Xcel Energy Services, Inc.
Public Service Company of Colorado
Comanche Unit 2
(Repl-2024-001)
Retirement & Replacement Study
Appendices

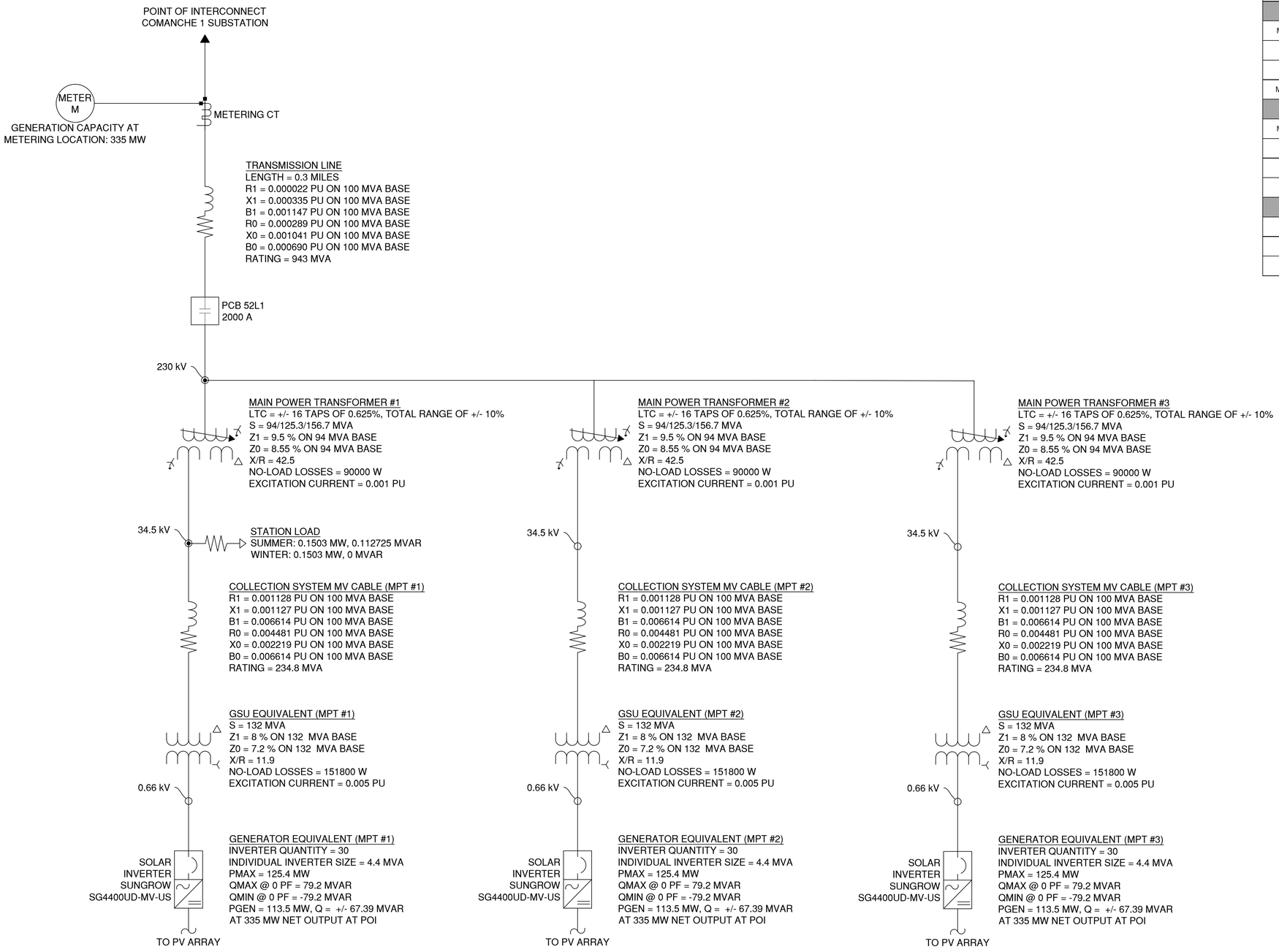


Excel Engineering of Minnesota, LLP

Prepared by
Craig Thingvold P.E.
LaShel Marvig
Asfand Yar Ali

Revision Date
December 23, 2024

Appendix A **Repl-2024-001 Equivalent Oneline Diagram**



SYSTEM SUMMARY	
DC CAPACITY	N/A
AC CAPACITY AT POI	335 MW
NAMEPLATE RATING	396 MVA @ 40C
MAIN SUBSTATION TRANSFORMER RATING	94/125.3/156.7 MVA, QTY: 3
POI / POCC VOLTAGE	230 KV
POWER CONDITIONING SYSTEM (PCS)	
MANUFACTURER / MODEL	Sungrow SG4400UD-MV-US
POWER RATING	4.4 MVA @ 40C
TOTAL QTY OF PCS	90
MV COLLECTION VOLTAGE	34.5 KV
PHOTOVOLTAIC MODULES	
MANUFACTURER / MODEL	TBD
DC POWER @ STC	TBD
MODULE QUANTITY	TBD
VOLTAGE	TBD
SINGLE-AXIS TRACKER	
MANUFACTURER	TBD
ROW SPACING / PITCH	TBD
RANGE OF MOTION	TBD

335 MW ARROYO 2 SOLAR PROJECT

PUEBLO COUNTY, CO

Rev.	Date	Description	By
A	01/12/2024	PRELIMINARY	MG

Xcel Energy®

NOTE 1:

PRELIMINARY

THIS DRAWING IS PRELIMINARY AND IS NOT TO BE USED FOR CONSTRUCTION. FOR REVIEW PURPOSES ONLY.

Ulteig
We listen. We solve.™
3350 38th Avenue South
Fargo, North Dakota 58104
Phone: 701.280.8500
Fax: 701.237.3191
www.ulteig.com
Bismarck - Denver - Detroit Lakes - Fargo - Sioux Falls - St. Paul

Design By: S. AKHLAGHI
Drawn By: S. AKHLAGHI
Approved By: M. GHORAI
Project Number: 23.25128
Company Registration Number: N/A

335 MW ARROYO 2 SOLAR PROJECT EQUIVALENT ONE LINE DIAGRAM 230 KV POI

DRAWING NUMBER: A2S-EQV-OL1

REVISION: A

2024.01.11

Appendix B Steady State Contingencies

```
"line_4183"    "secdd 'BURNTMIL_115.00' 'GREENHRN_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70002 70004 '1 ' 1"    "open"    1.000000  ""
0
"line_4184"    "secdd 'BURNTMIL_115.00' 'PUEBRESVR_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70002 71022 '1 ' 1"    "open"    1.000000  ""
0
"line_4185"    "secdd 'GREENHRN_115.00' 'READER_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 ' 1"    "open"    1.000000  ""
0
"line_4186"    "secdd 'BRUSH_SW_W_115.00' 'BRUSH_SW_E_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70005 70006 '1 ' 1"    "open"    1.000000  ""
0
"line_4187"    "secdd 'BRUSH_SW_W_115.00' 'BEAVER_CK_S_115.00' '2 ' 1"    1.00  ""    ""    ""    0
 "secdd 70005 70397 '2 ' 1"    "open"    1.000000  ""
0
"line_4188"    "secdd 'BRUSH_SW_E_115.00' 'BEAVER_CK_N_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70006 70398 '1 ' 1"    "open"    1.000000  ""
0
"line_4189"    "secdd 'FTN_LAKE_115.00' 'BACULITE_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 ' 1"    "open"    1.000000  ""
0
"line_4190"    "secdd 'FTN_LAKE_115.00' 'NTHRIDGE_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70007 70301 '1 ' 1"    "open"    1.000000  ""
0
"line_4191"    "secdd 'KELIM_115.00' 'AIRPORT_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70008 73002 '1 ' 1"    "open"    1.000000  ""
0
"line_4192"    "secdd 'CRAIG_YV_230.00' 'CRAIG_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70009 79013 '1 ' 1"    "open"    1.000000  ""
0
"line_4193"    "secdd 'TWNBT2_1_34.50' 'TWNBUTT2_34.50' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70011 70012 '1 ' 1"    "open"    1.000000  ""
0
"line_4194"    "secdd 'TWNBUTT2_230.00' 'LAMAR_SWYD_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70013 70254 '1 ' 1"    "open"    1.000000  ""
0
"line_4195"    "secdd 'TWNBUTT2_230.00' 'CO_GRN_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70013 70700 '1 ' 1"    "open"    1.000000  ""
0
"line_4196"    "secdd 'SNISABEL_115.00' 'LUDLOTAP_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70014 70272 '1 ' 1"    "open"    1.000000  ""
0
"line_4197"    "secdd 'SNISABEL_115.00' 'PINONCYN_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70014 70321 '1 ' 1"    "open"    1.000000  ""
0
"line_4198"    "secdd 'SNISABEL_34.50' 'SNISAB_1_34.50' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70015 70016 '1 ' 1"    "open"    1.000000  ""
0
"line_4199"    "secdd 'SODA_LAKES_230.00' 'CHATFLD_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70018 70100 '1 ' 1"    "open"    1.000000  ""
0
"line_4200"    "secdd 'SODA_LAKES_230.00' 'LOOKOUT_230.00' '1 ' 1"    1.00  ""
```

```
    "" "" 0
 "secdd 70018 70266 '1 ' 1" "open" 1.000000 ""
0
"line_4201" "secdd 'PDA_5_115.00' 'DOT_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70019 70158 '1 ' 1" "open" 1.000000 ""
0
"line_4202" "secdd 'PDA_5_115.00' 'DOT_TAP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70019 70159 '1 ' 1" "open" 1.000000 ""
0
"line_4203" "secdd 'CASTL_RK_T1_115.00' 'CASTL_RK_T2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70020 70021 '1 ' 1" "open" 1.000000 ""
0
"line_4204" "secdd 'CASTL_RK_T1_115.00' 'PALMER_LK_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70020 70308 '1 ' 1" "open" 1.000000 ""
0
"line_4205" "secdd 'CASTL_RK_T2_115.00' 'CASTL_RK_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70021 70091 '1 ' 1" "open" 1.000000 ""
0
"line_4206" "secdd 'CASTL_RK_T2_115.00' 'CROWFT_VLY_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70021 70117 '1 ' 1" "open" 1.000000 ""
0
"line_4207" "secdd 'NYBERG_115.00' 'BACULITE_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70022 70031 '1 ' 1" "open" 1.000000 ""
0
"line_4208" "secdd 'NYBERG_115.00' 'BOONE_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70022 70060 '1 ' 1" "open" 1.000000 ""
0
"line_4209" "secdd 'NYBERG_115.00' 'DOT_TAP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70022 70159 '1 ' 1" "open" 1.000000 ""
0
"line_4210" "secdd 'NYBERG_115.00' 'APT_MEM_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70022 70549 '1 ' 1" "open" 1.000000 ""
0
"line_4211" "secdd 'ALLISON_115.00' 'KENDRICK_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70023 70242 '1 ' 1" "open" 1.000000 ""
0
"line_4212" "secdd 'ALLISON_115.00' 'SODA_LAKES_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70023 70400 '1 ' 1" "open" 1.000000 ""
0
"line_4213" "secdd 'ALAMOSA_69.00' 'ALMSA_TM_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70024 70026 '1 ' 1" "open" 1.000000 ""
0
"line_4214" "secdd 'ALAMOSA_69.00' 'ALAMOSA_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70024 70186 '1 ' 1" "open" 1.000000 ""
0
"line_4215" "secdd 'ALAMOSA_69.00' 'MOSCA_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70024 70292 '1 ' 1" "open" 1.000000 ""
0
"line_4216" "secdd 'ALMSA_TM_69.00' 'HOMELAKE_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70026 70228 '1 ' 1" "open" 1.000000 ""
0
"line_4217" "secdd 'ALMSA_TM_69.00' 'ATER_TAP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70026 70511 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4218"   "secdd 'AIR_LIQ_115.00' 'AIR_LIQ_TP_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70027 70531 '1 '  1"   "open"   1.000000  ""
0
"line_4219"   "secdd 'ANSEL_TS_69.00' 'COCENTER_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70028 70118 '1 '  1"   "open"   1.000000  ""
0
"line_4220"   "secdd 'ANSEL_TS_69.00' 'SANLSVLY_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70028 70376 '1 '  1"   "open"   1.000000  ""
0
"line_4221"   "secdd 'ANTONITO_69.00' 'ROMEO_TAP_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70029 70552 '1 '  1"   "open"   1.000000  ""
0
"line_4222"   "secdd 'APT_PARK_115.00' 'BACULITE_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70030 70031 '1 '  1"   "open"   1.000000  ""
0
"line_4223"   "secdd 'APT_PARK_115.00' 'APT_MEM_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70030 70549 '1 '  1"   "open"   1.000000  ""
0
"line_4224"   "secdd 'BACULITE_115.00' 'W.STATON_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70031 70456 '1 '  1"   "open"   1.000000  ""
0
"line_4225"   "secdd 'BACULITE_115.00' 'W.STATON_115.00' '2 '  1"   1.00  ""   ""   ""   0
 "secdd 70031 70456 '2 '  1"   "open"   1.000000  ""
0
"line_4226"   "secdd 'ALMA_230.00' 'BRECKRDG_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70032 70064 '1 '  1"   "open"   1.000000  ""
0
"line_4227"   "secdd 'ALMA_230.00' 'MALTA_230.00' '1 '  1"   1.00  ""   ""   ""
0
 "secdd 70032 70274 '1 '  1"   "open"   1.000000  ""
0
"line_4228"   "secdd 'BOULDER_TM3_115.00' 'VALMONT_1_115.00' '2 '  1"   1.00  ""   ""   ""   0
 "secdd 70034 70444 '2 '  1"   "open"   1.000000  ""
0
"line_4229"   "secdd 'ARAPAHOE_A_115.00' 'ARAP_GEn_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70036 70035 '1 '  1"   "open"   1.000000  ""
0
"line_4230"   "secdd 'ARAPAHOE_A_115.00' 'ARAPAHOE_B_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70036 70037 '1 '  1"   "open"   1.000000  ""
0
"line_4231"   "secdd 'ARAPAHOE_A_115.00' 'SHERIDAN_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70036 70384 '1 '  1"   "open"   1.000000  ""
0
"line_4232"   "secdd 'ARAPAHOE_A_115.00' 'UNIVERS1_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70036 70441 '1 '  1"   "open"   1.000000  ""
0
"line_4233"   "secdd 'ARAPAHOE_A_115.00' 'AIR_LIQ_TP_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70036 70531 '1 '  1"   "open"   1.000000  ""
0
"line_4234"   "secdd 'ARAPAHOE_B_115.00' 'ENGLEWD3_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70037 70168 '1 '  1"   "open"   1.000000  ""
0
```

```
"line_4235"  "secdd 'ARAPAHOE_B_115.00' 'SOUTH_TAP_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70037 70401 '1 ' 1"  "open"  1.000000  ""
0
"line_4236"  "secdd 'ARAPAHOE_230.00' 'DAKOTA_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70038 70141 '1 ' 1"  "open"  1.000000  ""
0
"line_4237"  "secdd 'ARAPAHOE_230.00' 'DENVER_TM_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70038 70149 '1 ' 1"  "open"  1.000000  ""
0
"line_4238"  "secdd 'ARAPAHOE_230.00' 'SANTA_FE_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70038 70527 '1 ' 1"  "open"  1.000000  ""
0
"line_4239"  "secdd 'ARGO_115.00' 'CHEROKEE_S_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 ' 1"  "open"  1.000000  ""
0
"line_4240"  "secdd 'ARGO_115.00' 'DENVER_TM_1_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70039 70148 '1 ' 1"  "open"  1.000000  ""
0
"line_4241"  "secdd 'ARSENAL_115.00' 'DERBY_2_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70040 70153 '1 ' 1"  "open"  1.000000  ""
0
"line_4242"  "secdd 'ARSENAL_115.00' 'HAVANA2_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70040 70217 '1 ' 1"  "open"  1.000000  ""
0
"line_4243"  "secdd 'ARVADA_PS_230.00' 'CHEROKEE_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70041 70107 '1 ' 1"  "open"  1.000000  ""
0
"line_4244"  "secdd 'ARVADA_PS_230.00' 'RIDGE_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70041 70355 '1 ' 1"  "open"  1.000000  ""
0
"line_4245"  "secdd 'ASPEN_TP_69.00' 'BLENDE_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70042 70051 '1 ' 1"  "open"  1.000000  ""
0
"line_4246"  "secdd 'ASPEN_TP_69.00' 'READER_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70042 70353 '1 ' 1"  "open"  1.000000  ""
0
"line_4247"  "secdd 'BANCROFT_115.00' 'GRAY_STREET_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70045 70208 '1 ' 1"  "open"  1.000000  ""
0
"line_4248"  "secdd 'BANCROFT_115.00' 'KENDRICK_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70045 70242 '1 ' 1"  "open"  1.000000  ""
0
"line_4249"  "secdd 'BANCROFT_115.00' 'SOUTH_TAP_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70045 70401 '1 ' 1"  "open"  1.000000  ""
0
"line_4250"  "secdd 'BUCKLEY2_230.00' 'SMOKY_HL_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70046 70396 '1 ' 1"  "open"  1.000000  ""
0
"line_4251"  "secdd 'BUCKLEY2_230.00' 'TOLLGATE_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70046 70491 '1 ' 1"  "open"  1.000000  ""
0
"line_4252"  "secdd 'BARR_LAKE_230.00' 'GREEN_VLY_230.00' '1 ' 1"  1.00  ""
```

```
    "" "" 0
209  "secdd 70047 70048 '1 ' 1" "open" 1.000000 ""
210  0
211  "line_4253" "secdd 'BARR_LAKE_230.00' 'KNUTSON_230.00' '1 ' 1" 1.00 "" "" "" 0
212  "secdd 70047 70489 '1 ' 1" "open" 1.000000 ""
213  0
214  "line_4254" "secdd 'BARR_LAKE_230.00' 'REUNION_230.00' '1 ' 1" 1.00 "" "" "" 0
215  "secdd 70047 72026 '1 ' 1" "open" 1.000000 ""
216  0
217  "line_4255" "secdd 'GREEN_VLY_230.00' 'FT_LUPTON_230.00' '1 ' 1" 1.00 "" "" "" 0
218  "secdd 70048 70192 '1 ' 1" "open" 1.000000 ""
219  0
220  "line_4256" "secdd 'GREEN_VLY_230.00' 'IMBODEN_230.00' '1 ' 1" 1.00 "" "" "" 0
221  "secdd 70048 70526 '1 ' 1" "open" 1.000000 ""
222  0
223  "line_4257" "secdd 'GREEN_VLY_230.00' 'SPRUCE_230.00' '1 ' 1" 1.00 "" "" "" 0
224  "secdd 70048 70528 '1 ' 1" "open" 1.000000 ""
225  0
226  "line_4258" "secdd 'GREEN_VLY_230.00' 'RMEC_230.00' '1 ' 1" 1.00 "" "" "" 0
227  "secdd 70048 70590 '1 ' 1" "open" 1.000000 ""
228  0
229  "line_4259" "secdd 'GREEN_VLY_230.00' 'KEENESBURG_230.00' '1 ' 1" 1.00 "" "" "" 0
230  "secdd 70048 70820 '1 ' 1" "open" 1.000000 ""
231  0
232  "line_4260" "secdd 'GREEN_VLY_230.00' 'KEENESBURG_230.00' '2 ' 1" 1.00 "" "" "" 0
233  "secdd 70048 70820 '2 ' 1" "open" 1.000000 ""
234  0
235  "line_4261" "secdd 'BELMONT_69.00' 'OVERTON_69.00' '1 ' 1" 1.00 "" "" "" 0
236  "secdd 70049 70305 '1 ' 1" "open" 1.000000 ""
237  0
238  "line_4262" "secdd 'BELMONT_69.00' 'ERIE_AVE_69.00' '1 ' 1" 1.00 "" "" "" 0
239  "secdd 70049 71020 '1 ' 1" "open" 1.000000 ""
240  0
241  "line_4263" "secdd 'BERGEN_PK_115.00' 'HOGBACK_115.00' '1 ' 1" 1.00 "" "" "" 0
242  "secdd 70050 70224 '1 ' 1" "open" 1.000000 ""
243  0
244  "line_4264" "secdd 'BLENDE_69.00' 'ST.CHAS._69.00' '1 ' 1" 1.00 "" "" "" 0
245  "secdd 70051 70405 '1 ' 1" "open" 1.000000 ""
246  0
247  "line_4265" "secdd 'BLENDE_69.00' 'ERIE_AVE_69.00' '1 ' 1" 1.00 "" "" "" 0
248  "secdd 70051 71020 '1 ' 1" "open" 1.000000 ""
249  0
250  "line_4266" "secdd 'BLUE_RIVER_115.00' 'MILL_115.00' '1 ' 1" 1.00 "" "" "" 0
251  "secdd 70052 70287 '1 ' 1" "open" 1.000000 ""
252  0
253  "line_4267" "secdd 'BLUE_RIVER_230.00' 'PTARMGN_230.00' '1 ' 1" 1.00 "" "" "" 0
254  "secdd 70053 70057 '1 ' 1" "open" 1.000000 ""
255  0
256  "line_4268" "secdd 'BLUE_RIVER_230.00' 'GOREPASS_230.00' '1 ' 1" 1.00 "" "" "" 0
257  "secdd 70053 70088 '1 ' 1" "open" 1.000000 ""
258  0
259  "line_4269" "secdd 'BMONT_TP_69.00' 'OVERTON_69.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70054 70305 '1 ' 1"    "open"    1.000000  ""
0
"line_4270"    "secdd 'BMONT_TP_69.00' 'W.STATON_69.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70054 70455 '1 ' 1"    "open"    1.000000  ""
0
"line_4271"    "secdd 'BMONT_TP_69.00' 'FTN_LAKE_69.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70054 71030 '1 ' 1"    "open"    1.000000  ""
0
"line_4272"    "secdd 'BNAVST_115.00' 'BUENA_VST_T_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70055 70056 '1 ' 1"    "open"    1.000000  ""
0
"line_4273"    "secdd 'BUENA_VST_T_115.00' 'OTERO_TP_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70056 70304 '1 ' 1"    "open"    1.000000  ""
0
"line_4274"    "secdd 'BUENA_VST_T_115.00' 'RAY_LEWI_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70056 70312 '1 ' 1"    "open"    1.000000  ""
0
"line_4275"    "secdd 'PTARMGN_230.00' 'DILLON_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70057 70156 '1 ' 1"    "open"    1.000000  ""
0
"line_4276"    "secdd 'BOULDER_CN2_115.00' 'SUNSHINE_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70058 70424 '1 ' 1"    "open"    1.000000  ""
0
"line_4277"    "secdd 'BOULDER_TM1_115.00' 'SUNSHINE_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70059 70424 '1 ' 1"    "open"    1.000000  ""
0
"line_4278"    "secdd 'BOULDER_TM1_115.00' 'VALMONT_2_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70059 70440 '1 ' 1"    "open"    1.000000  ""
0
"line_4279"    "secdd 'BOONE_115.00' 'DOT_TAP_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70060 70159 '1 ' 1"    "open"    1.000000  ""
0
"line_4280"    "secdd 'BOONE_115.00' 'LAJUNTAT_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70060 70247 '1 ' 1"    "open"    1.000000  ""
0
"line_4281"    "secdd 'BOONE_115.00' 'LAJUNTAW_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70060 70249 '1 ' 1"    "open"    1.000000  ""
0
"line_4282"    "secdd 'BOONE_115.00' 'S.FOWLR_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70060 71027 '1 ' 1"    "open"    1.000000  ""
0
"line_4283"    "secdd 'BOONE_230.00' 'COMANCHE_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
0
"line_4284"    "secdd 'BOONE_230.00' 'LAMAR_SWYD_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70061 70254 '1 ' 1"    "open"    1.000000  ""
0
"line_4285"    "secdd 'BOONE_230.00' 'MIDWAY_PS_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
0
"line_4286"    "secdd 'BOONE_69.00' 'BOONE_TP_69.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70062 70063 '1 ' 1"    "open"    1.000000  ""
```

```
0
"line_4287"    "secdd 'BOONE_TP_69.00' 'HUERFANO_69.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70063 70235 '1 ' 1"    "open"    1.000000  ""
0
"line_4288"    "secdd 'BRECKRDG_230.00' 'DILLON_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70064 70156 '1 ' 1"    "open"    1.000000  ""
0
"line_4289"    "secdd 'BROOMFIELD_115.00' 'FEDERHT23_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70065 70174 '1 ' 1"    "open"    1.000000  ""
0
"line_4290"    "secdd 'BROOMFIELD_115.00' 'LOUISVILLE_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70065 70269 '1 ' 1"    "open"    1.000000  ""
0
"line_4291"    "secdd 'BROOMFIELD_115.00' 'SEMPER_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70065 70382 '1 ' 1"    "open"    1.000000  ""
0
"line_4292"    "secdd 'BROOMFIELD_115.00' 'VALMONT_2_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
0
"line_4293"    "secdd 'LOOKOUT_2_115.00' 'QUAKER_TP_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70066 70342 '1 ' 1"    "open"    1.000000  ""
0
"line_4294"    "secdd 'BUCKLEY1_230.00' 'SMOKY_HL_230.00' '2 ' 1"    1.00  ""    ""    ""    0
 "secdd 70067 70396 '2 ' 1"    "open"    1.000000  ""
0
"line_4295"    "secdd 'BUCKLEY1_230.00' 'JEWELL1_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70067 70512 '1 ' 1"    "open"    1.000000  ""
0
"line_4296"    "secdd 'BURROCYN_115.00' 'LUDLOTAP_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70068 70272 '1 ' 1"    "open"    1.000000  ""
0
"line_4297"    "secdd 'CABIN_CK_115.00' 'GEORGETN_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70071 70197 '1 ' 1"    "open"    1.000000  ""
0
"line_4298"    "secdd 'CABIN_CK_230.00' 'DILLON_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70072 70156 '1 ' 1"    "open"    1.000000  ""
0
"line_4299"    "secdd 'CABIN_CK_230.00' 'IDAHO_SPGS_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70072 70237 '1 ' 1"    "open"    1.000000  ""
0
"line_4300"    "secdd 'CABIN_CK_230.00' 'LOOKOUT_230.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 ' 1"    "open"    1.000000  ""
0
"line_4301"    "secdd 'CALIFORNIA_115.00' 'CALIFORN_TP_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70073 70074 '1 ' 1"    "open"    1.000000  ""
0
"line_4302"    "secdd 'CALIFORNIA_115.00' 'CHEROKEE_S_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
0
"line_4303"    "secdd 'CALIFORNIA_115.00' 'HARRISON_P2_115.00' '1 ' 1"    1.00  ""    ""    ""    0
 "secdd 70073 70182 '1 ' 1"    "open"    1.000000  ""
0
```

```
"line_4304"  "secdd 'CAMEO_69.00' 'VINELAND_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70076 70454 '1 ' 1"  "open"  1.000000  ""
0
"line_4305"  "secdd 'CAMEO_230.00' 'BLUESTONE_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70078 70264 '1 ' 1"  "open"  1.000000  ""
0
"line_4306"  "secdd 'CAMEO_230.00' 'UINTAH_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70078 70438 '1 ' 1"  "open"  1.000000  ""
0
"line_4307"  "secdd 'LAMSO_115.00' 'LAJUNTAT_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70079 70247 '1 ' 1"  "open"  1.000000  ""
0
"line_4308"  "secdd 'LAMSO_115.00' 'WILOW_CK_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70079 70472 '1 ' 1"  "open"  1.000000  ""
0
"line_4309"  "secdd 'STONINGT_69.00' 'VILAS_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70080 70453 '1 ' 1"  "open"  1.000000  ""
0
"line_4310"  "secdd 'STONINGT_69.00' 'WALSH_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70080 70460 '1 ' 1"  "open"  1.000000  ""
0
"line_4311"  "secdd 'FAIRGRNDS_115.00' 'THORNTON_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70081 70099 '1 ' 1"  "open"  1.000000  ""
0
"line_4312"  "secdd 'FAIRGRNDS_115.00' 'P.VALLEY_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70081 70307 '1 ' 1"  "open"  1.000000  ""
0
"line_4313"  "secdd 'CANONCTY_69.00' 'S_CAN.W_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70085 70371 '1 ' 1"  "open"  1.000000  ""
0
"line_4314"  "secdd 'CANONCTY_69.00' 'HOGBACK69_69.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70085 71026 '1 ' 1"  "open"  1.000000  ""
0
"line_4315"  "secdd 'CANONCTY_115.00' 'SKALA_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70086 70390 '1 ' 1"  "open"  1.000000  ""
0
"line_4316"  "secdd 'CANONCTY_115.00' 'HOGBACK115_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70086 71025 '1 ' 1"  "open"  1.000000  ""
0
"line_4317"  "secdd 'CAPITOL_HL_115.00' 'CALIFORN_TP_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70087 70074 '1 ' 1"  "open"  1.000000  ""
0
"line_4318"  "secdd 'CAPITOL_HL_115.00' 'DENVER_TM_1_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70087 70148 '1 ' 1"  "open"  1.000000  ""
0
"line_4319"  "secdd 'CAPITOL_HL_115.00' 'HARRISON_P2_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70087 70182 '1 ' 1"  "open"  1.000000  ""
0
"line_4320"  "secdd 'GOREPASS_230.00' 'HDN EAST_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70088 79142 '1 ' 1"  "open"  1.000000  ""
0
"line_4321"  "secdd 'CARBONDALE_115.00' 'HOPKINS_115.00' '1 ' 1"  1.00  ""
```

```
    "" "" 0
 "secdd 70089 70231 '1 ' 1" "open" 1.000000 ""
0
"line_4322" "secdd 'FT_LUPTON_2_115.00' 'DAVIS_PS_TP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70090 70190 '1 ' 1" "open" 1.000000 ""
0
"line_4323" "secdd 'FT_LUPTON_2_115.00' 'P.VALLEY_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70090 70307 '1 ' 1" "open" 1.000000 ""
0
"line_4324" "secdd 'CASTL_RK_CR_115.00' 'CASTL_RK_T1_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70091 70020 '1 ' 1" "open" 1.000000 ""
0
"line_4325" "secdd 'CASTL_RK_CR_115.00' 'WOLFSBRG_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70091 70519 '1 ' 1" "open" 1.000000 ""
0
"line_4326" "secdd 'CASTL_RK_CR_115.00' 'CRSTL_VA_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70091 70584 '1 ' 1" "open" 1.000000 ""
0
"line_4327" "secdd 'CENTER_69.00' 'HOOPERTP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70092 70230 '1 ' 1" "open" 1.000000 ""
0
"line_4328" "secdd 'CENTER_69.00' 'LAGARITA_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70092 70245 '1 ' 1" "open" 1.000000 ""
0
"line_4329" "secdd 'CF&IFURN_230.00' 'COMANCHE_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70094 70122 '1 ' 1" "open" 1.000000 ""
0
"line_4330" "secdd 'CF&ISE2_115.00' 'COMANCHE_2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70098 70123 '1 ' 1" "open" 1.000000 ""
0
"line_4331" "secdd 'CHATFLD_230.00' 'WATERTON_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70100 70464 '1 ' 1" "open" 1.000000 ""
0
"line_4332" "secdd 'CHEN_TAP_69.00' 'CHENEY_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70101 70102 '1 ' 1" "open" 1.000000 ""
0
"line_4333" "secdd 'CHEN_TAP_69.00' 'HOLL_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70101 70225 '1 ' 1" "open" 1.000000 ""
0
"line_4334" "secdd 'CHEN_TAP_69.00' 'T.BUTTES_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70101 70425 '1 ' 1" "open" 1.000000 ""
0
"line_4335" "secdd 'CHEROKEE_230.00' 'GLENNPS_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70107 70200 '1 ' 1" "open" 1.000000 ""
0
"line_4336" "secdd 'CHEROKEE_230.00' 'LACOMBE_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70107 70324 '1 ' 1" "open" 1.000000 ""
0
"line_4337" "secdd 'CHEROKEE_230.00' 'RIVERDALE_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70107 70362 '1 ' 1" "open" 1.000000 ""
0
"line_4338" "secdd 'CHEROKEE_230.00' 'RUSSELL_230.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70107 70369 '1 ' 1" "open" 1.000000 ""
0
"line_4339" "secdd 'CHEROKEE_230.00' 'SILVSADL_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70107 70609 '1 ' 1" "open" 1.000000 ""
0
"line_4340" "secdd 'CHEROKEE_S_115.00' 'MAPLETO1_115.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70108 70276 '2 ' 1" "open" 1.000000 ""
0
"line_4341" "secdd 'CHEROKEE_S_115.00' 'MAPLETO2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70108 70277 '1 ' 1" "open" 1.000000 ""
0
"line_4342" "secdd 'CHEROKEE_S_115.00' 'NORTH_PS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70108 70298 '1 ' 1" "open" 1.000000 ""
0
"line_4343" "secdd 'UNA_ORCH_69.00' 'DEBEQUE_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70109 70140 '1 ' 1" "open" 1.000000 ""
0
"line_4344" "secdd 'UNA_ORCH_69.00' 'OIL_SHALE_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70109 70302 '1 ' 1" "open" 1.000000 ""
0
"line_4345" "secdd 'CHEROKEE_N_115.00' 'CONOCO_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70110 70126 '1 ' 1" "open" 1.000000 ""
0
"line_4346" "secdd 'CHEROKEE_N_115.00' 'DERBY_2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70110 70153 '1 ' 1" "open" 1.000000 ""
0
"line_4347" "secdd 'CHEROKEE_N_115.00' 'DERBY_1_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70110 70154 '1 ' 1" "open" 1.000000 ""
0
"line_4348" "secdd 'CHEROKEE_N_115.00' 'FEDERHT23_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70110 70174 '1 ' 1" "open" 1.000000 ""
0
"line_4349" "secdd 'CHEROKEE_N_115.00' 'FEDERHT1_115.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70110 70175 '2 ' 1" "open" 1.000000 ""
0
"line_4350" "secdd 'CHEROKEE_N_115.00' 'METRO_WATER_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70110 70494 '1 ' 1" "open" 1.000000 ""
0
"line_4351" "secdd 'HAGERMAN_TP_230.00' 'MALTA_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70111 70274 '1 ' 1" "open" 1.000000 ""
0
"line_4352" "secdd 'CLARK_230.00' 'GREENWOOD_1_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70112 70212 '1 ' 1" "open" 1.000000 ""
0
"line_4353" "secdd 'CLARK_230.00' 'JORDAN_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70112 70241 '1 ' 1" "open" 1.000000 ""
0
"line_4354" "secdd 'CLIFTON_230.00' 'GRAND_JT_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70113 70205 '1 ' 1" "open" 1.000000 ""
0
"line_4355" "secdd 'CLIFTON_230.00' 'GRANDJ_PS_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70113 70206 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4356"    "secdd 'CLIMAX_115.00' 'LEADVIL1_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70114 70257 '1 '  1"    "open"    1.000000  ""
0
"line_4357"    "secdd 'CLIMAX_115.00' 'MAYFLOWER_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70114 70281 '1 '  1"    "open"    1.000000  ""
0
"line_4358"    "secdd 'CLIMAX_115.00' 'ROBINSON_RK_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70114 70364 '1 '  1"    "open"    1.000000  ""
0
"line_4359"    "secdd 'CLIMAX_115.00' 'SUMMIT1_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70114 70418 '1 '  1"    "open"    1.000000  ""
0
"line_4360"    "secdd 'HAPPY_CNYN_115.00' 'CROWFT_VLY_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70115 70117 '1 '  1"    "open"    1.000000  ""
0
"line_4361"    "secdd 'HAPPY_CNYN_115.00' 'DANIEL_PK_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70115 70138 '1 '  1"    "open"    1.000000  ""
0
"line_4362"    "secdd 'COMANCHE_1_115.00' 'CF&ISE1_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70121 70096 '1 '  1"    "open"    1.000000  ""
0
"line_4363"    "secdd 'COMANCHE_1_115.00' 'READER_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
0
"line_4364"    "secdd 'COMANCHE_230.00' 'MIDWAY_PS_230.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
0
"line_4365"    "secdd 'COMANCHE_230.00' 'WALSENBG_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
0
"line_4366"    "secdd 'COMANCHE_230.00' 'COMAN230_S1_230.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70122 70942 '1 '  1"    "open"    1.000000  ""
0
"line_4367"    "secdd 'COMANCHE_2_115.00' 'READER_115.00' '2 '  1"    1.00  ""    ""    ""    0
 "secdd 70123 70352 '2 '  1"    "open"    1.000000  ""
0
"line_4368"    "secdd 'CONIFER_CR_115.00' 'TINY_TWN_CR_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70124 70429 '1 '  1"    "open"    1.000000  ""
0
"line_4369"    "secdd 'SMOKY_HL_S_115.00' 'PEAKVIEW_CR_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70125 70521 '1 '  1"    "open"    1.000000  ""
0
"line_4370"    "secdd 'CONOCO_115.00' 'SANDOWN_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70126 70377 '1 '  1"    "open"    1.000000  ""
0
"line_4371"    "secdd 'COORS_RCL_115.00' 'FT_LUPTON_1_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70127 70191 '1 '  1"    "open"    1.000000  ""
0
"line_4372"    "secdd 'COORS_RCL_115.00' 'FULTONTS_115.00' '1 '  1"    1.00  ""    ""    0
 "secdd 70127 70194 '1 '  1"    "open"    1.000000  ""
0
```

```
"line_4373"    "secdd 'CREEDE_69.00' 'HILANDSL_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70129 70221 '1 '  1"    "open"    1.000000  ""
0
"line_4374"    "secdd 'CRPLECRK_69.00' 'PP_MINE_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70130 70306 '1 '  1"    "open"    1.000000  ""
0
"line_4375"    "secdd 'CTY_LAJ_69.00' 'LAJUNTAT_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70132 70248 '1 '  1"    "open"    1.000000  ""
0
"line_4376"    "secdd 'CTY_LAM_69.00' 'FT.LYON_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70136 70185 '1 '  1"    "open"    1.000000  ""
0
"line_4377"    "secdd 'CTY_LAM_69.00' 'PROWERS_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70136 70333 '1 '  1"    "open"    1.000000  ""
0
"line_4378"    "secdd 'CTY_LAM_69.00' 'WILOW_CK_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70136 70473 '1 '  1"    "open"    1.000000  ""
0
"line_4379"    "secdd 'DANIEL_PK_230.00' 'MARCY_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
0
"line_4380"    "secdd 'DANIEL_PK_230.00' 'SURREY_RG_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
0
"line_4381"    "secdd 'DANIEL_PK_230.00' 'PRAIRIE_3_230.00' '2 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
0
"line_4382"    "secdd 'DANIEL_PK_230.00' 'PRAIRIE_1_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
0
"line_4383"    "secdd 'DANIEL_PK_230.00' 'WATERTON_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
0
"line_4384"    "secdd 'DANIEL_PK_230.00' 'SANTA_FE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70527 '1 '  1"    "open"    1.000000  ""
0
"line_4385"    "secdd 'DANIEL_PK_230.00' 'MISS_SITE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"line_4386"    "secdd 'DANIEL_PK_230.00' 'FULLER_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"line_4387"    "secdd 'DEBEQUE_69.00' 'BLUESTONE_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70140 70981 '1 '  1"    "open"    1.000000  ""
0
"line_4388"    "secdd 'DAKOTA_230.00' 'DENVER_TM_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70141 70149 '1 '  1"    "open"    1.000000  ""
0
"line_4389"    "secdd 'DEER_CK_115.00' 'SODA_LAKES_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70142 70400 '1 '  1"    "open"    1.000000  ""
0
"line_4390"    "secdd 'DEER_CK_115.00' 'MARTIN_TP_115.00' '1 '  1"    1.00  ""    ""
```

```
    "" 0
  "secdd 70142 70484 '1 ' 1" "open" 1.000000 ""
  0
  "line_4391" "secdd 'DEL_NORTE_69.00' 'RIOGRAND_69.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70143 70360 '1 ' 1" "open" 1.000000 ""
  0
  "line_4392" "secdd 'DENVER_TM_2_115.00' 'FED_CTR_TP_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70144 70173 '1 ' 1" "open" 1.000000 ""
  0
  "line_4393" "secdd 'DENVER_TM_1_115.00' 'GRAY_STREET_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70148 70208 '1 ' 1" "open" 1.000000 ""
  0
  "line_4394" "secdd 'DENVER_TM_230.00' 'ELATI1_230.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70149 70163 '1 ' 1" "open" 1.000000 ""
  0
  "line_4395" "secdd 'DENVER_TM_230.00' 'LACOMBE_230.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70149 70324 '1 ' 1" "open" 1.000000 ""
  0
  "line_4396" "secdd 'DENVER_TM_230.00' 'WEST_PS_230.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70149 70480 '1 ' 1" "open" 1.000000 ""
  0
  "line_4397" "secdd 'SWALLOWS_115.00' 'DIAMNDBK_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70150 70151 '1 ' 1" "open" 1.000000 ""
  0
  "line_4398" "secdd 'DIAMNDBK_115.00' 'PUEB_W_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70151 70335 '1 ' 1" "open" 1.000000 ""
  0
  "line_4399" "secdd 'DERBY_1_115.00' 'HAVANA1_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70154 70216 '1 ' 1" "open" 1.000000 ""
  0
  "line_4400" "secdd 'DILLON_115.00' 'SUMTAP2_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70155 70421 '1 ' 1" "open" 1.000000 ""
  0
  "line_4401" "secdd 'DIVIDE_115.00' 'LAKE_GEORGE_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70157 70419 '1 ' 1" "open" 1.000000 ""
  0
  "line_4402" "secdd 'DIVIDE_115.00' 'WOODLAND_PK_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70157 70476 '1 ' 1" "open" 1.000000 ""
  0
  "line_4403" "secdd 'E_CANON_69.00' 'FLORENCE_69.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70160 70176 '1 ' 1" "open" 1.000000 ""
  0
  "line_4404" "secdd 'E_CANON_69.00' 'NCANON_69.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70160 70293 '1 ' 1" "open" 1.000000 ""
  0
  "line_4405" "secdd 'EADS_69.00' 'WILOW_CK_69.00' '1 ' 1" 1.00 "" "" "" "" 0
  "secdd 70161 70473 '1 ' 1" "open" 1.000000 ""
  0
  "line_4406" "secdd 'EAST_1_115.00' 'EAST_2_115.00' '1 ' 1" 1.00 "" "" "" 0
  "secdd 70162 70171 '1 ' 1" "open" 1.000000 ""
  0
  "line_4407" "secdd 'EAST_1_115.00' 'FITZ_SIMONS_115.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70162 70537 '1 ' 1" "open" 1.000000 ""
0
"line_4408" "secdd 'EAST_1_115.00' 'CHAMBERS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70162 70538 '1 ' 1" "open" 1.000000 ""
0
"line_4409" "secdd 'ELATI1_230.00' 'MONROEPS_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70163 70291 '1 ' 1" "open" 1.000000 ""
0
"line_4410" "secdd 'ELDORADO_115.00' 'NREL_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70164 70170 '1 ' 1" "open" 1.000000 ""
0
"line_4411" "secdd 'ELDORADO_115.00' 'NCAR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70164 70295 '1 ' 1" "open" 1.000000 ""
0
"line_4412" "secdd 'ELDORADO_115.00' 'RALSTON2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70164 70346 '1 ' 1" "open" 1.000000 ""
0
"line_4413" "secdd 'ELDORADO_115.00' 'VALMONT_1_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70164 70444 '1 ' 1" "open" 1.000000 ""
0
"line_4414" "secdd 'ENGLE_WD_TP_115.00' 'ENGLEWD3_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70165 70168 '1 ' 1" "open" 1.000000 ""
0
"line_4415" "secdd 'ENGLE_WD_TP_115.00' 'LITTLET1_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70165 70263 '1 ' 1" "open" 1.000000 ""
0
"line_4416" "secdd 'ENGLEWD1_115.00' 'ENGLEWD2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70166 70167 '1 ' 1" "open" 1.000000 ""
0
"line_4417" "secdd 'ENGLEWD1_115.00' 'SHERIDAN_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70166 70384 '1 ' 1" "open" 1.000000 ""
0
"line_4418" "secdd 'ENGLEWD2_115.00' 'ENGLEWD3_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70167 70168 '1 ' 1" "open" 1.000000 ""
0
"line_4419" "secdd 'ENNIS_115.00' 'HUDSON_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70169 70234 '1 ' 1" "open" 1.000000 ""
0
"line_4420" "secdd 'EAST_2_115.00' 'SMOKY_HL_N_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70171 70395 '1 ' 1" "open" 1.000000 ""
0
"line_4421" "secdd 'EAST_2_115.00' 'SMOKY_HL_N_115.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70171 70395 '2 ' 1" "open" 1.000000 ""
0
"line_4422" "secdd 'FED_CTR_115.00' 'FED_CTR_TP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70172 70173 '1 ' 1" "open" 1.000000 ""
0
"line_4423" "secdd 'FED_CTR_TP_115.00' 'QUAKER_TP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70173 70342 '1 ' 1" "open" 1.000000 ""
0
"line_4424" "secdd 'FEDERHT1_115.00' 'SEMPER_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70175 70382 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4425"  "secdd 'FLORENCE_69.00' 'HIGHLND_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70176 70220 '1 '  1"  "open"  1.000000  ""
0
"line_4426"  "secdd 'FOWLER_69.00' 'MANZANOL_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70178 70275 '1 '  1"  "open"  1.000000  ""
0
"line_4427"  "secdd 'FOWLER_69.00' 'S_FWL_TP_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70178 70372 '1 '  1"  "open"  1.000000  ""
0
"line_4428"  "secdd 'FREEMARY_69.00' 'PRAIRIE_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70181 70332 '1 '  1"  "open"  1.000000  ""
0
"line_4429"  "secdd 'FREEMARY_69.00' 'READER_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70181 70353 '1 '  1"  "open"  1.000000  ""
0
"line_4430"  "secdd 'FRUITA_69.00' 'UINTAH_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70183 70436 '1 '  1"  "open"  1.000000  ""
0
"line_4431"  "secdd 'FT.HOLLY_69.00' 'HOLL_TP_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70184 70225 '1 '  1"  "open"  1.000000  ""
0
"line_4432"  "secdd 'FT.LYON_69.00' 'LS_ANMAS_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70185 70271 '1 '  1"  "open"  1.000000  ""
0
"line_4433"  "secdd 'ALAMOSA_TP_69.00' 'FTGARLND_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70186 70187 '1 '  1"  "open"  1.000000  ""
0
"line_4434"  "secdd 'ALAMOSA_TP_69.00' 'ATER_TAP_69.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70186 70511 '1 '  1"  "open"  1.000000  ""
0
"line_4435"  "secdd 'GREENWOOD_2_230.00' 'ARAPAHOE_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70189 70038 '1 '  1"  "open"  1.000000  ""
0
"line_4436"  "secdd 'GREENWOOD_2_230.00' 'PRAIRIE_3_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70189 70323 '1 '  1"  "open"  1.000000  ""
0
"line_4437"  "secdd 'GREENWOOD_2_230.00' 'MONACO_12_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70189 70481 '1 '  1"  "open"  1.000000  ""
0
"line_4438"  "secdd 'DAVIS_PS_TP_115.00' 'HUDSON_115.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70190 70234 '1 '  1"  "open"  1.000000  ""
0
"line_4439"  "secdd 'FT_LUPTON_1_115.00' 'VASQUEZ_115.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70191 70450 '1 '  1"  "open"  1.000000  ""
0
"line_4440"  "secdd 'FT_LUPTON_230.00' 'PAWNEE_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70192 70311 '1 '  1"  "open"  1.000000  ""
0
"line_4441"  "secdd 'FT_LUPTON_230.00' 'FT_ST_VRAIN_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70192 70410 '1 '  1"  "open"  1.000000  ""
0
```

```
"line_4442"    "secdd 'FT_LUPTON_230.00' 'FT_ST_VRAIN_230.00' '2 '  1"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
0
"line_4443"    "secdd 'FT_LUPTON_230.00' 'JMSHAFER_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
0
"line_4444"    "secdd 'FT_LUPTON_230.00' 'JLGREEN_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70192 70529 '1 '  1"    "open"    1.000000  ""
0
"line_4445"    "secdd 'FT_LUPTON_230.00' 'HENRYLAK_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"line_4446"    "secdd 'FTN_VLY_115.00' 'DESRTCOV_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70193 70449 '1 '  1"    "open"    1.000000  ""
0
"line_4447"    "secdd 'FTN_VLY_115.00' 'MIDWAYBR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70193 73412 '1 '  1"    "open"    1.000000  ""
0
"line_4448"    "secdd 'FULTONTS_115.00' 'PARKWAY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70194 70604 '1 '  1"    "open"    1.000000  ""
0
"line_4449"    "secdd 'GEORGETN_115.00' 'HENDRSN_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70197 70218 '1 '  1"    "open"    1.000000  ""
0
"line_4450"    "secdd 'GILCREST_115.00' 'GODFREY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70198 70202 '1 '  1"    "open"    1.000000  ""
0
"line_4451"    "secdd 'GILCREST_115.00' 'ANADARKO_T_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70198 70219 '1 '  1"    "open"    1.000000  ""
0
"line_4452"    "secdd 'GILMAN_115.00' 'ROBINSON_RK_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70199 70364 '1 '  1"    "open"    1.000000  ""
0
"line_4453"    "secdd 'GLENNPS_230.00' 'WASHINGTON_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70200 70461 '1 '  1"    "open"    1.000000  ""
0
"line_4454"    "secdd 'GLENWOOD_69.00' 'MITCHELL_CK_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70201 70288 '1 '  1"    "open"    1.000000  ""
0
"line_4455"    "secdd 'GLENWOOD_69.00' 'ROARNGFK_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70201 70363 '1 '  1"    "open"    1.000000  ""
0
"line_4456"    "secdd 'GLENWOOD_69.00' 'SHOSHONE_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70201 70386 '1 '  1"    "open"    1.000000  ""
0
"line_4457"    "secdd 'GODFREY_115.00' 'GREELEY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70202 70209 '1 '  1"    "open"    1.000000  ""
0
"line_4458"    "secdd 'GODFREY_115.00' 'JOHNSTOWN_1_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70202 70240 '1 '  1"    "open"    1.000000  ""
0
"line_4459"    "secdd 'GRANTAP_69.00' 'GRANADA_69.00' '1 '  1"    1.00  ""    ""
```

```
    "" 0
 "secdd 70203 70204 '1 ' 1" "open" 1.000000 ""
0
"line_4460" "secdd 'GRANTAP_69.00' 'HOLL_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70203 70225 '1 ' 1" "open" 1.000000 ""
0
"line_4461" "secdd 'GRANTAP_69.00' 'WILOW_CK_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70203 70473 '1 ' 1" "open" 1.000000 ""
0
"line_4462" "secdd 'GRANDJ_PS_230.00' 'HORIZON_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70206 70233 '1 ' 1" "open" 1.000000 ""
0
"line_4463" "secdd 'GRAY_STREET_115.00' 'LAKEWOOD_1_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70208 70251 '1 ' 1" "open" 1.000000 ""
0
"line_4464" "secdd 'GRAY_STREET_115.00' 'LAKEWOOD_2_115.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70208 70252 '2 ' 1" "open" 1.000000 ""
0
"line_4465" "secdd 'GRAY_STREET_115.00' 'SOUTH_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70208 70402 '1 ' 1" "open" 1.000000 ""
0
"line_4466" "secdd 'GREELEY_115.00' 'MONFORT_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70209 70290 '1 ' 1" "open" 1.000000 ""
0
"line_4467" "secdd 'GREELEY_115.00' 'WELD_PS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70209 70470 '1 ' 1" "open" 1.000000 ""
0
"line_4468" "secdd 'GUNBARREL_2_230.00' 'GUNBARRE1_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70211 70213 '1 ' 1" "open" 1.000000 ""
0
"line_4469" "secdd 'GUNBARREL_2_230.00' 'GUNBARREL_3_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70211 70972 '1 ' 1" "open" 1.000000 ""
0
"line_4470" "secdd 'GREENWOOD_1_230.00' 'GREENWOOD_2_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70212 70189 '1 ' 1" "open" 1.000000 ""
0
"line_4471" "secdd 'GREENWOOD_1_230.00' 'PRAIRIE_1_230.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70212 70331 '2 ' 1" "open" 1.000000 ""
0
"line_4472" "secdd 'GREENWOOD_1_230.00' 'TECH_CENTER_230.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70212 70428 '2 ' 1" "open" 1.000000 ""
0
"line_4473" "secdd 'GUNBARRE1_230.00' 'NIWOT_230.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70213 70297 '2 ' 1" "open" 1.000000 ""
0
"line_4474" "secdd 'UTE_GRND_JN_69.00' 'VINELAND_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70214 70454 '1 ' 1" "open" 1.000000 ""
0
"line_4475" "secdd 'HARRISON_P1_115.00' 'LEETSDALE_2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70215 70282 '1 ' 1" "open" 1.000000 ""
0
"line_4476" "secdd 'HAVANA1_115.00' 'CHAMBERS_115.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70216 70538 '1 ' 1" "open" 1.000000 ""
0
"line_4477" "secdd 'HAVANA2_115.00' 'CHAMBERS_115.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70217 70538 '2 ' 1" "open" 1.000000 ""
0
"line_4478" "secdd 'HENDRSN_115.00' 'PORTAL_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70218 70328 '1 ' 1" "open" 1.000000 ""
0
"line_4479" "secdd 'ANADARKO_T_115.00' 'ANADARKO_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70219 70238 '1 ' 1" "open" 1.000000 ""
0
"line_4480" "secdd 'HIGHLND_69.00' 'PORTLAND_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70220 70329 '1 ' 1" "open" 1.000000 ""
0
"line_4481" "secdd 'HIGHLND_69.00' 'S_CANON_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70220 70370 '1 ' 1" "open" 1.000000 ""
0
"line_4482" "secdd 'HILANDSL_69.00' 'SFORK_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70221 70655 '1 ' 1" "open" 1.000000 ""
0
"line_4483" "secdd 'HILLTOP_69.00' 'HLTP_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70222 70223 '1 ' 1" "open" 1.000000 ""
0
"line_4484" "secdd 'HLTP_TP_69.00' 'SPRNGFLD_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70223 70404 '1 ' 1" "open" 1.000000 ""
0
"line_4485" "secdd 'HLTP_TP_69.00' 'VILAS_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70223 70453 '1 ' 1" "open" 1.000000 ""
0
"line_4486" "secdd 'HOGBACK_115.00' 'LOOKOUT_1_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70224 70265 '1 ' 1" "open" 1.000000 ""
0
"line_4487" "secdd 'HOGBACK_115.00' 'SODA_LAKES_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70224 70400 '1 ' 1" "open" 1.000000 ""
0
"line_4488" "secdd 'HOMELAKE_69.00' 'RIOGRD_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70228 70361 '1 ' 1" "open" 1.000000 ""
0
"line_4489" "secdd 'HOOPER_69.00' 'HOOPERTP_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70229 70230 '1 ' 1" "open" 1.000000 ""
0
"line_4490" "secdd 'HOOPERTP_69.00' 'SANLSVLY_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70230 70376 '1 ' 1" "open" 1.000000 ""
0
"line_4491" "secdd 'HOPKINS_115.00' 'SHOSHONE_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70231 70387 '1 ' 1" "open" 1.000000 ""
0
"line_4492" "secdd 'HOPKINS_115.00' 'BASALT_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70231 79003 '1 ' 1" "open" 1.000000 ""
0
"line_4493" "secdd 'HOPKINS_230.00' 'HAGERMAN_TP_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70232 70111 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4494"    "secdd 'HOPKINS_230.00' 'RIFLE_PS_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70232 70358 '1 '  1"    "open"    1.000000  ""
0
"line_4495"    "secdd 'HORIZON_230.00' 'ADOBE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70233 70268 '1 '  1"    "open"    1.000000  ""
0
"line_4496"    "secdd 'HUERFANO_69.00' 'PDA_TAP_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70235 70317 '1 '  1"    "open"    1.000000  ""
0
"line_4497"    "secdd 'HYDEPARK_115.00' 'PUEBPLNT_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70236 70339 '1 '  1"    "open"    1.000000  ""
0
"line_4498"    "secdd 'HYDEPARK_115.00' 'W.STATON_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 '  1"    "open"    1.000000  ""
0
"line_4499"    "secdd 'IDAHO_SPGS_230.00' 'LOOKOUT_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
0
"line_4500"    "secdd 'JEWELL2_230.00' 'LEETSDALE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70239 70260 '1 '  1"    "open"    1.000000  ""
0
"line_4501"    "secdd 'JEWELL2_230.00' 'TOLLGATE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70239 70491 '1 '  1"    "open"    1.000000  ""
0
"line_4502"    "secdd 'JOHNSTOWN_1_115.00' 'JOHNSTOWN_2_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70240 70246 '1 '  1"    "open"    1.000000  ""
0
"line_4503"    "secdd 'JORDAN_230.00' 'ORCHARD_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70241 70313 '1 '  1"    "open"    1.000000  ""
0
"line_4504"    "secdd 'LA_SECPA_69.00' 'LAJUNTAT_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70243 70248 '1 '  1"    "open"    1.000000  ""
0
"line_4505"    "secdd 'LAFAYETTE_115.00' 'VALMONT_1_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70244 70444 '1 '  1"    "open"    1.000000  ""
0
"line_4506"    "secdd 'LAFAYETTE_115.00' 'PARKWAY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70244 70604 '1 '  1"    "open"    1.000000  ""
0
"line_4507"    "secdd 'LAGARITA_69.00' 'PLAZA_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70245 70325 '1 '  1"    "open"    1.000000  ""
0
"line_4508"    "secdd 'JOHNSTOWN_2_115.00' 'WELD_PS_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70246 70470 '1 '  1"    "open"    1.000000  ""
0
"line_4509"    "secdd 'LAJUNTAW_69.00' 'PHLPS_TP_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70250 70320 '1 '  1"    "open"    1.000000  ""
0
"line_4510"    "secdd 'LAJUNTAW_69.00' 'ROCKYFRD_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70250 70366 '1 '  1"    "open"    1.000000  ""
0
```

```
"line_4511"   "secdd 'LAKEWOOD_1_115.00' 'LAKEWOOD_2_115.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70251 70252 '1 '  1"   "open"    1.000000  ""
0
"line_4512"   "secdd 'LAKEWOOD_1_115.00' 'RIDGE_1_115.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70251 70354 '1 '  1"   "open"    1.000000  ""
0
"line_4513"   "secdd 'LAKEWOOD_2_115.00' 'RIDGE_2_115.00' '2 '  1"    1.00  ""
""   ""   0
 "secdd 70252 70226 '2 '  1"   "open"    1.000000  ""
0
"line_4514"   "secdd 'LAMAR_CO_115.00' 'VILAS_115.00' '1 '  1"    1.00  ""   ""
""   0
 "secdd 70253 70452 '1 '  1"   "open"    1.000000  ""
0
"line_4515"   "secdd 'LAMAR_CO_115.00' 'WILOW_CK_115.00' '1 '  1"    1.00  ""   ""
""   0
 "secdd 70253 70472 '1 '  1"   "open"    1.000000  ""
0
"line_4516"   "secdd 'LAMAR_SWYD_230.00' 'LAMAR_C2_230.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70254 70255 '1 '  1"   "open"    1.000000  ""
0
"line_4517"   "secdd 'LAMAR_SWYD_230.00' 'LAMAR_DC_230.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70254 70560 '1 '  1"   "open"    1.000000  ""
0
"line_4518"   "secdd 'LAMAR_C2_230.00' 'BURLNGTN_230.00' '1 '  1"    1.00  ""   ""
""   0
 "secdd 70255 73036 '1 '  1"   "open"    1.000000  ""
0
"line_4519"   "secdd 'LEADVIL1_115.00' 'LEADVIL2_115.00' '1 '  1"    1.00  ""   ""
""   0
 "secdd 70257 70258 '1 '  1"   "open"    1.000000  ""
0
"line_4520"   "secdd 'LEADVIL1_115.00' 'MALTA_115.00' '1 '  1"    1.00  ""   ""
""   0
 "secdd 70257 70273 '1 '  1"   "open"    1.000000  ""
0
"line_4521"   "secdd 'LEADVIL2_115.00' 'MALTA_115.00' '1 '  1"    1.00  ""   ""
""   0
 "secdd 70258 70273 '1 '  1"   "open"    1.000000  ""
0
"line_4522"   "secdd 'LEADVIL2_115.00' 'ROBINSON_RK_115.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70258 70364 '1 '  1"   "open"    1.000000  ""
0
"line_4523"   "secdd 'LEETSDALE_1_115.00' 'LEETSDALE_2_115.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70259 70282 '1 '  1"   "open"    1.000000  ""
0
"line_4524"   "secdd 'LEETSDALE_1_115.00' 'SANDOWN_115.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70259 70377 '1 '  1"   "open"    1.000000  ""
0
"line_4525"   "secdd 'LEETSDALE_1_115.00' 'UNIVERS1_115.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70259 70441 '1 '  1"   "open"    1.000000  ""
0
"line_4526"   "secdd 'LEETSDALE_230.00' 'MONROEPS_230.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70260 70291 '1 '  1"   "open"    1.000000  ""
0
"line_4527"   "secdd 'LEETSDALE_230.00' 'SULLIVAN_2_230.00' '1 '  1"    1.00  ""
""   ""   0
 "secdd 70260 70365 '1 '  1"   "open"    1.000000  ""
0
"line_4528"   "secdd 'LEGGETT_230.00' 'NIWOT_230.00' '1 '  1"    1.00  ""   ""
```

```
      "" 0
1037   "secdd 70261 70297 '1 ' 1" "open" 1.000000 ""
1038   0
1039   "line_4529" "secdd 'LEGGETT_230.00' 'PLAINS_END_230.00' '1 ' 1" 1.00 "" "" "" 0
1040   "secdd 70261 70570 '1 ' 1" "open" 1.000000 ""
1041   0
1042   "line_4530" "secdd 'LEYDEN_TP_115.00' 'RIDGE_2_115.00' '1 ' 1" 1.00 "" "" "" 0
1043   "secdd 70262 70226 '1 ' 1" "open" 1.000000 ""
1044   0
1045   "line_4531" "secdd 'LEYDEN_TP_115.00' 'QUAKER_1_115.00' '1 ' 1" 1.00 "" "" "" 0
1046   "secdd 70262 70340 '1 ' 1" "open" 1.000000 ""
1047   0
1048   "line_4532" "secdd 'LITTLET1_115.00' 'WATERTON_115.00' '1 ' 1" 1.00 "" "" "" 0
1049   "secdd 70263 70463 '1 ' 1" "open" 1.000000 ""
1050   0
1051   "line_4533" "secdd 'BLUESTONE_230.00' 'PARACHUTE_230.00' '1 ' 1" 1.00 "" "" "" 0
1052   "secdd 70264 70309 '1 ' 1" "open" 1.000000 ""
1053   0
1054   "line_4534" "secdd 'LOOKOUT_230.00' 'RIDGE_230.00' '1 ' 1" 1.00 "" "" "" 0
1055   "secdd 70266 70355 '1 ' 1" "open" 1.000000 ""
1056   0
1057   "line_4535" "secdd 'LOOKOUT_230.00' 'WEST_PS_230.00' '1 ' 1" 1.00 "" "" "" 0
1058   "secdd 70266 70480 '1 ' 1" "open" 1.000000 ""
1059   0
1060   "line_4536" "secdd 'LOOKOUT_230.00' 'PLAINS_END_230.00' '1 ' 1" 1.00 "" "" "" 0
1061   "secdd 70266 70570 '1 ' 1" "open" 1.000000 ""
1062   0
1063   "line_4537" "secdd 'LOOKOUT_230.00' 'PLAINS_END_230.00' '2 ' 1" 1.00 "" "" "" 0
1064   "secdd 70266 70570 '2 ' 1" "open" 1.000000 ""
1065   0
1066   "line_4538" "secdd 'HOPKINS_69.00' 'ROARNGFK_69.00' '1 ' 1" 1.00 "" "" "" 0
1067   "secdd 70267 70363 '1 ' 1" "open" 1.000000 ""
1068   0
1069   "line_4539" "secdd 'ADOBE_230.00' 'UINTAH_230.00' '1 ' 1" 1.00 "" "" "" 0
1070   "secdd 70268 70438 '1 ' 1" "open" 1.000000 ""
1071   0
1072   "line_4540" "secdd 'LOUISVILLE_115.00' 'VALMONT_1_115.00' '1 ' 1" 1.00 "" "" "" 0
1073   "secdd 70269 70444 '1 ' 1" "open" 1.000000 ""
1074   0
1075   "line_4541" "secdd 'LS_ANMAS_69.00' 'PHLPS_TP_69.00' '1 ' 1" 1.00 "" "" "" 0
1076   "secdd 70271 70320 '1 ' 1" "open" 1.000000 ""
1077   0
1078   "line_4542" "secdd 'LUDLOTAP_115.00' 'WALSENBG_115.00' '1 ' 1" 1.00 "" "" "" 0
1079   "secdd 70272 70458 '1 ' 1" "open" 1.000000 ""
1080   0
1081   "line_4543" "secdd 'MALTA_115.00' 'TWN_LAK_TP_115.00' '1 ' 1" 1.00 "" "" "" 0
1082   "secdd 70273 70435 '1 ' 1" "open" 1.000000 ""
1083   0
1084   "line_4544" "secdd 'MALTA_230.00' 'HARTSEL_230.00' '1 ' 1" 1.00 "" "" "" 0
1085   "secdd 70274 70927 '1 ' 1" "open" 1.000000 ""
1086   0
1087   "line_4545" "secdd 'MALTA_230.00' 'BASALT_230.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70274 79004 '1 ' 1" "open" 1.000000 ""
0
"line_4546" "secdd 'MALTA_230.00' 'MT.ELBRT_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70274 73138 '1 ' 1" "open" 1.000000 ""
0
"line_4547" "secdd 'MANZANOL_69.00' 'ORDWAY_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70275 70303 '1 ' 1" "open" 1.000000 ""
0
"line_4548" "secdd 'MANZANOL_69.00' 'ROCKYFRD_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70275 70366 '1 ' 1" "open" 1.000000 ""
0
"line_4549" "secdd 'MAPLETO2_115.00' 'SANDOWN_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70277 70377 '1 ' 1" "open" 1.000000 ""
0
"line_4550" "secdd 'MARTIN_1_115.00' 'MARTIN_2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70279 70280 '1 ' 1" "open" 1.000000 ""
0
"line_4551" "secdd 'MARTIN_1_115.00' 'WATERTON_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70279 70463 '1 ' 1" "open" 1.000000 ""
0
"line_4552" "secdd 'MARTIN_2_115.00' 'MARTIN_TP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70280 70484 '1 ' 1" "open" 1.000000 ""
0
"line_4553" "secdd 'MAYFLOWER_115.00' 'SUMTAP2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70281 70421 '1 ' 1" "open" 1.000000 ""
0
"line_4554" "secdd 'MEADOW_HLS_230.00' 'ORCHARD_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70283 70313 '1 ' 1" "open" 1.000000 ""
0
"line_4555" "secdd 'MEADOW_HLS_230.00' 'SMOKY_HL_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70283 70396 '1 ' 1" "open" 1.000000 ""
0
"line_4556" "secdd 'SURREY_RG_230.00' 'LEMON_GLCH_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70284 70533 '1 ' 1" "open" 1.000000 ""
0
"line_4557" "secdd 'MIDWAY_PS_115.00' 'NTHRIDGE_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70285 70301 '1 ' 1" "open" 1.000000 ""
0
"line_4558" "secdd 'MIDWAY_PS_115.00' 'W.STATON_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70285 70456 '1 ' 1" "open" 1.000000 ""
0
"line_4559" "secdd 'MIDWAY_PS_230.00' 'MIRASOL_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70286 70652 '1 ' 1" "open" 1.000000 ""
0
"line_4560" "secdd 'MIDWAY_PS_230.00' 'MIDWAYBR_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70286 73413 '1 ' 1" "open" 1.000000 ""
0
"line_4561" "secdd 'MIDWAY_PS_230.00' 'FULLER_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70286 73477 '1 ' 1" "open" 1.000000 ""
0
"line_4562" "secdd 'MILL_115.00' 'PORTAL_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70287 70328 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4563"   "secdd 'MILL_115.00' 'FRASER_115.00' '1 '  1"   1.00  ""   ""   ""   ""
0
 "secdd 70287 73296 '1 '  1"   "open"   1.000000  ""
0
"line_4564"   "secdd 'MOFFAT_69.00' 'MOSCA_69.00' '1 '  1"   1.00  ""   ""   ""   ""
0
 "secdd 70289 70292 '1 '  1"   "open"   1.000000  ""
0
"line_4565"   "secdd 'MOFFAT_69.00' 'MIRGEJCT_69.00' '1 '  1"   1.00  ""   ""   ""   ""   0
 "secdd 70289 70505 '1 '  1"   "open"   1.000000  ""
0
"line_4566"   "secdd 'MONFORT_115.00' 'LEPRINO_TP_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70290 70116 '1 '  1"   "open"   1.000000  ""
0
"line_4567"   "secdd 'MONFORT_115.00' 'DCPL_TP_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70290 70897 '1 '  1"   "open"   1.000000  ""
0
"line_4568"   "secdd 'MOSCA_69.00' 'SANLSVLY_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70292 70376 '1 '  1"   "open"   1.000000  ""
0
"line_4569"   "secdd 'NCANON_69.00' 'NCANON_W_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70293 70294 '1 '  1"   "open"   1.000000  ""
0
"line_4570"   "secdd 'NCANON_W_69.00' 'VICTOR_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70294 70451 '1 '  1"   "open"   1.000000  ""
0
"line_4571"   "secdd 'NCANON_W_69.00' 'HOGBACK69_69.00' '2 '  1"   1.00  ""   ""   ""   0
 "secdd 70294 71026 '2 '  1"   "open"   1.000000  ""
0
"line_4572"   "secdd 'NEW_CASTLE_69.00' 'SILT_USBR_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70296 70388 '1 '  1"   "open"   1.000000  ""
0
"line_4573"   "secdd 'NIWOT_230.00' 'ISABELLE_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70297 70544 '1 '  1"   "open"   1.000000  ""
0
"line_4574"   "secdd 'NORTH_PS_115.00' 'SANDOWN_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70298 70377 '1 '  1"   "open"   1.000000  ""
0
"line_4575"   "secdd 'STKGULCH_230.00' 'PARACHUTE_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70299 70309 '1 '  1"   "open"   1.000000  ""
0
"line_4576"   "secdd 'PLAINVW_TP_115.00' 'NREL_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70300 70170 '1 '  1"   "open"   1.000000  ""
0
"line_4577"   "secdd 'PLAINVW_TP_115.00' 'LEYDEN_TP_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70300 70262 '1 '  1"   "open"   1.000000  ""
0
"line_4578"   "secdd 'PLAINVW_TP_115.00' 'PLAINVW_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70300 70322 '1 '  1"   "open"   1.000000  ""
0
"line_4579"   "secdd 'OIL_SHALE_69.00' 'RIFLE_UTE_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70302 70359 '1 '  1"   "open"   1.000000  ""
0
```

```
"line_4580"    "secdd 'OTERO_TP_115.00' 'TWN_LAK_TP_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70304 70435 '1 '  1"    "open"    1.000000  ""
0
"line_4581"    "secdd 'PP_MINE_69.00' 'VICTOR_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70306 70451 '1 '  1"    "open"    1.000000  ""
0
"line_4582"    "secdd 'PALMER_LK_115.00' 'FOXRUN_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70308 73414 '1 '  1"    "open"    1.000000  ""
0
"line_4583"    "secdd 'PARACHUTE_230.00' 'WHEELER_PS_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70309 70356 '1 '  1"    "open"    1.000000  ""
0
"line_4584"    "secdd 'PARACHUTE_230.00' 'RIFLE_PS_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70309 70358 '1 '  1"    "open"    1.000000  ""
0
"line_4585"    "secdd 'PARACHUTE_230.00' 'RIFLE_UTE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70309 79057 '1 '  1"    "open"    1.000000  ""
0
"line_4586"    "secdd 'PAWNEE_230.00' 'MANCHIEF_NG_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
0
"line_4587"    "secdd 'PAWNEE_230.00' 'BRICKCTR_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
0
"line_4588"    "secdd 'PAWNEE_230.00' 'MISS_SITE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
0
"line_4589"    "secdd 'RAY_LEWI_115.00' 'PONCHA_E_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70312 70327 '1 '  1"    "open"    1.000000  ""
0
"line_4590"    "secdd 'PDA_69.00' 'PDA_TAP_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70316 70317 '1 '  1"    "open"    1.000000  ""
0
"line_4591"    "secdd 'PDA_TAP_69.00' 'ST.CHAS._69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70317 70405 '1 '  1"    "open"    1.000000  ""
0
"line_4592"    "secdd 'PENROSE_69.00' 'PORTLAND_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70318 70329 '1 '  1"    "open"    1.000000  ""
0
"line_4593"    "secdd 'PHILLIPS_69.00' 'PHLPS_TP_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70319 70320 '1 '  1"    "open"    1.000000  ""
0
"line_4594"    "secdd 'PLAZA_69.00' 'SFORK_SL_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70325 70383 '1 '  1"    "open"    1.000000  ""
0
"line_4595"    "secdd 'PONCHA_69.00' 'MEARSJCT_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70326 70507 '1 '  1"    "open"    1.000000  ""
0
"line_4596"    "secdd 'PONCHA_E_115.00' 'SARGENT_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70327 70379 '1 '  1"    "open"    1.000000  ""
0
"line_4597"    "secdd 'PONCHA_E_115.00' 'N.GUNNSN_115.00' '1 '  1"    1.00  ""    ""    ""    0
```

```
1244    "secdd 70327 79196 '1 ' 1"    "open"    1.000000    ""
1245    0
1246    "line_4598"    "secdd 'PORTLAND_115.00' 'SKALA_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1247    "secdd 70330 70390 '1 ' 1"    "open"    1.000000    ""
1248    0
1249    "line_4599"    "secdd 'PORTLAND_115.00' 'W.STATON_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1250    "secdd 70330 70456 '1 ' 1"    "open"    1.000000    ""
1251    0
1252    "line_4600"    "secdd 'PORTLAND_115.00' 'W.STATON_115.00' '2 ' 1"    1.00    ""    ""
        ""    0
1253    "secdd 70330 70456 '2 ' 1"    "open"    1.000000    ""
1254    0
1255    "line_4601"    "secdd 'PRAIRIE_69.00' 'SUNSETPK_69.00' '1 ' 1"    1.00    ""    ""
        ""    0
1256    "secdd 70332 70422 '1 ' 1"    "open"    1.000000    ""
1257    0
1258    "line_4602"    "secdd 'PUEB_W_115.00' 'PUEB_TP_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1259    "secdd 70335 70336 '1 ' 1"    "open"    1.000000    ""
1260    0
1261    "line_4603"    "secdd 'PUEB_TP_115.00' 'STMBEACH_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1262    "secdd 70336 70412 '1 ' 1"    "open"    1.000000    ""
1263    0
1264    "line_4604"    "secdd 'PUEB_TP_115.00' 'W.STATON_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1265    "secdd 70336 70456 '1 ' 1"    "open"    1.000000    ""
1266    0
1267    "line_4605"    "secdd 'PUEBPLNT_69.00' 'W.STATON_69.00' '1 ' 1"    1.00    ""    ""
        ""    0
1268    "secdd 70338 70455 '1 ' 1"    "open"    1.000000    ""
1269    0
1270    "line_4606"    "secdd 'PUEBPLNT_115.00' 'READER_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1271    "secdd 70339 70352 '1 ' 1"    "open"    1.000000    ""
1272    0
1273    "line_4607"    "secdd 'QUAKER_1_115.00' 'QUAKER_2_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1274    "secdd 70340 70341 '1 ' 1"    "open"    1.000000    ""
1275    0
1276    "line_4608"    "secdd 'QUAKER_2_115.00' 'QUAKER_TP_115.00' '1 ' 1"    1.00    ""
        ""    ""    0
1277    "secdd 70341 70342 '1 ' 1"    "open"    1.000000    ""
1278    0
1279    "line_4609"    "secdd 'QUINCY_230.00' 'SMOKY_HL_230.00' '1 ' 1"    1.00    ""    ""
        ""    0
1280    "secdd 70343 70396 '1 ' 1"    "open"    1.000000    ""
1281    0
1282    "line_4610"    "secdd 'QUINCY_230.00' 'BRICKCTR_230.00' '1 ' 1"    1.00    ""    ""
        ""    0
1283    "secdd 70343 70545 '1 ' 1"    "open"    1.000000    ""
1284    0
1285    "line_4611"    "secdd 'RALSTON1_115.00' 'RIDGE_2_115.00' '1 ' 1"    1.00    ""    ""
        ""    0
1286    "secdd 70345 70226 '1 ' 1"    "open"    1.000000    ""
1287    0
1288    "line_4612"    "secdd 'RALSTON1_115.00' 'VALMONT_2_115.00' '1 ' 1"    1.00    ""
        ""    ""    0
1289    "secdd 70345 70440 '1 ' 1"    "open"    1.000000    ""
1290    0
1291    "line_4613"    "secdd 'RALSTON2_115.00' 'RIDGE_1_115.00' '2 ' 1"    1.00    ""    ""
        ""    0
1292    "secdd 70346 70354 '2 ' 1"    "open"    1.000000    ""
1293    0
1294    "line_4614"    "secdd 'RAMON_115.00' 'PLAZA_115.00' '1 ' 1"    1.00    ""    ""    ""
        0
1295    "secdd 70347 70658 '1 ' 1"    "open"    1.000000    ""
```

```
0
"line_4615"   "secdd 'RAMON_69.00' 'SFORK_SL_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70348 70383 '1 '  1"   "open"   1.000000  ""
0
"line_4616"   "secdd 'RAMON_69.00' 'SFORK_TP_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70348 70655 '1 '  1"   "open"   1.000000  ""
0
"line_4617"   "secdd 'READER_115.00' 'APT_MEM_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70352 70549 '1 '  1"   "open"   1.000000  ""
0
"line_4618"   "secdd 'READER_115.00' 'RTLSNAKEB_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70352 71006 '1 '  1"   "open"   1.000000  ""
0
"line_4619"   "secdd 'RIDGE_230.00' 'RUSSELL_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70355 70369 '1 '  1"   "open"   1.000000  ""
0
"line_4620"   "secdd 'WHEELER_PS_230.00' 'CAERUS_S1_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70356 70430 '1 '  1"   "open"   1.000000  ""
0
"line_4621"   "secdd 'MIDDLE_FORK_230.00' 'CAERUS_S1_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70357 70430 '1 '  1"   "open"   1.000000  ""
0
"line_4622"   "secdd 'RIFLE_PS_230.00' 'RIFLE WA_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70358 79059 '1 '  1"   "open"   1.000000  ""
0
"line_4623"   "secdd 'RIFLE_PS_230.00' 'RIFLE WA_230.00' '2 '  1"   1.00  ""   ""   ""   0
 "secdd 70358 79059 '2 '  1"   "open"   1.000000  ""
0
"line_4624"   "secdd 'RIFLE_PS_230.00' 'AMATLAS_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70358 79250 '1 '  1"   "open"   1.000000  ""
0
"line_4625"   "secdd 'RIFLE_UTE_69.00' 'SILT_USBR_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70359 70388 '1 '  1"   "open"   1.000000  ""
0
"line_4626"   "secdd 'RIOGRAND_69.00' 'RIOGRD_TP_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70360 70361 '1 '  1"   "open"   1.000000  ""
0
"line_4627"   "secdd 'RIOGRD_TP_69.00' 'SARGENT_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70361 70380 '1 '  1"   "open"   1.000000  ""
0
"line_4628"   "secdd 'RIVERDALE_230.00' 'HENRYLAK_230.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70362 70605 '1 '  1"   "open"   1.000000  ""
0
"line_4629"   "secdd 'ROCKYFRD_69.00' 'S_FWL_TP_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70366 70372 '1 '  1"   "open"   1.000000  ""
0
"line_4630"   "secdd 'ROMEO_69.00' 'ROMEO_TAP_69.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70367 70552 '1 '  1"   "open"   1.000000  ""
0
"line_4631"   "secdd 'ROSEDALE_115.00' 'LEPRINO_TP_115.00' '1 '  1"   1.00  ""   ""   ""   0
 "secdd 70368 70116 '1 '  1"   "open"   1.000000  ""
0
```

```
"line_4632"   "secdd 'ROSEDALE_115.00' 'ARROWHLK_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70368 70475 '1 '  1"   "open"    1.000000  ""
0
"line_4633"   "secdd 'ROSEDALE_115.00' 'KERSEY W_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70368 73055 '1 '  1"   "open"    1.000000  ""
0
"line_4634"   "secdd 'ROSEDALE_115.00' 'BOOMERNG_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70368 73554 '1 '  1"   "open"    1.000000  ""
0
"line_4635"   "secdd 'S_CANON_69.00' 'S_CAN.W_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70370 70371 '1 '  1"   "open"    1.000000  ""
0
"line_4636"   "secdd 'S_CAN.W_69.00' 'OAKCRK_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70371 71031 '1 '  1"   "open"    1.000000  ""
0
"line_4637"   "secdd 'S.ACACIO_115.00' 'STOCKADE_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70373 70414 '1 '  1"   "open"    1.000000  ""
0
"line_4638"   "secdd 'SANLSVLY_115.00' 'SARGENT_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70374 70379 '1 '  1"   "open"    1.000000  ""
0
"line_4639"   "secdd 'SANLSVLY_115.00' 'STANLEY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70374 70411 '1 '  1"   "open"    1.000000  ""
0
"line_4640"   "secdd 'SANLSVLY_115.00' 'WAVERLY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70374 70467 '1 '  1"   "open"    1.000000  ""
0
"line_4641"   "secdd 'SANLSVLY_115.00' 'BLANCA_PEAK_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70374 70937 '1 '  1"   "open"    1.000000  ""
0
"line_4642"   "secdd 'SANLSVLY_230.00' 'PONCHABR_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70375 79054 '1 '  1"   "open"    1.000000  ""
0
"line_4643"   "secdd 'AREQUGCH_115.00' 'W.CANON_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70378 70550 '1 '  1"   "open"    1.000000  ""
0
"line_4644"   "secdd 'SEDALIA_CR_115.00' 'ROXBOROU_CR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70381 70522 '1 '  1"   "open"    1.000000  ""
0
"line_4645"   "secdd 'SFORK_SL_69.00' 'SFORK_TP_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70383 70655 '1 '  1"   "open"    1.000000  ""
0
"line_4646"   "secdd 'SKINNER_69.00' 'OAKCRK_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70391 71031 '1 '  1"   "open"    1.000000  ""
0
"line_4647"   "secdd 'SKYRANCH_230.00' 'SPRUCE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70392 70528 '1 '  1"   "open"    1.000000  ""
0
"line_4648"   "secdd 'PONCHA_PS_230.00' 'PONCHABR_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70393 79054 '1 '  1"   "open"    1.000000  ""
0
"line_4649"   "secdd 'SMELTER_115.00' 'W.CANON_115.00' '1 '  1"    1.00  ""    ""
```

```
      "" 0
1400   "secdd 70394 70550 '1 ' 1" "open" 1.000000 ""
1401   0
1402   "line_4650" "secdd 'SMOKY_HL_N_115.00' 'STRASBRG_CR_115.00' '1 ' 1" 1.00 ""
       "" "" 0
1403   "secdd 70395 70416 '1 ' 1" "open" 1.000000 ""
1404   0
1405   "line_4651" "secdd 'SMOKY_HL_230.00' 'SPRUCE_230.00' '1 ' 1" 1.00 "" ""
       "" 0
1406   "secdd 70396 70528 '1 ' 1" "open" 1.000000 ""
1407   0
1408   "line_4652" "secdd 'SMOKY_HL_230.00' 'POWHATON_230.00' '1 ' 1" 1.00 "" ""
       "" 0
1409   "secdd 70396 70532 '1 ' 1" "open" 1.000000 ""
1410   0
1411   "line_4653" "secdd 'SMOKY_HL_230.00' 'MURPHY_230.00' '1 ' 1" 1.00 "" ""
       "" 0
1412   "secdd 70396 70551 '1 ' 1" "open" 1.000000 ""
1413   0
1414   "line_4654" "secdd 'SMOKY_HL_230.00' 'HARVEST_MI_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1415   "secdd 70396 70596 '1 ' 1" "open" 1.000000 ""
1416   0
1417   "line_4655" "secdd 'BEAVER_CK_S_115.00' 'BEAVER_CK_N_115.00' '1 ' 1" 1.00 ""
       "" "" 0
1418   "secdd 70397 70398 '1 ' 1" "open" 1.000000 ""
1419   0
1420   "line_4656" "secdd 'BEAVER_CK_S_115.00' 'BEAVERCK_115.00' '1 ' 1" 1.00 ""
       "" "" 0
1421   "secdd 70397 73020 '1 ' 1" "open" 1.000000 ""
1422   0
1423   "line_4657" "secdd 'BEAVER_CK_P_230.00' 'STORY_230.00' '1 ' 1" 1.00 "" ""
       "" 0
1424   "secdd 70399 73192 '1 ' 1" "open" 1.000000 ""
1425   0
1426   "line_4658" "secdd 'SODA_LAKES_115.00' 'TINY_TWN_CR_115.00' '1 ' 1" 1.00 ""
       "" "" 0
1427   "secdd 70400 70429 '1 ' 1" "open" 1.000000 ""
1428   0
1429   "line_4659" "secdd 'SOUTH_115.00' 'AIR_LIQ_TP_115.00' '1 ' 1" 1.00 "" ""
       "" 0
1430   "secdd 70402 70531 '1 ' 1" "open" 1.000000 ""
1431   0
1432   "line_4660" "secdd 'FT_ST_VRAIN_230.00' 'WELD_PS_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1433   "secdd 70410 70471 '1 ' 1" "open" 1.000000 ""
1434   0
1435   "line_4661" "secdd 'FT_ST_VRAIN_230.00' 'WINDSOR_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1436   "secdd 70410 70474 '1 ' 1" "open" 1.000000 ""
1437   0
1438   "line_4662" "secdd 'FT_ST_VRAIN_230.00' 'ISABELLE_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1439   "secdd 70410 70544 '1 ' 1" "open" 1.000000 ""
1440   0
1441   "line_4663" "secdd 'FT_ST_VRAIN_230.00' 'SPINDLE_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1442   "secdd 70410 70592 '1 ' 1" "open" 1.000000 ""
1443   0
1444   "line_4664" "secdd 'FT_ST_VRAIN_230.00' 'KEENESBURG_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1445   "secdd 70410 70820 '1 ' 1" "open" 1.000000 ""
1446   0
1447   "line_4665" "secdd 'FT_ST_VRAIN_230.00' 'LONGPEAK_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1448   "secdd 70410 78105 '1 ' 1" "open" 1.000000 ""
1449   0
1450   "line_4666" "secdd 'FT_ST_VRAIN_230.00' 'FORDHAM_230.00' '1 ' 1" 1.00 ""
       "" "" 0
```

```
 "secdd 70410 78120 '1 ' 1" "open" 1.000000 ""
0
"line_4667" "secdd 'STANLEY_115.00' 'PLAZA_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70411 70658 '1 ' 1" "open" 1.000000 ""
0
"line_4668" "secdd 'STMBEACH_115.00' 'WALSENBG_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70412 70458 '1 ' 1" "open" 1.000000 ""
0
"line_4669" "secdd 'STMBEACH_69.00' 'WALSENBG_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70413 70457 '1 ' 1" "open" 1.000000 ""
0
"line_4670" "secdd 'STOCKADE_115.00' 'WAVERLY_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70414 70467 '1 ' 1" "open" 1.000000 ""
0
"line_4671" "secdd 'STONMOOR_69.00' 'SUNSETPK_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70415 70422 '1 ' 1" "open" 1.000000 ""
0
"line_4672" "secdd 'STONMOOR_69.00' 'W.STATON_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70415 70455 '1 ' 1" "open" 1.000000 ""
0
"line_4673" "secdd 'STRASBRG_CR_115.00' 'STRAS_DT_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70416 71517 '1 ' 1" "open" 1.000000 ""
0
"line_4674" "secdd 'STRASBRG_CR_115.00' 'DEER_TRL_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70416 71512 '1 ' 1" "open" 1.000000 ""
0
"line_4675" "secdd 'SULLIVAN_1_230.00' 'TECH_CENTER_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70417 70428 '1 ' 1" "open" 1.000000 ""
0
"line_4676" "secdd 'SULLIVAN_1_230.00' 'JEWELL1_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70417 70512 '1 ' 1" "open" 1.000000 ""
0
"line_4677" "secdd 'SUMMIT1_115.00' 'SUMMIT2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70418 70420 '1 ' 1" "open" 1.000000 ""
0
"line_4678" "secdd 'LAKE_GEORGE_115.00' 'TARRYALL_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70419 70426 '1 ' 1" "open" 1.000000 ""
0
"line_4679" "secdd 'SUMMIT2_115.00' 'SUMTAP2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70420 70421 '1 ' 1" "open" 1.000000 ""
0
"line_4680" "secdd 'BOULDER_CN1_115.00' 'BOULDER_CN2_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70423 70058 '1 ' 1" "open" 1.000000 ""
0
"line_4681" "secdd 'BOULDER_CN1_115.00' 'BOULDER_CN2_115.00' '2 ' 1" 1.00 "" "" "" 0
 "secdd 70423 70058 '2 ' 1" "open" 1.000000 ""
0
"line_4682" "secdd 'BOULDER_CN1_115.00' 'NCAR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70423 70295 '1 ' 1" "open" 1.000000 ""
0
"line_4683" "secdd 'T.BUTTES_69.00' 'WALSH_69.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70425 70460 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4684"    "secdd 'TARRYALL_230.00' 'WATERTON_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70427 70464 '1 '  1"    "open"    1.000000  ""
0
"line_4685"    "secdd 'TARRYALL_230.00' 'HARTSEL_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70427 70927 '1 '  1"    "open"    1.000000  ""
0
"line_4686"    "secdd 'TOWER_230.00' 'PICADILLY_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70432 70530 '1 '  1"    "open"    1.000000  ""
0
"line_4687"    "secdd 'TOWER_230.00' 'CHAMBERS_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70432 70539 '1 '  1"    "open"    1.000000  ""
0
"line_4688"    "secdd 'TWNLAKES_115.00' 'TWN_LAK_TP_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70434 70435 '1 '  1"    "open"    1.000000  ""
0
"line_4689"    "secdd 'VALMONT_230.00' 'SIMMS_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70447 70543 '1 '  1"    "open"    1.000000  ""
0
"line_4690"    "secdd 'VALMONT_230.00' 'SPINDLE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70447 70592 '1 '  1"    "open"    1.000000  ""
0
"line_4691"    "secdd 'DESRTCOV_115.00' 'W.STATON_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70449 70456 '1 '  1"    "open"    1.000000  ""
0
"line_4692"    "secdd 'VASQUEZ_115.00' 'ANADARKO_T_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70450 70219 '1 '  1"    "open"    1.000000  ""
0
"line_4693"    "secdd 'W.STATON_115.00' 'PUEBRESVR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70456 71022 '1 '  1"    "open"    1.000000  ""
0
"line_4694"    "secdd 'W.STATON_115.00' 'PUEBLO_W_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70456 71023 '1 '  1"    "open"    1.000000  ""
0
"line_4695"    "secdd 'WALSENBG_230.00' 'VALENT_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70459 70990 '1 '  1"    "open"    1.000000  ""
0
"line_4696"    "secdd 'WASHINGTON_230.00' 'JLGREEN_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70461 70529 '1 '  1"    "open"    1.000000  ""
0
"line_4697"    "secdd 'WATERTON_115.00' 'MARTIN_TP_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70463 70484 '1 '  1"    "open"    1.000000  ""
0
"line_4698"    "secdd 'WATERTON_230.00' 'WATE_DST_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70464 70959 '1 '  1"    "open"    1.000000  ""
0
"line_4699"    "secdd 'MIDWAY_PS_345.00' 'WATERTON_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70465 70466 '1 '  1"    "open"    1.000000  ""
0
"line_4700"    "secdd 'WAVERLY_115.00' 'CARMEL_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70467 70656 '1 '  1"    "open"    1.000000  ""
0
```

```
"line_4701"    "secdd 'SPINDLE_NG_230.00' 'SPINDLE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70468 70592 '1 '  1"    "open"    1.000000  ""
0
"line_4702"    "secdd 'WELD_PS_115.00' 'ARROWHLK_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70470 70475 '1 '  1"    "open"    1.000000  ""
0
"line_4703"    "secdd 'WELD_PS_115.00' 'WELD  LM_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70470 73211 '1 '  1"    "open"    1.000000  ""
0
"line_4704"    "secdd 'WELD_PS_230.00' 'WELD  LM_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70471 73212 '1 '  1"    "open"    1.000000  ""
0
"line_4705"    "secdd 'WOODLAND_PK_115.00' 'FORESTLK_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70476 73476 '1 '  1"    "open"    1.000000  ""
0
"line_4706"    "secdd 'MONACO_12_230.00' 'SULLIVAN_2_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70481 70365 '1 '  1"    "open"    1.000000  ""
0
"line_4707"    "secdd 'JMSHAFER_230.00' 'GREENHSE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70488 72029 '1 '  1"    "open"    1.000000  ""
0
"line_4708"    "secdd 'HIGH_PT_230.00' 'SPRUCE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000  ""
0
"line_4709"    "secdd 'PIONER_CR_115.00' 'VICTORY_CR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70503 70510 '1 '  1"    "open"    1.000000  ""
0
"line_4710"    "secdd 'MIRGEJCT_69.00' 'SAGUACHE_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70505 70506 '1 '  1"    "open"    1.000000  ""
0
"line_4711"    "secdd 'MIRGEJCT_69.00' 'VILLA_GROVE_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70505 70508 '1 '  1"    "open"    1.000000  ""
0
"line_4712"    "secdd 'MEARSJCT_69.00' 'OXCART_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70507 70600 '1 '  1"    "open"    1.000000  ""
0
"line_4713"    "secdd 'VILLA_GROVE_69.00' 'KERBERCK_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70508 70509 '1 '  1"    "open"    1.000000  ""
0
"line_4714"    "secdd 'VILLA_GROVE_69.00' 'OXCART_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70508 70600 '1 '  1"    "open"    1.000000  ""
0
"line_4715"    "secdd 'ATER_TAP_69.00' 'ROMEO_TAP_69.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70511 70552 '1 '  1"    "open"    1.000000  ""
0
"line_4716"    "secdd 'HOMESTEAD_230.00' 'SULPHUR_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70513 70524 '1 '  1"    "open"    1.000000  ""
0
"line_4717"    "secdd 'HOMESTEAD_230.00' 'MURPHY_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70513 70551 '1 '  1"    "open"    1.000000  ""
0
"line_4718"    "secdd 'PLUM_CK_CR_115.00' 'SEDALIA_CR_115.00' '1 '  1"    1.00  ""
```

```
      "" "" 0
1607  "secdd 70514 70381 '1 ' 1" "open" 1.000000 ""
1608  0
1609  "line_4719" "secdd 'DAVIDSON_CR_115.00' 'PONDERSA_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
1610  "secdd 70515 70516 '1 ' 1" "open" 1.000000 ""
1611  0
1612  "line_4720" "secdd 'PONDERSA_CR_115.00' 'GRAND_VW_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
1613  "secdd 70516 70581 '1 ' 1" "open" 1.000000 ""
1614  0
1615  "line_4721" "secdd 'PARKER_CR_115.00' 'BAYOU_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
1616  "secdd 70517 70518 '1 ' 1" "open" 1.000000 ""
1617  0
1618  "line_4722" "secdd 'PARKER_CR_115.00' 'SULPHUR_115.00' '1 ' 1" 1.00 "" "" "" 0
1619  "secdd 70517 70523 '1 ' 1" "open" 1.000000 ""
1620  0
1621  "line_4723" "secdd 'PARKER_CR_115.00' 'SULPHUR_115.00' '2 ' 1" 1.00 "" "" "" 0
1622  "secdd 70517 70523 '2 ' 1" "open" 1.000000 ""
1623  0
1624  "line_4724" "secdd 'BAYOU_CR_115.00' 'FRANKTWN_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
1625  "secdd 70518 71506 '1 ' 1" "open" 1.000000 ""
1626  0
1627  "line_4725" "secdd 'WOLFSBRG_CR_115.00' 'MEADOWS_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
1628  "secdd 70519 70575 '1 ' 1" "open" 1.000000 ""
1629  0
1630  "line_4726" "secdd 'PEAKVIEW_CR_115.00' 'DAVIDSON_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
1631  "secdd 70521 70515 '1 ' 1" "open" 1.000000 ""
1632  0
1633  "line_4727" "secdd 'ROXBOROU_CR_115.00' 'WATERTON_115.00' '1 ' 1" 1.00 "" "" "" 0
1634  "secdd 70522 70463 '1 ' 1" "open" 1.000000 ""
1635  0
1636  "line_4728" "secdd 'SULPHUR_230.00' 'LEMON_GLCH_230.00' '1 ' 1" 1.00 "" "" "" 0
1637  "secdd 70524 70533 '1 ' 1" "open" 1.000000 ""
1638  0
1639  "line_4729" "secdd 'MT_HARRIS_138.00' 'HAYDEN_138.00' '1 ' 1" 1.00 "" "" "" 0
1640  "secdd 70525 79038 '1 ' 1" "open" 1.000000 ""
1641  0
1642  "line_4730" "secdd 'IMBODEN_230.00' 'HIGH_PT_230.00' '1 ' 1" 1.00 "" "" "" 0
1643  "secdd 70526 70497 '1 ' 1" "open" 1.000000 ""
1644  0
1645  "line_4731" "secdd 'SPRUCE_230.00' 'PICADILLY_230.00' '1 ' 1" 1.00 "" "" "" 0
1646  "secdd 70528 70530 '1 ' 1" "open" 1.000000 ""
1647  0
1648  "line_4732" "secdd 'SPRUCE_230.00' 'POWHATON_230.00' '1 ' 1" 1.00 "" "" "" 0
1649  "secdd 70528 70532 '1 ' 1" "open" 1.000000 ""
1650  0
1651  "line_4733" "secdd 'BERTHOUD_115.00' 'GATEWY_115.00' '1 ' 1" 1.00 "" "" "" 0
1652  "secdd 70534 72191 '1 ' 1" "open" 1.000000 ""
1653  0
1654  "line_4734" "secdd 'BERTHOUD_115.00' 'LONETREE_115.00' '1 ' 1" 1.00 "" "" "" 0
1655  "secdd 70534 73114 '1 ' 1" "open" 1.000000 ""
1656  0
1657  "line_4735" "secdd 'COOLEYMA_230.00' 'BASALT_230.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70535 79004 '1 ' 1" "open" 1.000000 ""
0
"line_4736" "secdd 'COOLEYMA_230.00' 'WOLCOTT_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70535 79069 '1 ' 1" "open" 1.000000 ""
0
"line_4737" "secdd 'FITZ_SIMONS_115.00' 'CHAMBERS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70537 70538 '1 ' 1" "open" 1.000000 ""
0
"line_4738" "secdd 'CHAMBERS_230.00' 'KESTREL_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70539 70536 '1 ' 1" "open" 1.000000 ""
0
"line_4739" "secdd 'BASALT_DST_115.00' 'SNOWMASS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70540 70542 '1 ' 1" "open" 1.000000 ""
0
"line_4740" "secdd 'BASALT_DST_115.00' 'BASALT_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70540 79003 '1 ' 1" "open" 1.000000 ""
0
"line_4741" "secdd 'ASPEN_PS_115.00' 'SNOWMASS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70541 70542 '1 ' 1" "open" 1.000000 ""
0
"line_4742" "secdd 'ASPEN_PS_115.00' 'BASALT_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70541 79003 '1 ' 1" "open" 1.000000 ""
0
"line_4743" "secdd 'SIMMS_230.00' 'MOONGLCH_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70543 70574 '1 ' 1" "open" 1.000000 ""
0
"line_4744" "secdd 'BRICK_CT_CR_115.00' 'PIONER_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70546 70503 '1 ' 1" "open" 1.000000 ""
0
"line_4745" "secdd 'BRICK_CT_CR_115.00' 'SPRG_VA_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70546 71505 '1 ' 1" "open" 1.000000 ""
0
"line_4746" "secdd 'BENNETT_CR_115.00' 'VICTORY_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70547 70510 '1 ' 1" "open" 1.000000 ""
0
"line_4747" "secdd 'W.CANON_115.00' 'HOGBACK115_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70550 71025 '1 ' 1" "open" 1.000000 ""
0
"line_4748" "secdd 'PINR_S_2_CR_34.50' 'PINR_S_1_CR_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70555 70559 '1 ' 1" "open" 1.000000 ""
0
"line_4749" "secdd 'PLAINS_END_230.00' 'PLAINS_NG2_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70570 70433 '1 ' 1" "open" 1.000000 ""
0
"line_4750" "secdd 'PLAINS_END_230.00' 'MOONGLCH_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70570 70574 '1 ' 1" "open" 1.000000 ""
0
"line_4751" "secdd 'MEADOWS_CR_115.00' 'PLUM_CK_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70575 70514 '1 ' 1" "open" 1.000000 ""
0
"line_4752" "secdd 'COMPARK_CR_115.00' 'PARKER_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70576 70517 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4753"   "secdd 'GRAND_VW_CR_115.00' 'COMPARK_CR_115.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70581 70576 '1 ' 1"   "open"   1.000000  ""
0
"line_4754"   "secdd 'GREENLND_CR_115.00' 'PALMER_LK_115.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70582 70308 '1 ' 1"   "open"   1.000000  ""
0
"line_4755"   "secdd 'GREENLND_CR_115.00' 'CRSTL_VA_CR_115.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70582 70584 '1 ' 1"   "open"   1.000000  ""
0
"line_4756"   "secdd 'ELIZABET_CR_115.00' 'KIOWA_CR_115.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70583 70571 '1 ' 1"   "open"   1.000000  ""
0
"line_4757"   "secdd 'RMEC_230.00' 'KEENESBURG_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70590 70820 '1 ' 1"   "open"   1.000000  ""
0
"line_4758"   "secdd 'FTNVLY_GENS_230.00' 'MIDWAY_PS_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70595 70286 '1 ' 1"   "open"   1.000000  ""
0
"line_4759"   "secdd 'HARVEST_MI_345.00' 'SMOKY_HL_345.00' '2 ' 1"   1.00  ""  ""  ""  0
 "secdd 70597 70599 '2 ' 1"   "open"   1.000000  ""
0
"line_4760"   "secdd 'HARVEST_MI_345.00' 'DANIEL_PK_345.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70597 70601 '1 ' 1"   "open"   1.000000  ""
0
"line_4761"   "secdd 'SMOKY_HL_345.00' 'MISS_SITE_345.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70599 70624 '1 ' 1"   "open"   1.000000  ""
0
"line_4762"   "secdd 'DANIEL_PK_345.00' 'MISS_SITE_345.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70601 70624 '1 ' 1"   "open"   1.000000  ""
0
"line_4763"   "secdd 'DANIEL_PK_345.00' 'TUNDRA_345.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70601 70653 '1 ' 1"   "open"   1.000000  ""
0
"line_4764"   "secdd 'HENRYLAK_230.00' 'GREENHSE_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70605 72029 '1 ' 1"   "open"   1.000000  ""
0
"line_4765"   "secdd 'HENRYLAK_230.00' 'SIPRES_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70605 72201 '1 ' 1"   "open"   1.000000  ""
0
"line_4766"   "secdd 'HENRYLAK_230.00' 'STORY_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70605 73192 '1 ' 1"   "open"   1.000000  ""
0
"line_4767"   "secdd 'SILVSADL_230.00' 'REUNION_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70609 72026 '1 ' 1"   "open"   1.000000  ""
0
"line_4768"   "secdd 'TITAN34.5_34.50' 'TITANS1_34.50' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70620 70617 '1 ' 1"   "open"   1.000000  ""
0
"line_4769"   "secdd 'MISS_SITE_230.00' 'TITAN230_230.00' '1 ' 1"   1.00  ""  ""  ""  0
 "secdd 70623 70618 '1 ' 1"   "open"   1.000000  ""
0
```

```
"line_4770"    "secdd 'MISS_SITE_230.00' 'CEDAR_PT_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70623 70678 '1 '  1"    "open"    1.000000  ""
0
"line_4771"    "secdd 'MISS_SITE_345.00' 'LIMON1_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
0
"line_4772"    "secdd 'MISS_SITE_345.00' 'PRONGHORN_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
0
"line_4773"    "secdd 'MISS_SITE_345.00' 'CANAL_XING_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
0
"line_4774"    "secdd 'MISS_SITE_345.00' 'CANAL_XING_345.00' '2 '  1"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"line_4775"    "secdd 'LIMON1_345.00' 'LIMON2_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70625 70626 '1 '  1"    "open"    1.000000  ""
0
"line_4776"    "secdd 'LIMON2_345.00' 'LIMON3_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70626 70627 '1 '  1"    "open"    1.000000  ""
0
"line_4777"    "secdd 'PRONGHORN_345.00' 'SHORTGRASS_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70628 70630 '1 '  1"    "open"    1.000000  ""
0
"line_4778"    "secdd 'ARRIBA_W1_1_34.50' 'ARRIBA_W1_2_34.50' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70633 70445 '1 '  1"    "open"    1.000000  ""
0
"line_4779"    "secdd 'ARRIBA_W2_1_34.50' 'ARRIBA_W2_2_34.50' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70634 70446 '1 '  1"    "open"    1.000000  ""
0
"line_4780"    "secdd 'MIRASOL_230.00' 'THUNDERWOLF_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70652 70759 '1 '  1"    "open"    1.000000  ""
0
"line_4781"    "secdd 'TUNDRA_345.00' 'COMANCHE_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '1 '  1"    "open"    1.000000  ""
0
"line_4782"    "secdd 'TUNDRA_345.00' 'NEPTUNE_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70653 70754 '1 '  1"    "open"    1.000000  ""
0
"line_4783"    "secdd 'CARMEL_115.00' 'ZINZER_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70656 70657 '1 '  1"    "open"    1.000000  ""
0
"line_4784"    "secdd 'ZINZER_115.00' 'PLAZA_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70657 70658 '1 '  1"    "open"    1.000000  ""
0
"line_4785"    "secdd 'ARRIBA_WF_345.00' 'BRONCO_PLNS_345.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70659 70750 '1 '  1"    "open"    1.000000  ""
0
"line_4786"    "secdd 'GOLDEN_WEST_230.00' 'FULLER_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70660 73477 '1 '  1"    "open"    1.000000  ""
0
"line_4787"    "secdd 'GLDNWST_W_2_34.50' 'GLDNWST_W_1_34.50' '1 '  1"    1.00  ""
```

```
      "" "" 0
1814   "secdd 70661 70662 '1 ' 1" "open" 1.000000 ""
1815   0
1816   "line_4788" "secdd 'CEDRPT_W1_1_34.50' 'CEDRPT_W1_2_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1817   "secdd 70672 70674 '1 ' 1" "open" 1.000000 ""
1818   0
1819   "line_4789" "secdd 'CEDRPT_W2_1_34.50' 'CEDRPT_W2_2_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1820   "secdd 70673 70675 '1 ' 1" "open" 1.000000 ""
1821   0
1822   "line_4790" "secdd 'CEDRPT_W2_3_230.00' 'CEDARPT_GEN_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1823   "secdd 70677 70679 '1 ' 1" "open" 1.000000 ""
1824   0
1825   "line_4791" "secdd 'CEDARPT_GEN_230.00' 'CEDRPT_W1_3_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1826   "secdd 70679 70676 '1 ' 1" "open" 1.000000 ""
1827   0
1828   "line_4792" "secdd 'CEDARPT_GEN_230.00' 'CEDAR_PT_230.00' '1 ' 1" 1.00 ""
       "" "" 0
1829   "secdd 70679 70678 '1 ' 1" "open" 1.000000 ""
1830   0
1831   "line_4793" "secdd 'CO_GRN_230.00' 'TWNBUTTE_230.00' '1 ' 1" 1.00 "" ""
       "" 0
1832   "secdd 70700 70705 '1 ' 1" "open" 1.000000 ""
1833   0
1834   "line_4794" "secdd 'TWNBT1_1_34.50' 'TWNBT1_2_34.50' '1 ' 1" 1.00 "" ""
       "" 0
1835   "secdd 70706 70703 '1 ' 1" "open" 1.000000 ""
1836   0
1837   "line_4795" "secdd 'CO_GRN_E_1_34.50' 'CO_GRN_E_34.50' '1 ' 1" 1.00 "" ""
       "" 0
1838   "secdd 70707 70701 '1 ' 1" "open" 1.000000 ""
1839   0
1840   "line_4796" "secdd 'CO_GRN_W_1_34.50' 'CO_GRN_W_34.50' '1 ' 1" 1.00 "" ""
       "" 0
1841   "secdd 70709 70702 '1 ' 1" "open" 1.000000 ""
1842   0
1843   "line_4797" "secdd 'SPRG_CN2_3_34.50' 'SPRG_CN2_2_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1844   "secdd 70717 70716 '1 ' 1" "open" 1.000000 ""
1845   0
1846   "line_4798" "secdd 'SPRG_CN1_2_34.50' 'SPRG_CN1_3_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1847   "secdd 70720 70719 '1 ' 1" "open" 1.000000 ""
1848   0
1849   "line_4799" "secdd 'RDGCREST_115.00' 'PEETZ_115.00' '1 ' 1" 1.00 "" ""
       "" 0
1850   "secdd 70722 73150 '1 ' 1" "open" 1.000000 ""
1851   0
1852   "line_4800" "secdd 'CHEYRGE_W13_34.50' 'CHEYRGE_W1_1_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1853   "secdd 70731 70732 '1 ' 1" "open" 1.000000 ""
1854   0
1855   "line_4801" "secdd 'CHEYRGE_W13_34.50' 'CHEYRGE_W3_1_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1856   "secdd 70731 70776 '1 ' 1" "open" 1.000000 ""
1857   0
1858   "line_4802" "secdd 'CHEYRGE_W2_2_34.50' 'CHEYRGE_W2_1_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1859   "secdd 70734 70735 '1 ' 1" "open" 1.000000 ""
1860   0
1861   "line_4803" "secdd 'CHEYRGW_W1_2_34.50' 'CHEYRGW_W1_1_34.50' '1 ' 1" 1.00 ""
       "" "" 0
1862   "secdd 70737 70738 '1 ' 1" "open" 1.000000 ""
1863   0
1864   "line_4804" "secdd 'CHEYRGW_W2_2_34.50' 'CHEYRGW_W2_1_34.50' '1 ' 1" 1.00 ""
       "" "" 0
```

```
 "secdd 70740 70741 '1 ' 1"    "open"    1.000000  ""
0
"line_4805"    "secdd 'BRONCO_PLNS_345.00' 'SHORTGRASS_345.00' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70750 70630 '1 ' 1"    "open"    1.000000  ""
0
"line_4806"    "secdd 'NEPTUN_SB1_34.50' 'NEPTUN_S1_1_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70755 70757 '1 ' 1"    "open"    1.000000  ""
0
"line_4807"    "secdd 'THNDWLF_SB1_34.50' 'THNDWLF_S1_1_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70760 70762 '1 ' 1"    "open"    1.000000  ""
0
"line_4808"    "secdd 'RUSHCK1_W1W2_345.00' 'PRONGHORN_345.00' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70764 70628 '1 ' 1"    "open"    1.000000  ""
0
"line_4809"    "secdd 'RUSHCK1_W1_1_34.50' 'RUSHCK1_W1_2_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70766 70765 '1 ' 1"    "open"    1.000000  ""
0
"line_4810"    "secdd 'RUSHCK1_W2_1_34.50' 'RUSHCK1_W2_2_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70769 70768 '1 ' 1"    "open"    1.000000  ""
0
"line_4811"    "secdd 'RUSHCK2_W3_1_34.50' 'RUSHCK2_W3_2_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70772 70773 '1 ' 1"    "open"    1.000000  ""
0
"line_4812"    "secdd 'MTNBRZ_WTG_1_34.50' 'MTNBRZ_WTG_2_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70816 70815 '1 ' 1"    "open"    1.000000  ""
0
"line_4813"    "secdd 'MTNBREEZE_230.00' 'CEDARCK2_230.00' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70819 70833 '1 ' 1"    "open"    1.000000  ""
0
"line_4814"    "secdd 'CEDARCK_SYD_230.00' 'CEDARCK2_230.00' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70821 70833 '1 ' 1"    "open"    1.000000  ""
0
"line_4815"    "secdd 'CEDARCK_CAP_230.00' 'CEDARCK_SYD_230.00' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70822 70821 '1 ' 1"    "open"    1.000000  ""
0
"line_4816"    "secdd 'CEDAR2W1_34.50' 'CEDARCK2A_34.50' '1 ' 1"    1.00  ""    ""
""    0
 "secdd 70830 70834 '1 ' 1"    "open"    1.000000  ""
0
"line_4817"    "secdd 'CEDAR2W2_34.50' 'CEDARCK2B_34.50' '1 ' 1"    1.00  ""    ""
""    0
 "secdd 70831 70835 '1 ' 1"    "open"    1.000000  ""
0
"line_4818"    "secdd 'CEDAR2W3_34.50' 'CEDARCK2B_34.50' '1 ' 1"    1.00  ""    ""
""    0
 "secdd 70832 70835 '1 ' 1"    "open"    1.000000  ""
0
"line_4819"    "secdd 'SUN_MTN_230.00' 'COMANCHE_230.00' '1 ' 1"    1.00  ""    ""
""    0
 "secdd 70856 70122 '1 ' 1"    "open"    1.000000  ""
0
"line_4820"    "secdd 'SUN_MTN_S1_1_34.50' 'SUN_MTN_S1_2_34.50' '1 ' 1"    1.00  ""
""    ""    0
 "secdd 70858 70857 '1 ' 1"    "open"    1.000000  ""
0
"line_4821"    "secdd 'AVERY_PS_230.00' 'TIMBERLN_230.00' '1 ' 1"    1.00  ""    ""
""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
```

```
0
"line_4822"   "secdd 'BIGHORN_S_3_230.00' 'COMANCHE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70875 70122 '1 '  1"   "open"    1.000000  ""
0
"line_4823"   "secdd 'BIGHORN_S_1_34.50' 'BIGHORN_S_2_34.50' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70877 70876 '1 '  1"   "open"    1.000000  ""
0
"line_4824"   "secdd 'HUSKY_230.00' 'AULT_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70898 73011 '1 '  1"   "open"    1.000000  ""
0
"line_4825"   "secdd 'HUSKY_115.00' 'COLLINS_ST_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70901 70902 '1 '  1"   "open"    1.000000  ""
0
"line_4826"   "secdd 'COLLINS_ST_115.00' 'CLOVERLY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70902 70903 '1 '  1"   "open"    1.000000  ""
0
"line_4827"   "secdd 'COMO_CR_115.00' 'ROB_TUNL_CR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70924 71508 '1 '  1"   "open"    1.000000  ""
0
"line_4828"   "secdd 'FAIRPLAY_CR_115.00' 'COMO_CR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70925 70924 '1 '  1"   "open"    1.000000  ""
0
"line_4829"   "secdd 'HARTSEL_CR_115.00' 'FAIRPLAY_CR_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70926 70925 '1 '  1"   "open"    1.000000  ""
0
"line_4830"   "secdd 'COMAN_S1_1_34.50' 'COMAN_S1_2_34.50' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70940 70941 '1 '  1"   "open"    1.000000  ""
0
"line_4831"   "secdd 'WATE_DST_230.00' 'MARCY_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70959 70278 '1 '  1"   "open"    1.000000  ""
0
"line_4832"   "secdd 'WLSBG_T2_13.80' 'WLSBG_R_13.80' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70960 70964 '1 '  1"   "open"    1.000000  ""
0
"line_4833"   "secdd 'WLSBG_T3_13.80' 'WLSBG_R_13.80' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70962 70964 '1 '  1"   "open"    1.000000  ""
0
"line_4834"   "secdd 'SANLSVLY_13.80' 'SLV_R1_13.80' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70965 70967 '1 '  1"   "open"    1.000000  ""
0
"line_4835"   "secdd 'SLV_R1_13.80' 'SLV_R2_13.80' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70967 70968 '1 '  1"   "open"    1.000000  ""
0
"line_4836"   "secdd 'SLV_R2_13.80' 'SLV_R3_13.80' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70968 70969 '1 '  1"   "open"    1.000000  ""
0
"line_4837"   "secdd 'SLV_R3_13.80' 'SANLSVL2_13.80' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70969 70970 '1 '  1"   "open"    1.000000  ""
0
"line_4838"   "secdd 'VALENT_230.00' 'SPANPEAKS_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70990 70991 '1 '  1"   "open"    1.000000  ""
0
```

```
"line_4839"  "secdd 'RTLSNAKEB_115.00' 'BUSCHRNCH_HI_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71006 71010 '1 ' 1"  "open"  1.000000  ""
0
"line_4840"  "secdd 'RTLSNAKEB_115.00' 'PEAKVIEWHI_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71006 71017 '1 ' 1"  "open"  1.000000  ""
0
"line_4841"  "secdd 'BUSCHRNCH2_34.50' 'BUSCHRNCH1_34.50' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71007 71008 '1 ' 1"  "open"  1.000000  ""
0
"line_4842"  "secdd 'BUSCHRNCHMID_34.50' 'BUSCHRNCH_MI_34.50' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71011 71012 '1 ' 1"  "open"  1.000000  ""
0
"line_4843"  "secdd 'PEAKVIEWMID_34.50' 'PEAKVIEWMI_34.50' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71018 71019 '1 ' 1"  "open"  1.000000  ""
0
"line_4844"  "secdd 'PUEBLO_W_115.00' 'N_PENROSE_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71023 71024 '1 ' 1"  "open"  1.000000  ""
0
"line_4845"  "secdd 'N_PENROSE_115.00' 'HOGBACK115_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71024 71025 '1 ' 1"  "open"  1.000000  ""
0
"line_4846"  "secdd 'FRANKTWN_CR_115.00' 'CASTL_RK_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71506 70091 '1 ' 1"  "open"  1.000000  ""
0
"line_4847"  "secdd 'STRAS_DT_CR_115.00' 'BENNETT_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71517 70547 '1 ' 1"  "open"  1.000000  ""
0
"line_4848"  "secdd 'DERBYHIL_115.00' 'DERBYHILPR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77500 78096 '1 ' 1"  "open"  1.000000  ""
0
"line_4849"  "secdd 'DERBHILT_115.00' 'VALLEYLM_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77501 78094 '1 ' 1"  "open"  1.000000  ""
0
"line_4850"  "secdd 'DERBHILT_115.00' 'BOYD_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77501 78101 '1 ' 1"  "open"  1.000000  ""
0
"line_4851"  "secdd 'POUDRE_115.00' 'RICHRDTP_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77502 77503 '1 ' 1"  "open"  1.000000  ""
0
"line_4852"  "secdd 'POUDRE_115.00' 'DIXON CK_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77502 78076 '1 ' 1"  "open"  1.000000  ""
0
"line_4853"  "secdd 'RICHRDTP_115.00' 'RICHARDS_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77503 78081 '1 ' 1"  "open"  1.000000  ""
0
"line_4854"  "secdd 'PONCHA_W_115.00' 'SMELTER_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 77642 70394 '1 ' 1"  "open"  1.000000  ""
0
"line_4855"  "secdd 'RAWHIDE_230.00' 'RD_WIND_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 78010 78050 '1 ' 1"  "open"  1.000000  ""
0
"line_4856"  "secdd 'RAWHIDE_230.00' 'LAPORTE_230.00' '1 ' 1"  1.00  ""  ""
```

```
      "" 0
2021   "secdd 78010 78070 '1 ' 1" "open" 1.000000 ""
2022   0
2023   "line_4857" "secdd 'RAWHIDE_230.00' 'LAPORTE_230.00' '2 ' 1" 1.00 "" "" "" 0
2024   "secdd 78010 78070 '2 ' 1" "open" 1.000000 ""
2025   0
2026   "line_4858" "secdd 'RAWHIDE_230.00' 'TIMBERLN_230.00' '1 ' 1" 1.00 "" "" "" 0
2027   "secdd 78010 78085 '1 ' 1" "open" 1.000000 ""
2028   0
2029   "line_4859" "secdd 'RAWHIDE_PV_34.50' 'RH_PV_CLTR_34.50' '1 ' 1" 1.00 "" "" "" 0
2030   "secdd 78020 78021 '1 ' 1" "open" 1.000000 ""
2031   0
2032   "line_4860" "secdd 'RAWHIDE_PV_34.50' 'RPS_PV_CLTR_34.50' '1 ' 1" 1.00 "" "" "" 0
2033   "secdd 78020 78023 '1 ' 1" "open" 1.000000 ""
2034   0
2035   "line_4861" "secdd 'RD_WIND_34.50' 'RD_CLTR_34.50' '1 ' 1" 1.00 "" "" "" 0
2036   "secdd 78051 78052 '1 ' 1" "open" 1.000000 ""
2037   0
2038   "line_4862" "secdd 'LAPORTE_230.00' 'COLLEGLK_230.00' '1 ' 1" 1.00 "" "" "" 0
2039   "secdd 78070 78072 '1 ' 1" "open" 1.000000 ""
2040   0
2041   "line_4863" "secdd 'LAPORTE_230.00' 'TIMBERLN_230.00' '1 ' 1" 1.00 "" "" "" 0
2042   "secdd 78070 78085 '1 ' 1" "open" 1.000000 ""
2043   0
2044   "line_4864" "secdd 'LAPORTE_115.00' 'BELLVUTP_115.00' '1 ' 1" 1.00 "" "" "" 0
2045   "secdd 78071 73298 '1 ' 1" "open" 1.000000 ""
2046   0
2047   "line_4865" "secdd 'COLLEGLK_230.00' 'DIXON CK_230.00' '1 ' 1" 1.00 "" "" "" 0
2048   "secdd 78072 78075 '1 ' 1" "open" 1.000000 ""
2049   0
2050   "line_4866" "secdd 'DIXON CK_230.00' 'HORSESHO_230.00' '1 ' 1" 1.00 "" "" "" 0
2051   "secdd 78075 78090 '1 ' 1" "open" 1.000000 ""
2052   0
2053   "line_4867" "secdd 'DIXON CK_115.00' 'DRAKE RD_115.00' '1 ' 1" 1.00 "" "" "" 0
2054   "secdd 78076 78077 '1 ' 1" "open" 1.000000 ""
2055   0
2056   "line_4868" "secdd 'HRSTHTAP_115.00' 'DIXON CK_115.00' '1 ' 1" 1.00 "" "" "" 0
2057   "secdd 73089 78076 '1 ' 1" "open" 1.000000 ""
2058   0
2059   "line_4869" "secdd 'DRAKE RD_115.00' 'TIMBERLN_115.00' '1 ' 1" 1.00 "" "" "" 0
2060   "secdd 78077 78086 '1 ' 1" "open" 1.000000 ""
2061   0
2062   "line_4870" "secdd 'RICHARDS_115.00' 'LINDEN_115.00' '1 ' 1" 1.00 "" "" "" 0
2063   "secdd 78081 78082 '1 ' 1" "open" 1.000000 ""
2064   0
2065   "line_4871" "secdd 'RICHARDS_115.00' 'WAVER_PV_115.00' '1 ' 1" 1.00 "" "" "" 0
2066   "secdd 78081 73469 '1 ' 1" "open" 1.000000 ""
2067   0
2068   "line_4872" "secdd 'LINDEN_115.00' 'TIMBERLN_115.00' '1 ' 1" 1.00 "" "" "" 0
2069   "secdd 78082 78086 '1 ' 1" "open" 1.000000 ""
2070   0
2071   "line_4873" "secdd 'TIMBERLN_230.00' 'HARMONY_230.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 78085 78088 '1 ' 1" "open" 1.000000 ""
0
"line_4874" "secdd 'CAREY_TS_230.00' 'AVERY_PS_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78087 70862 '1 ' 1" "open" 1.000000 ""
0
"line_4875" "secdd 'HARMONY_230.00' 'PORTNER_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78088 78089 '1 ' 1" "open" 1.000000 ""
0
"line_4876" "secdd 'PORTNER_230.00' 'BOYD_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78089 78100 '1 ' 1" "open" 1.000000 ""
0
"line_4877" "secdd 'HORSESHO_115.00' 'FTHLS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78091 78092 '1 ' 1" "open" 1.000000 ""
0
"line_4878" "secdd 'HORSESHO_115.00' 'CROSSRDS_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78091 78098 '1 ' 1" "open" 1.000000 ""
0
"line_4879" "secdd 'VALLEYLM_115.00' 'BOYD_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78094 78101 '1 ' 1" "open" 1.000000 ""
0
"line_4880" "secdd 'CROSSRDS_115.00' 'LOVE E_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78098 78099 '1 ' 1" "open" 1.000000 ""
0
"line_4881" "secdd 'LOVE E_115.00' 'BOYD_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78099 78101 '1 ' 1" "open" 1.000000 ""
0
"line_4882" "secdd 'BOYD_230.00' 'GATEWY_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78100 78102 '1 ' 1" "open" 1.000000 ""
0
"line_4883" "secdd 'GATEWY_230.00' 'LONGPEAK_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78102 78105 '1 ' 1" "open" 1.000000 ""
0
"line_4884" "secdd 'LONGPEAK_115.00' 'DELCTAP_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78106 78107 '1 ' 1" "open" 1.000000 ""
0
"line_4885" "secdd 'LONGPEAK_115.00' 'CNTYLINE_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78106 78116 '1 ' 1" "open" 1.000000 ""
0
"line_4886" "secdd 'DELCTAP_115.00' 'MEADOW_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78107 78109 '1 ' 1" "open" 1.000000 ""
0
"line_4887" "secdd 'MEADOW_115.00' 'LNGMNTNW_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78109 78110 '1 ' 1" "open" 1.000000 ""
0
"line_4888" "secdd 'LNGMNTNW_115.00' 'HARVARD_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78110 78111 '1 ' 1" "open" 1.000000 ""
0
"line_4889" "secdd 'ROGERSRD_115.00' 'FORDHAM_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78114 78121 '1 ' 1" "open" 1.000000 ""
0
"line_4890" "secdd 'CNTYLINE_115.00' 'TERRY_115.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 78116 78119 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_4891"  "secdd 'TERRY_115.00' 'FORDHAM_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 78119 78121 '1 ' 1"  "open"  1.000000  ""
0
"line_4892"  "secdd 'BASALT_115.00' 'CRYSTLPS_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79003 79018 '1 ' 1"  "open"  1.000000  ""
0
"line_4893"  "secdd 'BEAVER_CK_W_115.00' 'WOLCOTT_2_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79006 77643 '1 ' 1"  "open"  1.000000  ""
0
"line_4894"  "secdd 'BEAVER_CK_W_115.00' 'AVON_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79006 79092 '1 ' 1"  "open"  1.000000  ""
0
"line_4895"  "secdd 'UTE_GRND_JN_115.00' 'STRNELSN_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79034 79183 '1 ' 1"  "open"  1.000000  ""
0
"line_4896"  "secdd 'UTE_GRND_JN_138.00' 'COLLBRAN_138.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79035 79047 '1 ' 1"  "open"  1.000000  ""
0
"line_4897"  "secdd 'UTE_GRND_JN_345.00' 'RIFLE_CU_345.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79036 79058 '1 ' 1"  "open"  1.000000  ""
0
"line_4898"  "secdd 'COLLBRAN_138.00' 'RIFLE_UTE_138.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79047 79056 '1 ' 1"  "open"  1.000000  ""
0
"line_4899"  "secdd 'RIFLE_UTE_230.00' 'RIFLE WA_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79057 79059 '1 ' 1"  "open"  1.000000  ""
0
"line_4900"  "secdd 'RIFLE_CU_345.00' 'MEEKER_345.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79058 79266 '1 ' 1"  "open"  1.000000  ""
0
"line_4901"  "secdd 'STEAMBOAT_230.00' 'FOIDEL_CK_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79065 79091 '1 ' 1"  "open"  1.000000  ""
0
"line_4902"  "secdd 'STEAMBOAT_230.00' 'FOIDEL_CK_230.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 79065 79091 '2 ' 1"  "open"  1.000000  ""
0
"line_4903"  "secdd 'VAIL_115.00' 'WOLCOTT_1_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79066 79068 '1 ' 1"  "open"  1.000000  ""
0
"line_4904"  "secdd 'VAIL_115.00' 'AVON_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79066 79092 '1 ' 1"  "open"  1.000000  ""
0
"line_4905"  "secdd 'WOLCOTT_230.00' 'FOIDEL_CK_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79069 79091 '1 ' 1"  "open"  1.000000  ""
0
"line_4906"  "secdd 'COLLBRAN_115.00' 'MOLINA-L_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79173 79174 '1 ' 1"  "open"  1.000000  ""
0
"line_4907"  "secdd 'COLLBRAN_115.00' 'MOLINA-U_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 79173 79175 '1 ' 1"  "open"  1.000000  ""
0
"line_4908"  "secdd 'CHEYRGW_CTRL_345.00' 'CHEYRDG_W_345.00' '1 ' 1"  1.00  ""
```

```
      "" "" 0
2177  "secdd 70778 70632 '1 ' 1" "open" 1.000000 ""
2178  0
2179  "line_4909" "secdd 'CHEYRGW_CTRL_345.00' 'CHEYRDG_E_345.00' '1 ' 1" 1.00 ""
      "" "" 0
2180  "secdd 70778 70730 '1 ' 1" "open" 1.000000 ""
2181  0
2182  "line_4910" "secdd 'SPANPKS2_LV2_34.50' 'SPANPKS_LV1_34.50' '1 ' 1" 1.00 ""
      "" "" 0
2183  "secdd 70724 70992 '1 ' 1" "open" 1.000000 ""
2184  0
2185  "line_4911" "secdd 'SPANPKS_LV1_34.50' 'SPANPKS1_LV2_34.50' '1 ' 1" 1.00 ""
      "" "" 0
2186  "secdd 70992 70993 '1 ' 1" "open" 1.000000 ""
2187  0
2188  "line_4912" "secdd 'SEV_POI_230.00' 'CAREY_TS_230.00' '1 ' 1" 1.00 "" "" ""
      "" 0
2189  "secdd 78030 78087 '1 ' 1" "open" 1.000000 ""
2190  0
2191  "line_4913" "secdd 'SEV_POI_230.00' 'SEV_230.00' '1 ' 1" 1.00 "" "" ""
      0
2192  "secdd 78030 78031 '1 ' 1" "open" 1.000000 ""
2193  0
2194  "line_4914" "secdd 'SEV_34.50' 'SEV_CLTR_34.50' '1 ' 1" 1.00 "" "" ""
      0
2195  "secdd 78032 78033 '1 ' 1" "open" 1.000000 ""
2196  0
2197  "line_4915" "secdd 'METRO_WATER_115.00' 'THORNTON_115.00' '1 ' 1" 1.00 ""
      "" "" 0
2198  "secdd 70494 70099 '1 ' 1" "open" 1.000000 ""
2199  0
2200  "line_4916" "secdd 'KESTREL_230.00' 'SPRUCE_230.00' '1 ' 1" 1.00 "" "" ""
      "" 0
2201  "secdd 70536 70528 '1 ' 1" "open" 1.000000 ""
2202  0
2203  "line_4917" "secdd 'DCPL_TP_115.00' 'CLOVERLY_115.00' '1 ' 1" 1.00 "" "" ""
      "" 0
2204  "secdd 70897 70903 '1 ' 1" "open" 1.000000 ""
2205  0
2206  "line_4918" "secdd 'CANAL_XING_345.00' 'PAWNEE_345.00' '1 ' 1" 1.00 "" "" ""
      "" 0
2207  "secdd 70915 70598 '1 ' 1" "open" 1.000000 ""
2208  0
2209  "line_4919" "secdd 'CANAL_XING_345.00' 'PAWNEE_345.00' '2 ' 1" 1.00 "" "" ""
      "" 0
2210  "secdd 70915 70598 '2 ' 1" "open" 1.000000 ""
2211  0
2212  "line_4920" "secdd 'CANAL_XING_345.00' 'GOOSE_CK_345.00' '1 ' 1" 1.00 ""
      "" "" 0
2213  "secdd 70915 70918 '1 ' 1" "open" 1.000000 ""
2214  0
2215  "line_4921" "secdd 'GOOSE_CK_345.00' 'SHORTGRASS_345.00' '1 ' 1" 1.00 ""
      "" "" 0
2216  "secdd 70918 70630 '1 ' 1" "open" 1.000000 ""
2217  0
2218  "line_4922" "secdd 'GOOSE_CK_345.00' 'CHEYRDG_W_345.00' '1 ' 1" 1.00 ""
      "" "" 0
2219  "secdd 70918 70632 '1 ' 1" "open" 1.000000 ""
2220  0
2221  "line_4923" "secdd 'MAY_VALLEY_345.00' 'GOOSE_CK_345.00' '1 ' 1" 1.00 ""
      "" "" 0
2222  "secdd 70919 70918 '1 ' 1" "open" 1.000000 ""
2223  0
2224  "line_4924" "secdd 'MAY_VALLEY_345.00' 'GOOSE_CK_345.00' '2 ' 1" 1.00 ""
      "" "" 0
2225  "secdd 70919 70918 '2 ' 1" "open" 1.000000 ""
2226  0
2227  "line_4925" "secdd 'CARL_TP_69.00' 'MITCHELL_CK_69.00' '1 ' 1" 1.00 "" "" ""
      "" 0
```

"secdd 70936 70288 '1 ' 1" "open" 1.000000 ""
0
"line_4926" "secdd 'CARL_TP_69.00' 'NEW_CASTLE_69.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 70936 70296 '1 ' 1" "open" 1.000000 ""
0
"line_4927" "secdd 'GUNBARREL_3_230.00' 'NIWOT_230.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 70972 70297 '1 ' 1" "open" 1.000000 ""
0
"line_4928" "secdd 'CITADEL_CR_115.00' 'WOLFSBRG_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 71502 70519 '1 ' 1" "open" 1.000000 ""
0
"line_4929" "secdd 'SPRG_VA_CR_115.00' 'KIOWA_CR_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 71505 70571 '1 ' 1" "open" 1.000000 ""
0
"line_4930" "secdd 'ALMSA_S1_2_13.80' 'ALMSA_S1_1_13.80' '1 ' 1" 1.00 "" "" "" 0
"secdd 700179 700178 '1 ' 1" "open" 1.000000 ""
0
"line_4931" "secdd 'ALAMOSA_SLR_115.00' 'BLANCA_PEAK_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 700180 70937 '1 ' 1" "open" 1.000000 ""
0
"line_4932" "secdd 'PTZLOGN_CB_230.00' 'PTZLOGN_230.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 700181 70711 '1 ' 1" "open" 1.000000 ""
0
"line_4933" "secdd 'SLATERTS_115.00' 'DELCTAP_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 72107 78107 '1 ' 1" "open" 1.000000 ""
0
"line_4934" "secdd 'LAZYDOG_115.00' 'TERRY_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 72190 78119 '1 ' 1" "open" 1.000000 ""
0
"line_4935" "secdd 'GATEWY_115.00' 'BOYD_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 72191 78101 '1 ' 1" "open" 1.000000 ""
0
"line_4936" "secdd 'AIRPORT_115.00' 'BOYD_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73002 78101 '1 ' 1" "open" 1.000000 ""
0
"line_4937" "secdd 'AIRPORT_115.00' 'AIRPORTPR_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73002 78103 '1 ' 1" "open" 1.000000 ""
0
"line_4938" "secdd 'AULT_230.00' 'WINDSOR_230.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73011 70474 '1 ' 1" "open" 1.000000 ""
0
"line_4939" "secdd 'AULT_230.00' 'RAWHIDE_230.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73011 78010 '1 ' 1" "open" 1.000000 ""
0
"line_4940" "secdd 'AULT_230.00' 'SEV_POI_230.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73011 78030 '1 ' 1" "open" 1.000000 ""
0
"line_4941" "secdd 'ESTES_115.00' 'ESTESPR_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73056 78065 '1 ' 1" "open" 1.000000 ""
0
"line_4942" "secdd 'ESTES_115.00' 'MARYLKSB_115.00' '1 ' 1" 1.00 "" "" "" 0
"secdd 73056 78066 '1 ' 1" "open" 1.000000 ""

```
0
"line_4943"    "secdd 'HYGIENE_115.00' 'LNGMNTNW_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73090 78110 '1 '  1"    "open"    1.000000  ""
0
"line_4944"    "secdd 'LOVEWTAP_115.00' 'DERBHILT_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73124 77501 '1 '  1"    "open"    1.000000  ""
0
"line_4945"    "secdd 'LOVEWTAP_115.00' 'FTHLS_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73124 78092 '1 '  1"    "open"    1.000000  ""
0
"line_4946"    "secdd 'LOVEWTAP_115.00' 'VALLEYLM_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73124 78094 '1 '  1"    "open"    1.000000  ""
0
"line_4947"    "secdd 'STORY_230.00' 'PAWNEE_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73192 70311 '1 '  1"    "open"    1.000000  ""
0
"line_4948"    "secdd 'TIMNATH_115.00' 'RICHRDTP_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73200 77503 '1 '  1"    "open"    1.000000  ""
0
"line_4949"    "secdd 'MARYLKTP_115.00' 'MARYLKSB_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73233 78066 '1 '  1"    "open"    1.000000  ""
0
"line_4950"    "secdd 'MIDWAYBR_115.00' 'MIDWAY_PS_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73412 70285 '1 '  1"    "open"    1.000000  ""
0
"line_4951"    "secdd 'GLDNPNDS_115.00' 'LNGMNTNW_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73578 78110 '1 '  1"    "open"    1.000000  ""
0
"line_4952"    "secdd 'GLDNPNDS_115.00' 'ROGERSRD_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73578 78114 '1 '  1"    "open"    1.000000  ""
0
"line_4953"    "secdd 'SPNGCAN1_230_230.00' 'SPRNGCAN_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 70718 73579 '1 '  1"    "open"    1.000000  ""
0
"line_4954"    "secdd 'DERBYHILLLM_115.00' 'DERBYHIL_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73650 77500 '1 '  1"    "open"    1.000000  ""
0
"line_4955"    "secdd 'POUDRELM_115.00' 'POUDRE_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73651 77502 '1 '  1"    "open"    1.000000  ""
0
"line_4956"    "secdd 'TERRY ST LN_115.00' 'TERRY_115.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 73652 78119 '1 '  1"    "open"    1.000000  ""
0
"line_4957"    "secdd 'HDN WEST_230.00' 'FOIDEL_CK_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 79039 79091 '1 '  1"    "open"    1.000000  ""
0
"line_4958"    "secdd 'MEEKER_138.00' 'RIFLE_UTE_138.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 79046 79056 '1 '  1"    "open"    1.000000  ""
0
"line_4959"    "secdd 'GLDSTNPS_230.00' 'VALENT_230.00' '1 '  1"    1.00  ""    ""    ""    0
 "secdd 12181 70990 '1 '  1"    "open"    1.000000  ""
0
```

```
"line_4960"  "secdd 'DANIEL_PK_345.00' 'TUNDRA_345.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 70601 70653 '2 ' 1"  "open"  1.000000  ""
0
"line_4961"  "secdd 'TUNDRA_345.00' 'COMANCHE_345.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '2 ' 1"  "open"  1.000000  ""
0
"line_4962"  "secdd 'MAPLETO1_115.00' 'PODER_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70276 70177 '1 ' 1"  "open"  1.000000  ""
0
"line_4963"  "secdd 'PODER_115.00' 'CALIFORN_TP_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70177 70074 '1 ' 1"  "open"  1.000000  ""
0
"line_4964"  "secdd 'SPRUCE_230.00' 'COYOTE_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70528 70804 '1 ' 1"  "open"  1.000000  ""
0
"line_4965"  "secdd 'SPRUCE_230.00' 'COYOTE_230.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 70528 70804 '2 ' 1"  "open"  1.000000  ""
0
"line_4966"  "secdd 'CANAL_XING_345.00' 'GOOSE_CK_345.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 70915 70918 '2 ' 1"  "open"  1.000000  ""
0
"line_4967"  "secdd 'CANAL_XING_345.00' 'FT_ST_VRAIN_345.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '1 ' 1"  "open"  1.000000  ""
0
"line_4968"  "secdd 'CANAL_XING_345.00' 'FT_ST_VRAIN_345.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '2 ' 1"  "open"  1.000000  ""
0
"line_4969"  "secdd 'CONIFER_CR_115.00' 'PINEJCT_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70124 71507 '1 ' 1"  "open"  1.000000  ""
0
"line_4970"  "secdd 'DAWSONRG_CR_115.00' 'PLUM_CK_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71501 70514 '1 ' 1"  "open"  1.000000  ""
0
"line_4971"  "secdd 'CITADEL_CR_115.00' 'DAWSONRG_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71502 71501 '1 ' 1"  "open"  1.000000  ""
0
"line_4972"  "secdd 'BAYOU_CR_115.00' 'DELBERT_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70518 71503 '1 ' 1"  "open"  1.000000  ""
0
"line_4973"  "secdd 'DELBERT_CR_115.00' 'ELIZABET_CR_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 71503 70583 '1 ' 1"  "open"  1.000000  ""
0
"line_4974"  "secdd 'LACOMBE_230.00' 'BARKER_230.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70324 70152 '1 ' 1"  "open"  1.000000  ""
0
"line_4975"  "secdd 'LACOMBE_230.00' 'BARKER_230.00' '2 ' 1"  1.00  ""  ""  ""  0
 "secdd 70324 70152 '2 ' 1"  "open"  1.000000  ""
0
"line_4976"  "secdd 'GILMAN_115.00' 'AVON_115.00' '1 ' 1"  1.00  ""  ""  ""  0
 "secdd 70199 79092 '1 ' 1"  "open"  1.000000  ""
0
"line_4977"  "secdd 'TUNDRA_345.00' 'SANDSTONE_345.00' '1 ' 1"  1.00  ""  ""
```

```
      "" 0
2384   "secdd 70653 70921 '1 ' 1" "open" 1.000000 ""
2385   0
2386   "line_4978" "secdd 'TUNDRA_345.00' 'SANDSTONE_345.00' '2 ' 1" 1.00 "" "" "" 0
2387   "secdd 70653 70921 '2 ' 1" "open" 1.000000 ""
2388   0
2389   "line_4979" "secdd 'MAY_VALLEY_345.00' 'SANDSTONE_345.00' '1 ' 1" 1.00 "" "" "" 0
2390   "secdd 70919 70921 '1 ' 1" "open" 1.000000 ""
2391   0
2392   "line_4980" "secdd 'MAY_VALLEY_345.00' 'SANDSTONE_345.00' '2 ' 1" 1.00 "" "" "" 0
2393   "secdd 70919 70921 '2 ' 1" "open" 1.000000 ""
2394   0
2395   "line_4981" "secdd 'HARVEST_MI_345.00' 'SANDSTONE_345.00' '1 ' 1" 1.00 "" "" "" 0
2396   "secdd 70597 70921 '1 ' 1" "open" 1.000000 ""
2397   0
2398   "line_4982" "secdd 'HARVEST_MI_345.00' 'SANDSTONE_345.00' '2 ' 1" 1.00 "" "" "" 0
2399   "secdd 70597 70921 '2 ' 1" "open" 1.000000 ""
2400   0
2401   "line_4983" "secdd 'GREEN_VLY_230.00' 'R_2023_05_230.00' '1 ' 1" 1.00 "" "" "" 0
2402   "secdd 70048 70077 '1 ' 1" "open" 1.000000 ""
2403   0
2404   "line_4984" "secdd 'SPRUCE_230.00' 'R_2023_05_230.00' '1 ' 1" 1.00 "" "" "" 0
2405   "secdd 70528 70077 '1 ' 1" "open" 1.000000 ""
2406   0
2407   "line_4985" "secdd 'MAY_VALLEY_345.00' 'PI_2024_13_345.00' '1 ' 1" 1.00 "" "" "" 0
2408   "secdd 70919 700066 '1 ' 1" "open" 1.000000 ""
2409   0
2410   "line_4986" "secdd '24_13_W2_2_34.50' '24_13_W2_1_34.50' '1 ' 1" 1.00 "" "" "" 0
2411   "secdd 700056 700058 '1 ' 1" "open" 1.000000 ""
2412   0
2413   "line_4987" "secdd '24_13_W3_2_34.50' '24_13_W3_1_34.50' '1 ' 1" 1.00 "" "" "" 0
2414   "secdd 700059 700061 '1 ' 1" "open" 1.000000 ""
2415   0
2416   "line_4988" "secdd '24_13_W4_2_34.50' '24_13_W4_1_34.50' '1 ' 1" 1.00 "" "" "" 0
2417   "secdd 700062 700064 '1 ' 1" "open" 1.000000 ""
2418   0
2419   "line_4989" "secdd '24_13_W1_2_34.50' '24_13_W1_1_34.50' '1 ' 1" 1.00 "" "" "" 0
2420   "secdd 700068 700065 '1 ' 1" "open" 1.000000 ""
2421   0
2422   "line_4990" "secdd 'PI_2024_12_345.00' 'GOOSE_CK_345.00' '1 ' 1" 1.00 "" "" "" 0
2423   "secdd 700069 70918 '1 ' 1" "open" 1.000000 ""
2424   0
2425   "line_4991" "secdd '24_12_W1_1_34.50' '24_12_W1_2_34.50' '1 ' 1" 1.00 "" "" "" 0
2426   "secdd 700073 700070 '1 ' 1" "open" 1.000000 ""
2427   0
2428   "line_4992" "secdd '24_12_W2_1_34.50' '24_12_W2_2_34.50' '1 ' 1" 1.00 "" "" "" 0
2429   "secdd 700074 700071 '1 ' 1" "open" 1.000000 ""
2430   0
2431   "line_4993" "secdd '24_12_W3_1_34.50' '24_12_W3_2_34.50' '1 ' 1" 1.00 "" "" "" 0
2432   "secdd 700075 700072 '1 ' 1" "open" 1.000000 ""
2433   0
2434   "line_4994" "secdd 'COMANCHE_230.00' 'GI_2020_10_230.00' '1 ' 1" 1.00 "" "" "" 0
```

```
 "secdd 70122 700139 '1 ' 1" "open" 1.000000 ""
0
"line_4995" "secdd 'GI_2020_10_230.00' 'MIRASOL_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700139 70652 '1 ' 1" "open" 1.000000 ""
0
"line_4996" "secdd '20_10_SB1_34.50' '20_10_S1_1_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700141 700143 '1 ' 1" "open" 1.000000 ""
0
"line_4997" "secdd '20_10_SB1_34.50' '20_10_B1_1_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700141 700145 '1 ' 1" "open" 1.000000 ""
0
"line_4998" "secdd '20_10_SB2_34.50' '20_10_S2_1_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700150 700148 '1 ' 1" "open" 1.000000 ""
0
"line_4999" "secdd '20_10_SB2_34.50' '20_10_B2_1_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700150 700149 '1 ' 1" "open" 1.000000 ""
0
"line_5000" "secdd 'GREEN_VLY_230.00' 'GI_2021_6_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 70048 700155 '1 ' 1" "open" 1.000000 ""
0
"line_5001" "secdd '2021_6_S1_1_34.50' '2021_6_S1_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700152 700151 '1 ' 1" "open" 1.000000 ""
0
"line_5002" "secdd '2021_6_S1_2_34.50' '2021_6_S1_1_34.50' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700153 700152 '1 ' 1" "open" 1.000000 ""
0
"line_5003" "secdd 'GI_2021_6_230.00' 'SKYRANCH_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700155 70392 '1 ' 1" "open" 1.000000 ""
0
"line_5004" "secdd 'GI_2021_6_230.00' '2021_6_S1_3_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700155 700154 '1 ' 1" "open" 1.000000 ""
0
"line_5005" "secdd 'REPL_2024_1_230.00' 'COMANCHE_230.00' '1 ' 1" 1.00 "" "" "" 0
 "secdd 700208 70122 '1 ' 1" "open" 1.000000 ""
0
"line_5006" "secdd '24_1_S1_1_34.50' '24_1_S1_2_34.50' '1 ' 1" 1.00 "" "" "" "" 0
 "secdd 700212 700209 '1 ' 1" "open" 1.000000 ""
0
"line_5007" "secdd '24_1_S2_1_34.50' '24_1_S2_2_34.50' '1 ' 1" 1.00 "" "" "" "" 0
 "secdd 700213 700210 '1 ' 1" "open" 1.000000 ""
0
"line_5008" "secdd '24_1_S3_1_34.50' '24_1_S3_2_34.50' '1 ' 1" 1.00 "" "" "" "" 0
 "secdd 700214 700211 '1 ' 1" "open" 1.000000 ""
0
"line_5009" "secdd '24_5_G_1_34.50' '24_5_G_2_34.50' '1 ' 1" 1.00 "" "" "" "" 0
 "secdd 700005 700007 '1 ' 1" "open" 1.000000 ""
0
"line_5010" "secdd 'PI_2024_5_69.00' 'ALMSA_TM_69.00' '1 ' 1" 1.00 "" "" "" "" 0
 "secdd 700006 70026 '1 ' 1" "open" 1.000000 ""
0
"line_5011" "secdd '24_7_B_1_34.50' '24_7_B_2_34.50' '1 ' 1" 1.00 "" "" "" "" 0
 "secdd 700045 700046 '1 ' 1" "open" 1.000000 ""
```

```
0
"line_5012"   "secdd 'PI_2024_7_345.00' 'COMANCHE_345.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700047 70654 '1 '  1"   "open"    1.000000  ""
0
"line_5013"   "secdd '24_9_W1_1_34.50' '24_9_W1_2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700080 700081 '1 '  1"   "open"    1.000000  ""
0
"line_5014"   "secdd '24_9_W2_1_34.50' '24_9_W2_2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700083 700084 '1 '  1"   "open"    1.000000  ""
0
"line_5015"   "secdd '24_9_W3_1_34.50' '24_9_W3_2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700086 700087 '1 '  1"   "open"    1.000000  ""
0
"line_5016"   "secdd '24_9_W4_1_34.50' '24_9_W4_2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700089 700090 '1 '  1"   "open"    1.000000  ""
0
"line_5017"   "secdd 'PI_2024_9_345.00' 'GOOSE_CK_345.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700091 70918 '1 '  1"   "open"    1.000000  ""
0
"line_5018"   "secdd 'FT_ST_VRAIN_345.00' 'PI_2024_11_345.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 70916 700097 '1 '  1"   "open"    1.000000  ""
0
"line_5019"   "secdd '24_28_W_1_34.50' '24_28_W_2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700183 700184 '1 '  1"   "open"    1.000000  ""
0
"line_5020"   "secdd '5RSC_24_28_345.00' 'GOOSE_CK_345.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700185 70918 '1 '  1"   "open"    1.000000  ""
0
"line_5021"   "secdd '23_2_B1_1_34.50' '23_2_B1_2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700190 700189 '1 '  1"   "open"    1.000000  ""
0
"line_5022"   "secdd 'ALMSA_TM_115.00' 'PI_2024_8_115.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 70025 700224 '1 '  1"   "open"    1.000000  ""
0
"line_5023"   "secdd '24_8_SB_1_115.00' 'PI_2024_8_115.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700218 700224 '1 '  1"   "open"    1.000000  ""
0
"line_5024"   "secdd '24_8_S_1_34.50' '24_8_SB_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700220 700219 '1 '  1"   "open"    1.000000  ""
0
"line_5025"   "secdd '24_8_B_1_34.50' '24_8_SB_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700221 700219 '1 '  1"   "open"    1.000000  ""
0
"line_5026"   "secdd 'PI_2024_8_115.00' 'BLANCA_PEAK_115.00' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700224 70937 '1 '  1"   "open"    1.000000  ""
0
"line_5027"   "secdd '21_1_S1_1_34.50' '21_1_SB1_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700125 700131 '1 '  1"   "open"    1.000000  ""
0
"line_5028"   "secdd '21_1_S2_1_34.50' '21_1_SB2_34.50' '1 '  1"    1.00  ""    ""    ""  0
 "secdd 700126 700132 '1 '  1"   "open"    1.000000  ""
0
```

```
"line_5029"  "secdd '21_1_S3_1_34.50' '21_1_SB3_34.50' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 700127 700133 '1 '  1"  "open"  1.000000  ""
0
"line_5030"  "secdd '21_1_B1_1_34.50' '21_1_SB1_34.50' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 700128 700131 '1 '  1"  "open"  1.000000  ""
0
"line_5031"  "secdd '21_1_B2_1_34.50' '21_1_SB2_34.50' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 700129 700132 '1 '  1"  "open"  1.000000  ""
0
"line_5032"  "secdd '21_1_B3_1_34.50' '21_1_SB3_34.50' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 700130 700133 '1 '  1"  "open"  1.000000  ""
0
"line_5033"  "secdd 'REPL_2021_1_230.00' 'COMANCHE_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 700134 70122 '1 '  1"  "open"  1.000000  ""
0
"line_5034"  "secdd 'SPINDLE_230.00' 'PI_2024_10_230.00' '1 '  1"  1.00  ""  ""  ""  0
 "secdd 70592 700052 '1 '  1"  "open"  1.000000  ""
0
"tran_5035"  "tran 'TWNBUTT2_34.50' 'TWNBUTT2_230.00'  '1 '"  1.00  ""  ""  ""  0
 "tran 70012 70013 '1 '"  "open"  1.000000  ""
0
"tran_5036"  "tran 'SNISABEL_115.00' 'SNISABEL_34.50'  '1 '"  1.00  ""  ""  ""  0
 "tran 70014 70015 '1 '"  "open"  1.000000  ""
0
"tran_5037"  "tran 'ALMSA_TM_69.00' 'ALMSA_TM_115.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70026 70025 'T1'"  "open"  1.000000  ""
0
"tran_5038"  "tran 'ALMSA_TM_69.00' 'ALMSA_TM_115.00'  'T4'"  1.00  ""  ""  ""  0
 "tran 70026 70025 'T4'"  "open"  1.000000  ""
0
"tran_5039"  "tran 'ARAPAHOE_B_115.00' 'ARAPAHOE_230.00'  'T5'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
0
"tran_5040"  "tran 'BLUE_RIVER_115.00' 'BLUE_RIVER_230.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70052 70053 'T1'"  "open"  1.000000  ""
0
"tran_5041"  "tran 'BOONE_69.00' 'BOONE_115.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
0
"tran_5042"  "tran 'LOOKOUT_2_115.00' 'LOOKOUT_230.00'  'T2'"  1.00  ""  ""  ""  0
 "tran 70066 70266 'T2'"  "open"  1.000000  ""
0
"tran_5043"  "tran 'CABCRKA_13.80' 'CABIN_CK_230.00'  'UA'"  1.00  ""  ""  ""  0
 "tran 70069 70072 'UA'"  "open"  1.000000  ""
0
"tran_5044"  "tran 'CABCRKB_13.80' 'CABIN_CK_230.00'  'UB'"  1.00  ""  ""  ""  0
 "tran 70070 70072 'UB'"  "open"  1.000000  ""
0
"tran_5045"  "tran 'CABIN_CK_115.00' 'CABIN_CK_230.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70071 70072 'T1'"  "open"  1.000000  ""
0
"tran_5046"  "tran 'CABIN_CK_115.00' 'CABIN_CK_230.00'  'T2'"  1.00  ""  ""  ""  0
```

"tran 70071 70072 'T2'" "open" 1.000000 ""
0
"tran_5047" "tran 'CAMEO_230.00' 'CAMEO_69.00' 'CAMEO_13.80' 'T5'" 1.00 "" "" "" 0
"tran 70078 70076 71989 'T5'" "open" 1.000000 ""
0
"tran_5048" "tran 'CANONCTY_115.00' 'CANONCTY_69.00' 'T1'" 1.00 "" "" "" 0
"tran 70086 70085 'T1'" "open" 1.000000 ""
0
"tran_5049" "tran 'FT_LUPTON_2_115.00' 'FT_LUPTON_230.00' 'T3'" 1.00 "" "" "" 0
"tran 70090 70192 'T3'" "open" 1.000000 ""
0
"tran_5050" "tran 'CF&ISE1_69.00' 'CF&ISE1_115.00' 'T1'" 1.00 "" "" "" 0
"tran 70095 70096 'T1'" "open" 1.000000 ""
0
"tran_5051" "tran 'CF&ISE2_69.00' 'CF&ISE2_115.00' 'T2'" 1.00 "" "" "" 0
"tran 70097 70098 'T2'" "open" 1.000000 ""
0
"tran_5052" "tran 'CHEROK2_15.50' 'CHEROKEE_S_115.00' 'U2'" 1.00 "" "" "" 0
"tran 70104 70108 'U2'" "open" 1.000000 ""
0
"tran_5053" "tran 'CHEROK4_22.00' 'CHEROKEE_N_115.00' 'U4'" 1.00 "" "" "" 0
"tran 70106 70110 'U4'" "open" 1.000000 ""
0
"tran_5054" "tran 'CHEROKEE_S_115.00' 'CHEROKEE_230.00' 'T1'" 1.00 "" "" "" 0
"tran 70108 70107 'T1'" "open" 1.000000 ""
0
"tran_5055" "tran 'CHEROKEE_N_115.00' 'CHEROKEE_230.00' 'T2'" 1.00 "" "" "" 0
"tran 70110 70107 'T2'" "open" 1.000000 ""
0
"tran_5056" "tran 'COMAN_2_24.00' 'COMANCHE_230.00' 'U2'" 1.00 "" "" "" 0
"tran 70120 70122 'U2'" "open" 1.000000 ""
0
"tran_5057" "tran 'COMANCHE_1_115.00' 'COMANCHE_230.00' 'T1'" 1.00 "" "" "" 0
"tran 70121 70122 'T1'" "open" 1.000000 ""
0
"tran_5058" "tran 'COMANCHE_230.00' 'COMANCHE_345.00' 'T3'" 1.00 "" "" "" 0
"tran 70122 70654 'T3'" "open" 1.000000 ""
0
"tran_5059" "tran 'COMANCHE_230.00' 'COMANCHE_345.00' 'T4'" 1.00 "" "" "" 0
"tran 70122 70654 'T4'" "open" 1.000000 ""
0
"tran_5060" "tran 'COMANCHE_2_115.00' 'COMANCHE_230.00' 'T2'" 1.00 "" "" "" 0
"tran 70123 70122 'T2'" "open" 1.000000 ""
0
"tran_5061" "tran 'CTY_LAM_69.00' 'CTY_LAM_24.90' 'T4'" 1.00 "" "" "" 0
"tran 70136 70134 'T4'" "open" 1.000000 ""
0
"tran_5062" "tran 'CTY_LAM_69.00' 'CTY_LAM_24.90' 'T5'" 1.00 "" "" "" 0
"tran 70136 70134 'T5'" "open" 1.000000 ""
0
"tran_5063" "tran 'DANIEL_PK_230.00' 'DANIEL_PK_115.00' 'DANIEL_PK_13.80' 'T1'" 1.00 "" "" "" 0
"tran 70139 70138 71984 'T1'" "open" 1.000000 ""

```
0
"tran_5064"   "tran 'DANIEL_PK_230.00' 'DANIEL_PK_345.00' 'T3'"   1.00  ""  ""  ""  0
 "tran 70139 70601 'T3'"   "open"   1.000000  ""
0
"tran_5065"   "tran 'DANIEL_PK_230.00' 'DANIEL_PK_345.00' 'T4'"   1.00  ""  ""  ""  0
 "tran 70139 70601 'T4'"   "open"   1.000000  ""
0
"tran_5066"   "tran 'DANIEL_PK_230.00' 'DANIEL_PK_345.00' 'T5'"   1.00  ""  ""  ""  0
 "tran 70139 70601 'T5'"   "open"   1.000000  ""
0
"tran_5067"   "tran 'DENVER_TM_2_115.00' 'DENVER_TM_230.00' 'T2'"   1.00  ""  ""  ""  0
 "tran 70144 70149 'T2'"   "open"   1.000000  ""
0
"tran_5068"   "tran 'CHEROKEE5_18.00' 'CHEROKEE_S_115.00' 'U5'"   1.00  ""  ""  ""  0
 "tran 70145 70108 'U5'"   "open"   1.000000  ""
0
"tran_5069"   "tran 'CHEROKEE6_18.00' 'CHEROKEE_S_115.00' 'U6'"   1.00  ""  ""  ""  0
 "tran 70146 70108 'U6'"   "open"   1.000000  ""
0
"tran_5070"   "tran 'CHEROKEE7_18.00' 'CHEROKEE_S_115.00' 'U7'"   1.00  ""  ""  ""  0
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
0
"tran_5071"   "tran 'DILLON_115.00' 'DILLON_230.00' 'T2'"   1.00  ""  ""  ""
0
 "tran 70155 70156 'T2'"   "open"   1.000000  ""
0
"tran_5072"   "tran 'FRUITA_13.80' 'FRUITA_69.00' 'U1'"   1.00  ""  ""  ""  0
 "tran 70180 70183 'U1'"   "open"   1.000000  ""
0
"tran_5073"   "tran 'FT_LUPTN_12_13.80' 'FT_LUPTON_1_115.00' 'U1'"   1.00  ""  ""  ""  0
 "tran 70188 70191 'U1'"   "open"   1.000000  ""
0
"tran_5074"   "tran 'GEORGETN_25.00' 'GEORGETN_115.00' 'T1'"   1.00  ""  ""  ""  0
 "tran 70196 70197 'T1'"   "open"   1.000000  ""
0
"tran_5075"   "tran 'GRAND_JT_230.00' 'UTE_GRND_JN_345.00' 'T1'"   1.00  ""  ""  ""  0
 "tran 70205 79036 'T1'"   "open"   1.000000  ""
0
"tran_5076"   "tran 'UTE_GRND_JN_69.00' 'UTE_GRND_JN_115.00' 'T1'"   1.00  ""  ""  ""  0
 "tran 70214 79034 'T1'"   "open"   1.000000  ""
0
"tran_5077"   "tran 'RIDGE_3_115.00' 'RIDGE_230.00' 'T2'"   1.00  ""  ""  ""
0
 "tran 70227 70355 'T2'"   "open"   1.000000  ""
0
"tran_5078"   "tran 'HOPKINS_115.00' 'HOPKINS_230.00' 'T2'"   1.00  ""  ""  ""  0
 "tran 70231 70232 'T2'"   "open"   1.000000  ""
0
"tran_5079"   "tran 'LAJUNTAT_69.00' 'LAJUNTAT_115.00' 'T1'"   1.00  ""  ""  ""  0
 "tran 70248 70247 'T1'"   "open"   1.000000  ""
0
"tran_5080"   "tran 'LAJUNTAT_69.00' 'LAJUNTAT_115.00' 'T2'"   1.00  ""  ""  ""  0
 "tran 70248 70247 'T2'"   "open"   1.000000  ""
0
"tran_5081"   "tran 'LAJUNTAW_69.00' 'LAJUNTAW_115.00' 'T1'"   1.00  ""  ""  ""
```

```
    "" 0
"tran 70250 70249 'T1'" "open" 1.000000 ""
0
"tran_5082" "tran 'LAMAR_C2_230.00' 'LAMAR_CO_115.00' 'LAMAR_T1_13.80' 'T1'" 1.00 "" "" "" 0
"tran 70255 70253 70955 'T1'" "open" 1.000000 ""
0
"tran_5083" "tran 'LAMAR_C2_230.00' 'LAMAR_CO_115.00' 'LAMAR_T2_13.80' 'T2'" 1.00 "" "" "" 0
"tran 70255 70253 70957 'T2'" "open" 1.000000 ""
0
"tran_5084" "tran 'LEETSDALE_1_115.00' 'LEETSDALE_230.00' 'T4'" 1.00 "" "" "" 0
"tran 70259 70260 'T4'" "open" 1.000000 ""
0
"tran_5085" "tran 'LOOKOUT_1_115.00' 'LOOKOUT_230.00' 'T1'" 1.00 "" "" "" 0
"tran 70265 70266 'T1'" "open" 1.000000 ""
0
"tran_5086" "tran 'HOPKINS_69.00' 'HOPKINS_115.00' 'T1'" 1.00 "" "" "" 0
"tran 70267 70231 'T1'" "open" 1.000000 ""
0
"tran_5087" "tran 'LS_ANMAS_69.00' 'LS_ANMAS_13.80' 'T1'" 1.00 "" "" "" 0
"tran 70271 70270 'T1'" "open" 1.000000 ""
0
"tran_5088" "tran 'MALTA_230.00' 'MALTA_115.00' 'MALTA_T1_13.80' 'T1'" 1.00 "" "" "" 0
"tran 70274 70273 71982 'T1'" "open" 1.000000 ""
0
"tran_5089" "tran 'MALTA_230.00' 'MALTA_115.00' 'MALTA_T2_13.80' 'T2'" 1.00 "" "" "" 0
"tran 70274 70273 71983 'T2'" "open" 1.000000 ""
0
"tran_5090" "tran 'LEETSDALE_2_115.00' 'LEETSDALE_230.00' 'T5'" 1.00 "" "" "" 0
"tran 70282 70260 'T5'" "open" 1.000000 ""
0
"tran_5091" "tran 'PP_MINE_69.00' 'AREQUGCH_115.00' 'T1'" 1.00 "" "" "" 0
"tran 70306 70378 'T1'" "open" 1.000000 ""
0
"tran_5092" "tran 'PP_MINE_69.00' 'AREQUGCH_115.00' 'T2'" 1.00 "" "" "" 0
"tran 70306 70378 'T2'" "open" 1.000000 ""
0
"tran_5093" "tran 'PAWNEE_22.00' 'PAWNEE_230.00' 'U1'" 1.00 "" "" "" 0
"tran 70310 70311 'U1'" "open" 1.000000 ""
0
"tran_5094" "tran 'PAWNEE_22.00' 'PAWNEE_230.00' 'U2'" 1.00 "" "" "" 0
"tran 70310 70311 'U2'" "open" 1.000000 ""
0
"tran_5095" "tran 'MANCHEF1_16.00' 'MANCHIEF_NG_230.00' 'U1'" 1.00 "" "" "" 0
"tran 70314 70349 'U1'" "open" 1.000000 ""
0
"tran_5096" "tran 'MANCHEF2_16.00' 'MANCHIEF_NG_230.00' 'U2'" 1.00 "" "" "" 0
"tran 70315 70349 'U2'" "open" 1.000000 ""
0
"tran_5097" "tran 'PLAZA_69.00' 'PLAZA_115.00' '1 '" 1.00 "" "" "" 0
"tran 70325 70658 '1 '" "open" 1.000000 ""
0
"tran_5098" "tran 'PONCHA_69.00' 'PONCHA_W_115.00' 'T2'" 1.00 "" "" "" 0
"tran 70326 77642 'T2'" "open" 1.000000 ""
0
"tran_5099" "tran 'PORTLAND_69.00' 'PORTLAND_115.00' 'T1'" 1.00 "" "" ""
```

```
"" 0
2750  "tran 70329 70330 'T1'" "open" 1.000000 ""
2751  0
2752  "tran_5100" "tran 'PORTLAND_69.00' 'PORTLAND_115.00' 'T2'" 1.00 "" "" "" 0
2753  "tran 70329 70330 'T2'" "open" 1.000000 ""
2754  0
2755  "tran_5101" "tran 'PUB_DSLS_4.16' 'PUEBPLNT_69.00' 'U1'" 1.00 "" "" "" 0
2756  "tran 70334 70338 'U1'" "open" 1.000000 ""
2757  0
2758  "tran_5102" "tran 'R.F.DSLS_4.16' 'ROCKYFRD_69.00' 'U1'" 1.00 "" "" "" 0
2759  "tran 70344 70366 'U1'" "open" 1.000000 ""
2760  0
2761  "tran_5103" "tran 'RAMON_69.00' 'RAMON_115.00' 'T1'" 1.00 "" "" "" 0
2762  "tran 70348 70347 'T1'" "open" 1.000000 ""
2763  0
2764  "tran_5104" "tran 'READER_69.00' 'READER_115.00' 'T1'" 1.00 "" "" "" 0
2765  "tran 70353 70352 'T1'" "open" 1.000000 ""
2766  0
2767  "tran_5105" "tran 'READER_69.00' 'READER_115.00' 'T2'" 1.00 "" "" "" 0
2768  "tran 70353 70352 'T2'" "open" 1.000000 ""
2769  0
2770  "tran_5106" "tran 'RIFLE_UTE_69.00' 'RIFLE_UTE_138.00' 'T2'" 1.00 "" "" "" 0
2771  "tran 70359 79056 'T2'" "open" 1.000000 ""
2772  0
2773  "tran_5107" "tran 'SANLSVLY_115.00' 'SANLSVLY_230.00' 'SANLSVLY_13.80' 'T1'" 1.00 "" "" "" 0
2774  "tran 70374 70375 70965 'T1'" "open" 1.000000 ""
2775  0
2776  "tran_5108" "tran 'SANLSVLY_115.00' 'SANLSVLY_230.00' 'SANLSVL2_13.80' 'T2'" 1.00 "" "" "" 0
2777  "tran 70374 70375 70970 'T2'" "open" 1.000000 ""
2778  0
2779  "tran_5109" "tran 'SANLSVLY_69.00' 'SANLSVLY_115.00' 'T3'" 1.00 "" "" "" 0
2780  "tran 70376 70374 'T3'" "open" 1.000000 ""
2781  0
2782  "tran_5110" "tran 'SANLSVLY_69.00' 'SANLSVLY_115.00' 'T4'" 1.00 "" "" "" 0
2783  "tran 70376 70374 'T4'" "open" 1.000000 ""
2784  0
2785  "tran_5111" "tran 'SARGENT_69.00' 'SARGENT_115.00' 'T1'" 1.00 "" "" "" 0
2786  "tran 70380 70379 'T1'" "open" 1.000000 ""
2787  0
2788  "tran_5112" "tran 'SHOSHA&B_4.00' 'SHOSHONE_69.00' 'U1'" 1.00 "" "" "" 0
2789  "tran 70385 70386 'U1'" "open" 1.000000 ""
2790  0
2791  "tran_5113" "tran 'SHOSHA&B_4.00' 'SHOSHONE_115.00' 'U4'" 1.00 "" "" "" 0
2792  "tran 70385 70387 'U4'" "open" 1.000000 ""
2793  0
2794  "tran_5114" "tran 'PONCHA_PS_230.00' 'PONCHA_E_115.00' 'PONCHA_13.80' 'T4'" 1.00 "" "" "" 0
2795  "tran 70393 70327 71994 'T4'" "open" 1.000000 ""
2796  0
2797  "tran_5115" "tran 'SMOKY_HL_230.00' 'SMOKY_HL_S_115.00' 'SMOKY_HL_T2_13.80' 'T2'" 1.00 "" "" "" 0
2798  "tran 70396 70125 71991 'T2'" "open" 1.000000 ""
2799  0
2800  "tran_5116" "tran 'SMOKY_HL_230.00' 'SMOKY_HL_N_115.00' 'SMOKY_HL_T1_13.80' 'T1'" 1.00 "" "" "" 0
2801  "tran 70396 70395 71990 'T1'" "open" 1.000000 ""
2802  0
2803  "tran_5117" "tran 'BEAVER_CK_N_115.00' 'BEAVER_CK_P_230.00' 'T1'" 1.00 ""
```

```
      "" "" 0
2804  "tran 70398 70399 'T1'" "open" 1.000000 ""
2805  0
2806  "tran_5118" "tran 'SODA_LAKES_115.00' 'SODA_LAKES_230.00' 'T2'" 1.00 "" "" "" 0
2807  "tran 70400 70018 'T2'" "open" 1.000000 ""
2808  0
2809  "tran_5119" "tran 'ST.VR_2_18.00' 'FT_ST_VRAIN_230.00' 'U2'" 1.00 "" "" "" 0
2810  "tran 70406 70410 'U2'" "open" 1.000000 ""
2811  0
2812  "tran_5120" "tran 'ST.VR_3_18.00' 'FT_ST_VRAIN_230.00' 'U3'" 1.00 "" "" "" 0
2813  "tran 70407 70410 'U3'" "open" 1.000000 ""
2814  0
2815  "tran_5121" "tran 'ST.VR_4_18.00' 'FT_ST_VRAIN_230.00' 'U4'" 1.00 "" "" "" 0
2816  "tran 70408 70410 'U4'" "open" 1.000000 ""
2817  0
2818  "tran_5122" "tran 'ST.VRAIN_22.00' 'FT_ST_VRAIN_230.00' 'U1'" 1.00 "" "" "" 0
2819  "tran 70409 70410 'U1'" "open" 1.000000 ""
2820  0
2821  "tran_5123" "tran 'STMBEACH_69.00' 'STMBEACH_115.00' 'T1'" 1.00 "" "" "" 0
2822  "tran 70413 70412 'T1'" "open" 1.000000 ""
2823  0
2824  "tran_5124" "tran 'TARRYALL_115.00' 'TARRYALL_230.00' 'T1'" 1.00 "" "" "" 0
2825  "tran 70426 70427 'T1'" "open" 1.000000 ""
2826  0
2827  "tran_5125" "tran 'UINTAH_13.80' 'UINTAH_69.00' 'T2'" 1.00 "" "" "" 0
2828  "tran 70437 70436 'T2'" "open" 1.000000 ""
2829  0
2830  "tran_5126" "tran 'UINTAH_13.80' 'UINTAH_230.00' 'T1'" 1.00 "" "" "" 0
2831  "tran 70437 70438 'T1'" "open" 1.000000 ""
2832  0
2833  "tran_5127" "tran 'UINTAH_230.00' 'UINTAH_69.00' 'T1'" 1.00 "" "" "" 0
2834  "tran 70438 70436 'T1'" "open" 1.000000 ""
2835  0
2836  "tran_5128" "tran 'VALMONT_2_115.00' 'VALMONT_230.00' 'T7'" 1.00 "" "" "" 0
2837  "tran 70440 70447 'T7'" "open" 1.000000 ""
2838  0
2839  "tran_5129" "tran 'VALMONT_1_115.00' 'VALMONT_230.00' 'T8'" 1.00 "" "" "" 0
2840  "tran 70444 70447 'T8'" "open" 1.000000 ""
2841  0
2842  "tran_5130" "tran 'ARRIBA_W1_2_34.50' 'ARRIBA_WF_345.00' 'T1'" 1.00 "" "" "" 0
2843  "tran 70445 70659 'T1'" "open" 1.000000 ""
2844  0
2845  "tran_5131" "tran 'ARRIBA_W2_2_34.50' 'ARRIBA_WF_345.00' 'T2'" 1.00 "" "" "" 0
2846  "tran 70446 70659 'T2'" "open" 1.000000 ""
2847  0
2848  "tran_5132" "tran 'VALMNT6_13.80' 'VALMONT_1_115.00' 'U6'" 1.00 "" "" "" 0
2849  "tran 70448 70444 'U6'" "open" 1.000000 ""
2850  0
2851  "tran_5133" "tran 'VILAS_69.00' 'VILAS_115.00' 'T1'" 1.00 "" "" "" 0
2852  "tran 70453 70452 'T1'" "open" 1.000000 ""
2853  0
2854  "tran_5134" "tran 'W.STATON_115.00' 'W.STATON_69.00' 'T1'" 1.00 "" "" "" 0
2855  "tran 70456 70455 'T1'" "open" 1.000000 ""
2856  0
2857  "tran_5135" "tran 'W.STATON_115.00' 'W.STATON_69.00' 'T2'" 1.00 "" "" "" 0
```

```
 "tran 70456 70455 'T2'"  "open"  1.000000  ""
0
"tran_5136"  "tran 'WALSENBG_69.00' 'WALSENBG_115.00' 'T1'"  1.00  ""  ""  ""  0
 "tran 70457 70458 'T1'"  "open"  1.000000  ""
0
"tran_5137"  "tran 'WALSENBG_230.00' 'WALSENBG_115.00' 'WLSBG_T2_13.80' 'T2'"  1.00  ""  ""  ""  0
 "tran 70459 70458 70960 'T2'"  "open"  1.000000  ""
0
"tran_5138"  "tran 'WALSENBG_230.00' 'WALSENBG_115.00' 'WLSBG_T3_13.80' 'T3'"  1.00  ""  ""  ""  0
 "tran 70459 70458 70962 'T3'"  "open"  1.000000  ""
0
"tran_5139"  "tran 'WATERTON_115.00' 'WATERTON_230.00' 'T1'"  1.00  ""  ""  ""  0
 "tran 70463 70464 'T1'"  "open"  1.000000  ""
0
"tran_5140"  "tran 'WATERTON_115.00' 'WATERTON_230.00' 'T2'"  1.00  ""  ""  ""  0
 "tran 70463 70464 'T2'"  "open"  1.000000  ""
0
"tran_5141"  "tran 'MIDWAY_PS_345.00' 'MIDWAY_PS_230.00' 'MIDWAY_PS_13.80' 'T3'"  1.00  ""  ""  ""  0
 "tran 70465 70286 71996 'T3'"  "open"  1.000000  ""
0
"tran_5142"  "tran 'WATERTON_345.00' 'WATERTON_230.00' 'WATERTON_13.80' 'T3'"  1.00  ""  ""  ""  0
 "tran 70466 70464 71995 'T3'"  "open"  1.000000  ""
0
"tran_5143"  "tran 'WELD_PS_230.00' 'WELD_PS_115.00' 'WELD_PS_13.80' 'T1'"  1.00  ""  ""  ""  0
 "tran 70471 70470 71992 'T1'"  "open"  1.000000  ""
0
"tran_5144"  "tran 'WILOW_CK_69.00' 'WILOW_CK_115.00' 'T1'"  1.00  ""  ""  ""  0
 "tran 70473 70472 'T1'"  "open"  1.000000  ""
0
"tran_5145"  "tran 'WILOW_CK_69.00' 'WILOW_CK_115.00' 'T2'"  1.00  ""  ""  ""  0
 "tran 70473 70472 'T2'"  "open"  1.000000  ""
0
"tran_5146"  "tran 'ALMSACT1_13.80' 'ALMSA_TM_69.00' 'U1'"  1.00  ""  ""  ""  0
 "tran 70485 70026 'U1'"  "open"  1.000000  ""
0
"tran_5147"  "tran 'ALMSACT2_13.80' 'ALMSA_TM_115.00' 'U2'"  1.00  ""  ""  ""  0
 "tran 70486 70025 'U2'"  "open"  1.000000  ""
0
"tran_5148"  "tran 'JMSHAFR4_13.80' 'JMSHAFER_230.00' 'U4'"  1.00  ""  ""  ""  0
 "tran 70487 70488 'U4'"  "open"  1.000000  ""
0
"tran_5149"  "tran 'JMSHAFR3_13.80' 'JMSHAFER_230.00' 'U3'"  1.00  ""  ""  ""  0
 "tran 70490 70488 'U3'"  "open"  1.000000  ""
0
"tran_5150"  "tran 'JMSHAFR2_13.80' 'JMSHAFER_230.00' 'U2'"  1.00  ""  ""  ""  0
 "tran 70493 70488 'U2'"  "open"  1.000000  ""
0
"tran_5151"  "tran 'JMSHAFR1_13.80' 'JMSHAFER_230.00' 'U1'"  1.00  ""  ""  ""  0
 "tran 70495 70488 'U1'"  "open"  1.000000  ""
0
"tran_5152"  "tran 'QF_BCP2T_13.80' 'BRUSH_SW_W_115.00' 'U2'"  1.00  ""  ""  ""  0
 "tran 70498 70005 'U2'"  "open"  1.000000  ""
```

```
0
"tran_5153"    "tran 'QF_B4-4T_13.80' 'BRUSH_SW_W_115.00'  'U4'"    1.00  ""    ""    ""    0
 "tran 70499 70005 'U4'"    "open"    1.000000  ""
0
"tran_5154"    "tran 'QF_CPP1T_13.80' 'COPWRPRO_NG_115.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70500 70482 'U1'"    "open"    1.000000  ""
0
"tran_5155"    "tran 'QF_CPP3T_13.80' 'COPWRPRO_NG_115.00'  'U3'"    1.00  ""    ""    ""    0
 "tran 70501 70482 'U3'"    "open"    1.000000  ""
0
"tran_5156"    "tran 'PIONER_CR_115.00' 'PINR_S_2_CR_34.50'  'T1'"    1.00  ""    ""    ""    0
 "tran 70503 70555 'T1'"    "open"    1.000000  ""
0
"tran_5157"    "tran 'VICTORY_CR_115.00' 'KIOWA_S_CR_34.50'  'T1'"    1.00  ""    ""    ""    0
 "tran 70510 70572 'T1'"    "open"    1.000000  ""
0
"tran_5158"    "tran 'SULPHUR_115.00' 'SULPHUR_230.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 70523 70524 'T1'"    "open"    1.000000  ""
0
"tran_5159"    "tran 'SULPHUR_115.00' 'SULPHUR_230.00'  'T2'"    1.00  ""    ""    ""    0
 "tran 70523 70524 'T2'"    "open"    1.000000  ""
0
"tran_5160"    "tran 'CHAMBERS_115.00' 'CHAMBERS_230.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
0
"tran_5161"    "tran 'CHAMBERS_115.00' 'CHAMBERS_230.00'  'T2'"    1.00  ""    ""    ""    0
 "tran 70538 70539 'T2'"    "open"    1.000000  ""
0
"tran_5162"    "tran 'BRICK_CT_CR_115.00' 'BRICKCTR_230.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 70546 70545 'T1'"    "open"    1.000000  ""
0
"tran_5163"    "tran 'BRICK_CT_CR_115.00' 'HUNTER_S_CR_34.50'  'T1'"    1.00  ""    ""    ""    0
 "tran 70546 70573 'T1'"    "open"    1.000000  ""
0
"tran_5164"    "tran 'APT_DSLS_4.16' 'APT_PARK_115.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70548 70030 'U1'"    "open"    1.000000  ""
0
"tran_5165"    "tran 'ARAP5&6_13.80' 'ARAP_GEn_115.00'  'U5'"    1.00  ""    ""    ""    0
 "tran 70553 70035 'U5'"    "open"    1.000000  ""
0
"tran_5166"    "tran 'ARAP7_13.80' 'ARAP_GEn_115.00'  'U7'"    1.00  ""    ""    ""    0
 "tran 70554 70035 'U7'"    "open"    1.000000  ""
0
"tran_5167"    "tran 'QF_B4D4T_12.50' 'BRUSH_SW_W_115.00'  'U4'"    1.00  ""    ""    ""    0
 "tran 70556 70005 'U4'"    "open"    1.000000  ""
0
"tran_5168"    "tran 'VALMNT7_13.80' 'VALMONT_2_115.00'  'U7'"    1.00  ""    ""    ""    0
 "tran 70557 70440 'U7'"    "open"    1.000000  ""
0
"tran_5169"    "tran 'VALMNT8_13.80' 'VALMONT_2_115.00'  'U8'"    1.00  ""    ""    ""    0
 "tran 70558 70440 'U8'"    "open"    1.000000  ""
0
```

```
"tran_5170"   "tran 'SPRUCE1_18.00' 'BLUSPRU_GEN_230.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70562 70520 'U1'"   "open"    1.000000  ""
0
"tran_5171"   "tran 'SPRUCE2_18.00' 'BLUSPRU_GEN_230.00'  'U2'"    1.00  ""    ""    ""    0
 "tran 70563 70520 'U2'"   "open"    1.000000  ""
0
"tran_5172"   "tran 'KNUTSON1_13.80' 'KNUTSON_230.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70565 70489 'U1'"   "open"    1.000000  ""
0
"tran_5173"   "tran 'KNUTSON2_13.80' 'KNUTSON_230.00'  'U2'"    1.00  ""    ""    ""    0
 "tran 70566 70489 'U2'"   "open"    1.000000  ""
0
"tran_5174"   "tran 'FTNVL1&2_13.80' 'FTNVLY_GENS_230.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70577 70595 'U1'"   "open"    1.000000  ""
0
"tran_5175"   "tran 'FTNVL3&4_13.80' 'FTNVLY_GENS_230.00'  'U2'"    1.00  ""    ""    ""    0
 "tran 70578 70595 'U2'"   "open"    1.000000  ""
0
"tran_5176"   "tran 'FTNVL5&6_13.80' 'FTNVLY_GENS_230.00'  'U3'"    1.00  ""    ""    ""    0
 "tran 70579 70595 'U3'"   "open"    1.000000  ""
0
"tran_5177"   "tran 'PLNENDG1_1_13.80' 'PLAINS_NG1_230.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70580 70431 'U1'"   "open"    1.000000  ""
0
"tran_5178"   "tran 'PLNENDG2_1_13.80' 'PLAINS_NG2_230.00'  'U3'"    1.00  ""    ""    ""    0
 "tran 70585 70433 'U3'"   "open"    1.000000  ""
0
"tran_5179"   "tran 'PLNENDG2_2_13.80' 'PLAINS_NG2_230.00'  'U4'"    1.00  ""    ""    ""    0
 "tran 70586 70433 'U4'"   "open"    1.000000  ""
0
"tran_5180"   "tran 'PLNENDG1_2_13.80' 'PLAINS_NG1_230.00'  'U2'"    1.00  ""    ""    ""    0
 "tran 70587 70431 'U2'"   "open"    1.000000  ""
0
"tran_5181"   "tran 'RMEC1_15.00' 'RMEC_230.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70588 70590 'U1'"   "open"    1.000000  ""
0
"tran_5182"   "tran 'RMEC2_15.00' 'RMEC_230.00'  'U2'"    1.00  ""    ""    ""    0
 "tran 70589 70590 'U2'"   "open"    1.000000  ""
0
"tran_5183"   "tran 'RMEC3_23.00' 'RMEC_230.00'  'U3'"    1.00  ""    ""    ""    0
 "tran 70591 70590 'U3'"   "open"    1.000000  ""
0
"tran_5184"   "tran 'SPNDLE1_18.00' 'SPINDLE_NG_230.00'  'U1'"    1.00  ""    ""    ""    0
 "tran 70593 70468 'U1'"   "open"    1.000000  ""
0
"tran_5185"   "tran 'SPNDLE2_18.00' 'SPINDLE_NG_230.00'  'U2'"    1.00  ""    ""    ""    0
 "tran 70594 70468 'U2'"   "open"    1.000000  ""
0
"tran_5186"   "tran 'HARVEST_MI_345.00' 'HARVEST_MI_230.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 70597 70596 'T1'"   "open"    1.000000  ""
0
"tran_5187"   "tran 'PAWNEE_345.00' 'PAWNEE_230.00'  'PAWNEE_T2_13.80' 'T2'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"   "open"    1.000000  ""
0
```

```
"tran_5188"  "tran 'PAWNEE_345.00' 'PAWNEE_230.00'  'PAWNEE_T3_13.80' 'T3'"  1.00  ""  ""  ""  0
 "tran 70598 70311 71999 'T3'"  "open"  1.000000  ""
0
"tran_5189"  "tran 'SMOKY_HL_345.00' 'SMOKY_HL_230.00'  'T4'"  1.00  ""  ""  ""  0
 "tran 70599 70396 'T4'"  "open"  1.000000  ""
0
"tran_5190"  "tran 'SMOKY_HL_345.00' 'SMOKY_HL_230.00'  'T5'"  1.00  ""  ""  ""  0
 "tran 70599 70396 'T5'"  "open"  1.000000  ""
0
"tran_5191"  "tran 'TITAN230_230.00' 'TITAN34.5_34.50'  'TITAN13.8_13.80' 'T1'"  1.00  ""  ""  ""  0
 "tran 70618 70620 70619 'T1'"  "open"  1.000000  ""
0
"tran_5192"  "tran 'MISS_SITE_345.00' 'MISS_SITE_230.00'  'MISS_SITE_13.80' 'T1'"  1.00  ""  ""  ""  0
 "tran 70624 70623 71997 'T1'"  "open"  1.000000  ""
0
"tran_5193"  "tran 'SHORTGRASS_345.00' 'RUSHCK2_W3_2_34.50'  'T1'"  1.00  ""  ""  ""  0
 "tran 70630 70773 'T1'"  "open"  1.000000  ""
0
"tran_5194"  "tran 'LIMON1_W_34.50' 'LIMON1_345.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70635 70625 'T1'"  "open"  1.000000  ""
0
"tran_5195"  "tran 'LIMON2_W_34.50' 'LIMON2_345.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70636 70626 'T1'"  "open"  1.000000  ""
0
"tran_5196"  "tran 'LIMON3_W_34.50' 'LIMON3_345.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70637 70627 'T1'"  "open"  1.000000  ""
0
"tran_5197"  "tran 'COMANCHE_345.00' 'COMAN_3_27.00'  'U1'"  1.00  ""  ""  ""  0
 "tran 70654 70777 'U1'"  "open"  1.000000  ""
0
"tran_5198"  "tran 'GOLDEN_WEST_230.00' 'GLDNWST_W_2_34.50'  'T1'"  1.00  ""  ""  ""  0
 "tran 70660 70661 'T1'"  "open"  1.000000  ""
0
"tran_5199"  "tran 'CEDRPT_W1_2_34.50' 'CEDRPT_W1_3_230.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70674 70676 'T1'"  "open"  1.000000  ""
0
"tran_5200"  "tran 'CEDRPT_W2_2_34.50' 'CEDRPT_W2_3_230.00'  'T1'"  1.00  ""  ""  ""  0
 "tran 70675 70677 'T1'"  "open"  1.000000  ""
0
"tran_5201"  "tran 'CO_GRN_E_34.50' 'CO_GRN_230.00'  'UE'"  1.00  ""  ""  ""  0
 "tran 70701 70700 'UE'"  "open"  1.000000  ""
0
"tran_5202"  "tran 'CO_GRN_W_34.50' 'CO_GRN_230.00'  'UW'"  1.00  ""  ""  ""  0
 "tran 70702 70700 'UW'"  "open"  1.000000  ""
0
"tran_5203"  "tran 'TWNBT1_2_34.50' 'TWNBUTTE_230.00'  'U1'"  1.00  ""  ""  ""  0
 "tran 70703 70705 'U1'"  "open"  1.000000  ""
0
"tran_5204"  "tran 'PTZLOGN1_34.50' 'PTZLOGN_230.00'  'U1'"  1.00  ""  ""  ""  0
 "tran 70710 70711 'U1'"  "open"  1.000000  ""
0
"tran_5205"  "tran 'PTZLOGN2_34.50' 'PTZLOGN_230.00'  'U2'"  1.00  ""  ""  ""
```

```
""    0
3068    "tran 70712 70711 'U2'"    "open"    1.000000    ""
3069    0
3070    "tran_5206"    "tran 'PTZLOGN3_34.50' 'PTZLOGN_230.00' 'U3'"    1.00    ""    ""
        ""    0
3071    "tran 70713 70711 'U3'"    "open"    1.000000    ""
3072    0
3073    "tran_5207"    "tran 'PTZLOGN4_34.50' 'PTZLOGN_230.00' 'U4'"    1.00    ""    ""
        ""    0
3074    "tran 70714 70711 'U4'"    "open"    1.000000    ""
3075    0
3076    "tran_5208"    "tran 'SPRG_CN2_3_34.50' 'SPNGCAN1_230_230.00' 'T2'"    1.00    ""
        ""    ""    0
3077    "tran 70717 70718 'T2'"    "open"    1.000000    ""
3078    0
3079    "tran_5209"    "tran 'SPNGCAN1_230_230.00' 'SPRG_CN1_3_34.50' 'T1'"    1.00    ""
        ""    ""    0
3080    "tran 70718 70719 'T1'"    "open"    1.000000    ""
3081    0
3082    "tran_5210"    "tran 'RDGCREST_34.50' 'RDGCREST_115.00' 'U1'"    1.00    ""    ""
        ""    0
3083    "tran 70723 70722 'U1'"    "open"    1.000000    ""
3084    0
3085    "tran_5211"    "tran 'CHEYRDG_E_345.00' 'CHEYRGE_W13_34.50' 'T1'"    1.00    ""    ""
        ""    0
3086    "tran 70730 70731 'T1'"    "open"    1.000000    ""
3087    0
3088    "tran_5212"    "tran 'CHEYRDG_E_345.00' 'CHEYRGE_W2_2_34.50' 'T1'"    1.00    ""
        ""    ""    0
3089    "tran 70730 70734 'T1'"    "open"    1.000000    ""
3090    0
3091    "tran_5213"    "tran 'BRONCO_PLNS_345.00' 'BRONCO_W1_1_34.50' 'T1'"    1.00    ""
        ""    ""    0
3092    "tran 70750 70751 'T1'"    "open"    1.000000    ""
3093    0
3094    "tran_5214"    "tran 'BRONCO_PLNS_345.00' 'BRONCO_W2_1_34.50' 'T2'"    1.00    ""
        ""    ""    0
3095    "tran 70750 70752 'T2'"    "open"    1.000000    ""
3096    0
3097    "tran_5215"    "tran 'NEPTUNE_345.00' 'NEPTUN_SB1_34.50' 'T1'"    1.00    ""    ""
        ""    0
3098    "tran 70754 70755 'T1'"    "open"    1.000000    ""
3099    0
3100    "tran_5216"    "tran 'THUNDERWOLF_230.00' 'THNDWLF_SB1_34.50' 'T1'"    1.00    ""
        ""    ""    0
3101    "tran 70759 70760 'T1'"    "open"    1.000000    ""
3102    0
3103    "tran_5217"    "tran 'RUSHCK1_W1W2_345.00' 'RUSHCK1_W1_2_34.50' 'T1'"    1.00    ""
        ""    ""    0
3104    "tran 70764 70765 'T1'"    "open"    1.000000    ""
3105    0
3106    "tran_5218"    "tran 'RUSHCK1_W1W2_345.00' 'RUSHCK1_W2_2_34.50' 'T2'"    1.00    ""
        ""    ""    0
3107    "tran 70764 70768 'T2'"    "open"    1.000000    ""
3108    0
3109    "tran_5219"    "tran 'SUNCOR_AULT_44.00' 'HUSKY_115.00' 'T6'"    1.00    ""    ""
        ""    0
3110    "tran 70803 70901 'T6'"    "open"    1.000000    ""
3111    0
3112    "tran_5220"    "tran 'MTNBREEZE_230.00' 'MTNBRZ_WTG_2_34.50' 'T1'"    1.00    ""
        ""    ""    0
3113    "tran 70819 70815 'T1'"    "open"    1.000000    ""
3114    0
3115    "tran_5221"    "tran 'CEDARCK_SYD_230.00' 'CEDARCK_1A_34.50' 'U1'"    1.00    ""
        ""    ""    0
3116    "tran 70821 70823 'U1'"    "open"    1.000000    ""
3117    0
3118    "tran_5222"    "tran 'CEDARCK_SYD_230.00' 'CEDARCK_1B_34.50' 'U2'"    1.00    ""
        ""    ""    0
```

```
 "tran 70821 70824 'U2'" "open" 1.000000 ""
0
"tran_5223" "tran 'CEDARCK2A_34.50' 'CEDARCK2_230.00' 'T1'" 1.00 "" "" "" 0
 "tran 70834 70833 'T1'" "open" 1.000000 ""
0
"tran_5224" "tran 'CEDARCK2B_34.50' 'CEDARCK2_230.00' 'T1'" 1.00 "" "" "" 0
 "tran 70835 70833 'T1'" "open" 1.000000 ""
0
"tran_5225" "tran 'SUN_MTN_230.00' 'SUN_MTN_S1_2_34.50' 'T1'" 1.00 "" "" "" 0
 "tran 70856 70857 'T1'" "open" 1.000000 ""
0
"tran_5226" "tran 'HUSKY_115.00' 'HUSKY_230.00' 'T4'" 1.00 "" "" "" 0
 "tran 70901 70898 'T4'" "open" 1.000000 ""
0
"tran_5227" "tran 'HARTSEL_230.00' 'HARTSEL_CR_115.00' 'T1'" 1.00 "" "" "" 0
 "tran 70927 70926 'T1'" "open" 1.000000 ""
0
"tran_5228" "tran 'GSANDHIL_PV_34.50' 'MOSCA_69.00' 'U1'" 1.00 "" "" "" 0
 "tran 70931 70292 'U1'" "open" 1.000000 ""
0
"tran_5229" "tran 'SLVS_IBRDRLA_34.50' 'SANLSVLY_115.00' 'U1'" 1.00 "" "" "" 0
 "tran 70932 70374 'U1'" "open" 1.000000 ""
0
"tran_5230" "tran 'SUNPOWER_34.50' 'SANLSVLY_230.00' '1 '" 1.00 "" "" "" 0
 "tran 70935 70375 '1 '" "open" 1.000000 ""
0
"tran_5231" "tran 'COMAN_S1_2_34.50' 'COMAN230_S1_230.00' 'T1'" 1.00 "" "" "" 0
 "tran 70941 70942 'T1'" "open" 1.000000 ""
0
"tran_5232" "tran 'ST.VR_5_18.00' 'FT_ST_VRAIN_230.00' 'U5'" 1.00 "" "" "" 0
 "tran 70950 70410 'U5'" "open" 1.000000 ""
0
"tran_5233" "tran 'ST.VR_6_18.00' 'FT_ST_VRAIN_230.00' 'U6'" 1.00 "" "" "" 0
 "tran 70951 70410 'U6'" "open" 1.000000 ""
0
"tran_5234" "tran 'BAC_MSA GEN1_13.80' 'BACULITE_115.00' 'U1'" 1.00 "" "" "" 0
 "tran 71001 70031 'U1'" "open" 1.000000 ""
0
"tran_5235" "tran 'BAC_MSA GEN2_13.80' 'BACULITE_115.00' 'U1'" 1.00 "" "" "" 0
 "tran 71002 70031 'U1'" "open" 1.000000 ""
0
"tran_5236" "tran 'BAC_MSA GEN4_13.80' 'BACULITE_115.00' 'U1'" 1.00 "" "" "" 0
 "tran 71003 70031 'U1'" "open" 1.000000 ""
0
"tran_5237" "tran 'BAC_MSA GEN5_13.80' 'BACULITE_115.00' 'U1'" 1.00 "" "" "" 0
 "tran 71004 70031 'U1'" "open" 1.000000 ""
0
"tran_5238" "tran 'BAC_MSA GEN6_13.80' 'BACULITE_115.00' 'U1'" 1.00 "" "" "" 0
 "tran 71005 70031 'U1'" "open" 1.000000 ""
0
"tran_5239" "tran 'RTLSNAKEB_115.00' 'BUSCHRNCH1_34.50' 'T1'" 1.00 "" "" "" 0
 "tran 71006 71008 'T1'" "open" 1.000000 ""
0
```

```
"tran_5240"   "tran 'BUSCHRNCH_HI_115.00' 'BUSCHRNCHMID_34.50'  '1 '"    1.00  ""    ""    ""    0
 "tran 71010 71011 '1 '"   "open"    1.000000  ""
0
"tran_5241"   "tran 'PEAKVIEWHI_115.00' 'PEAKVIEWMID_34.50'  'WD'"    1.00  ""    ""    ""    0
 "tran 71017 71018 'WD'"   "open"    1.000000  ""
0
"tran_5242"   "tran 'HOGBACK69_69.00' 'HOGBACK115_115.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 71026 71025 'T1'"   "open"    1.000000  ""
0
"tran_5243"   "tran 'FTN_LAKE_69.00' 'FTN_LAKE_115.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 71030 70007 'T1'"   "open"    1.000000  ""
0
"tran_5244"   "tran 'WOLCOTT_2_115.00' 'WOLCOTT_230.00'  'T2'"    1.00  ""    ""    ""    0
 "tran 77643 79069 'T2'"   "open"    1.000000  ""
0
"tran_5245"   "tran 'RAWHIDE_24.00' 'RAWHIDE_230.00'  'U1'"    1.00  ""    ""    ""    ""
0
 "tran 78011 78010 'U1'"   "open"    1.000000  ""
0
"tran_5246"   "tran 'RAWHIDEA_13.80' 'RAWHIDE_230.00'  'UA'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"   "open"    1.000000  ""
0
"tran_5247"   "tran 'RAWHIDEB_13.80' 'RAWHIDE_230.00'  'UB'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"   "open"    1.000000  ""
0
"tran_5248"   "tran 'RAWHIDEC_13.80' 'RAWHIDE_230.00'  'UC'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"   "open"    1.000000  ""
0
"tran_5249"   "tran 'RAWHIDED_13.80' 'RAWHIDE_230.00'  'UD'"    1.00  ""    ""    ""    0
 "tran 78015 78010 'UD'"   "open"    1.000000  ""
0
"tran_5250"   "tran 'RAWHIDEF_18.00' 'RAWHIDE_230.00'  'UF'"    1.00  ""    ""    ""    0
 "tran 78016 78010 'UF'"   "open"    1.000000  ""
0
"tran_5251"   "tran 'RAWHIDE_PV_34.50' 'RAWHIDE_230.00'  'PV'"    1.00  ""    ""    ""    0
 "tran 78020 78010 'PV'"   "open"    1.000000  ""
0
"tran_5252"   "tran 'RD_WIND_34.50' 'RD_WIND_230.00'  'W '"    1.00  ""    ""    ""    ""
0
 "tran 78051 78050 'W '"   "open"    1.000000  ""
0
"tran_5253"   "tran 'LAPORTE_115.00' 'LAPORTE_230.00'  '1 '"    1.00  ""    ""    ""    0
 "tran 78071 78070 '1 '"   "open"    1.000000  ""
0
"tran_5254"   "tran 'LAPORTE_115.00' 'LAPORTE_230.00'  '2 '"    1.00  ""    ""    ""    0
 "tran 78071 78070 '2 '"   "open"    1.000000  ""
0
"tran_5255"   "tran 'DIXON CK_115.00' 'DIXON CK_230.00'  '1 '"    1.00  ""    ""    ""    0
 "tran 78076 78075 '1 '"   "open"    1.000000  ""
0
"tran_5256"   "tran 'DIXON CK_115.00' 'DIXON CK_230.00'  '2 '"    1.00  ""    ""    ""    0
 "tran 78076 78075 '2 '"   "open"    1.000000  ""
0
"tran_5257"   "tran 'TIMBERLN_115.00' 'TIMBERLN_230.00'  '3 '"    1.00  ""    ""    ""
```

```
      "" 0
3224  "tran 78086 78085 '3 '" "open" 1.000000 ""
3225  0
3226  "tran_5258" "tran 'TIMBERLN_115.00' 'TIMBERLN_230.00' '4 '" 1.00 "" "" "" 0
3227  "tran 78086 78085 '4 '" "open" 1.000000 ""
3228  0
3229  "tran_5259" "tran 'HORSESHO_115.00' 'HORSESHO_230.00' '1 '" 1.00 "" "" "" 0
3230  "tran 78091 78090 '1 '" "open" 1.000000 ""
3231  0
3232  "tran_5260" "tran 'HORSESHO_115.00' 'HORSESHO_230.00' '2 '" 1.00 "" "" "" 0
3233  "tran 78091 78090 '2 '" "open" 1.000000 ""
3234  0
3235  "tran_5261" "tran 'BOYD_115.00' 'BOYD_230.00' '1 '" 1.00 "" "" "" 0
3236  "tran 78101 78100 '1 '" "open" 1.000000 ""
3237  0
3238  "tran_5262" "tran 'BOYD_115.00' 'BOYD_230.00' '2 '" 1.00 "" "" "" 0
3239  "tran 78101 78100 '2 '" "open" 1.000000 ""
3240  0
3241  "tran_5263" "tran 'LONGPEAK_115.00' 'LONGPEAK_230.00' '1 '" 1.00 "" "" "" 0
3242  "tran 78106 78105 '1 '" "open" 1.000000 ""
3243  0
3244  "tran_5264" "tran 'LONGPEAK_115.00' 'LONGPEAK_230.00' '2 '" 1.00 "" "" "" 0
3245  "tran 78106 78105 '2 '" "open" 1.000000 ""
3246  0
3247  "tran_5265" "tran 'FORDHAM_115.00' 'FORDHAM_230.00' '1 '" 1.00 "" "" "" 0
3248  "tran 78121 78120 '1 '" "open" 1.000000 ""
3249  0
3250  "tran_5266" "tran 'FORDHAM_115.00' 'FORDHAM_230.00' '2 '" 1.00 "" "" "" 0
3251  "tran 78121 78120 '2 '" "open" 1.000000 ""
3252  0
3253  "tran_5267" "tran 'BASALT_115.00' 'BASALT_230.00' 'T1'" 1.00 "" "" "" 0
3254  "tran 79003 79004 'T1'" "open" 1.000000 ""
3255  0
3256  "tran_5268" "tran 'BASALT_230.00' 'BASALT_115.00' 'BASALT_13.80' 'T2'" 1.00 "" "" "" 0
3257  "tran 79004 79003 71985 'T2'" "open" 1.000000 ""
3258  0
3259  "tran_5269" "tran 'UTE_GRND_JN_115.00' 'UTE_GRND_JN_138.00' 'T2'" 1.00 "" "" "" 0
3260  "tran 79034 79035 'T2'" "open" 1.000000 ""
3261  0
3262  "tran_5270" "tran 'RIFLE_UTE_138.00' 'RIFLE_UTE_230.00' 'T3'" 1.00 "" "" "" 0
3263  "tran 79056 79057 'T3'" "open" 1.000000 ""
3264  0
3265  "tran_5271" "tran 'RIFLE_CU_345.00' 'RIFLE_UTE_230.00' 'RIFLE_UTE_13.80' 'T4'" 1.00 "" "" "" 0
3266  "tran 79058 79057 71988 'T4'" "open" 1.000000 ""
3267  0
3268  "tran_5272" "tran 'WOLCOTT_1_115.00' 'WOLCOTT_230.00' 'T1'" 1.00 "" "" "" 0
3269  "tran 79068 79069 'T1'" "open" 1.000000 ""
3270  0
3271  "tran_5273" "tran 'COLLBRAN_115.00' 'COLLBRAN_138.00' 'T2'" 1.00 "" "" "" 0
3272  "tran 79173 79047 'T2'" "open" 1.000000 ""
3273  0
3274  "tran_5274" "tran 'BOONE_230.00' 'BOONE_115.00' 'BOONE_13.80' 'T1'" 1.00 "" "" "" 0
3275  "tran 70061 70060 71981 'T1'" "open" 1.000000 ""
3276  0
```

```
"tran_5275"  "tran 'CHEYRGW_CTRL_345.00' 'CHEYRGW_W1_2_34.50' 'T1'"  1.00  ""  ""  ""  0
 "tran 70778 70737 'T1'"  "open"  1.000000  ""
0
"tran_5276"  "tran 'CHEYRGW_CTRL_345.00' 'CHEYRGW_W2_2_34.50' 'T1'"  1.00  ""  ""  ""  0
 "tran 70778 70740 'T1'"  "open"  1.000000  ""
0
"tran_5277"  "tran 'BIGHORN_S_3_230.00' 'BIGHORN_S_2_34.50' 'T1'"  1.00  ""  ""  ""  0
 "tran 70875 70876 'T1'"  "open"  1.000000  ""
0
"tran_5278"  "tran 'SPANPKS_LV1_34.50' 'SPANPEAKS_230.00' '1 '"  1.00  ""  ""  ""  0
 "tran 70992 70991 '1 '"  "open"  1.000000  ""
0
"tran_5279"  "tran 'S_FWL_TP_69.00' 'S.FOWLR_115.00' 'T1'"  1.00  ""  ""  ""  0
 "tran 70372 71027 'T1'"  "open"  1.000000  ""
0
"tran_5280"  "tran 'SEV_230.00' 'SEV_34.50' 'BHSUN_TER_13.80' 'S '"  1.00  ""  ""  ""  0
 "tran 78031 78032 78035 'S '"  "open"  1.000000  ""
0
"tran_5281"  "tran 'HOPKINS_230.00' 'HOPKINS_115.00' 'HOPKINS_13.80' 'T3'"  1.00  ""  ""  ""  0
 "tran 70232 70231 71953 'T3'"  "open"  1.000000  ""
0
"tran_5282"  "tran 'MIDWAY_PS_230.00' 'MIDWAY_PS_115.00' 'MIDW_13.80' 'T1'"  1.00  ""  ""  ""  0
 "tran 70286 70285 71980 'T1'"  "open"  1.000000  ""
0
"tran_5283"  "tran 'GOOSE_CK_34.50' 'GOOSE_CK_345.00' 'U1'"  1.00  ""  ""  ""  0
 "tran 70917 70918 'U1'"  "open"  1.000000  ""
0
"tran_5284"  "tran 'GOOSE_CK_34.50' 'GOOSE_CK_345.00' 'U2'"  1.00  ""  ""  ""  0
 "tran 70917 70918 'U2'"  "open"  1.000000  ""
0
"tran_5285"  "tran 'MAY_VALLEY_34.50' 'MAY_VALLEY_345.00' 'U1'"  1.00  ""  ""  ""  0
 "tran 70920 70919 'U1'"  "open"  1.000000  ""
0
"tran_5286"  "tran 'MAY_VALLEY_34.50' 'MAY_VALLEY_345.00' 'U2'"  1.00  ""  ""  ""  0
 "tran 70920 70919 'U2'"  "open"  1.000000  ""
0
"tran_5287"  "tran 'BLUESTONE_69.00' 'BLUESTONE_230.00' 'T1'"  1.00  ""  ""  ""  0
 "tran 70981 70264 'T1'"  "open"  1.000000  ""
0
"tran_5288"  "tran 'ALAMOSA_SLR_115.00' 'ALMSA_S1_2_13.80' 'ALMSA_TER_7.97' 'T1'"  1.00  ""  ""  ""  0
 "tran 700180 700179 71954 'T1'"  "open"  1.000000  ""
0
"tran_5289"  "tran 'HENRYLAK_115.00' 'HENRYLAK_230.00' 'T1'"  1.00  ""  ""  ""  0
 "tran 72024 70605 'T1'"  "open"  1.000000  ""
0
"tran_5290"  "tran 'CAREY_LM_12.50' 'CAREY_TS_230.00' '1 '"  1.00  ""  ""  ""  0
 "tran 72000 78087 '1 '"  "open"  1.000000  ""
0
"tran_5291"  "tran 'CAREY_LM_12.50' 'CAREY_TS_230.00' '2 '"  1.00  ""  ""  ""  0
 "tran 72000 78087 '2 '"  "open"  1.000000  ""
0
"tran_5292"  "tran 'GATEWY_115.00' 'GATEWY_230.00' '1 '"  1.00  ""  ""  ""
```

0
"tran 72191 78102 '1 '" "open" 1.000000 ""
0
"tran_5293" "tran 'MARYLKSB_115.00' 'MARYLKSB_69.00' '1 '" 1.00 "" "" "" 0
"tran 78066 73436 '1 '" "open" 1.000000 ""
0
"tran_5294" "tran 'GOREPASS_230.00' 'GOREPASS_138.00' '1 '" 1.00 "" "" "" 0
"tran 70088 73072 '1 '" "open" 1.000000 ""
0
"tran_5295" "tran 'W.CANON_115.00' 'W CANON_230.00' 'T1'" 1.00 "" "" "" 0
"tran 70550 73551 'T1'" "open" 1.000000 ""
0
"tran_5296" "tran 'GOLDEN_WEST_230.00' 'GYAK_COLL_34.50' 'GYAK_TERT_13.80' '1 '" 1.00 "" "" "" 0
"tran 70660 73724 73725 '1 '" "open" 1.000000 ""
0
"tran_5297" "tran 'FT_ST_VRAIN_230.00' 'FT_ST_VRAIN_345.00' 'T7'" 1.00 "" "" "" 0
"tran 70410 70916 'T7'" "open" 1.000000 ""
0
"tran_5298" "tran 'FT_ST_VRAIN_230.00' 'FT_ST_VRAIN_345.00' 'T8'" 1.00 "" "" "" 0
"tran 70410 70916 'T8'" "open" 1.000000 ""
0
"tran_5299" "tran 'HARVEST_MI_345.00' 'HARVEST_MI_230.00' 'T2'" 1.00 "" "" "" 0
"tran 70597 70596 'T2'" "open" 1.000000 ""
0
"tran_5300" "tran 'PI_2024_13_345.00' '24_13_W2_2_34.50' '24_13_T2_13.80' 'T2'" 1.00 "" "" "" 0
"tran 700066 700056 71969 'T2'" "open" 1.000000 ""
0
"tran_5301" "tran 'PI_2024_13_345.00' '24_13_W3_2_34.50' '24_13_T3_13.80' 'T3'" 1.00 "" "" "" 0
"tran 700066 700059 71968 'T3'" "open" 1.000000 ""
0
"tran_5302" "tran 'PI_2024_13_345.00' '24_13_W4_2_34.50' '24_13_T4_13.80' 'T4'" 1.00 "" "" "" 0
"tran 700066 700062 71967 'T4'" "open" 1.000000 ""
0
"tran_5303" "tran 'PI_2024_13_345.00' '24_13_W1_2_34.50' '24_13_T1_13.80' 'T1'" 1.00 "" "" "" 0
"tran 700066 700068 71970 'T1'" "open" 1.000000 ""
0
"tran_5304" "tran 'PI_2024_12_345.00' '24_12_W1_2_34.50' 'T1'" 1.00 "" "" "" 0
"tran 700069 700070 'T1'" "open" 1.000000 ""
0
"tran_5305" "tran 'PI_2024_12_345.00' '24_12_W2_2_34.50' 'T2'" 1.00 "" "" "" 0
"tran 700069 700071 'T2'" "open" 1.000000 ""
0
"tran_5306" "tran 'PI_2024_12_345.00' '24_12_W3_2_34.50' 'T3'" 1.00 "" "" "" 0
"tran 700069 700072 'T3'" "open" 1.000000 ""
0
"tran_5307" "tran '20_10_SB12_230.00' '20_10_SB1_34.50' '1 '" 1.00 "" "" "" 0
"tran 700140 700141 '1 '" "open" 1.000000 ""
0
"tran_5308" "tran '20_10_SB12_230.00' '20_10_SB2_34.50' '1 '" 1.00 "" "" "" 0
"tran 700140 700150 '1 '" "open" 1.000000 ""
0
"tran_5309" "tran '2021_6_S1_2_34.50' '2021_6_S1_3_230.00' 'T1'" 1.00 "" "" "" 0

```
 "tran 700153 700154 'T1'"    "open"    1.000000  ""
0
"tran_5310"    "tran 'REPL_2024_1_230.00' '24_1_S1_2_34.50'  '24_1_T1_13.80' '1 '"    1.00  ""    ""    ""    0
 "tran 700208 700209 71942 '1 '"    "open"    1.000000  ""
0
"tran_5311"    "tran 'REPL_2024_1_230.00' '24_1_S2_2_34.50'  '24_1_T2_13.80' '1 '"    1.00  ""    ""    ""    0
 "tran 700208 700210 71943 '1 '"    "open"    1.000000  ""
0
"tran_5312"    "tran 'REPL_2024_1_230.00' '24_1_S3_2_34.50'  '24_1_T3_13.80' '1 '"    1.00  ""    ""    ""    0
 "tran 700208 700211 71944 '1 '"    "open"    1.000000  ""
0
"tran_5313"    "tran 'PI_24_3_18.00' 'FT_LUPTON_1_115.00'  'T1'"    1.00  ""    ""    ""    0
 "tran 700001 70191 'T1'"    "open"    1.000000  ""
0
"tran_5314"    "tran 'PI_24_2_G7_19.00' 'FT_ST_VRAIN_230.00'  'U7'"    1.00  ""    ""    ""    0
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"tran_5315"    "tran 'PI_24_2_G8_19.00' 'FT_ST_VRAIN_230.00'  'U8'"    1.00  ""    ""    ""    0
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"tran_5316"    "tran 'PI_2024_5_69.00' '24_5_G_2_34.50'  '1 '"    1.00  ""    ""    ""    0
 "tran 700006 700007 '1 '"    "open"    1.000000  ""
0
"tran_5317"    "tran 'PI_2024_7_345.00' '24_7_B_2_34.50'  '24_7_T_13.80' 'T1'"    1.00  ""    ""    ""    0
 "tran 700047 700046 71972 'T1'"    "open"    1.000000  ""
0
"tran_5318"    "tran 'PI_2024_9_345.00' '24_9_W1_2_34.50'  '24_9_T4_13.80' 'T1'"    1.00  ""    ""    ""    0
 "tran 700091 700081 71966 'T1'"    "open"    1.000000  ""
0
"tran_5319"    "tran 'PI_2024_9_345.00' '24_9_W2_2_34.50'  '24_9_T3_13.80' 'T1'"    1.00  ""    ""    ""    0
 "tran 700091 700084 71965 'T1'"    "open"    1.000000  ""
0
"tran_5320"    "tran 'PI_2024_9_345.00' '24_9_W3_2_34.50'  '24_9_T2_13.80' 'T1'"    1.00  ""    ""    ""    0
 "tran 700091 700087 71964 'T1'"    "open"    1.000000  ""
0
"tran_5321"    "tran 'PI_2024_9_345.00' '24_9_W4_2_34.50'  '24_9_T1_13.80' 'T1'"    1.00  ""    ""    ""    0
 "tran 700091 700090 71963 'T1'"    "open"    1.000000  ""
0
"tran_5322"    "tran 'PI_2024_11_345.00' '24_11_B_2_34.50'  '24_11_T_13.80' '1 '"    1.00  ""    ""    ""    0
 "tran 700097 700098 71960 '1 '"    "open"    1.000000  ""
0
"tran_5323"    "tran '5RSC_24_28_345.00' '24_28_W_2_34.50'  '24_28_T1_13.80' 'T1'"    1.00  ""    ""    ""    0
 "tran 700185 700184 71952 'T1'"    "open"    1.000000  ""
0
"tran_5324"    "tran '5RSC_24_28_345.00' '24_28_W_2_34.50'  '24_28_T2_13.80' 'T2'"    1.00  ""    ""    ""    0
 "tran 700185 700184 71951 'T2'"    "open"    1.000000  ""
0
"tran_5325"    "tran 'PI_2023_2_345.00' '23_2_B1_2_34.50'  '23_2_T_13.80' '1 '"    1.00  ""    ""    ""    0
 "tran 700188 700189 71949 '1 '"    "open"    1.000000  ""
0
"tran_5326"    "tran '24_8_SB_34.50' '24_8_SB_1_115.00'  '1 '"    1.00  ""    ""    ""    0
 "tran 700219 700218 '1 '"    "open"    1.000000  ""
```

```
0
"tran_5327"   "tran 'REPL_2021_1_230.00' '21_1_SB1_34.50'  '21_1_T1_13.80' '1 '"   1.00  ""   ""   ""   0
 "tran 700134 700131 71959 '1 '"   "open"   1.000000  ""
0
"tran_5328"   "tran 'REPL_2021_1_230.00' '21_1_SB2_34.50'  '21_1_T2_13.80' '1 '"   1.00  ""   ""   ""   0
 "tran 700134 700132 71958 '1 '"   "open"   1.000000  ""
0
"tran_5329"   "tran 'REPL_2021_1_230.00' '21_1_SB3_34.50'  '21_1_T3_13.80' '1 '"   1.00  ""   ""   ""   0
 "tran 700134 700133 71957 '1 '"   "open"   1.000000  ""
0
"tran_5330"   "tran 'PI_2024_10_230.00' '24_10_B_2_34.50'  '24_10_T_13.80' 'T1'"   1.00  ""   ""   ""   0
 "tran 700052 700053 71971 'T1'"   "open"   1.000000  ""
0
"gen_5331"   "gen 'CABCRKB_13.80' 'HB'"   1.00  ""   ""   ""   0
 "gen 70070 'HB'"   "open"   1.000000  ""
0
"gen_5332"   "gen 'CABCRKA_13.80' 'HA'"   1.00  ""   ""   ""   0
 "gen 70069 'HA'"   "open"   1.000000  ""
0
"gen_5333"   "gen 'FRUITA_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 70180 'G1'"   "open"   1.000000  ""
0
"gen_5334"   "gen 'FT_LUPTN_12_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 70188 'G1'"   "open"   1.000000  ""
0
"gen_5335"   "gen 'FT_LUPTN_12_13.80' 'G2'"   1.00  ""   ""   ""   0
 "gen 70188 'G2'"   "open"   1.000000  ""
0
"gen_5336"   "gen 'PAWNEE_22.00' 'C1'"   1.00  ""   ""   ""   0
 "gen 70310 'C1'"   "open"   1.000000  ""
0
"gen_5337"   "gen 'MANCHEF1_16.00' 'G1'"   1.00  ""   ""   ""   0
 "gen 70314 'G1'"   "open"   1.000000  ""
0
"gen_5338"   "gen 'MANCHEF2_16.00' 'G2'"   1.00  ""   ""   ""   0
 "gen 70315 'G2'"   "open"   1.000000  ""
0
"gen_5339"   "gen 'PUB_DSLS_4.16' 'G1'"   1.00  ""   ""   ""   0
 "gen 70334 'G1'"   "open"   1.000000  ""
0
"gen_5340"   "gen 'R.F.DSLS_4.16' 'G1'"   1.00  ""   ""   ""   0
 "gen 70344 'G1'"   "open"   1.000000  ""
0
"gen_5341"   "gen 'ST.VR_2_18.00' 'G2'"   1.00  ""   ""   ""   0
 "gen 70406 'G2'"   "open"   1.000000  ""
0
"gen_5342"   "gen 'ST.VR_3_18.00' 'G3'"   1.00  ""   ""   ""   0
 "gen 70407 'G3'"   "open"   1.000000  ""
0
"gen_5343"   "gen 'ST.VR_4_18.00' 'G4'"   1.00  ""   ""   ""   0
 "gen 70408 'G4'"   "open"   1.000000  ""
0
"gen_5344"   "gen 'ST.VRAIN_22.00' 'ST'"   1.00  ""   ""   ""   0
 "gen 70409 'ST'"   "open"   1.000000  ""
0
"gen_5345"   "gen 'VALMNT6_13.80' 'G6'"   1.00  ""   ""   ""   0
 "gen 70448 'G6'"   "open"   1.000000  ""
0
"gen_5346"   "gen 'ALMSACT1_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 70485 'G1'"   "open"   1.000000  ""
0
"gen_5347"   "gen 'ALMSACT2_13.80' 'G2'"   1.00  ""   ""   ""   0
 "gen 70486 'G2'"   "open"   1.000000  ""
0
"gen_5348"   "gen 'JMSHAFR4_13.80' 'G4'"   1.00  ""   ""   ""   0
```

```
 "gen 70487 'G4'"    "open"    1.000000  ""
0
"gen_5349"    "gen 'JMSHAFR4_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70487 'G5'"    "open"    1.000000  ""
0
"gen_5350"    "gen 'JMSHAFR3_13.80' 'G3'"    1.00  ""    ""    ""    0
 "gen 70490 'G3'"    "open"    1.000000  ""
0
"gen_5351"    "gen 'JMSHAFR3_13.80' 'ST'"    1.00  ""    ""    ""    0
 "gen 70490 'ST'"    "open"    1.000000  ""
0
"gen_5352"    "gen 'JMSHAFR2_13.80' 'ST'"    1.00  ""    ""    ""    0
 "gen 70493 'ST'"    "open"    1.000000  ""
0
"gen_5353"    "gen 'JMSHAFR1_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70495 'G1'"    "open"    1.000000  ""
0
"gen_5354"    "gen 'JMSHAFR1_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70495 'G2'"    "open"    1.000000  ""
0
"gen_5355"    "gen 'QF_BCP2T_13.80' 'G3'"    1.00  ""    ""    ""    0
 "gen 70498 'G3'"    "open"    1.000000  ""
0
"gen_5356"    "gen 'QF_BCP2T_13.80' 'ST'"    1.00  ""    ""    ""    0
 "gen 70498 'ST'"    "open"    1.000000  ""
0
"gen_5357"    "gen 'QF_B4-4T_13.80' 'G4'"    1.00  ""    ""    ""    0
 "gen 70499 'G4'"    "open"    1.000000  ""
0
"gen_5358"    "gen 'QF_B4-4T_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70499 'G5'"    "open"    1.000000  ""
0
"gen_5359"    "gen 'QF_CPP1T_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70500 'G1'"    "open"    1.000000  ""
0
"gen_5360"    "gen 'QF_CPP1T_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70500 'G2'"    "open"    1.000000  ""
0
"gen_5361"    "gen 'QF_CPP3T_13.80' 'ST'"    1.00  ""    ""    ""    0
 "gen 70501 'ST'"    "open"    1.000000  ""
0
"gen_5362"    "gen 'APT_DSLS_4.16' 'G1'"    1.00  ""    ""    ""    0
 "gen 70548 'G1'"    "open"    1.000000  ""
0
"gen_5363"    "gen 'ARAP5&6_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70553 'G5'"    "open"    1.000000  ""
0
"gen_5364"    "gen 'ARAP5&6_13.80' 'G6'"    1.00  ""    ""    ""    0
 "gen 70553 'G6'"    "open"    1.000000  ""
0
"gen_5365"    "gen 'QF_B4D4T_12.50' 'ST'"    1.00  ""    ""    ""    0
 "gen 70556 'ST'"    "open"    1.000000  ""
0
"gen_5366"    "gen 'VALMNT7_13.80' 'G7'"    1.00  ""    ""    ""    0
 "gen 70557 'G7'"    "open"    1.000000  ""
0
"gen_5367"    "gen 'LAMAR_DC_230.00' 'DC'"    1.00  ""    ""    ""    0
 "gen 70560 'DC'"    "open"    1.000000  ""
0
"gen_5368"    "gen 'SPRUCE1_18.00' 'G1'"    1.00  ""    ""    ""    0
 "gen 70562 'G1'"    "open"    1.000000  ""
0
"gen_5369"    "gen 'SPRUCE2_18.00' 'G2'"    1.00  ""    ""    ""    0
 "gen 70563 'G2'"    "open"    1.000000  ""
0
"gen_5370"    "gen 'KNUTSON1_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70565 'G1'"    "open"    1.000000  ""
0
"gen_5371"    "gen 'KNUTSON2_13.80' 'G2'"    1.00  ""    ""    ""    0
```

```
 "gen 70566 'G2'"    "open"    1.000000  ""
0
"gen_5372"    "gen 'FTNVL1&2_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70577 'G1'"    "open"    1.000000  ""
0
"gen_5373"    "gen 'FTNVL1&2_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70577 'G2'"    "open"    1.000000  ""
0
"gen_5374"    "gen 'FTNVL3&4_13.80' 'G3'"    1.00  ""    ""    ""    0
 "gen 70578 'G3'"    "open"    1.000000  ""
0
"gen_5375"    "gen 'FTNVL3&4_13.80' 'G4'"    1.00  ""    ""    ""    0
 "gen 70578 'G4'"    "open"    1.000000  ""
0
"gen_5376"    "gen 'FTNVL5&6_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70579 'G5'"    "open"    1.000000  ""
0
"gen_5377"    "gen 'FTNVL5&6_13.80' 'G6'"    1.00  ""    ""    ""    0
 "gen 70579 'G6'"    "open"    1.000000  ""
0
"gen_5378"    "gen 'RMEC1_15.00' 'G1'"    1.00  ""    ""    ""    0
 "gen 70588 'G1'"    "open"    1.000000  ""
0
"gen_5379"    "gen 'RMEC2_15.00' 'G2'"    1.00  ""    ""    ""    0
 "gen 70589 'G2'"    "open"    1.000000  ""
0
"gen_5380"    "gen 'RMEC3_23.00' 'ST'"    1.00  ""    ""    ""    0
 "gen 70591 'ST'"    "open"    1.000000  ""
0
"gen_5381"    "gen 'PLNENDG1_1_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70580 'G1'"    "open"    1.000000  ""
0
"gen_5382"    "gen 'PLNENDG1_1_13.80' 'G0'"    1.00  ""    ""    ""    0
 "gen 70580 'G0'"    "open"    1.000000  ""
0
"gen_5383"    "gen 'PLNENDG1_1_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70580 'G2'"    "open"    1.000000  ""
0
"gen_5384"    "gen 'PLNENDG1_1_13.80' 'G3'"    1.00  ""    ""    ""    0
 "gen 70580 'G3'"    "open"    1.000000  ""
0
"gen_5385"    "gen 'PLNENDG1_1_13.80' 'G4'"    1.00  ""    ""    ""    0
 "gen 70580 'G4'"    "open"    1.000000  ""
0
"gen_5386"    "gen 'PLNENDG1_1_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70580 'G5'"    "open"    1.000000  ""
0
"gen_5387"    "gen 'PLNENDG1_1_13.80' 'G6'"    1.00  ""    ""    ""    0
 "gen 70580 'G6'"    "open"    1.000000  ""
0
"gen_5388"    "gen 'PLNENDG1_1_13.80' 'G7'"    1.00  ""    ""    ""    0
 "gen 70580 'G7'"    "open"    1.000000  ""
0
"gen_5389"    "gen 'PLNENDG1_1_13.80' 'G8'"    1.00  ""    ""    ""    0
 "gen 70580 'G8'"    "open"    1.000000  ""
0
"gen_5390"    "gen 'PLNENDG1_1_13.80' 'G9'"    1.00  ""    ""    ""    0
 "gen 70580 'G9'"    "open"    1.000000  ""
0
"gen_5391"    "gen 'PLNENDG1_2_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70587 'G1'"    "open"    1.000000  ""
0
"gen_5392"    "gen 'PLNENDG1_2_13.80' 'G0'"    1.00  ""    ""    ""    0
 "gen 70587 'G0'"    "open"    1.000000  ""
0
"gen_5393"    "gen 'PLNENDG1_2_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70587 'G2'"    "open"    1.000000  ""
0
"gen_5394"    "gen 'PLNENDG1_2_13.80' 'G3'"    1.00  ""    ""    ""    0
```

```
 "gen 70587 'G3'"    "open"    1.000000  ""
0
"gen_5395"    "gen 'PLNENDG1_2_13.80' 'G4'"    1.00  ""    ""    ""    0
 "gen 70587 'G4'"    "open"    1.000000  ""
0
"gen_5396"    "gen 'PLNENDG1_2_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70587 'G5'"    "open"    1.000000  ""
0
"gen_5397"    "gen 'PLNENDG1_2_13.80' 'G6'"    1.00  ""    ""    ""    0
 "gen 70587 'G6'"    "open"    1.000000  ""
0
"gen_5398"    "gen 'PLNENDG1_2_13.80' 'G7'"    1.00  ""    ""    ""    0
 "gen 70587 'G7'"    "open"    1.000000  ""
0
"gen_5399"    "gen 'PLNENDG1_2_13.80' 'G8'"    1.00  ""    ""    ""    0
 "gen 70587 'G8'"    "open"    1.000000  ""
0
"gen_5400"    "gen 'PLNENDG1_2_13.80' 'G9'"    1.00  ""    ""    ""    0
 "gen 70587 'G9'"    "open"    1.000000  ""
0
"gen_5401"    "gen 'VALMNT8_13.80' 'G8'"    1.00  ""    ""    ""    0
 "gen 70558 'G8'"    "open"    1.000000  ""
0
"gen_5402"    "gen 'SPNDLE1_18.00' 'G1'"    1.00  ""    ""    ""    0
 "gen 70593 'G1'"    "open"    1.000000  ""
0
"gen_5403"    "gen 'SPNDLE2_18.00' 'G2'"    1.00  ""    ""    ""    0
 "gen 70594 'G2'"    "open"    1.000000  ""
0
"gen_5404"    "gen 'PTZLOGN1_34.50' 'W1'"    1.00  ""    ""    ""    0
 "gen 70710 'W1'"    "open"    1.000000  ""
0
"gen_5405"    "gen 'PTZLOGN2_34.50' 'W2'"    1.00  ""    ""    ""    0
 "gen 70712 'W2'"    "open"    1.000000  ""
0
"gen_5406"    "gen 'PTZLOGN3_34.50' 'W3'"    1.00  ""    ""    ""    0
 "gen 70713 'W3'"    "open"    1.000000  ""
0
"gen_5407"    "gen 'RDGCREST_34.50' 'W1'"    1.00  ""    ""    ""    0
 "gen 70723 'W1'"    "open"    1.000000  ""
0
"gen_5408"    "gen 'PLNENDG2_1_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70585 'G1'"    "open"    1.000000  ""
0
"gen_5409"    "gen 'PLNENDG2_1_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70585 'G2'"    "open"    1.000000  ""
0
"gen_5410"    "gen 'PLNENDG2_1_13.80' 'G3'"    1.00  ""    ""    ""    0
 "gen 70585 'G3'"    "open"    1.000000  ""
0
"gen_5411"    "gen 'PLNENDG2_1_13.80' 'G4'"    1.00  ""    ""    ""    0
 "gen 70585 'G4'"    "open"    1.000000  ""
0
"gen_5412"    "gen 'PLNENDG2_1_13.80' 'G5'"    1.00  ""    ""    ""    0
 "gen 70585 'G5'"    "open"    1.000000  ""
0
"gen_5413"    "gen 'PLNENDG2_1_13.80' 'G6'"    1.00  ""    ""    ""    0
 "gen 70585 'G6'"    "open"    1.000000  ""
0
"gen_5414"    "gen 'PLNENDG2_1_13.80' 'G7'"    1.00  ""    ""    ""    0
 "gen 70585 'G7'"    "open"    1.000000  ""
0
"gen_5415"    "gen 'PLNENDG2_2_13.80' 'G1'"    1.00  ""    ""    ""    0
 "gen 70586 'G1'"    "open"    1.000000  ""
0
"gen_5416"    "gen 'PLNENDG2_2_13.80' 'G2'"    1.00  ""    ""    ""    0
 "gen 70586 'G2'"    "open"    1.000000  ""
0
"gen_5417"    "gen 'PLNENDG2_2_13.80' 'G3'"    1.00  ""    ""    ""    0
```

```
 "gen 70586 'G3'"   "open"   1.000000  ""
0
"gen_5418"   "gen 'PLNENDG2_2_13.80' 'G4'"   1.00  ""   ""   ""   0
 "gen 70586 'G4'"   "open"   1.000000  ""
0
"gen_5419"   "gen 'PLNENDG2_2_13.80' 'G5'"   1.00  ""   ""   ""   0
 "gen 70586 'G5'"   "open"   1.000000  ""
0
"gen_5420"   "gen 'PLNENDG2_2_13.80' 'G6'"   1.00  ""   ""   ""   0
 "gen 70586 'G6'"   "open"   1.000000  ""
0
"gen_5421"   "gen 'PLNENDG2_2_13.80' 'G7'"   1.00  ""   ""   ""   0
 "gen 70586 'G7'"   "open"   1.000000  ""
0
"gen_5422"   "gen 'ST.VR_5_18.00' 'G5'"   1.00  ""   ""   ""   0
 "gen 70950 'G5'"   "open"   1.000000  ""
0
"gen_5423"   "gen 'ST.VR_6_18.00' 'G6'"   1.00  ""   ""   ""   0
 "gen 70951 'G6'"   "open"   1.000000  ""
0
"gen_5424"   "gen 'PTZLOGN4_34.50' 'W4'"   1.00  ""   ""   ""   0
 "gen 70714 'W4'"   "open"   1.000000  ""
0
"gen_5425"   "gen 'COMAN_3_27.00' 'C3'"   1.00  ""   ""   ""   0
 "gen 70777 'C3'"   "open"   1.000000  ""
0
"gen_5426"   "gen 'GSANDHIL_PV_34.50' 'S1'"   1.00  ""   ""   ""   0
 "gen 70931 'S1'"   "open"   1.000000  ""
0
"gen_5427"   "gen 'SLVS_IBRDRLA_34.50' 'S2'"   1.00  ""   ""   ""   0
 "gen 70932 'S2'"   "open"   1.000000  ""
0
"gen_5428"   "gen 'BAC_MSA GEN1_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 71001 'G1'"   "open"   1.000000  ""
0
"gen_5429"   "gen 'BAC_MSA GEN2_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 71002 'G1'"   "open"   1.000000  ""
0
"gen_5430"   "gen 'BAC_MSA GEN4_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 71003 'G1'"   "open"   1.000000  ""
0
"gen_5431"   "gen 'BAC_MSA GEN4_13.80' 'G2'"   1.00  ""   ""   ""   0
 "gen 71003 'G2'"   "open"   1.000000  ""
0
"gen_5432"   "gen 'BAC_MSA GEN4_13.80' 'S1'"   1.00  ""   ""   ""   0
 "gen 71003 'S1'"   "open"   1.000000  ""
0
"gen_5433"   "gen 'BAC_MSA GEN5_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 71004 'G1'"   "open"   1.000000  ""
0
"gen_5434"   "gen 'BAC_MSA GEN5_13.80' 'G2'"   1.00  ""   ""   ""   0
 "gen 71004 'G2'"   "open"   1.000000  ""
0
"gen_5435"   "gen 'BAC_MSA GEN5_13.80' 'S1'"   1.00  ""   ""   ""   0
 "gen 71004 'S1'"   "open"   1.000000  ""
0
"gen_5436"   "gen 'CHEROK2_15.50' 'SC'"   1.00  ""   ""   ""   0
 "gen 70104 'SC'"   "open"   1.000000  ""
0
"gen_5437"   "gen 'BAC_MSA GEN6_13.80' 'G1'"   1.00  ""   ""   ""   0
 "gen 71005 'G1'"   "open"   1.000000  ""
0
"gen_5438"   "gen 'LIMON1_W_34.50' 'W1'"   1.00  ""   ""   ""   0
 "gen 70635 'W1'"   "open"   1.000000  ""
0
"gen_5439"   "gen 'LIMON2_W_34.50' 'W2'"   1.00  ""   ""   ""   0
 "gen 70636 'W2'"   "open"   1.000000  ""
0
"gen_5440"   "gen 'LIMON3_W_34.50' 'W3'"   1.00  ""   ""   ""   0
```

```
 "gen 70637 'W3'"    "open"    1.000000  ""
0
"gen_5441"    "gen 'CHEROKEE5_18.00' 'G5'"    1.00  ""    ""    ""    0
 "gen 70145 'G5'"    "open"    1.000000  ""
0
"gen_5442"    "gen 'CHEROKEE6_18.00' 'G6'"    1.00  ""    ""    ""    0
 "gen 70146 'G6'"    "open"    1.000000  ""
0
"gen_5443"    "gen 'CHEROKEE7_18.00' 'ST'"    1.00  ""    ""    ""    0
 "gen 70147 'ST'"    "open"    1.000000  ""
0
"gen_5444"    "gen 'SUNPOWER_34.50' 'S1'"    1.00  ""    ""    ""    0
 "gen 70935 'S1'"    "open"    1.000000  ""
0
"gen_5445"    "gen 'CEDARCK_1A_34.50' 'W1'"    1.00  ""    ""    ""    0
 "gen 70823 'W1'"    "open"    1.000000  ""
0
"gen_5446"    "gen 'CEDARCK_1B_34.50' 'W2'"    1.00  ""    ""    ""    0
 "gen 70824 'W2'"    "open"    1.000000  ""
0
"gen_5447"    "gen 'CHEROK4_22.00' 'G4'"    1.00  ""    ""    ""    0
 "gen 70106 'G4'"    "open"    1.000000  ""
0
"gen_5448"    "gen 'ARAP7_13.80' 'ST'"    1.00  ""    ""    ""    0
 "gen 70554 'ST'"    "open"    1.000000  ""
0
"gen_5449"    "gen 'RAWHIDE_24.00' 'C1'"    1.00  ""    ""    ""    0
 "gen 78011 'C1'"    "open"    1.000000  ""
0
"gen_5450"    "gen 'RAWHIDEA_13.80' 'GA'"    1.00  ""    ""    ""    0
 "gen 78012 'GA'"    "open"    1.000000  ""
0
"gen_5451"    "gen 'RAWHIDEB_13.80' 'GB'"    1.00  ""    ""    ""    0
 "gen 78013 'GB'"    "open"    1.000000  ""
0
"gen_5452"    "gen 'RAWHIDEC_13.80' 'GC'"    1.00  ""    ""    ""    0
 "gen 78014 'GC'"    "open"    1.000000  ""
0
"gen_5453"    "gen 'RAWHIDED_13.80' 'GD'"    1.00  ""    ""    ""    0
 "gen 78015 'GD'"    "open"    1.000000  ""
0
"gen_5454"    "gen 'RAWHIDEF_18.00' 'GF'"    1.00  ""    ""    ""    0
 "gen 78016 'GF'"    "open"    1.000000  ""
0
"gen_5455"    "gen 'HUNTER_S_CR_34.50' 'S1'"    1.00  ""    ""    ""    0
 "gen 70573 'S1'"    "open"    1.000000  ""
0
"gen_5456"    "gen 'KIOWA_S_CR_34.50' 'S1'"    1.00  ""    ""    ""    0
 "gen 70572 'S1'"    "open"    1.000000  ""
0
"gen_5457"    "gen '2021_6_S1_34.50' 'S1'"    1.00  ""    ""    ""    0
 "gen 700151 'S1'"    "open"    1.000000  ""
0
"gen_5458"    "gen 'PI_24_3_18.00' 'G3'"    1.00  ""    ""    ""    0
 "gen 700001 'G3'"    "open"    1.000000  ""
0
"gen_5459"    "gen 'PI_24_2_G7_19.00' 'G7'"    1.00  ""    ""    ""    0
 "gen 700002 'G7'"    "open"    1.000000  ""
0
"gen_5460"    "gen 'PI_24_2_G8_19.00' 'G8'"    1.00  ""    ""    ""    0
 "gen 700003 'G8'"    "open"    1.000000  ""
0
"gen_5461"    "gen 'COMAN_2_24.00' 'SC'"    1.00  ""    ""    ""    0
 "gen 70120 'SC'"    "open"    1.000000  ""
0
"svd_5462"    "svd 'W.CANON_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70550 'v '"    "open"    1.000000  ""
0
"svd_5463"    "svd 'BUSCHRNCH1_34.50' 'v '"    1.00  ""    ""    ""    0
```

```
 "svd 71008 'v '" "open" 1.000000 ""
0
"svd_5464" "svd 'LAJUNTAT_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70247 'v '" "open" 1.000000 ""
0
"svd_5465" "svd 'CANONCTY_69.00' 'v '" 1.00 "" "" "" 0
 "svd 70085 'v '" "open" 1.000000 ""
0
"svd_5466" "svd 'CANONCTY_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70086 'v '" "open" 1.000000 ""
0
"svd_5467" "svd 'BUSCHRNCHMID_34.50' 'v '" 1.00 "" "" "" 0
 "svd 71011 'v '" "open" 1.000000 ""
0
"svd_5468" "svd 'WILOW_CK_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70472 'v '" "open" 1.000000 ""
0
"svd_5469" "svd 'AREQUGCH_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70378 'v '" "open" 1.000000 ""
0
"svd_5470" "svd 'BURROCYN_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70068 'v '" "open" 1.000000 ""
0
"svd_5471" "svd 'CTY_LAM_24.90' 'v '" 1.00 "" "" "" 0
 "svd 70134 'v '" "open" 1.000000 ""
0
"svd_5472" "svd 'PORTLAND_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70330 'v '" "open" 1.000000 ""
0
"svd_5473" "svd 'ROCKYFRD_69.00' 'v '" 1.00 "" "" "" 0
 "svd 70366 'v '" "open" 1.000000 ""
0
"svd_5474" "svd 'W.STATON_69.00' 'v '" 1.00 "" "" "" 0
 "svd 70455 'v '" "open" 1.000000 ""
0
"svd_5475" "svd 'WALSH_69.00' 'v '" 1.00 "" "" "" 0
 "svd 70460 'v '" "open" 1.000000 ""
0
"svd_5476" "svd 'DIXON CK_115.00' 'v '" 1.00 "" "" "" 0
 "svd 78076 'v '" "open" 1.000000 ""
0
"svd_5477" "svd 'TIMBERLN_115.00' 'v '" 1.00 "" "" "" 0
 "svd 78086 'v '" "open" 1.000000 ""
0
"svd_5478" "svd 'HORSESHO_115.00' 'v '" 1.00 "" "" "" 0
 "svd 78091 'v '" "open" 1.000000 ""
0
"svd_5479" "svd 'LONGPEAK_115.00' 'v '" 1.00 "" "" "" 0
 "svd 78106 'v '" "open" 1.000000 ""
0
"svd_5480" "svd 'TERRY_115.00' 'v '" 1.00 "" "" "" 0
 "svd 78119 'v '" "open" 1.000000 ""
0
"svd_5481" "svd 'ALMSA_TM_69.00' 'v '" 1.00 "" "" "" 0
 "svd 70026 'v '" "open" 1.000000 ""
0
"svd_5482" "svd 'ARAPAHOE_A_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70036 'v '" "open" 1.000000 ""
0
"svd_5483" "svd 'ARAPAHOE_B_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70037 'v '" "open" 1.000000 ""
0
"svd_5484" "svd 'BANCROFT_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70045 'v '" "open" 1.000000 ""
0
"svd_5485" "svd 'BROOMFIELD_115.00' 'v '" 1.00 "" "" "" 0
 "svd 70065 'v '" "open" 1.000000 ""
0
"svd_5486" "svd 'CAMEO_230.00' 'v '" 1.00 "" "" "" 0
```

```
 "svd 70078 'v '"    "open"    1.000000  ""
0
"svd_5487"    "svd 'CHEROKEE_S_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70108 'v '"    "open"    1.000000  ""
0
"svd_5488"    "svd 'UNA_ORCH_69.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70109 'v '"    "open"    1.000000  ""
0
"svd_5489"    "svd 'DANIEL_PK_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70139 'v '"    "open"    1.000000  ""
0
"svd_5490"    "svd 'DENVER_TM_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70149 'v '"    "open"    1.000000  ""
0
"svd_5491"    "svd 'DILLON_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70155 'v '"    "open"    1.000000  ""
0
"svd_5492"    "svd 'ELDORADO_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70164 'v '"    "open"    1.000000  ""
0
"svd_5493"    "svd 'GREELEY_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70209 'v '"    "open"    1.000000  ""
0
"svd_5494"    "svd 'GREENWOOD_1_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70212 'v '"    "open"    1.000000  ""
0
"svd_5495"    "svd 'LEETSDALE_1_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70259 'v '"    "open"    1.000000  ""
0
"svd_5496"    "svd 'LOOKOUT_1_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70265 'v '"    "open"    1.000000  ""
0
"svd_5497"    "svd 'LOOKOUT_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70266 'v '"    "open"    1.000000  ""
0
"svd_5498"    "svd 'MONFORT_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70290 'v '"    "open"    1.000000  ""
0
"svd_5499"    "svd 'NORTH_PS_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70298 'v '"    "open"    1.000000  ""
0
"svd_5500"    "svd 'PARACHUTE_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70309 'v '"    "open"    1.000000  ""
0
"svd_5501"    "svd 'RIDGE_1_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70354 'v '"    "open"    1.000000  ""
0
"svd_5502"    "svd 'SMOKY_HL_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70396 'v '"    "open"    1.000000  ""
0
"svd_5503"    "svd 'SODA_LAKES_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70400 'v '"    "open"    1.000000  ""
0
"svd_5504"    "svd 'FT_ST_VRAIN_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70410 'v '"    "open"    1.000000  ""
0
"svd_5505"    "svd 'UINTAH_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70438 'v '"    "open"    1.000000  ""
0
"svd_5506"    "svd 'VALMONT_1_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70444 'v '"    "open"    1.000000  ""
0
"svd_5507"    "svd 'WATERTON_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70463 'v '"    "open"    1.000000  ""
0
"svd_5508"    "svd 'WELD_PS_115.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70470 'v '"    "open"    1.000000  ""
0
"svd_5509"    "svd 'DANIEL_PK_345.00' 'v '"    1.00  ""    ""    ""    0
```

```
 "svd 70601 'v '"  "open"  1.000000  ""
0
"svd_5510"  "svd 'MISS_SITE_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70624 'v '"  "open"  1.000000  ""
0
"svd_5511"  "svd 'LIMON1_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70625 'v '"  "open"  1.000000  ""
0
"svd_5512"  "svd 'COMANCHE_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70654 'v '"  "open"  1.000000  ""
0
"svd_5513"  "svd 'CEDRPT_W1_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70674 'v '"  "open"  1.000000  ""
0
"svd_5514"  "svd 'CEDRPT_W2_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70675 'v '"  "open"  1.000000  ""
0
"svd_5515"  "svd 'CEDAR_PT_230.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70678 'v '"  "open"  1.000000  ""
0
"svd_5516"  "svd 'CO_GRN_E_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70701 'v '"  "open"  1.000000  ""
0
"svd_5517"  "svd 'CO_GRN_W_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70702 'v '"  "open"  1.000000  ""
0
"svd_5518"  "svd 'RDGCREST_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70723 'v '"  "open"  1.000000  ""
0
"svd_5519"  "svd 'LAMAR_T1_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 70955 'v '"  "open"  1.000000  ""
0
"svd_5520"  "svd 'LAMAR_T2_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 70957 'v '"  "open"  1.000000  ""
0
"svd_5521"  "svd 'WLSBG_R_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 70964 'v '"  "open"  1.000000  ""
0
"svd_5522"  "svd 'SLV_R1_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 70967 'v '"  "open"  1.000000  ""
0
"svd_5523"  "svd 'SLV_R2_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 70968 'v '"  "open"  1.000000  ""
0
"svd_5524"  "svd 'SLV_R3_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 70969 'v '"  "open"  1.000000  ""
0
"svd_5525"  "svd 'PONCHA_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 71994 'v '"  "open"  1.000000  ""
0
"svd_5526"  "svd 'WATERTON_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 71995 'v '"  "open"  1.000000  ""
0
"svd_5527"  "svd 'MIDWAY_PS_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 71996 'v '"  "open"  1.000000  ""
0
"svd_5528"  "svd 'MISS_SITE_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 71997 'v '"  "open"  1.000000  ""
0
"svd_5529"  "svd 'PAWNEE_T2_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 71998 'v '"  "open"  1.000000  ""
0
"svd_5530"  "svd 'PAWNEE_T3_13.80' 'v '"  1.00  ""  ""  ""  0
 "svd 71999 'v '"  "open"  1.000000  ""
0
"svd_5531"  "svd 'BASALT_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 79003 'v '"  "open"  1.000000  ""
0
"svd_5532"  "svd 'WOLCOTT_230.00' 'v '"  1.00  ""  ""  ""  0
```

```
 "svd 79069 'v '"  "open"  1.000000  ""
0
"svd_5533"  "svd 'POUDRE_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 77502 'v '"  "open"  1.000000  ""
0
"svd_5534"  "svd 'HARVEST_MI_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70597 'v '"  "open"  1.000000  ""
0
"svd_5535"  "svd 'PRONGHORN_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70628 'v '"  "open"  1.000000  ""
0
"svd_5536"  "svd 'SHORTGRASS_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70630 'v '"  "open"  1.000000  ""
0
"svd_5537"  "svd 'CEDARCK_CAP_230.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70822 'v '"  "open"  1.000000  ""
0
"svd_5538"  "svd 'PEAKVIEWMID_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 71018 'v '"  "open"  1.000000  ""
0
"svd_5539"  "svd 'RUSHCK2_W3_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70773 'v '"  "open"  1.000000  ""
0
"svd_5540"  "svd 'SUN_MTN_S1_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70857 'v '"  "open"  1.000000  ""
0
"svd_5541"  "svd 'RUSHCK1_W1_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70765 'v '"  "open"  1.000000  ""
0
"svd_5542"  "svd 'RUSHCK1_W2_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70768 'v '"  "open"  1.000000  ""
0
"svd_5543"  "svd 'TWNBT2_1_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70011 'v '"  "open"  1.000000  ""
0
"svd_5544"  "svd 'TWNBUTT2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70012 'v '"  "open"  1.000000  ""
0
"svd_5545"  "svd 'BOULDER_TM3_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70034 'v '"  "open"  1.000000  ""
0
"svd_5546"  "svd 'LOOKOUT_2_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70066 'v '"  "open"  1.000000  ""
0
"svd_5547"  "svd 'DENVER_TM_2_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70144 'v '"  "open"  1.000000  ""
0
"svd_5548"  "svd 'EAST_2_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70171 'v '"  "open"  1.000000  ""
0
"svd_5549"  "svd 'RIDGE_2_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70226 'v '"  "open"  1.000000  ""
0
"svd_5550"  "svd 'PONCHA_E_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70327 'v '"  "open"  1.000000  ""
0
"svd_5551"  "svd 'VALMONT_2_115.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70440 'v '"  "open"  1.000000  ""
0
"svd_5552"  "svd 'PINR_S_2_CR_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70555 'v '"  "open"  1.000000  ""
0
"svd_5553"  "svd 'TUNDRA_345.00' 'v '"  1.00  ""  ""  ""  0
 "svd 70653 'v '"  "open"  1.000000  ""
0
"svd_5554"  "svd 'TWNBT1_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "svd 70703 'v '"  "open"  1.000000  ""
0
"svd_5555"  "svd 'MALTA_T1_13.80' 'v '"  1.00  ""  ""  ""  0
```

```
 "svd 71982 'v '"    "open"    1.000000  ""
0
"svd_5556"    "svd 'MALTA_T2_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71983 'v '"    "open"    1.000000  ""
0
"svd_5557"    "svd 'DANIEL_PK_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71984 'v '"    "open"    1.000000  ""
0
"svd_5558"    "svd 'BASALT_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71985 'v '"    "open"    1.000000  ""
0
"svd_5559"    "svd 'RIFLE_UTE_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71988 'v '"    "open"    1.000000  ""
0
"svd_5560"    "svd 'CAMEO_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71989 'v '"    "open"    1.000000  ""
0
"svd_5561"    "svd 'SMOKY_HL_T1_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71990 'v '"    "open"    1.000000  ""
0
"svd_5562"    "svd 'SMOKY_HL_T2_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71991 'v '"    "open"    1.000000  ""
0
"svd_5563"    "svd 'WELD_PS_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71992 'v '"    "open"    1.000000  ""
0
"svd_5564"    "svd 'RIFLE_CU_345.00' 'v '"    1.00  ""    ""    ""    0
 "svd 79058 'v '"    "open"    1.000000  ""
0
"svd_5565"    "svd 'CHEYRGE_W13_34.50' 'v '"    1.00  ""    ""    ""    0
 "svd 70731 'v '"    "open"    1.000000  ""
0
"svd_5566"    "svd 'CHEYRGE_W2_2_34.50' 'v '"    1.00  ""    ""    ""    0
 "svd 70734 'v '"    "open"    1.000000  ""
0
"svd_5567"    "svd 'CHEYRGW_W1_2_34.50' 'v '"    1.00  ""    ""    ""    0
 "svd 70737 'v '"    "open"    1.000000  ""
0
"svd_5568"    "svd 'CHEYRGW_W2_2_34.50' 'v '"    1.00  ""    ""    ""    0
 "svd 70740 'v '"    "open"    1.000000  ""
0
"svd_5569"    "svd 'BIGHORN_S_2_34.50' 'v '"    1.00  ""    ""    ""    0
 "svd 70876 'v '"    "open"    1.000000  ""
0
"svd_5570"    "svd 'BOONE_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71981 'v '"    "open"    1.000000  ""
0
"svd_5571"    "svd 'SEV_34.50' 'v '"    1.00  ""    ""    ""    0
 "svd 78032 'v '"    "open"    1.000000  ""
0
"svd_5572"    "svd 'CANAL_XING_345.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70915 'v '"    "open"    1.000000  ""
0
"svd_5573"    "svd 'GOOSE_CK_345.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70918 'v '"    "open"    1.000000  ""
0
"svd_5574"    "svd 'MAY_VALLEY_345.00' 'v '"    1.00  ""    ""    ""    0
 "svd 70919 'v '"    "open"    1.000000  ""
0
"svd_5575"    "svd 'HOPKINS_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71953 'v '"    "open"    1.000000  ""
0
"svd_5576"    "svd 'MIDW_13.80' 'v '"    1.00  ""    ""    ""    0
 "svd 71980 'v '"    "open"    1.000000  ""
0
"svd_5577"    "svd 'PTZLOGN_CB_230.00' 'v '"    1.00  ""    ""    ""    0
 "svd 700181 'v '"    "open"    1.000000  ""
0
"svd_5578"    "svd 'FT_ST_VRAIN_345.00' 'v '"    1.00  ""    ""    ""    0
```

```
 "svd 70916 'v '" "open" 1.000000 ""
0
"svd_5579" "svd 'SANDSTONE_345.00' 'v '" 1.00 "" "" "" 0
 "svd 70921 'v '" "open" 1.000000 ""
0
"svd_5580" "svd '2021_6_S1_2_34.50' 'v '" 1.00 "" "" "" 0
 "svd 700153 'v '" "open" 1.000000 ""
0
"svd_5581" "svd '24_5_G_2_34.50' 'v '" 1.00 "" "" "" 0
 "svd 700007 'v '" "open" 1.000000 ""
0
"svd_5582" "svd '24_7_B_2_34.50' 'v '" 1.00 "" "" "" 0
 "svd 700046 'v '" "open" 1.000000 ""
0
"svd_5583" "svd '24_28_W_2_34.50' 'v '" 1.00 "" "" "" 0
 "svd 700184 'v '" "open" 1.000000 ""
0
"svd_5584" "svd '24_8_SB_34.50' 'v '" 1.00 "" "" "" 0
 "svd 700219 'v '" "open" 1.000000 ""
0
# Fri Nov 15 13:08:31 2024
# WECC
# 2025 HEAVY SUMMER 4 OPERATING BASE CASE
# AUGUST 28, 2024
# Use seasonal ratings 1 and 2
# File to be converted : C:\Comanche 2
Replacement\Work\input\Contingencies\final\PSCO_TPL30HS.con

# /Line: 1661
"LoTC_1" "Line: 1661"
 line -->73150-->73179-->"1"->1-->0
0
# /Line: 282
"LoTC_2" "Line: 282"
 line -->70488-->72029-->"1"->1-->0
0
# /Line: 3000
"LoTC_3"-->"Line: 3000"
 line -->70053-->70088-->"1"->1-->0
0
# /Line: 3003
"LoTC_4"-->"Line: 3003"
 line -->70525-->79038-->"1"->1-->0
0
# /Line: 3007
"LoTC_5"-->"Line: 3007"
 line -->79057-->79059-->"1"->1-->0
0
# /Line: 3014
"LoTC_6" "Line: 3014"
 line -->79047-->79056-->"1"->1-->0
0
# /Line: 3015
"LoTC_7" "LoTC"
 line -->79035-->79047-->"1"->1-->0
0
# /Line: 5003
"LoTC_8"-->"LoTC"
 line -->70072-->70266-->"1"->1-->0
0
# /Line: 5005
"LoTC_9"-->"LoTC"
 line -->70072-->70237-->"1"->1-->0
 line -->70237-->70266-->"1"->1-->0
0
# /Line: 5007
"LoTC_10"-->"LoTC"
 line -->70072-->70156-->"1"->1-->0
0
```

```
# /Line: 5021
"LoTC_11"—>"LoTC"
 line —>70369—>70107—>"1"—>1—>0
 line —>70369—>70355—>"1"—>1—>0
0
# /Line: 5023
"LoTC_12"—>"LoTC"
 line —>70100—>70464—>"1"—>1—>0
 line —>70018—>70100—>"1"—>1—>0
0
# /Line: 5025
"LoTC_13"—>"LoTC"
 line —>70266—>70570—>"1"—>1—>0
0
# /Line: 5027
"LoTC_14"—>"LoTC"
 line —>70266—>70570—>"2"—>1—>0
0
# /Line: 5029
"LoTC_15"—>"LoTC"
 line —>70266—>70355—>"1"—>1—>0
0
# /Line: 5047
"LoTC_16"—>"LoTC"
 line —>70192—>70605—>"1"—>1—>0
0
# /Line: 5055
"LoTC_17"—>"LoTC"
 line —>70107—>70609—>"1"—>1—>0
0
# /Line: 5057
"LoTC_18"—>"LoTC"
 line —>70107—>70324—>"1"—>1—>0
0
# /Line: 5067
"LoTC_19"—>"LoTC"
 line —>70041—>70107—>"1"—>1—>0
 line —>70355—>70041—>"1"—>1—>0
0
# /Line: 5085
"LoTC_20"—>"LoTC"
 line —>70139—>70278—>"1"—>1—>0
 line —>70278—>70959—>"1"—>1—>0
0
# /Line: 5107
"LoTC_21"—>"LoTC"
 line —>70038—>70527—>"1"—>1—>0
 line —>70139—>70527—>"1"—>1—>0
0
# /Line: 5109
"LoTC_22"—>"LoTC"
 line —>70139—>70464—>"1"—>1—>0
0
# /Line: 5111
"LoTC_23"—>"LoTC"
 line —>70139—>70331—>"1"—>1—>0
 line —>70212—>70331—>"2"—>1—>0
0
# /Line: 5113
"LoTC_24"—>"LoTC"
 line —>70139—>70623—>"1"—>1—>0
0
# /Line: 5115
"LoTC_25"—>"LoTC"
 line —>70139—>70284—>"1"—>1—>0
 line —>70284—>70533—>"1"—>1—>0
 line —>70524—>70533—>"1"—>1—>0
0
# /Line: 5119
```

```
"LoTC_26"−−>"LoTC"
 line −>70139−−>73477−−>"1"−>1−−>0
0
# /Line: 5123
"LoTC_27"−−>"LoTC"
 line −>70595−−>70286−−>"1"−>1−−>0
0
# /Line: 5129
"LoTC_28"−−>"LoTC"
 line −>70286−−>73477−−>"1"−>1−−>0
0
# /Line: 5145
"LoTC_29"−−>"LoTC"
 line −>70274−−>70927−−>"1"−>1−−>0
0
# /Line: 5147
"LoTC_30"−−>"LoTC"
 line −>70274−−>73138−−>"1"−>1−−>0
0
# /Line: 5149
"LoTC_31"−−>"LoTC"
 line −>70274−−>79004−−>"1"−>1−−>0
0
# /Line: 5163
"LoTC_32"−−>"LoTC"
 line −>70513−−>70551−−>"1"−>1−−>0
 line −>70513−−>70524−−>"1"−>1−−>0
 line −>70396−−>70551−−>"1"−>1−−>0
0
# /Line: 5165
"LoTC_33"−−>"LoTC"
 line −>70343−−>70545−−>"1"−>1−−>0
 line −>70343−−>70396−−>"1"−>1−−>0
0
# /Line: 5167
"LoTC_34"−−>"LoTC"
 line −>70067−−>70512−−>"1"−>1−−>0
 line −>70067−−>70396−−>"2"−>1−−>0
 line −>70417−−>70512−−>"1"−>1−−>0
0
# /Line: 5169
"LoTC_35"−−>"LoTC"
 line −>70241−−>70313−−>"1"−>1−−>0
 line −>70283−−>70313−−>"1"−>1−−>0
 line −>70283−−>70396−−>"1"−>1−−>0
0
# /Line: 5171
"LoTC_36"−−>"LoTC"
 line −>70396−−>70532−−>"1"−>1−−>0
 line −>70528−−>70532−−>"1"−>1−−>0
0
# /Line: 5177
"LoTC_37"−−>"LoTC"
 line −>70396−−>70528−−>"1"−>1−−>0
0
# /Line: 5179
"LoTC_38"−−>"LoTC"
 line −>70596−−>70396−−>"1"−>1−−>0
0
# /Line: 5183
"LoTC_39"−−>"LoTC"
 line −>70192−−>70529−−>"1"−>1−−>0
0
# /Line: 5185
"LoTC_40"−−>"LoTC"
 line −>70528−−>70536−−>"1"−>1−−>0
 line −>70536−−>70539−−>"1"−>1−−>0
0
# /Line: 5187
```

```
"LoTC_41"—>"LoTC"
 line —>70528—>70530—>"1"→1—>0
 line —>70432—>70539—>"1"→1—>0
0
# /Line: 51875907
"LoTC_42"—>"LoTC"
 line —>70432—>70530—>"1"→1—>0
0
# /Line: 5189
"LoTC_43"—>"LoTC"
 line —>70528—>70520—>"1"→1—>0
0
# /Line: 5205
"LoTC_45"—>"LoTC"
 line —>70309—>70358—>"1"→1—>0
0
# /Line: 5207
"LoTC_46"—>"LoTC"
 line —>70232—>70358—>"1"→1—>0
0
# /Line: 5245
"LoTC_47"—>"LoTC"
 line —>70111—>70274—>"1"→1—>0
 line —>70232—>70111—>"1"→1—>0
0
# /Line: 5261
"LoTC_48"—>"LoTC"
 line —>70570—>70431—>"1"→1—>0
0
# /Line: 5265
"LoTC_49"—>"LoTC"
 line —>70399—>73192—>"1"→1—>0
0
# /Line: 5267
"LoTC_50"—>"LoTC"
 line —>70570—>70433—>"1"→1—>0
0
# /Line: 5270
"LoTC_51"—>"LoTC"
 line —>70048—>70077—>"1"→1—>0
 line —>70077—>70528—>"1"→1—>0
0
# /Line: 5271
"LoTC_52"—>"LoTC"
 line —>70048—>70590—>"1"→1—>0
0
# /Line: 5275
"LoTC_53"—>"LoTC"
 line —>70048—>700155—>"1"→1—>0
 line —>700155—>70392—>"1"→1—>0
0
# /Line: 5277
"LoTC_54"—>"LoTC"
 line —>70048—>70526—>"1"→1—>0
 line —>70526—>70497—>"1"→1—>0
 line —>70497—>70528—>"1"→1—>0
0
# /Line: 5279
"LoTC_55"—>"LoTC"
 line —>70048—>70820—>"1"→1—>0
0
# /Line: 5281
"LoTC_56"—>"LoTC"
 line —>70260—>70365—>"1"→1—>0
0
# /Line: 5283
"LoTC_57"—>"LoTC"
 line —>70163—>70291—>"1"→1—>0
 line —>70260—>70291—>"1"→1—>0
```

```
0
# /Line: 5285
"LoTC_58"—>"LoTC"
 line —>70046—>70396—>"1"—>1—>0
 line —>70046—>70491—>"1"—>1—>0
 line —>70239—>70260—>"1"—>1—>0
 line —>70239—>70491—>"1"—>1—>0
0
# /Line: 5307
"LoTC_59"—>"LoTC"
 line —>70410—>70544—>"1"—>1—>0
0
# /Line: 5309
"LoTC_60"—>"LoTC"
 line —>70107—>70362—>"1"—>1—>0
 line —>70362—>70605—>"1"—>1—>0
0
# /Line: 531
"LoTC_61"—>"LoTC"
 line —>79183—>79034—>"1"—>1—>0
0
# /Line: 5311
"LoTC_62"—>"LoTC"
 line —>70192—>70410—>"1"—>1—>0
0
# /Line: 5313
"LoTC_63"—>"LoTC"
 line —>70410—>70474—>"1"—>1—>0
 line —>70474—>73011—>"1"—>1—>0
0
# /Line: 5315
"LoTC_64"—>"LoTC"
 line —>70410—>70471—>"1"—>1—>0
0
# /Line: 5317
"LoTC_65"—>"LoTC"
 line —>70410—>78105—>"1"—>1—>0
0
# /Line: 5321
"LoTC_66"—>"LoTC"
 line —>70410—>78120—>"1"—>1—>0
0
# /Line: 5327
"LoTC_67"—>"LoTC"
 line —>70410—>70820—>"1"—>1—>0
0
# /Line: 5329
"LoTC_68"—>"LoTC"
 line —>70192—>70410—>"2"—>1—>0
0
# /Line: 5335
# /Line: 5337
"LoTC_70"—>"LoTC"
 line —>70061—>70254—>"1"—>1—>0
0
# /Line: 5355
"LoTC_71"—>"LoTC"
 line —>70064—>70156—>"1"—>1—>0
0
# /Line: 5359
"LoTC_72"—>"LoTC"
 line —>70156—>70057—>"1"—>1—>0
0
# /Line: 5367
"LoTC_73"—>"LoTC"
 line —>70057—>70053—>"1"—>1—>0
0
# /Line: 5385
"LoTC_74"—>"LoTC"
```

```
 line ⟶70447⟶70592⟶"1"⇢1⟶0
0
# /Line: 5389
"LoTC_75"⟶"LoTC"
 line ⟶70574⟶70570⟶"1"⇢1⟶0
 line ⟶70574⟶70543⟶"1"⇢1⟶0
 line ⟶70447⟶70543⟶"1"⇢1⟶0
0
# /Line: 5408
# /Line: 5409
"LoTC_77"⟶"LoTC"
 line ⟶70094⟶70122⟶"1"⇢1⟶0
0
# /Line: 5411
"LoTC_78"⟶"LoTC"
 line ⟶70122⟶70286⟶"1"⇢1⟶0
0
# /Line: 5413
"LoTC_79"⟶"LoTC"
 line ⟶70122⟶700139⇢"1"⇢1⟶0
 line ⟶700139⇢70652⟶"1"⇢1⟶0
0
# /Line: 5415
# /Line: 5416
"LoTC_81"⟶"LoTC"
 line ⟶70122⟶70942⟶"1"⇢1⟶0
0
# /Line: 5435
"LoTC_82"⟶"LoTC"
 line ⟶70112⟶70212⟶"1"⇢1⟶0
 line ⟶70112⟶70241⟶"1"⇢1⟶0
0
# /Line: 5453
"LoTC_83"⟶"LoTC"
 line ⟶70311⟶700181⇢"1"⇢1⟶0
 line ⟶700181⇢70711⟶"1"⇢1⟶0
0
# /Line: 5455
"LoTC_84"⟶"LoTC"
 line ⟶70311⟶73192⟶"1"⇢1⟶0
0
# /Line: 5457
# /Line: 5461
"LoTC_86"⟶"LoTC"
 line ⟶70311⟶70349⟶"1"⇢1⟶0
0
# /Line: 5463
"LoTC_87"⟶"LoTC"
 line ⟶70192⟶70311⟶"1"⇢1⟶0
0
# /Line: 5467
"LoTC_88"⟶"LoTC"
 line ⟶70311⟶70545⟶"1"⇢1⟶0
0
# /Line: 5487
"LoTC_89"⟶"LoTC"
 line ⟶70032⟶70064⟶"1"⇢1⟶0
 line ⟶70032⟶70274⟶"1"⇢1⟶0
0
# /Line: 5503
"LoTC_90"⟶"LoTC"
 line ⟶70309⟶79057⟶"1"⇢1⟶0
0
# /Line: 55043
"LoTC_91"⟶"LoTC"
 line ⟶70623⟶70678⟶"1"⇢1⟶0
0
# /Line: 5507
"LoTC_92"⟶"LoTC"
```

```
 line ->70309->70356->"1"->1->0
0
# /Line: 5509
"LoTC_93"->"LoTC"
 line ->70078->70264->"1"->1->0
 line ->70264->70309->"1"->1->0
0
# /Line: 5511
"LoTC_94"->"LoTC"
 line ->70254->70013->"1"->1->0
0
# /Line: 5513
"LoTC_95"->"LoTC"
 line ->70254->70560->"1"->1->0
0
# /Line: 55159
"LoTC_96"->"LoTC"
 line ->73477->70660->"1"->1->0
0
# /Line: 55173
"LoTC_97"->"LoTC"
 line ->70875->70122->"1"->1->0
0
# /Line: 55175
"LoTC_98"->"LoTC"
 line ->70122->70856->"1"->1->0
0
# /Line: 55195
"LoTC_99"->"LoTC"
 line ->70862->78087->"1"->1->0
0
# /Line: 55197
"LoTC_100"->"LoTC"
 line ->70862->78085->"1"->1->0
0
# /Line: 5525
"LoTC_101"->"LoTC"
 line ->70192->70048->"1"->1->0
 line ->70048->70192->"1"->1->0
0
# /Line: 55255
"LoTC_102"->"LoTC"
 line ->70286->70652->"1"->1->0
0
# /Line: 55257
"LoTC_103"->"LoTC"
 line ->70652->70759->"1"->1->0
0
# /Line: 5527
"LoTC_104"->"LoTC"
 line ->70107->70200->"1"->1->0
 line ->70200->70461->"1"->1->0
 line ->70461->70529->"1"->1->0
0
# /Line: 5529
"LoTC_105"->"LoTC"
 line ->70192->70488->"1"->1->0
0
# /Line: 5555
"LoTC_106"->"LoTC"
 line ->70268->70438->"1"->1->0
 line ->70206->70233->"1"->1->0
 line ->70233->70268->"1"->1->0
0
# /Line: 5557
"LoTC_107"->"LoTC"
 line ->70113->70206->"1"->1->0
 line ->70113->70205->"1"->1->0
0
```

```
# /Line: 5565
"LoTC_108"->"LoTC"
 line ->70590-->70820-->"1"->1-->0
0
# /Line: 5607
"LoTC_109"->"LoTC"
 line ->70078-->70438-->"1"->1-->0
0
# /Line: 5623
# /Line: 5623
"LoTC_110b"->"LoTC"
 line ->70141-->70149-->"1"->1-->0
0
# /Line: 5625
"LoTC_111"->"LoTC"
 line ->70149-->70163-->"1"->1-->0
0
# /Line: 5627
"LoTC_112"->"LoTC"
 line ->70149-->70324-->"1"->1-->0
0
# /Line: 5629
"LoTC_113"->"LoTC"
 line ->70149-->70480-->"1"->1-->0
 line ->70266-->70480-->"1"->1-->0
0
# /Line: 5633
"LoTC_114"->"LoTC"
 line ->70261-->70297-->"1"->1-->0
 line ->70261-->70570-->"1"->1-->0
0
# /Line: 5635
"LoTC_115"->"LoTC"
 line ->70972-->70297-->"1"->1-->0
0
# /Line: 5637
"LoTC_116"->"LoTC"
 line ->70297-->70544-->"1"->1-->0
0
# /Line: 5639
"LoTC_117"->"LoTC"
 line ->70213-->70297-->"2"->1-->0
0
# /Line: 5705
"LoTC_118"->"LoTC"
 line ->70212-->70428-->"2"->1-->0
 line ->70417-->70428-->"1"->1-->0
0
# /Line: 5707
"LoTC_119"->"LoTC"
 line ->70139-->70323-->"2"->1-->0
 line ->70189-->70323-->"1"->1-->0
0
# /Line: 5709
"LoTC_120"->"LoTC"
 line ->70038-->70189-->"1"->1-->0
0
# /Line: 5717
# /Line: 5717
"LoTC_121b"->"LoTC"
 line ->70481-->70365-->"1"->1-->0
0
# /Line: 5735
"LoTC_122"->"LoTC"
 line ->70392-->70528-->"1"->1-->0
0
# /Line: 5747
"LoTC_123"->"LoTC"
 line ->70393-->79054-->"1"->1-->0
```

```
0
# /Line: 5755
"LoTC_124"->"LoTC"
 line ->70047-->70489-->"1"->1-->0
0
# /Line: 5759
"LoTC_125"->"LoTC"
 line ->70047-->70048-->"1"->1-->0
0
# /Line: 5785
"LoTC_126"->"LoTC"
 line ->70535-->79069-->"1"->1-->0
0
# /Line: 5787
"LoTC_127"->"LoTC"
 line ->70535-->79004-->"1"->1-->0
0
# /Line: 5803
"LoTC_128"->"LoTC"
 line ->70427-->70464-->"1"->1-->0
0
# /Line: 5811
"LoTC_129"->"LoTC"
 line ->79065-->79091-->"2"->1-->0
0
# /Line: 5813
"LoTC_130"->"LoTC"
 line ->79069-->79091-->"1"->1-->0
0
# /Line: 5815
"LoTC_131"->"LoTC"
 line ->79039-->79091-->"1"->1-->0
0
# /Line: 5817
"LoTC_132"->"LoTC"
 line ->79065-->79091-->"1"->1-->0
0
# /Line: 5831
"LoTC_133"->"LoTC"
 line ->79013-->70009-->"1"->1-->0
0
# /Line: 5851
"LoTC_134"->"LoTC"
 line ->70018-->70266-->"1"->1-->0
0
# /Line: 5875
"LoTC_135"->"LoTC"
 line ->70047-->72026-->"1"->1-->0
0
# /Line: 5877
"LoTC_136"->"LoTC"
 line ->70609-->72026-->"1"->1-->0
0
# /Line: 5921
"LoTC_137"->"LoTC"
 line ->73143-->73579-->"1"->1-->0
0
# /Line: 5923
"LoTC_138"->"LoTC"
 line ->73579-->70718-->"1"->1-->0
0
# /Line: 5925
"LoTC_139"->"LoTC"
 line ->73579-->73180-->"1"->1-->0
0
# /Line: 5951
"LoTC_140"->"LoTC"
 line ->70592-->70468-->"1"->1-->0
0
```

```
# /Line: 5953
"LoTC_141"->"LoTC"
 line ->70410-->70592-->"1"->1-->0
0
# /Line: 5961
"LoTC_142"->"LoTC"
 line ->70048-->70820-->"2"->1-->0
0
# /Line: 5967
"LoTC_143"->"LoTC"
 line ->70822-->70821-->"1"->1-->0
 line ->70822-->70820-->"1"->1-->0
0
# /Line: 5995
"LoTC_144"->"LoTC"
 line ->70427-->70927-->"1"->1-->0
0
# /Line: 6584
"LoTC_145"->"LoTC"
 line ->70359-->70388-->"1"->1-->0
0
# /Line: 6944
"LoTC_146"->"LoTC"
 line ->70028-->70376-->"1"->1-->0
0
# /Line: 7015
"LoTC_147"->"LoTC"
 line ->70654-->70653-->"1"->1-->0
0
# /Line: 7051
"LoTC_149"->"LoTC"
 line ->70465-->70466-->"1"->1-->0
0
# /Line: 7081
"LoTC_150"->"LoTC"
 line ->70599-->70624-->"1"->1-->0
0
# /Line: 7087
"LoTC_151"->"LoTC"
 line ->70597-->70599-->"2"->1-->0
0
# /Line: 7091
"LoTC_152"->"LoTC"
 line ->70624-->70915-->"1"->1-->0
0
# /Line: 7103
"LoTC_153"->"LoTC"
 line ->70624-->70625-->"1"->1-->0
0
# /Line: 7107
"LoTC_154"->"LoTC"
 line ->70624-->70628-->"1"->1-->0
0
# /Line: 7109
"LoTC_155"->"LoTC"
 line ->70601-->70624-->"1"->1-->0
0
# /Line: 7111
"LoTC_156"->"LoTC"
 line ->70624-->70915-->"2"->1-->0
0
# /Line: 7131
"LoTC_157"->"LoTC"
 line ->70628-->70764-->"1"->1-->0
0
# /Line: 7132
"LoTC_158"->"LoTC"
 line ->70628-->70630-->"1"->1-->0
0
```

```
# /Line: 7153
"LoTC_159"->"LoTC"
 line ->70601-->70597-->"1"->1-->0
0
# /Line: 7191
"LoTC_160"->"LoTC"
 line ->70630-->70750-->"1"->1-->0
0
# /Line: 7192
"LoTC_161"->"LoTC"
 tran ->70773-->70630-->"T1"-->0-->-1
0
# /Line: 7199
"LoTC_162"->"LoTC"
 line ->70632-->70918-->"1"->1-->0
0
# /Line: 7235
"LoTC_163"->"LoTC"
 line ->70601-->70653-->"1"->1-->0
0
# /Line: 7239
"LoTC_164"->"LoTC"
 line ->70754-->70653-->"1"->1-->0
0
# /Line: 7300
"LoTC_165"->"LoTC"
 line ->79058-->79266-->"1"->1-->0
0
# /Line: 7302
"LoTC_166"->"LoTC"
 line ->79036-->79058-->"1"->1-->0
0
# /Line: 7303
"LoTC_167"->"LoTC"
 line ->79036-->79049-->"1"->1-->0
0
# /Line: 8004
"LoTC_168"->"LoTC"
 line ->70025-->700224->"1"->1-->0
 line ->700224->70937-->"1"->1-->0
0
# /Line: 8017
"LoTC_169"->"LoTC"
 line ->73055-->70368-->"1"->1-->0
0
# /Line: 8019
"LoTC_170"->"LoTC"
 line ->73211-->73554-->"1"->1-->0
 line ->73554-->70368-->"1"->1-->0
0
# /Line: 8024
"LoTC_171"->"LoTC"
 line ->70023-->70242-->"1"->1-->0
 line ->70023-->70400-->"1"->1-->0
 line ->70045-->70242-->"1"->1-->0
0
# /Line: 8026
"LoTC_172"->"LoTC"
 line ->70124-->70429-->"1"->1-->0
 line ->70124-->71507-->"1"->1-->0
 line ->70124-->71516-->"1"->1-->0
 line ->70400-->70429-->"1"->1-->0
0
# /Line: 8054
"LoTC_173"->"LoTC"
 line ->70218-->70328-->"1"->1-->0
 line ->70287-->70328-->"1"->1-->0
0
# /Line: 8055
```

```
"LoTC_174"->"LoTC"
 line ->70052-->70287-->"1"->1-->0
0
# /Line: 8134
"LoTC_175"->"LoTC"
 line ->70060-->70247-->"1"->1-->0
0
# /Line: 8174
"LoTC_176"->"LoTC"
 line ->70114-->70281-->"1"->1-->0
0
# /Line: 8189
"LoTC_177"->"LoTC"
 line ->70155-->70421-->"1"->1-->0
 line ->70281-->70421-->"1"->1-->0
0
# /Line: 8265
"LoTC_178"->"LoTC"
 line ->70116-->70805-->"1"->1-->0
 line ->70116-->70368-->"1"->1-->0
 line ->70290-->70116-->"1"->1-->0
0
# /Line: 8302
"LoTC_179"->"LoTC"
 line ->73044-->73024-->"1"->1-->0
 line ->73044-->73200-->"1"->1-->0
0
# /Line: 831
"LoTC_180"->"LoTC"
 line ->79046-->79056-->"1"->1-->0
0
# /Line: 8365
"LoTC_181"->"LoTC"
 line ->70202-->70240-->"1"->1-->0
 line ->70246-->70470-->"1"->1-->0
0
# /Line: 8384
"LoTC_182"->"LoTC"
 line ->70157-->70419-->"1"->1-->0
 line ->70419-->70426-->"1"->1-->0
0
# /Line: 8415
"LoTC_183"->"LoTC"
 line ->79006-->77643-->"1"->1-->0
0
# /Line: 8416
"LoTC_184"->"LoTC"
 line ->79066-->79068-->"1"->1-->0
0
# /Line: 8424
"LoTC_185"->"LoTC"
 line ->79006-->79092-->"1"->1-->0
0
# /Line: 8425
"LoTC_186"->"LoTC"
 line ->79066-->79092-->"1"->1-->0
0
# /Line: 8455
"LoTC_187"->"LoTC"
 line ->70476-->70157-->"1"->1-->0
 line ->70476-->73476-->"1"->1-->0
0
# /Line: 9000
"LoTC_188"->"LoTC"
 line ->70208-->70251-->"1"->1-->0
 line ->70251-->70354-->"1"->1-->0
0
# /Line: 9004
"LoTC_189"->"LoTC"
```

```
 line ->70039-->70148-->"1"->1-->0
0
# /Line: 9005
"LoTC_190"->"LoTC"
 line ->70208-->70252-->"2"->1-->0
 line ->70252-->70226-->"2"->1-->0
0
# /Line: 9007
"LoTC_191"->"LoTC"
 line ->70087-->70148-->"1"->1-->0
0
# /Line: 9008
"LoTC_192"->"LoTC"
 line ->70148-->70208-->"1"->1-->0
0
# /Line: 9046
"LoTC_193"->"LoTC"
 line ->70164-->70444-->"1"->1-->0
0
# /Line: 9052
"LoTC_194"->"LoTC"
 line ->70065-->70269-->"1"->1-->0
 line ->70269-->70444-->"1"->1-->0
0
# /Line: 9053
"LoTC_195"->"LoTC"
 line ->70194-->70604-->"1"->1-->0
 line ->70127-->70191-->"1"->1-->0
 line ->70127-->70194-->"1"->1-->0
0
# /Line: 9054
"LoTC_196"->"LoTC"
 line ->70345-->70226-->"1"->1-->0
 line ->70345-->70440-->"1"->1-->0
0
# /Line: 9055
"LoTC_197"->"LoTC"
 line ->70110-->70175-->"2"->1-->0
 line ->70175-->70382-->"1"->1-->0
0
# /Line: 9065
"LoTC_198"->"LoTC"
 line ->70059-->70440-->"1"->1-->0
0
# /Line: 9067
"LoTC_199"->"LoTC"
 line ->70034-->70444-->"2"->1-->0
0
# /Line: 9068
"LoTC_200"->"LoTC"
 line ->70065-->70440-->"1"->1-->0
0
# /Line: 9115
"LoTC_201"->"LoTC"
 line ->70209-->70290-->"1"->1-->0
0
# /Line: 9118
"LoTC_202"->"LoTC"
 line ->70202-->70209-->"1"->1-->0
0
# /Line: 9122
"LoTC_203"->"LoTC"
 line ->70173-->70342-->"1"->1-->0
 line ->70066-->70342-->"1"->1-->0
 line ->70342-->70341-->"1"->1-->0
0
# /Line: 9153
"LoTC_204"->"LoTC"
 tran ->70005-->70498-->"U2"-->0-->-1
```

```
0
# /Line: 9155
"LoTC_205"->"LoTC"
 tran ->70005-->70499-->"U4"-->0-->-1
0
# /Line: 9156
"LoTC_206"->"LoTC"
 tran ->70005-->70556-->"U4"-->0-->-1
0
# /Line: 9158
"LoTC_207"->"LoTC"
 line ->70006-->70482-->"1"->1-->0
0
# /Line: 9174
"LoTC_208"->"LoTC"
 line ->70171-->70395-->"1"->1-->0
0
# /Line: 9175
"LoTC_209"->"LoTC"
 line ->70162-->70538-->"1"->1-->0
0
# /Line: 9178
"LoTC_210"->"LoTC"
 line ->70162-->70537-->"1"->1-->0
 line ->70537-->70538-->"1"->1-->0
0
# /Line: 9188
"LoTC_211"->"LoTC"
 line ->70114-->70418-->"1"->1-->0
0
# /Line: 9191
"LoTC_212"->"LoTC"
 tran ->70932-->70374-->"U1"-->0-->-1
0
# /Line: 9198
"LoTC_213"->"LoTC"
 line ->70172-->70173-->"1"->1-->0
0
# /Line: 9205
"LoTC_214"->"LoTC"
 line ->70423-->70295-->"1"->1-->0
 line ->70164-->70295-->"1"->1-->0
0
# /Line: 9216
"LoTC_215"->"LoTC"
 line ->70058-->70424-->"1"->1-->0
 line ->70059-->70424-->"1"->1-->0
0
# /Line: 9254
"LoTC_216"->"LoTC"
 line ->70114-->70257-->"1"->1-->0
 line ->70257-->70273-->"1"->1-->0
0
# /Line: 9255
"LoTC_217"->"LoTC"
 line ->70056-->70312-->"1"->1-->0
 line ->70273-->70435-->"1"->1-->0
 line ->70304-->70056-->"1"->1-->0
 line ->70312-->70327-->"1"->1-->0
 line ->70435-->70304-->"1"->1-->0
0
# /Line: 9256
"LoTC_218"->"LoTC"
 line ->70231-->79003-->"1"->1-->0
0
# /Line: 9257
"LoTC_219"->"LoTC"
 line ->70114-->70364-->"1"->1-->0
 line ->70199-->70364-->"1"->1-->0
```

```
 line -->70258-->70364-->"1"->1-->0
 line -->70258-->70273-->"1"->1-->0
0
# /Line: 9286
"LoTC_220"->"LoTC"
 line -->70259-->70377-->"1"->1-->0
0
# /Line: 9311
"LoTC_221"->"LoTC"
 line -->70298-->70377-->"1"->1-->0
0
# /Line: 9332
"LoTC_222"->"LoTC"
 line -->70036-->70531-->"1"->1-->0
 line -->70208-->70402-->"1"->1-->0
 line -->70402-->70531-->"1"->1-->0
0
# /Line: 9333
"LoTC_223"->"LoTC"
 line -->70037-->70168-->"1"->1-->0
0
# /Line: 9334
"LoTC_224"->"LoTC"
 line -->70036-->70384-->"1"->1-->0
 line -->70166-->70384-->"1"->1-->0
0
# /Line: 9335
"LoTC_225"->"LoTC"
 line -->70037-->70401-->"1"->1-->0
 line -->70045-->70401-->"1"->1-->0
 line -->70401-->70402-->"1"->1-->0
0
# /Line: 9336
"LoTC_226"->"LoTC"
 line -->70037-->70168-->"1"->1-->0
 line -->70165-->70168-->"1"->1-->0
 line -->70165-->70263-->"1"->1-->0
 line -->70263-->70463-->"1"->1-->0
# /  open branch from bus 70483 to bus 70463 ckt 1   /WATE_TP-WATE-115.0-1
 line -->70279-->70463-->"1"->1-->0
0
# /Line: 9337
"LoTC_227"->"LoTC"
 line -->70280-->70484-->"1"->1-->0
 line -->70142-->70484-->"1"->1-->0
 line -->70142-->70400-->"1"->1-->0
 line -->70463-->70484-->"1"->1-->0
0
# /Line: 9338
"LoTC_228"->"LoTC"
 line -->70036-->70441-->"1"->1-->0
 line -->70259-->70441-->"1"->1-->0
0
# /Line: 9406
"LoTC_229"->"LoTC"
 line -->70006-->70398-->"1"->1-->0
0
# /Line: 9407
"LoTC_230"->"LoTC"
 line -->70005-->70397-->"2"->1-->0
0
# /Line: 9413
"LoTC_231"->"LoTC"
 line -->70039-->70108-->"1"->1-->0
0
# /Line: 9431
"LoTC_232"->"LoTC"
 line -->70374-->70937-->"1"->1-->0
0
```

```
# /Line: 9433
"LoTC_233"->"LoTC"
 line ->700180->70937-->"1"->1-->0
0
# /Line: 9448
"LoTC_234"->"LoTC"
 line ->70045-->70208-->"1"->1-->0
0
# /Line: 9464
"LoTC_235"->"LoTC"
 line ->70065-->70382-->"1"->1-->0
0
# /Line: 9481
"LoTC_236"->"LoTC"
 line ->70244-->70604-->"1"->1-->0
 line ->70244-->70444-->"1"->1-->0
0
# /Line: 9494
"LoTC_237"->"LoTC"
 line ->70219-->70238-->"1"->1-->0
 line ->70219-->70198-->"1"->1-->0
 line ->70219-->70450-->"1"->1-->0
 line ->70191-->70450-->"1"->1-->0
 line ->70198-->70202-->"1"->1-->0
0
# /Line: 9495
"LoTC_238"->"LoTC"
 line ->70190-->70090-->"1"->1-->0
0
# /Line: 9499
"LoTC_239"->"LoTC"
 line ->70090-->70307-->"1"->1-->0
 line ->70081-->70307-->"1"->1-->0
 line ->70081-->70099-->"1"->1-->0
0
# /Line: 9541
"LoTC_240"->"LoTC"
 line ->70298-->70108-->"1"->1-->0
0
# /Line: 9542
"LoTC_241a"->"LoTC"
 line ->70073-->70182-->"1"->1-->0
0
# /Line: 9542
# /Line: 9543
"LoTC_242"->"LoTC"
 line ->70040-->70217-->"1"->1-->0
 line ->70110-->70153-->"1"->1-->0
 line ->70153-->70040-->"1"->1-->0
 line ->70153-->70154-->"1"->1-->0
 line ->70217-->70538-->"2"->1-->0
0
# /Line: 9544
"LoTC_243"->"LoTC"
 line ->70110-->70154-->"1"->1-->0
 line ->70154-->70216-->"1"->1-->0
 line ->70216-->70538-->"1"->1-->0
0
# /Line: 9546
"LoTC_244"->"LoTC"
 line ->70108-->70277-->"1"->1-->0
0
# /Line: 9547
"LoTC_245"->"LoTC"
 line ->70073-->70074-->"1"->1-->0
 line ->70087-->70074-->"1"->1-->0
 line ->70108-->70276-->"2"->1-->0
 line ->70177-->70074-->"1"->1-->0
 line ->70177-->70276-->"1"->1-->0
```

```
0
# /Line: 9548
"LoTC_246"->"LoTC"
 line ->70110-->70494-->"1"->1-->0
 line ->70494-->70099-->"1"->1-->0
0
# /Line: 9549
"LoTC_247"->"LoTC"
 line ->70110-->70126-->"1"->1-->0
# /  open branch from bus 70126 to bus 70377 ckt 1   /CONS-SAND-115.0-1
0
# /Line: 9558
"LoTC_248"->"LoTC"
 line ->70065-->70174-->"1"->1-->0
 line ->70110-->70174-->"1"->1-->0
0
# /Line: 9584
"LoTC_249"->"LoTC"
 line ->70262-->70300-->"1"->1-->0
 line ->70262-->70340-->"1"->1-->0
 line ->70262-->70226-->"1"->1-->0
 line ->70170-->70300-->"1"->1-->0
0
# /Line: 9587
"LoTC_250"->"LoTC"
 line ->70164-->70170-->"1"->1-->0
0
# /Line: 9603
"LoTC_251"->"LoTC"
 line ->70020-->70091-->"1"->1-->0
 line ->70020-->70308-->"1"->1-->0
0
# /Line: 9605
"LoTC_252"->"LoTC"
 line ->70308-->73414-->"1"->1-->0
0
# /Line: 9606
"LoTC_253"->"LoTC"
 line ->70020-->70021-->"1"->1-->0
 line ->70021-->70091-->"1"->1-->0
 line ->70021-->70117-->"1"->1-->0
0
# /Line: 9625
"LoTC_254"->"LoTC"
 line ->70463-->70522-->"1"->1-->0
0
# /Line: 9636
"LoTC_255"->"LoTC"
 line ->70285-->70456-->"1"->1-->0
0
# /Line: 9637
"LoTC_256"->"LoTC"
 line ->70285-->70301-->"1"->1-->0
0
# /Line: 9652
"LoTC_257"->"LoTC"
 line ->70117-->70115-->"1"->1-->0
0
# /Line: 9665
"LoTC_258"->"LoTC"
 line ->70071-->70197-->"1"->1-->0
 line ->70197-->70218-->"1"->1-->0
0
# /Line: 9674
"LoTC_259"->"LoTC"
 line ->70138-->70115-->"1"->1-->0
0
# /Line: 9688
"LoTC_260"->"LoTC"
```

```
 line ->70164->70346->"1"->1->0
 line ->70346->70354->"2"->1->0
0
# /Line: 9714
"LoTC_261"->"LoTC"
 line ->70231->70387->"1"->1->0
0
# /Line: 9724
"LoTC_262"->"LoTC"
 line ->79003->79018->"1"->1->0
0
# /Line: 9725
"LoTC_263"->"LoTC"
 line ->70541->79003->"1"->1->0
0
# /Line: 9726
"LoTC_264"->"LoTC"
 line ->70540->79003->"1"->1->0
0
# /Line: 9794
"LoTC_265"->"LoTC"
 line ->70050->70224->"1"->1->0
 line ->70224->70265->"1"->1->0
 line ->70224->70400->"1"->1->0
0
# /Line: 9811
"LoTC_266"->"LoTC"
 line ->70327->70379->"1"->1->0
0
# /Line: 98119827
"LoTC_267"->"LoTC"
 line ->70374->70379->"1"->1->0
0
# /Line: 9812
"LoTC_268"->"LoTC"
 line ->77642->70394->"1"->1->0
0
# /Line: 9863
"LoTC_269"->"LoTC"
 line ->70125->70521->"1"->1->0
0
# /Line: 9864
"LoTC_270"->"LoTC"
 line ->70395->70416->"1"->1->0
0
# /Line: 9866
"LoTC_271"->"LoTC"
 line ->70171->70395->"2"->1->0
0
# /Line: 9914
"LoTC_272"->"LoTC"
 line ->70722->73150->"1"->1->0
0
# /Line: 9955
"LoTC_273"->"LoTC"
 line ->70215->70282->"1"->1->0
0
# /Line: 9956
"LoTC_274"->"LoTC"
 line ->70087->70182->"1"->1->0
0
# /Line: 9984
"LoTC_275"->"LoTC"
 line ->70123->70352->"2"->1->0
0
# /Line: 9985
"LoTC_276"->"LoTC"
 line ->70098->70123->"1"->1->0
0
```

```
# /Line: 9986
"LoTC_277"->"LoTC"
 line ->70121-->70352-->"1"->1-->0
0
# /Line: 9987
"LoTC_278"->"LoTC"
 line ->70121-->70096-->"1"->1-->0
0
# /Line: 9995
"LoTC_279"->"LoTC"
 line ->70209-->70470-->"1"->1-->0
0
# /Line: 9996
"LoTC_280"->"LoTC"
 line ->70368-->70475-->"1"->1-->0
 line ->70470-->70475-->"1"->1-->0
0
# /--------------2024 Changes
"LoTC_281"->"LoTC"
 line ->70327-->70312-->"1"->1-->0
0
"LoTC_282"->"LoTC"
 line ->70327-->70379-->"1"->1-->0
0
"LoTC_283"->"LoTC"
 line ->70327-->77642-->"1"->1-->0
0
"LoTC_284"->"LoTC"
 tran ->70327-->70393-->"T4"-->0-->71994
0
"LoTC_287"->"LoTC"
 line ->70109-->70140-->"1"->1-->0
 line ->70140-->70981-->"1"->1-->0
0
"LoTC_288"->"LoTC"
 line ->70902-->70903-->"1"->1-->0
0
"LoTC_289"->"LoTC"
 tran ->70901-->70898-->"T4"-->0-->-1
0
"LoTC_290"->"LoTC"
 line ->70416-->71512-->"1"->1-->0
0
"LoTC_291"->"LoTC"
 line ->70539-->70536-->"1"->1-->0
0
"LoTC_292"->"LoTC"
 line ->70536-->70528-->"1"->1-->0
0
"LoTC_293"->"LoTC"
 line ->70915-->70918-->"1"->1-->0
0
"LoTC_294"->"LoTC"
 line ->70915-->70918-->"2"->1-->0
0
"LoTC_295"->"LoTC"
 line ->70919-->70918-->"1"->1-->0
0
"LoTC_296"->"LoTC"
 line ->70919-->70918-->"2"->1-->0
0
"LoTC_297"->"LoTC"
 line ->70918-->70632-->"1"->1-->0
0
"LoTC_298"->"LoTC"
 tran ->70917-->70918-->"U1"-->0-->-1
0
"LoTC_299"->"LoTC"
 tran ->70917-->70918-->"U2"-->0-->-1
```

```
0
"LoTC_300"->"LoTC"
 line ->70546-->71505-->"1"->1-->0
0
# /--------------2026 Changes-----------------------------------
"LoTC_302"->"LoTC"
 line ->70291-->70260-->"1"->1-->0
0
"LoTC_303"->"LoTC"
 line ->70598-->70915-->"1"->1-->0
0
"LoTC_304"->"LoTC"
 line ->70598-->70915-->"2"->1-->0
0
"LoTC_305"->"LoTC"
 line ->70916-->70915-->"1"->1-->0
0
"LoTC_306"->"LoTC"
 line ->70916-->70915-->"2"->1-->0
0
"LoTC_307"->"LoTC"
 line ->70124-->71507-->"1"->1-->0
0
# /--------------2027 Changes-----------------------------------
"LoTC_310"->"LoTC"
 line ->70518-->71503-->"1"->1-->0
0
"LoTC_311"->"LoTC"
 line ->70583-->71503-->"1"->1-->0
0
"LoTC_312"->"LoTC"
 line ->70152-->70324-->"1"->1-->0
0
"LoTC_313"->"LoTC"
 line ->70152-->70324-->"2"->1-->0
0
"LoTC_314"->"LoTC"
 line ->70601-->70653-->"2"->1-->0
0
"LoTC_315"->"LoTC"
 line ->70653-->70654-->"2"->1-->0
0
# /May Valley-Tundra circuit 1
"LoTC_316"->"LoTC"
 line ->70919-->70921-->"1"->1-->0
0
"LoTC_317"->"LoTC"
 line ->70921-->70653-->"1"->1-->0
0
# /May Valley-Tundra circuit 2
"LoTC_318"->"LoTC"
 line ->70919-->70921-->"2"->1-->0
0
"LoTC_319"->"LoTC"
 line ->70921-->70653-->"2"->1-->0
0
# /Harvest T1 230-245
"LoTC_320"->"LoTC"
 tran ->70596-->70597-->"T1"-->0-->-1
0
# /Harvest T2 23-245
"LoTC_321"->"LoTC"
 tran ->70596-->70597-->"T2"-->0-->-1
0
# /May Valley T1 345-35
"LoTC_322"->"LoTC"
 tran ->70919-->70920-->"U1"-->0-->-1
0
# /May Valley T1 345-35
```

```
"LoTC_323"->"LoTC"
 tran ->70919->70920->"U2"->0->-1
0
"LoTC_324"->"LoTC"
 line ->70597->70921->"1"->1->0
 line ->70921->70653->"1"->1->0
0
"LoTC_325"->"LoTC"
 line ->70597->70921->"2"->1->0
 line ->70921->70653->"2"->1->0
0
# /contingency LoTC_326
# / open branch from bus 70091 to bus 71501 ckt 1 /CAST-DAWSONRIDGE-115.0-1
# /end
"LoTC_327"->"LoTC"
 line ->71501->71502->"1"->1->0
0
"LoTC_328"->"LoTC"
 line ->71502->70519->"1"->1->0
0
# /contingency LoTC_329
# / open branch from bus 70110 to bus 70108 ckt 1 /CHER_N-CHER_S-115.0-1
# /end
# /
# /
"BUSDBL_000000" "BUSDBL_000000'" 1.00 "" "" "" 0
 "secdd 70002 70004 '1 ' 1" "open" 1.000000 ""
 "secdd 70002 71022 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_000001" "BUSDBL_000001'" 1.00 "" "" "" 0
 "secdd 70002 70004 '1 ' 1" "open" 1.000000 ""
 "secdd 70004 70352 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_000002" "BUSDBL_000002'" 1.00 "" "" "" 0
 "secdd 70005 70006 '1 ' 1" "open" 1.000000 ""
 "secdd 70005 70397 '2 ' 1" "open" 1.000000 ""
0
"BUSDBL_000003" "BUSDBL_000003'" 1.00 "" "" "" 0
 "secdd 70005 70006 '1 ' 1" "open" 1.000000 ""
 "tran 70498 70005 'U2'" "open" 1.000000 ""
0
"BUSDBL_000004" "BUSDBL_000004'" 1.00 "" "" "" 0
 "secdd 70005 70006 '1 ' 1" "open" 1.000000 ""
 "tran 70499 70005 'U4'" "open" 1.000000 ""
0
"BUSDBL_000005" "BUSDBL_000005'" 1.00 "" "" "" 0
 "secdd 70005 70006 '1 ' 1" "open" 1.000000 ""
 "tran 70556 70005 'U4'" "open" 1.000000 ""
0
"BUSDBL_000006" "BUSDBL_000006'" 1.00 "" "" "" 0
 "secdd 70005 70397 '2 ' 1" "open" 1.000000 ""
 "tran 70498 70005 'U2'" "open" 1.000000 ""
0
"BUSDBL_000007" "BUSDBL_000007'" 1.00 "" "" "" 0
 "secdd 70005 70397 '2 ' 1" "open" 1.000000 ""
 "tran 70499 70005 'U4'" "open" 1.000000 ""
0
"BUSDBL_000008" "BUSDBL_000008'" 1.00 "" "" "" 0
 "secdd 70005 70397 '2 ' 1" "open" 1.000000 ""
 "tran 70556 70005 'U4'" "open" 1.000000 ""
0
"BUSDBL_000009" "BUSDBL_000009'" 1.00 "" "" "" 0
 "tran 70498 70005 'U2'" "open" 1.000000 ""
 "tran 70499 70005 'U4'" "open" 1.000000 ""
0
"BUSDBL_000010" "BUSDBL_000010'" 1.00 "" "" "" 0
 "tran 70498 70005 'U2'" "open" 1.000000 ""
 "tran 70556 70005 'U4'" "open" 1.000000 ""
0
```

```
"BUSDBL_000011"    "BUSDBL_000011'"    1.00    ""    ""    ""    0
 "tran 70499 70005 'U4'"    "open"    1.000000    ""
 "tran 70556 70005 'U4'"    "open"    1.000000    ""
0
"BUSDBL_000012"    "BUSDBL_000012'"    1.00    ""    ""    ""    0
 "secdd 70005 70006 '1 '  1"    "open"    1.000000    ""
 "secdd 70006 70398 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000013"    "BUSDBL_000013'"    1.00    ""    ""    ""    0
 "secdd 70005 70006 '1 '  1"    "open"    1.000000    ""
 "secdd 70006 70482 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000014"    "BUSDBL_000014'"    1.00    ""    ""    ""    0
 "secdd 70006 70398 '1 '  1"    "open"    1.000000    ""
 "secdd 70006 70482 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000015"    "BUSDBL_000015'"    1.00    ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000    ""
 "secdd 70007 70301 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000016"    "BUSDBL_000016'"    1.00    ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000    ""
 "tran 71030 70007 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000017"    "BUSDBL_000017'"    1.00    ""    ""    ""    0
 "secdd 70007 70301 '1 '  1"    "open"    1.000000    ""
 "tran 71030 70007 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000018"    "BUSDBL_000018'"    1.00    ""    ""    ""    0
 "tran 70010 70011 '1 '"    "open"    1.000000    ""
 "secdd 70011 70012 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000019"    "BUSDBL_000019'"    1.00    ""    ""    ""    0
 "secdd 70011 70012 '1 '  1"    "open"    1.000000    ""
 "tran 70012 70013 '1 '"    "open"    1.000000    ""
0
"BUSDBL_000020"    "BUSDBL_000020'"    1.00    ""    ""    ""    0
 "tran 70012 70013 '1 '"    "open"    1.000000    ""
 "secdd 70013 70254 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000021"    "BUSDBL_000021'"    1.00    ""    ""    ""    0
 "tran 70012 70013 '1 '"    "open"    1.000000    ""
 "secdd 70013 70700 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000022"    "BUSDBL_000022'"    1.00    ""    ""    ""    0
 "secdd 70013 70254 '1 '  1"    "open"    1.000000    ""
 "secdd 70013 70700 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000023"    "BUSDBL_000023'"    1.00    ""    ""    ""    0
 "tran 70014 70015 '1 '"    "open"    1.000000    ""
 "secdd 70014 70272 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000024"    "BUSDBL_000024'"    1.00    ""    ""    ""    0
 "tran 70014 70015 '1 '"    "open"    1.000000    ""
 "secdd 70014 70321 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000025"    "BUSDBL_000025'"    1.00    ""    ""    ""    0
 "secdd 70014 70272 '1 '  1"    "open"    1.000000    ""
 "secdd 70014 70321 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000026"    "BUSDBL_000026'"    1.00    ""    ""    ""    0
 "tran 70014 70015 '1 '"    "open"    1.000000    ""
 "secdd 70015 70016 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000027"    "BUSDBL_000027'"    1.00    ""    ""    ""    0
 "secdd 70015 70016 '1 '  1"    "open"    1.000000    ""
 "tran 70016 70017 '1 '"    "open"    1.000000    ""
0
"BUSDBL_000028"    "BUSDBL_000028'"    1.00    ""    ""    ""    0
```

```
 "secdd 70018 70100 '1 ' 1"    "open"    1.000000  ""
 "secdd 70018 70266 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000029"    "BUSDBL_000029'"    1.00  ""    ""    ""    0
 "secdd 70018 70100 '1 ' 1"    "open"    1.000000  ""
 "tran 70400 70018 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000030"    "BUSDBL_000030'"    1.00  ""    ""    ""    0
 "secdd 70018 70266 '1 ' 1"    "open"    1.000000  ""
 "tran 70400 70018 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000031"    "BUSDBL_000031'"    1.00  ""    ""    ""    0
 "secdd 70019 70158 '1 ' 1"    "open"    1.000000  ""
 "secdd 70019 70159 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000032"    "BUSDBL_000032'"    1.00  ""    ""    ""    0
 "secdd 70020 70021 '1 ' 1"    "open"    1.000000  ""
 "secdd 70091 70020 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000033"    "BUSDBL_000033'"    1.00  ""    ""    ""    0
 "secdd 70020 70021 '1 ' 1"    "open"    1.000000  ""
 "secdd 70020 70308 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000034"    "BUSDBL_000034'"    1.00  ""    ""    ""    0
 "secdd 70091 70020 '1 ' 1"    "open"    1.000000  ""
 "secdd 70020 70308 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000035"    "BUSDBL_000035'"    1.00  ""    ""    ""    0
 "secdd 70020 70021 '1 ' 1"    "open"    1.000000  ""
 "secdd 70021 70091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000036"    "BUSDBL_000036'"    1.00  ""    ""    ""    0
 "secdd 70020 70021 '1 ' 1"    "open"    1.000000  ""
 "secdd 70021 70117 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000037"    "BUSDBL_000037'"    1.00  ""    ""    ""    0
 "secdd 70021 70091 '1 ' 1"    "open"    1.000000  ""
 "secdd 70021 70117 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000038"    "BUSDBL_000038'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 ' 1"    "open"    1.000000  ""
 "secdd 70022 70060 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000039"    "BUSDBL_000039'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 ' 1"    "open"    1.000000  ""
 "secdd 70022 70159 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000040"    "BUSDBL_000040'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 ' 1"    "open"    1.000000  ""
 "secdd 70022 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000041"    "BUSDBL_000041'"    1.00  ""    ""    ""    0
 "secdd 70022 70060 '1 ' 1"    "open"    1.000000  ""
 "secdd 70022 70159 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000042"    "BUSDBL_000042'"    1.00  ""    ""    ""    0
 "secdd 70022 70060 '1 ' 1"    "open"    1.000000  ""
 "secdd 70022 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000043"    "BUSDBL_000043'"    1.00  ""    ""    ""    0
 "secdd 70022 70159 '1 ' 1"    "open"    1.000000  ""
 "secdd 70022 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000044"    "BUSDBL_000044'"    1.00  ""    ""    ""    0
 "secdd 70023 70242 '1 ' 1"    "open"    1.000000  ""
 "secdd 70023 70400 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000045"    "BUSDBL_000045'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70024 70186 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000046"    "BUSDBL_000046'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "secdd 70024 70292 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000047"    "BUSDBL_000047'"    1.00  ""    ""    ""    0
 "secdd 70024 70186 '1 ' 1"    "open"    1.000000  ""
 "secdd 70024 70292 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000048"    "BUSDBL_000048'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
 "tran 70026 70025 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000049"    "BUSDBL_000049'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
 "tran 70486 70025 'U2'"    "open"    1.000000  ""
0
"BUSDBL_000050"    "BUSDBL_000050'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
 "secdd 70025 700224 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000051"    "BUSDBL_000051'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T4'"    "open"    1.000000  ""
 "tran 70486 70025 'U2'"    "open"    1.000000  ""
0
"BUSDBL_000052"    "BUSDBL_000052'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T4'"    "open"    1.000000  ""
 "secdd 70025 700224 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000053"    "BUSDBL_000053'"    1.00  ""    ""    ""    0
 "tran 70486 70025 'U2'"    "open"    1.000000  ""
 "secdd 70025 700224 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000054"    "BUSDBL_000054'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000055"    "BUSDBL_000055'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "tran 70026 70025 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000056"    "BUSDBL_000056'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "secdd 70026 70228 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000057"    "BUSDBL_000057'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "tran 70485 70026 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000058"    "BUSDBL_000058'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "secdd 70026 70511 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000059"    "BUSDBL_000059'"    1.00  ""    ""    ""    0
 "secdd 70024 70026 '1 ' 1"    "open"    1.000000  ""
 "secdd 700006 70026 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000060"    "BUSDBL_000060'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
 "secdd 70026 70228 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000061"    "BUSDBL_000061'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
 "tran 70485 70026 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000062"    "BUSDBL_000062'"    1.00  ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000  ""
 "secdd 70026 70511 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000063"    "BUSDBL_000063'"    1.00    ""    ""    ""    0
 "tran 70026 70025 'T1'"    "open"    1.000000    ""
 "secdd 700006 70026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000064"    "BUSDBL_000064'"    1.00    ""    ""    ""    0
 "tran 70026 70025 'T4'"    "open"    1.000000    ""
 "secdd 70026 70228 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000065"    "BUSDBL_000065'"    1.00    ""    ""    ""    0
 "tran 70026 70025 'T4'"    "open"    1.000000    ""
 "tran 70485 70026 'U1'"    "open"    1.000000    ""
0
"BUSDBL_000066"    "BUSDBL_000066'"    1.00    ""    ""    ""    0
 "tran 70026 70025 'T4'"    "open"    1.000000    ""
 "secdd 70026 70511 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000067"    "BUSDBL_000067'"    1.00    ""    ""    ""    0
 "tran 70026 70025 'T4'"    "open"    1.000000    ""
 "secdd 700006 70026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000068"    "BUSDBL_000068'"    1.00    ""    ""    ""    0
 "secdd 70026 70228 '1 '  1"    "open"    1.000000    ""
 "tran 70485 70026 'U1'"    "open"    1.000000    ""
0
"BUSDBL_000069"    "BUSDBL_000069'"    1.00    ""    ""    ""    0
 "secdd 70026 70228 '1 '  1"    "open"    1.000000    ""
 "secdd 70026 70511 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000070"    "BUSDBL_000070'"    1.00    ""    ""    ""    0
 "secdd 70026 70228 '1 '  1"    "open"    1.000000    ""
 "secdd 700006 70026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000071"    "BUSDBL_000071'"    1.00    ""    ""    ""    0
 "tran 70485 70026 'U1'"    "open"    1.000000    ""
 "secdd 70026 70511 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000072"    "BUSDBL_000072'"    1.00    ""    ""    ""    0
 "tran 70485 70026 'U1'"    "open"    1.000000    ""
 "secdd 700006 70026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000073"    "BUSDBL_000073'"    1.00    ""    ""    ""    0
 "secdd 70026 70511 '1 '  1"    "open"    1.000000    ""
 "secdd 700006 70026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000074"    "BUSDBL_000074'"    1.00    ""    ""    ""    0
 "secdd 70028 70118 '1 '  1"    "open"    1.000000    ""
 "secdd 70028 70376 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000075"    "BUSDBL_000075'"    1.00    ""    ""    ""    0
 "secdd 70030 70031 '1 '  1"    "open"    1.000000    ""
 "tran 70548 70030 'U1'"    "open"    1.000000    ""
0
"BUSDBL_000076"    "BUSDBL_000076'"    1.00    ""    ""    ""    0
 "secdd 70030 70031 '1 '  1"    "open"    1.000000    ""
 "secdd 70030 70549 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000077"    "BUSDBL_000077'"    1.00    ""    ""    ""    0
 "tran 70548 70030 'U1'"    "open"    1.000000    ""
 "secdd 70030 70549 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000078"    "BUSDBL_000078'"    1.00    ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000    ""
 "secdd 70022 70031 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000079"    "BUSDBL_000079'"    1.00    ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000    ""
 "secdd 70030 70031 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000080"    "BUSDBL_000080'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70031 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000081"    "BUSDBL_000081'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70031 70456 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000082"    "BUSDBL_000082'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000083"    "BUSDBL_000083'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000084"    "BUSDBL_000084'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000085"    "BUSDBL_000085'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000086"    "BUSDBL_000086'"    1.00  ""    ""    ""    0
 "secdd 70007 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000087"    "BUSDBL_000087'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70030 70031 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000088"    "BUSDBL_000088'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70031 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000089"    "BUSDBL_000089'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70031 70456 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000090"    "BUSDBL_000090'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000091"    "BUSDBL_000091'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000092"    "BUSDBL_000092'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000093"    "BUSDBL_000093'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000094"    "BUSDBL_000094'"    1.00  ""    ""    ""    0
 "secdd 70022 70031 '1 '  1"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000095"    "BUSDBL_000095'"    1.00  ""    ""    ""    0
 "secdd 70030 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70031 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000096"    "BUSDBL_000096'"    1.00  ""    ""    ""    0
 "secdd 70030 70031 '1 '  1"    "open"    1.000000  ""
 "secdd 70031 70456 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000097"    "BUSDBL_000097'"    1.00  ""    ""    ""    0
```

```
 "secdd 70030 70031 '1 ' 1"    "open"    1.000000  ""
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000098"    "BUSDBL_000098'"    1.00  ""    ""    ""    0
 "secdd 70030 70031 '1 ' 1"    "open"    1.000000  ""
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000099"    "BUSDBL_000099'"    1.00  ""    ""    ""    0
 "secdd 70030 70031 '1 ' 1"    "open"    1.000000  ""
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000100"    "BUSDBL_000100'"    1.00  ""    ""    ""    0
 "secdd 70030 70031 '1 ' 1"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000101"    "BUSDBL_000101'"    1.00  ""    ""    ""    0
 "secdd 70030 70031 '1 ' 1"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000102"    "BUSDBL_000102'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000103"    "BUSDBL_000103'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000104"    "BUSDBL_000104'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000105"    "BUSDBL_000105'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000106"    "BUSDBL_000106'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000107"    "BUSDBL_000107'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000108"    "BUSDBL_000108'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000109"    "BUSDBL_000109'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000110"    "BUSDBL_000110'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000111"    "BUSDBL_000111'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000112"    "BUSDBL_000112'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000113"    "BUSDBL_000113'"    1.00  ""    ""    ""    0
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000114"    "BUSDBL_000114'"    1.00  ""    ""    ""    0
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
```

```
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000115"    "BUSDBL_000115'"    1.00  ""    ""    ""    0
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000116"    "BUSDBL_000116'"    1.00  ""    ""    ""    0
 "tran 71001 70031 'U1'"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000117"    "BUSDBL_000117'"    1.00  ""    ""    ""    0
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000118"    "BUSDBL_000118'"    1.00  ""    ""    ""    0
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000119"    "BUSDBL_000119'"    1.00  ""    ""    ""    0
 "tran 71002 70031 'U1'"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000120"    "BUSDBL_000120'"    1.00  ""    ""    ""    0
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000121"    "BUSDBL_000121'"    1.00  ""    ""    ""    0
 "tran 71003 70031 'U1'"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000122"    "BUSDBL_000122'"    1.00  ""    ""    ""    0
 "tran 71004 70031 'U1'"    "open"    1.000000  ""
 "tran 71005 70031 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000123"    "BUSDBL_000123'"    1.00  ""    ""    ""    0
 "secdd 70032 70064 '1 '  1"    "open"    1.000000  ""
 "secdd 70032 70274 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000124"    "BUSDBL_000124'"    1.00  ""    ""    ""    0
 "secdd 70033 70034 '1 '  1"    "open"    1.000000  ""
 "secdd 70059 70033 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000125"    "BUSDBL_000125'"    1.00  ""    ""    ""    0
 "secdd 70033 70034 '1 '  1"    "open"    1.000000  ""
 "secdd 70034 70444 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000126"    "BUSDBL_000126'"    1.00  ""    ""    ""    0
 "secdd 70036 70035 '1 '  1"    "open"    1.000000  ""
 "tran 70553 70035 'U5'"    "open"    1.000000  ""
0
"BUSDBL_000127"    "BUSDBL_000127'"    1.00  ""    ""    ""    0
 "secdd 70036 70035 '1 '  1"    "open"    1.000000  ""
 "tran 70554 70035 'U7'"    "open"    1.000000  ""
0
"BUSDBL_000128"    "BUSDBL_000128'"    1.00  ""    ""    ""    0
 "tran 70553 70035 'U5'"    "open"    1.000000  ""
 "tran 70554 70035 'U7'"    "open"    1.000000  ""
0
"BUSDBL_000129"    "BUSDBL_000129'"    1.00  ""    ""    ""    0
 "secdd 70036 70035 '1 '  1"    "open"    1.000000  ""
 "secdd 70036 70037 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000130"    "BUSDBL_000130'"    1.00  ""    ""    ""    0
 "secdd 70036 70035 '1 '  1"    "open"    1.000000  ""
 "secdd 70036 70384 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000131"    "BUSDBL_000131'"    1.00  ""    ""    ""    0
 "secdd 70036 70035 '1 '  1"    "open"    1.000000  ""
 "secdd 70036 70441 '1 '  1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000132"  "BUSDBL_000132'"  1.00  ""  ""  ""  0
 "secdd 70036 70035 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70531 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000133"  "BUSDBL_000133'"  1.00  ""  ""  ""  0
 "secdd 70036 70037 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70384 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000134"  "BUSDBL_000134'"  1.00  ""  ""  ""  0
 "secdd 70036 70037 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70441 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000135"  "BUSDBL_000135'"  1.00  ""  ""  ""  0
 "secdd 70036 70037 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70531 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000136"  "BUSDBL_000136'"  1.00  ""  ""  ""  0
 "secdd 70036 70384 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70441 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000137"  "BUSDBL_000137'"  1.00  ""  ""  ""  0
 "secdd 70036 70384 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70531 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000138"  "BUSDBL_000138'"  1.00  ""  ""  ""  0
 "secdd 70036 70441 '1 ' 1"  "open"  1.000000  ""
 "secdd 70036 70531 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000139"  "BUSDBL_000139'"  1.00  ""  ""  ""  0
 "secdd 70036 70037 '1 ' 1"  "open"  1.000000  ""
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
0
"BUSDBL_000140"  "BUSDBL_000140'"  1.00  ""  ""  ""  0
 "secdd 70036 70037 '1 ' 1"  "open"  1.000000  ""
 "secdd 70037 70168 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000141"  "BUSDBL_000141'"  1.00  ""  ""  ""  0
 "secdd 70036 70037 '1 ' 1"  "open"  1.000000  ""
 "secdd 70037 70401 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000142"  "BUSDBL_000142'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
 "secdd 70037 70168 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000143"  "BUSDBL_000143'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
 "secdd 70037 70401 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000144"  "BUSDBL_000144'"  1.00  ""  ""  ""  0
 "secdd 70037 70168 '1 ' 1"  "open"  1.000000  ""
 "secdd 70037 70401 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000145"  "BUSDBL_000145'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
 "secdd 70038 70141 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000146"  "BUSDBL_000146'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
 "secdd 70038 70149 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000147"  "BUSDBL_000147'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
 "secdd 70189 70038 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000148"  "BUSDBL_000148'"  1.00  ""  ""  ""  0
 "tran 70037 70038 'T5'"  "open"  1.000000  ""
 "secdd 70038 70527 '1 ' 1"  "open"  1.000000  ""
0
```

```
"BUSDBL_000149"    "BUSDBL_000149'"    1.00    ""    ""    ""    0
 "secdd 70038 70141 '1 '  1"    "open"    1.000000    ""
 "secdd 70038 70149 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000150"    "BUSDBL_000150'"    1.00    ""    ""    ""    0
 "secdd 70038 70141 '1 '  1"    "open"    1.000000    ""
 "secdd 70189 70038 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000151"    "BUSDBL_000151'"    1.00    ""    ""    ""    0
 "secdd 70038 70141 '1 '  1"    "open"    1.000000    ""
 "secdd 70038 70527 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000152"    "BUSDBL_000152'"    1.00    ""    ""    ""    0
 "secdd 70038 70149 '1 '  1"    "open"    1.000000    ""
 "secdd 70189 70038 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000153"    "BUSDBL_000153'"    1.00    ""    ""    ""    0
 "secdd 70038 70149 '1 '  1"    "open"    1.000000    ""
 "secdd 70038 70527 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000154"    "BUSDBL_000154'"    1.00    ""    ""    ""    0
 "secdd 70189 70038 '1 '  1"    "open"    1.000000    ""
 "secdd 70038 70527 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000155"    "BUSDBL_000155'"    1.00    ""    ""    ""    0
 "secdd 70039 70108 '1 '  1"    "open"    1.000000    ""
 "secdd 70039 70148 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000156"    "BUSDBL_000156'"    1.00    ""    ""    ""    0
 "secdd 70040 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70040 70217 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000157"    "BUSDBL_000157'"    1.00    ""    ""    ""    0
 "secdd 70041 70107 '1 '  1"    "open"    1.000000    ""
 "secdd 70041 70355 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000158"    "BUSDBL_000158'"    1.00    ""    ""    ""    0
 "secdd 70042 70051 '1 '  1"    "open"    1.000000    ""
 "secdd 70042 70353 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000159"    "BUSDBL_000159'"    1.00    ""    ""    ""    0
 "secdd 70045 70208 '1 '  1"    "open"    1.000000    ""
 "secdd 70045 70242 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000160"    "BUSDBL_000160'"    1.00    ""    ""    ""    0
 "secdd 70045 70208 '1 '  1"    "open"    1.000000    ""
 "secdd 70045 70401 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000161"    "BUSDBL_000161'"    1.00    ""    ""    ""    0
 "secdd 70045 70242 '1 '  1"    "open"    1.000000    ""
 "secdd 70045 70401 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000162"    "BUSDBL_000162'"    1.00    ""    ""    ""    0
 "secdd 70046 70396 '1 '  1"    "open"    1.000000    ""
 "secdd 70046 70491 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000163"    "BUSDBL_000163'"    1.00    ""    ""    ""    0
 "secdd 70047 70048 '1 '  1"    "open"    1.000000    ""
 "secdd 70047 70489 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000164"    "BUSDBL_000164'"    1.00    ""    ""    ""    0
 "secdd 70047 70048 '1 '  1"    "open"    1.000000    ""
 "secdd 70047 72026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000165"    "BUSDBL_000165'"    1.00    ""    ""    ""    0
 "secdd 70047 70489 '1 '  1"    "open"    1.000000    ""
 "secdd 70047 72026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000166"    "BUSDBL_000166'"    1.00    ""    ""    ""    0
```

```
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000167"    "BUSDBL_000167'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000168"    "BUSDBL_000168'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000169"    "BUSDBL_000169'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000170"    "BUSDBL_000170'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000171"    "BUSDBL_000171'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000172"    "BUSDBL_000172'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000173"    "BUSDBL_000173'"    1.00  ""    ""    ""    0
 "secdd 70047 70048 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000174"    "BUSDBL_000174'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000175"    "BUSDBL_000175'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000176"    "BUSDBL_000176'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000177"    "BUSDBL_000177'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000178"    "BUSDBL_000178'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000179"    "BUSDBL_000179'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000180"    "BUSDBL_000180'"    1.00  ""    ""    ""    0
 "secdd 70048 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000181"    "BUSDBL_000181'"    1.00  ""    ""    ""    0
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000182"    "BUSDBL_000182'"    1.00  ""    ""    ""    0
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000183"    "BUSDBL_000183'"    1.00  ""    ""    ""    0
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000184"    "BUSDBL_000184'"    1.00  ""    ""    ""    0
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000185"    "BUSDBL_000185'"    1.00  ""    ""    ""    0
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000186"    "BUSDBL_000186'"    1.00  ""    ""    ""    0
 "secdd 70048 70192 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000187"    "BUSDBL_000187'"    1.00  ""    ""    ""    0
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000188"    "BUSDBL_000188'"    1.00  ""    ""    ""    0
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000189"    "BUSDBL_000189'"    1.00  ""    ""    ""    0
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000190"    "BUSDBL_000190'"    1.00  ""    ""    ""    0
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000191"    "BUSDBL_000191'"    1.00  ""    ""    ""    0
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000192"    "BUSDBL_000192'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000193"    "BUSDBL_000193'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000194"    "BUSDBL_000194'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000195"    "BUSDBL_000195'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000196"    "BUSDBL_000196'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000197"    "BUSDBL_000197'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000198"    "BUSDBL_000198'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000199"    "BUSDBL_000199'"    1.00  ""    ""    ""    0
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 70820 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000200"    "BUSDBL_000200'"    1.00  ""    ""    ""    0
 "secdd 70048 70820 '1 ' 1"    "open"    1.000000  ""
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000201"    "BUSDBL_000201'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '2 '  1"    "open"    1.000000    ""
 "secdd 70048 700155 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000202"    "BUSDBL_000202'"    1.00    ""    ""    ""    0
 "secdd 70049 70305 '1 '  1"    "open"    1.000000    ""
 "secdd 70049 71020 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000203"    "BUSDBL_000203'"    1.00    ""    ""    ""    0
 "secdd 70042 70051 '1 '  1"    "open"    1.000000    ""
 "secdd 70051 70405 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000204"    "BUSDBL_000204'"    1.00    ""    ""    ""    0
 "secdd 70042 70051 '1 '  1"    "open"    1.000000    ""
 "secdd 70051 71020 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000205"    "BUSDBL_000205'"    1.00    ""    ""    ""    0
 "secdd 70051 70405 '1 '  1"    "open"    1.000000    ""
 "secdd 70051 71020 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000206"    "BUSDBL_000206'"    1.00    ""    ""    ""    0
 "tran 70052 70053 'T1'"    "open"    1.000000    ""
 "secdd 70052 70287 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000207"    "BUSDBL_000207'"    1.00    ""    ""    ""    0
 "tran 70052 70053 'T1'"    "open"    1.000000    ""
 "secdd 70053 70057 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000208"    "BUSDBL_000208'"    1.00    ""    ""    ""    0
 "tran 70052 70053 'T1'"    "open"    1.000000    ""
 "secdd 70053 70088 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000209"    "BUSDBL_000209'"    1.00    ""    ""    ""    0
 "secdd 70053 70057 '1 '  1"    "open"    1.000000    ""
 "secdd 70053 70088 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000210"    "BUSDBL_000210'"    1.00    ""    ""    ""    0
 "secdd 70054 70305 '1 '  1"    "open"    1.000000    ""
 "secdd 70054 70455 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000211"    "BUSDBL_000211'"    1.00    ""    ""    ""    0
 "secdd 70054 70305 '1 '  1"    "open"    1.000000    ""
 "secdd 70054 71030 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000212"    "BUSDBL_000212'"    1.00    ""    ""    ""    0
 "secdd 70054 70455 '1 '  1"    "open"    1.000000    ""
 "secdd 70054 71030 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000213"    "BUSDBL_000213'"    1.00    ""    ""    ""    0
 "secdd 70055 70056 '1 '  1"    "open"    1.000000    ""
 "secdd 70056 70304 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000214"    "BUSDBL_000214'"    1.00    ""    ""    ""    0
 "secdd 70055 70056 '1 '  1"    "open"    1.000000    ""
 "secdd 70056 70312 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000215"    "BUSDBL_000215'"    1.00    ""    ""    ""    0
 "secdd 70056 70304 '1 '  1"    "open"    1.000000    ""
 "secdd 70056 70312 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000216"    "BUSDBL_000216'"    1.00    ""    ""    ""    0
 "secdd 70053 70057 '1 '  1"    "open"    1.000000    ""
 "secdd 70057 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000217"    "BUSDBL_000217'"    1.00    ""    ""    ""    0
 "secdd 70423 70058 '1 '  1"    "open"    1.000000    ""
 "secdd 70423 70058 '2 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000218"  "BUSDBL_000218'"  1.00  ""  ""  ""  0
 "secdd 70423 70058 '1 '  1"  "open"  1.000000  ""
 "secdd 70058 70424 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000219"  "BUSDBL_000219'"  1.00  ""  ""  ""  0
 "secdd 70423 70058 '2 '  1"  "open"  1.000000  ""
 "secdd 70058 70424 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000220"  "BUSDBL_000220'"  1.00  ""  ""  ""  0
 "secdd 70059 70033 '1 '  1"  "open"  1.000000  ""
 "secdd 70059 70424 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000221"  "BUSDBL_000221'"  1.00  ""  ""  ""  0
 "secdd 70059 70033 '1 '  1"  "open"  1.000000  ""
 "secdd 70059 70440 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000222"  "BUSDBL_000222'"  1.00  ""  ""  ""  0
 "secdd 70059 70424 '1 '  1"  "open"  1.000000  ""
 "secdd 70059 70440 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000223"  "BUSDBL_000223'"  1.00  ""  ""  ""  0
 "secdd 70022 70060 '1 '  1"  "open"  1.000000  ""
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000224"  "BUSDBL_000224'"  1.00  ""  ""  ""  0
 "secdd 70022 70060 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 70159 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000225"  "BUSDBL_000225'"  1.00  ""  ""  ""  0
 "secdd 70022 70060 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 70247 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000226"  "BUSDBL_000226'"  1.00  ""  ""  ""  0
 "secdd 70022 70060 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 70249 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000227"  "BUSDBL_000227'"  1.00  ""  ""  ""  0
 "secdd 70022 70060 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 71027 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000228"  "BUSDBL_000228'"  1.00  ""  ""  ""  0
 "secdd 70022 70060 '1 '  1"  "open"  1.000000  ""
 "tran 70061 70060 71981 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000229"  "BUSDBL_000229'"  1.00  ""  ""  ""  0
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
 "secdd 70060 70159 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000230"  "BUSDBL_000230'"  1.00  ""  ""  ""  0
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
 "secdd 70060 70247 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000231"  "BUSDBL_000231'"  1.00  ""  ""  ""  0
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
 "secdd 70060 70249 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000232"  "BUSDBL_000232'"  1.00  ""  ""  ""  0
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
 "secdd 70060 71027 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000233"  "BUSDBL_000233'"  1.00  ""  ""  ""  0
 "tran 70061 70060 71981 'T1'"  "open"  1.000000  ""
 "tran 70062 70060 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000234"  "BUSDBL_000234'"  1.00  ""  ""  ""  0
 "secdd 70060 70159 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 70247 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000235"  "BUSDBL_000235'"  1.00  ""  ""  ""  0
```

```
 "secdd 70060 70159 '1 ' 1"    "open"    1.000000  ""
 "secdd 70060 70249 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000236"    "BUSDBL_000236'"    1.00  ""    ""    ""    0
 "secdd 70060 70159 '1 ' 1"    "open"    1.000000  ""
 "secdd 70060 71027 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000237"    "BUSDBL_000237'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70060 70159 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000238"    "BUSDBL_000238'"    1.00  ""    ""    ""    0
 "secdd 70060 70247 '1 ' 1"    "open"    1.000000  ""
 "secdd 70060 70249 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000239"    "BUSDBL_000239'"    1.00  ""    ""    ""    0
 "secdd 70060 70247 '1 ' 1"    "open"    1.000000  ""
 "secdd 70060 71027 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000240"    "BUSDBL_000240'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70060 70247 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000241"    "BUSDBL_000241'"    1.00  ""    ""    ""    0
 "secdd 70060 70249 '1 ' 1"    "open"    1.000000  ""
 "secdd 70060 71027 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000242"    "BUSDBL_000242'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70060 70249 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000243"    "BUSDBL_000243'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70060 71027 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000244"    "BUSDBL_000244'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70061 70254 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000245"    "BUSDBL_000245'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000246"    "BUSDBL_000246'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000247"    "BUSDBL_000247'"    1.00  ""    ""    ""    0
 "secdd 70061 70254 '1 ' 1"    "open"    1.000000  ""
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000248"    "BUSDBL_000248'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70061 70254 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000249"    "BUSDBL_000249'"    1.00  ""    ""    ""    0
 "tran 70061 70060 71981 'T1'"    "open"    1.000000  ""
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000250"    "BUSDBL_000250'"    1.00  ""    ""    ""    0
 "tran 70062 70060 'T1'"    "open"    1.000000  ""
 "secdd 70062 70063 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000251"    "BUSDBL_000251'"    1.00  ""    ""    ""    0
 "secdd 70062 70063 '1 ' 1"    "open"    1.000000  ""
 "secdd 70063 70235 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000252"    "BUSDBL_000252'"    1.00  ""    ""    ""    0
 "secdd 70032 70064 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70064 70156 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000253"    "BUSDBL_000253'"    1.00  ""    ""    ""    0
 "secdd 70065 70174 '1 ' 1"    "open"    1.000000  ""
 "secdd 70065 70269 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000254"    "BUSDBL_000254'"    1.00  ""    ""    ""    0
 "secdd 70065 70174 '1 ' 1"    "open"    1.000000  ""
 "secdd 70065 70382 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000255"    "BUSDBL_000255'"    1.00  ""    ""    ""    0
 "secdd 70065 70174 '1 ' 1"    "open"    1.000000  ""
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000256"    "BUSDBL_000256'"    1.00  ""    ""    ""    0
 "secdd 70065 70269 '1 ' 1"    "open"    1.000000  ""
 "secdd 70065 70382 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000257"    "BUSDBL_000257'"    1.00  ""    ""    ""    0
 "secdd 70065 70269 '1 ' 1"    "open"    1.000000  ""
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000258"    "BUSDBL_000258'"    1.00  ""    ""    ""    0
 "secdd 70065 70382 '1 ' 1"    "open"    1.000000  ""
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000259"    "BUSDBL_000259'"    1.00  ""    ""    ""    0
 "secdd 70265 70066 '1 ' 1"    "open"    1.000000  ""
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000260"    "BUSDBL_000260'"    1.00  ""    ""    ""    0
 "secdd 70265 70066 '1 ' 1"    "open"    1.000000  ""
 "secdd 70066 70342 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000261"    "BUSDBL_000261'"    1.00  ""    ""    ""    0
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
 "secdd 70066 70342 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000262"    "BUSDBL_000262'"    1.00  ""    ""    ""    0
 "secdd 70067 70396 '2 ' 1"    "open"    1.000000  ""
 "secdd 70067 70512 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000263"    "BUSDBL_000263'"    1.00  ""    ""    ""    0
 "tran 70071 70072 'T1'"    "open"    1.000000  ""
 "tran 70071 70072 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000264"    "BUSDBL_000264'"    1.00  ""    ""    ""    0
 "tran 70071 70072 'T1'"    "open"    1.000000  ""
 "secdd 70071 70197 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000265"    "BUSDBL_000265'"    1.00  ""    ""    ""    0
 "tran 70071 70072 'T2'"    "open"    1.000000  ""
 "secdd 70071 70197 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000266"    "BUSDBL_000266'"    1.00  ""    ""    ""    0
 "tran 70069 70072 'UA'"    "open"    1.000000  ""
 "tran 70070 70072 'UB'"    "open"    1.000000  ""
0
"BUSDBL_000267"    "BUSDBL_000267'"    1.00  ""    ""    ""    0
 "tran 70069 70072 'UA'"    "open"    1.000000  ""
 "tran 70071 70072 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000268"    "BUSDBL_000268'"    1.00  ""    ""    ""    0
 "tran 70069 70072 'UA'"    "open"    1.000000  ""
 "tran 70071 70072 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000269"    "BUSDBL_000269'"    1.00  ""    ""    ""    0
 "tran 70069 70072 'UA'"    "open"    1.000000  ""
 "secdd 70072 70156 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000270"    "BUSDBL_000270'"    1.00    ""    ""    ""    0
 "tran 70069 70072 'UA'"    "open"    1.000000    ""
 "secdd 70072 70237 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000271"    "BUSDBL_000271'"    1.00    ""    ""    ""    0
 "tran 70069 70072 'UA'"    "open"    1.000000    ""
 "secdd 70072 70266 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000272"    "BUSDBL_000272'"    1.00    ""    ""    ""    0
 "tran 70070 70072 'UB'"    "open"    1.000000    ""
 "tran 70071 70072 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000273"    "BUSDBL_000273'"    1.00    ""    ""    ""    0
 "tran 70070 70072 'UB'"    "open"    1.000000    ""
 "tran 70071 70072 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000274"    "BUSDBL_000274'"    1.00    ""    ""    ""    0
 "tran 70070 70072 'UB'"    "open"    1.000000    ""
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000275"    "BUSDBL_000275'"    1.00    ""    ""    ""    0
 "tran 70070 70072 'UB'"    "open"    1.000000    ""
 "secdd 70072 70237 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000276"    "BUSDBL_000276'"    1.00    ""    ""    ""    0
 "tran 70070 70072 'UB'"    "open"    1.000000    ""
 "secdd 70072 70266 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000277"    "BUSDBL_000277'"    1.00    ""    ""    ""    0
 "tran 70071 70072 'T1'"    "open"    1.000000    ""
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000278"    "BUSDBL_000278'"    1.00    ""    ""    ""    0
 "tran 70071 70072 'T1'"    "open"    1.000000    ""
 "secdd 70072 70237 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000279"    "BUSDBL_000279'"    1.00    ""    ""    ""    0
 "tran 70071 70072 'T1'"    "open"    1.000000    ""
 "secdd 70072 70266 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000280"    "BUSDBL_000280'"    1.00    ""    ""    ""    0
 "tran 70071 70072 'T2'"    "open"    1.000000    ""
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000281"    "BUSDBL_000281'"    1.00    ""    ""    ""    0
 "tran 70071 70072 'T2'"    "open"    1.000000    ""
 "secdd 70072 70237 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000282"    "BUSDBL_000282'"    1.00    ""    ""    ""    0
 "tran 70071 70072 'T2'"    "open"    1.000000    ""
 "secdd 70072 70266 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000283"    "BUSDBL_000283'"    1.00    ""    ""    ""    0
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
 "secdd 70072 70237 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000284"    "BUSDBL_000284'"    1.00    ""    ""    ""    0
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
 "secdd 70072 70266 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000285"    "BUSDBL_000285'"    1.00    ""    ""    ""    0
 "secdd 70072 70237 '1 '  1"    "open"    1.000000    ""
 "secdd 70072 70266 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000286"    "BUSDBL_000286'"    1.00    ""    ""    ""    0
 "secdd 70073 70074 '1 '  1"    "open"    1.000000    ""
 "secdd 70073 70108 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000287"    "BUSDBL_000287'"    1.00    ""    ""    ""    0
 "secdd 70073 70074 '1 '  1"    "open"    1.000000    ""
 "secdd 70073 70182 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000288"    "BUSDBL_000288'"    1.00    ""    ""    ""    0
 "secdd 70073 70108 '1 '  1"    "open"    1.000000    ""
 "secdd 70073 70182 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000289"    "BUSDBL_000289'"    1.00    ""    ""    ""    0
 "secdd 70073 70074 '1 '  1"    "open"    1.000000    ""
 "secdd 70087 70074 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000290"    "BUSDBL_000290'"    1.00    ""    ""    ""    0
 "secdd 70073 70074 '1 '  1"    "open"    1.000000    ""
 "secdd 70177 70074 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000291"    "BUSDBL_000291'"    1.00    ""    ""    ""    0
 "secdd 70087 70074 '1 '  1"    "open"    1.000000    ""
 "secdd 70177 70074 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000292"    "BUSDBL_000292'"    1.00    ""    ""    ""    0
 "tran 70078 70076 71989 'T5'"    "open"    1.000000    ""
 "secdd 70076 70454 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000293"    "BUSDBL_000293'"    1.00    ""    ""    ""    0
 "secdd 70048 70077 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70077 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000294"    "BUSDBL_000294'"    1.00    ""    ""    ""    0
 "secdd 70078 70264 '1 '  1"    "open"    1.000000    ""
 "secdd 70078 70438 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000295"    "BUSDBL_000295'"    1.00    ""    ""    ""    0
 "tran 70078 70076 71989 'T5'"    "open"    1.000000    ""
 "secdd 70078 70264 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000296"    "BUSDBL_000296'"    1.00    ""    ""    ""    0
 "tran 70078 70076 71989 'T5'"    "open"    1.000000    ""
 "secdd 70078 70438 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000297"    "BUSDBL_000297'"    1.00    ""    ""    ""    0
 "secdd 70079 70247 '1 '  1"    "open"    1.000000    ""
 "secdd 70079 70472 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000298"    "BUSDBL_000298'"    1.00    ""    ""    ""    0
 "secdd 70080 70453 '1 '  1"    "open"    1.000000    ""
 "secdd 70080 70460 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000299"    "BUSDBL_000299'"    1.00    ""    ""    ""    0
 "secdd 70081 70099 '1 '  1"    "open"    1.000000    ""
 "secdd 70081 70307 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000300"    "BUSDBL_000300'"    1.00    ""    ""    ""    0
 "tran 70086 70085 'T1'"    "open"    1.000000    ""
 "secdd 70085 70371 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000301"    "BUSDBL_000301'"    1.00    ""    ""    ""    0
 "tran 70086 70085 'T1'"    "open"    1.000000    ""
 "secdd 70085 71026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000302"    "BUSDBL_000302'"    1.00    ""    ""    ""    0
 "secdd 70085 70371 '1 '  1"    "open"    1.000000    ""
 "secdd 70085 71026 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000303"    "BUSDBL_000303'"    1.00    ""    ""    ""    0
 "tran 70086 70085 'T1'"    "open"    1.000000    ""
 "secdd 70086 70390 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000304"    "BUSDBL_000304'"    1.00    ""    ""    ""    0
```

```
 "tran 70086 70085 'T1'"    "open"    1.000000  ""
 "secdd 70086 71025 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000305"    "BUSDBL_000305'"    1.00  ""    ""    ""    0
 "secdd 70086 70390 '1 '  1"    "open"    1.000000  ""
 "secdd 70086 71025 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000306"    "BUSDBL_000306'"    1.00  ""    ""    ""    0
 "secdd 70087 70074 '1 '  1"    "open"    1.000000  ""
 "secdd 70087 70148 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000307"    "BUSDBL_000307'"    1.00  ""    ""    ""    0
 "secdd 70087 70074 '1 '  1"    "open"    1.000000  ""
 "secdd 70087 70182 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000308"    "BUSDBL_000308'"    1.00  ""    ""    ""    0
 "secdd 70087 70148 '1 '  1"    "open"    1.000000  ""
 "secdd 70087 70182 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000309"    "BUSDBL_000309'"    1.00  ""    ""    ""    0
 "secdd 70053 70088 '1 '  1"    "open"    1.000000  ""
 "tran 70088 73072 '1 '"    "open"    1.000000  ""
0
"BUSDBL_000310"    "BUSDBL_000310'"    1.00  ""    ""    ""    0
 "secdd 70053 70088 '1 '  1"    "open"    1.000000  ""
 "secdd 70088 79142 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000311"    "BUSDBL_000311'"    1.00  ""    ""    ""    0
 "tran 70088 73072 '1 '"    "open"    1.000000  ""
 "secdd 70088 79142 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000312"    "BUSDBL_000312'"    1.00  ""    ""    ""    0
 "secdd 70090 70190 '1 '  1"    "open"    1.000000  ""
 "secdd 70191 70090 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000313"    "BUSDBL_000313'"    1.00  ""    ""    ""    0
 "secdd 70090 70190 '1 '  1"    "open"    1.000000  ""
 "tran 70090 70192 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000314"    "BUSDBL_000314'"    1.00  ""    ""    ""    0
 "secdd 70090 70190 '1 '  1"    "open"    1.000000  ""
 "secdd 70090 70307 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000315"    "BUSDBL_000315'"    1.00  ""    ""    ""    0
 "secdd 70191 70090 '1 '  1"    "open"    1.000000  ""
 "tran 70090 70192 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000316"    "BUSDBL_000316'"    1.00  ""    ""    ""    0
 "secdd 70191 70090 '1 '  1"    "open"    1.000000  ""
 "secdd 70090 70307 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000317"    "BUSDBL_000317'"    1.00  ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000  ""
 "secdd 70090 70307 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000318"    "BUSDBL_000318'"    1.00  ""    ""    ""    0
 "secdd 70091 70020 '1 '  1"    "open"    1.000000  ""
 "secdd 70021 70091 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000319"    "BUSDBL_000319'"    1.00  ""    ""    ""    0
 "secdd 70091 70020 '1 '  1"    "open"    1.000000  ""
 "secdd 70091 70519 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000320"    "BUSDBL_000320'"    1.00  ""    ""    ""    0
 "secdd 70091 70020 '1 '  1"    "open"    1.000000  ""
 "secdd 70091 70584 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000321"    "BUSDBL_000321'"    1.00  ""    ""    ""    0
 "secdd 70091 70020 '1 '  1"    "open"    1.000000  ""
```

```
 "secdd 71506 70091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000322"    "BUSDBL_000322'"    1.00  ""    ""    ""    0
 "secdd 70021 70091 '1 ' 1"    "open"    1.000000  ""
 "secdd 70091 70519 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000323"    "BUSDBL_000323'"    1.00  ""    ""    ""    0
 "secdd 70021 70091 '1 ' 1"    "open"    1.000000  ""
 "secdd 70091 70584 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000324"    "BUSDBL_000324'"    1.00  ""    ""    ""    0
 "secdd 70021 70091 '1 ' 1"    "open"    1.000000  ""
 "secdd 71506 70091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000325"    "BUSDBL_000325'"    1.00  ""    ""    ""    0
 "secdd 70091 70519 '1 ' 1"    "open"    1.000000  ""
 "secdd 70091 70584 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000326"    "BUSDBL_000326'"    1.00  ""    ""    ""    0
 "secdd 70091 70519 '1 ' 1"    "open"    1.000000  ""
 "secdd 71506 70091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000327"    "BUSDBL_000327'"    1.00  ""    ""    ""    0
 "secdd 70091 70584 '1 ' 1"    "open"    1.000000  ""
 "secdd 71506 70091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000328"    "BUSDBL_000328'"    1.00  ""    ""    ""    0
 "secdd 70092 70230 '1 ' 1"    "open"    1.000000  ""
 "secdd 70092 70245 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000329"    "BUSDBL_000329'"    1.00  ""    ""    ""    0
 "tran 70095 70096 'T1'"    "open"    1.000000  ""
 "secdd 70121 70096 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000330"    "BUSDBL_000330'"    1.00  ""    ""    ""    0
 "tran 70097 70098 'T2'"    "open"    1.000000  ""
 "secdd 70098 70123 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000331"    "BUSDBL_000331'"    1.00  ""    ""    ""    0
 "secdd 70081 70099 '1 ' 1"    "open"    1.000000  ""
 "secdd 70494 70099 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000332"    "BUSDBL_000332'"    1.00  ""    ""    ""    0
 "secdd 70018 70100 '1 ' 1"    "open"    1.000000  ""
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000333"    "BUSDBL_000333'"    1.00  ""    ""    ""    0
 "secdd 70101 70102 '1 ' 1"    "open"    1.000000  ""
 "secdd 70101 70225 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000334"    "BUSDBL_000334'"    1.00  ""    ""    ""    0
 "secdd 70101 70102 '1 ' 1"    "open"    1.000000  ""
 "secdd 70101 70425 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000335"    "BUSDBL_000335'"    1.00  ""    ""    ""    0
 "secdd 70101 70225 '1 ' 1"    "open"    1.000000  ""
 "secdd 70101 70425 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000336"    "BUSDBL_000336'"    1.00  ""    ""    ""    0
 "secdd 70041 70107 '1 ' 1"    "open"    1.000000  ""
 "tran 70108 70107 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000337"    "BUSDBL_000337'"    1.00  ""    ""    ""    0
 "secdd 70041 70107 '1 ' 1"    "open"    1.000000  ""
 "tran 70110 70107 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000338"    "BUSDBL_000338'"    1.00  ""    ""    ""    0
 "secdd 70041 70107 '1 ' 1"    "open"    1.000000  ""
 "secdd 70107 70200 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000339"    "BUSDBL_000339'"    1.00    ""    ""    ""    0
 "secdd 70041 70107 '1 '  1"    "open"    1.000000    ""
 "secdd 70107 70324 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000340"    "BUSDBL_000340'"    1.00    ""    ""    ""    0
 "secdd 70041 70107 '1 '  1"    "open"    1.000000    ""
 "secdd 70107 70362 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000341"    "BUSDBL_000341'"    1.00    ""    ""    ""    0
 "secdd 70041 70107 '1 '  1"    "open"    1.000000    ""
 "secdd 70107 70369 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000342"    "BUSDBL_000342'"    1.00    ""    ""    ""    0
 "secdd 70041 70107 '1 '  1"    "open"    1.000000    ""
 "secdd 70107 70609 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000343"    "BUSDBL_000343'"    1.00    ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000    ""
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000344"    "BUSDBL_000344'"    1.00    ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000    ""
 "secdd 70107 70200 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000345"    "BUSDBL_000345'"    1.00    ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000    ""
 "secdd 70107 70324 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000346"    "BUSDBL_000346'"    1.00    ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000    ""
 "secdd 70107 70362 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000347"    "BUSDBL_000347'"    1.00    ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000    ""
 "secdd 70107 70369 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000348"    "BUSDBL_000348'"    1.00    ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000    ""
 "secdd 70107 70609 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000349"    "BUSDBL_000349'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70107 70200 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000350"    "BUSDBL_000350'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70107 70324 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000351"    "BUSDBL_000351'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70107 70362 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000352"    "BUSDBL_000352'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70107 70369 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000353"    "BUSDBL_000353'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70107 70609 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000354"    "BUSDBL_000354'"    1.00    ""    ""    ""    0
 "secdd 70107 70200 '1 '  1"    "open"    1.000000    ""
 "secdd 70107 70324 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000355"    "BUSDBL_000355'"    1.00    ""    ""    ""    0
 "secdd 70107 70200 '1 '  1"    "open"    1.000000    ""
 "secdd 70107 70362 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000356"  "BUSDBL_000356'"  1.00  ""  ""  ""  0
 "secdd 70107 70200 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70369 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000357"  "BUSDBL_000357'"  1.00  ""  ""  ""  0
 "secdd 70107 70200 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70609 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000358"  "BUSDBL_000358'"  1.00  ""  ""  ""  0
 "secdd 70107 70324 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70362 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000359"  "BUSDBL_000359'"  1.00  ""  ""  ""  0
 "secdd 70107 70324 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70369 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000360"  "BUSDBL_000360'"  1.00  ""  ""  ""  0
 "secdd 70107 70324 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70609 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000361"  "BUSDBL_000361'"  1.00  ""  ""  ""  0
 "secdd 70107 70362 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70369 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000362"  "BUSDBL_000362'"  1.00  ""  ""  ""  0
 "secdd 70107 70362 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70609 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000363"  "BUSDBL_000363'"  1.00  ""  ""  ""  0
 "secdd 70107 70369 '1 '  1"  "open"  1.000000  ""
 "secdd 70107 70609 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000364"  "BUSDBL_000364'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "secdd 70073 70108 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000365"  "BUSDBL_000365'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "tran 70104 70108 'U2'"  "open"  1.000000  ""
0
"BUSDBL_000366"  "BUSDBL_000366'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "tran 70108 70107 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000367"  "BUSDBL_000367'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "tran 70145 70108 'U5'"  "open"  1.000000  ""
0
"BUSDBL_000368"  "BUSDBL_000368'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "tran 70146 70108 'U6'"  "open"  1.000000  ""
0
"BUSDBL_000369"  "BUSDBL_000369'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "tran 70147 70108 'U7'"  "open"  1.000000  ""
0
"BUSDBL_000370"  "BUSDBL_000370'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "secdd 70108 70276 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_000371"  "BUSDBL_000371'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "secdd 70108 70277 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000372"  "BUSDBL_000372'"  1.00  ""  ""  ""  0
 "secdd 70039 70108 '1 '  1"  "open"  1.000000  ""
 "secdd 70108 70298 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000373"  "BUSDBL_000373'"  1.00  ""  ""  ""  0
```

```
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
0
"BUSDBL_000374"    "BUSDBL_000374'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "tran 70108 70107 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000375"    "BUSDBL_000375'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "tran 70145 70108 'U5'"    "open"    1.000000  ""
0
"BUSDBL_000376"    "BUSDBL_000376'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "tran 70146 70108 'U6'"    "open"    1.000000  ""
0
"BUSDBL_000377"    "BUSDBL_000377'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "tran 70147 70108 'U7'"    "open"    1.000000  ""
0
"BUSDBL_000378"    "BUSDBL_000378'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "secdd 70108 70276 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000379"    "BUSDBL_000379'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "secdd 70108 70277 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000380"    "BUSDBL_000380'"    1.00  ""    ""    ""    0
 "secdd 70073 70108 '1 ' 1"    "open"    1.000000  ""
 "secdd 70108 70298 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000381"    "BUSDBL_000381'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "tran 70108 70107 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000382"    "BUSDBL_000382'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "tran 70145 70108 'U5'"    "open"    1.000000  ""
0
"BUSDBL_000383"    "BUSDBL_000383'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "tran 70146 70108 'U6'"    "open"    1.000000  ""
0
"BUSDBL_000384"    "BUSDBL_000384'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "tran 70147 70108 'U7'"    "open"    1.000000  ""
0
"BUSDBL_000385"    "BUSDBL_000385'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "secdd 70108 70276 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000386"    "BUSDBL_000386'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "secdd 70108 70277 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000387"    "BUSDBL_000387'"    1.00  ""    ""    ""    0
 "tran 70104 70108 'U2'"    "open"    1.000000  ""
 "secdd 70108 70298 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000388"    "BUSDBL_000388'"    1.00  ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000  ""
 "tran 70145 70108 'U5'"    "open"    1.000000  ""
0
"BUSDBL_000389"    "BUSDBL_000389'"    1.00  ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000  ""
 "tran 70146 70108 'U6'"    "open"    1.000000  ""
0
"BUSDBL_000390"    "BUSDBL_000390'"    1.00  ""    ""    ""    0
 "tran 70108 70107 'T1'"    "open"    1.000000  ""
```

```
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
0
"BUSDBL_000391"   "BUSDBL_000391'"   1.00  ""   ""   ""   0
 "tran 70108 70107 'T1'"   "open"   1.000000  ""
 "secdd 70108 70276 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_000392"   "BUSDBL_000392'"   1.00  ""   ""   ""   0
 "tran 70108 70107 'T1'"   "open"   1.000000  ""
 "secdd 70108 70277 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000393"   "BUSDBL_000393'"   1.00  ""   ""   ""   0
 "tran 70108 70107 'T1'"   "open"   1.000000  ""
 "secdd 70108 70298 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000394"   "BUSDBL_000394'"   1.00  ""   ""   ""   0
 "tran 70145 70108 'U5'"   "open"   1.000000  ""
 "tran 70146 70108 'U6'"   "open"   1.000000  ""
0
"BUSDBL_000395"   "BUSDBL_000395'"   1.00  ""   ""   ""   0
 "tran 70145 70108 'U5'"   "open"   1.000000  ""
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
0
"BUSDBL_000396"   "BUSDBL_000396'"   1.00  ""   ""   ""   0
 "tran 70145 70108 'U5'"   "open"   1.000000  ""
 "secdd 70108 70276 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_000397"   "BUSDBL_000397'"   1.00  ""   ""   ""   0
 "tran 70145 70108 'U5'"   "open"   1.000000  ""
 "secdd 70108 70277 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000398"   "BUSDBL_000398'"   1.00  ""   ""   ""   0
 "tran 70145 70108 'U5'"   "open"   1.000000  ""
 "secdd 70108 70298 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000399"   "BUSDBL_000399'"   1.00  ""   ""   ""   0
 "tran 70146 70108 'U6'"   "open"   1.000000  ""
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
0
"BUSDBL_000400"   "BUSDBL_000400'"   1.00  ""   ""   ""   0
 "tran 70146 70108 'U6'"   "open"   1.000000  ""
 "secdd 70108 70276 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_000401"   "BUSDBL_000401'"   1.00  ""   ""   ""   0
 "tran 70146 70108 'U6'"   "open"   1.000000  ""
 "secdd 70108 70277 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000402"   "BUSDBL_000402'"   1.00  ""   ""   ""   0
 "tran 70146 70108 'U6'"   "open"   1.000000  ""
 "secdd 70108 70298 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000403"   "BUSDBL_000403'"   1.00  ""   ""   ""   0
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
 "secdd 70108 70276 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_000404"   "BUSDBL_000404'"   1.00  ""   ""   ""   0
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
 "secdd 70108 70277 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000405"   "BUSDBL_000405'"   1.00  ""   ""   ""   0
 "tran 70147 70108 'U7'"   "open"   1.000000  ""
 "secdd 70108 70298 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000406"   "BUSDBL_000406'"   1.00  ""   ""   ""   0
 "secdd 70108 70276 '2 '  1"   "open"   1.000000  ""
 "secdd 70108 70277 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_000407"   "BUSDBL_000407'"   1.00  ""   ""   ""   0
 "secdd 70108 70276 '2 '  1"   "open"   1.000000  ""
 "secdd 70108 70298 '1 '  1"   "open"   1.000000  ""
```

```
0
"BUSDBL_000408"    "BUSDBL_000408'"    1.00    ""    ""    ""    0
 "secdd 70108 70277 '1 '  1"    "open"    1.000000    ""
 "secdd 70108 70298 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000409"    "BUSDBL_000409'"    1.00    ""    ""    ""    0
 "secdd 70109 70140 '1 '  1"    "open"    1.000000    ""
 "secdd 70109 70302 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000410"    "BUSDBL_000410'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000411"    "BUSDBL_000411'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000412"    "BUSDBL_000412'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000413"    "BUSDBL_000413'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000414"    "BUSDBL_000414'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000415"    "BUSDBL_000415'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000416"    "BUSDBL_000416'"    1.00    ""    ""    ""    0
 "tran 70106 70110 'U4'"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000417"    "BUSDBL_000417'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000418"    "BUSDBL_000418'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000419"    "BUSDBL_000419'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000420"    "BUSDBL_000420'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000421"    "BUSDBL_000421'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000422"    "BUSDBL_000422'"    1.00    ""    ""    ""    0
 "tran 70110 70107 'T2'"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000423"    "BUSDBL_000423'"    1.00    ""    ""    ""    0
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000424"    "BUSDBL_000424'"    1.00    ""    ""    ""    0
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000425"    "BUSDBL_000425'"    1.00    ""    ""    ""    0
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000426"    "BUSDBL_000426'"    1.00    ""    ""    ""    0
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000427"    "BUSDBL_000427'"    1.00    ""    ""    ""    0
 "secdd 70110 70126 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000428"    "BUSDBL_000428'"    1.00    ""    ""    ""    0
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000429"    "BUSDBL_000429'"    1.00    ""    ""    ""    0
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000430"    "BUSDBL_000430'"    1.00    ""    ""    ""    0
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000431"    "BUSDBL_000431'"    1.00    ""    ""    ""    0
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000432"    "BUSDBL_000432'"    1.00    ""    ""    ""    0
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000433"    "BUSDBL_000433'"    1.00    ""    ""    ""    0
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000434"    "BUSDBL_000434'"    1.00    ""    ""    ""    0
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000435"    "BUSDBL_000435'"    1.00    ""    ""    ""    0
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000436"    "BUSDBL_000436'"    1.00    ""    ""    ""    0
 "secdd 70110 70174 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000437"    "BUSDBL_000437'"    1.00    ""    ""    ""    0
 "secdd 70110 70175 '2 '  1"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000438"    "BUSDBL_000438'"    1.00    ""    ""    ""    0
 "secdd 70232 70111 '1 '  1"    "open"    1.000000    ""
 "secdd 70111 70274 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000439"    "BUSDBL_000439'"    1.00    ""    ""    ""    0
 "secdd 70112 70212 '1 '  1"    "open"    1.000000    ""
 "secdd 70112 70241 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000440"    "BUSDBL_000440'"    1.00    ""    ""    ""    0
 "secdd 70113 70205 '1 '  1"    "open"    1.000000    ""
 "secdd 70113 70206 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000441"    "BUSDBL_000441'"    1.00    ""    ""    ""    0
 "secdd 70114 70257 '1 '  1"    "open"    1.000000    ""
 "secdd 70114 70281 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000442"    "BUSDBL_000442'"    1.00    ""    ""    ""    0
```

```
 "secdd 70114 70257 '1 ' 1"    "open"    1.000000  ""
 "secdd 70114 70364 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000443"    "BUSDBL_000443'"    1.00  ""    ""    ""    0
 "secdd 70114 70257 '1 ' 1"    "open"    1.000000  ""
 "secdd 70114 70418 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000444"    "BUSDBL_000444'"    1.00  ""    ""    ""    0
 "secdd 70114 70281 '1 ' 1"    "open"    1.000000  ""
 "secdd 70114 70364 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000445"    "BUSDBL_000445'"    1.00  ""    ""    ""    0
 "secdd 70114 70281 '1 ' 1"    "open"    1.000000  ""
 "secdd 70114 70418 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000446"    "BUSDBL_000446'"    1.00  ""    ""    ""    0
 "secdd 70114 70364 '1 ' 1"    "open"    1.000000  ""
 "secdd 70114 70418 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000447"    "BUSDBL_000447'"    1.00  ""    ""    ""    0
 "secdd 70115 70117 '1 ' 1"    "open"    1.000000  ""
 "secdd 70115 70138 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000448"    "BUSDBL_000448'"    1.00  ""    ""    ""    0
 "secdd 70290 70116 '1 ' 1"    "open"    1.000000  ""
 "secdd 70368 70116 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000449"    "BUSDBL_000449'"    1.00  ""    ""    ""    0
 "secdd 70290 70116 '1 ' 1"    "open"    1.000000  ""
 "secdd 70116 70805 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000450"    "BUSDBL_000450'"    1.00  ""    ""    ""    0
 "secdd 70368 70116 '1 ' 1"    "open"    1.000000  ""
 "secdd 70116 70805 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000451"    "BUSDBL_000451'"    1.00  ""    ""    ""    0
 "secdd 70021 70117 '1 ' 1"    "open"    1.000000  ""
 "secdd 70115 70117 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000452"    "BUSDBL_000452'"    1.00  ""    ""    ""    0
 "secdd 70028 70118 '1 ' 1"    "open"    1.000000  ""
 "secdd 70118 70380 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000453"    "BUSDBL_000453'"    1.00  ""    ""    ""    0
 "secdd 70121 70096 '1 ' 1"    "open"    1.000000  ""
 "tran 70121 70122 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000454"    "BUSDBL_000454'"    1.00  ""    ""    ""    0
 "secdd 70121 70096 '1 ' 1"    "open"    1.000000  ""
 "secdd 70121 70123 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000455"    "BUSDBL_000455'"    1.00  ""    ""    ""    0
 "secdd 70121 70096 '1 ' 1"    "open"    1.000000  ""
 "secdd 70121 70352 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000456"    "BUSDBL_000456'"    1.00  ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000  ""
 "secdd 70121 70123 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000457"    "BUSDBL_000457'"    1.00  ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000  ""
 "secdd 70121 70352 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000458"    "BUSDBL_000458'"    1.00  ""    ""    ""    0
 "secdd 70121 70123 '1 ' 1"    "open"    1.000000  ""
 "secdd 70121 70352 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000459"    "BUSDBL_000459'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70094 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000460"    "BUSDBL_000460'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70120 70122 'U2'"    "open"    1.000000  ""
0
"BUSDBL_000461"    "BUSDBL_000461'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70121 70122 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000462"    "BUSDBL_000462'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000463"    "BUSDBL_000463'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000464"    "BUSDBL_000464'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70122 70459 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000465"    "BUSDBL_000465'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000466"    "BUSDBL_000466'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000467"    "BUSDBL_000467'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70856 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000468"    "BUSDBL_000468'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70875 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000469"    "BUSDBL_000469'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70122 70942 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000470"    "BUSDBL_000470'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 700134 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000471"    "BUSDBL_000471'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70122 700139 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000472"    "BUSDBL_000472'"    1.00  ""    ""    ""    0
 "secdd 70061 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 700208 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000473"    "BUSDBL_000473'"    1.00  ""    ""    ""    0
 "secdd 70094 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70120 70122 'U2'"    "open"    1.000000  ""
0
"BUSDBL_000474"    "BUSDBL_000474'"    1.00  ""    ""    ""    0
 "secdd 70094 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70121 70122 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000475"    "BUSDBL_000475'"    1.00  ""    ""    ""    0
 "secdd 70094 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000476"    "BUSDBL_000476'"    1.00  ""    ""    ""    0
 "secdd 70094 70122 '1 ' 1"    "open"    1.000000  ""
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000477"    "BUSDBL_000477'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 70459 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000478"    "BUSDBL_000478'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "tran 70122 70654 'T3'"    "open"    1.000000    ""
0
"BUSDBL_000479"    "BUSDBL_000479'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "tran 70122 70654 'T4'"    "open"    1.000000    ""
0
"BUSDBL_000480"    "BUSDBL_000480'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000481"    "BUSDBL_000481'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000482"    "BUSDBL_000482'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000483"    "BUSDBL_000483'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000484"    "BUSDBL_000484'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000485"    "BUSDBL_000485'"    1.00    ""    ""    ""    0
 "secdd 70094 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000486"    "BUSDBL_000486'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000487"    "BUSDBL_000487'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "tran 70123 70122 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000488"    "BUSDBL_000488'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 70122 70286 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000489"    "BUSDBL_000489'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 70122 70459 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000490"    "BUSDBL_000490'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "tran 70122 70654 'T3'"    "open"    1.000000    ""
0
"BUSDBL_000491"    "BUSDBL_000491'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "tran 70122 70654 'T4'"    "open"    1.000000    ""
0
"BUSDBL_000492"    "BUSDBL_000492'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000493"    "BUSDBL_000493'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000494"    "BUSDBL_000494'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000495"    "BUSDBL_000495'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000496"    "BUSDBL_000496'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000497"    "BUSDBL_000497'"    1.00    ""    ""    ""    0
 "tran 70120 70122 'U2'"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000498"    "BUSDBL_000498'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "tran 70123 70122 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000499"    "BUSDBL_000499'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 70122 70286 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000500"    "BUSDBL_000500'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 70122 70459 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000501"    "BUSDBL_000501'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "tran 70122 70654 'T3'"    "open"    1.000000    ""
0
"BUSDBL_000502"    "BUSDBL_000502'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "tran 70122 70654 'T4'"    "open"    1.000000    ""
0
"BUSDBL_000503"    "BUSDBL_000503'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000504"    "BUSDBL_000504'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000505"    "BUSDBL_000505'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000506"    "BUSDBL_000506'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000507"    "BUSDBL_000507'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000508"    "BUSDBL_000508'"    1.00    ""    ""    ""    0
 "tran 70121 70122 'T1'"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000509"    "BUSDBL_000509'"    1.00    ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000    ""
 "secdd 70122 70286 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000510"    "BUSDBL_000510'"    1.00    ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000    ""
 "secdd 70122 70459 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000511"    "BUSDBL_000511'"    1.00    ""    ""    ""    0
```

```
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000512"    "BUSDBL_000512'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000513"    "BUSDBL_000513'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000514"    "BUSDBL_000514'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000515"    "BUSDBL_000515'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000516"    "BUSDBL_000516'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000517"    "BUSDBL_000517'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000518"    "BUSDBL_000518'"    1.00  ""    ""    ""    0
 "tran 70123 70122 'T2'"    "open"    1.000000  ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000519"    "BUSDBL_000519'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000520"    "BUSDBL_000520'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000521"    "BUSDBL_000521'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000522"    "BUSDBL_000522'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000523"    "BUSDBL_000523'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000524"    "BUSDBL_000524'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000525"    "BUSDBL_000525'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000526"    "BUSDBL_000526'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000527"    "BUSDBL_000527'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 '  1"    "open"    1.000000  ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000528"    "BUSDBL_000528'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
```

```
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000529"    "BUSDBL_000529'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000530"    "BUSDBL_000530'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000531"    "BUSDBL_000531'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000532"    "BUSDBL_000532'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000533"    "BUSDBL_000533'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000534"    "BUSDBL_000534'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000535"    "BUSDBL_000535'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000536"    "BUSDBL_000536'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000537"    "BUSDBL_000537'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000538"    "BUSDBL_000538'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000539"    "BUSDBL_000539'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000540"    "BUSDBL_000540'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000541"    "BUSDBL_000541'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000542"    "BUSDBL_000542'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T3'"    "open"    1.000000  ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000543"    "BUSDBL_000543'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
 "secdd 70856 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000544"    "BUSDBL_000544'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000545"    "BUSDBL_000545'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000546"    "BUSDBL_000546'"    1.00    ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000547"    "BUSDBL_000547'"    1.00    ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000548"    "BUSDBL_000548'"    1.00    ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000549"    "BUSDBL_000549'"    1.00    ""    ""    ""    0
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000550"    "BUSDBL_000550'"    1.00    ""    ""    ""    0
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000551"    "BUSDBL_000551'"    1.00    ""    ""    ""    0
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000552"    "BUSDBL_000552'"    1.00    ""    ""    ""    0
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000553"    "BUSDBL_000553'"    1.00    ""    ""    ""    0
 "secdd 70856 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000554"    "BUSDBL_000554'"    1.00    ""    ""    ""    0
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000555"    "BUSDBL_000555'"    1.00    ""    ""    ""    0
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000556"    "BUSDBL_000556'"    1.00    ""    ""    ""    0
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000557"    "BUSDBL_000557'"    1.00    ""    ""    ""    0
 "secdd 70875 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000558"    "BUSDBL_000558'"    1.00    ""    ""    ""    0
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000559"    "BUSDBL_000559'"    1.00    ""    ""    ""    0
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000560"    "BUSDBL_000560'"    1.00    ""    ""    ""    0
 "secdd 70122 70942 '1 '  1"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000561"    "BUSDBL_000561'"    1.00    ""    ""    ""    0
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000562"    "BUSDBL_000562'"    1.00    ""    ""    ""    0
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
 "secdd 700208 70122 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000563"  "BUSDBL_000563'"  1.00  ""  ""  ""  0
 "secdd 70122 700139 '1 '  1"  "open"  1.000000  ""
 "secdd 700208 70122 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000564"  "BUSDBL_000564'"  1.00  ""  ""  ""  0
 "secdd 70098 70123 '1 '  1"  "open"  1.000000  ""
 "secdd 70121 70123 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000565"  "BUSDBL_000565'"  1.00  ""  ""  ""  0
 "secdd 70098 70123 '1 '  1"  "open"  1.000000  ""
 "tran 70123 70122 'T2'"  "open"  1.000000  ""
0
"BUSDBL_000566"  "BUSDBL_000566'"  1.00  ""  ""  ""  0
 "secdd 70098 70123 '1 '  1"  "open"  1.000000  ""
 "secdd 70123 70352 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_000567"  "BUSDBL_000567'"  1.00  ""  ""  ""  0
 "secdd 70121 70123 '1 '  1"  "open"  1.000000  ""
 "tran 70123 70122 'T2'"  "open"  1.000000  ""
0
"BUSDBL_000568"  "BUSDBL_000568'"  1.00  ""  ""  ""  0
 "secdd 70121 70123 '1 '  1"  "open"  1.000000  ""
 "secdd 70123 70352 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_000569"  "BUSDBL_000569'"  1.00  ""  ""  ""  0
 "tran 70123 70122 'T2'"  "open"  1.000000  ""
 "secdd 70123 70352 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_000570"  "BUSDBL_000570'"  1.00  ""  ""  ""  0
 "secdd 70124 70429 '1 '  1"  "open"  1.000000  ""
 "secdd 70124 71507 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000571"  "BUSDBL_000571'"  1.00  ""  ""  ""  0
 "secdd 70124 70429 '1 '  1"  "open"  1.000000  ""
 "secdd 70124 71516 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000572"  "BUSDBL_000572'"  1.00  ""  ""  ""  0
 "secdd 70124 71507 '1 '  1"  "open"  1.000000  ""
 "secdd 70124 71516 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000573"  "BUSDBL_000573'"  1.00  ""  ""  ""  0
 "secdd 70395 70125 '1 '  1"  "open"  1.000000  ""
 "secdd 70125 70521 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000574"  "BUSDBL_000574'"  1.00  ""  ""  ""  0
 "secdd 70395 70125 '1 '  1"  "open"  1.000000  ""
 "tran 70396 70125 71991 'T2'"  "open"  1.000000  ""
0
"BUSDBL_000575"  "BUSDBL_000575'"  1.00  ""  ""  ""  0
 "tran 70396 70125 71991 'T2'"  "open"  1.000000  ""
 "secdd 70125 70521 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000576"  "BUSDBL_000576'"  1.00  ""  ""  ""  0
 "secdd 70110 70126 '1 '  1"  "open"  1.000000  ""
 "secdd 70126 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000577"  "BUSDBL_000577'"  1.00  ""  ""  ""  0
 "secdd 70127 70191 '1 '  1"  "open"  1.000000  ""
 "secdd 70127 70194 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000578"  "BUSDBL_000578'"  1.00  ""  ""  ""  0
 "tran 70128 70134 '1 '"  "open"  1.000000  ""
 "tran 70136 70134 'T4'"  "open"  1.000000  ""
0
"BUSDBL_000579"  "BUSDBL_000579'"  1.00  ""  ""  ""  0
 "tran 70128 70134 '1 '"  "open"  1.000000  ""
 "tran 70136 70134 'T5'"  "open"  1.000000  ""
0
"BUSDBL_000580"  "BUSDBL_000580'"  1.00  ""  ""  ""  0
```

```
 "tran 70136 70134 'T4'"    "open"    1.000000  ""
 "tran 70136 70134 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000581"    "BUSDBL_000581'"    1.00  ""    ""    ""    0
 "tran 70136 70134 'T4'"    "open"    1.000000  ""
 "secdd 70136 70185 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000582"    "BUSDBL_000582'"    1.00  ""    ""    ""    0
 "tran 70136 70134 'T4'"    "open"    1.000000  ""
 "secdd 70136 70333 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000583"    "BUSDBL_000583'"    1.00  ""    ""    ""    0
 "tran 70136 70134 'T4'"    "open"    1.000000  ""
 "secdd 70136 70473 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000584"    "BUSDBL_000584'"    1.00  ""    ""    ""    0
 "tran 70136 70134 'T5'"    "open"    1.000000  ""
 "secdd 70136 70185 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000585"    "BUSDBL_000585'"    1.00  ""    ""    ""    0
 "tran 70136 70134 'T5'"    "open"    1.000000  ""
 "secdd 70136 70333 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000586"    "BUSDBL_000586'"    1.00  ""    ""    ""    0
 "tran 70136 70134 'T5'"    "open"    1.000000  ""
 "secdd 70136 70473 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000587"    "BUSDBL_000587'"    1.00  ""    ""    ""    0
 "secdd 70136 70185 '1 '  1"    "open"    1.000000  ""
 "secdd 70136 70333 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000588"    "BUSDBL_000588'"    1.00  ""    ""    ""    0
 "secdd 70136 70185 '1 '  1"    "open"    1.000000  ""
 "secdd 70136 70473 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000589"    "BUSDBL_000589'"    1.00  ""    ""    ""    0
 "secdd 70136 70333 '1 '  1"    "open"    1.000000  ""
 "secdd 70136 70473 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000590"    "BUSDBL_000590'"    1.00  ""    ""    ""    0
 "secdd 70115 70138 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000591"    "BUSDBL_000591'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000592"    "BUSDBL_000592'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000593"    "BUSDBL_000593'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000594"    "BUSDBL_000594'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000595"    "BUSDBL_000595'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70527 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000596"    "BUSDBL_000596'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000597"    "BUSDBL_000597'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
```

```
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000598"    "BUSDBL_000598'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000599"    "BUSDBL_000599'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000600"    "BUSDBL_000600'"    1.00  ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000601"    "BUSDBL_000601'"    1.00  ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "secdd 70139 70278 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000602"    "BUSDBL_000602'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000603"    "BUSDBL_000603'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000604"    "BUSDBL_000604'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000605"    "BUSDBL_000605'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70527 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000606"    "BUSDBL_000606'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000607"    "BUSDBL_000607'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000608"    "BUSDBL_000608'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000609"    "BUSDBL_000609'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000610"    "BUSDBL_000610'"    1.00  ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000611"    "BUSDBL_000611'"    1.00  ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "secdd 70139 70284 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000612"    "BUSDBL_000612'"    1.00  ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000613"    "BUSDBL_000613'"    1.00  ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000614"    "BUSDBL_000614'"    1.00  ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "secdd 70139 70527 '1 '  1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000615"    "BUSDBL_000615'"    1.00    ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000616"    "BUSDBL_000616'"    1.00    ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000617"    "BUSDBL_000617'"    1.00    ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000618"    "BUSDBL_000618'"    1.00    ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000619"    "BUSDBL_000619'"    1.00    ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000620"    "BUSDBL_000620'"    1.00    ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "secdd 70139 70323 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000621"    "BUSDBL_000621'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000622"    "BUSDBL_000622'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70527 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000623"    "BUSDBL_000623'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000624"    "BUSDBL_000624'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000625"    "BUSDBL_000625'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000626"    "BUSDBL_000626'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000627"    "BUSDBL_000627'"    1.00    ""    ""    ""    0
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000628"    "BUSDBL_000628'"    1.00    ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "secdd 70139 70331 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000629"    "BUSDBL_000629'"    1.00    ""    ""    ""    0
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 70527 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000630"    "BUSDBL_000630'"    1.00    ""    ""    ""    0
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000631"    "BUSDBL_000631'"    1.00    ""    ""    ""    0
 "secdd 70139 70464 '1 '  1"    "open"    1.000000  ""
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
0
```

```
"BUSDBL_000632"  "BUSDBL_000632'"  1.00  ""  ""  ""  0
 "secdd 70139 70464 '1 '  1"  "open"  1.000000  ""
 "tran 70139 70601 'T5'"  "open"  1.000000  ""
0
"BUSDBL_000633"  "BUSDBL_000633'"  1.00  ""  ""  ""  0
 "secdd 70139 70464 '1 '  1"  "open"  1.000000  ""
 "secdd 70139 70623 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000634"  "BUSDBL_000634'"  1.00  ""  ""  ""  0
 "secdd 70139 70464 '1 '  1"  "open"  1.000000  ""
 "secdd 70139 73477 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000635"  "BUSDBL_000635'"  1.00  ""  ""  ""  0
 "tran 70139 70138 71984 'T1'"  "open"  1.000000  ""
 "secdd 70139 70464 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000636"  "BUSDBL_000636'"  1.00  ""  ""  ""  0
 "secdd 70139 70527 '1 '  1"  "open"  1.000000  ""
 "tran 70139 70601 'T3'"  "open"  1.000000  ""
0
"BUSDBL_000637"  "BUSDBL_000637'"  1.00  ""  ""  ""  0
 "secdd 70139 70527 '1 '  1"  "open"  1.000000  ""
 "tran 70139 70601 'T4'"  "open"  1.000000  ""
0
"BUSDBL_000638"  "BUSDBL_000638'"  1.00  ""  ""  ""  0
 "secdd 70139 70527 '1 '  1"  "open"  1.000000  ""
 "tran 70139 70601 'T5'"  "open"  1.000000  ""
0
"BUSDBL_000639"  "BUSDBL_000639'"  1.00  ""  ""  ""  0
 "secdd 70139 70527 '1 '  1"  "open"  1.000000  ""
 "secdd 70139 70623 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000640"  "BUSDBL_000640'"  1.00  ""  ""  ""  0
 "secdd 70139 70527 '1 '  1"  "open"  1.000000  ""
 "secdd 70139 73477 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000641"  "BUSDBL_000641'"  1.00  ""  ""  ""  0
 "tran 70139 70138 71984 'T1'"  "open"  1.000000  ""
 "secdd 70139 70527 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000642"  "BUSDBL_000642'"  1.00  ""  ""  ""  0
 "tran 70139 70601 'T3'"  "open"  1.000000  ""
 "tran 70139 70601 'T4'"  "open"  1.000000  ""
0
"BUSDBL_000643"  "BUSDBL_000643'"  1.00  ""  ""  ""  0
 "tran 70139 70601 'T3'"  "open"  1.000000  ""
 "tran 70139 70601 'T5'"  "open"  1.000000  ""
0
"BUSDBL_000644"  "BUSDBL_000644'"  1.00  ""  ""  ""  0
 "tran 70139 70601 'T3'"  "open"  1.000000  ""
 "secdd 70139 70623 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000645"  "BUSDBL_000645'"  1.00  ""  ""  ""  0
 "tran 70139 70601 'T3'"  "open"  1.000000  ""
 "secdd 70139 73477 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000646"  "BUSDBL_000646'"  1.00  ""  ""  ""  0
 "tran 70139 70138 71984 'T1'"  "open"  1.000000  ""
 "tran 70139 70601 'T3'"  "open"  1.000000  ""
0
"BUSDBL_000647"  "BUSDBL_000647'"  1.00  ""  ""  ""  0
 "tran 70139 70601 'T4'"  "open"  1.000000  ""
 "tran 70139 70601 'T5'"  "open"  1.000000  ""
0
"BUSDBL_000648"  "BUSDBL_000648'"  1.00  ""  ""  ""  0
 "tran 70139 70601 'T4'"  "open"  1.000000  ""
 "secdd 70139 70623 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000649"  "BUSDBL_000649'"  1.00  ""  ""  ""  0
```

```
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000650"    "BUSDBL_000650'"    1.00  ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000651"    "BUSDBL_000651'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000652"    "BUSDBL_000652'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000653"    "BUSDBL_000653'"    1.00  ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000654"    "BUSDBL_000654'"    1.00  ""    ""    ""    0
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000655"    "BUSDBL_000655'"    1.00  ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "secdd 70139 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000656"    "BUSDBL_000656'"    1.00  ""    ""    ""    0
 "tran 70139 70138 71984 'T1'"    "open"    1.000000  ""
 "secdd 70139 73477 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000657"    "BUSDBL_000657'"    1.00  ""    ""    ""    0
 "secdd 70109 70140 '1 '  1"    "open"    1.000000  ""
 "secdd 70140 70981 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000658"    "BUSDBL_000658'"    1.00  ""    ""    ""    0
 "secdd 70038 70141 '1 '  1"    "open"    1.000000  ""
 "secdd 70141 70149 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000659"    "BUSDBL_000659'"    1.00  ""    ""    ""    0
 "secdd 70142 70400 '1 '  1"    "open"    1.000000  ""
 "secdd 70142 70484 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000660"    "BUSDBL_000660'"    1.00  ""    ""    ""    0
 "secdd 70148 70144 '1 '  1"    "open"    1.000000  ""
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000661"    "BUSDBL_000661'"    1.00  ""    ""    ""    0
 "secdd 70148 70144 '1 '  1"    "open"    1.000000  ""
 "secdd 70144 70173 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000662"    "BUSDBL_000662'"    1.00  ""    ""    ""    0
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
 "secdd 70144 70173 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000663"    "BUSDBL_000663'"    1.00  ""    ""    ""    0
 "secdd 70039 70148 '1 '  1"    "open"    1.000000  ""
 "secdd 70087 70148 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000664"    "BUSDBL_000664'"    1.00  ""    ""    ""    0
 "secdd 70039 70148 '1 '  1"    "open"    1.000000  ""
 "secdd 70148 70144 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000665"    "BUSDBL_000665'"    1.00  ""    ""    ""    0
 "secdd 70039 70148 '1 '  1"    "open"    1.000000  ""
 "secdd 70148 70208 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000666"    "BUSDBL_000666'"    1.00  ""    ""    ""    0
 "secdd 70087 70148 '1 '  1"    "open"    1.000000  ""
```

```
 "secdd 70148 70144 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000667"    "BUSDBL_000667'"    1.00  ""    ""    ""    0
 "secdd 70087 70148 '1 ' 1"    "open"    1.000000  ""
 "secdd 70148 70208 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000668"    "BUSDBL_000668'"    1.00  ""    ""    ""    0
 "secdd 70148 70144 '1 ' 1"    "open"    1.000000  ""
 "secdd 70148 70208 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000669"    "BUSDBL_000669'"    1.00  ""    ""    ""    0
 "secdd 70038 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70141 70149 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000670"    "BUSDBL_000670'"    1.00  ""    ""    ""    0
 "secdd 70038 70149 '1 ' 1"    "open"    1.000000  ""
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000671"    "BUSDBL_000671'"    1.00  ""    ""    ""    0
 "secdd 70038 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70163 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000672"    "BUSDBL_000672'"    1.00  ""    ""    ""    0
 "secdd 70038 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000673"    "BUSDBL_000673'"    1.00  ""    ""    ""    0
 "secdd 70038 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70480 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000674"    "BUSDBL_000674'"    1.00  ""    ""    ""    0
 "secdd 70141 70149 '1 ' 1"    "open"    1.000000  ""
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000675"    "BUSDBL_000675'"    1.00  ""    ""    ""    0
 "secdd 70141 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70163 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000676"    "BUSDBL_000676'"    1.00  ""    ""    ""    0
 "secdd 70141 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000677"    "BUSDBL_000677'"    1.00  ""    ""    ""    0
 "secdd 70141 70149 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70480 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000678"    "BUSDBL_000678'"    1.00  ""    ""    ""    0
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
 "secdd 70149 70163 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000679"    "BUSDBL_000679'"    1.00  ""    ""    ""    0
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000680"    "BUSDBL_000680'"    1.00  ""    ""    ""    0
 "tran 70144 70149 'T2'"    "open"    1.000000  ""
 "secdd 70149 70480 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000681"    "BUSDBL_000681'"    1.00  ""    ""    ""    0
 "secdd 70149 70163 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000682"    "BUSDBL_000682'"    1.00  ""    ""    ""    0
 "secdd 70149 70163 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70480 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000683"    "BUSDBL_000683'"    1.00  ""    ""    ""    0
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
 "secdd 70149 70480 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000684"    "BUSDBL_000684'"    1.00    ""    ""    ""    0
 "secdd 70150 70151 '1 '  1"    "open"    1.000000    ""
 "secdd 70151 70335 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000685"    "BUSDBL_000685'"    1.00    ""    ""    ""    0
 "secdd 70324 70152 '1 '  1"    "open"    1.000000    ""
 "secdd 70324 70152 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000686"    "BUSDBL_000686'"    1.00    ""    ""    ""    0
 "secdd 70040 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000687"    "BUSDBL_000687'"    1.00    ""    ""    ""    0
 "secdd 70040 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70154 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000688"    "BUSDBL_000688'"    1.00    ""    ""    ""    0
 "secdd 70110 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70154 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000689"    "BUSDBL_000689'"    1.00    ""    ""    ""    0
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
 "secdd 70154 70153 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000690"    "BUSDBL_000690'"    1.00    ""    ""    ""    0
 "secdd 70110 70154 '1 '  1"    "open"    1.000000    ""
 "secdd 70154 70216 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000691"    "BUSDBL_000691'"    1.00    ""    ""    ""    0
 "secdd 70154 70153 '1 '  1"    "open"    1.000000    ""
 "secdd 70154 70216 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000692"    "BUSDBL_000692'"    1.00    ""    ""    ""    0
 "tran 70155 70156 'T2'"    "open"    1.000000    ""
 "secdd 70155 70421 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000693"    "BUSDBL_000693'"    1.00    ""    ""    ""    0
 "secdd 70057 70156 '1 '  1"    "open"    1.000000    ""
 "secdd 70064 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000694"    "BUSDBL_000694'"    1.00    ""    ""    ""    0
 "secdd 70057 70156 '1 '  1"    "open"    1.000000    ""
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000695"    "BUSDBL_000695'"    1.00    ""    ""    ""    0
 "secdd 70057 70156 '1 '  1"    "open"    1.000000    ""
 "tran 70155 70156 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000696"    "BUSDBL_000696'"    1.00    ""    ""    ""    0
 "secdd 70064 70156 '1 '  1"    "open"    1.000000    ""
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000697"    "BUSDBL_000697'"    1.00    ""    ""    ""    0
 "secdd 70064 70156 '1 '  1"    "open"    1.000000    ""
 "tran 70155 70156 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000698"    "BUSDBL_000698'"    1.00    ""    ""    ""    0
 "secdd 70072 70156 '1 '  1"    "open"    1.000000    ""
 "tran 70155 70156 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000699"    "BUSDBL_000699'"    1.00    ""    ""    ""    0
 "secdd 70157 70419 '1 '  1"    "open"    1.000000    ""
 "secdd 70157 70476 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000700"    "BUSDBL_000700'"    1.00    ""    ""    ""    0
 "secdd 70019 70159 '1 '  1"    "open"    1.000000    ""
 "secdd 70022 70159 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000701"  "BUSDBL_000701'"  1.00  ""  ""  ""  0
 "secdd 70019 70159 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 70159 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000702"  "BUSDBL_000702'"  1.00  ""  ""  ""  0
 "secdd 70022 70159 '1 '  1"  "open"  1.000000  ""
 "secdd 70060 70159 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000703"  "BUSDBL_000703'"  1.00  ""  ""  ""  0
 "secdd 70160 70176 '1 '  1"  "open"  1.000000  ""
 "secdd 70160 70293 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000704"  "BUSDBL_000704'"  1.00  ""  ""  ""  0
 "secdd 70162 70171 '1 '  1"  "open"  1.000000  ""
 "secdd 70162 70537 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000705"  "BUSDBL_000705'"  1.00  ""  ""  ""  0
 "secdd 70162 70171 '1 '  1"  "open"  1.000000  ""
 "secdd 70162 70538 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000706"  "BUSDBL_000706'"  1.00  ""  ""  ""  0
 "secdd 70162 70537 '1 '  1"  "open"  1.000000  ""
 "secdd 70162 70538 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000707"  "BUSDBL_000707'"  1.00  ""  ""  ""  0
 "secdd 70149 70163 '1 '  1"  "open"  1.000000  ""
 "secdd 70163 70291 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000708"  "BUSDBL_000708'"  1.00  ""  ""  ""  0
 "secdd 70164 70170 '1 '  1"  "open"  1.000000  ""
 "secdd 70164 70295 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000709"  "BUSDBL_000709'"  1.00  ""  ""  ""  0
 "secdd 70164 70170 '1 '  1"  "open"  1.000000  ""
 "secdd 70164 70346 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000710"  "BUSDBL_000710'"  1.00  ""  ""  ""  0
 "secdd 70164 70170 '1 '  1"  "open"  1.000000  ""
 "secdd 70164 70444 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000711"  "BUSDBL_000711'"  1.00  ""  ""  ""  0
 "secdd 70164 70295 '1 '  1"  "open"  1.000000  ""
 "secdd 70164 70346 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000712"  "BUSDBL_000712'"  1.00  ""  ""  ""  0
 "secdd 70164 70295 '1 '  1"  "open"  1.000000  ""
 "secdd 70164 70444 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000713"  "BUSDBL_000713'"  1.00  ""  ""  ""  0
 "secdd 70164 70346 '1 '  1"  "open"  1.000000  ""
 "secdd 70164 70444 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000714"  "BUSDBL_000714'"  1.00  ""  ""  ""  0
 "secdd 70165 70168 '1 '  1"  "open"  1.000000  ""
 "secdd 70165 70263 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000715"  "BUSDBL_000715'"  1.00  ""  ""  ""  0
 "secdd 70166 70167 '1 '  1"  "open"  1.000000  ""
 "secdd 70166 70384 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000716"  "BUSDBL_000716'"  1.00  ""  ""  ""  0
 "secdd 70166 70167 '1 '  1"  "open"  1.000000  ""
 "secdd 70167 70168 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000717"  "BUSDBL_000717'"  1.00  ""  ""  ""  0
 "secdd 70037 70168 '1 '  1"  "open"  1.000000  ""
 "secdd 70165 70168 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000718"  "BUSDBL_000718'"  1.00  ""  ""  ""  0
```

```
 "secdd 70037 70168 '1 ' 1"    "open"    1.000000  ""
 "secdd 70167 70168 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000719"    "BUSDBL_000719'"    1.00  ""    ""    ""    0
 "secdd 70165 70168 '1 ' 1"    "open"    1.000000  ""
 "secdd 70167 70168 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000720"    "BUSDBL_000720'"    1.00  ""    ""    ""    0
 "secdd 70164 70170 '1 ' 1"    "open"    1.000000  ""
 "secdd 70300 70170 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000721"    "BUSDBL_000721'"    1.00  ""    ""    ""    0
 "secdd 70162 70171 '1 ' 1"    "open"    1.000000  ""
 "secdd 70171 70395 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000722"    "BUSDBL_000722'"    1.00  ""    ""    ""    0
 "secdd 70162 70171 '1 ' 1"    "open"    1.000000  ""
 "secdd 70171 70395 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000723"    "BUSDBL_000723'"    1.00  ""    ""    ""    0
 "secdd 70171 70395 '1 ' 1"    "open"    1.000000  ""
 "secdd 70171 70395 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000724"    "BUSDBL_000724'"    1.00  ""    ""    ""    0
 "secdd 70144 70173 '1 ' 1"    "open"    1.000000  ""
 "secdd 70172 70173 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000725"    "BUSDBL_000725'"    1.00  ""    ""    ""    0
 "secdd 70144 70173 '1 ' 1"    "open"    1.000000  ""
 "secdd 70173 70342 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000726"    "BUSDBL_000726'"    1.00  ""    ""    ""    0
 "secdd 70172 70173 '1 ' 1"    "open"    1.000000  ""
 "secdd 70173 70342 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000727"    "BUSDBL_000727'"    1.00  ""    ""    ""    0
 "secdd 70065 70174 '1 ' 1"    "open"    1.000000  ""
 "secdd 70110 70174 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000728"    "BUSDBL_000728'"    1.00  ""    ""    ""    0
 "secdd 70110 70175 '2 ' 1"    "open"    1.000000  ""
 "secdd 70175 70382 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000729"    "BUSDBL_000729'"    1.00  ""    ""    ""    0
 "secdd 70160 70176 '1 ' 1"    "open"    1.000000  ""
 "secdd 70176 70220 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000730"    "BUSDBL_000730'"    1.00  ""    ""    ""    0
 "secdd 70177 70074 '1 ' 1"    "open"    1.000000  ""
 "secdd 70276 70177 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000731"    "BUSDBL_000731'"    1.00  ""    ""    ""    0
 "secdd 70178 70275 '1 ' 1"    "open"    1.000000  ""
 "secdd 70178 70372 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000732"    "BUSDBL_000732'"    1.00  ""    ""    ""    0
 "secdd 70181 70332 '1 ' 1"    "open"    1.000000  ""
 "secdd 70181 70353 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000733"    "BUSDBL_000733'"    1.00  ""    ""    ""    0
 "secdd 70073 70182 '1 ' 1"    "open"    1.000000  ""
 "secdd 70087 70182 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000734"    "BUSDBL_000734'"    1.00  ""    ""    ""    0
 "secdd 70073 70182 '1 ' 1"    "open"    1.000000  ""
 "secdd 70215 70182 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000735"    "BUSDBL_000735'"    1.00  ""    ""    ""    0
 "secdd 70087 70182 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70215 70182 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000736"    "BUSDBL_000736'"    1.00  ""    ""    ""    0
 "tran 70180 70183 'U1'"    "open"    1.000000  ""
 "secdd 70183 70436 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000737"    "BUSDBL_000737'"    1.00  ""    ""    ""    0
 "secdd 70136 70185 '1 ' 1"    "open"    1.000000  ""
 "secdd 70185 70271 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000738"    "BUSDBL_000738'"    1.00  ""    ""    ""    0
 "secdd 70024 70186 '1 ' 1"    "open"    1.000000  ""
 "secdd 70186 70187 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000739"    "BUSDBL_000739'"    1.00  ""    ""    ""    0
 "secdd 70024 70186 '1 ' 1"    "open"    1.000000  ""
 "secdd 70186 70511 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000740"    "BUSDBL_000740'"    1.00  ""    ""    ""    0
 "secdd 70186 70187 '1 ' 1"    "open"    1.000000  ""
 "secdd 70186 70511 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000741"    "BUSDBL_000741'"    1.00  ""    ""    ""    0
 "secdd 70189 70038 '1 ' 1"    "open"    1.000000  ""
 "secdd 70212 70189 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000742"    "BUSDBL_000742'"    1.00  ""    ""    ""    0
 "secdd 70189 70038 '1 ' 1"    "open"    1.000000  ""
 "secdd 70189 70323 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000743"    "BUSDBL_000743'"    1.00  ""    ""    ""    0
 "secdd 70189 70038 '1 ' 1"    "open"    1.000000  ""
 "secdd 70189 70481 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000744"    "BUSDBL_000744'"    1.00  ""    ""    ""    0
 "secdd 70212 70189 '1 ' 1"    "open"    1.000000  ""
 "secdd 70189 70323 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000745"    "BUSDBL_000745'"    1.00  ""    ""    ""    0
 "secdd 70212 70189 '1 ' 1"    "open"    1.000000  ""
 "secdd 70189 70481 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000746"    "BUSDBL_000746'"    1.00  ""    ""    ""    0
 "secdd 70189 70323 '1 ' 1"    "open"    1.000000  ""
 "secdd 70189 70481 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000747"    "BUSDBL_000747'"    1.00  ""    ""    ""    0
 "secdd 70090 70190 '1 ' 1"    "open"    1.000000  ""
 "secdd 70190 70234 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000748"    "BUSDBL_000748'"    1.00  ""    ""    ""    0
 "secdd 70191 70090 '1 ' 1"    "open"    1.000000  ""
 "secdd 70127 70191 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000749"    "BUSDBL_000749'"    1.00  ""    ""    ""    0
 "secdd 70191 70090 '1 ' 1"    "open"    1.000000  ""
 "tran 70188 70191 'U1'"    "open"    1.000000  ""
0
"BUSDBL_000750"    "BUSDBL_000750'"    1.00  ""    ""    ""    0
 "secdd 70191 70090 '1 ' 1"    "open"    1.000000  ""
 "secdd 70191 70450 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000751"    "BUSDBL_000751'"    1.00  ""    ""    ""    0
 "secdd 70191 70090 '1 ' 1"    "open"    1.000000  ""
 "tran 700001 70191 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000752"    "BUSDBL_000752'"    1.00  ""    ""    ""    0
 "secdd 70127 70191 '1 ' 1"    "open"    1.000000  ""
 "tran 70188 70191 'U1'"    "open"    1.000000  ""
```

```
0
"BUSDBL_000753"    "BUSDBL_000753'"    1.00    ""    ""    ""    0
 "secdd 70127 70191 '1 '  1"    "open"    1.000000    ""
 "secdd 70191 70450 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000754"    "BUSDBL_000754'"    1.00    ""    ""    ""    0
 "secdd 70127 70191 '1 '  1"    "open"    1.000000    ""
 "tran 700001 70191 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000755"    "BUSDBL_000755'"    1.00    ""    ""    ""    0
 "tran 70188 70191 'U1'"    "open"    1.000000    ""
 "secdd 70191 70450 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000756"    "BUSDBL_000756'"    1.00    ""    ""    ""    0
 "tran 70188 70191 'U1'"    "open"    1.000000    ""
 "tran 700001 70191 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000757"    "BUSDBL_000757'"    1.00    ""    ""    ""    0
 "secdd 70191 70450 '1 '  1"    "open"    1.000000    ""
 "tran 700001 70191 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000758"    "BUSDBL_000758'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "tran 70090 70192 'T3'"    "open"    1.000000    ""
0
"BUSDBL_000759"    "BUSDBL_000759'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "secdd 70192 70311 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000760"    "BUSDBL_000760'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "secdd 70192 70410 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000761"    "BUSDBL_000761'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "secdd 70192 70410 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000762"    "BUSDBL_000762'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "secdd 70192 70488 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000763"    "BUSDBL_000763'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "secdd 70192 70529 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000764"    "BUSDBL_000764'"    1.00    ""    ""    ""    0
 "secdd 70048 70192 '1 '  1"    "open"    1.000000    ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000765"    "BUSDBL_000765'"    1.00    ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000    ""
 "secdd 70192 70311 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000766"    "BUSDBL_000766'"    1.00    ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000    ""
 "secdd 70192 70410 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000767"    "BUSDBL_000767'"    1.00    ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000    ""
 "secdd 70192 70410 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000768"    "BUSDBL_000768'"    1.00    ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000    ""
 "secdd 70192 70488 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000769"    "BUSDBL_000769'"    1.00    ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000    ""
 "secdd 70192 70529 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000770"    "BUSDBL_000770'"    1.00  ""    ""    ""    0
 "tran 70090 70192 'T3'"    "open"    1.000000  ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000771"    "BUSDBL_000771'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000772"    "BUSDBL_000772'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000773"    "BUSDBL_000773'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000774"    "BUSDBL_000774'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70529 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000775"    "BUSDBL_000775'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000776"    "BUSDBL_000776'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000777"    "BUSDBL_000777'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000778"    "BUSDBL_000778'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70529 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000779"    "BUSDBL_000779'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000780"    "BUSDBL_000780'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000781"    "BUSDBL_000781'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "secdd 70192 70529 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000782"    "BUSDBL_000782'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000783"    "BUSDBL_000783'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70529 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000784"    "BUSDBL_000784'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000785"    "BUSDBL_000785'"    1.00  ""    ""    ""    0
 "secdd 70192 70529 '1 '  1"    "open"    1.000000  ""
 "secdd 70192 70605 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000786"    "BUSDBL_000786'"    1.00  ""    ""    ""    0
 "secdd 70193 70449 '1 '  1"    "open"    1.000000  ""
 "secdd 70193 73412 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000787"    "BUSDBL_000787'"    1.00  ""    ""    ""    0
```

```
 "secdd 70127 70194 '1 ' 1"    "open"    1.000000  ""
 "secdd 70194 70604 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000788"    "BUSDBL_000788'"    1.00  ""    ""    ""    0
 "secdd 70071 70197 '1 ' 1"    "open"    1.000000  ""
 "tran 70196 70197 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000789"    "BUSDBL_000789'"    1.00  ""    ""    ""    0
 "secdd 70071 70197 '1 ' 1"    "open"    1.000000  ""
 "secdd 70197 70218 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000790"    "BUSDBL_000790'"    1.00  ""    ""    ""    0
 "tran 70196 70197 'T1'"    "open"    1.000000  ""
 "secdd 70197 70218 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000791"    "BUSDBL_000791'"    1.00  ""    ""    ""    0
 "secdd 70198 70202 '1 ' 1"    "open"    1.000000  ""
 "secdd 70198 70219 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000792"    "BUSDBL_000792'"    1.00  ""    ""    ""    0
 "secdd 70199 70364 '1 ' 1"    "open"    1.000000  ""
 "secdd 70199 79092 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000793"    "BUSDBL_000793'"    1.00  ""    ""    ""    0
 "secdd 70107 70200 '1 ' 1"    "open"    1.000000  ""
 "secdd 70200 70461 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000794"    "BUSDBL_000794'"    1.00  ""    ""    ""    0
 "secdd 70201 70288 '1 ' 1"    "open"    1.000000  ""
 "secdd 70201 70363 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000795"    "BUSDBL_000795'"    1.00  ""    ""    ""    0
 "secdd 70201 70288 '1 ' 1"    "open"    1.000000  ""
 "secdd 70201 70386 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000796"    "BUSDBL_000796'"    1.00  ""    ""    ""    0
 "secdd 70201 70363 '1 ' 1"    "open"    1.000000  ""
 "secdd 70201 70386 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000797"    "BUSDBL_000797'"    1.00  ""    ""    ""    0
 "secdd 70198 70202 '1 ' 1"    "open"    1.000000  ""
 "secdd 70202 70209 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000798"    "BUSDBL_000798'"    1.00  ""    ""    ""    0
 "secdd 70198 70202 '1 ' 1"    "open"    1.000000  ""
 "secdd 70202 70240 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000799"    "BUSDBL_000799'"    1.00  ""    ""    ""    0
 "secdd 70202 70209 '1 ' 1"    "open"    1.000000  ""
 "secdd 70202 70240 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000800"    "BUSDBL_000800'"    1.00  ""    ""    ""    0
 "secdd 70203 70204 '1 ' 1"    "open"    1.000000  ""
 "secdd 70203 70225 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000801"    "BUSDBL_000801'"    1.00  ""    ""    ""    0
 "secdd 70203 70204 '1 ' 1"    "open"    1.000000  ""
 "secdd 70203 70473 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000802"    "BUSDBL_000802'"    1.00  ""    ""    ""    0
 "secdd 70203 70225 '1 ' 1"    "open"    1.000000  ""
 "secdd 70203 70473 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000803"    "BUSDBL_000803'"    1.00  ""    ""    ""    0
 "secdd 70113 70205 '1 ' 1"    "open"    1.000000  ""
 "tran 70205 79036 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000804"    "BUSDBL_000804'"    1.00  ""    ""    ""    0
 "secdd 70113 70206 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70206 70233 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000805"    "BUSDBL_000805'"    1.00  ""    ""    ""    0
 "secdd 70045 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70148 70208 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000806"    "BUSDBL_000806'"    1.00  ""    ""    ""    0
 "secdd 70045 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70251 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000807"    "BUSDBL_000807'"    1.00  ""    ""    ""    0
 "secdd 70045 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70252 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000808"    "BUSDBL_000808'"    1.00  ""    ""    ""    0
 "secdd 70045 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70402 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000809"    "BUSDBL_000809'"    1.00  ""    ""    ""    0
 "secdd 70148 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70251 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000810"    "BUSDBL_000810'"    1.00  ""    ""    ""    0
 "secdd 70148 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70252 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000811"    "BUSDBL_000811'"    1.00  ""    ""    ""    0
 "secdd 70148 70208 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70402 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000812"    "BUSDBL_000812'"    1.00  ""    ""    ""    0
 "secdd 70208 70251 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70252 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000813"    "BUSDBL_000813'"    1.00  ""    ""    ""    0
 "secdd 70208 70251 '1 ' 1"    "open"    1.000000  ""
 "secdd 70208 70402 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000814"    "BUSDBL_000814'"    1.00  ""    ""    ""    0
 "secdd 70208 70252 '2 ' 1"    "open"    1.000000  ""
 "secdd 70208 70402 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000815"    "BUSDBL_000815'"    1.00  ""    ""    ""    0
 "secdd 70202 70209 '1 ' 1"    "open"    1.000000  ""
 "secdd 70209 70290 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000816"    "BUSDBL_000816'"    1.00  ""    ""    ""    0
 "secdd 70202 70209 '1 ' 1"    "open"    1.000000  ""
 "secdd 70209 70470 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000817"    "BUSDBL_000817'"    1.00  ""    ""    ""    0
 "secdd 70209 70290 '1 ' 1"    "open"    1.000000  ""
 "secdd 70209 70470 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000818"    "BUSDBL_000818'"    1.00  ""    ""    ""    0
 "secdd 70211 70213 '1 ' 1"    "open"    1.000000  ""
 "secdd 70211 70972 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000819"    "BUSDBL_000819'"    1.00  ""    ""    ""    0
 "secdd 70112 70212 '1 ' 1"    "open"    1.000000  ""
 "secdd 70212 70189 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000820"    "BUSDBL_000820'"    1.00  ""    ""    ""    0
 "secdd 70112 70212 '1 ' 1"    "open"    1.000000  ""
 "secdd 70212 70331 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000821"    "BUSDBL_000821'"    1.00  ""    ""    ""    0
 "secdd 70112 70212 '1 ' 1"    "open"    1.000000  ""
 "secdd 70212 70428 '2 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000822"    "BUSDBL_000822'"    1.00    ""    ""    ""    0
 "secdd 70212 70189 '1 '  1"    "open"    1.000000    ""
 "secdd 70212 70331 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000823"    "BUSDBL_000823'"    1.00    ""    ""    ""    0
 "secdd 70212 70189 '1 '  1"    "open"    1.000000    ""
 "secdd 70212 70428 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000824"    "BUSDBL_000824'"    1.00    ""    ""    ""    0
 "secdd 70212 70331 '2 '  1"    "open"    1.000000    ""
 "secdd 70212 70428 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000825"    "BUSDBL_000825'"    1.00    ""    ""    ""    0
 "secdd 70211 70213 '1 '  1"    "open"    1.000000    ""
 "secdd 70213 70297 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000826"    "BUSDBL_000826'"    1.00    ""    ""    ""    0
 "secdd 70214 70454 '1 '  1"    "open"    1.000000    ""
 "tran 70214 79034 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000827"    "BUSDBL_000827'"    1.00    ""    ""    ""    0
 "secdd 70215 70182 '1 '  1"    "open"    1.000000    ""
 "secdd 70215 70282 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000828"    "BUSDBL_000828'"    1.00    ""    ""    ""    0
 "secdd 70154 70216 '1 '  1"    "open"    1.000000    ""
 "secdd 70216 70538 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000829"    "BUSDBL_000829'"    1.00    ""    ""    ""    0
 "secdd 70040 70217 '1 '  1"    "open"    1.000000    ""
 "secdd 70217 70538 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_000830"    "BUSDBL_000830'"    1.00    ""    ""    ""    0
 "secdd 70197 70218 '1 '  1"    "open"    1.000000    ""
 "secdd 70218 70328 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000831"    "BUSDBL_000831'"    1.00    ""    ""    ""    0
 "secdd 70198 70219 '1 '  1"    "open"    1.000000    ""
 "secdd 70219 70238 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000832"    "BUSDBL_000832'"    1.00    ""    ""    ""    0
 "secdd 70198 70219 '1 '  1"    "open"    1.000000    ""
 "secdd 70450 70219 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000833"    "BUSDBL_000833'"    1.00    ""    ""    ""    0
 "secdd 70219 70238 '1 '  1"    "open"    1.000000    ""
 "secdd 70450 70219 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000834"    "BUSDBL_000834'"    1.00    ""    ""    ""    0
 "secdd 70176 70220 '1 '  1"    "open"    1.000000    ""
 "secdd 70220 70329 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000835"    "BUSDBL_000835'"    1.00    ""    ""    ""    0
 "secdd 70176 70220 '1 '  1"    "open"    1.000000    ""
 "secdd 70220 70370 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000836"    "BUSDBL_000836'"    1.00    ""    ""    ""    0
 "secdd 70220 70329 '1 '  1"    "open"    1.000000    ""
 "secdd 70220 70370 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000837"    "BUSDBL_000837'"    1.00    ""    ""    ""    0
 "secdd 70129 70221 '1 '  1"    "open"    1.000000    ""
 "secdd 70221 70655 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000838"    "BUSDBL_000838'"    1.00    ""    ""    ""    0
 "secdd 70222 70223 '1 '  1"    "open"    1.000000    ""
 "secdd 70223 70404 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_000839"  "BUSDBL_000839'"  1.00  ""  ""  ""  0
 "secdd 70222 70223 '1 '  1"  "open"  1.000000  ""
 "secdd 70223 70453 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000840"  "BUSDBL_000840'"  1.00  ""  ""  ""  0
 "secdd 70223 70404 '1 '  1"  "open"  1.000000  ""
 "secdd 70223 70453 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000841"  "BUSDBL_000841'"  1.00  ""  ""  ""  0
 "secdd 70050 70224 '1 '  1"  "open"  1.000000  ""
 "secdd 70224 70265 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000842"  "BUSDBL_000842'"  1.00  ""  ""  ""  0
 "secdd 70050 70224 '1 '  1"  "open"  1.000000  ""
 "secdd 70224 70400 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000843"  "BUSDBL_000843'"  1.00  ""  ""  ""  0
 "secdd 70224 70265 '1 '  1"  "open"  1.000000  ""
 "secdd 70224 70400 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000844"  "BUSDBL_000844'"  1.00  ""  ""  ""  0
 "secdd 70101 70225 '1 '  1"  "open"  1.000000  ""
 "secdd 70184 70225 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000845"  "BUSDBL_000845'"  1.00  ""  ""  ""  0
 "secdd 70101 70225 '1 '  1"  "open"  1.000000  ""
 "secdd 70203 70225 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000846"  "BUSDBL_000846'"  1.00  ""  ""  ""  0
 "secdd 70184 70225 '1 '  1"  "open"  1.000000  ""
 "secdd 70203 70225 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000847"  "BUSDBL_000847'"  1.00  ""  ""  ""  0
 "secdd 70226 70227 '1 '  1"  "open"  1.000000  ""
 "secdd 70252 70226 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_000848"  "BUSDBL_000848'"  1.00  ""  ""  ""  0
 "secdd 70226 70227 '1 '  1"  "open"  1.000000  ""
 "secdd 70262 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000849"  "BUSDBL_000849'"  1.00  ""  ""  ""  0
 "secdd 70226 70227 '1 '  1"  "open"  1.000000  ""
 "secdd 70345 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000850"  "BUSDBL_000850'"  1.00  ""  ""  ""  0
 "secdd 70226 70227 '1 '  1"  "open"  1.000000  ""
 "secdd 70354 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000851"  "BUSDBL_000851'"  1.00  ""  ""  ""  0
 "secdd 70252 70226 '2 '  1"  "open"  1.000000  ""
 "secdd 70262 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000852"  "BUSDBL_000852'"  1.00  ""  ""  ""  0
 "secdd 70252 70226 '2 '  1"  "open"  1.000000  ""
 "secdd 70345 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000853"  "BUSDBL_000853'"  1.00  ""  ""  ""  0
 "secdd 70252 70226 '2 '  1"  "open"  1.000000  ""
 "secdd 70354 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000854"  "BUSDBL_000854'"  1.00  ""  ""  ""  0
 "secdd 70262 70226 '1 '  1"  "open"  1.000000  ""
 "secdd 70345 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000855"  "BUSDBL_000855'"  1.00  ""  ""  ""  0
 "secdd 70262 70226 '1 '  1"  "open"  1.000000  ""
 "secdd 70354 70226 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_000856"  "BUSDBL_000856'"  1.00  ""  ""  ""  0
```

```
 "secdd 70345 70226 '1 ' 1"    "open"    1.000000  ""
 "secdd 70354 70226 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000857"    "BUSDBL_000857'"    1.00  ""    ""    ""    0
 "secdd 70226 70227 '1 ' 1"    "open"    1.000000  ""
 "secdd 70354 70227 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000858"    "BUSDBL_000858'"    1.00  ""    ""    ""    0
 "secdd 70226 70227 '1 ' 1"    "open"    1.000000  ""
 "tran 70227 70355 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000859"    "BUSDBL_000859'"    1.00  ""    ""    ""    0
 "secdd 70354 70227 '1 ' 1"    "open"    1.000000  ""
 "tran 70227 70355 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000860"    "BUSDBL_000860'"    1.00  ""    ""    ""    0
 "secdd 70026 70228 '1 ' 1"    "open"    1.000000  ""
 "secdd 70228 70361 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000861"    "BUSDBL_000861'"    1.00  ""    ""    ""    0
 "secdd 70092 70230 '1 ' 1"    "open"    1.000000  ""
 "secdd 70229 70230 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000862"    "BUSDBL_000862'"    1.00  ""    ""    ""    0
 "secdd 70092 70230 '1 ' 1"    "open"    1.000000  ""
 "secdd 70230 70376 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000863"    "BUSDBL_000863'"    1.00  ""    ""    ""    0
 "secdd 70229 70230 '1 ' 1"    "open"    1.000000  ""
 "secdd 70230 70376 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000864"    "BUSDBL_000864'"    1.00  ""    ""    ""    0
 "secdd 70089 70231 '1 ' 1"    "open"    1.000000  ""
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000865"    "BUSDBL_000865'"    1.00  ""    ""    ""    0
 "secdd 70089 70231 '1 ' 1"    "open"    1.000000  ""
 "tran 70267 70231 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000866"    "BUSDBL_000866'"    1.00  ""    ""    ""    0
 "secdd 70089 70231 '1 ' 1"    "open"    1.000000  ""
 "secdd 70231 70387 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000867"    "BUSDBL_000867'"    1.00  ""    ""    ""    0
 "secdd 70089 70231 '1 ' 1"    "open"    1.000000  ""
 "secdd 70231 79003 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000868"    "BUSDBL_000868'"    1.00  ""    ""    ""    0
 "secdd 70089 70231 '1 ' 1"    "open"    1.000000  ""
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000869"    "BUSDBL_000869'"    1.00  ""    ""    ""    0
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
 "tran 70267 70231 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000870"    "BUSDBL_000870'"    1.00  ""    ""    ""    0
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
 "secdd 70231 70387 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000871"    "BUSDBL_000871'"    1.00  ""    ""    ""    0
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
 "secdd 70231 79003 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000872"    "BUSDBL_000872'"    1.00  ""    ""    ""    0
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000873"    "BUSDBL_000873'"    1.00  ""    ""    ""    0
 "tran 70267 70231 'T1'"    "open"    1.000000  ""
```

```
 "secdd 70231 70387 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000874"    "BUSDBL_000874'"    1.00  ""    ""    ""    0
 "tran 70267 70231 'T1'"    "open"    1.000000  ""
 "secdd 70231 79003 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000875"    "BUSDBL_000875'"    1.00  ""    ""    ""    0
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
 "tran 70267 70231 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000876"    "BUSDBL_000876'"    1.00  ""    ""    ""    0
 "secdd 70231 70387 '1 ' 1"    "open"    1.000000  ""
 "secdd 70231 79003 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000877"    "BUSDBL_000877'"    1.00  ""    ""    ""    0
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
 "secdd 70231 70387 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000878"    "BUSDBL_000878'"    1.00  ""    ""    ""    0
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
 "secdd 70231 79003 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000879"    "BUSDBL_000879'"    1.00  ""    ""    ""    0
 "secdd 70232 70111 '1 ' 1"    "open"    1.000000  ""
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000880"    "BUSDBL_000880'"    1.00  ""    ""    ""    0
 "secdd 70232 70111 '1 ' 1"    "open"    1.000000  ""
 "secdd 70232 70358 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000881"    "BUSDBL_000881'"    1.00  ""    ""    ""    0
 "secdd 70232 70111 '1 ' 1"    "open"    1.000000  ""
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
0
"BUSDBL_000882"    "BUSDBL_000882'"    1.00  ""    ""    ""    0
 "tran 70231 70232 'T2'"    "open"    1.000000  ""
 "secdd 70232 70358 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000883"    "BUSDBL_000883'"    1.00  ""    ""    ""    0
 "tran 70232 70231 71953 'T3'"    "open"    1.000000  ""
 "secdd 70232 70358 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000884"    "BUSDBL_000884'"    1.00  ""    ""    ""    0
 "secdd 70206 70233 '1 ' 1"    "open"    1.000000  ""
 "secdd 70233 70268 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000885"    "BUSDBL_000885'"    1.00  ""    ""    ""    0
 "secdd 70169 70234 '1 ' 1"    "open"    1.000000  ""
 "secdd 70190 70234 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000886"    "BUSDBL_000886'"    1.00  ""    ""    ""    0
 "secdd 70063 70235 '1 ' 1"    "open"    1.000000  ""
 "secdd 70235 70317 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000887"    "BUSDBL_000887'"    1.00  ""    ""    ""    0
 "secdd 70236 70339 '1 ' 1"    "open"    1.000000  ""
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000888"    "BUSDBL_000888'"    1.00  ""    ""    ""    0
 "secdd 70072 70237 '1 ' 1"    "open"    1.000000  ""
 "secdd 70237 70266 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000889"    "BUSDBL_000889'"    1.00  ""    ""    ""    0
 "secdd 70239 70260 '1 ' 1"    "open"    1.000000  ""
 "secdd 70239 70491 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000890"    "BUSDBL_000890'"    1.00  ""    ""    ""    0
 "secdd 70202 70240 '1 ' 1"    "open"    1.000000  ""
 "secdd 70240 70246 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000891"    "BUSDBL_000891'"    1.00    ""    ""    ""    0
 "secdd 70112 70241 '1 '  1"    "open"    1.000000    ""
 "secdd 70241 70313 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000892"    "BUSDBL_000892'"    1.00    ""    ""    ""    0
 "secdd 70023 70242 '1 '  1"    "open"    1.000000    ""
 "secdd 70045 70242 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000893"    "BUSDBL_000893'"    1.00    ""    ""    ""    0
 "secdd 70244 70444 '1 '  1"    "open"    1.000000    ""
 "secdd 70244 70604 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000894"    "BUSDBL_000894'"    1.00    ""    ""    ""    0
 "secdd 70092 70245 '1 '  1"    "open"    1.000000    ""
 "secdd 70245 70325 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000895"    "BUSDBL_000895'"    1.00    ""    ""    ""    0
 "secdd 70240 70246 '1 '  1"    "open"    1.000000    ""
 "secdd 70246 70470 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000896"    "BUSDBL_000896'"    1.00    ""    ""    ""    0
 "secdd 70060 70247 '1 '  1"    "open"    1.000000    ""
 "secdd 70079 70247 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000897"    "BUSDBL_000897'"    1.00    ""    ""    ""    0
 "secdd 70060 70247 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000898"    "BUSDBL_000898'"    1.00    ""    ""    ""    0
 "secdd 70060 70247 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000899"    "BUSDBL_000899'"    1.00    ""    ""    ""    0
 "secdd 70079 70247 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000900"    "BUSDBL_000900'"    1.00    ""    ""    ""    0
 "secdd 70079 70247 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000901"    "BUSDBL_000901'"    1.00    ""    ""    ""    0
 "tran 70248 70247 'T1'"    "open"    1.000000    ""
 "tran 70248 70247 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000902"    "BUSDBL_000902'"    1.00    ""    ""    ""    0
 "secdd 70132 70248 '1 '  1"    "open"    1.000000    ""
 "secdd 70243 70248 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_000903"    "BUSDBL_000903'"    1.00    ""    ""    ""    0
 "secdd 70132 70248 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000904"    "BUSDBL_000904'"    1.00    ""    ""    ""    0
 "secdd 70132 70248 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000905"    "BUSDBL_000905'"    1.00    ""    ""    ""    0
 "secdd 70243 70248 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T1'"    "open"    1.000000    ""
0
"BUSDBL_000906"    "BUSDBL_000906'"    1.00    ""    ""    ""    0
 "secdd 70243 70248 '1 '  1"    "open"    1.000000    ""
 "tran 70248 70247 'T2'"    "open"    1.000000    ""
0
"BUSDBL_000907"    "BUSDBL_000907'"    1.00    ""    ""    ""    0
 "secdd 70060 70249 '1 '  1"    "open"    1.000000    ""
 "tran 70250 70249 'T1'"    "open"    1.000000    ""
0
```

```
"BUSDBL_000908"    "BUSDBL_000908'"    1.00  ""    ""    ""    0
 "tran 70250 70249 'T1'"    "open"    1.000000  ""
 "secdd 70250 70320 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000909"    "BUSDBL_000909'"    1.00  ""    ""    ""    0
 "tran 70250 70249 'T1'"    "open"    1.000000  ""
 "secdd 70250 70366 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000910"    "BUSDBL_000910'"    1.00  ""    ""    ""    0
 "secdd 70250 70320 '1 '  1"    "open"    1.000000  ""
 "secdd 70250 70366 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000911"    "BUSDBL_000911'"    1.00  ""    ""    ""    0
 "secdd 70208 70251 '1 '  1"    "open"    1.000000  ""
 "secdd 70251 70252 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000912"    "BUSDBL_000912'"    1.00  ""    ""    ""    0
 "secdd 70208 70251 '1 '  1"    "open"    1.000000  ""
 "secdd 70251 70354 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000913"    "BUSDBL_000913'"    1.00  ""    ""    ""    0
 "secdd 70251 70252 '1 '  1"    "open"    1.000000  ""
 "secdd 70251 70354 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000914"    "BUSDBL_000914'"    1.00  ""    ""    ""    0
 "secdd 70208 70252 '2 '  1"    "open"    1.000000  ""
 "secdd 70252 70226 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000915"    "BUSDBL_000915'"    1.00  ""    ""    ""    0
 "secdd 70208 70252 '2 '  1"    "open"    1.000000  ""
 "secdd 70251 70252 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000916"    "BUSDBL_000916'"    1.00  ""    ""    ""    0
 "secdd 70252 70226 '2 '  1"    "open"    1.000000  ""
 "secdd 70251 70252 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000917"    "BUSDBL_000917'"    1.00  ""    ""    ""    0
 "secdd 70253 70452 '1 '  1"    "open"    1.000000  ""
 "secdd 70253 70472 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000918"    "BUSDBL_000918'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70955 'T1'"    "open"    1.000000  ""
 "secdd 70253 70452 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000919"    "BUSDBL_000919'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70957 'T2'"    "open"    1.000000  ""
 "secdd 70253 70452 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000920"    "BUSDBL_000920'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70955 'T1'"    "open"    1.000000  ""
 "secdd 70253 70472 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000921"    "BUSDBL_000921'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70957 'T2'"    "open"    1.000000  ""
 "secdd 70253 70472 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000922"    "BUSDBL_000922'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70955 'T1'"    "open"    1.000000  ""
 "tran 70255 70253 70957 'T2'"    "open"    1.000000  ""
0
"BUSDBL_000923"    "BUSDBL_000923'"    1.00  ""    ""    ""    0
 "secdd 70013 70254 '1 '  1"    "open"    1.000000  ""
 "secdd 70061 70254 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000924"    "BUSDBL_000924'"    1.00  ""    ""    ""    0
 "secdd 70013 70254 '1 '  1"    "open"    1.000000  ""
 "secdd 70254 70255 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000925"    "BUSDBL_000925'"    1.00  ""    ""    ""    0
```

```
 "secdd 70013 70254 '1 ' 1"    "open"    1.000000  ""
 "secdd 70254 70560 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000926"    "BUSDBL_000926'"    1.00  ""    ""    ""    0
 "secdd 70061 70254 '1 ' 1"    "open"    1.000000  ""
 "secdd 70254 70255 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000927"    "BUSDBL_000927'"    1.00  ""    ""    ""    0
 "secdd 70061 70254 '1 ' 1"    "open"    1.000000  ""
 "secdd 70254 70560 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000928"    "BUSDBL_000928'"    1.00  ""    ""    ""    0
 "secdd 70254 70255 '1 ' 1"    "open"    1.000000  ""
 "secdd 70254 70560 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000929"    "BUSDBL_000929'"    1.00  ""    ""    ""    0
 "secdd 70254 70255 '1 ' 1"    "open"    1.000000  ""
 "secdd 70255 73036 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000930"    "BUSDBL_000930'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70955 'T1'"    "open"    1.000000  ""
 "secdd 70254 70255 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000931"    "BUSDBL_000931'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70957 'T2'"    "open"    1.000000  ""
 "secdd 70254 70255 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000932"    "BUSDBL_000932'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70955 'T1'"    "open"    1.000000  ""
 "secdd 70255 73036 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000933"    "BUSDBL_000933'"    1.00  ""    ""    ""    0
 "tran 70255 70253 70957 'T2'"    "open"    1.000000  ""
 "secdd 70255 73036 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000934"    "BUSDBL_000934'"    1.00  ""    ""    ""    0
 "secdd 70114 70257 '1 ' 1"    "open"    1.000000  ""
 "secdd 70257 70258 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000935"    "BUSDBL_000935'"    1.00  ""    ""    ""    0
 "secdd 70114 70257 '1 ' 1"    "open"    1.000000  ""
 "secdd 70257 70273 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000936"    "BUSDBL_000936'"    1.00  ""    ""    ""    0
 "secdd 70257 70258 '1 ' 1"    "open"    1.000000  ""
 "secdd 70257 70273 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000937"    "BUSDBL_000937'"    1.00  ""    ""    ""    0
 "secdd 70257 70258 '1 ' 1"    "open"    1.000000  ""
 "secdd 70258 70273 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000938"    "BUSDBL_000938'"    1.00  ""    ""    ""    0
 "secdd 70257 70258 '1 ' 1"    "open"    1.000000  ""
 "secdd 70258 70364 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000939"    "BUSDBL_000939'"    1.00  ""    ""    ""    0
 "secdd 70258 70273 '1 ' 1"    "open"    1.000000  ""
 "secdd 70258 70364 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000940"    "BUSDBL_000940'"    1.00  ""    ""    ""    0
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
 "secdd 70259 70282 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000941"    "BUSDBL_000941'"    1.00  ""    ""    ""    0
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
 "secdd 70259 70377 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000942"    "BUSDBL_000942'"    1.00  ""    ""    ""    0
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
```

```
 "secdd 70259 70441 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000943"    "BUSDBL_000943'"    1.00  ""    ""    ""    0
 "secdd 70259 70282 '1 ' 1"    "open"    1.000000  ""
 "secdd 70259 70377 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000944"    "BUSDBL_000944'"    1.00  ""    ""    ""    0
 "secdd 70259 70282 '1 ' 1"    "open"    1.000000  ""
 "secdd 70259 70441 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000945"    "BUSDBL_000945'"    1.00  ""    ""    ""    0
 "secdd 70259 70377 '1 ' 1"    "open"    1.000000  ""
 "secdd 70259 70441 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000946"    "BUSDBL_000946'"    1.00  ""    ""    ""    0
 "secdd 70239 70260 '1 ' 1"    "open"    1.000000  ""
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
0
"BUSDBL_000947"    "BUSDBL_000947'"    1.00  ""    ""    ""    0
 "secdd 70239 70260 '1 ' 1"    "open"    1.000000  ""
 "tran 70282 70260 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000948"    "BUSDBL_000948'"    1.00  ""    ""    ""    0
 "secdd 70239 70260 '1 ' 1"    "open"    1.000000  ""
 "secdd 70260 70291 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000949"    "BUSDBL_000949'"    1.00  ""    ""    ""    0
 "secdd 70239 70260 '1 ' 1"    "open"    1.000000  ""
 "secdd 70260 70365 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000950"    "BUSDBL_000950'"    1.00  ""    ""    ""    0
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
 "tran 70282 70260 'T5'"    "open"    1.000000  ""
0
"BUSDBL_000951"    "BUSDBL_000951'"    1.00  ""    ""    ""    0
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
 "secdd 70260 70291 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000952"    "BUSDBL_000952'"    1.00  ""    ""    ""    0
 "tran 70259 70260 'T4'"    "open"    1.000000  ""
 "secdd 70260 70365 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000953"    "BUSDBL_000953'"    1.00  ""    ""    ""    0
 "tran 70282 70260 'T5'"    "open"    1.000000  ""
 "secdd 70260 70291 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000954"    "BUSDBL_000954'"    1.00  ""    ""    ""    0
 "tran 70282 70260 'T5'"    "open"    1.000000  ""
 "secdd 70260 70365 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000955"    "BUSDBL_000955'"    1.00  ""    ""    ""    0
 "secdd 70260 70291 '1 ' 1"    "open"    1.000000  ""
 "secdd 70260 70365 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000956"    "BUSDBL_000956'"    1.00  ""    ""    ""    0
 "secdd 70261 70297 '1 ' 1"    "open"    1.000000  ""
 "secdd 70261 70570 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000957"    "BUSDBL_000957'"    1.00  ""    ""    ""    0
 "secdd 70262 70226 '1 ' 1"    "open"    1.000000  ""
 "secdd 70300 70262 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000958"    "BUSDBL_000958'"    1.00  ""    ""    ""    0
 "secdd 70262 70226 '1 ' 1"    "open"    1.000000  ""
 "secdd 70262 70340 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_000959"    "BUSDBL_000959'"    1.00  ""    ""    ""    0
 "secdd 70300 70262 '1 ' 1"    "open"    1.000000  ""
 "secdd 70262 70340 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_000960"  "BUSDBL_000960'"  1.00  ""  ""  ""  0
 "secdd 70165 70263 '1 ' 1"  "open"  1.000000  ""
 "secdd 70263 70463 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000961"  "BUSDBL_000961'"  1.00  ""  ""  ""  0
 "secdd 70078 70264 '1 ' 1"  "open"  1.000000  ""
 "secdd 70264 70309 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000962"  "BUSDBL_000962'"  1.00  ""  ""  ""  0
 "secdd 70078 70264 '1 ' 1"  "open"  1.000000  ""
 "tran 70981 70264 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000963"  "BUSDBL_000963'"  1.00  ""  ""  ""  0
 "secdd 70264 70309 '1 ' 1"  "open"  1.000000  ""
 "tran 70981 70264 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000964"  "BUSDBL_000964'"  1.00  ""  ""  ""  0
 "secdd 70265 70066 '1 ' 1"  "open"  1.000000  ""
 "secdd 70224 70265 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000965"  "BUSDBL_000965'"  1.00  ""  ""  ""  0
 "secdd 70265 70066 '1 ' 1"  "open"  1.000000  ""
 "tran 70265 70266 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000966"  "BUSDBL_000966'"  1.00  ""  ""  ""  0
 "secdd 70224 70265 '1 ' 1"  "open"  1.000000  ""
 "tran 70265 70266 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000967"  "BUSDBL_000967'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "tran 70066 70266 'T2'"  "open"  1.000000  ""
0
"BUSDBL_000968"  "BUSDBL_000968'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "secdd 70072 70266 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000969"  "BUSDBL_000969'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "secdd 70237 70266 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000970"  "BUSDBL_000970'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "tran 70265 70266 'T1'"  "open"  1.000000  ""
0
"BUSDBL_000971"  "BUSDBL_000971'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "secdd 70266 70355 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000972"  "BUSDBL_000972'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "secdd 70266 70480 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000973"  "BUSDBL_000973'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "secdd 70266 70570 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000974"  "BUSDBL_000974'"  1.00  ""  ""  ""  0
 "secdd 70018 70266 '1 ' 1"  "open"  1.000000  ""
 "secdd 70266 70570 '2 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000975"  "BUSDBL_000975'"  1.00  ""  ""  ""  0
 "tran 70066 70266 'T2'"  "open"  1.000000  ""
 "secdd 70072 70266 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_000976"  "BUSDBL_000976'"  1.00  ""  ""  ""  0
 "tran 70066 70266 'T2'"  "open"  1.000000  ""
 "secdd 70237 70266 '1 ' 1"  "open"  1.000000  ""
0
```

```
"BUSDBL_000977"    "BUSDBL_000977'"    1.00  ""    ""    ""    0
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000978"    "BUSDBL_000978'"    1.00  ""    ""    ""    0
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000979"    "BUSDBL_000979'"    1.00  ""    ""    ""    0
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000980"    "BUSDBL_000980'"    1.00  ""    ""    ""    0
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000981"    "BUSDBL_000981'"    1.00  ""    ""    ""    0
 "tran 70066 70266 'T2'"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000982"    "BUSDBL_000982'"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000983"    "BUSDBL_000983'"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 '  1"    "open"    1.000000  ""
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000984"    "BUSDBL_000984'"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000985"    "BUSDBL_000985'"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000986"    "BUSDBL_000986'"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000987"    "BUSDBL_000987'"    1.00  ""    ""    ""    0
 "secdd 70072 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000988"    "BUSDBL_000988'"    1.00  ""    ""    ""    0
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
0
"BUSDBL_000989"    "BUSDBL_000989'"    1.00  ""    ""    ""    0
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000990"    "BUSDBL_000990'"    1.00  ""    ""    ""    0
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000991"    "BUSDBL_000991'"    1.00  ""    ""    ""    0
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000992"    "BUSDBL_000992'"    1.00  ""    ""    ""    0
 "secdd 70237 70266 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000993"    "BUSDBL_000993'"    1.00  ""    ""    ""    0
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000994"    "BUSDBL_000994'"    1.00  ""    ""    ""    0
```

```
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000995"    "BUSDBL_000995'"    1.00  ""    ""    ""    0
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000996"    "BUSDBL_000996'"    1.00  ""    ""    ""    0
 "tran 70265 70266 'T1'"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_000997"    "BUSDBL_000997'"    1.00  ""    ""    ""    0
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000998"    "BUSDBL_000998'"    1.00  ""    ""    ""    0
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_000999"    "BUSDBL_000999'"    1.00  ""    ""    ""    0
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001000"    "BUSDBL_001000'"    1.00  ""    ""    ""    0
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001001"    "BUSDBL_001001'"    1.00  ""    ""    ""    0
 "secdd 70266 70480 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001002"    "BUSDBL_001002'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70570 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001003"    "BUSDBL_001003'"    1.00  ""    ""    ""    0
 "tran 70267 70231 'T1'"    "open"    1.000000  ""
 "secdd 70267 70363 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001004"    "BUSDBL_001004'"    1.00  ""    ""    ""    0
 "secdd 70233 70268 '1 '  1"    "open"    1.000000  ""
 "secdd 70268 70438 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001005"    "BUSDBL_001005'"    1.00  ""    ""    ""    0
 "secdd 70065 70269 '1 '  1"    "open"    1.000000  ""
 "secdd 70269 70444 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001006"    "BUSDBL_001006'"    1.00  ""    ""    ""    0
 "secdd 70185 70271 '1 '  1"    "open"    1.000000  ""
 "tran 70271 70270 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001007"    "BUSDBL_001007'"    1.00  ""    ""    ""    0
 "secdd 70185 70271 '1 '  1"    "open"    1.000000  ""
 "secdd 70271 70320 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001008"    "BUSDBL_001008'"    1.00  ""    ""    ""    0
 "tran 70271 70270 'T1'"    "open"    1.000000  ""
 "secdd 70271 70320 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001009"    "BUSDBL_001009'"    1.00  ""    ""    ""    0
 "secdd 70014 70272 '1 '  1"    "open"    1.000000  ""
 "secdd 70068 70272 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001010"    "BUSDBL_001010'"    1.00  ""    ""    ""    0
 "secdd 70014 70272 '1 '  1"    "open"    1.000000  ""
 "secdd 70272 70458 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001011"    "BUSDBL_001011'"    1.00  ""    ""    ""    0
 "secdd 70068 70272 '1 '  1"    "open"    1.000000  ""
```

```
 "secdd 70272 70458 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001012"    "BUSDBL_001012'"    1.00  ""    ""    ""    0
 "secdd 70257 70273 '1 ' 1"    "open"    1.000000  ""
 "secdd 70258 70273 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001013"    "BUSDBL_001013'"    1.00  ""    ""    ""    0
 "secdd 70257 70273 '1 ' 1"    "open"    1.000000  ""
 "secdd 70273 70435 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001014"    "BUSDBL_001014'"    1.00  ""    ""    ""    0
 "secdd 70257 70273 '1 ' 1"    "open"    1.000000  ""
 "tran 70274 70273 71982 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001015"    "BUSDBL_001015'"    1.00  ""    ""    ""    0
 "secdd 70257 70273 '1 ' 1"    "open"    1.000000  ""
 "tran 70274 70273 71983 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001016"    "BUSDBL_001016'"    1.00  ""    ""    ""    0
 "secdd 70258 70273 '1 ' 1"    "open"    1.000000  ""
 "secdd 70273 70435 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001017"    "BUSDBL_001017'"    1.00  ""    ""    ""    0
 "secdd 70258 70273 '1 ' 1"    "open"    1.000000  ""
 "tran 70274 70273 71982 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001018"    "BUSDBL_001018'"    1.00  ""    ""    ""    0
 "secdd 70258 70273 '1 ' 1"    "open"    1.000000  ""
 "tran 70274 70273 71983 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001019"    "BUSDBL_001019'"    1.00  ""    ""    ""    0
 "tran 70274 70273 71982 'T1'"    "open"    1.000000  ""
 "secdd 70273 70435 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001020"    "BUSDBL_001020'"    1.00  ""    ""    ""    0
 "tran 70274 70273 71983 'T2'"    "open"    1.000000  ""
 "secdd 70273 70435 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001021"    "BUSDBL_001021'"    1.00  ""    ""    ""    0
 "tran 70274 70273 71982 'T1'"    "open"    1.000000  ""
 "tran 70274 70273 71983 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001022"    "BUSDBL_001022'"    1.00  ""    ""    ""    0
 "secdd 70032 70274 '1 ' 1"    "open"    1.000000  ""
 "secdd 70111 70274 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001023"    "BUSDBL_001023'"    1.00  ""    ""    ""    0
 "secdd 70032 70274 '1 ' 1"    "open"    1.000000  ""
 "secdd 70274 70927 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001024"    "BUSDBL_001024'"    1.00  ""    ""    ""    0
 "secdd 70032 70274 '1 ' 1"    "open"    1.000000  ""
 "secdd 70274 73138 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001025"    "BUSDBL_001025'"    1.00  ""    ""    ""    0
 "secdd 70032 70274 '1 ' 1"    "open"    1.000000  ""
 "secdd 70274 79004 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001026"    "BUSDBL_001026'"    1.00  ""    ""    ""    0
 "secdd 70032 70274 '1 ' 1"    "open"    1.000000  ""
 "tran 70274 70273 71982 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001027"    "BUSDBL_001027'"    1.00  ""    ""    ""    0
 "secdd 70032 70274 '1 ' 1"    "open"    1.000000  ""
 "tran 70274 70273 71983 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001028"    "BUSDBL_001028'"    1.00  ""    ""    ""    0
 "secdd 70111 70274 '1 ' 1"    "open"    1.000000  ""
 "secdd 70274 70927 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001029"  "BUSDBL_001029'"  1.00  ""  ""  ""  0
 "secdd 70111 70274 '1 '  1"  "open"  1.000000  ""
 "secdd 70274 73138 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001030"  "BUSDBL_001030'"  1.00  ""  ""  ""  0
 "secdd 70111 70274 '1 '  1"  "open"  1.000000  ""
 "secdd 70274 79004 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001031"  "BUSDBL_001031'"  1.00  ""  ""  ""  0
 "secdd 70111 70274 '1 '  1"  "open"  1.000000  ""
 "tran 70274 70273 71982 'T1'"  "open"  1.000000  ""
0
"BUSDBL_001032"  "BUSDBL_001032'"  1.00  ""  ""  ""  0
 "secdd 70111 70274 '1 '  1"  "open"  1.000000  ""
 "tran 70274 70273 71983 'T2'"  "open"  1.000000  ""
0
"BUSDBL_001033"  "BUSDBL_001033'"  1.00  ""  ""  ""  0
 "secdd 70274 70927 '1 '  1"  "open"  1.000000  ""
 "secdd 70274 73138 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001034"  "BUSDBL_001034'"  1.00  ""  ""  ""  0
 "secdd 70274 70927 '1 '  1"  "open"  1.000000  ""
 "secdd 70274 79004 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001035"  "BUSDBL_001035'"  1.00  ""  ""  ""  0
 "tran 70274 70273 71982 'T1'"  "open"  1.000000  ""
 "secdd 70274 70927 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001036"  "BUSDBL_001036'"  1.00  ""  ""  ""  0
 "tran 70274 70273 71983 'T2'"  "open"  1.000000  ""
 "secdd 70274 70927 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001037"  "BUSDBL_001037'"  1.00  ""  ""  ""  0
 "secdd 70274 73138 '1 '  1"  "open"  1.000000  ""
 "secdd 70274 79004 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001038"  "BUSDBL_001038'"  1.00  ""  ""  ""  0
 "tran 70274 70273 71982 'T1'"  "open"  1.000000  ""
 "secdd 70274 73138 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001039"  "BUSDBL_001039'"  1.00  ""  ""  ""  0
 "tran 70274 70273 71983 'T2'"  "open"  1.000000  ""
 "secdd 70274 73138 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001040"  "BUSDBL_001040'"  1.00  ""  ""  ""  0
 "tran 70274 70273 71982 'T1'"  "open"  1.000000  ""
 "secdd 70274 79004 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001041"  "BUSDBL_001041'"  1.00  ""  ""  ""  0
 "tran 70274 70273 71983 'T2'"  "open"  1.000000  ""
 "secdd 70274 79004 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001042"  "BUSDBL_001042'"  1.00  ""  ""  ""  0
 "secdd 70178 70275 '1 '  1"  "open"  1.000000  ""
 "secdd 70275 70303 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001043"  "BUSDBL_001043'"  1.00  ""  ""  ""  0
 "secdd 70178 70275 '1 '  1"  "open"  1.000000  ""
 "secdd 70275 70366 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001044"  "BUSDBL_001044'"  1.00  ""  ""  ""  0
 "secdd 70275 70303 '1 '  1"  "open"  1.000000  ""
 "secdd 70275 70366 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001045"  "BUSDBL_001045'"  1.00  ""  ""  ""  0
 "secdd 70108 70276 '2 '  1"  "open"  1.000000  ""
 "secdd 70276 70177 '1 '  1"  "open"  1.000000  ""
0
```

```
"BUSDBL_001046"    "BUSDBL_001046'"    1.00    ""    ""    ""    0
 "secdd 70108 70277 '1 '  1"    "open"    1.000000    ""
 "secdd 70277 70377 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001047"    "BUSDBL_001047'"    1.00    ""    ""    ""    0
 "secdd 70139 70278 '1 '  1"    "open"    1.000000    ""
 "secdd 70959 70278 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001048"    "BUSDBL_001048'"    1.00    ""    ""    ""    0
 "secdd 70279 70280 '1 '  1"    "open"    1.000000    ""
 "secdd 70279 70463 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001049"    "BUSDBL_001049'"    1.00    ""    ""    ""    0
 "secdd 70279 70280 '1 '  1"    "open"    1.000000    ""
 "secdd 70280 70484 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001050"    "BUSDBL_001050'"    1.00    ""    ""    ""    0
 "secdd 70114 70281 '1 '  1"    "open"    1.000000    ""
 "secdd 70281 70421 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001051"    "BUSDBL_001051'"    1.00    ""    ""    ""    0
 "secdd 70215 70282 '1 '  1"    "open"    1.000000    ""
 "secdd 70259 70282 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001052"    "BUSDBL_001052'"    1.00    ""    ""    ""    0
 "secdd 70215 70282 '1 '  1"    "open"    1.000000    ""
 "tran 70282 70260 'T5'"    "open"    1.000000    ""
0
"BUSDBL_001053"    "BUSDBL_001053'"    1.00    ""    ""    ""    0
 "secdd 70259 70282 '1 '  1"    "open"    1.000000    ""
 "tran 70282 70260 'T5'"    "open"    1.000000    ""
0
"BUSDBL_001054"    "BUSDBL_001054'"    1.00    ""    ""    ""    0
 "secdd 70283 70313 '1 '  1"    "open"    1.000000    ""
 "secdd 70283 70396 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001055"    "BUSDBL_001055'"    1.00    ""    ""    ""    0
 "secdd 70139 70284 '1 '  1"    "open"    1.000000    ""
 "secdd 70284 70533 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001056"    "BUSDBL_001056'"    1.00    ""    ""    ""    0
 "secdd 70285 70301 '1 '  1"    "open"    1.000000    ""
 "secdd 70285 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001057"    "BUSDBL_001057'"    1.00    ""    ""    ""    0
 "secdd 70285 70301 '1 '  1"    "open"    1.000000    ""
 "secdd 73412 70285 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001058"    "BUSDBL_001058'"    1.00    ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000    ""
 "secdd 70285 70301 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001059"    "BUSDBL_001059'"    1.00    ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 73412 70285 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001060"    "BUSDBL_001060'"    1.00    ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000    ""
 "secdd 70285 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001061"    "BUSDBL_001061'"    1.00    ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000    ""
 "secdd 73412 70285 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001062"    "BUSDBL_001062'"    1.00    ""    ""    ""    0
 "secdd 70061 70286 '1 '  1"    "open"    1.000000    ""
 "secdd 70122 70286 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001063"    "BUSDBL_001063'"    1.00    ""    ""    ""    0
```

```
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001064"    "BUSDBL_001064'"    1.00  ""    ""    ""    0
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001065"    "BUSDBL_001065'"    1.00  ""    ""    ""    0
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001066"    "BUSDBL_001066'"    1.00  ""    ""    ""    0
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001067"    "BUSDBL_001067'"    1.00  ""    ""    ""    0
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001068"    "BUSDBL_001068'"    1.00  ""    ""    ""    0
 "secdd 70061 70286 '1 ' 1"    "open"    1.000000  ""
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001069"    "BUSDBL_001069'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001070"    "BUSDBL_001070'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001071"    "BUSDBL_001071'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001072"    "BUSDBL_001072'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001073"    "BUSDBL_001073'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001074"    "BUSDBL_001074'"    1.00  ""    ""    ""    0
 "secdd 70122 70286 '1 ' 1"    "open"    1.000000  ""
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001075"    "BUSDBL_001075'"    1.00  ""    ""    ""    0
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001076"    "BUSDBL_001076'"    1.00  ""    ""    ""    0
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001077"    "BUSDBL_001077'"    1.00  ""    ""    ""    0
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001078"    "BUSDBL_001078'"    1.00  ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001079"    "BUSDBL_001079'"    1.00  ""    ""    ""    0
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
 "secdd 70595 70286 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001080"    "BUSDBL_001080'"    1.00  ""    ""    ""    0
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001081"    "BUSDBL_001081'"    1.00  ""    ""    ""    0
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001082"    "BUSDBL_001082'"    1.00  ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001083"    "BUSDBL_001083'"    1.00  ""    ""    ""    0
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001084"    "BUSDBL_001084'"    1.00  ""    ""    ""    0
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001085"    "BUSDBL_001085'"    1.00  ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001086"    "BUSDBL_001086'"    1.00  ""    ""    ""    0
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
 "secdd 70286 73413 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001087"    "BUSDBL_001087'"    1.00  ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001088"    "BUSDBL_001088'"    1.00  ""    ""    ""    0
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
 "secdd 70286 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001089"    "BUSDBL_001089'"    1.00  ""    ""    ""    0
 "tran 70286 70285 71980 'T1'"    "open"    1.000000  ""
 "tran 70465 70286 71996 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001090"    "BUSDBL_001090'"    1.00  ""    ""    ""    0
 "secdd 70052 70287 '1 ' 1"    "open"    1.000000  ""
 "secdd 70287 70328 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001091"    "BUSDBL_001091'"    1.00  ""    ""    ""    0
 "secdd 70052 70287 '1 ' 1"    "open"    1.000000  ""
 "secdd 70287 73296 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001092"    "BUSDBL_001092'"    1.00  ""    ""    ""    0
 "secdd 70287 70328 '1 ' 1"    "open"    1.000000  ""
 "secdd 70287 73296 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001093"    "BUSDBL_001093'"    1.00  ""    ""    ""    0
 "secdd 70201 70288 '1 ' 1"    "open"    1.000000  ""
 "secdd 70936 70288 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001094"    "BUSDBL_001094'"    1.00  ""    ""    ""    0
 "secdd 70289 70292 '1 ' 1"    "open"    1.000000  ""
 "secdd 70289 70505 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001095"    "BUSDBL_001095'"    1.00  ""    ""    ""    0
 "secdd 70290 70116 '1 ' 1"    "open"    1.000000  ""
 "secdd 70209 70290 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001096"    "BUSDBL_001096'"    1.00  ""    ""    ""    0
 "secdd 70290 70116 '1 ' 1"    "open"    1.000000  ""
 "secdd 70290 70897 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001097"    "BUSDBL_001097'"    1.00  ""    ""    ""    0
 "secdd 70209 70290 '1 ' 1"    "open"    1.000000  ""
 "secdd 70290 70897 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001098"    "BUSDBL_001098'"    1.00    ""    ""    ""    0
 "secdd 70163 70291 '1 '  1"    "open"    1.000000    ""
 "secdd 70260 70291 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001099"    "BUSDBL_001099'"    1.00    ""    ""    ""    0
 "secdd 70024 70292 '1 '  1"    "open"    1.000000    ""
 "secdd 70289 70292 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001100"    "BUSDBL_001100'"    1.00    ""    ""    ""    0
 "secdd 70024 70292 '1 '  1"    "open"    1.000000    ""
 "secdd 70292 70376 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001101"    "BUSDBL_001101'"    1.00    ""    ""    ""    0
 "secdd 70024 70292 '1 '  1"    "open"    1.000000    ""
 "tran 70931 70292 'U1'"    "open"    1.000000    ""
0
"BUSDBL_001102"    "BUSDBL_001102'"    1.00    ""    ""    ""    0
 "secdd 70289 70292 '1 '  1"    "open"    1.000000    ""
 "secdd 70292 70376 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001103"    "BUSDBL_001103'"    1.00    ""    ""    ""    0
 "secdd 70289 70292 '1 '  1"    "open"    1.000000    ""
 "tran 70931 70292 'U1'"    "open"    1.000000    ""
0
"BUSDBL_001104"    "BUSDBL_001104'"    1.00    ""    ""    ""    0
 "secdd 70292 70376 '1 '  1"    "open"    1.000000    ""
 "tran 70931 70292 'U1'"    "open"    1.000000    ""
0
"BUSDBL_001105"    "BUSDBL_001105'"    1.00    ""    ""    ""    0
 "secdd 70160 70293 '1 '  1"    "open"    1.000000    ""
 "secdd 70293 70294 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001106"    "BUSDBL_001106'"    1.00    ""    ""    ""    0
 "secdd 70293 70294 '1 '  1"    "open"    1.000000    ""
 "secdd 70294 70451 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001107"    "BUSDBL_001107'"    1.00    ""    ""    ""    0
 "secdd 70293 70294 '1 '  1"    "open"    1.000000    ""
 "secdd 70294 71026 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001108"    "BUSDBL_001108'"    1.00    ""    ""    ""    0
 "secdd 70294 70451 '1 '  1"    "open"    1.000000    ""
 "secdd 70294 71026 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001109"    "BUSDBL_001109'"    1.00    ""    ""    ""    0
 "secdd 70164 70295 '1 '  1"    "open"    1.000000    ""
 "secdd 70423 70295 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001110"    "BUSDBL_001110'"    1.00    ""    ""    ""    0
 "secdd 70296 70388 '1 '  1"    "open"    1.000000    ""
 "secdd 70936 70296 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001111"    "BUSDBL_001111'"    1.00    ""    ""    ""    0
 "secdd 70213 70297 '2 '  1"    "open"    1.000000    ""
 "secdd 70261 70297 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001112"    "BUSDBL_001112'"    1.00    ""    ""    ""    0
 "secdd 70213 70297 '2 '  1"    "open"    1.000000    ""
 "secdd 70297 70544 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001113"    "BUSDBL_001113'"    1.00    ""    ""    ""    0
 "secdd 70213 70297 '2 '  1"    "open"    1.000000    ""
 "secdd 70972 70297 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001114"    "BUSDBL_001114'"    1.00    ""    ""    ""    0
 "secdd 70261 70297 '1 '  1"    "open"    1.000000    ""
 "secdd 70297 70544 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_001115"    "BUSDBL_001115'"    1.00  ""    ""    ""    0
 "secdd 70261 70297 '1 '  1"    "open"    1.000000  ""
 "secdd 70972 70297 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001116"    "BUSDBL_001116'"    1.00  ""    ""    ""    0
 "secdd 70297 70544 '1 '  1"    "open"    1.000000  ""
 "secdd 70972 70297 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001117"    "BUSDBL_001117'"    1.00  ""    ""    ""    0
 "secdd 70108 70298 '1 '  1"    "open"    1.000000  ""
 "secdd 70298 70377 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001118"    "BUSDBL_001118'"    1.00  ""    ""    ""    0
 "secdd 70300 70170 '1 '  1"    "open"    1.000000  ""
 "secdd 70300 70262 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001119"    "BUSDBL_001119'"    1.00  ""    ""    ""    0
 "secdd 70300 70170 '1 '  1"    "open"    1.000000  ""
 "secdd 70300 70322 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001120"    "BUSDBL_001120'"    1.00  ""    ""    ""    0
 "secdd 70300 70262 '1 '  1"    "open"    1.000000  ""
 "secdd 70300 70322 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001121"    "BUSDBL_001121'"    1.00  ""    ""    ""    0
 "secdd 70007 70301 '1 '  1"    "open"    1.000000  ""
 "secdd 70285 70301 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001122"    "BUSDBL_001122'"    1.00  ""    ""    ""    0
 "secdd 70109 70302 '1 '  1"    "open"    1.000000  ""
 "secdd 70302 70359 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001123"    "BUSDBL_001123'"    1.00  ""    ""    ""    0
 "secdd 70056 70304 '1 '  1"    "open"    1.000000  ""
 "secdd 70304 70435 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001124"    "BUSDBL_001124'"    1.00  ""    ""    ""    0
 "secdd 70049 70305 '1 '  1"    "open"    1.000000  ""
 "secdd 70054 70305 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001125"    "BUSDBL_001125'"    1.00  ""    ""    ""    0
 "secdd 70130 70306 '1 '  1"    "open"    1.000000  ""
 "tran 70306 70378 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001126"    "BUSDBL_001126'"    1.00  ""    ""    ""    0
 "secdd 70130 70306 '1 '  1"    "open"    1.000000  ""
 "tran 70306 70378 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001127"    "BUSDBL_001127'"    1.00  ""    ""    ""    0
 "secdd 70130 70306 '1 '  1"    "open"    1.000000  ""
 "secdd 70306 70451 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001128"    "BUSDBL_001128'"    1.00  ""    ""    ""    0
 "tran 70306 70378 'T1'"    "open"    1.000000  ""
 "tran 70306 70378 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001129"    "BUSDBL_001129'"    1.00  ""    ""    ""    0
 "tran 70306 70378 'T1'"    "open"    1.000000  ""
 "secdd 70306 70451 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001130"    "BUSDBL_001130'"    1.00  ""    ""    ""    0
 "tran 70306 70378 'T2'"    "open"    1.000000  ""
 "secdd 70306 70451 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001131"    "BUSDBL_001131'"    1.00  ""    ""    ""    0
 "secdd 70081 70307 '1 '  1"    "open"    1.000000  ""
 "secdd 70090 70307 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001132"    "BUSDBL_001132'"    1.00  ""    ""    ""    0
```

```
 "secdd 70020 70308 '1 ' 1"    "open"    1.000000  ""
 "secdd 70582 70308 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001133"    "BUSDBL_001133'"    1.00  ""    ""    ""    0
 "secdd 70020 70308 '1 ' 1"    "open"    1.000000  ""
 "secdd 70308 73414 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001134"    "BUSDBL_001134'"    1.00  ""    ""    ""    0
 "secdd 70582 70308 '1 ' 1"    "open"    1.000000  ""
 "secdd 70308 73414 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001135"    "BUSDBL_001135'"    1.00  ""    ""    ""    0
 "secdd 70264 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70299 70309 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001136"    "BUSDBL_001136'"    1.00  ""    ""    ""    0
 "secdd 70264 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 70356 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001137"    "BUSDBL_001137'"    1.00  ""    ""    ""    0
 "secdd 70264 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 70358 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001138"    "BUSDBL_001138'"    1.00  ""    ""    ""    0
 "secdd 70264 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001139"    "BUSDBL_001139'"    1.00  ""    ""    ""    0
 "secdd 70299 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 70356 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001140"    "BUSDBL_001140'"    1.00  ""    ""    ""    0
 "secdd 70299 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 70358 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001141"    "BUSDBL_001141'"    1.00  ""    ""    ""    0
 "secdd 70299 70309 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001142"    "BUSDBL_001142'"    1.00  ""    ""    ""    0
 "secdd 70309 70356 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 70358 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001143"    "BUSDBL_001143'"    1.00  ""    ""    ""    0
 "secdd 70309 70356 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001144"    "BUSDBL_001144'"    1.00  ""    ""    ""    0
 "secdd 70309 70358 '1 ' 1"    "open"    1.000000  ""
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001145"    "BUSDBL_001145'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001146"    "BUSDBL_001146'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001147"    "BUSDBL_001147'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001148"    "BUSDBL_001148'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "secdd 70311 70349 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001149"    "BUSDBL_001149'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70311 70545 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001150"    "BUSDBL_001150'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "secdd 70311 70623 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001151"    "BUSDBL_001151'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "secdd 73192 70311 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001152"    "BUSDBL_001152'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "secdd 70311 700181 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001153"    "BUSDBL_001153'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001154"    "BUSDBL_001154'"    1.00  ""    ""    ""    0
 "secdd 70192 70311 '1 ' 1"    "open"    1.000000  ""
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001155"    "BUSDBL_001155'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "secdd 70311 70349 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001156"    "BUSDBL_001156'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "secdd 70311 70545 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001157"    "BUSDBL_001157'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "secdd 70311 70623 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001158"    "BUSDBL_001158'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "secdd 73192 70311 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001159"    "BUSDBL_001159'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "secdd 70311 700181 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001160"    "BUSDBL_001160'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001161"    "BUSDBL_001161'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U1'"    "open"    1.000000  ""
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001162"    "BUSDBL_001162'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "secdd 70311 70349 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001163"    "BUSDBL_001163'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "secdd 70311 70545 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001164"    "BUSDBL_001164'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "secdd 70311 70623 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001165"    "BUSDBL_001165'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "secdd 73192 70311 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001166"    "BUSDBL_001166'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "secdd 70311 700181 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001167"    "BUSDBL_001167'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001168"    "BUSDBL_001168'"    1.00  ""    ""    ""    0
 "tran 70310 70311 'U2'"    "open"    1.000000  ""
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001169"    "BUSDBL_001169'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001170"    "BUSDBL_001170'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001171"    "BUSDBL_001171'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "secdd 73192 70311 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001172"    "BUSDBL_001172'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "secdd 70311 700181 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001173"    "BUSDBL_001173'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001174"    "BUSDBL_001174'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001175"    "BUSDBL_001175'"    1.00  ""    ""    ""    0
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001176"    "BUSDBL_001176'"    1.00  ""    ""    ""    0
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
 "secdd 73192 70311 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001177"    "BUSDBL_001177'"    1.00  ""    ""    ""    0
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
 "secdd 70311 700181 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001178"    "BUSDBL_001178'"    1.00  ""    ""    ""    0
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001179"    "BUSDBL_001179'"    1.00  ""    ""    ""    0
 "secdd 70311 70545 '1 '  1"    "open"    1.000000  ""
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001180"    "BUSDBL_001180'"    1.00  ""    ""    ""    0
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
 "secdd 73192 70311 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001181"    "BUSDBL_001181'"    1.00  ""    ""    ""    0
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
 "secdd 70311 700181 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001182"    "BUSDBL_001182'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001183"    "BUSDBL_001183'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
 "secdd 70311 70623 '1 '  1"    "open"    1.000000  ""
0
```

```
"BUSDBL_001184"    "BUSDBL_001184'"    1.00    ""    ""    ""    0
 "secdd 73192 70311 '1 '  1"    "open"    1.000000    ""
 "secdd 70311 700181 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001185"    "BUSDBL_001185'"    1.00    ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"    "open"    1.000000    ""
 "secdd 73192 70311 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001186"    "BUSDBL_001186'"    1.00    ""    ""    ""    0
 "tran 70598 70311 71999 'T3'"    "open"    1.000000    ""
 "secdd 73192 70311 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001187"    "BUSDBL_001187'"    1.00    ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"    "open"    1.000000    ""
 "secdd 70311 700181 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001188"    "BUSDBL_001188'"    1.00    ""    ""    ""    0
 "tran 70598 70311 71999 'T3'"    "open"    1.000000    ""
 "secdd 70311 700181 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001189"    "BUSDBL_001189'"    1.00    ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"    "open"    1.000000    ""
 "tran 70598 70311 71999 'T3'"    "open"    1.000000    ""
0
"BUSDBL_001190"    "BUSDBL_001190'"    1.00    ""    ""    ""    0
 "secdd 70056 70312 '1 '  1"    "open"    1.000000    ""
 "secdd 70312 70327 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001191"    "BUSDBL_001191'"    1.00    ""    ""    ""    0
 "secdd 70241 70313 '1 '  1"    "open"    1.000000    ""
 "secdd 70283 70313 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001192"    "BUSDBL_001192'"    1.00    ""    ""    ""    0
 "secdd 70235 70317 '1 '  1"    "open"    1.000000    ""
 "secdd 70316 70317 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001193"    "BUSDBL_001193'"    1.00    ""    ""    ""    0
 "secdd 70235 70317 '1 '  1"    "open"    1.000000    ""
 "secdd 70317 70405 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001194"    "BUSDBL_001194'"    1.00    ""    ""    ""    0
 "secdd 70316 70317 '1 '  1"    "open"    1.000000    ""
 "secdd 70317 70405 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001195"    "BUSDBL_001195'"    1.00    ""    ""    ""    0
 "secdd 70250 70320 '1 '  1"    "open"    1.000000    ""
 "secdd 70271 70320 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001196"    "BUSDBL_001196'"    1.00    ""    ""    ""    0
 "secdd 70250 70320 '1 '  1"    "open"    1.000000    ""
 "secdd 70319 70320 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001197"    "BUSDBL_001197'"    1.00    ""    ""    ""    0
 "secdd 70271 70320 '1 '  1"    "open"    1.000000    ""
 "secdd 70319 70320 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001198"    "BUSDBL_001198'"    1.00    ""    ""    ""    0
 "secdd 70139 70323 '2 '  1"    "open"    1.000000    ""
 "secdd 70189 70323 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001199"    "BUSDBL_001199'"    1.00    ""    ""    ""    0
 "secdd 70107 70324 '1 '  1"    "open"    1.000000    ""
 "secdd 70149 70324 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001200"    "BUSDBL_001200'"    1.00    ""    ""    ""    0
 "secdd 70107 70324 '1 '  1"    "open"    1.000000    ""
 "secdd 70324 70152 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001201"    "BUSDBL_001201'"    1.00    ""    ""    ""    0
```

```
 "secdd 70107 70324 '1 ' 1"    "open"    1.000000  ""
 "secdd 70324 70152 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001202"    "BUSDBL_001202'"    1.00  ""    ""    ""    0
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
 "secdd 70324 70152 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001203"    "BUSDBL_001203'"    1.00  ""    ""    ""    0
 "secdd 70149 70324 '1 ' 1"    "open"    1.000000  ""
 "secdd 70324 70152 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001204"    "BUSDBL_001204'"    1.00  ""    ""    ""    0
 "secdd 70245 70325 '1 ' 1"    "open"    1.000000  ""
 "secdd 70325 70383 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001205"    "BUSDBL_001205'"    1.00  ""    ""    ""    0
 "secdd 70245 70325 '1 ' 1"    "open"    1.000000  ""
 "tran 70325 70658 '1 '"    "open"    1.000000  ""
0
"BUSDBL_001206"    "BUSDBL_001206'"    1.00  ""    ""    ""    0
 "secdd 70325 70383 '1 ' 1"    "open"    1.000000  ""
 "tran 70325 70658 '1 '"    "open"    1.000000  ""
0
"BUSDBL_001207"    "BUSDBL_001207'"    1.00  ""    ""    ""    0
 "secdd 70326 70507 '1 ' 1"    "open"    1.000000  ""
 "tran 70326 77642 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001208"    "BUSDBL_001208'"    1.00  ""    ""    ""    0
 "secdd 70312 70327 '1 ' 1"    "open"    1.000000  ""
 "secdd 70327 70379 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001209"    "BUSDBL_001209'"    1.00  ""    ""    ""    0
 "secdd 70312 70327 '1 ' 1"    "open"    1.000000  ""
 "secdd 77642 70327 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001210"    "BUSDBL_001210'"    1.00  ""    ""    ""    0
 "secdd 70312 70327 '1 ' 1"    "open"    1.000000  ""
 "secdd 70327 79196 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001211"    "BUSDBL_001211'"    1.00  ""    ""    ""    0
 "secdd 70312 70327 '1 ' 1"    "open"    1.000000  ""
 "tran 70393 70327 71994 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001212"    "BUSDBL_001212'"    1.00  ""    ""    ""    0
 "secdd 70327 70379 '1 ' 1"    "open"    1.000000  ""
 "secdd 77642 70327 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001213"    "BUSDBL_001213'"    1.00  ""    ""    ""    0
 "secdd 70327 70379 '1 ' 1"    "open"    1.000000  ""
 "secdd 70327 79196 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001214"    "BUSDBL_001214'"    1.00  ""    ""    ""    0
 "secdd 70327 70379 '1 ' 1"    "open"    1.000000  ""
 "tran 70393 70327 71994 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001215"    "BUSDBL_001215'"    1.00  ""    ""    ""    0
 "secdd 77642 70327 '1 ' 1"    "open"    1.000000  ""
 "secdd 70327 79196 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001216"    "BUSDBL_001216'"    1.00  ""    ""    ""    0
 "tran 70393 70327 71994 'T4'"    "open"    1.000000  ""
 "secdd 77642 70327 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001217"    "BUSDBL_001217'"    1.00  ""    ""    ""    0
 "tran 70393 70327 71994 'T4'"    "open"    1.000000  ""
 "secdd 70327 79196 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001218"    "BUSDBL_001218'"    1.00  ""    ""    ""    0
 "secdd 70218 70328 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70287 70328 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001219"    "BUSDBL_001219'"    1.00  ""    ""    ""    0
 "secdd 70220 70329 '1 ' 1"    "open"    1.000000  ""
 "secdd 70318 70329 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001220"    "BUSDBL_001220'"    1.00  ""    ""    ""    0
 "secdd 70220 70329 '1 ' 1"    "open"    1.000000  ""
 "tran 70329 70330 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001221"    "BUSDBL_001221'"    1.00  ""    ""    ""    0
 "secdd 70220 70329 '1 ' 1"    "open"    1.000000  ""
 "tran 70329 70330 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001222"    "BUSDBL_001222'"    1.00  ""    ""    ""    0
 "secdd 70318 70329 '1 ' 1"    "open"    1.000000  ""
 "tran 70329 70330 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001223"    "BUSDBL_001223'"    1.00  ""    ""    ""    0
 "secdd 70318 70329 '1 ' 1"    "open"    1.000000  ""
 "tran 70329 70330 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001224"    "BUSDBL_001224'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T1'"    "open"    1.000000  ""
 "tran 70329 70330 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001225"    "BUSDBL_001225'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T1'"    "open"    1.000000  ""
 "secdd 70330 70390 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001226"    "BUSDBL_001226'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T1'"    "open"    1.000000  ""
 "secdd 70330 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001227"    "BUSDBL_001227'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T1'"    "open"    1.000000  ""
 "secdd 70330 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001228"    "BUSDBL_001228'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T2'"    "open"    1.000000  ""
 "secdd 70330 70390 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001229"    "BUSDBL_001229'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T2'"    "open"    1.000000  ""
 "secdd 70330 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001230"    "BUSDBL_001230'"    1.00  ""    ""    ""    0
 "tran 70329 70330 'T2'"    "open"    1.000000  ""
 "secdd 70330 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001231"    "BUSDBL_001231'"    1.00  ""    ""    ""    0
 "secdd 70330 70390 '1 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001232"    "BUSDBL_001232'"    1.00  ""    ""    ""    0
 "secdd 70330 70390 '1 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001233"    "BUSDBL_001233'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001234"    "BUSDBL_001234'"    1.00  ""    ""    ""    0
 "secdd 70139 70331 '1 ' 1"    "open"    1.000000  ""
 "secdd 70212 70331 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001235"    "BUSDBL_001235'"    1.00  ""    ""    ""    0
 "secdd 70181 70332 '1 ' 1"    "open"    1.000000  ""
 "secdd 70332 70422 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001236"    "BUSDBL_001236'"    1.00    ""    ""    ""    0
 "secdd 70151 70335 '1 '  1"    "open"    1.000000    ""
 "secdd 70335 70336 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001237"    "BUSDBL_001237'"    1.00    ""    ""    ""    0
 "secdd 70335 70336 '1 '  1"    "open"    1.000000    ""
 "secdd 70336 70412 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001238"    "BUSDBL_001238'"    1.00    ""    ""    ""    0
 "secdd 70335 70336 '1 '  1"    "open"    1.000000    ""
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001239"    "BUSDBL_001239'"    1.00    ""    ""    ""    0
 "secdd 70336 70412 '1 '  1"    "open"    1.000000    ""
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001240"    "BUSDBL_001240'"    1.00    ""    ""    ""    0
 "tran 70334 70338 'U1'"    "open"    1.000000    ""
 "secdd 70338 70455 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001241"    "BUSDBL_001241'"    1.00    ""    ""    ""    0
 "secdd 70236 70339 '1 '  1"    "open"    1.000000    ""
 "secdd 70339 70352 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001242"    "BUSDBL_001242'"    1.00    ""    ""    ""    0
 "secdd 70262 70340 '1 '  1"    "open"    1.000000    ""
 "secdd 70340 70341 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001243"    "BUSDBL_001243'"    1.00    ""    ""    ""    0
 "secdd 70340 70341 '1 '  1"    "open"    1.000000    ""
 "secdd 70341 70342 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001244"    "BUSDBL_001244'"    1.00    ""    ""    ""    0
 "secdd 70066 70342 '1 '  1"    "open"    1.000000    ""
 "secdd 70173 70342 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001245"    "BUSDBL_001245'"    1.00    ""    ""    ""    0
 "secdd 70066 70342 '1 '  1"    "open"    1.000000    ""
 "secdd 70341 70342 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001246"    "BUSDBL_001246'"    1.00    ""    ""    ""    0
 "secdd 70173 70342 '1 '  1"    "open"    1.000000    ""
 "secdd 70341 70342 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001247"    "BUSDBL_001247'"    1.00    ""    ""    ""    0
 "secdd 70343 70396 '1 '  1"    "open"    1.000000    ""
 "secdd 70343 70545 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001248"    "BUSDBL_001248'"    1.00    ""    ""    ""    0
 "secdd 70345 70226 '1 '  1"    "open"    1.000000    ""
 "secdd 70345 70440 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001249"    "BUSDBL_001249'"    1.00    ""    ""    ""    0
 "secdd 70164 70346 '1 '  1"    "open"    1.000000    ""
 "secdd 70346 70354 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001250"    "BUSDBL_001250'"    1.00    ""    ""    ""    0
 "tran 70348 70347 'T1'"    "open"    1.000000    ""
 "secdd 70347 70658 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001251"    "BUSDBL_001251'"    1.00    ""    ""    ""    0
 "tran 70348 70347 'T1'"    "open"    1.000000    ""
 "secdd 70348 70383 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001252"    "BUSDBL_001252'"    1.00    ""    ""    ""    0
 "tran 70348 70347 'T1'"    "open"    1.000000    ""
 "secdd 70348 70655 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_001253"    "BUSDBL_001253'"    1.00  ""    ""    ""    0
 "secdd 70348 70383 '1 '  1"    "open"    1.000000  ""
 "secdd 70348 70655 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001254"    "BUSDBL_001254'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "tran 70314 70349 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001255"    "BUSDBL_001255'"    1.00  ""    ""    ""    0
 "secdd 70311 70349 '1 '  1"    "open"    1.000000  ""
 "tran 70315 70349 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001256"    "BUSDBL_001256'"    1.00  ""    ""    ""    0
 "tran 70314 70349 'U1'"    "open"    1.000000  ""
 "tran 70315 70349 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001257"    "BUSDBL_001257'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001258"    "BUSDBL_001258'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70123 70352 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001259"    "BUSDBL_001259'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70339 70352 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001260"    "BUSDBL_001260'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001261"    "BUSDBL_001261'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001262"    "BUSDBL_001262'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70352 70549 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001263"    "BUSDBL_001263'"    1.00  ""    ""    ""    0
 "secdd 70004 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70352 71006 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001264"    "BUSDBL_001264'"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70123 70352 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001265"    "BUSDBL_001265'"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70339 70352 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001266"    "BUSDBL_001266'"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001267"    "BUSDBL_001267'"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001268"    "BUSDBL_001268'"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70352 70549 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001269"    "BUSDBL_001269'"    1.00  ""    ""    ""    0
 "secdd 70121 70352 '1 '  1"    "open"    1.000000  ""
 "secdd 70352 71006 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001270"    "BUSDBL_001270'"    1.00  ""    ""    ""    0
```

```
 "secdd 70123 70352 '2 ' 1"    "open"    1.000000  ""
 "secdd 70339 70352 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001271"    "BUSDBL_001271'"    1.00  ""    ""    ""    0
 "secdd 70123 70352 '2 ' 1"    "open"    1.000000  ""
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001272"    "BUSDBL_001272'"    1.00  ""    ""    ""    0
 "secdd 70123 70352 '2 ' 1"    "open"    1.000000  ""
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001273"    "BUSDBL_001273'"    1.00  ""    ""    ""    0
 "secdd 70123 70352 '2 ' 1"    "open"    1.000000  ""
 "secdd 70352 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001274"    "BUSDBL_001274'"    1.00  ""    ""    ""    0
 "secdd 70123 70352 '2 ' 1"    "open"    1.000000  ""
 "secdd 70352 71006 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001275"    "BUSDBL_001275'"    1.00  ""    ""    ""    0
 "secdd 70339 70352 '1 ' 1"    "open"    1.000000  ""
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001276"    "BUSDBL_001276'"    1.00  ""    ""    ""    0
 "secdd 70339 70352 '1 ' 1"    "open"    1.000000  ""
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001277"    "BUSDBL_001277'"    1.00  ""    ""    ""    0
 "secdd 70339 70352 '1 ' 1"    "open"    1.000000  ""
 "secdd 70352 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001278"    "BUSDBL_001278'"    1.00  ""    ""    ""    0
 "secdd 70339 70352 '1 ' 1"    "open"    1.000000  ""
 "secdd 70352 71006 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001279"    "BUSDBL_001279'"    1.00  ""    ""    ""    0
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001280"    "BUSDBL_001280'"    1.00  ""    ""    ""    0
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
 "secdd 70352 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001281"    "BUSDBL_001281'"    1.00  ""    ""    ""    0
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
 "secdd 70352 71006 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001282"    "BUSDBL_001282'"    1.00  ""    ""    ""    0
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
 "secdd 70352 70549 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001283"    "BUSDBL_001283'"    1.00  ""    ""    ""    0
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
 "secdd 70352 71006 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001284"    "BUSDBL_001284'"    1.00  ""    ""    ""    0
 "secdd 70352 70549 '1 ' 1"    "open"    1.000000  ""
 "secdd 70352 71006 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001285"    "BUSDBL_001285'"    1.00  ""    ""    ""    0
 "secdd 70042 70353 '1 ' 1"    "open"    1.000000  ""
 "secdd 70181 70353 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001286"    "BUSDBL_001286'"    1.00  ""    ""    ""    0
 "secdd 70042 70353 '1 ' 1"    "open"    1.000000  ""
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001287"    "BUSDBL_001287'"    1.00  ""    ""    ""    0
 "secdd 70042 70353 '1 ' 1"    "open"    1.000000  ""
```

```
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001288"    "BUSDBL_001288'"    1.00  ""    ""    ""    0
 "secdd 70181 70353 '1 '  1"    "open"    1.000000  ""
 "tran 70353 70352 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001289"    "BUSDBL_001289'"    1.00  ""    ""    ""    0
 "secdd 70181 70353 '1 '  1"    "open"    1.000000  ""
 "tran 70353 70352 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001290"    "BUSDBL_001290'"    1.00  ""    ""    ""    0
 "secdd 70354 70226 '1 '  1"    "open"    1.000000  ""
 "secdd 70354 70227 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001291"    "BUSDBL_001291'"    1.00  ""    ""    ""    0
 "secdd 70354 70226 '1 '  1"    "open"    1.000000  ""
 "secdd 70251 70354 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001292"    "BUSDBL_001292'"    1.00  ""    ""    ""    0
 "secdd 70354 70226 '1 '  1"    "open"    1.000000  ""
 "secdd 70346 70354 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001293"    "BUSDBL_001293'"    1.00  ""    ""    ""    0
 "secdd 70354 70227 '1 '  1"    "open"    1.000000  ""
 "secdd 70251 70354 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001294"    "BUSDBL_001294'"    1.00  ""    ""    ""    0
 "secdd 70354 70227 '1 '  1"    "open"    1.000000  ""
 "secdd 70346 70354 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001295"    "BUSDBL_001295'"    1.00  ""    ""    ""    0
 "secdd 70251 70354 '1 '  1"    "open"    1.000000  ""
 "secdd 70346 70354 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001296"    "BUSDBL_001296'"    1.00  ""    ""    ""    0
 "secdd 70041 70355 '1 '  1"    "open"    1.000000  ""
 "tran 70227 70355 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001297"    "BUSDBL_001297'"    1.00  ""    ""    ""    0
 "secdd 70041 70355 '1 '  1"    "open"    1.000000  ""
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001298"    "BUSDBL_001298'"    1.00  ""    ""    ""    0
 "secdd 70041 70355 '1 '  1"    "open"    1.000000  ""
 "secdd 70355 70369 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001299"    "BUSDBL_001299'"    1.00  ""    ""    ""    0
 "tran 70227 70355 'T2'"    "open"    1.000000  ""
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001300"    "BUSDBL_001300'"    1.00  ""    ""    ""    0
 "tran 70227 70355 'T2'"    "open"    1.000000  ""
 "secdd 70355 70369 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001301"    "BUSDBL_001301'"    1.00  ""    ""    ""    0
 "secdd 70266 70355 '1 '  1"    "open"    1.000000  ""
 "secdd 70355 70369 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001302"    "BUSDBL_001302'"    1.00  ""    ""    ""    0
 "secdd 70309 70356 '1 '  1"    "open"    1.000000  ""
 "secdd 70356 70430 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001303"    "BUSDBL_001303'"    1.00  ""    ""    ""    0
 "secdd 70232 70358 '1 '  1"    "open"    1.000000  ""
 "secdd 70309 70358 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001304"    "BUSDBL_001304'"    1.00  ""    ""    ""    0
 "secdd 70232 70358 '1 '  1"    "open"    1.000000  ""
 "secdd 70358 79059 '1 '  1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001305"    "BUSDBL_001305'"    1.00    ""    ""    ""    0
 "secdd 70232 70358 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79059 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001306"    "BUSDBL_001306'"    1.00    ""    ""    ""    0
 "secdd 70232 70358 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79250 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001307"    "BUSDBL_001307'"    1.00    ""    ""    ""    0
 "secdd 70309 70358 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79059 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001308"    "BUSDBL_001308'"    1.00    ""    ""    ""    0
 "secdd 70309 70358 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79059 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001309"    "BUSDBL_001309'"    1.00    ""    ""    ""    0
 "secdd 70309 70358 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79250 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001310"    "BUSDBL_001310'"    1.00    ""    ""    ""    0
 "secdd 70358 79059 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79059 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001311"    "BUSDBL_001311'"    1.00    ""    ""    ""    0
 "secdd 70358 79059 '1 '  1"    "open"    1.000000    ""
 "secdd 70358 79250 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001312"    "BUSDBL_001312'"    1.00    ""    ""    ""    0
 "secdd 70358 79059 '2 '  1"    "open"    1.000000    ""
 "secdd 70358 79250 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001313"    "BUSDBL_001313'"    1.00    ""    ""    ""    0
 "secdd 70302 70359 '1 '  1"    "open"    1.000000    ""
 "secdd 70359 70388 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001314"    "BUSDBL_001314'"    1.00    ""    ""    ""    0
 "secdd 70302 70359 '1 '  1"    "open"    1.000000    ""
 "tran 70359 79056 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001315"    "BUSDBL_001315'"    1.00    ""    ""    ""    0
 "secdd 70359 70388 '1 '  1"    "open"    1.000000    ""
 "tran 70359 79056 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001316"    "BUSDBL_001316'"    1.00    ""    ""    ""    0
 "secdd 70143 70360 '1 '  1"    "open"    1.000000    ""
 "secdd 70360 70361 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001317"    "BUSDBL_001317'"    1.00    ""    ""    ""    0
 "secdd 70228 70361 '1 '  1"    "open"    1.000000    ""
 "secdd 70360 70361 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001318"    "BUSDBL_001318'"    1.00    ""    ""    ""    0
 "secdd 70228 70361 '1 '  1"    "open"    1.000000    ""
 "secdd 70361 70380 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001319"    "BUSDBL_001319'"    1.00    ""    ""    ""    0
 "secdd 70360 70361 '1 '  1"    "open"    1.000000    ""
 "secdd 70361 70380 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001320"    "BUSDBL_001320'"    1.00    ""    ""    ""    0
 "secdd 70107 70362 '1 '  1"    "open"    1.000000    ""
 "secdd 70362 70605 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001321"    "BUSDBL_001321'"    1.00    ""    ""    ""    0
 "secdd 70201 70363 '1 '  1"    "open"    1.000000    ""
 "secdd 70267 70363 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_001322"    "BUSDBL_001322'"    1.00  ""    ""    ""    0
 "secdd 70114 70364 '1 '  1"    "open"    1.000000  ""
 "secdd 70199 70364 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001323"    "BUSDBL_001323'"    1.00  ""    ""    ""    0
 "secdd 70114 70364 '1 '  1"    "open"    1.000000  ""
 "secdd 70258 70364 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001324"    "BUSDBL_001324'"    1.00  ""    ""    ""    0
 "secdd 70199 70364 '1 '  1"    "open"    1.000000  ""
 "secdd 70258 70364 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001325"    "BUSDBL_001325'"    1.00  ""    ""    ""    0
 "secdd 70260 70365 '1 '  1"    "open"    1.000000  ""
 "secdd 70481 70365 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001326"    "BUSDBL_001326'"    1.00  ""    ""    ""    0
 "secdd 70250 70366 '1 '  1"    "open"    1.000000  ""
 "secdd 70275 70366 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001327"    "BUSDBL_001327'"    1.00  ""    ""    ""    0
 "secdd 70250 70366 '1 '  1"    "open"    1.000000  ""
 "tran 70344 70366 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001328"    "BUSDBL_001328'"    1.00  ""    ""    ""    0
 "secdd 70250 70366 '1 '  1"    "open"    1.000000  ""
 "secdd 70366 70372 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001329"    "BUSDBL_001329'"    1.00  ""    ""    ""    0
 "secdd 70275 70366 '1 '  1"    "open"    1.000000  ""
 "tran 70344 70366 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001330"    "BUSDBL_001330'"    1.00  ""    ""    ""    0
 "secdd 70275 70366 '1 '  1"    "open"    1.000000  ""
 "secdd 70366 70372 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001331"    "BUSDBL_001331'"    1.00  ""    ""    ""    0
 "tran 70344 70366 'U1'"    "open"    1.000000  ""
 "secdd 70366 70372 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001332"    "BUSDBL_001332'"    1.00  ""    ""    ""    0
 "secdd 70368 70116 '1 '  1"    "open"    1.000000  ""
 "secdd 70368 70475 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001333"    "BUSDBL_001333'"    1.00  ""    ""    ""    0
 "secdd 70368 70116 '1 '  1"    "open"    1.000000  ""
 "secdd 70368 73055 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001334"    "BUSDBL_001334'"    1.00  ""    ""    ""    0
 "secdd 70368 70116 '1 '  1"    "open"    1.000000  ""
 "secdd 70368 73554 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001335"    "BUSDBL_001335'"    1.00  ""    ""    ""    0
 "secdd 70368 70475 '1 '  1"    "open"    1.000000  ""
 "secdd 70368 73055 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001336"    "BUSDBL_001336'"    1.00  ""    ""    ""    0
 "secdd 70368 70475 '1 '  1"    "open"    1.000000  ""
 "secdd 70368 73554 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001337"    "BUSDBL_001337'"    1.00  ""    ""    ""    0
 "secdd 70368 73055 '1 '  1"    "open"    1.000000  ""
 "secdd 70368 73554 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001338"    "BUSDBL_001338'"    1.00  ""    ""    ""    0
 "secdd 70107 70369 '1 '  1"    "open"    1.000000  ""
 "secdd 70355 70369 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001339"    "BUSDBL_001339'"    1.00  ""    ""    ""    0
```

```
 "secdd 70220 70370 '1 ' 1"    "open"    1.000000  ""
 "secdd 70370 70371 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001340"    "BUSDBL_001340'"    1.00  ""    ""    ""    0
 "secdd 70085 70371 '1 ' 1"    "open"    1.000000  ""
 "secdd 70370 70371 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001341"    "BUSDBL_001341'"    1.00  ""    ""    ""    0
 "secdd 70085 70371 '1 ' 1"    "open"    1.000000  ""
 "secdd 70371 71031 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001342"    "BUSDBL_001342'"    1.00  ""    ""    ""    0
 "secdd 70370 70371 '1 ' 1"    "open"    1.000000  ""
 "secdd 70371 71031 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001343"    "BUSDBL_001343'"    1.00  ""    ""    ""    0
 "secdd 70178 70372 '1 ' 1"    "open"    1.000000  ""
 "secdd 70366 70372 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001344"    "BUSDBL_001344'"    1.00  ""    ""    ""    0
 "secdd 70178 70372 '1 ' 1"    "open"    1.000000  ""
 "tran 70372 71027 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001345"    "BUSDBL_001345'"    1.00  ""    ""    ""    0
 "secdd 70366 70372 '1 ' 1"    "open"    1.000000  ""
 "tran 70372 71027 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001346"    "BUSDBL_001346'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001347"    "BUSDBL_001347'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001348"    "BUSDBL_001348'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001349"    "BUSDBL_001349'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
 "secdd 70374 70467 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001350"    "BUSDBL_001350'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
 "tran 70932 70374 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001351"    "BUSDBL_001351'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001352"    "BUSDBL_001352'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70965 'T1'"    "open"    1.000000  ""
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001353"    "BUSDBL_001353'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70970 'T2'"    "open"    1.000000  ""
 "tran 70376 70374 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001354"    "BUSDBL_001354'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001355"    "BUSDBL_001355'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001356"    "BUSDBL_001356'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
```

```
 "secdd 70374 70467 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001357"    "BUSDBL_001357'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
 "tran 70932 70374 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001358"    "BUSDBL_001358'"    1.00  ""    ""    ""    0
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001359"    "BUSDBL_001359'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70965 'T1'"    "open"    1.000000  ""
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001360"    "BUSDBL_001360'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70970 'T2'"    "open"    1.000000  ""
 "tran 70376 70374 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001361"    "BUSDBL_001361'"    1.00  ""    ""    ""    0
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001362"    "BUSDBL_001362'"    1.00  ""    ""    ""    0
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
 "secdd 70374 70467 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001363"    "BUSDBL_001363'"    1.00  ""    ""    ""    0
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
 "tran 70932 70374 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001364"    "BUSDBL_001364'"    1.00  ""    ""    ""    0
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001365"    "BUSDBL_001365'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70965 'T1'"    "open"    1.000000  ""
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001366"    "BUSDBL_001366'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70970 'T2'"    "open"    1.000000  ""
 "secdd 70374 70379 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001367"    "BUSDBL_001367'"    1.00  ""    ""    ""    0
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
 "secdd 70374 70467 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001368"    "BUSDBL_001368'"    1.00  ""    ""    ""    0
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
 "tran 70932 70374 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001369"    "BUSDBL_001369'"    1.00  ""    ""    ""    0
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001370"    "BUSDBL_001370'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70965 'T1'"    "open"    1.000000  ""
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001371"    "BUSDBL_001371'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70970 'T2'"    "open"    1.000000  ""
 "secdd 70374 70411 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001372"    "BUSDBL_001372'"    1.00  ""    ""    ""    0
 "secdd 70374 70467 '1 ' 1"    "open"    1.000000  ""
 "tran 70932 70374 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001373"    "BUSDBL_001373'"    1.00  ""    ""    ""    0
 "secdd 70374 70467 '1 ' 1"    "open"    1.000000  ""
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001374"  "BUSDBL_001374'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70965 'T1'"  "open"  1.000000  ""
 "secdd 70374 70467 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001375"  "BUSDBL_001375'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70970 'T2'"  "open"  1.000000  ""
 "secdd 70374 70467 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001376"  "BUSDBL_001376'"  1.00  ""  ""  ""  0
 "tran 70932 70374 'U1'"  "open"  1.000000  ""
 "secdd 70374 70937 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001377"  "BUSDBL_001377'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70965 'T1'"  "open"  1.000000  ""
 "tran 70932 70374 'U1'"  "open"  1.000000  ""
0
"BUSDBL_001378"  "BUSDBL_001378'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70970 'T2'"  "open"  1.000000  ""
 "tran 70932 70374 'U1'"  "open"  1.000000  ""
0
"BUSDBL_001379"  "BUSDBL_001379'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70965 'T1'"  "open"  1.000000  ""
 "secdd 70374 70937 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001380"  "BUSDBL_001380'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70970 'T2'"  "open"  1.000000  ""
 "secdd 70374 70937 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001381"  "BUSDBL_001381'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70965 'T1'"  "open"  1.000000  ""
 "tran 70374 70375 70970 'T2'"  "open"  1.000000  ""
0
"BUSDBL_001382"  "BUSDBL_001382'"  1.00  ""  ""  ""  0
 "tran 70935 70375 '1 '"  "open"  1.000000  ""
 "secdd 70375 79054 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001383"  "BUSDBL_001383'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70965 'T1'"  "open"  1.000000  ""
 "tran 70935 70375 '1 '"  "open"  1.000000  ""
0
"BUSDBL_001384"  "BUSDBL_001384'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70970 'T2'"  "open"  1.000000  ""
 "tran 70935 70375 '1 '"  "open"  1.000000  ""
0
"BUSDBL_001385"  "BUSDBL_001385'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70965 'T1'"  "open"  1.000000  ""
 "secdd 70375 79054 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001386"  "BUSDBL_001386'"  1.00  ""  ""  ""  0
 "tran 70374 70375 70970 'T2'"  "open"  1.000000  ""
 "secdd 70375 79054 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001387"  "BUSDBL_001387'"  1.00  ""  ""  ""  0
 "secdd 70028 70376 '1 '  1"  "open"  1.000000  ""
 "secdd 70230 70376 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001388"  "BUSDBL_001388'"  1.00  ""  ""  ""  0
 "secdd 70028 70376 '1 '  1"  "open"  1.000000  ""
 "secdd 70292 70376 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001389"  "BUSDBL_001389'"  1.00  ""  ""  ""  0
 "secdd 70028 70376 '1 '  1"  "open"  1.000000  ""
 "tran 70376 70374 'T3'"  "open"  1.000000  ""
0
"BUSDBL_001390"  "BUSDBL_001390'"  1.00  ""  ""  ""  0
 "secdd 70028 70376 '1 '  1"  "open"  1.000000  ""
 "tran 70376 70374 'T4'"  "open"  1.000000  ""
0
```

```
"BUSDBL_001391"  "BUSDBL_001391'"  1.00  ""  ""  ""  0
 "secdd 70230 70376 '1 '  1"  "open"  1.000000  ""
 "secdd 70292 70376 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001392"  "BUSDBL_001392'"  1.00  ""  ""  ""  0
 "secdd 70230 70376 '1 '  1"  "open"  1.000000  ""
 "tran 70376 70374 'T3'"  "open"  1.000000  ""
0
"BUSDBL_001393"  "BUSDBL_001393'"  1.00  ""  ""  ""  0
 "secdd 70230 70376 '1 '  1"  "open"  1.000000  ""
 "tran 70376 70374 'T4'"  "open"  1.000000  ""
0
"BUSDBL_001394"  "BUSDBL_001394'"  1.00  ""  ""  ""  0
 "secdd 70292 70376 '1 '  1"  "open"  1.000000  ""
 "tran 70376 70374 'T3'"  "open"  1.000000  ""
0
"BUSDBL_001395"  "BUSDBL_001395'"  1.00  ""  ""  ""  0
 "secdd 70292 70376 '1 '  1"  "open"  1.000000  ""
 "tran 70376 70374 'T4'"  "open"  1.000000  ""
0
"BUSDBL_001396"  "BUSDBL_001396'"  1.00  ""  ""  ""  0
 "secdd 70126 70377 '1 '  1"  "open"  1.000000  ""
 "secdd 70259 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001397"  "BUSDBL_001397'"  1.00  ""  ""  ""  0
 "secdd 70126 70377 '1 '  1"  "open"  1.000000  ""
 "secdd 70277 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001398"  "BUSDBL_001398'"  1.00  ""  ""  ""  0
 "secdd 70126 70377 '1 '  1"  "open"  1.000000  ""
 "secdd 70298 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001399"  "BUSDBL_001399'"  1.00  ""  ""  ""  0
 "secdd 70259 70377 '1 '  1"  "open"  1.000000  ""
 "secdd 70277 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001400"  "BUSDBL_001400'"  1.00  ""  ""  ""  0
 "secdd 70259 70377 '1 '  1"  "open"  1.000000  ""
 "secdd 70298 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001401"  "BUSDBL_001401'"  1.00  ""  ""  ""  0
 "secdd 70277 70377 '1 '  1"  "open"  1.000000  ""
 "secdd 70298 70377 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001402"  "BUSDBL_001402'"  1.00  ""  ""  ""  0
 "tran 70306 70378 'T1'"  "open"  1.000000  ""
 "secdd 70378 70550 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001403"  "BUSDBL_001403'"  1.00  ""  ""  ""  0
 "tran 70306 70378 'T2'"  "open"  1.000000  ""
 "secdd 70378 70550 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001404"  "BUSDBL_001404'"  1.00  ""  ""  ""  0
 "secdd 70327 70379 '1 '  1"  "open"  1.000000  ""
 "secdd 70374 70379 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001405"  "BUSDBL_001405'"  1.00  ""  ""  ""  0
 "secdd 70327 70379 '1 '  1"  "open"  1.000000  ""
 "tran 70380 70379 'T1'"  "open"  1.000000  ""
0
"BUSDBL_001406"  "BUSDBL_001406'"  1.00  ""  ""  ""  0
 "secdd 70374 70379 '1 '  1"  "open"  1.000000  ""
 "tran 70380 70379 'T1'"  "open"  1.000000  ""
0
"BUSDBL_001407"  "BUSDBL_001407'"  1.00  ""  ""  ""  0
 "secdd 70118 70380 '1 '  1"  "open"  1.000000  ""
 "secdd 70361 70380 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001408"  "BUSDBL_001408'"  1.00  ""  ""  ""  0
```

```
 "secdd 70118 70380 '1 ' 1"    "open"    1.000000  ""
 "tran 70380 70379 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001409"    "BUSDBL_001409'"    1.00  ""    ""    ""    0
 "secdd 70361 70380 '1 ' 1"    "open"    1.000000  ""
 "tran 70380 70379 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001410"    "BUSDBL_001410'"    1.00  ""    ""    ""    0
 "secdd 70514 70381 '1 ' 1"    "open"    1.000000  ""
 "secdd 70381 70522 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001411"    "BUSDBL_001411'"    1.00  ""    ""    ""    0
 "secdd 70065 70382 '1 ' 1"    "open"    1.000000  ""
 "secdd 70175 70382 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001412"    "BUSDBL_001412'"    1.00  ""    ""    ""    0
 "secdd 70325 70383 '1 ' 1"    "open"    1.000000  ""
 "secdd 70348 70383 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001413"    "BUSDBL_001413'"    1.00  ""    ""    ""    0
 "secdd 70325 70383 '1 ' 1"    "open"    1.000000  ""
 "secdd 70383 70655 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001414"    "BUSDBL_001414'"    1.00  ""    ""    ""    0
 "secdd 70348 70383 '1 ' 1"    "open"    1.000000  ""
 "secdd 70383 70655 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001415"    "BUSDBL_001415'"    1.00  ""    ""    ""    0
 "secdd 70036 70384 '1 ' 1"    "open"    1.000000  ""
 "secdd 70166 70384 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001416"    "BUSDBL_001416'"    1.00  ""    ""    ""    0
 "tran 70385 70386 'U1'"    "open"    1.000000  ""
 "tran 70385 70387 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001417"    "BUSDBL_001417'"    1.00  ""    ""    ""    0
 "secdd 70201 70386 '1 ' 1"    "open"    1.000000  ""
 "tran 70385 70386 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001418"    "BUSDBL_001418'"    1.00  ""    ""    ""    0
 "secdd 70231 70387 '1 ' 1"    "open"    1.000000  ""
 "tran 70385 70387 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001419"    "BUSDBL_001419'"    1.00  ""    ""    ""    0
 "secdd 70296 70388 '1 ' 1"    "open"    1.000000  ""
 "secdd 70359 70388 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001420"    "BUSDBL_001420'"    1.00  ""    ""    ""    0
 "secdd 70086 70390 '1 ' 1"    "open"    1.000000  ""
 "secdd 70330 70390 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001421"    "BUSDBL_001421'"    1.00  ""    ""    ""    0
 "secdd 70392 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 700155 70392 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001422"    "BUSDBL_001422'"    1.00  ""    ""    ""    0
 "tran 70393 70327 71994 'T4'"    "open"    1.000000  ""
 "secdd 70393 79054 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001423"    "BUSDBL_001423'"    1.00  ""    ""    ""    0
 "secdd 70394 70550 '1 ' 1"    "open"    1.000000  ""
 "secdd 77642 70394 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001424"    "BUSDBL_001424'"    1.00  ""    ""    ""    0
 "secdd 70395 70125 '1 ' 1"    "open"    1.000000  ""
 "secdd 70171 70395 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001425"    "BUSDBL_001425'"    1.00  ""    ""    ""    0
 "secdd 70395 70125 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70171 70395 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001426"    "BUSDBL_001426'"    1.00  ""    ""    ""    0
 "secdd 70395 70125 '1 ' 1"    "open"    1.000000  ""
 "secdd 70395 70416 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001427"    "BUSDBL_001427'"    1.00  ""    ""    ""    0
 "secdd 70395 70125 '1 ' 1"    "open"    1.000000  ""
 "tran 70396 70395 71990 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001428"    "BUSDBL_001428'"    1.00  ""    ""    ""    0
 "secdd 70171 70395 '1 ' 1"    "open"    1.000000  ""
 "secdd 70395 70416 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001429"    "BUSDBL_001429'"    1.00  ""    ""    ""    0
 "secdd 70171 70395 '1 ' 1"    "open"    1.000000  ""
 "tran 70396 70395 71990 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001430"    "BUSDBL_001430'"    1.00  ""    ""    ""    0
 "secdd 70171 70395 '2 ' 1"    "open"    1.000000  ""
 "secdd 70395 70416 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001431"    "BUSDBL_001431'"    1.00  ""    ""    ""    0
 "secdd 70171 70395 '2 ' 1"    "open"    1.000000  ""
 "tran 70396 70395 71990 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001432"    "BUSDBL_001432'"    1.00  ""    ""    ""    0
 "tran 70396 70395 71990 'T1'"    "open"    1.000000  ""
 "secdd 70395 70416 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001433"    "BUSDBL_001433'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70067 70396 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001434"    "BUSDBL_001434'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70283 70396 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001435"    "BUSDBL_001435'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70343 70396 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001436"    "BUSDBL_001436'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70396 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001437"    "BUSDBL_001437'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70396 70532 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001438"    "BUSDBL_001438'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70396 70551 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001439"    "BUSDBL_001439'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "secdd 70396 70596 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001440"    "BUSDBL_001440'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "tran 70599 70396 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001441"    "BUSDBL_001441'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "tran 70599 70396 'T5'"    "open"    1.000000  ""
0
"BUSDBL_001442"    "BUSDBL_001442'"    1.00  ""    ""    ""    0
 "secdd 70046 70396 '1 ' 1"    "open"    1.000000  ""
 "tran 70396 70395 71990 'T1'"    "open"    1.000000  ""
```

```
0
"BUSDBL_001443"    "BUSDBL_001443'"    1.00    ""    ""    ""    0
 "secdd 70046 70396 '1 '  1"    "open"    1.000000  ""
 "tran 70396 70125 71991 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001444"    "BUSDBL_001444'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001445"    "BUSDBL_001445'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "secdd 70343 70396 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001446"    "BUSDBL_001446'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "secdd 70396 70528 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001447"    "BUSDBL_001447'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "secdd 70396 70532 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001448"    "BUSDBL_001448'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "secdd 70396 70551 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001449"    "BUSDBL_001449'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "secdd 70396 70596 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001450"    "BUSDBL_001450'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "tran 70599 70396 'T4'"    "open"    1.000000  ""
0
"BUSDBL_001451"    "BUSDBL_001451'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "tran 70599 70396 'T5'"    "open"    1.000000  ""
0
"BUSDBL_001452"    "BUSDBL_001452'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "tran 70396 70395 71990 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001453"    "BUSDBL_001453'"    1.00    ""    ""    ""    0
 "secdd 70067 70396 '2 '  1"    "open"    1.000000  ""
 "tran 70396 70125 71991 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001454"    "BUSDBL_001454'"    1.00    ""    ""    ""    0
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
 "secdd 70343 70396 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001455"    "BUSDBL_001455'"    1.00    ""    ""    ""    0
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
 "secdd 70396 70528 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001456"    "BUSDBL_001456'"    1.00    ""    ""    ""    0
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
 "secdd 70396 70532 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001457"    "BUSDBL_001457'"    1.00    ""    ""    ""    0
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
 "secdd 70396 70551 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001458"    "BUSDBL_001458'"    1.00    ""    ""    ""    0
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
 "secdd 70396 70596 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001459"    "BUSDBL_001459'"    1.00    ""    ""    ""    0
 "secdd 70283 70396 '1 '  1"    "open"    1.000000  ""
 "tran 70599 70396 'T4'"    "open"    1.000000  ""
0
```

```
"BUSDBL_001460"  "BUSDBL_001460'"  1.00  ""  ""  ""  0
 "secdd 70283 70396 '1 '  1"  "open"  1.000000  ""
 "tran 70599 70396 'T5'"  "open"  1.000000  ""
0
"BUSDBL_001461"  "BUSDBL_001461'"  1.00  ""  ""  ""  0
 "secdd 70283 70396 '1 '  1"  "open"  1.000000  ""
 "tran 70396 70395 71990 'T1'"  "open"  1.000000  ""
0
"BUSDBL_001462"  "BUSDBL_001462'"  1.00  ""  ""  ""  0
 "tran 70396 70125 71991 'T2'"  "open"  1.000000  ""
 "secdd 70283 70396 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001463"  "BUSDBL_001463'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001464"  "BUSDBL_001464'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70532 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001465"  "BUSDBL_001465'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70551 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001466"  "BUSDBL_001466'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70596 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001467"  "BUSDBL_001467'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "tran 70599 70396 'T4'"  "open"  1.000000  ""
0
"BUSDBL_001468"  "BUSDBL_001468'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "tran 70599 70396 'T5'"  "open"  1.000000  ""
0
"BUSDBL_001469"  "BUSDBL_001469'"  1.00  ""  ""  ""  0
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
 "tran 70396 70395 71990 'T1'"  "open"  1.000000  ""
0
"BUSDBL_001470"  "BUSDBL_001470'"  1.00  ""  ""  ""  0
 "tran 70396 70125 71991 'T2'"  "open"  1.000000  ""
 "secdd 70343 70396 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001471"  "BUSDBL_001471'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70532 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001472"  "BUSDBL_001472'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70551 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001473"  "BUSDBL_001473'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70596 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001474"  "BUSDBL_001474'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "tran 70599 70396 'T4'"  "open"  1.000000  ""
0
"BUSDBL_001475"  "BUSDBL_001475'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "tran 70599 70396 'T5'"  "open"  1.000000  ""
0
"BUSDBL_001476"  "BUSDBL_001476'"  1.00  ""  ""  ""  0
 "tran 70396 70395 71990 'T1'"  "open"  1.000000  ""
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001477"  "BUSDBL_001477'"  1.00  ""  ""  ""  0
```

```
 "tran 70396 70125 71991 'T2'"   "open"   1.000000  ""
 "secdd 70396 70528 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001478"   "BUSDBL_001478'"   1.00  ""   ""   ""   0
 "secdd 70396 70532 '1 '  1"   "open"   1.000000  ""
 "secdd 70396 70551 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001479"   "BUSDBL_001479'"   1.00  ""   ""   ""   0
 "secdd 70396 70532 '1 '  1"   "open"   1.000000  ""
 "secdd 70396 70596 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001480"   "BUSDBL_001480'"   1.00  ""   ""   ""   0
 "secdd 70396 70532 '1 '  1"   "open"   1.000000  ""
 "tran 70599 70396 'T4'"   "open"   1.000000  ""
0
"BUSDBL_001481"   "BUSDBL_001481'"   1.00  ""   ""   ""   0
 "secdd 70396 70532 '1 '  1"   "open"   1.000000  ""
 "tran 70599 70396 'T5'"   "open"   1.000000  ""
0
"BUSDBL_001482"   "BUSDBL_001482'"   1.00  ""   ""   ""   0
 "tran 70396 70395 71990 'T1'"   "open"   1.000000  ""
 "secdd 70396 70532 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001483"   "BUSDBL_001483'"   1.00  ""   ""   ""   0
 "tran 70396 70125 71991 'T2'"   "open"   1.000000  ""
 "secdd 70396 70532 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001484"   "BUSDBL_001484'"   1.00  ""   ""   ""   0
 "secdd 70396 70551 '1 '  1"   "open"   1.000000  ""
 "secdd 70396 70596 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001485"   "BUSDBL_001485'"   1.00  ""   ""   ""   0
 "secdd 70396 70551 '1 '  1"   "open"   1.000000  ""
 "tran 70599 70396 'T4'"   "open"   1.000000  ""
0
"BUSDBL_001486"   "BUSDBL_001486'"   1.00  ""   ""   ""   0
 "secdd 70396 70551 '1 '  1"   "open"   1.000000  ""
 "tran 70599 70396 'T5'"   "open"   1.000000  ""
0
"BUSDBL_001487"   "BUSDBL_001487'"   1.00  ""   ""   ""   0
 "tran 70396 70395 71990 'T1'"   "open"   1.000000  ""
 "secdd 70396 70551 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001488"   "BUSDBL_001488'"   1.00  ""   ""   ""   0
 "tran 70396 70125 71991 'T2'"   "open"   1.000000  ""
 "secdd 70396 70551 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001489"   "BUSDBL_001489'"   1.00  ""   ""   ""   0
 "secdd 70396 70596 '1 '  1"   "open"   1.000000  ""
 "tran 70599 70396 'T4'"   "open"   1.000000  ""
0
"BUSDBL_001490"   "BUSDBL_001490'"   1.00  ""   ""   ""   0
 "secdd 70396 70596 '1 '  1"   "open"   1.000000  ""
 "tran 70599 70396 'T5'"   "open"   1.000000  ""
0
"BUSDBL_001491"   "BUSDBL_001491'"   1.00  ""   ""   ""   0
 "tran 70396 70395 71990 'T1'"   "open"   1.000000  ""
 "secdd 70396 70596 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001492"   "BUSDBL_001492'"   1.00  ""   ""   ""   0
 "tran 70396 70125 71991 'T2'"   "open"   1.000000  ""
 "secdd 70396 70596 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001493"   "BUSDBL_001493'"   1.00  ""   ""   ""   0
 "tran 70599 70396 'T4'"   "open"   1.000000  ""
 "tran 70599 70396 'T5'"   "open"   1.000000  ""
0
"BUSDBL_001494"   "BUSDBL_001494'"   1.00  ""   ""   ""   0
 "tran 70396 70395 71990 'T1'"   "open"   1.000000  ""
```

```
 "tran 70599 70396 'T4'"   "open"    1.000000  ""
0
"BUSDBL_001495"   "BUSDBL_001495'"    1.00  ""    ""    ""   0
 "tran 70396 70125 71991 'T2'"   "open"    1.000000  ""
 "tran 70599 70396 'T4'"   "open"    1.000000  ""
0
"BUSDBL_001496"   "BUSDBL_001496'"    1.00  ""    ""    ""   0
 "tran 70396 70395 71990 'T1'"   "open"    1.000000  ""
 "tran 70599 70396 'T5'"   "open"    1.000000  ""
0
"BUSDBL_001497"   "BUSDBL_001497'"    1.00  ""    ""    ""   0
 "tran 70396 70125 71991 'T2'"   "open"    1.000000  ""
 "tran 70599 70396 'T5'"   "open"    1.000000  ""
0
"BUSDBL_001498"   "BUSDBL_001498'"    1.00  ""    ""    ""   0
 "tran 70396 70125 71991 'T2'"   "open"    1.000000  ""
 "tran 70396 70395 71990 'T1'"   "open"    1.000000  ""
0
"BUSDBL_001499"   "BUSDBL_001499'"    1.00  ""    ""    ""   0
 "secdd 70005 70397 '2 '  1"   "open"    1.000000  ""
 "secdd 70397 70398 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001500"   "BUSDBL_001500'"    1.00  ""    ""    ""   0
 "secdd 70005 70397 '2 '  1"   "open"    1.000000  ""
 "secdd 70397 73020 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001501"   "BUSDBL_001501'"    1.00  ""    ""    ""   0
 "secdd 70397 70398 '1 '  1"   "open"    1.000000  ""
 "secdd 70397 73020 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001502"   "BUSDBL_001502'"    1.00  ""    ""    ""   0
 "secdd 70006 70398 '1 '  1"   "open"    1.000000  ""
 "secdd 70397 70398 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001503"   "BUSDBL_001503'"    1.00  ""    ""    ""   0
 "secdd 70006 70398 '1 '  1"   "open"    1.000000  ""
 "tran 70398 70399 'T1'"   "open"    1.000000  ""
0
"BUSDBL_001504"   "BUSDBL_001504'"    1.00  ""    ""    ""   0
 "secdd 70397 70398 '1 '  1"   "open"    1.000000  ""
 "tran 70398 70399 'T1'"   "open"    1.000000  ""
0
"BUSDBL_001505"   "BUSDBL_001505'"    1.00  ""    ""    ""   0
 "tran 70398 70399 'T1'"   "open"    1.000000  ""
 "secdd 70399 73192 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001506"   "BUSDBL_001506'"    1.00  ""    ""    ""   0
 "tran 70400 70018 'T2'"   "open"    1.000000  ""
 "secdd 70023 70400 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001507"   "BUSDBL_001507'"    1.00  ""    ""    ""   0
 "tran 70400 70018 'T2'"   "open"    1.000000  ""
 "secdd 70142 70400 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001508"   "BUSDBL_001508'"    1.00  ""    ""    ""   0
 "tran 70400 70018 'T2'"   "open"    1.000000  ""
 "secdd 70224 70400 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001509"   "BUSDBL_001509'"    1.00  ""    ""    ""   0
 "tran 70400 70018 'T2'"   "open"    1.000000  ""
 "secdd 70400 70429 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001510"   "BUSDBL_001510'"    1.00  ""    ""    ""   0
 "secdd 70023 70400 '1 '  1"   "open"    1.000000  ""
 "secdd 70142 70400 '1 '  1"   "open"    1.000000  ""
0
"BUSDBL_001511"   "BUSDBL_001511'"    1.00  ""    ""    ""   0
 "secdd 70023 70400 '1 '  1"   "open"    1.000000  ""
 "secdd 70224 70400 '1 '  1"   "open"    1.000000  ""
```

```
0
"BUSDBL_001512"    "BUSDBL_001512'"    1.00  ""    ""    ""    0
 "secdd 70023 70400 '1 '  1"    "open"    1.000000  ""
 "secdd 70400 70429 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001513"    "BUSDBL_001513'"    1.00  ""    ""    ""    0
 "secdd 70142 70400 '1 '  1"    "open"    1.000000  ""
 "secdd 70224 70400 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001514"    "BUSDBL_001514'"    1.00  ""    ""    ""    0
 "secdd 70142 70400 '1 '  1"    "open"    1.000000  ""
 "secdd 70400 70429 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001515"    "BUSDBL_001515'"    1.00  ""    ""    ""    0
 "secdd 70224 70400 '1 '  1"    "open"    1.000000  ""
 "secdd 70400 70429 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001516"    "BUSDBL_001516'"    1.00  ""    ""    ""    0
 "secdd 70037 70401 '1 '  1"    "open"    1.000000  ""
 "secdd 70045 70401 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001517"    "BUSDBL_001517'"    1.00  ""    ""    ""    0
 "secdd 70037 70401 '1 '  1"    "open"    1.000000  ""
 "secdd 70402 70401 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001518"    "BUSDBL_001518'"    1.00  ""    ""    ""    0
 "secdd 70045 70401 '1 '  1"    "open"    1.000000  ""
 "secdd 70402 70401 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001519"    "BUSDBL_001519'"    1.00  ""    ""    ""    0
 "secdd 70208 70402 '1 '  1"    "open"    1.000000  ""
 "secdd 70402 70401 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001520"    "BUSDBL_001520'"    1.00  ""    ""    ""    0
 "secdd 70208 70402 '1 '  1"    "open"    1.000000  ""
 "secdd 70402 70531 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001521"    "BUSDBL_001521'"    1.00  ""    ""    ""    0
 "secdd 70402 70401 '1 '  1"    "open"    1.000000  ""
 "secdd 70402 70531 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001522"    "BUSDBL_001522'"    1.00  ""    ""    ""    0
 "secdd 70051 70405 '1 '  1"    "open"    1.000000  ""
 "secdd 70317 70405 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001523"    "BUSDBL_001523'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001524"    "BUSDBL_001524'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001525"    "BUSDBL_001525'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001526"    "BUSDBL_001526'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001527"    "BUSDBL_001527'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 70471 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001528"    "BUSDBL_001528'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 70474 '1 '  1"    "open"    1.000000  ""
0
```

```
"BUSDBL_001529"    "BUSDBL_001529'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 70544 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001530"    "BUSDBL_001530'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 70592 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001531"    "BUSDBL_001531'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 70820 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001532"    "BUSDBL_001532'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001533"    "BUSDBL_001533'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001534"    "BUSDBL_001534'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001535"    "BUSDBL_001535'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001536"    "BUSDBL_001536'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001537"    "BUSDBL_001537'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001538"    "BUSDBL_001538'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001539"    "BUSDBL_001539'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '1 '  1"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001540"    "BUSDBL_001540'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001541"    "BUSDBL_001541'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001542"    "BUSDBL_001542'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001543"    "BUSDBL_001543'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001544"    "BUSDBL_001544'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "secdd 70410 70471 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001545"    "BUSDBL_001545'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 '  1"    "open"    1.000000  ""
 "secdd 70410 70474 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001546"    "BUSDBL_001546'"    1.00  ""    ""    ""    0
```

```
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "secdd 70410 70544 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001547"    "BUSDBL_001547'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001548"    "BUSDBL_001548'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001549"    "BUSDBL_001549'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001550"    "BUSDBL_001550'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001551"    "BUSDBL_001551'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001552"    "BUSDBL_001552'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001553"    "BUSDBL_001553'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001554"    "BUSDBL_001554'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "secdd 70410 78120 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001555"    "BUSDBL_001555'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001556"    "BUSDBL_001556'"    1.00  ""    ""    ""    0
 "secdd 70192 70410 '2 ' 1"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001557"    "BUSDBL_001557'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001558"    "BUSDBL_001558'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001559"    "BUSDBL_001559'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001560"    "BUSDBL_001560'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001561"    "BUSDBL_001561'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001562"    "BUSDBL_001562'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "secdd 70410 70544 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001563"    "BUSDBL_001563'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
```

```
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001564"    "BUSDBL_001564'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001565"    "BUSDBL_001565'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001566"    "BUSDBL_001566'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001567"    "BUSDBL_001567'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001568"    "BUSDBL_001568'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001569"    "BUSDBL_001569'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001570"    "BUSDBL_001570'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001571"    "BUSDBL_001571'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001572"    "BUSDBL_001572'"    1.00  ""    ""    ""    0
 "tran 70406 70410 'U2'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001573"    "BUSDBL_001573'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001574"    "BUSDBL_001574'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001575"    "BUSDBL_001575'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001576"    "BUSDBL_001576'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001577"    "BUSDBL_001577'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 70544 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001578"    "BUSDBL_001578'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001579"    "BUSDBL_001579'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001580"    "BUSDBL_001580'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
```

```
0
"BUSDBL_001581"    "BUSDBL_001581'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001582"    "BUSDBL_001582'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001583"    "BUSDBL_001583'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001584"    "BUSDBL_001584'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001585"    "BUSDBL_001585'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001586"    "BUSDBL_001586'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001587"    "BUSDBL_001587'"    1.00  ""    ""    ""    0
 "tran 70407 70410 'U3'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001588"    "BUSDBL_001588'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001589"    "BUSDBL_001589'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 70471 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001590"    "BUSDBL_001590'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 70474 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001591"    "BUSDBL_001591'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 70544 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001592"    "BUSDBL_001592'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 70592 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001593"    "BUSDBL_001593'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 70820 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001594"    "BUSDBL_001594'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001595"    "BUSDBL_001595'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001596"    "BUSDBL_001596'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001597"    "BUSDBL_001597'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
```

```
"BUSDBL_001598"    "BUSDBL_001598'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001599"    "BUSDBL_001599'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001600"    "BUSDBL_001600'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001601"    "BUSDBL_001601'"    1.00  ""    ""    ""    0
 "tran 70408 70410 'U4'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001602"    "BUSDBL_001602'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 70471 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001603"    "BUSDBL_001603'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 70474 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001604"    "BUSDBL_001604'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 70544 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001605"    "BUSDBL_001605'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 70592 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001606"    "BUSDBL_001606'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 70820 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001607"    "BUSDBL_001607'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001608"    "BUSDBL_001608'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001609"    "BUSDBL_001609'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001610"    "BUSDBL_001610'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001611"    "BUSDBL_001611'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001612"    "BUSDBL_001612'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001613"    "BUSDBL_001613'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001614"    "BUSDBL_001614'"    1.00  ""    ""    ""    0
 "tran 70409 70410 'U1'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001615"    "BUSDBL_001615'"    1.00  ""    ""    ""    0
```

```
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001616"    "BUSDBL_001616'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70544 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001617"    "BUSDBL_001617'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001618"    "BUSDBL_001618'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001619"    "BUSDBL_001619'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001620"    "BUSDBL_001620'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001621"    "BUSDBL_001621'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001622"    "BUSDBL_001622'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001623"    "BUSDBL_001623'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001624"    "BUSDBL_001624'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 78120 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001625"    "BUSDBL_001625'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001626"    "BUSDBL_001626'"    1.00  ""    ""    ""    0
 "secdd 70410 70471 '1 ' 1"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001627"    "BUSDBL_001627'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70544 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001628"    "BUSDBL_001628'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001629"    "BUSDBL_001629'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001630"    "BUSDBL_001630'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001631"    "BUSDBL_001631'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001632"    "BUSDBL_001632'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
```

```
 "tran 70950 70410 'U5'"  "open"  1.000000  ""
0
"BUSDBL_001633"  "BUSDBL_001633'"  1.00  ""  ""  ""  0
 "secdd 70410 70474 '1 '  1"  "open"  1.000000  ""
 "tran 70951 70410 'U6'"  "open"  1.000000  ""
0
"BUSDBL_001634"  "BUSDBL_001634'"  1.00  ""  ""  ""  0
 "secdd 70410 70474 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 78105 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001635"  "BUSDBL_001635'"  1.00  ""  ""  ""  0
 "secdd 70410 70474 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 78120 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001636"  "BUSDBL_001636'"  1.00  ""  ""  ""  0
 "secdd 70410 70474 '1 '  1"  "open"  1.000000  ""
 "tran 700002 70410 'U7'"  "open"  1.000000  ""
0
"BUSDBL_001637"  "BUSDBL_001637'"  1.00  ""  ""  ""  0
 "secdd 70410 70474 '1 '  1"  "open"  1.000000  ""
 "tran 700003 70410 'U8'"  "open"  1.000000  ""
0
"BUSDBL_001638"  "BUSDBL_001638'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 70592 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001639"  "BUSDBL_001639'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 70820 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001640"  "BUSDBL_001640'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "tran 70410 70916 'T7'"  "open"  1.000000  ""
0
"BUSDBL_001641"  "BUSDBL_001641'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "tran 70410 70916 'T8'"  "open"  1.000000  ""
0
"BUSDBL_001642"  "BUSDBL_001642'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "tran 70950 70410 'U5'"  "open"  1.000000  ""
0
"BUSDBL_001643"  "BUSDBL_001643'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "tran 70951 70410 'U6'"  "open"  1.000000  ""
0
"BUSDBL_001644"  "BUSDBL_001644'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 78105 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001645"  "BUSDBL_001645'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 78120 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001646"  "BUSDBL_001646'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "tran 700002 70410 'U7'"  "open"  1.000000  ""
0
"BUSDBL_001647"  "BUSDBL_001647'"  1.00  ""  ""  ""  0
 "secdd 70410 70544 '1 '  1"  "open"  1.000000  ""
 "tran 700003 70410 'U8'"  "open"  1.000000  ""
0
"BUSDBL_001648"  "BUSDBL_001648'"  1.00  ""  ""  ""  0
 "secdd 70410 70592 '1 '  1"  "open"  1.000000  ""
 "secdd 70410 70820 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001649"  "BUSDBL_001649'"  1.00  ""  ""  ""  0
 "secdd 70410 70592 '1 '  1"  "open"  1.000000  ""
 "tran 70410 70916 'T7'"  "open"  1.000000  ""
```

```
0
"BUSDBL_001650"    "BUSDBL_001650'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "tran 70410 70916 'T8'"    "open"    1.000000    ""
0
"BUSDBL_001651"    "BUSDBL_001651'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "tran 70950 70410 'U5'"    "open"    1.000000    ""
0
"BUSDBL_001652"    "BUSDBL_001652'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "tran 70951 70410 'U6'"    "open"    1.000000    ""
0
"BUSDBL_001653"    "BUSDBL_001653'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001654"    "BUSDBL_001654'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "secdd 70410 78120 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001655"    "BUSDBL_001655'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "tran 700002 70410 'U7'"    "open"    1.000000    ""
0
"BUSDBL_001656"    "BUSDBL_001656'"    1.00    ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000    ""
 "tran 700003 70410 'U8'"    "open"    1.000000    ""
0
"BUSDBL_001657"    "BUSDBL_001657'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "tran 70410 70916 'T7'"    "open"    1.000000    ""
0
"BUSDBL_001658"    "BUSDBL_001658'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "tran 70410 70916 'T8'"    "open"    1.000000    ""
0
"BUSDBL_001659"    "BUSDBL_001659'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "tran 70950 70410 'U5'"    "open"    1.000000    ""
0
"BUSDBL_001660"    "BUSDBL_001660'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "tran 70951 70410 'U6'"    "open"    1.000000    ""
0
"BUSDBL_001661"    "BUSDBL_001661'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001662"    "BUSDBL_001662'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "secdd 70410 78120 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001663"    "BUSDBL_001663'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "tran 700002 70410 'U7'"    "open"    1.000000    ""
0
"BUSDBL_001664"    "BUSDBL_001664'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 ' 1"    "open"    1.000000    ""
 "tran 700003 70410 'U8'"    "open"    1.000000    ""
0
"BUSDBL_001665"    "BUSDBL_001665'"    1.00    ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000    ""
 "tran 70410 70916 'T8'"    "open"    1.000000    ""
0
"BUSDBL_001666"    "BUSDBL_001666'"    1.00    ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000    ""
 "tran 70950 70410 'U5'"    "open"    1.000000    ""
0
```

```
"BUSDBL_001667"    "BUSDBL_001667'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001668"    "BUSDBL_001668'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001669"    "BUSDBL_001669'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001670"    "BUSDBL_001670'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001671"    "BUSDBL_001671'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T7'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001672"    "BUSDBL_001672'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
0
"BUSDBL_001673"    "BUSDBL_001673'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001674"    "BUSDBL_001674'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001675"    "BUSDBL_001675'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001676"    "BUSDBL_001676'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001677"    "BUSDBL_001677'"    1.00  ""    ""    ""    0
 "tran 70410 70916 'T8'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001678"    "BUSDBL_001678'"    1.00  ""    ""    ""    0
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001679"    "BUSDBL_001679'"    1.00  ""    ""    ""    0
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001680"    "BUSDBL_001680'"    1.00  ""    ""    ""    0
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001681"    "BUSDBL_001681'"    1.00  ""    ""    ""    0
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001682"    "BUSDBL_001682'"    1.00  ""    ""    ""    0
 "tran 70950 70410 'U5'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001683"    "BUSDBL_001683'"    1.00  ""    ""    ""    0
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001684"    "BUSDBL_001684'"    1.00  ""    ""    ""    0
```

```
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001685"    "BUSDBL_001685'"    1.00  ""    ""    ""    0
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001686"    "BUSDBL_001686'"    1.00  ""    ""    ""    0
 "tran 70951 70410 'U6'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001687"    "BUSDBL_001687'"    1.00  ""    ""    ""    0
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001688"    "BUSDBL_001688'"    1.00  ""    ""    ""    0
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001689"    "BUSDBL_001689'"    1.00  ""    ""    ""    0
 "secdd 70410 78105 '1 '  1"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001690"    "BUSDBL_001690'"    1.00  ""    ""    ""    0
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001691"    "BUSDBL_001691'"    1.00  ""    ""    ""    0
 "secdd 70410 78120 '1 '  1"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001692"    "BUSDBL_001692'"    1.00  ""    ""    ""    0
 "tran 700002 70410 'U7'"    "open"    1.000000  ""
 "tran 700003 70410 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001693"    "BUSDBL_001693'"    1.00  ""    ""    ""    0
 "secdd 70374 70411 '1 '  1"    "open"    1.000000  ""
 "secdd 70411 70658 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001694"    "BUSDBL_001694'"    1.00  ""    ""    ""    0
 "secdd 70336 70412 '1 '  1"    "open"    1.000000  ""
 "tran 70413 70412 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001695"    "BUSDBL_001695'"    1.00  ""    ""    ""    0
 "secdd 70336 70412 '1 '  1"    "open"    1.000000  ""
 "secdd 70412 70458 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001696"    "BUSDBL_001696'"    1.00  ""    ""    ""    0
 "tran 70413 70412 'T1'"    "open"    1.000000  ""
 "secdd 70412 70458 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001697"    "BUSDBL_001697'"    1.00  ""    ""    ""    0
 "tran 70413 70412 'T1'"    "open"    1.000000  ""
 "secdd 70413 70457 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001698"    "BUSDBL_001698'"    1.00  ""    ""    ""    0
 "secdd 70373 70414 '1 '  1"    "open"    1.000000  ""
 "secdd 70414 70467 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001699"    "BUSDBL_001699'"    1.00  ""    ""    ""    0
 "secdd 70415 70422 '1 '  1"    "open"    1.000000  ""
 "secdd 70415 70455 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001700"    "BUSDBL_001700'"    1.00  ""    ""    ""    0
 "secdd 70395 70416 '1 '  1"    "open"    1.000000  ""
 "secdd 70416 71512 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001701"    "BUSDBL_001701'"    1.00  ""    ""    ""    0
 "secdd 70395 70416 '1 '  1"    "open"    1.000000  ""
```

```
 "secdd 70416 71517 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001702"    "BUSDBL_001702'"    1.00  ""    ""    ""    0
 "secdd 70416 71512 '1 ' 1"    "open"    1.000000  ""
 "secdd 70416 71517 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001703"    "BUSDBL_001703'"    1.00  ""    ""    ""    0
 "secdd 70417 70428 '1 ' 1"    "open"    1.000000  ""
 "secdd 70417 70512 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001704"    "BUSDBL_001704'"    1.00  ""    ""    ""    0
 "secdd 70114 70418 '1 ' 1"    "open"    1.000000  ""
 "secdd 70418 70420 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001705"    "BUSDBL_001705'"    1.00  ""    ""    ""    0
 "secdd 70157 70419 '1 ' 1"    "open"    1.000000  ""
 "secdd 70419 70426 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001706"    "BUSDBL_001706'"    1.00  ""    ""    ""    0
 "secdd 70418 70420 '1 ' 1"    "open"    1.000000  ""
 "secdd 70420 70421 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001707"    "BUSDBL_001707'"    1.00  ""    ""    ""    0
 "secdd 70155 70421 '1 ' 1"    "open"    1.000000  ""
 "secdd 70281 70421 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001708"    "BUSDBL_001708'"    1.00  ""    ""    ""    0
 "secdd 70155 70421 '1 ' 1"    "open"    1.000000  ""
 "secdd 70420 70421 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001709"    "BUSDBL_001709'"    1.00  ""    ""    ""    0
 "secdd 70281 70421 '1 ' 1"    "open"    1.000000  ""
 "secdd 70420 70421 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001710"    "BUSDBL_001710'"    1.00  ""    ""    ""    0
 "secdd 70332 70422 '1 ' 1"    "open"    1.000000  ""
 "secdd 70415 70422 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001711"    "BUSDBL_001711'"    1.00  ""    ""    ""    0
 "secdd 70423 70058 '1 ' 1"    "open"    1.000000  ""
 "secdd 70423 70295 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001712"    "BUSDBL_001712'"    1.00  ""    ""    ""    0
 "secdd 70423 70058 '1 ' 1"    "open"    1.000000  ""
 "secdd 70423 70492 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001713"    "BUSDBL_001713'"    1.00  ""    ""    ""    0
 "secdd 70423 70058 '2 ' 1"    "open"    1.000000  ""
 "secdd 70423 70295 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001714"    "BUSDBL_001714'"    1.00  ""    ""    ""    0
 "secdd 70423 70058 '2 ' 1"    "open"    1.000000  ""
 "secdd 70423 70492 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001715"    "BUSDBL_001715'"    1.00  ""    ""    ""    0
 "secdd 70423 70295 '1 ' 1"    "open"    1.000000  ""
 "secdd 70423 70492 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001716"    "BUSDBL_001716'"    1.00  ""    ""    ""    0
 "secdd 70058 70424 '1 ' 1"    "open"    1.000000  ""
 "secdd 70059 70424 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001717"    "BUSDBL_001717'"    1.00  ""    ""    ""    0
 "secdd 70101 70425 '1 ' 1"    "open"    1.000000  ""
 "secdd 70425 70460 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001718"    "BUSDBL_001718'"    1.00  ""    ""    ""    0
 "secdd 70419 70426 '1 ' 1"    "open"    1.000000  ""
 "tran 70426 70427 'T1'"    "open"    1.000000  ""
```

```
0
"BUSDBL_001719"    "BUSDBL_001719'"    1.00    ""    ""    ""    0
 "tran 70426 70427 'T1'"    "open"    1.000000    ""
 "secdd 70427 70464 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001720"    "BUSDBL_001720'"    1.00    ""    ""    ""    0
 "tran 70426 70427 'T1'"    "open"    1.000000    ""
 "secdd 70427 70927 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001721"    "BUSDBL_001721'"    1.00    ""    ""    ""    0
 "secdd 70427 70464 '1 '  1"    "open"    1.000000    ""
 "secdd 70427 70927 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001722"    "BUSDBL_001722'"    1.00    ""    ""    ""    0
 "secdd 70212 70428 '2 '  1"    "open"    1.000000    ""
 "secdd 70417 70428 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001723"    "BUSDBL_001723'"    1.00    ""    ""    ""    0
 "secdd 70124 70429 '1 '  1"    "open"    1.000000    ""
 "secdd 70400 70429 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001724"    "BUSDBL_001724'"    1.00    ""    ""    ""    0
 "secdd 70356 70430 '1 '  1"    "open"    1.000000    ""
 "secdd 70357 70430 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001725"    "BUSDBL_001725'"    1.00    ""    ""    ""    0
 "secdd 70570 70431 '1 '  1"    "open"    1.000000    ""
 "tran 70580 70431 'U1'"    "open"    1.000000    ""
0
"BUSDBL_001726"    "BUSDBL_001726'"    1.00    ""    ""    ""    0
 "secdd 70570 70431 '1 '  1"    "open"    1.000000    ""
 "tran 70587 70431 'U2'"    "open"    1.000000    ""
0
"BUSDBL_001727"    "BUSDBL_001727'"    1.00    ""    ""    ""    0
 "tran 70580 70431 'U1'"    "open"    1.000000    ""
 "tran 70587 70431 'U2'"    "open"    1.000000    ""
0
"BUSDBL_001728"    "BUSDBL_001728'"    1.00    ""    ""    ""    0
 "secdd 70432 70530 '1 '  1"    "open"    1.000000    ""
 "secdd 70432 70539 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001729"    "BUSDBL_001729'"    1.00    ""    ""    ""    0
 "secdd 70570 70433 '1 '  1"    "open"    1.000000    ""
 "tran 70585 70433 'U3'"    "open"    1.000000    ""
0
"BUSDBL_001730"    "BUSDBL_001730'"    1.00    ""    ""    ""    0
 "secdd 70570 70433 '1 '  1"    "open"    1.000000    ""
 "tran 70586 70433 'U4'"    "open"    1.000000    ""
0
"BUSDBL_001731"    "BUSDBL_001731'"    1.00    ""    ""    ""    0
 "tran 70585 70433 'U3'"    "open"    1.000000    ""
 "tran 70586 70433 'U4'"    "open"    1.000000    ""
0
"BUSDBL_001732"    "BUSDBL_001732'"    1.00    ""    ""    ""    0
 "secdd 70273 70435 '1 '  1"    "open"    1.000000    ""
 "secdd 70304 70435 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001733"    "BUSDBL_001733'"    1.00    ""    ""    ""    0
 "secdd 70273 70435 '1 '  1"    "open"    1.000000    ""
 "secdd 70434 70435 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001734"    "BUSDBL_001734'"    1.00    ""    ""    ""    0
 "secdd 70304 70435 '1 '  1"    "open"    1.000000    ""
 "secdd 70434 70435 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001735"    "BUSDBL_001735'"    1.00    ""    ""    ""    0
 "secdd 70183 70436 '1 '  1"    "open"    1.000000    ""
 "tran 70437 70436 'T2'"    "open"    1.000000    ""
0
```

```
"BUSDBL_001736"    "BUSDBL_001736'"    1.00    ""    ""    ""    0
 "secdd 70183 70436 '1 '  1"    "open"    1.000000    ""
 "tran 70438 70436 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001737"    "BUSDBL_001737'"    1.00    ""    ""    ""    0
 "tran 70437 70436 'T2'"    "open"    1.000000    ""
 "tran 70438 70436 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001738"    "BUSDBL_001738'"    1.00    ""    ""    ""    0
 "tran 70437 70436 'T2'"    "open"    1.000000    ""
 "tran 70437 70438 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001739"    "BUSDBL_001739'"    1.00    ""    ""    ""    0
 "secdd 70078 70438 '1 '  1"    "open"    1.000000    ""
 "secdd 70268 70438 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001740"    "BUSDBL_001740'"    1.00    ""    ""    ""    0
 "secdd 70078 70438 '1 '  1"    "open"    1.000000    ""
 "tran 70438 70436 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001741"    "BUSDBL_001741'"    1.00    ""    ""    ""    0
 "secdd 70078 70438 '1 '  1"    "open"    1.000000    ""
 "tran 70437 70438 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001742"    "BUSDBL_001742'"    1.00    ""    ""    ""    0
 "secdd 70268 70438 '1 '  1"    "open"    1.000000    ""
 "tran 70438 70436 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001743"    "BUSDBL_001743'"    1.00    ""    ""    ""    0
 "secdd 70268 70438 '1 '  1"    "open"    1.000000    ""
 "tran 70437 70438 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001744"    "BUSDBL_001744'"    1.00    ""    ""    ""    0
 "tran 70438 70436 'T1'"    "open"    1.000000    ""
 "tran 70437 70438 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001745"    "BUSDBL_001745'"    1.00    ""    ""    ""    0
 "secdd 70059 70440 '1 '  1"    "open"    1.000000    ""
 "secdd 70065 70440 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001746"    "BUSDBL_001746'"    1.00    ""    ""    ""    0
 "secdd 70059 70440 '1 '  1"    "open"    1.000000    ""
 "secdd 70345 70440 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001747"    "BUSDBL_001747'"    1.00    ""    ""    ""    0
 "secdd 70059 70440 '1 '  1"    "open"    1.000000    ""
 "secdd 70444 70440 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001748"    "BUSDBL_001748'"    1.00    ""    ""    ""    0
 "secdd 70059 70440 '1 '  1"    "open"    1.000000    ""
 "tran 70440 70447 'T7'"    "open"    1.000000    ""
0
"BUSDBL_001749"    "BUSDBL_001749'"    1.00    ""    ""    ""    0
 "secdd 70059 70440 '1 '  1"    "open"    1.000000    ""
 "tran 70557 70440 'U7'"    "open"    1.000000    ""
0
"BUSDBL_001750"    "BUSDBL_001750'"    1.00    ""    ""    ""    0
 "secdd 70059 70440 '1 '  1"    "open"    1.000000    ""
 "tran 70558 70440 'U8'"    "open"    1.000000    ""
0
"BUSDBL_001751"    "BUSDBL_001751'"    1.00    ""    ""    ""    0
 "secdd 70065 70440 '1 '  1"    "open"    1.000000    ""
 "secdd 70345 70440 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001752"    "BUSDBL_001752'"    1.00    ""    ""    ""    0
 "secdd 70065 70440 '1 '  1"    "open"    1.000000    ""
 "secdd 70444 70440 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001753"    "BUSDBL_001753'"    1.00    ""    ""    ""    0
```

```
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70440 70447 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001754"    "BUSDBL_001754'"    1.00  ""    ""    ""    0
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70557 70440 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001755"    "BUSDBL_001755'"    1.00  ""    ""    ""    0
 "secdd 70065 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70558 70440 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001756"    "BUSDBL_001756'"    1.00  ""    ""    ""    0
 "secdd 70345 70440 '1 ' 1"    "open"    1.000000  ""
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001757"    "BUSDBL_001757'"    1.00  ""    ""    ""    0
 "secdd 70345 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70440 70447 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001758"    "BUSDBL_001758'"    1.00  ""    ""    ""    0
 "secdd 70345 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70557 70440 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001759"    "BUSDBL_001759'"    1.00  ""    ""    ""    0
 "secdd 70345 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70558 70440 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001760"    "BUSDBL_001760'"    1.00  ""    ""    ""    0
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70440 70447 'T7'"    "open"    1.000000  ""
0
"BUSDBL_001761"    "BUSDBL_001761'"    1.00  ""    ""    ""    0
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70557 70440 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001762"    "BUSDBL_001762'"    1.00  ""    ""    ""    0
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70558 70440 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001763"    "BUSDBL_001763'"    1.00  ""    ""    ""    0
 "tran 70440 70447 'T7'"    "open"    1.000000  ""
 "tran 70557 70440 'U7'"    "open"    1.000000  ""
0
"BUSDBL_001764"    "BUSDBL_001764'"    1.00  ""    ""    ""    0
 "tran 70440 70447 'T7'"    "open"    1.000000  ""
 "tran 70558 70440 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001765"    "BUSDBL_001765'"    1.00  ""    ""    ""    0
 "tran 70557 70440 'U7'"    "open"    1.000000  ""
 "tran 70558 70440 'U8'"    "open"    1.000000  ""
0
"BUSDBL_001766"    "BUSDBL_001766'"    1.00  ""    ""    ""    0
 "secdd 70036 70441 '1 ' 1"    "open"    1.000000  ""
 "secdd 70259 70441 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001767"    "BUSDBL_001767'"    1.00  ""    ""    ""    0
 "secdd 70034 70444 '2 ' 1"    "open"    1.000000  ""
 "secdd 70164 70444 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001768"    "BUSDBL_001768'"    1.00  ""    ""    ""    0
 "secdd 70034 70444 '2 ' 1"    "open"    1.000000  ""
 "secdd 70244 70444 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001769"    "BUSDBL_001769'"    1.00  ""    ""    ""    0
 "secdd 70034 70444 '2 ' 1"    "open"    1.000000  ""
 "secdd 70269 70444 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001770"    "BUSDBL_001770'"    1.00  ""    ""    ""    0
 "secdd 70034 70444 '2 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001771"    "BUSDBL_001771'"    1.00  ""    ""    ""    0
 "secdd 70034 70444 '2 ' 1"    "open"    1.000000  ""
 "tran 70444 70447 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001772"    "BUSDBL_001772'"    1.00  ""    ""    ""    0
 "secdd 70034 70444 '2 ' 1"    "open"    1.000000  ""
 "tran 70448 70444 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001773"    "BUSDBL_001773'"    1.00  ""    ""    ""    0
 "secdd 70164 70444 '1 ' 1"    "open"    1.000000  ""
 "secdd 70244 70444 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001774"    "BUSDBL_001774'"    1.00  ""    ""    ""    0
 "secdd 70164 70444 '1 ' 1"    "open"    1.000000  ""
 "secdd 70269 70444 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001775"    "BUSDBL_001775'"    1.00  ""    ""    ""    0
 "secdd 70164 70444 '1 ' 1"    "open"    1.000000  ""
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001776"    "BUSDBL_001776'"    1.00  ""    ""    ""    0
 "secdd 70164 70444 '1 ' 1"    "open"    1.000000  ""
 "tran 70444 70447 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001777"    "BUSDBL_001777'"    1.00  ""    ""    ""    0
 "secdd 70164 70444 '1 ' 1"    "open"    1.000000  ""
 "tran 70448 70444 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001778"    "BUSDBL_001778'"    1.00  ""    ""    ""    0
 "secdd 70244 70444 '1 ' 1"    "open"    1.000000  ""
 "secdd 70269 70444 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001779"    "BUSDBL_001779'"    1.00  ""    ""    ""    0
 "secdd 70244 70444 '1 ' 1"    "open"    1.000000  ""
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001780"    "BUSDBL_001780'"    1.00  ""    ""    ""    0
 "secdd 70244 70444 '1 ' 1"    "open"    1.000000  ""
 "tran 70444 70447 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001781"    "BUSDBL_001781'"    1.00  ""    ""    ""    0
 "secdd 70244 70444 '1 ' 1"    "open"    1.000000  ""
 "tran 70448 70444 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001782"    "BUSDBL_001782'"    1.00  ""    ""    ""    0
 "secdd 70269 70444 '1 ' 1"    "open"    1.000000  ""
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001783"    "BUSDBL_001783'"    1.00  ""    ""    ""    0
 "secdd 70269 70444 '1 ' 1"    "open"    1.000000  ""
 "tran 70444 70447 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001784"    "BUSDBL_001784'"    1.00  ""    ""    ""    0
 "secdd 70269 70444 '1 ' 1"    "open"    1.000000  ""
 "tran 70448 70444 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001785"    "BUSDBL_001785'"    1.00  ""    ""    ""    0
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70444 70447 'T8'"    "open"    1.000000  ""
0
"BUSDBL_001786"    "BUSDBL_001786'"    1.00  ""    ""    ""    0
 "secdd 70444 70440 '1 ' 1"    "open"    1.000000  ""
 "tran 70448 70444 'U6'"    "open"    1.000000  ""
0
"BUSDBL_001787"    "BUSDBL_001787'"    1.00  ""    ""    ""    0
 "tran 70444 70447 'T8'"    "open"    1.000000  ""
 "tran 70448 70444 'U6'"    "open"    1.000000  ""
```

```
0
"BUSDBL_001788"    "BUSDBL_001788'"    1.00    ""    ""    ""    0
 "secdd 70633 70445 '1 ' 1"    "open"    1.000000    ""
 "tran 70445 70659 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001789"    "BUSDBL_001789'"    1.00    ""    ""    ""    0
 "secdd 70634 70446 '1 ' 1"    "open"    1.000000    ""
 "tran 70446 70659 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001790"    "BUSDBL_001790'"    1.00    ""    ""    ""    0
 "tran 70440 70447 'T7'"    "open"    1.000000    ""
 "tran 70444 70447 'T8'"    "open"    1.000000    ""
0
"BUSDBL_001791"    "BUSDBL_001791'"    1.00    ""    ""    ""    0
 "tran 70440 70447 'T7'"    "open"    1.000000    ""
 "secdd 70447 70543 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001792"    "BUSDBL_001792'"    1.00    ""    ""    ""    0
 "tran 70440 70447 'T7'"    "open"    1.000000    ""
 "secdd 70447 70592 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001793"    "BUSDBL_001793'"    1.00    ""    ""    ""    0
 "tran 70444 70447 'T8'"    "open"    1.000000    ""
 "secdd 70447 70543 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001794"    "BUSDBL_001794'"    1.00    ""    ""    ""    0
 "tran 70444 70447 'T8'"    "open"    1.000000    ""
 "secdd 70447 70592 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001795"    "BUSDBL_001795'"    1.00    ""    ""    ""    0
 "secdd 70447 70543 '1 ' 1"    "open"    1.000000    ""
 "secdd 70447 70592 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001796"    "BUSDBL_001796'"    1.00    ""    ""    ""    0
 "secdd 70193 70449 '1 ' 1"    "open"    1.000000    ""
 "secdd 70449 70456 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001797"    "BUSDBL_001797'"    1.00    ""    ""    ""    0
 "secdd 70191 70450 '1 ' 1"    "open"    1.000000    ""
 "secdd 70450 70219 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001798"    "BUSDBL_001798'"    1.00    ""    ""    ""    0
 "secdd 70294 70451 '1 ' 1"    "open"    1.000000    ""
 "secdd 70306 70451 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001799"    "BUSDBL_001799'"    1.00    ""    ""    ""    0
 "secdd 70253 70452 '1 ' 1"    "open"    1.000000    ""
 "tran 70453 70452 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001800"    "BUSDBL_001800'"    1.00    ""    ""    ""    0
 "secdd 70080 70453 '1 ' 1"    "open"    1.000000    ""
 "secdd 70223 70453 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001801"    "BUSDBL_001801'"    1.00    ""    ""    ""    0
 "secdd 70080 70453 '1 ' 1"    "open"    1.000000    ""
 "tran 70453 70452 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001802"    "BUSDBL_001802'"    1.00    ""    ""    ""    0
 "secdd 70223 70453 '1 ' 1"    "open"    1.000000    ""
 "tran 70453 70452 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001803"    "BUSDBL_001803'"    1.00    ""    ""    ""    0
 "secdd 70076 70454 '1 ' 1"    "open"    1.000000    ""
 "secdd 70214 70454 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_001804"    "BUSDBL_001804'"    1.00    ""    ""    ""    0
 "secdd 70054 70455 '1 ' 1"    "open"    1.000000    ""
 "secdd 70338 70455 '1 ' 1"    "open"    1.000000    ""
0
```

```
"BUSDBL_001805"    "BUSDBL_001805'"    1.00    ""    ""    ""    0
 "secdd 70054 70455 '1 '  1"    "open"    1.000000    ""
 "secdd 70415 70455 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001806"    "BUSDBL_001806'"    1.00    ""    ""    ""    0
 "secdd 70054 70455 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001807"    "BUSDBL_001807'"    1.00    ""    ""    ""    0
 "secdd 70054 70455 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001808"    "BUSDBL_001808'"    1.00    ""    ""    ""    0
 "secdd 70338 70455 '1 '  1"    "open"    1.000000    ""
 "secdd 70415 70455 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001809"    "BUSDBL_001809'"    1.00    ""    ""    ""    0
 "secdd 70338 70455 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001810"    "BUSDBL_001810'"    1.00    ""    ""    ""    0
 "secdd 70338 70455 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001811"    "BUSDBL_001811'"    1.00    ""    ""    ""    0
 "secdd 70415 70455 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001812"    "BUSDBL_001812'"    1.00    ""    ""    ""    0
 "secdd 70415 70455 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001813"    "BUSDBL_001813'"    1.00    ""    ""    ""    0
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001814"    "BUSDBL_001814'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70236 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001815"    "BUSDBL_001815'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70285 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001816"    "BUSDBL_001816'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70330 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001817"    "BUSDBL_001817'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_001818"    "BUSDBL_001818'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001819"    "BUSDBL_001819'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001820"    "BUSDBL_001820'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001821"    "BUSDBL_001821'"    1.00    ""    ""    ""    0
 "secdd 70031 70456 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001822"    "BUSDBL_001822'"    1.00    ""    ""    ""    0
```

```
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70456 71022 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001823"    "BUSDBL_001823'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70456 71023 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001824"    "BUSDBL_001824'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001825"    "BUSDBL_001825'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70285 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001826"    "BUSDBL_001826'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001827"    "BUSDBL_001827'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001828"    "BUSDBL_001828'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70336 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001829"    "BUSDBL_001829'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70449 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001830"    "BUSDBL_001830'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 70456 70455 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001831"    "BUSDBL_001831'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "tran 70456 70455 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001832"    "BUSDBL_001832'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70456 71022 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001833"    "BUSDBL_001833'"    1.00  ""    ""    ""    0
 "secdd 70031 70456 '2 ' 1"    "open"    1.000000  ""
 "secdd 70456 71023 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001834"    "BUSDBL_001834'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70285 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001835"    "BUSDBL_001835'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001836"    "BUSDBL_001836'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70330 70456 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001837"    "BUSDBL_001837'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70336 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001838"    "BUSDBL_001838'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
 "secdd 70449 70456 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001839"    "BUSDBL_001839'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 ' 1"    "open"    1.000000  ""
```

```
 "tran 70456 70455 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001840"    "BUSDBL_001840'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 '  1"    "open"    1.000000  ""
 "tran 70456 70455 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001841"    "BUSDBL_001841'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001842"    "BUSDBL_001842'"    1.00  ""    ""    ""    0
 "secdd 70236 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001843"    "BUSDBL_001843'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001844"    "BUSDBL_001844'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70330 70456 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_001845"    "BUSDBL_001845'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70336 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001846"    "BUSDBL_001846'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70449 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001847"    "BUSDBL_001847'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "tran 70456 70455 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001848"    "BUSDBL_001848'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "tran 70456 70455 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001849"    "BUSDBL_001849'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001850"    "BUSDBL_001850'"    1.00  ""    ""    ""    0
 "secdd 70285 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001851"    "BUSDBL_001851'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70336 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001852"    "BUSDBL_001852'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70449 70456 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001853"    "BUSDBL_001853'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
 "tran 70456 70455 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001854"    "BUSDBL_001854'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
 "tran 70456 70455 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001855"    "BUSDBL_001855'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001856"    "BUSDBL_001856'"    1.00  ""    ""    ""    0
 "secdd 70330 70456 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001857"    "BUSDBL_001857'"    1.00    ""    ""    ""    0
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001858"    "BUSDBL_001858'"    1.00    ""    ""    ""    0
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001859"    "BUSDBL_001859'"    1.00    ""    ""    ""    0
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001860"    "BUSDBL_001860'"    1.00    ""    ""    ""    0
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001861"    "BUSDBL_001861'"    1.00    ""    ""    ""    0
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001862"    "BUSDBL_001862'"    1.00    ""    ""    ""    0
 "secdd 70330 70456 '2 '  1"    "open"    1.000000    ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001863"    "BUSDBL_001863'"    1.00    ""    ""    ""    0
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001864"    "BUSDBL_001864'"    1.00    ""    ""    ""    0
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001865"    "BUSDBL_001865'"    1.00    ""    ""    ""    0
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001866"    "BUSDBL_001866'"    1.00    ""    ""    ""    0
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001867"    "BUSDBL_001867'"    1.00    ""    ""    ""    0
 "secdd 70336 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001868"    "BUSDBL_001868'"    1.00    ""    ""    ""    0
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
0
"BUSDBL_001869"    "BUSDBL_001869'"    1.00    ""    ""    ""    0
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
 "tran 70456 70455 'T2'"    "open"    1.000000    ""
0
"BUSDBL_001870"    "BUSDBL_001870'"    1.00    ""    ""    ""    0
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001871"    "BUSDBL_001871'"    1.00    ""    ""    ""    0
 "secdd 70449 70456 '1 '  1"    "open"    1.000000    ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001872"    "BUSDBL_001872'"    1.00    ""    ""    ""    0
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001873"    "BUSDBL_001873'"    1.00    ""    ""    ""    0
 "tran 70456 70455 'T1'"    "open"    1.000000    ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_001874"    "BUSDBL_001874'"    1.00  ""    ""    ""    0
 "tran 70456 70455 'T2'"    "open"    1.000000  ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001875"    "BUSDBL_001875'"    1.00  ""    ""    ""    0
 "tran 70456 70455 'T2'"    "open"    1.000000  ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001876"    "BUSDBL_001876'"    1.00  ""    ""    ""    0
 "secdd 70456 71022 '1 '  1"    "open"    1.000000  ""
 "secdd 70456 71023 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001877"    "BUSDBL_001877'"    1.00  ""    ""    ""    0
 "secdd 70413 70457 '1 '  1"    "open"    1.000000  ""
 "tran 70457 70458 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001878"    "BUSDBL_001878'"    1.00  ""    ""    ""    0
 "secdd 70272 70458 '1 '  1"    "open"    1.000000  ""
 "secdd 70412 70458 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001879"    "BUSDBL_001879'"    1.00  ""    ""    ""    0
 "secdd 70272 70458 '1 '  1"    "open"    1.000000  ""
 "tran 70457 70458 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001880"    "BUSDBL_001880'"    1.00  ""    ""    ""    0
 "secdd 70272 70458 '1 '  1"    "open"    1.000000  ""
 "tran 70459 70458 70960 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001881"    "BUSDBL_001881'"    1.00  ""    ""    ""    0
 "secdd 70272 70458 '1 '  1"    "open"    1.000000  ""
 "tran 70459 70458 70962 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001882"    "BUSDBL_001882'"    1.00  ""    ""    ""    0
 "secdd 70412 70458 '1 '  1"    "open"    1.000000  ""
 "tran 70457 70458 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001883"    "BUSDBL_001883'"    1.00  ""    ""    ""    0
 "secdd 70412 70458 '1 '  1"    "open"    1.000000  ""
 "tran 70459 70458 70960 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001884"    "BUSDBL_001884'"    1.00  ""    ""    ""    0
 "secdd 70412 70458 '1 '  1"    "open"    1.000000  ""
 "tran 70459 70458 70962 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001885"    "BUSDBL_001885'"    1.00  ""    ""    ""    0
 "tran 70457 70458 'T1'"    "open"    1.000000  ""
 "tran 70459 70458 70960 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001886"    "BUSDBL_001886'"    1.00  ""    ""    ""    0
 "tran 70457 70458 'T1'"    "open"    1.000000  ""
 "tran 70459 70458 70962 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001887"    "BUSDBL_001887'"    1.00  ""    ""    ""    0
 "tran 70459 70458 70960 'T2'"    "open"    1.000000  ""
 "tran 70459 70458 70962 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001888"    "BUSDBL_001888'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "secdd 70459 70990 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001889"    "BUSDBL_001889'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "tran 70459 70458 70960 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001890"    "BUSDBL_001890'"    1.00  ""    ""    ""    0
 "secdd 70122 70459 '1 '  1"    "open"    1.000000  ""
 "tran 70459 70458 70962 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001891"    "BUSDBL_001891'"    1.00  ""    ""    ""    0
```

```
 "tran 70459 70458 70960 'T2'"   "open"   1.000000  ""
 "secdd 70459 70990 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001892"   "BUSDBL_001892'"   1.00  ""   ""   ""   0
 "tran 70459 70458 70962 'T3'"   "open"   1.000000  ""
 "secdd 70459 70990 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001893"   "BUSDBL_001893'"   1.00  ""   ""   ""   0
 "secdd 70080 70460 '1 '  1"   "open"   1.000000  ""
 "secdd 70425 70460 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001894"   "BUSDBL_001894'"   1.00  ""   ""   ""   0
 "secdd 70200 70461 '1 '  1"   "open"   1.000000  ""
 "secdd 70461 70529 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001895"   "BUSDBL_001895'"   1.00  ""   ""   ""   0
 "secdd 70263 70463 '1 '  1"   "open"   1.000000  ""
 "secdd 70279 70463 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001896"   "BUSDBL_001896'"   1.00  ""   ""   ""   0
 "secdd 70263 70463 '1 '  1"   "open"   1.000000  ""
 "tran 70463 70464 'T1'"   "open"   1.000000  ""
0
"BUSDBL_001897"   "BUSDBL_001897'"   1.00  ""   ""   ""   0
 "secdd 70263 70463 '1 '  1"   "open"   1.000000  ""
 "tran 70463 70464 'T2'"   "open"   1.000000  ""
0
"BUSDBL_001898"   "BUSDBL_001898'"   1.00  ""   ""   ""   0
 "secdd 70263 70463 '1 '  1"   "open"   1.000000  ""
 "secdd 70463 70484 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001899"   "BUSDBL_001899'"   1.00  ""   ""   ""   0
 "secdd 70263 70463 '1 '  1"   "open"   1.000000  ""
 "secdd 70522 70463 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001900"   "BUSDBL_001900'"   1.00  ""   ""   ""   0
 "secdd 70279 70463 '1 '  1"   "open"   1.000000  ""
 "tran 70463 70464 'T1'"   "open"   1.000000  ""
0
"BUSDBL_001901"   "BUSDBL_001901'"   1.00  ""   ""   ""   0
 "secdd 70279 70463 '1 '  1"   "open"   1.000000  ""
 "tran 70463 70464 'T2'"   "open"   1.000000  ""
0
"BUSDBL_001902"   "BUSDBL_001902'"   1.00  ""   ""   ""   0
 "secdd 70279 70463 '1 '  1"   "open"   1.000000  ""
 "secdd 70463 70484 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001903"   "BUSDBL_001903'"   1.00  ""   ""   ""   0
 "secdd 70279 70463 '1 '  1"   "open"   1.000000  ""
 "secdd 70522 70463 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001904"   "BUSDBL_001904'"   1.00  ""   ""   ""   0
 "tran 70463 70464 'T1'"   "open"   1.000000  ""
 "tran 70463 70464 'T2'"   "open"   1.000000  ""
0
"BUSDBL_001905"   "BUSDBL_001905'"   1.00  ""   ""   ""   0
 "tran 70463 70464 'T1'"   "open"   1.000000  ""
 "secdd 70463 70484 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001906"   "BUSDBL_001906'"   1.00  ""   ""   ""   0
 "tran 70463 70464 'T1'"   "open"   1.000000  ""
 "secdd 70522 70463 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001907"   "BUSDBL_001907'"   1.00  ""   ""   ""   0
 "tran 70463 70464 'T2'"   "open"   1.000000  ""
 "secdd 70463 70484 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_001908"   "BUSDBL_001908'"   1.00  ""   ""   ""   0
 "tran 70463 70464 'T2'"   "open"   1.000000  ""
```

```
 "secdd 70522 70463 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001909"    "BUSDBL_001909'"    1.00  ""    ""    ""    0
 "secdd 70463 70484 '1 ' 1"    "open"    1.000000  ""
 "secdd 70522 70463 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001910"    "BUSDBL_001910'"    1.00  ""    ""    ""    0
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
 "secdd 70139 70464 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001911"    "BUSDBL_001911'"    1.00  ""    ""    ""    0
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
 "secdd 70427 70464 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001912"    "BUSDBL_001912'"    1.00  ""    ""    ""    0
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70463 70464 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001913"    "BUSDBL_001913'"    1.00  ""    ""    ""    0
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70463 70464 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001914"    "BUSDBL_001914'"    1.00  ""    ""    ""    0
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
 "secdd 70464 70959 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001915"    "BUSDBL_001915'"    1.00  ""    ""    ""    0
 "secdd 70100 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70466 70464 71995 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001916"    "BUSDBL_001916'"    1.00  ""    ""    ""    0
 "secdd 70139 70464 '1 ' 1"    "open"    1.000000  ""
 "secdd 70427 70464 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001917"    "BUSDBL_001917'"    1.00  ""    ""    ""    0
 "secdd 70139 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70463 70464 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001918"    "BUSDBL_001918'"    1.00  ""    ""    ""    0
 "secdd 70139 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70463 70464 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001919"    "BUSDBL_001919'"    1.00  ""    ""    ""    0
 "secdd 70139 70464 '1 ' 1"    "open"    1.000000  ""
 "secdd 70464 70959 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001920"    "BUSDBL_001920'"    1.00  ""    ""    ""    0
 "secdd 70139 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70466 70464 71995 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001921"    "BUSDBL_001921'"    1.00  ""    ""    ""    0
 "secdd 70427 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70463 70464 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001922"    "BUSDBL_001922'"    1.00  ""    ""    ""    0
 "secdd 70427 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70463 70464 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001923"    "BUSDBL_001923'"    1.00  ""    ""    ""    0
 "secdd 70427 70464 '1 ' 1"    "open"    1.000000  ""
 "secdd 70464 70959 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001924"    "BUSDBL_001924'"    1.00  ""    ""    ""    0
 "secdd 70427 70464 '1 ' 1"    "open"    1.000000  ""
 "tran 70466 70464 71995 'T3'"    "open"    1.000000  ""
0
"BUSDBL_001925"    "BUSDBL_001925'"    1.00  ""    ""    ""    0
 "tran 70463 70464 'T1'"    "open"    1.000000  ""
 "secdd 70464 70959 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_001926"  "BUSDBL_001926'"  1.00  ""  ""  ""  0
 "tran 70463 70464 'T1'"  "open"  1.000000  ""
 "tran 70466 70464 71995 'T3'"  "open"  1.000000  ""
0
"BUSDBL_001927"  "BUSDBL_001927'"  1.00  ""  ""  ""  0
 "tran 70463 70464 'T2'"  "open"  1.000000  ""
 "secdd 70464 70959 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001928"  "BUSDBL_001928'"  1.00  ""  ""  ""  0
 "tran 70463 70464 'T2'"  "open"  1.000000  ""
 "tran 70466 70464 71995 'T3'"  "open"  1.000000  ""
0
"BUSDBL_001929"  "BUSDBL_001929'"  1.00  ""  ""  ""  0
 "tran 70466 70464 71995 'T3'"  "open"  1.000000  ""
 "secdd 70464 70959 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001930"  "BUSDBL_001930'"  1.00  ""  ""  ""  0
 "tran 70465 70286 71996 'T3'"  "open"  1.000000  ""
 "secdd 70465 70466 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001931"  "BUSDBL_001931'"  1.00  ""  ""  ""  0
 "tran 70466 70464 71995 'T3'"  "open"  1.000000  ""
 "secdd 70465 70466 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001932"  "BUSDBL_001932'"  1.00  ""  ""  ""  0
 "secdd 70374 70467 '1 '  1"  "open"  1.000000  ""
 "secdd 70414 70467 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001933"  "BUSDBL_001933'"  1.00  ""  ""  ""  0
 "secdd 70374 70467 '1 '  1"  "open"  1.000000  ""
 "secdd 70467 70656 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001934"  "BUSDBL_001934'"  1.00  ""  ""  ""  0
 "secdd 70414 70467 '1 '  1"  "open"  1.000000  ""
 "secdd 70467 70656 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001935"  "BUSDBL_001935'"  1.00  ""  ""  ""  0
 "secdd 70468 70592 '1 '  1"  "open"  1.000000  ""
 "tran 70593 70468 'U1'"  "open"  1.000000  ""
0
"BUSDBL_001936"  "BUSDBL_001936'"  1.00  ""  ""  ""  0
 "secdd 70468 70592 '1 '  1"  "open"  1.000000  ""
 "tran 70594 70468 'U2'"  "open"  1.000000  ""
0
"BUSDBL_001937"  "BUSDBL_001937'"  1.00  ""  ""  ""  0
 "tran 70593 70468 'U1'"  "open"  1.000000  ""
 "tran 70594 70468 'U2'"  "open"  1.000000  ""
0
"BUSDBL_001938"  "BUSDBL_001938'"  1.00  ""  ""  ""  0
 "secdd 70209 70470 '1 '  1"  "open"  1.000000  ""
 "secdd 70246 70470 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001939"  "BUSDBL_001939'"  1.00  ""  ""  ""  0
 "secdd 70209 70470 '1 '  1"  "open"  1.000000  ""
 "secdd 70470 70475 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001940"  "BUSDBL_001940'"  1.00  ""  ""  ""  0
 "secdd 70209 70470 '1 '  1"  "open"  1.000000  ""
 "secdd 70470 73211 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_001941"  "BUSDBL_001941'"  1.00  ""  ""  ""  0
 "secdd 70209 70470 '1 '  1"  "open"  1.000000  ""
 "tran 70471 70470 71992 'T1'"  "open"  1.000000  ""
0
"BUSDBL_001942"  "BUSDBL_001942'"  1.00  ""  ""  ""  0
 "secdd 70246 70470 '1 '  1"  "open"  1.000000  ""
 "secdd 70470 70475 '1 '  1"  "open"  1.000000  ""
0
```

```
"BUSDBL_001943" "BUSDBL_001943'" 1.00 "" "" "" 0
 "secdd 70246 70470 '1 ' 1" "open" 1.000000 ""
 "secdd 70470 73211 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001944" "BUSDBL_001944'" 1.00 "" "" "" 0
 "secdd 70246 70470 '1 ' 1" "open" 1.000000 ""
 "tran 70471 70470 71992 'T1'" "open" 1.000000 ""
0
"BUSDBL_001945" "BUSDBL_001945'" 1.00 "" "" "" 0
 "secdd 70470 70475 '1 ' 1" "open" 1.000000 ""
 "secdd 70470 73211 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001946" "BUSDBL_001946'" 1.00 "" "" "" 0
 "tran 70471 70470 71992 'T1'" "open" 1.000000 ""
 "secdd 70470 70475 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001947" "BUSDBL_001947'" 1.00 "" "" "" 0
 "tran 70471 70470 71992 'T1'" "open" 1.000000 ""
 "secdd 70470 73211 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001948" "BUSDBL_001948'" 1.00 "" "" "" 0
 "secdd 70410 70471 '1 ' 1" "open" 1.000000 ""
 "secdd 70471 73212 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001949" "BUSDBL_001949'" 1.00 "" "" "" 0
 "secdd 70410 70471 '1 ' 1" "open" 1.000000 ""
 "tran 70471 70470 71992 'T1'" "open" 1.000000 ""
0
"BUSDBL_001950" "BUSDBL_001950'" 1.00 "" "" "" 0
 "tran 70471 70470 71992 'T1'" "open" 1.000000 ""
 "secdd 70471 73212 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001951" "BUSDBL_001951'" 1.00 "" "" "" 0
 "secdd 70079 70472 '1 ' 1" "open" 1.000000 ""
 "secdd 70253 70472 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001952" "BUSDBL_001952'" 1.00 "" "" "" 0
 "secdd 70079 70472 '1 ' 1" "open" 1.000000 ""
 "tran 70473 70472 'T1'" "open" 1.000000 ""
0
"BUSDBL_001953" "BUSDBL_001953'" 1.00 "" "" "" 0
 "secdd 70079 70472 '1 ' 1" "open" 1.000000 ""
 "tran 70473 70472 'T2'" "open" 1.000000 ""
0
"BUSDBL_001954" "BUSDBL_001954'" 1.00 "" "" "" 0
 "secdd 70253 70472 '1 ' 1" "open" 1.000000 ""
 "tran 70473 70472 'T1'" "open" 1.000000 ""
0
"BUSDBL_001955" "BUSDBL_001955'" 1.00 "" "" "" 0
 "secdd 70253 70472 '1 ' 1" "open" 1.000000 ""
 "tran 70473 70472 'T2'" "open" 1.000000 ""
0
"BUSDBL_001956" "BUSDBL_001956'" 1.00 "" "" "" 0
 "tran 70473 70472 'T1'" "open" 1.000000 ""
 "tran 70473 70472 'T2'" "open" 1.000000 ""
0
"BUSDBL_001957" "BUSDBL_001957'" 1.00 "" "" "" 0
 "secdd 70136 70473 '1 ' 1" "open" 1.000000 ""
 "secdd 70161 70473 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001958" "BUSDBL_001958'" 1.00 "" "" "" 0
 "secdd 70136 70473 '1 ' 1" "open" 1.000000 ""
 "secdd 70203 70473 '1 ' 1" "open" 1.000000 ""
0
"BUSDBL_001959" "BUSDBL_001959'" 1.00 "" "" "" 0
 "secdd 70136 70473 '1 ' 1" "open" 1.000000 ""
 "tran 70473 70472 'T1'" "open" 1.000000 ""
0
"BUSDBL_001960" "BUSDBL_001960'" 1.00 "" "" "" 0
```

```
 "secdd 70136 70473 '1 ' 1"    "open"    1.000000  ""
 "tran 70473 70472 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001961"    "BUSDBL_001961'"    1.00  ""    ""    ""    0
 "secdd 70161 70473 '1 ' 1"    "open"    1.000000  ""
 "secdd 70203 70473 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001962"    "BUSDBL_001962'"    1.00  ""    ""    ""    0
 "secdd 70161 70473 '1 ' 1"    "open"    1.000000  ""
 "tran 70473 70472 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001963"    "BUSDBL_001963'"    1.00  ""    ""    ""    0
 "secdd 70161 70473 '1 ' 1"    "open"    1.000000  ""
 "tran 70473 70472 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001964"    "BUSDBL_001964'"    1.00  ""    ""    ""    0
 "secdd 70203 70473 '1 ' 1"    "open"    1.000000  ""
 "tran 70473 70472 'T1'"    "open"    1.000000  ""
0
"BUSDBL_001965"    "BUSDBL_001965'"    1.00  ""    ""    ""    0
 "secdd 70203 70473 '1 ' 1"    "open"    1.000000  ""
 "tran 70473 70472 'T2'"    "open"    1.000000  ""
0
"BUSDBL_001966"    "BUSDBL_001966'"    1.00  ""    ""    ""    0
 "secdd 70410 70474 '1 ' 1"    "open"    1.000000  ""
 "secdd 73011 70474 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001967"    "BUSDBL_001967'"    1.00  ""    ""    ""    0
 "secdd 70368 70475 '1 ' 1"    "open"    1.000000  ""
 "secdd 70470 70475 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001968"    "BUSDBL_001968'"    1.00  ""    ""    ""    0
 "secdd 70157 70476 '1 ' 1"    "open"    1.000000  ""
 "secdd 70476 73476 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001969"    "BUSDBL_001969'"    1.00  ""    ""    ""    0
 "secdd 70149 70480 '1 ' 1"    "open"    1.000000  ""
 "secdd 70266 70480 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001970"    "BUSDBL_001970'"    1.00  ""    ""    ""    0
 "secdd 70189 70481 '1 ' 1"    "open"    1.000000  ""
 "secdd 70481 70365 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001971"    "BUSDBL_001971'"    1.00  ""    ""    ""    0
 "secdd 70006 70482 '1 ' 1"    "open"    1.000000  ""
 "tran 70500 70482 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001972"    "BUSDBL_001972'"    1.00  ""    ""    ""    0
 "secdd 70006 70482 '1 ' 1"    "open"    1.000000  ""
 "tran 70501 70482 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001973"    "BUSDBL_001973'"    1.00  ""    ""    ""    0
 "tran 70500 70482 'U1'"    "open"    1.000000  ""
 "tran 70501 70482 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001974"    "BUSDBL_001974'"    1.00  ""    ""    ""    0
 "secdd 70142 70484 '1 ' 1"    "open"    1.000000  ""
 "secdd 70280 70484 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001975"    "BUSDBL_001975'"    1.00  ""    ""    ""    0
 "secdd 70142 70484 '1 ' 1"    "open"    1.000000  ""
 "secdd 70463 70484 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001976"    "BUSDBL_001976'"    1.00  ""    ""    ""    0
 "secdd 70280 70484 '1 ' 1"    "open"    1.000000  ""
 "secdd 70463 70484 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_001977"    "BUSDBL_001977'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 ' 1"    "open"    1.000000  ""
```

```
 "tran 70487 70488 'U4'"    "open"    1.000000  ""
0
"BUSDBL_001978"    "BUSDBL_001978'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
 "tran 70490 70488 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001979"    "BUSDBL_001979'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
 "tran 70493 70488 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001980"    "BUSDBL_001980'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
 "tran 70495 70488 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001981"    "BUSDBL_001981'"    1.00  ""    ""    ""    0
 "secdd 70192 70488 '1 '  1"    "open"    1.000000  ""
 "secdd 70488 72029 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001982"    "BUSDBL_001982'"    1.00  ""    ""    ""    0
 "tran 70487 70488 'U4'"    "open"    1.000000  ""
 "tran 70490 70488 'U3'"    "open"    1.000000  ""
0
"BUSDBL_001983"    "BUSDBL_001983'"    1.00  ""    ""    ""    0
 "tran 70487 70488 'U4'"    "open"    1.000000  ""
 "tran 70493 70488 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001984"    "BUSDBL_001984'"    1.00  ""    ""    ""    0
 "tran 70487 70488 'U4'"    "open"    1.000000  ""
 "tran 70495 70488 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001985"    "BUSDBL_001985'"    1.00  ""    ""    ""    0
 "tran 70487 70488 'U4'"    "open"    1.000000  ""
 "secdd 70488 72029 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001986"    "BUSDBL_001986'"    1.00  ""    ""    ""    0
 "tran 70490 70488 'U3'"    "open"    1.000000  ""
 "tran 70493 70488 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001987"    "BUSDBL_001987'"    1.00  ""    ""    ""    0
 "tran 70490 70488 'U3'"    "open"    1.000000  ""
 "tran 70495 70488 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001988"    "BUSDBL_001988'"    1.00  ""    ""    ""    0
 "tran 70490 70488 'U3'"    "open"    1.000000  ""
 "secdd 70488 72029 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001989"    "BUSDBL_001989'"    1.00  ""    ""    ""    0
 "tran 70493 70488 'U2'"    "open"    1.000000  ""
 "tran 70495 70488 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001990"    "BUSDBL_001990'"    1.00  ""    ""    ""    0
 "tran 70493 70488 'U2'"    "open"    1.000000  ""
 "secdd 70488 72029 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001991"    "BUSDBL_001991'"    1.00  ""    ""    ""    0
 "tran 70495 70488 'U1'"    "open"    1.000000  ""
 "secdd 70488 72029 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_001992"    "BUSDBL_001992'"    1.00  ""    ""    ""    0
 "secdd 70047 70489 '1 '  1"    "open"    1.000000  ""
 "tran 70565 70489 'U1'"    "open"    1.000000  ""
0
"BUSDBL_001993"    "BUSDBL_001993'"    1.00  ""    ""    ""    0
 "secdd 70047 70489 '1 '  1"    "open"    1.000000  ""
 "tran 70566 70489 'U2'"    "open"    1.000000  ""
0
"BUSDBL_001994"    "BUSDBL_001994'"    1.00  ""    ""    ""    0
 "tran 70565 70489 'U1'"    "open"    1.000000  ""
 "tran 70566 70489 'U2'"    "open"    1.000000  ""
```

```
0
"BUSDBL_001995"    "BUSDBL_001995'"    1.00    ""    ""    ""    0
 "secdd 70046 70491 '1 '  1"    "open"    1.000000    ""
 "secdd 70239 70491 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001996"    "BUSDBL_001996'"    1.00    ""    ""    ""    0
 "secdd 70494 70099 '1 '  1"    "open"    1.000000    ""
 "secdd 70110 70494 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001997"    "BUSDBL_001997'"    1.00    ""    ""    ""    0
 "secdd 70526 70497 '1 '  1"    "open"    1.000000    ""
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001998"    "BUSDBL_001998'"    1.00    ""    ""    ""    0
 "secdd 70503 70510 '1 '  1"    "open"    1.000000    ""
 "secdd 70546 70503 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_001999"    "BUSDBL_001999'"    1.00    ""    ""    ""    0
 "secdd 70503 70510 '1 '  1"    "open"    1.000000    ""
 "tran 70503 70555 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002000"    "BUSDBL_002000'"    1.00    ""    ""    ""    0
 "secdd 70546 70503 '1 '  1"    "open"    1.000000    ""
 "tran 70503 70555 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002001"    "BUSDBL_002001'"    1.00    ""    ""    ""    0
 "secdd 70289 70505 '1 '  1"    "open"    1.000000    ""
 "secdd 70505 70506 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002002"    "BUSDBL_002002'"    1.00    ""    ""    ""    0
 "secdd 70289 70505 '1 '  1"    "open"    1.000000    ""
 "secdd 70505 70508 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002003"    "BUSDBL_002003'"    1.00    ""    ""    ""    0
 "secdd 70505 70506 '1 '  1"    "open"    1.000000    ""
 "secdd 70505 70508 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002004"    "BUSDBL_002004'"    1.00    ""    ""    ""    0
 "secdd 70326 70507 '1 '  1"    "open"    1.000000    ""
 "secdd 70507 70600 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002005"    "BUSDBL_002005'"    1.00    ""    ""    ""    0
 "secdd 70505 70508 '1 '  1"    "open"    1.000000    ""
 "secdd 70508 70509 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002006"    "BUSDBL_002006'"    1.00    ""    ""    ""    0
 "secdd 70505 70508 '1 '  1"    "open"    1.000000    ""
 "secdd 70508 70600 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002007"    "BUSDBL_002007'"    1.00    ""    ""    ""    0
 "secdd 70508 70509 '1 '  1"    "open"    1.000000    ""
 "secdd 70508 70600 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002008"    "BUSDBL_002008'"    1.00    ""    ""    ""    0
 "secdd 70503 70510 '1 '  1"    "open"    1.000000    ""
 "secdd 70547 70510 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002009"    "BUSDBL_002009'"    1.00    ""    ""    ""    0
 "secdd 70503 70510 '1 '  1"    "open"    1.000000    ""
 "tran 70510 70572 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002010"    "BUSDBL_002010'"    1.00    ""    ""    ""    0
 "secdd 70547 70510 '1 '  1"    "open"    1.000000    ""
 "tran 70510 70572 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002011"    "BUSDBL_002011'"    1.00    ""    ""    ""    0
 "secdd 70026 70511 '1 '  1"    "open"    1.000000    ""
 "secdd 70186 70511 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_002012"    "BUSDBL_002012'"    1.00  ""    ""    ""    0
 "secdd 70026 70511 '1 '  1"    "open"    1.000000  ""
 "secdd 70511 70552 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002013"    "BUSDBL_002013'"    1.00  ""    ""    ""    0
 "secdd 70186 70511 '1 '  1"    "open"    1.000000  ""
 "secdd 70511 70552 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002014"    "BUSDBL_002014'"    1.00  ""    ""    ""    0
 "secdd 70067 70512 '1 '  1"    "open"    1.000000  ""
 "secdd 70417 70512 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002015"    "BUSDBL_002015'"    1.00  ""    ""    ""    0
 "secdd 70513 70524 '1 '  1"    "open"    1.000000  ""
 "secdd 70513 70551 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002016"    "BUSDBL_002016'"    1.00  ""    ""    ""    0
 "secdd 70514 70381 '1 '  1"    "open"    1.000000  ""
 "secdd 70575 70514 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002017"    "BUSDBL_002017'"    1.00  ""    ""    ""    0
 "secdd 70514 70381 '1 '  1"    "open"    1.000000  ""
 "secdd 71501 70514 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002018"    "BUSDBL_002018'"    1.00  ""    ""    ""    0
 "secdd 70575 70514 '1 '  1"    "open"    1.000000  ""
 "secdd 71501 70514 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002019"    "BUSDBL_002019'"    1.00  ""    ""    ""    0
 "secdd 70515 70516 '1 '  1"    "open"    1.000000  ""
 "secdd 70521 70515 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002020"    "BUSDBL_002020'"    1.00  ""    ""    ""    0
 "secdd 70515 70516 '1 '  1"    "open"    1.000000  ""
 "secdd 70516 70581 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002021"    "BUSDBL_002021'"    1.00  ""    ""    ""    0
 "secdd 70517 70518 '1 '  1"    "open"    1.000000  ""
 "secdd 70517 70523 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002022"    "BUSDBL_002022'"    1.00  ""    ""    ""    0
 "secdd 70517 70518 '1 '  1"    "open"    1.000000  ""
 "secdd 70517 70523 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002023"    "BUSDBL_002023'"    1.00  ""    ""    ""    0
 "secdd 70517 70518 '1 '  1"    "open"    1.000000  ""
 "secdd 70576 70517 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002024"    "BUSDBL_002024'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '1 '  1"    "open"    1.000000  ""
 "secdd 70517 70523 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002025"    "BUSDBL_002025'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '1 '  1"    "open"    1.000000  ""
 "secdd 70576 70517 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002026"    "BUSDBL_002026'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '2 '  1"    "open"    1.000000  ""
 "secdd 70576 70517 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002027"    "BUSDBL_002027'"    1.00  ""    ""    ""    0
 "secdd 70517 70518 '1 '  1"    "open"    1.000000  ""
 "secdd 70518 71503 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002028"    "BUSDBL_002028'"    1.00  ""    ""    ""    0
 "secdd 70517 70518 '1 '  1"    "open"    1.000000  ""
 "secdd 70518 71506 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002029"    "BUSDBL_002029'"    1.00  ""    ""    ""    0
```

```
 "secdd 70518 71503 '1 ' 1"    "open"      1.000000  ""
 "secdd 70518 71506 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002030"    "BUSDBL_002030'"    1.00  ""    ""    ""    0
 "secdd 70091 70519 '1 ' 1"    "open"      1.000000  ""
 "secdd 70519 70575 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002031"    "BUSDBL_002031'"    1.00  ""    ""    ""    0
 "secdd 70091 70519 '1 ' 1"    "open"      1.000000  ""
 "secdd 71502 70519 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002032"    "BUSDBL_002032'"    1.00  ""    ""    ""    0
 "secdd 70519 70575 '1 ' 1"    "open"      1.000000  ""
 "secdd 71502 70519 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002033"    "BUSDBL_002033'"    1.00  ""    ""    ""    0
 "secdd 70520 70528 '1 ' 1"    "open"      1.000000  ""
 "tran 70562 70520 'U1'"    "open"      1.000000  ""
0
"BUSDBL_002034"    "BUSDBL_002034'"    1.00  ""    ""    ""    0
 "secdd 70520 70528 '1 ' 1"    "open"      1.000000  ""
 "tran 70563 70520 'U2'"    "open"      1.000000  ""
0
"BUSDBL_002035"    "BUSDBL_002035'"    1.00  ""    ""    ""    0
 "tran 70562 70520 'U1'"    "open"      1.000000  ""
 "tran 70563 70520 'U2'"    "open"      1.000000  ""
0
"BUSDBL_002036"    "BUSDBL_002036'"    1.00  ""    ""    ""    0
 "secdd 70125 70521 '1 ' 1"    "open"      1.000000  ""
 "secdd 70521 70515 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002037"    "BUSDBL_002037'"    1.00  ""    ""    ""    0
 "secdd 70381 70522 '1 ' 1"    "open"      1.000000  ""
 "secdd 70522 70463 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002038"    "BUSDBL_002038'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '1 ' 1"    "open"      1.000000  ""
 "tran 70523 70524 'T1'"    "open"      1.000000  ""
0
"BUSDBL_002039"    "BUSDBL_002039'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '1 ' 1"    "open"      1.000000  ""
 "tran 70523 70524 'T2'"    "open"      1.000000  ""
0
"BUSDBL_002040"    "BUSDBL_002040'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '2 ' 1"    "open"      1.000000  ""
 "tran 70523 70524 'T1'"    "open"      1.000000  ""
0
"BUSDBL_002041"    "BUSDBL_002041'"    1.00  ""    ""    ""    0
 "secdd 70517 70523 '2 ' 1"    "open"      1.000000  ""
 "tran 70523 70524 'T2'"    "open"      1.000000  ""
0
"BUSDBL_002042"    "BUSDBL_002042'"    1.00  ""    ""    ""    0
 "tran 70523 70524 'T1'"    "open"      1.000000  ""
 "tran 70523 70524 'T2'"    "open"      1.000000  ""
0
"BUSDBL_002043"    "BUSDBL_002043'"    1.00  ""    ""    ""    0
 "secdd 70513 70524 '1 ' 1"    "open"      1.000000  ""
 "tran 70523 70524 'T1'"    "open"      1.000000  ""
0
"BUSDBL_002044"    "BUSDBL_002044'"    1.00  ""    ""    ""    0
 "secdd 70513 70524 '1 ' 1"    "open"      1.000000  ""
 "tran 70523 70524 'T2'"    "open"      1.000000  ""
0
"BUSDBL_002045"    "BUSDBL_002045'"    1.00  ""    ""    ""    0
 "secdd 70513 70524 '1 ' 1"    "open"      1.000000  ""
 "secdd 70524 70533 '1 ' 1"    "open"      1.000000  ""
0
"BUSDBL_002046"    "BUSDBL_002046'"    1.00  ""    ""    ""    0
 "tran 70523 70524 'T1'"    "open"      1.000000  ""
```

```
 "secdd 70524 70533 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002047"    "BUSDBL_002047'"    1.00  ""    ""    ""    0
 "tran 70523 70524 'T2'"    "open"    1.000000  ""
 "secdd 70524 70533 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002048"    "BUSDBL_002048'"    1.00  ""    ""    ""    0
 "secdd 70048 70526 '1 ' 1"    "open"    1.000000  ""
 "secdd 70526 70497 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002049"    "BUSDBL_002049'"    1.00  ""    ""    ""    0
 "secdd 70038 70527 '1 ' 1"    "open"    1.000000  ""
 "secdd 70139 70527 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002050"    "BUSDBL_002050'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70077 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002051"    "BUSDBL_002051'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70392 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002052"    "BUSDBL_002052'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70396 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002053"    "BUSDBL_002053'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70497 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002054"    "BUSDBL_002054'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70520 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002055"    "BUSDBL_002055'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70530 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002056"    "BUSDBL_002056'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70532 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002057"    "BUSDBL_002057'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70536 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002058"    "BUSDBL_002058'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002059"    "BUSDBL_002059'"    1.00  ""    ""    ""    0
 "secdd 70048 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002060"    "BUSDBL_002060'"    1.00  ""    ""    ""    0
 "secdd 70528 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70392 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002061"    "BUSDBL_002061'"    1.00  ""    ""    ""    0
 "secdd 70528 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70396 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002062"    "BUSDBL_002062'"    1.00  ""    ""    ""    0
 "secdd 70528 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70497 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002063"    "BUSDBL_002063'"    1.00  ""    ""    ""    0
 "secdd 70528 70077 '1 ' 1"    "open"    1.000000  ""
 "secdd 70520 70528 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_002064"  "BUSDBL_002064'"  1.00  ""  ""  ""  0
 "secdd 70528 70077 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70530 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002065"  "BUSDBL_002065'"  1.00  ""  ""  ""  0
 "secdd 70528 70077 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70532 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002066"  "BUSDBL_002066'"  1.00  ""  ""  ""  0
 "secdd 70528 70077 '1 '  1"  "open"  1.000000  ""
 "secdd 70536 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002067"  "BUSDBL_002067'"  1.00  ""  ""  ""  0
 "secdd 70528 70077 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70804 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002068"  "BUSDBL_002068'"  1.00  ""  ""  ""  0
 "secdd 70528 70077 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70804 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002069"  "BUSDBL_002069'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002070"  "BUSDBL_002070'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70497 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002071"  "BUSDBL_002071'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70520 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002072"  "BUSDBL_002072'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70530 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002073"  "BUSDBL_002073'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70532 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002074"  "BUSDBL_002074'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70536 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002075"  "BUSDBL_002075'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70804 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002076"  "BUSDBL_002076'"  1.00  ""  ""  ""  0
 "secdd 70392 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70804 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002077"  "BUSDBL_002077'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70497 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002078"  "BUSDBL_002078'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70520 70528 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002079"  "BUSDBL_002079'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70530 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002080"  "BUSDBL_002080'"  1.00  ""  ""  ""  0
 "secdd 70396 70528 '1 '  1"  "open"  1.000000  ""
 "secdd 70528 70532 '1 '  1"  "open"  1.000000  ""
0
```

```
"BUSDBL_002081"    "BUSDBL_002081'"    1.00    ""    ""    ""    0
 "secdd 70396 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70536 70528 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002082"    "BUSDBL_002082'"    1.00    ""    ""    ""    0
 "secdd 70396 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002083"    "BUSDBL_002083'"    1.00    ""    ""    ""    0
 "secdd 70396 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_002084"    "BUSDBL_002084'"    1.00    ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70520 70528 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002085"    "BUSDBL_002085'"    1.00    ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70530 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002086"    "BUSDBL_002086'"    1.00    ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70532 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002087"    "BUSDBL_002087'"    1.00    ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70536 70528 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002088"    "BUSDBL_002088'"    1.00    ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002089"    "BUSDBL_002089'"    1.00    ""    ""    ""    0
 "secdd 70497 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_002090"    "BUSDBL_002090'"    1.00    ""    ""    ""    0
 "secdd 70520 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70530 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002091"    "BUSDBL_002091'"    1.00    ""    ""    ""    0
 "secdd 70520 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70532 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002092"    "BUSDBL_002092'"    1.00    ""    ""    ""    0
 "secdd 70520 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70536 70528 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002093"    "BUSDBL_002093'"    1.00    ""    ""    ""    0
 "secdd 70520 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002094"    "BUSDBL_002094'"    1.00    ""    ""    ""    0
 "secdd 70520 70528 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_002095"    "BUSDBL_002095'"    1.00    ""    ""    ""    0
 "secdd 70528 70530 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70532 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002096"    "BUSDBL_002096'"    1.00    ""    ""    ""    0
 "secdd 70528 70530 '1 '  1"    "open"    1.000000    ""
 "secdd 70536 70528 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002097"    "BUSDBL_002097'"    1.00    ""    ""    ""    0
 "secdd 70528 70530 '1 '  1"    "open"    1.000000    ""
 "secdd 70528 70804 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002098"    "BUSDBL_002098'"    1.00    ""    ""    ""    0
```

```
 "secdd 70528 70530 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002099"    "BUSDBL_002099'"    1.00  ""    ""    ""    0
 "secdd 70528 70532 '1 ' 1"    "open"    1.000000  ""
 "secdd 70536 70528 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002100"    "BUSDBL_002100'"    1.00  ""    ""    ""    0
 "secdd 70528 70532 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002101"    "BUSDBL_002101'"    1.00  ""    ""    ""    0
 "secdd 70528 70532 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002102"    "BUSDBL_002102'"    1.00  ""    ""    ""    0
 "secdd 70536 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002103"    "BUSDBL_002103'"    1.00  ""    ""    ""    0
 "secdd 70536 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002104"    "BUSDBL_002104'"    1.00  ""    ""    ""    0
 "secdd 70528 70804 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70804 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002105"    "BUSDBL_002105'"    1.00  ""    ""    ""    0
 "secdd 70192 70529 '1 ' 1"    "open"    1.000000  ""
 "secdd 70461 70529 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002106"    "BUSDBL_002106'"    1.00  ""    ""    ""    0
 "secdd 70432 70530 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70530 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002107"    "BUSDBL_002107'"    1.00  ""    ""    ""    0
 "secdd 70027 70531 '1 ' 1"    "open"    1.000000  ""
 "secdd 70036 70531 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002108"    "BUSDBL_002108'"    1.00  ""    ""    ""    0
 "secdd 70027 70531 '1 ' 1"    "open"    1.000000  ""
 "secdd 70402 70531 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002109"    "BUSDBL_002109'"    1.00  ""    ""    ""    0
 "secdd 70036 70531 '1 ' 1"    "open"    1.000000  ""
 "secdd 70402 70531 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002110"    "BUSDBL_002110'"    1.00  ""    ""    ""    0
 "secdd 70396 70532 '1 ' 1"    "open"    1.000000  ""
 "secdd 70528 70532 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002111"    "BUSDBL_002111'"    1.00  ""    ""    ""    0
 "secdd 70284 70533 '1 ' 1"    "open"    1.000000  ""
 "secdd 70524 70533 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002112"    "BUSDBL_002112'"    1.00  ""    ""    ""    0
 "secdd 70534 72191 '1 ' 1"    "open"    1.000000  ""
 "secdd 70534 73114 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002113"    "BUSDBL_002113'"    1.00  ""    ""    ""    0
 "secdd 70535 79004 '1 ' 1"    "open"    1.000000  ""
 "secdd 70535 79069 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002114"    "BUSDBL_002114'"    1.00  ""    ""    ""    0
 "secdd 70536 70528 '1 ' 1"    "open"    1.000000  ""
 "secdd 70539 70536 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002115"    "BUSDBL_002115'"    1.00  ""    ""    ""    0
 "secdd 70162 70537 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70537 70538 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002116"    "BUSDBL_002116'"    1.00  ""    ""    ""    0
 "secdd 70162 70538 '1 ' 1"    "open"    1.000000  ""
 "secdd 70216 70538 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002117"    "BUSDBL_002117'"    1.00  ""    ""    ""    0
 "secdd 70162 70538 '1 ' 1"    "open"    1.000000  ""
 "secdd 70217 70538 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002118"    "BUSDBL_002118'"    1.00  ""    ""    ""    0
 "secdd 70162 70538 '1 ' 1"    "open"    1.000000  ""
 "secdd 70537 70538 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002119"    "BUSDBL_002119'"    1.00  ""    ""    ""    0
 "secdd 70162 70538 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002120"    "BUSDBL_002120'"    1.00  ""    ""    ""    0
 "secdd 70162 70538 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002121"    "BUSDBL_002121'"    1.00  ""    ""    ""    0
 "secdd 70216 70538 '1 ' 1"    "open"    1.000000  ""
 "secdd 70217 70538 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002122"    "BUSDBL_002122'"    1.00  ""    ""    ""    0
 "secdd 70216 70538 '1 ' 1"    "open"    1.000000  ""
 "secdd 70537 70538 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002123"    "BUSDBL_002123'"    1.00  ""    ""    ""    0
 "secdd 70216 70538 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002124"    "BUSDBL_002124'"    1.00  ""    ""    ""    0
 "secdd 70216 70538 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002125"    "BUSDBL_002125'"    1.00  ""    ""    ""    0
 "secdd 70217 70538 '2 ' 1"    "open"    1.000000  ""
 "secdd 70537 70538 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002126"    "BUSDBL_002126'"    1.00  ""    ""    ""    0
 "secdd 70217 70538 '2 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002127"    "BUSDBL_002127'"    1.00  ""    ""    ""    0
 "secdd 70217 70538 '2 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002128"    "BUSDBL_002128'"    1.00  ""    ""    ""    0
 "secdd 70537 70538 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002129"    "BUSDBL_002129'"    1.00  ""    ""    ""    0
 "secdd 70537 70538 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002130"    "BUSDBL_002130'"    1.00  ""    ""    ""    0
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
 "tran 70538 70539 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002131"    "BUSDBL_002131'"    1.00  ""    ""    ""    0
 "secdd 70432 70539 '1 ' 1"    "open"    1.000000  ""
 "secdd 70539 70536 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002132"    "BUSDBL_002132'"    1.00  ""    ""    ""    0
 "secdd 70432 70539 '1 ' 1"    "open"    1.000000  ""
 "tran 70538 70539 'T1'"    "open"    1.000000  ""
```

```
0
"BUSDBL_002133"    "BUSDBL_002133'"    1.00    ""    ""    ""    0
 "secdd 70432 70539 '1 ' 1"    "open"    1.000000    ""
 "tran 70538 70539 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002134"    "BUSDBL_002134'"    1.00    ""    ""    ""    0
 "secdd 70539 70536 '1 ' 1"    "open"    1.000000    ""
 "tran 70538 70539 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002135"    "BUSDBL_002135'"    1.00    ""    ""    ""    0
 "secdd 70539 70536 '1 ' 1"    "open"    1.000000    ""
 "tran 70538 70539 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002136"    "BUSDBL_002136'"    1.00    ""    ""    ""    0
 "secdd 70540 70542 '1 ' 1"    "open"    1.000000    ""
 "secdd 70540 79003 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002137"    "BUSDBL_002137'"    1.00    ""    ""    ""    0
 "secdd 70541 70542 '1 ' 1"    "open"    1.000000    ""
 "secdd 70541 79003 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002138"    "BUSDBL_002138'"    1.00    ""    ""    ""    0
 "secdd 70540 70542 '1 ' 1"    "open"    1.000000    ""
 "secdd 70541 70542 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002139"    "BUSDBL_002139'"    1.00    ""    ""    ""    0
 "secdd 70447 70543 '1 ' 1"    "open"    1.000000    ""
 "secdd 70543 70574 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002140"    "BUSDBL_002140'"    1.00    ""    ""    ""    0
 "secdd 70297 70544 '1 ' 1"    "open"    1.000000    ""
 "secdd 70410 70544 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002141"    "BUSDBL_002141'"    1.00    ""    ""    ""    0
 "secdd 70311 70545 '1 ' 1"    "open"    1.000000    ""
 "secdd 70343 70545 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002142"    "BUSDBL_002142'"    1.00    ""    ""    ""    0
 "secdd 70311 70545 '1 ' 1"    "open"    1.000000    ""
 "tran 70546 70545 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002143"    "BUSDBL_002143'"    1.00    ""    ""    ""    0
 "secdd 70343 70545 '1 ' 1"    "open"    1.000000    ""
 "tran 70546 70545 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002144"    "BUSDBL_002144'"    1.00    ""    ""    ""    0
 "secdd 70546 70503 '1 ' 1"    "open"    1.000000    ""
 "tran 70546 70545 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002145"    "BUSDBL_002145'"    1.00    ""    ""    ""    0
 "secdd 70546 70503 '1 ' 1"    "open"    1.000000    ""
 "tran 70546 70573 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002146"    "BUSDBL_002146'"    1.00    ""    ""    ""    0
 "secdd 70546 70503 '1 ' 1"    "open"    1.000000    ""
 "secdd 70546 71505 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002147"    "BUSDBL_002147'"    1.00    ""    ""    ""    0
 "tran 70546 70545 'T1'"    "open"    1.000000    ""
 "tran 70546 70573 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002148"    "BUSDBL_002148'"    1.00    ""    ""    ""    0
 "tran 70546 70545 'T1'"    "open"    1.000000    ""
 "secdd 70546 71505 '1 ' 1"    "open"    1.000000    ""
0
"BUSDBL_002149"    "BUSDBL_002149'"    1.00    ""    ""    ""    0
 "tran 70546 70573 'T1'"    "open"    1.000000    ""
 "secdd 70546 71505 '1 ' 1"    "open"    1.000000    ""
0
```

```
"BUSDBL_002150"  "BUSDBL_002150'"  1.00  ""  ""  ""  0
 "secdd 70547 70510 '1 ' 1"  "open"  1.000000  ""
 "secdd 71517 70547 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002151"  "BUSDBL_002151'"  1.00  ""  ""  ""  0
 "secdd 70022 70549 '1 ' 1"  "open"  1.000000  ""
 "secdd 70030 70549 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002152"  "BUSDBL_002152'"  1.00  ""  ""  ""  0
 "secdd 70022 70549 '1 ' 1"  "open"  1.000000  ""
 "secdd 70352 70549 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002153"  "BUSDBL_002153'"  1.00  ""  ""  ""  0
 "secdd 70030 70549 '1 ' 1"  "open"  1.000000  ""
 "secdd 70352 70549 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002154"  "BUSDBL_002154'"  1.00  ""  ""  ""  0
 "secdd 70378 70550 '1 ' 1"  "open"  1.000000  ""
 "secdd 70394 70550 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002155"  "BUSDBL_002155'"  1.00  ""  ""  ""  0
 "secdd 70378 70550 '1 ' 1"  "open"  1.000000  ""
 "secdd 70550 71025 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002156"  "BUSDBL_002156'"  1.00  ""  ""  ""  0
 "secdd 70378 70550 '1 ' 1"  "open"  1.000000  ""
 "tran 70550 73551 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002157"  "BUSDBL_002157'"  1.00  ""  ""  ""  0
 "secdd 70394 70550 '1 ' 1"  "open"  1.000000  ""
 "secdd 70550 71025 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002158"  "BUSDBL_002158'"  1.00  ""  ""  ""  0
 "secdd 70394 70550 '1 ' 1"  "open"  1.000000  ""
 "tran 70550 73551 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002159"  "BUSDBL_002159'"  1.00  ""  ""  ""  0
 "secdd 70550 71025 '1 ' 1"  "open"  1.000000  ""
 "tran 70550 73551 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002160"  "BUSDBL_002160'"  1.00  ""  ""  ""  0
 "secdd 70396 70551 '1 ' 1"  "open"  1.000000  ""
 "secdd 70513 70551 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002161"  "BUSDBL_002161'"  1.00  ""  ""  ""  0
 "secdd 70029 70552 '1 ' 1"  "open"  1.000000  ""
 "secdd 70367 70552 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002162"  "BUSDBL_002162'"  1.00  ""  ""  ""  0
 "secdd 70029 70552 '1 ' 1"  "open"  1.000000  ""
 "secdd 70511 70552 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002163"  "BUSDBL_002163'"  1.00  ""  ""  ""  0
 "secdd 70367 70552 '1 ' 1"  "open"  1.000000  ""
 "secdd 70511 70552 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002164"  "BUSDBL_002164'"  1.00  ""  ""  ""  0
 "tran 70503 70555 'T1'"  "open"  1.000000  ""
 "secdd 70555 70559 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002165"  "BUSDBL_002165'"  1.00  ""  ""  ""  0
 "tran 70559 70502 'U1'"  "open"  1.000000  ""
 "secdd 70555 70559 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002166"  "BUSDBL_002166'"  1.00  ""  ""  ""  0
 "secdd 70261 70570 '1 ' 1"  "open"  1.000000  ""
 "secdd 70266 70570 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002167"  "BUSDBL_002167'"  1.00  ""  ""  ""  0
```

```
 "secdd 70261 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70266 70570 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002168"    "BUSDBL_002168'"    1.00  ""    ""    ""    0
 "secdd 70261 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70431 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002169"    "BUSDBL_002169'"    1.00  ""    ""    ""    0
 "secdd 70261 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70433 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002170"    "BUSDBL_002170'"    1.00  ""    ""    ""    0
 "secdd 70261 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70574 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002171"    "BUSDBL_002171'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70431 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002172"    "BUSDBL_002172'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70433 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002173"    "BUSDBL_002173'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70574 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002174"    "BUSDBL_002174'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '2 ' 1"    "open"    1.000000  ""
 "secdd 70570 70431 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002175"    "BUSDBL_002175'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '2 ' 1"    "open"    1.000000  ""
 "secdd 70570 70433 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002176"    "BUSDBL_002176'"    1.00  ""    ""    ""    0
 "secdd 70266 70570 '2 ' 1"    "open"    1.000000  ""
 "secdd 70570 70574 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002177"    "BUSDBL_002177'"    1.00  ""    ""    ""    0
 "secdd 70570 70431 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70433 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002178"    "BUSDBL_002178'"    1.00  ""    ""    ""    0
 "secdd 70570 70431 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70574 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002179"    "BUSDBL_002179'"    1.00  ""    ""    ""    0
 "secdd 70570 70433 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70574 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002180"    "BUSDBL_002180'"    1.00  ""    ""    ""    0
 "secdd 70583 70571 '1 ' 1"    "open"    1.000000  ""
 "secdd 71505 70571 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002181"    "BUSDBL_002181'"    1.00  ""    ""    ""    0
 "secdd 70543 70574 '1 ' 1"    "open"    1.000000  ""
 "secdd 70570 70574 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002182"    "BUSDBL_002182'"    1.00  ""    ""    ""    0
 "secdd 70575 70514 '1 ' 1"    "open"    1.000000  ""
 "secdd 70519 70575 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002183"    "BUSDBL_002183'"    1.00  ""    ""    ""    0
 "secdd 70576 70517 '1 ' 1"    "open"    1.000000  ""
 "secdd 70581 70576 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002184"    "BUSDBL_002184'"    1.00  ""    ""    ""    0
 "secdd 70516 70581 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70581 70576 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002185"    "BUSDBL_002185'"    1.00  ""    ""    ""    0
 "secdd 70582 70308 '1 ' 1"    "open"    1.000000  ""
 "secdd 70582 70584 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002186"    "BUSDBL_002186'"    1.00  ""    ""    ""    0
 "secdd 70583 70571 '1 ' 1"    "open"    1.000000  ""
 "secdd 71503 70583 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002187"    "BUSDBL_002187'"    1.00  ""    ""    ""    0
 "secdd 70091 70584 '1 ' 1"    "open"    1.000000  ""
 "secdd 70582 70584 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002188"    "BUSDBL_002188'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "tran 70588 70590 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002189"    "BUSDBL_002189'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "tran 70589 70590 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002190"    "BUSDBL_002190'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "tran 70591 70590 'U3'"    "open"    1.000000  ""
0
"BUSDBL_002191"    "BUSDBL_002191'"    1.00  ""    ""    ""    0
 "secdd 70048 70590 '1 ' 1"    "open"    1.000000  ""
 "secdd 70590 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002192"    "BUSDBL_002192'"    1.00  ""    ""    ""    0
 "tran 70588 70590 'U1'"    "open"    1.000000  ""
 "tran 70589 70590 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002193"    "BUSDBL_002193'"    1.00  ""    ""    ""    0
 "tran 70588 70590 'U1'"    "open"    1.000000  ""
 "tran 70591 70590 'U3'"    "open"    1.000000  ""
0
"BUSDBL_002194"    "BUSDBL_002194'"    1.00  ""    ""    ""    0
 "tran 70588 70590 'U1'"    "open"    1.000000  ""
 "secdd 70590 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002195"    "BUSDBL_002195'"    1.00  ""    ""    ""    0
 "tran 70589 70590 'U2'"    "open"    1.000000  ""
 "tran 70591 70590 'U3'"    "open"    1.000000  ""
0
"BUSDBL_002196"    "BUSDBL_002196'"    1.00  ""    ""    ""    0
 "tran 70589 70590 'U2'"    "open"    1.000000  ""
 "secdd 70590 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002197"    "BUSDBL_002197'"    1.00  ""    ""    ""    0
 "tran 70591 70590 'U3'"    "open"    1.000000  ""
 "secdd 70590 70820 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002198"    "BUSDBL_002198'"    1.00  ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
 "secdd 70447 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002199"    "BUSDBL_002199'"    1.00  ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
 "secdd 70468 70592 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002200"    "BUSDBL_002200'"    1.00  ""    ""    ""    0
 "secdd 70410 70592 '1 ' 1"    "open"    1.000000  ""
 "secdd 70592 700052 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002201"    "BUSDBL_002201'"    1.00  ""    ""    ""    0
 "secdd 70447 70592 '1 ' 1"    "open"    1.000000  ""
 "secdd 70468 70592 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_002202"  "BUSDBL_002202'"  1.00  ""  ""  ""  0
 "secdd 70447 70592 '1 ' 1"  "open"  1.000000  ""
 "secdd 70592 700052 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002203"  "BUSDBL_002203'"  1.00  ""  ""  ""  0
 "secdd 70468 70592 '1 ' 1"  "open"  1.000000  ""
 "secdd 70592 700052 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002204"  "BUSDBL_002204'"  1.00  ""  ""  ""  0
 "secdd 70595 70286 '1 ' 1"  "open"  1.000000  ""
 "tran 70577 70595 'U1'"  "open"  1.000000  ""
0
"BUSDBL_002205"  "BUSDBL_002205'"  1.00  ""  ""  ""  0
 "secdd 70595 70286 '1 ' 1"  "open"  1.000000  ""
 "tran 70578 70595 'U2'"  "open"  1.000000  ""
0
"BUSDBL_002206"  "BUSDBL_002206'"  1.00  ""  ""  ""  0
 "secdd 70595 70286 '1 ' 1"  "open"  1.000000  ""
 "tran 70579 70595 'U3'"  "open"  1.000000  ""
0
"BUSDBL_002207"  "BUSDBL_002207'"  1.00  ""  ""  ""  0
 "tran 70577 70595 'U1'"  "open"  1.000000  ""
 "tran 70578 70595 'U2'"  "open"  1.000000  ""
0
"BUSDBL_002208"  "BUSDBL_002208'"  1.00  ""  ""  ""  0
 "tran 70577 70595 'U1'"  "open"  1.000000  ""
 "tran 70579 70595 'U3'"  "open"  1.000000  ""
0
"BUSDBL_002209"  "BUSDBL_002209'"  1.00  ""  ""  ""  0
 "tran 70578 70595 'U2'"  "open"  1.000000  ""
 "tran 70579 70595 'U3'"  "open"  1.000000  ""
0
"BUSDBL_002210"  "BUSDBL_002210'"  1.00  ""  ""  ""  0
 "secdd 70396 70596 '1 ' 1"  "open"  1.000000  ""
 "tran 70597 70596 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002211"  "BUSDBL_002211'"  1.00  ""  ""  ""  0
 "secdd 70396 70596 '1 ' 1"  "open"  1.000000  ""
 "tran 70597 70596 'T2'"  "open"  1.000000  ""
0
"BUSDBL_002212"  "BUSDBL_002212'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T1'"  "open"  1.000000  ""
 "tran 70597 70596 'T2'"  "open"  1.000000  ""
0
"BUSDBL_002213"  "BUSDBL_002213'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T1'"  "open"  1.000000  ""
 "secdd 70597 70599 '2 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002214"  "BUSDBL_002214'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T1'"  "open"  1.000000  ""
 "secdd 70597 70601 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002215"  "BUSDBL_002215'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T1'"  "open"  1.000000  ""
 "secdd 70597 70921 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002216"  "BUSDBL_002216'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T1'"  "open"  1.000000  ""
 "secdd 70597 70921 '2 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002217"  "BUSDBL_002217'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T2'"  "open"  1.000000  ""
 "secdd 70597 70599 '2 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002218"  "BUSDBL_002218'"  1.00  ""  ""  ""  0
 "tran 70597 70596 'T2'"  "open"  1.000000  ""
 "secdd 70597 70601 '1 ' 1"  "open"  1.000000  ""
0
```

```
"BUSDBL_002219"    "BUSDBL_002219'"    1.00  ""    ""    ""    0
 "tran 70597 70596 'T2'"    "open"    1.000000  ""
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002220"    "BUSDBL_002220'"    1.00  ""    ""    ""    0
 "tran 70597 70596 'T2'"    "open"    1.000000  ""
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002221"    "BUSDBL_002221'"    1.00  ""    ""    ""    0
 "secdd 70597 70599 '2 '  1"    "open"    1.000000  ""
 "secdd 70597 70601 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002222"    "BUSDBL_002222'"    1.00  ""    ""    ""    0
 "secdd 70597 70599 '2 '  1"    "open"    1.000000  ""
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002223"    "BUSDBL_002223'"    1.00  ""    ""    ""    0
 "secdd 70597 70599 '2 '  1"    "open"    1.000000  ""
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002224"    "BUSDBL_002224'"    1.00  ""    ""    ""    0
 "secdd 70597 70601 '1 '  1"    "open"    1.000000  ""
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002225"    "BUSDBL_002225'"    1.00  ""    ""    ""    0
 "secdd 70597 70601 '1 '  1"    "open"    1.000000  ""
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002226"    "BUSDBL_002226'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002227"    "BUSDBL_002227'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 '  1"    "open"    1.000000  ""
 "secdd 70915 70598 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002228"    "BUSDBL_002228'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
 "secdd 70915 70598 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002229"    "BUSDBL_002229'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
 "secdd 70915 70598 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002230"    "BUSDBL_002230'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71998 'T2'"    "open"    1.000000  ""
 "secdd 70915 70598 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002231"    "BUSDBL_002231'"    1.00  ""    ""    ""    0
 "tran 70598 70311 71999 'T3'"    "open"    1.000000  ""
 "secdd 70915 70598 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002232"    "BUSDBL_002232'"    1.00  ""    ""    ""    0
 "tran 70599 70396 'T4'"    "open"    1.000000  ""
 "secdd 70597 70599 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002233"    "BUSDBL_002233'"    1.00  ""    ""    ""    0
 "tran 70599 70396 'T4'"    "open"    1.000000  ""
 "secdd 70599 70624 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002234"    "BUSDBL_002234'"    1.00  ""    ""    ""    0
 "tran 70599 70396 'T5'"    "open"    1.000000  ""
 "secdd 70597 70599 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002235"    "BUSDBL_002235'"    1.00  ""    ""    ""    0
 "tran 70599 70396 'T5'"    "open"    1.000000  ""
 "secdd 70599 70624 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002236"    "BUSDBL_002236'"    1.00  ""    ""    ""    0
```

```
 "secdd 70597 70599 '2 ' 1"    "open"    1.000000  ""
 "secdd 70599 70624 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002237"    "BUSDBL_002237'"    1.00  ""    ""    ""    0
 "secdd 70507 70600 '1 ' 1"    "open"    1.000000  ""
 "secdd 70508 70600 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002238"    "BUSDBL_002238'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
 "secdd 70597 70601 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002239"    "BUSDBL_002239'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
 "secdd 70601 70624 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002240"    "BUSDBL_002240'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002241"    "BUSDBL_002241'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T3'"    "open"    1.000000  ""
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002242"    "BUSDBL_002242'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
 "secdd 70597 70601 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002243"    "BUSDBL_002243'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
 "secdd 70601 70624 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002244"    "BUSDBL_002244'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002245"    "BUSDBL_002245'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T4'"    "open"    1.000000  ""
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002246"    "BUSDBL_002246'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
 "secdd 70597 70601 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002247"    "BUSDBL_002247'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
 "secdd 70601 70624 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002248"    "BUSDBL_002248'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002249"    "BUSDBL_002249'"    1.00  ""    ""    ""    0
 "tran 70139 70601 'T5'"    "open"    1.000000  ""
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002250"    "BUSDBL_002250'"    1.00  ""    ""    ""    0
 "secdd 70597 70601 '1 ' 1"    "open"    1.000000  ""
 "secdd 70601 70624 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002251"    "BUSDBL_002251'"    1.00  ""    ""    ""    0
 "secdd 70597 70601 '1 ' 1"    "open"    1.000000  ""
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002252"    "BUSDBL_002252'"    1.00  ""    ""    ""    0
 "secdd 70597 70601 '1 ' 1"    "open"    1.000000  ""
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002253"    "BUSDBL_002253'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70601 70653 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002254"    "BUSDBL_002254'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 ' 1"    "open"     1.000000  ""
 "secdd 70601 70653 '2 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002255"    "BUSDBL_002255'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '1 ' 1"    "open"     1.000000  ""
 "secdd 70601 70653 '2 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002256"    "BUSDBL_002256'"    1.00  ""    ""    ""    0
 "secdd 70194 70604 '1 ' 1"    "open"     1.000000  ""
 "secdd 70244 70604 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002257"    "BUSDBL_002257'"    1.00  ""    ""    ""    0
 "secdd 70192 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70362 70605 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002258"    "BUSDBL_002258'"    1.00  ""    ""    ""    0
 "secdd 70192 70605 '1 ' 1"    "open"     1.000000  ""
 "tran 72024 70605 'T1'"    "open"     1.000000  ""
0
"BUSDBL_002259"    "BUSDBL_002259'"    1.00  ""    ""    ""    0
 "secdd 70192 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 72029 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002260"    "BUSDBL_002260'"    1.00  ""    ""    ""    0
 "secdd 70192 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 72201 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002261"    "BUSDBL_002261'"    1.00  ""    ""    ""    0
 "secdd 70192 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 73192 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002262"    "BUSDBL_002262'"    1.00  ""    ""    ""    0
 "secdd 70362 70605 '1 ' 1"    "open"     1.000000  ""
 "tran 72024 70605 'T1'"    "open"     1.000000  ""
0
"BUSDBL_002263"    "BUSDBL_002263'"    1.00  ""    ""    ""    0
 "secdd 70362 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 72029 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002264"    "BUSDBL_002264'"    1.00  ""    ""    ""    0
 "secdd 70362 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 72201 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002265"    "BUSDBL_002265'"    1.00  ""    ""    ""    0
 "secdd 70362 70605 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 73192 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002266"    "BUSDBL_002266'"    1.00  ""    ""    ""    0
 "tran 72024 70605 'T1'"    "open"     1.000000  ""
 "secdd 70605 72029 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002267"    "BUSDBL_002267'"    1.00  ""    ""    ""    0
 "tran 72024 70605 'T1'"    "open"     1.000000  ""
 "secdd 70605 72201 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002268"    "BUSDBL_002268'"    1.00  ""    ""    ""    0
 "tran 72024 70605 'T1'"    "open"     1.000000  ""
 "secdd 70605 73192 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002269"    "BUSDBL_002269'"    1.00  ""    ""    ""    0
 "secdd 70605 72029 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 72201 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002270"    "BUSDBL_002270'"    1.00  ""    ""    ""    0
 "secdd 70605 72029 '1 ' 1"    "open"     1.000000  ""
 "secdd 70605 73192 '1 ' 1"    "open"     1.000000  ""
```

```
0
"BUSDBL_002271"  "BUSDBL_002271'"  1.00  ""  ""  ""  0
 "secdd 70605 72201 '1 ' 1"  "open"  1.000000  ""
 "secdd 70605 73192 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002272"  "BUSDBL_002272'"  1.00  ""  ""  ""  0
 "secdd 70107 70609 '1 ' 1"  "open"  1.000000  ""
 "secdd 70609 72026 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002273"  "BUSDBL_002273'"  1.00  ""  ""  ""  0
 "tran 70617 70616 'T1'"  "open"  1.000000  ""
 "secdd 70620 70617 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002274"  "BUSDBL_002274'"  1.00  ""  ""  ""  0
 "tran 70618 70620 70619 'T1'"  "open"  1.000000  ""
 "secdd 70623 70618 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002275"  "BUSDBL_002275'"  1.00  ""  ""  ""  0
 "secdd 70620 70617 '1 ' 1"  "open"  1.000000  ""
 "tran 70618 70620 70619 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002276"  "BUSDBL_002276'"  1.00  ""  ""  ""  0
 "secdd 70139 70623 '1 ' 1"  "open"  1.000000  ""
 "secdd 70311 70623 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002277"  "BUSDBL_002277'"  1.00  ""  ""  ""  0
 "secdd 70139 70623 '1 ' 1"  "open"  1.000000  ""
 "secdd 70623 70618 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002278"  "BUSDBL_002278'"  1.00  ""  ""  ""  0
 "secdd 70139 70623 '1 ' 1"  "open"  1.000000  ""
 "secdd 70623 70678 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002279"  "BUSDBL_002279'"  1.00  ""  ""  ""  0
 "secdd 70139 70623 '1 ' 1"  "open"  1.000000  ""
 "tran 70624 70623 71997 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002280"  "BUSDBL_002280'"  1.00  ""  ""  ""  0
 "secdd 70311 70623 '1 ' 1"  "open"  1.000000  ""
 "secdd 70623 70618 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002281"  "BUSDBL_002281'"  1.00  ""  ""  ""  0
 "secdd 70311 70623 '1 ' 1"  "open"  1.000000  ""
 "secdd 70623 70678 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002282"  "BUSDBL_002282'"  1.00  ""  ""  ""  0
 "secdd 70311 70623 '1 ' 1"  "open"  1.000000  ""
 "tran 70624 70623 71997 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002283"  "BUSDBL_002283'"  1.00  ""  ""  ""  0
 "secdd 70623 70618 '1 ' 1"  "open"  1.000000  ""
 "secdd 70623 70678 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002284"  "BUSDBL_002284'"  1.00  ""  ""  ""  0
 "secdd 70623 70618 '1 ' 1"  "open"  1.000000  ""
 "tran 70624 70623 71997 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002285"  "BUSDBL_002285'"  1.00  ""  ""  ""  0
 "tran 70624 70623 71997 'T1'"  "open"  1.000000  ""
 "secdd 70623 70678 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002286"  "BUSDBL_002286'"  1.00  ""  ""  ""  0
 "secdd 70599 70624 '1 ' 1"  "open"  1.000000  ""
 "secdd 70601 70624 '1 ' 1"  "open"  1.000000  ""
0
"BUSDBL_002287"  "BUSDBL_002287'"  1.00  ""  ""  ""  0
 "secdd 70599 70624 '1 ' 1"  "open"  1.000000  ""
 "secdd 70624 70625 '1 ' 1"  "open"  1.000000  ""
0
```

```
"BUSDBL_002288"    "BUSDBL_002288'"    1.00  ""    ""    ""    0
 "secdd 70599 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002289"    "BUSDBL_002289'"    1.00  ""    ""    ""    0
 "secdd 70599 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002290"    "BUSDBL_002290'"    1.00  ""    ""    ""    0
 "secdd 70599 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002291"    "BUSDBL_002291'"    1.00  ""    ""    ""    0
 "secdd 70599 70624 '1 '  1"    "open"    1.000000  ""
 "tran 70624 70623 71997 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002292"    "BUSDBL_002292'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002293"    "BUSDBL_002293'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002294"    "BUSDBL_002294'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002295"    "BUSDBL_002295'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002296"    "BUSDBL_002296'"    1.00  ""    ""    ""    0
 "secdd 70601 70624 '1 '  1"    "open"    1.000000  ""
 "tran 70624 70623 71997 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002297"    "BUSDBL_002297'"    1.00  ""    ""    ""    0
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002298"    "BUSDBL_002298'"    1.00  ""    ""    ""    0
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002299"    "BUSDBL_002299'"    1.00  ""    ""    ""    0
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002300"    "BUSDBL_002300'"    1.00  ""    ""    ""    0
 "tran 70624 70623 71997 'T1'"    "open"    1.000000  ""
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002301"    "BUSDBL_002301'"    1.00  ""    ""    ""    0
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002302"    "BUSDBL_002302'"    1.00  ""    ""    ""    0
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002303"    "BUSDBL_002303'"    1.00  ""    ""    ""    0
 "tran 70624 70623 71997 'T1'"    "open"    1.000000  ""
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002304"    "BUSDBL_002304'"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002305"    "BUSDBL_002305'"    1.00  ""    ""    ""    0
```

```
 "tran 70624 70623 71997 'T1'"    "open"    1.000000  ""
 "secdd 70624 70915 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002306"    "BUSDBL_002306'"    1.00  ""    ""    ""    0
 "tran 70624 70623 71997 'T1'"    "open"    1.000000  ""
 "secdd 70624 70915 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002307"    "BUSDBL_002307'"    1.00  ""    ""    ""    0
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
 "secdd 70625 70626 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002308"    "BUSDBL_002308'"    1.00  ""    ""    ""    0
 "secdd 70624 70625 '1 '  1"    "open"    1.000000  ""
 "tran 70635 70625 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002309"    "BUSDBL_002309'"    1.00  ""    ""    ""    0
 "secdd 70625 70626 '1 '  1"    "open"    1.000000  ""
 "tran 70635 70625 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002310"    "BUSDBL_002310'"    1.00  ""    ""    ""    0
 "secdd 70625 70626 '1 '  1"    "open"    1.000000  ""
 "secdd 70626 70627 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002311"    "BUSDBL_002311'"    1.00  ""    ""    ""    0
 "secdd 70625 70626 '1 '  1"    "open"    1.000000  ""
 "tran 70636 70626 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002312"    "BUSDBL_002312'"    1.00  ""    ""    ""    0
 "secdd 70626 70627 '1 '  1"    "open"    1.000000  ""
 "tran 70636 70626 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002313"    "BUSDBL_002313'"    1.00  ""    ""    ""    0
 "secdd 70626 70627 '1 '  1"    "open"    1.000000  ""
 "tran 70637 70627 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002314"    "BUSDBL_002314'"    1.00  ""    ""    ""    0
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
 "secdd 70628 70630 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002315"    "BUSDBL_002315'"    1.00  ""    ""    ""    0
 "secdd 70624 70628 '1 '  1"    "open"    1.000000  ""
 "secdd 70764 70628 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002316"    "BUSDBL_002316'"    1.00  ""    ""    ""    0
 "secdd 70628 70630 '1 '  1"    "open"    1.000000  ""
 "secdd 70764 70628 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002317"    "BUSDBL_002317'"    1.00  ""    ""    ""    0
 "secdd 70628 70630 '1 '  1"    "open"    1.000000  ""
 "secdd 70750 70630 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002318"    "BUSDBL_002318'"    1.00  ""    ""    ""    0
 "secdd 70628 70630 '1 '  1"    "open"    1.000000  ""
 "tran 70630 70773 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002319"    "BUSDBL_002319'"    1.00  ""    ""    ""    0
 "secdd 70628 70630 '1 '  1"    "open"    1.000000  ""
 "secdd 70918 70630 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002320"    "BUSDBL_002320'"    1.00  ""    ""    ""    0
 "secdd 70750 70630 '1 '  1"    "open"    1.000000  ""
 "tran 70630 70773 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002321"    "BUSDBL_002321'"    1.00  ""    ""    ""    0
 "secdd 70750 70630 '1 '  1"    "open"    1.000000  ""
 "secdd 70918 70630 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002322"    "BUSDBL_002322'"    1.00  ""    ""    ""    0
 "tran 70630 70773 'T1'"    "open"    1.000000  ""
```

```
 "secdd 70918 70630 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002323"    "BUSDBL_002323'"    1.00  ""    ""    ""    0
 "secdd 70778 70632 '1 ' 1"    "open"    1.000000  ""
 "secdd 70918 70632 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002324"    "BUSDBL_002324'"    1.00  ""    ""    ""    0
 "tran 70443 70633 'U1'"    "open"    1.000000  ""
 "secdd 70633 70445 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002325"    "BUSDBL_002325'"    1.00  ""    ""    ""    0
 "tran 70442 70634 'U2'"    "open"    1.000000  ""
 "secdd 70634 70446 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002326"    "BUSDBL_002326'"    1.00  ""    ""    ""    0
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
 "secdd 70652 70759 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002327"    "BUSDBL_002327'"    1.00  ""    ""    ""    0
 "secdd 70286 70652 '1 ' 1"    "open"    1.000000  ""
 "secdd 700139 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002328"    "BUSDBL_002328'"    1.00  ""    ""    ""    0
 "secdd 70652 70759 '1 ' 1"    "open"    1.000000  ""
 "secdd 700139 70652 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002329"    "BUSDBL_002329'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
 "secdd 70653 70654 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002330"    "BUSDBL_002330'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
 "secdd 70653 70654 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002331"    "BUSDBL_002331'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
 "secdd 70653 70754 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002332"    "BUSDBL_002332'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
 "secdd 70653 70921 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002333"    "BUSDBL_002333'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '1 ' 1"    "open"    1.000000  ""
 "secdd 70653 70921 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002334"    "BUSDBL_002334'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
 "secdd 70653 70654 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002335"    "BUSDBL_002335'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
 "secdd 70653 70654 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002336"    "BUSDBL_002336'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
 "secdd 70653 70754 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002337"    "BUSDBL_002337'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
 "secdd 70653 70921 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002338"    "BUSDBL_002338'"    1.00  ""    ""    ""    0
 "secdd 70601 70653 '2 ' 1"    "open"    1.000000  ""
 "secdd 70653 70921 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002339"    "BUSDBL_002339'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '1 ' 1"    "open"    1.000000  ""
 "secdd 70653 70654 '2 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_002340"  "BUSDBL_002340'"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '1 '  1"  "open"  1.000000  ""
 "secdd 70653 70754 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002341"  "BUSDBL_002341'"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '1 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002342"  "BUSDBL_002342'"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '1 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002343"  "BUSDBL_002343'"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '2 '  1"  "open"  1.000000  ""
 "secdd 70653 70754 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002344"  "BUSDBL_002344'"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '2 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002345"  "BUSDBL_002345'"  1.00  ""  ""  ""  0
 "secdd 70653 70654 '2 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002346"  "BUSDBL_002346'"  1.00  ""  ""  ""  0
 "secdd 70653 70754 '1 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002347"  "BUSDBL_002347'"  1.00  ""  ""  ""  0
 "secdd 70653 70754 '1 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002348"  "BUSDBL_002348'"  1.00  ""  ""  ""  0
 "secdd 70653 70921 '1 '  1"  "open"  1.000000  ""
 "secdd 70653 70921 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002349"  "BUSDBL_002349'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T3'"  "open"  1.000000  ""
 "secdd 70653 70654 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002350"  "BUSDBL_002350'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T3'"  "open"  1.000000  ""
 "secdd 70653 70654 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002351"  "BUSDBL_002351'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T3'"  "open"  1.000000  ""
 "tran 70654 70777 'U1'"  "open"  1.000000  ""
0
"BUSDBL_002352"  "BUSDBL_002352'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T3'"  "open"  1.000000  ""
 "secdd 700047 70654 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002353"  "BUSDBL_002353'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T3'"  "open"  1.000000  ""
 "secdd 700188 70654 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002354"  "BUSDBL_002354'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T4'"  "open"  1.000000  ""
 "secdd 70653 70654 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002355"  "BUSDBL_002355'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T4'"  "open"  1.000000  ""
 "secdd 70653 70654 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002356"  "BUSDBL_002356'"  1.00  ""  ""  ""  0
 "tran 70122 70654 'T4'"  "open"  1.000000  ""
 "tran 70654 70777 'U1'"  "open"  1.000000  ""
0
```

```
"BUSDBL_002357"    "BUSDBL_002357'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
 "secdd 700047 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002358"    "BUSDBL_002358'"    1.00  ""    ""    ""    0
 "tran 70122 70654 'T4'"    "open"    1.000000  ""
 "secdd 700188 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002359"    "BUSDBL_002359'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '1 '  1"    "open"    1.000000  ""
 "tran 70654 70777 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002360"    "BUSDBL_002360'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '1 '  1"    "open"    1.000000  ""
 "secdd 700047 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002361"    "BUSDBL_002361'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '1 '  1"    "open"    1.000000  ""
 "secdd 700188 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002362"    "BUSDBL_002362'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '2 '  1"    "open"    1.000000  ""
 "tran 70654 70777 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002363"    "BUSDBL_002363'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '2 '  1"    "open"    1.000000  ""
 "secdd 700047 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002364"    "BUSDBL_002364'"    1.00  ""    ""    ""    0
 "secdd 70653 70654 '2 '  1"    "open"    1.000000  ""
 "secdd 700188 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002365"    "BUSDBL_002365'"    1.00  ""    ""    ""    0
 "tran 70654 70777 'U1'"    "open"    1.000000  ""
 "secdd 700047 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002366"    "BUSDBL_002366'"    1.00  ""    ""    ""    0
 "tran 70654 70777 'U1'"    "open"    1.000000  ""
 "secdd 700188 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002367"    "BUSDBL_002367'"    1.00  ""    ""    ""    0
 "secdd 700047 70654 '1 '  1"    "open"    1.000000  ""
 "secdd 700188 70654 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002368"    "BUSDBL_002368'"    1.00  ""    ""    ""    0
 "secdd 70221 70655 '1 '  1"    "open"    1.000000  ""
 "secdd 70348 70655 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002369"    "BUSDBL_002369'"    1.00  ""    ""    ""    0
 "secdd 70221 70655 '1 '  1"    "open"    1.000000  ""
 "secdd 70383 70655 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002370"    "BUSDBL_002370'"    1.00  ""    ""    ""    0
 "secdd 70348 70655 '1 '  1"    "open"    1.000000  ""
 "secdd 70383 70655 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002371"    "BUSDBL_002371'"    1.00  ""    ""    ""    0
 "secdd 70467 70656 '1 '  1"    "open"    1.000000  ""
 "secdd 70656 70657 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002372"    "BUSDBL_002372'"    1.00  ""    ""    ""    0
 "secdd 70656 70657 '1 '  1"    "open"    1.000000  ""
 "secdd 70657 70658 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002373"    "BUSDBL_002373'"    1.00  ""    ""    ""    0
 "tran 70325 70658 '1 '"    "open"    1.000000  ""
 "secdd 70347 70658 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002374"    "BUSDBL_002374'"    1.00  ""    ""    ""    0
```

```
 "tran 70325 70658 '1 '"    "open"    1.000000  ""
 "secdd 70411 70658 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002375"    "BUSDBL_002375'"    1.00  ""    ""    ""    0
 "tran 70325 70658 '1 '"    "open"    1.000000  ""
 "secdd 70657 70658 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002376"    "BUSDBL_002376'"    1.00  ""    ""    ""    0
 "secdd 70347 70658 '1 ' 1"    "open"    1.000000  ""
 "secdd 70411 70658 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002377"    "BUSDBL_002377'"    1.00  ""    ""    ""    0
 "secdd 70347 70658 '1 ' 1"    "open"    1.000000  ""
 "secdd 70657 70658 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002378"    "BUSDBL_002378'"    1.00  ""    ""    ""    0
 "secdd 70411 70658 '1 ' 1"    "open"    1.000000  ""
 "secdd 70657 70658 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002379"    "BUSDBL_002379'"    1.00  ""    ""    ""    0
 "tran 70445 70659 'T1'"    "open"    1.000000  ""
 "tran 70446 70659 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002380"    "BUSDBL_002380'"    1.00  ""    ""    ""    0
 "tran 70445 70659 'T1'"    "open"    1.000000  ""
 "secdd 70659 70750 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002381"    "BUSDBL_002381'"    1.00  ""    ""    ""    0
 "tran 70446 70659 'T2'"    "open"    1.000000  ""
 "secdd 70659 70750 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002382"    "BUSDBL_002382'"    1.00  ""    ""    ""    0
 "tran 70660 70661 'T1'"    "open"    1.000000  ""
 "secdd 70660 73477 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002383"    "BUSDBL_002383'"    1.00  ""    ""    ""    0
 "tran 70660 70661 'T1'"    "open"    1.000000  ""
 "tran 70660 73724 73725 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002384"    "BUSDBL_002384'"    1.00  ""    ""    ""    0
 "secdd 70660 73477 '1 ' 1"    "open"    1.000000  ""
 "tran 70660 73724 73725 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002385"    "BUSDBL_002385'"    1.00  ""    ""    ""    0
 "tran 70660 70661 'T1'"    "open"    1.000000  ""
 "secdd 70661 70662 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002386"    "BUSDBL_002386'"    1.00  ""    ""    ""    0
 "secdd 70661 70662 '1 ' 1"    "open"    1.000000  ""
 "tran 70662 70663 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002387"    "BUSDBL_002387'"    1.00  ""    ""    ""    0
 "tran 70672 70670 'U1'"    "open"    1.000000  ""
 "secdd 70672 70674 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002388"    "BUSDBL_002388'"    1.00  ""    ""    ""    0
 "tran 70673 70671 'U2'"    "open"    1.000000  ""
 "secdd 70673 70675 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002389"    "BUSDBL_002389'"    1.00  ""    ""    ""    0
 "secdd 70672 70674 '1 ' 1"    "open"    1.000000  ""
 "tran 70674 70676 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002390"    "BUSDBL_002390'"    1.00  ""    ""    ""    0
 "secdd 70673 70675 '1 ' 1"    "open"    1.000000  ""
 "tran 70675 70677 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002391"    "BUSDBL_002391'"    1.00  ""    ""    ""    0
 "tran 70674 70676 'T1'"    "open"    1.000000  ""
```

```
 "secdd 70679 70676 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002392"    "BUSDBL_002392'"    1.00  ""    ""    ""    0
 "tran 70675 70677 'T1'"    "open"    1.000000  ""
 "secdd 70677 70679 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002393"    "BUSDBL_002393'"    1.00  ""    ""    ""    0
 "secdd 70623 70678 '1 ' 1"    "open"    1.000000  ""
 "secdd 70679 70678 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002394"    "BUSDBL_002394'"    1.00  ""    ""    ""    0
 "secdd 70679 70676 '1 ' 1"    "open"    1.000000  ""
 "secdd 70677 70679 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002395"    "BUSDBL_002395'"    1.00  ""    ""    ""    0
 "secdd 70679 70676 '1 ' 1"    "open"    1.000000  ""
 "secdd 70679 70678 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002396"    "BUSDBL_002396'"    1.00  ""    ""    ""    0
 "secdd 70677 70679 '1 ' 1"    "open"    1.000000  ""
 "secdd 70679 70678 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002397"    "BUSDBL_002397'"    1.00  ""    ""    ""    0
 "secdd 70013 70700 '1 ' 1"    "open"    1.000000  ""
 "tran 70701 70700 'UE'"    "open"    1.000000  ""
0
"BUSDBL_002398"    "BUSDBL_002398'"    1.00  ""    ""    ""    0
 "secdd 70013 70700 '1 ' 1"    "open"    1.000000  ""
 "tran 70702 70700 'UW'"    "open"    1.000000  ""
0
"BUSDBL_002399"    "BUSDBL_002399'"    1.00  ""    ""    ""    0
 "secdd 70013 70700 '1 ' 1"    "open"    1.000000  ""
 "secdd 70700 70705 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002400"    "BUSDBL_002400'"    1.00  ""    ""    ""    0
 "tran 70701 70700 'UE'"    "open"    1.000000  ""
 "tran 70702 70700 'UW'"    "open"    1.000000  ""
0
"BUSDBL_002401"    "BUSDBL_002401'"    1.00  ""    ""    ""    0
 "tran 70701 70700 'UE'"    "open"    1.000000  ""
 "secdd 70700 70705 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002402"    "BUSDBL_002402'"    1.00  ""    ""    ""    0
 "tran 70702 70700 'UW'"    "open"    1.000000  ""
 "secdd 70700 70705 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002403"    "BUSDBL_002403'"    1.00  ""    ""    ""    0
 "tran 70701 70700 'UE'"    "open"    1.000000  ""
 "secdd 70707 70701 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002404"    "BUSDBL_002404'"    1.00  ""    ""    ""    0
 "tran 70702 70700 'UW'"    "open"    1.000000  ""
 "secdd 70709 70702 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002405"    "BUSDBL_002405'"    1.00  ""    ""    ""    0
 "tran 70703 70705 'U1'"    "open"    1.000000  ""
 "secdd 70706 70703 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002406"    "BUSDBL_002406'"    1.00  ""    ""    ""    0
 "secdd 70700 70705 '1 ' 1"    "open"    1.000000  ""
 "tran 70703 70705 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002407"    "BUSDBL_002407'"    1.00  ""    ""    ""    0
 "secdd 70706 70703 '1 ' 1"    "open"    1.000000  ""
 "tran 70704 70706 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002408"    "BUSDBL_002408'"    1.00  ""    ""    ""    0
 "secdd 70707 70701 '1 ' 1"    "open"    1.000000  ""
 "tran 70708 70707 '1 '"    "open"    1.000000  ""
```

```
0
"BUSDBL_002409"    "BUSDBL_002409'"    1.00    ""    ""    ""    0
 "tran 70256 70709 '1 '"    "open"    1.000000    ""
 "secdd 70709 70702 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002410"    "BUSDBL_002410'"    1.00    ""    ""    ""    0
 "tran 70710 70711 'U1'"    "open"    1.000000    ""
 "tran 70712 70711 'U2'"    "open"    1.000000    ""
0
"BUSDBL_002411"    "BUSDBL_002411'"    1.00    ""    ""    ""    0
 "tran 70710 70711 'U1'"    "open"    1.000000    ""
 "tran 70713 70711 'U3'"    "open"    1.000000    ""
0
"BUSDBL_002412"    "BUSDBL_002412'"    1.00    ""    ""    ""    0
 "tran 70710 70711 'U1'"    "open"    1.000000    ""
 "tran 70714 70711 'U4'"    "open"    1.000000    ""
0
"BUSDBL_002413"    "BUSDBL_002413'"    1.00    ""    ""    ""    0
 "tran 70710 70711 'U1'"    "open"    1.000000    ""
 "secdd 700181 70711 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002414"    "BUSDBL_002414'"    1.00    ""    ""    ""    0
 "tran 70712 70711 'U2'"    "open"    1.000000    ""
 "tran 70713 70711 'U3'"    "open"    1.000000    ""
0
"BUSDBL_002415"    "BUSDBL_002415'"    1.00    ""    ""    ""    0
 "tran 70712 70711 'U2'"    "open"    1.000000    ""
 "tran 70714 70711 'U4'"    "open"    1.000000    ""
0
"BUSDBL_002416"    "BUSDBL_002416'"    1.00    ""    ""    ""    0
 "tran 70712 70711 'U2'"    "open"    1.000000    ""
 "secdd 700181 70711 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002417"    "BUSDBL_002417'"    1.00    ""    ""    ""    0
 "tran 70713 70711 'U3'"    "open"    1.000000    ""
 "tran 70714 70711 'U4'"    "open"    1.000000    ""
0
"BUSDBL_002418"    "BUSDBL_002418'"    1.00    ""    ""    ""    0
 "tran 70713 70711 'U3'"    "open"    1.000000    ""
 "secdd 700181 70711 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002419"    "BUSDBL_002419'"    1.00    ""    ""    ""    0
 "tran 70714 70711 'U4'"    "open"    1.000000    ""
 "secdd 700181 70711 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002420"    "BUSDBL_002420'"    1.00    ""    ""    ""    0
 "tran 70715 70716 'U2'"    "open"    1.000000    ""
 "secdd 70717 70716 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002421"    "BUSDBL_002421'"    1.00    ""    ""    ""    0
 "secdd 70717 70716 '1 '  1"    "open"    1.000000    ""
 "tran 70717 70718 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002422"    "BUSDBL_002422'"    1.00    ""    ""    ""    0
 "tran 70717 70718 'T2'"    "open"    1.000000    ""
 "tran 70718 70719 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002423"    "BUSDBL_002423'"    1.00    ""    ""    ""    0
 "tran 70717 70718 'T2'"    "open"    1.000000    ""
 "secdd 70718 73579 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002424"    "BUSDBL_002424'"    1.00    ""    ""    ""    0
 "tran 70718 70719 'T1'"    "open"    1.000000    ""
 "secdd 70718 73579 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002425"    "BUSDBL_002425'"    1.00    ""    ""    ""    0
 "tran 70718 70719 'T1'"    "open"    1.000000    ""
 "secdd 70720 70719 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_002426"    "BUSDBL_002426'"    1.00    ""    ""    ""    0
 "secdd 70720 70719 '1 '  1"    "open"    1.000000    ""
 "tran 70721 70720 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002427"    "BUSDBL_002427'"    1.00    ""    ""    ""    0
 "tran 70723 70722 'U1'"    "open"    1.000000    ""
 "secdd 70722 73150 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002428"    "BUSDBL_002428'"    1.00    ""    ""    ""    0
 "tran 70725 70724 '1 '"    "open"    1.000000    ""
 "secdd 70724 70992 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002429"    "BUSDBL_002429'"    1.00    ""    ""    ""    0
 "tran 70730 70731 'T1'"    "open"    1.000000    ""
 "tran 70730 70734 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002430"    "BUSDBL_002430'"    1.00    ""    ""    ""    0
 "tran 70730 70731 'T1'"    "open"    1.000000    ""
 "secdd 70778 70730 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002431"    "BUSDBL_002431'"    1.00    ""    ""    ""    0
 "tran 70730 70734 'T1'"    "open"    1.000000    ""
 "secdd 70778 70730 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002432"    "BUSDBL_002432'"    1.00    ""    ""    ""    0
 "tran 70730 70731 'T1'"    "open"    1.000000    ""
 "secdd 70731 70732 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002433"    "BUSDBL_002433'"    1.00    ""    ""    ""    0
 "tran 70730 70731 'T1'"    "open"    1.000000    ""
 "secdd 70731 70776 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002434"    "BUSDBL_002434'"    1.00    ""    ""    ""    0
 "secdd 70731 70732 '1 '  1"    "open"    1.000000    ""
 "secdd 70731 70776 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002435"    "BUSDBL_002435'"    1.00    ""    ""    ""    0
 "secdd 70731 70732 '1 '  1"    "open"    1.000000    ""
 "tran 70732 70733 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002436"    "BUSDBL_002436'"    1.00    ""    ""    ""    0
 "tran 70730 70734 'T1'"    "open"    1.000000    ""
 "secdd 70734 70735 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002437"    "BUSDBL_002437'"    1.00    ""    ""    ""    0
 "secdd 70734 70735 '1 '  1"    "open"    1.000000    ""
 "tran 70735 70736 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002438"    "BUSDBL_002438'"    1.00    ""    ""    ""    0
 "secdd 70737 70738 '1 '  1"    "open"    1.000000    ""
 "tran 70778 70737 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002439"    "BUSDBL_002439'"    1.00    ""    ""    ""    0
 "secdd 70737 70738 '1 '  1"    "open"    1.000000    ""
 "tran 70738 70739 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002440"    "BUSDBL_002440'"    1.00    ""    ""    ""    0
 "secdd 70740 70741 '1 '  1"    "open"    1.000000    ""
 "tran 70778 70740 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002441"    "BUSDBL_002441'"    1.00    ""    ""    ""    0
 "secdd 70740 70741 '1 '  1"    "open"    1.000000    ""
 "tran 70741 70742 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002442"    "BUSDBL_002442'"    1.00    ""    ""    ""    0
 "secdd 70750 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 70659 70750 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002443"    "BUSDBL_002443'"    1.00    ""    ""    ""    0
```

```
 "secdd 70750 70630 '1 ' 1"    "open"    1.000000  ""
 "tran 70750 70751 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002444"    "BUSDBL_002444'"    1.00  ""    ""    ""    0
 "secdd 70750 70630 '1 ' 1"    "open"    1.000000  ""
 "tran 70750 70752 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002445"    "BUSDBL_002445'"    1.00  ""    ""    ""    0
 "secdd 70659 70750 '1 ' 1"    "open"    1.000000  ""
 "tran 70750 70751 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002446"    "BUSDBL_002446'"    1.00  ""    ""    ""    0
 "secdd 70659 70750 '1 ' 1"    "open"    1.000000  ""
 "tran 70750 70752 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002447"    "BUSDBL_002447'"    1.00  ""    ""    ""    0
 "tran 70750 70751 'T1'"    "open"    1.000000  ""
 "tran 70750 70752 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002448"    "BUSDBL_002448'"    1.00  ""    ""    ""    0
 "tran 70750 70751 'T1'"    "open"    1.000000  ""
 "tran 70751 70753 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002449"    "BUSDBL_002449'"    1.00  ""    ""    ""    0
 "tran 70752 70749 'U2'"    "open"    1.000000  ""
 "tran 70750 70752 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002450"    "BUSDBL_002450'"    1.00  ""    ""    ""    0
 "secdd 70653 70754 '1 ' 1"    "open"    1.000000  ""
 "tran 70754 70755 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002451"    "BUSDBL_002451'"    1.00  ""    ""    ""    0
 "tran 70754 70755 'T1'"    "open"    1.000000  ""
 "tran 70755 70756 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002452"    "BUSDBL_002452'"    1.00  ""    ""    ""    0
 "tran 70754 70755 'T1'"    "open"    1.000000  ""
 "secdd 70755 70757 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002453"    "BUSDBL_002453'"    1.00  ""    ""    ""    0
 "tran 70755 70756 'U2'"    "open"    1.000000  ""
 "secdd 70755 70757 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002454"    "BUSDBL_002454'"    1.00  ""    ""    ""    0
 "secdd 70755 70757 '1 ' 1"    "open"    1.000000  ""
 "tran 70757 70758 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002455"    "BUSDBL_002455'"    1.00  ""    ""    ""    0
 "secdd 70652 70759 '1 ' 1"    "open"    1.000000  ""
 "tran 70759 70760 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002456"    "BUSDBL_002456'"    1.00  ""    ""    ""    0
 "tran 70759 70760 'T1'"    "open"    1.000000  ""
 "tran 70760 70761 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002457"    "BUSDBL_002457'"    1.00  ""    ""    ""    0
 "tran 70759 70760 'T1'"    "open"    1.000000  ""
 "secdd 70760 70762 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002458"    "BUSDBL_002458'"    1.00  ""    ""    ""    0
 "tran 70760 70761 'U2'"    "open"    1.000000  ""
 "secdd 70760 70762 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002459"    "BUSDBL_002459'"    1.00  ""    ""    ""    0
 "secdd 70760 70762 '1 ' 1"    "open"    1.000000  ""
 "tran 70762 70763 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002460"    "BUSDBL_002460'"    1.00  ""    ""    ""    0
 "secdd 70764 70628 '1 ' 1"    "open"    1.000000  ""
```

```
 "tran 70764 70765 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002461"    "BUSDBL_002461'"    1.00  ""    ""    ""    0
 "secdd 70764 70628 '1 '  1"    "open"    1.000000  ""
 "tran 70764 70768 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002462"    "BUSDBL_002462'"    1.00  ""    ""    ""    0
 "tran 70764 70765 'T1'"    "open"    1.000000  ""
 "tran 70764 70768 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002463"    "BUSDBL_002463'"    1.00  ""    ""    ""    0
 "tran 70764 70765 'T1'"    "open"    1.000000  ""
 "secdd 70766 70765 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002464"    "BUSDBL_002464'"    1.00  ""    ""    ""    0
 "secdd 70766 70765 '1 '  1"    "open"    1.000000  ""
 "tran 70766 70767 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002465"    "BUSDBL_002465'"    1.00  ""    ""    ""    0
 "tran 70764 70768 'T2'"    "open"    1.000000  ""
 "secdd 70769 70768 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002466"    "BUSDBL_002466'"    1.00  ""    ""    ""    0
 "secdd 70769 70768 '1 '  1"    "open"    1.000000  ""
 "tran 70769 70770 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002467"    "BUSDBL_002467'"    1.00  ""    ""    ""    0
 "tran 70772 70771 'U3'"    "open"    1.000000  ""
 "secdd 70772 70773 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002468"    "BUSDBL_002468'"    1.00  ""    ""    ""    0
 "tran 70630 70773 'T1'"    "open"    1.000000  ""
 "secdd 70772 70773 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002469"    "BUSDBL_002469'"    1.00  ""    ""    ""    0
 "secdd 70731 70776 '1 '  1"    "open"    1.000000  ""
 "tran 70776 70775 'U3'"    "open"    1.000000  ""
0
"BUSDBL_002470"    "BUSDBL_002470'"    1.00  ""    ""    ""    0
 "secdd 70778 70632 '1 '  1"    "open"    1.000000  ""
 "secdd 70778 70730 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002471"    "BUSDBL_002471'"    1.00  ""    ""    ""    0
 "secdd 70778 70632 '1 '  1"    "open"    1.000000  ""
 "tran 70778 70737 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002472"    "BUSDBL_002472'"    1.00  ""    ""    ""    0
 "secdd 70778 70632 '1 '  1"    "open"    1.000000  ""
 "tran 70778 70740 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002473"    "BUSDBL_002473'"    1.00  ""    ""    ""    0
 "secdd 70778 70730 '1 '  1"    "open"    1.000000  ""
 "tran 70778 70737 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002474"    "BUSDBL_002474'"    1.00  ""    ""    ""    0
 "secdd 70778 70730 '1 '  1"    "open"    1.000000  ""
 "tran 70778 70740 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002475"    "BUSDBL_002475'"    1.00  ""    ""    ""    0
 "tran 70778 70737 'T1'"    "open"    1.000000  ""
 "tran 70778 70740 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002476"    "BUSDBL_002476'"    1.00  ""    ""    ""    0
 "secdd 70816 70815 '1 '  1"    "open"    1.000000  ""
 "tran 70819 70815 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002477"    "BUSDBL_002477'"    1.00  ""    ""    ""    0
 "secdd 70816 70815 '1 '  1"    "open"    1.000000  ""
 "tran 70816 70817 'U2'"    "open"    1.000000  ""
```

```
0
"BUSDBL_002478"    "BUSDBL_002478'"    1.00    ""    ""    ""    0
 "secdd 70816 70815 '1 '  1"    "open"    1.000000    ""
 "tran 70818 70816 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002479"    "BUSDBL_002479'"    1.00    ""    ""    ""    0
 "tran 70816 70817 'U2'"    "open"    1.000000    ""
 "tran 70818 70816 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002480"    "BUSDBL_002480'"    1.00    ""    ""    ""    0
 "tran 70819 70815 'T1'"    "open"    1.000000    ""
 "secdd 70819 70833 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002481"    "BUSDBL_002481'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '1 '  1"    "open"    1.000000    ""
 "secdd 70410 70820 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002482"    "BUSDBL_002482'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '1 '  1"    "open"    1.000000    ""
 "secdd 70590 70820 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002483"    "BUSDBL_002483'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '1 '  1"    "open"    1.000000    ""
 "secdd 70820 70822 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002484"    "BUSDBL_002484'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '2 '  1"    "open"    1.000000    ""
 "secdd 70410 70820 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002485"    "BUSDBL_002485'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '2 '  1"    "open"    1.000000    ""
 "secdd 70590 70820 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002486"    "BUSDBL_002486'"    1.00    ""    ""    ""    0
 "secdd 70048 70820 '2 '  1"    "open"    1.000000    ""
 "secdd 70820 70822 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002487"    "BUSDBL_002487'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 '  1"    "open"    1.000000    ""
 "secdd 70590 70820 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002488"    "BUSDBL_002488'"    1.00    ""    ""    ""    0
 "secdd 70410 70820 '1 '  1"    "open"    1.000000    ""
 "secdd 70820 70822 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002489"    "BUSDBL_002489'"    1.00    ""    ""    ""    0
 "secdd 70590 70820 '1 '  1"    "open"    1.000000    ""
 "secdd 70820 70822 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002490"    "BUSDBL_002490'"    1.00    ""    ""    ""    0
 "secdd 70822 70821 '1 '  1"    "open"    1.000000    ""
 "tran 70821 70823 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002491"    "BUSDBL_002491'"    1.00    ""    ""    ""    0
 "secdd 70822 70821 '1 '  1"    "open"    1.000000    ""
 "tran 70821 70824 'U2'"    "open"    1.000000    ""
0
"BUSDBL_002492"    "BUSDBL_002492'"    1.00    ""    ""    ""    0
 "secdd 70822 70821 '1 '  1"    "open"    1.000000    ""
 "secdd 70821 70833 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002493"    "BUSDBL_002493'"    1.00    ""    ""    ""    0
 "tran 70821 70823 'U1'"    "open"    1.000000    ""
 "tran 70821 70824 'U2'"    "open"    1.000000    ""
0
"BUSDBL_002494"    "BUSDBL_002494'"    1.00    ""    ""    ""    0
 "tran 70821 70823 'U1'"    "open"    1.000000    ""
 "secdd 70821 70833 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_002495"    "BUSDBL_002495'"    1.00    ""    ""    ""    0
 "tran 70821 70824 'U2'"    "open"    1.000000    ""
 "secdd 70821 70833 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002496"    "BUSDBL_002496'"    1.00    ""    ""    ""    0
 "secdd 70820 70822 '1 '  1"    "open"    1.000000    ""
 "secdd 70822 70821 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002497"    "BUSDBL_002497'"    1.00    ""    ""    ""    0
 "tran 70830 70825 'U1'"    "open"    1.000000    ""
 "secdd 70830 70834 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002498"    "BUSDBL_002498'"    1.00    ""    ""    ""    0
 "tran 70831 70826 'U1'"    "open"    1.000000    ""
 "secdd 70831 70835 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002499"    "BUSDBL_002499'"    1.00    ""    ""    ""    0
 "tran 70832 70827 'U1'"    "open"    1.000000    ""
 "secdd 70832 70835 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002500"    "BUSDBL_002500'"    1.00    ""    ""    ""    0
 "secdd 70819 70833 '1 '  1"    "open"    1.000000    ""
 "secdd 70821 70833 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002501"    "BUSDBL_002501'"    1.00    ""    ""    ""    0
 "secdd 70819 70833 '1 '  1"    "open"    1.000000    ""
 "tran 70834 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002502"    "BUSDBL_002502'"    1.00    ""    ""    ""    0
 "secdd 70819 70833 '1 '  1"    "open"    1.000000    ""
 "tran 70835 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002503"    "BUSDBL_002503'"    1.00    ""    ""    ""    0
 "secdd 70821 70833 '1 '  1"    "open"    1.000000    ""
 "tran 70834 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002504"    "BUSDBL_002504'"    1.00    ""    ""    ""    0
 "secdd 70821 70833 '1 '  1"    "open"    1.000000    ""
 "tran 70835 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002505"    "BUSDBL_002505'"    1.00    ""    ""    ""    0
 "tran 70834 70833 'T1'"    "open"    1.000000    ""
 "tran 70835 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002506"    "BUSDBL_002506'"    1.00    ""    ""    ""    0
 "tran 70834 70828 'T1'"    "open"    1.000000    ""
 "secdd 70830 70834 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002507"    "BUSDBL_002507'"    1.00    ""    ""    ""    0
 "tran 70834 70828 'T1'"    "open"    1.000000    ""
 "tran 70834 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002508"    "BUSDBL_002508'"    1.00    ""    ""    ""    0
 "secdd 70830 70834 '1 '  1"    "open"    1.000000    ""
 "tran 70834 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002509"    "BUSDBL_002509'"    1.00    ""    ""    ""    0
 "tran 70835 70829 'T1'"    "open"    1.000000    ""
 "secdd 70831 70835 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002510"    "BUSDBL_002510'"    1.00    ""    ""    ""    0
 "tran 70835 70829 'T1'"    "open"    1.000000    ""
 "secdd 70832 70835 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002511"    "BUSDBL_002511'"    1.00    ""    ""    ""    0
 "tran 70835 70829 'T1'"    "open"    1.000000    ""
 "tran 70835 70833 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002512"    "BUSDBL_002512'"    1.00    ""    ""    ""    0
```

```
 "secdd 70831 70835 '1 ' 1"    "open"    1.000000  ""
 "secdd 70832 70835 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002513"    "BUSDBL_002513'"    1.00  ""    ""    ""    0
 "secdd 70831 70835 '1 ' 1"    "open"    1.000000  ""
 "tran 70835 70833 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002514"    "BUSDBL_002514'"    1.00  ""    ""    ""    0
 "secdd 70832 70835 '1 ' 1"    "open"    1.000000  ""
 "tran 70835 70833 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002515"    "BUSDBL_002515'"    1.00  ""    ""    ""    0
 "secdd 70856 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70856 70857 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002516"    "BUSDBL_002516'"    1.00  ""    ""    ""    0
 "tran 70856 70857 'T1'"    "open"    1.000000  ""
 "secdd 70858 70857 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002517"    "BUSDBL_002517'"    1.00  ""    ""    ""    0
 "secdd 70858 70857 '1 ' 1"    "open"    1.000000  ""
 "tran 70858 70859 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002518"    "BUSDBL_002518'"    1.00  ""    ""    ""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78087 70862 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002519"    "BUSDBL_002519'"    1.00  ""    ""    ""    0
 "secdd 70875 70122 '1 ' 1"    "open"    1.000000  ""
 "tran 70875 70876 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002520"    "BUSDBL_002520'"    1.00  ""    ""    ""    0
 "tran 70875 70876 'T1'"    "open"    1.000000  ""
 "secdd 70877 70876 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002521"    "BUSDBL_002521'"    1.00  ""    ""    ""    0
 "secdd 70877 70876 '1 ' 1"    "open"    1.000000  ""
 "tran 70877 70878 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002522"    "BUSDBL_002522'"    1.00  ""    ""    ""    0
 "secdd 70290 70897 '1 ' 1"    "open"    1.000000  ""
 "secdd 70899 70897 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002523"    "BUSDBL_002523'"    1.00  ""    ""    ""    0
 "secdd 70290 70897 '1 ' 1"    "open"    1.000000  ""
 "secdd 70897 70903 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002524"    "BUSDBL_002524'"    1.00  ""    ""    ""    0
 "secdd 70899 70897 '1 ' 1"    "open"    1.000000  ""
 "secdd 70897 70903 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002525"    "BUSDBL_002525'"    1.00  ""    ""    ""    0
 "tran 70901 70898 'T4'"    "open"    1.000000  ""
 "secdd 70898 73011 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002526"    "BUSDBL_002526'"    1.00  ""    ""    ""    0
 "tran 70803 70901 'T6'"    "open"    1.000000  ""
 "tran 70901 70898 'T4'"    "open"    1.000000  ""
0
"BUSDBL_002527"    "BUSDBL_002527'"    1.00  ""    ""    ""    0
 "tran 70803 70901 'T6'"    "open"    1.000000  ""
 "secdd 70901 70902 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002528"    "BUSDBL_002528'"    1.00  ""    ""    ""    0
 "tran 70901 70898 'T4'"    "open"    1.000000  ""
 "secdd 70901 70902 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002529"    "BUSDBL_002529'"    1.00  ""    ""    ""    0
 "secdd 70901 70902 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 70902 70903 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002530"    "BUSDBL_002530'"    1.00  ""    ""    ""    0
 "secdd 70897 70903 '1 ' 1"    "open"    1.000000  ""
 "secdd 70902 70903 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002531"    "BUSDBL_002531'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 ' 1"    "open"    1.000000  ""
 "secdd 70624 70915 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002532"    "BUSDBL_002532'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 ' 1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002533"    "BUSDBL_002533'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70916 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002534"    "BUSDBL_002534'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70916 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002535"    "BUSDBL_002535'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002536"    "BUSDBL_002536'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002537"    "BUSDBL_002537'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '2 ' 1"    "open"    1.000000  ""
 "secdd 70624 70915 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002538"    "BUSDBL_002538'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '2 ' 1"    "open"    1.000000  ""
 "secdd 70624 70915 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002539"    "BUSDBL_002539'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '2 ' 1"    "open"    1.000000  ""
 "secdd 70915 70916 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002540"    "BUSDBL_002540'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '2 ' 1"    "open"    1.000000  ""
 "secdd 70915 70916 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002541"    "BUSDBL_002541'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '2 ' 1"    "open"    1.000000  ""
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002542"    "BUSDBL_002542'"    1.00  ""    ""    ""    0
 "secdd 70915 70598 '2 ' 1"    "open"    1.000000  ""
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002543"    "BUSDBL_002543'"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70916 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002544"    "BUSDBL_002544'"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70916 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002545"    "BUSDBL_002545'"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002546"    "BUSDBL_002546'"    1.00  ""    ""    ""    0
 "secdd 70624 70915 '1 ' 1"    "open"    1.000000  ""
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_002547"  "BUSDBL_002547"  1.00  ""  ""  ""  0
 "secdd 70624 70915 '2 '  1"  "open"  1.000000  ""
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002548"  "BUSDBL_002548"  1.00  ""  ""  ""  0
 "secdd 70624 70915 '2 '  1"  "open"  1.000000  ""
 "secdd 70915 70916 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002549"  "BUSDBL_002549"  1.00  ""  ""  ""  0
 "secdd 70624 70915 '2 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002550"  "BUSDBL_002550"  1.00  ""  ""  ""  0
 "secdd 70624 70915 '2 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002551"  "BUSDBL_002551"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
 "secdd 70915 70916 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002552"  "BUSDBL_002552"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002553"  "BUSDBL_002553"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002554"  "BUSDBL_002554"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '2 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002555"  "BUSDBL_002555"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '2 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002556"  "BUSDBL_002556"  1.00  ""  ""  ""  0
 "secdd 70915 70918 '1 '  1"  "open"  1.000000  ""
 "secdd 70915 70918 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002557"  "BUSDBL_002557"  1.00  ""  ""  ""  0
 "tran 70410 70916 'T7'"  "open"  1.000000  ""
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002558"  "BUSDBL_002558"  1.00  ""  ""  ""  0
 "tran 70410 70916 'T7'"  "open"  1.000000  ""
 "secdd 70915 70916 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002559"  "BUSDBL_002559"  1.00  ""  ""  ""  0
 "tran 70410 70916 'T7'"  "open"  1.000000  ""
 "secdd 70916 700097 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002560"  "BUSDBL_002560"  1.00  ""  ""  ""  0
 "tran 70410 70916 'T8'"  "open"  1.000000  ""
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002561"  "BUSDBL_002561"  1.00  ""  ""  ""  0
 "tran 70410 70916 'T8'"  "open"  1.000000  ""
 "secdd 70915 70916 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002562"  "BUSDBL_002562"  1.00  ""  ""  ""  0
 "tran 70410 70916 'T8'"  "open"  1.000000  ""
 "secdd 70916 700097 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002563"  "BUSDBL_002563"  1.00  ""  ""  ""  0
 "secdd 70915 70916 '1 '  1"  "open"  1.000000  ""
 "secdd 70916 700097 '1 '  1"  "open"  1.000000  ""
0
```

```
"BUSDBL_002564"    "BUSDBL_002564'"    1.00    ""    ""    ""    0
 "secdd 70915 70916 '2 '  1"    "open"    1.000000    ""
 "secdd 70916 700097 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002565"    "BUSDBL_002565'"    1.00    ""    ""    ""    0
 "tran 70917 70918 'U1'"    "open"    1.000000    ""
 "tran 70917 70918 'U2'"    "open"    1.000000    ""
0
"BUSDBL_002566"    "BUSDBL_002566'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 70918 70632 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002567"    "BUSDBL_002567'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 70915 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002568"    "BUSDBL_002568'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 70915 70918 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_002569"    "BUSDBL_002569'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "tran 70917 70918 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002570"    "BUSDBL_002570'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "tran 70917 70918 'U2'"    "open"    1.000000    ""
0
"BUSDBL_002571"    "BUSDBL_002571'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 70919 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002572"    "BUSDBL_002572'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 70919 70918 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_002573"    "BUSDBL_002573'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 700069 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002574"    "BUSDBL_002574'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 700091 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002575"    "BUSDBL_002575'"    1.00    ""    ""    ""    0
 "secdd 70918 70630 '1 '  1"    "open"    1.000000    ""
 "secdd 700185 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002576"    "BUSDBL_002576'"    1.00    ""    ""    ""    0
 "secdd 70918 70632 '1 '  1"    "open"    1.000000    ""
 "secdd 70915 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002577"    "BUSDBL_002577'"    1.00    ""    ""    ""    0
 "secdd 70918 70632 '1 '  1"    "open"    1.000000    ""
 "secdd 70915 70918 '2 '  1"    "open"    1.000000    ""
0
"BUSDBL_002578"    "BUSDBL_002578'"    1.00    ""    ""    ""    0
 "secdd 70918 70632 '1 '  1"    "open"    1.000000    ""
 "tran 70917 70918 'U1'"    "open"    1.000000    ""
0
"BUSDBL_002579"    "BUSDBL_002579'"    1.00    ""    ""    ""    0
 "secdd 70918 70632 '1 '  1"    "open"    1.000000    ""
 "tran 70917 70918 'U2'"    "open"    1.000000    ""
0
"BUSDBL_002580"    "BUSDBL_002580'"    1.00    ""    ""    ""    0
 "secdd 70918 70632 '1 '  1"    "open"    1.000000    ""
 "secdd 70919 70918 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002581"    "BUSDBL_002581'"    1.00    ""    ""    ""    0
```

```
 "secdd 70918 70632 '1 ' 1"    "open"    1.000000  ""
 "secdd 70919 70918 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002582"    "BUSDBL_002582'"    1.00  ""    ""    ""    0
 "secdd 70918 70632 '1 ' 1"    "open"    1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002583"    "BUSDBL_002583'"    1.00  ""    ""    ""    0
 "secdd 70918 70632 '1 ' 1"    "open"    1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002584"    "BUSDBL_002584'"    1.00  ""    ""    ""    0
 "secdd 70918 70632 '1 ' 1"    "open"    1.000000  ""
 "secdd 700185 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002585"    "BUSDBL_002585'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 70917 70918 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002586"    "BUSDBL_002586'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 70917 70918 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002587"    "BUSDBL_002587'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "secdd 70919 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002588"    "BUSDBL_002588'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "secdd 70919 70918 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002589"    "BUSDBL_002589'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002590"    "BUSDBL_002590'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002591"    "BUSDBL_002591'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '1 ' 1"    "open"    1.000000  ""
 "secdd 700185 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002592"    "BUSDBL_002592'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
 "tran 70917 70918 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002593"    "BUSDBL_002593'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
 "tran 70917 70918 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002594"    "BUSDBL_002594'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
 "secdd 70919 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002595"    "BUSDBL_002595'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
 "secdd 70919 70918 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002596"    "BUSDBL_002596'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002597"    "BUSDBL_002597'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002598"    "BUSDBL_002598'"    1.00  ""    ""    ""    0
 "secdd 70915 70918 '2 ' 1"    "open"    1.000000  ""
```

```
 "secdd 700185 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002599"    "BUSDBL_002599'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U1'"    "open"     1.000000  ""
 "secdd 70919 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002600"    "BUSDBL_002600'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U1'"    "open"     1.000000  ""
 "secdd 70919 70918 '2 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002601"    "BUSDBL_002601'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U1'"    "open"     1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002602"    "BUSDBL_002602'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U1'"    "open"     1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002603"    "BUSDBL_002603'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U1'"    "open"     1.000000  ""
 "secdd 700185 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002604"    "BUSDBL_002604'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U2'"    "open"     1.000000  ""
 "secdd 70919 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002605"    "BUSDBL_002605'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U2'"    "open"     1.000000  ""
 "secdd 70919 70918 '2 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002606"    "BUSDBL_002606'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U2'"    "open"     1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002607"    "BUSDBL_002607'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U2'"    "open"     1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002608"    "BUSDBL_002608'"     1.00  ""    ""    ""    0
 "tran 70917 70918 'U2'"    "open"     1.000000  ""
 "secdd 700185 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002609"    "BUSDBL_002609'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 ' 1"    "open"     1.000000  ""
 "secdd 70919 70918 '2 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002610"    "BUSDBL_002610'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 ' 1"    "open"     1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002611"    "BUSDBL_002611'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 ' 1"    "open"     1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002612"    "BUSDBL_002612'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 ' 1"    "open"     1.000000  ""
 "secdd 700185 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002613"    "BUSDBL_002613'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 ' 1"    "open"     1.000000  ""
 "secdd 700069 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002614"    "BUSDBL_002614'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 ' 1"    "open"     1.000000  ""
 "secdd 700091 70918 '1 ' 1"    "open"     1.000000  ""
0
"BUSDBL_002615"    "BUSDBL_002615'"     1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 ' 1"    "open"     1.000000  ""
 "secdd 700185 70918 '1 ' 1"    "open"     1.000000  ""
```

```
0
"BUSDBL_002616"    "BUSDBL_002616'"    1.00  ""    ""    ""    0
 "secdd 700069 70918 '1 '  1"    "open"    1.000000  ""
 "secdd 700091 70918 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002617"    "BUSDBL_002617'"    1.00  ""    ""    ""    0
 "secdd 700069 70918 '1 '  1"    "open"    1.000000  ""
 "secdd 700185 70918 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002618"    "BUSDBL_002618'"    1.00  ""    ""    ""    0
 "secdd 700091 70918 '1 '  1"    "open"    1.000000  ""
 "secdd 700185 70918 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002619"    "BUSDBL_002619'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 '  1"    "open"    1.000000  ""
 "tran 70920 70919 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002620"    "BUSDBL_002620'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 '  1"    "open"    1.000000  ""
 "tran 70920 70919 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002621"    "BUSDBL_002621'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002622"    "BUSDBL_002622'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002623"    "BUSDBL_002623'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002624"    "BUSDBL_002624'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 '  1"    "open"    1.000000  ""
 "tran 70920 70919 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002625"    "BUSDBL_002625'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 '  1"    "open"    1.000000  ""
 "tran 70920 70919 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002626"    "BUSDBL_002626'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002627"    "BUSDBL_002627'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002628"    "BUSDBL_002628'"    1.00  ""    ""    ""    0
 "secdd 70919 70918 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002629"    "BUSDBL_002629'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U1'"    "open"    1.000000  ""
 "tran 70920 70919 'U2'"    "open"    1.000000  ""
0
"BUSDBL_002630"    "BUSDBL_002630'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U1'"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002631"    "BUSDBL_002631'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U1'"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002632"    "BUSDBL_002632'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U1'"    "open"    1.000000  ""
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
```

```
"BUSDBL_002633"    "BUSDBL_002633'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U2'"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002634"    "BUSDBL_002634'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U2'"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002635"    "BUSDBL_002635'"    1.00  ""    ""    ""    0
 "tran 70920 70919 'U2'"    "open"    1.000000  ""
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002636"    "BUSDBL_002636'"    1.00  ""    ""    ""    0
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002637"    "BUSDBL_002637'"    1.00  ""    ""    ""    0
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002638"    "BUSDBL_002638'"    1.00  ""    ""    ""    0
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002639"    "BUSDBL_002639'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70653 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002640"    "BUSDBL_002640'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70653 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002641"    "BUSDBL_002641'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002642"    "BUSDBL_002642'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002643"    "BUSDBL_002643'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
 "secdd 70653 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002644"    "BUSDBL_002644'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
 "secdd 70653 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002645"    "BUSDBL_002645'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002646"    "BUSDBL_002646'"    1.00  ""    ""    ""    0
 "secdd 70597 70921 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002647"    "BUSDBL_002647'"    1.00  ""    ""    ""    0
 "secdd 70653 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002648"    "BUSDBL_002648'"    1.00  ""    ""    ""    0
 "secdd 70653 70921 '1 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002649"    "BUSDBL_002649'"    1.00  ""    ""    ""    0
 "secdd 70653 70921 '2 '  1"    "open"    1.000000  ""
 "secdd 70919 70921 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002650"    "BUSDBL_002650'"    1.00  ""    ""    ""    0
```

```
 "secdd 70653 70921 '2 ' 1"    "open"    1.000000  ""
 "secdd 70919 70921 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002651"    "BUSDBL_002651'"    1.00  ""    ""    ""    0
 "secdd 70925 70924 '1 ' 1"    "open"    1.000000  ""
 "secdd 70924 71508 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002652"    "BUSDBL_002652'"    1.00  ""    ""    ""    0
 "secdd 70925 70924 '1 ' 1"    "open"    1.000000  ""
 "secdd 70926 70925 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002653"    "BUSDBL_002653'"    1.00  ""    ""    ""    0
 "secdd 70926 70925 '1 ' 1"    "open"    1.000000  ""
 "tran 70927 70926 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002654"    "BUSDBL_002654'"    1.00  ""    ""    ""    0
 "secdd 70274 70927 '1 ' 1"    "open"    1.000000  ""
 "secdd 70427 70927 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002655"    "BUSDBL_002655'"    1.00  ""    ""    ""    0
 "secdd 70274 70927 '1 ' 1"    "open"    1.000000  ""
 "tran 70927 70926 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002656"    "BUSDBL_002656'"    1.00  ""    ""    ""    0
 "secdd 70427 70927 '1 ' 1"    "open"    1.000000  ""
 "tran 70927 70926 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002657"    "BUSDBL_002657'"    1.00  ""    ""    ""    0
 "secdd 70936 70288 '1 ' 1"    "open"    1.000000  ""
 "secdd 70936 70296 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002658"    "BUSDBL_002658'"    1.00  ""    ""    ""    0
 "secdd 70936 70288 '1 ' 1"    "open"    1.000000  ""
 "secdd 70936 70854 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002659"    "BUSDBL_002659'"    1.00  ""    ""    ""    0
 "secdd 70936 70296 '1 ' 1"    "open"    1.000000  ""
 "secdd 70936 70854 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002660"    "BUSDBL_002660'"    1.00  ""    ""    ""    0
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
 "secdd 700180 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002661"    "BUSDBL_002661'"    1.00  ""    ""    ""    0
 "secdd 70374 70937 '1 ' 1"    "open"    1.000000  ""
 "secdd 700224 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002662"    "BUSDBL_002662'"    1.00  ""    ""    ""    0
 "secdd 700180 70937 '1 ' 1"    "open"    1.000000  ""
 "secdd 700224 70937 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002663"    "BUSDBL_002663'"    1.00  ""    ""    ""    0
 "tran 70934 70940 'U1'"    "open"    1.000000  ""
 "secdd 70940 70941 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002664"    "BUSDBL_002664'"    1.00  ""    ""    ""    0
 "secdd 70940 70941 '1 ' 1"    "open"    1.000000  ""
 "tran 70941 70942 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002665"    "BUSDBL_002665'"    1.00  ""    ""    ""    0
 "secdd 70122 70942 '1 ' 1"    "open"    1.000000  ""
 "tran 70941 70942 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002666"    "BUSDBL_002666'"    1.00  ""    ""    ""    0
 "secdd 70959 70278 '1 ' 1"    "open"    1.000000  ""
 "secdd 70464 70959 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002667"    "BUSDBL_002667'"    1.00  ""    ""    ""    0
 "tran 70459 70458 70960 'T2'"    "open"    1.000000  ""
```

```
 "secdd 70960 70964 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002668"    "BUSDBL_002668'"    1.00  ""    ""    ""    0
 "tran 70459 70458 70962 'T3'"    "open"    1.000000  ""
 "secdd 70962 70964 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002669"    "BUSDBL_002669'"    1.00  ""    ""    ""    0
 "secdd 70960 70964 '1 ' 1"    "open"    1.000000  ""
 "secdd 70962 70964 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002670"    "BUSDBL_002670'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70965 'T1'"    "open"    1.000000  ""
 "secdd 70965 70967 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002671"    "BUSDBL_002671'"    1.00  ""    ""    ""    0
 "secdd 70965 70967 '1 ' 1"    "open"    1.000000  ""
 "secdd 70967 70968 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002672"    "BUSDBL_002672'"    1.00  ""    ""    ""    0
 "secdd 70967 70968 '1 ' 1"    "open"    1.000000  ""
 "secdd 70968 70969 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002673"    "BUSDBL_002673'"    1.00  ""    ""    ""    0
 "secdd 70968 70969 '1 ' 1"    "open"    1.000000  ""
 "secdd 70969 70970 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002674"    "BUSDBL_002674'"    1.00  ""    ""    ""    0
 "tran 70374 70375 70970 'T2'"    "open"    1.000000  ""
 "secdd 70969 70970 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002675"    "BUSDBL_002675'"    1.00  ""    ""    ""    0
 "secdd 70211 70972 '1 ' 1"    "open"    1.000000  ""
 "secdd 70972 70297 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002676"    "BUSDBL_002676'"    1.00  ""    ""    ""    0
 "secdd 70140 70981 '1 ' 1"    "open"    1.000000  ""
 "tran 70981 70264 'T1'"    "open"    1.000000  ""
0
"BUSDBL_002677"    "BUSDBL_002677'"    1.00  ""    ""    ""    0
 "secdd 12181 70990 '1 ' 1"    "open"    1.000000  ""
 "secdd 70459 70990 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002678"    "BUSDBL_002678'"    1.00  ""    ""    ""    0
 "secdd 12181 70990 '1 ' 1"    "open"    1.000000  ""
 "secdd 70990 70991 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002679"    "BUSDBL_002679'"    1.00  ""    ""    ""    0
 "secdd 70459 70990 '1 ' 1"    "open"    1.000000  ""
 "secdd 70990 70991 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002680"    "BUSDBL_002680'"    1.00  ""    ""    ""    0
 "secdd 70990 70991 '1 ' 1"    "open"    1.000000  ""
 "tran 70992 70991 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002681"    "BUSDBL_002681'"    1.00  ""    ""    ""    0
 "secdd 70724 70992 '1 ' 1"    "open"    1.000000  ""
 "tran 70992 70991 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002682"    "BUSDBL_002682'"    1.00  ""    ""    ""    0
 "secdd 70724 70992 '1 ' 1"    "open"    1.000000  ""
 "secdd 70992 70993 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002683"    "BUSDBL_002683'"    1.00  ""    ""    ""    0
 "tran 70992 70991 '1 '"    "open"    1.000000  ""
 "secdd 70992 70993 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002684"    "BUSDBL_002684'"    1.00  ""    ""    ""    0
 "secdd 70992 70993 '1 ' 1"    "open"    1.000000  ""
 "tran 70994 70993 '1 '"    "open"    1.000000  ""
```

```
0
"BUSDBL_002685"    "BUSDBL_002685'"    1.00    ""    ""    ""    0
 "secdd 70352 71006 '1 '  1"    "open"    1.000000    ""
 "tran 71006 71008 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002686"    "BUSDBL_002686'"    1.00    ""    ""    ""    0
 "secdd 70352 71006 '1 '  1"    "open"    1.000000    ""
 "secdd 71006 71010 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002687"    "BUSDBL_002687'"    1.00    ""    ""    ""    0
 "secdd 70352 71006 '1 '  1"    "open"    1.000000    ""
 "secdd 71006 71017 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002688"    "BUSDBL_002688'"    1.00    ""    ""    ""    0
 "tran 71006 71008 'T1'"    "open"    1.000000    ""
 "secdd 71006 71010 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002689"    "BUSDBL_002689'"    1.00    ""    ""    ""    0
 "tran 71006 71008 'T1'"    "open"    1.000000    ""
 "secdd 71006 71017 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002690"    "BUSDBL_002690'"    1.00    ""    ""    ""    0
 "secdd 71006 71010 '1 '  1"    "open"    1.000000    ""
 "secdd 71006 71017 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002691"    "BUSDBL_002691'"    1.00    ""    ""    ""    0
 "secdd 71007 71008 '1 '  1"    "open"    1.000000    ""
 "tran 71007 71009 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002692"    "BUSDBL_002692'"    1.00    ""    ""    ""    0
 "tran 71006 71008 'T1'"    "open"    1.000000    ""
 "secdd 71007 71008 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002693"    "BUSDBL_002693'"    1.00    ""    ""    ""    0
 "secdd 71006 71010 '1 '  1"    "open"    1.000000    ""
 "tran 71010 71011 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002694"    "BUSDBL_002694'"    1.00    ""    ""    ""    0
 "tran 71010 71011 '1 '"    "open"    1.000000    ""
 "secdd 71011 71012 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002695"    "BUSDBL_002695'"    1.00    ""    ""    ""    0
 "secdd 71011 71012 '1 '  1"    "open"    1.000000    ""
 "tran 71012 71013 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002696"    "BUSDBL_002696'"    1.00    ""    ""    ""    0
 "secdd 71006 71017 '1 '  1"    "open"    1.000000    ""
 "tran 71017 71018 'WD'"    "open"    1.000000    ""
0
"BUSDBL_002697"    "BUSDBL_002697'"    1.00    ""    ""    ""    0
 "tran 71017 71018 'WD'"    "open"    1.000000    ""
 "secdd 71018 71019 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002698"    "BUSDBL_002698'"    1.00    ""    ""    ""    0
 "tran 71019 71016 'WD'"    "open"    1.000000    ""
 "secdd 71018 71019 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002699"    "BUSDBL_002699'"    1.00    ""    ""    ""    0
 "secdd 70049 71020 '1 '  1"    "open"    1.000000    ""
 "secdd 70051 71020 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002700"    "BUSDBL_002700'"    1.00    ""    ""    ""    0
 "secdd 70002 71022 '1 '  1"    "open"    1.000000    ""
 "secdd 70456 71022 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002701"    "BUSDBL_002701'"    1.00    ""    ""    ""    0
 "secdd 70456 71023 '1 '  1"    "open"    1.000000    ""
 "secdd 71023 71024 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_002702"  "BUSDBL_002702'"  1.00  ""  ""  ""  0
 "secdd 71023 71024 '1 '  1"  "open"  1.000000  ""
 "secdd 71024 71025 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002703"  "BUSDBL_002703'"  1.00  ""  ""  ""  0
 "secdd 70086 71025 '1 '  1"  "open"  1.000000  ""
 "secdd 70550 71025 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002704"  "BUSDBL_002704'"  1.00  ""  ""  ""  0
 "secdd 70086 71025 '1 '  1"  "open"  1.000000  ""
 "secdd 71024 71025 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002705"  "BUSDBL_002705'"  1.00  ""  ""  ""  0
 "secdd 70086 71025 '1 '  1"  "open"  1.000000  ""
 "tran 71026 71025 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002706"  "BUSDBL_002706'"  1.00  ""  ""  ""  0
 "secdd 70550 71025 '1 '  1"  "open"  1.000000  ""
 "secdd 71024 71025 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002707"  "BUSDBL_002707'"  1.00  ""  ""  ""  0
 "secdd 70550 71025 '1 '  1"  "open"  1.000000  ""
 "tran 71026 71025 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002708"  "BUSDBL_002708'"  1.00  ""  ""  ""  0
 "secdd 71024 71025 '1 '  1"  "open"  1.000000  ""
 "tran 71026 71025 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002709"  "BUSDBL_002709'"  1.00  ""  ""  ""  0
 "secdd 70085 71026 '1 '  1"  "open"  1.000000  ""
 "secdd 70294 71026 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_002710"  "BUSDBL_002710'"  1.00  ""  ""  ""  0
 "secdd 70085 71026 '1 '  1"  "open"  1.000000  ""
 "tran 71026 71025 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002711"  "BUSDBL_002711'"  1.00  ""  ""  ""  0
 "secdd 70294 71026 '2 '  1"  "open"  1.000000  ""
 "tran 71026 71025 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002712"  "BUSDBL_002712'"  1.00  ""  ""  ""  0
 "secdd 70060 71027 '1 '  1"  "open"  1.000000  ""
 "tran 70372 71027 'T1'"  "open"  1.000000  ""
0
"BUSDBL_002713"  "BUSDBL_002713'"  1.00  ""  ""  ""  0
 "tran 71030 70007 'T1'"  "open"  1.000000  ""
 "secdd 70054 71030 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002714"  "BUSDBL_002714'"  1.00  ""  ""  ""  0
 "secdd 70371 71031 '1 '  1"  "open"  1.000000  ""
 "secdd 70391 71031 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002715"  "BUSDBL_002715'"  1.00  ""  ""  ""  0
 "secdd 71501 70514 '1 '  1"  "open"  1.000000  ""
 "secdd 71502 71501 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002716"  "BUSDBL_002716'"  1.00  ""  ""  ""  0
 "secdd 71502 70519 '1 '  1"  "open"  1.000000  ""
 "secdd 71502 71501 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002717"  "BUSDBL_002717'"  1.00  ""  ""  ""  0
 "secdd 70518 71503 '1 '  1"  "open"  1.000000  ""
 "secdd 71503 70583 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002718"  "BUSDBL_002718'"  1.00  ""  ""  ""  0
 "secdd 70546 71505 '1 '  1"  "open"  1.000000  ""
 "secdd 71505 70571 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_002719"  "BUSDBL_002719'"  1.00  ""  ""  ""  0
```

```
 "secdd 71506 70091 '1 ' 1"    "open"    1.000000  ""
 "secdd 70518 71506 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002720"    "BUSDBL_002720'"    1.00  ""    ""    ""    0
 "secdd 70416 71517 '1 ' 1"    "open"    1.000000  ""
 "secdd 71517 70547 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002721"    "BUSDBL_002721'"    1.00  ""    ""    ""    0
 "secdd 73650 77500 '1 ' 1"    "open"    1.000000  ""
 "secdd 77500 77501 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002722"    "BUSDBL_002722'"    1.00  ""    ""    ""    0
 "secdd 73650 77500 '1 ' 1"    "open"    1.000000  ""
 "secdd 77500 78096 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002723"    "BUSDBL_002723'"    1.00  ""    ""    ""    0
 "secdd 77500 77501 '1 ' 1"    "open"    1.000000  ""
 "secdd 77500 78096 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002724"    "BUSDBL_002724'"    1.00  ""    ""    ""    0
 "secdd 73124 77501 '1 ' 1"    "open"    1.000000  ""
 "secdd 77500 77501 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002725"    "BUSDBL_002725'"    1.00  ""    ""    ""    0
 "secdd 73124 77501 '1 ' 1"    "open"    1.000000  ""
 "secdd 77501 78094 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002726"    "BUSDBL_002726'"    1.00  ""    ""    ""    0
 "secdd 73124 77501 '1 ' 1"    "open"    1.000000  ""
 "secdd 77501 78101 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002727"    "BUSDBL_002727'"    1.00  ""    ""    ""    0
 "secdd 77500 77501 '1 ' 1"    "open"    1.000000  ""
 "secdd 77501 78094 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002728"    "BUSDBL_002728'"    1.00  ""    ""    ""    0
 "secdd 77500 77501 '1 ' 1"    "open"    1.000000  ""
 "secdd 77501 78101 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002729"    "BUSDBL_002729'"    1.00  ""    ""    ""    0
 "secdd 77501 78094 '1 ' 1"    "open"    1.000000  ""
 "secdd 77501 78101 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002730"    "BUSDBL_002730'"    1.00  ""    ""    ""    0
 "secdd 73651 77502 '1 ' 1"    "open"    1.000000  ""
 "secdd 77502 77503 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002731"    "BUSDBL_002731'"    1.00  ""    ""    ""    0
 "secdd 73651 77502 '1 ' 1"    "open"    1.000000  ""
 "secdd 77502 78076 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002732"    "BUSDBL_002732'"    1.00  ""    ""    ""    0
 "secdd 77502 77503 '1 ' 1"    "open"    1.000000  ""
 "secdd 77502 78076 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002733"    "BUSDBL_002733'"    1.00  ""    ""    ""    0
 "secdd 73200 77503 '1 ' 1"    "open"    1.000000  ""
 "secdd 77502 77503 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002734"    "BUSDBL_002734'"    1.00  ""    ""    ""    0
 "secdd 73200 77503 '1 ' 1"    "open"    1.000000  ""
 "secdd 77503 78081 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002735"    "BUSDBL_002735'"    1.00  ""    ""    ""    0
 "secdd 77502 77503 '1 ' 1"    "open"    1.000000  ""
 "secdd 77503 78081 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002736"    "BUSDBL_002736'"    1.00  ""    ""    ""    0
 "tran 70326 77642 'T2'"    "open"    1.000000  ""
```

```
 "secdd 77642 70327 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002737"    "BUSDBL_002737'"    1.00  ""    ""    ""    0
 "tran 70326 77642 'T2'"    "open"    1.000000  ""
 "secdd 77642 70394 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002738"    "BUSDBL_002738'"    1.00  ""    ""    ""    0
 "secdd 77642 70327 '1 ' 1"    "open"    1.000000  ""
 "secdd 77642 70394 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002739"    "BUSDBL_002739'"    1.00  ""    ""    ""    0
 "secdd 79006 77643 '1 ' 1"    "open"    1.000000  ""
 "secdd 79068 77643 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002740"    "BUSDBL_002740'"    1.00  ""    ""    ""    0
 "secdd 79006 77643 '1 ' 1"    "open"    1.000000  ""
 "tran 77643 79069 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002741"    "BUSDBL_002741'"    1.00  ""    ""    ""    0
 "secdd 79068 77643 '1 ' 1"    "open"    1.000000  ""
 "tran 77643 79069 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002742"    "BUSDBL_002742'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
0
"BUSDBL_002743"    "BUSDBL_002743'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
0
"BUSDBL_002744"    "BUSDBL_002744'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
0
"BUSDBL_002745"    "BUSDBL_002745'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
0
"BUSDBL_002746"    "BUSDBL_002746'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78015 78010 'UD'"    "open"    1.000000  ""
0
"BUSDBL_002747"    "BUSDBL_002747'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78016 78010 'UF'"    "open"    1.000000  ""
0
"BUSDBL_002748"    "BUSDBL_002748'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002749"    "BUSDBL_002749'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "secdd 78010 78050 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002750"    "BUSDBL_002750'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "secdd 78010 78070 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002751"    "BUSDBL_002751'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "secdd 78010 78070 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002752"    "BUSDBL_002752'"    1.00  ""    ""    ""    0
 "secdd 73011 78010 '1 ' 1"    "open"    1.000000  ""
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002753"    "BUSDBL_002753'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
```

```
0
"BUSDBL_002754"    "BUSDBL_002754'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
0
"BUSDBL_002755"    "BUSDBL_002755'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
0
"BUSDBL_002756"    "BUSDBL_002756'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "tran 78015 78010 'UD'"    "open"    1.000000  ""
0
"BUSDBL_002757"    "BUSDBL_002757'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "tran 78016 78010 'UF'"    "open"    1.000000  ""
0
"BUSDBL_002758"    "BUSDBL_002758'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002759"    "BUSDBL_002759'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "secdd 78010 78050 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002760"    "BUSDBL_002760'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "secdd 78010 78070 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002761"    "BUSDBL_002761'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "secdd 78010 78070 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002762"    "BUSDBL_002762'"    1.00  ""    ""    ""    0
 "tran 78011 78010 'U1'"    "open"    1.000000  ""
 "secdd 78010 78085 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002763"    "BUSDBL_002763'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
0
"BUSDBL_002764"    "BUSDBL_002764'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
0
"BUSDBL_002765"    "BUSDBL_002765'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "tran 78015 78010 'UD'"    "open"    1.000000  ""
0
"BUSDBL_002766"    "BUSDBL_002766'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "tran 78016 78010 'UF'"    "open"    1.000000  ""
0
"BUSDBL_002767"    "BUSDBL_002767'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002768"    "BUSDBL_002768'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "secdd 78010 78050 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002769"    "BUSDBL_002769'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "secdd 78010 78070 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002770"    "BUSDBL_002770'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "secdd 78010 78070 '2 '  1"    "open"    1.000000  ""
0
```

```
"BUSDBL_002771"    "BUSDBL_002771'"    1.00  ""    ""    ""    0
 "tran 78012 78010 'UA'"    "open"    1.000000  ""
 "secdd 78010 78085 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002772"    "BUSDBL_002772'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
0
"BUSDBL_002773"    "BUSDBL_002773'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "tran 78015 78010 'UD'"    "open"    1.000000  ""
0
"BUSDBL_002774"    "BUSDBL_002774'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "tran 78016 78010 'UF'"    "open"    1.000000  ""
0
"BUSDBL_002775"    "BUSDBL_002775'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002776"    "BUSDBL_002776'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "secdd 78010 78050 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002777"    "BUSDBL_002777'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "secdd 78010 78070 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002778"    "BUSDBL_002778'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "secdd 78010 78070 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002779"    "BUSDBL_002779'"    1.00  ""    ""    ""    0
 "tran 78013 78010 'UB'"    "open"    1.000000  ""
 "secdd 78010 78085 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002780"    "BUSDBL_002780'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "tran 78015 78010 'UD'"    "open"    1.000000  ""
0
"BUSDBL_002781"    "BUSDBL_002781'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "tran 78016 78010 'UF'"    "open"    1.000000  ""
0
"BUSDBL_002782"    "BUSDBL_002782'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002783"    "BUSDBL_002783'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "secdd 78010 78050 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002784"    "BUSDBL_002784'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "secdd 78010 78070 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002785"    "BUSDBL_002785'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "secdd 78010 78070 '2 '  1"    "open"    1.000000  ""
0
"BUSDBL_002786"    "BUSDBL_002786'"    1.00  ""    ""    ""    0
 "tran 78014 78010 'UC'"    "open"    1.000000  ""
 "secdd 78010 78085 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002787"    "BUSDBL_002787'"    1.00  ""    ""    ""    0
 "tran 78015 78010 'UD'"    "open"    1.000000  ""
 "tran 78016 78010 'UF'"    "open"    1.000000  ""
0
"BUSDBL_002788"    "BUSDBL_002788'"    1.00  ""    ""    ""    0
```

```
 "tran 78015 78010 'UD'"   "open"   1.000000  ""
 "tran 78020 78010 'PV'"   "open"   1.000000  ""
0
"BUSDBL_002789"   "BUSDBL_002789'"   1.00  ""   ""   ""   0
 "tran 78015 78010 'UD'"   "open"   1.000000  ""
 "secdd 78010 78050 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002790"   "BUSDBL_002790'"   1.00  ""   ""   ""   0
 "tran 78015 78010 'UD'"   "open"   1.000000  ""
 "secdd 78010 78070 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002791"   "BUSDBL_002791'"   1.00  ""   ""   ""   0
 "tran 78015 78010 'UD'"   "open"   1.000000  ""
 "secdd 78010 78070 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_002792"   "BUSDBL_002792'"   1.00  ""   ""   ""   0
 "tran 78015 78010 'UD'"   "open"   1.000000  ""
 "secdd 78010 78085 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002793"   "BUSDBL_002793'"   1.00  ""   ""   ""   0
 "tran 78016 78010 'UF'"   "open"   1.000000  ""
 "tran 78020 78010 'PV'"   "open"   1.000000  ""
0
"BUSDBL_002794"   "BUSDBL_002794'"   1.00  ""   ""   ""   0
 "tran 78016 78010 'UF'"   "open"   1.000000  ""
 "secdd 78010 78050 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002795"   "BUSDBL_002795'"   1.00  ""   ""   ""   0
 "tran 78016 78010 'UF'"   "open"   1.000000  ""
 "secdd 78010 78070 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002796"   "BUSDBL_002796'"   1.00  ""   ""   ""   0
 "tran 78016 78010 'UF'"   "open"   1.000000  ""
 "secdd 78010 78070 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_002797"   "BUSDBL_002797'"   1.00  ""   ""   ""   0
 "tran 78016 78010 'UF'"   "open"   1.000000  ""
 "secdd 78010 78085 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002798"   "BUSDBL_002798'"   1.00  ""   ""   ""   0
 "tran 78020 78010 'PV'"   "open"   1.000000  ""
 "secdd 78010 78050 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002799"   "BUSDBL_002799'"   1.00  ""   ""   ""   0
 "tran 78020 78010 'PV'"   "open"   1.000000  ""
 "secdd 78010 78070 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002800"   "BUSDBL_002800'"   1.00  ""   ""   ""   0
 "tran 78020 78010 'PV'"   "open"   1.000000  ""
 "secdd 78010 78070 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_002801"   "BUSDBL_002801'"   1.00  ""   ""   ""   0
 "tran 78020 78010 'PV'"   "open"   1.000000  ""
 "secdd 78010 78085 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002802"   "BUSDBL_002802'"   1.00  ""   ""   ""   0
 "secdd 78010 78050 '1 '  1"   "open"   1.000000  ""
 "secdd 78010 78070 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002803"   "BUSDBL_002803'"   1.00  ""   ""   ""   0
 "secdd 78010 78050 '1 '  1"   "open"   1.000000  ""
 "secdd 78010 78070 '2 '  1"   "open"   1.000000  ""
0
"BUSDBL_002804"   "BUSDBL_002804'"   1.00  ""   ""   ""   0
 "secdd 78010 78050 '1 '  1"   "open"   1.000000  ""
 "secdd 78010 78085 '1 '  1"   "open"   1.000000  ""
0
"BUSDBL_002805"   "BUSDBL_002805'"   1.00  ""   ""   ""   0
 "secdd 78010 78070 '1 '  1"   "open"   1.000000  ""
```

```
 "secdd 78010 78070 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002806"    "BUSDBL_002806'"    1.00  ""    ""    ""    0
 "secdd 78010 78070 '1 ' 1"    "open"    1.000000  ""
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002807"    "BUSDBL_002807'"    1.00  ""    ""    ""    0
 "secdd 78010 78070 '2 ' 1"    "open"    1.000000  ""
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002808"    "BUSDBL_002808'"    1.00  ""    ""    ""    0
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
 "secdd 78020 78021 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002809"    "BUSDBL_002809'"    1.00  ""    ""    ""    0
 "tran 78020 78010 'PV'"    "open"    1.000000  ""
 "secdd 78020 78023 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002810"    "BUSDBL_002810'"    1.00  ""    ""    ""    0
 "secdd 78020 78021 '1 ' 1"    "open"    1.000000  ""
 "secdd 78020 78023 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002811"    "BUSDBL_002811'"    1.00  ""    ""    ""    0
 "secdd 78020 78021 '1 ' 1"    "open"    1.000000  ""
 "tran 78022 78021 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002812"    "BUSDBL_002812'"    1.00  ""    ""    ""    0
 "secdd 78020 78023 '1 ' 1"    "open"    1.000000  ""
 "tran 78024 78023 'PV'"    "open"    1.000000  ""
0
"BUSDBL_002813"    "BUSDBL_002813'"    1.00  ""    ""    ""    0
 "secdd 73011 78030 '1 ' 1"    "open"    1.000000  ""
 "secdd 78030 78031 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002814"    "BUSDBL_002814'"    1.00  ""    ""    ""    0
 "secdd 73011 78030 '1 ' 1"    "open"    1.000000  ""
 "secdd 78030 78087 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002815"    "BUSDBL_002815'"    1.00  ""    ""    ""    0
 "secdd 78030 78031 '1 ' 1"    "open"    1.000000  ""
 "secdd 78030 78087 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002816"    "BUSDBL_002816'"    1.00  ""    ""    ""    0
 "secdd 78030 78031 '1 ' 1"    "open"    1.000000  ""
 "tran 78031 78032 78035 'S '"    "open"    1.000000  ""
0
"BUSDBL_002817"    "BUSDBL_002817'"    1.00  ""    ""    ""    0
 "tran 78031 78032 78035 'S '"    "open"    1.000000  ""
 "secdd 78032 78033 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002818"    "BUSDBL_002818'"    1.00  ""    ""    ""    0
 "secdd 78032 78033 '1 ' 1"    "open"    1.000000  ""
 "tran 78034 78033 'S1'"    "open"    1.000000  ""
0
"BUSDBL_002819"    "BUSDBL_002819'"    1.00  ""    ""    ""    0
 "secdd 78010 78050 '1 ' 1"    "open"    1.000000  ""
 "tran 78051 78050 'W '"    "open"    1.000000  ""
0
"BUSDBL_002820"    "BUSDBL_002820'"    1.00  ""    ""    ""    0
 "tran 78051 78050 'W '"    "open"    1.000000  ""
 "secdd 78051 78052 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002821"    "BUSDBL_002821'"    1.00  ""    ""    ""    0
 "secdd 78051 78052 '1 ' 1"    "open"    1.000000  ""
 "tran 78053 78052 'W1'"    "open"    1.000000  ""
0
"BUSDBL_002822"    "BUSDBL_002822'"    1.00  ""    ""    ""    0
 "secdd 73056 78066 '1 ' 1"    "open"    1.000000  ""
 "secdd 73233 78066 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_002823"    "BUSDBL_002823'"    1.00    ""    ""    ""    0
 "secdd 73056 78066 '1 '  1"    "open"    1.000000    ""
 "tran 78066 73436 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002824"    "BUSDBL_002824'"    1.00    ""    ""    ""    0
 "secdd 73233 78066 '1 '  1"    "open"    1.000000    ""
 "tran 78066 73436 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002825"    "BUSDBL_002825'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '1 '  1"    "open"    1.000000    ""
 "tran 78071 78070 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002826"    "BUSDBL_002826'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '1 '  1"    "open"    1.000000    ""
 "tran 78071 78070 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002827"    "BUSDBL_002827'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '1 '  1"    "open"    1.000000    ""
 "secdd 78070 78072 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002828"    "BUSDBL_002828'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '1 '  1"    "open"    1.000000    ""
 "secdd 78070 78085 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002829"    "BUSDBL_002829'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '2 '  1"    "open"    1.000000    ""
 "tran 78071 78070 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002830"    "BUSDBL_002830'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '2 '  1"    "open"    1.000000    ""
 "tran 78071 78070 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002831"    "BUSDBL_002831'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '2 '  1"    "open"    1.000000    ""
 "secdd 78070 78072 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002832"    "BUSDBL_002832'"    1.00    ""    ""    ""    0
 "secdd 78010 78070 '2 '  1"    "open"    1.000000    ""
 "secdd 78070 78085 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002833"    "BUSDBL_002833'"    1.00    ""    ""    ""    0
 "tran 78071 78070 '1 '"    "open"    1.000000    ""
 "tran 78071 78070 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002834"    "BUSDBL_002834'"    1.00    ""    ""    ""    0
 "tran 78071 78070 '1 '"    "open"    1.000000    ""
 "secdd 78070 78072 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002835"    "BUSDBL_002835'"    1.00    ""    ""    ""    0
 "tran 78071 78070 '1 '"    "open"    1.000000    ""
 "secdd 78070 78085 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002836"    "BUSDBL_002836'"    1.00    ""    ""    ""    0
 "tran 78071 78070 '2 '"    "open"    1.000000    ""
 "secdd 78070 78072 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002837"    "BUSDBL_002837'"    1.00    ""    ""    ""    0
 "tran 78071 78070 '2 '"    "open"    1.000000    ""
 "secdd 78070 78085 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002838"    "BUSDBL_002838'"    1.00    ""    ""    ""    0
 "secdd 78070 78072 '1 '  1"    "open"    1.000000    ""
 "secdd 78070 78085 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002839"    "BUSDBL_002839'"    1.00    ""    ""    ""    0
 "secdd 78071 73298 '1 '  1"    "open"    1.000000    ""
 "tran 78071 78070 '1 '"    "open"    1.000000    ""
0
```

```
"BUSDBL_002840"    "BUSDBL_002840'"    1.00    ""    ""    ""    0
 "secdd 78071 73298 '1 '  1"    "open"    1.000000  ""
 "tran 78071 78070 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002841"    "BUSDBL_002841'"    1.00    ""    ""    ""    0
 "secdd 78070 78072 '1 '  1"    "open"    1.000000  ""
 "secdd 78072 78075 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002842"    "BUSDBL_002842'"    1.00    ""    ""    ""    0
 "secdd 78072 78075 '1 '  1"    "open"    1.000000  ""
 "tran 78076 78075 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002843"    "BUSDBL_002843'"    1.00    ""    ""    ""    0
 "secdd 78072 78075 '1 '  1"    "open"    1.000000  ""
 "tran 78076 78075 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002844"    "BUSDBL_002844'"    1.00    ""    ""    ""    0
 "secdd 78072 78075 '1 '  1"    "open"    1.000000  ""
 "secdd 78075 78090 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002845"    "BUSDBL_002845'"    1.00    ""    ""    ""    0
 "tran 78076 78075 '1 '"    "open"    1.000000  ""
 "tran 78076 78075 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002846"    "BUSDBL_002846'"    1.00    ""    ""    ""    0
 "tran 78076 78075 '1 '"    "open"    1.000000  ""
 "secdd 78075 78090 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002847"    "BUSDBL_002847'"    1.00    ""    ""    ""    0
 "tran 78076 78075 '2 '"    "open"    1.000000  ""
 "secdd 78075 78090 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002848"    "BUSDBL_002848'"    1.00    ""    ""    ""    0
 "secdd 73089 78076 '1 '  1"    "open"    1.000000  ""
 "secdd 77502 78076 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002849"    "BUSDBL_002849'"    1.00    ""    ""    ""    0
 "secdd 73089 78076 '1 '  1"    "open"    1.000000  ""
 "tran 78076 78075 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002850"    "BUSDBL_002850'"    1.00    ""    ""    ""    0
 "secdd 73089 78076 '1 '  1"    "open"    1.000000  ""
 "tran 78076 78075 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002851"    "BUSDBL_002851'"    1.00    ""    ""    ""    0
 "secdd 73089 78076 '1 '  1"    "open"    1.000000  ""
 "secdd 78076 78077 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002852"    "BUSDBL_002852'"    1.00    ""    ""    ""    0
 "secdd 77502 78076 '1 '  1"    "open"    1.000000  ""
 "tran 78076 78075 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002853"    "BUSDBL_002853'"    1.00    ""    ""    ""    0
 "secdd 77502 78076 '1 '  1"    "open"    1.000000  ""
 "tran 78076 78075 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002854"    "BUSDBL_002854'"    1.00    ""    ""    ""    0
 "secdd 77502 78076 '1 '  1"    "open"    1.000000  ""
 "secdd 78076 78077 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002855"    "BUSDBL_002855'"    1.00    ""    ""    ""    0
 "tran 78076 78075 '1 '"    "open"    1.000000  ""
 "secdd 78076 78077 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002856"    "BUSDBL_002856'"    1.00    ""    ""    ""    0
 "tran 78076 78075 '2 '"    "open"    1.000000  ""
 "secdd 78076 78077 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002857"    "BUSDBL_002857'"    1.00    ""    ""    ""    0
```

```
 "secdd 78076 78077 '1 ' 1"    "open"    1.000000  ""
 "secdd 78077 78086 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002858"    "BUSDBL_002858'"    1.00  ""    ""    ""    0
 "secdd 78081 73469 '1 ' 1"    "open"    1.000000  ""
 "secdd 77503 78081 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002859"    "BUSDBL_002859'"    1.00  ""    ""    ""    0
 "secdd 78081 73469 '1 ' 1"    "open"    1.000000  ""
 "secdd 78081 78082 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002860"    "BUSDBL_002860'"    1.00  ""    ""    ""    0
 "secdd 77503 78081 '1 ' 1"    "open"    1.000000  ""
 "secdd 78081 78082 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002861"    "BUSDBL_002861'"    1.00  ""    ""    ""    0
 "secdd 78081 78082 '1 ' 1"    "open"    1.000000  ""
 "secdd 78082 78086 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002862"    "BUSDBL_002862'"    1.00  ""    ""    ""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002863"    "BUSDBL_002863'"    1.00  ""    ""    ""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78070 78085 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002864"    "BUSDBL_002864'"    1.00  ""    ""    ""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
0
"BUSDBL_002865"    "BUSDBL_002865'"    1.00  ""    ""    ""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
0
"BUSDBL_002866"    "BUSDBL_002866'"    1.00  ""    ""    ""    0
 "secdd 70862 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78085 78088 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002867"    "BUSDBL_002867'"    1.00  ""    ""    ""    0
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78070 78085 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002868"    "BUSDBL_002868'"    1.00  ""    ""    ""    0
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
0
"BUSDBL_002869"    "BUSDBL_002869'"    1.00  ""    ""    ""    0
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
0
"BUSDBL_002870"    "BUSDBL_002870'"    1.00  ""    ""    ""    0
 "secdd 78010 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78085 78088 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002871"    "BUSDBL_002871'"    1.00  ""    ""    ""    0
 "secdd 78070 78085 '1 ' 1"    "open"    1.000000  ""
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
0
"BUSDBL_002872"    "BUSDBL_002872'"    1.00  ""    ""    ""    0
 "secdd 78070 78085 '1 ' 1"    "open"    1.000000  ""
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
0
"BUSDBL_002873"    "BUSDBL_002873'"    1.00  ""    ""    ""    0
 "secdd 78070 78085 '1 ' 1"    "open"    1.000000  ""
 "secdd 78085 78088 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002874"    "BUSDBL_002874'"    1.00  ""    ""    ""    0
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
```

```
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
0
"BUSDBL_002875"    "BUSDBL_002875'"    1.00  ""    ""    ""    0
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
 "secdd 78085 78088 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002876"    "BUSDBL_002876'"    1.00  ""    ""    ""    0
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
 "secdd 78085 78088 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002877"    "BUSDBL_002877'"    1.00  ""    ""    ""    0
 "secdd 78077 78086 '1 '  1"    "open"    1.000000  ""
 "secdd 78082 78086 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002878"    "BUSDBL_002878'"    1.00  ""    ""    ""    0
 "secdd 78077 78086 '1 '  1"    "open"    1.000000  ""
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
0
"BUSDBL_002879"    "BUSDBL_002879'"    1.00  ""    ""    ""    0
 "secdd 78077 78086 '1 '  1"    "open"    1.000000  ""
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
0
"BUSDBL_002880"    "BUSDBL_002880'"    1.00  ""    ""    ""    0
 "secdd 78082 78086 '1 '  1"    "open"    1.000000  ""
 "tran 78086 78085 '3 '"    "open"    1.000000  ""
0
"BUSDBL_002881"    "BUSDBL_002881'"    1.00  ""    ""    ""    0
 "secdd 78082 78086 '1 '  1"    "open"    1.000000  ""
 "tran 78086 78085 '4 '"    "open"    1.000000  ""
0
"BUSDBL_002882"    "BUSDBL_002882'"    1.00  ""    ""    ""    0
 "secdd 78087 70862 '1 '  1"    "open"    1.000000  ""
 "tran 72000 78087 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002883"    "BUSDBL_002883'"    1.00  ""    ""    ""    0
 "secdd 78087 70862 '1 '  1"    "open"    1.000000  ""
 "tran 72000 78087 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002884"    "BUSDBL_002884'"    1.00  ""    ""    ""    0
 "secdd 78087 70862 '1 '  1"    "open"    1.000000  ""
 "secdd 78030 78087 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002885"    "BUSDBL_002885'"    1.00  ""    ""    ""    0
 "tran 72000 78087 '1 '"    "open"    1.000000  ""
 "tran 72000 78087 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002886"    "BUSDBL_002886'"    1.00  ""    ""    ""    0
 "tran 72000 78087 '1 '"    "open"    1.000000  ""
 "secdd 78030 78087 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002887"    "BUSDBL_002887'"    1.00  ""    ""    ""    0
 "tran 72000 78087 '2 '"    "open"    1.000000  ""
 "secdd 78030 78087 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002888"    "BUSDBL_002888'"    1.00  ""    ""    ""    0
 "secdd 78085 78088 '1 '  1"    "open"    1.000000  ""
 "secdd 78088 78089 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002889"    "BUSDBL_002889'"    1.00  ""    ""    ""    0
 "secdd 78088 78089 '1 '  1"    "open"    1.000000  ""
 "secdd 78089 78100 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002890"    "BUSDBL_002890'"    1.00  ""    ""    ""    0
 "secdd 78075 78090 '1 '  1"    "open"    1.000000  ""
 "tran 78091 78090 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002891"    "BUSDBL_002891'"    1.00  ""    ""    ""    0
 "secdd 78075 78090 '1 '  1"    "open"    1.000000  ""
 "tran 78091 78090 '2 '"    "open"    1.000000  ""
```

```
0
"BUSDBL_002892"    "BUSDBL_002892'"    1.00  ""    ""    ""    0
 "tran 78091 78090 '1 '"    "open"    1.000000  ""
 "tran 78091 78090 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002893"    "BUSDBL_002893'"    1.00  ""    ""    ""    0
 "tran 78091 78090 '1 '"    "open"    1.000000  ""
 "secdd 78091 78092 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002894"    "BUSDBL_002894'"    1.00  ""    ""    ""    0
 "tran 78091 78090 '1 '"    "open"    1.000000  ""
 "secdd 78091 78098 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002895"    "BUSDBL_002895'"    1.00  ""    ""    ""    0
 "tran 78091 78090 '2 '"    "open"    1.000000  ""
 "secdd 78091 78092 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002896"    "BUSDBL_002896'"    1.00  ""    ""    ""    0
 "tran 78091 78090 '2 '"    "open"    1.000000  ""
 "secdd 78091 78098 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002897"    "BUSDBL_002897'"    1.00  ""    ""    ""    0
 "secdd 78091 78092 '1 '  1"    "open"    1.000000  ""
 "secdd 78091 78098 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002898"    "BUSDBL_002898'"    1.00  ""    ""    ""    0
 "secdd 73124 78092 '1 '  1"    "open"    1.000000  ""
 "secdd 78091 78092 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002899"    "BUSDBL_002899'"    1.00  ""    ""    ""    0
 "secdd 73124 78094 '1 '  1"    "open"    1.000000  ""
 "secdd 77501 78094 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002900"    "BUSDBL_002900'"    1.00  ""    ""    ""    0
 "secdd 73124 78094 '1 '  1"    "open"    1.000000  ""
 "secdd 78094 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002901"    "BUSDBL_002901'"    1.00  ""    ""    ""    0
 "secdd 77501 78094 '1 '  1"    "open"    1.000000  ""
 "secdd 78094 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002902"    "BUSDBL_002902'"    1.00  ""    ""    ""    0
 "secdd 78091 78098 '1 '  1"    "open"    1.000000  ""
 "secdd 78098 78099 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002903"    "BUSDBL_002903'"    1.00  ""    ""    ""    0
 "secdd 78098 78099 '1 '  1"    "open"    1.000000  ""
 "secdd 78099 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002904"    "BUSDBL_002904'"    1.00  ""    ""    ""    0
 "secdd 78089 78100 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002905"    "BUSDBL_002905'"    1.00  ""    ""    ""    0
 "secdd 78089 78100 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002906"    "BUSDBL_002906'"    1.00  ""    ""    ""    0
 "secdd 78089 78100 '1 '  1"    "open"    1.000000  ""
 "secdd 78100 78102 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002907"    "BUSDBL_002907'"    1.00  ""    ""    ""    0
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002908"    "BUSDBL_002908'"    1.00  ""    ""    ""    0
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
 "secdd 78100 78102 '1 '  1"    "open"    1.000000  ""
0
```

```
"BUSDBL_002909"    "BUSDBL_002909'"    1.00  ""    ""    ""    0
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
 "secdd 78100 78102 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002910"    "BUSDBL_002910'"    1.00  ""    ""    ""    0
 "secdd 72191 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 73002 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002911"    "BUSDBL_002911'"    1.00  ""    ""    ""    0
 "secdd 72191 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 77501 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002912"    "BUSDBL_002912'"    1.00  ""    ""    ""    0
 "secdd 72191 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78094 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002913"    "BUSDBL_002913'"    1.00  ""    ""    ""    0
 "secdd 72191 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78099 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002914"    "BUSDBL_002914'"    1.00  ""    ""    ""    0
 "secdd 72191 78101 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002915"    "BUSDBL_002915'"    1.00  ""    ""    ""    0
 "secdd 72191 78101 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002916"    "BUSDBL_002916'"    1.00  ""    ""    ""    0
 "secdd 73002 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 77501 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002917"    "BUSDBL_002917'"    1.00  ""    ""    ""    0
 "secdd 73002 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78094 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002918"    "BUSDBL_002918'"    1.00  ""    ""    ""    0
 "secdd 73002 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78099 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002919"    "BUSDBL_002919'"    1.00  ""    ""    ""    0
 "secdd 73002 78101 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002920"    "BUSDBL_002920'"    1.00  ""    ""    ""    0
 "secdd 73002 78101 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002921"    "BUSDBL_002921'"    1.00  ""    ""    ""    0
 "secdd 77501 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78094 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002922"    "BUSDBL_002922'"    1.00  ""    ""    ""    0
 "secdd 77501 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78099 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002923"    "BUSDBL_002923'"    1.00  ""    ""    ""    0
 "secdd 77501 78101 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002924"    "BUSDBL_002924'"    1.00  ""    ""    ""    0
 "secdd 77501 78101 '1 '  1"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002925"    "BUSDBL_002925'"    1.00  ""    ""    ""    0
 "secdd 78094 78101 '1 '  1"    "open"    1.000000  ""
 "secdd 78099 78101 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_002926"    "BUSDBL_002926'"    1.00  ""    ""    ""    0
```

```
 "secdd 78094 78101 '1 ' 1"    "open"    1.000000  ""
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002927"    "BUSDBL_002927'"    1.00  ""    ""    ""    0
 "secdd 78094 78101 '1 ' 1"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002928"    "BUSDBL_002928'"    1.00  ""    ""    ""    0
 "secdd 78099 78101 '1 ' 1"    "open"    1.000000  ""
 "tran 78101 78100 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002929"    "BUSDBL_002929'"    1.00  ""    ""    ""    0
 "secdd 78099 78101 '1 ' 1"    "open"    1.000000  ""
 "tran 78101 78100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002930"    "BUSDBL_002930'"    1.00  ""    ""    ""    0
 "tran 72191 78102 '1 '"    "open"    1.000000  ""
 "secdd 78100 78102 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002931"    "BUSDBL_002931'"    1.00  ""    ""    ""    0
 "tran 72191 78102 '1 '"    "open"    1.000000  ""
 "secdd 78102 78105 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002932"    "BUSDBL_002932'"    1.00  ""    ""    ""    0
 "secdd 78100 78102 '1 ' 1"    "open"    1.000000  ""
 "secdd 78102 78105 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002933"    "BUSDBL_002933'"    1.00  ""    ""    ""    0
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000  ""
 "secdd 78102 78105 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002934"    "BUSDBL_002934'"    1.00  ""    ""    ""    0
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000  ""
 "tran 78106 78105 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002935"    "BUSDBL_002935'"    1.00  ""    ""    ""    0
 "secdd 70410 78105 '1 ' 1"    "open"    1.000000  ""
 "tran 78106 78105 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002936"    "BUSDBL_002936'"    1.00  ""    ""    ""    0
 "secdd 78102 78105 '1 ' 1"    "open"    1.000000  ""
 "tran 78106 78105 '1 '"    "open"    1.000000  ""
0
"BUSDBL_002937"    "BUSDBL_002937'"    1.00  ""    ""    ""    0
 "secdd 78102 78105 '1 ' 1"    "open"    1.000000  ""
 "tran 78106 78105 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002938"    "BUSDBL_002938'"    1.00  ""    ""    ""    0
 "tran 78106 78105 '1 '"    "open"    1.000000  ""
 "tran 78106 78105 '2 '"    "open"    1.000000  ""
0
"BUSDBL_002939"    "BUSDBL_002939'"    1.00  ""    ""    ""    0
 "tran 78106 78105 '1 '"    "open"    1.000000  ""
 "secdd 78106 78107 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002940"    "BUSDBL_002940'"    1.00  ""    ""    ""    0
 "tran 78106 78105 '1 '"    "open"    1.000000  ""
 "secdd 78106 78116 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002941"    "BUSDBL_002941'"    1.00  ""    ""    ""    0
 "tran 78106 78105 '2 '"    "open"    1.000000  ""
 "secdd 78106 78107 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002942"    "BUSDBL_002942'"    1.00  ""    ""    ""    0
 "tran 78106 78105 '2 '"    "open"    1.000000  ""
 "secdd 78106 78116 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002943"    "BUSDBL_002943'"    1.00  ""    ""    ""    0
 "secdd 78106 78107 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 78106 78116 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002944"    "BUSDBL_002944'"    1.00  ""    ""    ""    0
 "secdd 72107 78107 '1 ' 1"    "open"    1.000000  ""
 "secdd 78106 78107 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002945"    "BUSDBL_002945'"    1.00  ""    ""    ""    0
 "secdd 72107 78107 '1 ' 1"    "open"    1.000000  ""
 "secdd 78107 78109 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002946"    "BUSDBL_002946'"    1.00  ""    ""    ""    0
 "secdd 78106 78107 '1 ' 1"    "open"    1.000000  ""
 "secdd 78107 78109 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002947"    "BUSDBL_002947'"    1.00  ""    ""    ""    0
 "secdd 78107 78109 '1 ' 1"    "open"    1.000000  ""
 "secdd 78109 78110 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002948"    "BUSDBL_002948'"    1.00  ""    ""    ""    0
 "secdd 73090 78110 '1 ' 1"    "open"    1.000000  ""
 "secdd 73578 78110 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002949"    "BUSDBL_002949'"    1.00  ""    ""    ""    0
 "secdd 73090 78110 '1 ' 1"    "open"    1.000000  ""
 "secdd 78109 78110 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002950"    "BUSDBL_002950'"    1.00  ""    ""    ""    0
 "secdd 73090 78110 '1 ' 1"    "open"    1.000000  ""
 "secdd 78110 78111 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002951"    "BUSDBL_002951'"    1.00  ""    ""    ""    0
 "secdd 73578 78110 '1 ' 1"    "open"    1.000000  ""
 "secdd 78109 78110 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002952"    "BUSDBL_002952'"    1.00  ""    ""    ""    0
 "secdd 73578 78110 '1 ' 1"    "open"    1.000000  ""
 "secdd 78110 78111 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002953"    "BUSDBL_002953'"    1.00  ""    ""    ""    0
 "secdd 78109 78110 '1 ' 1"    "open"    1.000000  ""
 "secdd 78110 78111 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002954"    "BUSDBL_002954'"    1.00  ""    ""    ""    0
 "secdd 73578 78114 '1 ' 1"    "open"    1.000000  ""
 "secdd 78114 78121 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002955"    "BUSDBL_002955'"    1.00  ""    ""    ""    0
 "secdd 78106 78116 '1 ' 1"    "open"    1.000000  ""
 "secdd 78116 78119 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002956"    "BUSDBL_002956'"    1.00  ""    ""    ""    0
 "secdd 72190 78119 '1 ' 1"    "open"    1.000000  ""
 "secdd 73652 78119 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002957"    "BUSDBL_002957'"    1.00  ""    ""    ""    0
 "secdd 72190 78119 '1 ' 1"    "open"    1.000000  ""
 "secdd 78116 78119 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002958"    "BUSDBL_002958'"    1.00  ""    ""    ""    0
 "secdd 72190 78119 '1 ' 1"    "open"    1.000000  ""
 "secdd 78119 78121 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002959"    "BUSDBL_002959'"    1.00  ""    ""    ""    0
 "secdd 73652 78119 '1 ' 1"    "open"    1.000000  ""
 "secdd 78116 78119 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002960"    "BUSDBL_002960'"    1.00  ""    ""    ""    0
 "secdd 73652 78119 '1 ' 1"    "open"    1.000000  ""
 "secdd 78119 78121 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_002961"    "BUSDBL_002961'"    1.00    ""    ""    ""    0
 "secdd 78116 78119 '1 '  1"    "open"    1.000000    ""
 "secdd 78119 78121 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002962"    "BUSDBL_002962'"    1.00    ""    ""    ""    0
 "secdd 70410 78120 '1 '  1"    "open"    1.000000    ""
 "tran 78121 78120 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002963"    "BUSDBL_002963'"    1.00    ""    ""    ""    0
 "secdd 70410 78120 '1 '  1"    "open"    1.000000    ""
 "tran 78121 78120 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002964"    "BUSDBL_002964'"    1.00    ""    ""    ""    0
 "tran 78121 78120 '1 '"    "open"    1.000000    ""
 "tran 78121 78120 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002965"    "BUSDBL_002965'"    1.00    ""    ""    ""    0
 "secdd 78114 78121 '1 '  1"    "open"    1.000000    ""
 "secdd 78119 78121 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002966"    "BUSDBL_002966'"    1.00    ""    ""    ""    0
 "secdd 78114 78121 '1 '  1"    "open"    1.000000    ""
 "tran 78121 78120 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002967"    "BUSDBL_002967'"    1.00    ""    ""    ""    0
 "secdd 78114 78121 '1 '  1"    "open"    1.000000    ""
 "tran 78121 78120 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002968"    "BUSDBL_002968'"    1.00    ""    ""    ""    0
 "secdd 78119 78121 '1 '  1"    "open"    1.000000    ""
 "tran 78121 78120 '1 '"    "open"    1.000000    ""
0
"BUSDBL_002969"    "BUSDBL_002969'"    1.00    ""    ""    ""    0
 "secdd 78119 78121 '1 '  1"    "open"    1.000000    ""
 "tran 78121 78120 '2 '"    "open"    1.000000    ""
0
"BUSDBL_002970"    "BUSDBL_002970'"    1.00    ""    ""    ""    0
 "secdd 70231 79003 '1 '  1"    "open"    1.000000    ""
 "secdd 70540 79003 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002971"    "BUSDBL_002971'"    1.00    ""    ""    ""    0
 "secdd 70231 79003 '1 '  1"    "open"    1.000000    ""
 "secdd 70541 79003 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002972"    "BUSDBL_002972'"    1.00    ""    ""    ""    0
 "secdd 70231 79003 '1 '  1"    "open"    1.000000    ""
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002973"    "BUSDBL_002973'"    1.00    ""    ""    ""    0
 "secdd 70231 79003 '1 '  1"    "open"    1.000000    ""
 "secdd 79003 79018 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002974"    "BUSDBL_002974'"    1.00    ""    ""    ""    0
 "secdd 70231 79003 '1 '  1"    "open"    1.000000    ""
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002975"    "BUSDBL_002975'"    1.00    ""    ""    ""    0
 "secdd 70540 79003 '1 '  1"    "open"    1.000000    ""
 "secdd 70541 79003 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002976"    "BUSDBL_002976'"    1.00    ""    ""    ""    0
 "secdd 70540 79003 '1 '  1"    "open"    1.000000    ""
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002977"    "BUSDBL_002977'"    1.00    ""    ""    ""    0
 "secdd 70540 79003 '1 '  1"    "open"    1.000000    ""
 "secdd 79003 79018 '1 '  1"    "open"    1.000000    ""
0
```

```
"BUSDBL_002978"    "BUSDBL_002978'"    1.00    ""    ""    ""    0
 "secdd 70540 79003 '1 '  1"    "open"    1.000000    ""
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002979"    "BUSDBL_002979'"    1.00    ""    ""    ""    0
 "secdd 70541 79003 '1 '  1"    "open"    1.000000    ""
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002980"    "BUSDBL_002980'"    1.00    ""    ""    ""    0
 "secdd 70541 79003 '1 '  1"    "open"    1.000000    ""
 "secdd 79003 79018 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002981"    "BUSDBL_002981'"    1.00    ""    ""    ""    0
 "secdd 70541 79003 '1 '  1"    "open"    1.000000    ""
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002982"    "BUSDBL_002982'"    1.00    ""    ""    ""    0
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
 "secdd 79003 79018 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002983"    "BUSDBL_002983'"    1.00    ""    ""    ""    0
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002984"    "BUSDBL_002984'"    1.00    ""    ""    ""    0
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
 "secdd 79003 79018 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002985"    "BUSDBL_002985'"    1.00    ""    ""    ""    0
 "secdd 70274 79004 '1 '  1"    "open"    1.000000    ""
 "secdd 70535 79004 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002986"    "BUSDBL_002986'"    1.00    ""    ""    ""    0
 "secdd 70274 79004 '1 '  1"    "open"    1.000000    ""
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002987"    "BUSDBL_002987'"    1.00    ""    ""    ""    0
 "secdd 70274 79004 '1 '  1"    "open"    1.000000    ""
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002988"    "BUSDBL_002988'"    1.00    ""    ""    ""    0
 "secdd 70535 79004 '1 '  1"    "open"    1.000000    ""
 "tran 79003 79004 'T1'"    "open"    1.000000    ""
0
"BUSDBL_002989"    "BUSDBL_002989'"    1.00    ""    ""    ""    0
 "secdd 70535 79004 '1 '  1"    "open"    1.000000    ""
 "tran 79004 79003 71985 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002990"    "BUSDBL_002990'"    1.00    ""    ""    ""    0
 "secdd 79006 77643 '1 '  1"    "open"    1.000000    ""
 "secdd 79006 79092 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002991"    "BUSDBL_002991'"    1.00    ""    ""    ""    0
 "tran 70214 79034 'T1'"    "open"    1.000000    ""
 "tran 79034 79035 'T2'"    "open"    1.000000    ""
0
"BUSDBL_002992"    "BUSDBL_002992'"    1.00    ""    ""    ""    0
 "tran 70214 79034 'T1'"    "open"    1.000000    ""
 "secdd 79034 79183 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002993"    "BUSDBL_002993'"    1.00    ""    ""    ""    0
 "tran 79034 79035 'T2'"    "open"    1.000000    ""
 "secdd 79034 79183 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002994"    "BUSDBL_002994'"    1.00    ""    ""    ""    0
 "tran 79034 79035 'T2'"    "open"    1.000000    ""
 "secdd 79035 79047 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_002995"    "BUSDBL_002995'"    1.00    ""    ""    ""    0
```

```
 "secdd 79035 79047 '1 ' 1"    "open"    1.000000  ""
 "secdd 79047 79056 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002996"    "BUSDBL_002996'"    1.00  ""    ""    ""    0
 "secdd 79035 79047 '1 ' 1"    "open"    1.000000  ""
 "tran 79173 79047 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002997"    "BUSDBL_002997'"    1.00  ""    ""    ""    0
 "secdd 79047 79056 '1 ' 1"    "open"    1.000000  ""
 "tran 79173 79047 'T2'"    "open"    1.000000  ""
0
"BUSDBL_002998"    "BUSDBL_002998'"    1.00  ""    ""    ""    0
 "tran 70359 79056 'T2'"    "open"    1.000000  ""
 "secdd 79046 79056 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_002999"    "BUSDBL_002999'"    1.00  ""    ""    ""    0
 "tran 70359 79056 'T2'"    "open"    1.000000  ""
 "secdd 79047 79056 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003000"    "BUSDBL_003000'"    1.00  ""    ""    ""    0
 "tran 70359 79056 'T2'"    "open"    1.000000  ""
 "tran 79056 79057 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003001"    "BUSDBL_003001'"    1.00  ""    ""    ""    0
 "secdd 79046 79056 '1 ' 1"    "open"    1.000000  ""
 "secdd 79047 79056 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003002"    "BUSDBL_003002'"    1.00  ""    ""    ""    0
 "secdd 79046 79056 '1 ' 1"    "open"    1.000000  ""
 "tran 79056 79057 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003003"    "BUSDBL_003003'"    1.00  ""    ""    ""    0
 "secdd 79047 79056 '1 ' 1"    "open"    1.000000  ""
 "tran 79056 79057 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003004"    "BUSDBL_003004'"    1.00  ""    ""    ""    0
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
 "tran 79056 79057 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003005"    "BUSDBL_003005'"    1.00  ""    ""    ""    0
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
 "secdd 79057 79059 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003006"    "BUSDBL_003006'"    1.00  ""    ""    ""    0
 "secdd 70309 79057 '1 ' 1"    "open"    1.000000  ""
 "tran 79058 79057 71988 'T4'"    "open"    1.000000  ""
0
"BUSDBL_003007"    "BUSDBL_003007'"    1.00  ""    ""    ""    0
 "tran 79056 79057 'T3'"    "open"    1.000000  ""
 "secdd 79057 79059 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003008"    "BUSDBL_003008'"    1.00  ""    ""    ""    0
 "tran 79058 79057 71988 'T4'"    "open"    1.000000  ""
 "tran 79056 79057 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003009"    "BUSDBL_003009'"    1.00  ""    ""    ""    0
 "tran 79058 79057 71988 'T4'"    "open"    1.000000  ""
 "secdd 79057 79059 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003010"    "BUSDBL_003010'"    1.00  ""    ""    ""    0
 "secdd 79036 79058 '1 ' 1"    "open"    1.000000  ""
 "secdd 79058 79266 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003011"    "BUSDBL_003011'"    1.00  ""    ""    ""    0
 "tran 79058 79057 71988 'T4'"    "open"    1.000000  ""
 "secdd 79036 79058 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003012"    "BUSDBL_003012'"    1.00  ""    ""    ""    0
 "tran 79058 79057 71988 'T4'"    "open"    1.000000  ""
```

```
 "secdd 79058 79266 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003013"    "BUSDBL_003013'"    1.00  ""    ""    ""    0
 "secdd 79065 79091 '1 ' 1"    "open"    1.000000  ""
 "secdd 79065 79091 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003014"    "BUSDBL_003014'"    1.00  ""    ""    ""    0
 "secdd 79066 79068 '1 ' 1"    "open"    1.000000  ""
 "secdd 79066 79092 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003015"    "BUSDBL_003015'"    1.00  ""    ""    ""    0
 "secdd 79068 77643 '1 ' 1"    "open"    1.000000  ""
 "secdd 79066 79068 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003016"    "BUSDBL_003016'"    1.00  ""    ""    ""    0
 "secdd 79068 77643 '1 ' 1"    "open"    1.000000  ""
 "tran 79068 79069 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003017"    "BUSDBL_003017'"    1.00  ""    ""    ""    0
 "secdd 79066 79068 '1 ' 1"    "open"    1.000000  ""
 "tran 79068 79069 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003018"    "BUSDBL_003018'"    1.00  ""    ""    ""    0
 "secdd 70535 79069 '1 ' 1"    "open"    1.000000  ""
 "tran 77643 79069 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003019"    "BUSDBL_003019'"    1.00  ""    ""    ""    0
 "secdd 70535 79069 '1 ' 1"    "open"    1.000000  ""
 "tran 79068 79069 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003020"    "BUSDBL_003020'"    1.00  ""    ""    ""    0
 "secdd 70535 79069 '1 ' 1"    "open"    1.000000  ""
 "secdd 79069 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003021"    "BUSDBL_003021'"    1.00  ""    ""    ""    0
 "tran 77643 79069 'T2'"    "open"    1.000000  ""
 "tran 79068 79069 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003022"    "BUSDBL_003022'"    1.00  ""    ""    ""    0
 "tran 77643 79069 'T2'"    "open"    1.000000  ""
 "secdd 79069 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003023"    "BUSDBL_003023'"    1.00  ""    ""    ""    0
 "tran 79068 79069 'T1'"    "open"    1.000000  ""
 "secdd 79069 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003024"    "BUSDBL_003024'"    1.00  ""    ""    ""    0
 "secdd 79039 79091 '1 ' 1"    "open"    1.000000  ""
 "secdd 79065 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003025"    "BUSDBL_003025'"    1.00  ""    ""    ""    0
 "secdd 79039 79091 '1 ' 1"    "open"    1.000000  ""
 "secdd 79065 79091 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003026"    "BUSDBL_003026'"    1.00  ""    ""    ""    0
 "secdd 79039 79091 '1 ' 1"    "open"    1.000000  ""
 "secdd 79069 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003027"    "BUSDBL_003027'"    1.00  ""    ""    ""    0
 "secdd 79065 79091 '1 ' 1"    "open"    1.000000  ""
 "secdd 79069 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003028"    "BUSDBL_003028'"    1.00  ""    ""    ""    0
 "secdd 79065 79091 '2 ' 1"    "open"    1.000000  ""
 "secdd 79069 79091 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003029"    "BUSDBL_003029'"    1.00  ""    ""    ""    0
 "secdd 70199 79092 '1 ' 1"    "open"    1.000000  ""
 "secdd 79006 79092 '1 ' 1"    "open"    1.000000  ""
```

```
0
"BUSDBL_003030"  "BUSDBL_003030'"  1.00  ""  ""  ""  0
 "secdd 70199 79092 '1 '  1"  "open"  1.000000  ""
 "secdd 79066 79092 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003031"  "BUSDBL_003031'"  1.00  ""  ""  ""  0
 "secdd 79006 79092 '1 '  1"  "open"  1.000000  ""
 "secdd 79066 79092 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003032"  "BUSDBL_003032'"  1.00  ""  ""  ""  0
 "tran 79173 79047 'T2'"  "open"  1.000000  ""
 "secdd 79173 79174 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003033"  "BUSDBL_003033'"  1.00  ""  ""  ""  0
 "tran 79173 79047 'T2'"  "open"  1.000000  ""
 "secdd 79173 79175 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003034"  "BUSDBL_003034'"  1.00  ""  ""  ""  0
 "secdd 79173 79174 '1 '  1"  "open"  1.000000  ""
 "secdd 79173 79175 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003035"  "BUSDBL_003035'"  1.00  ""  ""  ""  0
 "tran 700005 700004 'U1'"  "open"  1.000000  ""
 "secdd 700005 700007 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003036"  "BUSDBL_003036'"  1.00  ""  ""  ""  0
 "secdd 700006 70026 '1 '  1"  "open"  1.000000  ""
 "tran 700006 700007 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003037"  "BUSDBL_003037'"  1.00  ""  ""  ""  0
 "secdd 700005 700007 '1 '  1"  "open"  1.000000  ""
 "tran 700006 700007 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003038"  "BUSDBL_003038'"  1.00  ""  ""  ""  0
 "tran 700044 700045 'U1'"  "open"  1.000000  ""
 "secdd 700045 700046 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003039"  "BUSDBL_003039'"  1.00  ""  ""  ""  0
 "tran 700047 700046 71972 'T1'"  "open"  1.000000  ""
 "secdd 700045 700046 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003040"  "BUSDBL_003040'"  1.00  ""  ""  ""  0
 "secdd 700047 70654 '1 '  1"  "open"  1.000000  ""
 "tran 700047 700046 71972 'T1'"  "open"  1.000000  ""
0
"BUSDBL_003041"  "BUSDBL_003041'"  1.00  ""  ""  ""  0
 "secdd 70592 700052 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003042"  "BUSDBL_003042'"  1.00  ""  ""  ""  0
 "secdd 700053 700054 '2 '  1"  "open"  1.000000  ""
0
"BUSDBL_003043"  "BUSDBL_003043'"  1.00  ""  ""  ""  0
 "secdd 700053 700054 '2 '  1"  "open"  1.000000  ""
 "tran 700054 700055 'U1'"  "open"  1.000000  ""
0
"BUSDBL_003044"  "BUSDBL_003044'"  1.00  ""  ""  ""  0
 "tran 700066 700056 71969 'T2'"  "open"  1.000000  ""
 "secdd 700056 700058 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003045"  "BUSDBL_003045'"  1.00  ""  ""  ""  0
 "secdd 700056 700058 '1 '  1"  "open"  1.000000  ""
 "tran 700058 700057 'U2'"  "open"  1.000000  ""
0
"BUSDBL_003046"  "BUSDBL_003046'"  1.00  ""  ""  ""  0
 "tran 700066 700059 71968 'T3'"  "open"  1.000000  ""
 "secdd 700059 700061 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003047"  "BUSDBL_003047'"  1.00  ""  ""  ""  0
 "secdd 700059 700061 '1 '  1"  "open"  1.000000  ""
```

```
 "tran 700061 700060 'U3'"    "open"    1.000000  ""
0
"BUSDBL_003048"    "BUSDBL_003048'"    1.00  ""    ""    ""    0
 "tran 700066 700062 71967 'T4'"    "open"    1.000000  ""
 "secdd 700062 700064 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_003049"    "BUSDBL_003049'"    1.00  ""    ""    ""    0
 "secdd 700062 700064 '1 '  1"    "open"    1.000000  ""
 "tran 700064 700063 'U4'"    "open"    1.000000  ""
0
"BUSDBL_003050"    "BUSDBL_003050'"    1.00  ""    ""    ""    0
 "tran 700065 700067 'U1'"    "open"    1.000000  ""
 "secdd 700068 700065 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_003051"    "BUSDBL_003051'"    1.00  ""    ""    ""    0
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
 "tran 700066 700059 71968 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003052"    "BUSDBL_003052'"    1.00  ""    ""    ""    0
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
 "tran 700066 700056 71969 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003053"    "BUSDBL_003053'"    1.00  ""    ""    ""    0
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_003054"    "BUSDBL_003054'"    1.00  ""    ""    ""    0
 "secdd 70919 700066 '1 '  1"    "open"    1.000000  ""
 "tran 700066 700062 71967 'T4'"    "open"    1.000000  ""
0
"BUSDBL_003055"    "BUSDBL_003055'"    1.00  ""    ""    ""    0
 "tran 700066 700059 71968 'T3'"    "open"    1.000000  ""
 "tran 700066 700056 71969 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003056"    "BUSDBL_003056'"    1.00  ""    ""    ""    0
 "tran 700066 700059 71968 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003057"    "BUSDBL_003057'"    1.00  ""    ""    ""    0
 "tran 700066 700062 71967 'T4'"    "open"    1.000000  ""
 "tran 700066 700059 71968 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003058"    "BUSDBL_003058'"    1.00  ""    ""    ""    0
 "tran 700066 700056 71969 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003059"    "BUSDBL_003059'"    1.00  ""    ""    ""    0
 "tran 700066 700062 71967 'T4'"    "open"    1.000000  ""
 "tran 700066 700056 71969 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003060"    "BUSDBL_003060'"    1.00  ""    ""    ""    0
 "tran 700066 700062 71967 'T4'"    "open"    1.000000  ""
0
"BUSDBL_003061"    "BUSDBL_003061'"    1.00  ""    ""    ""    0
 "secdd 700068 700065 '1 '  1"    "open"    1.000000  ""
0
"BUSDBL_003062"    "BUSDBL_003062'"    1.00  ""    ""    ""    0
 "secdd 700069 70918 '1 '  1"    "open"    1.000000  ""
 "tran 700069 700070 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003063"    "BUSDBL_003063'"    1.00  ""    ""    ""    0
 "secdd 700069 70918 '1 '  1"    "open"    1.000000  ""
 "tran 700069 700071 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003064"    "BUSDBL_003064'"    1.00  ""    ""    ""    0
 "secdd 700069 70918 '1 '  1"    "open"    1.000000  ""
 "tran 700069 700072 'T3'"    "open"    1.000000  ""
0
"BUSDBL_003065"    "BUSDBL_003065'"    1.00  ""    ""    ""    0
 "tran 700069 700070 'T1'"    "open"    1.000000  ""
 "tran 700069 700071 'T2'"    "open"    1.000000  ""
0
```

```
"BUSDBL_003066"    "BUSDBL_003066'"    1.00    ""    ""    ""    0
 "tran 700069 700070 'T1'"    "open"    1.000000    ""
 "tran 700069 700072 'T3'"    "open"    1.000000    ""
0
"BUSDBL_003067"    "BUSDBL_003067'"    1.00    ""    ""    ""    0
 "tran 700069 700071 'T2'"    "open"    1.000000    ""
 "tran 700069 700072 'T3'"    "open"    1.000000    ""
0
"BUSDBL_003068"    "BUSDBL_003068'"    1.00    ""    ""    ""    0
 "tran 700069 700070 'T1'"    "open"    1.000000    ""
 "secdd 700073 700070 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003069"    "BUSDBL_003069'"    1.00    ""    ""    ""    0
 "tran 700069 700071 'T2'"    "open"    1.000000    ""
 "secdd 700074 700071 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003070"    "BUSDBL_003070'"    1.00    ""    ""    ""    0
 "tran 700069 700072 'T3'"    "open"    1.000000    ""
 "secdd 700075 700072 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003071"    "BUSDBL_003071'"    1.00    ""    ""    ""    0
 "secdd 700073 700070 '1 '  1"    "open"    1.000000    ""
 "tran 700076 700073 'U1'"    "open"    1.000000    ""
0
"BUSDBL_003072"    "BUSDBL_003072'"    1.00    ""    ""    ""    0
 "secdd 700074 700071 '1 '  1"    "open"    1.000000    ""
 "tran 700077 700074 'U2'"    "open"    1.000000    ""
0
"BUSDBL_003073"    "BUSDBL_003073'"    1.00    ""    ""    ""    0
 "secdd 700075 700072 '1 '  1"    "open"    1.000000    ""
 "tran 700078 700075 'U3'"    "open"    1.000000    ""
0
"BUSDBL_003074"    "BUSDBL_003074'"    1.00    ""    ""    ""    0
 "tran 700080 700079 'U1'"    "open"    1.000000    ""
 "secdd 700080 700081 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003075"    "BUSDBL_003075'"    1.00    ""    ""    ""    0
 "tran 700091 700081 71966 'T1'"    "open"    1.000000    ""
 "secdd 700080 700081 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003076"    "BUSDBL_003076'"    1.00    ""    ""    ""    0
 "tran 700083 700082 'U2'"    "open"    1.000000    ""
 "secdd 700083 700084 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003077"    "BUSDBL_003077'"    1.00    ""    ""    ""    0
 "tran 700091 700084 71965 'T1'"    "open"    1.000000    ""
 "secdd 700083 700084 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003078"    "BUSDBL_003078'"    1.00    ""    ""    ""    0
 "tran 700086 700085 'U3'"    "open"    1.000000    ""
 "secdd 700086 700087 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003079"    "BUSDBL_003079'"    1.00    ""    ""    ""    0
 "tran 700091 700087 71964 'T1'"    "open"    1.000000    ""
 "secdd 700086 700087 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003080"    "BUSDBL_003080'"    1.00    ""    ""    ""    0
 "tran 700089 700088 'U4'"    "open"    1.000000    ""
 "secdd 700089 700090 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003081"    "BUSDBL_003081'"    1.00    ""    ""    ""    0
 "tran 700091 700090 71963 'T1'"    "open"    1.000000    ""
 "secdd 700089 700090 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003082"    "BUSDBL_003082'"    1.00    ""    ""    ""    0
 "secdd 700091 70918 '1 '  1"    "open"    1.000000    ""
 "tran 700091 700081 71966 'T1'"    "open"    1.000000    ""
0
"BUSDBL_003083"    "BUSDBL_003083'"    1.00    ""    ""    ""    0
```

```
 "secdd 700091 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 700091 700084 71965 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003084"    "BUSDBL_003084'"    1.00  ""    ""    ""    0
 "secdd 700091 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 700091 700087 71964 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003085"    "BUSDBL_003085'"    1.00  ""    ""    ""    0
 "secdd 700091 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 700091 700090 71963 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003086"    "BUSDBL_003086'"    1.00  ""    ""    ""    0
 "tran 700091 700084 71965 'T1'"    "open"    1.000000  ""
 "tran 700091 700081 71966 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003087"    "BUSDBL_003087'"    1.00  ""    ""    ""    0
 "tran 700091 700087 71964 'T1'"    "open"    1.000000  ""
 "tran 700091 700081 71966 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003088"    "BUSDBL_003088'"    1.00  ""    ""    ""    0
 "tran 700091 700090 71963 'T1'"    "open"    1.000000  ""
 "tran 700091 700081 71966 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003089"    "BUSDBL_003089'"    1.00  ""    ""    ""    0
 "tran 700091 700087 71964 'T1'"    "open"    1.000000  ""
 "tran 700091 700084 71965 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003090"    "BUSDBL_003090'"    1.00  ""    ""    ""    0
 "tran 700091 700090 71963 'T1'"    "open"    1.000000  ""
 "tran 700091 700084 71965 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003091"    "BUSDBL_003091'"    1.00  ""    ""    ""    0
 "tran 700091 700090 71963 'T1'"    "open"    1.000000  ""
 "tran 700091 700087 71964 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003092"    "BUSDBL_003092'"    1.00  ""    ""    ""    0
 "secdd 70916 700097 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003093"    "BUSDBL_003093'"    1.00  ""    ""    ""    0
 "secdd 700098 700099 '2 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003094"    "BUSDBL_003094'"    1.00  ""    ""    ""    0
 "secdd 700098 700099 '2 ' 1"    "open"    1.000000  ""
 "tran 700099 700100 '2 '"    "open"    1.000000  ""
0
"BUSDBL_003095"    "BUSDBL_003095'"    1.00  ""    ""    ""    0
 "tran 700119 700125 '1 '"    "open"    1.000000  ""
 "secdd 700125 700131 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003096"    "BUSDBL_003096'"    1.00  ""    ""    ""    0
 "tran 700120 700126 '1 '"    "open"    1.000000  ""
 "secdd 700126 700132 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003097"    "BUSDBL_003097'"    1.00  ""    ""    ""    0
 "tran 700121 700127 '1 '"    "open"    1.000000  ""
 "secdd 700127 700133 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003098"    "BUSDBL_003098'"    1.00  ""    ""    ""    0
 "tran 700122 700128 '1 '"    "open"    1.000000  ""
 "secdd 700128 700131 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003099"    "BUSDBL_003099'"    1.00  ""    ""    ""    0
 "tran 700123 700129 '1 '"    "open"    1.000000  ""
 "secdd 700129 700132 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003100"    "BUSDBL_003100'"    1.00  ""    ""    ""    0
 "tran 700124 700130 '1 '"    "open"    1.000000  ""
 "secdd 700130 700133 '1 ' 1"    "open"    1.000000  ""
0
```

```
"BUSDBL_003101"    "BUSDBL_003101'"    1.00    ""    ""    ""    0
 "secdd 700125 700131 '1 '  1"    "open"    1.000000    ""
 "secdd 700128 700131 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003102"    "BUSDBL_003102'"    1.00    ""    ""    ""    0
 "tran 700134 700131 71959 '1 '"    "open"    1.000000    ""
 "secdd 700125 700131 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003103"    "BUSDBL_003103'"    1.00    ""    ""    ""    0
 "tran 700134 700131 71959 '1 '"    "open"    1.000000    ""
 "secdd 700128 700131 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003104"    "BUSDBL_003104'"    1.00    ""    ""    ""    0
 "secdd 700126 700132 '1 '  1"    "open"    1.000000    ""
 "secdd 700129 700132 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003105"    "BUSDBL_003105'"    1.00    ""    ""    ""    0
 "tran 700134 700132 71958 '1 '"    "open"    1.000000    ""
 "secdd 700126 700132 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003106"    "BUSDBL_003106'"    1.00    ""    ""    ""    0
 "tran 700134 700132 71958 '1 '"    "open"    1.000000    ""
 "secdd 700129 700132 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003107"    "BUSDBL_003107'"    1.00    ""    ""    ""    0
 "secdd 700127 700133 '1 '  1"    "open"    1.000000    ""
 "secdd 700130 700133 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003108"    "BUSDBL_003108'"    1.00    ""    ""    ""    0
 "tran 700134 700133 71957 '1 '"    "open"    1.000000    ""
 "secdd 700127 700133 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003109"    "BUSDBL_003109'"    1.00    ""    ""    ""    0
 "tran 700134 700133 71957 '1 '"    "open"    1.000000    ""
 "secdd 700130 700133 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003110"    "BUSDBL_003110'"    1.00    ""    ""    ""    0
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
 "tran 700134 700131 71959 '1 '"    "open"    1.000000    ""
0
"BUSDBL_003111"    "BUSDBL_003111'"    1.00    ""    ""    ""    0
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
 "tran 700134 700133 71957 '1 '"    "open"    1.000000    ""
0
"BUSDBL_003112"    "BUSDBL_003112'"    1.00    ""    ""    ""    0
 "secdd 700134 70122 '1 '  1"    "open"    1.000000    ""
 "tran 700134 700132 71958 '1 '"    "open"    1.000000    ""
0
"BUSDBL_003113"    "BUSDBL_003113'"    1.00    ""    ""    ""    0
 "tran 700134 700133 71957 '1 '"    "open"    1.000000    ""
 "tran 700134 700131 71959 '1 '"    "open"    1.000000    ""
0
"BUSDBL_003114"    "BUSDBL_003114'"    1.00    ""    ""    ""    0
 "tran 700134 700132 71958 '1 '"    "open"    1.000000    ""
 "tran 700134 700131 71959 '1 '"    "open"    1.000000    ""
0
"BUSDBL_003115"    "BUSDBL_003115'"    1.00    ""    ""    ""    0
 "tran 700134 700133 71957 '1 '"    "open"    1.000000    ""
 "tran 700134 700132 71958 '1 '"    "open"    1.000000    ""
0
"BUSDBL_003116"    "BUSDBL_003116'"    1.00    ""    ""    ""    0
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
 "secdd 700139 70652 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003117"    "BUSDBL_003117'"    1.00    ""    ""    ""    0
 "secdd 70122 700139 '1 '  1"    "open"    1.000000    ""
 "secdd 700139 700140 '1 '  1"    "open"    1.000000    ""
0
"BUSDBL_003118"    "BUSDBL_003118'"    1.00    ""    ""    ""    0
```

```
 "secdd 700139 70652 '1 ' 1"    "open"    1.000000  ""
 "secdd 700139 700140 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003119"    "BUSDBL_003119'"    1.00  ""    ""    ""    0
 "secdd 700139 700140 '1 ' 1"    "open"    1.000000  ""
 "tran 700140 700141 '1 '"    "open"    1.000000  ""
0
"BUSDBL_003120"    "BUSDBL_003120'"    1.00  ""    ""    ""    0
 "secdd 700139 700140 '1 ' 1"    "open"    1.000000  ""
 "tran 700140 700150 '1 '"    "open"    1.000000  ""
0
"BUSDBL_003121"    "BUSDBL_003121'"    1.00  ""    ""    ""    0
 "tran 700140 700141 '1 '"    "open"    1.000000  ""
 "tran 700140 700150 '1 '"    "open"    1.000000  ""
0
"BUSDBL_003122"    "BUSDBL_003122'"    1.00  ""    ""    ""    0
 "tran 700140 700141 '1 '"    "open"    1.000000  ""
 "secdd 700141 700143 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003123"    "BUSDBL_003123'"    1.00  ""    ""    ""    0
 "tran 700140 700141 '1 '"    "open"    1.000000  ""
 "secdd 700141 700145 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003124"    "BUSDBL_003124'"    1.00  ""    ""    ""    0
 "secdd 700141 700143 '1 ' 1"    "open"    1.000000  ""
 "secdd 700141 700145 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003125"    "BUSDBL_003125'"    1.00  ""    ""    ""    0
 "secdd 700141 700143 '1 ' 1"    "open"    1.000000  ""
 "tran 700143 700142 '1 '"    "open"    1.000000  ""
0
"BUSDBL_003126"    "BUSDBL_003126'"    1.00  ""    ""    ""    0
 "secdd 700141 700145 '1 ' 1"    "open"    1.000000  ""
 "tran 700145 700144 '1 '"    "open"    1.000000  ""
0
"BUSDBL_003127"    "BUSDBL_003127'"    1.00  ""    ""    ""    0
 "tran 700148 700146 '1 '"    "open"    1.000000  ""
 "secdd 700150 700148 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003128"    "BUSDBL_003128'"    1.00  ""    ""    ""    0
 "tran 700149 700147 '1 '"    "open"    1.000000  ""
 "secdd 700150 700149 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003129"    "BUSDBL_003129'"    1.00  ""    ""    ""    0
 "tran 700140 700150 '1 '"    "open"    1.000000  ""
 "secdd 700150 700148 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003130"    "BUSDBL_003130'"    1.00  ""    ""    ""    0
 "tran 700140 700150 '1 '"    "open"    1.000000  ""
 "secdd 700150 700149 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003131"    "BUSDBL_003131'"    1.00  ""    ""    ""    0
 "secdd 700150 700148 '1 ' 1"    "open"    1.000000  ""
 "secdd 700150 700149 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003132"    "BUSDBL_003132'"    1.00  ""    ""    ""    0
 "secdd 700152 700151 '1 ' 1"    "open"    1.000000  ""
 "secdd 700153 700152 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003133"    "BUSDBL_003133'"    1.00  ""    ""    ""    0
 "secdd 700153 700152 '1 ' 1"    "open"    1.000000  ""
 "tran 700153 700154 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003134"    "BUSDBL_003134'"    1.00  ""    ""    ""    0
 "tran 700153 700154 'T1'"    "open"    1.000000  ""
 "secdd 700155 700154 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003135"    "BUSDBL_003135'"    1.00  ""    ""    ""    0
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
```

```
 "secdd 700155 70392 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003136"    "BUSDBL_003136'"    1.00  ""    ""    ""    0
 "secdd 70048 700155 '1 ' 1"    "open"    1.000000  ""
 "secdd 700155 700154 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003137"    "BUSDBL_003137'"    1.00  ""    ""    ""    0
 "secdd 700155 70392 '1 ' 1"    "open"    1.000000  ""
 "secdd 700155 700154 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003138"    "BUSDBL_003138'"    1.00  ""    ""    ""    0
 "tran 700178 70933 'U1'"    "open"    1.000000  ""
 "secdd 700179 700178 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003139"    "BUSDBL_003139'"    1.00  ""    ""    ""    0
 "tran 700180 700179 71954 'T1'"    "open"    1.000000  ""
 "secdd 700179 700178 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003140"    "BUSDBL_003140'"    1.00  ""    ""    ""    0
 "secdd 700180 70937 '1 ' 1"    "open"    1.000000  ""
 "tran 700180 700179 71954 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003141"    "BUSDBL_003141'"    1.00  ""    ""    ""    0
 "secdd 70311 700181 '1 ' 1"    "open"    1.000000  ""
 "secdd 700181 70711 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003142"    "BUSDBL_003142'"    1.00  ""    ""    ""    0
 "tran 700183 700182 'U1'"    "open"    1.000000  ""
 "secdd 700183 700184 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003143"    "BUSDBL_003143'"    1.00  ""    ""    ""    0
 "tran 700185 700184 71952 'T1'"    "open"    1.000000  ""
 "secdd 700183 700184 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003144"    "BUSDBL_003144'"    1.00  ""    ""    ""    0
 "tran 700185 700184 71951 'T2'"    "open"    1.000000  ""
 "secdd 700183 700184 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003145"    "BUSDBL_003145'"    1.00  ""    ""    ""    0
 "tran 700185 700184 71951 'T2'"    "open"    1.000000  ""
 "tran 700185 700184 71952 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003146"    "BUSDBL_003146'"    1.00  ""    ""    ""    0
 "secdd 700185 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 700185 700184 71952 'T1'"    "open"    1.000000  ""
0
"BUSDBL_003147"    "BUSDBL_003147'"    1.00  ""    ""    ""    0
 "secdd 700185 70918 '1 ' 1"    "open"    1.000000  ""
 "tran 700185 700184 71951 'T2'"    "open"    1.000000  ""
0
"BUSDBL_003148"    "BUSDBL_003148'"    1.00  ""    ""    ""    0
 "secdd 700188 70654 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003149"    "BUSDBL_003149'"    1.00  ""    ""    ""    0
 "secdd 700190 700189 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003150"    "BUSDBL_003150'"    1.00  ""    ""    ""    0
 "secdd 700190 700189 '1 ' 1"    "open"    1.000000  ""
 "tran 700191 700190 '1 '"    "open"    1.000000  ""
0
"BUSDBL_003151"    "BUSDBL_003151'"    1.00  ""    ""    ""    0
 "secdd 700208 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003152"    "BUSDBL_003152'"    1.00  ""    ""    ""    0
 "secdd 700208 70122 '1 ' 1"    "open"    1.000000  ""
0
"BUSDBL_003153"    "BUSDBL_003153'"    1.00  ""    ""    ""    0
 "secdd 700208 70122 '1 ' 1"    "open"    1.000000  ""
0
```

```
"BUSDBL_003157"  "BUSDBL_003157'"  1.00  ""  ""  ""  0
 "secdd 700212 700209 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003158"  "BUSDBL_003158'"  1.00  ""  ""  ""  0
 "secdd 700213 700210 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003159"  "BUSDBL_003159'"  1.00  ""  ""  ""  0
 "secdd 700214 700211 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003160"  "BUSDBL_003160'"  1.00  ""  ""  ""  0
 "secdd 700212 700209 '1 '  1"  "open"  1.000000  ""
 "tran 700215 700212 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003161"  "BUSDBL_003161'"  1.00  ""  ""  ""  0
 "secdd 700213 700210 '1 '  1"  "open"  1.000000  ""
 "tran 700216 700213 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003162"  "BUSDBL_003162'"  1.00  ""  ""  ""  0
 "secdd 700214 700211 '1 '  1"  "open"  1.000000  ""
 "tran 700217 700214 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003163"  "BUSDBL_003163'"  1.00  ""  ""  ""  0
 "tran 700219 700218 '1 '"  "open"  1.000000  ""
 "secdd 700218 700224 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003164"  "BUSDBL_003164'"  1.00  ""  ""  ""  0
 "tran 700219 700218 '1 '"  "open"  1.000000  ""
 "secdd 700220 700219 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003165"  "BUSDBL_003165'"  1.00  ""  ""  ""  0
 "tran 700219 700218 '1 '"  "open"  1.000000  ""
 "secdd 700221 700219 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003166"  "BUSDBL_003166'"  1.00  ""  ""  ""  0
 "secdd 700220 700219 '1 '  1"  "open"  1.000000  ""
 "secdd 700221 700219 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003167"  "BUSDBL_003167'"  1.00  ""  ""  ""  0
 "secdd 700220 700219 '1 '  1"  "open"  1.000000  ""
 "tran 700222 700220 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003168"  "BUSDBL_003168'"  1.00  ""  ""  ""  0
 "secdd 700221 700219 '1 '  1"  "open"  1.000000  ""
 "tran 700223 700221 '1 '"  "open"  1.000000  ""
0
"BUSDBL_003169"  "BUSDBL_003169'"  1.00  ""  ""  ""  0
 "secdd 70025 700224 '1 '  1"  "open"  1.000000  ""
 "secdd 700224 70937 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003170"  "BUSDBL_003170'"  1.00  ""  ""  ""  0
 "secdd 70025 700224 '1 '  1"  "open"  1.000000  ""
 "secdd 700218 700224 '1 '  1"  "open"  1.000000  ""
0
"BUSDBL_003171"  "BUSDBL_003171'"  1.00  ""  ""  ""  0
 "secdd 700224 70937 '1 '  1"  "open"  1.000000  ""
 "secdd 700218 700224 '1 '  1"  "open"  1.000000  ""
0
"shunt_3172"  "shunt 'CEDARCK2A_34.50' 'B1'"  1.00  ""  ""  ""  0
 "shunt 70834 'B1'"  "open"  1.000000  ""
0
"shunt_3173"  "shunt 'CEDARCK2B_34.50' 'B1'"  1.00  ""  ""  ""  0
 "shunt 70835 'B1'"  "open"  1.000000  ""
0
"shunt_3174"  "shunt 'ARRIBA_W1_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "shunt 70445 'v '"  "open"  1.000000  ""
0
"shunt_3175"  "shunt 'ARRIBA_W2_2_34.50' 'v '"  1.00  ""  ""  ""  0
 "shunt 70446 'v '"  "open"  1.000000  ""
0
```

```
"shunt_3176"    "shunt 'MISS_SITE_345.00' 'PRONGHORN_345.00' '1 ' 'f1'  1"    1.00    ""    ""    ""    0
 "shunt 70624 70628 '1 ' 'f1'  1"    "open"    1.000000    ""
0
"shunt_3177"    "shunt 'UTE_GRND_JN_345.00' 'RIFLE_CU_345.00' '1 ' 't1'  1"    1.00    ""    ""    ""    0
 "shunt 79036 79058 '1 ' 't1'  1"    "open"    1.000000    ""
0
"shunt_3178"    "shunt 'CANAL_XING_345.00' 'GOOSE_CK_345.00' '1 ' 't1'  1"    1.00    ""    ""    ""    0
 "shunt 70915 70918 '1 ' 't1'  1"    "open"    1.000000    ""
0
"shunt_3179"    "shunt 'GLDSTNPS_230.00' 'VALENT_230.00' '1 ' 'f1'  1"    1.00    ""    ""    ""    0
 "shunt 12181 70990 '1 ' 'f1'  1"    "open"    1.000000    ""
0
"shunt_3180"    "shunt 'RIFLE_CU_345.00' 'MEEKER_345.00' '1 ' 'f1'  1"    1.00    ""    ""    ""    0
 "shunt 79058 79266 '1 ' 'f1'  1"    "open"    1.000000    ""
0
"shunt_3181"    "shunt 'CANAL_XING_345.00' 'GOOSE_CK_345.00' '2 ' 't2'  1"    1.00    ""    ""    ""    0
 "shunt 70915 70918 '2 ' 't2'  1"    "open"    1.000000    ""
0
"shunt_3182"    "shunt 'MAY_VALLEY_345.00' 'SANDSTONE_345.00' '1 ' 'f1'  1"    1.00    ""    ""    ""    0
 "shunt 70919 70921 '1 ' 'f1'  1"    "open"    1.000000    ""
0
"shunt_3183"    "shunt 'MAY_VALLEY_345.00' 'SANDSTONE_345.00' '1 ' 't1'  1"    1.00    ""    ""    ""    0
 "shunt 70919 70921 '1 ' 't1'  1"    "open"    1.000000    ""
0
"shunt_3184"    "shunt 'MAY_VALLEY_345.00' 'SANDSTONE_345.00' '2 ' 'f2'  1"    1.00    ""    ""    ""    0
 "shunt 70919 70921 '2 ' 'f2'  1"    "open"    1.000000    ""
0
"shunt_3185"    "shunt 'MAY_VALLEY_345.00' 'SANDSTONE_345.00' '2 ' 't2'  1"    1.00    ""    ""    ""    0
 "shunt 70919 70921 '2 ' 't2'  1"    "open"    1.000000    ""
0
"shunt_3186"    "shunt 'HARVEST_MI_345.00' 'SANDSTONE_345.00' '1 ' 't1'  1"    1.00    ""    ""    ""    0
 "shunt 70597 70921 '1 ' 't1'  1"    "open"    1.000000    ""
0
"shunt_3187"    "shunt 'HARVEST_MI_345.00' 'SANDSTONE_345.00' '2 ' 't2'  1"    1.00    ""    ""    ""    0
 "shunt 70597 70921 '2 ' 't2'  1"    "open"    1.000000    ""
0
"bus_3188"    "bus 'BURNTMIL_115.00'"    1.00    ""    ""    ""    0
 "bus 70002"    "open"    1.000000    ""
0
"bus_3189"    "bus 'GREENHRN_115.00'"    1.00    ""    ""    ""    0
 "bus 70004"    "open"    1.000000    ""
0
"bus_3190"    "bus 'BRUSH_SW_W_115.00'"    1.00    ""    ""    ""    0
 "bus 70005"    "open"    1.000000    ""
0
"bus_3191"    "bus 'BRUSH_SW_E_115.00'"    1.00    ""    ""    ""    0
 "bus 70006"    "open"    1.000000    ""
0
"bus_3192"    "bus 'FTN_LAKE_115.00'"    1.00    ""    ""    ""    0
 "bus 70007"    "open"    1.000000    ""
0
"bus_3193"    "bus 'KELIM_115.00'"    1.00    ""    ""    ""    0
 "bus 70008"    "open"    1.000000    ""
0
"bus_3194"    "bus 'CRAIG_YV_230.00'"    1.00    ""    ""    ""    0
 "bus 70009"    "open"    1.000000    ""
0
```

```
"bus_3195"  "bus 'TWNBT2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70011"  "open"  1.000000  ""
0
"bus_3196"  "bus 'TWNBUTT2_34.50'"  1.00  ""  ""  ""  0
 "bus 70012"  "open"  1.000000  ""
0
"bus_3197"  "bus 'TWNBUTT2_230.00'"  1.00  ""  ""  ""  0
 "bus 70013"  "open"  1.000000  ""
0
"bus_3198"  "bus 'SNISABEL_115.00'"  1.00  ""  ""  ""  0
 "bus 70014"  "open"  1.000000  ""
0
"bus_3199"  "bus 'SNISABEL_34.50'"  1.00  ""  ""  ""  0
 "bus 70015"  "open"  1.000000  ""
0
"bus_3200"  "bus 'SNISAB_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70016"  "open"  1.000000  ""
0
"bus_3201"  "bus 'SODA_LAKES_230.00'"  1.00  ""  ""  ""  0
 "bus 70018"  "open"  1.000000  ""
0
"bus_3202"  "bus 'PDA_5_115.00'"  1.00  ""  ""  ""  0
 "bus 70019"  "open"  1.000000  ""
0
"bus_3203"  "bus 'CASTL_RK_T1_115.00'"  1.00  ""  ""  ""  0
 "bus 70020"  "open"  1.000000  ""
0
"bus_3204"  "bus 'CASTL_RK_T2_115.00'"  1.00  ""  ""  ""  0
 "bus 70021"  "open"  1.000000  ""
0
"bus_3205"  "bus 'NYBERG_115.00'"  1.00  ""  ""  ""  0
 "bus 70022"  "open"  1.000000  ""
0
"bus_3206"  "bus 'ALLISON_115.00'"  1.00  ""  ""  ""  0
 "bus 70023"  "open"  1.000000  ""
0
"bus_3207"  "bus 'ALAMOSA_69.00'"  1.00  ""  ""  ""  0
 "bus 70024"  "open"  1.000000  ""
0
"bus_3208"  "bus 'ALMSA_TM_115.00'"  1.00  ""  ""  ""  0
 "bus 70025"  "open"  1.000000  ""
0
"bus_3209"  "bus 'ALMSA_TM_69.00'"  1.00  ""  ""  ""  0
 "bus 70026"  "open"  1.000000  ""
0
"bus_3210"  "bus 'AIR_LIQ_115.00'"  1.00  ""  ""  ""  0
 "bus 70027"  "open"  1.000000  ""
0
"bus_3211"  "bus 'ANSEL_TS_69.00'"  1.00  ""  ""  ""  0
 "bus 70028"  "open"  1.000000  ""
0
"bus_3212"  "bus 'ANTONITO_69.00'"  1.00  ""  ""  ""  0
 "bus 70029"  "open"  1.000000  ""
0
"bus_3213"  "bus 'APT_PARK_115.00'"  1.00  ""  ""  ""  0
 "bus 70030"  "open"  1.000000  ""
0
"bus_3214"  "bus 'BACULITE_115.00'"  1.00  ""  ""  ""  0
 "bus 70031"  "open"  1.000000  ""
0
"bus_3215"  "bus 'ALMA_230.00'"  1.00  ""  ""  ""  0
 "bus 70032"  "open"  1.000000  ""
0
"bus_3216"  "bus 'BOULDER_TM2_115.00'"  1.00  ""  ""  ""  0
 "bus 70033"  "open"  1.000000  ""
0
"bus_3217"  "bus 'BOULDER_TM3_115.00'"  1.00  ""  ""  ""  0
 "bus 70034"  "open"  1.000000  ""
0
```

```
"bus_3218"  "bus 'ARAP_GEn_115.00'"  1.00  ""  ""  ""  0
 "bus 70035"  "open"  1.000000  ""
0
"bus_3219"  "bus 'ARAPAHOE_A_115.00'"  1.00  ""  ""  ""  0
 "bus 70036"  "open"  1.000000  ""
0
"bus_3220"  "bus 'ARAPAHOE_B_115.00'"  1.00  ""  ""  ""  0
 "bus 70037"  "open"  1.000000  ""
0
"bus_3221"  "bus 'ARAPAHOE_230.00'"  1.00  ""  ""  ""  0
 "bus 70038"  "open"  1.000000  ""
0
"bus_3222"  "bus 'ARGO_115.00'"  1.00  ""  ""  ""  0
 "bus 70039"  "open"  1.000000  ""
0
"bus_3223"  "bus 'ARSENAL_115.00'"  1.00  ""  ""  ""  0
 "bus 70040"  "open"  1.000000  ""
0
"bus_3224"  "bus 'ARVADA_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70041"  "open"  1.000000  ""
0
"bus_3225"  "bus 'ASPEN_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70042"  "open"  1.000000  ""
0
"bus_3226"  "bus 'BANCROFT_115.00'"  1.00  ""  ""  ""  0
 "bus 70045"  "open"  1.000000  ""
0
"bus_3227"  "bus 'BUCKLEY2_230.00'"  1.00  ""  ""  ""  0
 "bus 70046"  "open"  1.000000  ""
0
"bus_3228"  "bus 'BARR_LAKE_230.00'"  1.00  ""  ""  ""  0
 "bus 70047"  "open"  1.000000  ""
0
"bus_3229"  "bus 'GREEN_VLY_230.00'"  1.00  ""  ""  ""  0
 "bus 70048"  "open"  1.000000  ""
0
"bus_3230"  "bus 'BELMONT_69.00'"  1.00  ""  ""  ""  0
 "bus 70049"  "open"  1.000000  ""
0
"bus_3231"  "bus 'BERGEN_PK_115.00'"  1.00  ""  ""  ""  0
 "bus 70050"  "open"  1.000000  ""
0
"bus_3232"  "bus 'BLENDE_69.00'"  1.00  ""  ""  ""  0
 "bus 70051"  "open"  1.000000  ""
0
"bus_3233"  "bus 'BLUE_RIVER_115.00'"  1.00  ""  ""  ""  0
 "bus 70052"  "open"  1.000000  ""
0
"bus_3234"  "bus 'BLUE_RIVER_230.00'"  1.00  ""  ""  ""  0
 "bus 70053"  "open"  1.000000  ""
0
"bus_3235"  "bus 'BMONT_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70054"  "open"  1.000000  ""
0
"bus_3236"  "bus 'BNAVST_115.00'"  1.00  ""  ""  ""  0
 "bus 70055"  "open"  1.000000  ""
0
"bus_3237"  "bus 'BUENA_VST_T_115.00'"  1.00  ""  ""  ""  0
 "bus 70056"  "open"  1.000000  ""
0
"bus_3238"  "bus 'PTARMGN_230.00'"  1.00  ""  ""  ""  0
 "bus 70057"  "open"  1.000000  ""
0
"bus_3239"  "bus 'BOULDER_CN2_115.00'"  1.00  ""  ""  ""  0
 "bus 70058"  "open"  1.000000  ""
0
"bus_3240"  "bus 'BOULDER_TM1_115.00'"  1.00  ""  ""  ""  0
 "bus 70059"  "open"  1.000000  ""
0
```

```
"bus_3241"    "bus 'BOONE_115.00'"    1.00    ""    ""    ""    0
 "bus 70060"    "open"    1.000000    ""
0
"bus_3242"    "bus 'BOONE_230.00'"    1.00    ""    ""    ""    0
 "bus 70061"    "open"    1.000000    ""
0
"bus_3243"    "bus 'BOONE_69.00'"    1.00    ""    ""    ""    0
 "bus 70062"    "open"    1.000000    ""
0
"bus_3244"    "bus 'BOONE_TP_69.00'"    1.00    ""    ""    ""    0
 "bus 70063"    "open"    1.000000    ""
0
"bus_3245"    "bus 'BRECKRDG_230.00'"    1.00    ""    ""    ""    0
 "bus 70064"    "open"    1.000000    ""
0
"bus_3246"    "bus 'BROOMFIELD_115.00'"    1.00    ""    ""    ""    0
 "bus 70065"    "open"    1.000000    ""
0
"bus_3247"    "bus 'LOOKOUT_2_115.00'"    1.00    ""    ""    ""    0
 "bus 70066"    "open"    1.000000    ""
0
"bus_3248"    "bus 'BUCKLEY1_230.00'"    1.00    ""    ""    ""    0
 "bus 70067"    "open"    1.000000    ""
0
"bus_3249"    "bus 'BURROCYN_115.00'"    1.00    ""    ""    ""    0
 "bus 70068"    "open"    1.000000    ""
0
"bus_3250"    "bus 'CABCRKA_13.80'"    1.00    ""    ""    ""    0
 "bus 70069"    "open"    1.000000    ""
0
"bus_3251"    "bus 'CABCRKB_13.80'"    1.00    ""    ""    ""    0
 "bus 70070"    "open"    1.000000    ""
0
"bus_3252"    "bus 'CABIN_CK_115.00'"    1.00    ""    ""    ""    0
 "bus 70071"    "open"    1.000000    ""
0
"bus_3253"    "bus 'CABIN_CK_230.00'"    1.00    ""    ""    ""    0
 "bus 70072"    "open"    1.000000    ""
0
"bus_3254"    "bus 'CALIFORNIA_115.00'"    1.00    ""    ""    ""    0
 "bus 70073"    "open"    1.000000    ""
0
"bus_3255"    "bus 'CALIFORN_TP_115.00'"    1.00    ""    ""    ""    0
 "bus 70074"    "open"    1.000000    ""
0
"bus_3256"    "bus 'CAMEO_69.00'"    1.00    ""    ""    ""    0
 "bus 70076"    "open"    1.000000    ""
0
"bus_3257"    "bus 'CAMEO_230.00'"    1.00    ""    ""    ""    0
 "bus 70078"    "open"    1.000000    ""
0
"bus_3258"    "bus 'LAMSO_115.00'"    1.00    ""    ""    ""    0
 "bus 70079"    "open"    1.000000    ""
0
"bus_3259"    "bus 'STONINGT_69.00'"    1.00    ""    ""    ""    0
 "bus 70080"    "open"    1.000000    ""
0
"bus_3260"    "bus 'FAIRGRNDS_115.00'"    1.00    ""    ""    ""    0
 "bus 70081"    "open"    1.000000    ""
0
"bus_3261"    "bus 'CANONCTY_69.00'"    1.00    ""    ""    ""    0
 "bus 70085"    "open"    1.000000    ""
0
"bus_3262"    "bus 'CANONCTY_115.00'"    1.00    ""    ""    ""    0
 "bus 70086"    "open"    1.000000    ""
0
"bus_3263"    "bus 'CAPITOL_HL_115.00'"    1.00    ""    ""    ""    0
 "bus 70087"    "open"    1.000000    ""
0
```

```
"bus_3264"  "bus 'GOREPASS_230.00'"  1.00  ""  ""  ""  0
 "bus 70088"  "open"  1.000000  ""
0
"bus_3265"  "bus 'CARBONDALE_115.00'"  1.00  ""  ""  ""  0
 "bus 70089"  "open"  1.000000  ""
0
"bus_3266"  "bus 'FT_LUPTON_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70090"  "open"  1.000000  ""
0
"bus_3267"  "bus 'CASTL_RK_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70091"  "open"  1.000000  ""
0
"bus_3268"  "bus 'CENTER_69.00'"  1.00  ""  ""  ""  0
 "bus 70092"  "open"  1.000000  ""
0
"bus_3269"  "bus 'CF&IFURN_230.00'"  1.00  ""  ""  ""  0
 "bus 70094"  "open"  1.000000  ""
0
"bus_3270"  "bus 'CF&ISE1_69.00'"  1.00  ""  ""  ""  0
 "bus 70095"  "open"  1.000000  ""
0
"bus_3271"  "bus 'CF&ISE1_115.00'"  1.00  ""  ""  ""  0
 "bus 70096"  "open"  1.000000  ""
0
"bus_3272"  "bus 'CF&ISE2_69.00'"  1.00  ""  ""  ""  0
 "bus 70097"  "open"  1.000000  ""
0
"bus_3273"  "bus 'CF&ISE2_115.00'"  1.00  ""  ""  ""  0
 "bus 70098"  "open"  1.000000  ""
0
"bus_3274"  "bus 'THORNTON_115.00'"  1.00  ""  ""  ""  0
 "bus 70099"  "open"  1.000000  ""
0
"bus_3275"  "bus 'CHATFLD_230.00'"  1.00  ""  ""  ""  0
 "bus 70100"  "open"  1.000000  ""
0
"bus_3276"  "bus 'CHEN_TAP_69.00'"  1.00  ""  ""  ""  0
 "bus 70101"  "open"  1.000000  ""
0
"bus_3277"  "bus 'CHENEY_69.00'"  1.00  ""  ""  ""  0
 "bus 70102"  "open"  1.000000  ""
0
"bus_3278"  "bus 'CHEROK2_15.50'"  1.00  ""  ""  ""  0
 "bus 70104"  "open"  1.000000  ""
0
"bus_3279"  "bus 'CHEROK4_22.00'"  1.00  ""  ""  ""  0
 "bus 70106"  "open"  1.000000  ""
0
"bus_3280"  "bus 'CHEROKEE_230.00'"  1.00  ""  ""  ""  0
 "bus 70107"  "open"  1.000000  ""
0
"bus_3281"  "bus 'CHEROKEE_S_115.00'"  1.00  ""  ""  ""  0
 "bus 70108"  "open"  1.000000  ""
0
"bus_3282"  "bus 'UNA_ORCH_69.00'"  1.00  ""  ""  ""  0
 "bus 70109"  "open"  1.000000  ""
0
"bus_3283"  "bus 'CHEROKEE_N_115.00'"  1.00  ""  ""  ""  0
 "bus 70110"  "open"  1.000000  ""
0
"bus_3284"  "bus 'HAGERMAN_TP_230.00'"  1.00  ""  ""  ""  0
 "bus 70111"  "open"  1.000000  ""
0
"bus_3285"  "bus 'CLARK_230.00'"  1.00  ""  ""  ""  0
 "bus 70112"  "open"  1.000000  ""
0
"bus_3286"  "bus 'CLIFTON_230.00'"  1.00  ""  ""  ""  0
 "bus 70113"  "open"  1.000000  ""
0
```

```
"bus_3287"  "bus 'CLIMAX_115.00'"  1.00  ""  ""  ""  0
 "bus 70114"  "open"  1.000000  ""
0
"bus_3288"  "bus 'HAPPY_CNYN_115.00'"  1.00  ""  ""  ""  0
 "bus 70115"  "open"  1.000000  ""
0
"bus_3289"  "bus 'LEPRINO_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70116"  "open"  1.000000  ""
0
"bus_3290"  "bus 'CROWFT_VLY_115.00'"  1.00  ""  ""  ""  0
 "bus 70117"  "open"  1.000000  ""
0
"bus_3291"  "bus 'COCENTER_69.00'"  1.00  ""  ""  ""  0
 "bus 70118"  "open"  1.000000  ""
0
"bus_3292"  "bus 'COMAN_2_24.00'"  1.00  ""  ""  ""  0
 "bus 70120"  "open"  1.000000  ""
0
"bus_3293"  "bus 'COMANCHE_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70121"  "open"  1.000000  ""
0
"bus_3294"  "bus 'COMANCHE_230.00'"  1.00  ""  ""  ""  0
 "bus 70122"  "open"  1.000000  ""
0
"bus_3295"  "bus 'COMANCHE_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70123"  "open"  1.000000  ""
0
"bus_3296"  "bus 'CONIFER_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70124"  "open"  1.000000  ""
0
"bus_3297"  "bus 'SMOKY_HL_S_115.00'"  1.00  ""  ""  ""  0
 "bus 70125"  "open"  1.000000  ""
0
"bus_3298"  "bus 'CONOCO_115.00'"  1.00  ""  ""  ""  0
 "bus 70126"  "open"  1.000000  ""
0
"bus_3299"  "bus 'COORS_RCL_115.00'"  1.00  ""  ""  ""  0
 "bus 70127"  "open"  1.000000  ""
0
"bus_3300"  "bus 'CREEDE_69.00'"  1.00  ""  ""  ""  0
 "bus 70129"  "open"  1.000000  ""
0
"bus_3301"  "bus 'CRPLECRK_69.00'"  1.00  ""  ""  ""  0
 "bus 70130"  "open"  1.000000  ""
0
"bus_3302"  "bus 'CTY_LAJ_69.00'"  1.00  ""  ""  ""  0
 "bus 70132"  "open"  1.000000  ""
0
"bus_3303"  "bus 'CTY_LAM_24.90'"  1.00  ""  ""  ""  0
 "bus 70134"  "open"  1.000000  ""
0
"bus_3304"  "bus 'CTY_LAM_69.00'"  1.00  ""  ""  ""  0
 "bus 70136"  "open"  1.000000  ""
0
"bus_3305"  "bus 'DANIEL_PK_115.00'"  1.00  ""  ""  ""  0
 "bus 70138"  "open"  1.000000  ""
0
"bus_3306"  "bus 'DANIEL_PK_230.00'"  1.00  ""  ""  ""  0
 "bus 70139"  "open"  1.000000  ""
0
"bus_3307"  "bus 'DEBEQUE_69.00'"  1.00  ""  ""  ""  0
 "bus 70140"  "open"  1.000000  ""
0
"bus_3308"  "bus 'DAKOTA_230.00'"  1.00  ""  ""  ""  0
 "bus 70141"  "open"  1.000000  ""
0
"bus_3309"  "bus 'DEER_CK_115.00'"  1.00  ""  ""  ""  0
 "bus 70142"  "open"  1.000000  ""
0
```

```
"bus_3310"  "bus 'DEL_NORTE_69.00'"  1.00  ""  ""  ""  0
 "bus 70143"  "open"  1.000000  ""
0
"bus_3311"  "bus 'DENVER_TM_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70144"  "open"  1.000000  ""
0
"bus_3312"  "bus 'CHEROKEE5_18.00'"  1.00  ""  ""  ""  0
 "bus 70145"  "open"  1.000000  ""
0
"bus_3313"  "bus 'CHEROKEE6_18.00'"  1.00  ""  ""  ""  0
 "bus 70146"  "open"  1.000000  ""
0
"bus_3314"  "bus 'CHEROKEE7_18.00'"  1.00  ""  ""  ""  0
 "bus 70147"  "open"  1.000000  ""
0
"bus_3315"  "bus 'DENVER_TM_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70148"  "open"  1.000000  ""
0
"bus_3316"  "bus 'DENVER_TM_230.00'"  1.00  ""  ""  ""  0
 "bus 70149"  "open"  1.000000  ""
0
"bus_3317"  "bus 'SWALLOWS_115.00'"  1.00  ""  ""  ""  0
 "bus 70150"  "open"  1.000000  ""
0
"bus_3318"  "bus 'DIAMNDBK_115.00'"  1.00  ""  ""  ""  0
 "bus 70151"  "open"  1.000000  ""
0
"bus_3319"  "bus 'DERBY_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70153"  "open"  1.000000  ""
0
"bus_3320"  "bus 'DERBY_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70154"  "open"  1.000000  ""
0
"bus_3321"  "bus 'DILLON_115.00'"  1.00  ""  ""  ""  0
 "bus 70155"  "open"  1.000000  ""
0
"bus_3322"  "bus 'DILLON_230.00'"  1.00  ""  ""  ""  0
 "bus 70156"  "open"  1.000000  ""
0
"bus_3323"  "bus 'DIVIDE_115.00'"  1.00  ""  ""  ""  0
 "bus 70157"  "open"  1.000000  ""
0
"bus_3324"  "bus 'DOT_115.00'"  1.00  ""  ""  ""  0
 "bus 70158"  "open"  1.000000  ""
0
"bus_3325"  "bus 'DOT_TAP_115.00'"  1.00  ""  ""  ""  0
 "bus 70159"  "open"  1.000000  ""
0
"bus_3326"  "bus 'E_CANON_69.00'"  1.00  ""  ""  ""  0
 "bus 70160"  "open"  1.000000  ""
0
"bus_3327"  "bus 'EADS_69.00'"  1.00  ""  ""  ""  0
 "bus 70161"  "open"  1.000000  ""
0
"bus_3328"  "bus 'EAST_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70162"  "open"  1.000000  ""
0
"bus_3329"  "bus 'ELATI1_230.00'"  1.00  ""  ""  ""  0
 "bus 70163"  "open"  1.000000  ""
0
"bus_3330"  "bus 'ELDORADO_115.00'"  1.00  ""  ""  ""  0
 "bus 70164"  "open"  1.000000  ""
0
"bus_3331"  "bus 'ENGLE_WD_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70165"  "open"  1.000000  ""
0
"bus_3332"  "bus 'ENGLEWD1_115.00'"  1.00  ""  ""  ""  0
 "bus 70166"  "open"  1.000000  ""
0
```

```
"bus_3333"    "bus 'ENGLEWD2_115.00'"    1.00    ""    ""    ""    0
 "bus 70167"    "open"    1.000000    ""
0
"bus_3334"    "bus 'ENGLEWD3_115.00'"    1.00    ""    ""    ""    0
 "bus 70168"    "open"    1.000000    ""
0
"bus_3335"    "bus 'ENNIS_115.00'"    1.00    ""    ""    ""    0
 "bus 70169"    "open"    1.000000    ""
0
"bus_3336"    "bus 'NREL_115.00'"    1.00    ""    ""    ""    0
 "bus 70170"    "open"    1.000000    ""
0
"bus_3337"    "bus 'EAST_2_115.00'"    1.00    ""    ""    ""    0
 "bus 70171"    "open"    1.000000    ""
0
"bus_3338"    "bus 'FED_CTR_115.00'"    1.00    ""    ""    ""    0
 "bus 70172"    "open"    1.000000    ""
0
"bus_3339"    "bus 'FED_CTR_TP_115.00'"    1.00    ""    ""    ""    0
 "bus 70173"    "open"    1.000000    ""
0
"bus_3340"    "bus 'FEDERHT23_115.00'"    1.00    ""    ""    ""    0
 "bus 70174"    "open"    1.000000    ""
0
"bus_3341"    "bus 'FEDERHT1_115.00'"    1.00    ""    ""    ""    0
 "bus 70175"    "open"    1.000000    ""
0
"bus_3342"    "bus 'FLORENCE_69.00'"    1.00    ""    ""    ""    0
 "bus 70176"    "open"    1.000000    ""
0
"bus_3343"    "bus 'FOWLER_69.00'"    1.00    ""    ""    ""    0
 "bus 70178"    "open"    1.000000    ""
0
"bus_3344"    "bus 'FRUITA_13.80'"    1.00    ""    ""    ""    0
 "bus 70180"    "open"    1.000000    ""
0
"bus_3345"    "bus 'FREEMARY_69.00'"    1.00    ""    ""    ""    0
 "bus 70181"    "open"    1.000000    ""
0
"bus_3346"    "bus 'HARRISON_P2_115.00'"    1.00    ""    ""    ""    0
 "bus 70182"    "open"    1.000000    ""
0
"bus_3347"    "bus 'FRUITA_69.00'"    1.00    ""    ""    ""    0
 "bus 70183"    "open"    1.000000    ""
0
"bus_3348"    "bus 'FT.HOLLY_69.00'"    1.00    ""    ""    ""    0
 "bus 70184"    "open"    1.000000    ""
0
"bus_3349"    "bus 'FT.LYON_69.00'"    1.00    ""    ""    ""    0
 "bus 70185"    "open"    1.000000    ""
0
"bus_3350"    "bus 'ALAMOSA_TP_69.00'"    1.00    ""    ""    ""    0
 "bus 70186"    "open"    1.000000    ""
0
"bus_3351"    "bus 'FTGARLND_69.00'"    1.00    ""    ""    ""    0
 "bus 70187"    "open"    1.000000    ""
0
"bus_3352"    "bus 'FT_LUPTN_12_13.80'"    1.00    ""    ""    ""    0
 "bus 70188"    "open"    1.000000    ""
0
"bus_3353"    "bus 'GREENWOOD_2_230.00'"    1.00    ""    ""    ""    0
 "bus 70189"    "open"    1.000000    ""
0
"bus_3354"    "bus 'DAVIS_PS_TP_115.00'"    1.00    ""    ""    ""    0
 "bus 70190"    "open"    1.000000    ""
0
"bus_3355"    "bus 'FT_LUPTON_1_115.00'"    1.00    ""    ""    ""    0
 "bus 70191"    "open"    1.000000    ""
0
```

```
"bus_3356"  "bus 'FT_LUPTON_230.00'"  1.00  ""  ""  ""  0
 "bus 70192"  "open"  1.000000  ""
0
"bus_3357"  "bus 'FTN_VLY_115.00'"  1.00  ""  ""  ""  0
 "bus 70193"  "open"  1.000000  ""
0
"bus_3358"  "bus 'FULTONTS_115.00'"  1.00  ""  ""  ""  0
 "bus 70194"  "open"  1.000000  ""
0
"bus_3359"  "bus 'GEORGETN_25.00'"  1.00  ""  ""  ""  0
 "bus 70196"  "open"  1.000000  ""
0
"bus_3360"  "bus 'GEORGETN_115.00'"  1.00  ""  ""  ""  0
 "bus 70197"  "open"  1.000000  ""
0
"bus_3361"  "bus 'GILCREST_115.00'"  1.00  ""  ""  ""  0
 "bus 70198"  "open"  1.000000  ""
0
"bus_3362"  "bus 'GILMAN_115.00'"  1.00  ""  ""  ""  0
 "bus 70199"  "open"  1.000000  ""
0
"bus_3363"  "bus 'GLENNPS_230.00'"  1.00  ""  ""  ""  0
 "bus 70200"  "open"  1.000000  ""
0
"bus_3364"  "bus 'GLENWOOD_69.00'"  1.00  ""  ""  ""  0
 "bus 70201"  "open"  1.000000  ""
0
"bus_3365"  "bus 'GODFREY_115.00'"  1.00  ""  ""  ""  0
 "bus 70202"  "open"  1.000000  ""
0
"bus_3366"  "bus 'GRANTAP_69.00'"  1.00  ""  ""  ""  0
 "bus 70203"  "open"  1.000000  ""
0
"bus_3367"  "bus 'GRANADA_69.00'"  1.00  ""  ""  ""  0
 "bus 70204"  "open"  1.000000  ""
0
"bus_3368"  "bus 'GRAND_JT_230.00'"  1.00  ""  ""  ""  0
 "bus 70205"  "open"  1.000000  ""
0
"bus_3369"  "bus 'GRANDJ_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70206"  "open"  1.000000  ""
0
"bus_3370"  "bus 'GRAY_STREET_115.00'"  1.00  ""  ""  ""  0
 "bus 70208"  "open"  1.000000  ""
0
"bus_3371"  "bus 'GREELEY_115.00'"  1.00  ""  ""  ""  0
 "bus 70209"  "open"  1.000000  ""
0
"bus_3372"  "bus 'GUNBARREL_2_230.00'"  1.00  ""  ""  ""  0
 "bus 70211"  "open"  1.000000  ""
0
"bus_3373"  "bus 'GREENWOOD_1_230.00'"  1.00  ""  ""  ""  0
 "bus 70212"  "open"  1.000000  ""
0
"bus_3374"  "bus 'GUNBARRE1_230.00'"  1.00  ""  ""  ""  0
 "bus 70213"  "open"  1.000000  ""
0
"bus_3375"  "bus 'UTE_GRND_JN_69.00'"  1.00  ""  ""  ""  0
 "bus 70214"  "open"  1.000000  ""
0
"bus_3376"  "bus 'HARRISON_P1_115.00'"  1.00  ""  ""  ""  0
 "bus 70215"  "open"  1.000000  ""
0
"bus_3377"  "bus 'HAVANA1_115.00'"  1.00  ""  ""  ""  0
 "bus 70216"  "open"  1.000000  ""
0
"bus_3378"  "bus 'HAVANA2_115.00'"  1.00  ""  ""  ""  0
 "bus 70217"  "open"  1.000000  ""
0
```

```
"bus_3379"  "bus 'HENDRSN_115.00'"  1.00  ""  ""  ""  0
 "bus 70218"  "open"  1.000000  ""
0
"bus_3380"  "bus 'ANADARKO_T_115.00'"  1.00  ""  ""  ""  0
 "bus 70219"  "open"  1.000000  ""
0
"bus_3381"  "bus 'HIGHLND_69.00'"  1.00  ""  ""  ""  0
 "bus 70220"  "open"  1.000000  ""
0
"bus_3382"  "bus 'HILANDSL_69.00'"  1.00  ""  ""  ""  0
 "bus 70221"  "open"  1.000000  ""
0
"bus_3383"  "bus 'HILLTOP_69.00'"  1.00  ""  ""  ""  0
 "bus 70222"  "open"  1.000000  ""
0
"bus_3384"  "bus 'HLTP_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70223"  "open"  1.000000  ""
0
"bus_3385"  "bus 'HOGBACK_115.00'"  1.00  ""  ""  ""  0
 "bus 70224"  "open"  1.000000  ""
0
"bus_3386"  "bus 'HOLL_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70225"  "open"  1.000000  ""
0
"bus_3387"  "bus 'RIDGE_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70226"  "open"  1.000000  ""
0
"bus_3388"  "bus 'RIDGE_3_115.00'"  1.00  ""  ""  ""  0
 "bus 70227"  "open"  1.000000  ""
0
"bus_3389"  "bus 'HOMELAKE_69.00'"  1.00  ""  ""  ""  0
 "bus 70228"  "open"  1.000000  ""
0
"bus_3390"  "bus 'HOOPER_69.00'"  1.00  ""  ""  ""  0
 "bus 70229"  "open"  1.000000  ""
0
"bus_3391"  "bus 'HOOPERTP_69.00'"  1.00  ""  ""  ""  0
 "bus 70230"  "open"  1.000000  ""
0
"bus_3392"  "bus 'HOPKINS_115.00'"  1.00  ""  ""  ""  0
 "bus 70231"  "open"  1.000000  ""
0
"bus_3393"  "bus 'HOPKINS_230.00'"  1.00  ""  ""  ""  0
 "bus 70232"  "open"  1.000000  ""
0
"bus_3394"  "bus 'HORIZON_230.00'"  1.00  ""  ""  ""  0
 "bus 70233"  "open"  1.000000  ""
0
"bus_3395"  "bus 'HUDSON_115.00'"  1.00  ""  ""  ""  0
 "bus 70234"  "open"  1.000000  ""
0
"bus_3396"  "bus 'HUERFANO_69.00'"  1.00  ""  ""  ""  0
 "bus 70235"  "open"  1.000000  ""
0
"bus_3397"  "bus 'HYDEPARK_115.00'"  1.00  ""  ""  ""  0
 "bus 70236"  "open"  1.000000  ""
0
"bus_3398"  "bus 'IDAHO_SPGS_230.00'"  1.00  ""  ""  ""  0
 "bus 70237"  "open"  1.000000  ""
0
"bus_3399"  "bus 'ANADARKO_115.00'"  1.00  ""  ""  ""  0
 "bus 70238"  "open"  1.000000  ""
0
"bus_3400"  "bus 'JEWELL2_230.00'"  1.00  ""  ""  ""  0
 "bus 70239"  "open"  1.000000  ""
0
"bus_3401"  "bus 'JOHNSTOWN_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70240"  "open"  1.000000  ""
0
```

```
"bus_3402"  "bus 'JORDAN_230.00'"  1.00  ""  ""  ""  0
 "bus 70241"  "open"  1.000000  ""
0
"bus_3403"  "bus 'KENDRICK_115.00'"  1.00  ""  ""  ""  0
 "bus 70242"  "open"  1.000000  ""
0
"bus_3404"  "bus 'LA_SECPA_69.00'"  1.00  ""  ""  ""  0
 "bus 70243"  "open"  1.000000  ""
0
"bus_3405"  "bus 'LAFAYETTE_115.00'"  1.00  ""  ""  ""  0
 "bus 70244"  "open"  1.000000  ""
0
"bus_3406"  "bus 'LAGARITA_69.00'"  1.00  ""  ""  ""  0
 "bus 70245"  "open"  1.000000  ""
0
"bus_3407"  "bus 'JOHNSTOWN_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70246"  "open"  1.000000  ""
0
"bus_3408"  "bus 'LAJUNTAT_115.00'"  1.00  ""  ""  ""  0
 "bus 70247"  "open"  1.000000  ""
0
"bus_3409"  "bus 'LAJUNTAT_69.00'"  1.00  ""  ""  ""  0
 "bus 70248"  "open"  1.000000  ""
0
"bus_3410"  "bus 'LAJUNTAW_115.00'"  1.00  ""  ""  ""  0
 "bus 70249"  "open"  1.000000  ""
0
"bus_3411"  "bus 'LAJUNTAW_69.00'"  1.00  ""  ""  ""  0
 "bus 70250"  "open"  1.000000  ""
0
"bus_3412"  "bus 'LAKEWOOD_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70251"  "open"  1.000000  ""
0
"bus_3413"  "bus 'LAKEWOOD_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70252"  "open"  1.000000  ""
0
"bus_3414"  "bus 'LAMAR_CO_115.00'"  1.00  ""  ""  ""  0
 "bus 70253"  "open"  1.000000  ""
0
"bus_3415"  "bus 'LAMAR_SWYD_230.00'"  1.00  ""  ""  ""  0
 "bus 70254"  "open"  1.000000  ""
0
"bus_3416"  "bus 'LAMAR_C2_230.00'"  1.00  ""  ""  ""  0
 "bus 70255"  "open"  1.000000  ""
0
"bus_3417"  "bus 'LEADVIL1_115.00'"  1.00  ""  ""  ""  0
 "bus 70257"  "open"  1.000000  ""
0
"bus_3418"  "bus 'LEADVIL2_115.00'"  1.00  ""  ""  ""  0
 "bus 70258"  "open"  1.000000  ""
0
"bus_3419"  "bus 'LEETSDALE_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70259"  "open"  1.000000  ""
0
"bus_3420"  "bus 'LEETSDALE_230.00'"  1.00  ""  ""  ""  0
 "bus 70260"  "open"  1.000000  ""
0
"bus_3421"  "bus 'LEGGETT_230.00'"  1.00  ""  ""  ""  0
 "bus 70261"  "open"  1.000000  ""
0
"bus_3422"  "bus 'LEYDEN_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70262"  "open"  1.000000  ""
0
"bus_3423"  "bus 'LITTLET1_115.00'"  1.00  ""  ""  ""  0
 "bus 70263"  "open"  1.000000  ""
0
"bus_3424"  "bus 'BLUESTONE_230.00'"  1.00  ""  ""  ""  0
 "bus 70264"  "open"  1.000000  ""
0
```

```
"bus_3425"  "bus 'LOOKOUT_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70265"  "open"  1.000000  ""
0
"bus_3426"  "bus 'LOOKOUT_230.00'"  1.00  ""  ""  ""  0
 "bus 70266"  "open"  1.000000  ""
0
"bus_3427"  "bus 'HOPKINS_69.00'"  1.00  ""  ""  ""  0
 "bus 70267"  "open"  1.000000  ""
0
"bus_3428"  "bus 'ADOBE_230.00'"  1.00  ""  ""  ""  0
 "bus 70268"  "open"  1.000000  ""
0
"bus_3429"  "bus 'LOUISVILLE_115.00'"  1.00  ""  ""  ""  0
 "bus 70269"  "open"  1.000000  ""
0
"bus_3430"  "bus 'LS_ANMAS_13.80'"  1.00  ""  ""  ""  0
 "bus 70270"  "open"  1.000000  ""
0
"bus_3431"  "bus 'LS_ANMAS_69.00'"  1.00  ""  ""  ""  0
 "bus 70271"  "open"  1.000000  ""
0
"bus_3432"  "bus 'LUDLOTAP_115.00'"  1.00  ""  ""  ""  0
 "bus 70272"  "open"  1.000000  ""
0
"bus_3433"  "bus 'MALTA_115.00'"  1.00  ""  ""  ""  0
 "bus 70273"  "open"  1.000000  ""
0
"bus_3434"  "bus 'MALTA_230.00'"  1.00  ""  ""  ""  0
 "bus 70274"  "open"  1.000000  ""
0
"bus_3435"  "bus 'MANZANOL_69.00'"  1.00  ""  ""  ""  0
 "bus 70275"  "open"  1.000000  ""
0
"bus_3436"  "bus 'MAPLETO1_115.00'"  1.00  ""  ""  ""  0
 "bus 70276"  "open"  1.000000  ""
0
"bus_3437"  "bus 'MAPLETO2_115.00'"  1.00  ""  ""  ""  0
 "bus 70277"  "open"  1.000000  ""
0
"bus_3438"  "bus 'MARCY_230.00'"  1.00  ""  ""  ""  0
 "bus 70278"  "open"  1.000000  ""
0
"bus_3439"  "bus 'MARTIN_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70279"  "open"  1.000000  ""
0
"bus_3440"  "bus 'MARTIN_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70280"  "open"  1.000000  ""
0
"bus_3441"  "bus 'MAYFLOWER_115.00'"  1.00  ""  ""  ""  0
 "bus 70281"  "open"  1.000000  ""
0
"bus_3442"  "bus 'LEETSDALE_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70282"  "open"  1.000000  ""
0
"bus_3443"  "bus 'MEADOW_HLS_230.00'"  1.00  ""  ""  ""  0
 "bus 70283"  "open"  1.000000  ""
0
"bus_3444"  "bus 'SURREY_RG_230.00'"  1.00  ""  ""  ""  0
 "bus 70284"  "open"  1.000000  ""
0
"bus_3445"  "bus 'MIDWAY_PS_115.00'"  1.00  ""  ""  ""  0
 "bus 70285"  "open"  1.000000  ""
0
"bus_3446"  "bus 'MIDWAY_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70286"  "open"  1.000000  ""
0
"bus_3447"  "bus 'MILL_115.00'"  1.00  ""  ""  ""  0
 "bus 70287"  "open"  1.000000  ""
0
```

```
"bus_3448"  "bus 'MITCHELL_CK_69.00'"  1.00  ""  ""  ""  0
 "bus 70288"  "open"  1.000000  ""
0
"bus_3449"  "bus 'MOFFAT_69.00'"  1.00  ""  ""  ""  0
 "bus 70289"  "open"  1.000000  ""
0
"bus_3450"  "bus 'MONFORT_115.00'"  1.00  ""  ""  ""  0
 "bus 70290"  "open"  1.000000  ""
0
"bus_3451"  "bus 'MONROEPS_230.00'"  1.00  ""  ""  ""  0
 "bus 70291"  "open"  1.000000  ""
0
"bus_3452"  "bus 'MOSCA_69.00'"  1.00  ""  ""  ""  0
 "bus 70292"  "open"  1.000000  ""
0
"bus_3453"  "bus 'NCANON_69.00'"  1.00  ""  ""  ""  0
 "bus 70293"  "open"  1.000000  ""
0
"bus_3454"  "bus 'NCANON_W_69.00'"  1.00  ""  ""  ""  0
 "bus 70294"  "open"  1.000000  ""
0
"bus_3455"  "bus 'NCAR_115.00'"  1.00  ""  ""  ""  0
 "bus 70295"  "open"  1.000000  ""
0
"bus_3456"  "bus 'NEW_CASTLE_69.00'"  1.00  ""  ""  ""  0
 "bus 70296"  "open"  1.000000  ""
0
"bus_3457"  "bus 'NIWOT_230.00'"  1.00  ""  ""  ""  0
 "bus 70297"  "open"  1.000000  ""
0
"bus_3458"  "bus 'NORTH_PS_115.00'"  1.00  ""  ""  ""  0
 "bus 70298"  "open"  1.000000  ""
0
"bus_3459"  "bus 'STKGULCH_230.00'"  1.00  ""  ""  ""  0
 "bus 70299"  "open"  1.000000  ""
0
"bus_3460"  "bus 'PLAINVW_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70300"  "open"  1.000000  ""
0
"bus_3461"  "bus 'NTHRIDGE_115.00'"  1.00  ""  ""  ""  0
 "bus 70301"  "open"  1.000000  ""
0
"bus_3462"  "bus 'OIL_SHALE_69.00'"  1.00  ""  ""  ""  0
 "bus 70302"  "open"  1.000000  ""
0
"bus_3463"  "bus 'ORDWAY_69.00'"  1.00  ""  ""  ""  0
 "bus 70303"  "open"  1.000000  ""
0
"bus_3464"  "bus 'OTERO_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70304"  "open"  1.000000  ""
0
"bus_3465"  "bus 'OVERTON_69.00'"  1.00  ""  ""  ""  0
 "bus 70305"  "open"  1.000000  ""
0
"bus_3466"  "bus 'PP_MINE_69.00'"  1.00  ""  ""  ""  0
 "bus 70306"  "open"  1.000000  ""
0
"bus_3467"  "bus 'P.VALLEY_115.00'"  1.00  ""  ""  ""  0
 "bus 70307"  "open"  1.000000  ""
0
"bus_3468"  "bus 'PALMER_LK_115.00'"  1.00  ""  ""  ""  0
 "bus 70308"  "open"  1.000000  ""
0
"bus_3469"  "bus 'PARACHUTE_230.00'"  1.00  ""  ""  ""  0
 "bus 70309"  "open"  1.000000  ""
0
"bus_3470"  "bus 'PAWNEE_22.00'"  1.00  ""  ""  ""  0
 "bus 70310"  "open"  1.000000  ""
0
```

```
"bus_3471"  "bus 'PAWNEE_230.00'"  1.00  ""  ""  ""  0
 "bus 70311"  "open"  1.000000  ""
0
"bus_3472"  "bus 'RAY_LEWI_115.00'"  1.00  ""  ""  ""  0
 "bus 70312"  "open"  1.000000  ""
0
"bus_3473"  "bus 'ORCHARD_230.00'"  1.00  ""  ""  ""  0
 "bus 70313"  "open"  1.000000  ""
0
"bus_3474"  "bus 'MANCHEF1_16.00'"  1.00  ""  ""  ""  0
 "bus 70314"  "open"  1.000000  ""
0
"bus_3475"  "bus 'MANCHEF2_16.00'"  1.00  ""  ""  ""  0
 "bus 70315"  "open"  1.000000  ""
0
"bus_3476"  "bus 'PDA_69.00'"  1.00  ""  ""  ""  0
 "bus 70316"  "open"  1.000000  ""
0
"bus_3477"  "bus 'PDA_TAP_69.00'"  1.00  ""  ""  ""  0
 "bus 70317"  "open"  1.000000  ""
0
"bus_3478"  "bus 'PENROSE_69.00'"  1.00  ""  ""  ""  0
 "bus 70318"  "open"  1.000000  ""
0
"bus_3479"  "bus 'PHILLIPS_69.00'"  1.00  ""  ""  ""  0
 "bus 70319"  "open"  1.000000  ""
0
"bus_3480"  "bus 'PHLPS_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70320"  "open"  1.000000  ""
0
"bus_3481"  "bus 'PINONCYN_115.00'"  1.00  ""  ""  ""  0
 "bus 70321"  "open"  1.000000  ""
0
"bus_3482"  "bus 'PLAINVW_115.00'"  1.00  ""  ""  ""  0
 "bus 70322"  "open"  1.000000  ""
0
"bus_3483"  "bus 'PRAIRIE_3_230.00'"  1.00  ""  ""  ""  0
 "bus 70323"  "open"  1.000000  ""
0
"bus_3484"  "bus 'LACOMBE_230.00'"  1.00  ""  ""  ""  0
 "bus 70324"  "open"  1.000000  ""
0
"bus_3485"  "bus 'PLAZA_69.00'"  1.00  ""  ""  ""  0
 "bus 70325"  "open"  1.000000  ""
0
"bus_3486"  "bus 'PONCHA_69.00'"  1.00  ""  ""  ""  0
 "bus 70326"  "open"  1.000000  ""
0
"bus_3487"  "bus 'PONCHA_E_115.00'"  1.00  ""  ""  ""  0
 "bus 70327"  "open"  1.000000  ""
0
"bus_3488"  "bus 'PORTAL_115.00'"  1.00  ""  ""  ""  0
 "bus 70328"  "open"  1.000000  ""
0
"bus_3489"  "bus 'PORTLAND_69.00'"  1.00  ""  ""  ""  0
 "bus 70329"  "open"  1.000000  ""
0
"bus_3490"  "bus 'PORTLAND_115.00'"  1.00  ""  ""  ""  0
 "bus 70330"  "open"  1.000000  ""
0
"bus_3491"  "bus 'PRAIRIE_1_230.00'"  1.00  ""  ""  ""  0
 "bus 70331"  "open"  1.000000  ""
0
"bus_3492"  "bus 'PRAIRIE_69.00'"  1.00  ""  ""  ""  0
 "bus 70332"  "open"  1.000000  ""
0
"bus_3493"  "bus 'PROWERS_69.00'"  1.00  ""  ""  ""  0
 "bus 70333"  "open"  1.000000  ""
0
```

```
"bus_3494"  "bus 'PUB_DSLS_4.16'"  1.00  ""  ""  ""  0
 "bus 70334"  "open"  1.000000  ""
0
"bus_3495"  "bus 'PUEB_W_115.00'"  1.00  ""  ""  ""  0
 "bus 70335"  "open"  1.000000  ""
0
"bus_3496"  "bus 'PUEB_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70336"  "open"  1.000000  ""
0
"bus_3497"  "bus 'PUEBPLNT_69.00'"  1.00  ""  ""  ""  0
 "bus 70338"  "open"  1.000000  ""
0
"bus_3498"  "bus 'PUEBPLNT_115.00'"  1.00  ""  ""  ""  0
 "bus 70339"  "open"  1.000000  ""
0
"bus_3499"  "bus 'QUAKER_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70340"  "open"  1.000000  ""
0
"bus_3500"  "bus 'QUAKER_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70341"  "open"  1.000000  ""
0
"bus_3501"  "bus 'QUAKER_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70342"  "open"  1.000000  ""
0
"bus_3502"  "bus 'QUINCY_230.00'"  1.00  ""  ""  ""  0
 "bus 70343"  "open"  1.000000  ""
0
"bus_3503"  "bus 'R.F.DSLS_4.16'"  1.00  ""  ""  ""  0
 "bus 70344"  "open"  1.000000  ""
0
"bus_3504"  "bus 'RALSTON1_115.00'"  1.00  ""  ""  ""  0
 "bus 70345"  "open"  1.000000  ""
0
"bus_3505"  "bus 'RALSTON2_115.00'"  1.00  ""  ""  ""  0
 "bus 70346"  "open"  1.000000  ""
0
"bus_3506"  "bus 'RAMON_115.00'"  1.00  ""  ""  ""  0
 "bus 70347"  "open"  1.000000  ""
0
"bus_3507"  "bus 'RAMON_69.00'"  1.00  ""  ""  ""  0
 "bus 70348"  "open"  1.000000  ""
0
"bus_3508"  "bus 'MANCHIEF_NG_230.00'"  1.00  ""  ""  ""  0
 "bus 70349"  "open"  1.000000  ""
0
"bus_3509"  "bus 'READER_115.00'"  1.00  ""  ""  ""  0
 "bus 70352"  "open"  1.000000  ""
0
"bus_3510"  "bus 'READER_69.00'"  1.00  ""  ""  ""  0
 "bus 70353"  "open"  1.000000  ""
0
"bus_3511"  "bus 'RIDGE_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70354"  "open"  1.000000  ""
0
"bus_3512"  "bus 'RIDGE_230.00'"  1.00  ""  ""  ""  0
 "bus 70355"  "open"  1.000000  ""
0
"bus_3513"  "bus 'WHEELER_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70356"  "open"  1.000000  ""
0
"bus_3514"  "bus 'MIDDLE_FORK_230.00'"  1.00  ""  ""  ""  0
 "bus 70357"  "open"  1.000000  ""
0
"bus_3515"  "bus 'RIFLE_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70358"  "open"  1.000000  ""
0
"bus_3516"  "bus 'RIFLE_UTE_69.00'"  1.00  ""  ""  ""  0
 "bus 70359"  "open"  1.000000  ""
0
```

```
"bus_3517"  "bus 'RIOGRAND_69.00'"  1.00  ""  ""  ""  0
 "bus 70360"  "open"  1.000000  ""
0
"bus_3518"  "bus 'RIOGRD_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70361"  "open"  1.000000  ""
0
"bus_3519"  "bus 'RIVERDALE_230.00'"  1.00  ""  ""  ""  0
 "bus 70362"  "open"  1.000000  ""
0
"bus_3520"  "bus 'ROARNGFK_69.00'"  1.00  ""  ""  ""  0
 "bus 70363"  "open"  1.000000  ""
0
"bus_3521"  "bus 'ROBINSON_RK_115.00'"  1.00  ""  ""  ""  0
 "bus 70364"  "open"  1.000000  ""
0
"bus_3522"  "bus 'SULLIVAN_2_230.00'"  1.00  ""  ""  ""  0
 "bus 70365"  "open"  1.000000  ""
0
"bus_3523"  "bus 'ROCKYFRD_69.00'"  1.00  ""  ""  ""  0
 "bus 70366"  "open"  1.000000  ""
0
"bus_3524"  "bus 'ROMEO_69.00'"  1.00  ""  ""  ""  0
 "bus 70367"  "open"  1.000000  ""
0
"bus_3525"  "bus 'ROSEDALE_115.00'"  1.00  ""  ""  ""  0
 "bus 70368"  "open"  1.000000  ""
0
"bus_3526"  "bus 'RUSSELL_230.00'"  1.00  ""  ""  ""  0
 "bus 70369"  "open"  1.000000  ""
0
"bus_3527"  "bus 'S_CANON_69.00'"  1.00  ""  ""  ""  0
 "bus 70370"  "open"  1.000000  ""
0
"bus_3528"  "bus 'S_CAN.W_69.00'"  1.00  ""  ""  ""  0
 "bus 70371"  "open"  1.000000  ""
0
"bus_3529"  "bus 'S_FWL_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70372"  "open"  1.000000  ""
0
"bus_3530"  "bus 'S.ACACIO_115.00'"  1.00  ""  ""  ""  0
 "bus 70373"  "open"  1.000000  ""
0
"bus_3531"  "bus 'SANLSVLY_115.00'"  1.00  ""  ""  ""  0
 "bus 70374"  "open"  1.000000  ""
0
"bus_3532"  "bus 'SANLSVLY_230.00'"  1.00  ""  ""  ""  0
 "bus 70375"  "open"  1.000000  ""
0
"bus_3533"  "bus 'SANLSVLY_69.00'"  1.00  ""  ""  ""  0
 "bus 70376"  "open"  1.000000  ""
0
"bus_3534"  "bus 'SANDOWN_115.00'"  1.00  ""  ""  ""  0
 "bus 70377"  "open"  1.000000  ""
0
"bus_3535"  "bus 'AREQUGCH_115.00'"  1.00  ""  ""  ""  0
 "bus 70378"  "open"  1.000000  ""
0
"bus_3536"  "bus 'SARGENT_115.00'"  1.00  ""  ""  ""  0
 "bus 70379"  "open"  1.000000  ""
0
"bus_3537"  "bus 'SARGENT_69.00'"  1.00  ""  ""  ""  0
 "bus 70380"  "open"  1.000000  ""
0
"bus_3538"  "bus 'SEDALIA_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70381"  "open"  1.000000  ""
0
"bus_3539"  "bus 'SEMPER_115.00'"  1.00  ""  ""  ""  0
 "bus 70382"  "open"  1.000000  ""
0
```

```
"bus_3540"  "bus 'SFORK_SL_69.00'"  1.00  ""  ""  ""  0
 "bus 70383"  "open"  1.000000  ""
0
"bus_3541"  "bus 'SHERIDAN_115.00'"  1.00  ""  ""  ""  0
 "bus 70384"  "open"  1.000000  ""
0
"bus_3542"  "bus 'SHOSHA&B_4.00'"  1.00  ""  ""  ""  0
 "bus 70385"  "open"  1.000000  ""
0
"bus_3543"  "bus 'SHOSHONE_69.00'"  1.00  ""  ""  ""  0
 "bus 70386"  "open"  1.000000  ""
0
"bus_3544"  "bus 'SHOSHONE_115.00'"  1.00  ""  ""  ""  0
 "bus 70387"  "open"  1.000000  ""
0
"bus_3545"  "bus 'SILT_USBR_69.00'"  1.00  ""  ""  ""  0
 "bus 70388"  "open"  1.000000  ""
0
"bus_3546"  "bus 'SKALA_115.00'"  1.00  ""  ""  ""  0
 "bus 70390"  "open"  1.000000  ""
0
"bus_3547"  "bus 'SKINNER_69.00'"  1.00  ""  ""  ""  0
 "bus 70391"  "open"  1.000000  ""
0
"bus_3548"  "bus 'SKYRANCH_230.00'"  1.00  ""  ""  ""  0
 "bus 70392"  "open"  1.000000  ""
0
"bus_3549"  "bus 'PONCHA_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70393"  "open"  1.000000  ""
0
"bus_3550"  "bus 'SMELTER_115.00'"  1.00  ""  ""  ""  0
 "bus 70394"  "open"  1.000000  ""
0
"bus_3551"  "bus 'SMOKY_HL_N_115.00'"  1.00  ""  ""  ""  0
 "bus 70395"  "open"  1.000000  ""
0
"bus_3552"  "bus 'SMOKY_HL_230.00'"  1.00  ""  ""  ""  0
 "bus 70396"  "open"  1.000000  ""
0
"bus_3553"  "bus 'BEAVER_CK_S_115.00'"  1.00  ""  ""  ""  0
 "bus 70397"  "open"  1.000000  ""
0
"bus_3554"  "bus 'BEAVER_CK_N_115.00'"  1.00  ""  ""  ""  0
 "bus 70398"  "open"  1.000000  ""
0
"bus_3555"  "bus 'BEAVER_CK_P_230.00'"  1.00  ""  ""  ""  0
 "bus 70399"  "open"  1.000000  ""
0
"bus_3556"  "bus 'SODA_LAKES_115.00'"  1.00  ""  ""  ""  0
 "bus 70400"  "open"  1.000000  ""
0
"bus_3557"  "bus 'SOUTH_TAP_115.00'"  1.00  ""  ""  ""  0
 "bus 70401"  "open"  1.000000  ""
0
"bus_3558"  "bus 'SOUTH_115.00'"  1.00  ""  ""  ""  0
 "bus 70402"  "open"  1.000000  ""
0
"bus_3559"  "bus 'SPRNGFLD_69.00'"  1.00  ""  ""  ""  0
 "bus 70404"  "open"  1.000000  ""
0
"bus_3560"  "bus 'ST.CHAS._69.00'"  1.00  ""  ""  ""  0
 "bus 70405"  "open"  1.000000  ""
0
"bus_3561"  "bus 'ST.VR_2_18.00'"  1.00  ""  ""  ""  0
 "bus 70406"  "open"  1.000000  ""
0
"bus_3562"  "bus 'ST.VR_3_18.00'"  1.00  ""  ""  ""  0
 "bus 70407"  "open"  1.000000  ""
0
```

```
"bus_3563"  "bus 'ST.VR_4_18.00'"  1.00  ""  ""  ""  0
 "bus 70408"  "open"  1.000000  ""
0
"bus_3564"  "bus 'ST.VRAIN_22.00'"  1.00  ""  ""  ""  0
 "bus 70409"  "open"  1.000000  ""
0
"bus_3565"  "bus 'FT_ST_VRAIN_230.00'"  1.00  ""  ""  ""  0
 "bus 70410"  "open"  1.000000  ""
0
"bus_3566"  "bus 'STANLEY_115.00'"  1.00  ""  ""  ""  0
 "bus 70411"  "open"  1.000000  ""
0
"bus_3567"  "bus 'STMBEACH_115.00'"  1.00  ""  ""  ""  0
 "bus 70412"  "open"  1.000000  ""
0
"bus_3568"  "bus 'STMBEACH_69.00'"  1.00  ""  ""  ""  0
 "bus 70413"  "open"  1.000000  ""
0
"bus_3569"  "bus 'STOCKADE_115.00'"  1.00  ""  ""  ""  0
 "bus 70414"  "open"  1.000000  ""
0
"bus_3570"  "bus 'STONMOOR_69.00'"  1.00  ""  ""  ""  0
 "bus 70415"  "open"  1.000000  ""
0
"bus_3571"  "bus 'STRASBRG_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70416"  "open"  1.000000  ""
0
"bus_3572"  "bus 'SULLIVAN_1_230.00'"  1.00  ""  ""  ""  0
 "bus 70417"  "open"  1.000000  ""
0
"bus_3573"  "bus 'SUMMIT1_115.00'"  1.00  ""  ""  ""  0
 "bus 70418"  "open"  1.000000  ""
0
"bus_3574"  "bus 'LAKE_GEORGE_115.00'"  1.00  ""  ""  ""  0
 "bus 70419"  "open"  1.000000  ""
0
"bus_3575"  "bus 'SUMMIT2_115.00'"  1.00  ""  ""  ""  0
 "bus 70420"  "open"  1.000000  ""
0
"bus_3576"  "bus 'SUMTAP2_115.00'"  1.00  ""  ""  ""  0
 "bus 70421"  "open"  1.000000  ""
0
"bus_3577"  "bus 'SUNSETPK_69.00'"  1.00  ""  ""  ""  0
 "bus 70422"  "open"  1.000000  ""
0
"bus_3578"  "bus 'BOULDER_CN1_115.00'"  1.00  ""  ""  ""  0
 "bus 70423"  "open"  1.000000  ""
0
"bus_3579"  "bus 'SUNSHINE_115.00'"  1.00  ""  ""  ""  0
 "bus 70424"  "open"  1.000000  ""
0
"bus_3580"  "bus 'T.BUTTES_69.00'"  1.00  ""  ""  ""  0
 "bus 70425"  "open"  1.000000  ""
0
"bus_3581"  "bus 'TARRYALL_115.00'"  1.00  ""  ""  ""  0
 "bus 70426"  "open"  1.000000  ""
0
"bus_3582"  "bus 'TARRYALL_230.00'"  1.00  ""  ""  ""  0
 "bus 70427"  "open"  1.000000  ""
0
"bus_3583"  "bus 'TECH_CENTER_230.00'"  1.00  ""  ""  ""  0
 "bus 70428"  "open"  1.000000  ""
0
"bus_3584"  "bus 'TINY_TWN_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70429"  "open"  1.000000  ""
0
"bus_3585"  "bus 'CAERUS_S1_230.00'"  1.00  ""  ""  ""  0
 "bus 70430"  "open"  1.000000  ""
0
```

```
"bus_3586"  "bus 'PLAINS_NG1_230.00'"  1.00  ""  ""  ""  0
 "bus 70431"  "open"  1.000000  ""
0
"bus_3587"  "bus 'TOWER_230.00'"  1.00  ""  ""  ""  0
 "bus 70432"  "open"  1.000000  ""
0
"bus_3588"  "bus 'PLAINS_NG2_230.00'"  1.00  ""  ""  ""  0
 "bus 70433"  "open"  1.000000  ""
0
"bus_3589"  "bus 'TWNLAKES_115.00'"  1.00  ""  ""  ""  0
 "bus 70434"  "open"  1.000000  ""
0
"bus_3590"  "bus 'TWN_LAK_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70435"  "open"  1.000000  ""
0
"bus_3591"  "bus 'UINTAH_69.00'"  1.00  ""  ""  ""  0
 "bus 70436"  "open"  1.000000  ""
0
"bus_3592"  "bus 'UINTAH_13.80'"  1.00  ""  ""  ""  0
 "bus 70437"  "open"  1.000000  ""
0
"bus_3593"  "bus 'UINTAH_230.00'"  1.00  ""  ""  ""  0
 "bus 70438"  "open"  1.000000  ""
0
"bus_3594"  "bus 'VALMONT_2_115.00'"  1.00  ""  ""  ""  0
 "bus 70440"  "open"  1.000000  ""
0
"bus_3595"  "bus 'UNIVERS1_115.00'"  1.00  ""  ""  ""  0
 "bus 70441"  "open"  1.000000  ""
0
"bus_3596"  "bus 'VALMONT_1_115.00'"  1.00  ""  ""  ""  0
 "bus 70444"  "open"  1.000000  ""
0
"bus_3597"  "bus 'ARRIBA_W1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70445"  "open"  1.000000  ""
0
"bus_3598"  "bus 'ARRIBA_W2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70446"  "open"  1.000000  ""
0
"bus_3599"  "bus 'VALMONT_230.00'"  1.00  ""  ""  ""  0
 "bus 70447"  "open"  1.000000  ""
0
"bus_3600"  "bus 'VALMNT6_13.80'"  1.00  ""  ""  ""  0
 "bus 70448"  "open"  1.000000  ""
0
"bus_3601"  "bus 'DESRTCOV_115.00'"  1.00  ""  ""  ""  0
 "bus 70449"  "open"  1.000000  ""
0
"bus_3602"  "bus 'VASQUEZ_115.00'"  1.00  ""  ""  ""  0
 "bus 70450"  "open"  1.000000  ""
0
"bus_3603"  "bus 'VICTOR_69.00'"  1.00  ""  ""  ""  0
 "bus 70451"  "open"  1.000000  ""
0
"bus_3604"  "bus 'VILAS_115.00'"  1.00  ""  ""  ""  0
 "bus 70452"  "open"  1.000000  ""
0
"bus_3605"  "bus 'VILAS_69.00'"  1.00  ""  ""  ""  0
 "bus 70453"  "open"  1.000000  ""
0
"bus_3606"  "bus 'VINELAND_69.00'"  1.00  ""  ""  ""  0
 "bus 70454"  "open"  1.000000  ""
0
"bus_3607"  "bus 'W.STATON_69.00'"  1.00  ""  ""  ""  0
 "bus 70455"  "open"  1.000000  ""
0
"bus_3608"  "bus 'W.STATON_115.00'"  1.00  ""  ""  ""  0
 "bus 70456"  "open"  1.000000  ""
0
```

```
"bus_3609"  "bus 'WALSENBG_69.00'"  1.00  ""  ""  ""  0
 "bus 70457"  "open"  1.000000  ""
0
"bus_3610"  "bus 'WALSENBG_115.00'"  1.00  ""  ""  ""  0
 "bus 70458"  "open"  1.000000  ""
0
"bus_3611"  "bus 'WALSENBG_230.00'"  1.00  ""  ""  ""  0
 "bus 70459"  "open"  1.000000  ""
0
"bus_3612"  "bus 'WALSH_69.00'"  1.00  ""  ""  ""  0
 "bus 70460"  "open"  1.000000  ""
0
"bus_3613"  "bus 'WASHINGTON_230.00'"  1.00  ""  ""  ""  0
 "bus 70461"  "open"  1.000000  ""
0
"bus_3614"  "bus 'WATERTON_115.00'"  1.00  ""  ""  ""  0
 "bus 70463"  "open"  1.000000  ""
0
"bus_3615"  "bus 'WATERTON_230.00'"  1.00  ""  ""  ""  0
 "bus 70464"  "open"  1.000000  ""
0
"bus_3616"  "bus 'MIDWAY_PS_345.00'"  1.00  ""  ""  ""  0
 "bus 70465"  "open"  1.000000  ""
0
"bus_3617"  "bus 'WATERTON_345.00'"  1.00  ""  ""  ""  0
 "bus 70466"  "open"  1.000000  ""
0
"bus_3618"  "bus 'WAVERLY_115.00'"  1.00  ""  ""  ""  0
 "bus 70467"  "open"  1.000000  ""
0
"bus_3619"  "bus 'SPINDLE_NG_230.00'"  1.00  ""  ""  ""  0
 "bus 70468"  "open"  1.000000  ""
0
"bus_3620"  "bus 'WELD_PS_115.00'"  1.00  ""  ""  ""  0
 "bus 70470"  "open"  1.000000  ""
0
"bus_3621"  "bus 'WELD_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70471"  "open"  1.000000  ""
0
"bus_3622"  "bus 'WILOW_CK_115.00'"  1.00  ""  ""  ""  0
 "bus 70472"  "open"  1.000000  ""
0
"bus_3623"  "bus 'WILOW_CK_69.00'"  1.00  ""  ""  ""  0
 "bus 70473"  "open"  1.000000  ""
0
"bus_3624"  "bus 'WINDSOR_230.00'"  1.00  ""  ""  ""  0
 "bus 70474"  "open"  1.000000  ""
0
"bus_3625"  "bus 'ARROWHLK_115.00'"  1.00  ""  ""  ""  0
 "bus 70475"  "open"  1.000000  ""
0
"bus_3626"  "bus 'WOODLAND_PK_115.00'"  1.00  ""  ""  ""  0
 "bus 70476"  "open"  1.000000  ""
0
"bus_3627"  "bus 'WEST_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70480"  "open"  1.000000  ""
0
"bus_3628"  "bus 'MONACO_12_230.00'"  1.00  ""  ""  ""  0
 "bus 70481"  "open"  1.000000  ""
0
"bus_3629"  "bus 'COPWRPRO_NG_115.00'"  1.00  ""  ""  ""  0
 "bus 70482"  "open"  1.000000  ""
0
"bus_3630"  "bus 'MARTIN_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70484"  "open"  1.000000  ""
0
"bus_3631"  "bus 'ALMSACT1_13.80'"  1.00  ""  ""  ""  0
 "bus 70485"  "open"  1.000000  ""
0
```

```
"bus_3632"  "bus 'ALMSACT2_13.80'"  1.00  ""  ""  ""  0
 "bus 70486"  "open"  1.000000  ""
0
"bus_3633"  "bus 'JMSHAFR4_13.80'"  1.00  ""  ""  ""  0
 "bus 70487"  "open"  1.000000  ""
0
"bus_3634"  "bus 'JMSHAFER_230.00'"  1.00  ""  ""  ""  0
 "bus 70488"  "open"  1.000000  ""
0
"bus_3635"  "bus 'KNUTSON_230.00'"  1.00  ""  ""  ""  0
 "bus 70489"  "open"  1.000000  ""
0
"bus_3636"  "bus 'JMSHAFR3_13.80'"  1.00  ""  ""  ""  0
 "bus 70490"  "open"  1.000000  ""
0
"bus_3637"  "bus 'TOLLGATE_230.00'"  1.00  ""  ""  ""  0
 "bus 70491"  "open"  1.000000  ""
0
"bus_3638"  "bus 'BOULDER_HYD_115.00'"  1.00  ""  ""  ""  0
 "bus 70492"  "open"  1.000000  ""
0
"bus_3639"  "bus 'JMSHAFR2_13.80'"  1.00  ""  ""  ""  0
 "bus 70493"  "open"  1.000000  ""
0
"bus_3640"  "bus 'JMSHAFR1_13.80'"  1.00  ""  ""  ""  0
 "bus 70495"  "open"  1.000000  ""
0
"bus_3641"  "bus 'HIGH_PT_230.00'"  1.00  ""  ""  ""  0
 "bus 70497"  "open"  1.000000  ""
0
"bus_3642"  "bus 'QF_BCP2T_13.80'"  1.00  ""  ""  ""  0
 "bus 70498"  "open"  1.000000  ""
0
"bus_3643"  "bus 'QF_B4-4T_13.80'"  1.00  ""  ""  ""  0
 "bus 70499"  "open"  1.000000  ""
0
"bus_3644"  "bus 'QF_CPP1T_13.80'"  1.00  ""  ""  ""  0
 "bus 70500"  "open"  1.000000  ""
0
"bus_3645"  "bus 'QF_CPP3T_13.80'"  1.00  ""  ""  ""  0
 "bus 70501"  "open"  1.000000  ""
0
"bus_3646"  "bus 'PIONER_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70503"  "open"  1.000000  ""
0
"bus_3647"  "bus 'MIRGEJCT_69.00'"  1.00  ""  ""  ""  0
 "bus 70505"  "open"  1.000000  ""
0
"bus_3648"  "bus 'SAGUACHE_69.00'"  1.00  ""  ""  ""  0
 "bus 70506"  "open"  1.000000  ""
0
"bus_3649"  "bus 'MEARSJCT_69.00'"  1.00  ""  ""  ""  0
 "bus 70507"  "open"  1.000000  ""
0
"bus_3650"  "bus 'VILLA_GROVE_69.00'"  1.00  ""  ""  ""  0
 "bus 70508"  "open"  1.000000  ""
0
"bus_3651"  "bus 'KERBERCK_69.00'"  1.00  ""  ""  ""  0
 "bus 70509"  "open"  1.000000  ""
0
"bus_3652"  "bus 'VICTORY_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70510"  "open"  1.000000  ""
0
"bus_3653"  "bus 'ATER_TAP_69.00'"  1.00  ""  ""  ""  0
 "bus 70511"  "open"  1.000000  ""
0
"bus_3654"  "bus 'JEWELL1_230.00'"  1.00  ""  ""  ""  0
 "bus 70512"  "open"  1.000000  ""
0
```

```
"bus_3655"  "bus 'HOMESTEAD_230.00'"  1.00  ""  ""  ""  0
 "bus 70513"  "open"  1.000000  ""
0
"bus_3656"  "bus 'PLUM_CK_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70514"  "open"  1.000000  ""
0
"bus_3657"  "bus 'DAVIDSON_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70515"  "open"  1.000000  ""
0
"bus_3658"  "bus 'PONDERSA_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70516"  "open"  1.000000  ""
0
"bus_3659"  "bus 'PARKER_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70517"  "open"  1.000000  ""
0
"bus_3660"  "bus 'BAYOU_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70518"  "open"  1.000000  ""
0
"bus_3661"  "bus 'WOLFSBRG_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70519"  "open"  1.000000  ""
0
"bus_3662"  "bus 'BLUSPRU_GEN_230.00'"  1.00  ""  ""  ""  0
 "bus 70520"  "open"  1.000000  ""
0
"bus_3663"  "bus 'PEAKVIEW_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70521"  "open"  1.000000  ""
0
"bus_3664"  "bus 'ROXBOROU_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70522"  "open"  1.000000  ""
0
"bus_3665"  "bus 'SULPHUR_115.00'"  1.00  ""  ""  ""  0
 "bus 70523"  "open"  1.000000  ""
0
"bus_3666"  "bus 'SULPHUR_230.00'"  1.00  ""  ""  ""  0
 "bus 70524"  "open"  1.000000  ""
0
"bus_3667"  "bus 'MT_HARRIS_138.00'"  1.00  ""  ""  ""  0
 "bus 70525"  "open"  1.000000  ""
0
"bus_3668"  "bus 'IMBODEN_230.00'"  1.00  ""  ""  ""  0
 "bus 70526"  "open"  1.000000  ""
0
"bus_3669"  "bus 'SANTA_FE_230.00'"  1.00  ""  ""  ""  0
 "bus 70527"  "open"  1.000000  ""
0
"bus_3670"  "bus 'SPRUCE_230.00'"  1.00  ""  ""  ""  0
 "bus 70528"  "open"  1.000000  ""
0
"bus_3671"  "bus 'JLGREEN_230.00'"  1.00  ""  ""  ""  0
 "bus 70529"  "open"  1.000000  ""
0
"bus_3672"  "bus 'PICADILLY_230.00'"  1.00  ""  ""  ""  0
 "bus 70530"  "open"  1.000000  ""
0
"bus_3673"  "bus 'AIR_LIQ_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70531"  "open"  1.000000  ""
0
"bus_3674"  "bus 'POWHATON_230.00'"  1.00  ""  ""  ""  0
 "bus 70532"  "open"  1.000000  ""
0
"bus_3675"  "bus 'LEMON_GLCH_230.00'"  1.00  ""  ""  ""  0
 "bus 70533"  "open"  1.000000  ""
0
"bus_3676"  "bus 'BERTHOUD_115.00'"  1.00  ""  ""  ""  0
 "bus 70534"  "open"  1.000000  ""
0
"bus_3677"  "bus 'COOLEYMA_230.00'"  1.00  ""  ""  ""  0
 "bus 70535"  "open"  1.000000  ""
0
```

```
"bus_3678"    "bus 'FITZ_SIMONS_115.00'"    1.00    ""    ""    ""    0
 "bus 70537"    "open"    1.000000    ""
0
"bus_3679"    "bus 'CHAMBERS_115.00'"    1.00    ""    ""    ""    0
 "bus 70538"    "open"    1.000000    ""
0
"bus_3680"    "bus 'CHAMBERS_230.00'"    1.00    ""    ""    ""    0
 "bus 70539"    "open"    1.000000    ""
0
"bus_3681"    "bus 'BASALT_DST_115.00'"    1.00    ""    ""    ""    0
 "bus 70540"    "open"    1.000000    ""
0
"bus_3682"    "bus 'ASPEN_PS_115.00'"    1.00    ""    ""    ""    0
 "bus 70541"    "open"    1.000000    ""
0
"bus_3683"    "bus 'SNOWMASS_115.00'"    1.00    ""    ""    ""    0
 "bus 70542"    "open"    1.000000    ""
0
"bus_3684"    "bus 'SIMMS_230.00'"    1.00    ""    ""    ""    0
 "bus 70543"    "open"    1.000000    ""
0
"bus_3685"    "bus 'ISABELLE_230.00'"    1.00    ""    ""    ""    0
 "bus 70544"    "open"    1.000000    ""
0
"bus_3686"    "bus 'BRICKCTR_230.00'"    1.00    ""    ""    ""    0
 "bus 70545"    "open"    1.000000    ""
0
"bus_3687"    "bus 'BRICK_CT_CR_115.00'"    1.00    ""    ""    ""    0
 "bus 70546"    "open"    1.000000    ""
0
"bus_3688"    "bus 'BENNETT_CR_115.00'"    1.00    ""    ""    ""    0
 "bus 70547"    "open"    1.000000    ""
0
"bus_3689"    "bus 'APT_DSLS_4.16'"    1.00    ""    ""    ""    0
 "bus 70548"    "open"    1.000000    ""
0
"bus_3690"    "bus 'APT_MEM_115.00'"    1.00    ""    ""    ""    0
 "bus 70549"    "open"    1.000000    ""
0
"bus_3691"    "bus 'W.CANON_115.00'"    1.00    ""    ""    ""    0
 "bus 70550"    "open"    1.000000    ""
0
"bus_3692"    "bus 'MURPHY_230.00'"    1.00    ""    ""    ""    0
 "bus 70551"    "open"    1.000000    ""
0
"bus_3693"    "bus 'ROMEO_TAP_69.00'"    1.00    ""    ""    ""    0
 "bus 70552"    "open"    1.000000    ""
0
"bus_3694"    "bus 'ARAP5&6_13.80'"    1.00    ""    ""    ""    0
 "bus 70553"    "open"    1.000000    ""
0
"bus_3695"    "bus 'ARAP7_13.80'"    1.00    ""    ""    ""    0
 "bus 70554"    "open"    1.000000    ""
0
"bus_3696"    "bus 'PINR_S_2_CR_34.50'"    1.00    ""    ""    ""    0
 "bus 70555"    "open"    1.000000    ""
0
"bus_3697"    "bus 'QF_B4D4T_12.50'"    1.00    ""    ""    ""    0
 "bus 70556"    "open"    1.000000    ""
0
"bus_3698"    "bus 'VALMNT7_13.80'"    1.00    ""    ""    ""    0
 "bus 70557"    "open"    1.000000    ""
0
"bus_3699"    "bus 'VALMNT8_13.80'"    1.00    ""    ""    ""    0
 "bus 70558"    "open"    1.000000    ""
0
"bus_3700"    "bus 'PINR_S_1_CR_34.50'"    1.00    ""    ""    ""    0
 "bus 70559"    "open"    1.000000    ""
0
```

```
"bus_3701"  "bus 'LAMAR_DC_230.00'"  1.00  ""  ""  ""  0
 "bus 70560"  "open"  1.000000  ""
0
"bus_3702"  "bus 'SPRUCE1_18.00'"  1.00  ""  ""  ""  0
 "bus 70562"  "open"  1.000000  ""
0
"bus_3703"  "bus 'SPRUCE2_18.00'"  1.00  ""  ""  ""  0
 "bus 70563"  "open"  1.000000  ""
0
"bus_3704"  "bus 'KNUTSON1_13.80'"  1.00  ""  ""  ""  0
 "bus 70565"  "open"  1.000000  ""
0
"bus_3705"  "bus 'KNUTSON2_13.80'"  1.00  ""  ""  ""  0
 "bus 70566"  "open"  1.000000  ""
0
"bus_3706"  "bus 'PLAINS_END_230.00'"  1.00  ""  ""  ""  0
 "bus 70570"  "open"  1.000000  ""
0
"bus_3707"  "bus 'KIOWA_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70571"  "open"  1.000000  ""
0
"bus_3708"  "bus 'KIOWA_S_CR_34.50'"  1.00  ""  ""  ""  0
 "bus 70572"  "open"  1.000000  ""
0
"bus_3709"  "bus 'HUNTER_S_CR_34.50'"  1.00  ""  ""  ""  0
 "bus 70573"  "open"  1.000000  ""
0
"bus_3710"  "bus 'MOONGLCH_230.00'"  1.00  ""  ""  ""  0
 "bus 70574"  "open"  1.000000  ""
0
"bus_3711"  "bus 'MEADOWS_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70575"  "open"  1.000000  ""
0
"bus_3712"  "bus 'COMPARK_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70576"  "open"  1.000000  ""
0
"bus_3713"  "bus 'FTNVL1&2_13.80'"  1.00  ""  ""  ""  0
 "bus 70577"  "open"  1.000000  ""
0
"bus_3714"  "bus 'FTNVL3&4_13.80'"  1.00  ""  ""  ""  0
 "bus 70578"  "open"  1.000000  ""
0
"bus_3715"  "bus 'FTNVL5&6_13.80'"  1.00  ""  ""  ""  0
 "bus 70579"  "open"  1.000000  ""
0
"bus_3716"  "bus 'PLNENDG1_1_13.80'"  1.00  ""  ""  ""  0
 "bus 70580"  "open"  1.000000  ""
0
"bus_3717"  "bus 'GRAND_VW_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70581"  "open"  1.000000  ""
0
"bus_3718"  "bus 'GREENLND_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70582"  "open"  1.000000  ""
0
"bus_3719"  "bus 'ELIZABET_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70583"  "open"  1.000000  ""
0
"bus_3720"  "bus 'CRSTL_VA_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70584"  "open"  1.000000  ""
0
"bus_3721"  "bus 'PLNENDG2_1_13.80'"  1.00  ""  ""  ""  0
 "bus 70585"  "open"  1.000000  ""
0
"bus_3722"  "bus 'PLNENDG2_2_13.80'"  1.00  ""  ""  ""  0
 "bus 70586"  "open"  1.000000  ""
0
"bus_3723"  "bus 'PLNENDG1_2_13.80'"  1.00  ""  ""  ""  0
 "bus 70587"  "open"  1.000000  ""
0
```

```
"bus_3724"    "bus 'RMEC1_15.00'"    1.00    ""    ""    ""    0
 "bus 70588"    "open"    1.000000    ""
0
"bus_3725"    "bus 'RMEC2_15.00'"    1.00    ""    ""    ""    0
 "bus 70589"    "open"    1.000000    ""
0
"bus_3726"    "bus 'RMEC_230.00'"    1.00    ""    ""    ""    0
 "bus 70590"    "open"    1.000000    ""
0
"bus_3727"    "bus 'RMEC3_23.00'"    1.00    ""    ""    ""    0
 "bus 70591"    "open"    1.000000    ""
0
"bus_3728"    "bus 'SPINDLE_230.00'"    1.00    ""    ""    ""    0
 "bus 70592"    "open"    1.000000    ""
0
"bus_3729"    "bus 'SPNDLE1_18.00'"    1.00    ""    ""    ""    0
 "bus 70593"    "open"    1.000000    ""
0
"bus_3730"    "bus 'SPNDLE2_18.00'"    1.00    ""    ""    ""    0
 "bus 70594"    "open"    1.000000    ""
0
"bus_3731"    "bus 'FTNVLY_GENS_230.00'"    1.00    ""    ""    ""    0
 "bus 70595"    "open"    1.000000    ""
0
"bus_3732"    "bus 'HARVEST_MI_230.00'"    1.00    ""    ""    ""    0
 "bus 70596"    "open"    1.000000    ""
0
"bus_3733"    "bus 'HARVEST_MI_345.00'"    1.00    ""    ""    ""    0
 "bus 70597"    "open"    1.000000    ""
0
"bus_3734"    "bus 'PAWNEE_345.00'"    1.00    ""    ""    ""    0
 "bus 70598"    "open"    1.000000    ""
0
"bus_3735"    "bus 'SMOKY_HL_345.00'"    1.00    ""    ""    ""    0
 "bus 70599"    "open"    1.000000    ""
0
"bus_3736"    "bus 'OXCART_69.00'"    1.00    ""    ""    ""    0
 "bus 70600"    "open"    1.000000    ""
0
"bus_3737"    "bus 'DANIEL_PK_345.00'"    1.00    ""    ""    ""    0
 "bus 70601"    "open"    1.000000    ""
0
"bus_3738"    "bus 'PARKWAY_115.00'"    1.00    ""    ""    ""    0
 "bus 70604"    "open"    1.000000    ""
0
"bus_3739"    "bus 'HENRYLAK_230.00'"    1.00    ""    ""    ""    0
 "bus 70605"    "open"    1.000000    ""
0
"bus_3740"    "bus 'SILVSADL_230.00'"    1.00    ""    ""    ""    0
 "bus 70609"    "open"    1.000000    ""
0
"bus_3741"    "bus 'TITANS1_34.50'"    1.00    ""    ""    ""    0
 "bus 70617"    "open"    1.000000    ""
0
"bus_3742"    "bus 'TITAN230_230.00'"    1.00    ""    ""    ""    0
 "bus 70618"    "open"    1.000000    ""
0
"bus_3743"    "bus 'TITAN13.8_13.80'"    1.00    ""    ""    ""    0
 "bus 70619"    "open"    1.000000    ""
0
"bus_3744"    "bus 'TITAN34.5_34.50'"    1.00    ""    ""    ""    0
 "bus 70620"    "open"    1.000000    ""
0
"bus_3745"    "bus 'MISS_SITE_230.00'"    1.00    ""    ""    ""    0
 "bus 70623"    "open"    1.000000    ""
0
"bus_3746"    "bus 'MISS_SITE_345.00'"    1.00    ""    ""    ""    0
 "bus 70624"    "open"    1.000000    ""
0
```

```
"bus_3747"  "bus 'LIMON1_345.00'"  1.00  ""  ""  ""  0
 "bus 70625"  "open"  1.000000  ""
0
"bus_3748"  "bus 'LIMON2_345.00'"  1.00  ""  ""  ""  0
 "bus 70626"  "open"  1.000000  ""
0
"bus_3749"  "bus 'LIMON3_345.00'"  1.00  ""  ""  ""  0
 "bus 70627"  "open"  1.000000  ""
0
"bus_3750"  "bus 'PRONGHORN_345.00'"  1.00  ""  ""  ""  0
 "bus 70628"  "open"  1.000000  ""
0
"bus_3751"  "bus 'SHORTGRASS_345.00'"  1.00  ""  ""  ""  0
 "bus 70630"  "open"  1.000000  ""
0
"bus_3752"  "bus 'CHEYRDG_W_345.00'"  1.00  ""  ""  ""  0
 "bus 70632"  "open"  1.000000  ""
0
"bus_3753"  "bus 'ARRIBA_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70633"  "open"  1.000000  ""
0
"bus_3754"  "bus 'ARRIBA_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70634"  "open"  1.000000  ""
0
"bus_3755"  "bus 'LIMON1_W_34.50'"  1.00  ""  ""  ""  0
 "bus 70635"  "open"  1.000000  ""
0
"bus_3756"  "bus 'LIMON2_W_34.50'"  1.00  ""  ""  ""  0
 "bus 70636"  "open"  1.000000  ""
0
"bus_3757"  "bus 'LIMON3_W_34.50'"  1.00  ""  ""  ""  0
 "bus 70637"  "open"  1.000000  ""
0
"bus_3758"  "bus 'MIRASOL_230.00'"  1.00  ""  ""  ""  0
 "bus 70652"  "open"  1.000000  ""
0
"bus_3759"  "bus 'TUNDRA_345.00'"  1.00  ""  ""  ""  0
 "bus 70653"  "open"  1.000000  ""
0
"bus_3760"  "bus 'COMANCHE_345.00'"  1.00  ""  ""  ""  0
 "bus 70654"  "open"  1.000000  ""
0
"bus_3761"  "bus 'SFORK_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70655"  "open"  1.000000  ""
0
"bus_3762"  "bus 'CARMEL_115.00'"  1.00  ""  ""  ""  0
 "bus 70656"  "open"  1.000000  ""
0
"bus_3763"  "bus 'ZINZER_115.00'"  1.00  ""  ""  ""  0
 "bus 70657"  "open"  1.000000  ""
0
"bus_3764"  "bus 'PLAZA_115.00'"  1.00  ""  ""  ""  0
 "bus 70658"  "open"  1.000000  ""
0
"bus_3765"  "bus 'ARRIBA_WF_345.00'"  1.00  ""  ""  ""  0
 "bus 70659"  "open"  1.000000  ""
0
"bus_3766"  "bus 'GOLDEN_WEST_230.00'"  1.00  ""  ""  ""  0
 "bus 70660"  "open"  1.000000  ""
0
"bus_3767"  "bus 'GLDNWST_W_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70661"  "open"  1.000000  ""
0
"bus_3768"  "bus 'GLDNWST_W_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70662"  "open"  1.000000  ""
0
"bus_3769"  "bus 'CEDRPT_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70672"  "open"  1.000000  ""
0
```

```
"bus_3770"  "bus 'CEDRPT_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70673"  "open"  1.000000  ""
0
"bus_3771"  "bus 'CEDRPT_W1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70674"  "open"  1.000000  ""
0
"bus_3772"  "bus 'CEDRPT_W2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70675"  "open"  1.000000  ""
0
"bus_3773"  "bus 'CEDRPT_W1_3_230.00'"  1.00  ""  ""  ""  0
 "bus 70676"  "open"  1.000000  ""
0
"bus_3774"  "bus 'CEDRPT_W2_3_230.00'"  1.00  ""  ""  ""  0
 "bus 70677"  "open"  1.000000  ""
0
"bus_3775"  "bus 'CEDAR_PT_230.00'"  1.00  ""  ""  ""  0
 "bus 70678"  "open"  1.000000  ""
0
"bus_3776"  "bus 'CEDARPT_GEN_230.00'"  1.00  ""  ""  ""  0
 "bus 70679"  "open"  1.000000  ""
0
"bus_3777"  "bus 'CO_GRN_230.00'"  1.00  ""  ""  ""  0
 "bus 70700"  "open"  1.000000  ""
0
"bus_3778"  "bus 'CO_GRN_E_34.50'"  1.00  ""  ""  ""  0
 "bus 70701"  "open"  1.000000  ""
0
"bus_3779"  "bus 'CO_GRN_W_34.50'"  1.00  ""  ""  ""  0
 "bus 70702"  "open"  1.000000  ""
0
"bus_3780"  "bus 'TWNBT1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70703"  "open"  1.000000  ""
0
"bus_3781"  "bus 'TWNBUTTE_230.00'"  1.00  ""  ""  ""  0
 "bus 70705"  "open"  1.000000  ""
0
"bus_3782"  "bus 'TWNBT1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70706"  "open"  1.000000  ""
0
"bus_3783"  "bus 'CO_GRN_E_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70707"  "open"  1.000000  ""
0
"bus_3784"  "bus 'CO_GRN_W_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70709"  "open"  1.000000  ""
0
"bus_3785"  "bus 'PTZLOGN1_34.50'"  1.00  ""  ""  ""  0
 "bus 70710"  "open"  1.000000  ""
0
"bus_3786"  "bus 'PTZLOGN_230.00'"  1.00  ""  ""  ""  0
 "bus 70711"  "open"  1.000000  ""
0
"bus_3787"  "bus 'PTZLOGN2_34.50'"  1.00  ""  ""  ""  0
 "bus 70712"  "open"  1.000000  ""
0
"bus_3788"  "bus 'PTZLOGN3_34.50'"  1.00  ""  ""  ""  0
 "bus 70713"  "open"  1.000000  ""
0
"bus_3789"  "bus 'PTZLOGN4_34.50'"  1.00  ""  ""  ""  0
 "bus 70714"  "open"  1.000000  ""
0
"bus_3790"  "bus 'SPRG_CN2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70716"  "open"  1.000000  ""
0
"bus_3791"  "bus 'SPRG_CN2_3_34.50'"  1.00  ""  ""  ""  0
 "bus 70717"  "open"  1.000000  ""
0
"bus_3792"  "bus 'SPNGCAN1_230_230.00'"  1.00  ""  ""  ""  0
 "bus 70718"  "open"  1.000000  ""
0
```

```
"bus_3793"  "bus 'SPRG_CN1_3_34.50'"  1.00  ""  ""  ""  0
 "bus 70719"  "open"  1.000000  ""
0
"bus_3794"  "bus 'SPRG_CN1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70720"  "open"  1.000000  ""
0
"bus_3795"  "bus 'RDGCREST_115.00'"  1.00  ""  ""  ""  0
 "bus 70722"  "open"  1.000000  ""
0
"bus_3796"  "bus 'RDGCREST_34.50'"  1.00  ""  ""  ""  0
 "bus 70723"  "open"  1.000000  ""
0
"bus_3797"  "bus 'CHEYRDG_E_345.00'"  1.00  ""  ""  ""  0
 "bus 70730"  "open"  1.000000  ""
0
"bus_3798"  "bus 'CHEYRGE_W13_34.50'"  1.00  ""  ""  ""  0
 "bus 70731"  "open"  1.000000  ""
0
"bus_3799"  "bus 'CHEYRGE_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70732"  "open"  1.000000  ""
0
"bus_3800"  "bus 'CHEYRGE_W2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70734"  "open"  1.000000  ""
0
"bus_3801"  "bus 'CHEYRGE_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70735"  "open"  1.000000  ""
0
"bus_3802"  "bus 'CHEYRGW_W1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70737"  "open"  1.000000  ""
0
"bus_3803"  "bus 'CHEYRGW_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70738"  "open"  1.000000  ""
0
"bus_3804"  "bus 'CHEYRGW_W2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70740"  "open"  1.000000  ""
0
"bus_3805"  "bus 'CHEYRGW_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70741"  "open"  1.000000  ""
0
"bus_3806"  "bus 'BRONCO_PLNS_345.00'"  1.00  ""  ""  ""  0
 "bus 70750"  "open"  1.000000  ""
0
"bus_3807"  "bus 'BRONCO_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70751"  "open"  1.000000  ""
0
"bus_3808"  "bus 'BRONCO_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70752"  "open"  1.000000  ""
0
"bus_3809"  "bus 'NEPTUNE_345.00'"  1.00  ""  ""  ""  0
 "bus 70754"  "open"  1.000000  ""
0
"bus_3810"  "bus 'NEPTUN_SB1_34.50'"  1.00  ""  ""  ""  0
 "bus 70755"  "open"  1.000000  ""
0
"bus_3811"  "bus 'NEPTUN_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70757"  "open"  1.000000  ""
0
"bus_3812"  "bus 'THUNDERWOLF_230.00'"  1.00  ""  ""  ""  0
 "bus 70759"  "open"  1.000000  ""
0
"bus_3813"  "bus 'THNDWLF_SB1_34.50'"  1.00  ""  ""  ""  0
 "bus 70760"  "open"  1.000000  ""
0
"bus_3814"  "bus 'THNDWLF_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70762"  "open"  1.000000  ""
0
"bus_3815"  "bus 'RUSHCK1_W1W2_345.00'"  1.00  ""  ""  ""  0
 "bus 70764"  "open"  1.000000  ""
0
```

```
"bus_3816"  "bus 'RUSHCK1_W1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70765"  "open"  1.000000  ""
0
"bus_3817"  "bus 'RUSHCK1_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70766"  "open"  1.000000  ""
0
"bus_3818"  "bus 'RUSHCK1_W2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70768"  "open"  1.000000  ""
0
"bus_3819"  "bus 'RUSHCK1_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70769"  "open"  1.000000  ""
0
"bus_3820"  "bus 'RUSHCK2_W3_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70772"  "open"  1.000000  ""
0
"bus_3821"  "bus 'RUSHCK2_W3_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70773"  "open"  1.000000  ""
0
"bus_3822"  "bus 'COMAN_3_27.00'"  1.00  ""  ""  ""  0
 "bus 70777"  "open"  1.000000  ""
0
"bus_3823"  "bus 'SUNCOR_AULT_44.00'"  1.00  ""  ""  ""  0
 "bus 70803"  "open"  1.000000  ""
0
"bus_3824"  "bus 'LEPRINO_PS_115.00'"  1.00  ""  ""  ""  0
 "bus 70805"  "open"  1.000000  ""
0
"bus_3825"  "bus 'MTNBRZ_WTG_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70815"  "open"  1.000000  ""
0
"bus_3826"  "bus 'MTNBRZ_WTG_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70816"  "open"  1.000000  ""
0
"bus_3827"  "bus 'MTNBREEZE_230.00'"  1.00  ""  ""  ""  0
 "bus 70819"  "open"  1.000000  ""
0
"bus_3828"  "bus 'KEENESBURG_230.00'"  1.00  ""  ""  ""  0
 "bus 70820"  "open"  1.000000  ""
0
"bus_3829"  "bus 'CEDARCK_SYD_230.00'"  1.00  ""  ""  ""  0
 "bus 70821"  "open"  1.000000  ""
0
"bus_3830"  "bus 'CEDARCK_CAP_230.00'"  1.00  ""  ""  ""  0
 "bus 70822"  "open"  1.000000  ""
0
"bus_3831"  "bus 'CEDARCK_1A_34.50'"  1.00  ""  ""  ""  0
 "bus 70823"  "open"  1.000000  ""
0
"bus_3832"  "bus 'CEDARCK_1B_34.50'"  1.00  ""  ""  ""  0
 "bus 70824"  "open"  1.000000  ""
0
"bus_3833"  "bus 'CEDAR2W1_34.50'"  1.00  ""  ""  ""  0
 "bus 70830"  "open"  1.000000  ""
0
"bus_3834"  "bus 'CEDAR2W2_34.50'"  1.00  ""  ""  ""  0
 "bus 70831"  "open"  1.000000  ""
0
"bus_3835"  "bus 'CEDAR2W3_34.50'"  1.00  ""  ""  ""  0
 "bus 70832"  "open"  1.000000  ""
0
"bus_3836"  "bus 'CEDARCK2_230.00'"  1.00  ""  ""  ""  0
 "bus 70833"  "open"  1.000000  ""
0
"bus_3837"  "bus 'CEDARCK2A_34.50'"  1.00  ""  ""  ""  0
 "bus 70834"  "open"  1.000000  ""
0
"bus_3838"  "bus 'CEDARCK2B_34.50'"  1.00  ""  ""  ""  0
 "bus 70835"  "open"  1.000000  ""
0
```

```
"bus_3839"  "bus 'CARL_69.00'"  1.00  ""  ""  ""  0
 "bus 70854"  "open"  1.000000  ""
0
"bus_3840"  "bus 'SUN_MTN_230.00'"  1.00  ""  ""  ""  0
 "bus 70856"  "open"  1.000000  ""
0
"bus_3841"  "bus 'SUN_MTN_S1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70857"  "open"  1.000000  ""
0
"bus_3842"  "bus 'SUN_MTN_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70858"  "open"  1.000000  ""
0
"bus_3843"  "bus 'AVERY_PS_230.00'"  1.00  ""  ""  ""  0
 "bus 70862"  "open"  1.000000  ""
0
"bus_3844"  "bus 'BIGHORN_S_3_230.00'"  1.00  ""  ""  ""  0
 "bus 70875"  "open"  1.000000  ""
0
"bus_3845"  "bus 'BIGHORN_S_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70876"  "open"  1.000000  ""
0
"bus_3846"  "bus 'BIGHORN_S_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70877"  "open"  1.000000  ""
0
"bus_3847"  "bus 'HUSKY_230.00'"  1.00  ""  ""  ""  0
 "bus 70898"  "open"  1.000000  ""
0
"bus_3848"  "bus 'LUCERNE_PS_115.00'"  1.00  ""  ""  ""  0
 "bus 70899"  "open"  1.000000  ""
0
"bus_3849"  "bus 'HUSKY_115.00'"  1.00  ""  ""  ""  0
 "bus 70901"  "open"  1.000000  ""
0
"bus_3850"  "bus 'COLLINS_ST_115.00'"  1.00  ""  ""  ""  0
 "bus 70902"  "open"  1.000000  ""
0
"bus_3851"  "bus 'CLOVERLY_115.00'"  1.00  ""  ""  ""  0
 "bus 70903"  "open"  1.000000  ""
0
"bus_3852"  "bus 'COMO_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70924"  "open"  1.000000  ""
0
"bus_3853"  "bus 'FAIRPLAY_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70925"  "open"  1.000000  ""
0
"bus_3854"  "bus 'HARTSEL_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 70926"  "open"  1.000000  ""
0
"bus_3855"  "bus 'HARTSEL_230.00'"  1.00  ""  ""  ""  0
 "bus 70927"  "open"  1.000000  ""
0
"bus_3856"  "bus 'GSANDHIL_PV_34.50'"  1.00  ""  ""  ""  0
 "bus 70931"  "open"  1.000000  ""
0
"bus_3857"  "bus 'SLVS_IBRDRLA_34.50'"  1.00  ""  ""  ""  0
 "bus 70932"  "open"  1.000000  ""
0
"bus_3858"  "bus 'SUNPOWER_34.50'"  1.00  ""  ""  ""  0
 "bus 70935"  "open"  1.000000  ""
0
"bus_3859"  "bus 'BLANCA_PEAK_115.00'"  1.00  ""  ""  ""  0
 "bus 70937"  "open"  1.000000  ""
0
"bus_3860"  "bus 'COMAN_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 70940"  "open"  1.000000  ""
0
"bus_3861"  "bus 'COMAN_S1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 70941"  "open"  1.000000  ""
0
```

```
"bus_3862"    "bus 'COMAN230_S1_230.00'"    1.00    ""    ""    ""    0
 "bus 70942"    "open"    1.000000    ""
0
"bus_3863"    "bus 'ST.VR_5_18.00'"    1.00    ""    ""    ""    0
 "bus 70950"    "open"    1.000000    ""
0
"bus_3864"    "bus 'ST.VR_6_18.00'"    1.00    ""    ""    ""    0
 "bus 70951"    "open"    1.000000    ""
0
"bus_3865"    "bus 'LAMAR_T1_13.80'"    1.00    ""    ""    ""    0
 "bus 70955"    "open"    1.000000    ""
0
"bus_3866"    "bus 'mid_70956_230.00'"    1.00    ""    ""    ""    0
 "bus 70956"    "open"    1.000000    ""
0
"bus_3867"    "bus 'LAMAR_T2_13.80'"    1.00    ""    ""    ""    0
 "bus 70957"    "open"    1.000000    ""
0
"bus_3868"    "bus 'mid_70958_230.00'"    1.00    ""    ""    ""    0
 "bus 70958"    "open"    1.000000    ""
0
"bus_3869"    "bus 'WATE_DST_230.00'"    1.00    ""    ""    ""    0
 "bus 70959"    "open"    1.000000    ""
0
"bus_3870"    "bus 'WLSBG_T2_13.80'"    1.00    ""    ""    ""    0
 "bus 70960"    "open"    1.000000    ""
0
"bus_3871"    "bus 'mid_70961_230.00'"    1.00    ""    ""    ""    0
 "bus 70961"    "open"    1.000000    ""
0
"bus_3872"    "bus 'WLSBG_T3_13.80'"    1.00    ""    ""    ""    0
 "bus 70962"    "open"    1.000000    ""
0
"bus_3873"    "bus 'mid_70963_230.00'"    1.00    ""    ""    ""    0
 "bus 70963"    "open"    1.000000    ""
0
"bus_3874"    "bus 'WLSBG_R_13.80'"    1.00    ""    ""    ""    0
 "bus 70964"    "open"    1.000000    ""
0
"bus_3875"    "bus 'SANLSVLY_13.80'"    1.00    ""    ""    ""    0
 "bus 70965"    "open"    1.000000    ""
0
"bus_3876"    "bus 'mid_70966_115.00'"    1.00    ""    ""    ""    0
 "bus 70966"    "open"    1.000000    ""
0
"bus_3877"    "bus 'SLV_R1_13.80'"    1.00    ""    ""    ""    0
 "bus 70967"    "open"    1.000000    ""
0
"bus_3878"    "bus 'SLV_R2_13.80'"    1.00    ""    ""    ""    0
 "bus 70968"    "open"    1.000000    ""
0
"bus_3879"    "bus 'SLV_R3_13.80'"    1.00    ""    ""    ""    0
 "bus 70969"    "open"    1.000000    ""
0
"bus_3880"    "bus 'SANLSVL2_13.80'"    1.00    ""    ""    ""    0
 "bus 70970"    "open"    1.000000    ""
0
"bus_3881"    "bus 'mid_70971_115.00'"    1.00    ""    ""    ""    0
 "bus 70971"    "open"    1.000000    ""
0
"bus_3882"    "bus 'BLUESTONE_69.00'"    1.00    ""    ""    ""    0
 "bus 70981"    "open"    1.000000    ""
0
"bus_3883"    "bus 'VALENT_230.00'"    1.00    ""    ""    ""    0
 "bus 70990"    "open"    1.000000    ""
0
"bus_3884"    "bus 'BAC_MSA GEN1_13.80'"    1.00    ""    ""    ""    0
 "bus 71001"    "open"    1.000000    ""
0
```

```
"bus_3885"    "bus 'BAC_MSA GEN2_13.80'"    1.00    ""    ""    ""    0
 "bus 71002"    "open"    1.000000    ""
0
"bus_3886"    "bus 'BAC_MSA GEN4_13.80'"    1.00    ""    ""    ""    0
 "bus 71003"    "open"    1.000000    ""
0
"bus_3887"    "bus 'BAC_MSA GEN5_13.80'"    1.00    ""    ""    ""    0
 "bus 71004"    "open"    1.000000    ""
0
"bus_3888"    "bus 'BAC_MSA GEN6_13.80'"    1.00    ""    ""    ""    0
 "bus 71005"    "open"    1.000000    ""
0
"bus_3889"    "bus 'RTLSNAKEB_115.00'"    1.00    ""    ""    ""    0
 "bus 71006"    "open"    1.000000    ""
0
"bus_3890"    "bus 'BUSCHRNCH2_34.50'"    1.00    ""    ""    ""    0
 "bus 71007"    "open"    1.000000    ""
0
"bus_3891"    "bus 'BUSCHRNCH1_34.50'"    1.00    ""    ""    ""    0
 "bus 71008"    "open"    1.000000    ""
0
"bus_3892"    "bus 'BUSCHRNCH_HI_115.00'"    1.00    ""    ""    ""    0
 "bus 71010"    "open"    1.000000    ""
0
"bus_3893"    "bus 'BUSCHRNCHMID_34.50'"    1.00    ""    ""    ""    0
 "bus 71011"    "open"    1.000000    ""
0
"bus_3894"    "bus 'BUSCHRNCH_MI_34.50'"    1.00    ""    ""    ""    0
 "bus 71012"    "open"    1.000000    ""
0
"bus_3895"    "bus 'PEAKVIEWHI_115.00'"    1.00    ""    ""    ""    0
 "bus 71017"    "open"    1.000000    ""
0
"bus_3896"    "bus 'PEAKVIEWMID_34.50'"    1.00    ""    ""    ""    0
 "bus 71018"    "open"    1.000000    ""
0
"bus_3897"    "bus 'PEAKVIEWMI_34.50'"    1.00    ""    ""    ""    0
 "bus 71019"    "open"    1.000000    ""
0
"bus_3898"    "bus 'ERIE_AVE_69.00'"    1.00    ""    ""    ""    0
 "bus 71020"    "open"    1.000000    ""
0
"bus_3899"    "bus 'PUEBRESVR_115.00'"    1.00    ""    ""    ""    0
 "bus 71022"    "open"    1.000000    ""
0
"bus_3900"    "bus 'PUEBLO_W_115.00'"    1.00    ""    ""    ""    0
 "bus 71023"    "open"    1.000000    ""
0
"bus_3901"    "bus 'N_PENROSE_115.00'"    1.00    ""    ""    ""    0
 "bus 71024"    "open"    1.000000    ""
0
"bus_3902"    "bus 'HOGBACK115_115.00'"    1.00    ""    ""    ""    0
 "bus 71025"    "open"    1.000000    ""
0
"bus_3903"    "bus 'HOGBACK69_69.00'"    1.00    ""    ""    ""    0
 "bus 71026"    "open"    1.000000    ""
0
"bus_3904"    "bus 'S.FOWLR_115.00'"    1.00    ""    ""    ""    0
 "bus 71027"    "open"    1.000000    ""
0
"bus_3905"    "bus 'FTN_LAKE_69.00'"    1.00    ""    ""    ""    0
 "bus 71030"    "open"    1.000000    ""
0
"bus_3906"    "bus 'OAKCRK_69.00'"    1.00    ""    ""    ""    0
 "bus 71031"    "open"    1.000000    ""
0
"bus_3907"    "bus 'FRANKTWN_CR_115.00'"    1.00    ""    ""    ""    0
 "bus 71506"    "open"    1.000000    ""
0
```

```
"bus_3908"  "bus 'ROB_TUNL_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71508"  "open"  1.000000  ""
0
"bus_3909"  "bus 'CONI_DST_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71516"  "open"  1.000000  ""
0
"bus_3910"  "bus 'STRAS_DT_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71517"  "open"  1.000000  ""
0
"bus_3911"  "bus 'MALTA_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71982"  "open"  1.000000  ""
0
"bus_3912"  "bus 'MALTA_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71983"  "open"  1.000000  ""
0
"bus_3913"  "bus 'DANIEL_PK_13.80'"  1.00  ""  ""  ""  0
 "bus 71984"  "open"  1.000000  ""
0
"bus_3914"  "bus 'BASALT_13.80'"  1.00  ""  ""  ""  0
 "bus 71985"  "open"  1.000000  ""
0
"bus_3915"  "bus 'RIFLE_UTE_13.80'"  1.00  ""  ""  ""  0
 "bus 71988"  "open"  1.000000  ""
0
"bus_3916"  "bus 'CAMEO_13.80'"  1.00  ""  ""  ""  0
 "bus 71989"  "open"  1.000000  ""
0
"bus_3917"  "bus 'SMOKY_HL_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71990"  "open"  1.000000  ""
0
"bus_3918"  "bus 'SMOKY_HL_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71991"  "open"  1.000000  ""
0
"bus_3919"  "bus 'WELD_PS_13.80'"  1.00  ""  ""  ""  0
 "bus 71992"  "open"  1.000000  ""
0
"bus_3920"  "bus 'PONCHA_13.80'"  1.00  ""  ""  ""  0
 "bus 71994"  "open"  1.000000  ""
0
"bus_3921"  "bus 'WATERTON_13.80'"  1.00  ""  ""  ""  0
 "bus 71995"  "open"  1.000000  ""
0
"bus_3922"  "bus 'MIDWAY_PS_13.80'"  1.00  ""  ""  ""  0
 "bus 71996"  "open"  1.000000  ""
0
"bus_3923"  "bus 'MISS_SITE_13.80'"  1.00  ""  ""  ""  0
 "bus 71997"  "open"  1.000000  ""
0
"bus_3924"  "bus 'PAWNEE_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71998"  "open"  1.000000  ""
0
"bus_3925"  "bus 'PAWNEE_T3_13.80'"  1.00  ""  ""  ""  0
 "bus 71999"  "open"  1.000000  ""
0
"bus_3926"  "bus 'DERBYHIL_115.00'"  1.00  ""  ""  ""  0
 "bus 77500"  "open"  1.000000  ""
0
"bus_3927"  "bus 'DERBHILT_115.00'"  1.00  ""  ""  ""  0
 "bus 77501"  "open"  1.000000  ""
0
"bus_3928"  "bus 'POUDRE_115.00'"  1.00  ""  ""  ""  0
 "bus 77502"  "open"  1.000000  ""
0
"bus_3929"  "bus 'RICHRDTP_115.00'"  1.00  ""  ""  ""  0
 "bus 77503"  "open"  1.000000  ""
0
"bus_3930"  "bus 'PONCHA_W_115.00'"  1.00  ""  ""  ""  0
 "bus 77642"  "open"  1.000000  ""
0
```

```
"bus_3931"  "bus 'WOLCOTT_2_115.00'"  1.00  ""  ""  ""  0
 "bus 77643"  "open"  1.000000  ""
0
"bus_3932"  "bus 'RAWHIDE_230.00'"  1.00  ""  ""  ""  0
 "bus 78010"  "open"  1.000000  ""
0
"bus_3933"  "bus 'RAWHIDE_24.00'"  1.00  ""  ""  ""  0
 "bus 78011"  "open"  1.000000  ""
0
"bus_3934"  "bus 'RAWHIDEA_13.80'"  1.00  ""  ""  ""  0
 "bus 78012"  "open"  1.000000  ""
0
"bus_3935"  "bus 'RAWHIDEB_13.80'"  1.00  ""  ""  ""  0
 "bus 78013"  "open"  1.000000  ""
0
"bus_3936"  "bus 'RAWHIDEC_13.80'"  1.00  ""  ""  ""  0
 "bus 78014"  "open"  1.000000  ""
0
"bus_3937"  "bus 'RAWHIDED_13.80'"  1.00  ""  ""  ""  0
 "bus 78015"  "open"  1.000000  ""
0
"bus_3938"  "bus 'RAWHIDEF_18.00'"  1.00  ""  ""  ""  0
 "bus 78016"  "open"  1.000000  ""
0
"bus_3939"  "bus 'RAWHIDE_PV_34.50'"  1.00  ""  ""  ""  0
 "bus 78020"  "open"  1.000000  ""
0
"bus_3940"  "bus 'RH_PV_CLTR_34.50'"  1.00  ""  ""  ""  0
 "bus 78021"  "open"  1.000000  ""
0
"bus_3941"  "bus 'RPS_PV_CLTR_34.50'"  1.00  ""  ""  ""  0
 "bus 78023"  "open"  1.000000  ""
0
"bus_3942"  "bus 'RD_WIND_230.00'"  1.00  ""  ""  ""  0
 "bus 78050"  "open"  1.000000  ""
0
"bus_3943"  "bus 'RD_WIND_34.50'"  1.00  ""  ""  ""  0
 "bus 78051"  "open"  1.000000  ""
0
"bus_3944"  "bus 'RD_CLTR_34.50'"  1.00  ""  ""  ""  0
 "bus 78052"  "open"  1.000000  ""
0
"bus_3945"  "bus 'ESTESPR_115.00'"  1.00  ""  ""  ""  0
 "bus 78065"  "open"  1.000000  ""
0
"bus_3946"  "bus 'MARYLKSB_115.00'"  1.00  ""  ""  ""  0
 "bus 78066"  "open"  1.000000  ""
0
"bus_3947"  "bus 'LAPORTE_230.00'"  1.00  ""  ""  ""  0
 "bus 78070"  "open"  1.000000  ""
0
"bus_3948"  "bus 'LAPORTE_115.00'"  1.00  ""  ""  ""  0
 "bus 78071"  "open"  1.000000  ""
0
"bus_3949"  "bus 'COLLEGLK_230.00'"  1.00  ""  ""  ""  0
 "bus 78072"  "open"  1.000000  ""
0
"bus_3950"  "bus 'DIXON CK_230.00'"  1.00  ""  ""  ""  0
 "bus 78075"  "open"  1.000000  ""
0
"bus_3951"  "bus 'DIXON CK_115.00'"  1.00  ""  ""  ""  0
 "bus 78076"  "open"  1.000000  ""
0
"bus_3952"  "bus 'DRAKE RD_115.00'"  1.00  ""  ""  ""  0
 "bus 78077"  "open"  1.000000  ""
0
"bus_3953"  "bus 'RICHARDS_115.00'"  1.00  ""  ""  ""  0
 "bus 78081"  "open"  1.000000  ""
0
```

```
"bus_3954"  "bus 'LINDEN_115.00'"  1.00  ""  ""  ""  0
 "bus 78082"  "open"  1.000000  ""
0
"bus_3955"  "bus 'TIMBERLN_230.00'"  1.00  ""  ""  ""  0
 "bus 78085"  "open"  1.000000  ""
0
"bus_3956"  "bus 'TIMBERLN_115.00'"  1.00  ""  ""  ""  0
 "bus 78086"  "open"  1.000000  ""
0
"bus_3957"  "bus 'CAREY_TS_230.00'"  1.00  ""  ""  ""  0
 "bus 78087"  "open"  1.000000  ""
0
"bus_3958"  "bus 'HARMONY_230.00'"  1.00  ""  ""  ""  0
 "bus 78088"  "open"  1.000000  ""
0
"bus_3959"  "bus 'PORTNER_230.00'"  1.00  ""  ""  ""  0
 "bus 78089"  "open"  1.000000  ""
0
"bus_3960"  "bus 'HORSESHO_230.00'"  1.00  ""  ""  ""  0
 "bus 78090"  "open"  1.000000  ""
0
"bus_3961"  "bus 'HORSESHO_115.00'"  1.00  ""  ""  ""  0
 "bus 78091"  "open"  1.000000  ""
0
"bus_3962"  "bus 'FTHLS_115.00'"  1.00  ""  ""  ""  0
 "bus 78092"  "open"  1.000000  ""
0
"bus_3963"  "bus 'VALLEYLM_115.00'"  1.00  ""  ""  ""  0
 "bus 78094"  "open"  1.000000  ""
0
"bus_3964"  "bus 'DERBYHILPR_115.00'"  1.00  ""  ""  ""  0
 "bus 78096"  "open"  1.000000  ""
0
"bus_3965"  "bus 'CROSSRDS_115.00'"  1.00  ""  ""  ""  0
 "bus 78098"  "open"  1.000000  ""
0
"bus_3966"  "bus 'LOVE E_115.00'"  1.00  ""  ""  ""  0
 "bus 78099"  "open"  1.000000  ""
0
"bus_3967"  "bus 'BOYD_230.00'"  1.00  ""  ""  ""  0
 "bus 78100"  "open"  1.000000  ""
0
"bus_3968"  "bus 'BOYD_115.00'"  1.00  ""  ""  ""  0
 "bus 78101"  "open"  1.000000  ""
0
"bus_3969"  "bus 'GATEWY_230.00'"  1.00  ""  ""  ""  0
 "bus 78102"  "open"  1.000000  ""
0
"bus_3970"  "bus 'AIRPORTPR_115.00'"  1.00  ""  ""  ""  0
 "bus 78103"  "open"  1.000000  ""
0
"bus_3971"  "bus 'LONGPEAK_230.00'"  1.00  ""  ""  ""  0
 "bus 78105"  "open"  1.000000  ""
0
"bus_3972"  "bus 'LONGPEAK_115.00'"  1.00  ""  ""  ""  0
 "bus 78106"  "open"  1.000000  ""
0
"bus_3973"  "bus 'DELCTAP_115.00'"  1.00  ""  ""  ""  0
 "bus 78107"  "open"  1.000000  ""
0
"bus_3974"  "bus 'MEADOW_115.00'"  1.00  ""  ""  ""  0
 "bus 78109"  "open"  1.000000  ""
0
"bus_3975"  "bus 'LNGMNTNW_115.00'"  1.00  ""  ""  ""  0
 "bus 78110"  "open"  1.000000  ""
0
"bus_3976"  "bus 'HARVARD_115.00'"  1.00  ""  ""  ""  0
 "bus 78111"  "open"  1.000000  ""
0
```

```
"bus_3977"  "bus 'ROGERSRD_115.00'"  1.00  ""  ""  ""  0
 "bus 78114"  "open"  1.000000  ""
0
"bus_3978"  "bus 'CNTYLINE_115.00'"  1.00  ""  ""  ""  0
 "bus 78116"  "open"  1.000000  ""
0
"bus_3979"  "bus 'TERRY_115.00'"  1.00  ""  ""  ""  0
 "bus 78119"  "open"  1.000000  ""
0
"bus_3980"  "bus 'FORDHAM_230.00'"  1.00  ""  ""  ""  0
 "bus 78120"  "open"  1.000000  ""
0
"bus_3981"  "bus 'FORDHAM_115.00'"  1.00  ""  ""  ""  0
 "bus 78121"  "open"  1.000000  ""
0
"bus_3982"  "bus 'BASALT_115.00'"  1.00  ""  ""  ""  0
 "bus 79003"  "open"  1.000000  ""
0
"bus_3983"  "bus 'BASALT_230.00'"  1.00  ""  ""  ""  0
 "bus 79004"  "open"  1.000000  ""
0
"bus_3984"  "bus 'BEAVER_CK_W_115.00'"  1.00  ""  ""  ""  0
 "bus 79006"  "open"  1.000000  ""
0
"bus_3985"  "bus 'CRYSTLPS_115.00'"  1.00  ""  ""  ""  0
 "bus 79018"  "open"  1.000000  ""
0
"bus_3986"  "bus 'UTE_GRND_JN_115.00'"  1.00  ""  ""  ""  0
 "bus 79034"  "open"  1.000000  ""
0
"bus_3987"  "bus 'UTE_GRND_JN_138.00'"  1.00  ""  ""  ""  0
 "bus 79035"  "open"  1.000000  ""
0
"bus_3988"  "bus 'COLLBRAN_138.00'"  1.00  ""  ""  ""  0
 "bus 79047"  "open"  1.000000  ""
0
"bus_3989"  "bus 'RIFLE_UTE_138.00'"  1.00  ""  ""  ""  0
 "bus 79056"  "open"  1.000000  ""
0
"bus_3990"  "bus 'RIFLE_UTE_230.00'"  1.00  ""  ""  ""  0
 "bus 79057"  "open"  1.000000  ""
0
"bus_3991"  "bus 'RIFLE_CU_345.00'"  1.00  ""  ""  ""  0
 "bus 79058"  "open"  1.000000  ""
0
"bus_3992"  "bus 'STEAMBOAT_230.00'"  1.00  ""  ""  ""  0
 "bus 79065"  "open"  1.000000  ""
0
"bus_3993"  "bus 'VAIL_115.00'"  1.00  ""  ""  ""  0
 "bus 79066"  "open"  1.000000  ""
0
"bus_3994"  "bus 'WOLCOTT_1_115.00'"  1.00  ""  ""  ""  0
 "bus 79068"  "open"  1.000000  ""
0
"bus_3995"  "bus 'WOLCOTT_230.00'"  1.00  ""  ""  ""  0
 "bus 79069"  "open"  1.000000  ""
0
"bus_3996"  "bus 'FOIDEL_CK_230.00'"  1.00  ""  ""  ""  0
 "bus 79091"  "open"  1.000000  ""
0
"bus_3997"  "bus 'AVON_115.00'"  1.00  ""  ""  ""  0
 "bus 79092"  "open"  1.000000  ""
0
"bus_3998"  "bus 'COLLBRAN_115.00'"  1.00  ""  ""  ""  0
 "bus 79173"  "open"  1.000000  ""
0
"bus_3999"  "bus 'mid_99177_230.00'"  1.00  ""  ""  ""  0
 "bus 99177"  "open"  1.000000  ""
0
```

```
"bus_4000"    "bus 'mid_99178_230.00'"    1.00    ""    ""    ""    0
 "bus 99178"    "open"    1.000000    ""
0
"bus_4001"    "bus 'mid_99179_230.00'"    1.00    ""    ""    ""    0
 "bus 99179"    "open"    1.000000    ""
0
"bus_4002"    "bus 'mid_99180_230.00'"    1.00    ""    ""    ""    0
 "bus 99180"    "open"    1.000000    ""
0
"bus_4003"    "bus 'mid_99183_345.00'"    1.00    ""    ""    ""    0
 "bus 99183"    "open"    1.000000    ""
0
"bus_4004"    "bus 'mid_99184_230.00'"    1.00    ""    ""    ""    0
 "bus 99184"    "open"    1.000000    ""
0
"bus_4005"    "bus 'mid_99185_230.00'"    1.00    ""    ""    ""    0
 "bus 99185"    "open"    1.000000    ""
0
"bus_4006"    "bus 'mid_99186_230.00'"    1.00    ""    ""    ""    0
 "bus 99186"    "open"    1.000000    ""
0
"bus_4007"    "bus 'mid_99187_230.00'"    1.00    ""    ""    ""    0
 "bus 99187"    "open"    1.000000    ""
0
"bus_4008"    "bus 'mid_99536_230.00'"    1.00    ""    ""    ""    0
 "bus 99536"    "open"    1.000000    ""
0
"bus_4009"    "bus 'mid_99555_230.00'"    1.00    ""    ""    ""    0
 "bus 99555"    "open"    1.000000    ""
0
"bus_4010"    "bus 'mid_99598_345.00'"    1.00    ""    ""    ""    0
 "bus 99598"    "open"    1.000000    ""
0
"bus_4011"    "bus 'mid_99599_345.00'"    1.00    ""    ""    ""    0
 "bus 99599"    "open"    1.000000    ""
0
"bus_4012"    "bus 'mid_99600_345.00'"    1.00    ""    ""    ""    0
 "bus 99600"    "open"    1.000000    ""
0
"bus_4013"    "bus 'mid_99602_345.00'"    1.00    ""    ""    ""    0
 "bus 99602"    "open"    1.000000    ""
0
"bus_4014"    "bus 'mid_99603_345.00'"    1.00    ""    ""    ""    0
 "bus 99603"    "open"    1.000000    ""
0
"bus_4015"    "bus 'CHEYRGE_W3_1_34.50'"    1.00    ""    ""    ""    0
 "bus 70776"    "open"    1.000000    ""
0
"bus_4016"    "bus 'CHEYRGW_CTRL_345.00'"    1.00    ""    ""    ""    0
 "bus 70778"    "open"    1.000000    ""
0
"bus_4017"    "bus 'BOONE_13.80'"    1.00    ""    ""    ""    0
 "bus 71981"    "open"    1.000000    ""
0
"bus_4018"    "bus 'mid_99176_230.00'"    1.00    ""    ""    ""    0
 "bus 99176"    "open"    1.000000    ""
0
"bus_4019"    "bus 'SPANPKS2_LV2_34.50'"    1.00    ""    ""    ""    0
 "bus 70724"    "open"    1.000000    ""
0
"bus_4020"    "bus 'SPANPEAKS_230.00'"    1.00    ""    ""    ""    0
 "bus 70991"    "open"    1.000000    ""
0
"bus_4021"    "bus 'SPANPKS_LV1_34.50'"    1.00    ""    ""    ""    0
 "bus 70992"    "open"    1.000000    ""
0
"bus_4022"    "bus 'SPANPKS1_LV2_34.50'"    1.00    ""    ""    ""    0
 "bus 70993"    "open"    1.000000    ""
0
```

```
"bus_4023"  "bus 'SEV_POI_230.00'"  1.00  ""  ""  ""  0
 "bus 78030"  "open"  1.000000  ""
0
"bus_4024"  "bus 'SEV_230.00'"  1.00  ""  ""  ""  0
 "bus 78031"  "open"  1.000000  ""
0
"bus_4025"  "bus 'SEV_34.50'"  1.00  ""  ""  ""  0
 "bus 78032"  "open"  1.000000  ""
0
"bus_4026"  "bus 'SEV_CLTR_34.50'"  1.00  ""  ""  ""  0
 "bus 78033"  "open"  1.000000  ""
0
"bus_4027"  "bus 'METRO_WATER_115.00'"  1.00  ""  ""  ""  0
 "bus 70494"  "open"  1.000000  ""
0
"bus_4028"  "bus 'KESTREL_230.00'"  1.00  ""  ""  ""  0
 "bus 70536"  "open"  1.000000  ""
0
"bus_4029"  "bus 'DCPL_TP_115.00'"  1.00  ""  ""  ""  0
 "bus 70897"  "open"  1.000000  ""
0
"bus_4030"  "bus 'CANAL_XING_345.00'"  1.00  ""  ""  ""  0
 "bus 70915"  "open"  1.000000  ""
0
"bus_4031"  "bus 'GOOSE_CK_34.50'"  1.00  ""  ""  ""  0
 "bus 70917"  "open"  1.000000  ""
0
"bus_4032"  "bus 'GOOSE_CK_345.00'"  1.00  ""  ""  ""  0
 "bus 70918"  "open"  1.000000  ""
0
"bus_4033"  "bus 'MAY_VALLEY_345.00'"  1.00  ""  ""  ""  0
 "bus 70919"  "open"  1.000000  ""
0
"bus_4034"  "bus 'MAY_VALLEY_34.50'"  1.00  ""  ""  ""  0
 "bus 70920"  "open"  1.000000  ""
0
"bus_4035"  "bus 'CARL_TP_69.00'"  1.00  ""  ""  ""  0
 "bus 70936"  "open"  1.000000  ""
0
"bus_4036"  "bus 'GUNBARREL_3_230.00'"  1.00  ""  ""  ""  0
 "bus 70972"  "open"  1.000000  ""
0
"bus_4037"  "bus 'CITADEL_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71502"  "open"  1.000000  ""
0
"bus_4038"  "bus 'SPRG_VA_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71505"  "open"  1.000000  ""
0
"bus_4039"  "bus 'DEER_TRL_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71512"  "open"  1.000000  ""
0
"bus_4040"  "bus 'HOPKINS_13.80'"  1.00  ""  ""  ""  0
 "bus 71953"  "open"  1.000000  ""
0
"bus_4041"  "bus 'ALMSA_TER_7.97'"  1.00  ""  ""  ""  0
 "bus 71954"  "open"  1.000000  ""
0
"bus_4042"  "bus 'MIDW_13.80'"  1.00  ""  ""  ""  0
 "bus 71980"  "open"  1.000000  ""
0
"bus_4043"  "bus 'ALMSA_mdpt_115.00'"  1.00  ""  ""  ""  0
 "bus 99147"  "open"  1.000000  ""
0
"bus_4044"  "bus 'mid point_100.00'"  1.00  ""  ""  ""  0
 "bus 99174"  "open"  1.000000  ""
0
"bus_4045"  "bus 'mid point_100.00'"  1.00  ""  ""  ""  0
 "bus 99175"  "open"  1.000000  ""
0
```

```
"bus_4046"  "bus 'ALMSA_S1_1_13.80'"  1.00  ""  ""  ""  0
 "bus 700178"  "open"  1.000000  ""
0
"bus_4047"  "bus 'ALMSA_S1_2_13.80'"  1.00  ""  ""  ""  0
 "bus 700179"  "open"  1.000000  ""
0
"bus_4048"  "bus 'ALAMOSA_SLR_115.00'"  1.00  ""  ""  ""  0
 "bus 700180"  "open"  1.000000  ""
0
"bus_4049"  "bus 'PTZLOGN_CB_230.00'"  1.00  ""  ""  ""  0
 "bus 700181"  "open"  1.000000  ""
0
"bus_4050"  "bus 'mid_99053_100.00'"  1.00  ""  ""  ""  0
 "bus 99053"  "open"  1.000000  ""
0
"bus_4051"  "bus 'mid_99137_230.00'"  1.00  ""  ""  ""  0
 "bus 99137"  "open"  1.000000  ""
0
"bus_4052"  "bus 'BHSUN_TER_13.80'"  1.00  ""  ""  ""  0
 "bus 78035"  "open"  1.000000  ""
0
"bus_4053"  "bus 'PODER_115.00'"  1.00  ""  ""  ""  0
 "bus 70177"  "open"  1.000000  ""
0
"bus_4054"  "bus 'COYOTE_230.00'"  1.00  ""  ""  ""  0
 "bus 70804"  "open"  1.000000  ""
0
"bus_4055"  "bus 'FT_ST_VRAIN_345.00'"  1.00  ""  ""  ""  0
 "bus 70916"  "open"  1.000000  ""
0
"bus_4056"  "bus 'PINEJCT_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71507"  "open"  1.000000  ""
0
"bus_4057"  "bus 'DAWSONRG_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71501"  "open"  1.000000  ""
0
"bus_4058"  "bus 'DELBERT_CR_115.00'"  1.00  ""  ""  ""  0
 "bus 71503"  "open"  1.000000  ""
0
"bus_4059"  "bus 'BARKER_230.00'"  1.00  ""  ""  ""  0
 "bus 70152"  "open"  1.000000  ""
0
"bus_4060"  "bus 'SANDSTONE_345.00'"  1.00  ""  ""  ""  0
 "bus 70921"  "open"  1.000000  ""
0
"bus_4061"  "bus 'R_2023_05_230.00'"  1.00  ""  ""  ""  0
 "bus 70077"  "open"  1.000000  ""
0
"bus_4062"  "bus '24_13_T4_13.80'"  1.00  ""  ""  ""  0
 "bus 71967"  "open"  1.000000  ""
0
"bus_4063"  "bus '24_13_T3_13.80'"  1.00  ""  ""  ""  0
 "bus 71968"  "open"  1.000000  ""
0
"bus_4064"  "bus '24_13_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71969"  "open"  1.000000  ""
0
"bus_4065"  "bus '24_13_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71970"  "open"  1.000000  ""
0
"bus_4066"  "bus 'mid_98007_1.00'"  1.00  ""  ""  ""  0
 "bus 98007"  "open"  1.000000  ""
0
"bus_4067"  "bus 'mid_98008_1.00'"  1.00  ""  ""  ""  0
 "bus 98008"  "open"  1.000000  ""
0
"bus_4068"  "bus 'mid_98005_1.00'"  1.00  ""  ""  ""  0
 "bus 98005"  "open"  1.000000  ""
0
```

```
"bus_4069" "bus 'mid_98006_1.00'" 1.00 "" "" "" 0
 "bus 98006" "open" 1.000000 ""
0
"bus_4070" "bus '24_13_W2_2_34.50'" 1.00 "" "" "" 0
 "bus 700056" "open" 1.000000 ""
0
"bus_4071" "bus '24_13_W2_1_34.50'" 1.00 "" "" "" 0
 "bus 700058" "open" 1.000000 ""
0
"bus_4072" "bus '24_13_W3_2_34.50'" 1.00 "" "" "" 0
 "bus 700059" "open" 1.000000 ""
0
"bus_4073" "bus '24_13_W3_1_34.50'" 1.00 "" "" "" 0
 "bus 700061" "open" 1.000000 ""
0
"bus_4074" "bus '24_13_W4_2_34.50'" 1.00 "" "" "" 0
 "bus 700062" "open" 1.000000 ""
0
"bus_4075" "bus '24_13_W4_1_34.50'" 1.00 "" "" "" 0
 "bus 700064" "open" 1.000000 ""
0
"bus_4076" "bus '24_13_W1_1_34.50'" 1.00 "" "" "" 0
 "bus 700065" "open" 1.000000 ""
0
"bus_4077" "bus 'PI_2024_13_345.00'" 1.00 "" "" "" 0
 "bus 700066" "open" 1.000000 ""
0
"bus_4078" "bus '24_13_W1_2_34.50'" 1.00 "" "" "" 0
 "bus 700068" "open" 1.000000 ""
0
"bus_4079" "bus 'PI_2024_12_345.00'" 1.00 "" "" "" 0
 "bus 700069" "open" 1.000000 ""
0
"bus_4080" "bus '24_12_W1_2_34.50'" 1.00 "" "" "" 0
 "bus 700070" "open" 1.000000 ""
0
"bus_4081" "bus '24_12_W2_2_34.50'" 1.00 "" "" "" 0
 "bus 700071" "open" 1.000000 ""
0
"bus_4082" "bus '24_12_W3_2_34.50'" 1.00 "" "" "" 0
 "bus 700072" "open" 1.000000 ""
0
"bus_4083" "bus '24_12_W1_1_34.50'" 1.00 "" "" "" 0
 "bus 700073" "open" 1.000000 ""
0
"bus_4084" "bus '24_12_W2_1_34.50'" 1.00 "" "" "" 0
 "bus 700074" "open" 1.000000 ""
0
"bus_4085" "bus '24_12_W3_1_34.50'" 1.00 "" "" "" 0
 "bus 700075" "open" 1.000000 ""
0
"bus_4086" "bus 'GI_2020_10_230.00'" 1.00 "" "" "" 0
 "bus 700139" "open" 1.000000 ""
0
"bus_4087" "bus '20_10_SB12_230.00'" 1.00 "" "" "" 0
 "bus 700140" "open" 1.000000 ""
0
"bus_4088" "bus '20_10_SB1_34.50'" 1.00 "" "" "" 0
 "bus 700141" "open" 1.000000 ""
0
"bus_4089" "bus '20_10_S1_1_34.50'" 1.00 "" "" "" 0
 "bus 700143" "open" 1.000000 ""
0
"bus_4090" "bus '20_10_B1_1_34.50'" 1.00 "" "" "" 0
 "bus 700145" "open" 1.000000 ""
0
"bus_4091" "bus '20_10_S2_1_34.50'" 1.00 "" "" "" 0
 "bus 700148" "open" 1.000000 ""
0
```

```
"bus_4092"  "bus '20_10_B2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700149"  "open"  1.000000  ""
0
"bus_4093"  "bus '20_10_SB2_34.50'"  1.00  ""  ""  ""  0
 "bus 700150"  "open"  1.000000  ""
0
"bus_4094"  "bus '2021_6_S1_34.50'"  1.00  ""  ""  ""  0
 "bus 700151"  "open"  1.000000  ""
0
"bus_4095"  "bus '2021_6_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700152"  "open"  1.000000  ""
0
"bus_4096"  "bus '2021_6_S1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700153"  "open"  1.000000  ""
0
"bus_4097"  "bus '2021_6_S1_3_230.00'"  1.00  ""  ""  ""  0
 "bus 700154"  "open"  1.000000  ""
0
"bus_4098"  "bus 'GI_2021_6_230.00'"  1.00  ""  ""  ""  0
 "bus 700155"  "open"  1.000000  ""
0
"bus_4099"  "bus '24_1_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71942"  "open"  1.000000  ""
0
"bus_4100"  "bus '24_1_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71943"  "open"  1.000000  ""
0
"bus_4101"  "bus '24_1_T3_13.80'"  1.00  ""  ""  ""  0
 "bus 71944"  "open"  1.000000  ""
0
"bus_4102"  "bus 'mid_99132_230.00'"  1.00  ""  ""  ""  0
 "bus 99132"  "open"  1.000000  ""
0
"bus_4103"  "bus 'mid_99134_230.00'"  1.00  ""  ""  ""  0
 "bus 99134"  "open"  1.000000  ""
0
"bus_4104"  "bus 'mid_99133_230.00'"  1.00  ""  ""  ""  0
 "bus 99133"  "open"  1.000000  ""
0
"bus_4105"  "bus 'REPL_2024_1_230.00'"  1.00  ""  ""  ""  0
 "bus 700208"  "open"  1.000000  ""
0
"bus_4106"  "bus '24_1_S1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700209"  "open"  1.000000  ""
0
"bus_4107"  "bus '24_1_S2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700210"  "open"  1.000000  ""
0
"bus_4108"  "bus '24_1_S3_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700211"  "open"  1.000000  ""
0
"bus_4109"  "bus '24_1_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700212"  "open"  1.000000  ""
0
"bus_4110"  "bus '24_1_S2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700213"  "open"  1.000000  ""
0
"bus_4111"  "bus '24_1_S3_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700214"  "open"  1.000000  ""
0
"bus_4112"  "bus 'PI_24_3_18.00'"  1.00  ""  ""  ""  0
 "bus 700001"  "open"  1.000000  ""
0
"bus_4113"  "bus 'PI_24_2_G7_19.00'"  1.00  ""  ""  ""  0
 "bus 700002"  "open"  1.000000  ""
0
"bus_4114"  "bus 'PI_24_2_G8_19.00'"  1.00  ""  ""  ""  0
 "bus 700003"  "open"  1.000000  ""
0
```

```
"bus_4115"  "bus '24_5_G_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700005"  "open"  1.000000  ""
0
"bus_4116"  "bus 'PI_2024_5_69.00'"  1.00  ""  ""  ""  0
 "bus 700006"  "open"  1.000000  ""
0
"bus_4117"  "bus '24_5_G_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700007"  "open"  1.000000  ""
0
"bus_4118"  "bus '24_7_T_13.80'"  1.00  ""  ""  ""  0
 "bus 71972"  "open"  1.000000  ""
0
"bus_4119"  "bus 'mid_99166_345.00'"  1.00  ""  ""  ""  0
 "bus 99166"  "open"  1.000000  ""
0
"bus_4120"  "bus '24_7_B_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700045"  "open"  1.000000  ""
0
"bus_4121"  "bus '24_7_B_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700046"  "open"  1.000000  ""
0
"bus_4122"  "bus 'PI_2024_7_345.00'"  1.00  ""  ""  ""  0
 "bus 700047"  "open"  1.000000  ""
0
"bus_4123"  "bus '24_9_T4_13.80'"  1.00  ""  ""  ""  0
 "bus 71966"  "open"  1.000000  ""
0
"bus_4124"  "bus '24_9_T3_13.80'"  1.00  ""  ""  ""  0
 "bus 71965"  "open"  1.000000  ""
0
"bus_4125"  "bus '24_9_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71964"  "open"  1.000000  ""
0
"bus_4126"  "bus '24_9_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71963"  "open"  1.000000  ""
0
"bus_4127"  "bus 'mid_98009_345.00'"  1.00  ""  ""  ""  0
 "bus 98009"  "open"  1.000000  ""
0
"bus_4128"  "bus 'mid_98010_345.00'"  1.00  ""  ""  ""  0
 "bus 98010"  "open"  1.000000  ""
0
"bus_4129"  "bus 'mid_98011_345.00'"  1.00  ""  ""  ""  0
 "bus 98011"  "open"  1.000000  ""
0
"bus_4130"  "bus 'mid_98012_345.00'"  1.00  ""  ""  ""  0
 "bus 98012"  "open"  1.000000  ""
0
"bus_4131"  "bus '24_9_W1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700080"  "open"  1.000000  ""
0
"bus_4132"  "bus '24_9_W1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700081"  "open"  1.000000  ""
0
"bus_4133"  "bus '24_9_W2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700083"  "open"  1.000000  ""
0
"bus_4134"  "bus '24_9_W2_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700084"  "open"  1.000000  ""
0
"bus_4135"  "bus '24_9_W3_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700086"  "open"  1.000000  ""
0
"bus_4136"  "bus '24_9_W3_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700087"  "open"  1.000000  ""
0
"bus_4137"  "bus '24_9_W4_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700089"  "open"  1.000000  ""
0
```

```
"bus_4138"  "bus '24_9_W4_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700090"  "open"  1.000000  ""
0
"bus_4139"  "bus 'PI_2024_9_345.00'"  1.00  ""  ""  ""  0
 "bus 700091"  "open"  1.000000  ""
0
"bus_4140"  "bus '24_11_T_13.80'"  1.00  ""  ""  ""  0
 "bus 71960"  "open"  1.000000  ""
0
"bus_4141"  "bus 'mid_98004_13.80'"  1.00  ""  ""  ""  0
 "bus 98004"  "open"  1.000000  ""
0
"bus_4142"  "bus 'PI_2024_11_345.00'"  1.00  ""  ""  ""  0
 "bus 700097"  "open"  1.000000  ""
0
"bus_4143"  "bus '24_11_B_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700098"  "open"  1.000000  ""
0
"bus_4144"  "bus '24_11_B_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700099"  "open"  1.000000  ""
0
"bus_4145"  "bus '24_28_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71951"  "open"  1.000000  ""
0
"bus_4146"  "bus '24_28_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71952"  "open"  1.000000  ""
0
"bus_4147"  "bus 'mid_98001_345.00'"  1.00  ""  ""  ""  0
 "bus 98001"  "open"  1.000000  ""
0
"bus_4148"  "bus 'mid_98002_345.00'"  1.00  ""  ""  ""  0
 "bus 98002"  "open"  1.000000  ""
0
"bus_4149"  "bus '24_28_W_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700183"  "open"  1.000000  ""
0
"bus_4150"  "bus '24_28_W_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700184"  "open"  1.000000  ""
0
"bus_4151"  "bus '5RSC_24_28_345.00'"  1.00  ""  ""  ""  0
 "bus 700185"  "open"  1.000000  ""
0
"bus_4152"  "bus '23_2_T_13.80'"  1.00  ""  ""  ""  0
 "bus 71949"  "open"  1.000000  ""
0
"bus_4153"  "bus 'mid_99604_345.00'"  1.00  ""  ""  ""  0
 "bus 99604"  "open"  1.000000  ""
0
"bus_4154"  "bus 'PI_2023_2_345.00'"  1.00  ""  ""  ""  0
 "bus 700188"  "open"  1.000000  ""
0
"bus_4155"  "bus '23_2_B1_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700189"  "open"  1.000000  ""
0
"bus_4156"  "bus '23_2_B1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700190"  "open"  1.000000  ""
0
"bus_4157"  "bus '24_8_SB_1_115.00'"  1.00  ""  ""  ""  0
 "bus 700218"  "open"  1.000000  ""
0
"bus_4158"  "bus '24_8_SB_34.50'"  1.00  ""  ""  ""  0
 "bus 700219"  "open"  1.000000  ""
0
"bus_4159"  "bus '24_8_S_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700220"  "open"  1.000000  ""
0
"bus_4160"  "bus '24_8_B_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700221"  "open"  1.000000  ""
0
```

```
"bus_4161"  "bus 'PI_2024_8_115.00'"  1.00  ""  ""  ""  0
 "bus 700224"  "open"  1.000000  ""
0
"bus_4162"  "bus '21_1_T3_13.80'"  1.00  ""  ""  ""  0
 "bus 71957"  "open"  1.000000  ""
0
"bus_4163"  "bus '21_1_T2_13.80'"  1.00  ""  ""  ""  0
 "bus 71958"  "open"  1.000000  ""
0
"bus_4164"  "bus '21_1_T1_13.80'"  1.00  ""  ""  ""  0
 "bus 71959"  "open"  1.000000  ""
0
"bus_4165"  "bus 'mid_990151_230.00'"  1.00  ""  ""  ""  0
 "bus 990151"  "open"  1.000000  ""
0
"bus_4166"  "bus 'mid_990152_230.00'"  1.00  ""  ""  ""  0
 "bus 990152"  "open"  1.000000  ""
0
"bus_4167"  "bus 'mid_990153_230.00'"  1.00  ""  ""  ""  0
 "bus 990153"  "open"  1.000000  ""
0
"bus_4168"  "bus '21_1_S1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700125"  "open"  1.000000  ""
0
"bus_4169"  "bus '21_1_S2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700126"  "open"  1.000000  ""
0
"bus_4170"  "bus '21_1_S3_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700127"  "open"  1.000000  ""
0
"bus_4171"  "bus '21_1_B1_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700128"  "open"  1.000000  ""
0
"bus_4172"  "bus '21_1_B2_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700129"  "open"  1.000000  ""
0
"bus_4173"  "bus '21_1_B3_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700130"  "open"  1.000000  ""
0
"bus_4174"  "bus '21_1_SB1_34.50'"  1.00  ""  ""  ""  0
 "bus 700131"  "open"  1.000000  ""
0
"bus_4175"  "bus '21_1_SB2_34.50'"  1.00  ""  ""  ""  0
 "bus 700132"  "open"  1.000000  ""
0
"bus_4176"  "bus '21_1_SB3_34.50'"  1.00  ""  ""  ""  0
 "bus 700133"  "open"  1.000000  ""
0
"bus_4177"  "bus 'REPL_2021_1_230.00'"  1.00  ""  ""  ""  0
 "bus 700134"  "open"  1.000000  ""
0
"bus_4178"  "bus '24_10_T_13.80'"  1.00  ""  ""  ""  0
 "bus 71971"  "open"  1.000000  ""
0
"bus_4179"  "bus 'mid_98770_230.00'"  1.00  ""  ""  ""  0
 "bus 98770"  "open"  1.000000  ""
0
"bus_4180"  "bus 'PI_2024_10_230.00'"  1.00  ""  ""  ""  0
 "bus 700052"  "open"  1.000000  ""
0
"bus_4181"  "bus '24_10_B_2_34.50'"  1.00  ""  ""  ""  0
 "bus 700053"  "open"  1.000000  ""
0
"bus_4182"  "bus '24_10_B_1_34.50'"  1.00  ""  ""  ""  0
 "bus 700054"  "open"  1.000000  ""
0
# /
# Fri Nov 15 13:58:45 2024
# WECC
```

```
# 2025 HEAVY SUMMER 4 OPERATING BASE CASE
# AUGUST 28, 2024
# Use seasonal ratings 1 and 2
# File to be converted : C:\Comanche 2 Replacement\Work\input\Contingencies\BF.con

# / Breaker Failure - run software element to element, N-1 contingencies, in PSSE/PSLF to simulate some breaker faults not included
# /
# /
# /
"BF_001a"—>"dobe"
 line —>70268—>70233—>"1"→1—>0
 load —>70233—>"P1"—>0
 load —>70233—>"P2"—>0
 line —>70233—>70206—>"1"→1—>0
 line —>70268—>70438—>"1"→1—>0
0
"BF_002a"—>"llison"
 load —>70023—>"P1"—>0
 load —>70023—>"P2"—>0
 line —>70023—>70242—>"1"→1—>0
 load —>70242—>"P1"—>0
 load —>70242—>"P2"—>0
 line —>70242—>70045—>"1"→1—>0
 line —>70023—>70400—>"1"→1—>0
0
"BF_003a"—>"lma"
 line —>70032—>70064—>"1"→1—>0
 line —>70032—>70274—>"1"→1—>0
 load —>70032—>"P1"—>0
0
"BF_004a"—>"Arapahoe 230 bus"
 tran —>70038—>70037—>"T5"—>0—>-1
 line —>70038—>70527—>"1"→1—>0
 load —>70527—>"P1"—>0
 load —>70527—>"P2"—>0
 line —>70527—>70139—>"1"→1—>0
 load —>70141—>"P1"—>0
 load —>70141—>"P2"—>0
 line —>70141—>70149—>"1"→1—>0
 line —>70038—>70149—>"1"→1—>0
 line —>70038—>70189—>"1"→1—>0
0
"BF_004b"—>"Arapahoe_A Sub (Bus 1)"
 isolate —>70036
 line —>70036—>70384—>"1"→1—>0
 load —>70384—>"P1"—>0
 load —>70384—>"P2"—>0
 line —>70384—>70166—>"1"→1—>0
 load —>70166—>"P1"—>0
 line —>70036—>70441—>"1"→1—>0
 load —>70441—>"P1"—>0
 load —>70441—>"P2"—>0
 load —>70441—>"P3"—>0
 line —>70441—>70259—>"1"→1—>0
 line —>70036—>70531—>"1"→1—>0
 line —>70531—>70027—>"1"→1—>0
 load —>70027—>"IN"—>0
 line —>70531—>70402—>"1"→1—>0
 load —>70402—>"P2"—>0
 line —>70402—>70208—>"1"→1—>0
 line —>70036—>70037—>"1"→1—>0
 line —>70036—>70035—>"1"→1—>0
 gen —>70553—>"G5"—>0
 gen —>70553—>"G6"—>0
 load —>70553—>"SS"—>0
 gen —>70554—>"ST"—>0
0
"BF_004c"—>"Arapahoe_B Sub (Bus 2)"
```

```
21354   isolate ⟶70037
21355   svd ⟶70037⟶"v"↦0
21356   tran ⟶70037⟶70038⟶"T5"⟶0⟶-1
21357   line ⟶70037⟶70168⟶"1"↦1⟶0
21358   line ⟶70165⟶70168⟶"1"↦1⟶0
21359   line ⟶70165⟶70263⟶"1"↦1⟶0
21360   load ⟶70263⟶"P1"⟶0
21361   load ⟶70263⟶"P2"⟶0
21362   load ⟶70263⟶"P3"⟶0
21363   load ⟶70279⟶"P1"⟶0
21364   line ⟶70037⟶70036⟶"1"↦1⟶0
21365   line ⟶70037⟶70401⟶"1"↦1⟶0
21366   load ⟶70401⟶"P1"⟶0
21367   line ⟶70401⟶70045⟶"1"↦1⟶0
21368   0
21369   "BF_004d"⟶"Arapahoe_A&B Sub (Buses 1 & 2)"
21370   isolate ⟶70036
21371   line ⟶70036⟶70037⟶"1"↦1⟶0
21372   line ⟶70036⟶70384⟶"1"↦1⟶0
21373   load ⟶70384⟶"P1"⟶0
21374   load ⟶70384⟶"P2"⟶0
21375   line ⟶70384⟶70166⟶"1"↦1⟶0
21376   load ⟶70166⟶"P1"⟶0
21377   line ⟶70036⟶70441⟶"1"↦1⟶0
21378   load ⟶70441⟶"P1"⟶0
21379   load ⟶70441⟶"P2"⟶0
21380   load ⟶70441⟶"P3"⟶0
21381   line ⟶70441⟶70259⟶"1"↦1⟶0
21382   line ⟶70036⟶70531⟶"1"↦1⟶0
21383   line ⟶70531⟶70027⟶"1"↦1⟶0
21384   load ⟶70027⟶"IN"⟶0
21385   line ⟶70531⟶70402⟶"1"↦1⟶0
21386   load ⟶70402⟶"P2"⟶0
21387   line ⟶70402⟶70208⟶"1"↦1⟶0
21388   line ⟶70036⟶70037⟶"1"↦1⟶0
21389   line ⟶70036⟶70035⟶"1"↦1⟶0
21390   gen ⟶70553⟶"G5"⟶0
21391   gen ⟶70553⟶"G6"⟶0
21392   load ⟶70553⟶"SS"⟶0
21393   gen ⟶70554⟶"ST"⟶0
21394   isolate ⟶70037
21395   svd ⟶70037⟶"v"↦0
21396   tran ⟶70037⟶70038⟶"T5"⟶0⟶-1
21397   line ⟶70037⟶70168⟶"1"↦1⟶0
21398   line ⟶70165⟶70168⟶"1"↦1⟶0
21399   line ⟶70165⟶70263⟶"1"↦1⟶0
21400   load ⟶70263⟶"P1"⟶0
21401   load ⟶70263⟶"P2"⟶0
21402   load ⟶70263⟶"P3"⟶0
21403   load ⟶70279⟶"P1"⟶0
21404   line ⟶70037⟶70036⟶"1"↦1⟶0
21405   line ⟶70037⟶70401⟶"1"↦1⟶0
21406   load ⟶70401⟶"P1"⟶0
21407   line ⟶70401⟶70045⟶"1"↦1⟶0
21408   0
21409   "BF_005"⟶"Argo"
21410   line ⟶70039⟶70108⟶"1"↦1⟶0
21411   line ⟶70039⟶70148⟶"1"↦1⟶0
21412   load ⟶70039⟶"IN"⟶0
21413   load ⟶70039⟶"P1"⟶0
21414   load ⟶70039⟶"P2"⟶0
21415   0
21416   "BF_006"⟶"rsenal"
21417   line ⟶70040⟶70153⟶"1"↦1⟶0
21418   line ⟶70153⟶70110⟶"1"↦1⟶0
21419   line ⟶70040⟶70217⟶"1"↦1⟶0
21420   line ⟶70217⟶70538⟶"2"↦1⟶0
21421   0
21422   "BF_007"⟶"Arvada 55092 stuck"
```

```
 line ->70041->70355->"1"->1->0
 line ->70041->70107->"1"->1->0
 load ->70041->"P2"->0
0
"BF_008a"->"Alamosa Terminal"
 line ->70025->700224->"1"->1->0
 line ->700224->70937->"1"->1->0
 load ->70025->"P2"->0
 load ->70025->"P3"->0
 tran ->70025->70486->"U2"->0->-1
 gen ->70486->"G2"->0
0
"BF_008b"->"lamosa 69kV"
 tran ->70026->70025->"T1"->0->-1
 line ->70026->70024->"1"->1->0
 line ->70026->70228->"1"->1->0
 line ->70026->70511->"1"->1->0
 tran ->70026->70485->"U1"->0->-1
0
"BF_009"->"von AV511"
 line ->79092->79006->"1"->1->0
 load ->79092->"HC"->0
0
"BF_010a"->"von 531"
 line ->79092->79006->"1"->1->0
 line ->79092->79066->"1"->1->0
 load ->79092->"HC"->0
0
"BF_010b"->"von 551"
 line ->79092->79066->"1"->1->0
 load ->79092->"HC"->0
0
"BF_011"->"Bancroft->->->"
 line ->70045->70208->"1"->1->0
 line ->70045->70242->"1"->1->0
 load ->70242->"P1"->0
 load ->70242->"P2"->0
 line ->70242->70023->"1"->1->0
 load ->70023->"P1"->0
 load ->70023->"P2"->0
 line ->70023->70400->"1"->1->0
 line ->70045->70401->"1"->1->0
 load ->70401->"P1"->0
 line ->70401->70037->"1"->1->0
0
"BF_012a"->"CB182/282 Barr Lk/Knutson 1 & 2"
 line ->70047->70489->"1"->1->0
 gen ->70565->"G1"->0
 gen ->70566->"G2"->0
0
"BF_012b"->"5755 Barr Lk - Green Valley / Brighton Units 1 & 2"
 line ->70047->70048->"1"->1->0
 line ->70047->70489->"1"->1->0
 gen ->70565->"G1"->0
 gen ->70566->"G2"->0
0
"BF_012c"->"5756 Barr Lk - Reunion / Brighton Units 1 & 2"
 line ->70047->72026->"1"->1->0
 line ->70047->70489->"1"->1->0
 gen ->70565->"G1"->0
 gen ->70566->"G2"->0
0
"BF_012d"->"Barr Lake 5750 stuck"
 load ->70047->"P1"->0
 load ->70047->"P2"->0
 load ->70047->"TS"->0
0
"BF_012e"->"Barr Lake 5759 stuck"
 line ->70047->70048->"1"->1->0
```

```
 load ⟶70047⟶"P2"⟶⟶0
 load ⟶70047⟶"TS"⟶⟶0
0
"BF_012f"⟶"Barr Lake 5875 stuck"
 line ⟶70047⟶72026⟶"1"⟶1⟶⟶0
 load ⟶70047⟶"P1"⟶⟶0
0
"BF_013a"⟶"Basalt 230 kV B211 stuck"
 line ⟶70274⟶79004⟶"1"⟶1⟶⟶0
 tran ⟶79004⟶79003⟶"T2"⟶⟶0⟶⟶71985
0
"BF_013b"⟶"Basalt 230 kV B221 stuck"
 line ⟶70274⟶79004⟶"1"⟶1⟶⟶0
 tran ⟶79003⟶79004⟶"T1"⟶⟶0⟶⟶-1
0
"BF_013c"⟶"Basalt 230 kV B231 stuck"
 line ⟶70535⟶79004⟶"1"⟶1⟶⟶0
 tran ⟶79003⟶79004⟶"T1"⟶⟶0⟶⟶-1
0
"BF_013d"⟶"Basalt 230 kV B241 stuck"
 line ⟶70535⟶79004⟶"1"⟶1⟶⟶0
 tran ⟶79004⟶79003⟶"T2"⟶⟶0⟶⟶71985
0
"BF_013e"⟶"Basalt 115 Sub"
 line ⟶79003⟶70231⟶"1"⟶1⟶⟶0
 line ⟶79003⟶79018⟶"1"⟶1⟶⟶0
 load ⟶79018⟶"HC"⟶⟶0
 line ⟶79003⟶70541⟶"1"⟶1⟶⟶0
 line ⟶79003⟶70540⟶"1"⟶1⟶⟶0
 tran ⟶79004⟶79003⟶"T2"⟶⟶0⟶⟶71985
 tran ⟶79003⟶79004⟶"T1"⟶⟶0⟶⟶-1
0
"BF_013f"⟶"Basalt Distr - Basalt/Snowmass"
 line ⟶70540⟶79003⟶"1"⟶1⟶⟶0
 line ⟶70540⟶70542⟶"1"⟶1⟶⟶0
 load ⟶70540⟶"HC"⟶⟶0
0
"BF_014a"⟶"Beaver Creek PS 115 North bus"
 line ⟶70398⟶70006⟶"1"⟶1⟶⟶0
 line ⟶70398⟶70397⟶"1"⟶1⟶⟶0
 tran ⟶70398⟶70399⟶"T1"⟶⟶0⟶⟶-1
 line ⟶70399⟶73192⟶"1"⟶1⟶⟶0
# ⟶⟶⟶/remove load P5 from bus 70398
0
"BF_014b"⟶"Beaver Creek PS 115 South bus"
 line ⟶70397⟶73020⟶"1"⟶1⟶⟶0
 line ⟶70397⟶70005⟶"2"⟶1⟶⟶0
 line ⟶70397⟶70398⟶"1"⟶1⟶⟶0
 load ⟶70397⟶"P5"⟶⟶0
0
"BF_014c"⟶"Beaver Creek PS 115 Bus Tie"
 line ⟶70398⟶70006⟶"1"⟶1⟶⟶0
 tran ⟶70398⟶70399⟶"T1"⟶⟶0⟶⟶-1
 line ⟶70399⟶73192⟶"1"⟶1⟶⟶0
 load ⟶70398⟶"P2"⟶⟶0
 line ⟶70397⟶70398⟶"1"⟶1⟶⟶0
 line ⟶70397⟶70005⟶"2"⟶1⟶⟶0
 line ⟶70397⟶73020⟶"1"⟶1⟶⟶0
 load ⟶70397⟶"P5"⟶⟶0
0
"BF_014d"⟶"9409 Beaver Creek WAPA"
 line ⟶73020⟶70397⟶"1"⟶1⟶⟶0
 line ⟶70397⟶70005⟶"2"⟶1⟶⟶0
 line ⟶70397⟶70398⟶"1"⟶1⟶⟶0
 load ⟶70397⟶"P5"⟶⟶0
 line ⟶73020⟶73003⟶"1"⟶1⟶⟶0
 line ⟶73020⟶73015⟶"1"⟶1⟶⟶0
 tran ⟶73015⟶73016⟶"1"⟶0⟶⟶-1
 line ⟶73020⟶73031⟶"1"⟶1⟶⟶0
```

```
 line ⟶73020⟶73065⟶"1"↦1⟶0
 line ⟶73020⟶73136⟶"1"↦1⟶0
 line ⟶73020⟶73464⟶"1"↦1⟶0
 svd ⟶73020⟶"v"↦0
0
"BF_014e"⟶"Beaver Creek West 115 kV Sub"
 line ⟶79006⟶77643⟶"1"↦1⟶0
 line ⟶79006⟶79092⟶"1"↦1⟶0
 load ⟶79006⟶"HC"⟶0
0
"BF_015a"⟶"205 Boulder Canyon Swyd Bus 1"
 line ⟶70423⟶70295⟶"1"↦1⟶0
 line ⟶70295⟶70164⟶"1"↦1⟶0
 line ⟶70423⟶70058⟶"1"↦1⟶0
 load ⟶70423⟶"P3"⟶0
 load ⟶70295⟶"P1"⟶0
 load ⟶70295⟶"P2"⟶0
0
"BF_015b"⟶"216 Boulder Canyon Swyd Bus 2"
 line ⟶70058⟶70423⟶"1"↦1⟶0
 line ⟶70058⟶70424⟶"1"↦1⟶0
 line ⟶70424⟶70059⟶"1"↦1⟶0
 load ⟶70424⟶"P1"⟶0
0
"BF_015c"⟶"200 Boulder Canyon Swyd Bus tie"
 line ⟶70423⟶70058⟶"1"↦1⟶0
 line ⟶70423⟶70295⟶"1"↦1⟶0
 line ⟶70295⟶70164⟶"1"↦1⟶0
 load ⟶70423⟶"P3"⟶0
 load ⟶70295⟶"P1"⟶0
 load ⟶70295⟶"P2"⟶0
 line ⟶70058⟶70424⟶"1"↦1⟶0
 line ⟶70424⟶70059⟶"1"↦1⟶0
 load ⟶70424⟶"P1"⟶0
0
"BF_016"⟶"Bighorn Solar"
 line ⟶70122⟶70875⟶"1"↦1⟶0
0
"BF_017a"⟶"Blanca Peak 9431"
 line ⟶70937⟶700224⟶"1"↦1⟶0
 line ⟶700224⟶70025⟶"1"↦1⟶0
 line ⟶70937⟶70374⟶"1"↦1⟶0
0
"BF_017b"⟶"Blanca Peak 9430"
 line ⟶70937⟶70374⟶"1"↦1⟶0
 line ⟶70937⟶700180⟶"1"↦1⟶0
# /↦⟶remove load SS from bus 70933
 gen ⟶70933⟶"S1"⟶0
0
"BF_017c"⟶"Blanca Peak 9433"
 line ⟶70937⟶700224⟶"1"↦1⟶0
 line ⟶700224⟶70025⟶"1"↦1⟶0
 line ⟶70937⟶700180⟶"1"↦1⟶0
# /↦⟶remove load SS from bus 70933
 gen ⟶70933⟶"S1"⟶0
0
"BF_018a"⟶"Blue River 8055 stuck"
 line ⟶70052⟶70287⟶"1"↦1⟶0
0
"BF_018b"⟶"Blue River 8351 stuck"
 tran ⟶70052⟶70053⟶"T1"⟶0⟶-1
0
"BF_018c"⟶"Blue River 5533 stuck"
 tran ⟶70053⟶70052⟶"T1"⟶0⟶-1
 line ⟶70053⟶70088⟶"1"↦1⟶0
0
"BF_018d"⟶"Blue River 5534 stuck"
 line ⟶70053⟶70088⟶"1"↦1⟶0
 line ⟶70053⟶70057⟶"1"↦1⟶0
```

```
0
"BF_018e"⟶"Blue River 5567 stuck"
 tran ⟶70052⟶70053⟶"T1"⟶0⟶-1
 line ⟶70053⟶70057⟶"1"⟶1⟶0
0
"BF_019a"⟶"Boone 115kV Bus"
 line ⟶70060⟶70022⟶"1"⟶1⟶0
 line ⟶70060⟶70159⟶"1"⟶1⟶0
 line ⟶70060⟶70247⟶"1"⟶1⟶0
 line ⟶70060⟶70249⟶"1"⟶1⟶0
 line ⟶70060⟶71027⟶"1"⟶1⟶0
 tran ⟶70061⟶70060⟶"T1"⟶0⟶71981
 tran ⟶70060⟶70062⟶"T1"⟶0⟶-1
0
"BF_019b"⟶"Boone 5335"
 tran ⟶70061⟶70060⟶"T1"⟶0⟶71981
0
"BF_019c"⟶"Boone 5415"
 tran ⟶70061⟶70060⟶"T1"⟶0⟶71981
0
"BF_019d"⟶"oone 5336"
 line ⟶70061⟶70254⟶"1"⟶1⟶0
0
"BF_019e"⟶"oone 5337"
 line ⟶70061⟶70254⟶"1"⟶1⟶0
0
"BF_020"⟶"Brecktenridge"
 line ⟶70064⟶70032⟶"1"⟶1⟶0
 line ⟶70032⟶70274⟶"1"⟶1⟶0
 line ⟶70064⟶70156⟶"1"⟶1⟶0
 load ⟶70032⟶"P1"⟶0
 load ⟶70064⟶"P1"⟶0
 load ⟶70064⟶"P2"⟶0
 load ⟶70064⟶"P3"⟶0
0
"BF_021a"⟶"Brickt Center - Pawnee/Smoky Hill 5165"
 line ⟶70545⟶70311⟶"1"⟶1⟶0
 line ⟶70545⟶70343⟶"1"⟶1⟶0
 load ⟶70343⟶"NT"⟶0
 load ⟶70343⟶"P1"⟶0
 line ⟶70343⟶70396⟶"1"⟶1⟶0
0
"BF_021b"⟶"Brickt Center - Pawnee / 230/115 T1 5781"
 line ⟶70545⟶70311⟶"1"⟶1⟶0
 tran ⟶70545⟶70546⟶"T1"⟶0⟶-1
0
"BF_021c"⟶"Brickt Center - Smoky Hill / 230/115 T1 5780"
 line ⟶70545⟶70343⟶"1"⟶1⟶0
 load ⟶70343⟶"NT"⟶0
 load ⟶70343⟶"P1"⟶0
 line ⟶70343⟶70396⟶"1"⟶1⟶0
 tran ⟶70545⟶70546⟶"T1"⟶0⟶-1
0
"BF_022"⟶"Broomfield"
 isolate ⟶70065
 load ⟶70065⟶"P1"⟶0
 load ⟶70065⟶"P2"⟶0
 load ⟶70065⟶"P3"⟶0
 svd ⟶70065⟶"v"⟶0
 line ⟶70065⟶70269⟶"1"⟶1⟶0
 load ⟶70269⟶"P1"⟶0
 load ⟶70269⟶"P2"⟶0
 line ⟶70269⟶70444⟶"1"⟶1⟶0
 line ⟶70065⟶70382⟶"1"⟶1⟶0
 line ⟶70065⟶70440⟶"1"⟶1⟶0
 line ⟶70065⟶70174⟶"1"⟶1⟶0
 line ⟶70174⟶70110⟶"1"⟶1⟶0
 load ⟶70174⟶"P2"⟶0
 load ⟶70174⟶"P3"⟶0
```

```
0
"BF_023"——>"rush SS and Brush 4"
 isolate ——>70005
 isolate ——>70006
 line ——>70005——>70006——>"1"->1——>0
 line ——>70005——>70397——>"2"->1——>0
 gen ——>70498——>"G3"——>0
 gen ——>70498——>"ST"——>0
 load ——>70498——>"SS"——>0
 gen ——>70499——>"G4"——>0
 gen ——>70499——>"G5"——>0
 load ——>70499——>"SS"——>0
 gen ——>70556——>"ST"——>0
 load ——>70556——>"SS"——>0
 gen ——>70500——>"G1"——>0
 gen ——>70500——>"G2"——>0
 load ——>70500——>"SS"——>0
 gen ——>70501——>"ST"——>0
 load ——>70501——>"SS"——>0
0
"BF_024a"——>" Boulder Term Bus 3 "
 line ——>70034——>70444——>"2"->1——>0
 load ——>70034——>"P3"——>0
 svd ——>70034——>"v"->0
0
"BF_024b"——>"Boulder Term Buses 2 & 3"
 line ——>70034——>70444——>"2"->1——>0
 load ——>70034——>"P3"——>0
 svd ——>70034——>"v"->0
 line ——>70034——>70033——>"1"->1——>0
 load ——>70033——>"P2"——>0
 line ——>70033——>70059——>"1"->1——>0
0
"BF_024c"——>"oulder Term Buses 1 & 2"
 line ——>70059——>70440——>"1"->1——>0
 line ——>70059——>70424——>"1"->1——>0
 line ——>70033——>70059——>"1"->1——>0
 line ——>70424——>70058——>"1"->1——>0
 load ——>70033——>"P2"——>0
 load ——>70059——>"P1"——>0
0
"BF_024d"——>"Boulder Term Bus 1 "
 line ——>70059——>70440——>"1"->1——>0
 line ——>70059——>70424——>"1"->1——>0
 line ——>70424——>70058——>"1"->1——>0
 load ——>70059——>"P1"——>0
0
"BF_025a"——>"Cabin Ck 230 Sub"
 isolate ——>70072
 line ——>70072——>70266——>"1"->1——>0
 line ——>70072——>70237——>"1"->1——>0
 line ——>70237——>70266——>"1"->1——>0
 line ——>70072——>70156——>"1"->1——>0
 tran ——>70072——>70071——>"T1"——>0——>-1
 tran ——>70072——>70071——>"T2"——>0——>-1
 tran ——>70072——>70069——>"UA"——>0——>-1
 tran ——>70072——>70070——>"UB"——>0——>-1
 gen ——>70069——>"HA"——>0
 gen ——>70070——>"HB"——>0
0
"BF_025b"——>"Cabin Ck 115 Sub"
 isolate ——>70071
 tran ——>70072——>70071——>"T1"——>0——>-1
 tran ——>70072——>70071——>"T2"——>0——>-1
 line ——>70071——>70197——>"1"->1——>0
 line ——>70197——>70218——>"1"->1——>0
0
"BF_026"——>"Cameo 230 kV"
 line ——>70078——>70438——>"1"->1——>0
```

```
 tran ->70078->70076->"T5"->0->71989
 svd ->70078->"v"->0
 line ->70078->70264->"1"->1->0
 line ->70264->70309->"1"->1->0
0
"BF_027a"->"Capitol Hill 9561 stuck"
 line ->70087->70182->"1"->1->0
0
"BF_027b"->"Capitol Hill 9547 stuck"
 line ->70087->70074->"1"->1->0
 line ->70074->70177->"1"->1->0
 line ->70177->70276->"1"->1->0
 line ->70276->70108->"2"->1->0
0
"BF_027c"->"Capitol Hill 9562 stuck"
 line ->70087->70074->"1"->1->0
 line ->70074->70177->"1"->1->0
 line ->70177->70276->"1"->1->0
 line ->70276->70108->"2"->1->0
0
"BF_027d"->"Capitol Hill 9007 stuck"
 line ->70087->70148->"1"->1->0
0
"BF_027e"->"Capitol Hill 9569 stuck"
 line ->70087->70148->"1"->1->0
0
"BF_027f"->"Capitol Hill 9956 stuck"
 line ->70087->70182->"1"->1->0
0
"BF_028"->"Castle Rockt Sub"
 line ->70020->70308->"1"->1->0
 line ->70091->70584->"1"->1->0
 load ->70584->"CR"->0
 line ->70584->70582->"1"->1->0
 load ->70582->"CR"->0
 line ->70582->70308->"1"->1->0
 line ->70021->70117->"1"->1->0
 line ->70091->71506->"1"->1->0
 line ->70091->70020->"1"->1->0
 line ->71506->70518->"1"->1->0
 line ->71502->71501->"1"->1->0
 line ->71502->70519->"1"->1->0
 line ->70519->70091->"1"->1->0
0
"BF_029a"->"edar Creek Cap Bank"
 line ->70822->70820->"1"->1->0
 line ->70822->70821->"1"->1->0
0
"BF_029b"->"edar Creek SWYD and 1"
 line ->70821->70822->"1"->1->0
 line ->70821->70833->"1"->1->0
 tran ->70821->70823->"U1"->0->-1
 gen ->70823->"W1"->0
 load ->70823->"SS"->0
 tran ->70821->70824->"U2"->0->-1
 gen ->70824->"W2"->0
0
"BF_029c"->"F&I Southeast 2"
 line ->70098->70123->"1"->1->0
 tran ->70098->70097->"T2"->0->-1
 load ->70097->"IN"->0
0
"BF_030"->"F&I Southeast 1"
 line ->70096->70121->"1"->1->0
 tran ->70096->70095->"T1"->0->-1
 load ->70095->"IN"->0
0
"BF_031a"->"Chambers 5912 stuck"
 line ->70539->70536->"1"->1->0
```

```
 tran ⟶70539⟶70538⟶"T1"⟶0⟶-1
0
"BF_031b"⟶"Chambers 5911 stuck"
 tran ⟶70539⟶70538⟶"T1"⟶0⟶-1
 line ⟶70539⟶70432⟶"1"⟶1⟶0
 load ⟶70432⟶"P1"⟶0
 load ⟶70432⟶"P2"⟶0
 line ⟶70432⟶70530⟶"1"⟶1⟶0
 load ⟶70530⟶"P1"⟶0
 line ⟶70530⟶70528⟶"1"⟶1⟶0
0
"BF_031c"⟶"Chambers 5185 stuck"
 tran ⟶70539⟶70538⟶"T2"⟶0⟶-1
 line ⟶70539⟶70536⟶"1"⟶1⟶0
0
"BF_031d"⟶"Chambers 5187 stuck"
 line ⟶70539⟶70432⟶"1"⟶1⟶0
 load ⟶70432⟶"P1"⟶0
 load ⟶70432⟶"P2"⟶0
 line ⟶70432⟶70530⟶"1"⟶1⟶0
 load ⟶70530⟶"P1"⟶0
 line ⟶70530⟶70528⟶"1"⟶1⟶0
 tran ⟶70539⟶70538⟶"T2"⟶0⟶-1
0
"BF_031e"⟶"Chambers 9544 stuck"
 tran ⟶70538⟶70539⟶"T1"⟶0⟶-1
 line ⟶70538⟶70216⟶"1"⟶1⟶0
 line ⟶70216⟶70154⟶"1"⟶1⟶0
 line ⟶70154⟶70110⟶"1"⟶1⟶0
0
"BF_031f"⟶"Chambers 9234 stuck"
 line ⟶70538⟶70216⟶"1"⟶1⟶0
 line ⟶70216⟶70154⟶"1"⟶1⟶0
 line ⟶70154⟶70110⟶"1"⟶1⟶0
 line ⟶70538⟶70162⟶"1"⟶1⟶0
0
"BF_031g"⟶"Chambers 9175 stuck"
 tran ⟶70538⟶70539⟶"T2"⟶0⟶-1
 line ⟶70538⟶70162⟶"1"⟶1⟶0
0
"BF_031h"⟶"Chambers 9178 stuck"
 line ⟶70538⟶70537⟶"1"⟶1⟶0
 load ⟶70537⟶"P1"⟶0
 load ⟶70537⟶"P2"⟶0
 line ⟶70537⟶70162⟶"1"⟶1⟶0
 tran ⟶70538⟶70539⟶"T2"⟶0⟶-1
0
"BF_031i"⟶"Chambers 9236 stuck"
#   /open branch from bus 70538 to bus 70162 ckt 1
 line ⟶70538⟶70537⟶"1"⟶1⟶0
 line ⟶70537⟶70162⟶"1"⟶1⟶0
 line ⟶70538⟶70216⟶"1"⟶1⟶0
 line ⟶70216⟶70154⟶"1"⟶1⟶0
 line ⟶70154⟶70110⟶"1"⟶1⟶0
0
"BF_031j"⟶"Chambers 9543 stuck"
 line ⟶70538⟶70216⟶"1"⟶1⟶0
 line ⟶70216⟶70154⟶"1"⟶1⟶0
 line ⟶70154⟶70110⟶"1"⟶1⟶0
 tran ⟶70538⟶70539⟶"T1"⟶0⟶-1
0
"BF_032"⟶"hatfield"
 line ⟶70100⟶70018⟶"1"⟶1⟶0
 load ⟶70100⟶"P1"⟶0
 load ⟶70100⟶"P2"⟶0
 line ⟶70100⟶70464⟶"1"⟶1⟶0
0
# ///Cherokee 230 kV
"BF_033a"⟶"5051 Cherokee"
```

```
 tran ->70107->70108->"T1"->0->-1
0
"BF_033b"->"5052 Cherokee - 230/115 T1 & Lacombe"
 tran ->70107->70108->"T1"->0->-1
 line ->70107->70324->"1"->1->0
0
"BF_033c"->"5040 or 5044 Cherokee"
 tran ->70107->70110->"T2"->0->-1
0
"BF_033d"->"5054 Cherokee - Ridge (Arvada)"
 line ->70107->70041->"1"->1->0
 load ->70041->"P1"->0
 load ->70041->"P2"->0
 line ->70041->70355->"1"->1->0
0
"BF_033e"->"5056 Cherokee JL Green - Ridge"
 line ->70107->70200->"1"->1->0
 load ->70200->"P1"->0
 load ->70200->"P2"->0
 load ->70200->"P3"->0
 line ->70200->70461->"1"->1->0
 load ->70461->"P1"->0
 load ->70461->"P2"->0
 load ->70461->"P3"->0
 line ->70461->70529->"1"->1->0
 line ->70107->70369->"1"->1->0
 load ->70369->"P1"->0
 load ->70369->"P2"->0
 line ->70369->70355->"1"->1->0
0
"BF_033f"->"5058 Cherokee - Henry Lk & Cherokee - Silver Saddle"
 line ->70107->70362->"1"->1->0
 load ->70362->"P1"->0
 load ->70362->"P2"->0
 line ->70362->70605->"1"->1->0
 line ->70107->70609->"1"->1->0
 load ->70609->"TS"->0
 line ->70609->72026->"1"->1->0
0
"BF_033g"->"5309 Cherokee - Henry Lake"
 line ->70107->70362->"1"->1->0
 load ->70362->"P1"->0
 load ->70362->"P2"->0
 line ->70362->70605->"1"->1->0
0
"BF_033h"->"021 Cherokee - Russell-Ridge"
 line ->70107->70369->"1"->1->0
 load ->70369->"P1"->0
 load ->70369->"P2"->0
 line ->70369->70355->"1"->1->0
0
"BF_033i"->"067 Cherokee - Arvada - Ridge"
 line ->70107->70041->"1"->1->0
 load ->70041->"P1"->0
 load ->70041->"P2"->0
 line ->70041->70355->"1"->1->0
0
"BF_033j"->"057 Cherokee - Lacombe"
 line ->70107->70324->"1"->1->0
0
"BF_033k"->"5055 Cherokee - Silver Saddle"
 line ->70107->70609->"1"->1->0
 line ->70609->72026->"1"->1->0
 load ->70609->"TS"->0
0
"BF_033l"->"5527 Cherokee - JL Green"
 line ->70107->70200->"1"->1->0
 load ->70200->"P1"->0
 load ->70200->"P2"->0
```

```
 load ->70200->"P3"->0
 line ->70200->70461->"1"->1->0
 load ->70461->"P1"->0
 load ->70461->"P2"->0
 load ->70461->"P3"->0
 line ->70461->70529->"1"->1->0
0
# ///Cherokee 115kV North
"BF_033m"->"9519 or 9529 Cherokee"
 tran ->70110->70107->"T2"->0->-1
0
"BF_033n"->"Cherokee - Chambers (#9543)"
 line ->70110->70154->"1"->1->0
 load ->70154->"P2"->0
 line ->70154->70216->"1"->1->0
 load ->70216->"P1"->0
 line ->70216->70538->"1"->1->0
0
"BF_033o"->"Cherokee - Chambers (#9544)/Broomfield"
 line ->70110->70153->"1"->1->0
 load ->70153->"P1"->0
 line ->70153->70040->"1"->1->0
 line ->70040->70217->"1"->1->0
 load ->70217->"P2"->0
 load ->70217->"P3"->0
 line ->70217->70538->"2"->1->0
0
"BF_033p"->"549 Cherokee - Sandown"
 line ->70110->70126->"1"->1->0
 load ->70126->"IN"->0
0
"BF_033q"->"548 Cherokee - Thornton"
 line ->70110->70494->"1"->1->0
 line ->70494->70099->"1"->1->0
 load ->70099->"P1"->0
 line ->70099->70081->"1"->1->0
 load ->70081->"TS"->0
 line ->70081->70307->"1"->1->0
 load ->70307->"TS"->0
 line ->70307->70090->"1"->1->0
0
"BF_033r"->"558 Cherokee - Broomfield"
 line ->70110->70174->"1"->1->0
 load ->70174->"P2"->0
 load ->70174->"P3"->0
 line ->70174->70065->"1"->1->0
0
"BF_033s"->"055 Cherokee - Semper"
 line ->70110->70175->"2"->1->0
 load ->70175->"P1"->0
 line ->70175->70382->"1"->1->0
0
"BF_033t"->"523 Cherokee"
 line ->70110->70154->"1"->1->0
 load ->70154->"P2"->0
 line ->70154->70216->"1"->1->0
 load ->70216->"P1"->0
 line ->70216->70538->"1"->1->0
 line ->70110->70494->"1"->1->0
 line ->70494->70099->"1"->1->0
 load ->70099->"P1"->0
 line ->70099->70081->"1"->1->0
 load ->70081->"TS"->0
 line ->70081->70307->"1"->1->0
 load ->70307->"TS"->0
 line ->70307->70090->"1"->1->0
0
"BF_033u"->"522 Cherokee"
 line ->70110->70153->"1"->1->0
```

```
 load →70153→"P1"→0
 line →70153→70040→"1"→1→0
 line →70040→70217→"1"→1→0
 load →70217→"P2"→0
 load →70217→"P3"→0
 line →70217→70538→"2"→1→0
 line →70110→70174→"1"→1→0
 load →70174→"P2"→0
 load →70174→"P3"→0
 line →70174→70065→"1"→1→0
0
"BF_033v"→"521 Cherokee"
 line →70110→70126→"1"→1→0
 load →70126→"IN"→0
 line →70110→70175→"2"→1→0
 load →70175→"P1"→0
 line →70175→70382→"1"→1→0
0
# //9515 and 9514 contingencies
# ///Cherokee 115kV South
"BF_033w"→"511 or 9538 Cherokee"
 tran →70108→70107→"T1"→0→-1
0
"BF_033x"→"537 or 9413 Cherokee - Argo"
 line →70108→70039→"1"→1→0
0
"BF_033y"→"536 Cherokee - North and Cap Hill→→→→→→→"
 line →70108→70298→"1"→1→0
 line →70108→70276→"2"→1→0
 load →70276→"P1"→0
 line →70276→70177→"1"→1→0
 line →70177→70074→"1"→1→0
 line →70074→70087→"1"→1→0
0
"BF_033z"→"535 Cherokee - Sandown and Harrison"
 load →70073→"P1"→0
 load →70073→"P2"→0
 load →70073→"P3"→0
# /→open branch from bus 70073 to bus 70182→ckt 1
 line →70108→70277→"1"→1→0
 load →70277→"P2"→0
0
"BF_033aa"→"541 Cherokee - North"
 line →70108→70298→"1"→1→0
0
"BF_033ab"→"547 Cherokee - Capitol Hill"
 line →70108→70276→"2"→1→0
 load →70276→"P1"→0
 line →70276→70177→"1"→1→0
 line →70177→70074→"1"→1→0
 line →70074→70087→"1"→1→0
0
"BF_033ac"→"546 Cherokee - Sandown"
 line →70108→70277→"1"→1→0
 load →70277→"P2"→0
0
"BF_033ad"→"542 Cherokee - Harrison"
 load →70073→"P1"→0
 load →70073→"P2"→0
 load →70073→"P3"→0
 line →70073→70182→"1"→1→0
0
"BF_033ae"→"526 Cherokee - CTG6"
 tran →70108→70146→"U6"→0→-1
 gen →70146→"G6"→0
 gen →70147→"ST"→1→pgen →115.00
0
"BF_033af"→"550, 9500, 9530, 9540 Cherokee"
 svd →70108→"v"→0
```

```
0
"BF_033ag"→"555 or 9525 Cherokee"
 tran →70108→70145→"U5"→0→-1
 gen →70145→"G5"→0
 load →70145→"SS"→0
 gen →70147→"ST"→1→pgen →115.00
0
"BF_033ah"→"9527 or 9557 Cherokee"
 tran →70108→70147→"U7"→0→-1
 gen →70147→"ST"→0
0
"BF_033ai"→"9532 or 9502 Cherokee"
 tran →70108→70104→"U2"→0→-1
 gen →70104→"SC"→0
 load →70104→"SS"→0
0
"BF_034"→"Cheyenne Ridge West - Shortgrass"
 line →70632→70918→"1"→1→0
0
"BF_035"→"lark Sub"
 line →70112→70212→"1"→1→0
 line →70112→70241→"1"→1→0
 load →70112→"P1"→0
 load →70112→"P2"→0
 load →70112→"P3"→0
0
"BF_036"→"lifton"
 line →70113→70205→"1"→1→0
 line →70113→70206→"1"→1→0
 load →70113→"P1"→0
 load →70113→"P2"→0
0
"BF_037"→"Climax Sub"
 line →70114→70257→"1"→1→0
 load →70257→"P1"→0
 line →70257→70273→"1"→1→0
 line →70114→70281→"1"→1→0
 line →70114→70364→"1"→1→0
 line →70364→70199→"1"→1→0
 load →70199→"P1"→0
# →/open branch from bus 70199 to bus 79092 ckt 1
 line →70364→70258→"1"→1→0
 load →70258→"P2"→0
 line →70258→70273→"1"→1→0
 tran →70274→70273→"T2"→0→71983
 tran →70274→70273→"T1"→0→71982
0
"BF_038a"→"Collbran Sub - Molina C811 or C362"
 line →79173→79174→"1"→1→0
 line →79173→79175→"1"→1→0
 load →79047→"GV"→0
0
"BF_038b"→"ollbran - Rifle Ute C831"
 tran →79047→79173→"T2"→0→-1
 line →79047→79056→"1"→1→0
 load →79047→"GV"→0
0
"BF_038c"→"ollbran - Grand Junction Ute C481"
 line →79047→79035→"1"→1→0
 load →79047→"GV"→0
0
# ///Comanche 345
"BF_039a"→"Comanche - Tundra (#7017) & swshunt"
 line →70654→70653→"2"→1→0
 svd →70654→"v"→0
0
"BF_039b"→"omanche - Daniels Park & Gen 3 #7014"
 line →70654→70653→"2"→1→0
 tran →70654→70777→"U1"→0→-1
```

```
 gen ⟶70777⟶"C3"⟶⟶0
 load ⟶70777⟶"SS"⟶⟶0
0
"BF_039c"⟶"omanche - Gen 3 # 7019 or 7013"
 tran ⟶70654⟶70777⟶"U1"⟶⟶0⟶-1
 gen ⟶70777⟶"C3"⟶⟶0
 load ⟶70777⟶"SS"⟶⟶0
0
"BF_039d"⟶"omanche - Tundra and swshunt # 7015"
 line ⟶70654⟶70653⟶"1"⟶1⟶⟶0
 svd ⟶70654⟶"v"⟶0
0
"BF_039e"⟶"Comanche - Tundra and 345/230 ckt T4 #7012"
 line ⟶70654⟶70653⟶"1"⟶1⟶⟶0
 tran ⟶70654⟶70122⟶"T4"⟶⟶0⟶-1
0
"BF_039f"⟶"omanche - 345/230 ckt T4 #7024"
 tran ⟶70654⟶70122⟶"T4"⟶⟶0⟶-1
0
"BF_039g"⟶"Comanche - swshunt and ckt T3 # 7023"
 tran ⟶70654⟶70122⟶"T3"⟶⟶0⟶-1
 svd ⟶70654⟶"v"⟶0
0
"BF_039h"⟶"Comanche - T3 # 7010"
 tran ⟶70654⟶70122⟶"T3"⟶⟶0⟶-1
0
# ///Comanche 230
"BF_039i"⟶"Comanche 230/345 kV T3 & 230/115 kV T2 #5418"
 tran ⟶70122⟶70654⟶"T3"⟶⟶0⟶-1
 tran ⟶70122⟶70123⟶"T2"⟶⟶0⟶-1
0
"BF_039j"⟶"Comanche 230/345 kV T4 & Unit 2 #5402"
 tran ⟶70122⟶70654⟶"T4"⟶⟶0⟶-1
 tran ⟶70122⟶70120⟶"U2"⟶⟶0⟶-1
0
"BF_039k"⟶"Comanche - Midway PS/CF&I Furnace #5410"
 line ⟶70122⟶70286⟶"1"⟶1⟶⟶0
 line ⟶70122⟶70094⟶"1"⟶1⟶⟶0
 load ⟶70094⟶"IN"⟶⟶0
0
"BF_039m"⟶"Comanche 115/230 T1 / CF&I SE1/Reader (#9986)"
 tran ⟶70121⟶70122⟶"T1"⟶⟶0⟶-1
 line ⟶70121⟶70096⟶"1"⟶1⟶⟶0
 line ⟶70121⟶70352⟶"1"⟶1⟶⟶0
0
"BF_039n"⟶"Comanche 115/230 T2 / Reader (#9984)/CF&I SE2"
 tran ⟶70123⟶70122⟶"T2"⟶⟶0⟶-1
 line ⟶70123⟶70352⟶"2"⟶1⟶⟶0
 line ⟶70123⟶70098⟶"1"⟶1⟶⟶0
0
"BF_039o"⟶"Comanche 115 Bus tie"
 line ⟶70121⟶70123⟶"1"⟶1⟶⟶0
 tran ⟶70121⟶70122⟶"T1"⟶⟶0⟶-1
 line ⟶70121⟶70096⟶"1"⟶1⟶⟶0
 tran ⟶70096⟶70095⟶"T1"⟶⟶0⟶-1
 load ⟶70095⟶"IN"⟶⟶0
 line ⟶70121⟶70352⟶"1"⟶1⟶⟶0
 tran ⟶70123⟶70122⟶"T2"⟶⟶0⟶-1
 line ⟶70123⟶70352⟶"2"⟶1⟶⟶0
 line ⟶70123⟶70098⟶"1"⟶1⟶⟶0
 tran ⟶70098⟶70097⟶"T2"⟶⟶0⟶-1
 load ⟶70097⟶"IN"⟶⟶0
0
"BF_040"⟶"onoco South"
 line ⟶70126⟶70110⟶"1"⟶1⟶⟶0
0
"BF_041"⟶"Cooley Mesa"
 line ⟶70535⟶79004⟶"1"⟶1⟶⟶0
 line ⟶70535⟶79069⟶"1"⟶1⟶⟶0
```

```
 load ->70535->"HC"->0
 load ->70535->"NT"->0
0
# ///Craig 345 kv
"BF_042a"->"raig 896"
 line ->79014->72720->"1"->1->0
 line ->72720->79266->"1"->1->0
 line ->79014->73012->"1"->1->0
0
"BF_042b"->"raig 296"
 line ->79014->65193->"1"->1->0
 tran ->79014->79013->"1"->0->-1
0
"BF_042c"->"Craig 596"
 tran ->79014->79017->"1"->0->-1
 gen ->79017->"1"->0
 tran ->79014->79013->"2"->0->-1
0
# ///Craig 230
"BF_042d"->"raig 286"
 tran ->79013->79014->"1"->0->-1
 line ->79013->79039->"2"->1->0
0
"BF_042e"->"raig 886"
 line ->79013->79142->"1"->1->0
 line ->79013->79059->"1"->1->0
0
"BF_042f"->"raig 586"
 tran ->79013->79014->"2"->0->-1
 tran ->79013->79016->"1"->0->-1
 gen ->79016->"1"->0
0
"BF_042g"->"raig 1186"
 line ->79013->70009->"1"->1->0
 tran ->79013->79015->"1"->0->-1
# /->->remove machine 1 from bus 79015
# /->->remove load SS from bus 79015
0
"BF_043"->"rowfoot Valley"
 line ->70117->70115->"1"->1->0
 line ->70117->70021->"1"->1->0
 load ->70117->"CR"->0
0
"BF_044"->"Dakota"
 line ->70141->70149->"1"->1->0
 load ->70141->"P1"->0
 load ->70141->"P2"->0
0
# ///Daniels Park 345
"BF_045a"->"aniels Park 7030"
 tran ->70601->70139->"T3"->0->-1
 svd ->70601->"v"->0
0
"BF_045b"->"Daniels Park 7032 stuck"
 tran ->70601->70139->"T4"->0->-1
 line ->70601->70653->"2"->1->0
0
"BF_045c"->"Daniels Park 7036 stuck"
 line ->70601->70597->"1"->1->0
 line ->70601->70653->"1"->1->0
0
"BF_045d"->"Daniels Park 7038 stuck"
 tran ->70601->70139->"T5"->0->-1
 line ->70601->70624->"1"->1->0
0
"BF_045e"->"Daniels Park 115 kV bus"
 tran ->70139->70138->"T1"->0->71984
 line ->70138->70115->"1"->1->0
0
```

```
"BF_045g"⟶"aniels Park 7017"
 line ⟶70601⟶70653⟶"2"⇢1⟶0
 svd ⟶70601⟶"v"⇢0
0
"BF_045h"⟶"aniels Park 7235"
 line ⟶70601⟶70653⟶"1"⇢1⟶0
 svd ⟶70601⟶"v"⇢0
0
"BF_045i"⟶"aniels Park 7109"
 line ⟶70601⟶70624⟶"1"⇢1⟶0
 svd ⟶70601⟶"v"⇢0
0
# ///Daniels Park 230
"BF_045j"⟶"Daniels Park 5116 stuck"
 tran ⟶70139⟶70601⟶"T4"⟶0⟶-1
 line ⟶70139⟶70527⟶"1"⇢1⟶0
 load ⟶70527⟶"P1"⟶0
 load ⟶70527⟶"P2"⟶0
 line ⟶70527⟶70038⟶"1"⇢1⟶0
0
"BF_045k"⟶"Daniels Park 5108 stuck"
 tran ⟶70139⟶70601⟶"T5"⟶0⟶-1
 line ⟶70139⟶70464⟶"1"⇢1⟶0
0
"BF_045l"⟶"Daniels Park 5102 stuck"
 line ⟶70139⟶73477⟶"1"⇢1⟶0
 line ⟶70139⟶70278⟶"1"⇢1⟶0
 line ⟶70278⟶70959⟶"1"⇢1⟶0
0
"BF_045m"⟶"Daniels Park 5112 stuck"
 line ⟶70139⟶70331⟶"1"⇢1⟶0
 load ⟶70331⟶"P1"⟶0
 load ⟶70331⟶"P2"⟶0
 line ⟶70331⟶70212⟶"2"⇢1⟶0
 line ⟶70139⟶70623⟶"1"⇢1⟶0
0
"BF_045n"⟶"aniels Park 5110 stuck"
 tran ⟶70139⟶70601⟶"T3"⟶0⟶-1
 line ⟶70139⟶70284⟶"1"⇢1⟶0
 load ⟶70284⟶"P1"⟶0
 load ⟶70284⟶"P2"⟶0
 line ⟶70284⟶70533⟶"1"⇢1⟶0
 load ⟶70533⟶"CR"⟶0
 line ⟶70533⟶70524⟶"1"⇢1⟶0
0
"BF_045o"⟶"aniels Park 5104"
 tran ⟶70139⟶70601⟶"T4"⟶0⟶-1
 svd ⟶70139⟶"v"⇢0
0
"BF_045p"⟶"aniels Park 5105"
 tran ⟶70139⟶70601⟶"T5"⟶0⟶-1
 svd ⟶70139⟶"v"⇢0
0
"BF_045q"⟶"aniels Park 5101"
 tran ⟶70139⟶70138⟶"T1"⟶0⟶71984
 svd ⟶70139⟶"v"⇢0
0
"BF_045r"⟶"aniels Park 5119"
 line ⟶70139⟶73477⟶"1"⇢1⟶0
 svd ⟶70139⟶"v"⇢0
0
"BF_045s"⟶"aniels Park 5707"
 line ⟶70139⟶70323⟶"2"⇢1⟶0
 load ⟶70323⟶"P3"⟶0
 line ⟶70323⟶70189⟶"1"⇢1⟶0
 svd ⟶70139⟶"v"⇢0
0
"BF_045t"⟶"aniels Park 5111"
 line ⟶70139⟶70331⟶"1"⇢1⟶0
```

```
load ⟶70331⟶"P1"⟶0
load ⟶70331⟶"P2"⟶0
line ⟶70331⟶70212⟶"2"⟶1⟶0
svd ⟶70139⟶"v"⟶0
0
"BF_045u"⟶"aniels Park 5103"
tran ⟶70139⟶70601⟶"T3"⟶0⟶-1
svd ⟶70139⟶"v"⟶0
0
"BF_045v"⟶"aniels Park 115kV Bus"
tran ⟶70139⟶70138⟶"T1"⟶0⟶71984
line ⟶70138⟶70115⟶"1"⟶1⟶0
load ⟶70138⟶"CR"⟶0
0
# ///Dillon 230
"BF_046a"⟶"illon - Ptarmigan and P3 5359"
line ⟶70057⟶70156⟶"1"⟶1⟶0
load ⟶70156⟶"P1"⟶0
0
"BF_046b"⟶"Dillon - Ptarmigan and Cabin Creek 5358"
line ⟶70156⟶70057⟶"1"⟶1⟶0
line ⟶70156⟶70072⟶"1"⟶1⟶0
line ⟶70072⟶70266⟶"1"⟶1⟶0
0
"BF_046c"⟶"illon - Cabin Creek and P4"
line ⟶70156⟶70072⟶"1"⟶1⟶0
load ⟶70156⟶"P4"⟶0
0
"BF_046d"⟶"illon 230/115 and P3 #5352"
tran ⟶70156⟶70155⟶"T2"⟶0⟶-1
load ⟶70156⟶"P1"⟶0
0
"BF_046e"⟶"Dillon 230/115 T2 & Brecktenridge 5356"
tran ⟶70156⟶70155⟶"T2"⟶0⟶-1
line ⟶70156⟶70064⟶"1"⟶1⟶0
0
"BF_046f"⟶"illon - Brecktenridge and P4"
line ⟶70156⟶70064⟶"1"⟶1⟶0
load ⟶70156⟶"P4"⟶0
0
"BF_046g"⟶"Dillon 115 Sub and Mayflower"
tran ⟶70155⟶70156⟶"T2"⟶0⟶-1
line ⟶70155⟶70421⟶"1"⟶1⟶0
line ⟶70421⟶70281⟶"1"⟶1⟶0
line ⟶70281⟶70114⟶"1"⟶1⟶0
load ⟶70155⟶"P3"⟶0
svd ⟶70155⟶"v"⟶0
0
"BF_047"⟶"Divide Sub"
line ⟶70157⟶70419⟶"1"⟶1⟶0
line ⟶70419⟶70426⟶"1"⟶1⟶0
load ⟶70419⟶"CR"⟶0
line ⟶70157⟶70476⟶"1"⟶1⟶0
load ⟶70476⟶"CR"⟶0
line ⟶70476⟶73476⟶"1"⟶1⟶0
load ⟶70157⟶"CR"⟶0
0
# ///Denver Terminal 230
"BF_048a"⟶"enver 5745"
load ⟶70149⟶"P5"⟶0
load ⟶70149⟶"P6"⟶0
svd ⟶70149⟶"v"⟶0
0
"BF_048b"⟶"enver 5627"
line ⟶70149⟶70324⟶"1"⟶1⟶0
load ⟶70149⟶"P6"⟶0
svd ⟶70149⟶"v"⟶0
0
"BF_048c"⟶"enver 5625"
```

```
 line ⟶70149⟶70163⟶"1"⟶1⟶0
 svd ⟶70149⟶"v"⟶0
 load ⟶70149⟶"P6"⟶0
0
"BF_048d"⟶"enver 5622"
 svd ⟶70149⟶"v"⟶0
0
"BF_048e"⟶"Denver Term 5620 stuck"
 tran ⟶70144⟶70149⟶"T2"⟶0⟶-1
 load ⟶70149⟶"P5"⟶0
0
"BF_048f"⟶"Denvert Term - Lacombe/Lookout (#5628)"
 line ⟶70149⟶70324⟶"1"⟶1⟶0
 line ⟶70149⟶70480⟶"1"⟶1⟶0
 line ⟶70480⟶70266⟶"1"⟶1⟶0
0
"BF_048g"⟶"Denvert Term - Arapahoe/Elati #5626"
 line ⟶70149⟶70141⟶"1"⟶1⟶0
 load ⟶70141⟶"P1"⟶0
 load ⟶70141⟶"P2"⟶0
 line ⟶70149⟶70163⟶"1"⟶1⟶0
0
"BF_048h"⟶"enver 5742"
 tran ⟶70144⟶70149⟶"T2"⟶0⟶-1
 load ⟶70149⟶"P4"⟶0
0
# //5629, 5623
# ///Denver Terminal 115
"BF_048i"⟶"Denver Term 115kV Bus 1"
 line ⟶70148⟶70039⟶"1"⟶1⟶0
 line ⟶70148⟶70208⟶"1"⟶1⟶0
 line ⟶70148⟶70087⟶"1"⟶1⟶0
0
"BF_048j"⟶"enver Terminal 115kV Bus 2"
 tran ⟶70144⟶70149⟶"T2"⟶0⟶-1
 svd ⟶70144⟶"v"⟶0
0
"BF_048k"⟶"enver Terminal 115kV Bus tie"
 line ⟶70144⟶70148⟶"1"⟶1⟶0
 line ⟶70148⟶70039⟶"1"⟶1⟶0
 line ⟶70148⟶70208⟶"1"⟶1⟶0
 line ⟶70148⟶70087⟶"1"⟶1⟶0
 tran ⟶70144⟶70149⟶"T2"⟶0⟶-1
 svd ⟶70144⟶"v"⟶0
0
"BF_049a"⟶"East Bus 2"
 line ⟶70171⟶70395⟶"1"⟶1⟶0
 line ⟶70171⟶70395⟶"2"⟶1⟶0
 load ⟶70171⟶"P2"⟶0
 svd ⟶70171⟶"v"⟶0
0
"BF_049b"⟶"East Bus 1 "
 line ⟶70162⟶70537⟶"1"⟶1⟶0
 load ⟶70537⟶"P1"⟶0
 load ⟶70537⟶"P2"⟶0
 line ⟶70537⟶70538⟶"1"⟶1⟶0
 line ⟶70162⟶70538⟶"1"⟶1⟶0
 load ⟶70162⟶"P1"⟶0
 load ⟶70162⟶"P3"⟶0
0
"BF_049c"⟶"East Bus Tie"
 line ⟶70162⟶70171⟶"1"⟶1⟶0
 line ⟶70171⟶70395⟶"1"⟶1⟶0
 line ⟶70171⟶70395⟶"2"⟶1⟶0
 load ⟶70171⟶"P2"⟶0
 svd ⟶70171⟶"v"⟶0
 line ⟶70162⟶70537⟶"1"⟶1⟶0
 load ⟶70537⟶"P1"⟶0
 load ⟶70537⟶"P2"⟶0
```

```
 line ⟶70537⟶70538⟶"1"⟶1⟶0
 line ⟶70162⟶70538⟶"1"⟶1⟶0
 load ⟶70162⟶"P1"⟶0
 load ⟶70162⟶"P3"⟶0
0
"BF_050a"⟶"Elati 5283 stuck"
 line ⟶70163⟶70291⟶"1"⟶1⟶0
 load ⟶70291⟶"P1"⟶0
 load ⟶70291⟶"P2"⟶0
 line ⟶70291⟶70260⟶"1"⟶1⟶0
 load ⟶70163⟶"P2"⟶0
0
"BF_050b"⟶"Elati 5680 stuck"
 load ⟶70163⟶"P1"⟶0
 load ⟶70163⟶"P2"⟶0
0
"BF_050c"⟶"Elati 5689 stuck"
 load ⟶70163⟶"P1"⟶0
 load ⟶70163⟶"P3"⟶0
0
"BF_050d"⟶"Elati 5625 stuck"
 line ⟶70163⟶70149⟶"1"⟶1⟶0
 load ⟶70163⟶"P3"⟶0
0
"BF_051"⟶"Eldorado - NREL update"
 line ⟶70164⟶70170⟶"1"⟶1⟶0
 line ⟶70164⟶70295⟶"1"⟶1⟶0
 load ⟶70295⟶"P1"⟶0
 load ⟶70295⟶"P2"⟶0
 line ⟶70295⟶70423⟶"1"⟶1⟶0
 line ⟶70164⟶70346⟶"1"⟶1⟶0
 load ⟶70346⟶"P2"⟶0
 line ⟶70346⟶70354⟶"2"⟶1⟶0
 line ⟶70164⟶70444⟶"1"⟶1⟶0
0
"BF_052a"⟶"nglewood 3"
 line ⟶70168⟶70165⟶"1"⟶1⟶0
 line ⟶70168⟶70037⟶"1"⟶1⟶0
 line ⟶70165⟶70263⟶"1"⟶1⟶0
 load ⟶70263⟶"P1"⟶0
 load ⟶70263⟶"P2"⟶0
 load ⟶70263⟶"P3"⟶0
 load ⟶70279⟶"P1"⟶0
 load ⟶70168⟶"P3"⟶0
0
"BF_052b"⟶"nglewood 2"
 line ⟶70167⟶70166⟶"1"⟶1⟶0
# ⟶/open branch from bus 70167 to 70037 ckt 1 / not in base case
 load ⟶70167⟶"P2"⟶0
0
"BF_052c"⟶"nglewood 3"
 line ⟶70166⟶70167⟶"1"⟶1⟶0
 line ⟶70166⟶70384⟶"1"⟶1⟶0
 line ⟶70384⟶70036⟶"1"⟶1⟶0
 load ⟶70384⟶"P1"⟶0
 load ⟶70384⟶"P2"⟶0
 load ⟶70166⟶"P1"⟶0
0
"BF_053a"⟶"Federal Heights 9361 stuck"
 line ⟶70175⟶70382⟶"1"⟶1⟶0
 line ⟶70175⟶70110⟶"2"⟶1⟶0
 load ⟶70175⟶"P1"⟶0
0
"BF_053b"⟶"Federal Heights 9362 and 9363 stuck"
 line ⟶70174⟶70110⟶"1"⟶1⟶0
 line ⟶70174⟶70065⟶"1"⟶1⟶0
 load ⟶70174⟶"P2"⟶0
 load ⟶70174⟶"P3"⟶0
0
```

```
"BF_054a"—>"Foidel Creek 5811 stuck"
 line —>79039—>79091—>"1"›1—>0
 line —>79065—>79091—>"2"›1—>0
0
"BF_054b"—>"Foidel Creek 5812 stuck"
 line —>79065—>79091—>"2"›1—>0
 line —>79069—>79091—>"1"›1—>0
0
"BF_054c"—>"Foidel Creek 5814 stuck"
 line —>79065—>79091—>"1"›1—>0
 line —>79039—>79091—>"1"›1—>0
0
"BF_054d"—>"Foidel Creek 5817 stuck"
 line —>79065—>79091—>"1"›1—>0
 line —>79069—>79091—>"1"›1—>0
0
"BF_055"—>"orest Lake"
 line —>73476—>70476—>"1"›1—>0
 load —>70476—>"CR"—>0
 line —>70476—>70157—>"1"›1—>0
 line —>73476—>73400—>"1"›1—>0
 load —>73400—>"TS"—>0
 line —>73400—>73414—>"1"›1—>0
 load —>73476—>"TS"—>0
0
"BF_056"—>"Glenn 5773 stuck"
 line —>70200—>70461—>"1"›1—>0
 line —>70461—>70529—>"1"›1—>0
 line —>70107—>70200—>"1"›1—>0
 load —>70200—>"P1"—>0
 load —>70200—>"P2"—>0
0
# ///Fort Lupton 230
"BF_057a"—>"Ft Lupton 5520 stuck"
 line —>70192—>70410—>"1"›1—>0
 tran —>70192—>70090—>"T3"—>0—>-1
0
"BF_057b"—>"Ft Lupton 5522 stuck"
 line —>70192—>70311—>"1"›1—>0
 line —>70192—>70529—>"1"›1—>0
0
"BF_057c"—>"Ft Lupton 5524 stuck"
 line —>70192—>70048—>"1"›1—>0
 line —>70192—>70488—>"1"›1—>0
0
# //Fort Lupton 115
"BF_057d"—>"Ft Lupton Bus 1"
 line —>70191—>70127—>"1"›1—>0
 line —>70127—>70194—>"1"›1—>0
 load —>70194—>"TS"—>0
 line —>70194—>70604—>"1"›1—>0
 line —>70191—>70450—>"1"›1—>0
 load —>70450—>"P1"—>0
 line —>70450—>70219—>"1"›1—>0
 line —>70219—>70238—>"1"›1—>0
 load —>70238—>"IN"—>0
 line —>70219—>70198—>"1"›1—>0
 load —>70198—>"P1"—>0
 line —>70198—>70202—>"1"›1—>0
 tran —>70191—>70188—>"U1"—>0—>-1
 gen —>70188—>"G1"—>0
 gen —>70188—>"G2"—>0
0
"BF_057e"—>"Ft Lupton Bus 2"
 line —>70090—>70190—>"1"›1—>0
 line —>70190—>70234—>"1"›1—>0
 load —>70234—>"TS"—>0
 line —>70234—>70169—>"1"›1—>0
# —>—>/remove load P1 from bus 70169
```

```
 line -->70090-->70307-->"1"->1-->0
 load -->70307-->"TS"-->0
 line -->70307-->70081-->"1"->1-->0
 load -->70081-->"TS"-->0
 line -->70081-->70099-->"1"->1-->0
 tran -->70090-->70192-->"T3"-->0-->-1
 0
"BF_057f"-->"ort Lupton Bus Tie"
 line -->70191-->70090-->"1"->1-->0
 line -->70191-->70127-->"1"->1-->0
 line -->70127-->70194-->"1"->1-->0
 load -->70194-->"TS"-->0
 line -->70194-->70604-->"1"->1-->0
 line -->70191-->70450-->"1"->1-->0
 load -->70450-->"P1"-->0
 line -->70450-->70219-->"1"->1-->0
 line -->70219-->70238-->"1"->1-->0
 load -->70238-->"IN"-->0
 line -->70219-->70198-->"1"->1-->0
# /->-->remove load P1 from bus 70198
 line -->70198-->70202-->"1"->1-->0
 tran -->70191-->70188-->"U1"-->0-->-1
 gen -->70188-->"G1"-->0
 gen -->70188-->"G2"-->0
 line -->70090-->70190-->"1"->1-->0
 line -->70190-->70234-->"1"->1-->0
 load -->70234-->"TS"-->0
 line -->70234-->70169-->"1"->1-->0
 load -->70169-->"P2"-->0
 line -->70090-->70307-->"1"->1-->0
 load -->70307-->"TS"-->0
 line -->70307-->70081-->"1"->1-->0
 load -->70081-->"TS"-->0
 line -->70081-->70099-->"1"->1-->0
 tran -->70090-->70192-->"T3"-->0-->-1
 0
"BF_058a"-->"Ft St Vrain - Ault/Fordham #5308"
 line -->70410-->70474-->"1"->1-->0
 load -->70474-->"P1"-->0
 load -->70474-->"P2"-->0
 line -->70474-->73011-->"1"->1-->0
 line -->70410-->78120-->"1"->1-->0
 0
"BF_058b"-->"Ft St Vrain - NO 1 Gen"
 tran -->70410-->70409-->"U1"-->0-->-1
 gen -->70409-->"ST"-->0
 0
"BF_058c"-->"Ft St Vrain - Longs Peak/Isabelle #5306"
 line -->70410-->78105-->"1"->1-->0
 line -->70410-->70544-->"1"->1-->0
 0
"BF_058d"-->"Ft St Vrain - Ft Lupton & Unit 2 #5312"
 line -->70410-->70192-->"2"->1-->0
 tran -->70410-->70406-->"U2"-->0-->-1
 gen -->70406-->"G2"-->0
 load -->70406-->"SS"-->0
#  ->-->/reduce bus 70409 generation by 33.33 percent
 0
"BF_058e"-->"Ft St Vrain - Keenesburg & Unit 3 + part Unit 1"
 line -->70410-->70820-->"1"->1-->0
 tran -->70410-->70407-->"U3"-->0-->-1
 gen -->70407-->"G3"-->0
#  /reduce bus 70409 generation by 33.33 percent
 0
"BF_058f"-->"t St Vrain - G4 and swshunt #5304"
 tran -->70410-->70408-->"U4"-->0-->-1
 gen -->70408-->"G4"-->0
 load -->70408-->"SS"-->0
 svd -->70410-->"v"->0
```

```
0
"BF_058g"⟶"t St Vrain - G5 and swshunt #5302"
 tran ⟶70410⟶70950⟶"U5"⟶0⟶-1
 gen ⟶70950⟶"G5"⟶0
 load ⟶70950⟶"SS"⟶0
 svd ⟶70410⟶"v"→0
0
"BF_058h"⟶"t St Vrain - G6 and swshunt #5328"
 tran ⟶70410⟶70951⟶"U6"⟶0⟶-1
 gen ⟶70951⟶"G6"⟶0
 load ⟶70951⟶"SS"⟶0
 svd ⟶70410⟶"v"→0
0
"BF_059a"⟶"ountain Valley "
 line ⟶70193⟶73412⟶"1"→1⟶0
 line ⟶70193⟶70449⟶"1"→1⟶0
 load ⟶70193⟶"WP"⟶0
0
"BF_059b"⟶"Fountain Valley NUG"
 line ⟶70286⟶70595⟶"1"→1⟶0
 gen ⟶70577⟶"G1"⟶0
 gen ⟶70577⟶"G2"⟶0
 load ⟶70577⟶"SS"⟶0
 line ⟶70286⟶70595⟶"1"→1⟶0
 gen ⟶70578⟶"G3"⟶0
 gen ⟶70578⟶"G4"⟶0
 load ⟶70578⟶"SS"⟶0
 line ⟶70286⟶70595⟶"1"→1⟶0
 gen ⟶70579⟶"G5"⟶0
 gen ⟶70579⟶"G6"⟶0
 load ⟶70579⟶"SS"⟶0
0
"BF_060"⟶"Grand Junction "
 line ⟶70206⟶70113⟶"1"→1⟶0
 load ⟶70113⟶"P1"⟶0
 load ⟶70113⟶"P2"⟶0
 line ⟶70113⟶70205⟶"1"→1⟶0
 line ⟶70206⟶70233⟶"1"→1⟶0
 load ⟶70233⟶"P1"⟶0
 load ⟶70233⟶"P2"⟶0
 line ⟶70233⟶70268⟶"1"→1⟶0
 load ⟶70268⟶"GV"⟶0
 line ⟶70268⟶70438⟶"1"→1⟶0
 load ⟶70206⟶"P1"⟶0
 load ⟶70206⟶"P2"⟶0
0
"BF_061"⟶"lenn"
 line ⟶70200⟶70107⟶"1"→1⟶0
 line ⟶70200⟶70461⟶"1"→1⟶0
 load ⟶70461⟶"P1"⟶0
 load ⟶70461⟶"P2"⟶0
 load ⟶70461⟶"P3"⟶0
 line ⟶70461⟶70529⟶"1"→1⟶0
 load ⟶70200⟶"P1"⟶0
 load ⟶70200⟶"P2"⟶0
 load ⟶70200⟶"P3"⟶0
0
"BF_062a"⟶"Godfrey 8105"
 line ⟶70202⟶70198⟶"1"→1⟶0
 load ⟶70198⟶"P1"⟶0
 line ⟶70198⟶70219⟶"1"→1⟶0
 line ⟶70219⟶70238⟶"1"→1⟶0
 load ⟶70238⟶"IN"⟶0
 line ⟶70219⟶70450⟶"1"→1⟶0
 load ⟶70450⟶"P1"⟶0
 line ⟶70450⟶70191⟶"1"→1⟶0
 line ⟶70202⟶70209⟶"1"→1⟶0
0
"BF_062b"⟶"Godfrey 8103"
```

```
 line →70202→70198→"1"→1→0
 load →70198→"P1"→0
 line →70198→70219→"1"→1→0
 line →70219→70238→"1"→1→0
 load →70238→"IN"→0
 line →70219→70450→"1"→1→0
 load →70450→"P1"→0
 line →70450→70191→"1"→1→0
 line →70202→70240→"1"→1→0
 load →70240→"P1"→0
0
"BF_062c"→"Godfrey 8101"
 line →70202→70209→"1"→1→0
 line →70202→70240→"1"→1→0
 load →70240→"P1"→0
0
"BF_063"→"Gray Street Sub"
 line →70208→70045→"1"→1→0
 line →70208→70148→"1"→1→0
 line →70208→70251→"1"→1→0
 load →70251→"P1"→0
 line →70251→70354→"1"→1→0
 line →70208→70252→"2"→1→0
 load →70252→"P2"→0
 line →70252→70226→"2"→1→0
 line →70208→70402→"1"→1→0
 load →70402→"P2"→0
 line →70402→70531→"1"→1→0
 line →70531→70027→"1"→1→0
 load →70027→"IN"→0
 line →70531→70036→"1"→1→0
0
"BF_064a"→"Greenwood Bus 2"
 load →70481→"P1"→0
 line →70481→70365→"1"→1→0
 line →70189→70323→"1"→1→0
 line →70323→70139→"2"→1→0
 load →70189→"P2"→0
 load →70189→"P3"→0
0
"BF_064b"→"Greenwood Bus 1"
 line →70212→70331→"2"→1→0
 line →70331→70139→"1"→1→0
 line →70212→70112→"1"→1→0
 load →70112→"P1"→0
 load →70112→"P2"→0
 load →70112→"P3"→0
 line →70112→70241→"1"→1→0
 line →70212→70428→"2"→1→0
 load →70428→"P1"→0
 load →70428→"P2"→0
 line →70428→70417→"1"→1→0
 load →70212→"P1"→0
 svd →70212→"v"→0
0
"BF_064c"→"Greenwood Bus Tie"
 line →70212→70189→"1"→1→0
 load →70481→"P1"→0
 line →70481→70365→"1"→1→0
 line →70189→70323→"1"→1→0
 line →70323→70139→"2"→1→0
 load →70189→"P2"→0
 load →70189→"P3"→0
 line →70212→70331→"2"→1→0
 line →70331→70139→"1"→1→0
 line →70212→70112→"1"→1→0
 load →70112→"P1"→0
 load →70112→"P2"→0
 load →70112→"P3"→0
```

```
 line ⟶70112⟶70241⟶"1"↴1⟶0
 line ⟶70212⟶70428⟶"2"↴1⟶0
 load ⟶70428⟶"P1"⟶0
 load ⟶70428⟶"P2"⟶0
 line ⟶70428⟶70417⟶"1"↴1⟶0
 load ⟶70212⟶"P1"⟶0
 svd ⟶70212⟶"v"↴0
0
"BF_065a"⟶"Greeley 9119 stuck"
 line ⟶70209⟶70470⟶"1"↴1⟶0
 line ⟶70209⟶70202⟶"1"↴1⟶0
0
"BF_065b"⟶"Greeley 9130 stuck"
 line ⟶70209⟶70290⟶"1"↴1⟶0
 load ⟶70209⟶"P3"⟶0
0
"BF_065c"⟶"reeley 9995"
 line ⟶70209⟶70470⟶"1"↴1⟶0
 svd ⟶70209⟶"v"↴0
0
"BF_065d"⟶"reeley 9135"
 load ⟶70209⟶"P3"⟶0
 svd ⟶70209⟶"v"↴0
0
"BF_065e"⟶"reeley 9134"
 load ⟶70209⟶"P4"⟶0
 svd ⟶70209⟶"v"↴0
0
"BF_065f"⟶"reeley 9118"
 line ⟶70209⟶70202⟶"1"↴1⟶0
 svd ⟶70209⟶"v"↴0
0
"BF_065g"⟶"reeley 9115"
 line ⟶70209⟶70290⟶"1"↴1⟶0
 svd ⟶70209⟶"v"↴0
0
"BF_066a"⟶"Green Valley - Barr Lk/Ft Lupton 5272"
 line ⟶70048⟶70047⟶"1"↴1⟶0
 line ⟶70048⟶70192⟶"1"↴1⟶0
0
"BF_066b"⟶"Green Valley - RMEC/Sky Ranch 5274"
 line ⟶70048⟶70590⟶"1"↴1⟶0
 line ⟶70048⟶700155⟶"1"↴1⟶0
 line ⟶700155⟶70392⟶"1"↴1⟶0
0
"BF_066c"⟶"Green Valley - Keenesburg/Imboden 5276"
 line ⟶70048⟶70820⟶"1"↴1⟶0
 line ⟶70048⟶70526⟶"1"↴1⟶0
 load ⟶70526⟶"P1"⟶0
 line ⟶70526⟶70497⟶"1"↴1⟶0
 line ⟶70497⟶70528⟶"1"↴1⟶0
0
"BF_066d"⟶"Green Valley - Keenesburg /Spruce 5278"
 line ⟶70048⟶70820⟶"2"↴1⟶0
 line ⟶70048⟶70077⟶"1"↴1⟶0
 line ⟶70077⟶70528⟶"1"↴1⟶0
0
"BF_067a"⟶"Gunbarrel 5639"
 line ⟶70213⟶70211⟶"1"↴1⟶0
 line ⟶70213⟶70297⟶"2"↴1⟶0
 load ⟶70213⟶"IN"⟶0
 load ⟶70211⟶"IN"⟶0
0
"BF_067b"⟶"unbarrel 5635"
 line ⟶70211⟶70213⟶"1"↴1⟶0
 line ⟶70972⟶70297⟶"1"↴1⟶0
 load ⟶70211⟶"IN"⟶0
 load ⟶70211⟶"TS"⟶0
0
```

```
"BF_068"—→"appy Canyon"
 line —→70115—→70117—→"1"→1—→0
 line —→70115—→70138—→"1"→1—→0
0
"BF_069a"—→"Harrison Bus 2"
 line —→70182—→70073—→"1"→1—→0
 load —→70073—→"P1"—→0
 load —→70073—→"P2"—→0
 load —→70073—→"P3"—→0
 line —→70182—→70087—→"1"→1—→0
0
"BF_069b"—→"Harrison Bus 1"
 line —→70215—→70282—→"1"→1—→0
0
"BF_069c"—→"Harrison Bus Tie 9950"
 line —→70215—→70182—→"1"→1—→0
 line —→70182—→70073—→"1"→1—→0
 load —→70073—→"P1"—→0
 load —→70073—→"P2"—→0
 load —→70073—→"P3"—→0
 line —→70182—→70087—→"1"→1—→0
 line —→70215—→70282—→"1"→1—→0
 load —→70215—→"P1"—→0
 load —→70182—→"P2"—→0
0
"BF_070a"—→"Hartsel 5145 stuck"
 line —→70927—→70274—→"1"→1—→0
 line —→70927—→70427—→"1"→1—→0
0
"BF_070b"—→"Hartsel 5990 stuck"
 line —→70274—→70927—→"1"→1—→0
 tran —→70927—→70926—→"T1"—→0—→-1
0
"BF_070c"—→"Hartsel 5991 stuck"
 tran —→70927—→70926—→"T1"—→0—→-1
 line —→70927—→70427—→"1"→1—→0
0
"BF_070d"—→"artsel 115"
 tran —→70926—→70927—→"T1"—→0—→-1
 line —→70926—→70925—→"1"→1—→0
 load —→70926—→"CR"—→0
0
# //Hayden
"BF_071a"—→"ayden 230 West"
 tran —→79039—→79140—→"1"→0—→79038
 svd —→79140—→"v"→0
 line —→79039—→79013—→"2"→1—→0
 tran —→79039—→79041—→"1"→0—→-1
 gen —→79041—→"1"→0
 line —→79039—→79091—→"1"→1—→0
 line —→79039—→79142—→"1"→1—→0
0
"BF_071b"—→"ayden 230 East"
 line —→79142—→79039—→"1"→1—→0
 line —→79142—→79013—→"1"→1—→0
 tran —→79142—→79040—→"1"→0—→-1
 gen —→79040—→"1"→0
 load —→79040—→"PS"—→0
 line —→79142—→73616—→"1"→1—→0
 tran —→79142—→79139—→"1"→0—→79038
 svd —→79139—→"v"→0
 line —→79142—→70088—→"1"→1—→0
0
"BF_071c"—→"ayden 230 bus tie "
 tran —→79039—→79140—→"1"→0—→79038
 svd —→79140—→"v"→0
 line —→79039—→79013—→"2"→1—→0
 tran —→79039—→79041—→"1"→0—→-1
 gen —→79041—→"1"→0
```

```
 line ->79039->79091->"1"->1->0
 line ->79039->79142->"1"->1->0
 line ->79142->79039->"1"->1->0
 line ->79142->79013->"1"->1->0
 tran ->79142->79040->"1"->0->-1
 gen ->79040->"1"->0
 load ->79040->"PS"->0
 line ->79142->73616->"1"->1->0
 tran ->79142->79139->"1"->0->79038
 svd ->79139->"v"->0
 line ->79142->70088->"1"->1->0
0
"BF_071d"->"ayden 138 bus"
 line ->79038->79001->"1"->1->0
 tran ->79038->79142->"1"->0->79139
 svd ->79139->"v"->0
 line ->79038->79002->"1"->1->0
 tran ->79038->79039->"1"->0->79140
 svd ->79140->"v"->0
 line ->79038->73057->"1"->1->0
 line ->73057->73072->"1"->1->0
 load ->79038->"MU"->0
 load ->79038->"WA"->0
 line ->79038->70525->"1"->1->0
0
"BF_072"->"Henderson PS Sub "
 line ->70218->70328->"1"->1->0
 line ->70328->70287->"1"->1->0
 line ->70218->70197->"1"->1->0
 line ->70197->70071->"1"->1->0
# /->->remove load IN from bus 70218
0
# //Harvest Mile 345
"BF_073a"->"arvest Mile  7087"
 line ->70597->70599->"2"->1->0
 svd ->70597->"v"->0
0
"BF_073b"->"arvest Mile 7150"
 line ->70597->70599->"2"->1->0
 line ->70597->70601->"1"->1->0
0
"BF_073c"->"arvest Mile 7153"
 line ->70597->70601->"1"->1->0
 tran ->70597->70596->"T1"->0->-1
 tran ->70597->70596->"T2"->0->-1
0
"BF_073d"->"arvest Mile 7151"
 tran ->70597->70596->"T1"->0->-1
 svd ->70597->"v"->0
0
"BF_073e"->"arvest Mile 230 #55230"
 tran ->70597->70596->"T1"->0->-1
 tran ->70597->70596->"T2"->0->-1
0
"BF_074a"->"enry Lake 1082"
 line ->70605->72201->"1"->1->0
0
"BF_074b"->"enry Lake 886"
 line ->70605->72201->"1"->1->0
 line ->70605->72029->"1"->1->0
0
"BF_074c"->"enry Lake 586"
 line ->70605->72029->"1"->1->0
 tran ->70605->72024->"T1"->0->-1
0
"BF_074d"->"enry Lake 482"
 tran ->70605->72024->"T1"->0->-1
 line ->70605->70362->"1"->1->0
 load ->70362->"P1"->0
```

```
 load ->70362->"P2"->0
 line ->70362->70107->"1"->1->0
0
"BF_074e"->"enry Lake 686"
 line ->70605->70362->"1"->1->0
 load ->70362->"P1"->0
 load ->70362->"P2"->0
 line ->70362->70107->"1"->1->0
 line ->70605->70192->"1"->1->0
0
"BF_074f"->"enry Lake 982"
 line ->70605->70192->"1"->1->0
0
"BF_074g"->"enry Lake 115kV bus "
 tran ->70605->72024->"T1"->0->-1
 line ->72024->72019->"1"->1->0
 load ->72024->"TS"->0
0
"BF_075a"->"Hopkins 5246 stuck"
 tran ->70232->70231->"T2"->0->-1
 line ->70232->70111->"1"->1->0
 line ->70111->70274->"1"->1->0
0
"BF_075b"->"Hopkins 5243 stuck"
 line ->70232->70111->"1"->1->0
 line ->70111->70274->"1"->1->0
 tran ->70232->70231->"T3"->0->71953
0
"BF_075c"->"Hopkins 5240 stuck"
 tran ->70232->70231->"T3"->0->71953
 line ->70232->70358->"1"->1->0
0
"BF_075d"->"Hopkins 5207 stuck"
 line ->70232->70358->"1"->1->0
 tran ->70232->70231->"T2"->0->-1
0
"BF_075e"->"Hopkins 115 kV Bus"
 line ->70231->70089->"1"->1->0
 load ->70089->"P1"->0
 line ->70231->70387->"1"->1->0
 line ->70231->79003->"1"->1->0
 tran ->70231->70267->"T1"->0->-1
 tran ->70231->70232->"T2"->0->-1
 tran ->70231->70232->"T3"->0->71953
0
"BF_076"->"mboden"
 line ->70526->70048->"1"->1->0
 line ->70526->70497->"1"->1->0
 load ->70526->"P1"->0
0
"BF_077"->"sabelle "
 line ->70544->70410->"1"->1->0
 line ->70544->70297->"1"->1->0
 load ->70544->"P1"->0
0
"BF_078a"->"Jackson Fuller - Daniel Park/Midway PS #5114"
 line ->73477->70139->"1"->1->0
 line ->73477->70286->"1"->1->0
0
"BF_078b"->"ackson Fuller 5129"
 line ->73477->70286->"1"->1->0
0
"BF_078c"->"ackson Fuller 5119"
 line ->73477->70139->"1"->1->0
0
"BF_078d"->"ackson Fuller 55150/55159"
 line ->73477->70660->"1"->1->0
0
"BF_079"->".L. Green"
```

```
 line ⟶70529⟶70192⟶"1"⟶1⟶0
 line ⟶70529⟶70461⟶"1"⟶1⟶0
 load ⟶70461⟶"P1"⟶0
 load ⟶70461⟶"P2"⟶0
 load ⟶70461⟶"P3"⟶0
 line ⟶70461⟶70200⟶"1"⟶1⟶0
 load ⟶70200⟶"P3"⟶0
 load ⟶70200⟶"P2"⟶0
 load ⟶70200⟶"P1"⟶0
 line ⟶70200⟶70107⟶"1"⟶1⟶0
 load ⟶70529⟶"TS"⟶0
0
"BF_080"⟶"ewell"
 line ⟶70239⟶70260⟶"1"⟶1⟶0
 line ⟶70239⟶70491⟶"1"⟶1⟶0
 load ⟶70491⟶"P1"⟶0
 load ⟶70491⟶"P2"⟶0
 load ⟶70491⟶"P3"⟶0
 line ⟶70491⟶70046⟶"1"⟶1⟶0
 line ⟶70046⟶70396⟶"1"⟶1⟶0
0
"BF_081"⟶"M Shafer"
 line ⟶70488⟶70192⟶"1"⟶1⟶0
 line ⟶70488⟶72029⟶"1"⟶1⟶0
 tran ⟶70488⟶70487⟶"U4"⟶0⟶-1
 gen ⟶70487⟶"G4"⟶0
 load ⟶70487⟶"SS"⟶0
 tran ⟶70488⟶70490⟶"U3"⟶0⟶-1
 gen ⟶70490⟶"G3"⟶0
 gen ⟶70490⟶"ST"⟶0
 load ⟶70490⟶"SS"⟶0
 tran ⟶70488⟶70493⟶"U2"⟶0⟶-1
 gen ⟶70493⟶"ST"⟶0
 load ⟶70493⟶"SS"⟶0
 tran ⟶70488⟶70495⟶"U1"⟶0⟶-1
 gen ⟶70495⟶"G1"⟶0
 gen ⟶70495⟶"G2"⟶0
 load ⟶70495⟶"SS"⟶0
0
"BF_082a"⟶"ordan Road 5432"
 load ⟶70241⟶"P1"⟶0
 load ⟶70241⟶"P2"⟶0
0
"BF_082b"⟶"ordan Road 5435 or 5169"
 line ⟶70241⟶70112⟶"1"⟶1⟶0
 load ⟶70112⟶"P1"⟶0
 load ⟶70112⟶"P2"⟶0
 load ⟶70112⟶"P3"⟶0
 line ⟶70112⟶70212⟶"1"⟶1⟶0
 line ⟶70241⟶70313⟶"1"⟶1⟶0
 line ⟶70313⟶70283⟶"1"⟶1⟶0
 load ⟶70283⟶"P1"⟶0
 load ⟶70283⟶"P2"⟶0
 line ⟶70283⟶70396⟶"1"⟶1⟶0
0
"BF_083a"⟶"eenesburg 5960"
 line ⟶70821⟶70822⟶"1"⟶1⟶0
 line ⟶70820⟶70822⟶"1"⟶1⟶0
 line ⟶70820⟶70410⟶"1"⟶1⟶0
0
"BF_083b"⟶"eenesburg 5962"
 line ⟶70820⟶70590⟶"1"⟶1⟶0
 line ⟶70820⟶70048⟶"2"⟶1⟶0
0
"BF_084a"⟶"akewood"
 line ⟶70252⟶70208⟶"2"⟶1⟶0
 line ⟶70252⟶70226⟶"2"⟶1⟶0
0
"BF_085a"⟶"Lacombe 5290 stuck"
```

```
 line ->70324->70107->"1"->1->0
 line ->70324->70149->"1"->1->0
 load ->70324->"P1"->0
 load ->70324->"P2"->0
 load ->70324->"P3"->0
0
"BF_085b"->"Lacombe 5292 and 5293 stuck"
 load ->70324->"P2"->0
 load ->70324->"P3"->0
0
"BF_085c"->"Lacombe 5057 stuck"
 load ->70324->"P2"->0
 load ->70324->"P3"->0
 line ->70107->70324->"1"->1->0
0
# //Lamar (LASS) SWYD
"BF_086a"->"Lamar 5337"
 line ->70254->70061->"1"->1->0
 line ->70254->70255->"1"->1->0
0
"BF_086b"->"amar 5510"
 line ->70254->70061->"1"->1->0
 line ->70254->70013->"1"->1->0
 tran ->70013->70012->"1"->0->-1
 gen ->70010->"W"->0
 load ->70010->"SS"->0
 line ->70013->70700->"1"->1->0
 gen ->70708->"W1"->0
 load ->70708->"SS"->0
 gen ->70256->"W2"->0
 load ->70256->"SS"->0
 gen ->70704->"W1"->0
0
"BF_086c"->"amar 5511"
 line ->70254->70013->"1"->1->0
 tran ->70013->70012->"1"->0->-1
 gen ->70010->"W"->0
 load ->70010->"SS"->0
 line ->70013->70700->"1"->1->0
 gen ->70708->"W1"->0
 load ->70708->"SS"->0
 gen ->70256->"W2"->0
 load ->70256->"SS"->0
 gen ->70704->"W1"->0
 line ->70254->70560->"1"->1->0
 gen ->70560->"DC"->0
0
"BF_086d"->"amar 5512"
 line ->70254->70560->"1"->1->0
 gen ->70560->"DC"->0
 line ->70254->70255->"1"->1->0
0
"BF_086e"->"amar 5521"
 line ->70254->70560->"1"->1->0
 gen ->70560->"DC"->0
0
"BF_086f"->"amar TSGT 230"
 line ->70255->70254->"1"->1->0
 tran ->70255->70253->"T1"->0->70955
 tran ->70255->70253->"T2"->0->70957
0
"BF_086g"->"amar TSGT 115"
 tran ->70255->70253->"T1"->0->70955
 tran ->70255->70253->"T2"->0->70957
 line ->70253->70452->"1"->1->0
 line ->70253->70472->"1"->1->0
0
# //Leetsdale 230
"BF_087a"->"Leetsdale 5283 stuck"
```

```
 tran ->70260->70259->"T4"->0->-1
 line ->70260->70291->"1"->1->0
 line ->70291->70163->"1"->1->0
0
"BF_087b"->"Leetsdale 5284 stuck"
 line ->70260->70291->"1"->1->0
 line ->70291->70163->"1"->1->0
 line ->70260->70239->"1"->1->0
 line ->70239->70491->"1"->1->0
 load ->70491->"P1"->0
 load ->70491->"P2"->0
 load ->70491->"P3"->0
 line ->70491->70046->"1"->1->0
 line ->70046->70396->"1"->1->0
0
"BF_087c"->"Leetsdale 5285 stuck"
 line ->70260->70239->"1"->1->0
 line ->70239->70491->"1"->1->0
 load ->70491->"P1"->0
 load ->70491->"P2"->0
 load ->70491->"P3"->0
 line ->70491->70046->"1"->1->0
 line ->70046->70396->"1"->1->0
 tran ->70260->70282->"T5"->0->-1
0
"BF_087d"->"Leetsdale 5282 stuck"
 line ->70260->70365->"1"->1->0
 tran ->70260->70282->"T5"->0->-1
0
"BF_087e"->"Leetsdale 5281 stuck"
 line ->70260->70365->"1"->1->0
 tran ->70260->70259->"T4"->0->-1
0
# //Leetsdale 115
"BF_087f"->"Leetsdale - Bus 1"
 line ->70259->70441->"1"->1->0
 load ->70441->"P1"->0
 load ->70441->"P2"->0
 load ->70441->"P3"->0
 line ->70441->70036->"1"->1->0
 line ->70259->70282->"1"->1->0
 tran ->70259->70260->"T4"->0->-1
 line ->70259->70377->"1"->1->0
 svd ->70259->"v"->0
0
"BF_087g"->"Leetsdale - Bus 2"
 line ->70282->70215->"1"->1->0
 tran ->70282->70260->"T5"->0->-1
 line ->70282->70259->"1"->1->0
0
"BF_087h"->"Leetsdale - Bus Tie Breaker"
 line ->70259->70441->"1"->1->0
 load ->70441->"P1"->0
 load ->70441->"P2"->0
 load ->70441->"P3"->0
 line ->70441->70036->"1"->1->0
 line ->70259->70282->"1"->1->0
 tran ->70259->70260->"T4"->0->-1
 line ->70259->70377->"1"->1->0
 svd ->70259->"v"->0
 line ->70282->70215->"1"->1->0
 tran ->70282->70260->"T5"->0->-1
 line ->70282->70259->"1"->1->0
 load ->70259->"P1"->0
 load ->70259->"P2"->0
 load ->70282->"P3"->0
0
# //Lookout 230
"BF_088a"->"Lookout 5022 stuck"
```

```
 line ->70266->70570->"1"->1->0
 line ->70266->70072->"1"->1->0
0
"BF_088b"->"Lookout 5024 stuck"
 line ->70266->70237->"1"->1->0
 load ->70237->"P1"->0
 line ->70237->70072->"1"->1->0
 line ->70266->70018->"1"->1->0
0
"BF_088c"->"Lookout 5026 stuck"
 line ->70266->70355->"1"->1->0
 line ->70266->70480->"1"->1->0
 load ->70480->"P1"->0
 line ->70480->70149->"1"->1->0
0
"BF_088d"->"Lookout 5025"
 line ->70266->70570->"1"->1->0
 tran ->70266->70066->"T2"->0->-1
 svd ->70266->"v"->0
0
"BF_088e"->"Lookout 5027 stuck"
 line ->70266->70570->"2"->1->0
 tran ->70266->70066->"T2"->0->-1
 svd ->70266->"v"->0
0
"BF_088f"->"ookout 5028"
 tran ->70266->70066->"T2"->0->-1
 svd ->70266->"v"->0
0
"BF_088g"->"Lookout 5005 stuck"
 line ->70266->70237->"1"->1->0
 load ->70237->"P1"->0
 line ->70237->70072->"1"->1->0
 tran ->70266->70066->"T2"->0->-1
 svd ->70266->"v"->0
0
"BF_088h"->"Lookout 5029 stuck"
 line ->70266->70355->"1"->1->0
 tran ->70266->70066->"T2"->0->-1
 svd ->70266->"v"->0
0
"BF_088i"->"Lookout 5003 stuck"
 line ->70266->70072->"1"->1->0
 tran ->70266->70265->"T1"->0->-1
0
"BF_088j"->"Lookout 5035 stuck"
 line ->70266->70570->"2"->1->0
 tran ->70266->70265->"T1"->0->-1
0
"BF_088k"->"Lookout 5851 stuck"
 line ->70266->70018->"1"->1->0
 tran ->70266->70265->"T1"->0->-1
0
"BF_088l"->"Lookout 5629 stuck"
 line ->70266->70480->"1"->1->0
 load ->70480->"P1"->0
 line ->70480->70149->"1"->1->0
 tran ->70266->70265->"T1"->0->-1
0
"BF_088m"->"Lookout Bus 2"
 tran ->70066->70266->"T2"->0->-1
 line ->70066->70342->"1"->1->0
 line ->70342->70341->"1"->1->0
 line ->70342->70173->"1"->1->0
 line ->70173->70172->"1"->1->0
 load ->70172->"IN"->0
 line ->70341->70342->"1"->1->0
0
"BF_088n"->"Lookout Bus 1"
```

```
 tran ->70265->70266->"T1"->0->-1
 line ->70265->70224->"1"->1->0
 line ->70224->70400->"1"->1->0
 line ->70224->70050->"1"->1->0
 load ->70050->"CR"->0
 load ->70050->"P1"->0
 load ->70050->"P2"->0
 svd ->70265->"v"->0
0
"BF_088o"->"Lookout Bus Tie Breaker"
 line ->70265->70066->"1"->1->0
 tran ->70066->70266->"T2"->0->-1
 line ->70066->70342->"1"->1->0
 line ->70342->70341->"1"->1->0
 line ->70342->70173->"1"->1->0
 line ->70173->70172->"1"->1->0
 load ->70172->"IN"->0
 line ->70341->70342->"1"->1->0
 tran ->70265->70266->"T1"->0->-1
 line ->70265->70224->"1"->1->0
 line ->70224->70400->"1"->1->0
 line ->70224->70050->"1"->1->0
 load ->70050->"CR"->0
 load ->70050->"P1"->0
 load ->70050->"P2"->0
 svd ->70265->"v"->0
0
# //Malta 230
"BF_089a"->"Malta - Basalt/Mt Elbert 5146"
 line ->70274->79004->"1"->1->0
 line ->70274->73138->"1"->1->0
0
"BF_089b"->"Malta - Hopkins/Hartselt 5142"
 line ->70274->70111->"1"->1->0
 line ->70111->70232->"1"->1->0
 line ->70274->70927->"1"->1->0
0
"BF_089c"->"Malta - Dillon & 230/115 T1 5152"
 line ->70274->70032->"1"->1->0
 load ->70032->"P1"->0
 line ->70032->70064->"1"->1->0
 tran ->70274->70273->"T1"->0->71982
0
"BF_089d"->"alta 5149 "
 line ->70274->79004->"1"->1->0
0
"BF_089e"->"alta 5245"
 line ->70274->70111->"1"->1->0
 line ->70111->70232->"1"->1->0
0
"BF_089f"->"alta 5487->"
 line ->70274->70032->"1"->1->0
 load ->70032->"P1"->0
 line ->70032->70064->"1"->1->0
0
"BF_089g"->"Malta -Climax (9257) & 115/230 T2 #9264"
 tran ->70274->70273->"T2"->0->71983
 line ->70273->70258->"1"->1->0
 load ->70258->"P2"->0
 line ->70258->70364->"1"->1->0
 line ->70364->70199->"1"->1->0
 load ->70199->"P1"->0
 line ->70364->70114->"1"->1->0
0
"BF_089h"->"Malta -Climax (9254) & 115/230 T1 #9258"
 line ->70273->70257->"1"->1->0
 load ->70257->"P1"->0
 line ->70257->70114->"1"->1->0
 tran ->70274->70273->"T1"->0->71982
```

```
0
"BF_090a"⟶"Manchief Units 1 & 2"
 line ⟶70311⟶70349⟶"1"⟶1⟶0
 gen ⟶70314⟶"G1"⟶0
 line ⟶70311⟶70349⟶"1"⟶1⟶0
 gen ⟶70315⟶"G2"⟶0
0
"BF_091a"⟶"Mapleton 9742 stuck"
 line ⟶70108⟶70277⟶"1"⟶1⟶0
0
"BF_091b"⟶"Mapleton 9741 stuck"
 line ⟶70108⟶70276⟶"2"⟶1⟶0
 line ⟶70087⟶70074⟶"1"⟶1⟶0
 line ⟶70074⟶70177⟶"1"⟶1⟶0
 line ⟶70177⟶70276⟶"1"⟶1⟶0
0
"BF_092a"⟶"Mayflower"
 line ⟶70281⟶70114⟶"1"⟶1⟶0
 line ⟶70281⟶70421⟶"1"⟶1⟶0
 line ⟶70421⟶70155⟶"1"⟶1⟶0
 load ⟶70281⟶"IN"⟶0
 load ⟶70281⟶"P1"⟶0
 load ⟶70281⟶"P2"⟶0
0
"BF_093a"⟶"eeker"
 line ⟶79266⟶79058⟶"1"⟶1⟶0
 line ⟶79266⟶79356⟶"1"⟶1⟶0
 line ⟶79266⟶72720⟶"1"⟶1⟶0
0
"BF_094a"⟶"idway 345 #7060"
 tran ⟶70465⟶71996⟶"T3"⟶0⟶70286
 line ⟶70465⟶70466⟶"1"⟶1⟶0
0
"BF_094b"⟶"Midway PS 230/345 & Boone #5128"
 tran ⟶70286⟶70465⟶"T3"⟶0⟶71996
0
"BF_094c"⟶"Midway PS - Mirasol & Fountain Valley Units #5126"
 line ⟶70286⟶70652⟶"1"⟶1⟶0
 line ⟶70286⟶70595⟶"1"⟶1⟶0
 gen ⟶70577⟶"G1"⟶0
 gen ⟶70577⟶"G2"⟶0
 load ⟶70577⟶"SS"⟶0
 line ⟶70286⟶70595⟶"1"⟶1⟶0
 gen ⟶70578⟶"G3"⟶0
 gen ⟶70578⟶"G4"⟶0
 load ⟶70578⟶"SS"⟶0
 line ⟶70286⟶70595⟶"1"⟶1⟶0
 gen ⟶70579⟶"G5"⟶0
 gen ⟶70579⟶"G6"⟶0
 load ⟶70579⟶"SS"⟶0
0
"BF_094d"⟶"Midway 5120 stuck"
 line ⟶70286⟶73477⟶"1"⟶1⟶0
 line ⟶70286⟶73413⟶"1"⟶1⟶0
 line ⟶73413⟶73419⟶"1"⟶1⟶0
 line ⟶73413⟶73638⟶"1"⟶1⟶0
 line ⟶73638⟶73551⟶"1"⟶1⟶0
0
"BF_094e"⟶"idway WAPA 230 bus # 386"
 line ⟶73413⟶70286⟶"1"⟶1⟶0
 tran ⟶73413⟶73412⟶"1"⟶0⟶-1
 line ⟶73413⟶73419⟶"1"⟶1⟶0
 line ⟶73413⟶73638⟶"1"⟶1⟶0
 line ⟶73638⟶73551⟶"1"⟶1⟶0
0
"BF_094f"⟶"Midway PS 115 Bus"
 tran ⟶70285⟶70286⟶"T1"⟶0⟶71980
 line ⟶70285⟶70456⟶"1"⟶1⟶0
 line ⟶70285⟶70301⟶"1"⟶1⟶0
```

```
load ->70301->"WP"->0
line ->70301->70007->"1"->1->0
line ->70007->70031->"1"->1->0
line ->70285->73412->"1"->1->0
0
"BF_094g"->"idway WAPA 115"
line ->73412->70193->"1"->1->0
load ->70193->"WP"->0
line ->70193->70449->"1"->1->0
load ->70449->"WP"->0
line ->70449->70456->"1"->1->0
line ->73412->73416->"1"->1->0
line ->73412->73417->"1"->1->0
tran ->73412->73413->"1"->0->-1
line ->73412->70285->"1"->1->0
0
"BF_095a"->"Mill"
line ->70287->70052->"1"->1->0
line ->70287->70328->"1"->1->0
load ->70328->"P2"->0
line ->70328->70218->"1"->1->0
line ->70287->73296->"1"->1->0
load ->70287->"P1"->0
0
"BF_096a"->"irasol"
line ->70652->700139->"1"->1->0
line ->700139->70122->"1"->1->0
line ->70652->70286->"1"->1->0
line ->70652->70759->"1"->1->0
0
"BF_097a"->"Moon Gulch"
line ->70574->70543->"1"->1->0
load ->70543->"P1"->0
load ->70543->"P2"->0
line ->70543->70447->"1"->1->0
line ->70574->70570->"1"->1->0
0
"BF_098a"->"onaco"
line ->70481->70365->"1"->1->0
load ->70481->"P1"->0
0
"BF_099a"->"Monfort Sub"
line ->70290->70209->"1"->1->0
line ->70290->70116->"1"->1->0
line ->70116->70805->"1"->1->0
load ->70805->"IN"->0
line ->70116->70368->"1"->1->0
line ->70290->70897->"1"->1->0
line ->70897->70899->"1"->1->0
load ->70899->"IN"->0
line ->70897->70903->"1"->1->0
load ->70290->"P1"->0
svd ->70290->"v"->0
0
"BF_100a"->"onument"
line ->73414->70308->"1"->1->0
line ->73414->73400->"1"->1->0
line ->73414->73738->"1"->1->0
line ->73738->73712->"1"->1->0
line ->73738->73712->"2"->1->0
line ->73414->73445->"1"->1->0
tran ->73414->72902->"1"->0->-1
tran ->73414->72902->"2"->0->-1
0
# //Missile Site 345
"BF_101a"->"Missile Site 7104 stuck"
line ->70624->70915->"2"->1->0
line ->70624->70599->"1"->1->0
0
```

```
"BF_101b"⟶"Missile Site 7108 stuck"
 line ⟶70624⟶70915⟶"1"⇢1⟶0
 line ⟶70624⟶70601⟶"1"⇢1⟶0
0
# //Missile Site 230
"BF_101c"⟶"Missile Site 55040 stuck"
 line ⟶70623⟶70139⟶"1"⇢1⟶0
0
"BF_101d"⟶"Missile Site 5113 stuck"
 line ⟶70623⟶70139⟶"1"⇢1⟶0
 line ⟶70623⟶70678⟶"1"⇢1⟶0
0
"BF_101e"⟶"Missile Site 55042 stuck"
 line ⟶70623⟶70678⟶"1"⇢1⟶0
 line ⟶70623⟶70618⟶"1"⇢1⟶0
0
"BF_101f"⟶"Missile Site 55045 stuck"
 line ⟶70623⟶70618⟶"1"⇢1⟶0
 tran ⟶70624⟶70623⟶"T1"⟶0⟶71997
0
"BF_101g"⟶"Missile Site 5457 stuck"
 tran ⟶70624⟶70623⟶"T1"⟶0⟶71997
0
"BF_101h"⟶"Missile Site 7106 stuck"
 line ⟶70624⟶70628⟶"1"⇢1⟶0
 svd ⟶70624⟶"v"⇢0
0
"BF_101i"⟶"Missile Site 7100 stuck"
 line ⟶70624⟶70625⟶"1"⇢1⟶0
 tran ⟶70624⟶70623⟶"T1"⟶0⟶71997
0
"BF_102a"⟶"Montrose 345 stuck"
 line ⟶79049⟶79072⟶"1"⇢1⟶0
 tran ⟶79049⟶79048⟶"1"⇢0⟶72969
 line ⟶79049⟶79036⟶"1"⇢1⟶0
0
"BF_103a"⟶"Mt Harris"
 line ⟶70525⟶79038⟶"1"⇢1⟶0
 load ⟶70525⟶"YV"⟶0
0
"BF_104b"⟶"urphy Creek"
 line ⟶70551⟶70396⟶"1"⇢1⟶0
 line ⟶70551⟶70513⟶"1"⇢1⟶0
 load ⟶70513⟶"CR"⟶0
 line ⟶70513⟶70524⟶"1"⇢1⟶0
 load ⟶70551⟶"P1"⟶0
 load ⟶70551⟶"P2"⟶0
0
"BF_105a"⟶"Niwot 5637 stuck"
 line ⟶70297⟶70544⟶"1"⇢1⟶0
 load ⟶70297⟶"P1"⟶0
 load ⟶70297⟶"P2"⟶0
0
"BF_105b"⟶"Niwot 5634 stuck"
 line ⟶70297⟶70544⟶"1"⇢1⟶0
 line ⟶70297⟶70972⟶"1"⇢1⟶0
0
"BF_105c"⟶"Niwot 5635 stuck"
 line ⟶70297⟶70261⟶"1"⇢1⟶0
 load ⟶70261⟶"P1"⟶0
 load ⟶70261⟶"P2"⟶0
 line ⟶70261⟶70570⟶"1"⇢1⟶0
 line ⟶70297⟶70972⟶"1"⇢1⟶0
0
"BF_105d"⟶"Niwot 5636 stuck"
 line ⟶70297⟶70213⟶"2"⇢1⟶0
 line ⟶70297⟶70261⟶"1"⇢1⟶0
 load ⟶70261⟶"P1"⟶0
 load ⟶70261⟶"P2"⟶0
```

```
 line ⟶70261⟶70570⟶"1"↛1⟶0
0
"BF_105e"⟶"Niwot 5639 stuck"
 line ⟶70297⟶70213⟶"2"↛1⟶0
 load ⟶70297⟶"P1"⟶0
 load ⟶70297⟶"P2"⟶0
0
"BF_106a"⟶"North 9305 stuck"
 line ⟶70298⟶70108⟶"1"↛1⟶0
 svd ⟶70298⟶"v"↛0
0
"BF_106b"⟶"North 9308 stuck"
 line ⟶70298⟶70377⟶"1"↛1⟶0
 svd ⟶70298⟶"v"↛0
0
"BF_106c"⟶"North 9309 stuck"
 line ⟶70298⟶70377⟶"1"↛1⟶0
0
"BF_106d"⟶"North 9300 stuck"
 load ⟶70298⟶"P2"⟶0
 load ⟶70298⟶"P6"⟶0
0
"BF_106e"⟶"North 9303 stuck"
 load ⟶70298⟶"P1"⟶0
 load ⟶70298⟶"P2"⟶0
0
"BF_106f"⟶"North 9304 stuck"
 line ⟶70108⟶70298⟶"1"↛1⟶0
0
"BF_107a"⟶"REL "
 line ⟶70170⟶70164⟶"1"↛1⟶0
 line ⟶70170⟶70300⟶"1"↛1⟶0
 line ⟶70300⟶70322⟶"1"↛1⟶0
 line ⟶70300⟶70262⟶"1"↛1⟶0
 line ⟶70262⟶70340⟶"1"↛1⟶0
 line ⟶70262⟶70226⟶"1"↛1⟶0
 load ⟶70170⟶"NT"⟶0
0
"BF_108a"⟶"tero Pumping Station"
 line ⟶70304⟶70056⟶"1"↛1⟶0
 line ⟶70056⟶70055⟶"1"↛1⟶0
 load ⟶70055⟶"TS"⟶0
 line ⟶70056⟶70312⟶"1"↛1⟶0
 load ⟶70312⟶"TS"⟶0
 line ⟶70312⟶70327⟶"1"↛1⟶0
 line ⟶70304⟶70435⟶"1"↛1⟶0
 line ⟶70435⟶70273⟶"1"↛1⟶0
 line ⟶70435⟶70434⟶"1"↛1⟶0
 load ⟶70434⟶"TS"⟶0
 load ⟶70304⟶"CS"⟶0
0
"BF_109a"⟶"Palmer Lake 115 Sub "
 line ⟶70308⟶70020⟶"1"↛1⟶0
 line ⟶70308⟶70582⟶"1"↛1⟶0
 load ⟶70582⟶"CR"⟶0
 line ⟶70582⟶70584⟶"1"↛1⟶0
 load ⟶70584⟶"CR"⟶0
 line ⟶70584⟶70091⟶"1"↛1⟶0
 line ⟶70308⟶73414⟶"1"↛1⟶0
0
"BF_109a"⟶"Parachute 5505 stuck"
 line ⟶70309⟶70299⟶"1"↛1⟶0
 svd ⟶70309⟶"v"↛0
0
"BF_109b"⟶"Parachute 5506 stuck"
 line ⟶70309⟶70299⟶"1"↛1⟶0
 line ⟶70309⟶70358⟶"1"↛1⟶0
0
"BF_109c"⟶"Parachute 5507 stuck"
```

```
 line ⟶70309⟶70356⟶"1"⟶1⟶0
 load ⟶70356⟶"IN"⟶0
 line ⟶70356⟶70430⟶"1"⟶1⟶0
 line ⟶70430⟶70357⟶"1"⟶1⟶0
 load ⟶70357⟶"IN"⟶0
 svd ⟶70309⟶"v"⟶0
0
"BF_109d"⟶"Parachute 5508 stuck"
#  ⟶/open branch from bus 70309 to bus 70078 ckt 1
 line ⟶70309⟶70264⟶"1"⟶1⟶0
 line ⟶70264⟶70078⟶"1"⟶1⟶0
 line ⟶70309⟶70356⟶"1"⟶1⟶0
 load ⟶70356⟶"IN"⟶0
 line ⟶70356⟶70430⟶"1"⟶1⟶0
 line ⟶70430⟶70357⟶"1"⟶1⟶0
 load ⟶70357⟶"IN"⟶0
0
"BF_109e"⟶"Parachute 5501 stuck"
 load ⟶70309⟶"P1"⟶0
 load ⟶70309⟶"HC"⟶0
 svd ⟶70309⟶"v"⟶0
0
"BF_109f"⟶"Parachute 55160 stuck"
 line ⟶70309⟶79057⟶"1"⟶1⟶0
 load ⟶70309⟶"P1"⟶0
0
"BF_110a"⟶"arkway 562"
 line ⟶70604⟶70194⟶"1"⟶1⟶0
 load ⟶70194⟶"TS"⟶0
 line ⟶70194⟶70127⟶"1"⟶1⟶0
 line ⟶70127⟶70191⟶"1"⟶1⟶0
 line ⟶70604⟶70244⟶"1"⟶1⟶0
 load ⟶70244⟶"P2"⟶0
 load ⟶70244⟶"P3"⟶0
 load ⟶70604⟶"TS"⟶0
0
"BF_111a"⟶"Pawnee 7093 stuck"
 line ⟶70598⟶70915⟶"1"⟶1⟶0
 tran ⟶70598⟶70311⟶"T3"⟶0⟶71999
0
"BF_111b"⟶"Pawnee 7094 stuck"
 line ⟶70598⟶70915⟶"2"⟶1⟶0
 tran ⟶70598⟶70311⟶"T3"⟶0⟶71999
0
"BF_111c"⟶"Pawnee 7111 stuck"
 line ⟶70598⟶70915⟶"2"⟶1⟶0
 tran ⟶70598⟶70311⟶"T2"⟶0⟶71998
0
"BF_111d"⟶"Pawnee 7092 stuck"
 tran ⟶70598⟶70311⟶"T2"⟶0⟶71998
 line ⟶70598⟶70915⟶"1"⟶1⟶0
0
"BF_111e"⟶"Pawnee 5454 stuck"
 line ⟶70311⟶70545⟶"1"⟶1⟶0
 line ⟶70311⟶70349⟶"1"⟶1⟶0
 gen ⟶70314⟶"G1"⟶0
 load ⟶70314⟶"SS"⟶0
 line ⟶70311⟶70349⟶"1"⟶1⟶0
 gen ⟶70315⟶"G2"⟶0
 load ⟶70315⟶"SS"⟶0
0
"BF_111f"⟶"Pawnee 5450 stuck"
 line ⟶70311⟶73192⟶"1"⟶1⟶0
0
"BF_112a"⟶"Peetz"
 line ⟶73150⟶70722⟶"1"⟶1⟶0
 load ⟶70723⟶"SS"⟶0
 svd ⟶70723⟶"v"⟶0
 gen ⟶70723⟶"W1"⟶0
```

```
 load ->73150->"PS"->0
 line ->73150->73179->"1"->1->0
 line ->73150->73191->"1"->1->0
0
"BF_113a"->"icadilly"
 line ->70530->70432->"1"->1->0
 load ->70432->"P2"->0
 load ->70432->"P1"->0
 line ->70530->70528->"1"->1->0
0
"BF_114a"->"Plains End - Niwot & Unit Groups 3 & 4 #5264"
 line ->70570->70261->"1"->1->0
 load ->70261->"P1"->0
 load ->70261->"P2"->0
 line ->70261->70297->"1"->1->0
0
"BF_114b"->"Plains End - Lookout/Valmont 230 #5262"
 line ->70570->70266->"1"->1->0
 line ->70570->70574->"1"->1->0
 load ->70574->"P1"->0
 line ->70574->70543->"1"->1->0
 load ->70543->"P1"->0
 load ->70543->"P2"->0
 line ->70543->70447->"1"->1->0
0
"BF_114c"->"Plains End - Lookout (#5027) & Pl End Gen Groups 1 & 2 #5260"
 line ->70570->70266->"2"->1->0
0
"BF_114d"->"lains End NUG 1"
 line ->70570->70431->"1"->1->0
 load ->70580->"SS"->0
 line ->70570->70431->"1"->1->0
0
"BF_114e"->"lains End NUG 2"
 line ->70570->70433->"1"->1->0
 line ->70570->70433->"1"->1->0
0
"BF_115a"->"oncha 5747"
 tran ->70393->70327->"T4"->0->71994
 line ->70393->79054->"1"->1->0
0
"BF_115b"->"Poncha West Bus"
 tran ->77642->70326->"T2"->0->-1
 line ->70327->79196->"1"->1->0
 line ->79196->79197->"1"->1->0
 line ->79197->79090->"1"->1->0
 line ->79197->79037->"1"->1->0
 line ->77642->70394->"1"->1->0
 load ->70394->"TS"->0
 line ->70394->70550->"1"->1->0
 load ->77642->"NT"->0
 load ->77642->"P1"->0
0
"BF_115c"->"Poncha East Bus"
 line ->70327->70379->"1"->1->0
 load ->70379->"P2"->0
 line ->70379->70374->"1"->1->0
 line ->70327->70312->"1"->1->0
 line ->70312->70056->"1"->1->0
 line ->70056->70304->"1"->1->0
 line ->70304->70435->"1"->1->0
 line ->70435->70273->"1"->1->0
 tran ->70393->70327->"T4"->0->71994
 svd ->70327->"v"->0
0
"BF_115d"->"Poncha Bus Tie"
 line ->70327->77642->"1"->1->0
 tran ->77642->70326->"T2"->0->-1
 line ->70327->79196->"1"->1->0
```

```
 line -->79196-->79197-->"1"->1-->0
 line -->79197-->79090-->"1"->1-->0
 line -->79197-->79037-->"1"->1-->0
 line -->77642-->70394-->"1"->1-->0
 load -->70394-->"TS"-->0
 line -->70394-->70550-->"1"->1-->0
 load -->77642-->"NT"-->0
 load -->77642-->"P1"-->0
 line -->70327-->70379-->"1"->1-->0
 load -->70379-->"P2"-->0
 line -->70379-->70374-->"1"->1-->0
 line -->70327-->70312-->"1"->1-->0
 line -->70312-->70056-->"1"->1-->0
 line -->70056-->70304-->"1"->1-->0
 line -->70304-->70435-->"1"->1-->0
 line -->70435-->70273-->"1"->1-->0
 tran -->70393-->70327-->"T4"-->0-->71994
 svd -->70327-->"v"->0
0
"BF_116a"-->"Pronghorn 7107 stuck"
 line -->70628-->70624-->"1"->1-->0
 tran -->70764-->70765-->"T1"-->0-->-1
 load -->70765-->"SS"-->0
 svd -->70765-->"v"->0
 gen -->70767-->"W1"-->0
 tran -->70764-->70768-->"T2"-->0-->-1
 load -->70768-->"SS"-->0
 svd -->70768-->"v"->0
 gen -->70770-->"W2"-->0
0
"BF_116b"-->"ronghorn 7138      remove swshunt from bus 70628"
 line -->70628-->70624-->"1"->1-->0
0
"BF_116c"-->"Pronghorn 7132 stuck"
 line -->70628-->70630-->"1"->1-->0
0
"BF_116d"-->"Pronghorn 7130 stuck"
 line -->70628-->70630-->"1"->1-->0
 tran -->70764-->70765-->"T1"-->0-->-1
 load -->70765-->"SS"-->0
 svd -->70765-->"v"->0
 gen -->70767-->"W1"-->0
 tran -->70764-->70768-->"T2"-->0-->-1
 load -->70768-->"SS"-->0
 svd -->70768-->"v"->0
 gen -->70770-->"W2"-->0
0
"BF_117a"-->"Ptarmigan 5367 stuck"
 line -->70057-->70053-->"1"->1-->0
 load -->70057-->"P1"-->0
0
"BF_117b"-->"Ptarmigan 5364 stuck"
 line -->70057-->70156-->"1"->1-->0
 line -->70057-->70053-->"1"->1-->0
 load -->70057-->"P1"-->0
0
"BF_117c"-->"Ptarmigan 5359 stuck"
 line -->70057-->70156-->"1"->1-->0
 load -->70057-->"P1"-->0
0
"BF_118a"-->"eunion 5876"
 line -->72026-->70047-->"1"->1-->0
 line -->72026-->70609-->"1"->1-->0
0
"BF_118b"-->"eunion 5875"
 line -->72026-->70047-->"1"->1-->0
 tran -->72026-->72028-->"T1"-->0-->-1
0
"BF_118c"-->"eunion 5877 "
```

```
 line ->72026->70609->"1"->1->0
 load ->72026->"TS"->0
0
"BF_118d"->"eunion 5870"
 tran ->72026->72028->"T1"->0->-1
 load ->72026->"TS"->0
0
# //Ridge 230
"BF_119a"->"Ridge 5029 stuck"
 line ->70266->70355->"1"->1->0
 tran ->70227->70355->"T2"->0->-1
0
"BF_119b"->"Ridge 5066 stuck"
 line ->70266->70355->"1"->1->0
 line ->70355->70369->"1"->1->0
 load ->70369->"P1"->0
 load ->70369->"P2"->0
 line ->70107->70369->"1"->1->0
0
"BF_119c"->"Ridge 5021 stuck"
 line ->70355->70369->"1"->1->0
 load ->70369->"P1"->0
 load ->70369->"P2"->0
 line ->70107->70369->"1"->1->0
 load ->70355->"P3"->0
0
"BF_119d"->"Ridge 5067 stuck"
 line ->70041->70355->"1"->1->0
 load ->70041->"P1"->0
 load ->70041->"P2"->0
 line ->70041->70107->"1"->1->0
 load ->70355->"P3"->0
0
"BF_119e"->"Ridge 5064 stuck"
 line ->70041->70355->"1"->1->0
 load ->70041->"P1"->0
 load ->70041->"P2"->0
 line ->70041->70107->"1"->1->0
 tran ->70227->70355->"T2"->0->-1
0
# //Ridge 115
"BF_119f"->"Ridge Bus 1"
 line ->70354->70346->"2"->1->0
 load ->70346->"P2"->0
 line ->70346->70164->"1"->1->0
 line ->70354->70251->"1"->1->0
 line ->70251->70208->"1"->1->0
 svd ->70354->"v"->0
0
"BF_119g"->"Ridge Bus 2"
 line ->70226->70262->"1"->1->0
 line ->70262->70340->"1"->1->0
 line ->70262->70300->"1"->1->0
 line ->70300->70322->"1"->1->0
 line ->70300->70170->"1"->1->0
 line ->70226->70252->"2"->1->0
 line ->70252->70208->"2"->1->0
 line ->70226->70345->"1"->1->0
 line ->70345->70440->"1"->1->0
 svd ->70354->"v"->0
0
"BF_119h"->"Ridge Bus 1 & 2"
 line ->70354->70346->"2"->1->0
 load ->70346->"P2"->0
 line ->70346->70164->"1"->1->0
 line ->70354->70251->"1"->1->0
 line ->70251->70208->"1"->1->0
 svd ->70354->"v"->0
 line ->70226->70262->"1"->1->0
```

```
 line ->70262->70340->"1"->1->0
 line ->70262->70300->"1"->1->0
 line ->70300->70322->"1"->1->0
 line ->70300->70170->"1"->1->0
 line ->70226->70252->"2"->1->0
 line ->70252->70208->"2"->1->0
 line ->70226->70345->"1"->1->0
 line ->70345->70440->"1"->1->0
 svd ->70354->"v"->0
 tran ->70227->70355->"T2"->0->-1
0
"BF_120a"->"RMEC - Green Valley & RMEC Unit 1 + 1/2 Unit 3, 5567 stuck"
 line ->70590->70048->"1"->1->0
 tran ->70590->70588->"U1"->0->-1
 gen ->70588->"G1"->0
 gen ->70591->"ST"->1->pgen ->159.50
0
"BF_120b"->"RMEC Unit 1 & 3, 5560 stuck"
 tran ->70590->70588->"U1"->0->-1
 gen ->70588->"G1"->0
 tran ->70590->70591->"U3"->0->-1
 gen ->70591->"ST"->0
0
"BF_120c"->"RMEC - Keenesburg & RMEC Unit 3, 5564 stuck"
 line ->70590->70820->"1"->1->0
 tran ->70590->70591->"U3"->0->-1
 gen ->70591->"ST"->0
0
"BF_120d"->"RMEC - Keenesburg & RMEC Unit 2 + 1/2 Unit 3, 5565 stuck"
 line ->70590->70820->"1"->1->0
 tran ->70590->70589->"U2"->0->-1
 gen ->70589->"G2"->0
 gen ->70591->"ST"->1->pgen ->159.50
0
"BF_121a"->"Rosedale 9690 stuck"
 load ->70368->"P2"->0
 load ->70368->"P1"->0
0
"BF_121b"->"Rosedale 8018 "
 line ->70368->70475->"1"->1->0
 load ->70475->"P1"->0
 load ->70475->"P2"->0
 line ->70475->70470->"1"->1->0
0
"BF_121c"->"Rosedale 8016"
 line ->70368->73554->"1"->1->0
 line ->73554->73211->"1"->1->0
 line ->70368->73055->"1"->1->0
0
"BF_122a"->"ussell"
 line ->70369->70107->"1"->1->0
 line ->70369->70355->"1"->1->0
 load ->70369->"P1"->0
 load ->70369->"P2"->0
0
"BF_123a"->"ush Creek"
 line ->70764->70628->"1"->1->0
 tran ->70764->70765->"T1"->0->-1
 load ->70765->"SS"->0
 svd ->70765->"v"->0
 gen ->70767->"W1"->0
 tran ->70764->70768->"T2"->0->-1
 load ->70768->"SS"->0
 svd ->70768->"v"->0
 gen ->70770->"W2"->0
0
"BF_124a"->"Sandown Buses 1 & 2 & 3 #9949"
 line ->70377->70259->"1"->1->0
# / open branch from bus 70277 to bus 70108 ckt 1
```

```
 load ->70126->"IN"->0
# / open branch from bus 70126 to bus 70110 ckt 1
 line ->70377->70298->"1"->1->0
 load ->70377->"IN"->0
 load ->70377->"P1"->0
 load ->70377->"P2"->0
 load ->70377->"P3"->0
0
"BF_124b"->"Sandown Buses 1 & 2"
 line ->70377->70259->"1"->1->0
# / open branch from bus 70277 to bus 70108 ckt 1
 load ->70126->"IN"->0
# / open branch from bus 70126 to bus 70110 ckt 1
0
"BF_125a"->"hortgrass 7195"
 line ->70630->70918->"1"->1->0
 svd ->70630->"v"->0
0
"BF_125b"->"hortgrass 7193"
 line ->70630->70628->"1"->1->0
 svd ->70630->"v"->0
0
"BF_125c"->"hortgrass 7191"
 line ->70630->70918->"1"->1->0
 line ->70630->70750->"1"->1->0
0
"BF_125d"->"hortgrass 7190"
 line ->70630->70750->"1"->1->0
 tran ->70630->70773->"T1"->0->-1
0
"BF_125e"->"hortgrass 7192"
 line ->70630->70628->"1"->1->0
 tran ->70630->70773->"T1"->0->-1
0
"BF_126a"->"Silver Saddle 230 Sub 5740 stuck"
 line ->70609->70107->"1"->1->0
 line ->70609->72026->"1"->1->0
 load ->70609->"TS"->0
0
"BF_127a"->"Sky Ranch 230 Sub"
 line ->70392->70528->"1"->1->0
 line ->70392->700155->"1"->1->0
 line ->700155->70048->"1"->1->0
 load ->70392->"P1"->0
 load ->70392->"P2"->0
0
"BF_128a"->"San Luis Valley 230 kV 482 stuck"
 line ->70375->79054->"1"->1->0
 tran ->70375->70374->"T1"->0->70965
0
"BF_128b"->"SLV 230 kV 182 stuck"
 line ->70375->79054->"1"->1->0
 tran ->70374->70375->"T2"->0->70970
0
"BF_128c"->"SLV 230 kV 282 stuck"
 tran ->70375->70374->"T2"->0->70970
 tran ->70935->70375->"1"->0->-1
 gen ->70935->"S1"->0
 load ->70935->"SS"->0
0
"BF_128d"->"SLV 230 kV 382 stuck"
 tran ->70935->70375->"1"->0->-1
 gen ->70935->"S1"->0
 load ->70935->"SS"->0
 tran ->70374->70375->"T1"->0->70965
0
"BF_128e"->"SLV 115 kV Bus 1"
 tran ->70374->70376->"T3"->0->-1
 line ->70376->70028->"1"->1->0
```

```
 line ->70376->70230->"1"->1->0
 line ->70376->70292->"1"->1->0
 tran ->70374->70375->"T1"->0->70965
 line ->70374->70379->"1"->1->0
 load ->70379->"P2"->0
 line ->70379->70327->"1"->1->0
 tran ->70379->70380->"T1"->0->-1
 line ->70374->70411->"1"->1->0
 line ->70411->70658->"1"->1->0
0
"BF_128f"->"SLV 115 kV Bus 2"
 line ->70374->70467->"1"->1->0
 line ->70374->70937->"1"->1->0
 tran ->70374->70376->"T4"->0->-1
 tran ->70374->70375->"T2"->0->70970
 tran ->70374->70932->"U1"->0->-1
 gen ->70933->"S1"->0
 load ->70932->"SS"->0
0
"BF_128g"->"San Luis Valley Bus Tie"
 tran ->70374->70376->"T3"->0->-1
 line ->70376->70028->"1"->1->0
 line ->70376->70230->"1"->1->0
 line ->70376->70292->"1"->1->0
 tran ->70374->70375->"T1"->0->70965
 line ->70374->70379->"1"->1->0
 load ->70379->"P2"->0
 line ->70379->70327->"1"->1->0
 tran ->70379->70380->"T1"->0->-1
 line ->70374->70411->"1"->1->0
 line ->70411->70658->"1"->1->0
 line ->70374->70467->"1"->1->0
 line ->70374->70937->"1"->1->0
 tran ->70374->70376->"T4"->0->-1
 tran ->70374->70375->"T2"->0->70970
 tran ->70374->70932->"U1"->0->-1
 gen ->70933->"S1"->0
 load ->70932->"SS"->0
0
"BF_129a"->"Smoky Hill 7081 stuck"
 line ->70599->70624->"1"->1->0
 tran ->70599->70396->"T5"->0->-1
0
"BF_129b"->"Smoky Hill 7080 stuck"
 tran ->70599->70396->"T4"->0->-1
 line ->70599->70624->"1"->1->0
0
"BF_129c"->"Smoky Hill 7084 stuck"
 line ->70597->70599->"2"->1->0
 tran ->70599->70396->"T4"->0->-1
0
"BF_129d"->"Smoky Hill 7082 stuck"
 tran ->70599->70396->"T5"->0->-1
 line ->70597->70599->"2"->1->0
0
"BF_129e"->"Smoky Hill 5166 stuck"
 line ->70396->70532->"1"->1->0
 load ->70532->"P1"->0
 line ->70532->70528->"1"->1->0
 line ->70396->70596->"1"->1->0
0
"BF_129f"->"Smoky Hill 5164 stuck"
 line ->70396->70528->"1"->1->0
 line ->70343->70396->"1"->1->0
 load ->70343->"P1"->0
 load ->70343->"NT"->0
 line ->70343->70545->"1"->1->0
0
"BF_129g"->"Smoky Hill 5178 stuck"
```

```
 line ->70396->70551->"1"->1->0
 load ->70551->"P1"->0
 load ->70551->"P2"->0
 line ->70551->70513->"1"->1->0
 load ->70513->"CR"->0
 line ->70513->70524->"1"->1->0
 tran ->70395->70396->"T1"->0->71990
0
"BF_129h"->"Smoky Hill 5176 stuck"
 tran ->70396->70125->"T2"->0->71991
 tran ->70599->70396->"T4"->0->-1
0
"BF_129i"->"Smoky Hill 5168 stuck"
 line ->70396->70067->"2"->1->0
 load ->70067->"P1"->0
 load ->70067->"P2"->0
 line ->70067->70512->"1"->1->0
 line ->70512->70417->"1"->1->0
 line ->70396->70046->"1"->1->0
 line ->70046->70491->"1"->1->0
 load ->70491->"P1"->0
 load ->70491->"P2"->0
 load ->70491->"P3"->0
 line ->70491->70239->"1"->1->0
 line ->70239->70260->"1"->1->0
0
"BF_129j"->"Smoky Hill 5170 stuck"
 line ->70283->70396->"1"->1->0
 load ->70283->"P1"->0
 load ->70283->"P2"->0
 line ->70283->70313->"1"->1->0
 load ->70313->"CR"->0
 line ->70313->70241->"1"->1->0
 tran ->70599->70396->"T5"->0->-1
0
"BF_129k"->"moky Hill 5179"
 line ->70396->70596->"1"->1->0
 svd ->70396->"v"->0
0
"BF_129l"->"moky Hill 5165"
 line ->70343->70396->"1"->1->0
 load ->70343->"P1"->0
 load ->70343->"NT"->0
 line ->70343->70545->"1"->1->0
 svd ->70396->"v"->0
0
"BF_129m"->"moky Hill 5163"
 line ->70396->70551->"1"->1->0
 load ->70551->"P1"->0
 load ->70551->"P2"->0
 line ->70551->70513->"1"->1->0
 load ->70513->"CR"->0
 line ->70513->70524->"1"->1->0
 svd ->70396->"v"->0
0
"BF_129n"->"moky Hill 5174"
 tran ->70599->70396->"T4"->0->-1
 svd ->70396->"v"->0
0
"BF_129o"->"moky Hill 5285"
 line ->70396->70046->"1"->1->0
 line ->70046->70491->"1"->1->0
 load ->70491->"P1"->0
 load ->70491->"P2"->0
 load ->70491->"P3"->0
 line ->70491->70239->"1"->1->0
 line ->70239->70260->"1"->1->0
 svd ->70396->"v"->0
0
```

```
"BF_129p"⟶"moky Hill 5175"
 tran ⟶70599⟶70396⟶"T5"⟶0⟶-1
 svd ⟶70396⟶"v"→0
0
"BF_129q"⟶"Smoky Hill 5171 stuck"
 line ⟶70396⟶70532⟶"1"→1⟶0
 line ⟶70532⟶70528⟶"1"→1⟶0
 load ⟶70396⟶"P3"⟶0
0
"BF_129r"⟶"Smoky Hill 5177 stuck"
 line ⟶70396⟶70528⟶"1"→1⟶0
 load ⟶70396⟶"P3"⟶0
0
"BF_129s"⟶"Smoky Hill 5161 stuck"
 tran ⟶70396⟶70395⟶"T1"⟶0⟶71990
 load ⟶70396⟶"P3"⟶0
0
"BF_129t"⟶"Smoky Hill 5162 stuck"
 tran ⟶70396⟶70125⟶"T2"⟶0⟶71991
 load ⟶70396⟶"P3"⟶0
0
"BF_129u"⟶"Smoky Hill 5167 stuck"
 line ⟶70396⟶70046⟶"1"→1⟶0
 line ⟶70046⟶70491⟶"1"→1⟶0
 load ⟶70491⟶"P1"⟶0
 load ⟶70491⟶"P2"⟶0
 load ⟶70491⟶"P3"⟶0
 line ⟶70491⟶70239⟶"1"→1⟶0
 line ⟶70239⟶70260⟶"1"→1⟶0
 load ⟶70396⟶"P3"⟶0
0
"BF_129v"⟶"Smoky Hill 5169 stuck"
 line ⟶70283⟶70396⟶"1"→1⟶0
 load ⟶70283⟶"P1"⟶0
 load ⟶70283⟶"P2"⟶0
 line ⟶70283⟶70313⟶"1"→1⟶0
 load ⟶70313⟶"CR"⟶0
 line ⟶70313⟶70241⟶"1"→1⟶0
 load ⟶70396⟶"P3"⟶0
0
"BF_129w"⟶"Smoky Hill 115 kV North Bus"
 line ⟶70395⟶70416⟶"1"→1⟶0
 line ⟶70395⟶70171⟶"1"→1⟶0
 line ⟶70395⟶70171⟶"2"→1⟶0
 tran ⟶70396⟶70395⟶"T1"⟶0⟶71990
0
"BF_129x"⟶"Smoky Hill 115 kV South Bus"
 tran ⟶70396⟶70125⟶"T2"⟶0⟶71991
 line ⟶70125⟶70521⟶"1"→1⟶0
 svd ⟶70396⟶"v"→0
0
"BF_129y"⟶"Smoky Hill 115 Sub"
 line ⟶70125⟶70395⟶"1"→1⟶0
 line ⟶70395⟶70416⟶"1"→1⟶0
 line ⟶70395⟶70171⟶"1"→1⟶0
 line ⟶70395⟶70171⟶"2"→1⟶0
 tran ⟶70396⟶70395⟶"T1"⟶0⟶71990
 tran ⟶70396⟶70125⟶"T2"⟶0⟶71991
 line ⟶70125⟶70521⟶"1"→1⟶0
 svd ⟶70396⟶"v"→0
0
"BF_130a"⟶"Soda Lakes 230 kV 5023 stuck"
 line ⟶70018⟶70266⟶"1"→1⟶0
 line ⟶70018⟶70100⟶"1"→1⟶0
 load ⟶70100⟶"P1"⟶0
 load ⟶70100⟶"P2"⟶0
 line ⟶70100⟶70464⟶"1"→1⟶0
0
"BF_130b"⟶"Soda Lakes 230 kV 5850 stuck"
```

```
 line ->70018->70100->"1"->1->0
 load ->70100->"P1"->0
 load ->70100->"P2"->0
 line ->70100->70464->"1"->1->0
 tran ->70018->70400->"T2"->0->-1
0
"BF_130c"->"Soda Lakes 230 kV 5851 stuck"
 line ->70018->70266->"1"->1->0
 tran ->70018->70400->"T2"->0->-1
0
"BF_130d"->"Soda Lakes 115 Sub"
 tran ->70400->70018->"T2"->0->-1
 line ->70400->70224->"1"->1->0
 line ->70224->70265->"1"->1->0
 line ->70224->70050->"1"->1->0
 load ->70050->"P1"->0
 load ->70050->"P2"->0
 load ->70050->"CR"->0
 line ->70400->70142->"1"->1->0
 load ->70142->"P1"->0
 load ->70142->"CR"->0
 line ->70142->70484->"1"->1->0
 line ->70484->70463->"1"->1->0
 line ->70484->70280->"1"->1->0
 line ->70400->70429->"1"->1->0
 load ->70429->"CR"->0
 line ->70429->70124->"1"->1->0
 load ->70124->"P1"->0
 load ->70124->"CR"->0
 line ->70400->70023->"1"->1->0
 load ->70023->"P1"->0
 load ->70023->"P2"->0
 line ->70023->70242->"1"->1->0
 load ->70242->"P1"->0
 load ->70242->"P2"->0
 line ->70242->70045->"1"->1->0
 load ->70400->"CR"->0
 load ->70400->"P1"->0
 svd ->70400->"v"->0
0
"BF_131a"->"South 9241 stuck"
 line ->70037->70401->"1"->1->0
 line ->70045->70401->"1"->1->0
0
"BF_131b"->"South 9242 stuck"
 line ->70208->70402->"1"->1->0
 line ->70402->70531->"1"->1->0
 line ->70027->70531->"1"->1->0
 load ->70027->"IN"->0
 line ->70036->70531->"1"->1->0
0
"BF_132a"->"Spring Canyon 5925 stuck"
 line ->73180->73579->"1"->1->0
 line ->73143->73579->"1"->1->0
0
"BF_132b"->"Spring Canyon 5922 stuck"
 line ->73180->73579->"1"->1->0
 line ->73579->70718->"1"->1->0
0
"BF_132c"->"Spring Canyon 5920 stuck"
 line ->73579->70718->"1"->1->0
 line ->73143->73579->"1"->1->0
0
"BF_133a"->"Spruce 5180 stuck"
 line ->70396->70528->"1"->1->0
 line ->70048->70077->"1"->1->0
 line ->70077->70528->"1"->1->0
0
"BF_133b"->"Spruce 5182 stuck"
```

```
 line ->70528->70532->"1"->1->0
# ->/open branch from bus 70526 to bus 70528 ckt 1
#   ->/open branch from bus 70048 to bus 70526 ckt 1
 line ->70528->70497->"1"->1->0
 line ->70497->70526->"1"->1->0
 line ->70048->70526->"1"->1->0
0
"BF_133c"->"Spruce 5184 stuck"
 line ->70528->70536->"1"->1->0
 line ->70392->70528->"1"->1->0
0
"BF_133d"->"Spruce 5186 stuck"
 line ->70528->70530->"1"->1->0
 load ->70530->"P1"->0
 line ->70432->70530->"1"->1->0
 load ->70432->"P1"->0
 load ->70432->"P2"->0
 line ->70432->70539->"1"->1->0
 line ->70528->70520->"1"->1->0
 gen ->70562->"G1"->0
 load ->70562->"SS"->0
 line ->70528->70520->"1"->1->0
 gen ->70563->"G2"->0
 load ->70563->"SS"->0
0
"BF_134a"->"Steamboat 5817 stuck"
 line ->79065->79091->"1"->1->0
 load ->79065->"YV"->0
0
"BF_134b"->"Steamboat 5882 stuck"
 line ->79065->79091->"2"->1->0
 load ->79065->"YV"->0
0
"BF_135a"->"Sullivan 1(5167, 5713, or 5705 stuck)"
 line ->70417->70428->"1"->1->0
 load ->70428->"P1"->0
 load ->70428->"P2"->0
 line ->70212->70428->"2"->1->0
 line ->70417->70512->"1"->1->0
 line ->70512->70067->"1"->1->0
 load ->70067->"P1"->0
 load ->70067->"P2"->0
 line ->70067->70396->"2"->1->0
0
"BF_135b"->"ullivan 2 5281 or 5717"
 line ->70365->70260->"1"->1->0
 line ->70365->70481->"1"->1->0
0
"BF_136a"->"ulphur 5426"
 tran ->70524->70523->"T1"->0->-1
 load ->70524->"CR"->0
0
"BF_136b"->"ulphur 5420"
 tran ->70524->70523->"T2"->0->-1
 load ->70524->"CR"->0
0
"BF_136c"->"ulphur 115kV"
 line ->70523->70517->"1"->1->0
 line ->70523->70517->"2"->1->0
0
"BF_137a"->"arryall 5802"
 line ->70427->70464->"1"->1->0
 line ->70427->70927->"1"->1->0
0
"BF_137b"->"arryall 5803"
 line ->70427->70464->"1"->1->0
 tran ->70427->70426->"T1"->0->-1
0
"BF_137c"->"arryall 5800"
```

```
 line ->70427->70927->"1"->1->0
 tran ->70427->70426->"T1"->0->-1
0
"BF_137d"->"arryall 8384"
 tran ->70426->70427->"T1"->0->-1
 line ->70426->70419->"1"->1->0
 load ->70419->"CR"->0
 line ->70419->70157->"1"->1->0
0
"BF_138a"->"Thornton"
 line ->70099->70081->"1"->1->0
 load ->70081->"TS"->0
 line ->70081->70307->"1"->1->0
 load ->70307->"TS"->0
 line ->70090->70307->"1"->1->0
 line ->70099->70494->"1"->1->0
 line ->70494->70110->"1"->1->0
 load ->70081->"TS"->0
0
"BF_139a"->"ollgate"
 line ->70491->70046->"1"->1->0
 line ->70491->70239->"1"->1->0
0
"BF_140a"->"undra 7015"
 line ->70653->70654->"1"->1->0
 line ->70653->70754->"1"->1->0
0
"BF_140b"->"undra 7235"
 line ->70653->70654->"1"->1->0
 line ->70653->70601->"1"->1->0
0
"BF_140c"->"undra 7230"
 line ->70653->70601->"1"->1->0
 line ->70653->70754->"1"->1->0
0
"BF_141a"->"rand Junction Ute G331N"
 line ->79036->79049->"1"->1->0
 tran ->79036->70205->"T1"->0->-1
0
"BF_141b"->"JU G331K"
 tran ->79036->70205->"T1"->0->-1
 line ->79036->79058->"1"->1->0
0
"BF_141c"->"JU G331S"
 line ->79036->79058->"1"->1->0
 line ->79036->79049->"1"->1->0
0
"BF_141d"->"JU->5557"
 tran ->70205->79036->"T1"->0->-1
 line ->70205->70113->"1"->1->0
 load ->70113->"P1"->0
 load ->70113->"P2"->0
 line ->70113->70206->"1"->1->0
0
"BF_141e"->"rand Junction Ute 8035"
 tran ->79034->70214->"T1"->0->-1
 load ->70214->"GV"->0
 line ->70214->70454->"1"->1->0
 line ->79034->79183->"1"->1->0
0
"BF_141f"->"JU 8304"
 tran ->79034->70214->"T1"->0->-1
 load ->70214->"GV"->0
 line ->70214->70454->"1"->1->0
 tran ->79034->79035->"T2"->0->-1
0
"BF_141g"->"JU 8032"
 tran ->79034->79035->"T2"->0->-1
 line ->79034->79183->"1"->1->0
```

```
0
"BF_141h"-->"JU 3015"
 tran -->79035-->79034-->"T2"-->0-->-1
 line -->79035-->79047-->"1"->1-->0
0
"BF_142a"-->"ifle "
 line -->70358-->70232-->"1"->1-->0
 line -->70358-->70309-->"1"->1-->0
 line -->70358-->79059-->"1"->1-->0
 line -->70358-->79059-->"2"->1-->0
 line -->79059-->79057-->"1"->1-->0
 line -->79059-->79013-->"1"->1-->0
 line -->79059-->79070-->"1"->1-->0
0
"BF_143a"-->"ifle Ute R321K"
 line -->79058-->79266-->"1"->1-->0
 line -->79058-->79036-->"1"->1-->0
0
"BF_143b"-->"ifle Ute R311W or R311K"
 line -->79058-->79266-->"1"->1-->0
 line -->79058-->79036-->"1"->1-->0
 tran -->79058-->79057-->"T4"-->0-->71988
0
"BF_143c"-->"ifle Ute 55140"
 line -->79057-->70309-->"1"->1-->0
 tran -->79058-->79057-->"T4"-->0-->71988
0
"BF_143d"-->"ifle Ute 55134"
 line -->79057-->79059-->"1"->1-->0
 tran -->79057-->79058-->"T4"-->0-->71988
0
"BF_143e"-->"ifle Ute 55135"
 line -->79057-->70309-->"1"->1-->0
 tran -->79057-->79056-->"T3"-->0-->-1
0
"BF_143f"-->"ifle Ute 55133"
 tran -->79057-->79056-->"T3"-->0-->-1
 line -->79057-->79059-->"1"->1-->0
0
"BF_143g"-->"ifle Ute 138 bus"
 tran -->79056-->70359-->"T2"-->0-->-1
 tran -->79056-->79057-->"T3"-->0-->-1
 line -->79056-->79047-->"1"->1-->0
 line -->79056-->79046-->"1"->1-->0
 load -->79056-->"HC"-->0
 load -->79056-->"P1"-->0
 load -->79056-->"P5"-->0
0
"BF_144a"-->"emper"
 line -->70382-->70065-->"1"->1-->0
 line -->70065-->70174-->"1"->1-->0
 line -->70382-->70175-->"1"->1-->0
 load -->70382-->"P1"-->0
 load -->70382-->"P2"-->0
0
"BF_145a"-->"pindle"
 line -->70592-->70410-->"1"->1-->0
 line -->70592-->70447-->"1"->1-->0
# /->remove load SS from bus 70592
 line -->70592-->70468-->"1"->1-->0
 tran -->70468-->70593-->"U1"-->0-->-1
 gen -->70593-->"G1"-->0
 tran -->70468-->70594-->"U2"-->0-->-1
 gen -->70594-->"G2"-->0
0
"BF_146a"-->"tory 2096"
 line -->73193-->72140-->"1"->1-->0
 tran -->73193-->72961-->"1"->0-->73192
0
```

```
"BF_146b"—→"tory 1796"
 tran —→73193—→73192—→"1"→0—→72961
 tran —→73193—→73192—→"2"→0—→72963
0
"BF_146c"—→"tory 2192"
 line —→73193—→72140—→"1"→1—→0
 tran —→73193—→73192—→"2"→0—→72963
0
"BF_146d"—→"tory 286"
 line —→73192—→73016—→"1"→1—→0
 line —→73192—→70311—→"1"→1—→0
0
"BF_146e"—→"tory 586"
 line —→73192—→70399—→"1"→1—→0
0
"BF_146f"—→"tory 886"
 line —→73192—→73143—→"1"→1—→0
 tran —→73192—→73193—→"2"→0—→72963
0
"BF_147a"—→"ail 8425"
 line —→79066—→79092—→"1"→1—→0
 load —→79066—→"HC"——→0
0
"BF_147b"—→"ail 8430"
 line —→79066—→79092—→"1"→1—→0
 line —→79066—→79068—→"1"→1—→0
 load —→79066—→"HC"——→0
0
"BF_147c"—→"ail 8416"
 line —→79066—→79068—→"1"→1—→0
 load —→79066—→"HC"——→0
0
"BF_148a"—→"Valmont - Spindle & 230/115 T7 #5385"
 line —→70447—→70592—→"1"→1—→0
 tran —→70447—→70440—→"T7"——→0—→-1
0
"BF_148b"—→"Valmont 230/115 T7 & T8 #5380"
 tran —→70447—→70440—→"T7"——→0—→-1
 tran —→70447—→70444—→"T8"——→0—→-1
0
"BF_148c"—→"Valmont 230/115 T8 & Plains End #5389"
 tran —→70447—→70444—→"T8"——→0—→-1
 line —→70447—→70543—→"1"→1—→0
 load —→70543—→"P1"——→0
 load —→70543—→"P2"——→0
 line —→70543—→70574—→"1"→1—→0
 load —→70574—→"P1"——→0
 line —→70574—→70570—→"1"→1—→0
0
"BF_148d"—→"Valmont - Plains End/Spindle"
 line —→70447—→70592—→"1"→1—→0
 tran —→70447—→70444—→"T8"——→0—→-1
 line —→70447—→70543—→"1"→1—→0
 load —→70543—→"P1"——→0
 load —→70543—→"P2"——→0
 line —→70543—→70574—→"1"→1—→0
 load —→70574—→"P1"——→0
 line —→70574—→70570—→"1"→1—→0
0
"BF_148e"—→"Valm 115/230 T8 & Eldor/Parkwy/Bould Term (#9067)/Broom (#9052) & Unit 6"
 tran —→70444—→70447—→"T8"——→0—→-1
 svd —→70444—→"v"→0
 line —→70444—→70164—→"1"→1—→0
 line —→70444—→70269—→"1"→1—→0
 load —→70269—→"P1"——→0
 load —→70269—→"P2"——→0
 line —→70269—→70065—→"1"→1—→0
 line —→70444—→70034—→"2"→1—→0
 tran —→70444—→70448—→"U6"——→0—→-1
```

```
 gen ⟶70448⟶"G6"⟶0
 line ⟶70444⟶70244⟶"1"⟶1⟶0
 load ⟶70244⟶"P3"⟶0
 load ⟶70244⟶"P2"⟶0
 line ⟶70244⟶70604⟶"1"⟶1⟶0
0
"BF_148f"⟶"Valm - Bould Term (#9065)/Broom (#9068)/Ridge & 115/230 T7 & Units 7 & 8"
 svd ⟶70440⟶"v"⟶0
 line ⟶70440⟶70059⟶"1"⟶1⟶0
 tran ⟶70440⟶70557⟶"U7"⟶0⟶-1
 gen ⟶70557⟶"G7"⟶0
 tran ⟶70440⟶70558⟶"U8"⟶0⟶-1
 gen ⟶70448⟶"G6"⟶0
 line ⟶70440⟶70065⟶"1"⟶1⟶0
 line ⟶70440⟶70345⟶"1"⟶1⟶0
 line ⟶70226⟶70345⟶"1"⟶1⟶0
 line ⟶70444⟶70034⟶"2"⟶1⟶0
 tran ⟶70440⟶70447⟶"T7"⟶0⟶-1
0
"BF_148g"⟶"Valmont 115 bus tie"
 line ⟶70440⟶70444⟶"1"⟶1⟶0
 tran ⟶70444⟶70447⟶"T8"⟶0⟶-1
 svd ⟶70444⟶"v"⟶0
 line ⟶70444⟶70164⟶"1"⟶1⟶0
 line ⟶70444⟶70269⟶"1"⟶1⟶0
 load ⟶70269⟶"P1"⟶0
 load ⟶70269⟶"P2"⟶0
 line ⟶70269⟶70065⟶"1"⟶1⟶0
 line ⟶70444⟶70034⟶"2"⟶1⟶0
 tran ⟶70444⟶70448⟶"U6"⟶0⟶-1
 gen ⟶70448⟶"G6"⟶0
 line ⟶70444⟶70244⟶"1"⟶1⟶0
 load ⟶70244⟶"P3"⟶0
 load ⟶70244⟶"P2"⟶0
 line ⟶70244⟶70604⟶"1"⟶1⟶0
 svd ⟶70440⟶"v"⟶0
 line ⟶70440⟶70059⟶"1"⟶1⟶0
 tran ⟶70440⟶70557⟶"U7"⟶0⟶-1
 gen ⟶70557⟶"G7"⟶0
 tran ⟶70440⟶70558⟶"U8"⟶0⟶-1
 gen ⟶70448⟶"G6"⟶0
 line ⟶70440⟶70065⟶"1"⟶1⟶0
 line ⟶70440⟶70345⟶"1"⟶1⟶0
 line ⟶70226⟶70345⟶"1"⟶1⟶0
 tran ⟶70440⟶70447⟶"T7"⟶0⟶-1
0
"BF_149a"⟶"alsenburg 230"
 line ⟶70459⟶70990⟶"1"⟶1⟶0
 tran ⟶70459⟶70458⟶"T2"⟶0⟶70960
 tran ⟶70459⟶70458⟶"T3"⟶0⟶70962
0
"BF_149b"⟶"alsenburg 115"
 tran ⟶70459⟶70458⟶"T2"⟶0⟶70960
 tran ⟶70459⟶70458⟶"T3"⟶0⟶70962
 line ⟶70458⟶70272⟶"1"⟶1⟶0
 line ⟶70458⟶70412⟶"1"⟶1⟶0
 tran ⟶70458⟶70457⟶"T1"⟶0⟶-1
 load ⟶70458⟶"TS"⟶0
0
"BF_150a"⟶"aterton 7052"
 line ⟶70466⟶70465⟶"1"⟶1⟶0
 tran ⟶70466⟶71995⟶"T3"⟶0⟶70464
0
"BF_150b"⟶"Waterton - 230/115 T2 & 230/345 T1 #5083"
 tran ⟶70464⟶70463⟶"T2"⟶0⟶-1
 tran ⟶70464⟶70466⟶"T3"⟶0⟶71995
0
"BF_150c"⟶"Waterton - 230/115 T1 & 230/345 T1 #5086"
 tran ⟶70464⟶70463⟶"T1"⟶0⟶-1
```

```
 tran ⟶70464⟶70466⟶"T3"⟶0⟶71995
0
"BF_150d"⟶"Waterton - Tarryall & 230/115 T2 #5083"
 line ⟶70464⟶70427⟶"1"⟶1⟶0
 tran ⟶70464⟶70463⟶"T2"⟶0⟶-1
0
"BF_150e"⟶"Waterton - Daniels Pk (#5088)/Tarryall"
 line ⟶70464⟶70139⟶"1"⟶1⟶0
 line ⟶70464⟶70427⟶"1"⟶1⟶0
0
"BF_150f"⟶"Waterton - 230/115 T1 & Daniels Pk (#5109)"
 tran ⟶70464⟶70463⟶"T1"⟶0⟶-1
 line ⟶70464⟶70139⟶"1"⟶1⟶0
0
"BF_150g"⟶"Waterton 230/115 T2 & Soda Lakes"
 tran ⟶70464⟶70463⟶"T2"⟶0⟶-1
 line ⟶70464⟶70100⟶"1"⟶1⟶0
 load ⟶70100⟶"P2"⟶0
 load ⟶70100⟶"P1"⟶0
 line ⟶70100⟶70018⟶"1"⟶1⟶0
0
"BF_150h"⟶"Waterton - Soda Lakes/Daniels Pk (#5080)"
 line ⟶70464⟶70100⟶"1"⟶1⟶0
 load ⟶70100⟶"P2"⟶0
 load ⟶70100⟶"P1"⟶0
 line ⟶70100⟶70018⟶"1"⟶1⟶0
 line ⟶70959⟶70278⟶"1"⟶1⟶0
 load ⟶70278⟶"P3"⟶0
 load ⟶70278⟶"P2"⟶0
 load ⟶70278⟶"P1"⟶0
 line ⟶70278⟶70139⟶"1"⟶1⟶0
0
"BF_150i"⟶"Waterton - Daniels Pk (#5085) & 230/115 T1"
 line ⟶70959⟶70278⟶"1"⟶1⟶0
 load ⟶70278⟶"P3"⟶0
 load ⟶70278⟶"P2"⟶0
 load ⟶70278⟶"P1"⟶0
 line ⟶70278⟶70139⟶"1"⟶1⟶0
 tran ⟶70464⟶70463⟶"T1"⟶0⟶-1
0
"BF_150j"⟶"Waterton 115 Sub"
 tran ⟶70463⟶70464⟶"T2"⟶0⟶-1
 tran ⟶70463⟶70464⟶"T1"⟶0⟶-1
 load ⟶70279⟶"P1"⟶0
 load ⟶70263⟶"P3"⟶0
 load ⟶70263⟶"P2"⟶0
 load ⟶70263⟶"P1"⟶0
 line ⟶70263⟶70165⟶"1"⟶1⟶0
 line ⟶70165⟶70168⟶"1"⟶1⟶0
 line ⟶70168⟶70037⟶"1"⟶1⟶0
 line ⟶70463⟶70484⟶"1"⟶1⟶0
 line ⟶70484⟶70280⟶"1"⟶1⟶0
 line ⟶70484⟶70142⟶"1"⟶1⟶0
 load ⟶70142⟶"P1"⟶0
 load ⟶70142⟶"CR"⟶0
 line ⟶70142⟶70400⟶"1"⟶1⟶0
 line ⟶70463⟶70522⟶"1"⟶1⟶0
 svd ⟶70463⟶"v"⟶0
0
"BF_151a"⟶"Weld PS - Weld LM Tie & Weld LM Sub #5221"
 line ⟶70471⟶73212⟶"1"⟶1⟶0
 line ⟶73212⟶73011⟶"1"⟶1⟶0
 line ⟶73212⟶73011⟶"2"⟶1⟶0
 tran ⟶73212⟶73211⟶"1"⟶0⟶-1
 tran ⟶73212⟶73211⟶"3"⟶0⟶-1
 tran ⟶70471⟶70470⟶"T1"⟶0⟶71992
0
"BF_151b"⟶"Weld PS - Weld LM Tie & Weld LM Sub #5223"
 line ⟶70471⟶73212⟶"1"⟶1⟶0
```

```
  line ⟶73212⟶73011⟶"1"↦1⟶0
  line ⟶73212⟶73011⟶"2"↦1⟶0
  tran ⟶73212⟶73211⟶"1"↦0⟶-1
  tran ⟶73212⟶73211⟶"3"↦0⟶-1
  0
  "BF_151c"⟶"Weld PS 230/115 & Weld PS - Ft St Vrain #5224"
  tran ⟶70471⟶70470⟶"T1"⟶0⟶71992
  line ⟶70471⟶70410⟶"1"↦1⟶0
  0
  "BF_151d"⟶"eld PS 5226"
  load ⟶70471⟶"P4"⟶0
  load ⟶70471⟶"P5"⟶0
  0
  "BF_151e"⟶"eld LM 230"
  line ⟶73212⟶70471⟶"1"↦1⟶0
  line ⟶73212⟶73011⟶"1"↦1⟶0
  line ⟶73212⟶73011⟶"2"↦1⟶0
  tran ⟶73212⟶73211⟶"1"↦0⟶-1
  tran ⟶73212⟶73211⟶"3"↦0⟶-1
  0
  "BF_151f"⟶"eld 115 #9996"
  line ⟶70470⟶73211⟶"1"↦1⟶0
  line ⟶70470⟶70475⟶"1"↦1⟶0
  load ⟶70475⟶"P2"⟶0
  load ⟶70475⟶"P1"⟶0
  line ⟶70475⟶70368⟶"1"↦1⟶0
  svd ⟶70470⟶"v"↦0
  0
  "BF_151g"⟶"eld 9995"
  line ⟶70470⟶73211⟶"1"↦1⟶0
  line ⟶70470⟶70209⟶"1"↦1⟶0
  svd ⟶70470⟶"v"↦0
  0
  "BF_151h"⟶"eld 8365"
  line ⟶70470⟶73211⟶"1"↦1⟶0
  line ⟶70470⟶70246⟶"1"↦1⟶0
  svd ⟶70470⟶"v"↦0
  0
  "BF_151i"⟶"eld 9926"
  tran ⟶70471⟶70470⟶"T1"⟶0⟶71992
  line ⟶70470⟶70475⟶"1"↦1⟶0
  load ⟶70475⟶"P2"⟶0
  load ⟶70475⟶"P1"⟶0
  line ⟶70475⟶70368⟶"1"↦1⟶0
  0
  "BF_151j"⟶"eld 9925"
  tran ⟶70471⟶70470⟶"T1"⟶0⟶71992
  line ⟶70470⟶70209⟶"1"↦1⟶0
  0
  "BF_151k"⟶"eld 9997"
  tran ⟶70471⟶70470⟶"T1"⟶0⟶71992
  line ⟶70470⟶70246⟶"1"↦1⟶0
  0
  "BF_151l"⟶"eld LM 115"
  line ⟶73211⟶70470⟶"1"↦1⟶0
  line ⟶73211⟶73554⟶"1"↦1⟶0
  line ⟶73554⟶70368⟶"1"↦1⟶0
  line ⟶73211⟶73558⟶"1"↦1⟶0
  tran ⟶73211⟶73212⟶"1"↦0⟶-1
  tran ⟶73211⟶73212⟶"3"↦0⟶-1
  0
  "BF_152a"⟶"Wolcott - Foidel Ck & 230/115 T1 WC261"
  line ⟶79069⟶79091⟶"1"↦1⟶0
  tran ⟶79069⟶79068⟶"T1"⟶0⟶-1
  load ⟶79069⟶"HC"⟶0
  0
  "BF_152b"⟶"Wolcott 230/115 T1 & Cooley Mesa WC211"
  tran ⟶79069⟶79068⟶"T1"⟶0⟶-1
  line ⟶79069⟶70535⟶"1"↦1⟶0
```

```
 load ->79069->"HC"->0
0
"BF_152c"->"Wolcott 230/115 T2 & Foidel Ck"
 tran ->79069->77643->"T2"->0->-1
 line ->79069->79091->"1"->1->0
0
"BF_152d"->"olcott T2 and swshunt WC231"
 tran ->79069->77643->"T2"->0->-1
 svd ->79069->"v"->0
0
"BF_152e"->"olcott WC221"
 line ->79069->70535->"1"->1->0
 svd ->79069->"v"->0
0
"BF_152f"->"Wolcott - Vail & 115/230 T1"
 line ->79068->79066->"1"->1->0
 tran ->79068->79069->"T1"->0->-1
0
"BF_152g"->"Wolcott - Beaver Ck CU & 115/230 T2"
 line ->77643->79006->"1"->1->0
 tran ->77643->79069->"T2"->0->-1
0
"BF_152h"->"Wolcott 115 Sub"
 line ->77643->79068->"1"->1->0
 line ->79068->79066->"1"->1->0
 tran ->79068->79069->"T1"->0->-1
 line ->77643->79006->"1"->1->0
 tran ->77643->79069->"T2"->0->-1
0
"BF_153a"->"Uintah 5596 stuck"
 line ->70078->70438->"1"->1->0
 tran ->70438->70437->"T1"->0->-1
 load ->70437->"GV"->0
 load ->70438->"P1"->0
0
"BF_153b"->"Uintah 5597 stuck"
 line ->70438->70268->"1"->1->0
 load ->70268->"GV"->0
 line ->70268->70233->"1"->1->0
 load ->70233->"P2"->0
 load ->70233->"P1"->0
 line ->70233->70206->"1"->1->0
 load ->70438->"P3"->0
0
"BF_153c"->"intah 5594"
 tran ->70438->70436->"T1"->0->-1
 svd ->70438->"v"->0
0
"BF_153d"->"intah 5591"
 tran ->70438->70437->"T1"->0->-1
 load ->70437->"GV"->0
 load ->70438->"P1"->0
 svd ->70438->"v"->0
0
"BF_153e"->"intah 5593"
 load ->70438->"P3"->0
 svd ->70438->"v"->0
0
# /-----------------New Contingencies-----------------
"BF_154a"->"anal 7304"
 line ->70916->70915->"1"->1->0
 line ->70915->70598->"1"->1->0
0
"BF_154b"->"anal 7298"
 line ->70916->70915->"1"->1->0
 line ->70915->70598->"1"->1->0
0
"BF_155a"->"oose Creek 7252"
 line ->70918->70915->"1"->1->0
```

```
 line →70918→70919→"1"→1→0
0
"BF_155b"→"oose Creek 7254"
 line →70918→70915→"2"→1→0
 line →70918→70915→"2"→1→0
0
"BF_156a"→"andstone 7402"
 line →70597→70921→"1"→1→0
 line →70653→70921→"1"→1→0
0
"BF_156b"
 line →70597→70921→"2"→1→0
 line →70921→70919→"1"→1→0
0
"BF_157a"→"undra 7230"
 line →70653→70921→"2"→1→0
 line →70653→70754→"1"→1→0
0
"BF_157b"→"undra 7240"
 line →70601→70653→"1"→1→0
 line →70653→70654→"1"→1→0
0
"BF_157c"→"undra 7232"
 line →70601→70653→"2"→1→0
 line →70653→70654→"2"→1→0
0
# Fri Nov 15 13:55:02 2024
# WECC
# 2025 HEAVY SUMMER 4 OPERATING BASE CASE
# AUGUST 28, 2024
# Use seasonal ratings 1 and 2
# File to be converted : C:\Comanche 2 Replacement\Work\input\Contingencies\P7.con

# →→→→
```

```
      ---->---->---->---->---->---->---->---->---->---->---->---->---->---->  /p7
25067 # /Lines: 9332 9335 9448
      Empty
                                                                          /p7
25068 "P7_3"->"P7"
25069  line ->70036-->70531-->"1"->1-->0
25070  line ->70208-->70402-->"1"->1-->0
25071  line ->70402-->70531-->"1"->1-->0
25072  line ->70037-->70401-->"1"->1-->0
25073  line ->70045-->70401-->"1"->1-->0
25074  line ->70401-->70402-->"1"->1-->0
25075  line ->70045-->70208-->"1"->1-->0
25076 0
25077 # ->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->
      ---->---->---->---->---->---->---->---->---->---->---->---->---->---->  /p7
25078 # /Lines: 9332 9448 Empty
      Empty
                                                                          /p7
25079 "P7_4"->"P7"
25080  line ->70036-->70531-->"1"->1-->0
25081  line ->70208-->70402-->"1"->1-->0
25082  line ->70402-->70531-->"1"->1-->0
25083  line ->70045-->70208-->"1"->1-->0
25084 0
25085 # ->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->
      ---->---->---->---->---->---->---->---->---->---->---->---->---->---->  /p7
25086 # /Lines: 9335 9448 Empty
      Empty
                                                                          /p7
25087 "P7_5"->"P7"
25088  line ->70037-->70401-->"1"->1-->0
25089  line ->70045-->70401-->"1"->1-->0
25090  line ->70401-->70402-->"1"->1-->0
25091  line ->70045-->70208-->"1"->1-->0
25092 0
25093 # ->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->
      ---->---->---->---->---->---->---->---->---->---->---->---->---->---->  /p7
25094 # /Lines: 5107 9336 Empty
      Empty
                                                                          /p7
25095 "P7_6"->"P7"
25096  line ->70038-->70527-->"1"->1-->0
25097  line ->70139-->70527-->"1"->1-->0
25098  line ->70037-->70168-->"1"->1-->0
25099  line ->70165-->70168-->"1"->1-->0
25100  line ->70165-->70263-->"1"->1-->0
25101  line ->70263-->70463-->"1"->1-->0
25102  line ->70279-->70463-->"1"->1-->0
25103 0
25104 # ->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->
      ---->---->---->---->---->---->---->---->---->---->---->---->---->---->  /p7
25105 # /Lines: 5623 5625 Empty
      Empty
                                                                          /p7
25106 "P7_7"->"P7"
25107  line ->70141-->70149-->"1"->1-->0
25108  line ->70149-->70163-->"1"->1-->0
25109 0
25110 # ->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->---->
      ---->---->---->---->---->---->---->---->---->---->---->---->---->---->  /p7
25111 # /Lines: 9335 5623 Empty
      Empty
                                                                          /p7
25112 "P7_8"->"P7"
25113  line ->70037-->70401-->"1"->1-->0
25114  line ->70045-->70401-->"1"->1-->0
25115  line ->70401-->70402-->"1"->1-->0
25116 # /  open branch from bus 70038 to bus 70141 ckt 1
      /ARAP-DAKO-230.0-1
```

/p7
/ open branch from bus 70141 to bus 70149 ckt 1
/DAKO-DTER-230.0-1
/p7
0
/p7
/Lines: 9333 9334 Empty Empty #LINE 9333 BECAME
9336
/p7
"P7_9"→"P7"
line →70037→70168→"1"→1→0
line →70165→70168→"1"→1→0
line →70165→70263→"1"→1→0
line →70263→70463→"1"→1→0
line →70036→70384→"1"→1→0
line →70166→70384→"1"→1→0
0
/p7
/Lines: 9336 9337 Empty
Empty
/p7
"P7_10"→"P7"
line →70037→70168→"1"→1→0
line →70165→70168→"1"→1→0
line →70165→70263→"1"→1→0
line →70263→70463→"1"→1→0
line →70279→70463→"1"→1→0
line →70280→70484→"1"→1→0
line →70142→70484→"1"→1→0
line →70142→70400→"1"→1→0
line →70463→70484→"1"→1→0
0
/p7
/Lines: 9413 9541 Empty
Empty
/p7
"P7_11"→"P7"
line →70039→70108→"1"→1→0
line →70298→70108→"1"→1→0
0
/p7
/Lines: 9725 9726 Empty
Empty
/p7
"P7_12"→"P7"
line →70541→79003→"1"→1→0
line →70540→79003→"1"→1→0
0
/p7
/Lines: 9725 9727 Empty
Empty
/p7
"P7_13"→"P7"
line →70541→79003→"1"→1→0
0
/p7
/Lines: 8425 8424 Empty
Empty
/p7
"P7_14"→"P7"
line →79066→79092→"1"→1→0
line →79006→79092→"1"→1→0
0

```
# ->->->
```

```
      ⟶⟶⟶
```

0
/p7
/Lines 9175 9178 Empty
Empty /p7
"P7_28" "P7"
line 70162 70538 "1" 1 0
line 70162 70537 "1" 1 0
line 70537 70538 "1" 1 0
0
/p7
/Lines 5185 5187 Empty
Empty /p7
"P7_29" "P7"
line 70528 70536 "1" 1 0
line 70536 70539 "1" 1 0
line 70528 70530 "1" 1 0
line 70432 70539 "1" 1 0
0
/p7
/Lines 9542 9549 Empty
Empty /p7
"P7_30" "P7"
/ open branch from bus 70073 to bus 70182 ckt 1
/CALI-HARR-115.0-1 /p7
/ open branch from bus 70126 to bus 70377 ckt 1
/CONS-SAND-115.0-1 /p7
0
/p7
/Lines 9546 9547 9542
Empty /p7
"P7_31" "P7"
/p7
line 70108 70276 "2" 1 0
line 70073 70074 "1" 1 0
line 70087 70074 "1" 1 0
line 70276 70177 "1" 1 0
line 70177 70074 "1" 1 0
line 70073 70182 "1" 1 0
/p7
line 70108 70277 "1" 1 0
0
/p7
/Lines 5525 5309 5759
5875 /p7
"P7_32" "P7"
line 70192 70048 "1" 1 0
line 70048 70192 "1" 1 0
line 70107 70362 "1" 1 0
line 70362 70605 "1" 1 0
line 70047 70048 "1" 1 0
line 70047 72026 "1" 1 0
0
/p7
/Lines 5309 5875 Empty

```
Empty
                                                                /p7
"P7_33"→"P7"
 line →70107⟶70362⟶"1"→1⟶0
 line →70362⟶70605⟶"1"→1⟶0
 line →70047⟶72026⟶"1"→1⟶0
0
# →⟶⟶⟶
```

```
# /Lines: 9547 9541 Empty
Empty                                                
```

line →70107→70609→"1"→1→0
0
→→→→

```
"P7_53"→"P7"
 line →70122⟶70286⟶"1"→1⟶0
 line →70286⟶70652⟶"1"→1⟶0
0
# →⟶→⟶→⟶→
```

```
"P7_60"→"P7"
 line →70513⟶70551⟶"1"→1⟶0
 line →70513⟶70524⟶"1"→1⟶0
 line →70396⟶70551⟶"1"→1⟶0
 line →70139⟶70623⟶"1"→1⟶0
0
# →⟶→⟶→⟶→
```

```
 line →70139→70464→"1"→1→0
0
# →→→→
```

```
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 9587 9853 Empty
Empty
                                                                        /p7
"P7_73"->"P7"
 line ->70164-->70170-->"1"->1-->0
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 9688 9046 Empty
Empty
                                                                        /p7
"P7_74"->"P7"
 line ->70164-->70346-->"1"->1-->0
 line ->70346-->70354-->"2"->1-->0
 line ->70164-->70444-->"1"->1-->0
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 9054 9046 Empty
Empty
                                                                        /p7
"P7_75"->"P7"
 line ->70345-->70226-->"1"->1-->0
 line ->70345-->70440-->"1"->1-->0
 line ->70164-->70444-->"1"->1-->0
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 5311 5329 Empty
Empty
                                                                        /p7
"P7_76"->"P7"
 line ->70192-->70410-->"1"->1-->0
 line ->70192-->70410-->"2"->1-->0
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 9494 9053 Empty
Empty
                                                                        /p7
"P7_77"->"P7"
 line ->70219-->70238-->"1"->1-->0
 line ->70219-->70198-->"1"->1-->0
 line ->70219-->70450-->"1"->1-->0
 line ->70191-->70450-->"1"->1-->0
 line ->70198-->70202-->"1"->1-->0
 line ->70194-->70604-->"1"->1-->0
 line ->70127-->70191-->"1"->1-->0
 line ->70127-->70194-->"1"->1-->0
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 9494 9495 Empty
Empty
                                                                        /p7
"P7_78"->"P7"
 line ->70219-->70238-->"1"->1-->0
 line ->70219-->70198-->"1"->1-->0
 line ->70219-->70450-->"1"->1-->0
 line ->70191-->70450-->"1"->1-->0
 line ->70198-->70202-->"1"->1-->0
 line ->70190-->70090-->"1"->1-->0
0
# ->------------------------------------------------------------------------
------------------------------------------------------------------------ /p7
# /Lines: 5525 5759 Empty
```

```
      Empty
                                                                  /p7
25650 "P7_79"→"P7"
25651  line →70192⟶70048⟶"1"→1⟶0
25652  line →70048⟶70192⟶"1"→1⟶0
25653  line →70047⟶70048⟶"1"→1⟶0
25654 0
25655 # →⟶→⟶→⟶→
```

```
 line →79039→79091→"1"→1→0
0
# →→→→
```

```
25747    line →70048——>70820——>"2"→1——>0
25748    0
25749    # →——>——>——>
```

```
                                                
```

```
# /Lines: 9115 9995 Empty
Empty
                                        /p7
"P7_105"——>"P7"
 line —>70209——>70290——>"1"->1——>0
 line —>70209——>70470——>"1"->1——>0
0
# —>——>——>——
```

```
0
# ->->->
```

```
      Empty
                                                /p7
25947 "P7_118"——>"P7"
25948  line ->70231——>70387——>"1"->1——>0
25949  line ->70359——>70388——>"1"->1——>0
25950 0
25951 # ->——>——>——>
```

```
 line →70266→70570→"2"→1→0
 line →70261→70297→"1"→1→0
 line →70261→70570→"1"→1→0
 line →70266→70570→"1"→1→0
0
# →→→→
```

```
      ---->---->---->
```

```
 line →70261→70570→"1"→1→0
0
# →→→→
```

```
0
# ->->->
```

```
0
# ->->->
```

```
"P7_156"——>"P7"
 line ->70100——>70464——>"1"->1——>0
 line ->70018——>70100——>"1"->1——>0
 line ->70427——>70464——>"1"->1——>0
0
# ->——>——>——>
```

```
26289   line →70915→70624→"1"→1→0
26290   line →70915→70624→"2"→1→0
26291   0
26292   # →→→→
```

Appendix C Steady State Results

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70024	ALAMOSA	69	70	710	bus_3209	0.879	0.881
70025	ALMSA_TM	115	70	710	BF_128f	0.87	0.872
70026	ALMSA_TM	69	70	710	BF_128f	0.898	0.901
70028	ANSEL_TS	69	70	710	BF_128f	0.935	0.937
70029	ANTONITO	69	70	710	bus_3209	0.756	0.757
70033	BOULDER_TM2	115	70	703	BF_148g	0.862	0.861
70034	BOULDER_TM3	115	70	703	BF_148g	0.862	0.861
70040	ARSENAL	115	70	700	bus_3670	0.902	0.9
70042	ASPEN_TP	69	70	712	bus_3509	0.899	0.901
70051	BLENDE	69	70	712	bus_3509	0.9	0.902
70058	BOULDER_CN2	115	70	703	BF_148g	0.882	0.882
70059	BOULDER_TM1	115	70	703	BF_148g	0.862	0.861
70076	CAMEO	69	70	708	bus_3257	0.908	0.908
70078	CAMEO	230	70	708	BF_141c	0.923	0.923
70079	LAMSO	115	70	712	BUSDBL_001954	0.835	0.836
70080	STONINGT	69	70	712	BUSDBL_000918	0.932	0.933
70092	CENTER	69	70	710	BF_128f	0.902	0.904
70101	CHEN_TAP	69	70	712	BUSDBL_001954	0.897	0.897
70102	CHENEY	69	70	712	BUSDBL_001954	0.897	0.896
70109	UNA_ORCH	69	70	708	BF_026	0.898	0.898
70113	CLIFTON	230	70	708	BF_141c	0.868	0.868
70118	COCENTER	69	70	710	BF_128f	0.936	0.938
70132	CTY_LAJ	69	70	712	BUSDBL_000897	0.836	0.837
70136	CTY_LAM	69	70	712	BUSDBL_001954	0.823	0.823
70140	DEBEQUE	69	70	708	BF_026	0.896	0.896
70143	DEL_NORTE	69	70	710	BF_128f	0.914	0.916
70155	DILLON	115	70	709	bus_3322	1.092	1.092
70161	EADS	69	70	712	BUSDBL_001954	0.814	0.814
70162	EAST_1	115	70	700	bus_3670	0.871	0.869
70171	EAST_2	115	70	700	bus_3670	0.896	0.894
70174	FEDERHT23	115	70	700	bus_3283	0.907	0.906
70175	FEDERHT1	115	70	700	bus_3283	0.895	0.894
70181	FREEMARY	69	70	712	bus_3509	0.887	0.889
70183	FRUITA	69	70	708	BF_141c	0.881	0.88
70184	FT.HOLLY	69	70	712	BUSDBL_001954	0.863	0.862
70186	ALAMOSA_TP	69	70	710	bus_3209	0.879	0.88
70187	FTGARLND	69	70	710	bus_3209	0.849	0.85
70201	GLENWOOD	69	70	708	BUSDBL_000875	0.924	0.924
70203	GRANTAP	69	70	712	BUSDBL_001954	0.857	0.856
70204	GRANADA	69	70	712	BUSDBL_001954	0.857	0.856
70205	GRAND_JT	230	70	708	BF_141c	0.869	0.868
70206	GRANDJ_PS	230	70	708	BF_141c	0.869	0.868
70214	UTE_GRND_JN	69	70	708	bus_3257	0.93	0.93
70216	HAVANA1	115	70	700	bus_3670	0.891	0.889
70217	HAVANA2	115	70	700	bus_3670	0.887	0.885

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70222	HILLTOP	69	70	712	BUSDBL_000918	0.933	0.934
70223	HLTP_TP	69	70	712	BUSDBL_000918	0.933	0.934
70225	HOLL_TP	69	70	712	BUSDBL_001954	0.865	0.864
70228	HOMELAKE	69	70	710	BF_128f	0.908	0.91
70229	HOOPER	69	70	710	BF_128f	0.9	0.902
70230	HOOPERTP	69	70	710	BF_128f	0.905	0.907
70233	HORIZON	230	70	708	BF_141c	0.871	0.87
70243	LA_SECPA	69	70	712	BUSDBL_000897	0.824	0.824
70244	LAFAYETTE	115	70	703	bus_3596	0.822	0.82
70247	LAJUNTAT	115	70	712	BUSDBL_001954	0.888	0.889
70248	LAJUNTAT	69	70	712	BUSDBL_000897	0.845	0.845
70264	BLUESTONE	230	70	708	BF_026	0.854	0.854
70267	HOPKINS	69	70	708	BUSDBL_000875	0.923	0.923
70268	ADOBE	230	70	708	BF_141c	0.873	0.873
70288	MITCHELL_CK	69	70	708	BUSDBL_000875	0.924	0.924
70289	MOFFAT	69	70	710	BF_128f	0.9	0.902
70292	MOSCA	69	70	710	BF_128f	0.922	0.924
70295	NCAR	115	70	703	BF_148g	0.903	0.902
70296	NEW_CASTLE	69	70	708	BUSDBL_002999	0.867	0.866
70299	STKGULCH	230	70	708	BUSDBL_001144	0.902	0.901
70302	OIL_SHALE	69	70	708	BUSDBL_002999	0.895	0.894
70309	PARACHUTE	230	70	708	BUSDBL_001144	0.903	0.903
70326	PONCHA	69	70	710	BF_115c	0.842	0.842
70327	PONCHA_E	115	70	709	BF_115c	0.845	0.845
70332	PRAIRIE	69	70	712	bus_3509	0.878	0.88
70333	PROWERS	69	70	712	BUSDBL_001954	0.821	0.821
70353	READER	69	70	712	bus_3509	0.895	0.897
70356	WHEELER_PS	230	70	708	BUSDBL_001144	0.902	0.902
70357	MIDDLE_FORK	230	70	708	BUSDBL_001144	0.898	0.898
70359	RIFLE_UTE	69	70	708	BUSDBL_002998	0.884	0.884
70360	RIOGRAND	69	70	710	BF_128f	0.919	0.921
70361	RIOGRD_TP	69	70	710	BF_128f	0.93	0.932
70363	ROARNGFK	69	70	708	BUSDBL_000875	0.923	0.923
70367	ROMEO	69	70	710	bus_3209	0.762	0.764
70376	SANLSVLY	69	70	710	BF_128f	0.934	0.936
70380	SARGENT	69	70	710	BF_128f	0.936	0.938
70382	SEMPER	115	70	700	bus_3283	0.903	0.902
70386	SHOSHONE	69	70	708	BUSDBL_000875	0.929	0.929
70388	SILT_USBR	69	70	708	BUSDBL_002998	0.874	0.874
70393	PONCHA_PS	230	70	709	P7_143	0.924	0.924
70394	SMELTER	115	70	712	BF_115c	0.845	0.845
70404	SPRNGFLD	69	70	712	BUSDBL_000918	0.931	0.932
70405	ST.CHAS.	69	70	712	bus_3509	0.895	0.897
70423	BOULDER_CN1	115	70	703	BF_148g	0.883	0.882
70424	SUNSHINE	115	70	703	BF_148g	0.874	0.873

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70425	T.BUTTES	69	70	712	BUSDBL_000919	0.932	0.932
70430	CAERUS_S1	230	70	708	BUSDBL_001144	0.9	0.9
70432	TOWER	230	70	700	bus_3670	0.806	0.805
70436	UINTAH	69	70	708	BF_141c	0.888	0.887
70438	UINTAH	230	70	708	BF_141c	0.879	0.879
70452	VILAS	115	70	712	BUSDBL_000919	0.937	0.937
70453	VILAS	69	70	712	BUSDBL_000918	0.932	0.933
70454	VINELAND	69	70	708	bus_3257	0.909	0.909
70460	WALSH	69	70	712	BUSDBL_000919	0.932	0.932
70471	WELD_PS	230	70	706	BUSDBL_001948	0.912	0.911
70472	WILOW_CK	115	70	712	BUSDBL_001954	0.834	0.834
70473	WILOW_CK	69	70	712	BUSDBL_001954	0.828	0.828
70492	BOULDER_HYD	115	70	703	BF_148g	0.883	0.882
70494	METRO_WATER	115	70	700	bus_3283	0.916	0.914
70505	MIRGEJCT	69	70	710	BF_128f	0.899	0.901
70506	SAGUACHE	69	70	710	BF_128f	0.895	0.897
70507	MEARSJCT	69	70	710	BF_115c	0.842	0.842
70508	VILLA_GROVE	69	70	710	BF_115c	0.843	0.843
70509	KERBERCK	69	70	710	BF_115c	0.842	0.842
70511	ATER_TAP	69	70	710	bus_3209	0.873	0.874
70530	PICADILLY	230	70	700	bus_3670	0.805	0.804
70536	KESTREL	230	70	700	bus_3670	0.802	0.801
70537	FITZ_SIMONS	115	70	700	bus_3670	0.868	0.866
70538	CHAMBERS	115	70	700	bus_3670	0.867	0.865
70539	CHAMBERS	230	70	700	bus_3670	0.809	0.807
70552	ROMEO_TAP	69	70	710	bus_3209	0.763	0.764
70597	HARVEST_MI	345	70	700	BF_073b	1.084	1.084
70600	OXCART	69	70	710	BF_115c	0.842	0.842
70604	PARKWAY	115	70	703	bus_3596	0.845	0.843
70854	CARL	69	70	708	BUSDBL_002998	0.864	0.864
70936	CARL_TP	69	70	708	BUSDBL_002998	0.864	0.864
70937	BLANCA_PEAK	115	70	710	BF_128f	0.87	0.872
70981	BLUESTONE	69	70	708	BF_026	0.896	0.896
71020	ERIE_AVE	69	70	712	bus_3509	0.904	0.905
77642	PONCHA_W	115	70	709	BF_115c	0.845	0.845
99147	ALMSA_mdpt	115	70	710	BF_128f	0.849	0.851
99184	mid_99184	230	70	708	bus_3257	0.889	0.889
99555	mid_99555	230	70	791	P7_143	0.924	0.924
700180	ALAMOSA_SLR	115	70	710	BF_128f	0.87	0.872
70020	CASTL_RK_T1	115	70	704	bus_3737	0.908	0.938
70021	CASTL_RK_T2	115	70	704	bus_3737	0.908	0.938
70085	CANONCTY	69	70	712	bus_3737	0.927	0.975
70086	CANONCTY	115	70	712	bus_3737	0.915	0.965
70091	CASTL_RK_CR	115	70	704	bus_3737	0.908	0.938
70115	HAPPY_CNYN	115	70	700	bus_3737	0.907	0.935

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70117	CROWFT_VLY	115	70	704	bus_3737	0.907	0.936
70130	CRPLECRK	69	70	712	bus_3737	0.905	0.958
70157	DIVIDE	115	70	704	bus_3737	0.915	0.950
70160	E_CANON	69	70	712	bus_3737	0.91	0.958
70176	FLORENCE	69	70	712	bus_3737	0.922	0.970
70193	FTN_VLY	115	70	712	bus_3737	0.898	0.954
70220	HIGHLND	69	70	712	bus_3737	0.923	0.971
70285	MIDWAY_PS	115	70	704	bus_3737	0.909	0.958
70286	MIDWAY_PS	230	70	704	bus_3737	0.905	0.962
70293	NCANON	69	70	712	bus_3737	0.92	0.968
70294	NCANON_W	69	70	712	bus_3737	0.92	0.968
70306	PP_MINE	69	70	712	bus_3737	0.906	0.959
70308	PALMER_LK	115	70	704	bus_3737	0.892	0.931
70318	PENROSE	69	70	712	bus_3737	0.927	0.975
70329	PORTLAND	69	70	712	bus_3737	0.93	0.978
70330	PORTLAND	115	70	712	bus_3737	0.911	0.957
70370	S_CANON	69	70	712	bus_3737	0.918	0.967
70371	S_CAN.W	69	70	712	bus_3737	0.928	0.976
70378	AREQUGCH	115	70	712	bus_3737	0.905	0.958
70390	SKALA	115	70	712	bus_3737	0.911	0.958
70391	SKINNER	69	70	712	bus_3737	0.927	0.975
70449	DESRTCOV	115	70	712	bus_3737	0.91	0.959
70451	VICTOR	69	70	712	bus_3737	0.906	0.958
70465	MIDWAY_PS	345	70	700	bus_3737	0.876	0.930
70466	WATERTON	345	70	700	bus_3737	0.87	0.909
70476	WOODLAND_PK	115	70	709	bus_3737	0.902	0.942
70550	W.CANON	115	70	712	bus_3737	0.918	0.969
70582	GREENLND_CR	115	70	704	bus_3737	0.894	0.932
70584	CRSTL_VA_CR	115	70	704	bus_3737	0.901	0.934
70595	FTNVLY_GENS	230	70	704	bus_3737	0.905	0.962
70660	GOLDEN_WEST	230	70	757	bus_3737	0.896	0.952
71024	N_PENROSE	115	70	712	bus_3737	0.916	0.963
71025	HOGBACK115	115	70	712	bus_3737	0.915	0.965
71026	HOGBACK69	69	70	712	bus_3737	0.927	0.975
71031	OAKCRK	69	70	712	bus_3737	0.928	0.976
99137	mid_99137	230	70	757	bus_3737	0.9	0.956
99175	mid point	100	70	704	bus_3737	0.906	0.959
99602	mid_99602	345	70	700	bus_3737	0.901	0.958
99603	mid_99603	345	70	700	bus_3737	0.9	0.932

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70024	ALAMOSA	69	70	710	bus_3209	0.892	0.892
70029	ANTONITO	69	70	710	bus_3209	0.768	0.769
70033	BOULDER_TM2	115	70	703	BF_148g	0.854	0.854
70034	BOULDER_TM3	115	70	703	BF_148g	0.854	0.854
70040	ARSENAL	115	70	700	bus_3670	0.908	0.909
70042	ASPEN_TP	69	70	712	bus_3509	0.901	0.901
70051	BLENDE	69	70	712	bus_3509	0.901	0.902
70058	BOULDER_CN2	115	70	703	BF_148g	0.876	0.876
70059	BOULDER_TM1	115	70	703	BF_148g	0.854	0.854
70076	CAMEO	69	70	708	bus_3257	0.908	0.908
70078	CAMEO	230	70	708	BF_141c	0.921	0.921
70079	LAMSO	115	70	712	BUSDBL_001954	0.841	0.841
70080	STONINGT	69	70	712	BUSDBL_000919	0.939	0.939
70101	CHEN_TAP	69	70	712	BUSDBL_001954	0.909	0.909
70102	CHENEY	69	70	712	BUSDBL_001954	0.909	0.909
70109	UNA_ORCH	69	70	708	BF_026	0.897	0.897
70113	CLIFTON	230	70	708	BF_141c	0.865	0.865
70116	LEPRINO_TP	115	70	706	BUSDBL_000757	0.809	0.809
70127	COORS_RCL	115	70	700	BUSDBL_000751	0.901	0.901
70132	CTY_LAJ	69	70	712	BUSDBL_000897	0.848	0.848
70136	CTY_LAM	69	70	712	BUSDBL_001954	0.832	0.832
70140	DEBEQUE	69	70	708	BF_026	0.896	0.896
70155	DILLON	115	70	709	BUSDBL_000697	1.089	1.09
70161	EADS	69	70	712	BUSDBL_001954	0.823	0.823
70162	EAST_1	115	70	700	bus_3670	0.876	0.876
70171	EAST_2	115	70	700	bus_3670	0.9	0.9
70174	FEDERHT23	115	70	700	bus_3283	0.908	0.908
70175	FEDERHT1	115	70	700	bus_3283	0.895	0.895
70181	FREEMARY	69	70	712	bus_3509	0.889	0.889
70183	FRUITA	69	70	708	BF_141c	0.878	0.878
70184	FT.HOLLY	69	70	712	BUSDBL_001954	0.874	0.874
70186	ALAMOSA_TP	69	70	710	bus_3209	0.891	0.891
70187	FTGARLND	69	70	710	bus_3209	0.861	0.861
70191	FT_LUPTON_1	115	70	706	BUSDBL_000751	0.898	0.898
70194	FULTONTS	115	70	700	BUSDBL_000751	0.903	0.903
70198	GILCREST	115	70	706	BUSDBL_000757	0.768	0.768
70201	GLENWOOD	69	70	708	BUSDBL_000875	0.922	0.922
70202	GODFREY	115	70	706	BUSDBL_000757	0.773	0.773
70203	GRANTAP	69	70	712	BUSDBL_001954	0.868	0.868
70204	GRANADA	69	70	712	BUSDBL_001954	0.867	0.867
70205	GRAND_JT	230	70	708	BF_141c	0.865	0.865
70206	GRANDJ_PS	230	70	708	BF_141c	0.865	0.865
70209	GREELEY	115	70	706	BUSDBL_000757	0.791	0.791
70214	UTE_GRND_JN	69	70	708	bus_3257	0.93	0.93
70216	HAVANA1	115	70	700	bus_3670	0.897	0.897

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70217	HAVANA2	115	70	700	bus_3670	0.893	0.893
70219	ANADARKO_T	115	70	706	BUSDBL_000757	0.761	0.761
70222	HILLTOP	69	70	712	BUSDBL_000918	0.941	0.941
70223	HLTP_TP	69	70	712	BUSDBL_000919	0.94	0.94
70225	HOLL_TP	69	70	712	BUSDBL_001954	0.876	0.876
70233	HORIZON	230	70	708	BF_141c	0.868	0.868
70238	ANADARKO	115	70	706	BUSDBL_000757	0.757	0.757
70240	JOHNSTOWN_1	115	70	706	BUSDBL_000757	0.779	0.779
70243	LA_SECPA	69	70	712	BUSDBL_000897	0.836	0.836
70244	LAFAYETTE	115	70	703	bus_3596	0.841	0.841
70246	JOHNSTOWN_2	115	70	706	BUSDBL_000757	0.779	0.779
70247	LAJUNTAT	115	70	712	BUSDBL_001954	0.89	0.89
70248	LAJUNTAT	69	70	712	BUSDBL_000897	0.856	0.856
70264	BLUESTONE	230	70	708	BF_026	0.858	0.858
70267	HOPKINS	69	70	708	BUSDBL_000875	0.922	0.922
70268	ADOBE	230	70	708	BF_141c	0.87	0.87
70288	MITCHELL_CK	69	70	708	BUSDBL_000875	0.923	0.923
70289	MOFFAT	69	70	710	bus_3209	0.927	0.927
70290	MONFORT	115	70	706	BUSDBL_000757	0.804	0.804
70295	NCAR	115	70	703	BF_148g	0.897	0.897
70296	NEW_CASTLE	69	70	708	BUSDBL_002998	0.856	0.856
70299	STKGULCH	230	70	708	BUSDBL_001144	0.902	0.902
70302	OIL_SHALE	69	70	708	BUSDBL_002998	0.885	0.885
70309	PARACHUTE	230	70	708	BUSDBL_001144	0.904	0.904
70326	PONCHA	69	70	710	BF_115c	0.837	0.837
70327	PONCHA_E	115	70	709	BF_115c	0.84	0.84
70332	PRAIRIE	69	70	712	bus_3509	0.88	0.88
70333	PROWERS	69	70	712	BUSDBL_001954	0.83	0.83
70353	READER	69	70	712	bus_3509	0.897	0.897
70356	WHEELER_PS	230	70	708	BUSDBL_001144	0.903	0.903
70357	MIDDLE_FORK	230	70	708	BUSDBL_001144	0.899	0.899
70359	RIFLE_UTE	69	70	708	BUSDBL_002998	0.874	0.874
70363	ROARNGFK	69	70	708	BUSDBL_000875	0.922	0.922
70367	ROMEO	69	70	710	bus_3209	0.775	0.775
70368	ROSEDALE	115	70	706	BUSDBL_000757	0.816	0.816
70382	SEMPER	115	70	700	bus_3283	0.903	0.903
70386	SHOSHONE	69	70	708	BUSDBL_000875	0.928	0.928
70388	SILT_USBR	69	70	708	BUSDBL_002998	0.864	0.864
70393	PONCHA_PS	230	70	709	P7_143	0.923	0.923
70394	SMELTER	115	70	712	BF_115c	0.84	0.84
70404	SPRNGFLD	69	70	712	BUSDBL_000918	0.939	0.939
70405	ST.CHAS.	69	70	712	bus_3509	0.897	0.897
70423	BOULDER_CN1	115	70	703	BF_148g	0.876	0.876
70424	SUNSHINE	115	70	703	BF_148g	0.867	0.867
70425	T.BUTTES	69	70	712	BUSDBL_000919	0.939	0.939

						Voltage PU	
Bus	**Name**	**kV**	**Area**	**Zone**	**Out_Name**	**2027 Bench**	**2027 Study**
70430	CAERUS_S1	230	70	708	BUSDBL_001144	0.901	0.901
70432	TOWER	230	70	700	bus_3670	0.812	0.812
70436	UINTAH	69	70	708	BF_141c	0.885	0.885
70438	UINTAH	230	70	708	BF_141c	0.876	0.876
70450	VASQUEZ	115	70	700	BUSDBL_000757	0.759	0.759
70452	VILAS	115	70	712	BUSDBL_000919	0.944	0.944
70453	VILAS	69	70	712	BUSDBL_000918	0.94	0.94
70454	VINELAND	69	70	708	bus_3257	0.909	0.909
70460	WALSH	69	70	712	BUSDBL_000919	0.939	0.939
70470	WELD_PS	115	70	706	BUSDBL_000757	0.794	0.794
70472	WILOW_CK	115	70	712	BUSDBL_001954	0.84	0.84
70473	WILOW_CK	69	70	712	BUSDBL_001954	0.837	0.837
70475	ARROWHLK	115	70	706	BUSDBL_000757	0.799	0.798
70492	BOULDER_HYD	115	70	703	BF_148g	0.876	0.876
70505	MIRGEJCT	69	70	710	bus_3209	0.925	0.925
70506	SAGUACHE	69	70	710	bus_3209	0.922	0.922
70507	MEARSJCT	69	70	710	BF_115c	0.838	0.838
70508	VILLA_GROVE	69	70	710	BF_115c	0.838	0.838
70509	KERBERCK	69	70	710	BF_115c	0.838	0.838
70511	ATER_TAP	69	70	710	bus_3209	0.885	0.885
70530	PICADILLY	230	70	700	bus_3670	0.811	0.811
70536	KESTREL	230	70	700	bus_3670	0.808	0.808
70537	FITZ_SIMONS	115	70	700	bus_3670	0.873	0.873
70538	CHAMBERS	115	70	700	bus_3670	0.872	0.872
70539	CHAMBERS	230	70	700	bus_3670	0.814	0.814
70552	ROMEO_TAP	69	70	710	bus_3209	0.775	0.775
70600	OXCART	69	70	710	BF_115c	0.838	0.838
70604	PARKWAY	115	70	703	bus_3596	0.863	0.863
70805	LEPRINO_PS	115	70	706	BUSDBL_000757	0.809	0.809
70854	CARL	69	70	708	BUSDBL_002998	0.854	0.854
70897	DCPL_TP	115	70	706	BUSDBL_000757	0.809	0.809
70898	HUSKY	230	70	706	line_4824	0.82	0.82
70899	LUCERNE_PS	115	70	706	BUSDBL_000757	0.809	0.809
70901	HUSKY	115	70	706	line_4824	0.82	0.82
70902	COLLINS_ST	115	70	706	line_4824	0.821	0.821
70903	CLOVERLY	115	70	706	BUSDBL_000757	0.817	0.817
70936	CARL_TP	69	70	708	BUSDBL_002998	0.854	0.854
70981	BLUESTONE	69	70	708	BF_026	0.896	0.896
71020	ERIE_AVE	69	70	712	bus_3509	0.905	0.905
77642	PONCHA_W	115	70	709	BF_115c	0.84	0.84
78107	DELCTAP	115	70	780	BUSDBL_002946	0.916	0.916

Branch ID								Branch Loading PU		
From	Name	kV	From	Name	kV	ck	Outage Name	2026 Bench	2026 Study	Comments
70023	ALLISON	115	70242	KENDRICK	115	1	BUSDBL_000160	1.102	1.102	Pre-existing
70023	ALLISON	115	70400	SODA_LAKES	115	1	BUSDBL_000160	1.478	1.478	Pre-existing
70024	ALAMOSA	69	70186	ALAMOSA_TP	69	1	bus_3209	1.119	1.117	Pre-existing
70024	ALAMOSA	69	70292	MOSCA	69	1	BUSDBL_000064	1.535	1.535	Pre-existing
70040	ARSENAL	115	70153	DERBY_2	115	1	bus_3670	1.096	1.104	Pre-existing
70042	ASPEN_TP	69	70051	BLENDE	69	1	BF_094f	1.022	1.022	Pre-existing
70042	ASPEN_TP	69	70353	READER	69	1	BF_094f	1.021	1.022	Pre-existing
70045	BANCROFT	115	70208	GRAY_STREET	115	1	line_4212	1.194	1.203	Pre-existing
70045	BANCROFT	115	70242	KENDRICK	115	1	line_4212	1.113	1.113	Pre-existing
70046	BUCKLEY2	230	70396	SMOKY_HL	230	1	bus_3306	1.13	1.124	Pre-existing
70047	BARR_LAKE	230	70048	GREEN_VLY	230	1	bus_3670	1.104	1.135	Pre-existing
70047	BARR_LAKE	230	72026	REUNION	230	1	bus_3670	1.049	1.08	Pre-existing
70049	BELMONT	69	70305	OVERTON	69	1	bus_3509	1.251	1.249	Pre-existing
70049	BELMONT	69	71020	ERIE_AVE	69	1	bus_3509	1.111	1.109	Pre-existing
70054	BMONT_TP	69	70305	OVERTON	69	1	bus_3509	1.673	1.669	Pre-existing
70054	BMONT_TP	69	71030	FTN_LAKE	69	1	bus_3509	1.673	1.669	Pre-existing
70059	BOULDER_TM1	115	70440	VALMONT_2	115	1	BUSDBL_001785	1.152	1.155	Pre-existing
70061	BOONE	230	70122	COMANCHE	230	1	bus_3737	1.167	---	Bench case only
70061	BOONE	230	70286	MIDWAY_PS	230	1	bus_3737	1.019	---	Bench case only
70073	CALIFORNIA	115	70108	CHEROKEE_S	115	1	BUSDBL_000370	1.128	1.142	Pre-existing
70078	CAMEO	230	70076	CAMEO	69	T5	BUSDBL_000294	1.011	1.011	Pre-existing
70087	CAPITOL_HL	115	70074	CALIFORN_TP	115	1	BUSDBL_000364	1.096	1.11	Pre-existing
70087	CAPITOL_HL	115	70148	DENVER_TM_1	115	1	LoTC_231	1.145	1.157	Pre-existing
70090	FT_LUPTON_2	115	70192	FT_LUPTON	230	T3	tran_5143	1.003	1.016	Pre-existing
70108	CHEROKEE_S	115	70276	MAPLETO1	115	2	BUSDBL_000364	1.07	1.081	Pre-existing
70108	CHEROKEE_S	115	70277	MAPLETO2	115	1	BF_033y	1.122	1.123	Pre-existing
70110	CHEROKEE_N	115	70126	CONOCO	115	1	bus_3281	1.026	1.045	Pre-existing
70110	CHEROKEE_N	115	70153	DERBY_2	115	1	bus_3670	1.247	1.255	Pre-existing
70110	CHEROKEE_N	115	70154	DERBY_1	115	1	bus_3670	1.27	1.279	Pre-existing
70112	CLARK	230	70212	GREENWOOD_1	230	1	bus_3306	1.041	1.035	Pre-existing
70112	CLARK	230	70241	JORDAN	230	1	bus_3306	1.479	1.472	Pre-existing
70121	COMANCHE_1	115	70122	COMANCHE	230	T1	BUSDBL_000462	1.003	---	Bench case only
70123	COMANCHE_2	115	70122	COMANCHE	230	T2	tran_5057	1.004	---	Bench case only
70139	DANIEL_PK	230	70323	PRAIRIE_3	230	2	BUSDBL_000622	1.335	1.246	Pre-existing
70139	DANIEL_PK	230	70331	PRAIRIE_1	230	1	BUSDBL_000614	1.013	---	Bench case only
70139	DANIEL_PK	230	70601	DANIEL_PK	345	T3	BUSDBL_000647	1.036	---	Bench case only
70139	DANIEL_PK	230	70601	DANIEL_PK	345	T4	BUSDBL_000643	1.038	---	Bench case only
70139	DANIEL_PK	230	70601	DANIEL_PK	345	T5	BUSDBL_000642	1.038	---	Bench case only

Branch ID								Branch Loading PU		
From	Name	kV	From	Name	kV	ck	Outage Name	2026 Bench	2026 Study	Comments
70139	DANIEL_PK	230	73477	FULLER	230	1	bus_3737	1.133	---	Bench case only
70140	DEBEQUE	69	70981	BLUESTONE	69	1	BF_143g	1.04	1.04	Pre-existing
70148	DENVER_TM_1	115	70144	DENVER_TM_2	115	1	bus_3281	1.272	1.271	Pre-existing
70148	DENVER_TM_1	115	70208	GRAY_STREET	115	1	BF_148g	1.333	1.342	Pre-existing
70154	DERBY_1	115	70216	HAVANA1	115	1	bus_3670	1.065	1.073	Pre-existing
70162	EAST_1	115	70171	EAST_2	115	1	BUSDBL_002096	2.355	2.346	Pre-existing
70171	EAST_2	115	70395	SMOKY_HL_N	115	1	BUSDBL_002096	1.281	1.276	Pre-existing
70171	EAST_2	115	70395	SMOKY_HL_N	115	2	BUSDBL_002096	1.06	1.056	Pre-existing
70177	PODER	115	70074	CALIFORN_TP	115	1	BUSDBL_000364	1.096	1.11	Pre-existing
70193	FTN_VLY	115	70449	DESRTCOV	115	1	bus_3446	1.243	1.039	Pre-existing
70193	FTN_VLY	115	73412	MIDWAYBR	115	1	bus_3446	2.377	1.986	Pre-existing
70198	GILCREST	115	70219	ANADARKO_T	115	1	bus_3356	1.108	1.138	Pre-existing
70208	GRAY_STREET	115	70402	SOUTH	115	1	BUSDBL_000134	1.047	1.048	Pre-existing
70212	GREENWOOD_1	230	70189	GREENWOOD_2	230	1	BUSDBL_000614	1.388	1.338	Pre-existing
70215	HARRISON_P1	115	70282	LEETSDALE_2	115	1	bus_3281	1.208	1.206	Pre-existing
70236	HYDEPARK	115	70339	PUEBPLNT	115	1	bus_3737	1.245	---	Bench case only
70244	LAFAYETTE	115	70444	VALMONT_1	115	1	line_4371	1.002	1.002	Pre-existing
70269	LOUISVILLE	115	70444	VALMONT_1	115	1	bus_3283	1.051	1.052	Pre-existing
70276	MAPLETO1	115	70177	PODER	115	1	BUSDBL_000364	1.096	1.11	Pre-existing
70283	MEADOW_HLS	230	70313	ORCHARD	230	1	bus_3306	1.014	1.01	Pre-existing
70283	MEADOW_HLS	230	70396	SMOKY_HL	230	1	bus_3306	1.148	1.144	Pre-existing
70292	MOSCA	69	70376	SANLSVLY	69	1	bus_3209	1.544	1.541	Pre-existing
70302	OIL_SHALE	69	70359	RIFLE_UTE	69	1	BUSDBL_001144	1.066	1.067	Pre-existing
70339	PUEBPLNT	115	70352	READER	115	1	bus_3737	1.418	1.16	Pre-existing
70346	RALSTON2	115	70354	RIDGE_1	115	2	BF_148g	1.307	1.308	Pre-existing
70361	RIOGRD_TP	69	70380	SARGENT	69	1	BF_128f	1.026	1.023	Pre-existing
70368	ROSEDALE	115	73554	BOOMERNG	115	1	BUSDBL_001947	1.261	1.257	Pre-existing
70374	SANLSVLY	115	70375	SANLSVLY	230	T1	BF_128f	1.031	1.028	Pre-existing
70376	SANLSVLY	69	70374	SANLSVLY	115	T3	BF_128f	1.069	1.067	Pre-existing
70396	SMOKY_HL	230	70395	SMOKY_HL_N	115	T1	BUSDBL_002096	1.023	1.024	Pre-existing
70410	FT_ST_VRAIN	230	70820	KEENESBURG	230	1	bus_3229	1.064	1.065	Pre-existing
70423	BOULDER_CN1	115	70058	BOULDER_CN2	115	2	BF_148g	1.586	1.587	Pre-existing
70423	BOULDER_CN1	115	70492	BOULDER_HYD	115	1	BF_148g	1.113	1.114	Pre-existing
70449	DESRTCOV	115	70456	W.STATON	115	1	bus_3446	1.317	1.113	Pre-existing
70550	W.CANON	115	73551	W CANON	230	T1	bus_3608	1.066	1.066	Pre-existing
72024	HENRYLAK	115	70605	HENRYLAK	230	T1	BF_118a	1.245	1.245	Pre-existing
72413	VOLLMERT	115	73460	BLK_SQMV	115	1	bus_3737	1.035	---	Bench case only
72413	VOLLMERT	115	73481	FULLER	115	1	bus_3737	1.066	---	Bench case only

Branch ID								Branch Loading PU		
From	Name	kV	From	Name	kV	ck	Outage Name	2026 Bench	2026 Study	Comments
73002	AIRPORT	115	73433	WINDSORT	115	1	BUSDBL_001948	1.23	1.231	Pre-existing
73002	AIRPORT	115	78101	BOYD	115	1	BUSDBL_001948	1.65	1.651	Pre-existing
73211	WELD LM	115	73554	BOOMERNG	115	1	BUSDBL_001947	1.327	1.324	Pre-existing
73211	WELD LM	115	73558	WHITNEY	115	1	line_4936	1.07	1.072	Pre-existing
73412	MIDWAYBR	115	73416	RANCHO	115	1	bus_3737	1.101	---	Bench case only
73414	FOXRUN	115	73445	GRESHAM	115	1	bus_3737	1.021	---	Bench case only
73433	WINDSORT	115	73558	WHITNEY	115	1	BUSDBL_001948	1.397	1.397	Pre-existing
73445	GRESHAM	115	73455	BLKFORTP	115	1	bus_3737	1.065	---	Bench case only
70164	ELDORADO	115	70444	VALMONT_1	115	1	P7_20	0.999	1.013	Redispatching VLMNT7 Unit G7 mitigated the overload
70447	VALMONT	230	70592	SPINDLE	230	1	bus_3229	0.991	1.028	Can be mitigated by redispatch of St. Vrain Gen units

Branch								Branch Loading PU		
From	Name	kV	From	Name	kV	ck	Outage Name	2027 Bench	2027 Study	Comments
70023	ALLISON	115	70242	KENDRICK	115	1	BUSDBL_000160	1.12	1.12	Pre-existing
70023	ALLISON	115	70400	SODA_LAKES	115	1	BUSDBL_000160	1.503	1.502	Pre-existing
70024	ALAMOSA	69	70026	ALMSA_TM	69	1	BUSDBL_000069	1.307	1.307	Pre-existing
70024	ALAMOSA	69	70186	ALAMOSA_TP	69	1	bus_3209	1.116	1.116	Pre-existing
70024	ALAMOSA	69	70292	MOSCA	69	1	bus_3209	1.477	1.477	Pre-existing
70040	ARSENAL	115	70153	DERBY_2	115	1	bus_3670	1.042	1.042	Pre-existing
70042	ASPEN_TP	69	70051	BLENDE	69	1	BUSDBL_000015	1.02	1.02	Pre-existing
70042	ASPEN_TP	69	70353	READER	69	1	BUSDBL_000015	1.02	1.02	Pre-existing
70045	BANCROFT	115	70208	GRAY_STREET	115	1	line_4212	1.209	1.21	Pre-existing
70045	BANCROFT	115	70242	KENDRICK	115	1	line_4212	1.131	1.131	Pre-existing
70046	BUCKLEY2	230	70396	SMOKY_HL	230	1	bus_3306	1.219	1.218	Pre-existing
70046	BUCKLEY2	230	70491	TOLLGATE	230	1	bus_3306	1.052	1.051	Pre-existing
70048	GREEN_VLY	230	70590	RMEC	230	1	BUSDBL_000199	1.039	1.041	Pre-existing
70048	GREEN_VLY	230	70820	KEENESBURG	230	1	BUSDBL_000197	1.098	1.099	Pre-existing
70048	GREEN_VLY	230	70820	KEENESBURG	230	2	BUSDBL_000196	1.098	1.099	Pre-existing
70049	BELMONT	69	70305	OVERTON	69	1	bus_3509	1.249	1.249	Pre-existing
70049	BELMONT	69	71020	ERIE_AVE	69	1	bus_3509	1.109	1.109	Pre-existing
70054	BMONT_TP	69	70305	OVERTON	69	1	bus_3509	1.67	1.67	Pre-existing
70054	BMONT_TP	69	71030	FTN_LAKE	69	1	bus_3509	1.67	1.669	Pre-existing
70058	BOULDER_CN2	115	70424	SUNSHINE	115	1	BF_148g	1.013	1.013	Pre-existing
70059	BOULDER_TM1	115	70440	VALMONT_2	115	1	BUSDBL_001785	1.183	1.184	Pre-existing
70061	BOONE	230	70122	COMANCHE	230	1	bus_3759	1.263	1.231	Pre-existing
70073	CALIFORNIA	115	70108	CHEROKEE_S	115	1	BUSDBL_000370	1.106	1.107	Pre-existing
70078	CAMEO	230	70076	CAMEO	69	T5	BUSDBL_000294	1.01	1.01	Pre-existing
70087	CAPITOL_HL	115	70074	CALIFORN_TP	115	1	BUSDBL_000364	1.07	1.07	Pre-existing
70087	CAPITOL_HL	115	70148	DENVER_TM_1	115	1	line_4239	1.093	1.093	Pre-existing
70090	FT_LUPTON_2	115	70192	FT_LUPTON	230	T3	line_4824	1.117	1.118	Pre-existing
70097	CF&ISE2	69	70098	CF&ISE2	115	T2	BUSDBL_000498	0.995	0.995	Pre-existing
70108	CHEROKEE_S	115	70276	MAPLETO1	115	2	BUSDBL_000364	1.05	1.051	Pre-existing
70108	CHEROKEE_S	115	70277	MAPLETO2	115	1	BF_033y	1.134	1.134	Pre-existing
70109	UNA_ORCH	69	70140	DEBEQUE	69	1	BUSDBL_002998	1.002	1.002	Pre-existing
70110	CHEROKEE_N	115	70126	CONOCO	115	1	bus_3281	1	1.001	Pre-existing
70110	CHEROKEE_N	115	70153	DERBY_2	115	1	bus_3670	1.193	1.193	Pre-existing
70110	CHEROKEE_N	115	70154	DERBY_1	115	1	bus_3670	1.213	1.213	Pre-existing
70110	CHEROKEE_N	115	70174	FEDERHT23	115	1	BUSDBL_001795	1	1	Pre-existing
70112	CLARK	230	70212	GREENWOOD_1	230	1	bus_3306	1.133	1.132	Pre-existing

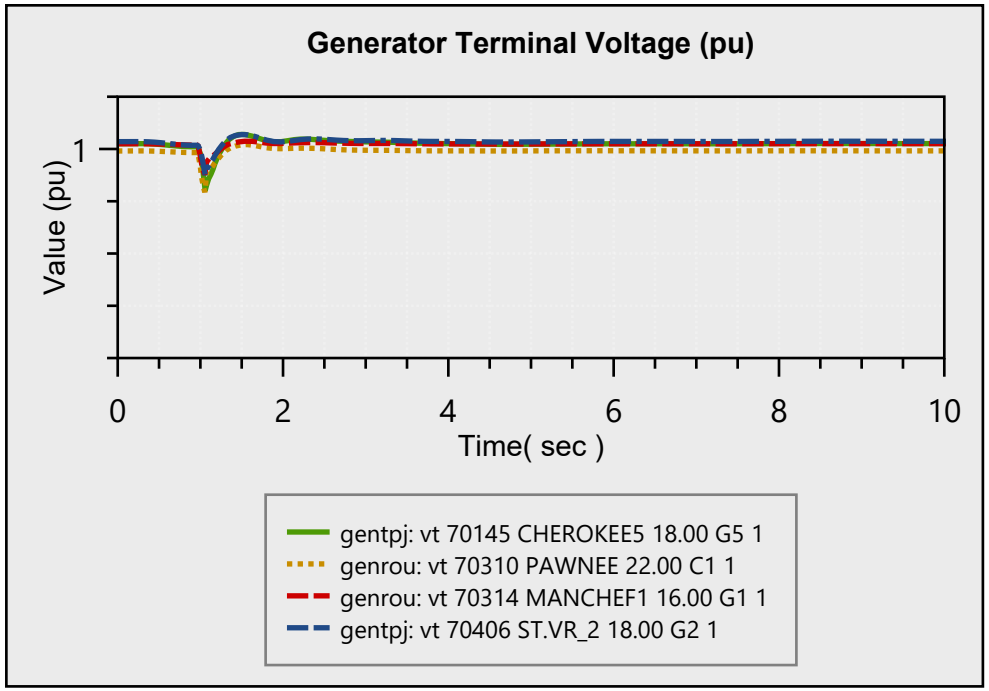
Branch								Branch Loading PU		
From	Name	kV	From	Name	kV	ck	Outage Name	2027 Bench	2027 Study	Comments
70112	CLARK	230	70241	JORDAN	230	1	bus_3306	1.585	1.584	Pre-existing
70121	COMANCHE_1	115	70122	COMANCHE	230	T1	BUSDBL_000462	1.031	1.024	Pre-existing
70123	COMANCHE_2	115	70122	COMANCHE	230	T2	tran_5057	1.015	1.009	Pre-existing
70139	DANIEL_PK	230	70323	PRAIRIE_3	230	2	bus_3552	1.495	1.492	Pre-existing
70139	DANIEL_PK	230	70331	PRAIRIE_1	230	1	bus_3552	1.152	1.15	Pre-existing
70139	DANIEL_PK	230	70601	DANIEL_PK	345	T3	BUSDBL_000647	1.077	1.075	Pre-existing
70139	DANIEL_PK	230	70601	DANIEL_PK	345	T4	BUSDBL_000643	1.08	1.077	Pre-existing
70139	DANIEL_PK	230	70601	DANIEL_PK	345	T5	BUSDBL_000642	1.08	1.077	Pre-existing
70139	DANIEL_PK	230	73477	FULLER	230	1	bus_3759	1.113	1.089	Pre-existing
70140	DEBEQUE	69	70981	BLUESTONE	69	1	BUSDBL_002998	1.061	1.061	Pre-existing
70148	DENVER_TM_1	115	70144	DENVER_TM_2	115	1	bus_3281	1.282	1.282	Pre-existing
70148	DENVER_TM_1	115	70208	GRAY_STREET	115	1	BF_148g	1.34	1.34	Pre-existing
70154	DERBY_1	115	70216	HAVANA1	115	1	bus_3670	1.008	1.008	Pre-existing
70162	EAST_1	115	70171	EAST_2	115	1	BUSDBL_002096	2.401	2.4	Pre-existing
70164	ELDORADO	115	70444	VALMONT_1	115	1	P7_20	1.026	1.027	Pre-existing
70171	EAST_2	115	70395	SMOKY_HL_N	115	1	BUSDBL_002096	1.306	1.305	Pre-existing
70171	EAST_2	115	70395	SMOKY_HL_N	115	2	BUSDBL_002096	1.081	1.08	Pre-existing
70177	PODER	115	70074	CALIFORN_TP	115	1	BUSDBL_000364	1.07	1.07	Pre-existing
70189	GREENWOOD_2	230	70323	PRAIRIE_3	230	1	bus_3552	1.047	1.044	Pre-existing
70189	GREENWOOD_2	230	70481	MONACO_12	230	1	line_4250	1.026	1.024	Pre-existing
70191	FT_LUPTON_1	115	70450	VASQUEZ	115	1	line_4824	1.611	1.611	Pre-existing
70192	FT_LUPTON	230	70410	FT_ST_VRAIN	230	1	BUSDBL_001546	1.108	1.109	Pre-existing
70193	FTN_VLY	115	70449	DESRTCOV	115	1	bus_3446	1.109	1.098	Pre-existing
70193	FTN_VLY	115	73412	MIDWAYBR	115	1	bus_3446	2.12	2.099	Pre-existing
70198	GILCREST	115	70202	GODFREY	115	1	line_4824	1.051	1.05	Pre-existing
70198	GILCREST	115	70219	ANADARKO_T	115	1	line_4824	1.247	1.246	Pre-existing
70208	GRAY_STREET	115	70252	LAKEWOOD_2	115	2	BF_148g	1.01	1.01	Pre-existing
70208	GRAY_STREET	115	70402	SOUTH	115	1	BUSDBL_000134	1.081	1.081	Pre-existing
70209	GREELEY	115	70290	MONFORT	115	1	line_4439	1.073	1.073	Pre-existing
70212	GREENWOOD_1	230	70189	GREENWOOD_2	230	1	BUSDBL_000614	1.503	1.5	Pre-existing
70212	GREENWOOD_1	230	70331	PRAIRIE_1	230	2	bus_3552	1.023	1.021	Pre-existing
70215	HARRISON_P1	115	70282	LEETSDALE_2	115	1	bus_3281	1.208	1.207	Pre-existing
70236	HYDEPARK	115	70339	PUEBPLNT	115	1	bus_3759	1.221	1.195	Pre-existing
70241	JORDAN	230	70313	ORCHARD	230	1	bus_3306	1.026	1.025	Pre-existing
70244	LAFAYETTE	115	70444	VALMONT_1	115	1	BUSDBL_000751	1.04	1.039	Pre-existing
70269	LOUISVILLE	115	70444	VALMONT_1	115	1	bus_3283	1.065	1.065	Pre-existing

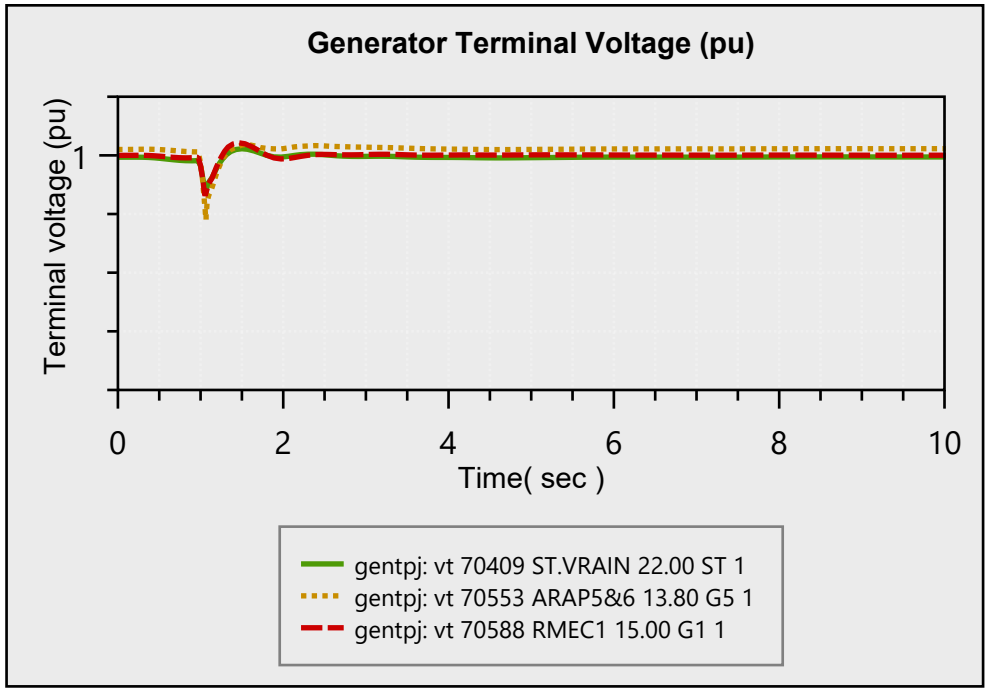
Branch								Branch Loading PU		
From	Name	kV	From	Name	kV	ck	Outage Name	2027 Bench	2027 Study	Comments
70276	MAPLETO1	115	70177	PODER	115	1	BUSDBL_000364	1.07	1.07	Pre-existing
70283	MEADOW_HLS	230	70313	ORCHARD	230	1	bus_3306	1.077	1.076	Pre-existing
70283	MEADOW_HLS	230	70396	SMOKY_HL	230	1	bus_3306	1.212	1.212	Pre-existing
70290	MONFORT	115	70897	DCPL_TP	115	1	BUSDBL_000757	1.006	1.006	Pre-existing
70292	MOSCA	69	70376	SANLSVLY	69	1	bus_3209	1.548	1.548	Pre-existing
70302	OIL_SHALE	69	70359	RIFLE_UTE	69	1	BUSDBL_001144	1.071	1.071	Pre-existing
70339	PUEBPLNT	115	70352	READER	115	1	bus_3759	1.39	1.363	Pre-existing
70346	RALSTON2	115	70354	RIDGE_1	115	2	BF_148g	1.335	1.335	Pre-existing
70368	ROSEDALE	115	70116	LEPRINO_TP	115	1	line_4824	1.124	1.125	Pre-existing
70368	ROSEDALE	115	73554	BOOMERNG	115	1	BF_014d	1.664	1.665	Pre-existing
70374	SANLSVLY	115	70937	BLANCA_PEAK	115	1	BF_008b	1.024	1.024	Pre-existing
70396	SMOKY_HL	230	70395	SMOKY_HL_N	115	T1	BUSDBL_002096	1.043	1.043	Pre-existing
70396	SMOKY_HL	230	70596	HARVEST_MI	230	1	bus_3306	1.191	1.188	Pre-existing
70410	FT_ST_VRAIN	230	70820	KEENESBURG	230	1	bus_3229	1.061	1.061	Pre-existing
70423	BOULDER_CN1	115	70058	BOULDER_CN2	115	2	BF_148g	1.623	1.623	Pre-existing
70423	BOULDER_CN1	115	70492	BOULDER_HYD	115	1	BF_148g	1.122	1.122	Pre-existing
70447	VALMONT	230	70592	SPINDLE	230	1	bus_3229	1.093	1.095	Pre-existing
70449	DESRTCOV	115	70456	W.STATON	115	1	bus_3446	1.183	1.171	Pre-existing
70450	VASQUEZ	115	70219	ANADARKO_T	115	1	line_4824	1.623	1.623	Pre-existing
70481	MONACO_12	230	70365	SULLIVAN_2	230	1	BUSDBL_001437	1.1	1.098	Pre-existing
70550	W.CANON	115	73551	W CANON	230	T1	bus_3608	1.066	1.067	Pre-existing
70599	SMOKY_HL	345	70396	SMOKY_HL	230	T4	BUSDBL_001490	1.095	1.093	Pre-existing
70599	SMOKY_HL	345	70396	SMOKY_HL	230	T5	BUSDBL_001489	1.095	1.093	Pre-existing
70897	DCPL_TP	115	70903	CLOVERLY	115	1	BUSDBL_000757	1.095	1.095	Pre-existing
70901	HUSKY	115	70898	HUSKY	230	T4	BUSDBL_000757	1.089	1.089	Pre-existing
70901	HUSKY	115	70902	COLLINS_ST	115	1	BUSDBL_000757	1.377	1.377	Pre-existing
70902	COLLINS_ST	115	70903	CLOVERLY	115	1	BUSDBL_000757	1.324	1.324	Pre-existing
72024	HENRYLAK	115	70605	HENRYLAK	230	T1	BF_118a	1.245	1.245	Pre-existing
72413	VOLLMERT	115	73460	BLK_SQMV	115	1	bus_3759	1.016	1.003	Pre-existing
72413	VOLLMERT	115	73481	FULLER	115	1	bus_3759	1.046	1.033	Pre-existing
73002	AIRPORT	115	73433	WINDSORT	115	1	line_4824	1.411	1.411	Pre-existing
73002	AIRPORT	115	78101	BOYD	115	1	line_4824	1.853	1.853	Pre-existing
73055	KERSEY W	115	73095	KERSEYTP	115	1	line_4824	1.164	1.165	Pre-existing
73095	KERSEYTP	115	73543	WILLOBY	115	1	line_4824	1.163	1.164	Pre-existing
73159	PROSPVAL	115	73370	LOSTCKTP	115	1	line_4824	1.029	1.029	Pre-existing
73211	WELD LM	115	73554	BOOMERNG	115	1	BF_014d	1.729	1.729	Pre-existing

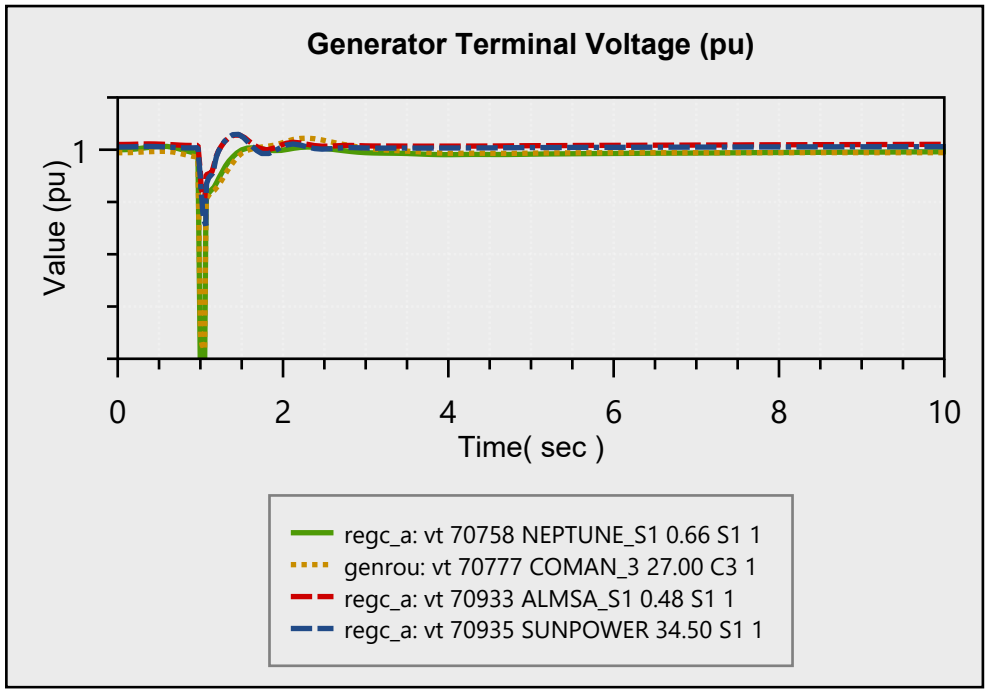
Branch								Branch Loading PU		
From	**Name**	**kV**	**From**	**Name**	**kV**	**ck**	**Outage Name**	**2027 Bench**	**2027 Study**	**Comments**
73211	WELD LM	115	73558	WHITNEY	115	1	line_4824	1.187	1.187	Pre-existing
73412	MIDWAYBR	115	73416	RANCHO	115	1	bus_3759	1.077	1.06	Pre-existing
73414	FOXRUN	115	73445	GRESHAM	115	1	bus_3759	1.012	0.994	Pre-existing
73433	WINDSORT	115	73558	WHITNEY	115	1	line_4824	1.585	1.585	Pre-existing
73445	GRESHAM	115	73455	BLKFORTP	115	1	bus_3759	1.054	1.036	Pre-existing

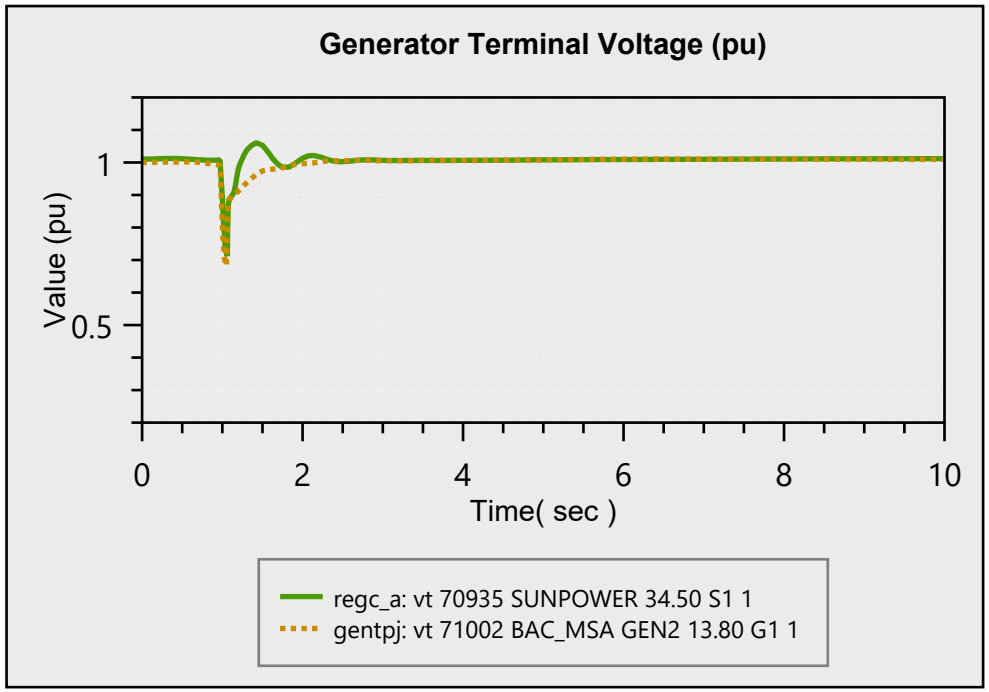
Appendix D Stability Plots

OUTPUTS

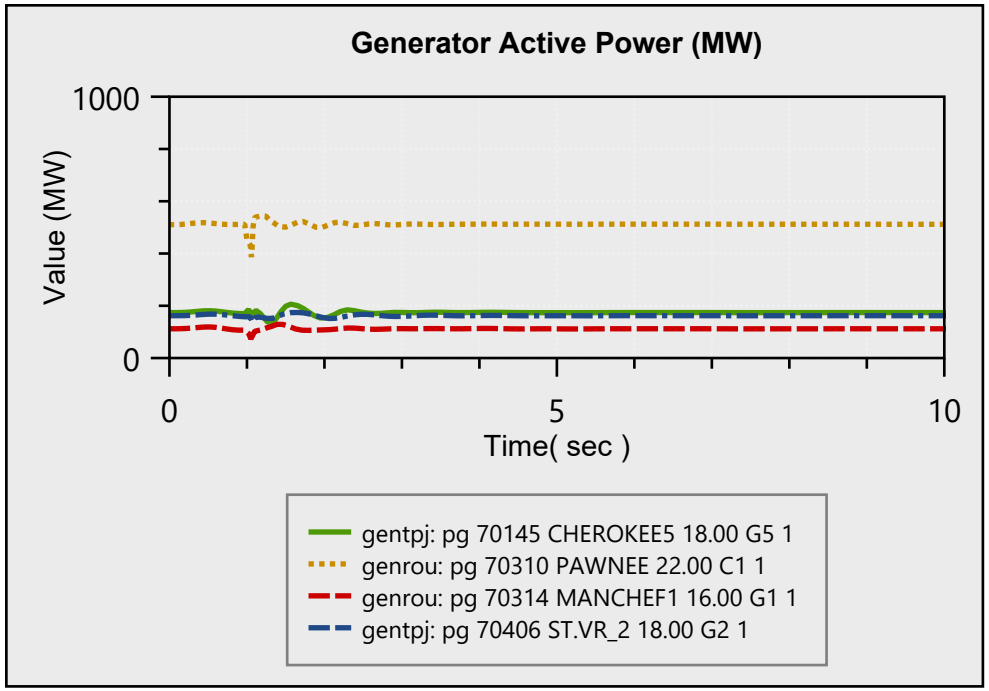

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

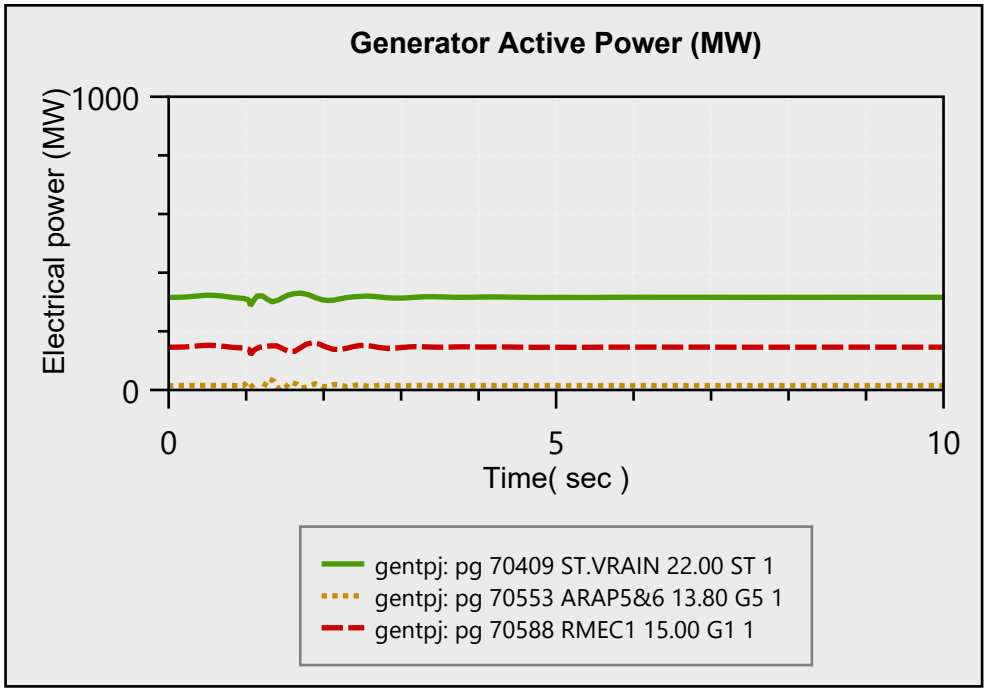

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

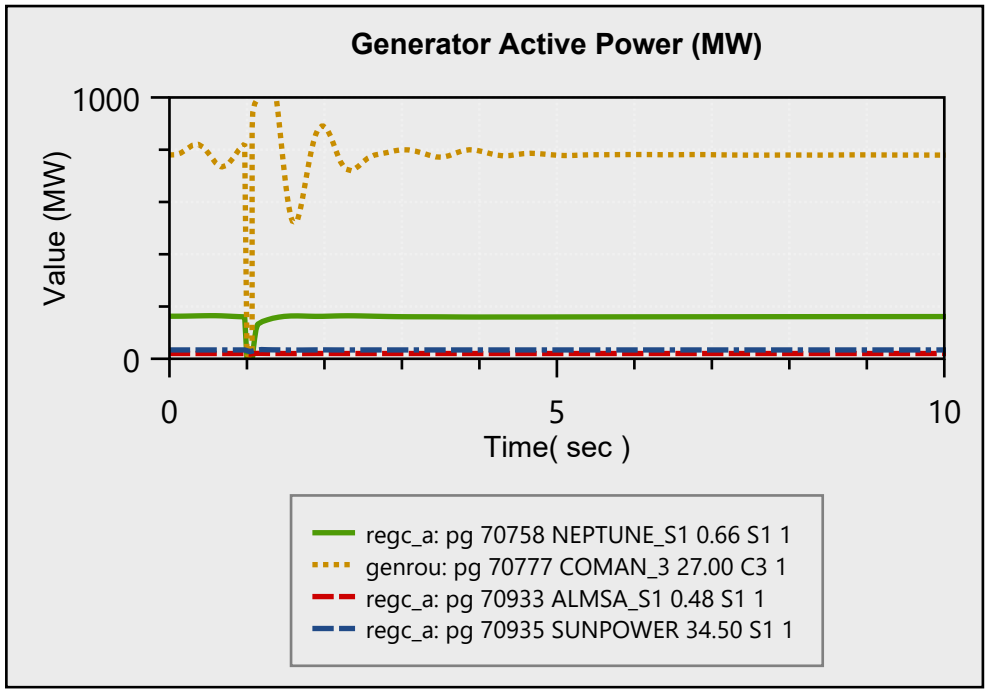

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

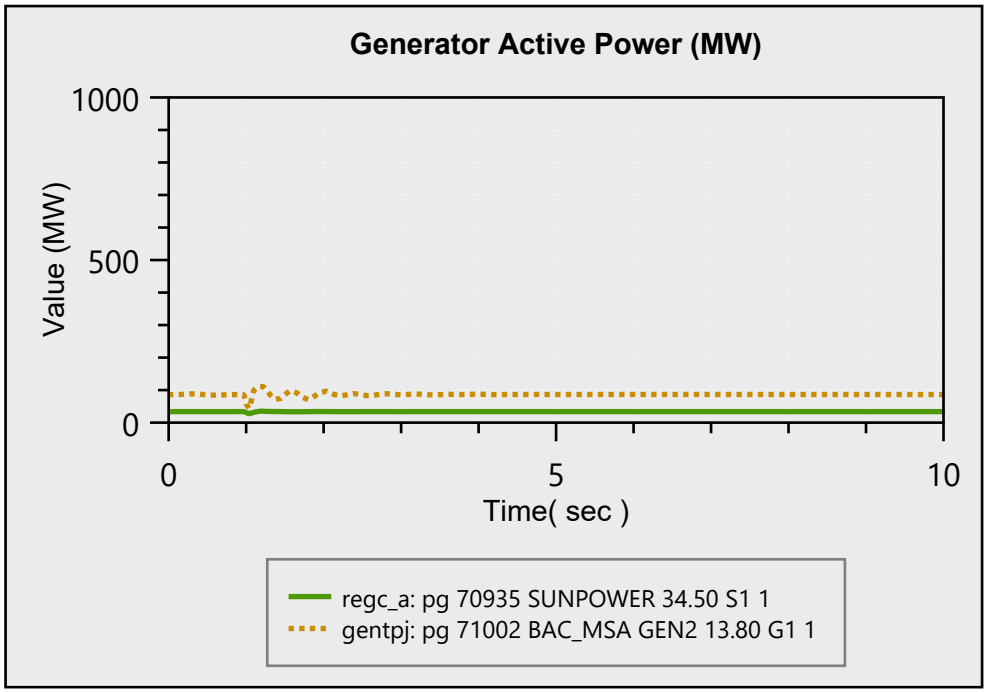

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

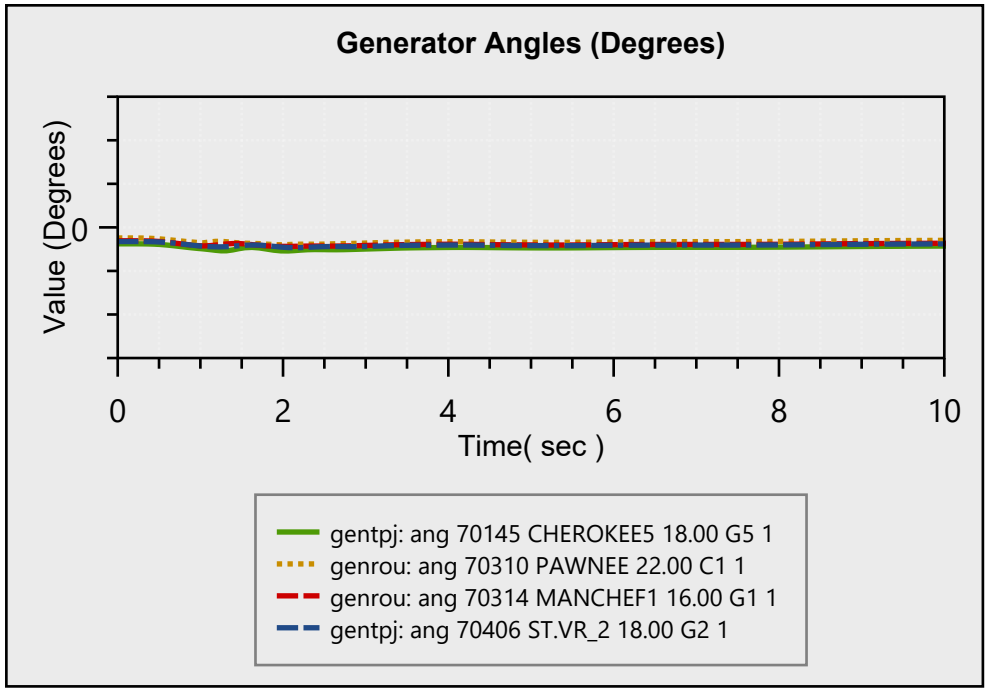

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

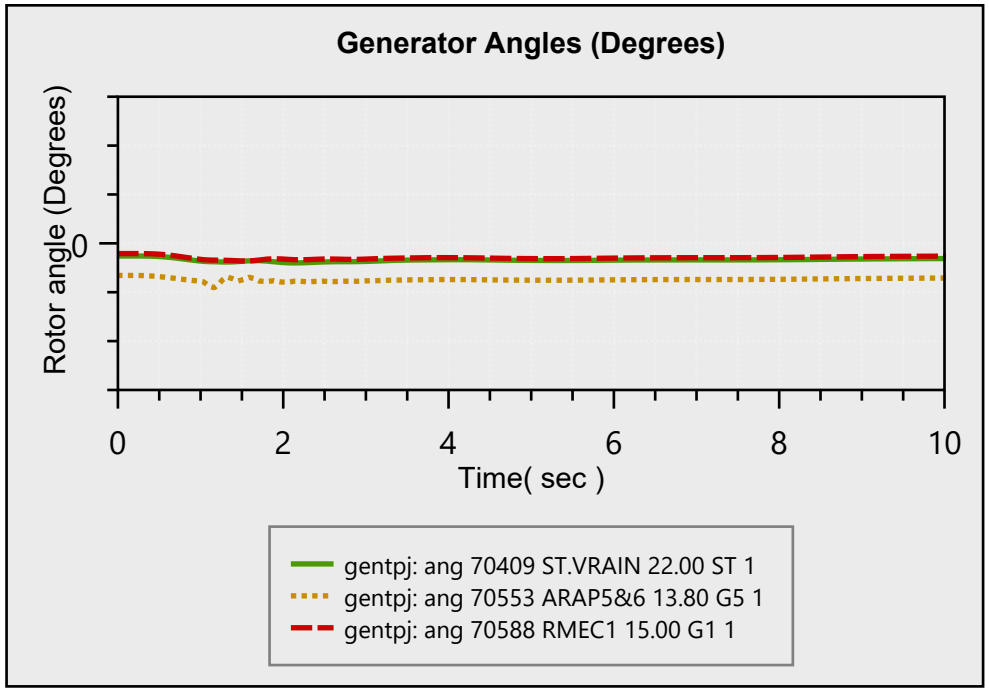

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

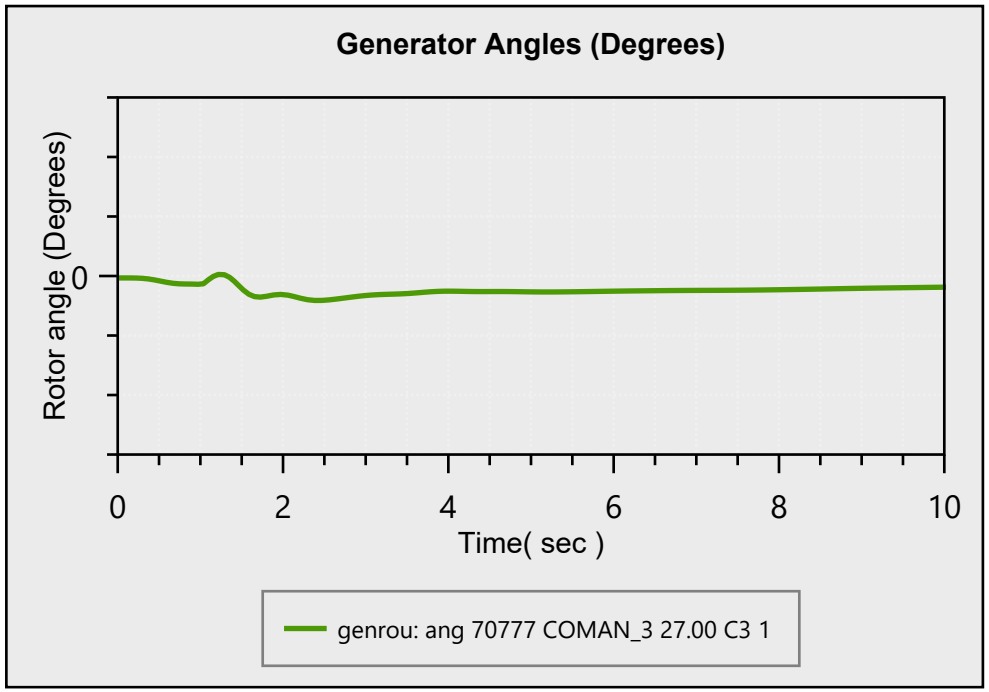

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

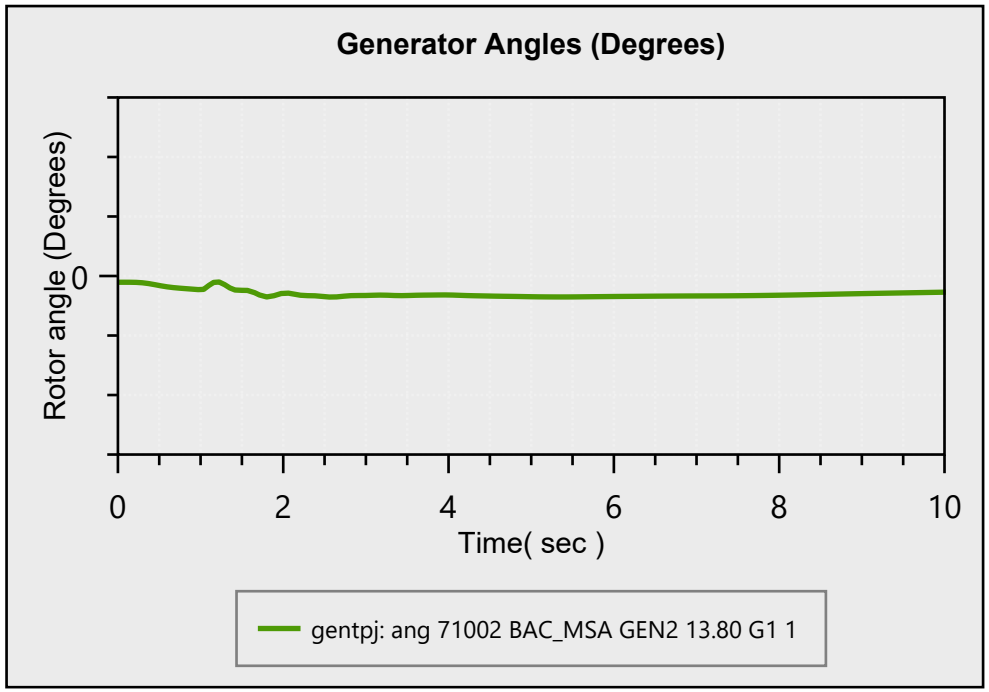

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

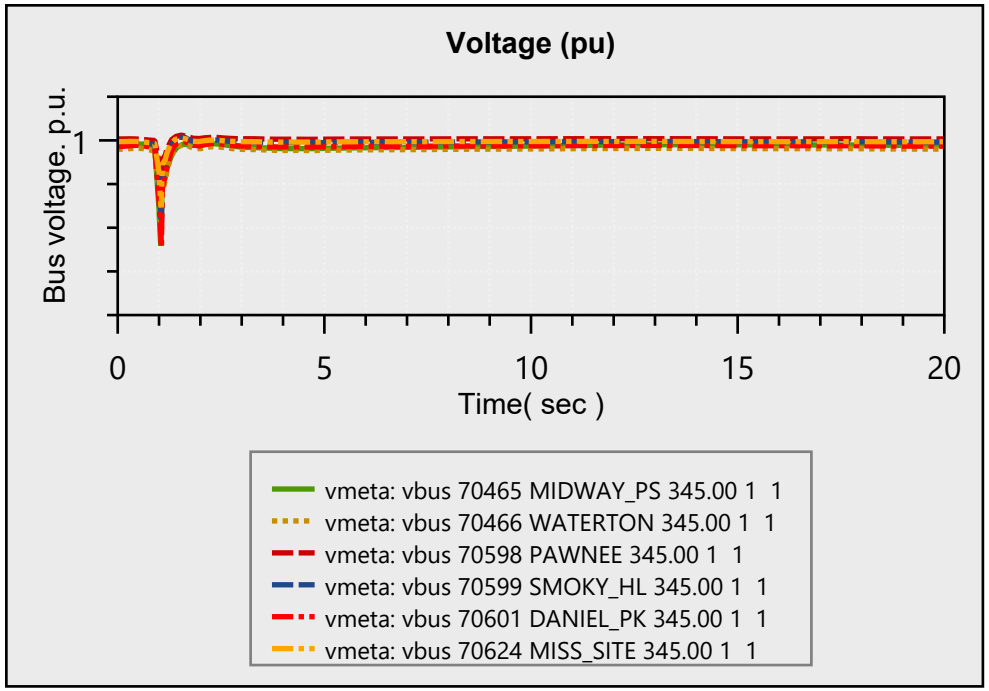

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

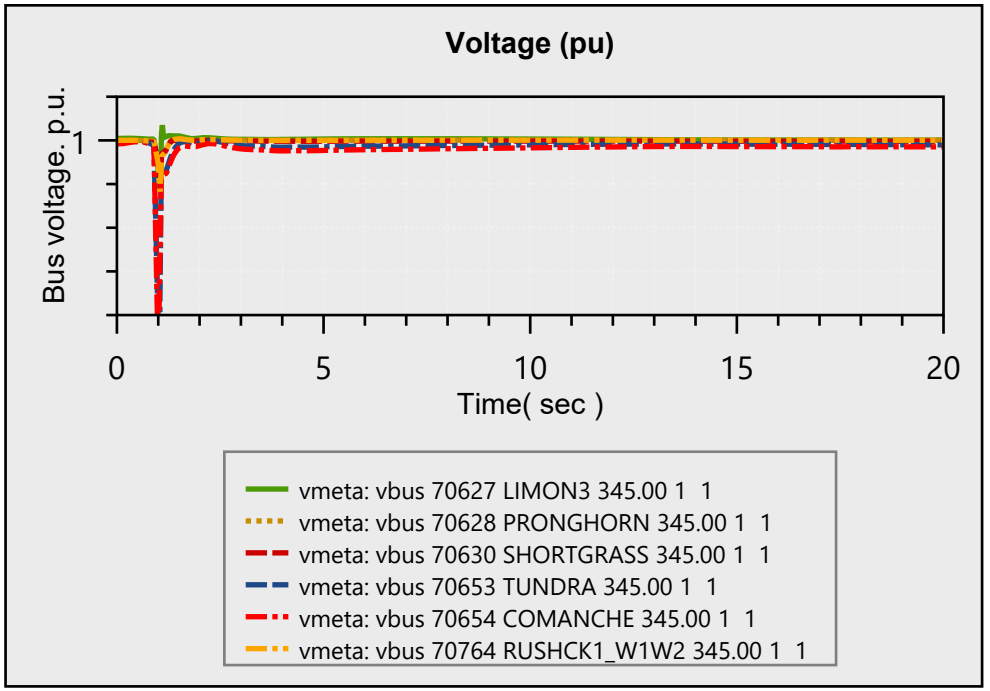

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

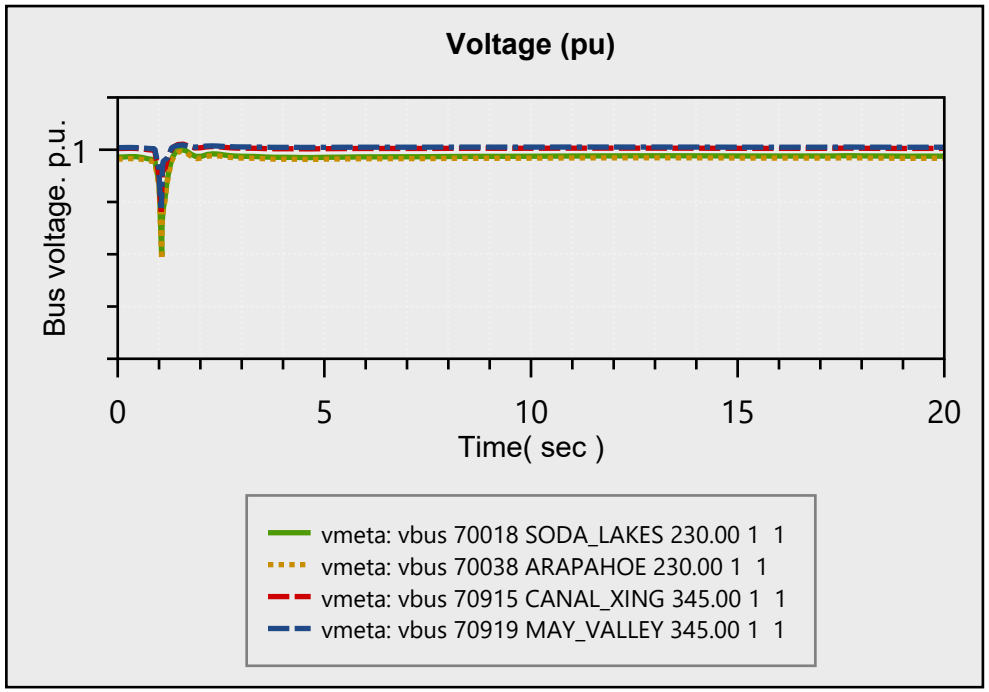

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

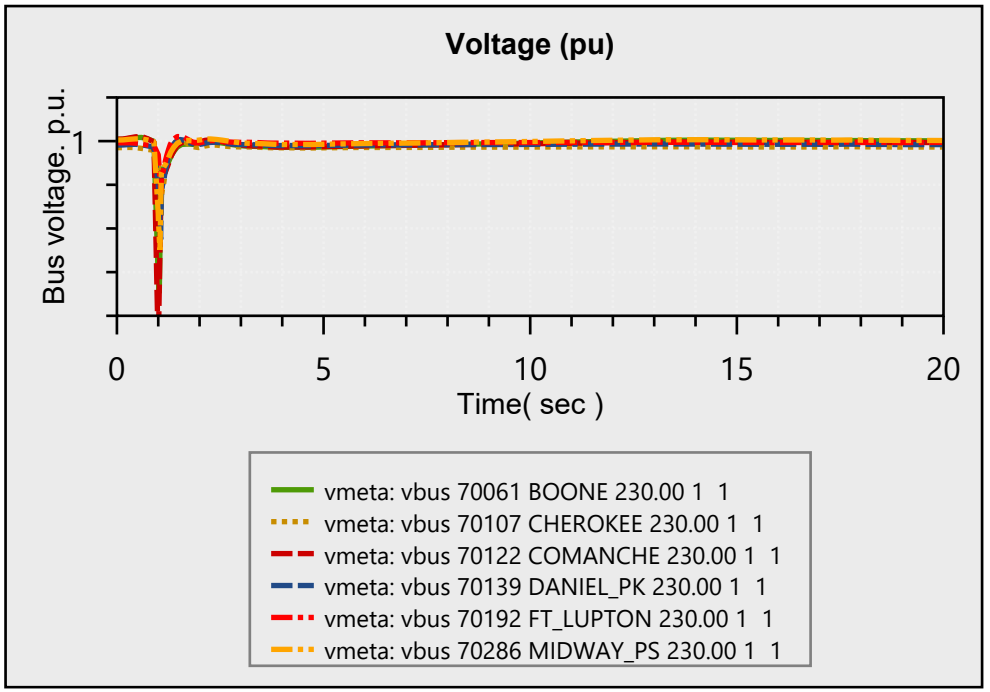

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

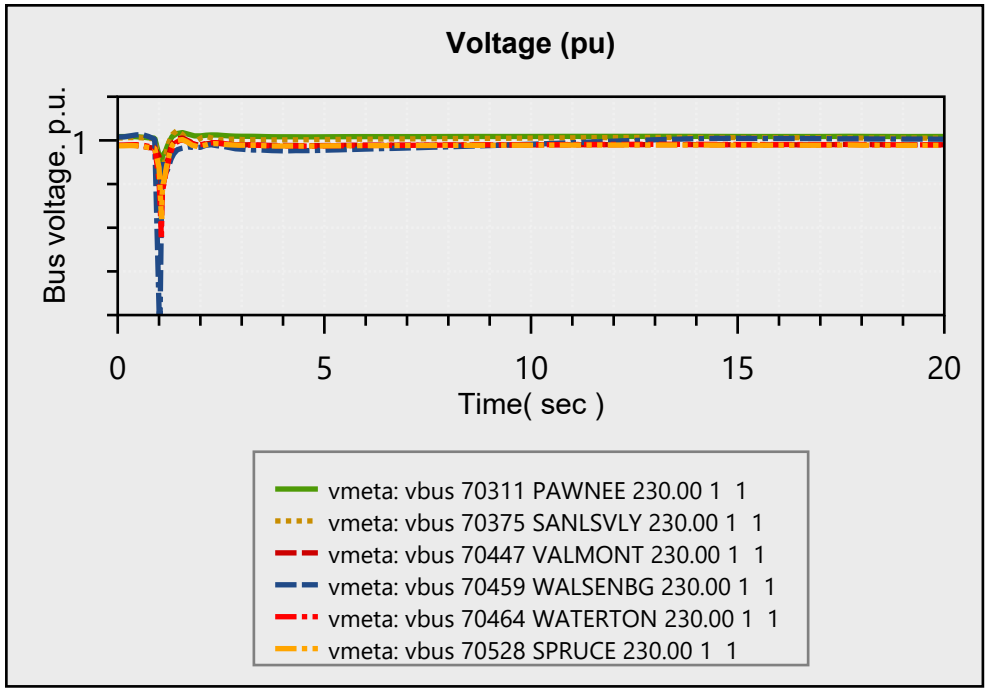

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

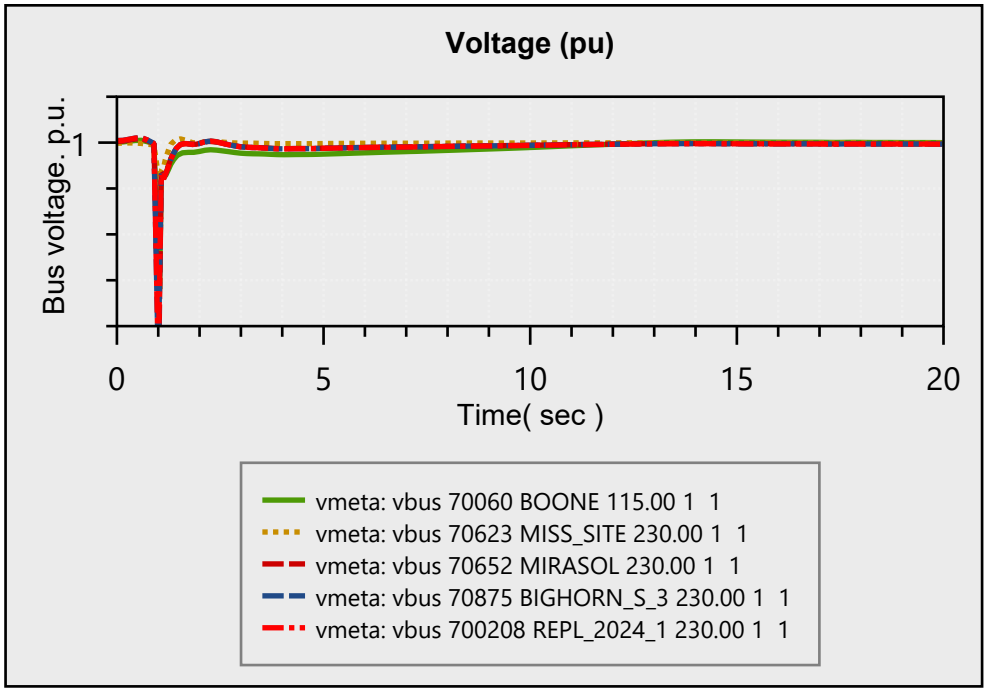

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

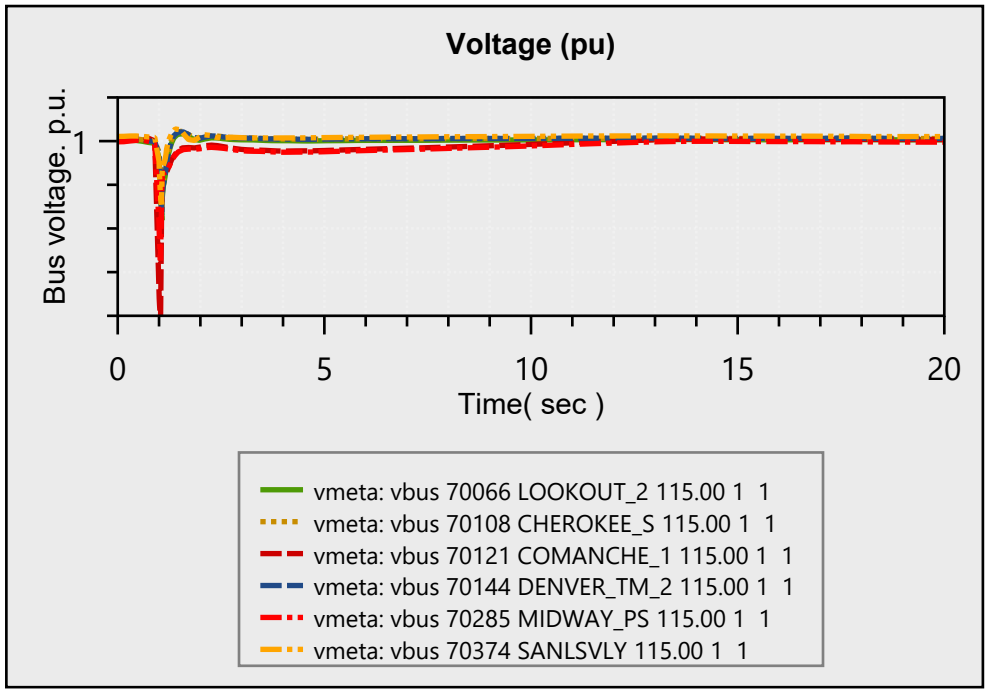

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

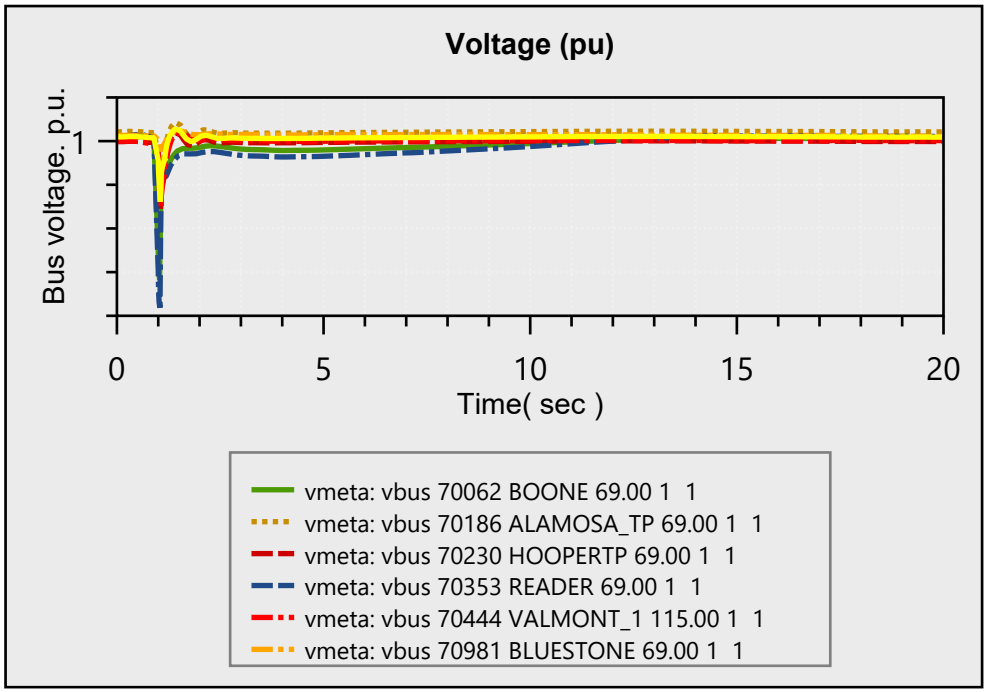

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

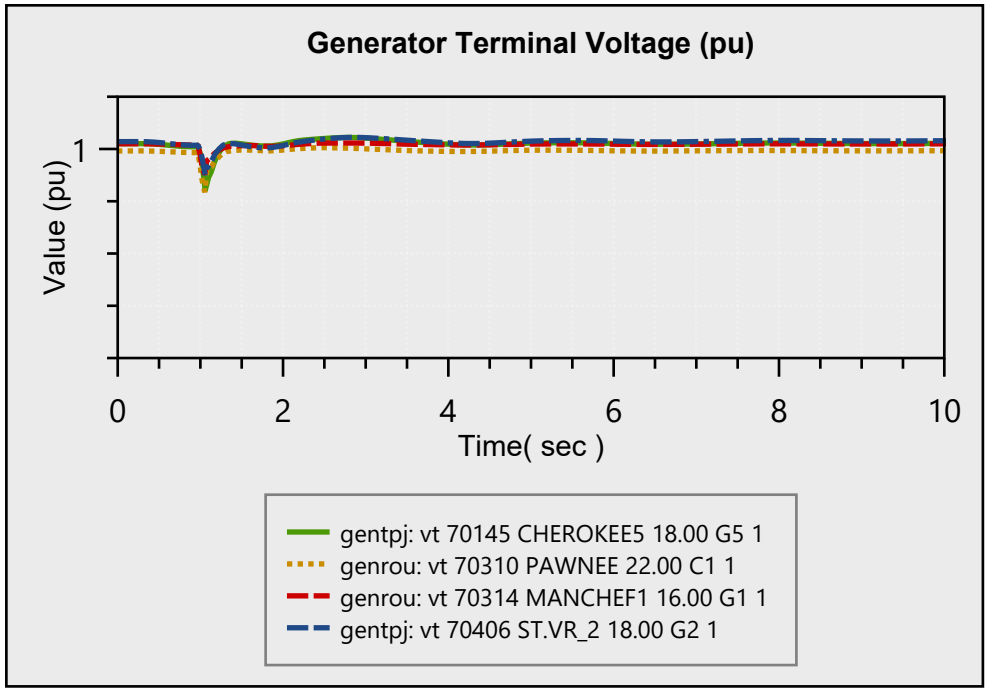

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

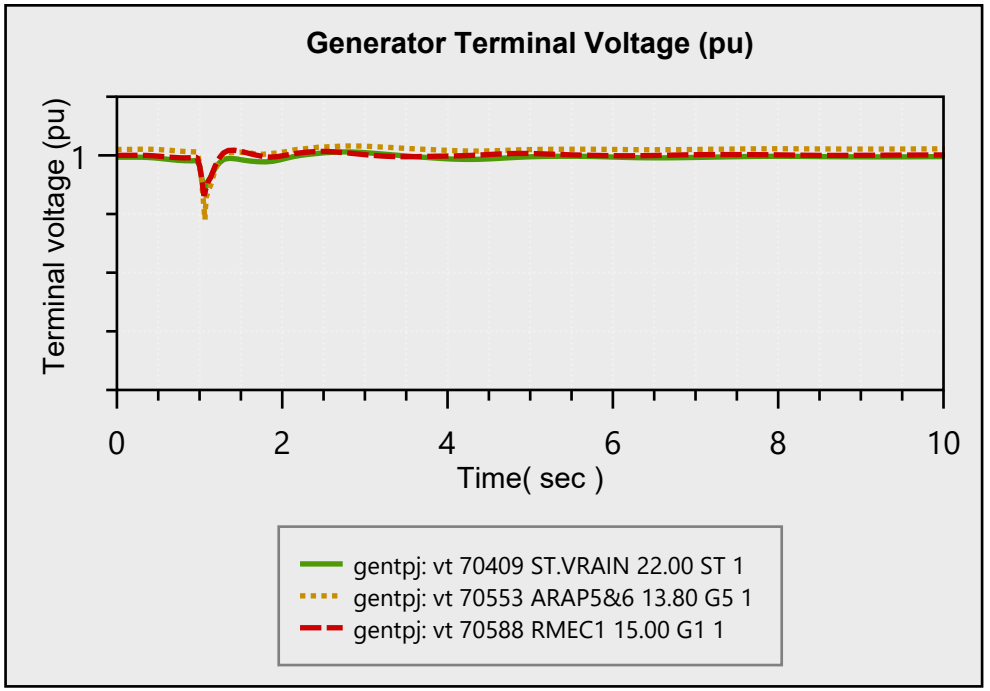

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

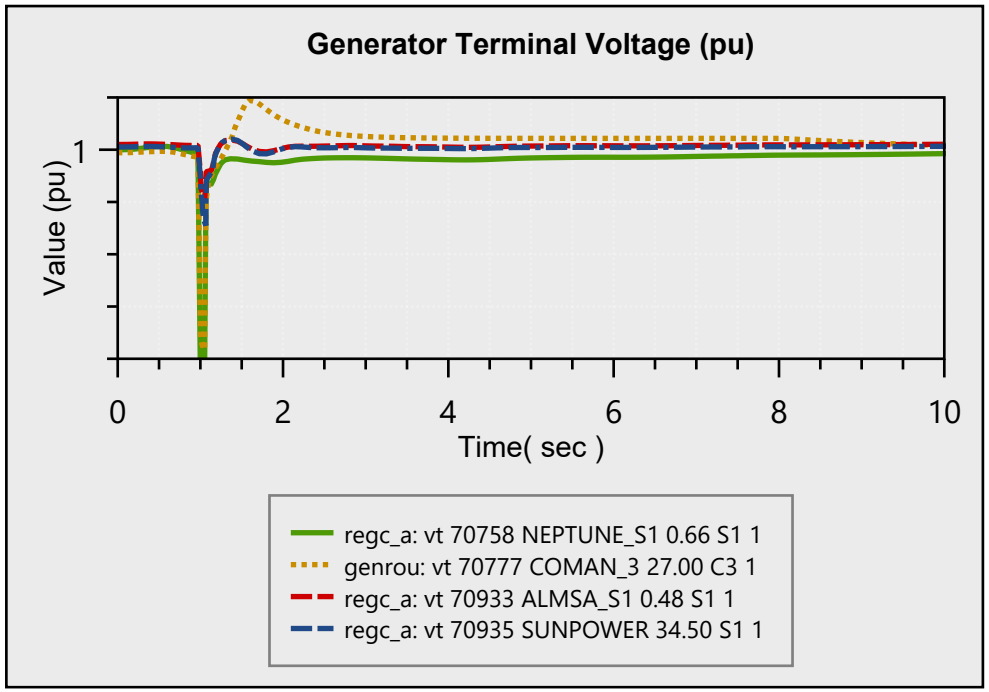

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

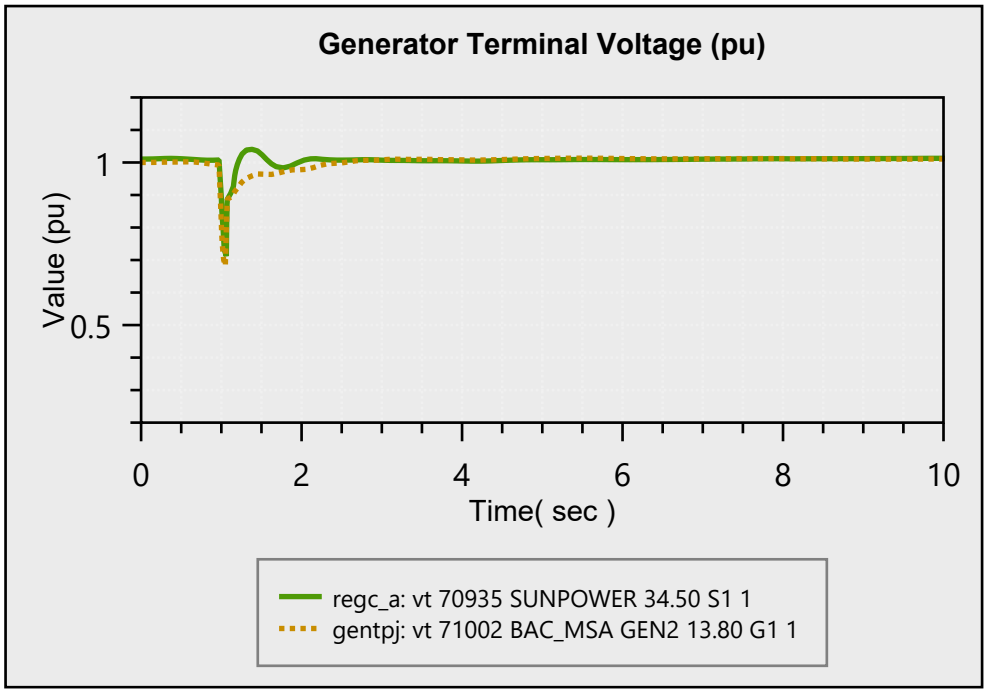

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

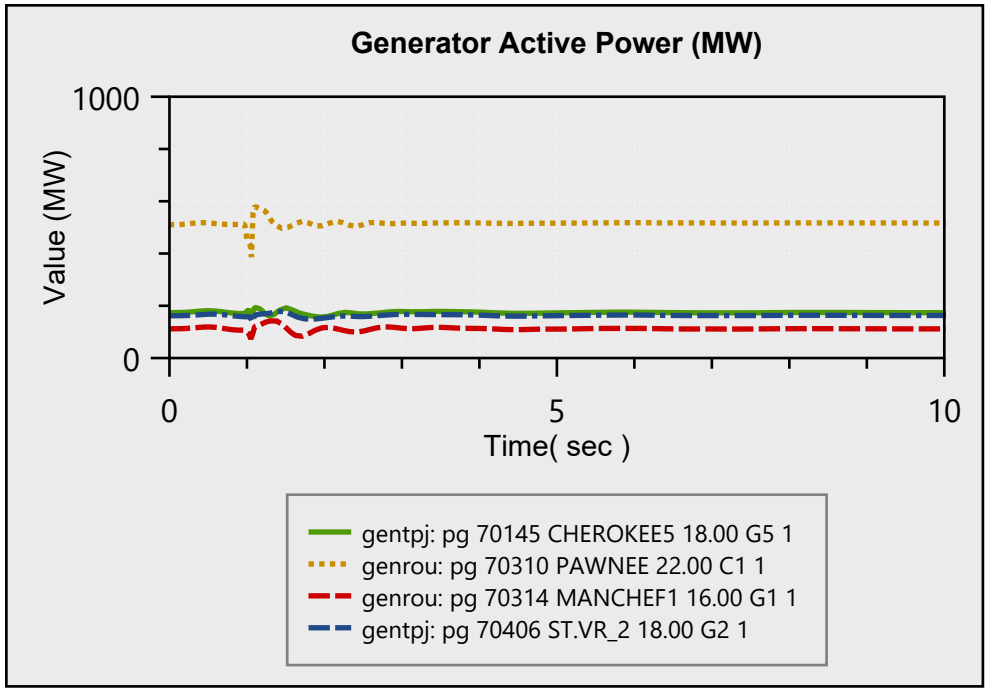

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

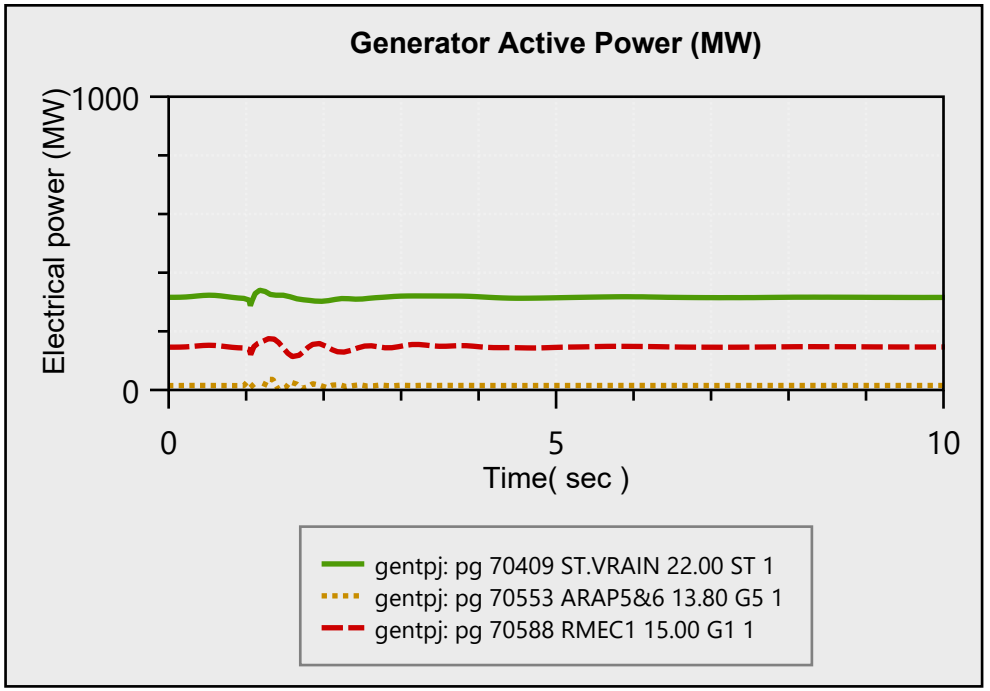

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

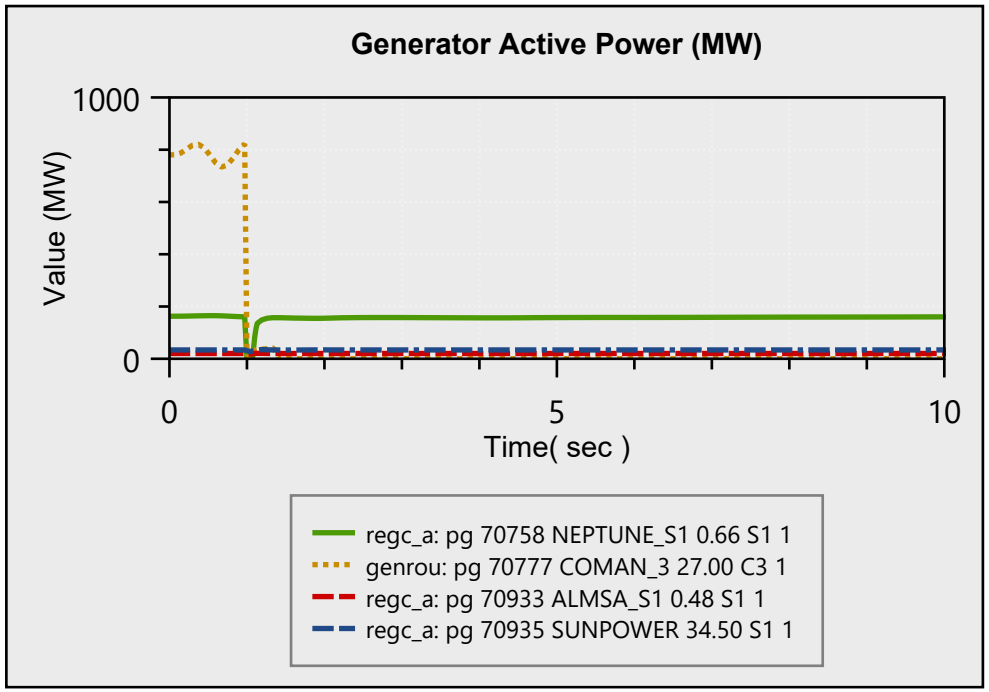

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

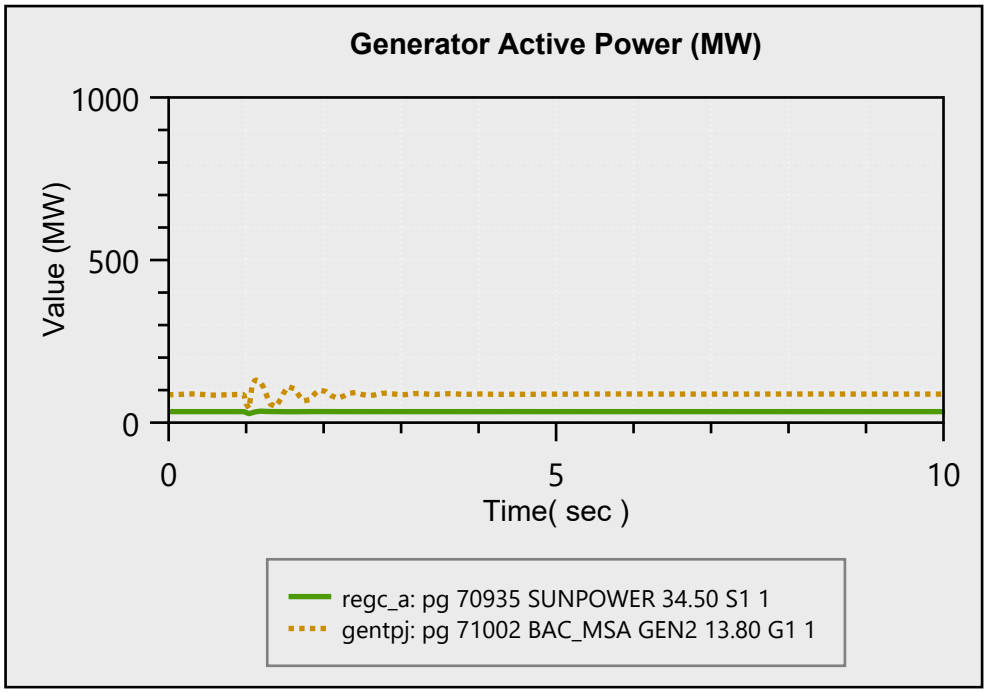

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

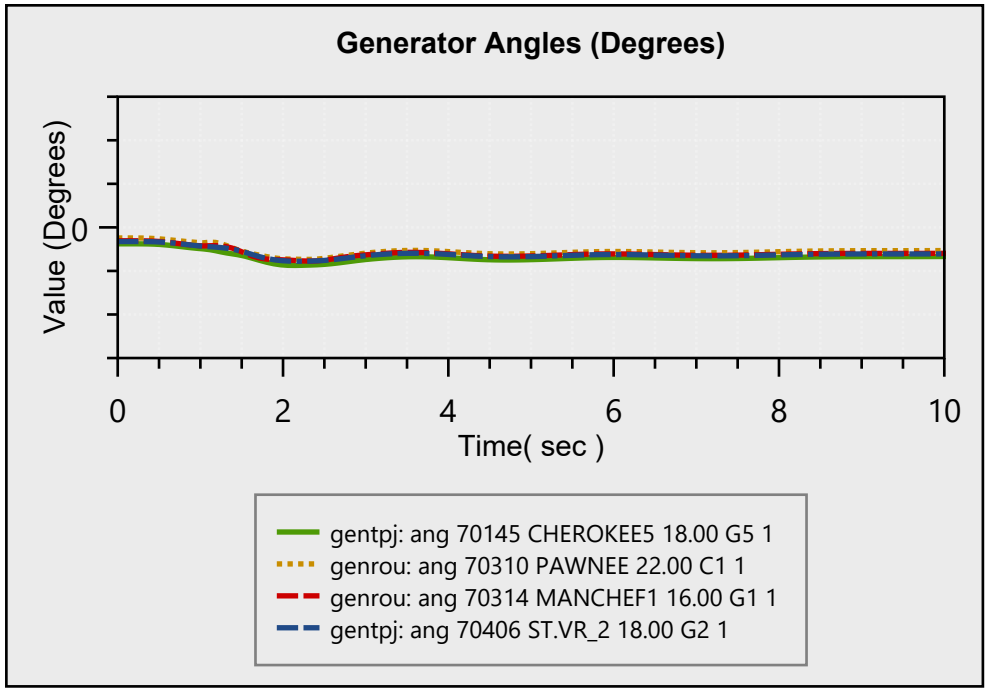

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

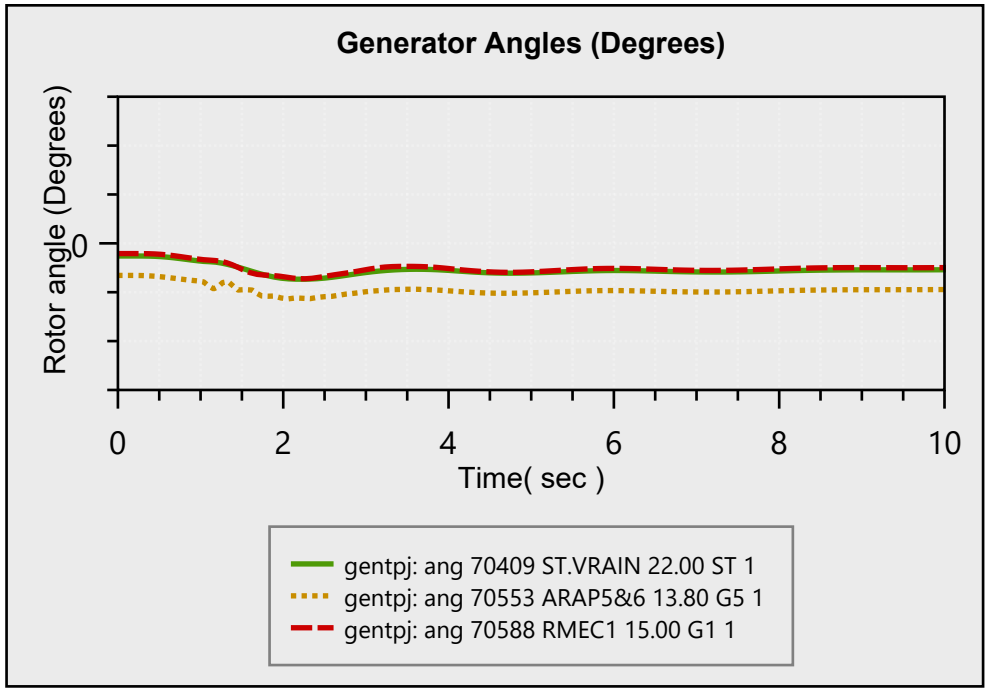

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

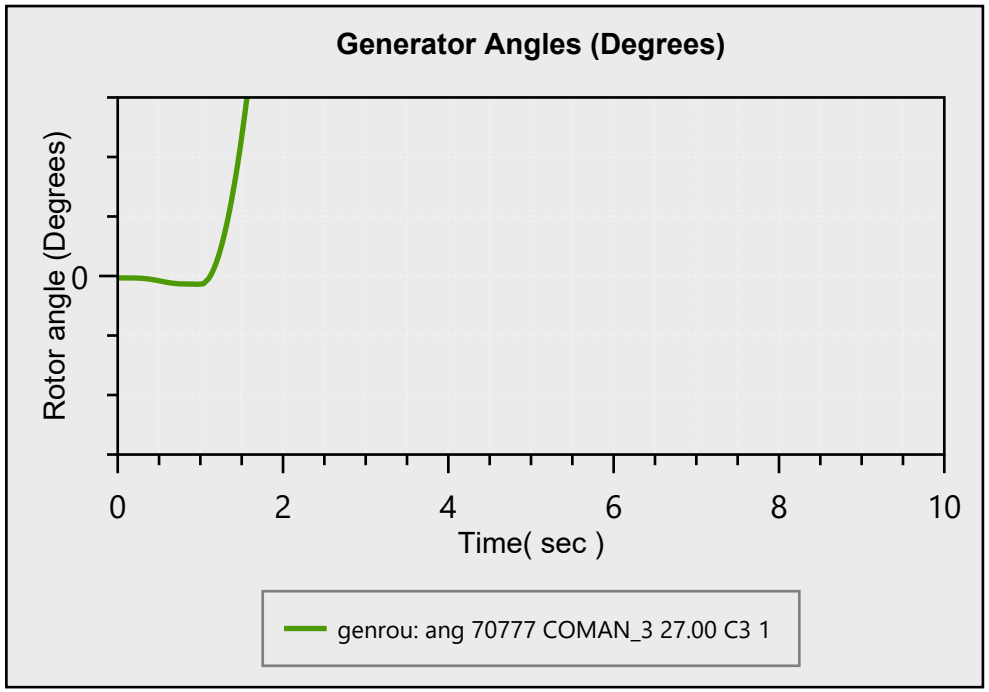

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

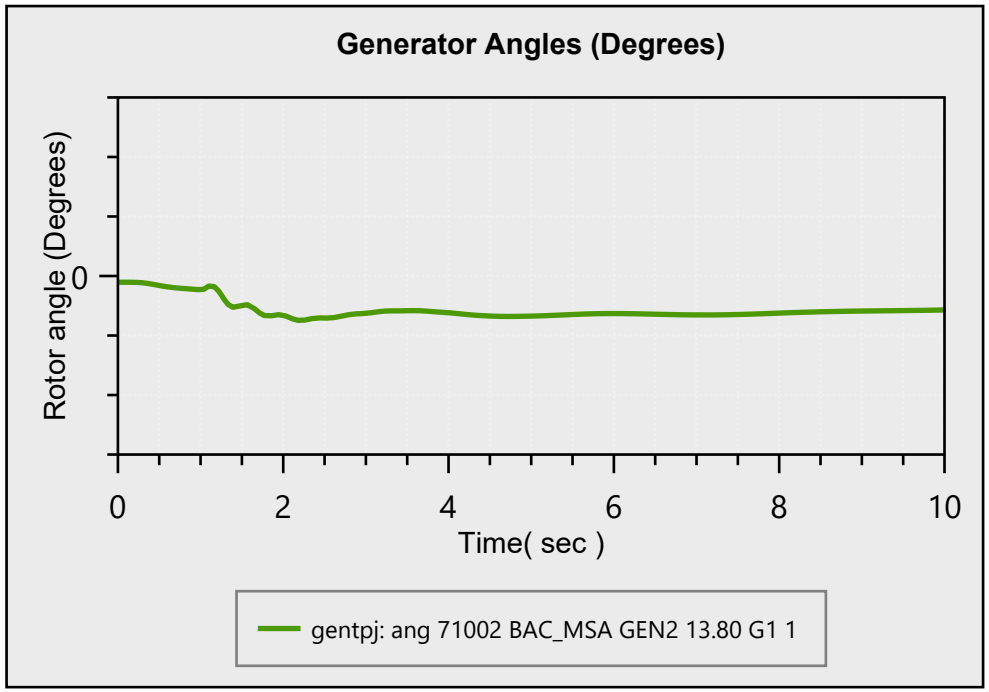

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

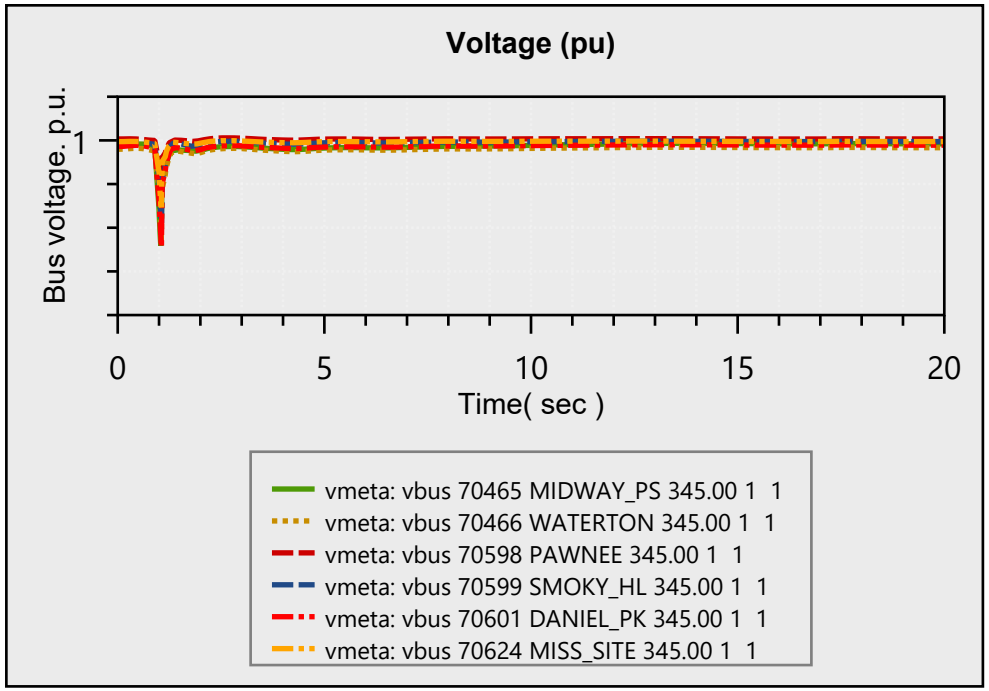

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

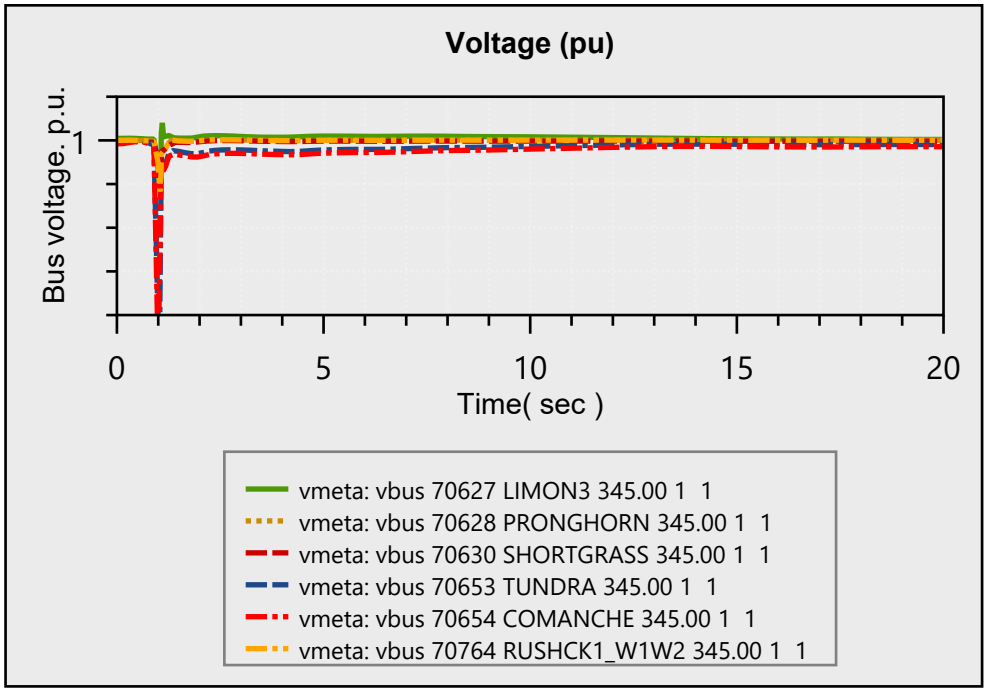

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

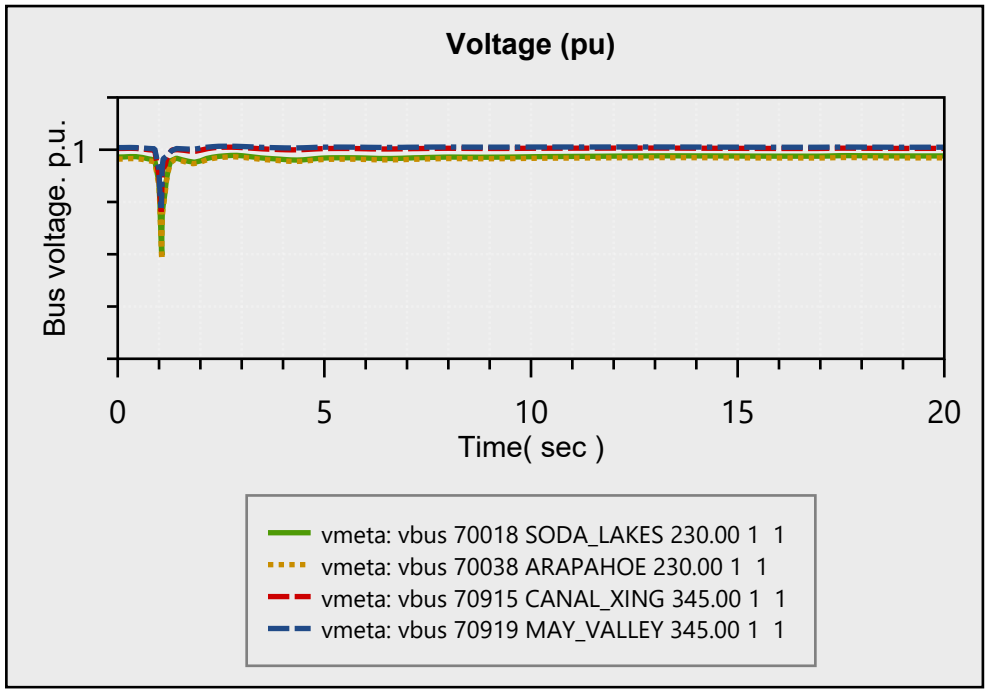

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

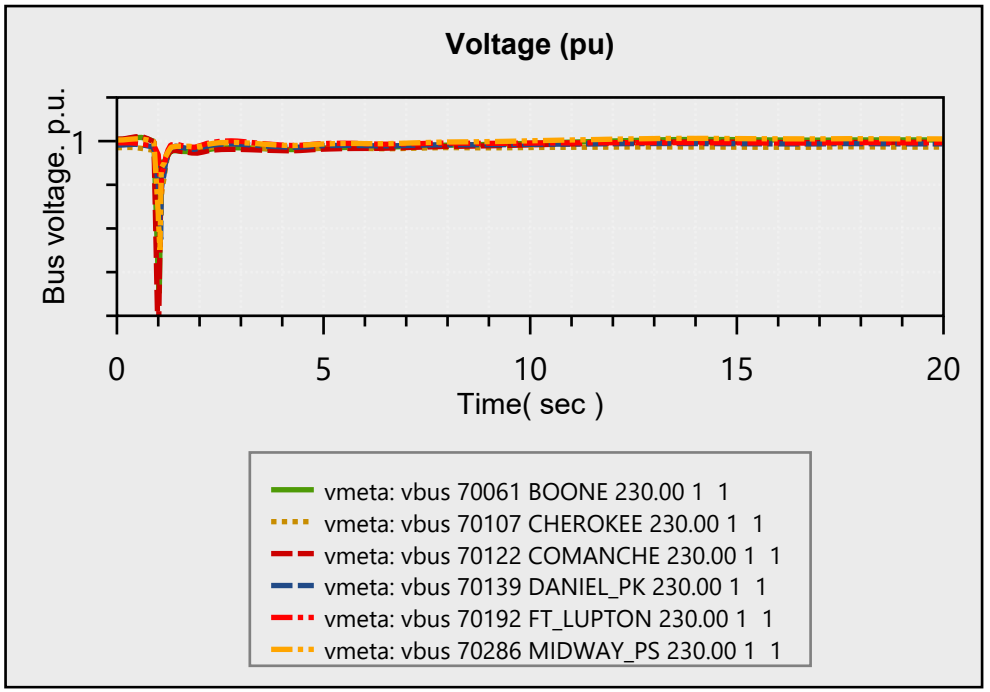

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

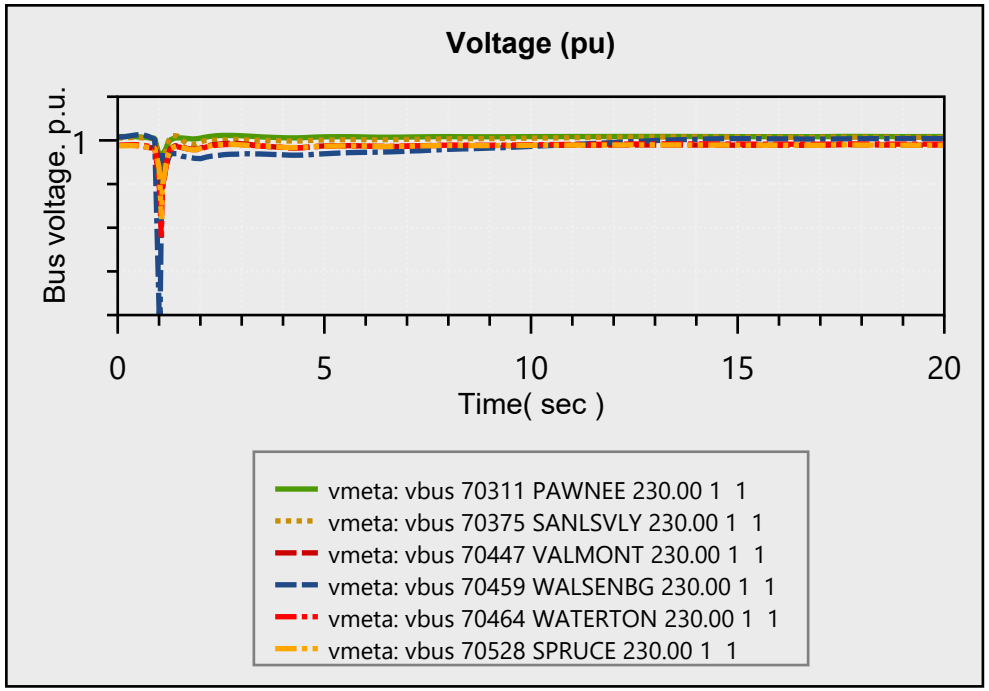

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

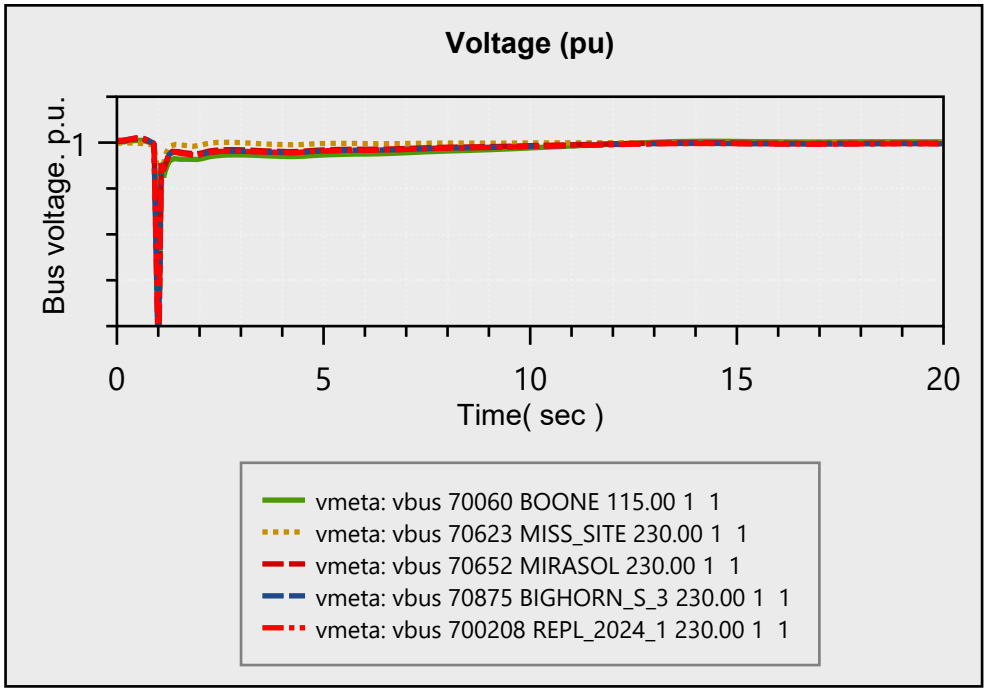

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

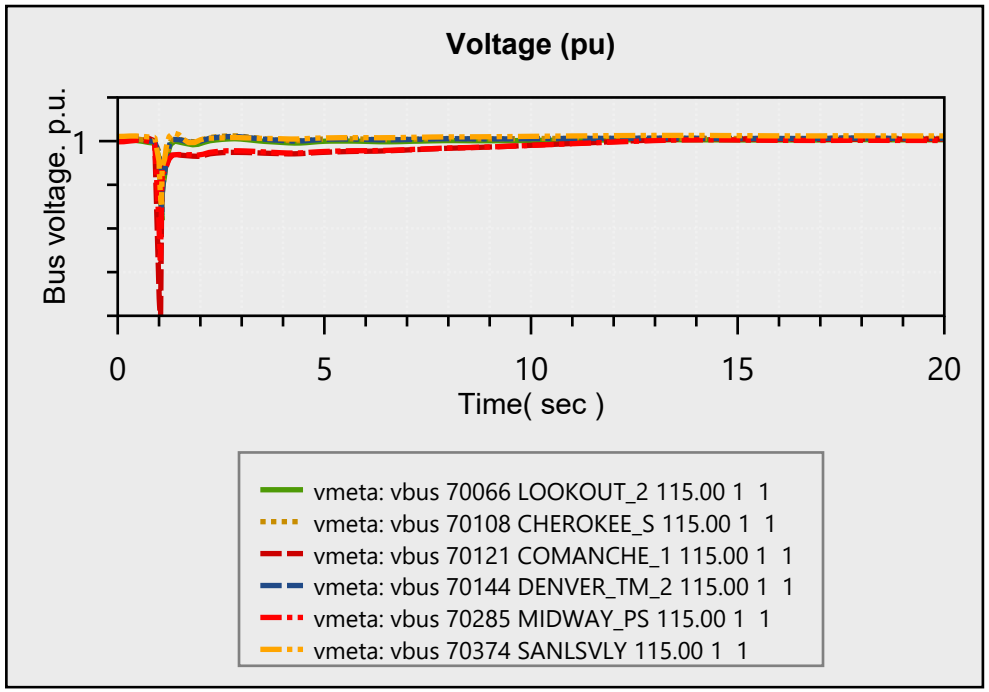

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

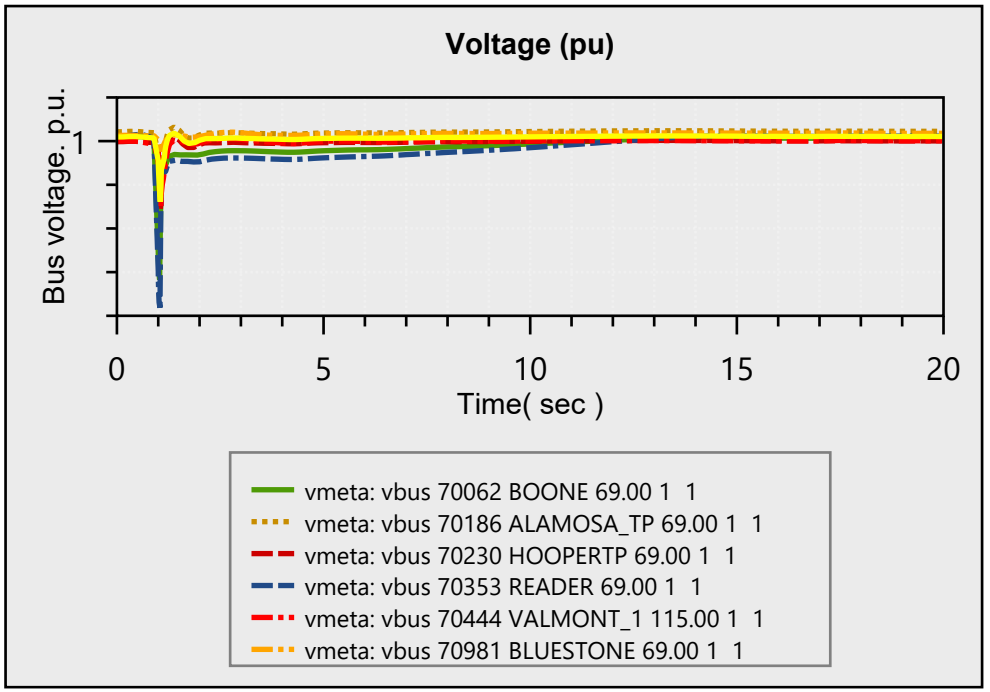

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

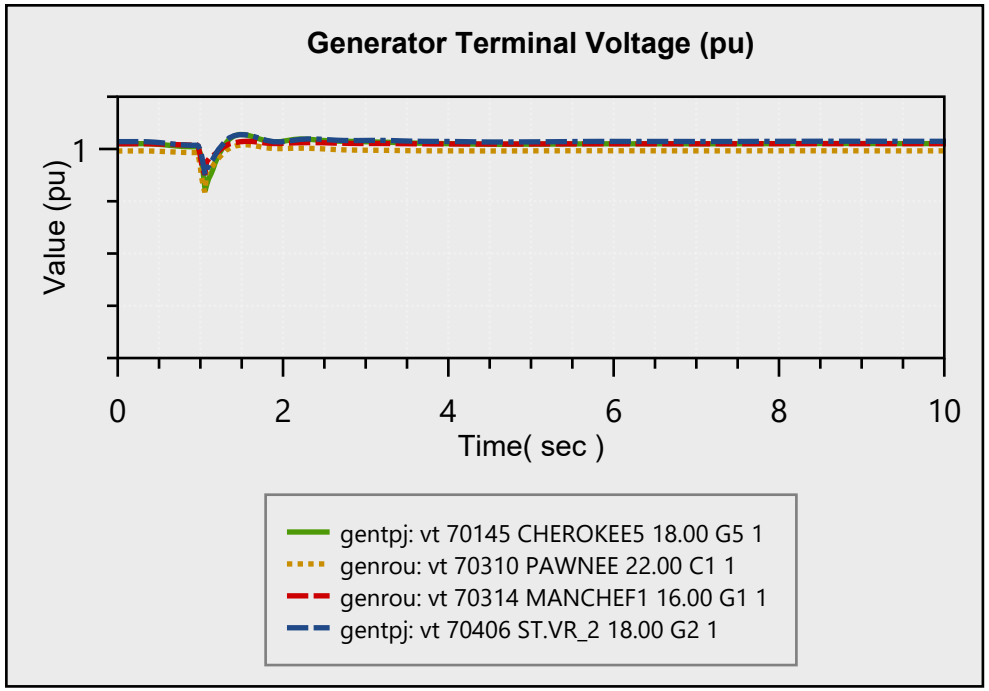

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

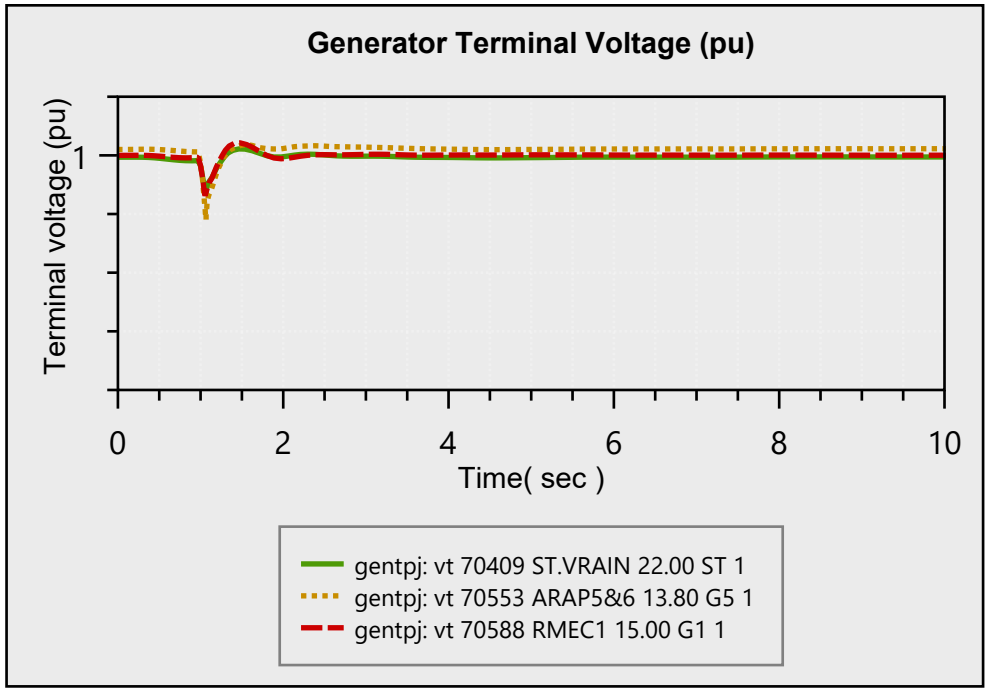

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

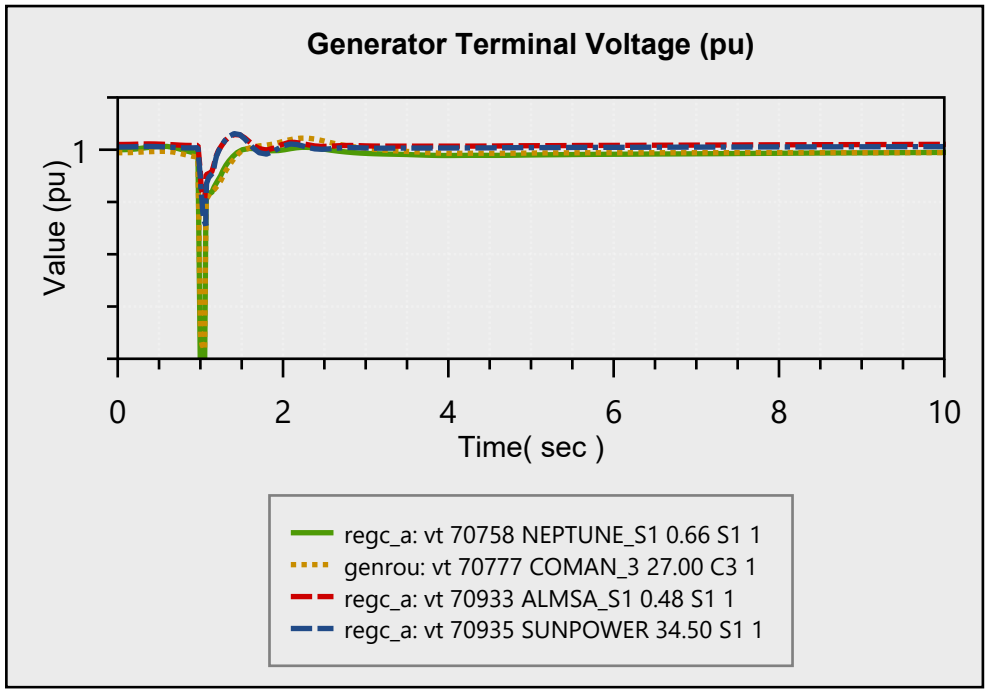

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

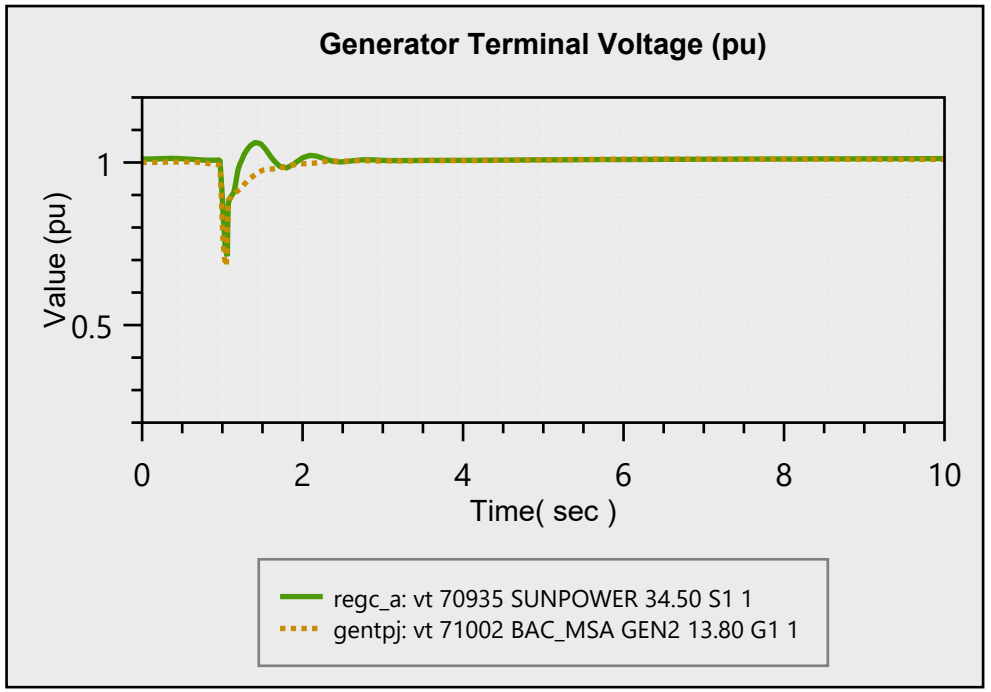

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

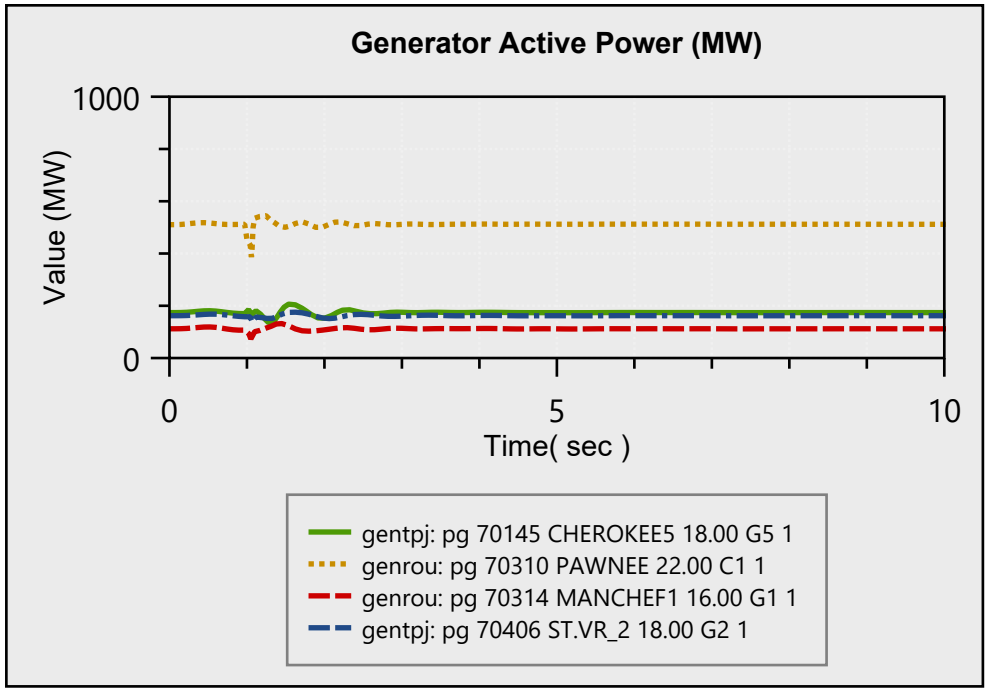

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

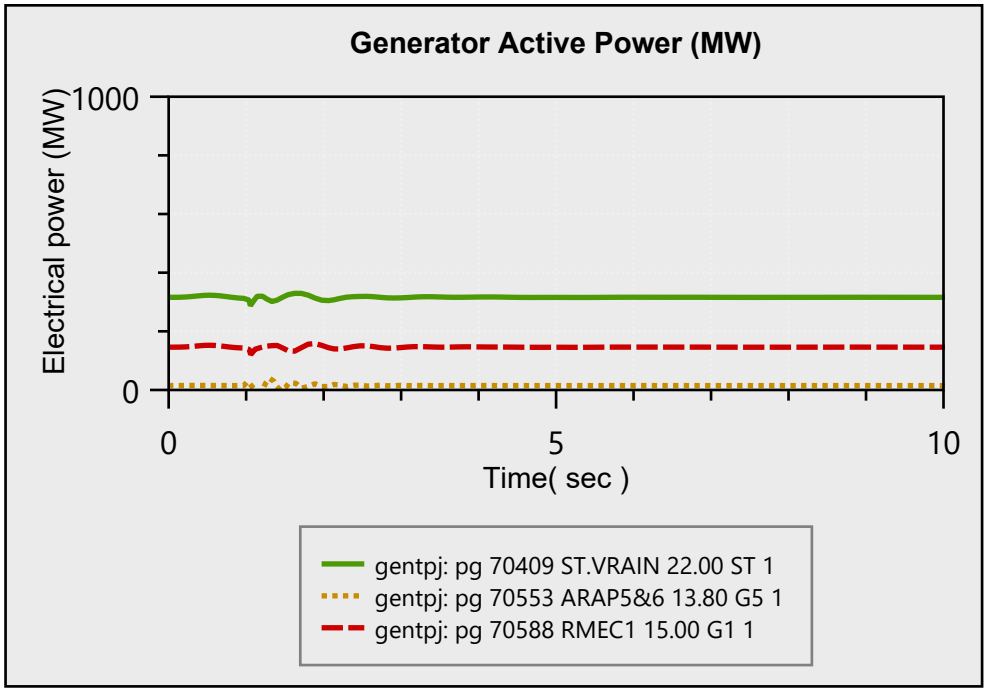

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

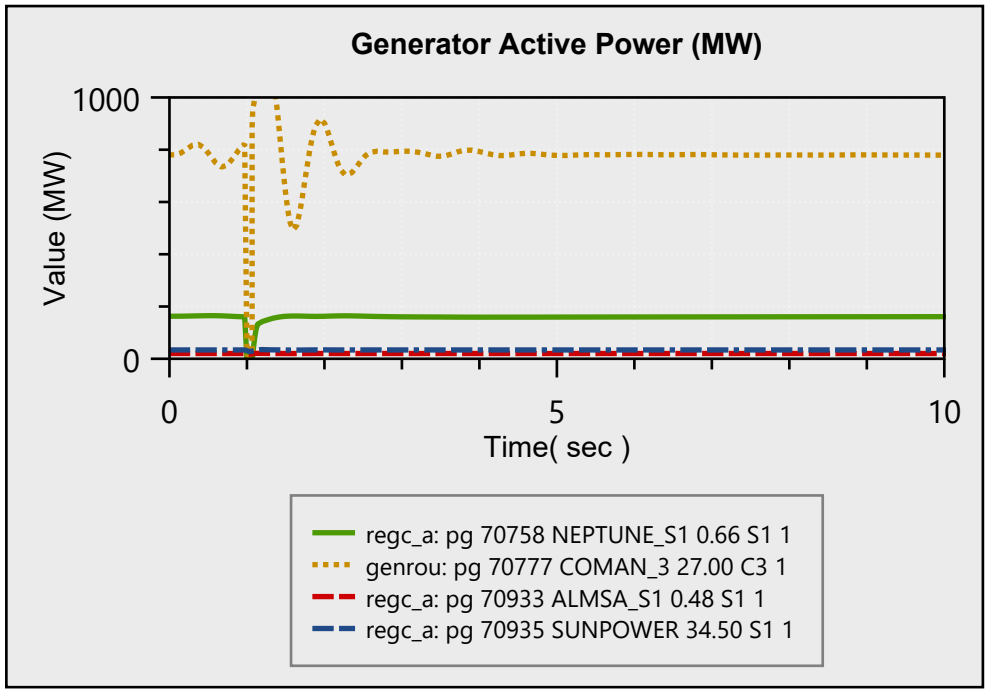

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

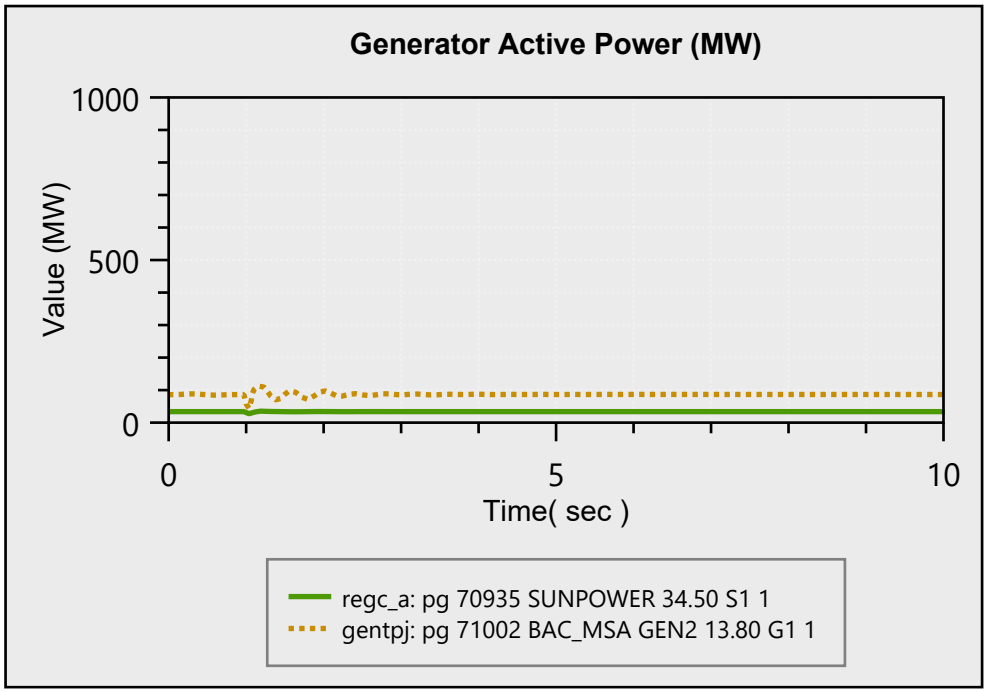

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

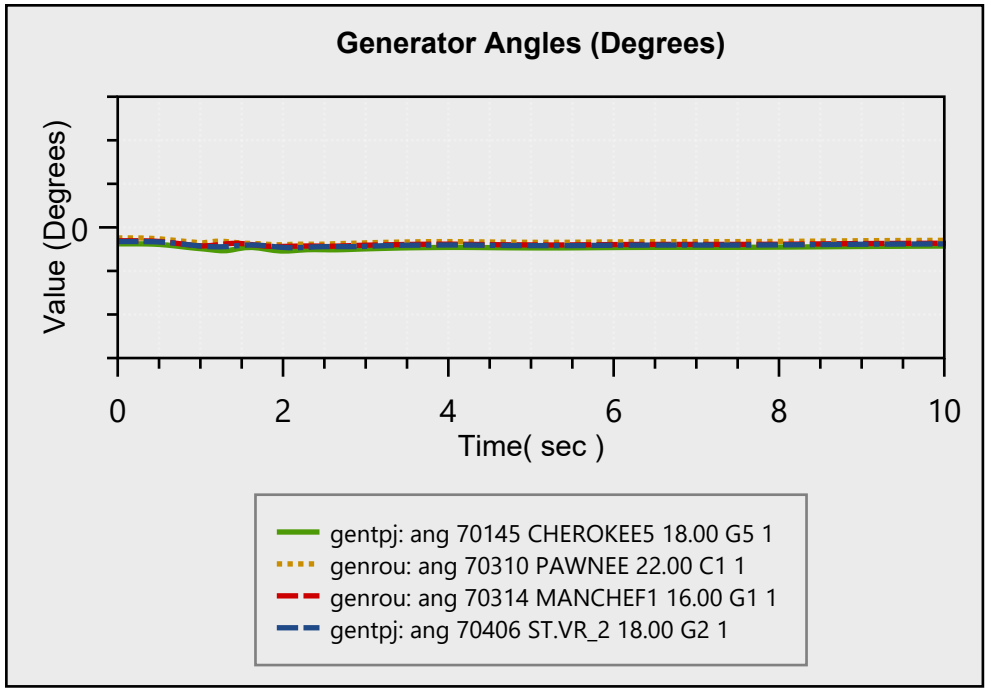

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

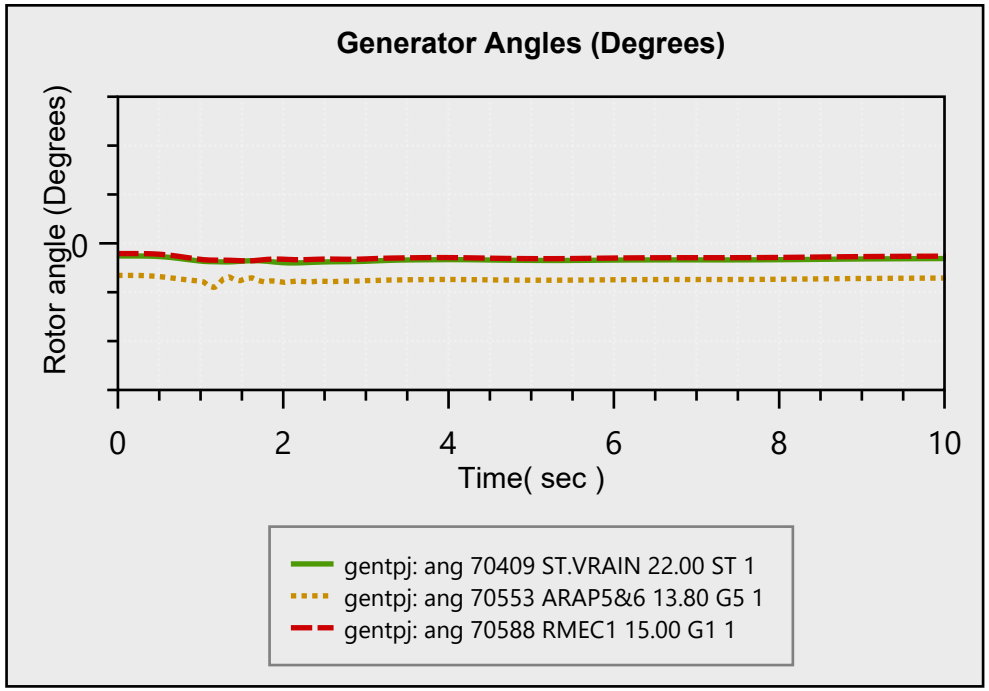

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

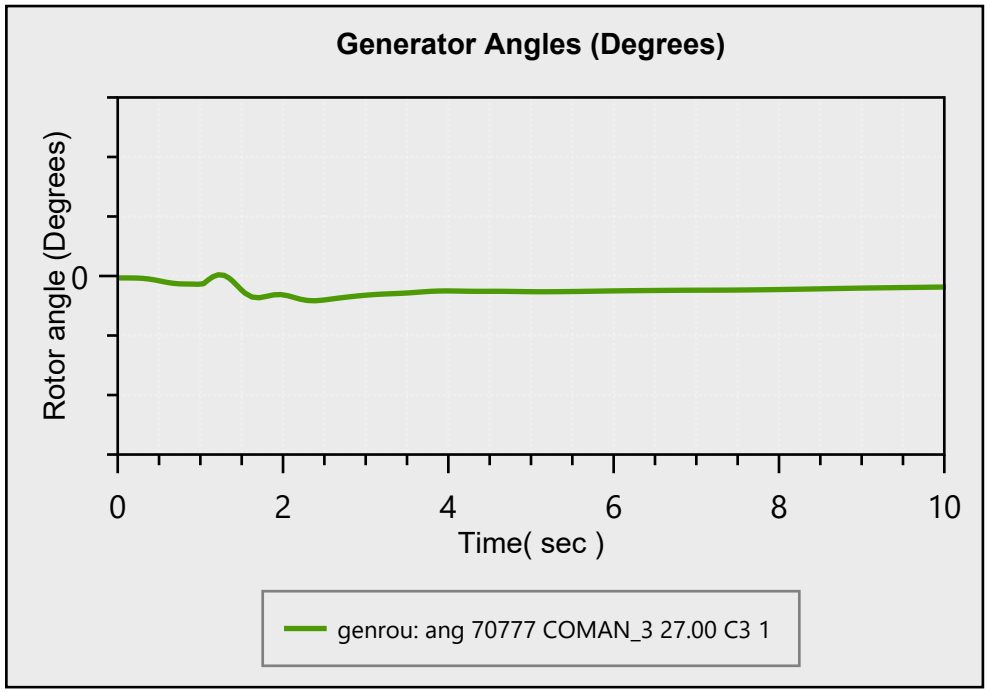

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

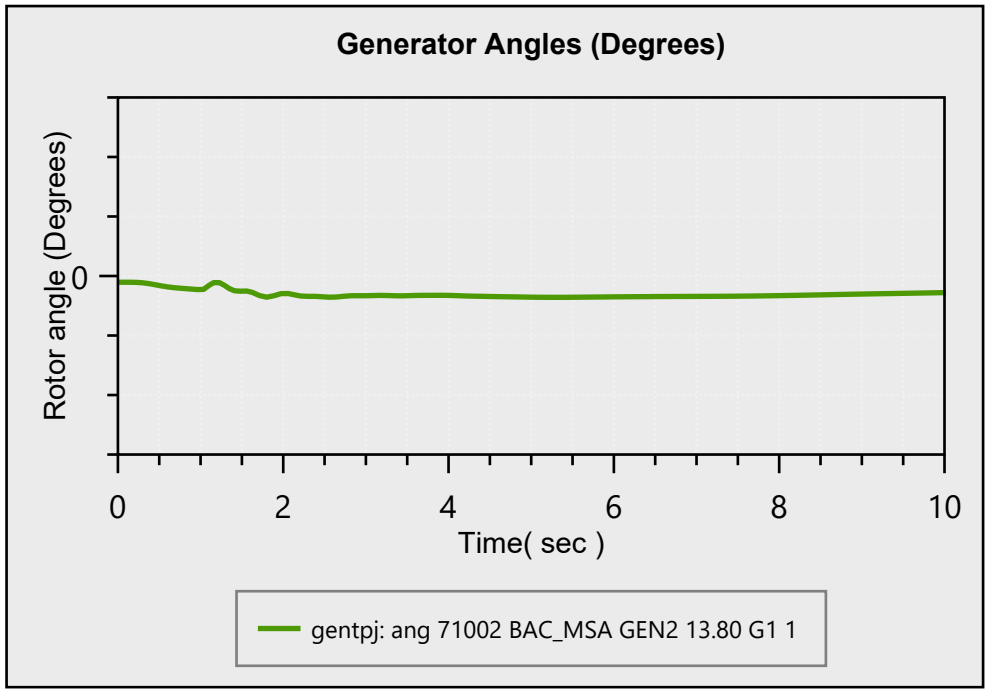

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

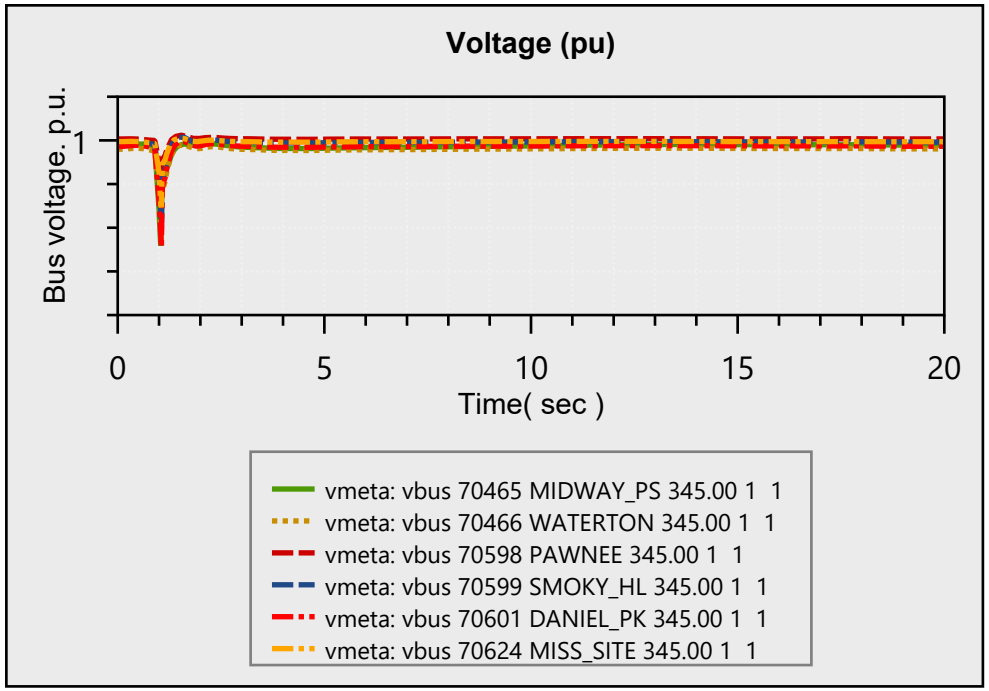

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

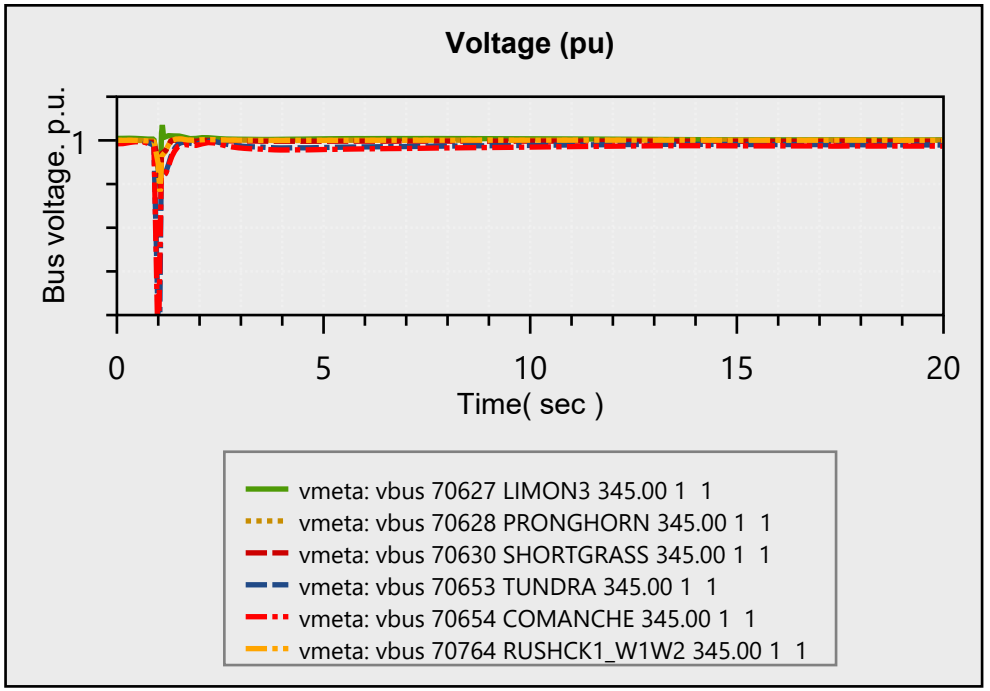

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

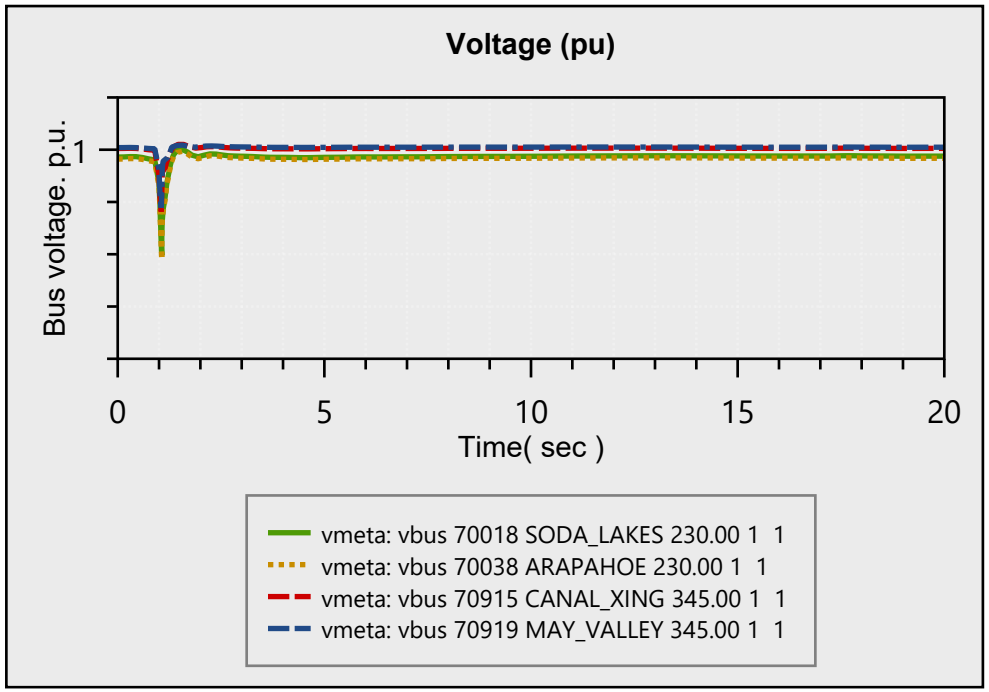

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

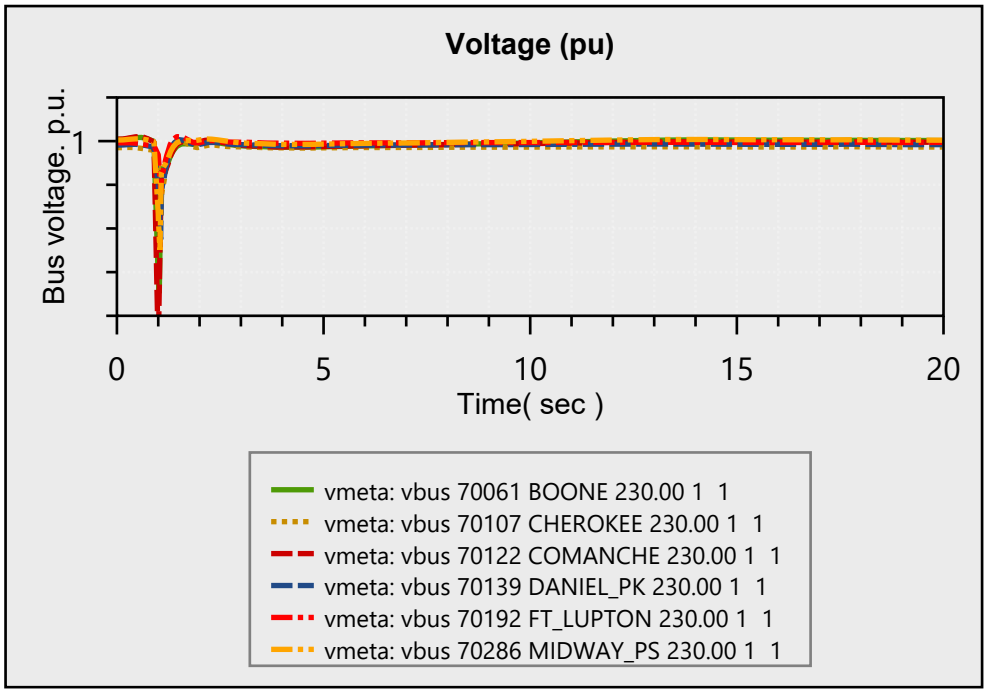

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

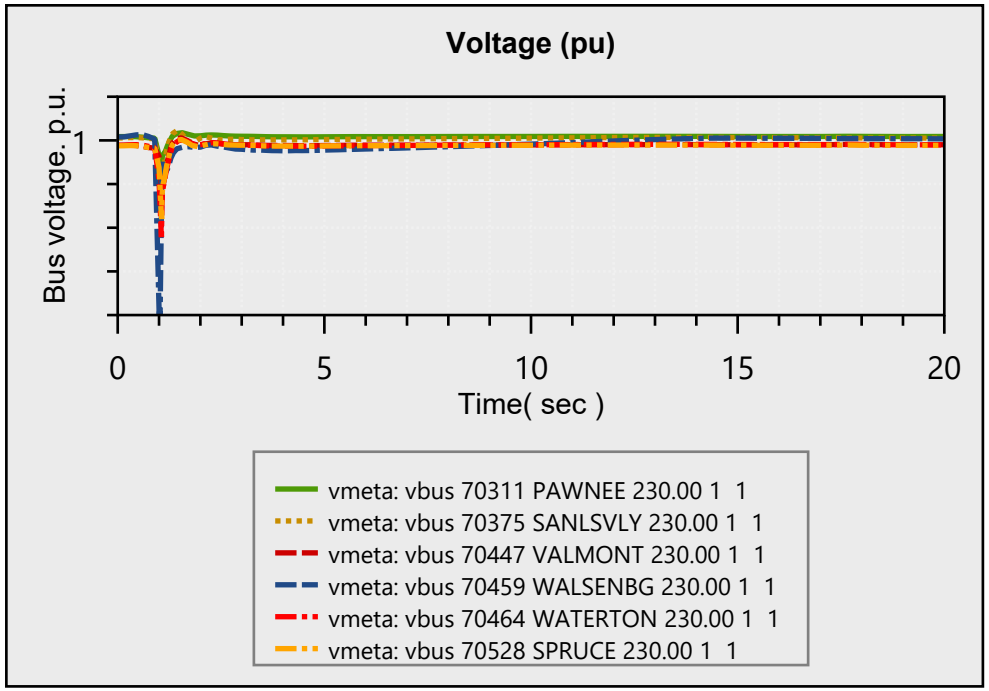

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

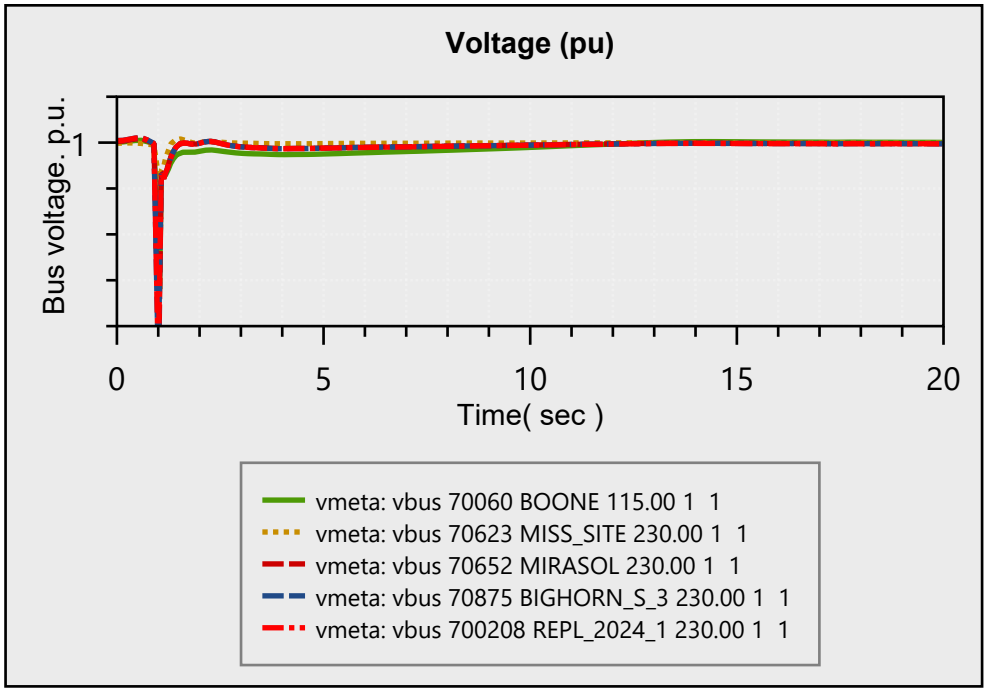

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

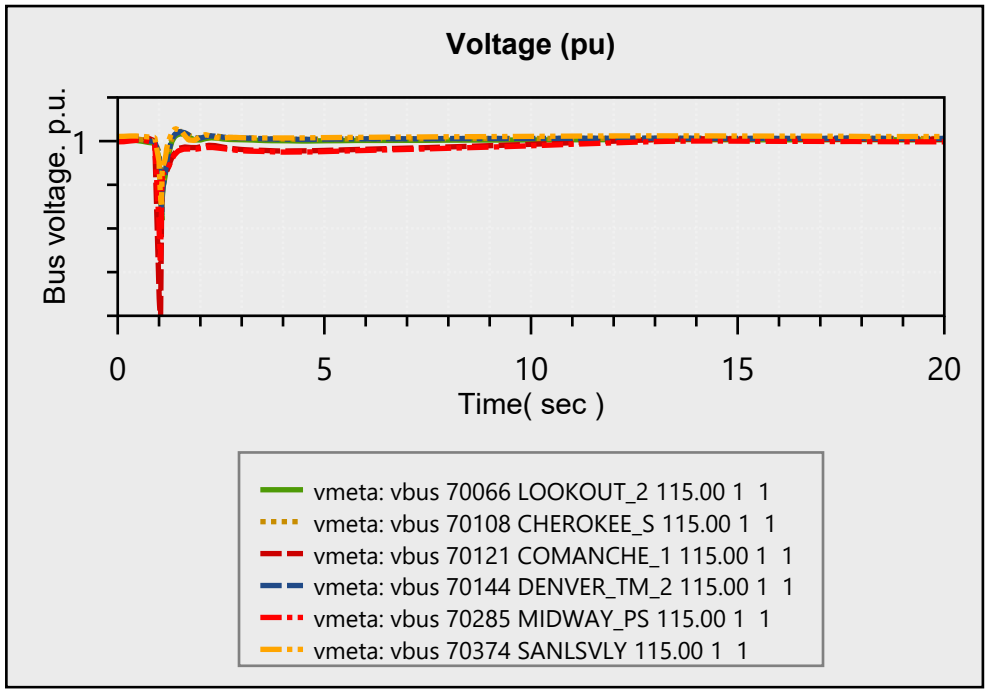

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

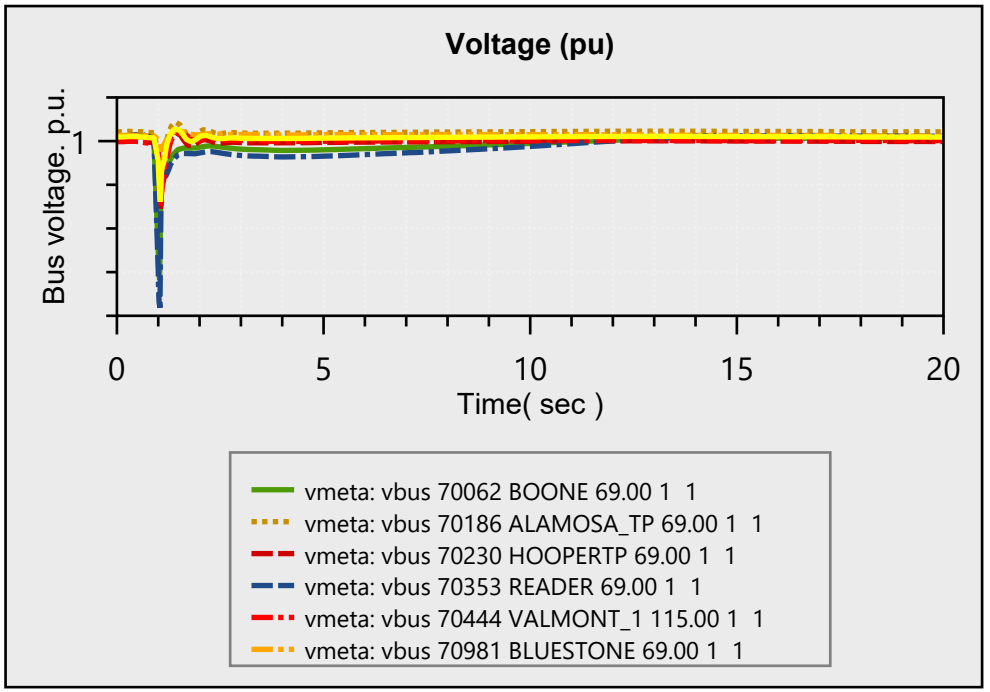

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

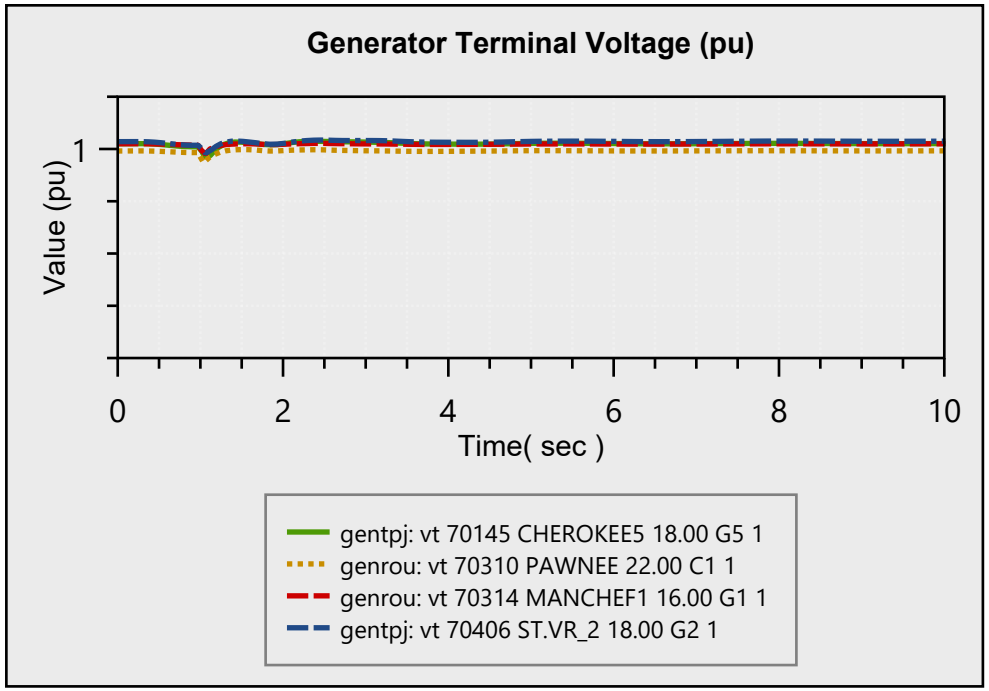

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

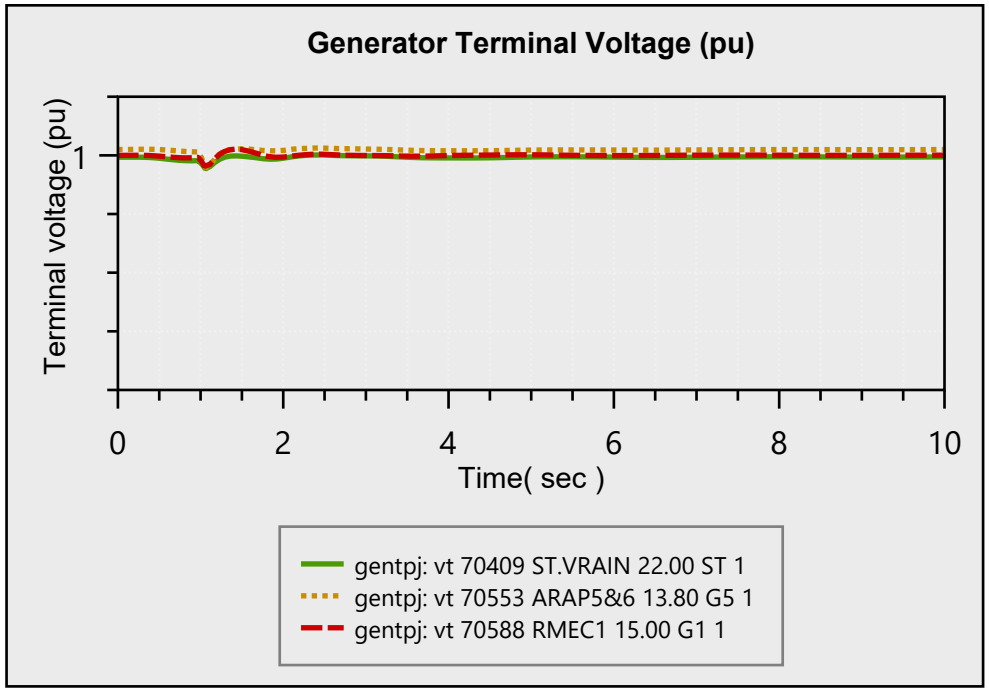

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

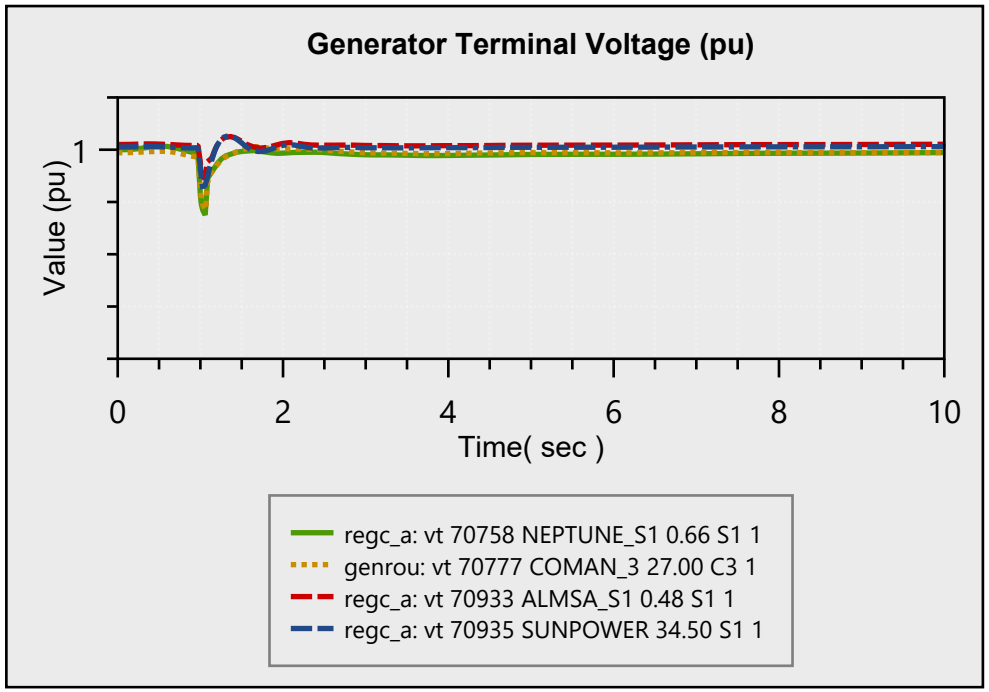

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

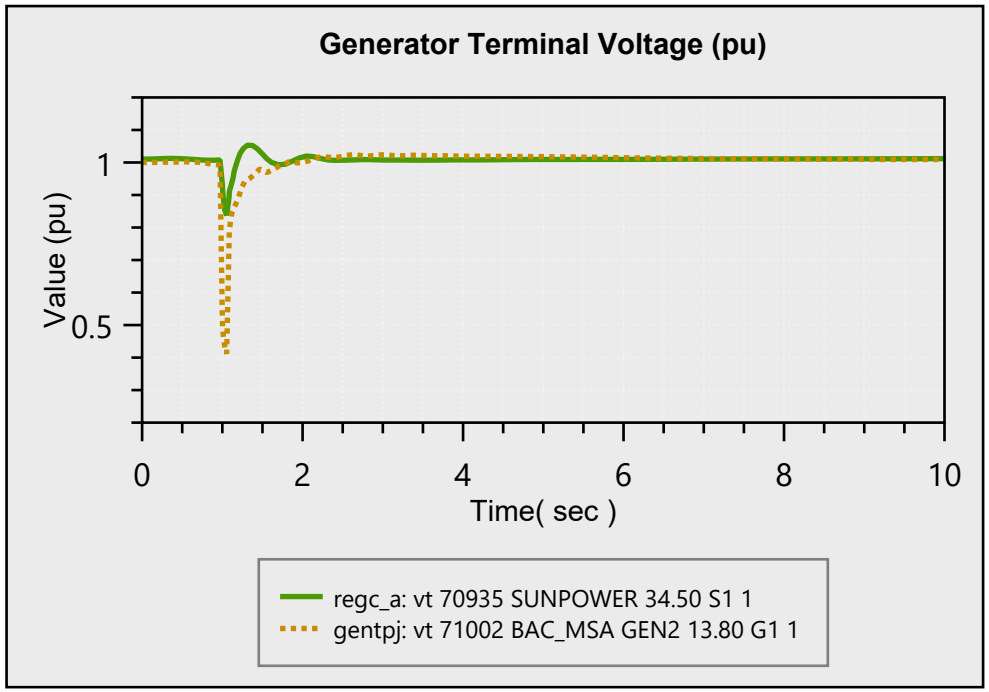

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

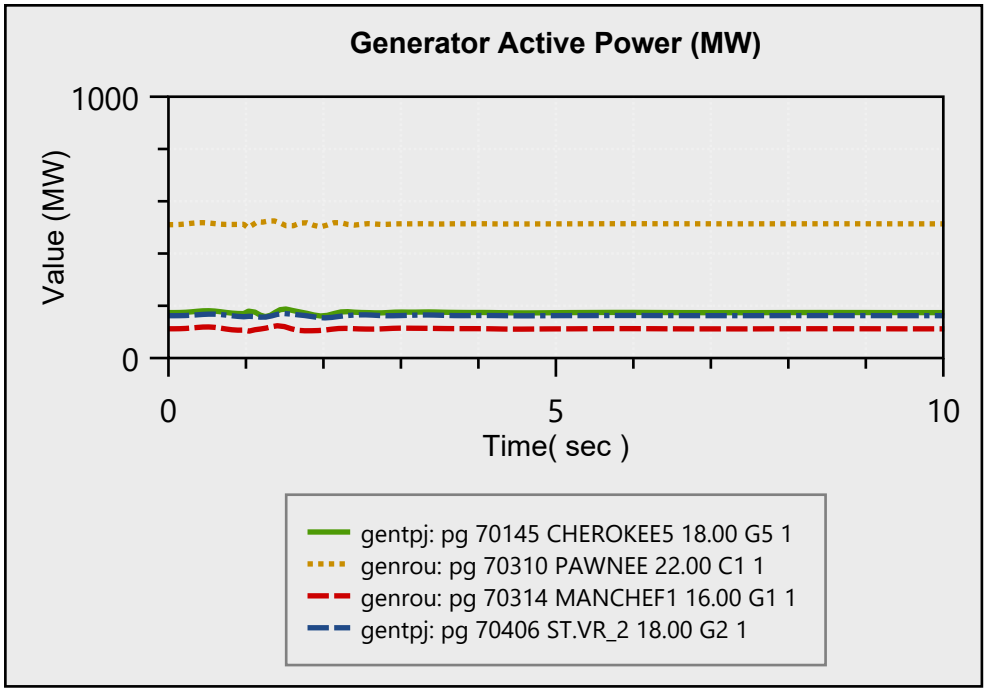

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

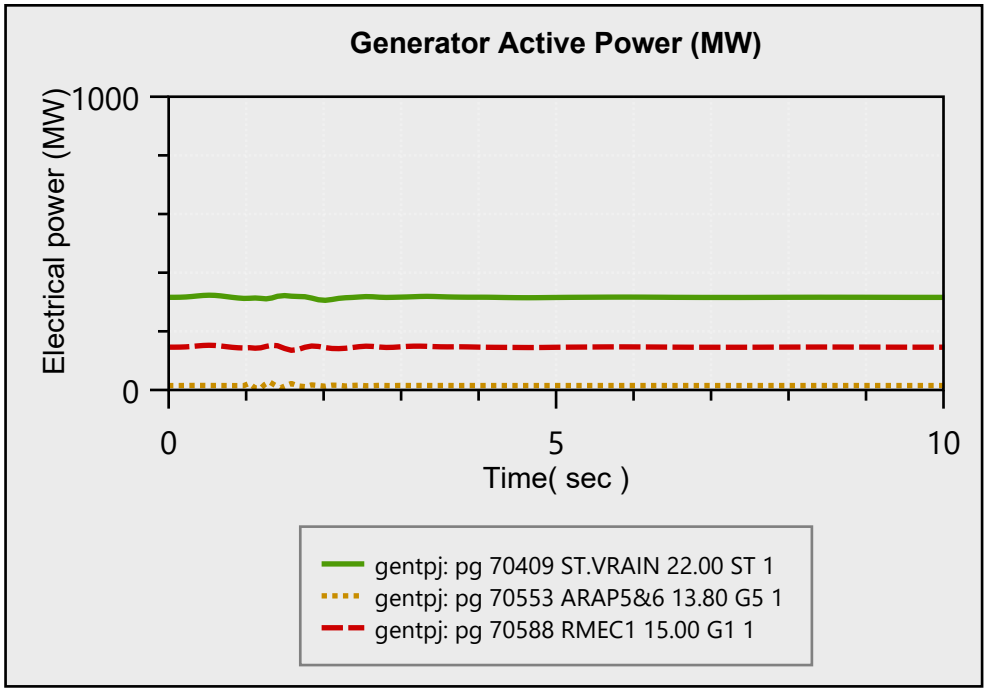

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

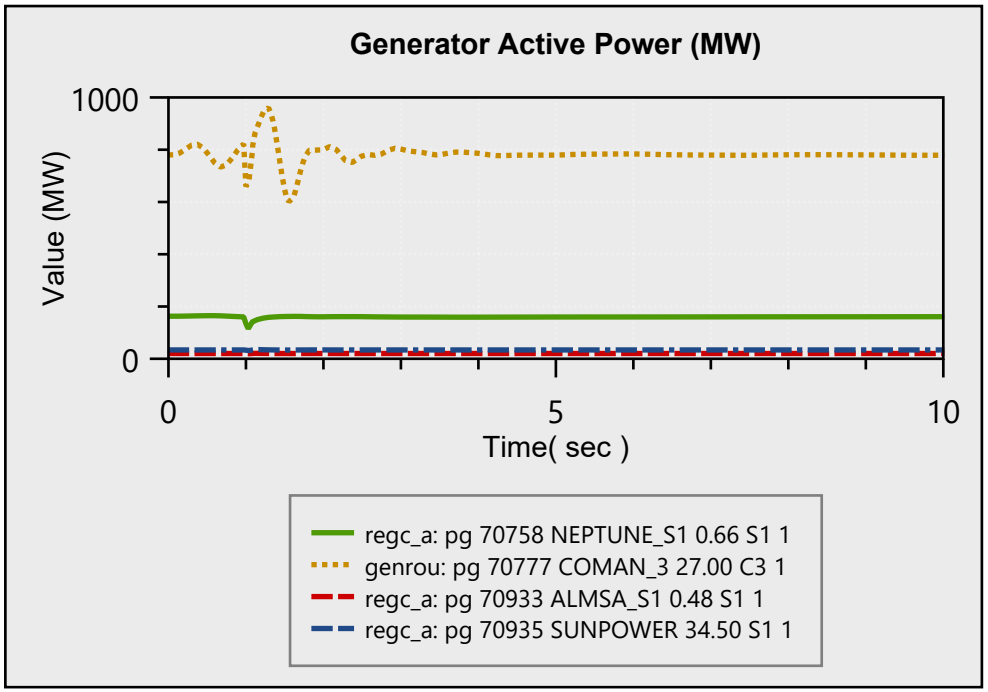

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

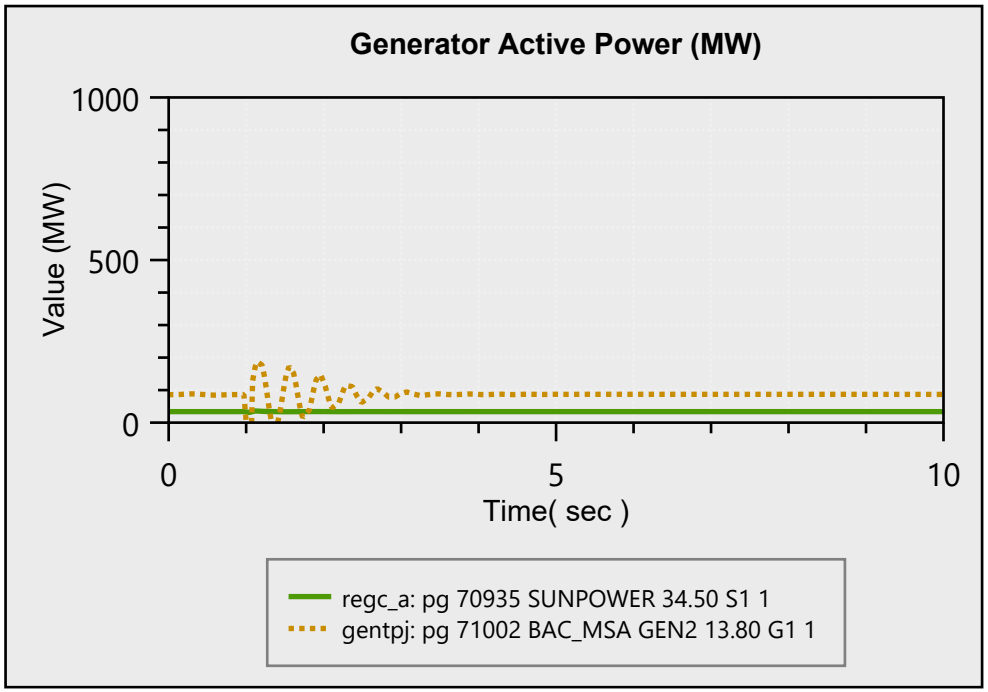

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

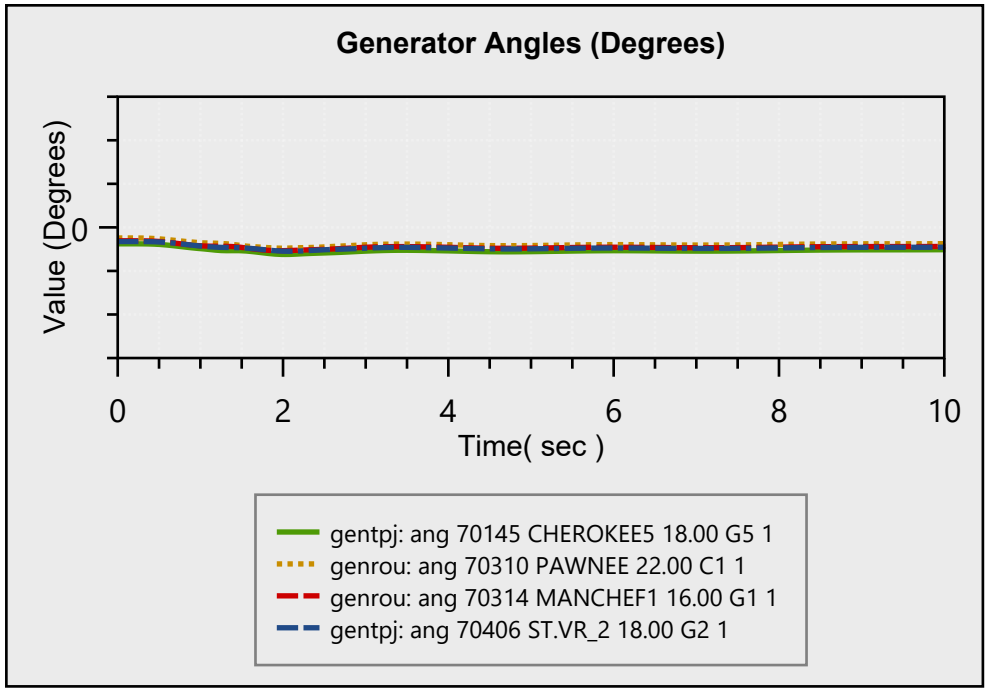

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

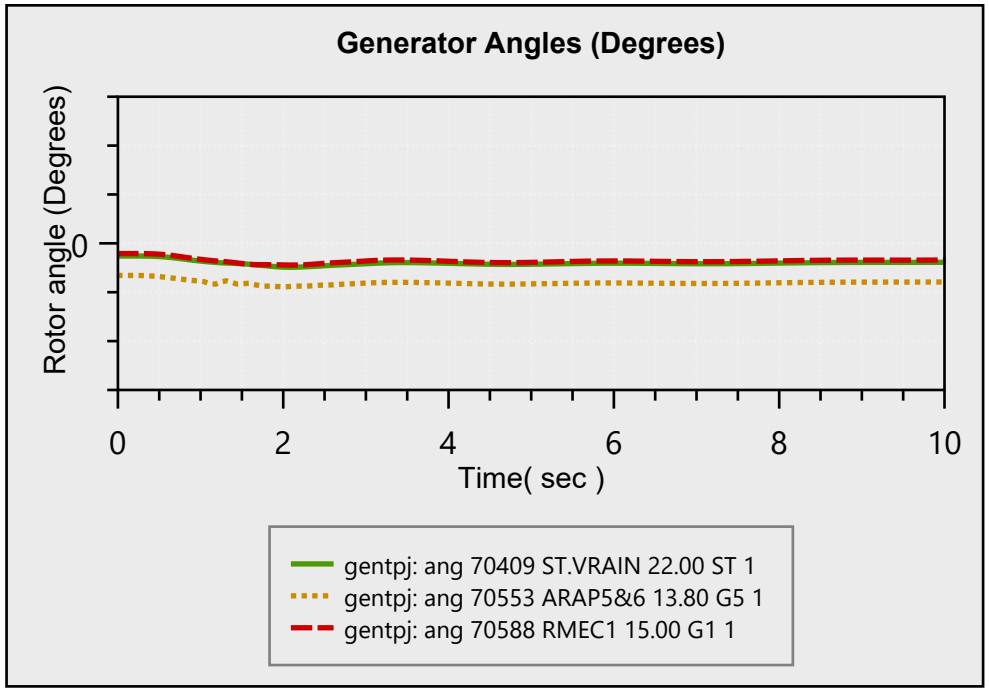

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

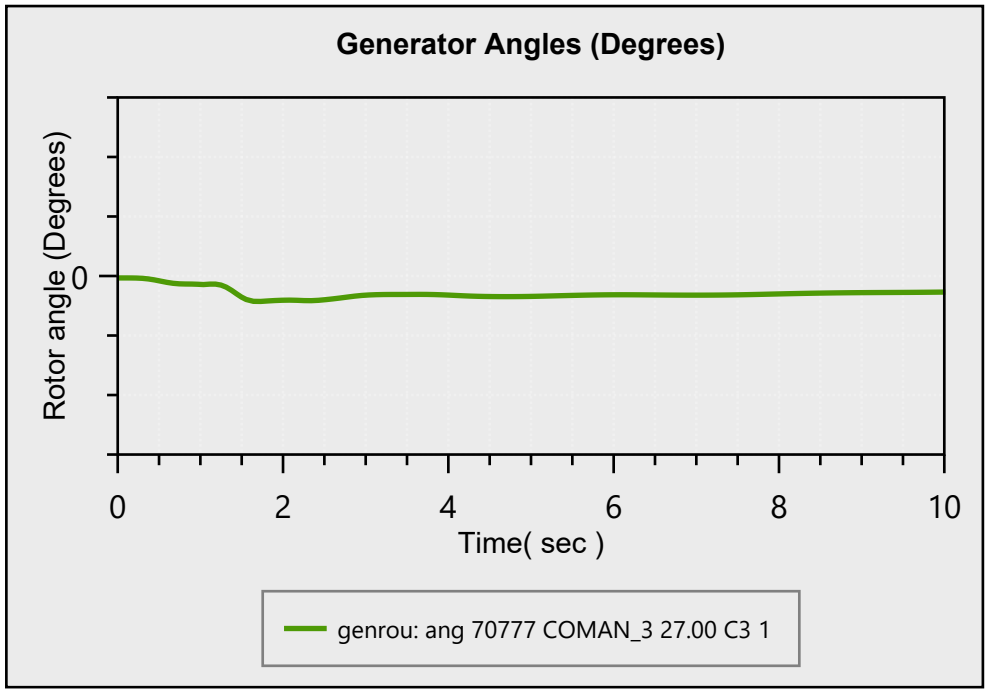

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

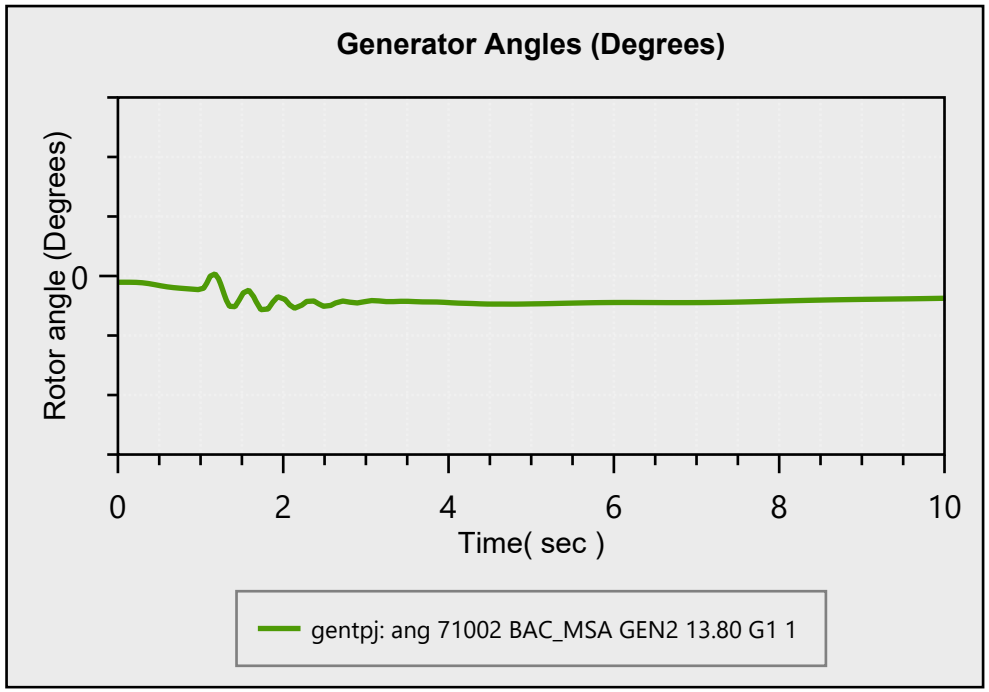

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

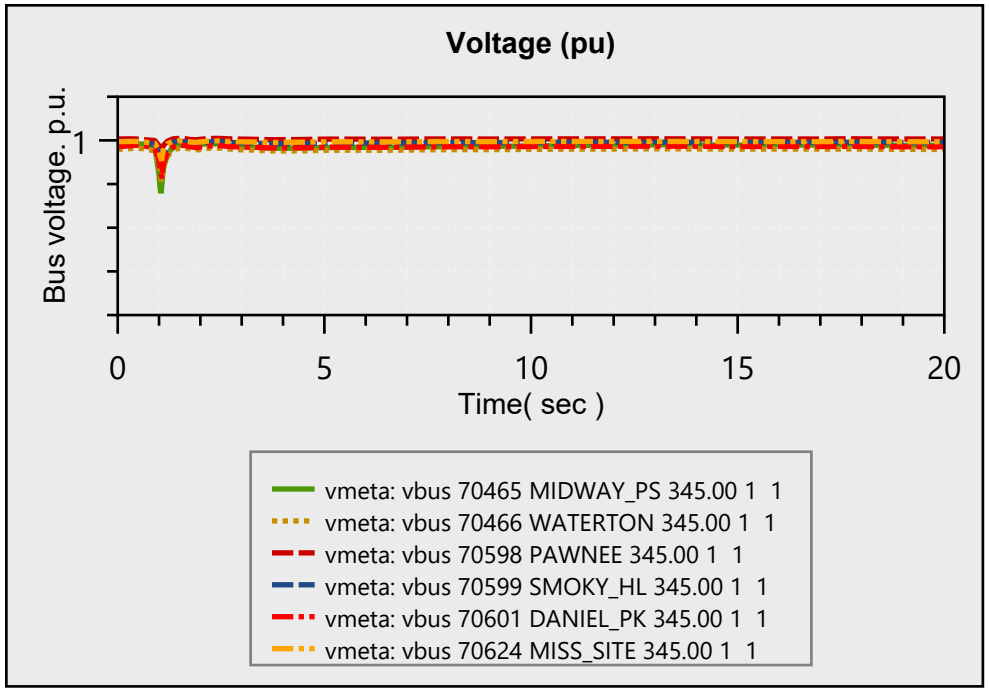

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

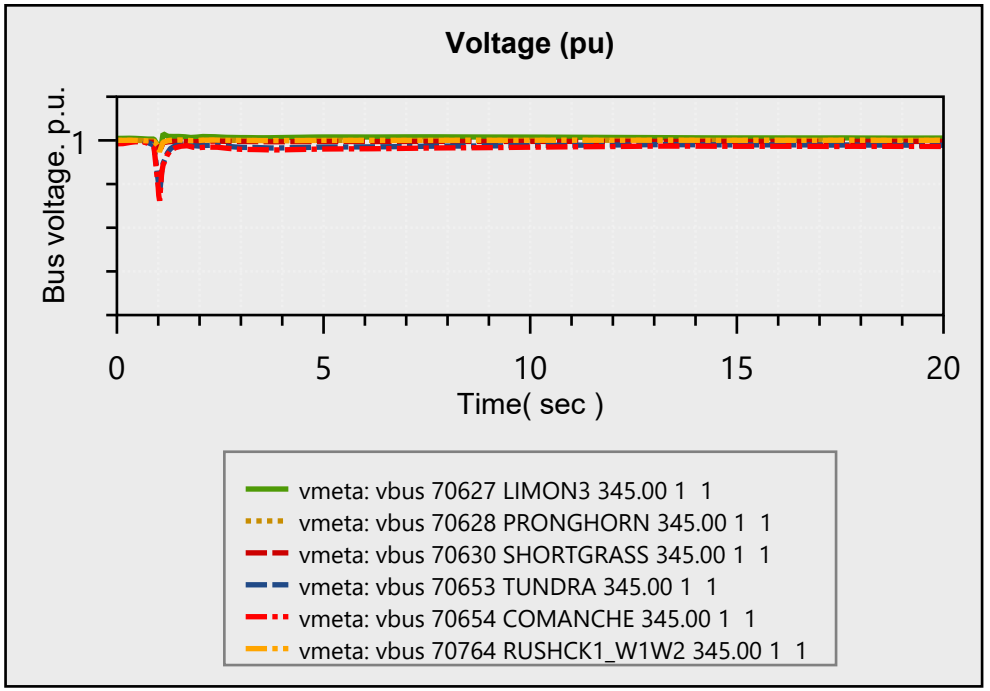

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

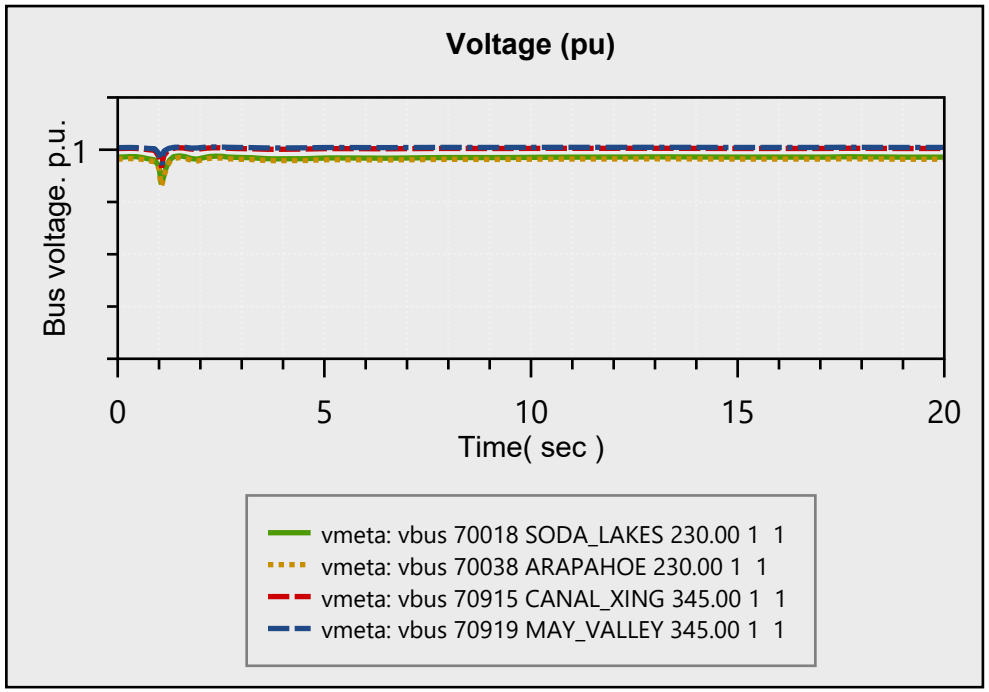

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

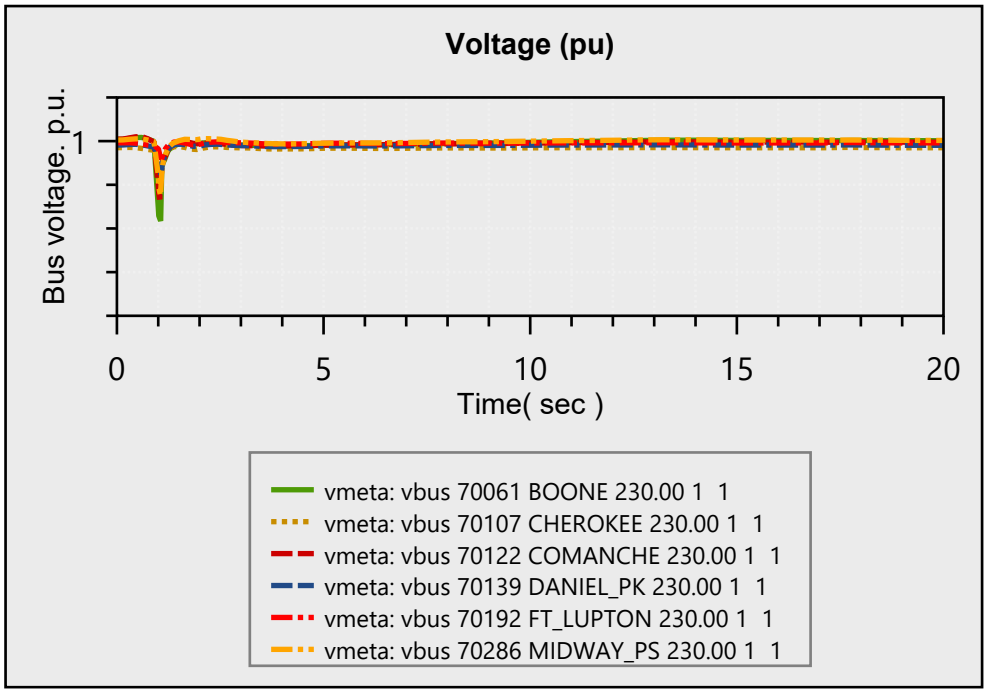

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

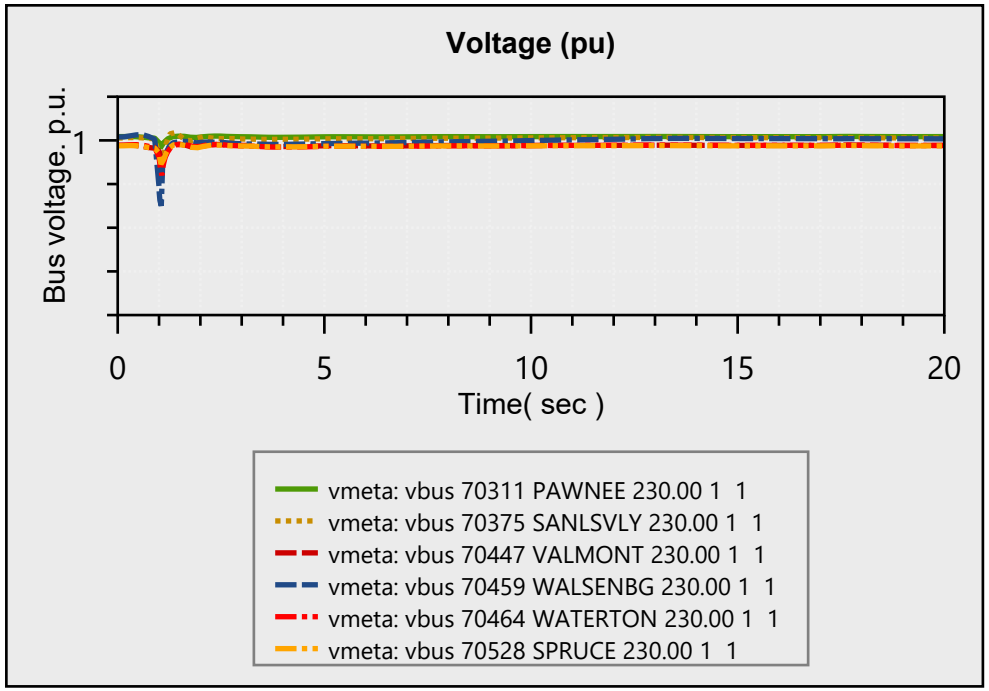

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

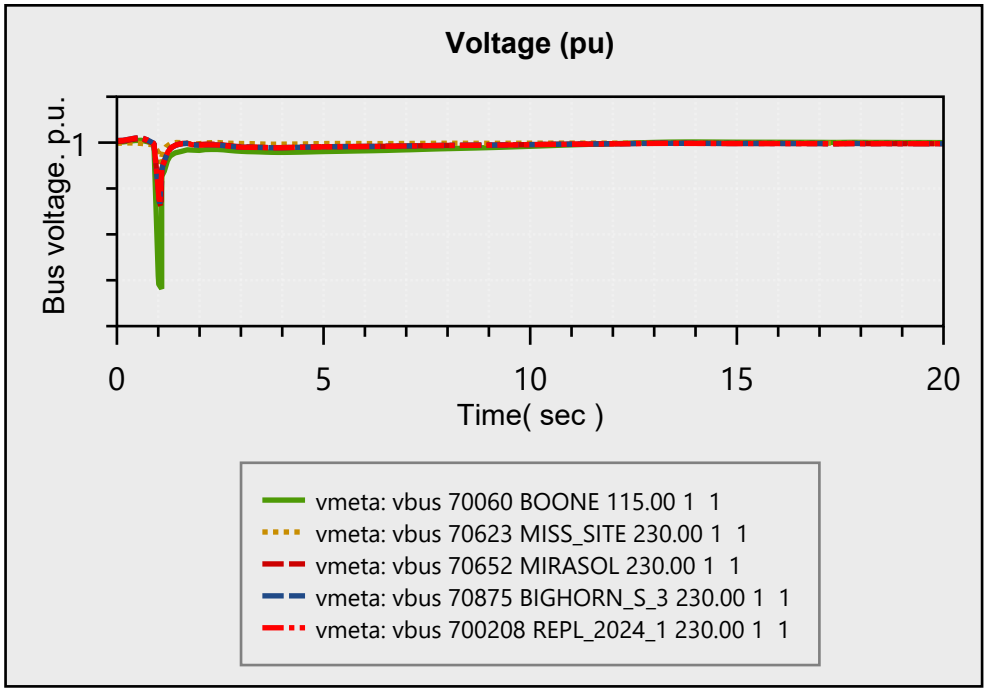

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

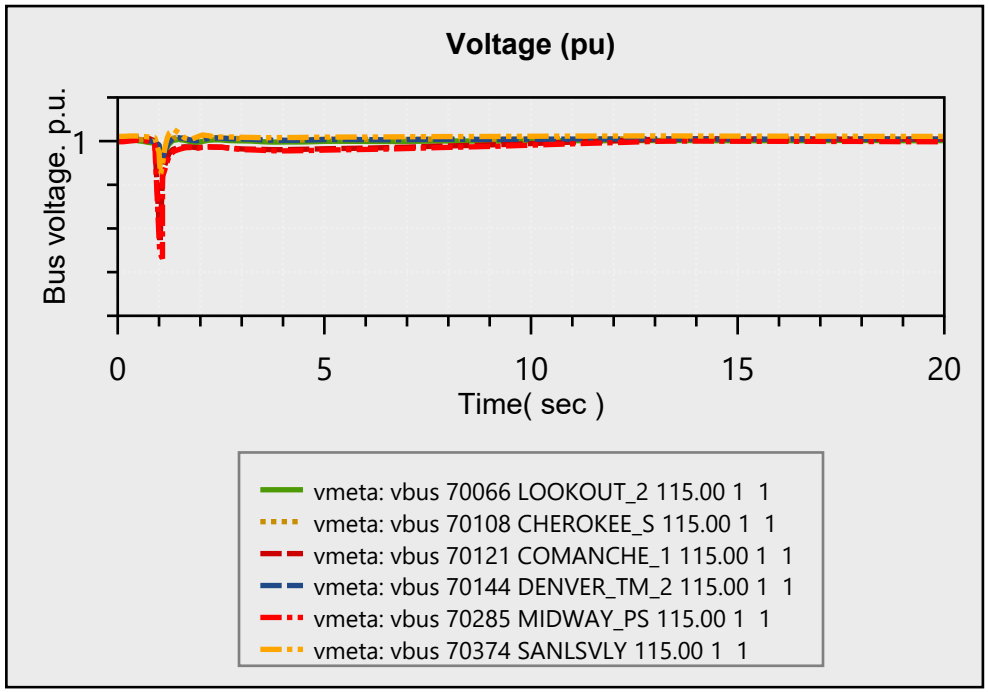

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

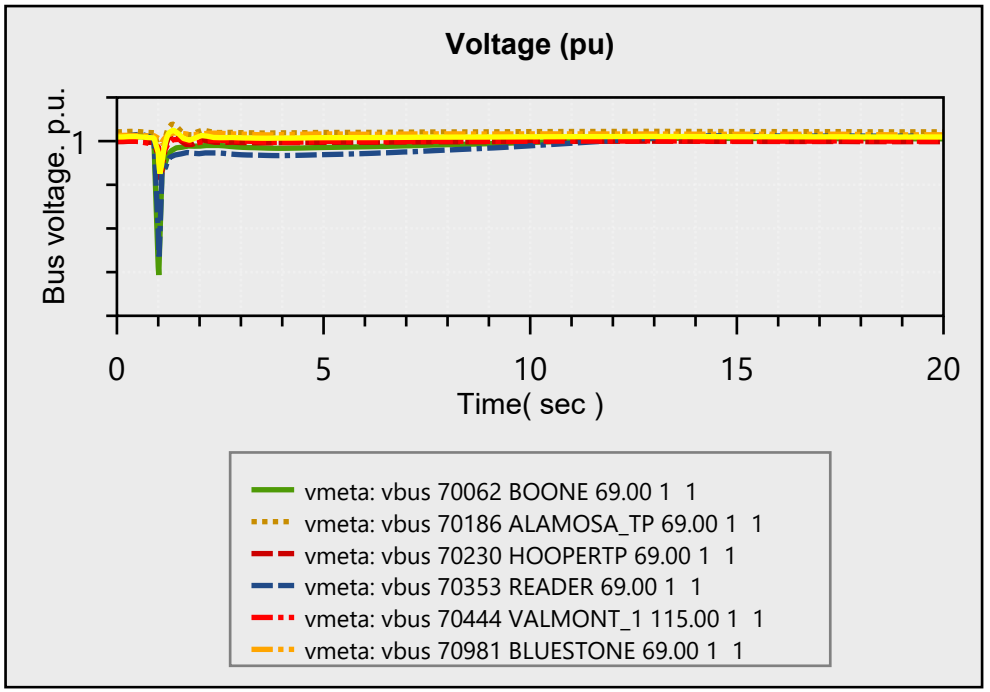

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

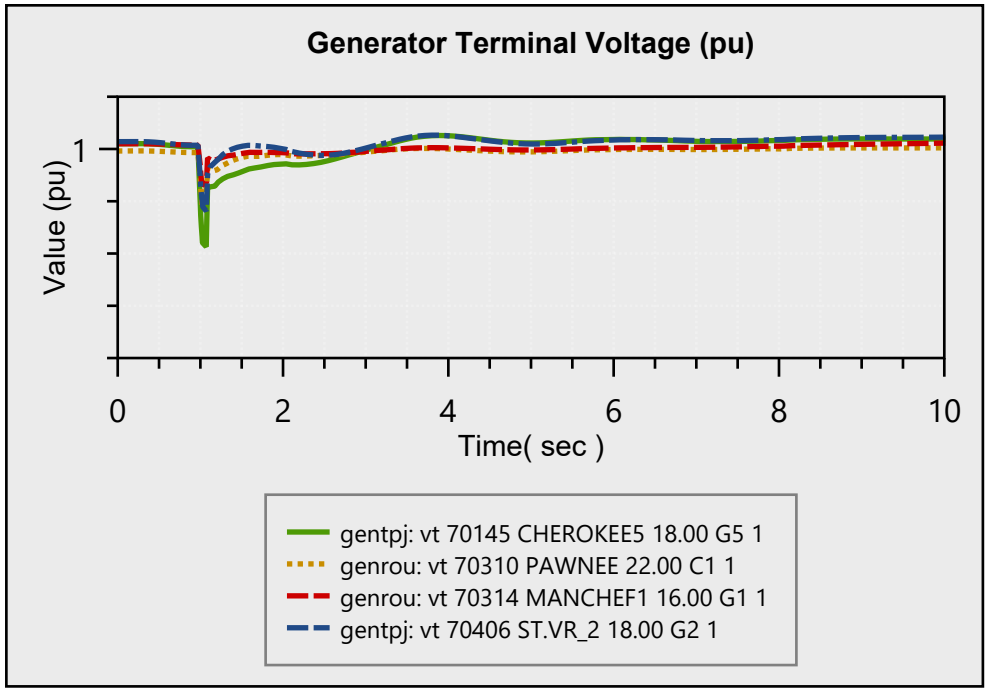

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

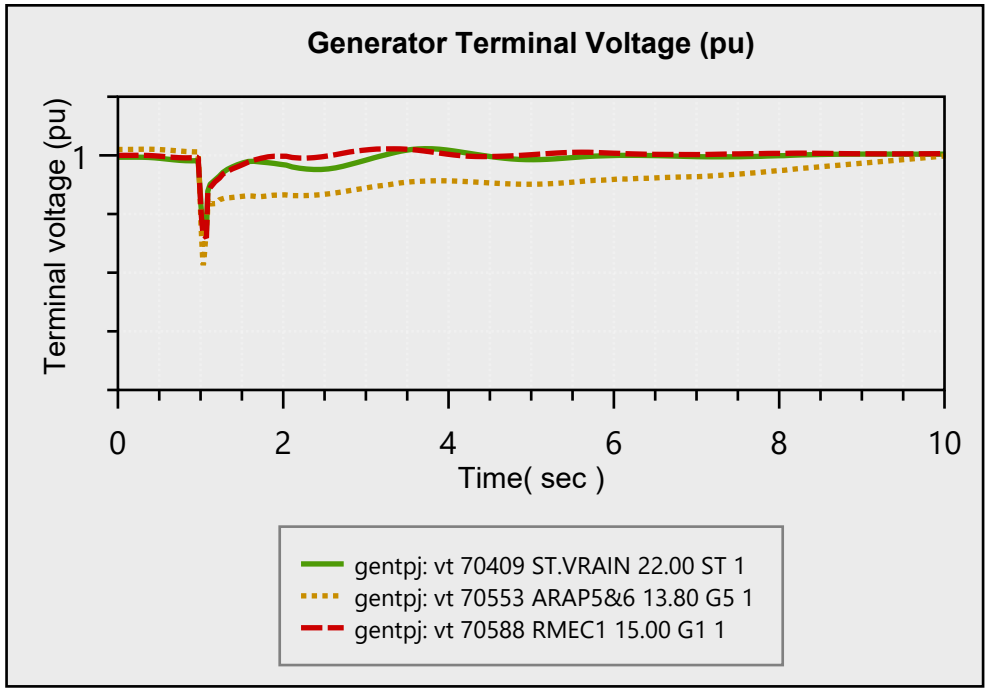

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

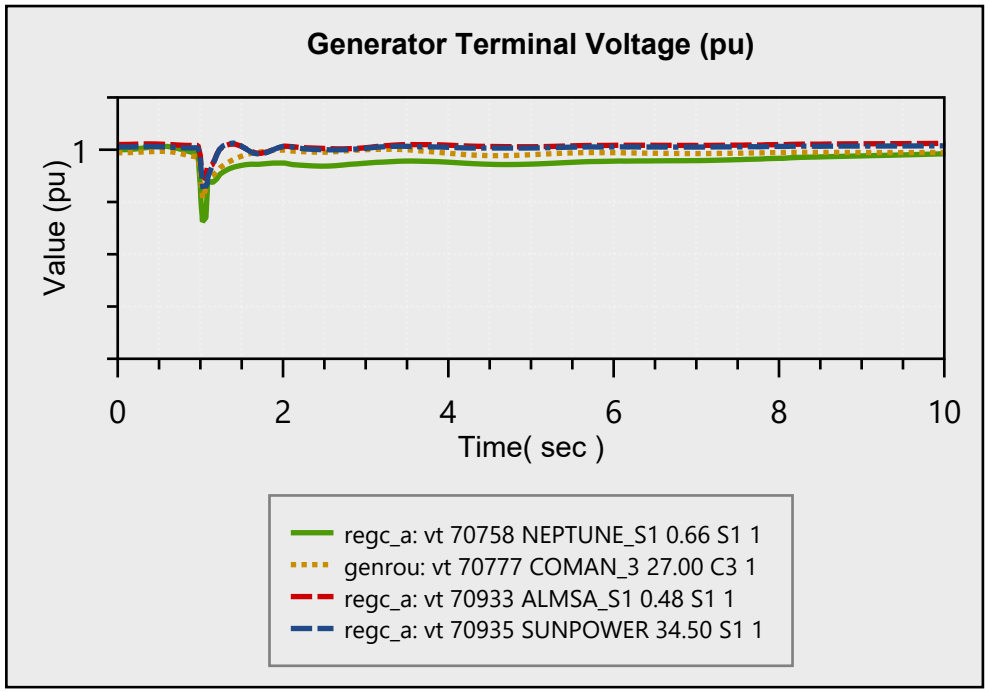

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

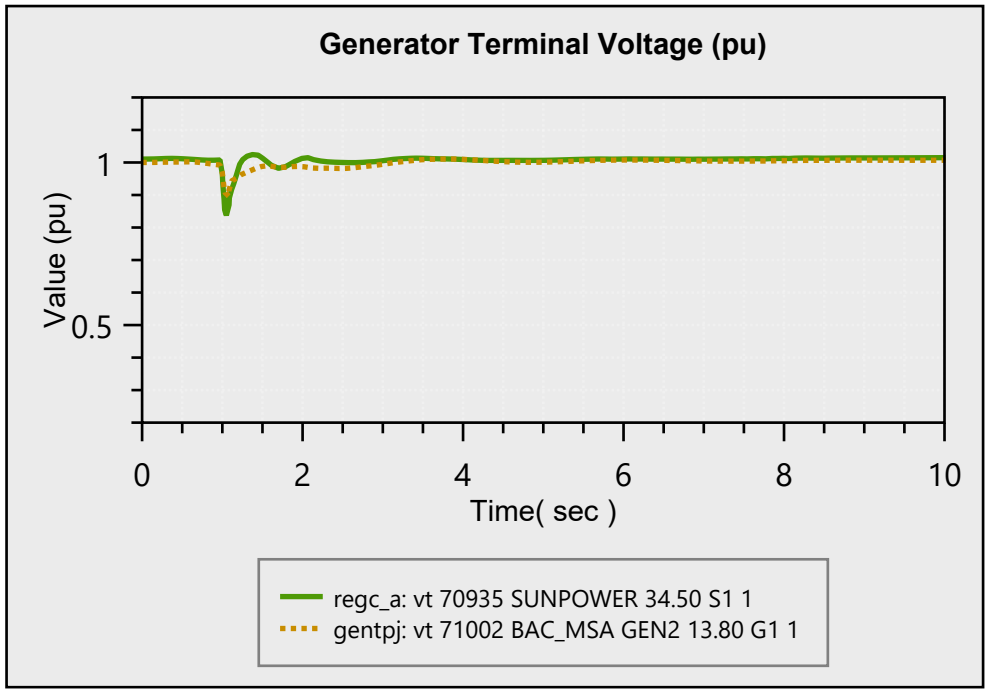

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

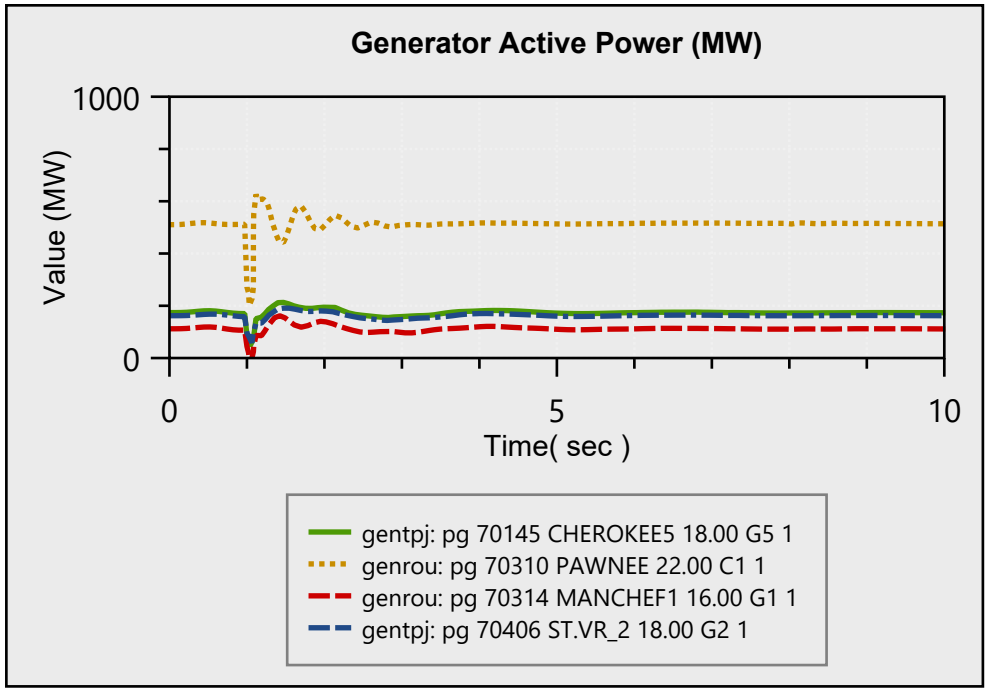

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

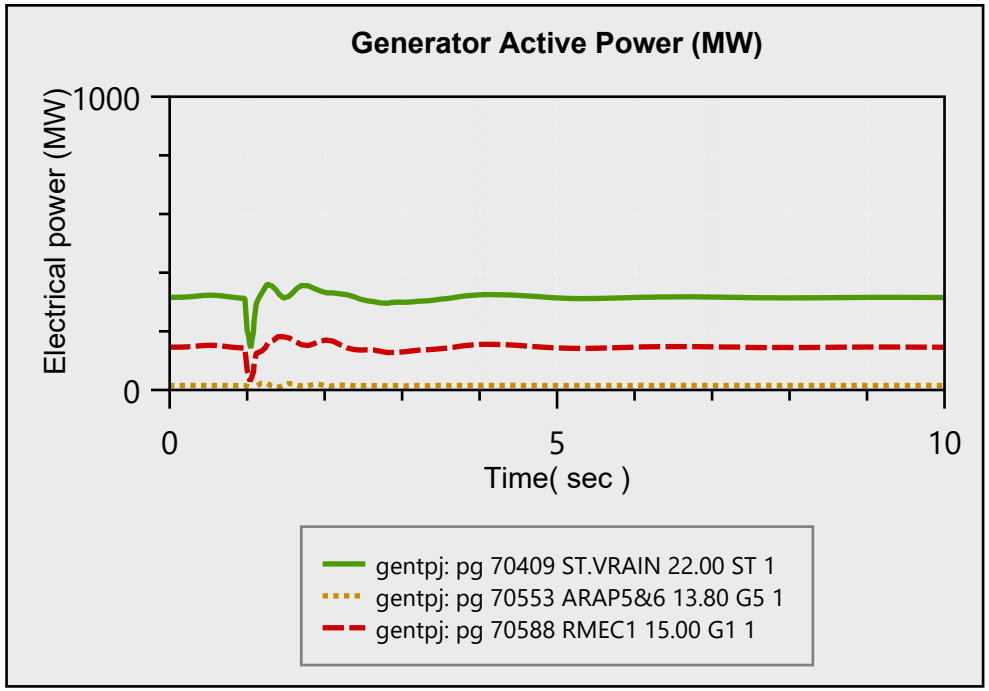

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

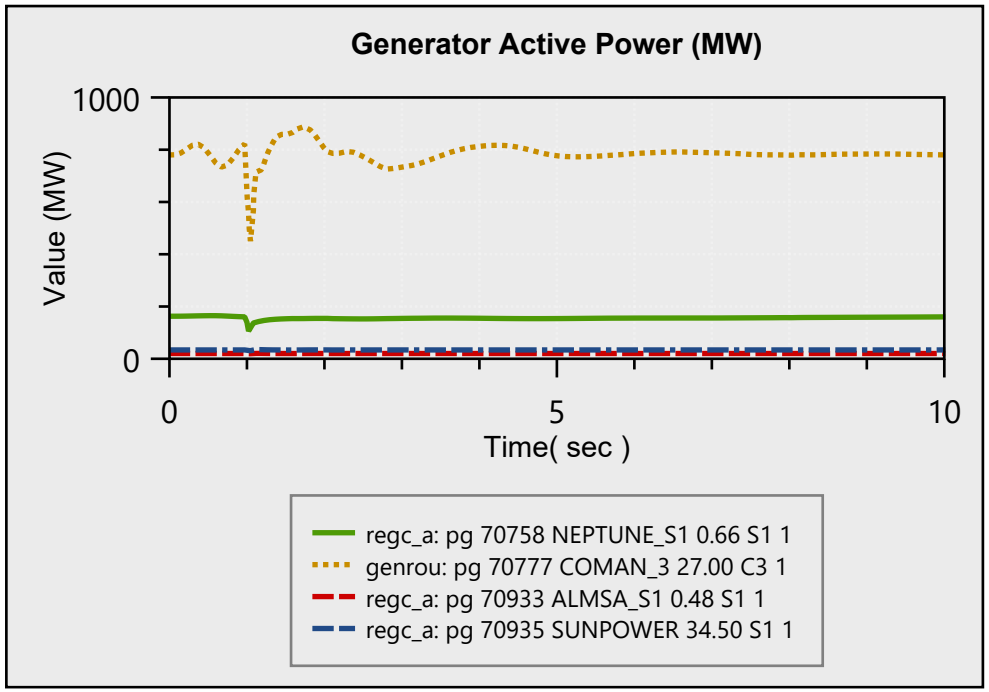

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

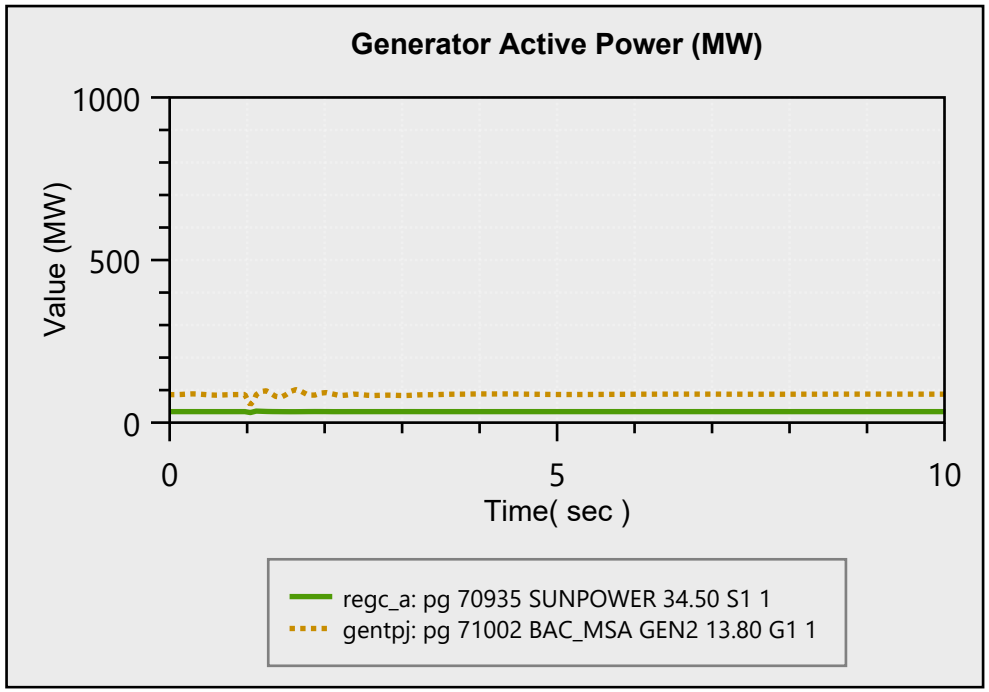

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

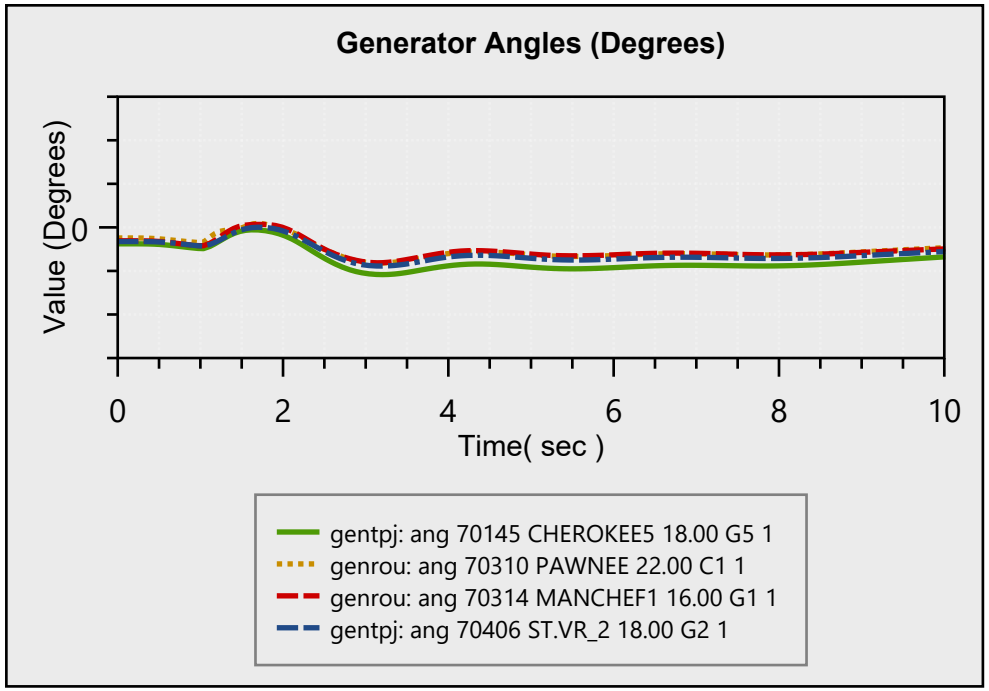

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

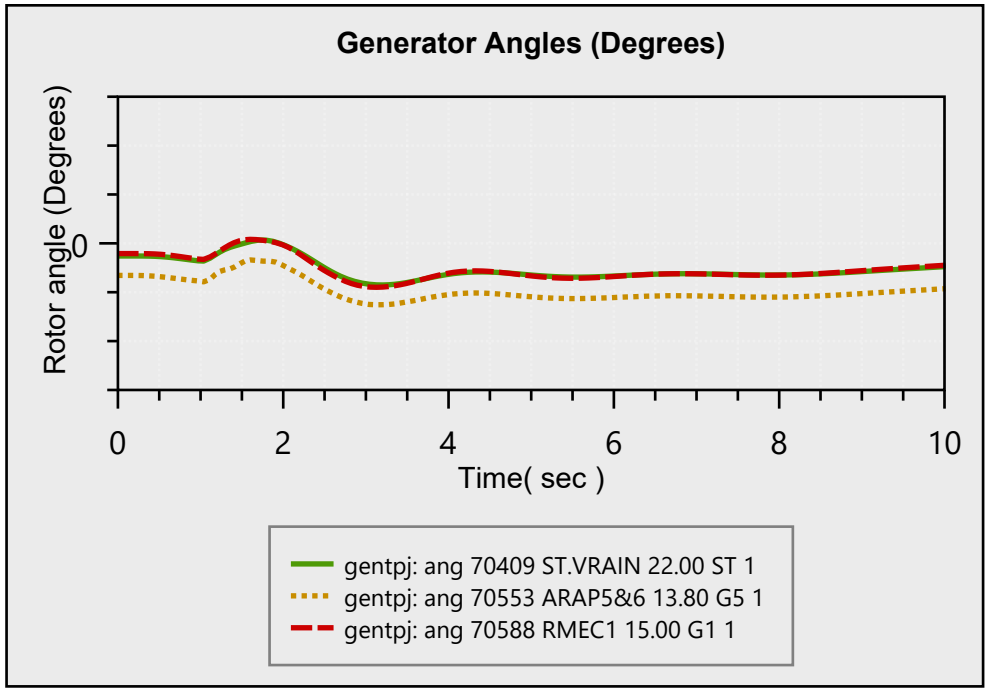

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

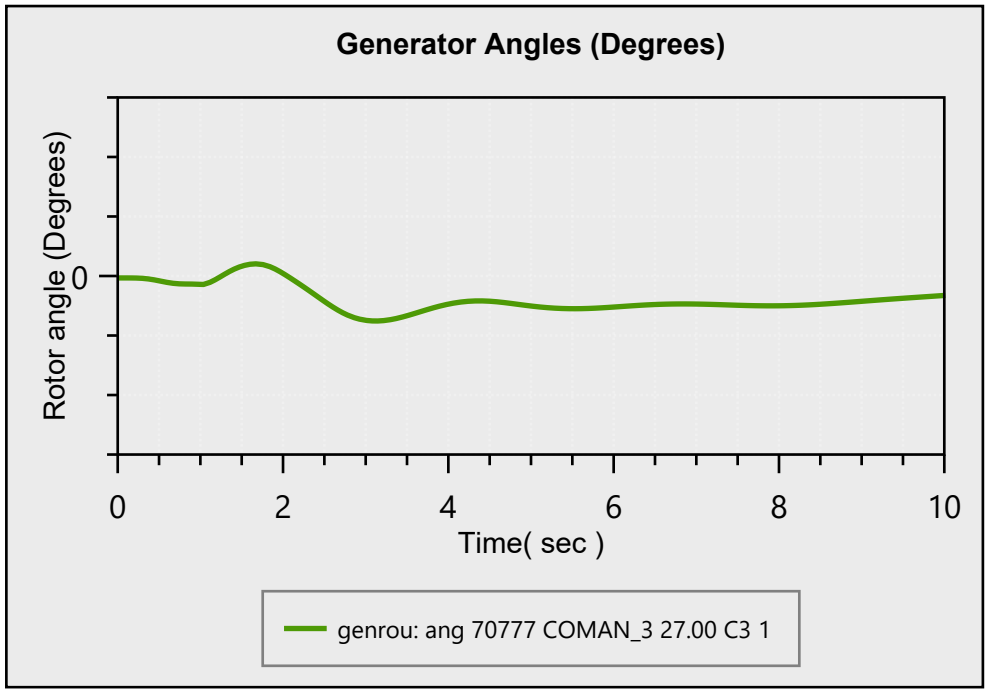

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

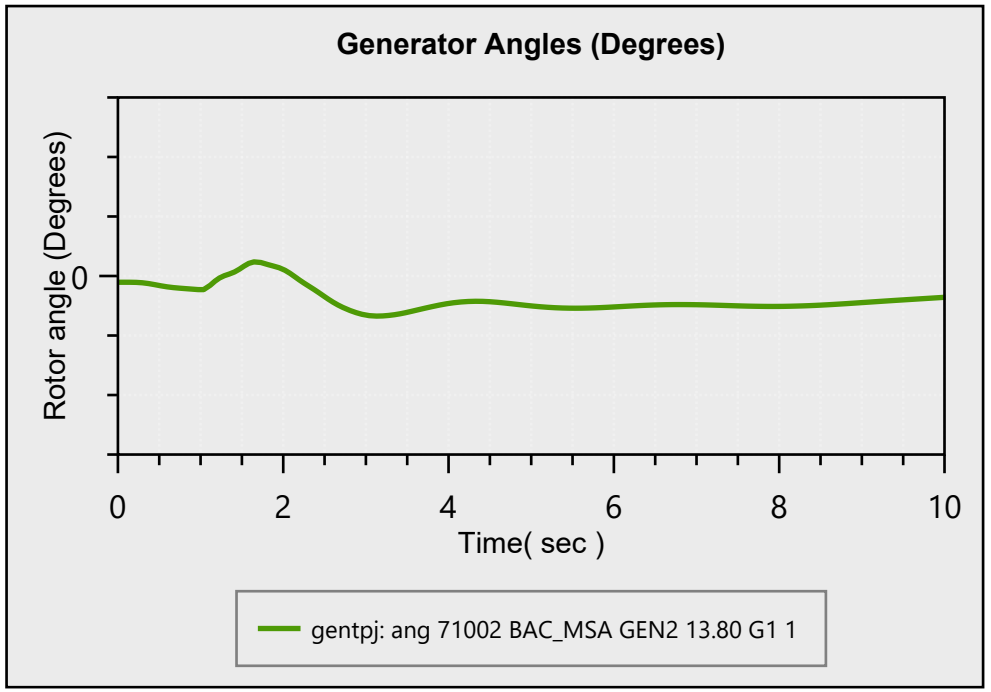

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

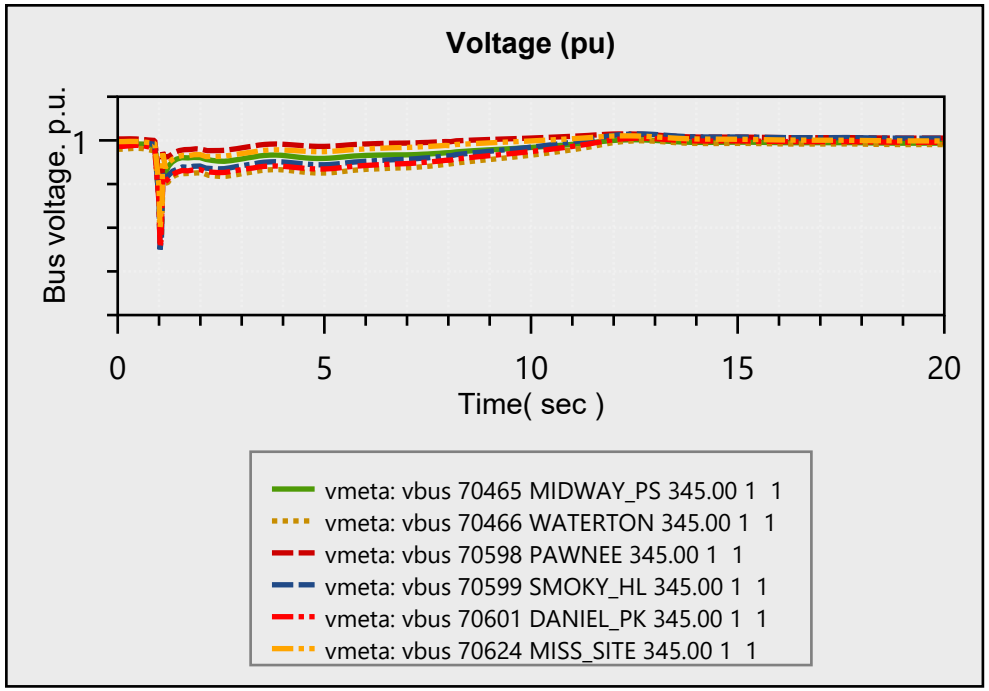

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

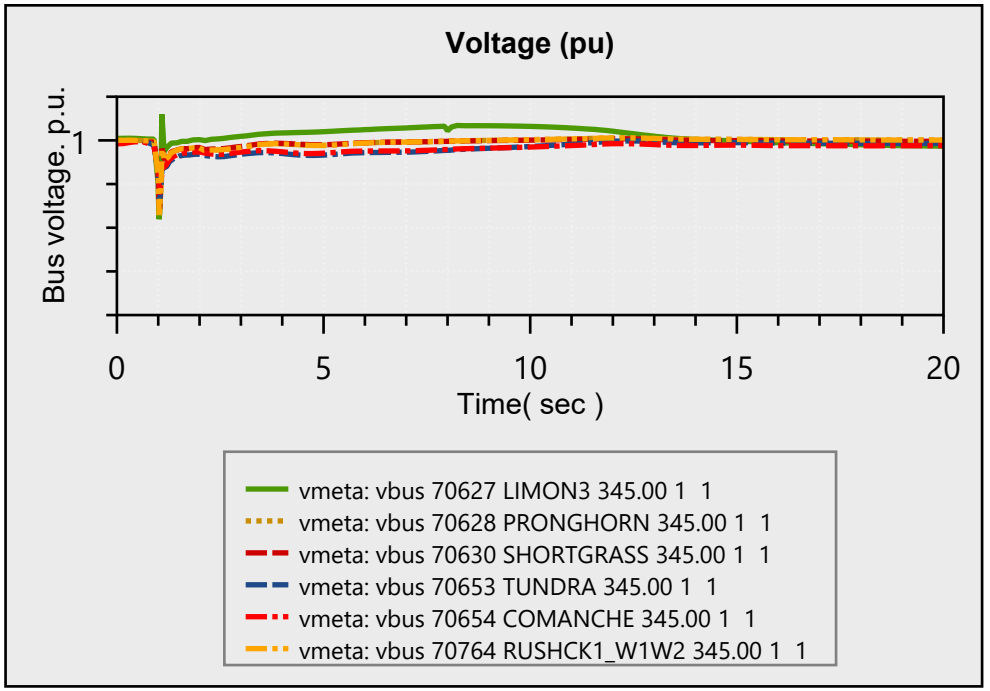

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

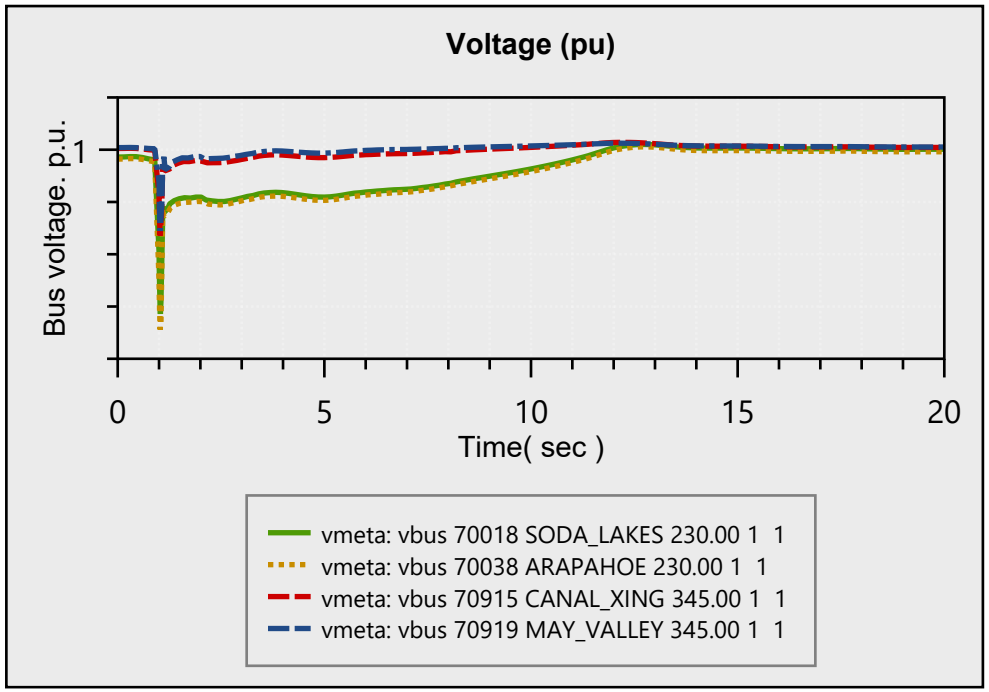

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

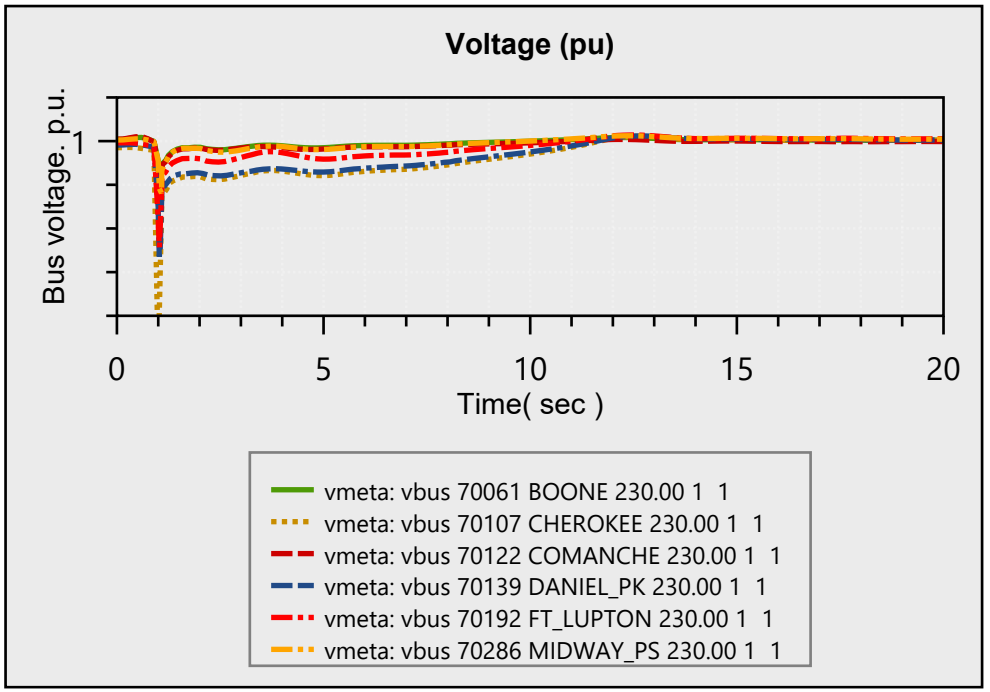

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

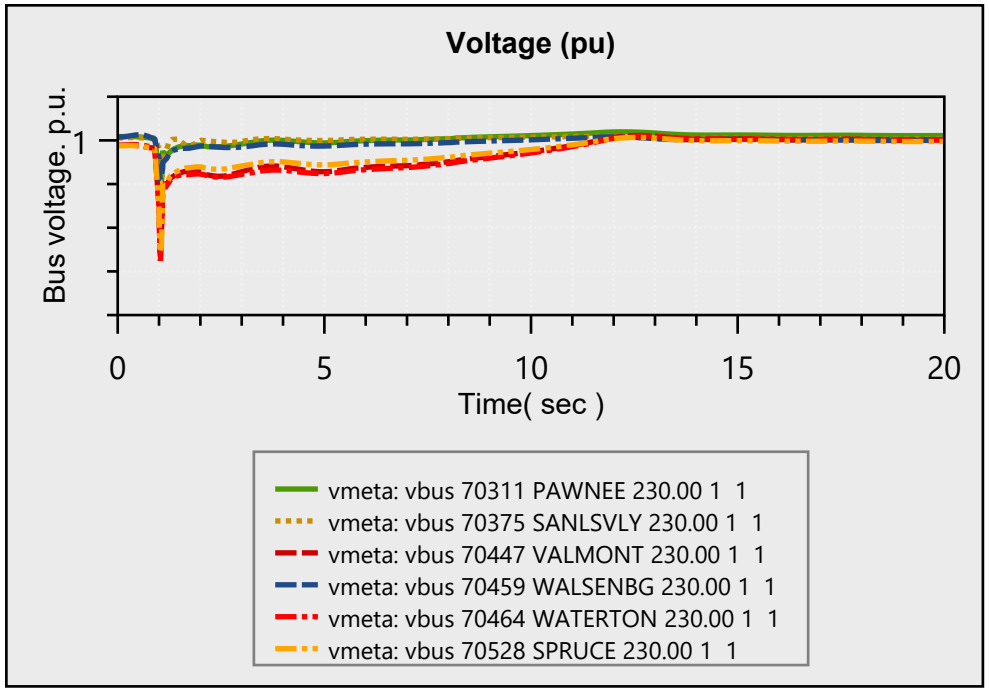

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

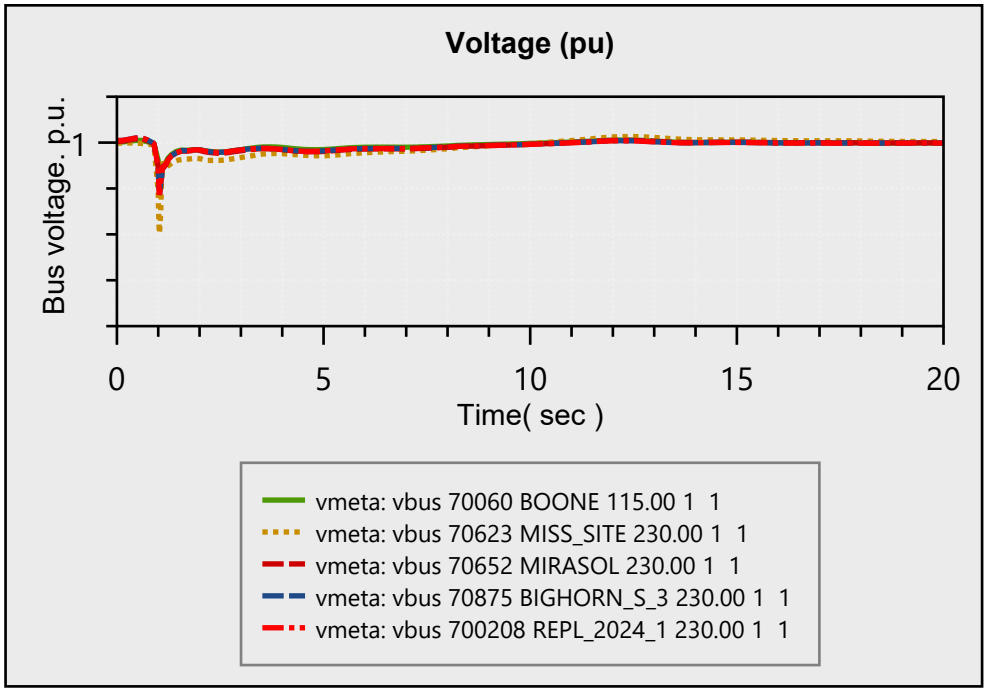

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

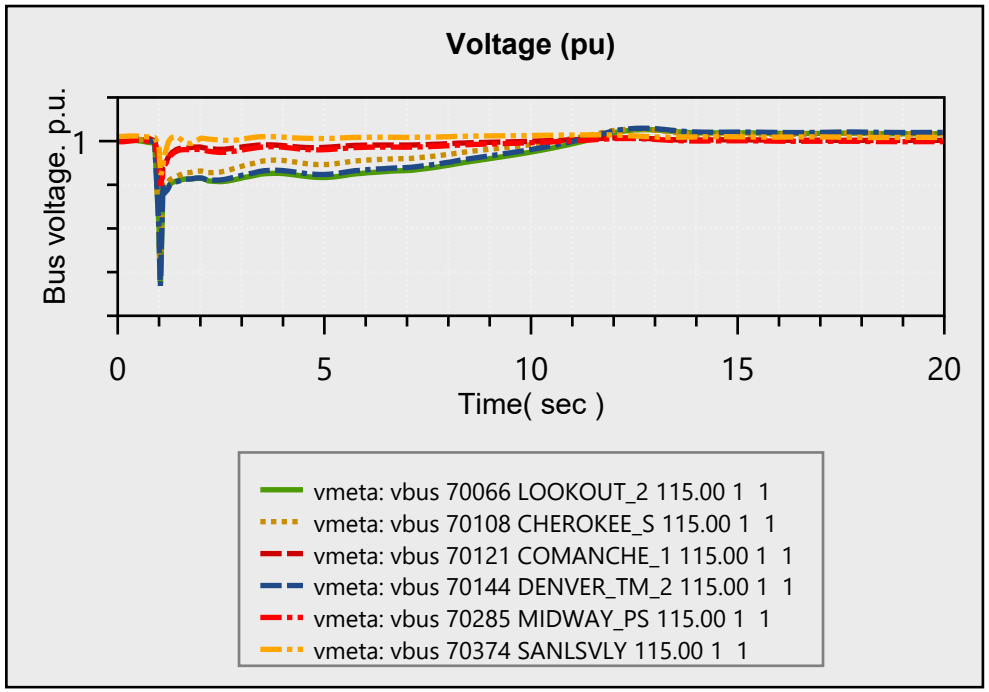

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

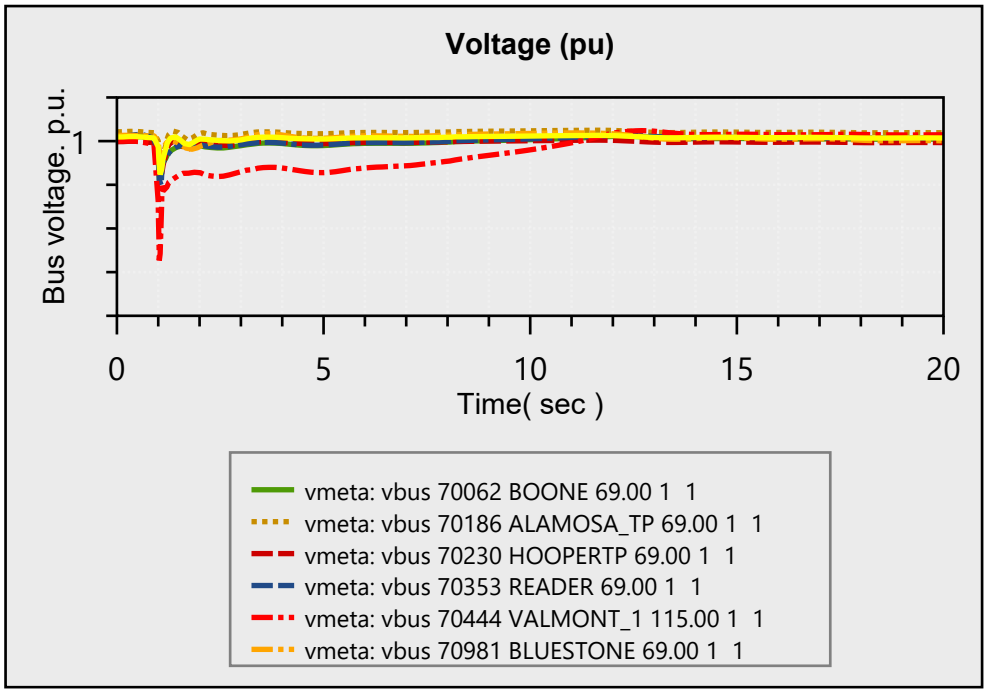

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

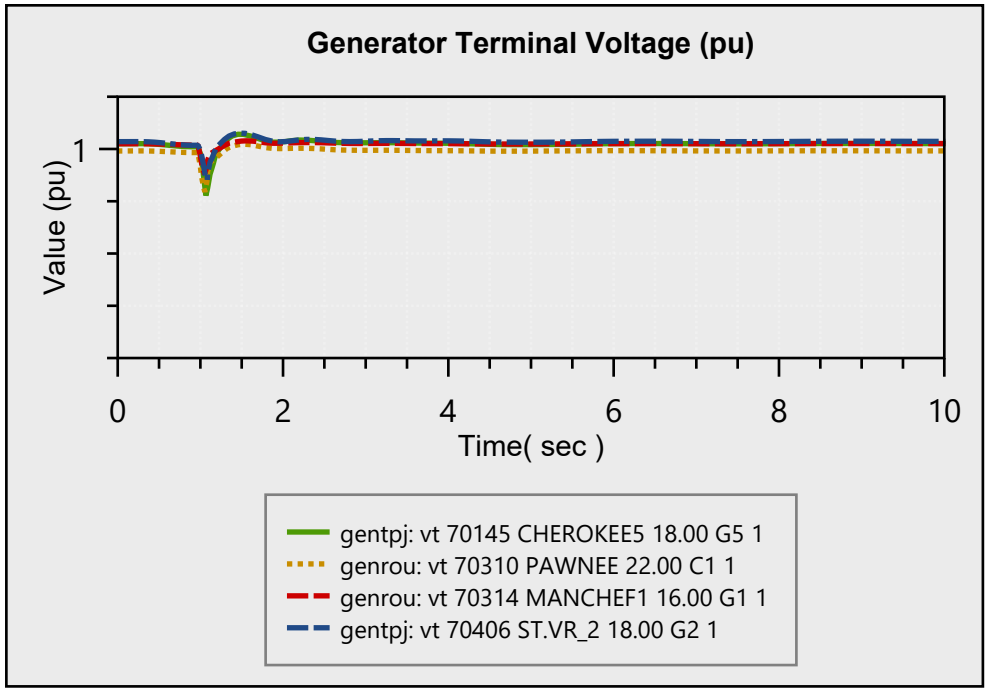

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

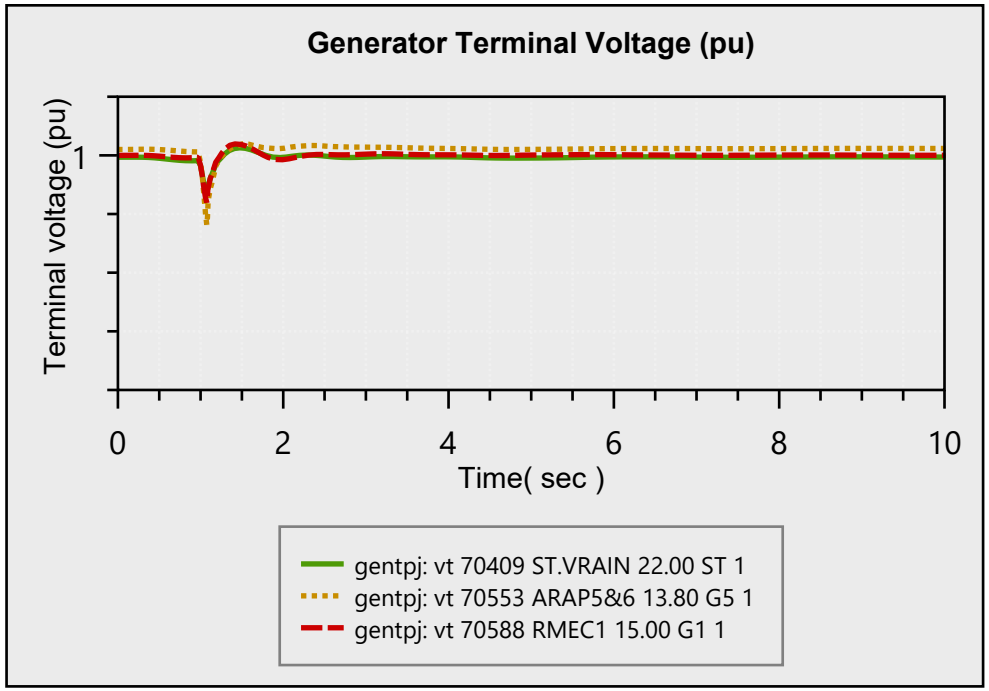

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

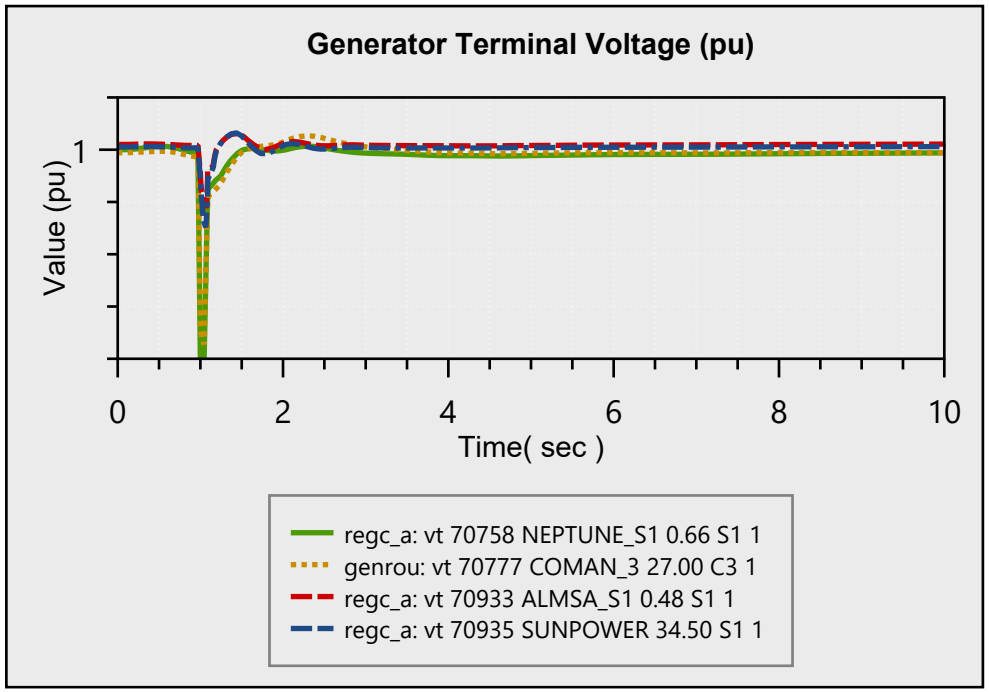

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

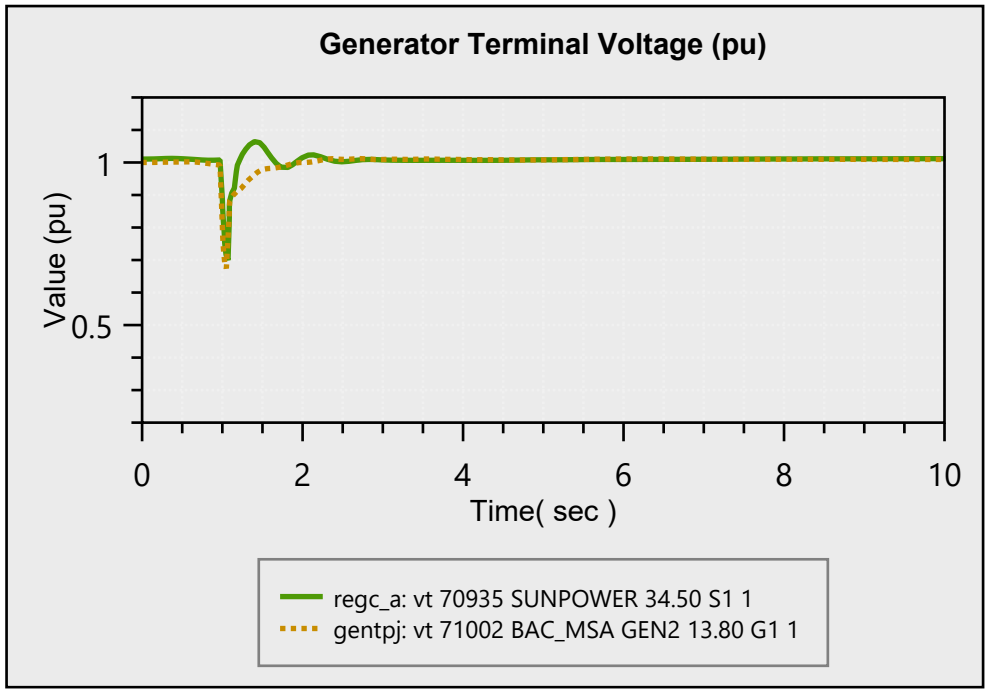

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

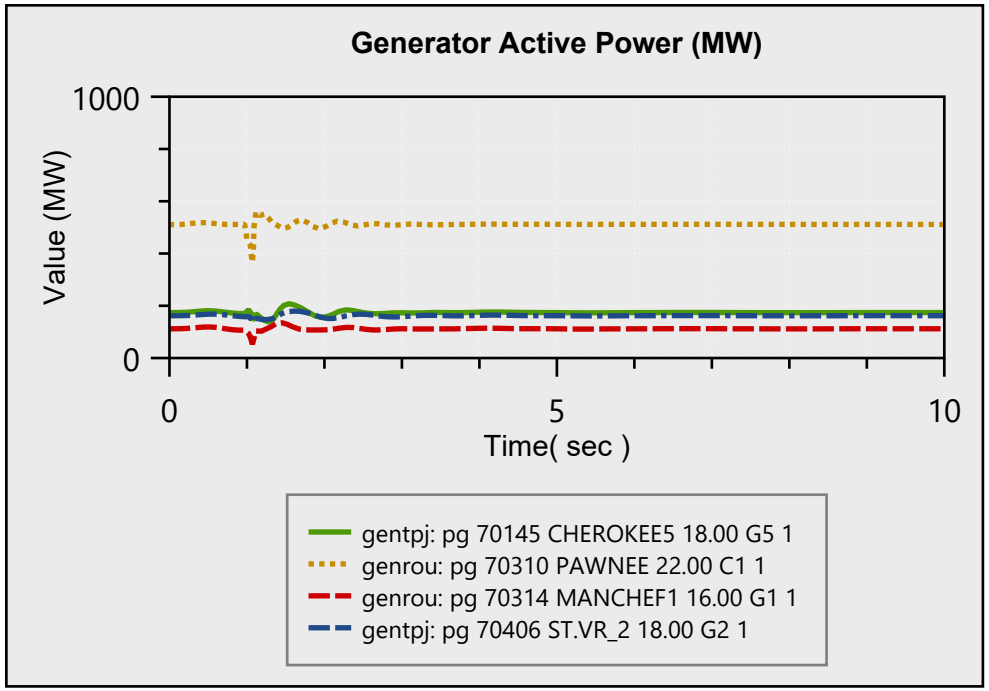

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

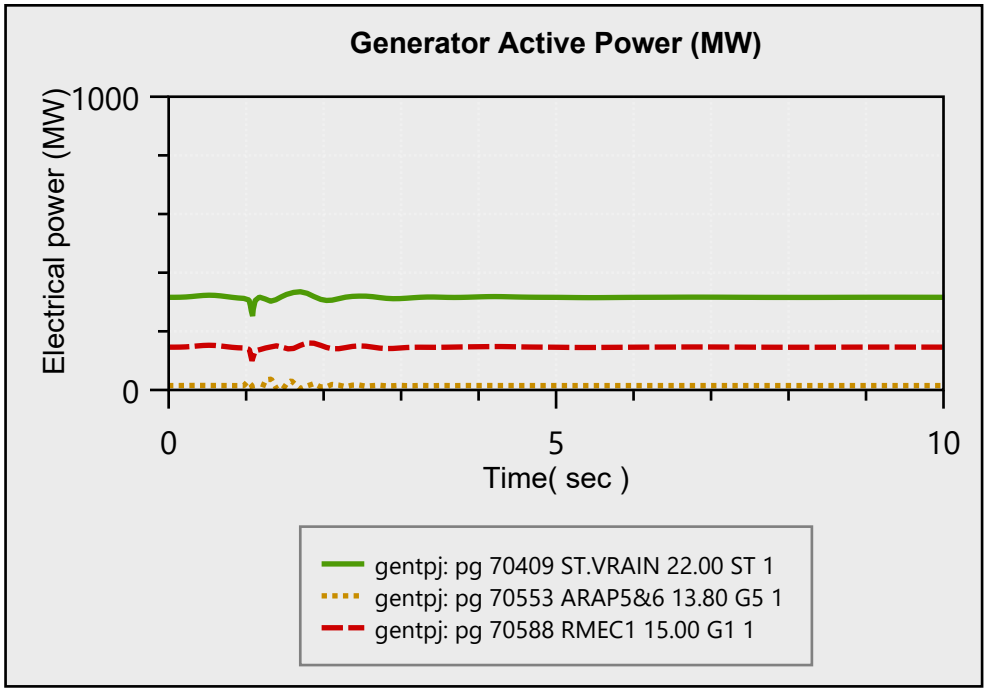

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

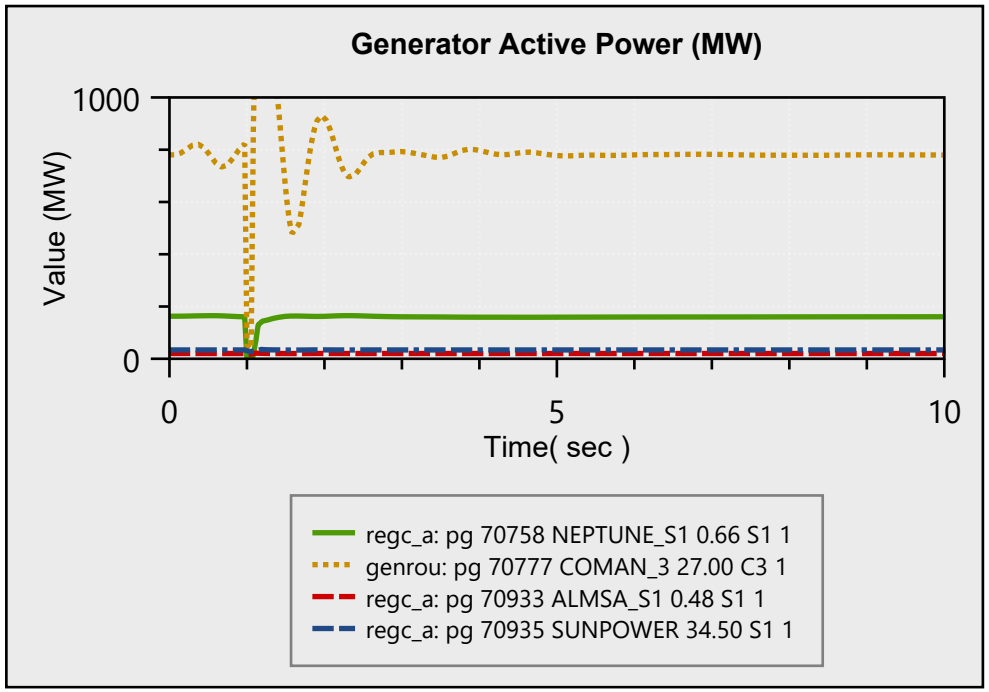

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

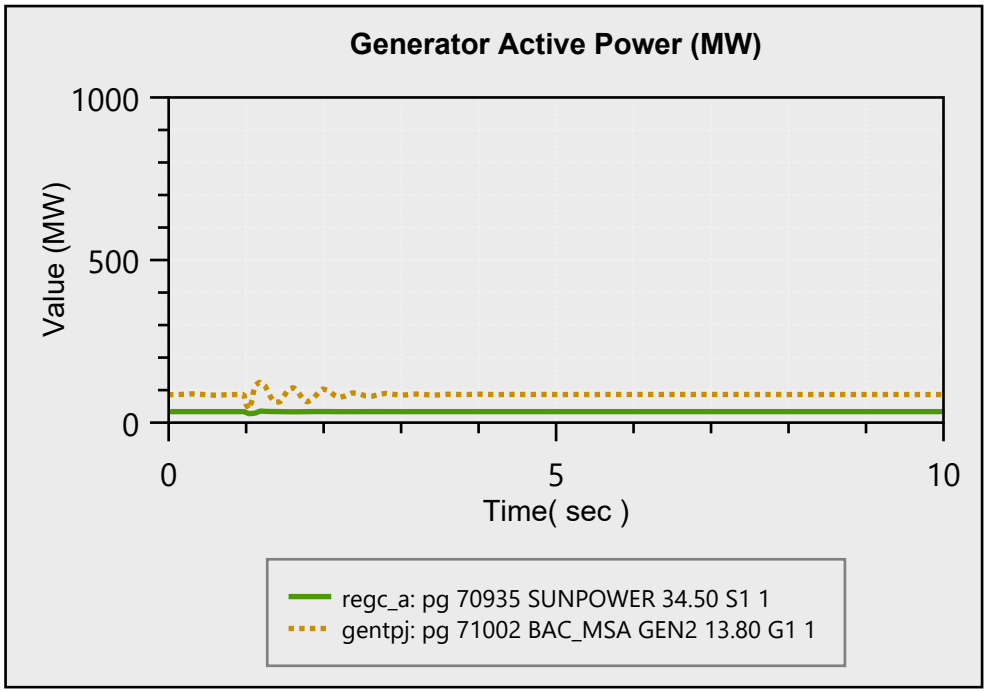

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

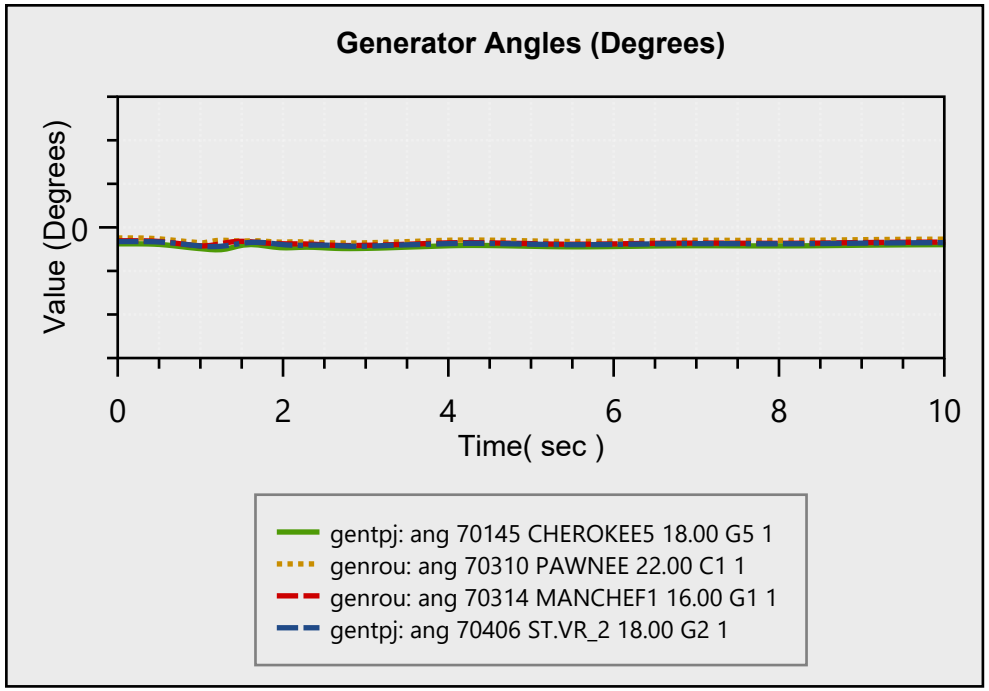

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

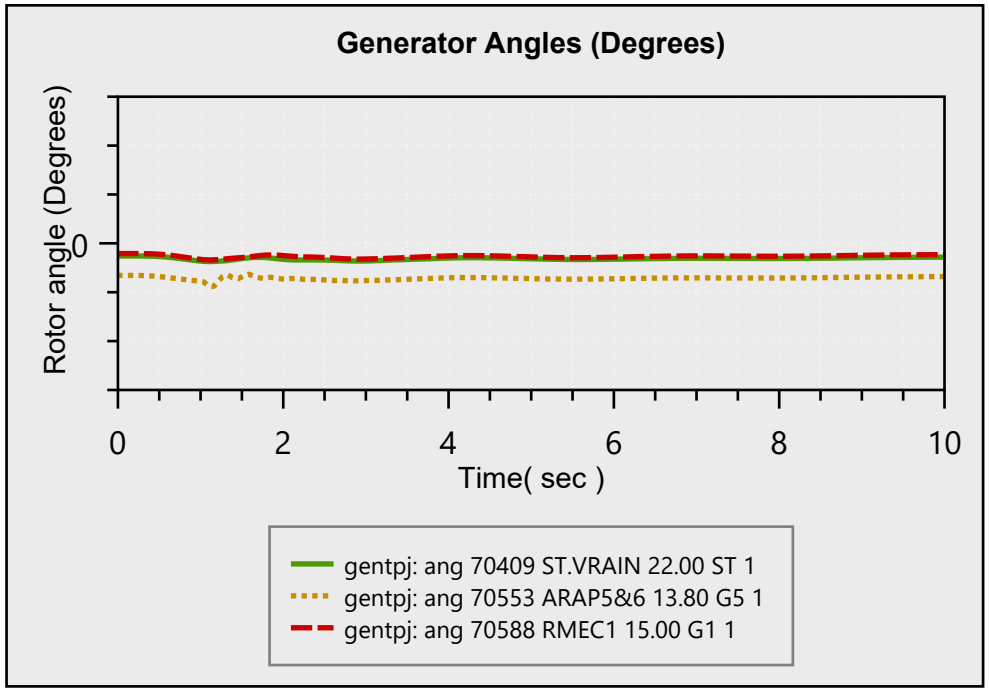

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

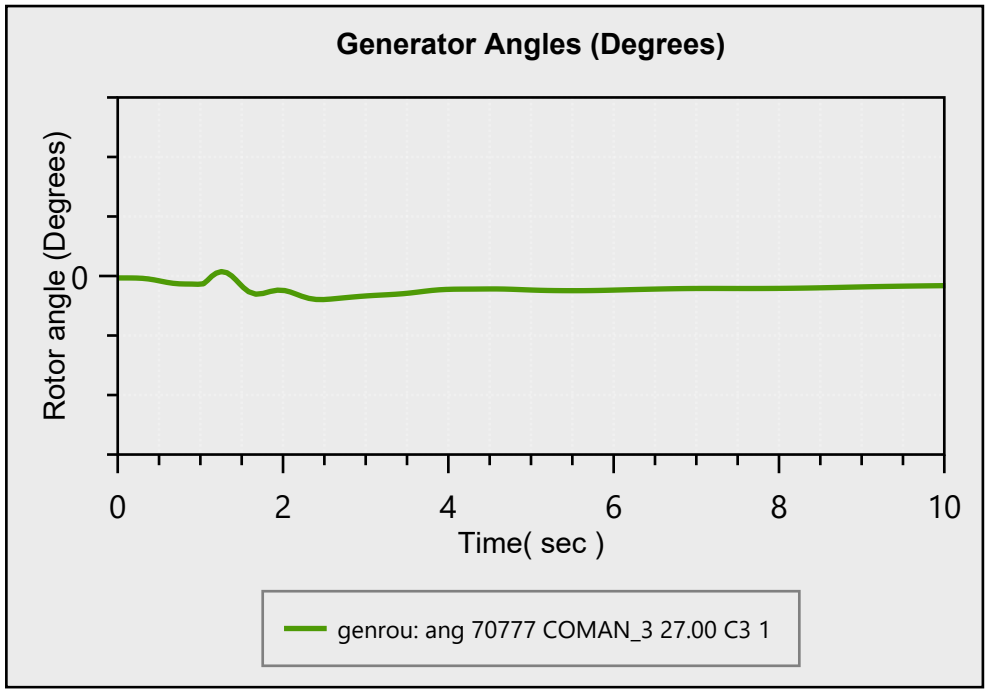

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

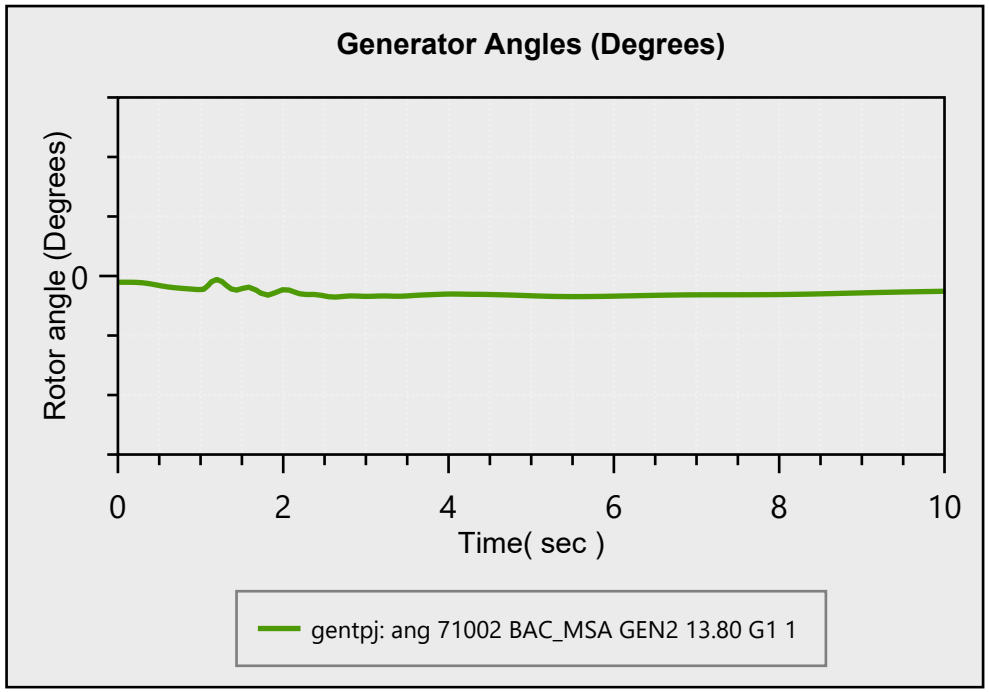

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

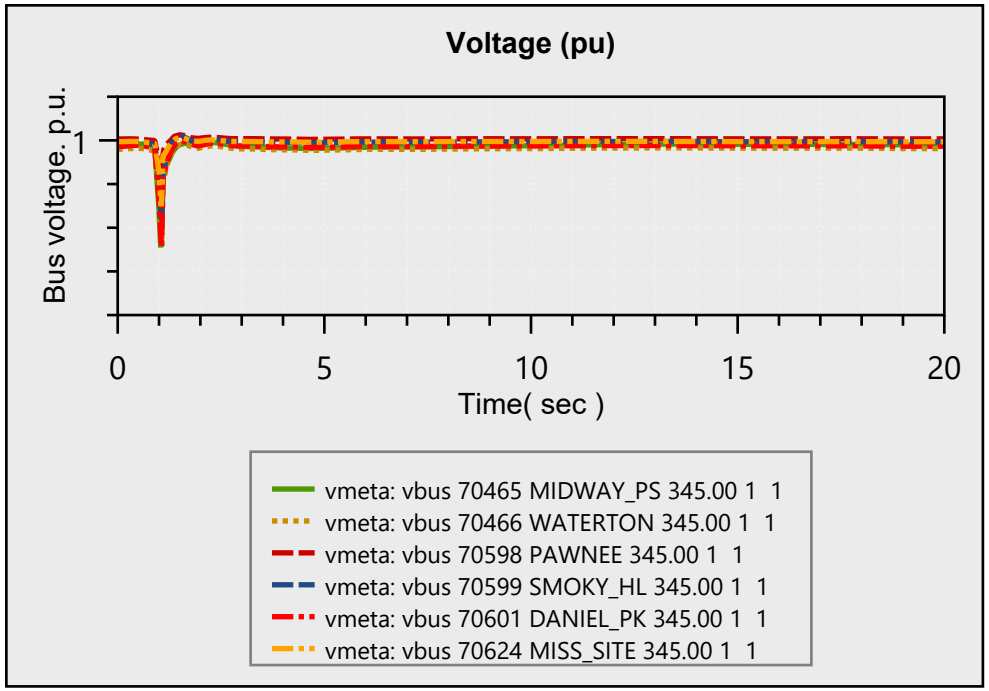

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

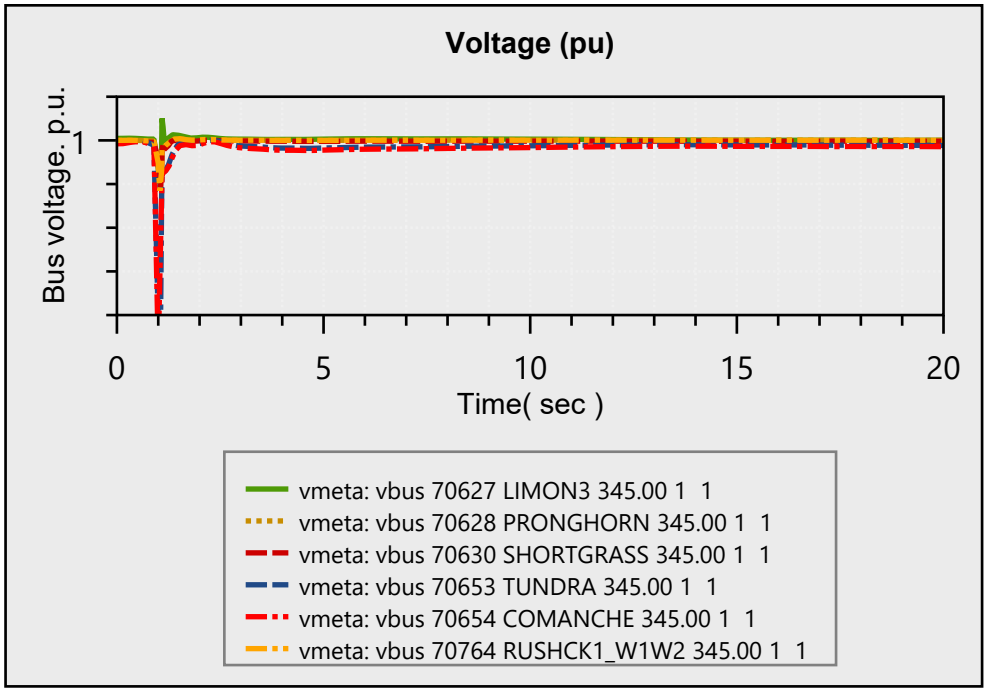

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

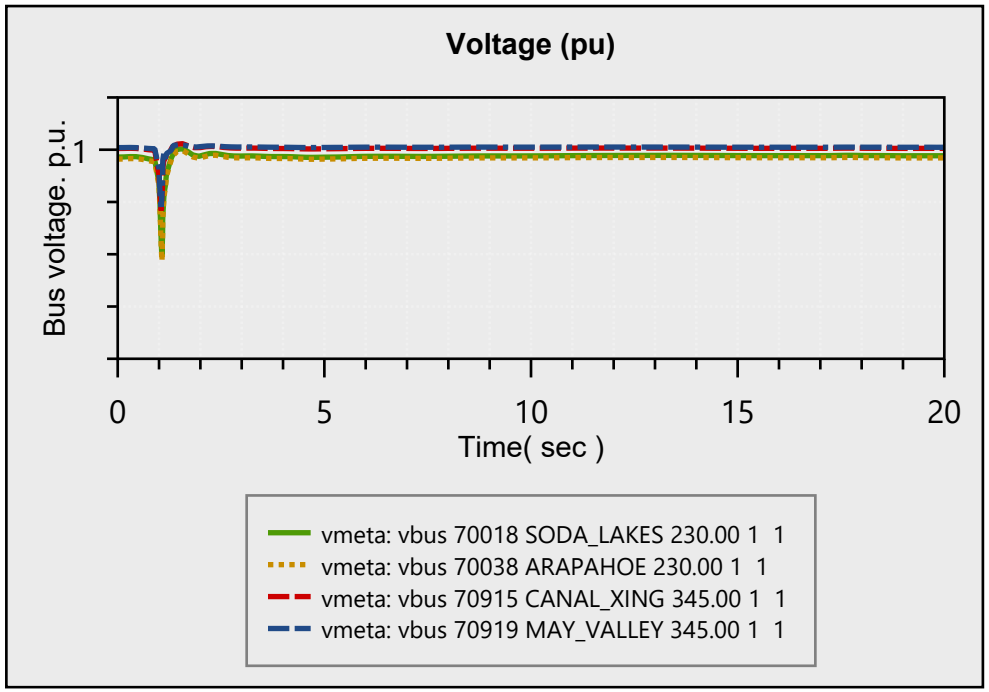

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

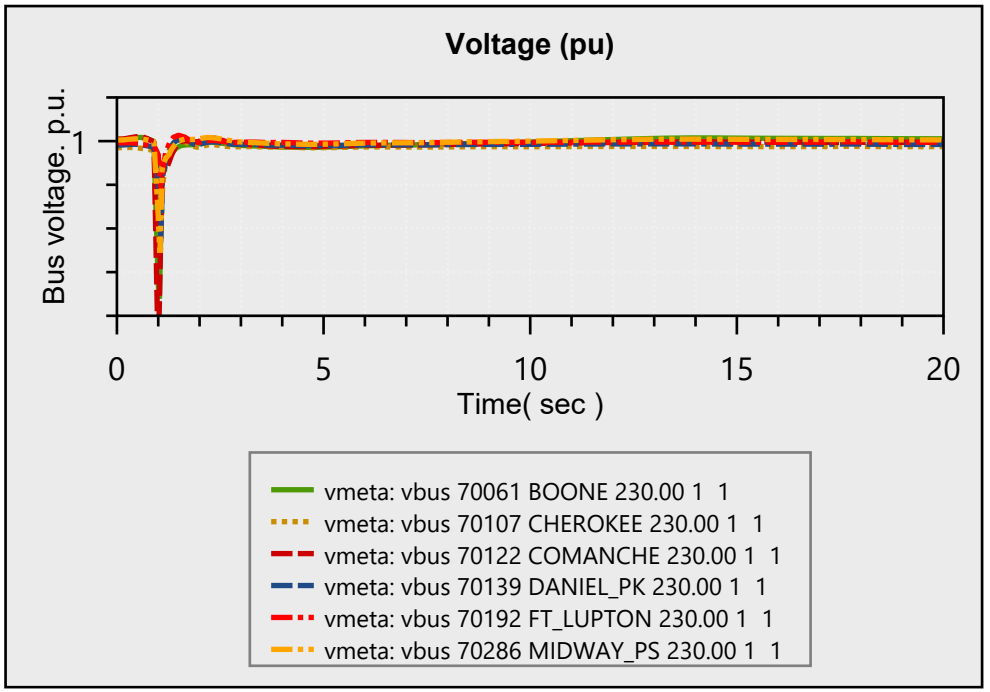

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

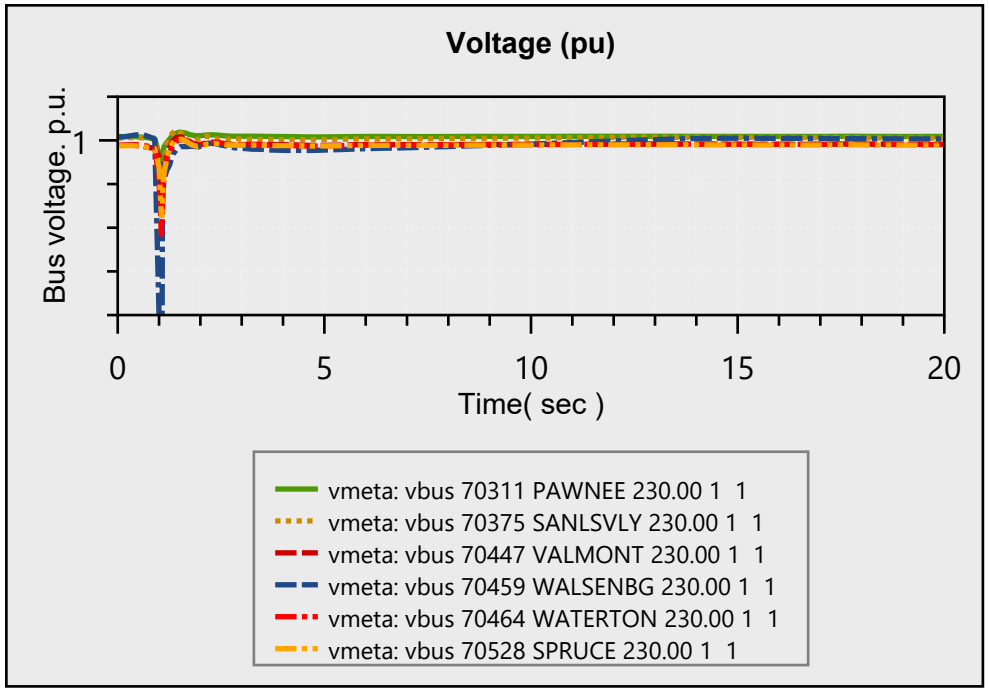

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

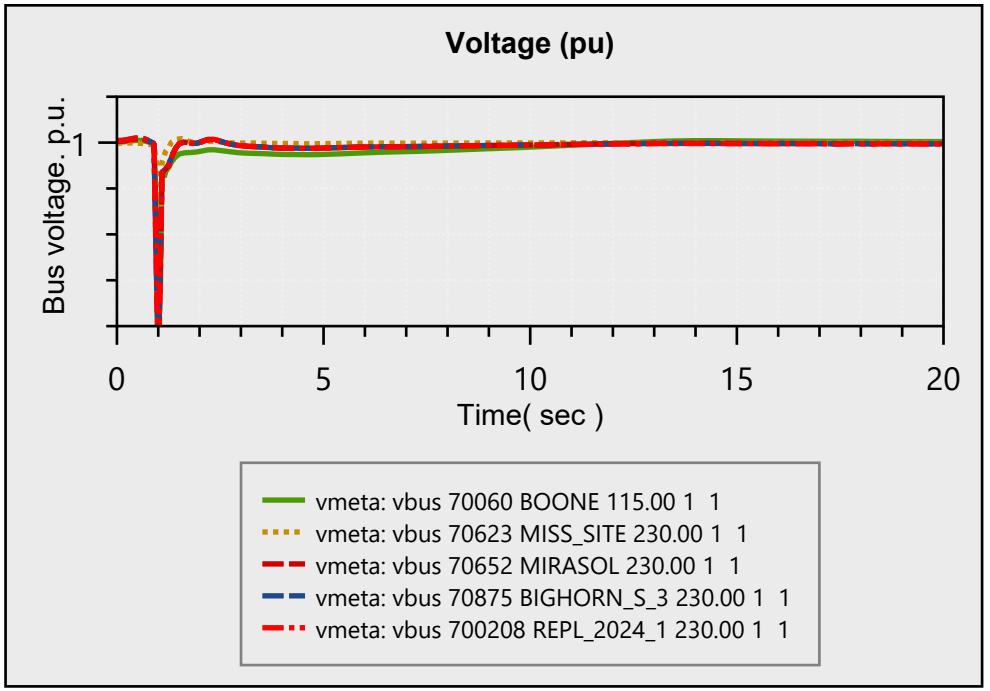

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

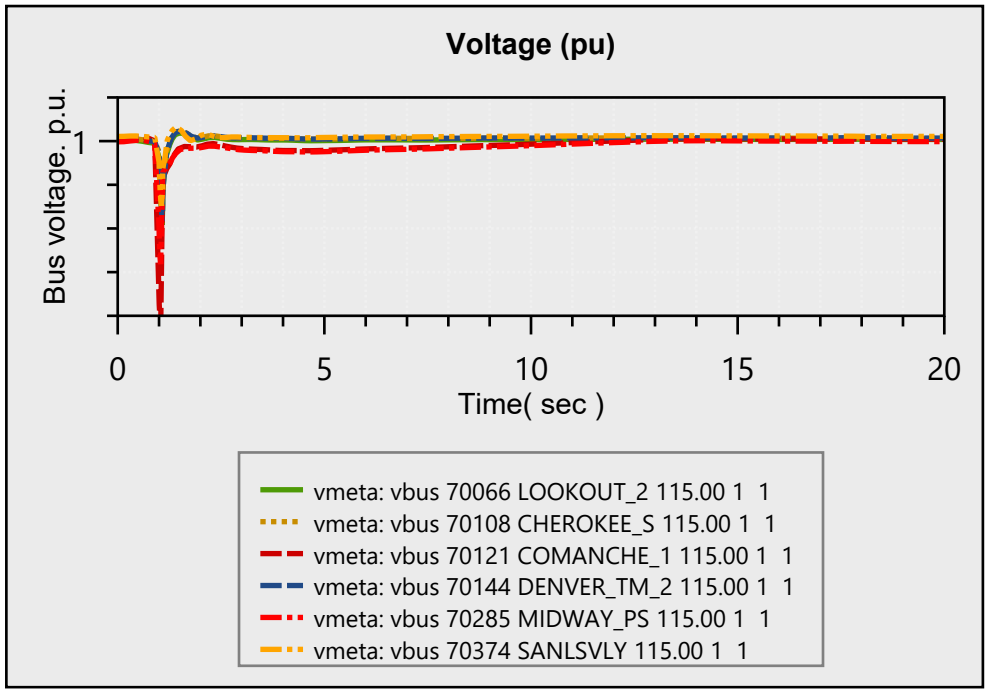

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

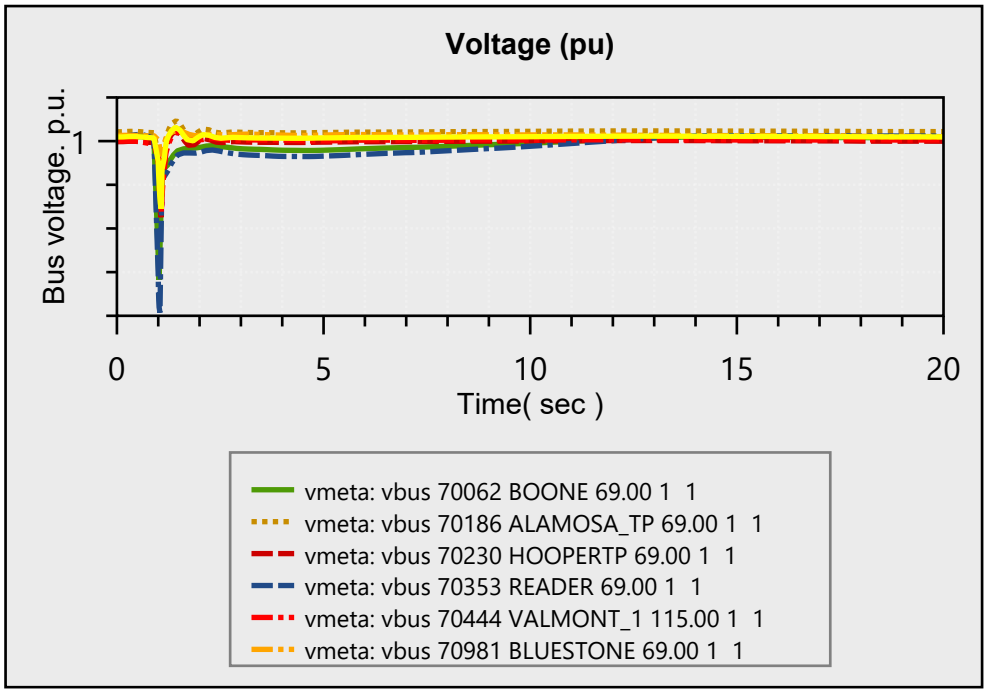

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

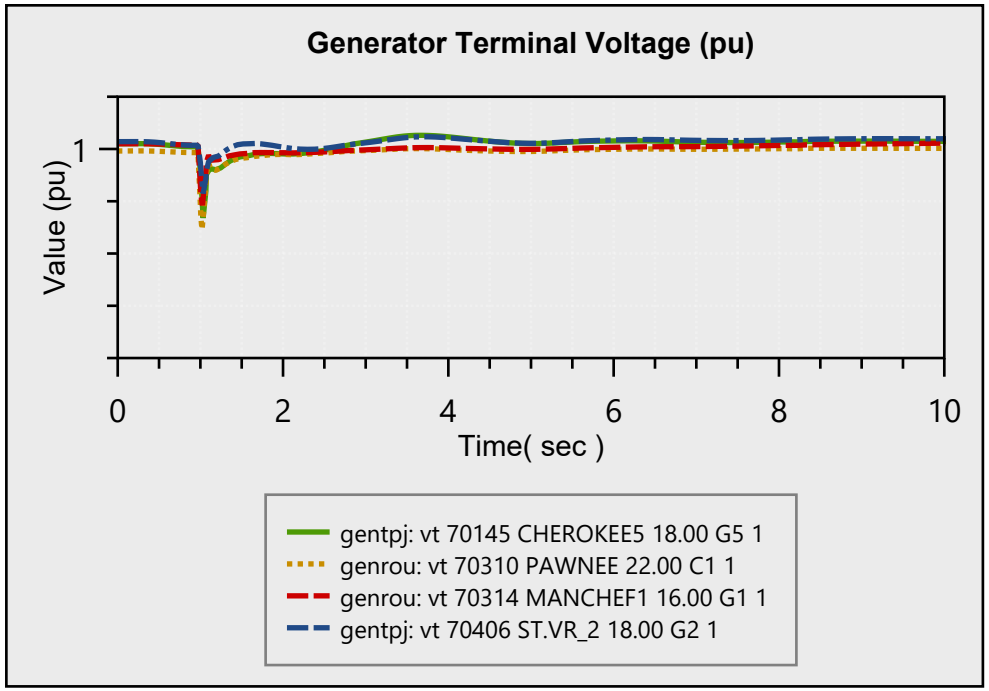

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

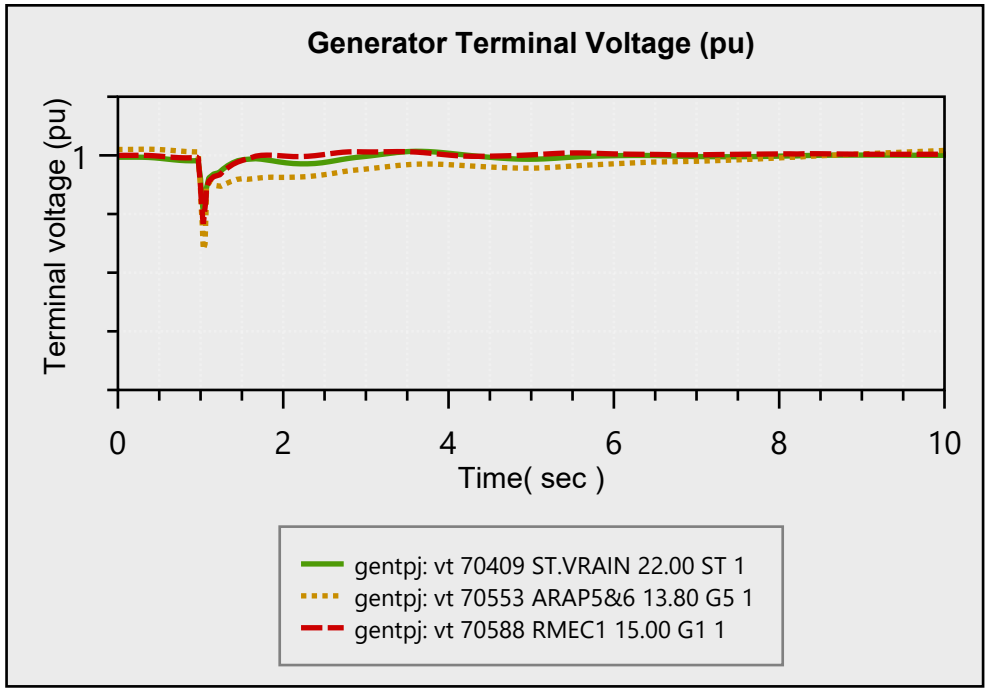

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

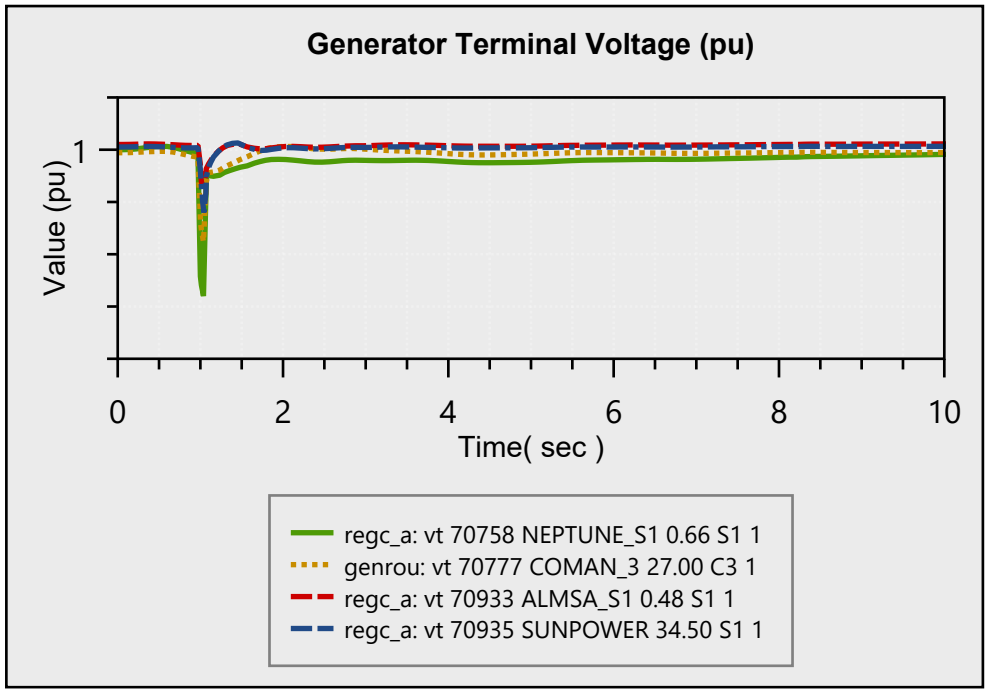

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

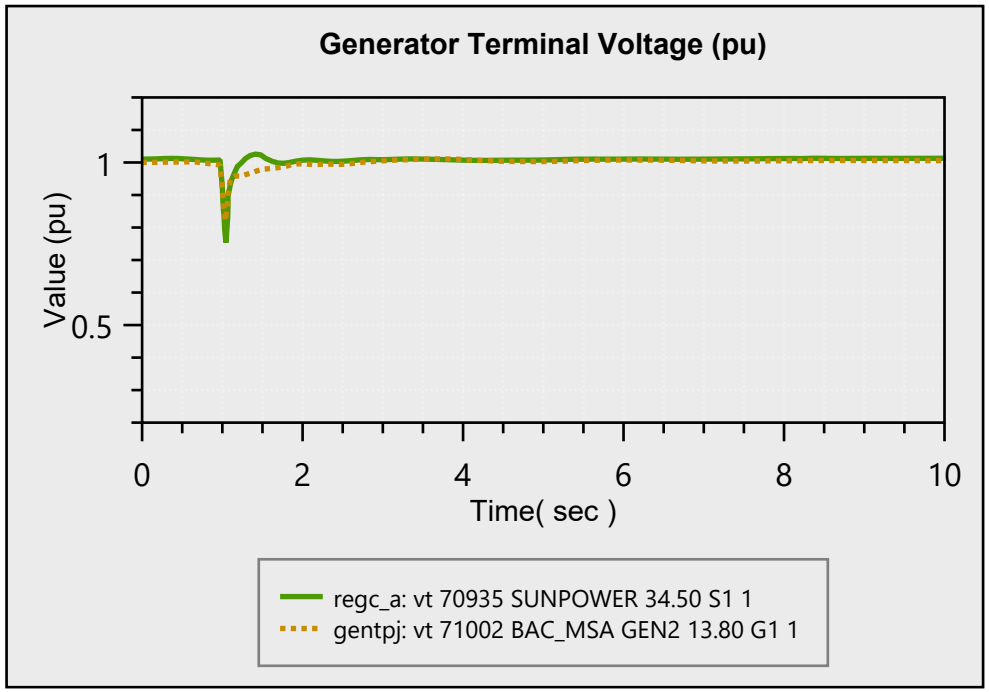

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

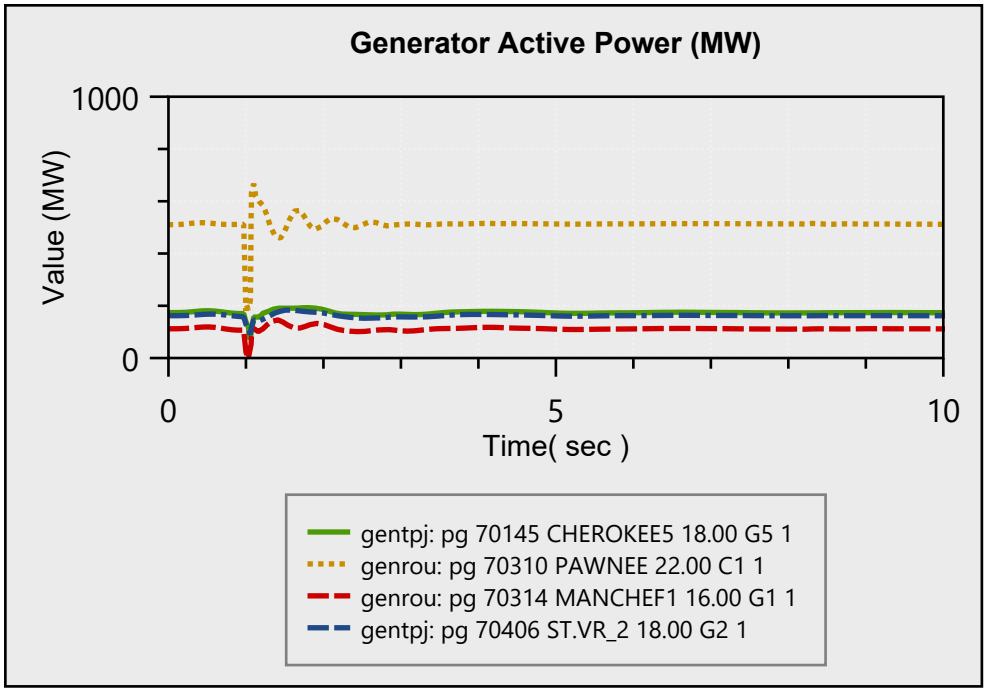

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

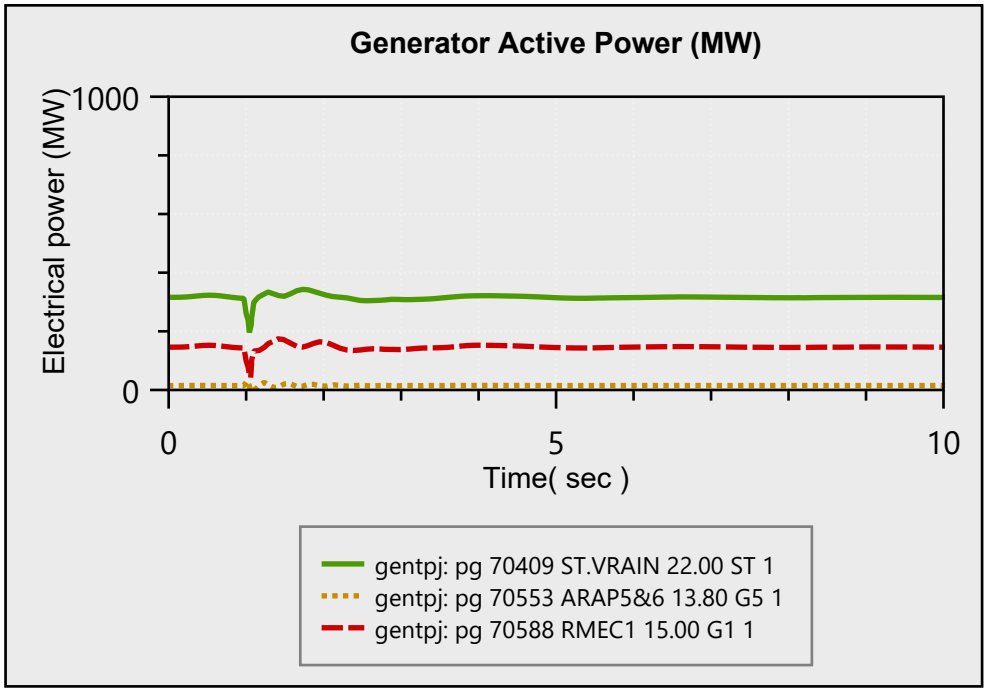

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

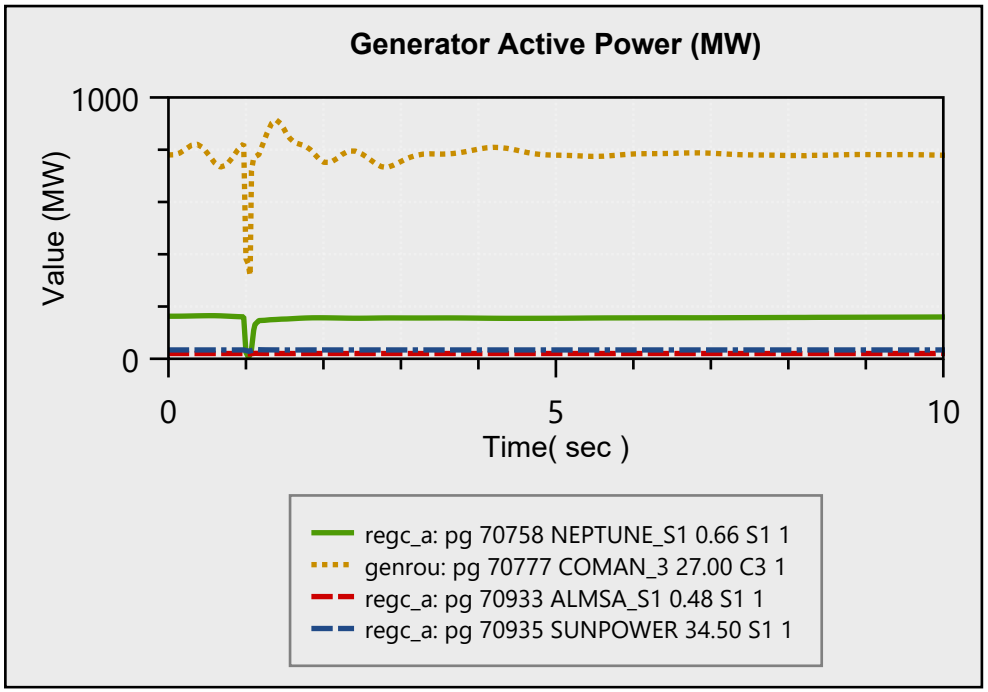

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

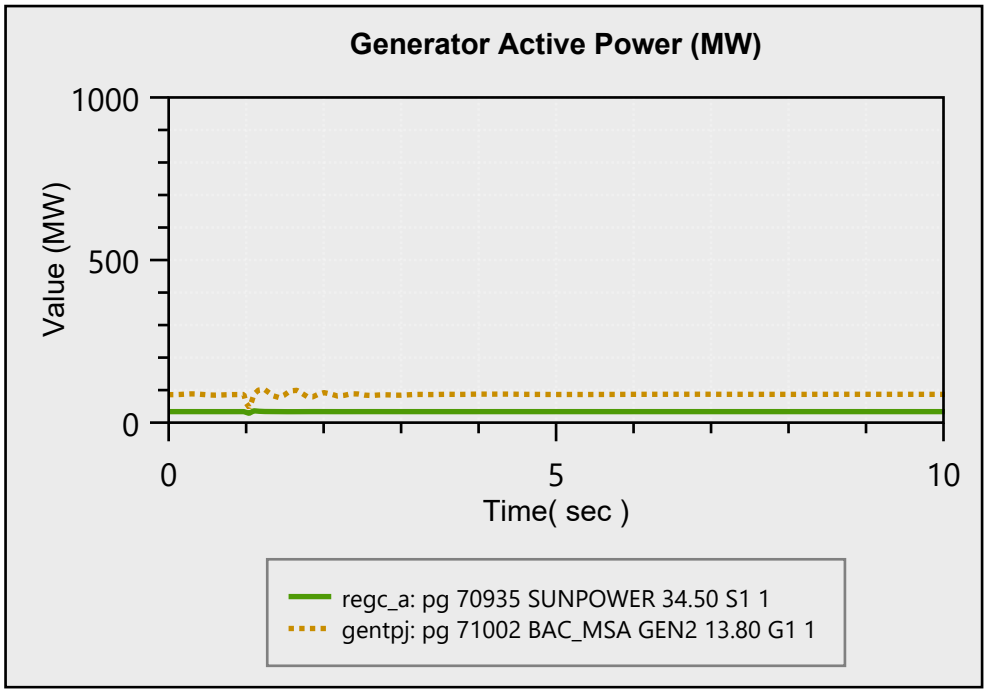

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

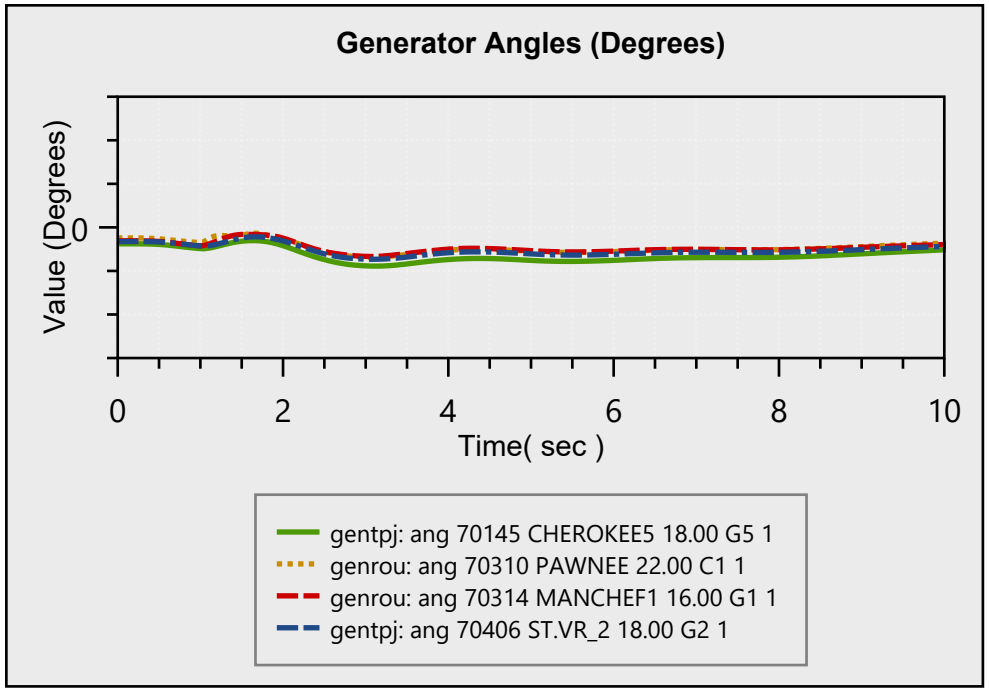

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

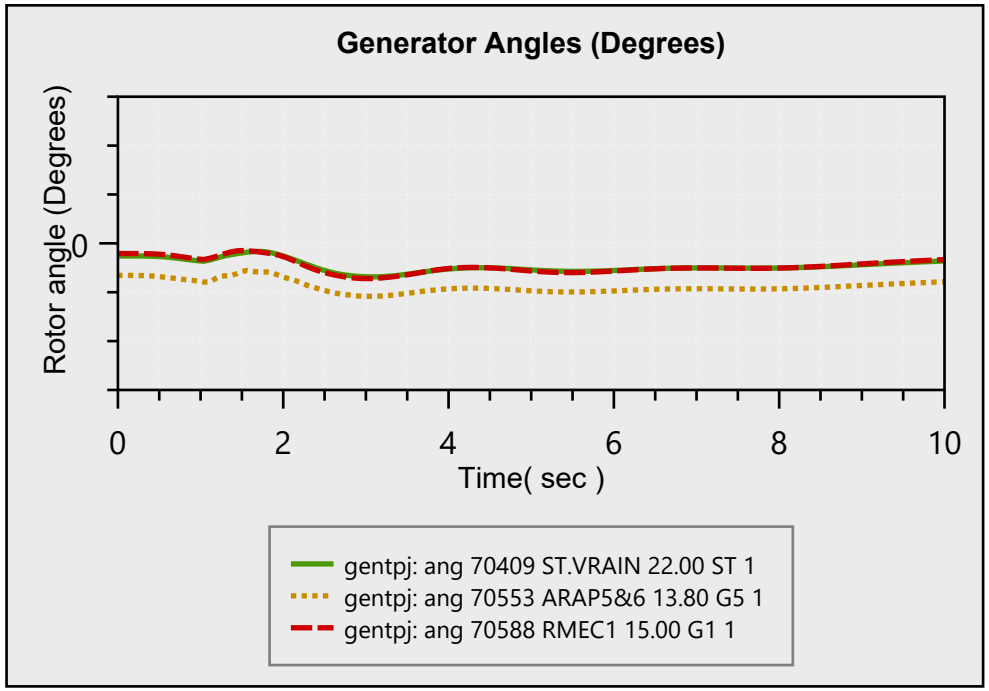

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

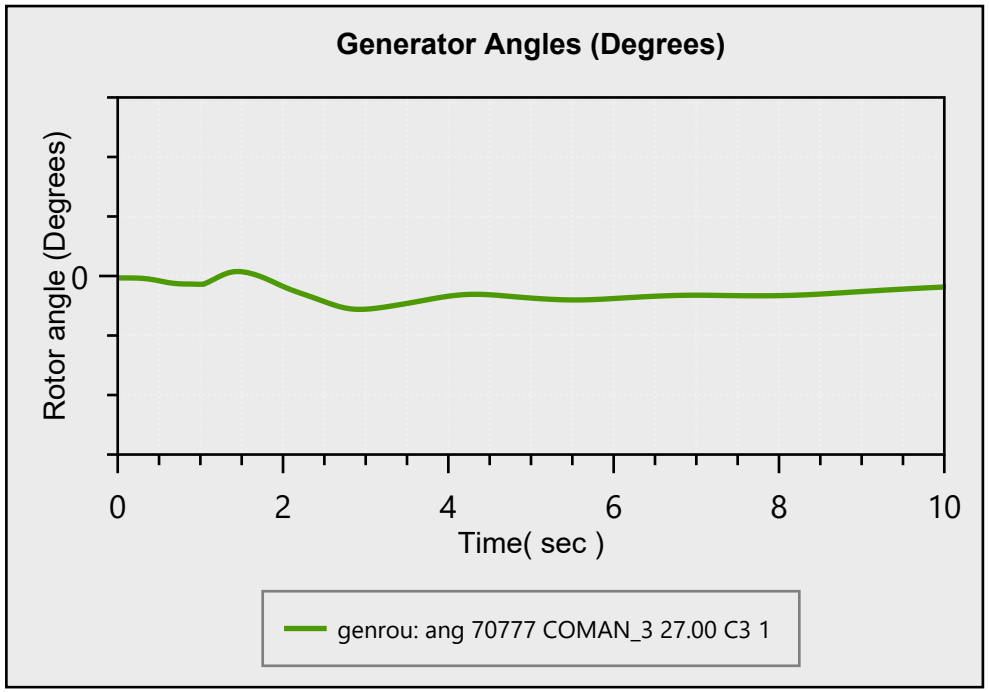

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

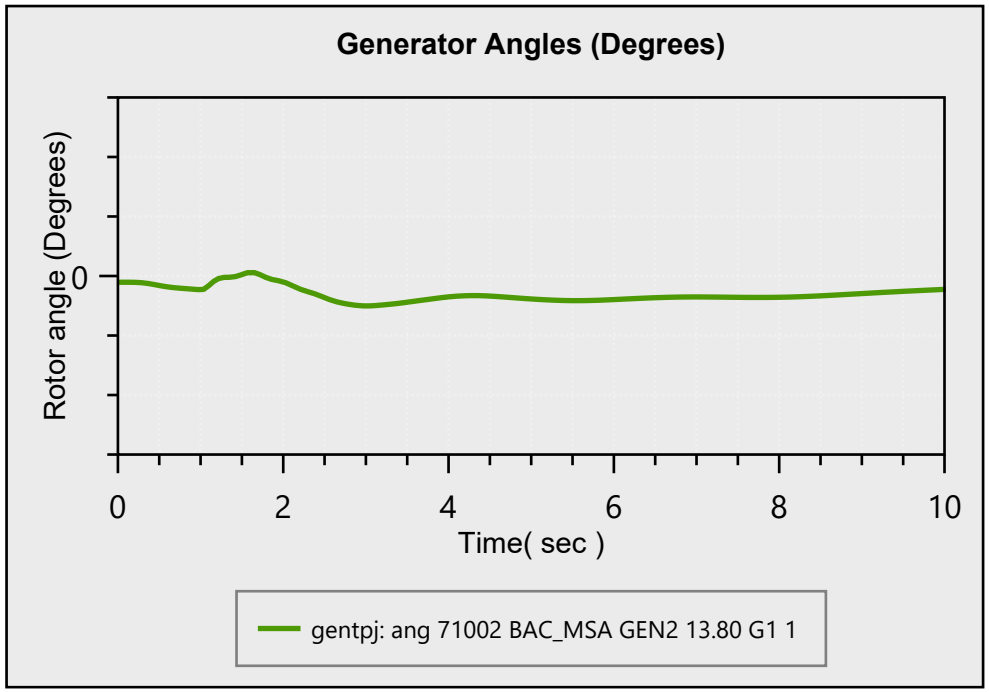

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

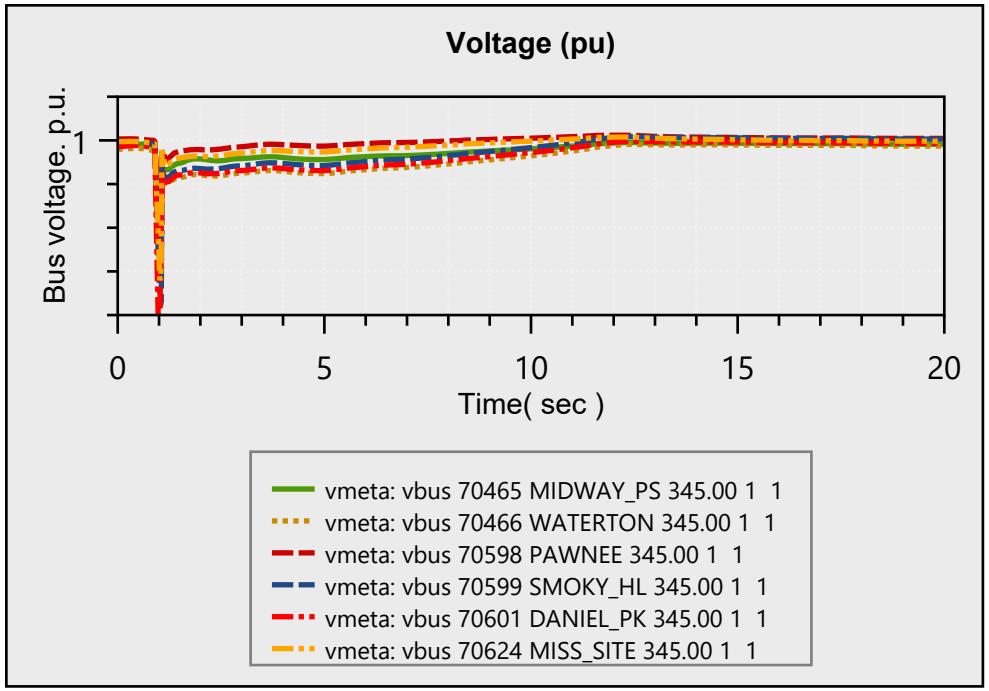

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

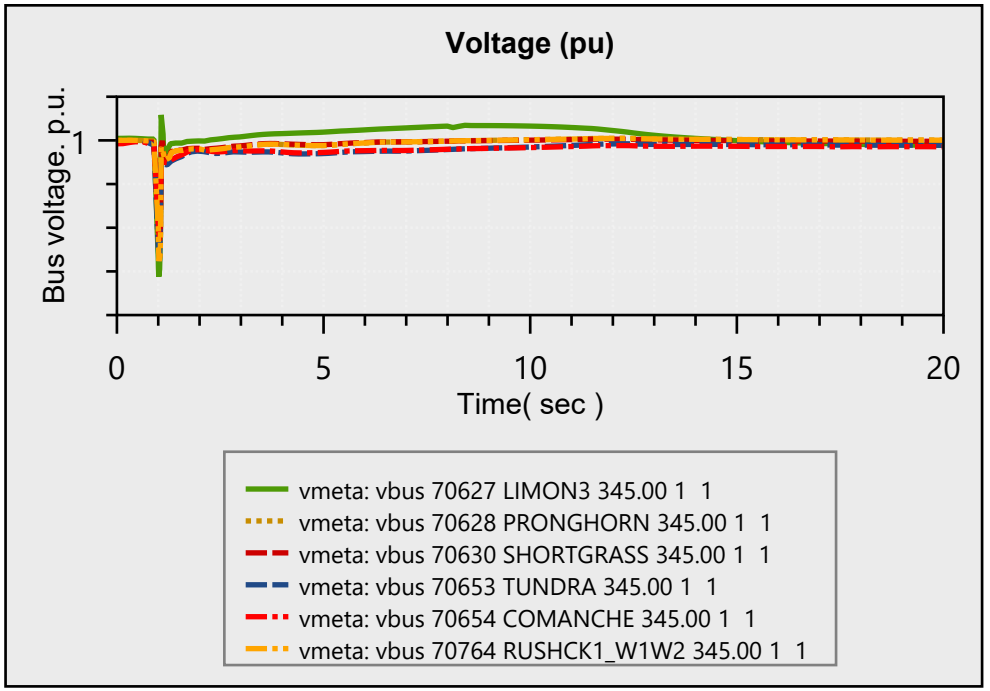

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

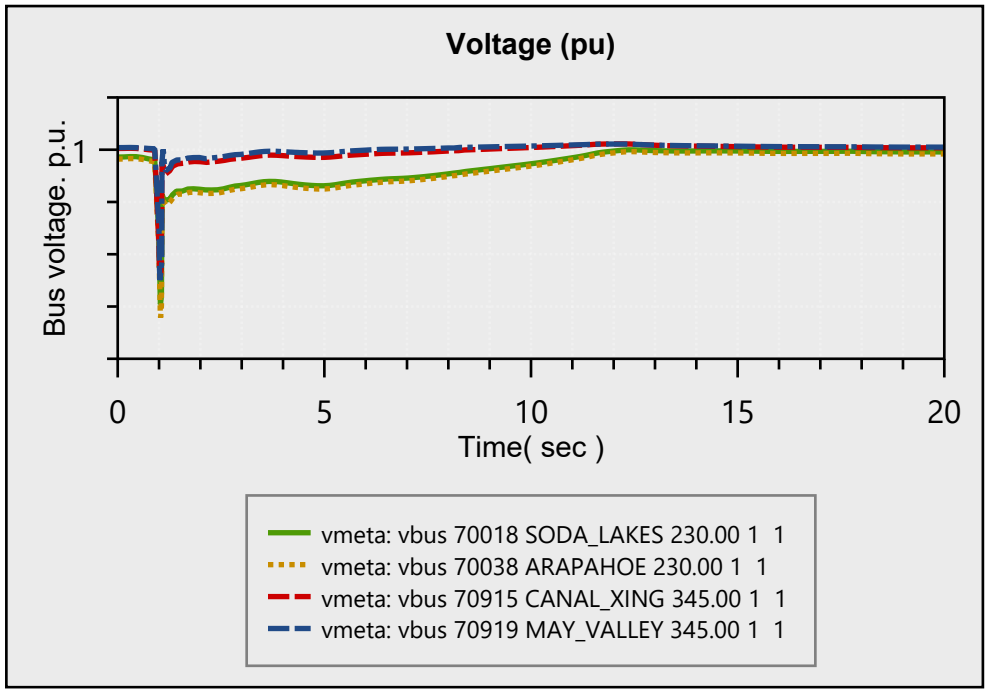

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

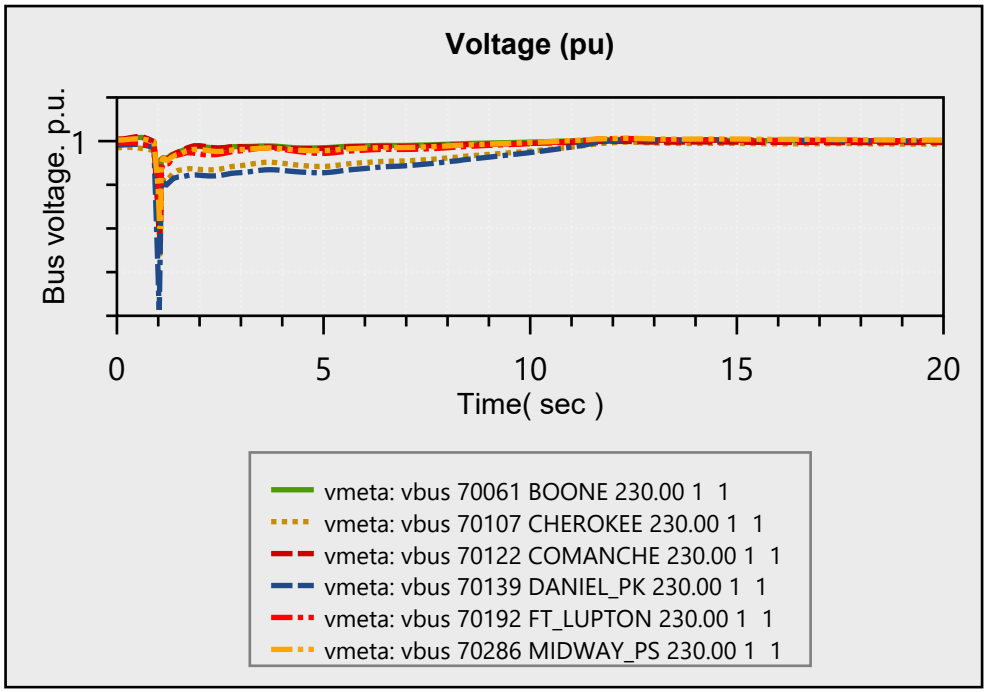

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

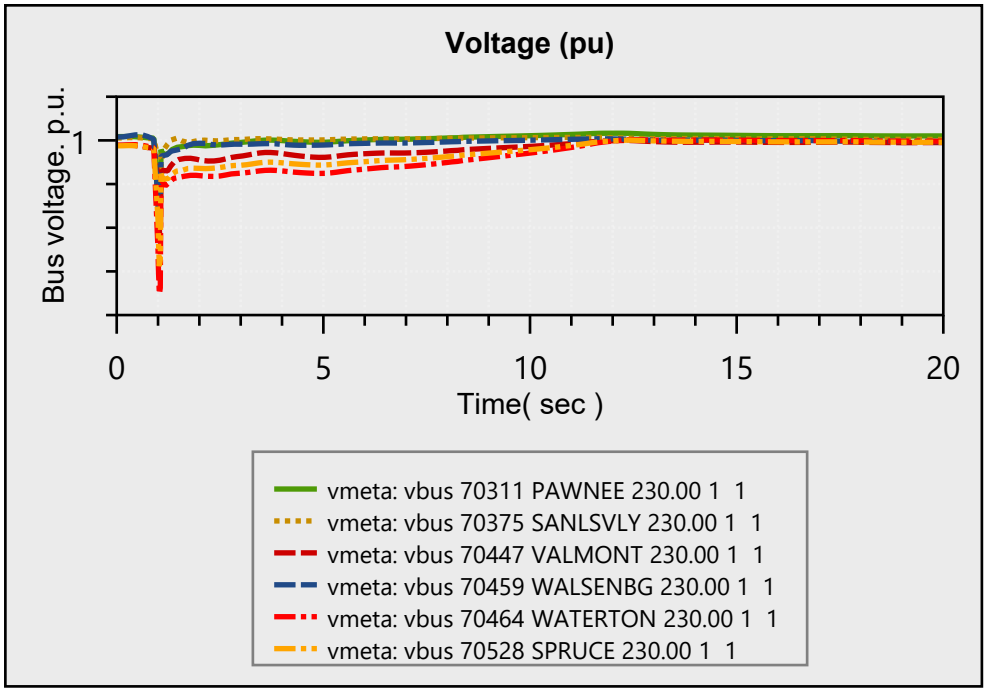

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

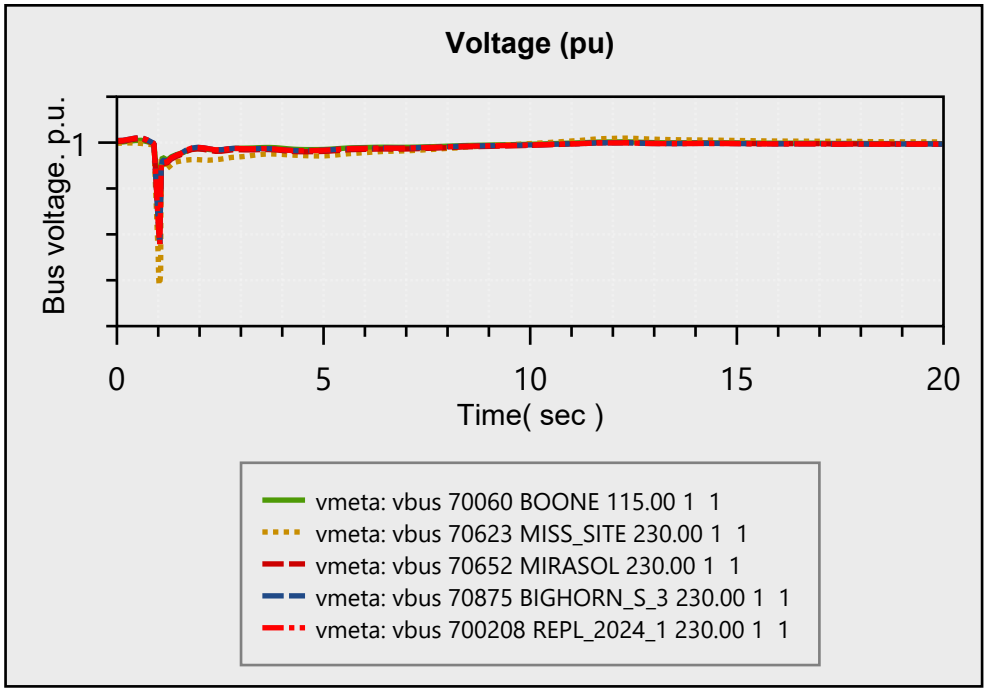

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

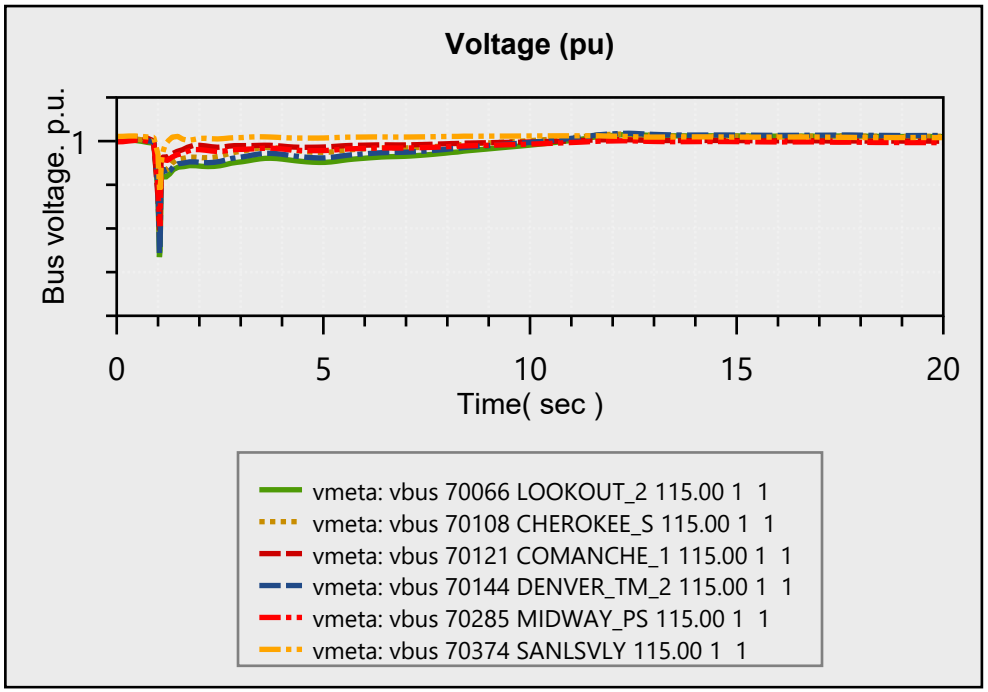

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

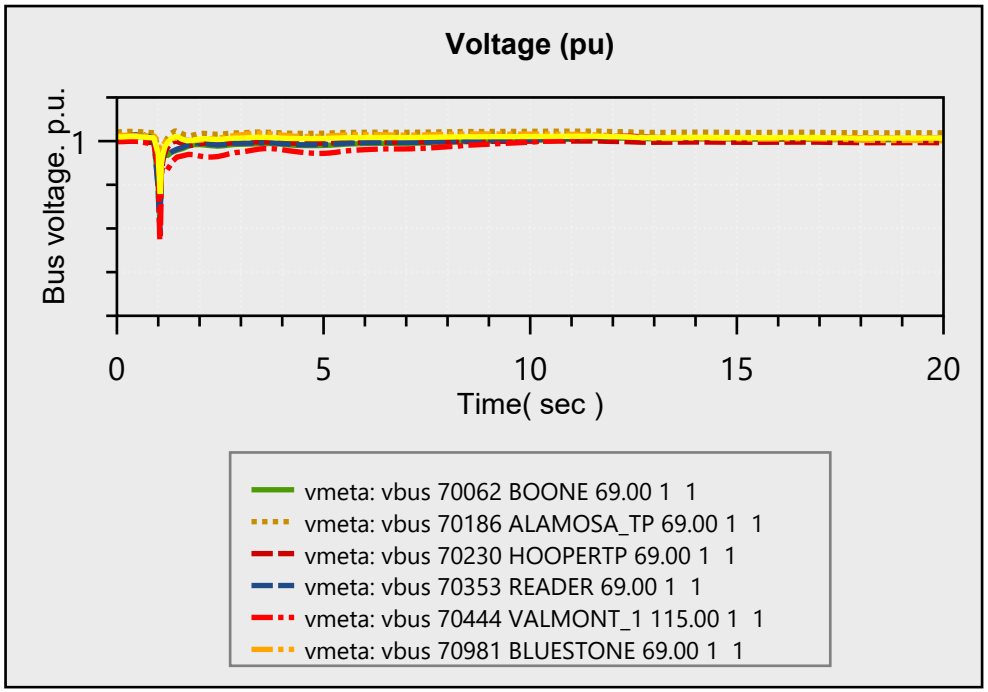

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

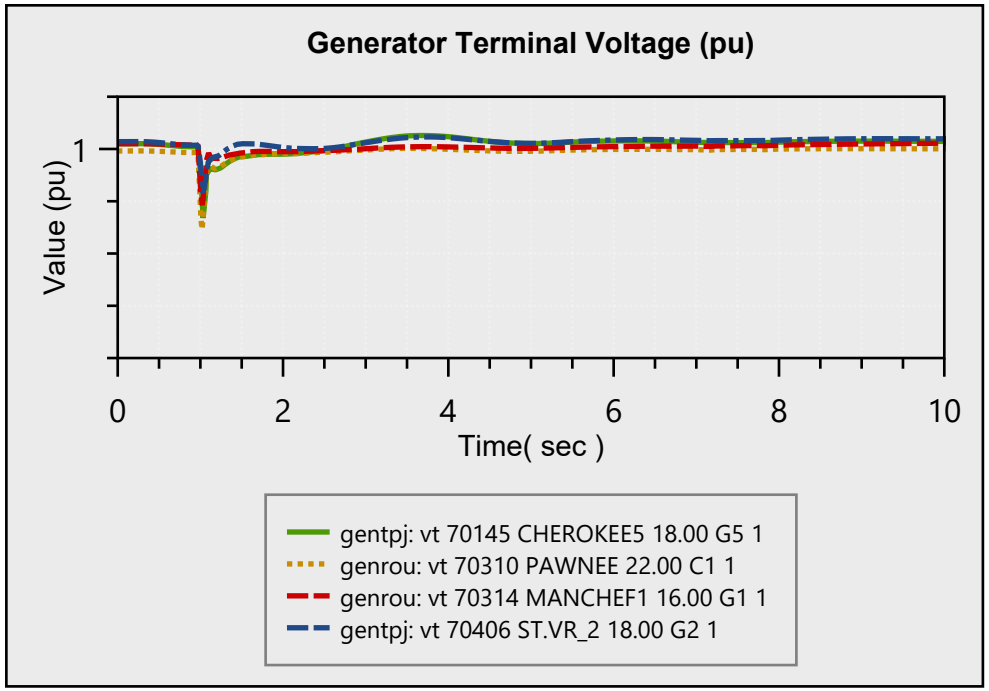

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

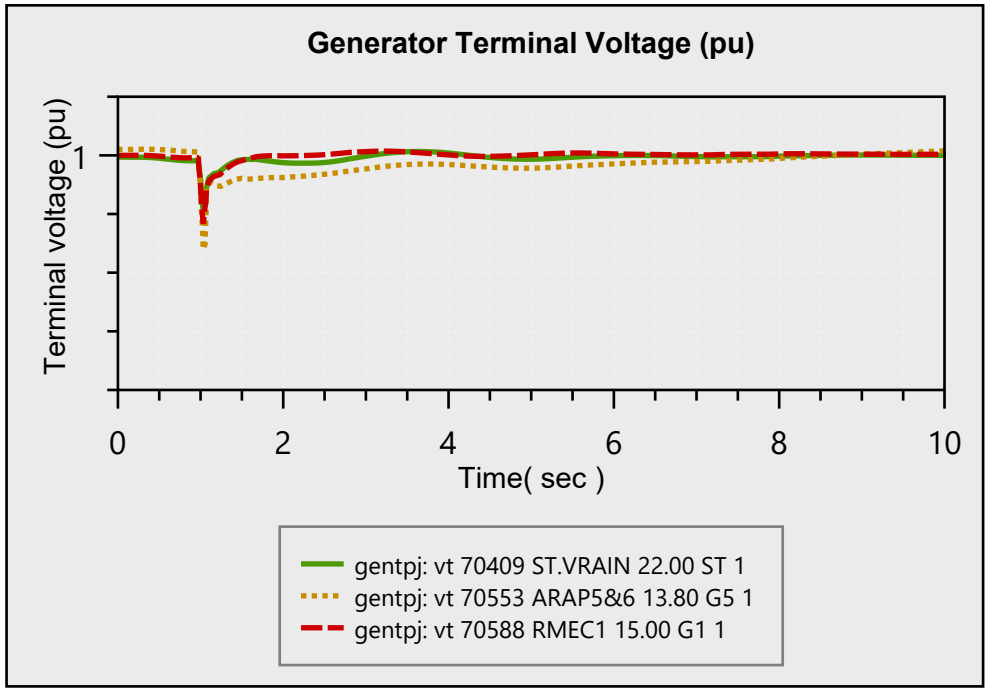

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

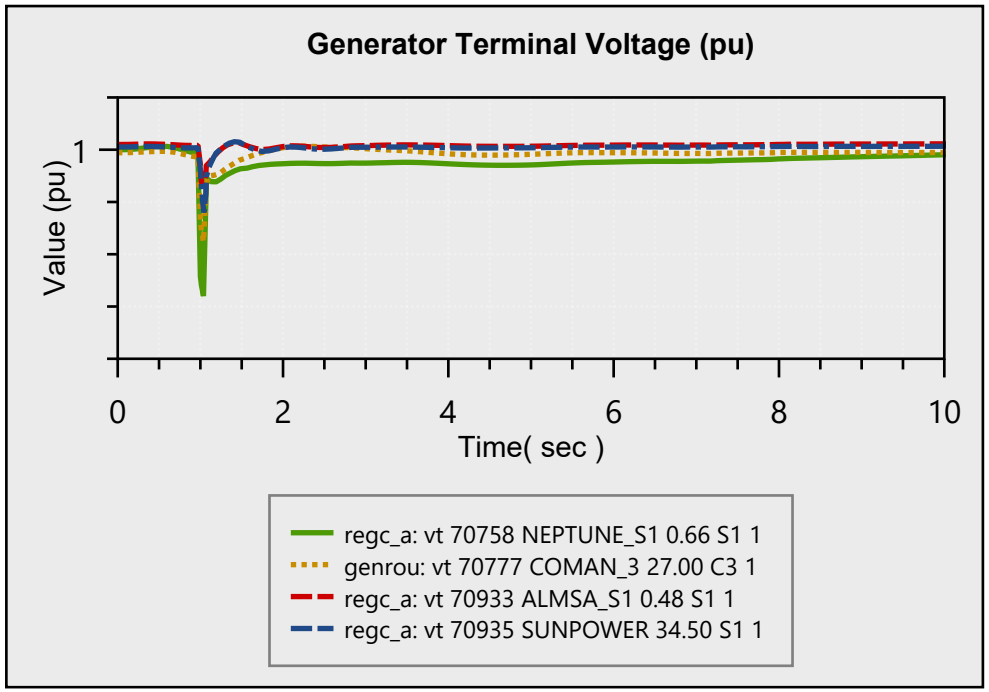

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

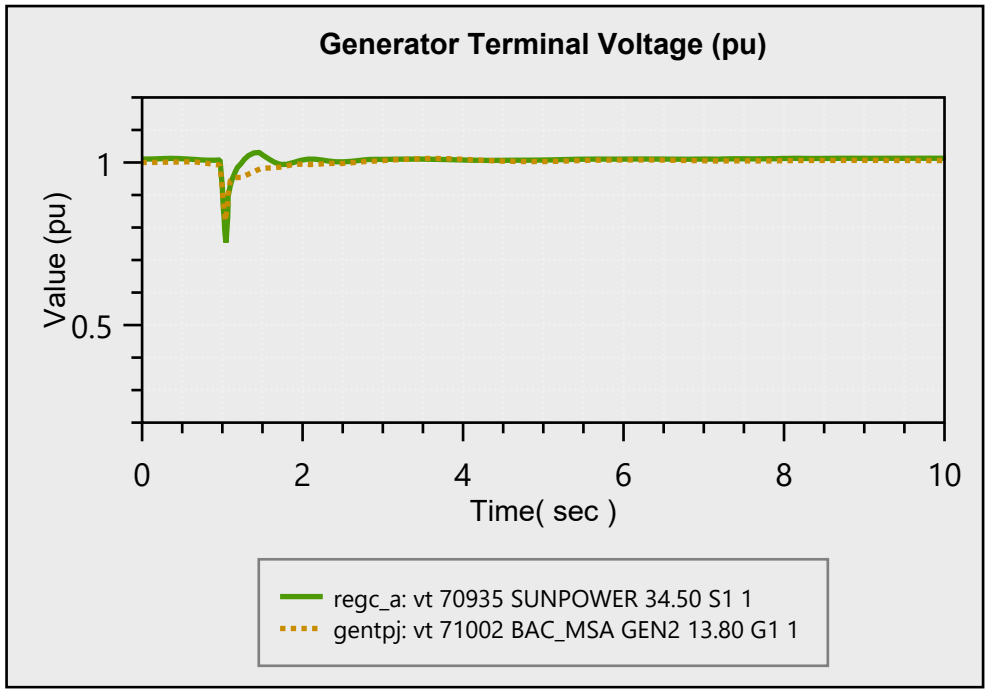

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

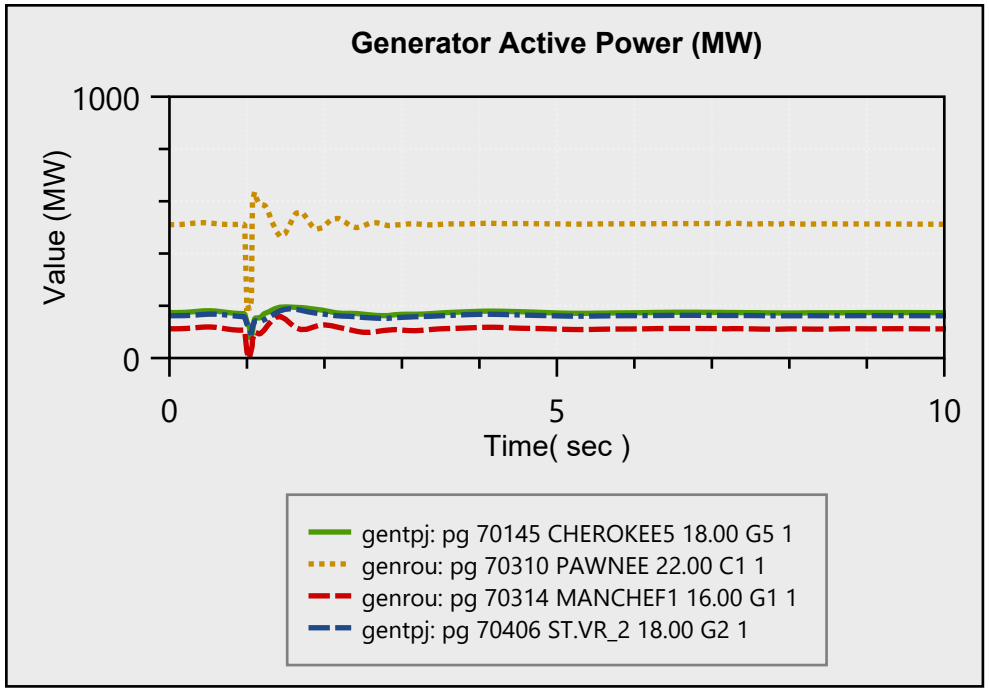

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

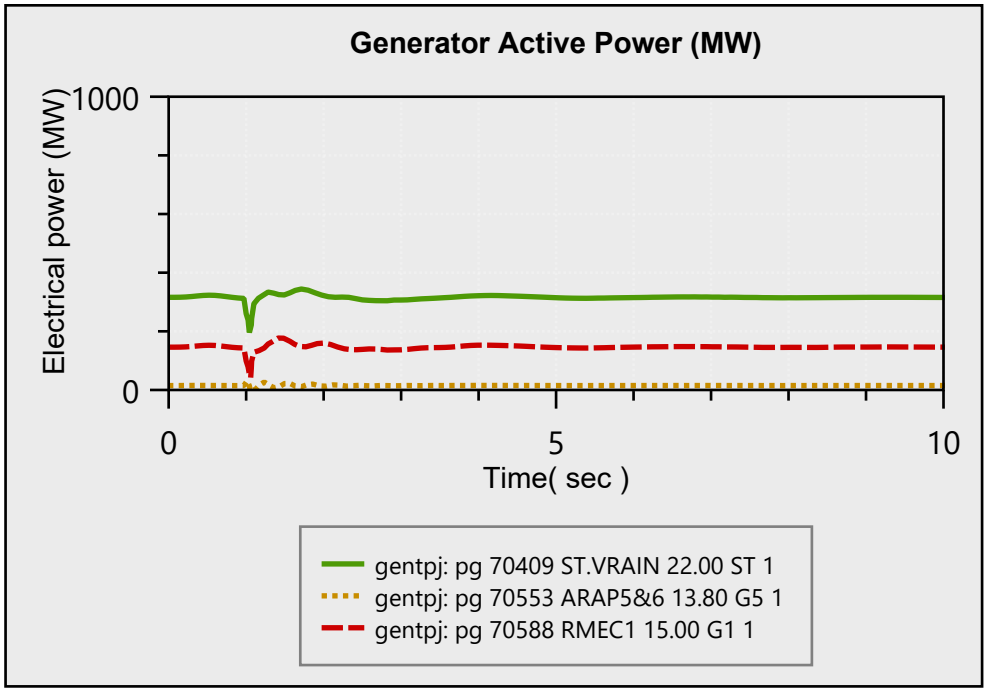

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

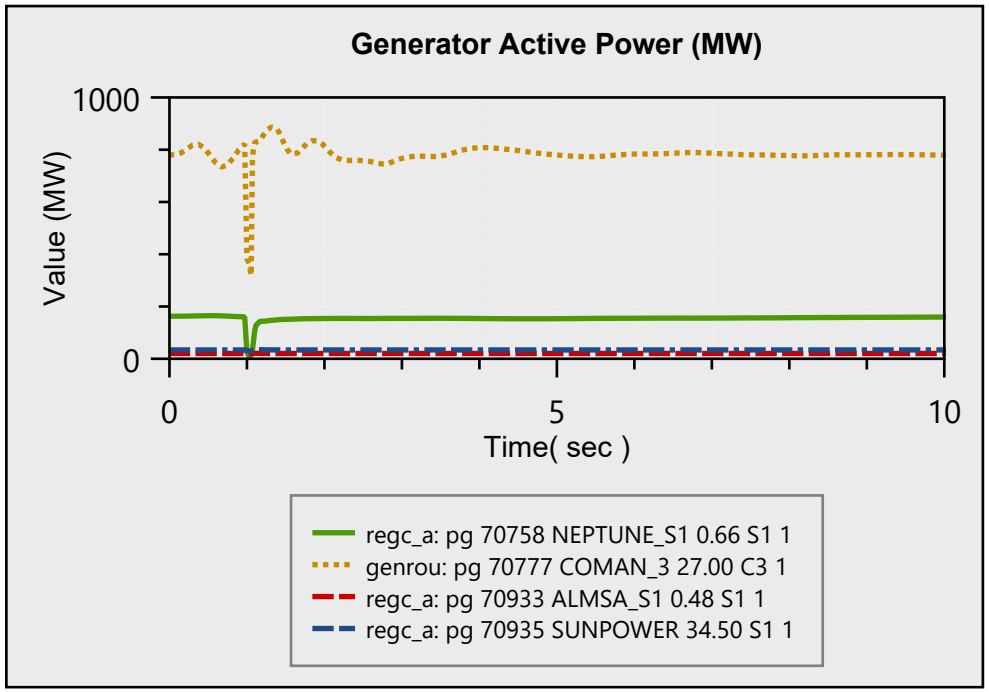

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

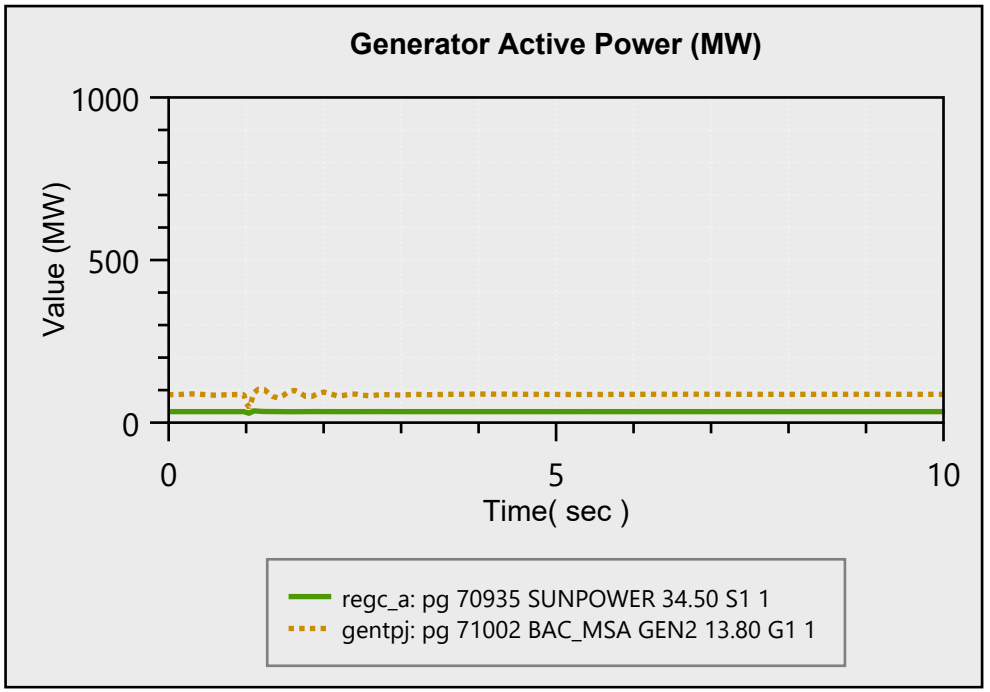

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

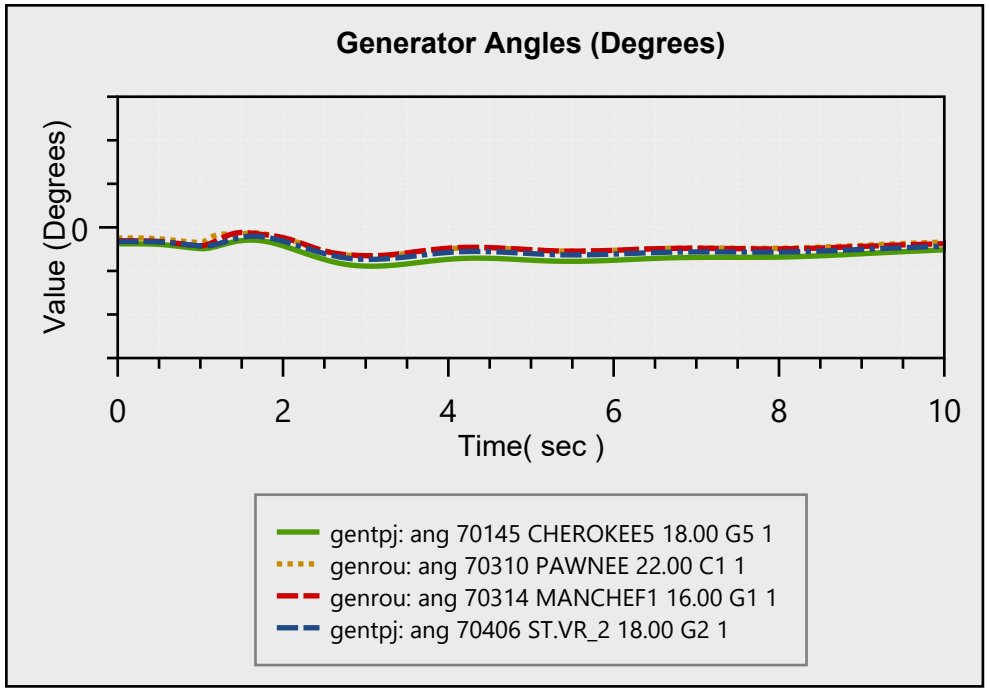

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

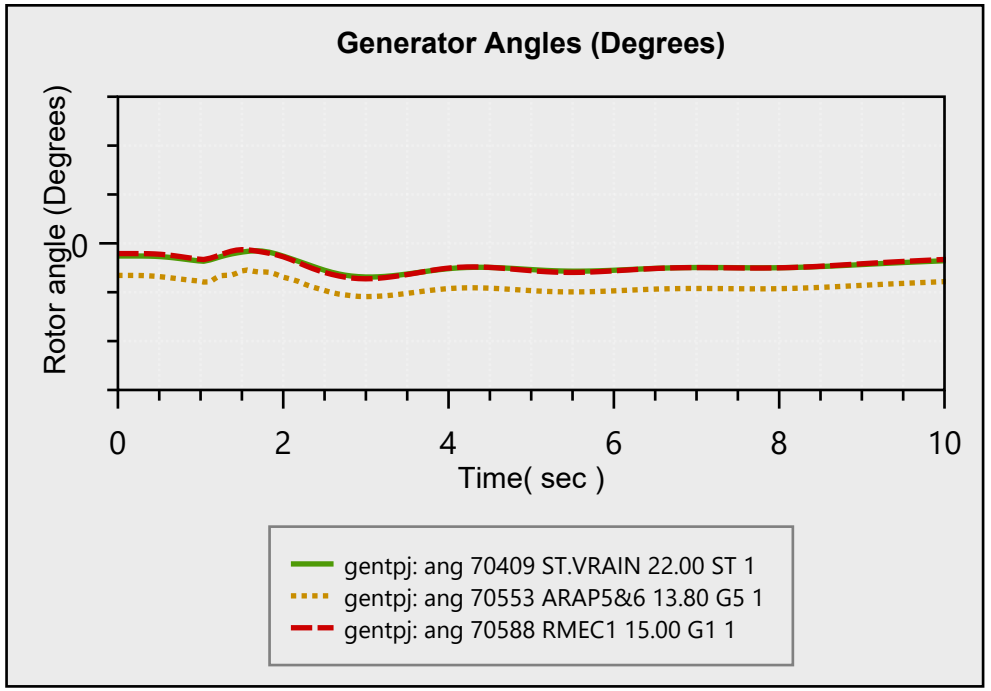

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

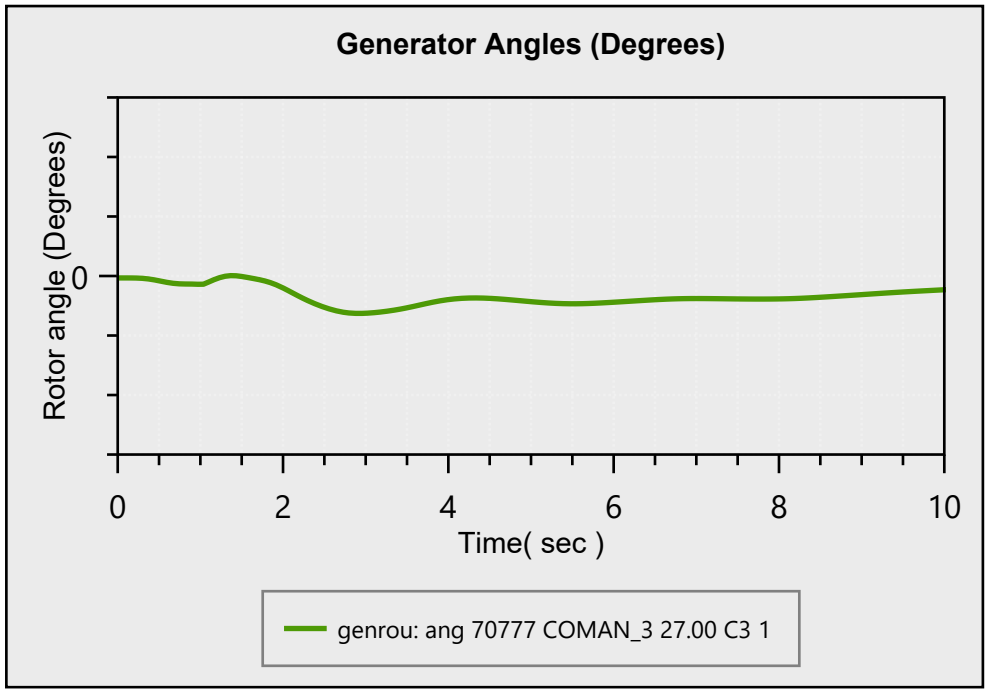

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

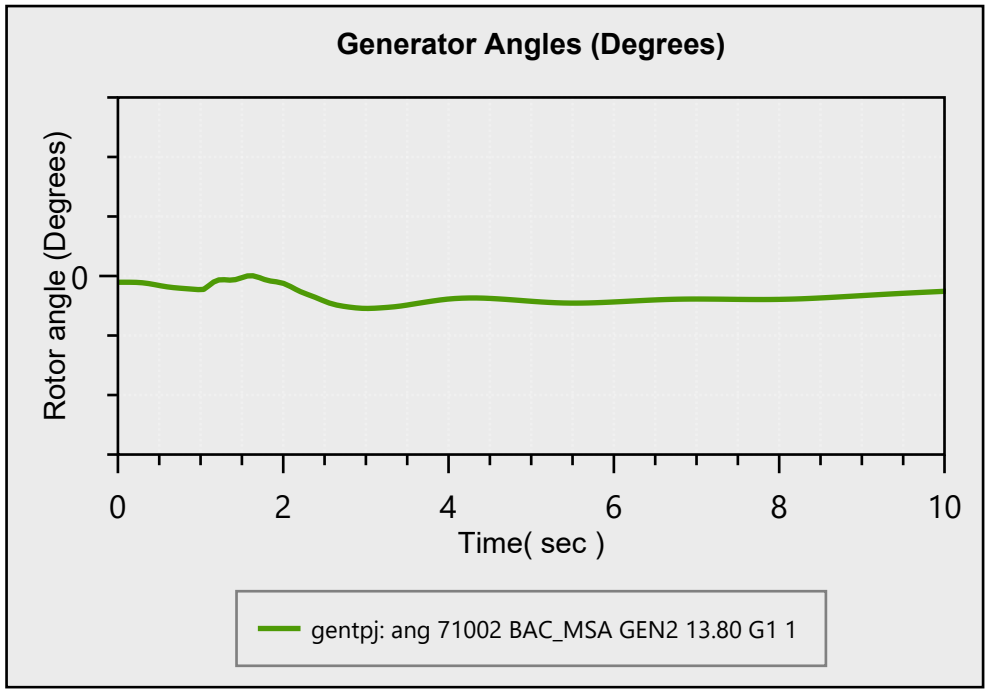

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

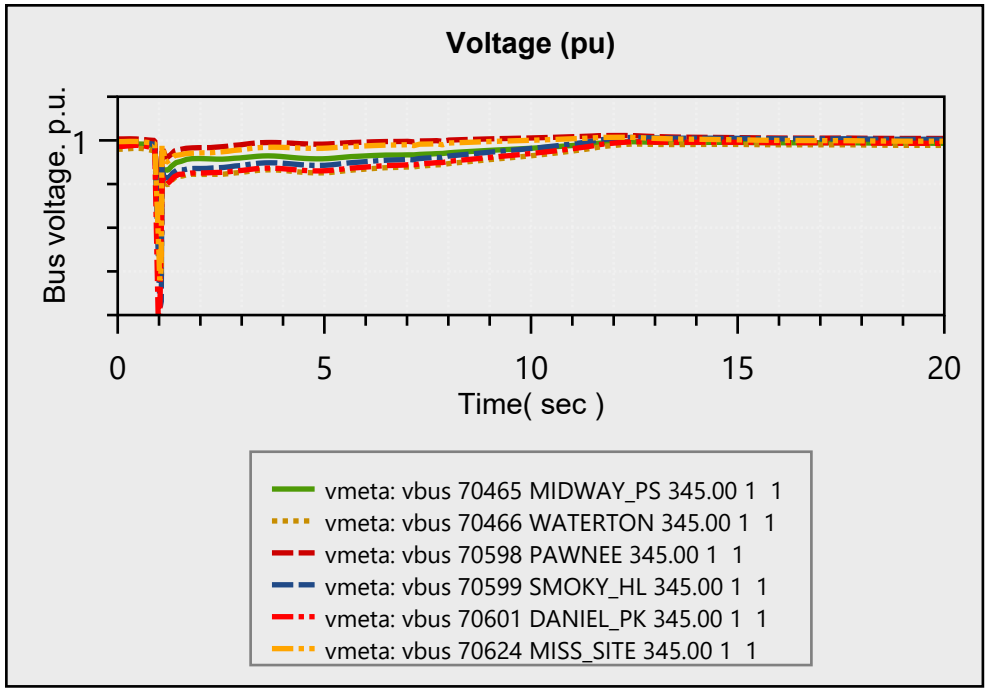

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

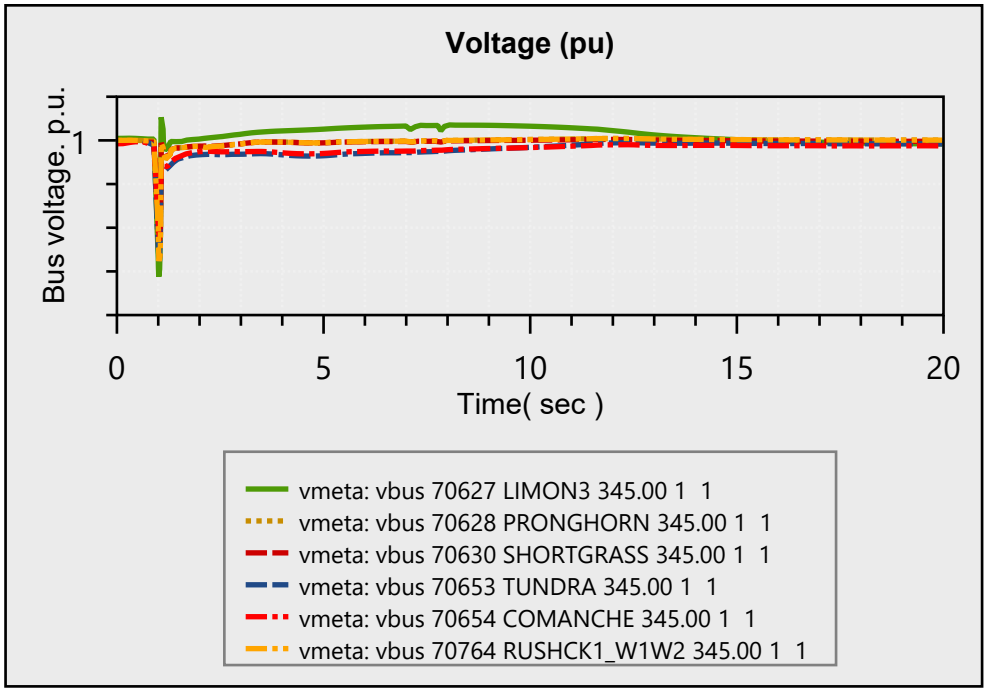

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

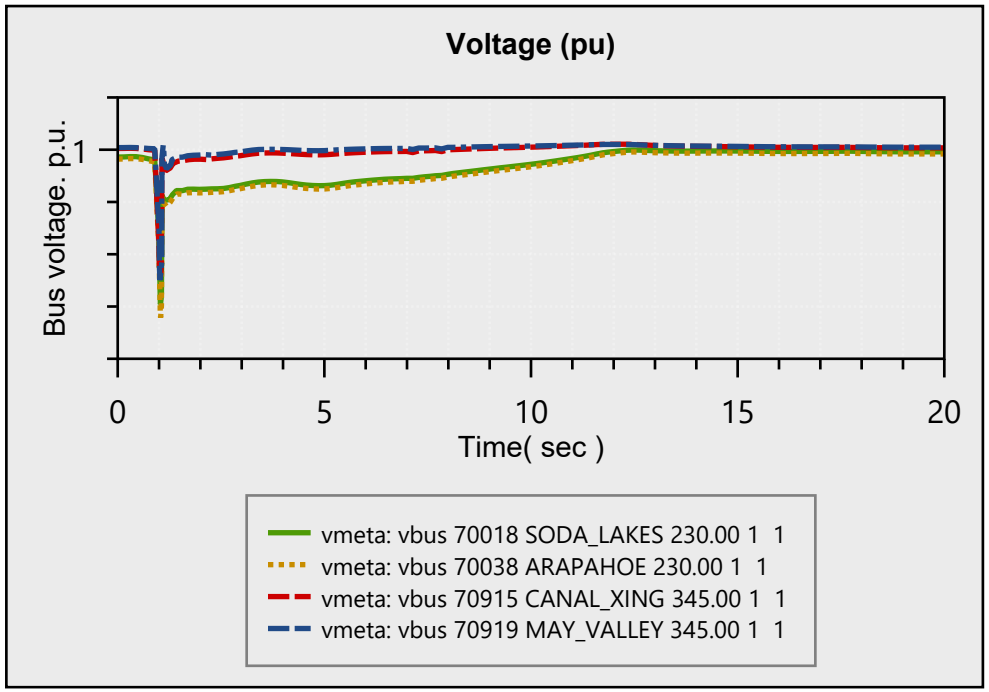

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

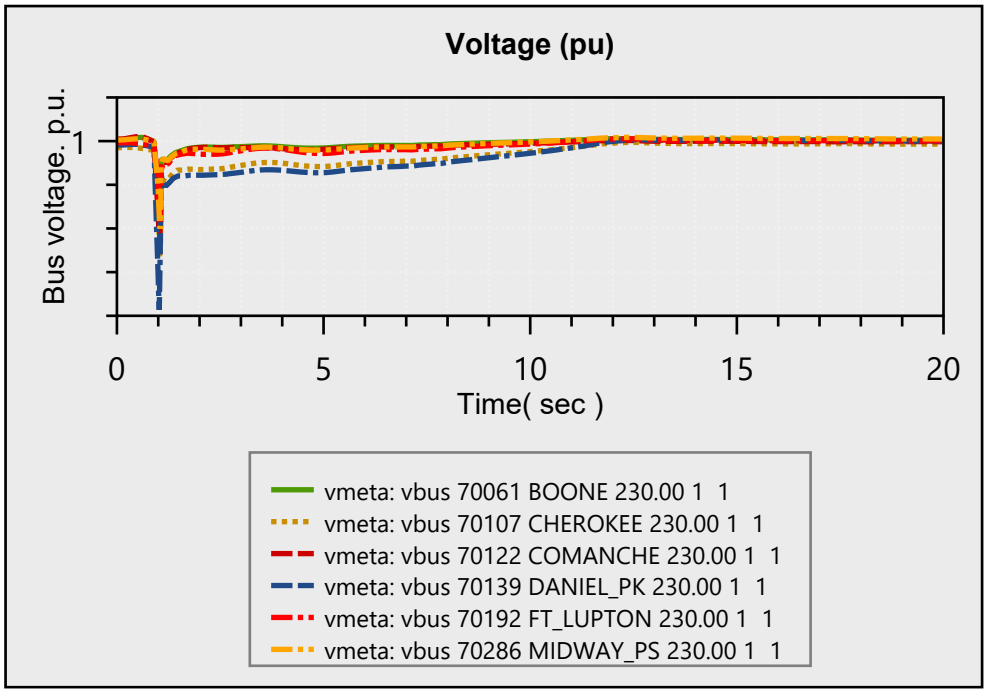

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

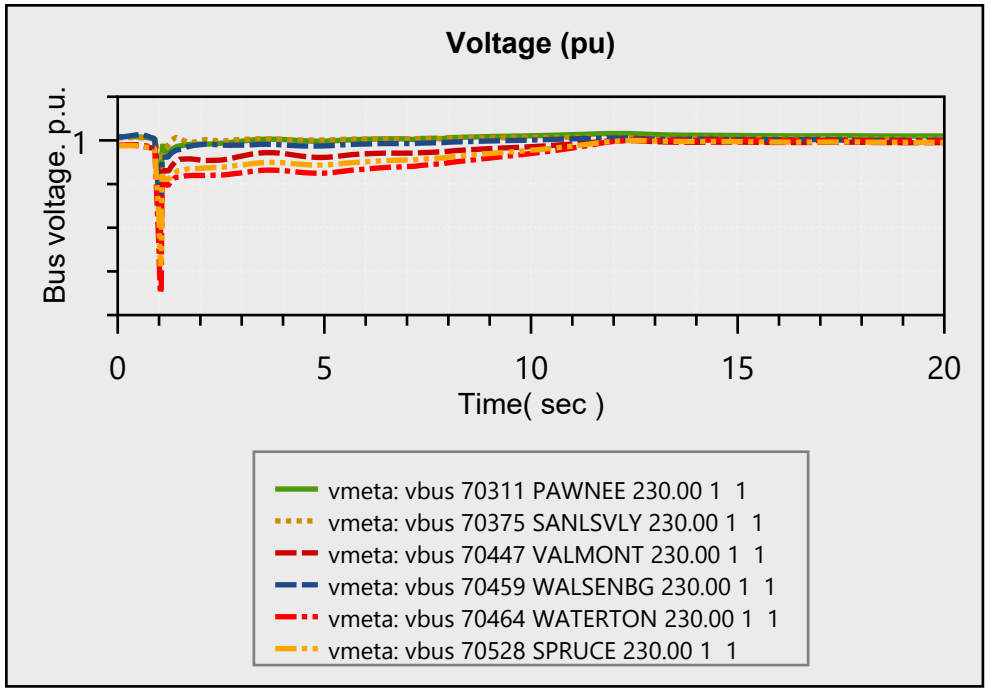

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

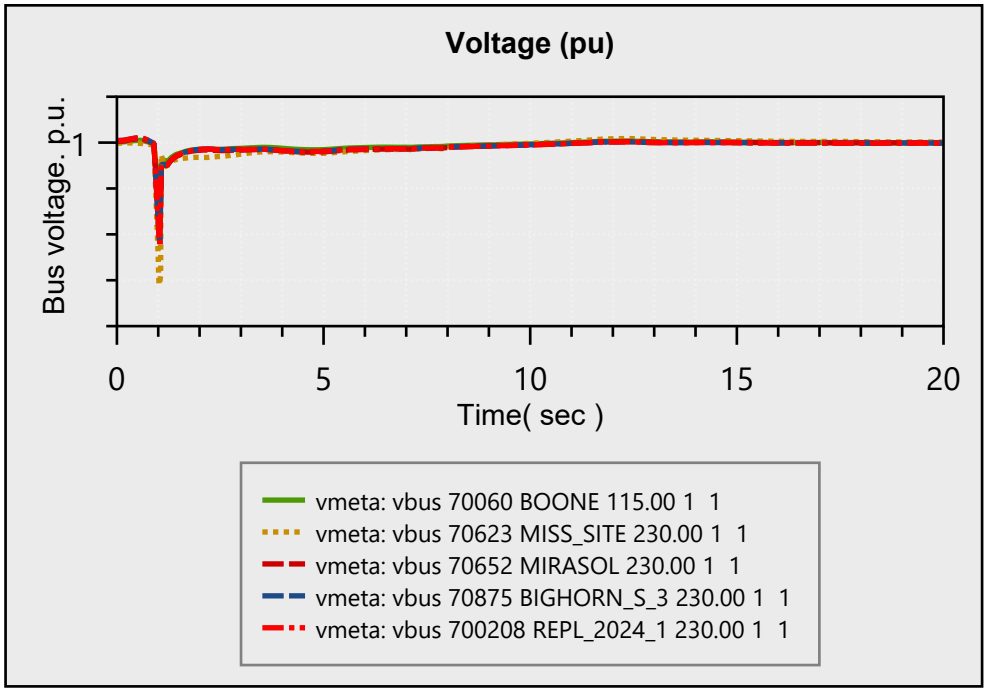

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

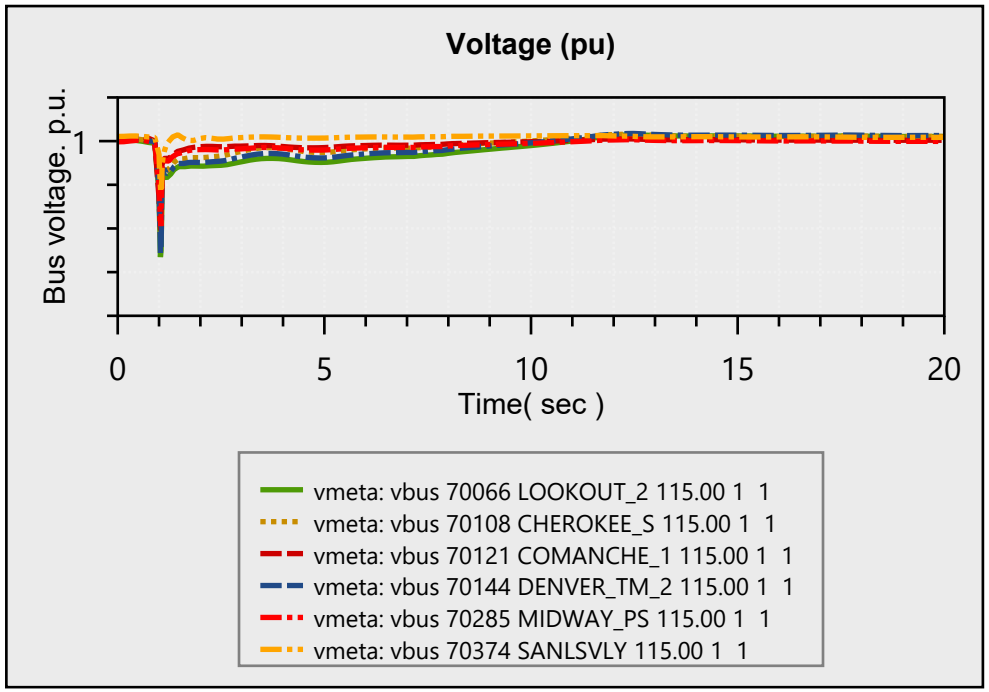

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

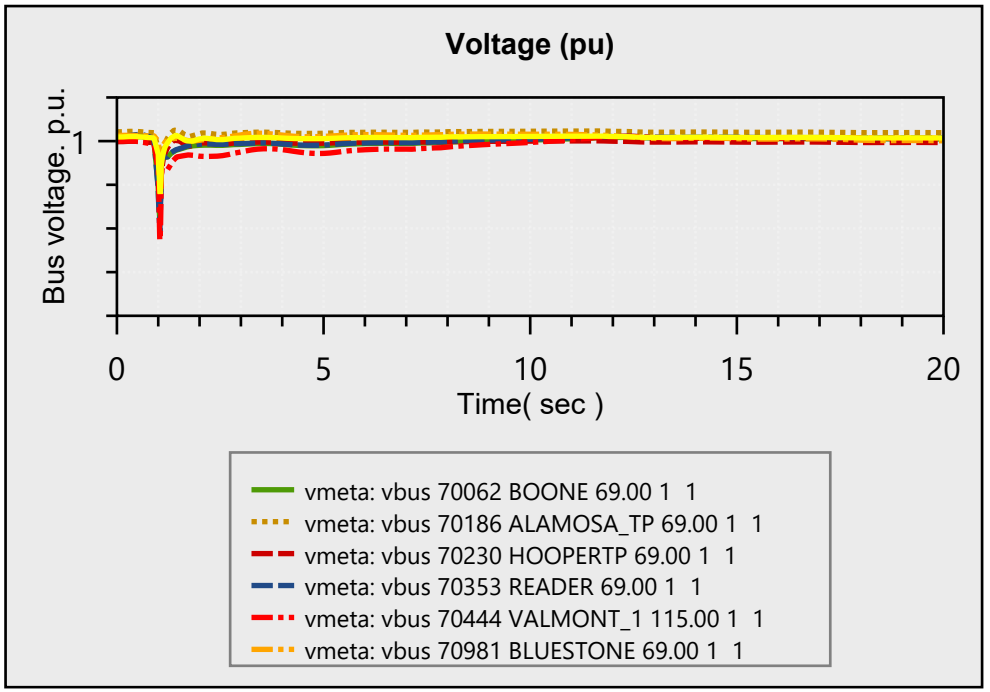

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

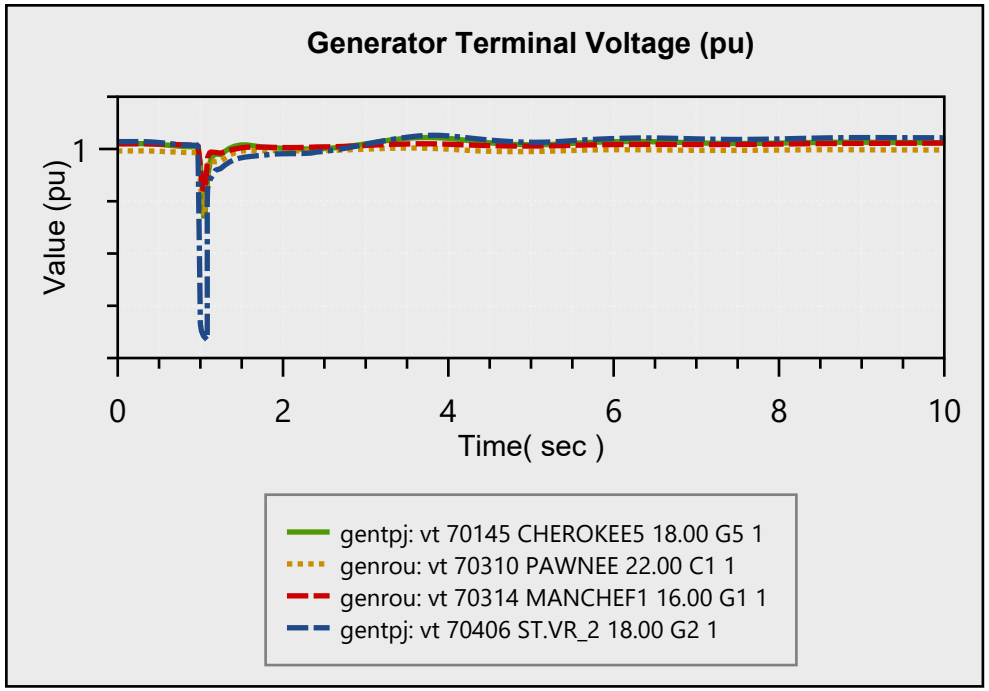

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

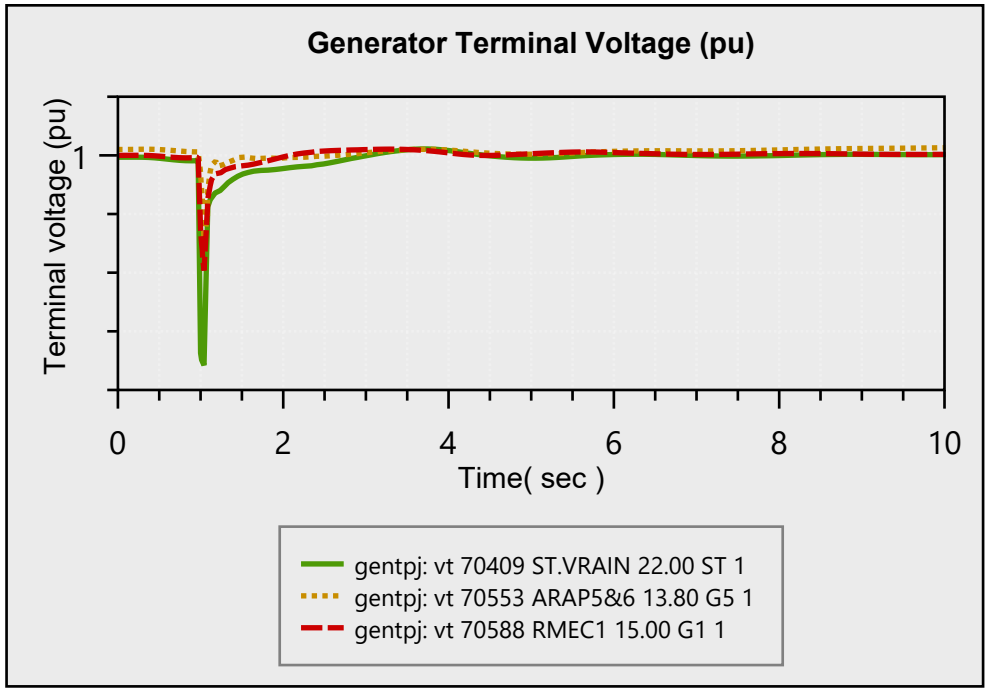

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

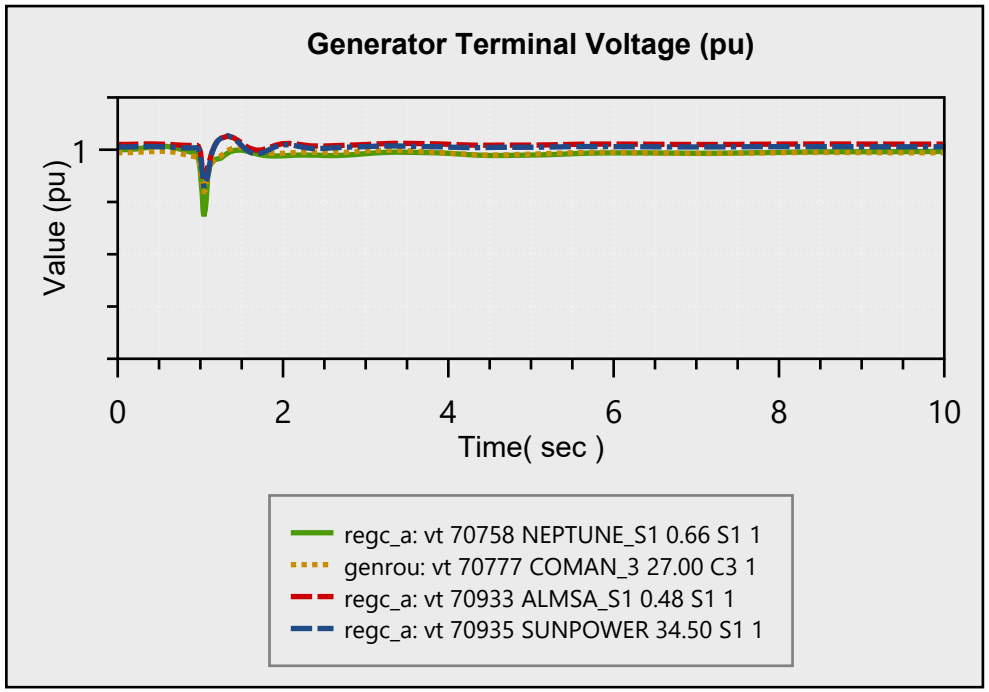

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

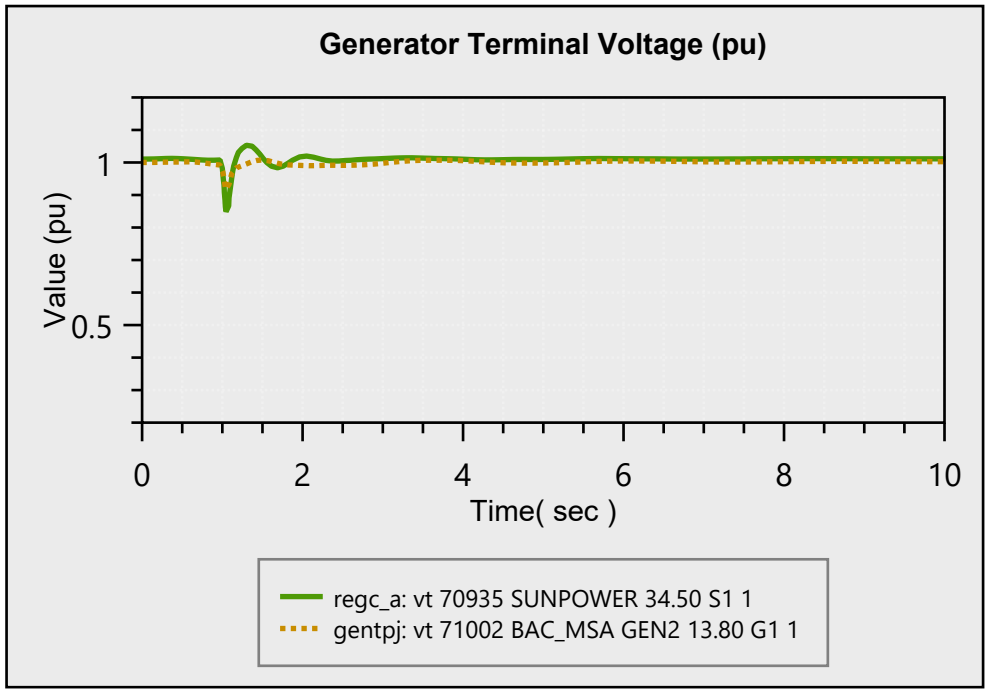

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

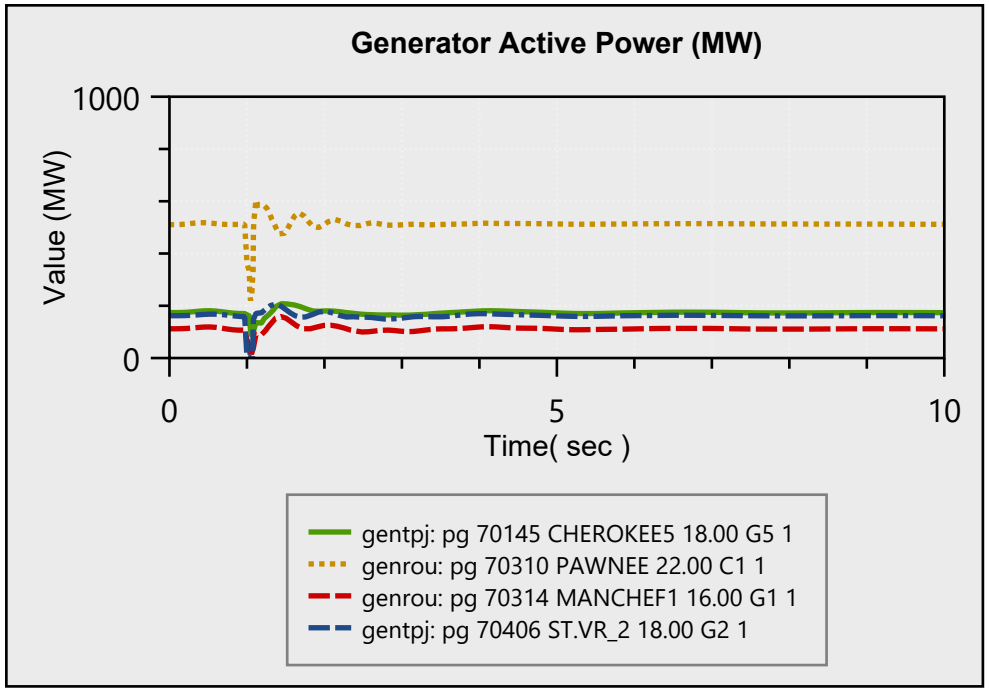

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

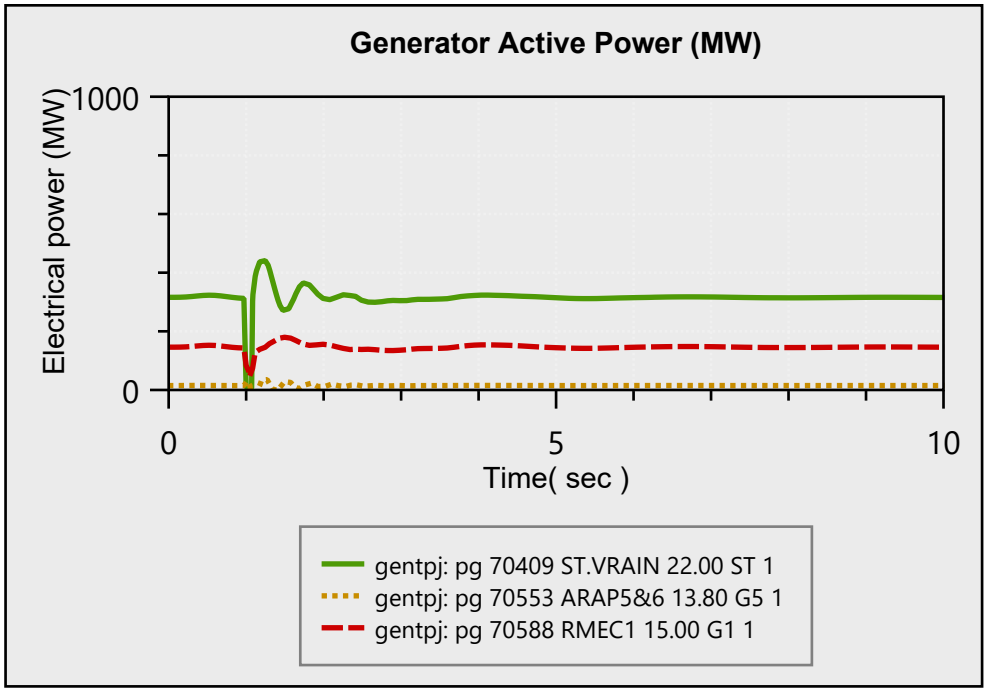

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

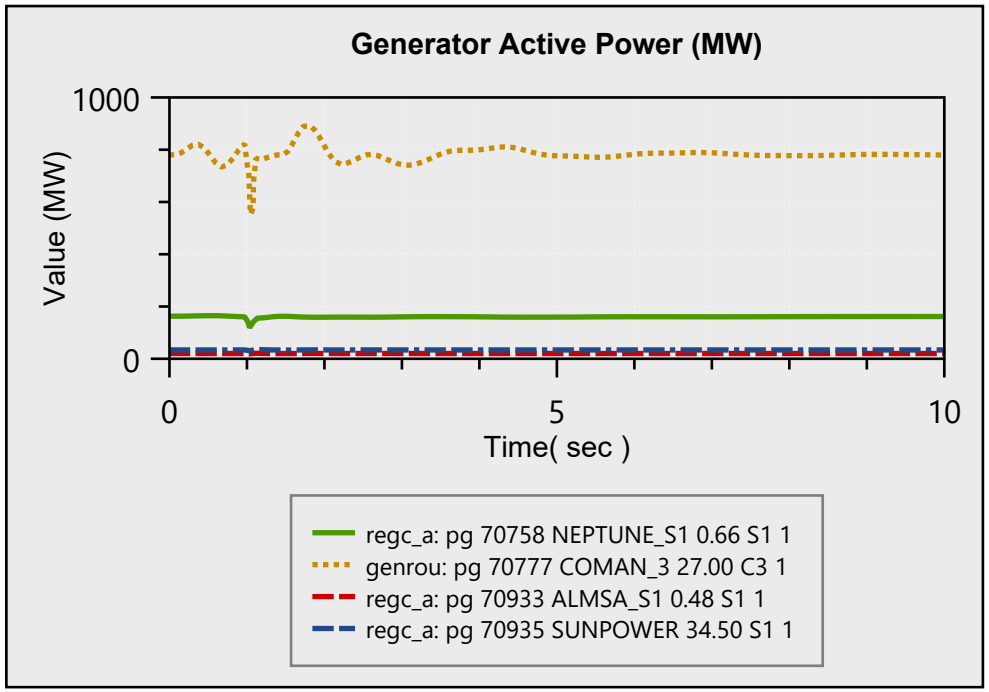

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

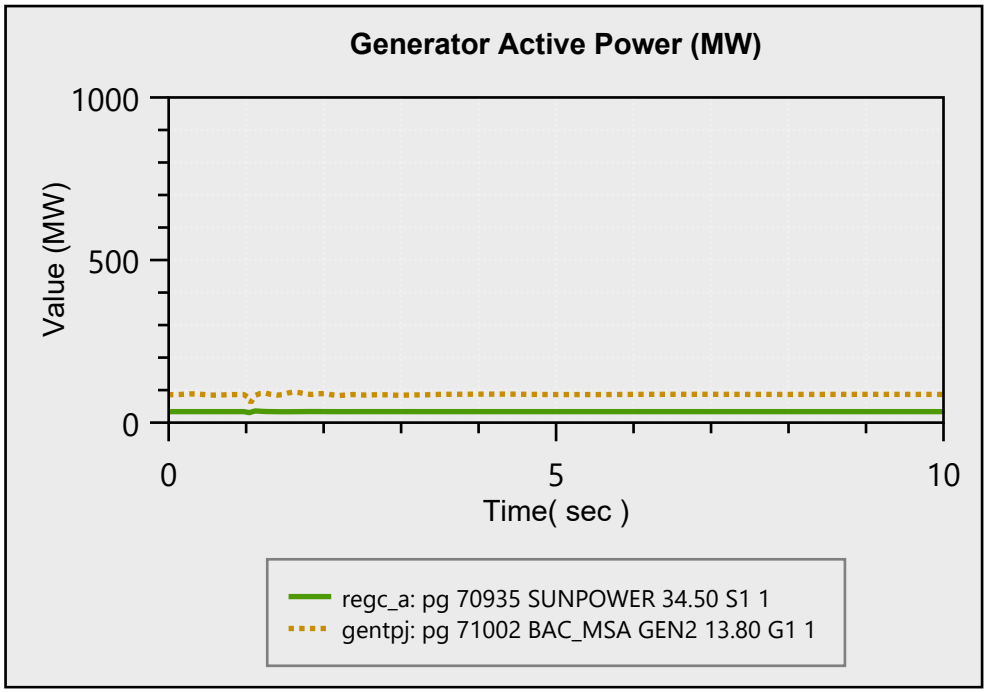

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

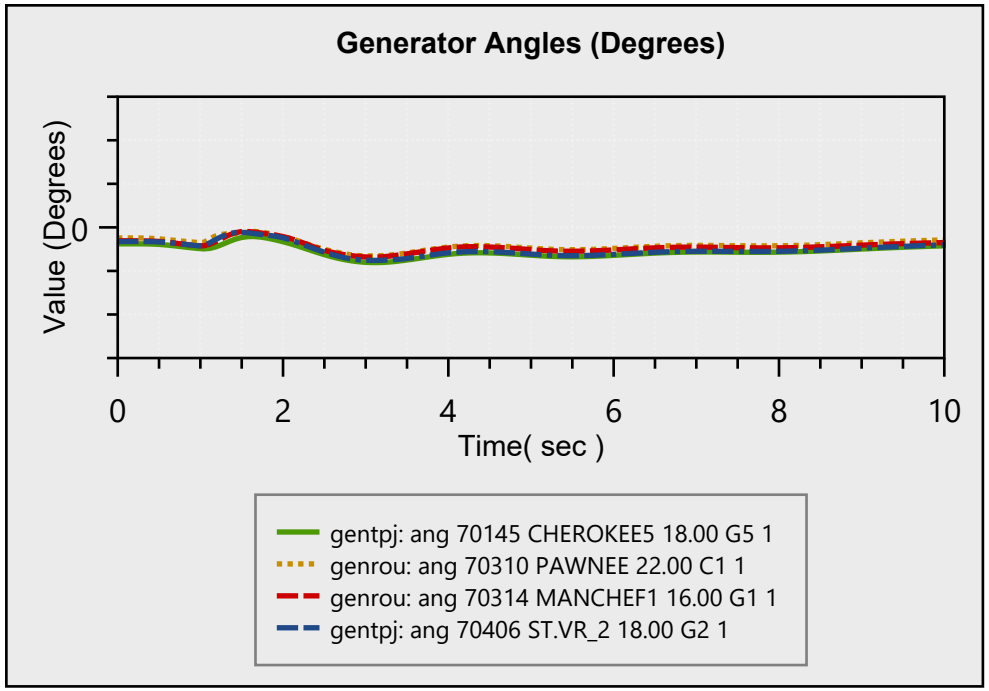

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

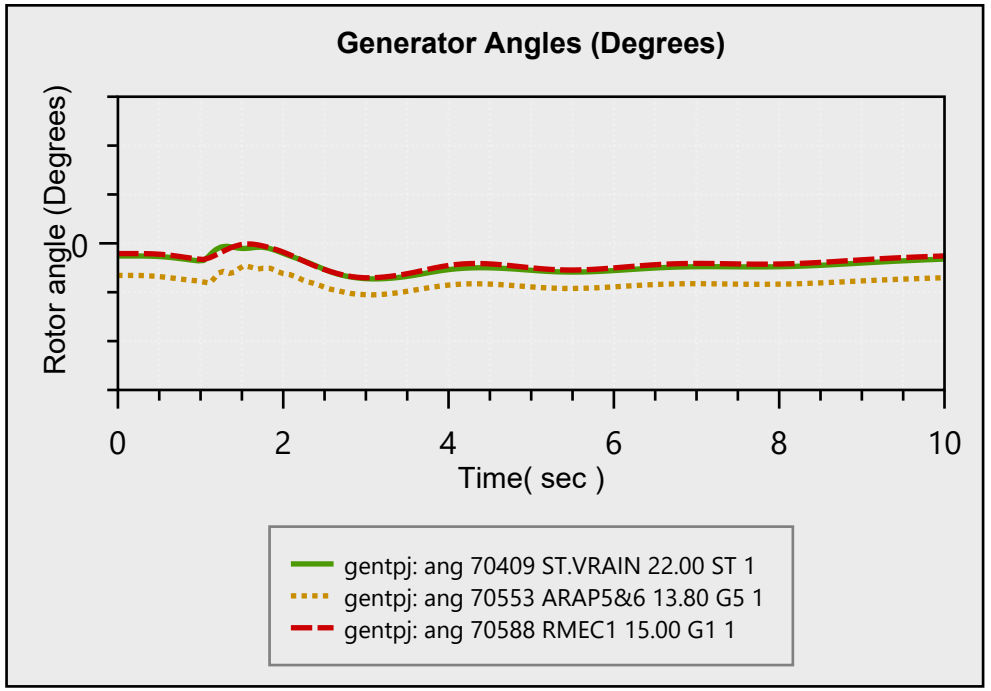

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

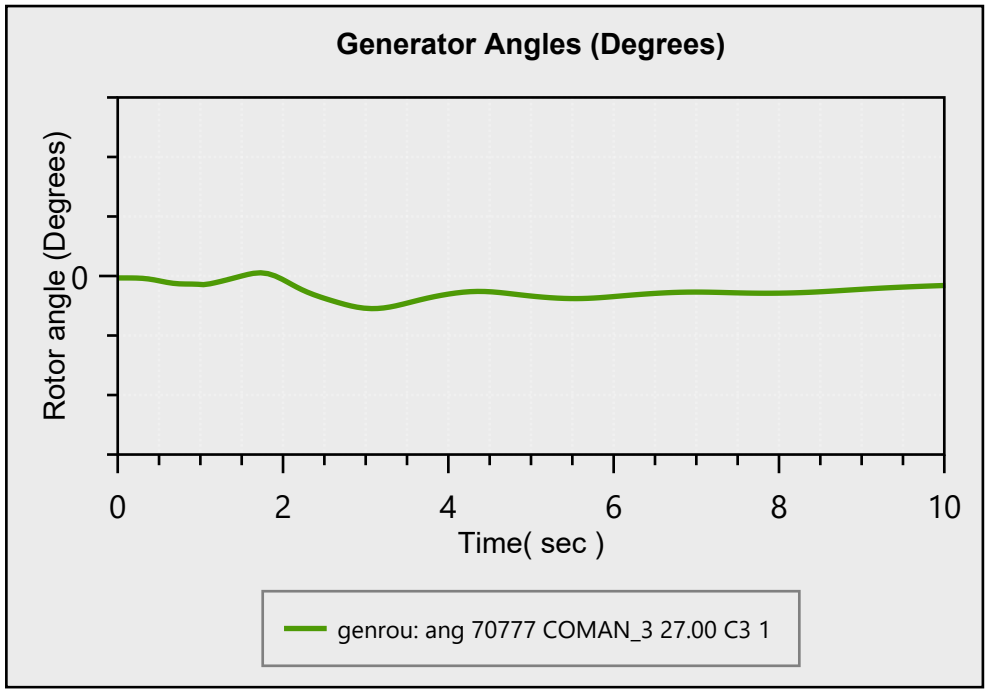

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

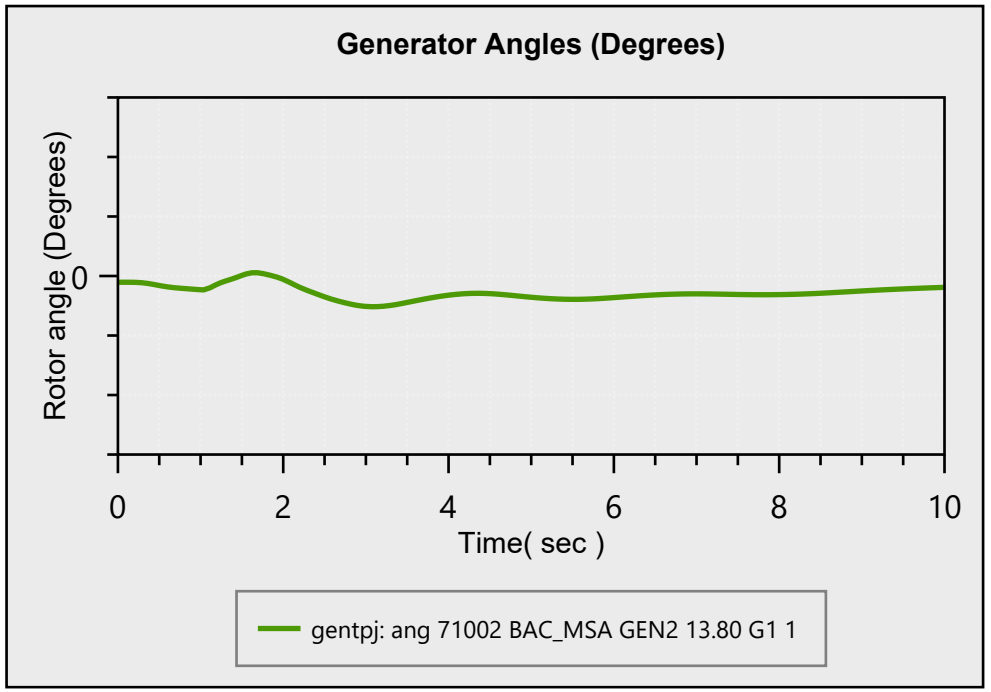

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

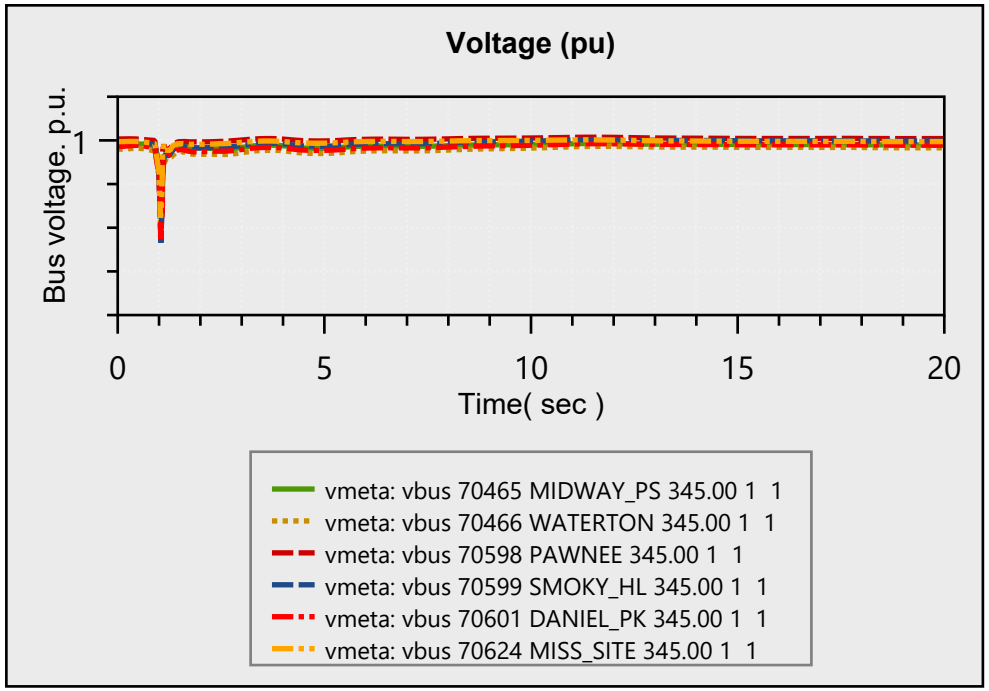

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

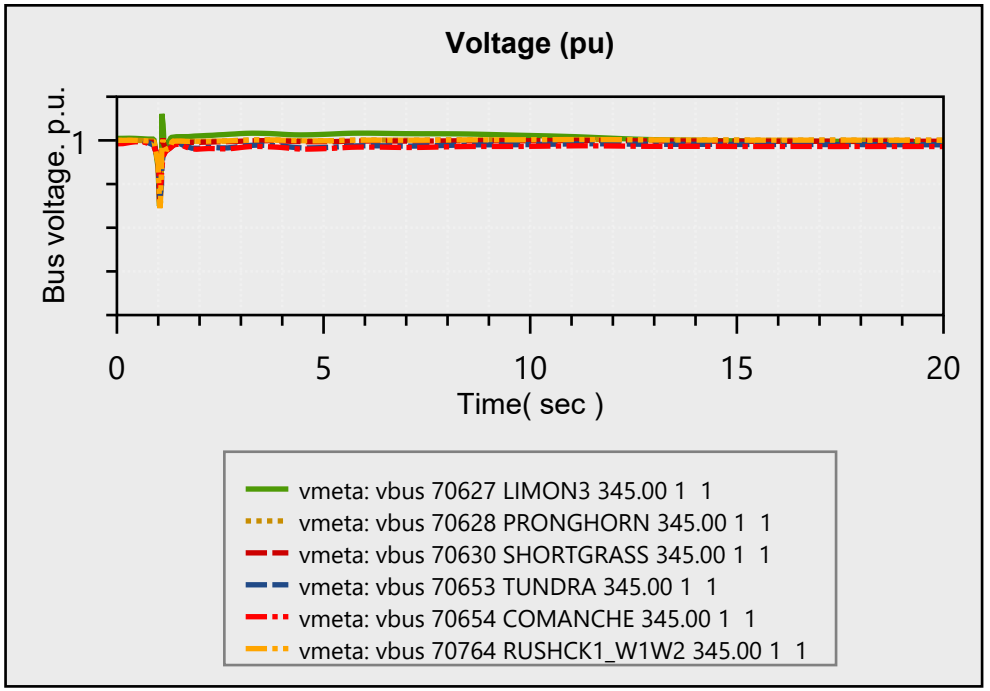

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

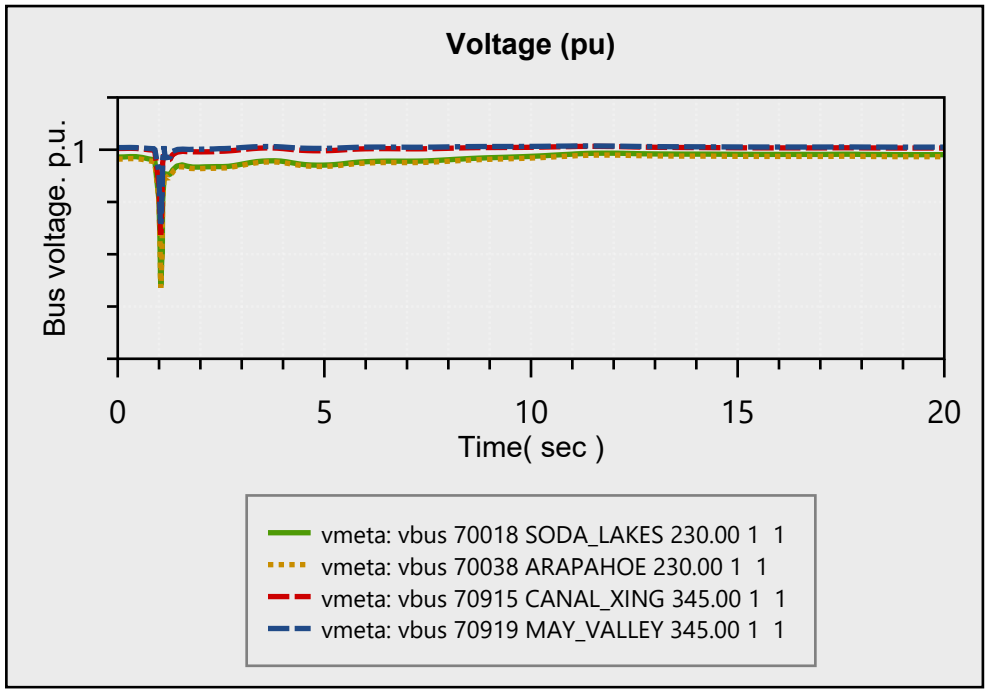

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

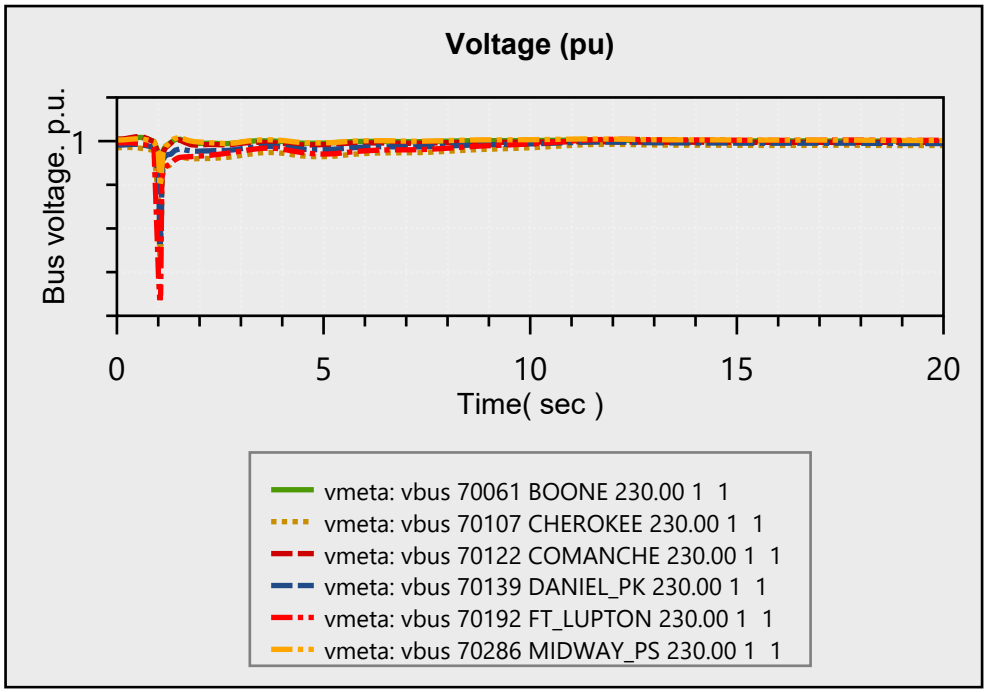

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

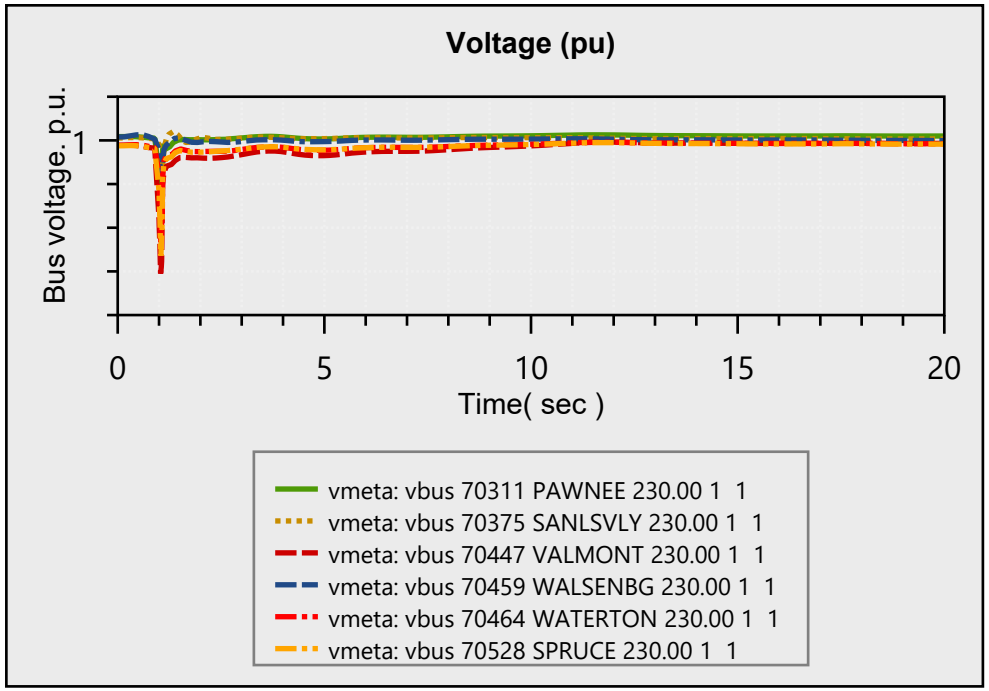

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

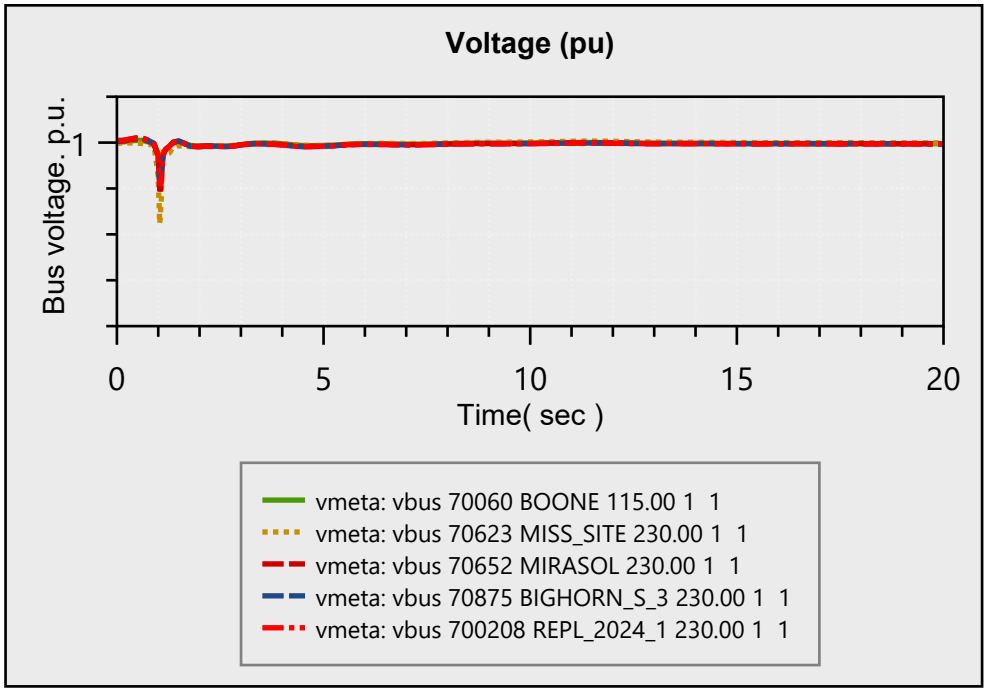

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

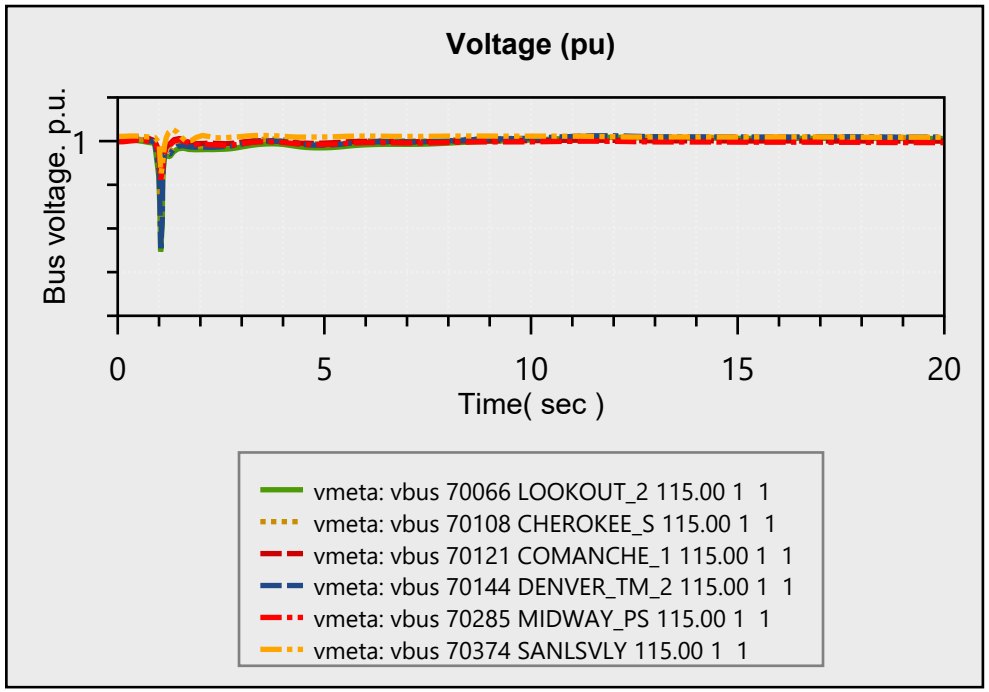

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

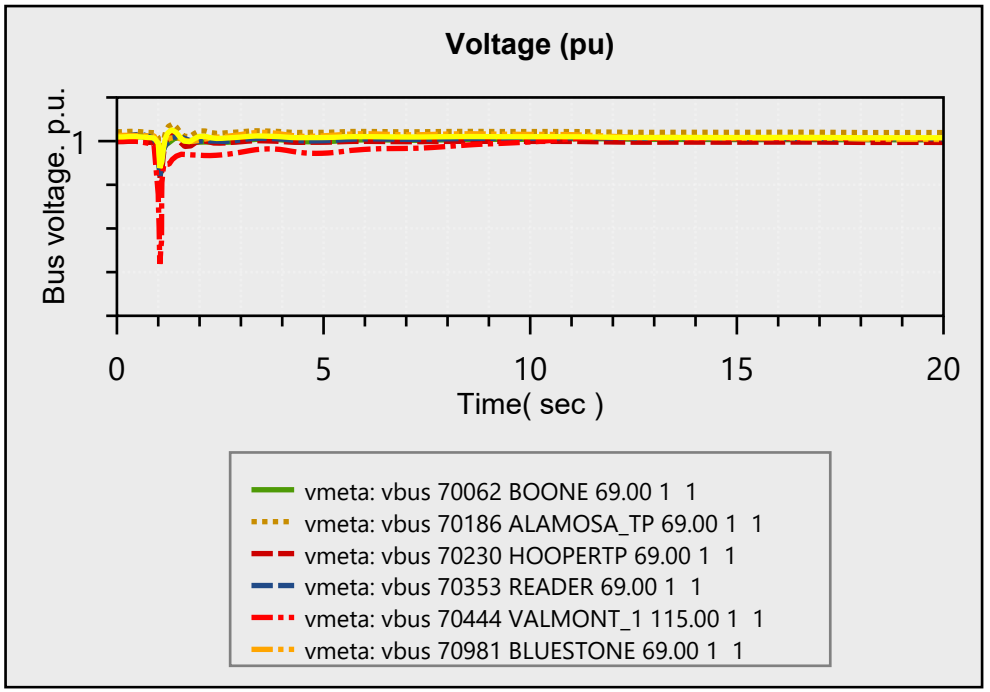

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

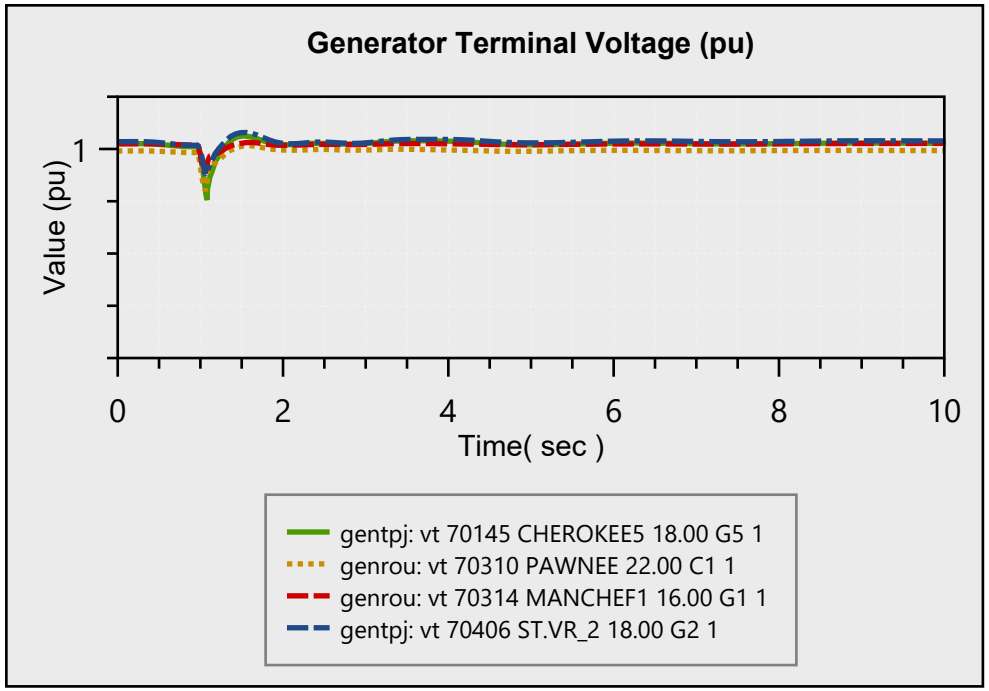

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

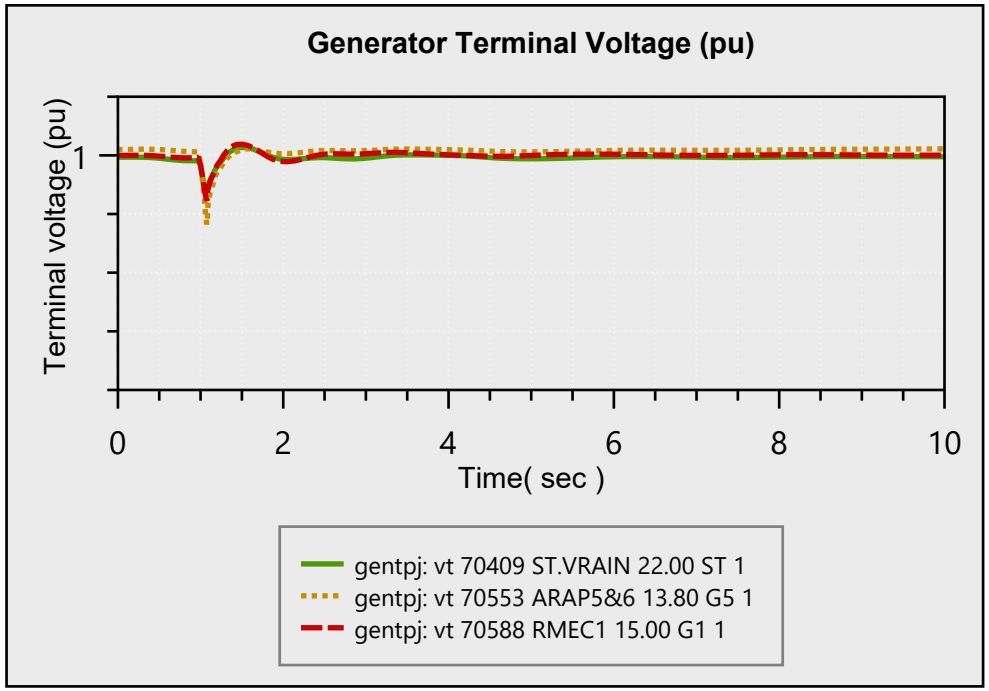

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

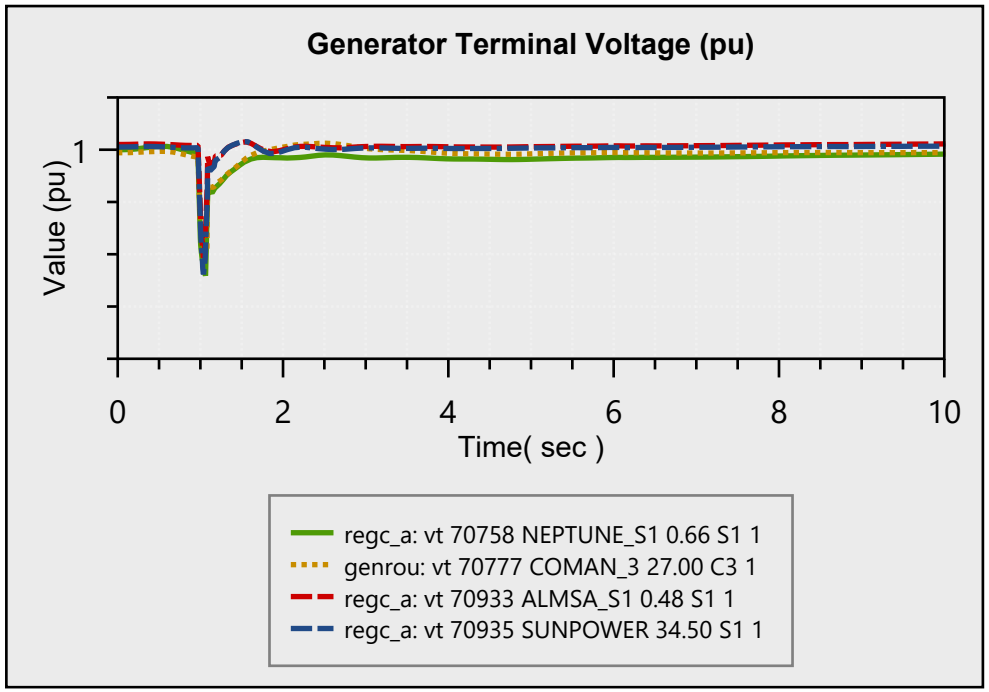

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

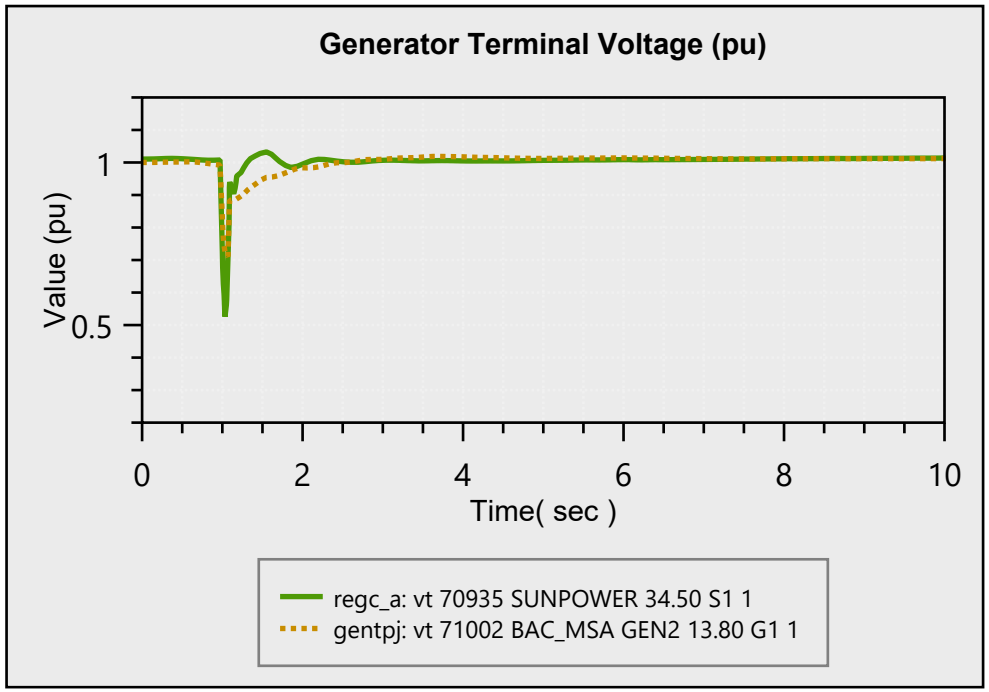

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

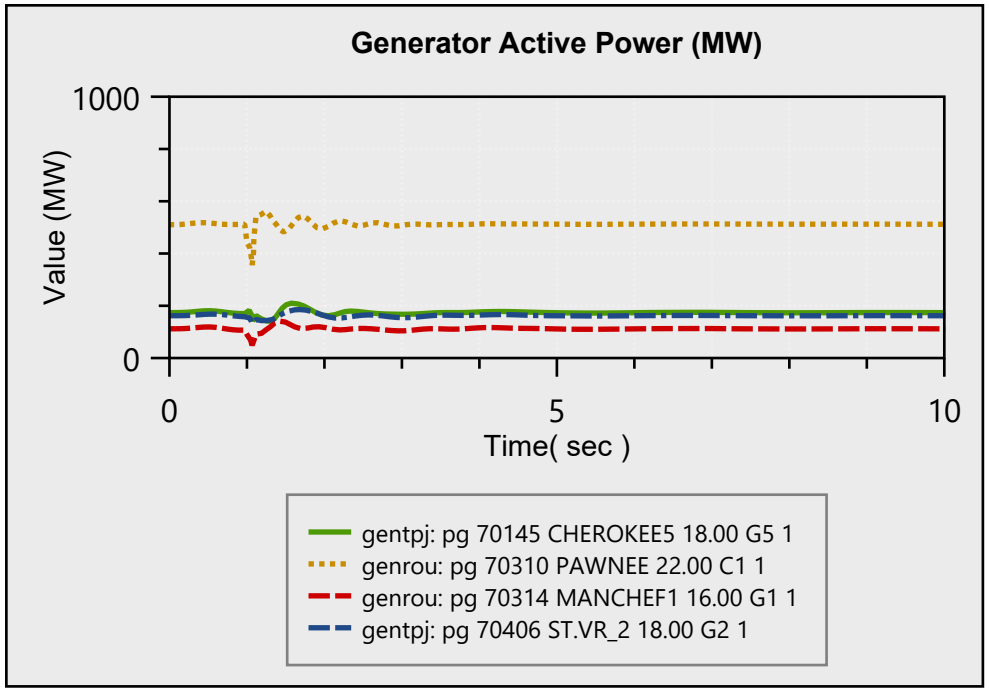

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

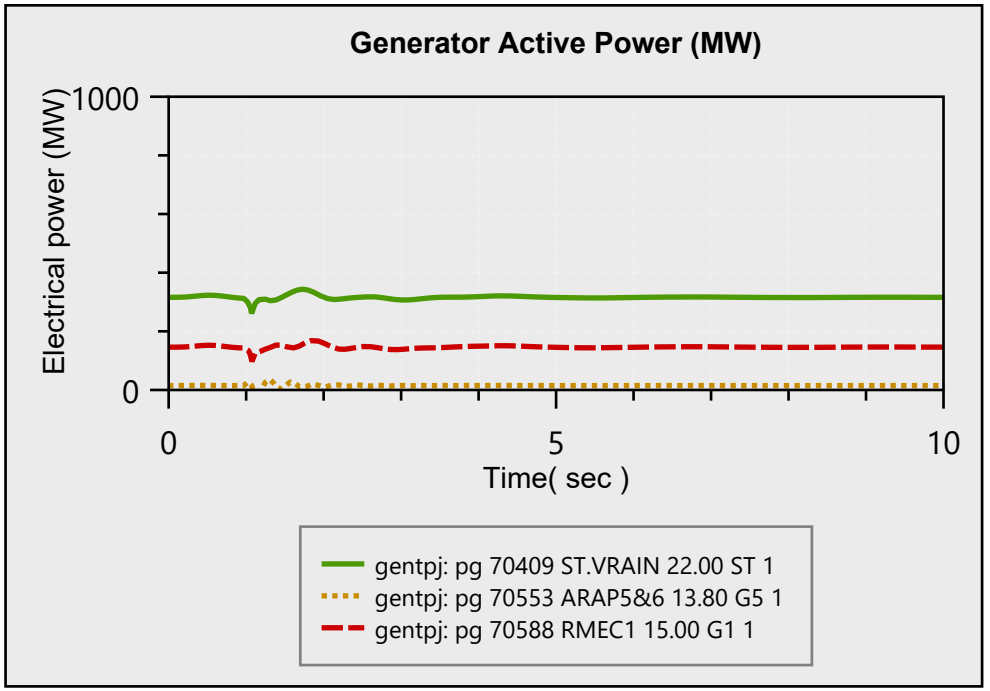

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

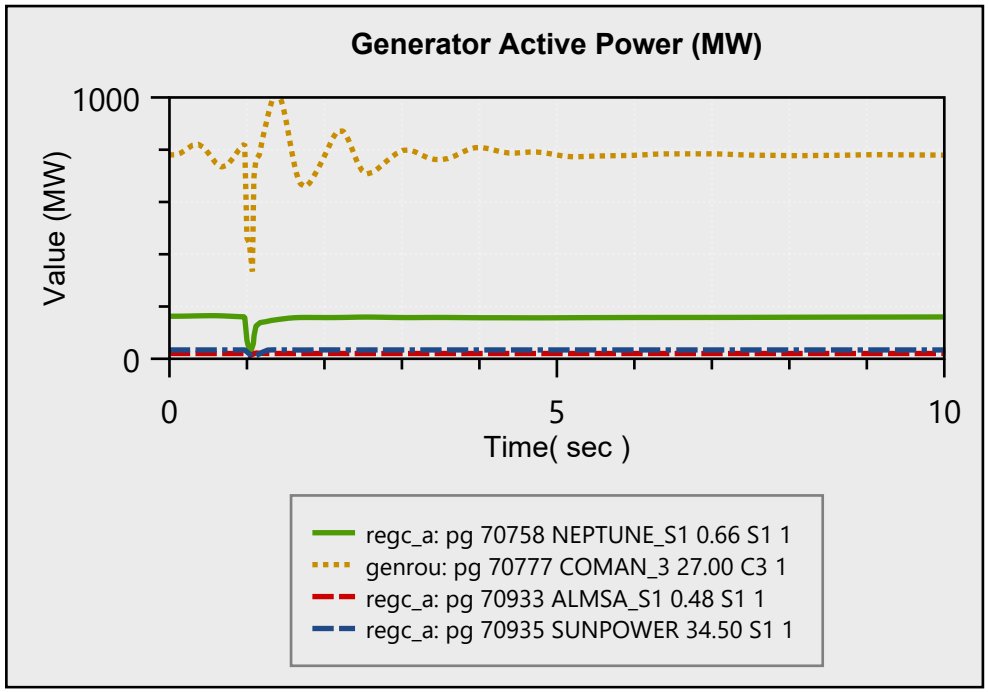

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

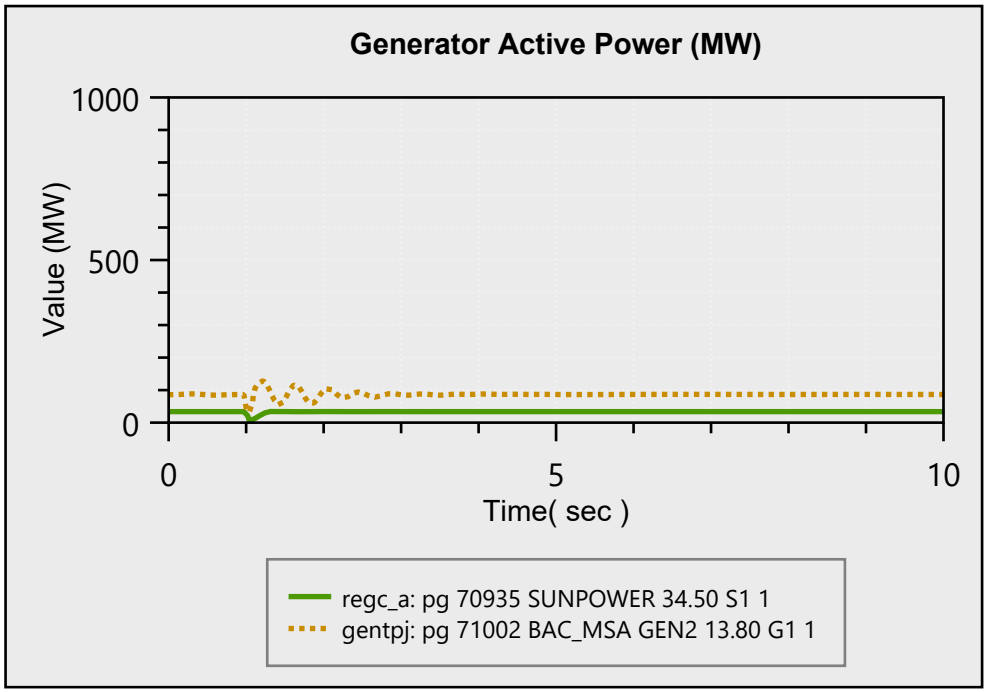

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

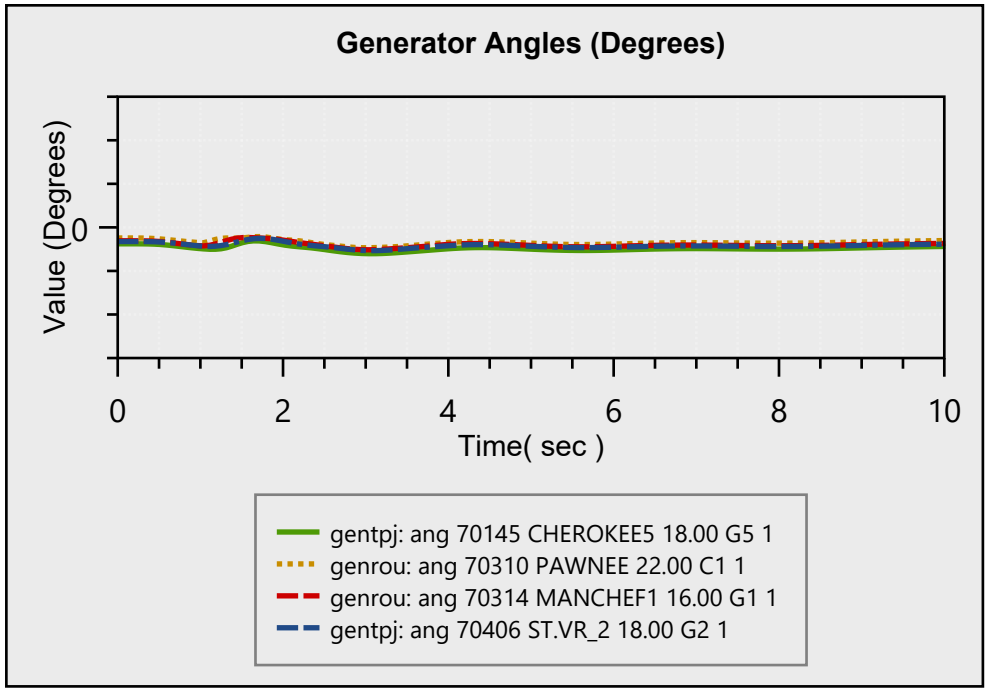

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

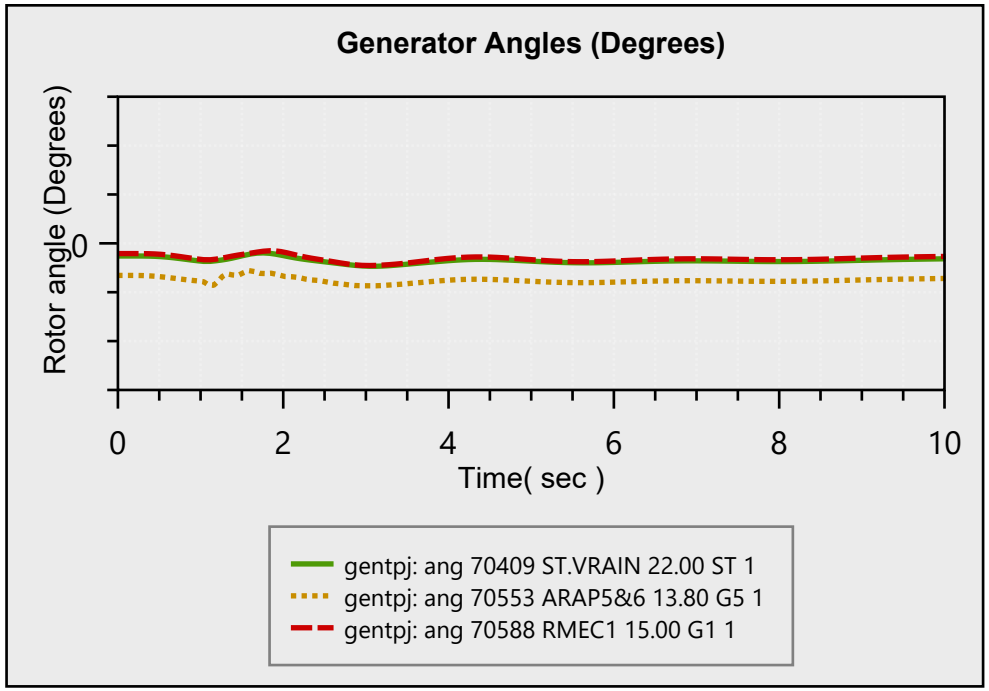

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

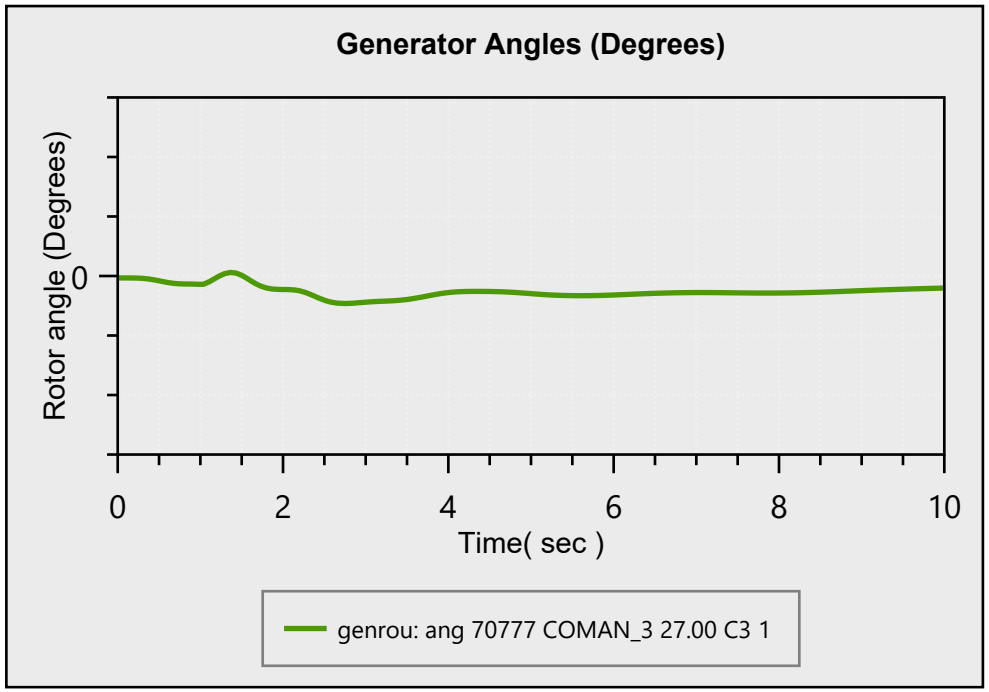

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

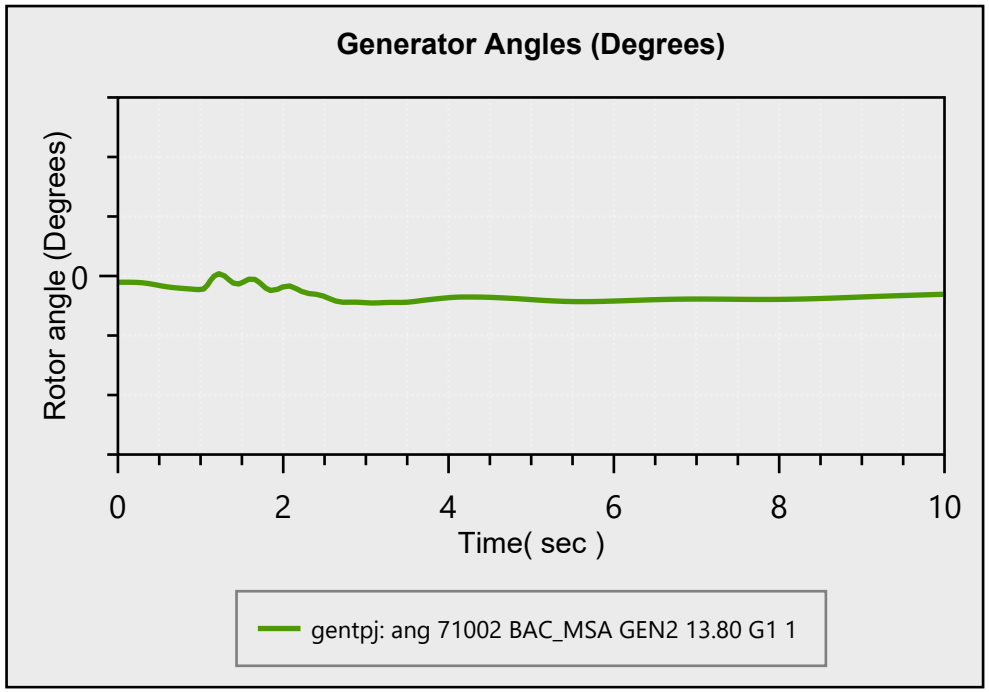

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

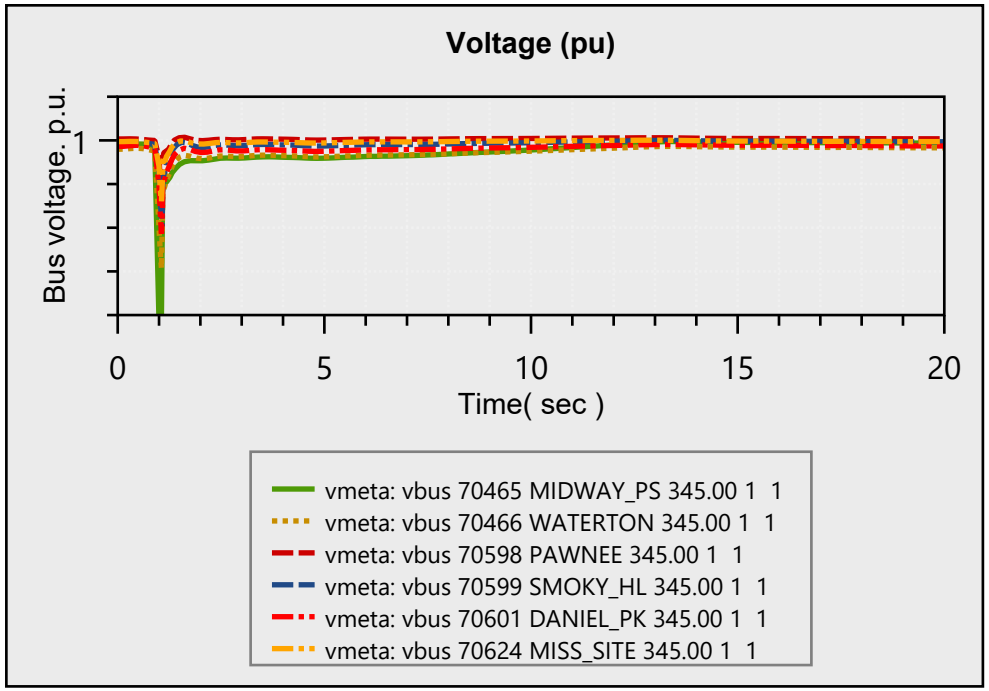

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

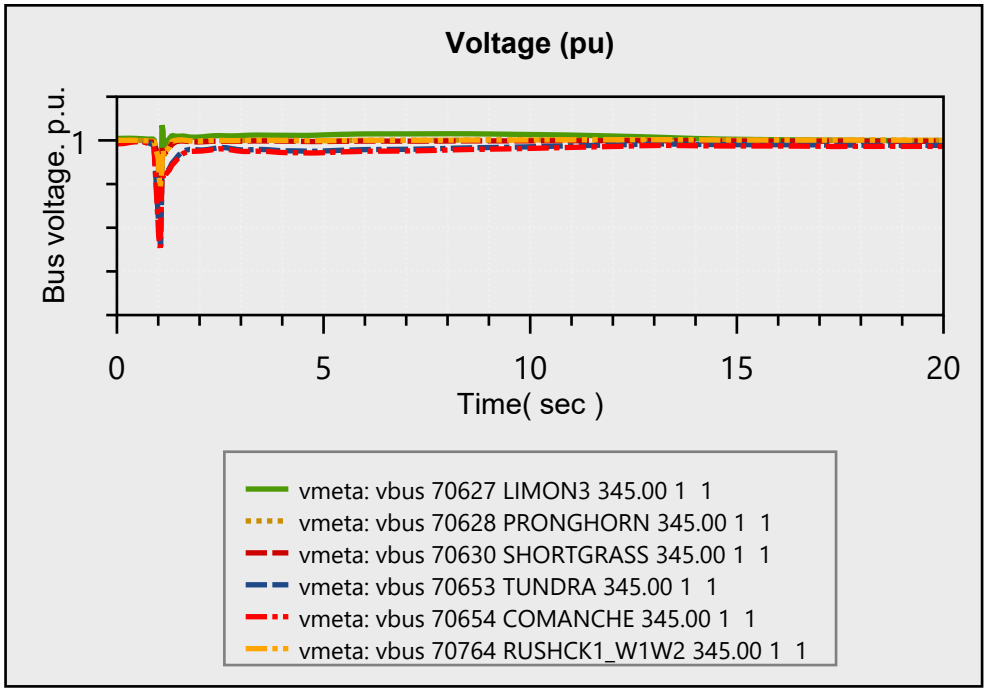

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

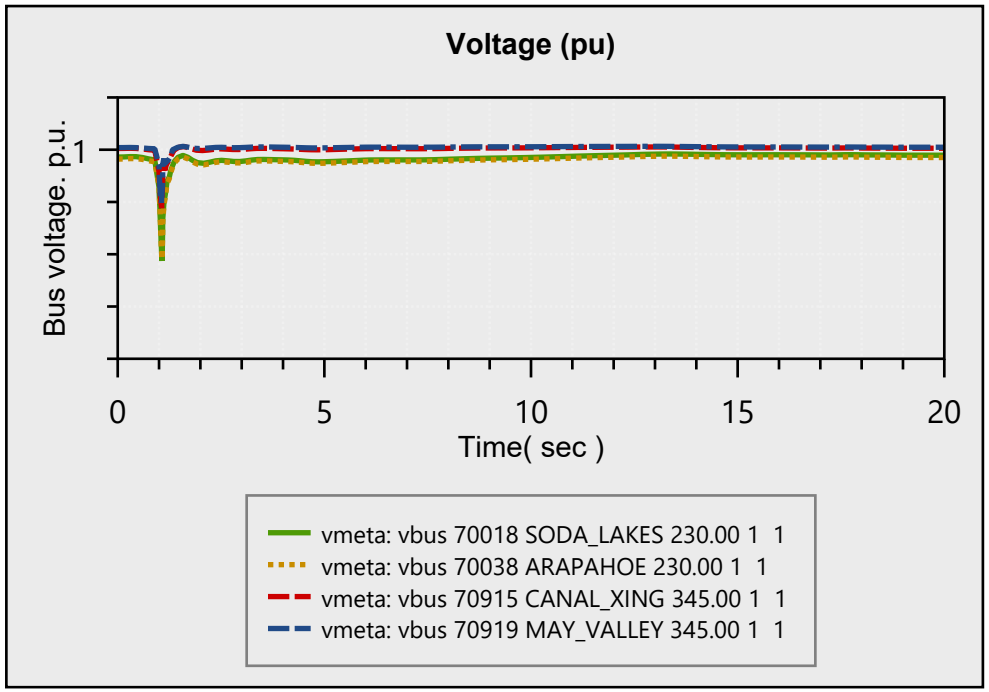

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

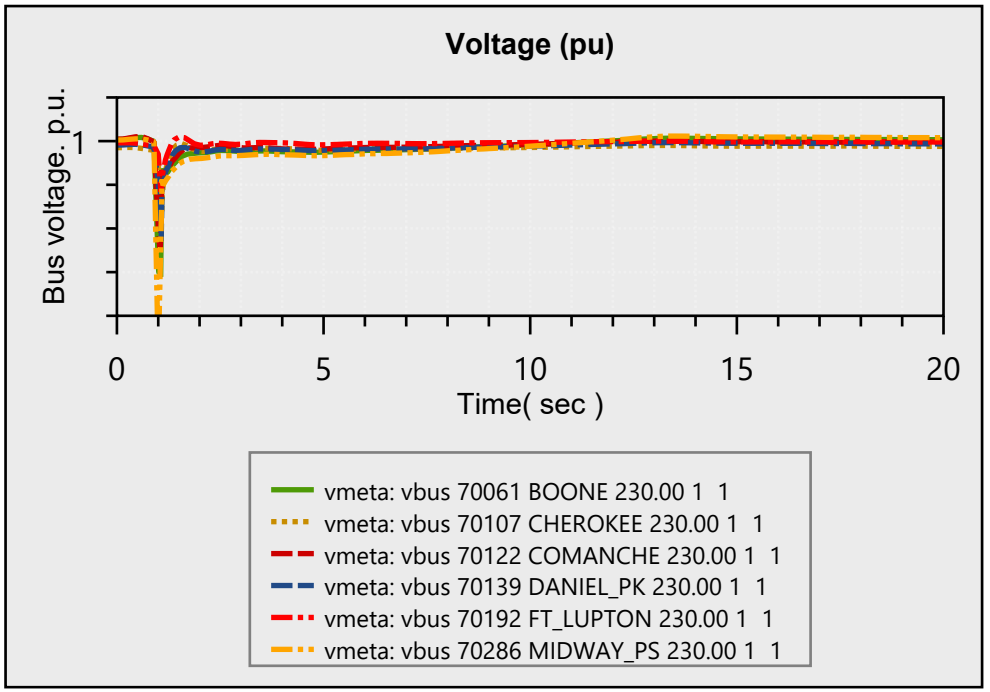

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

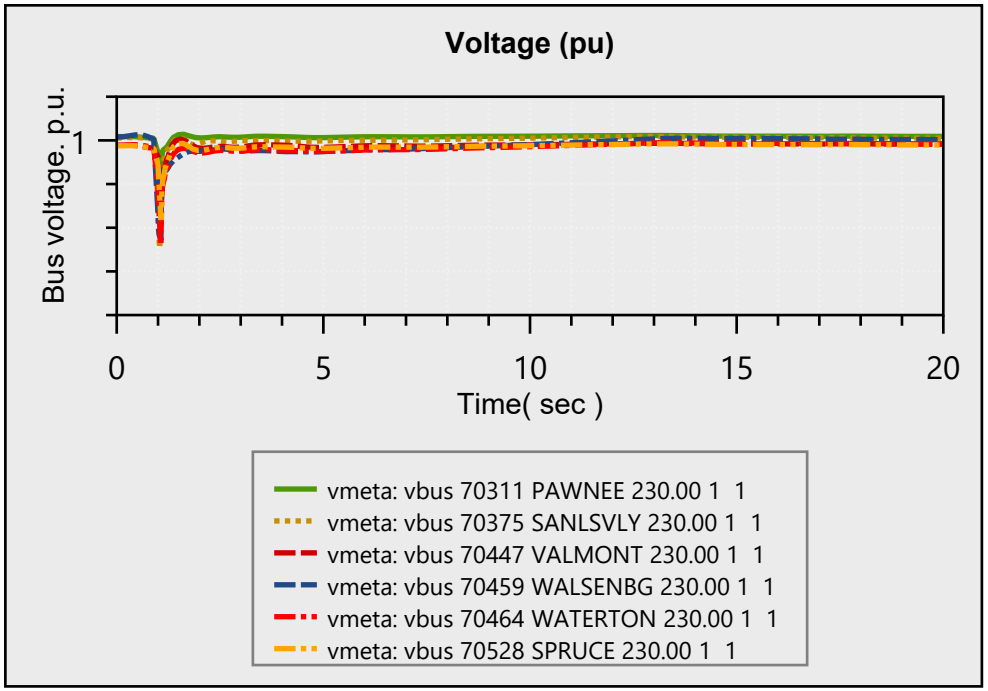

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

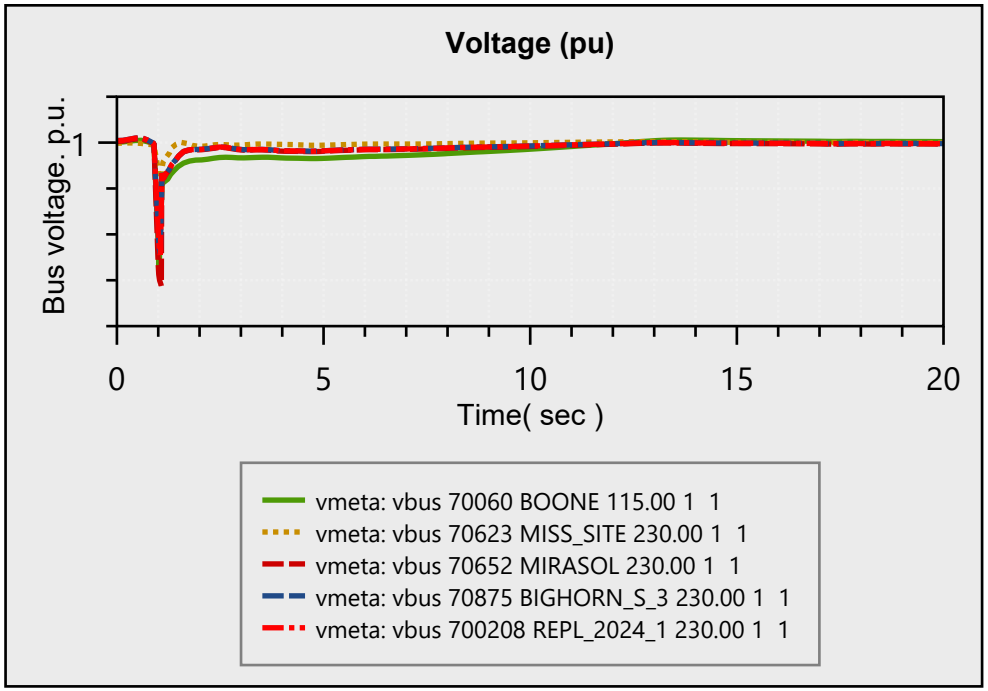

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

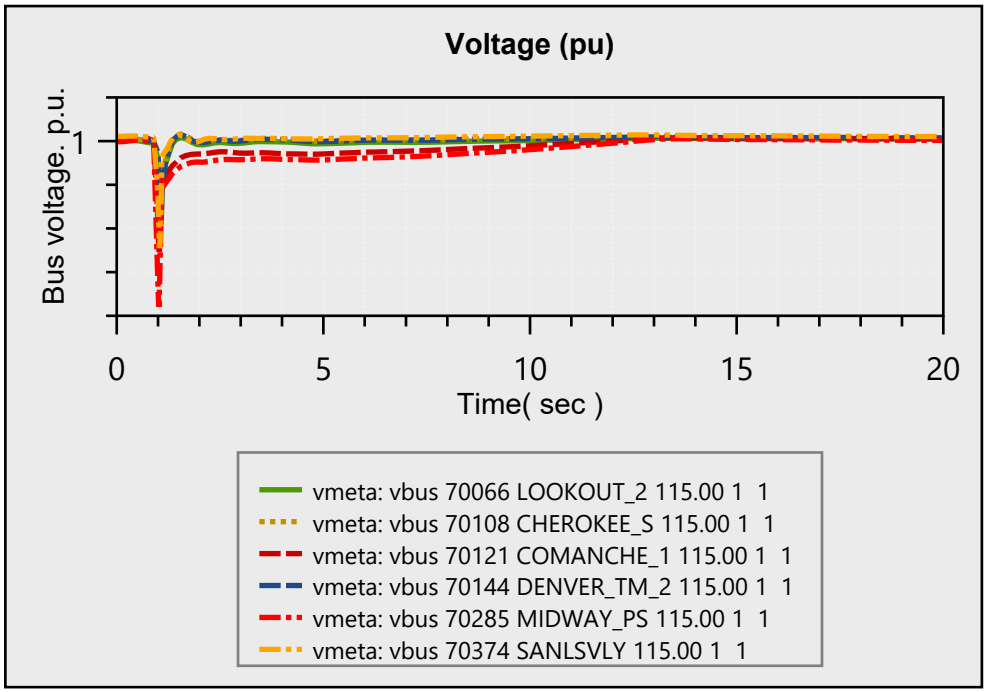

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

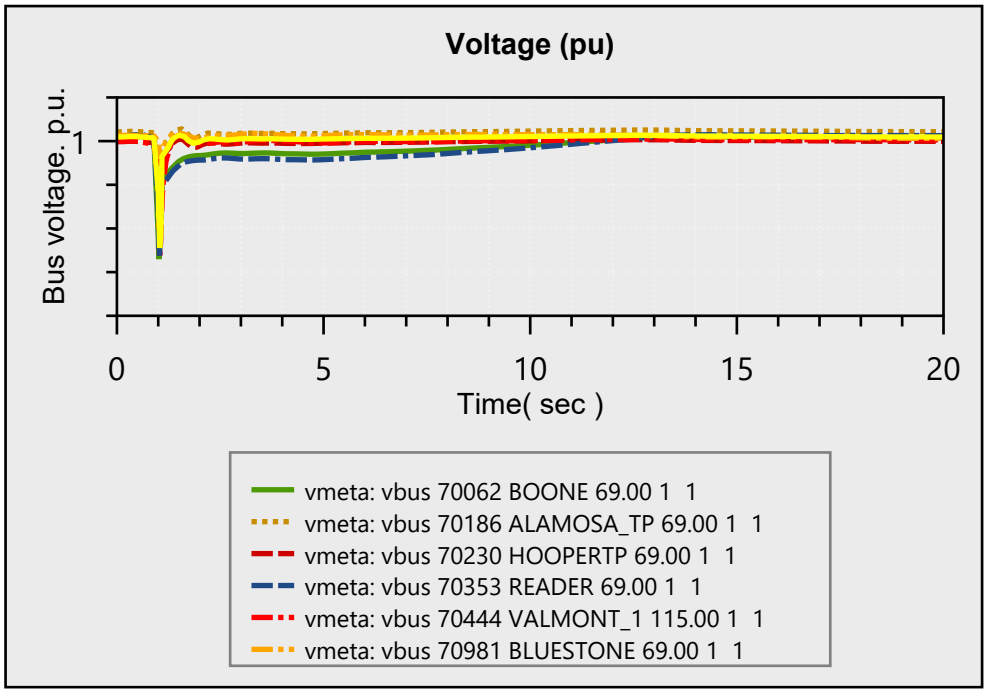

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

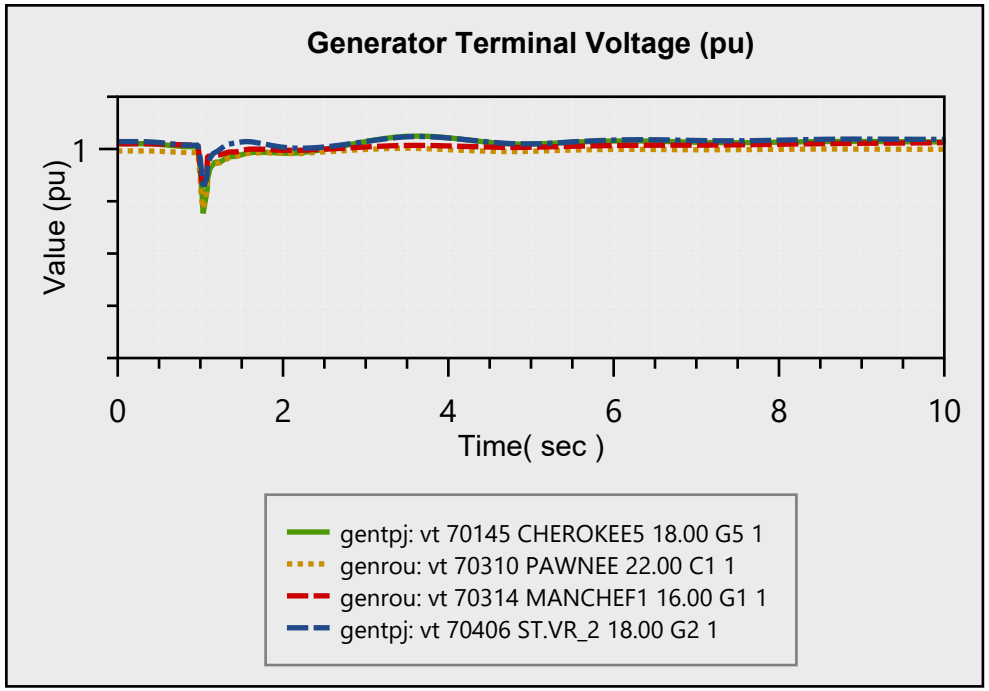

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

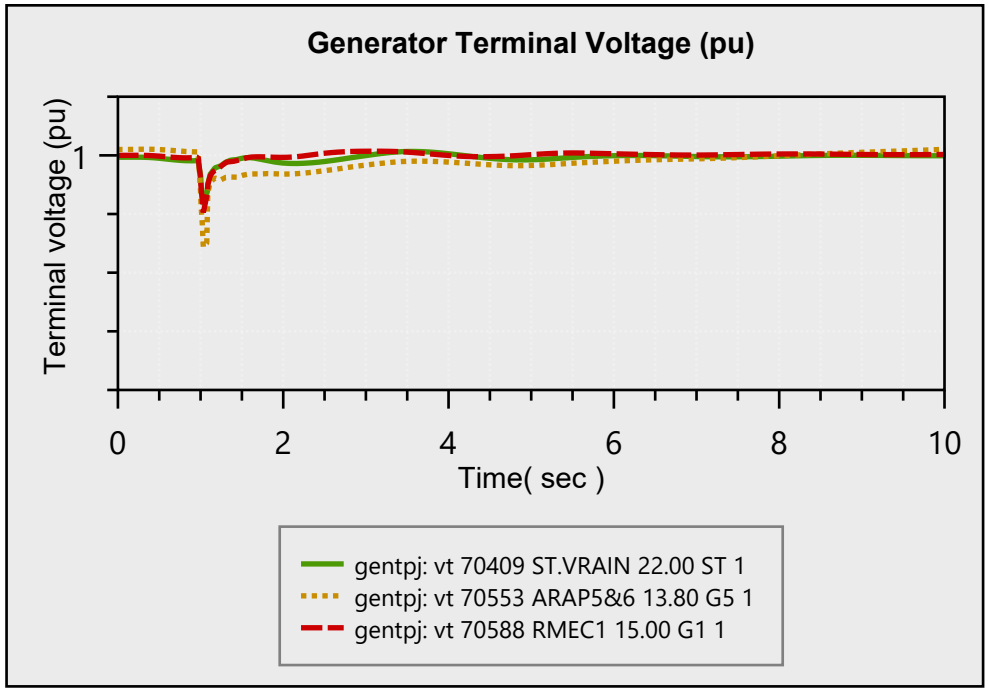

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

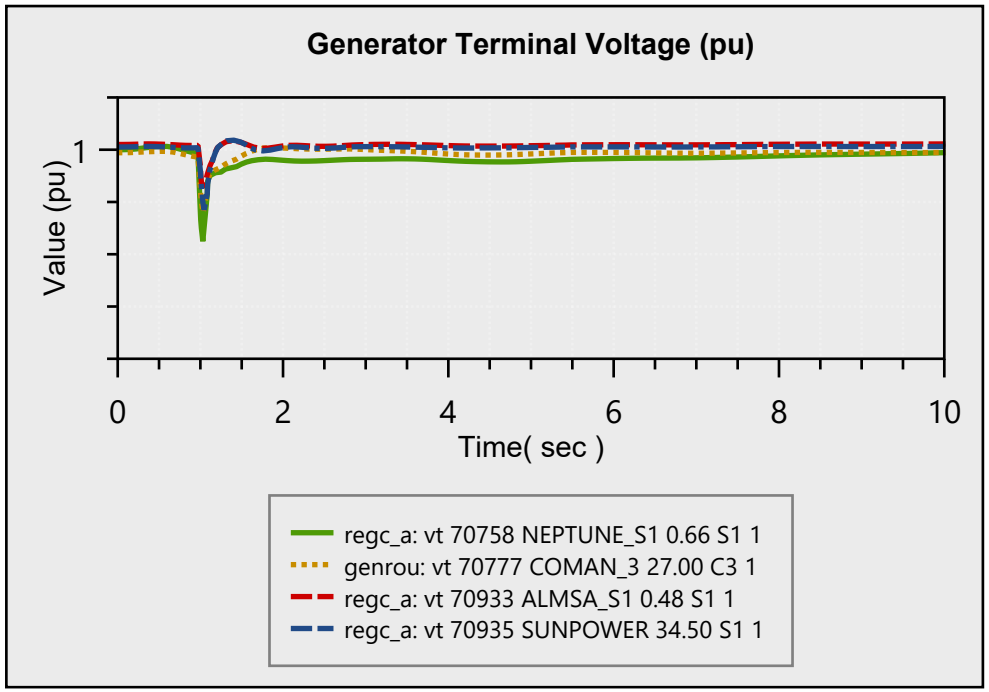

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

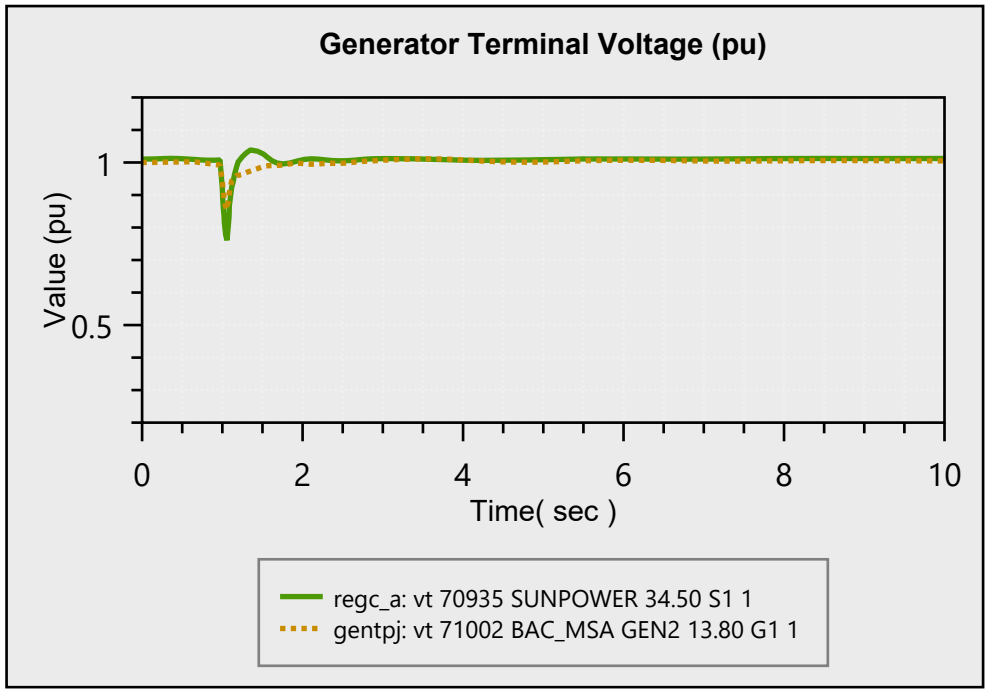

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

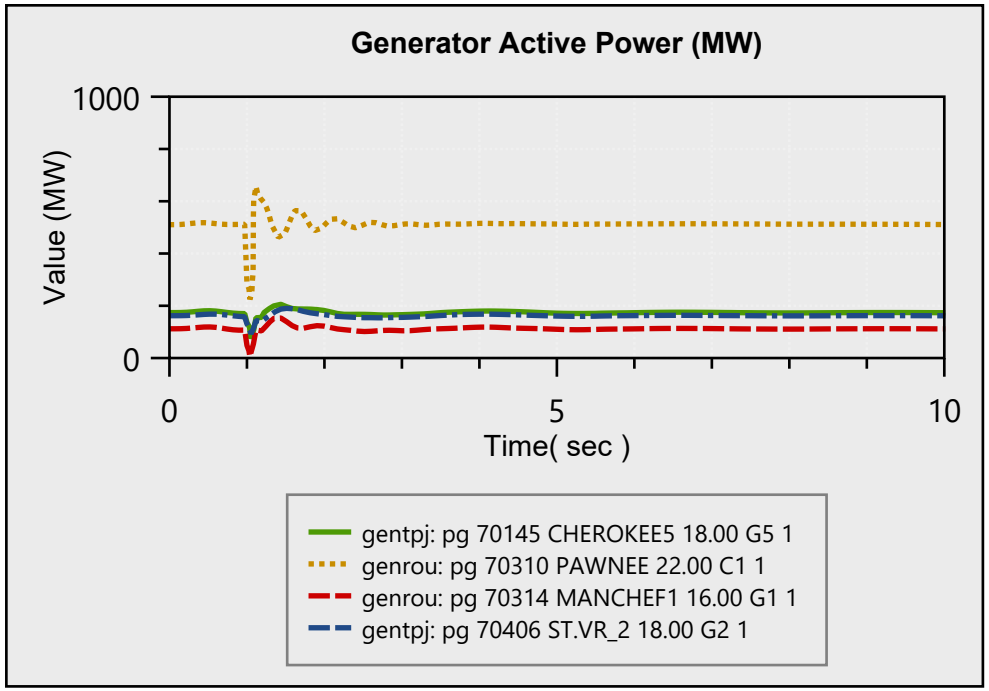

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

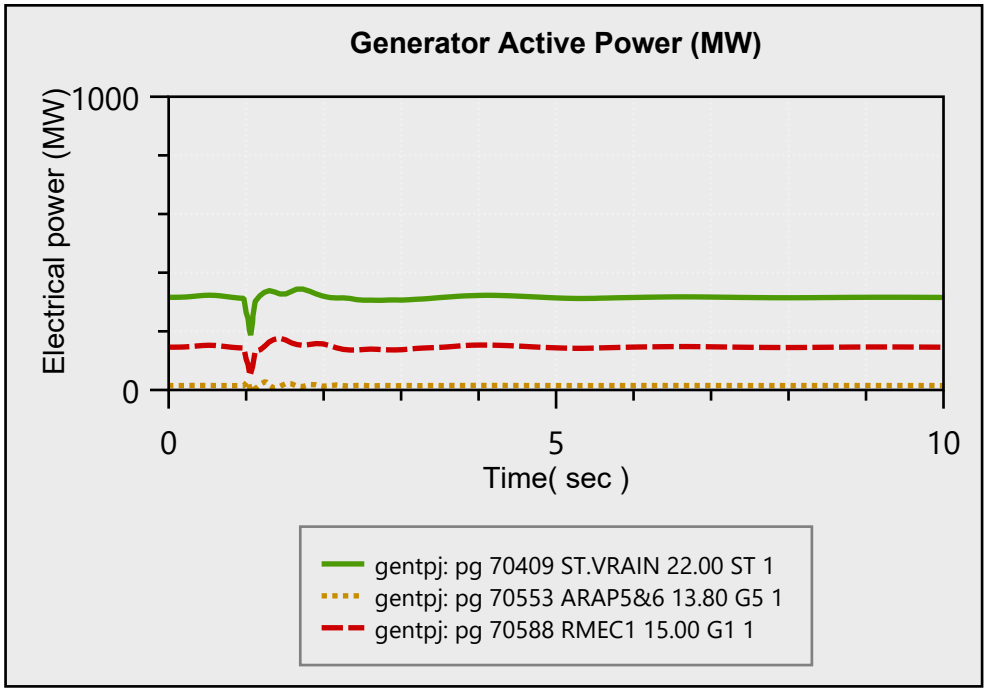

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

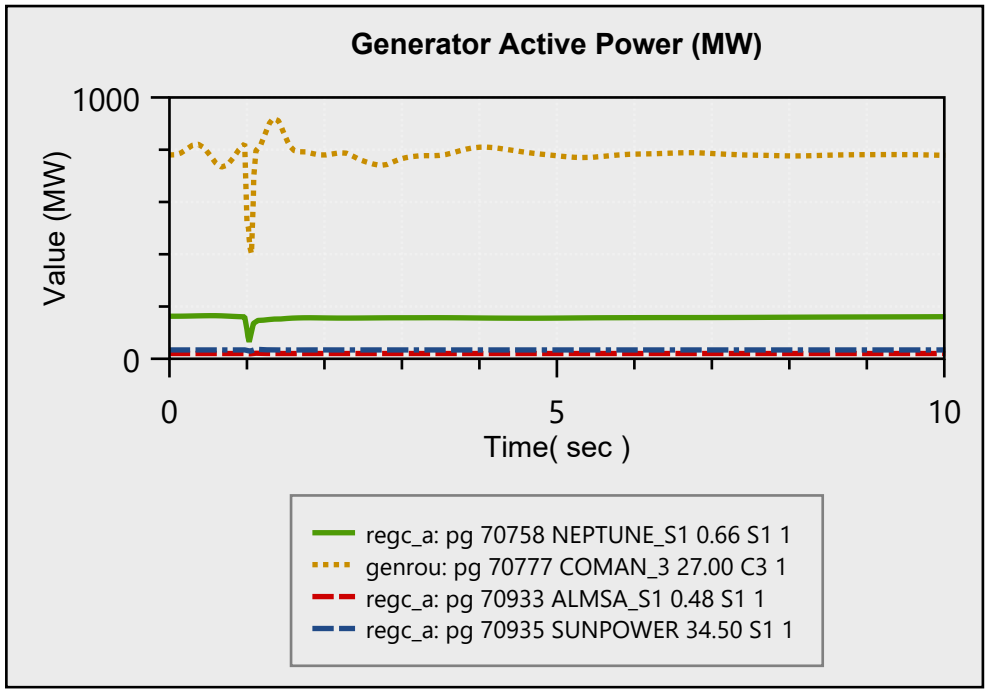

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

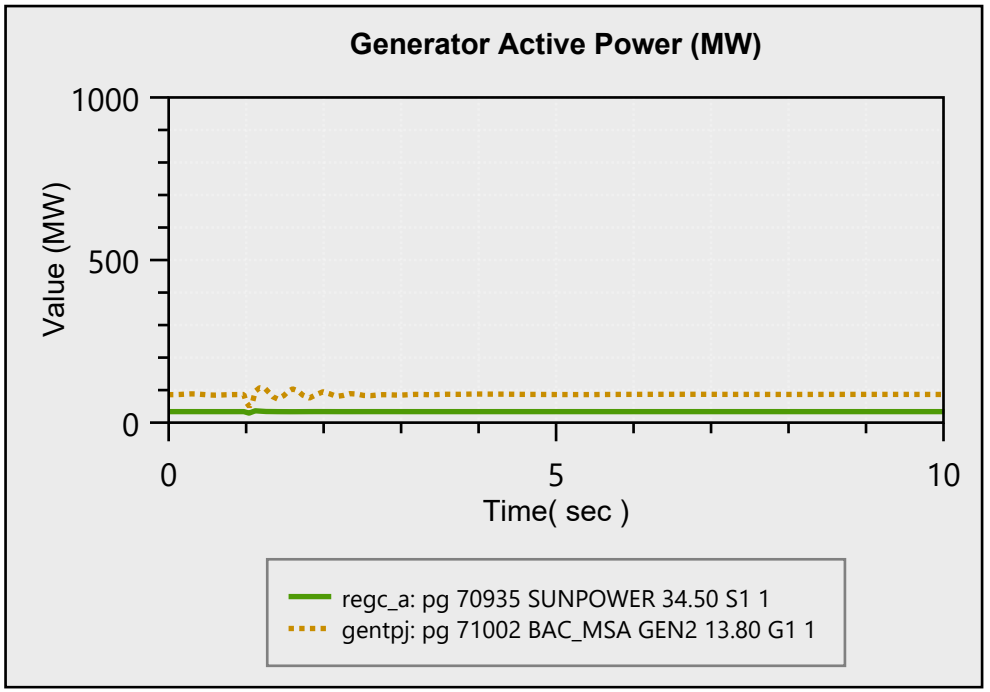

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

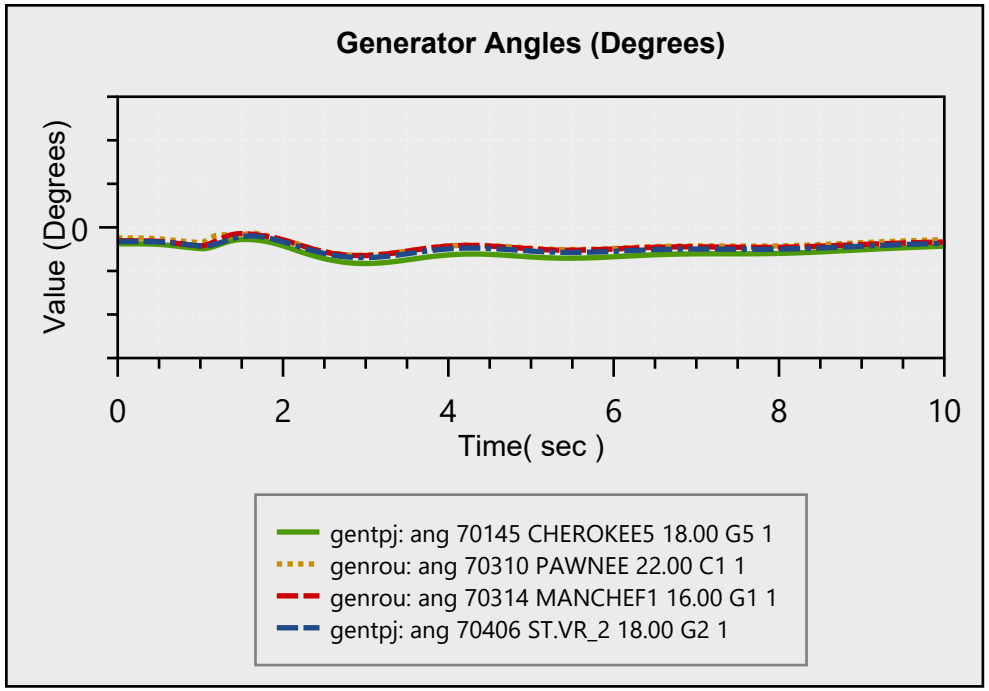

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

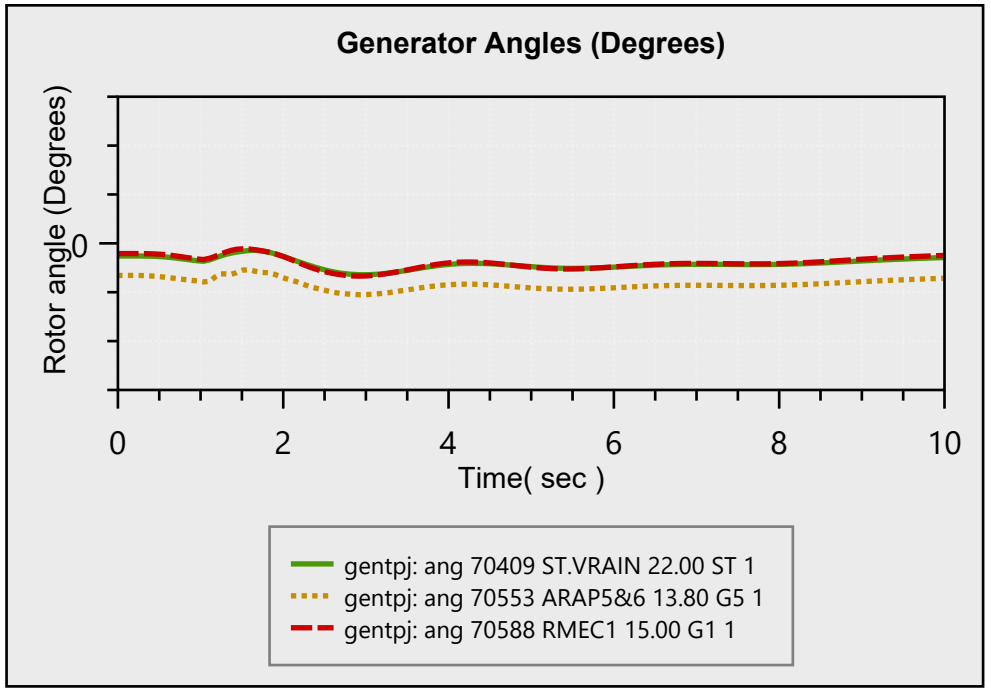

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

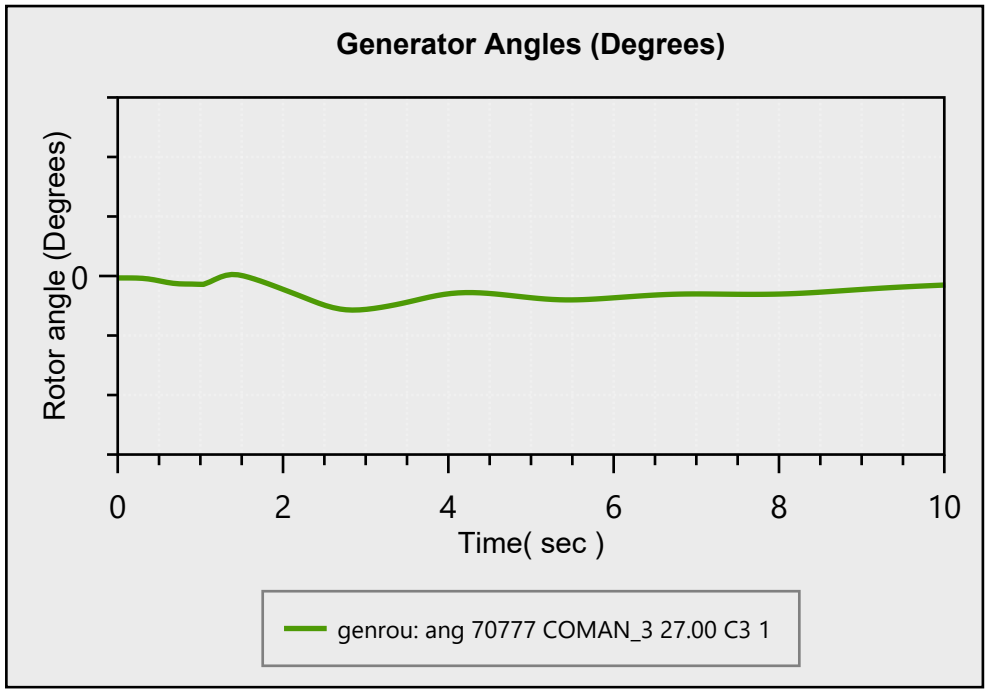

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

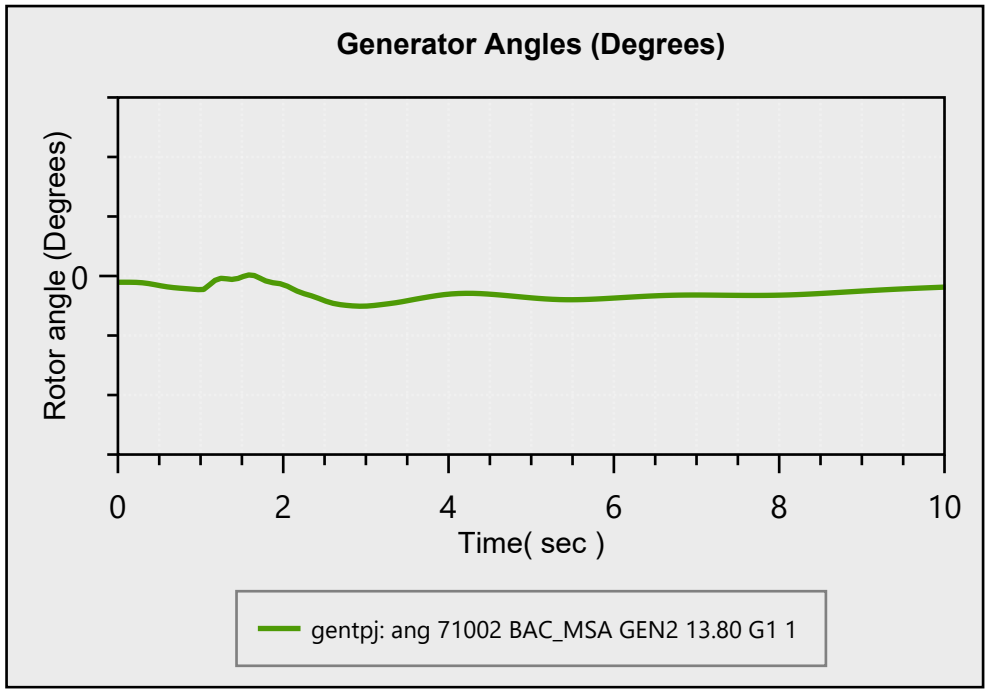

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

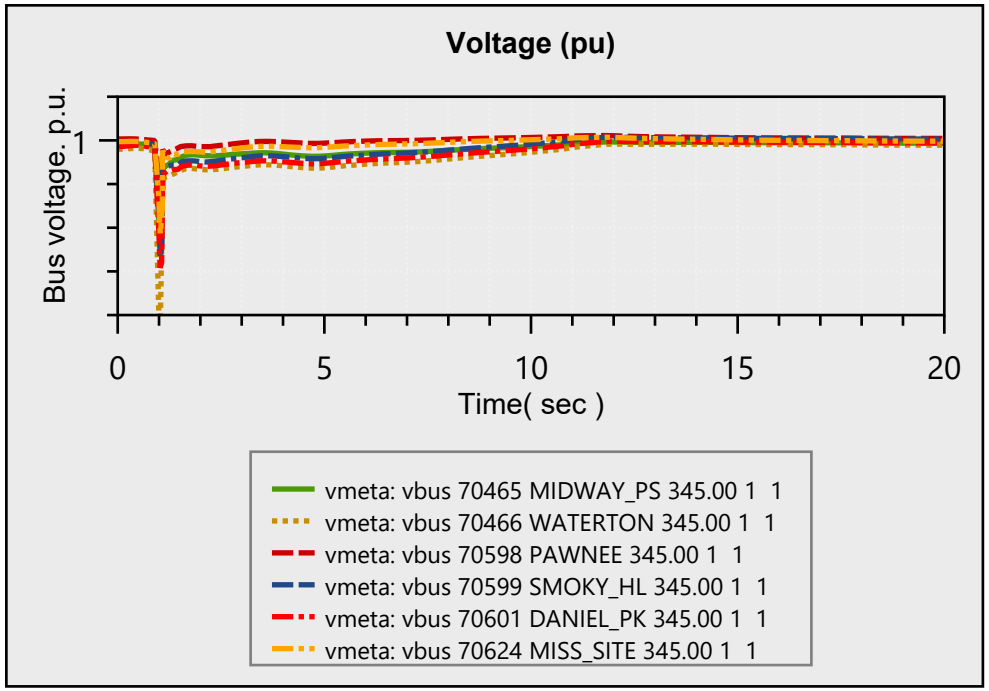

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

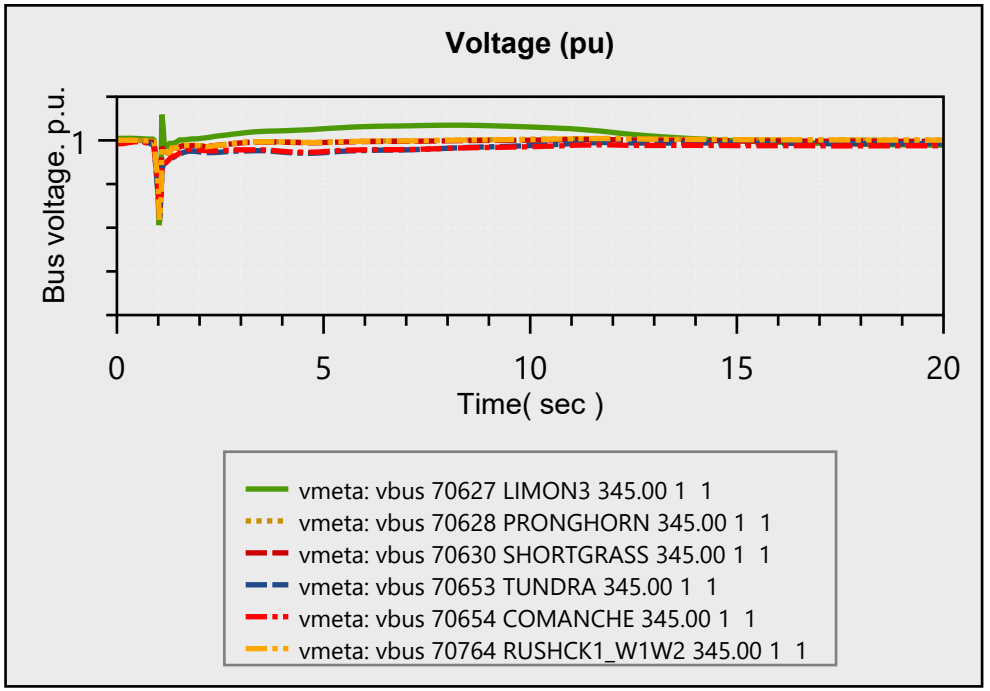

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

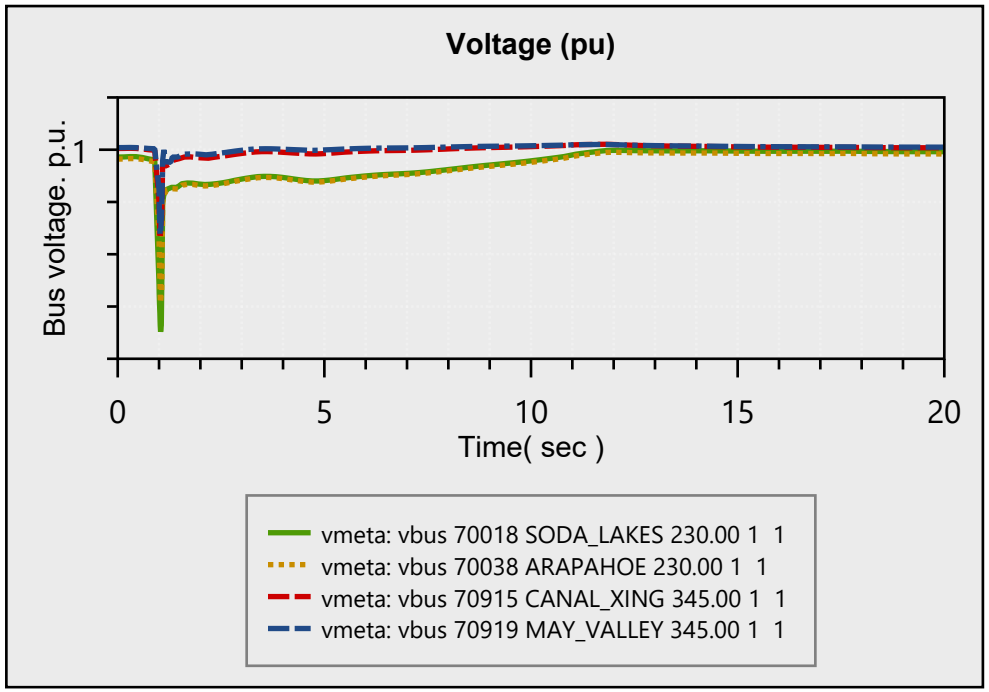

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

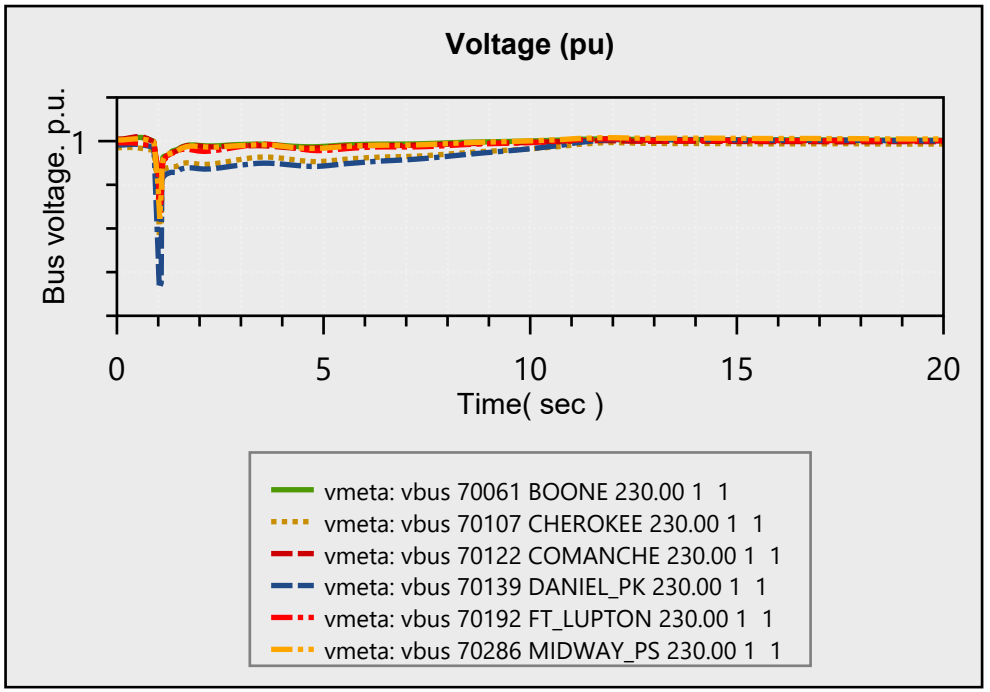

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

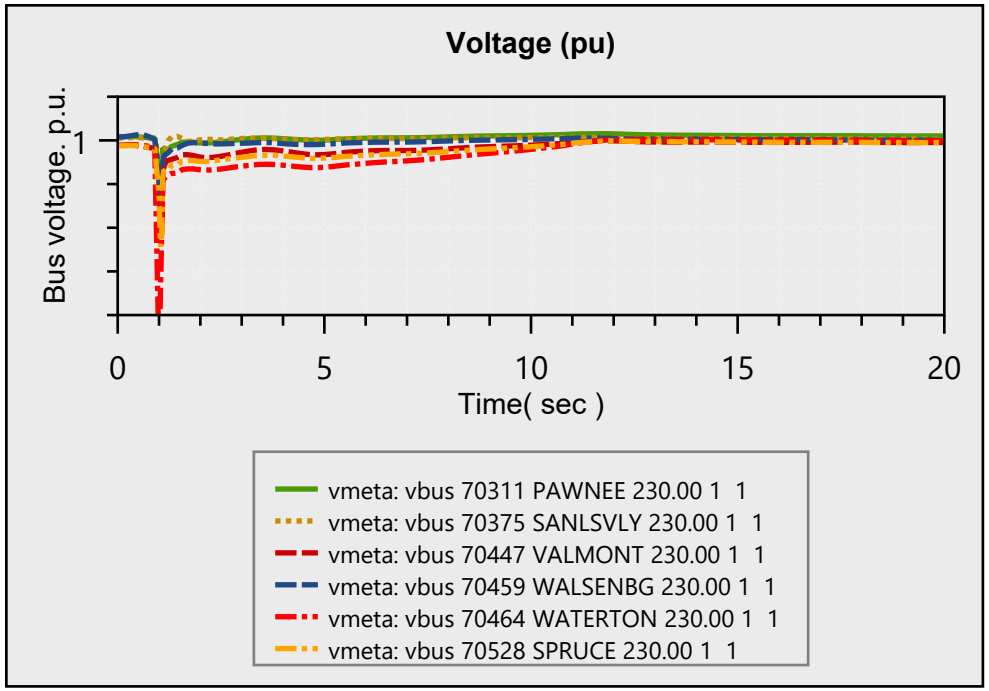

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

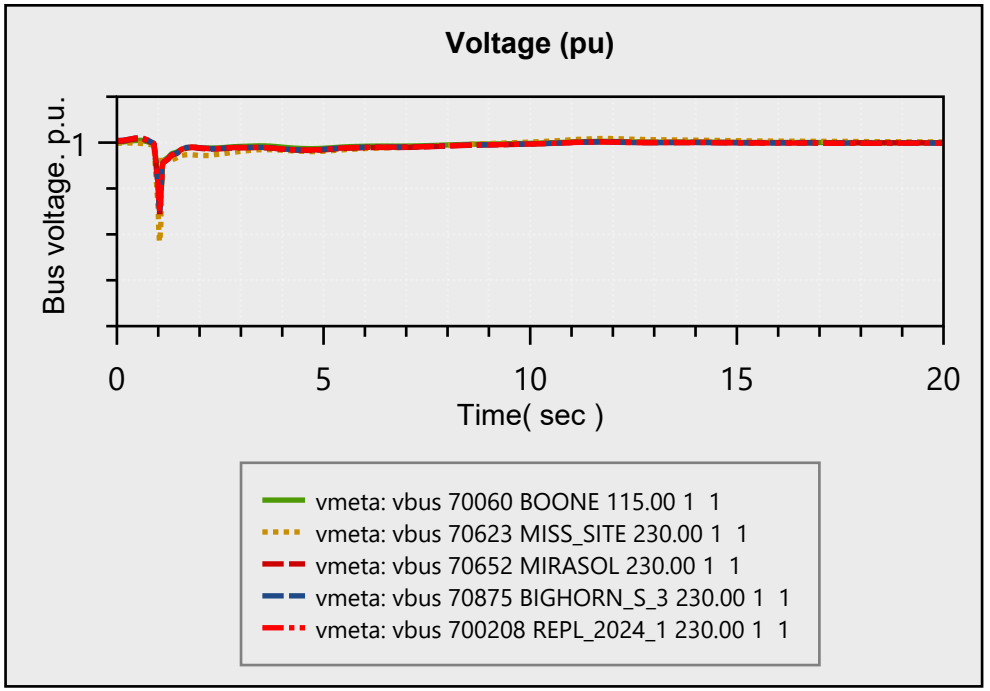

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

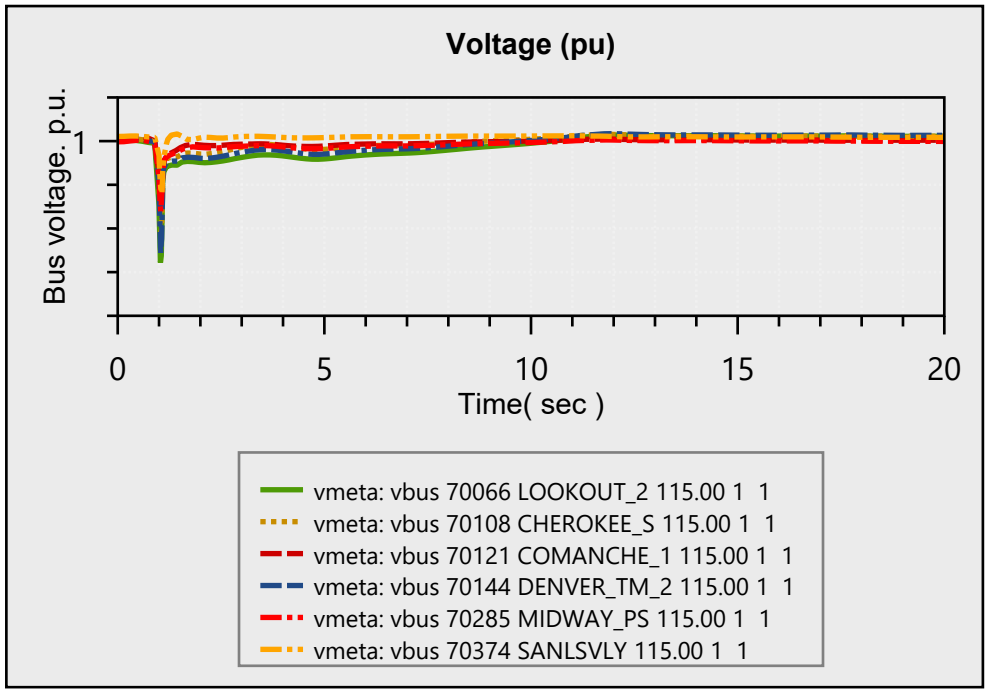

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

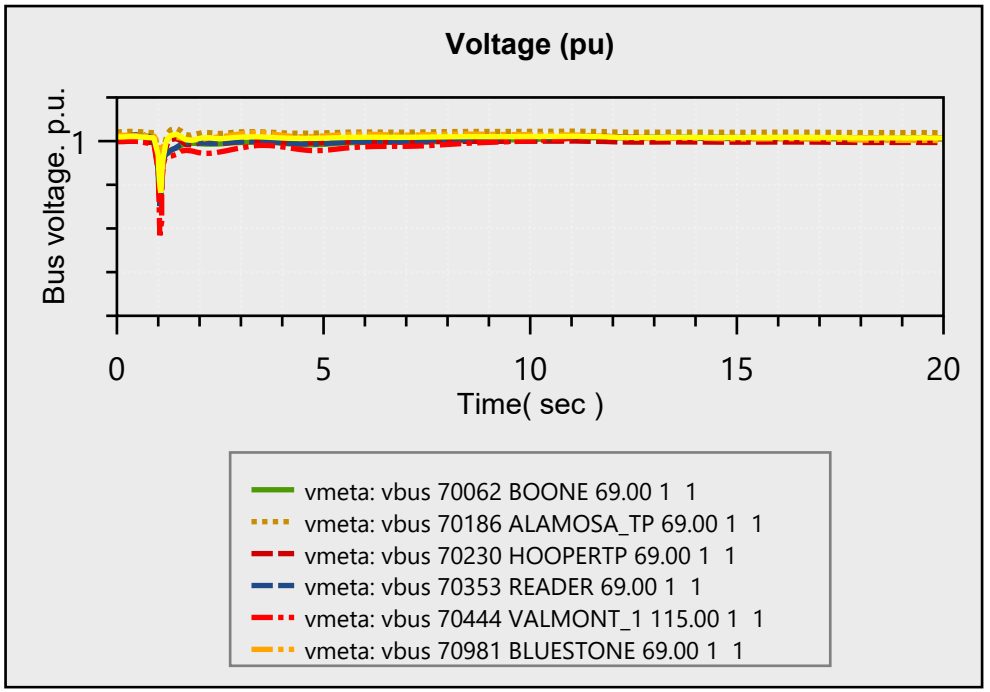

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

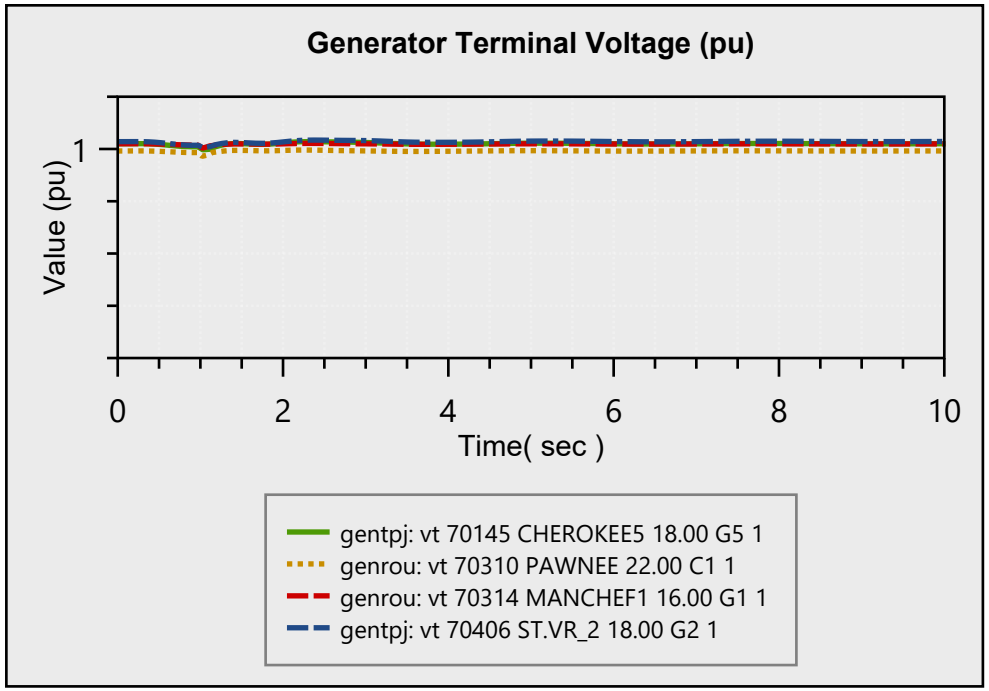

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

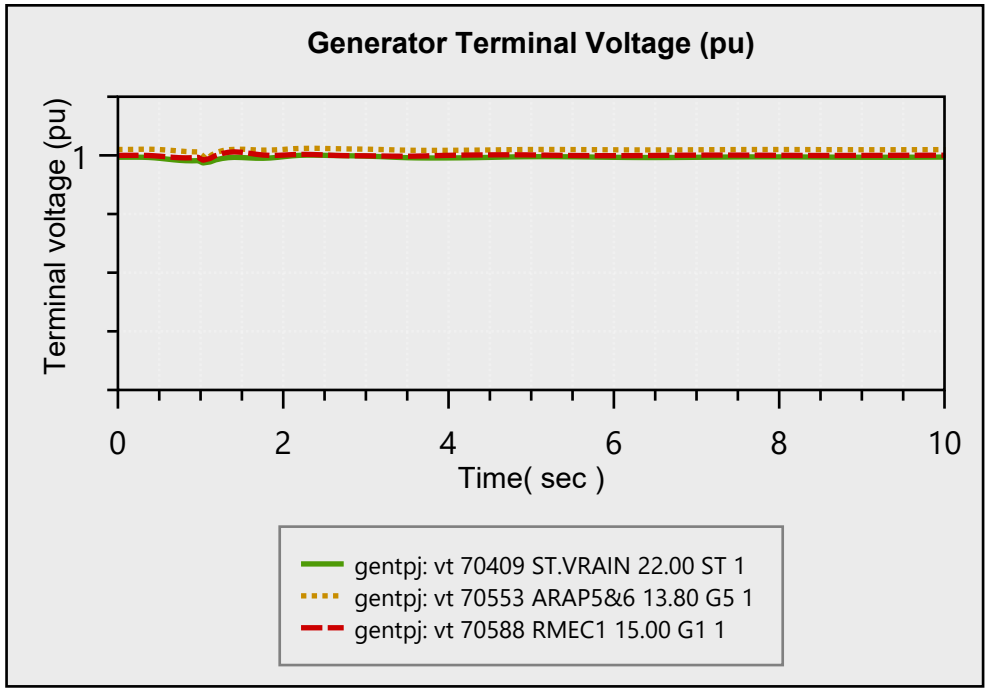

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

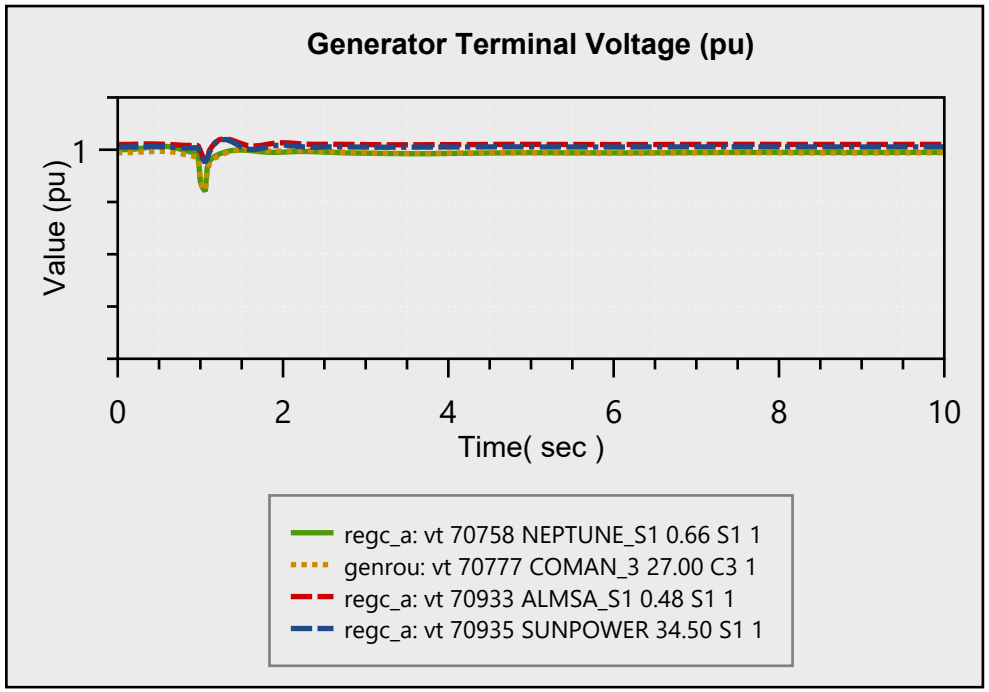

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

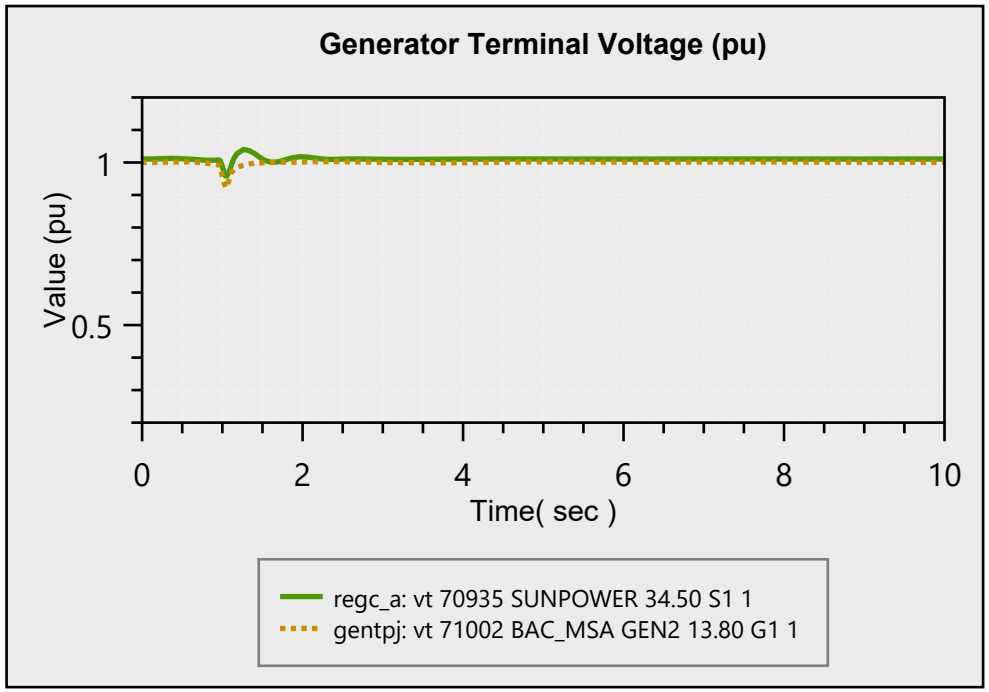

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

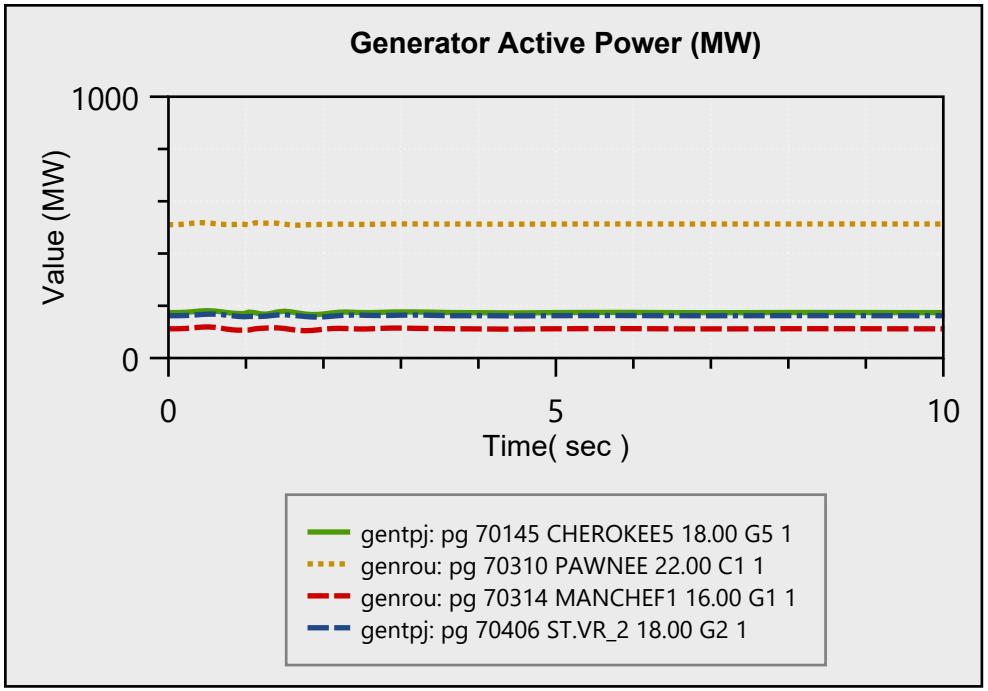

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

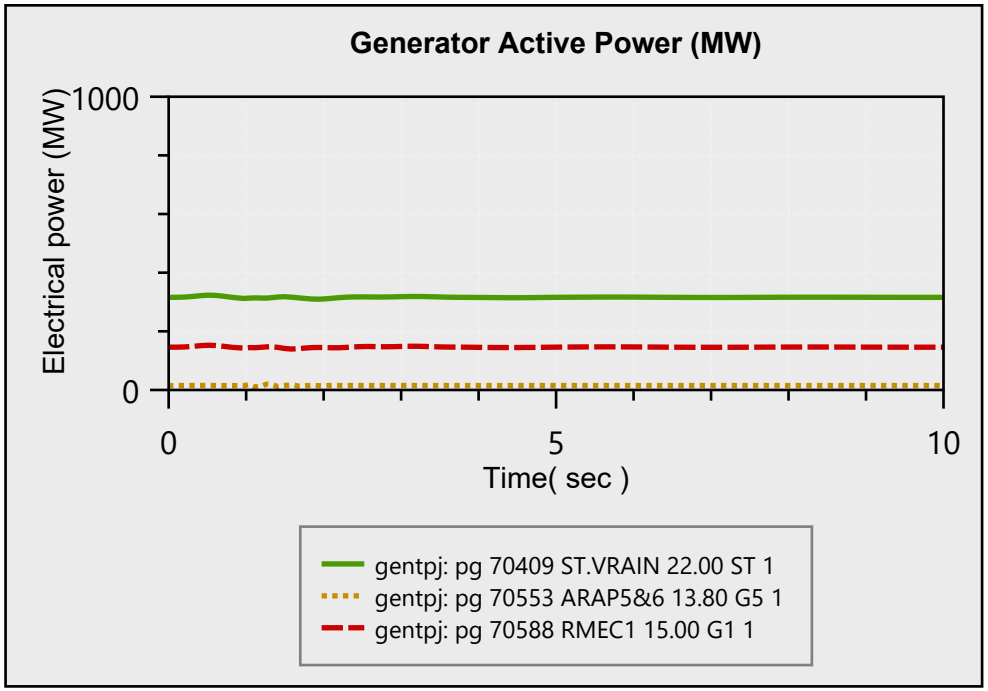

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

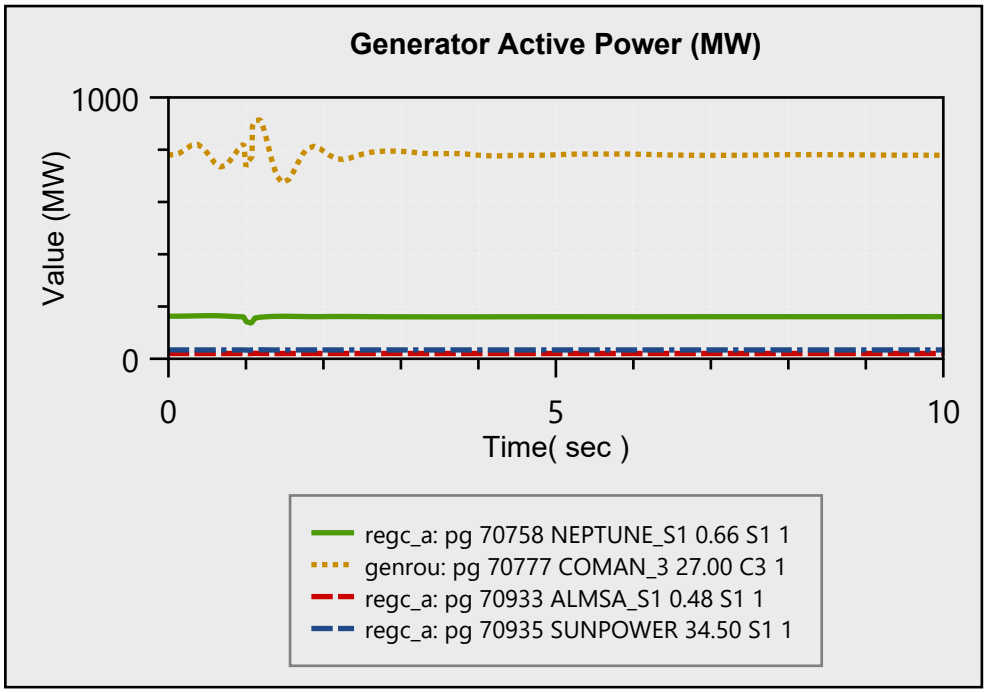

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

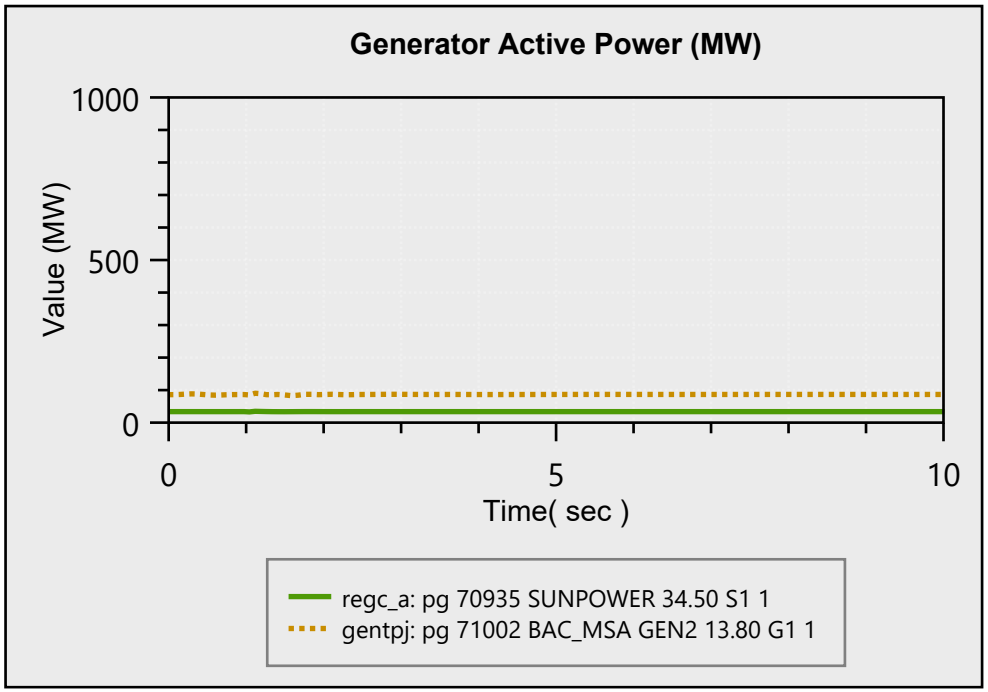

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

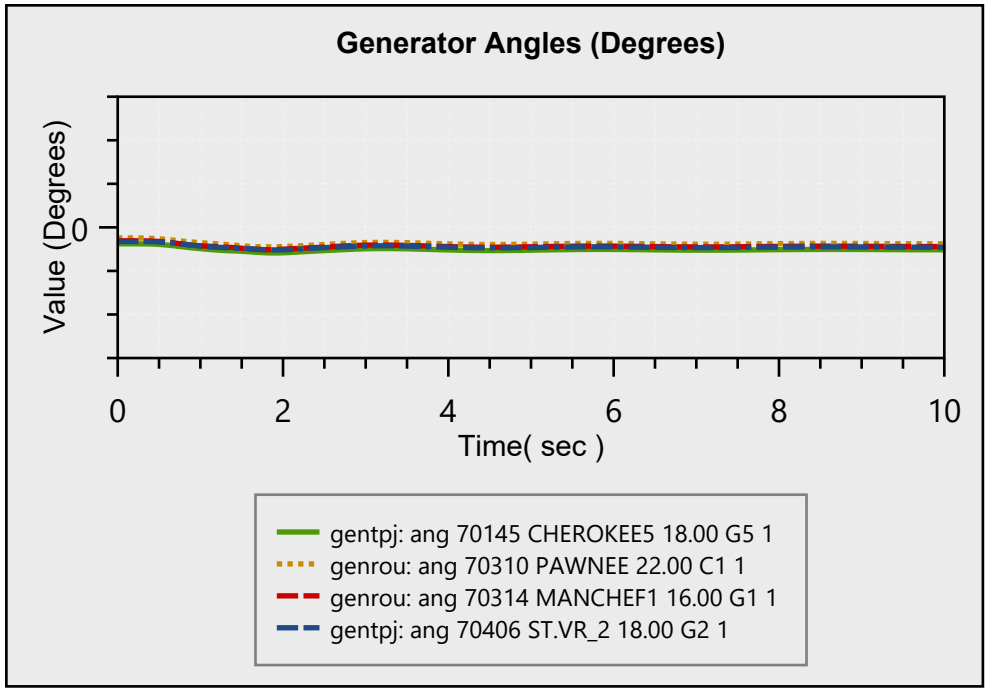

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

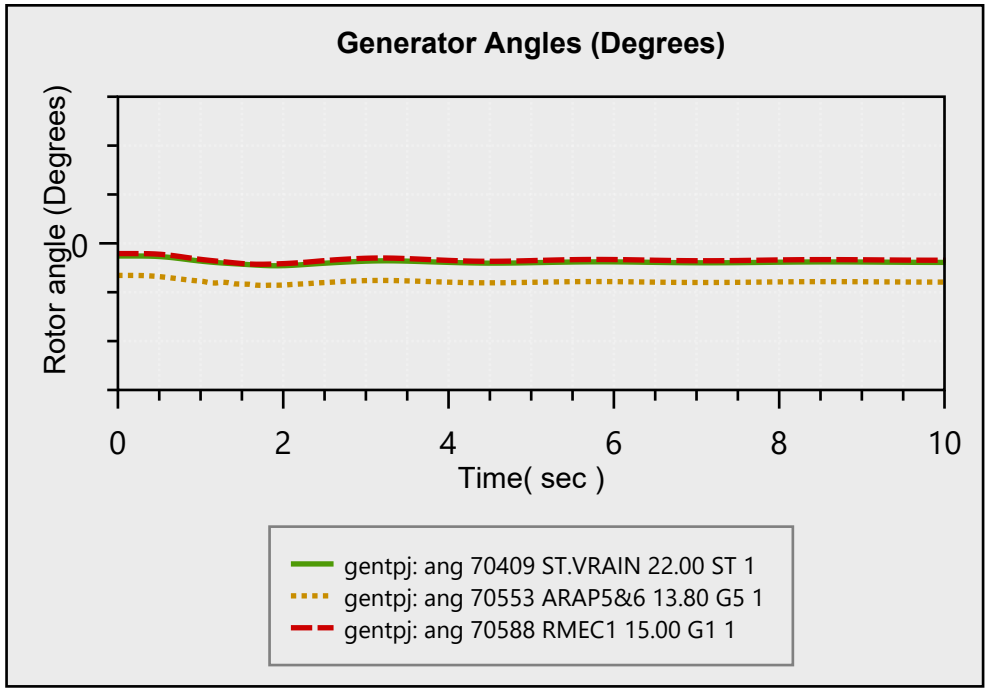

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

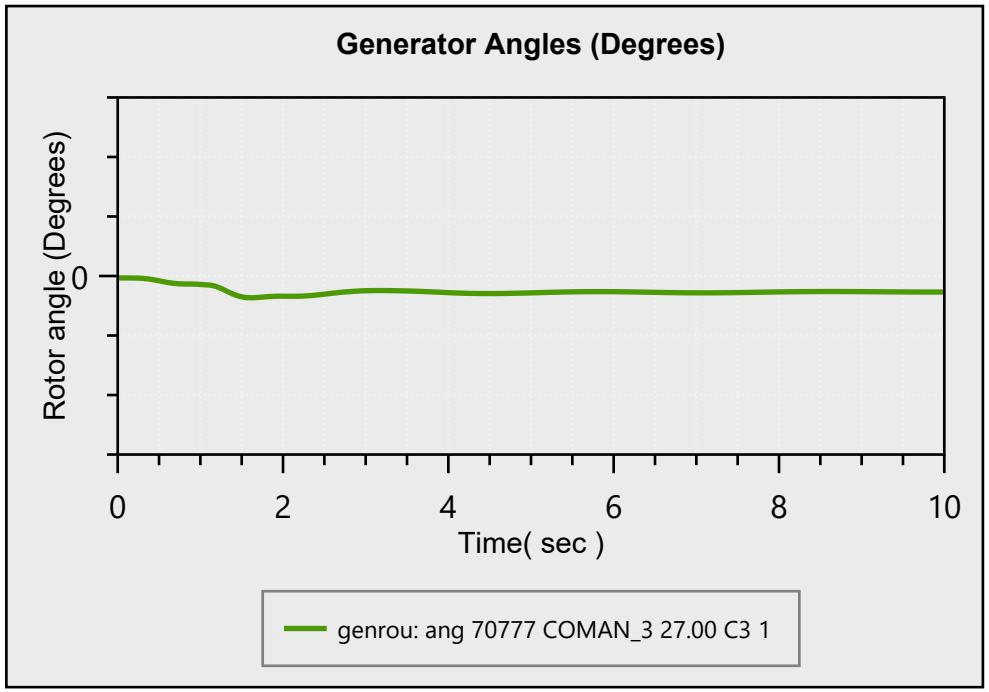

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

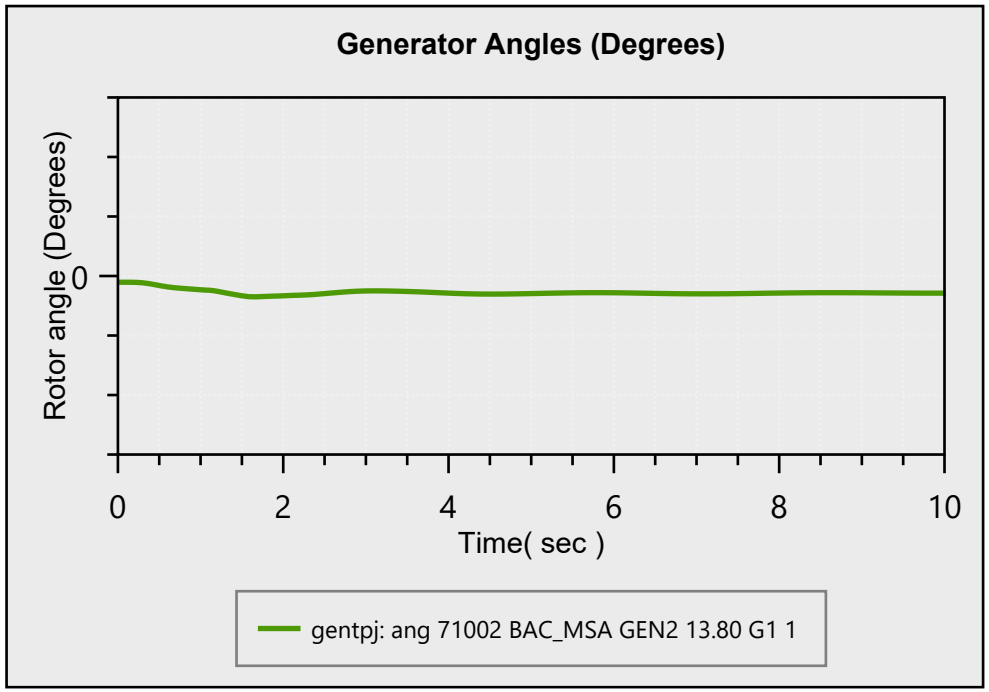

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

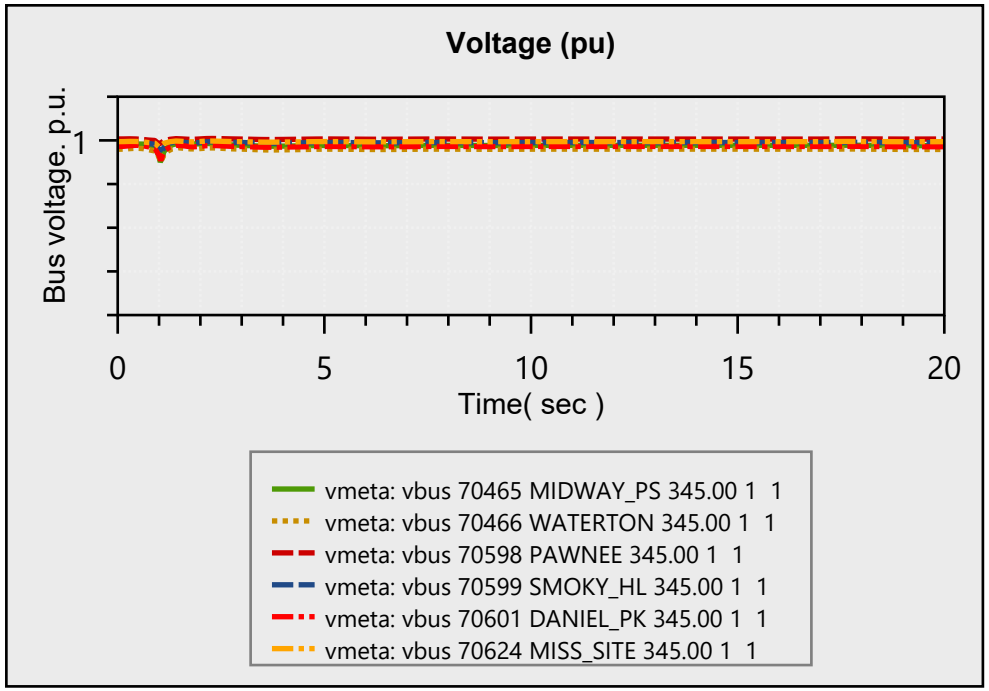

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

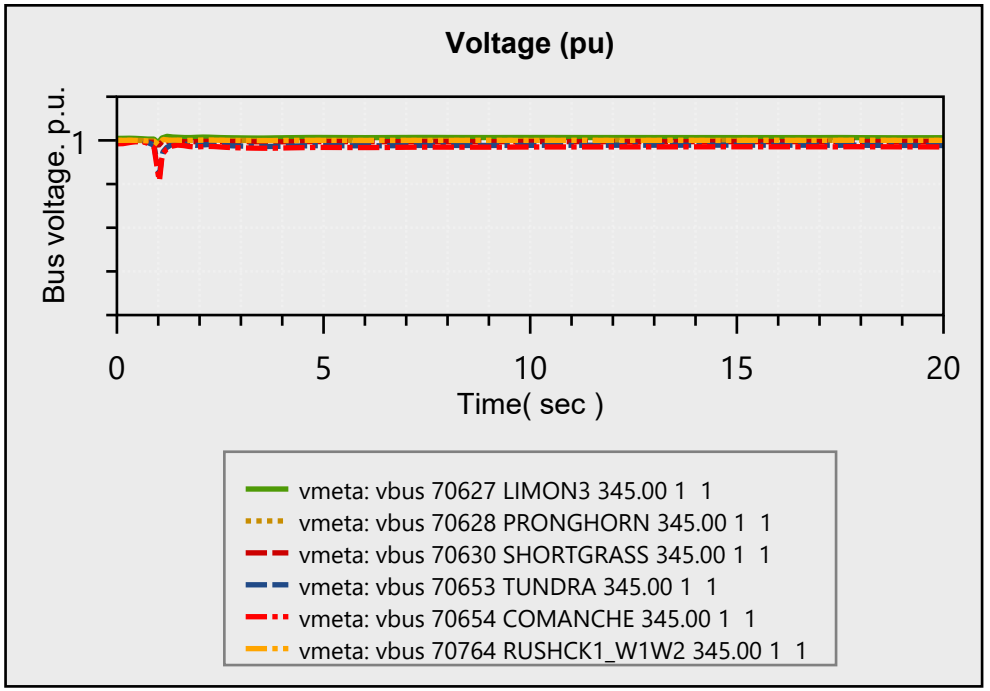

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

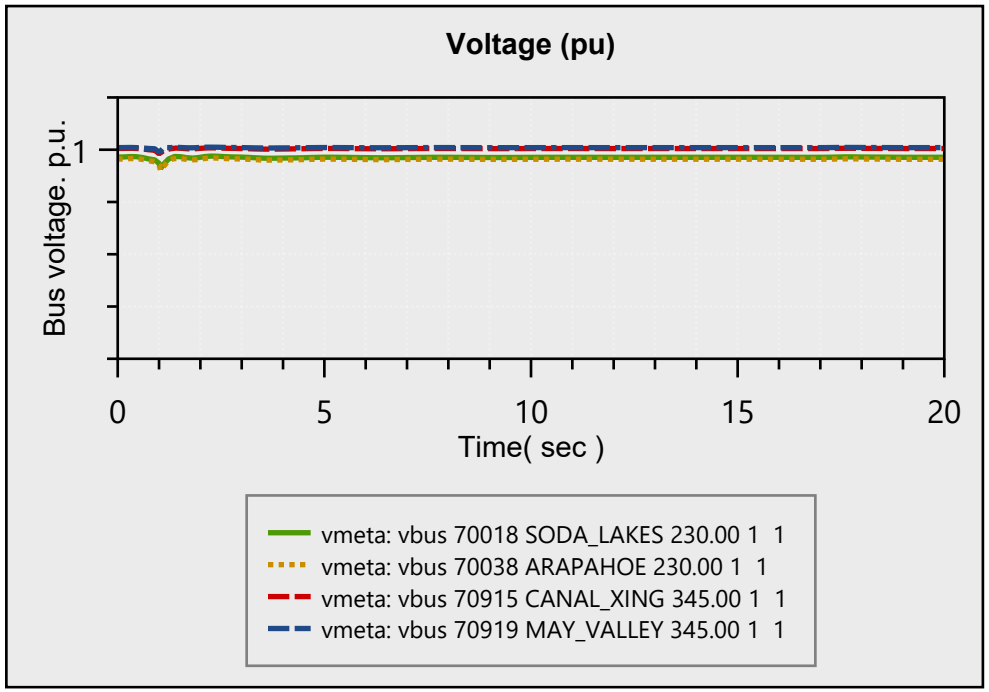

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

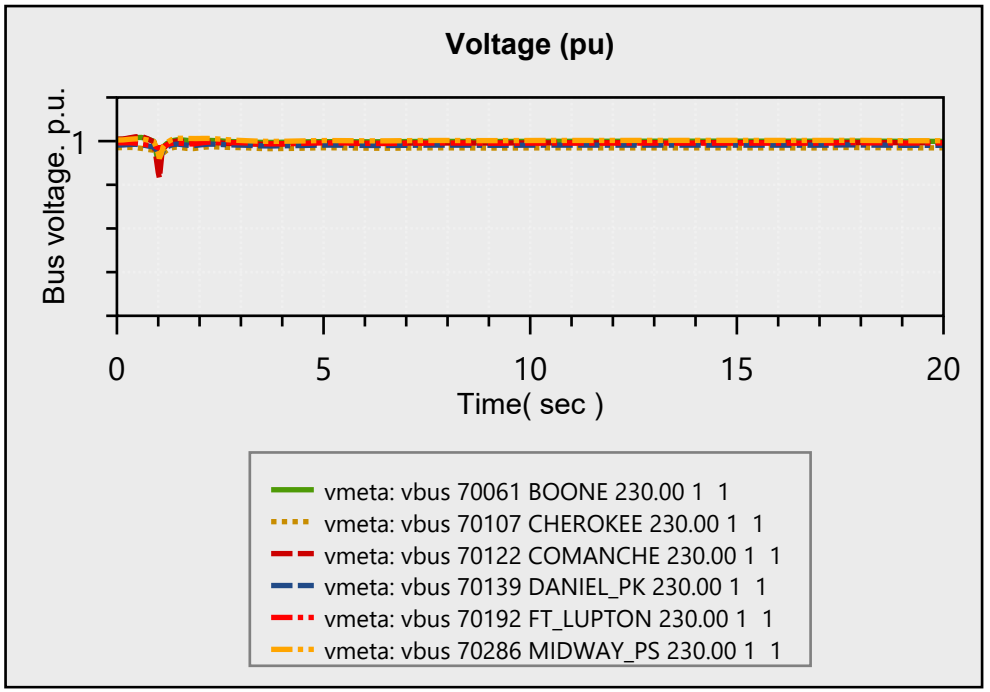

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

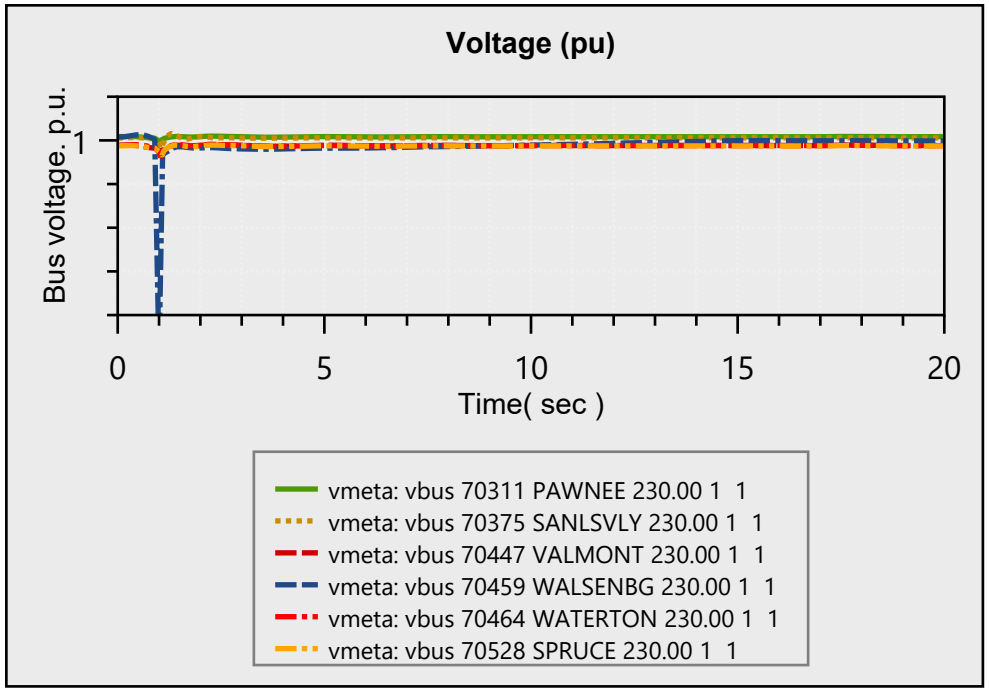

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

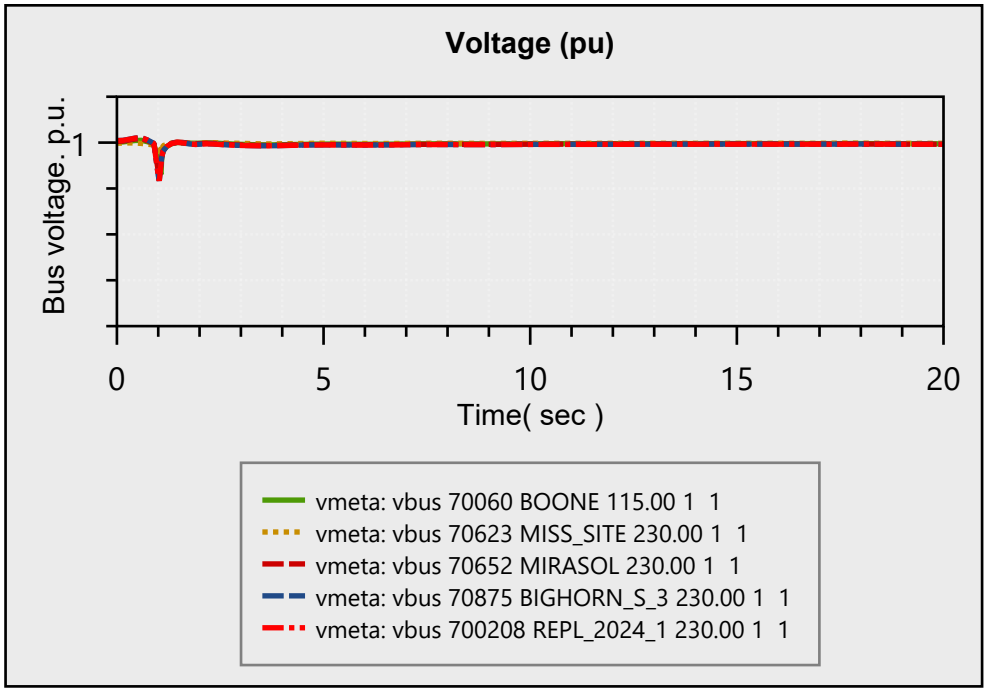

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

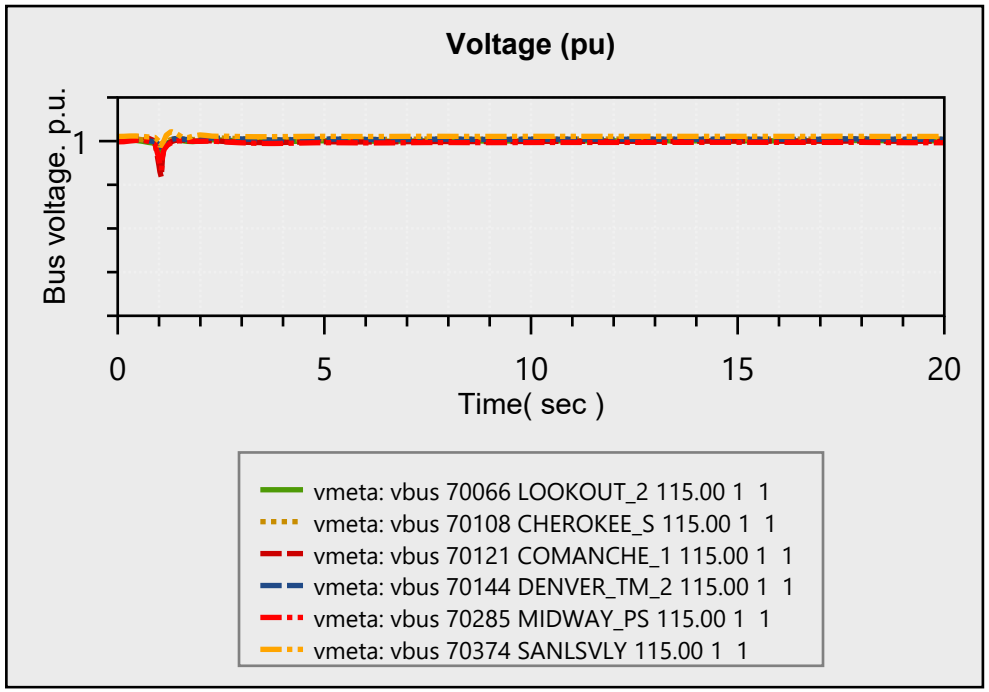

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

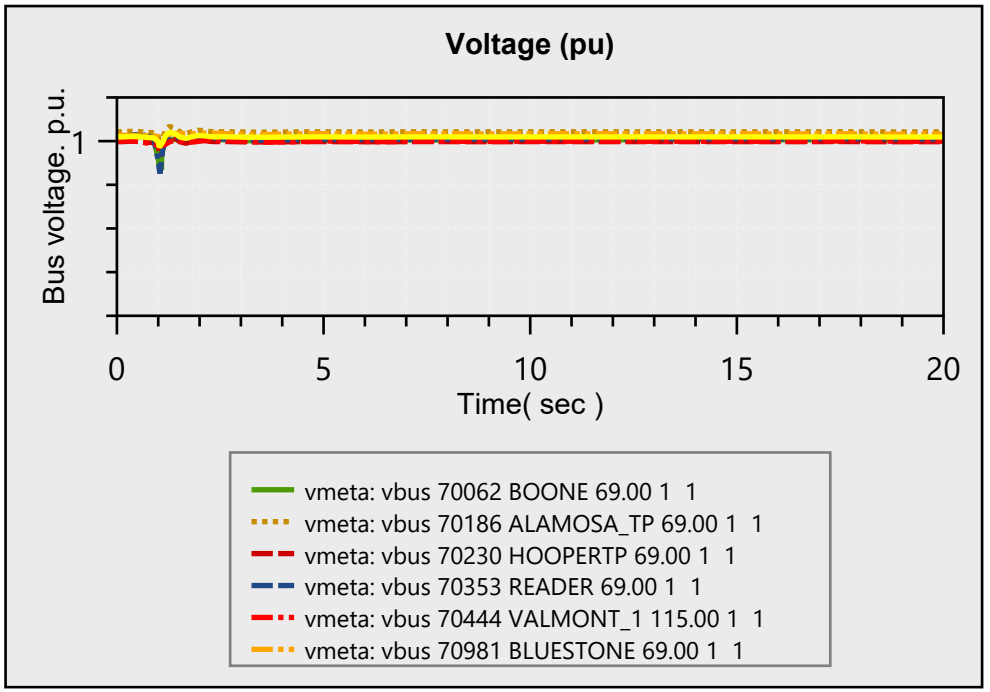

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

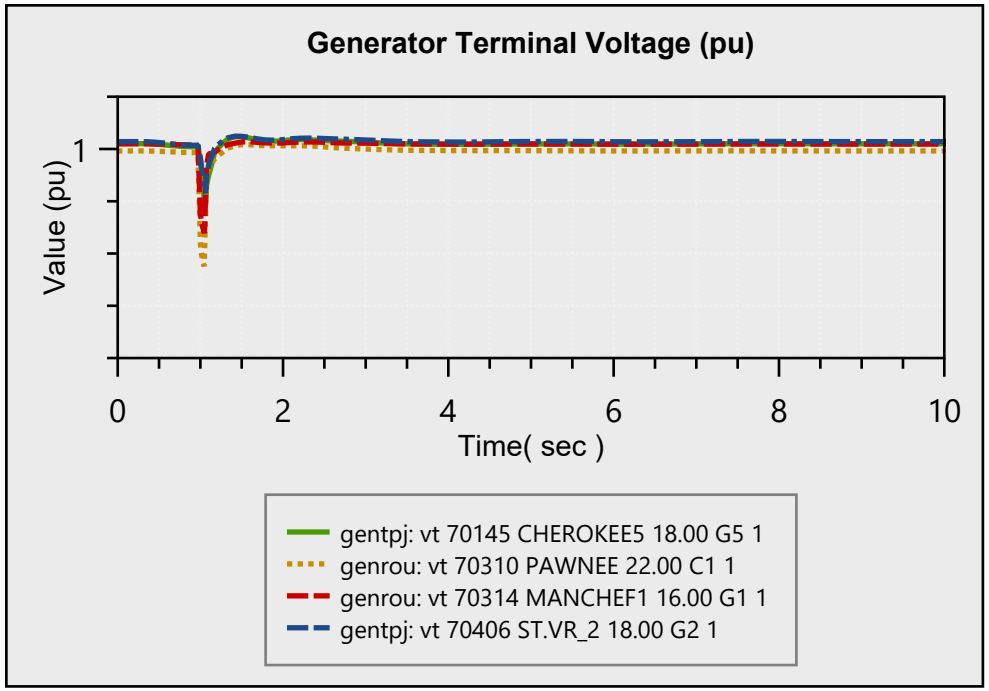

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

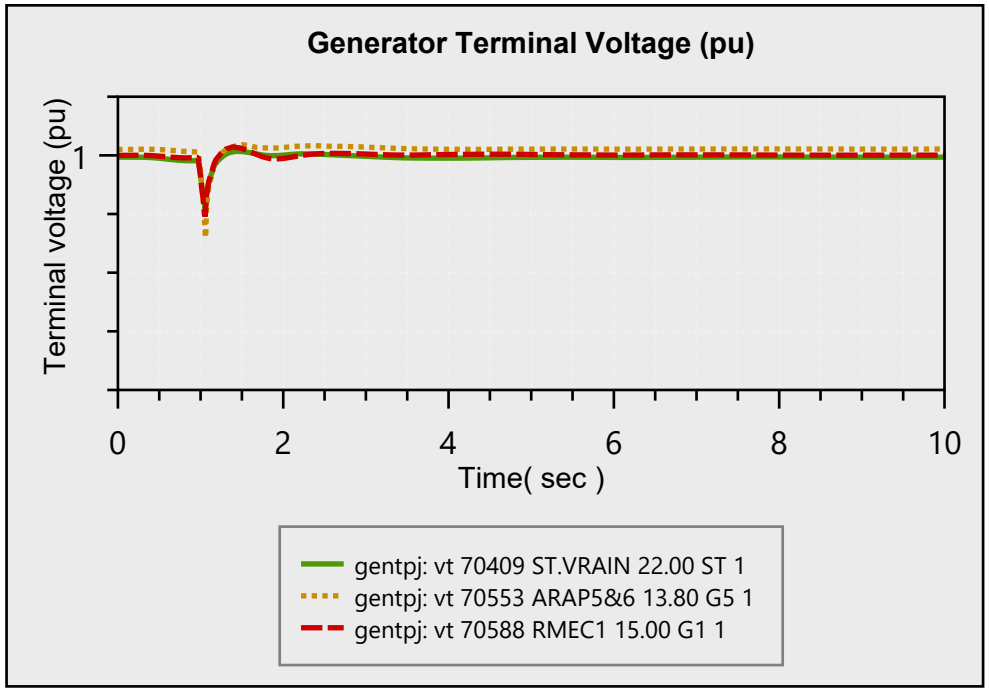

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

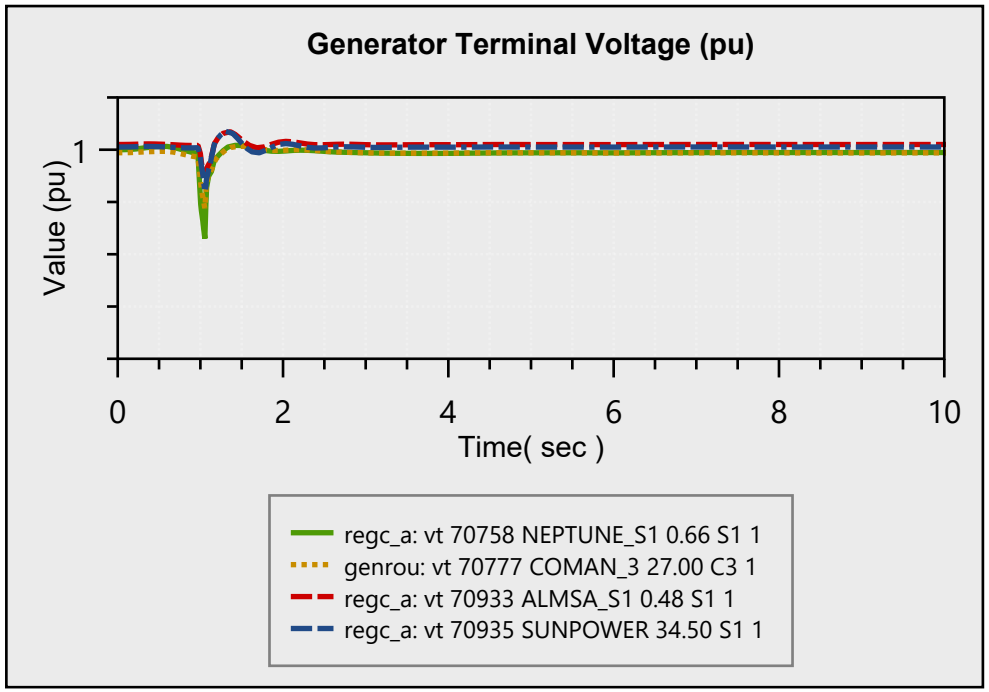

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

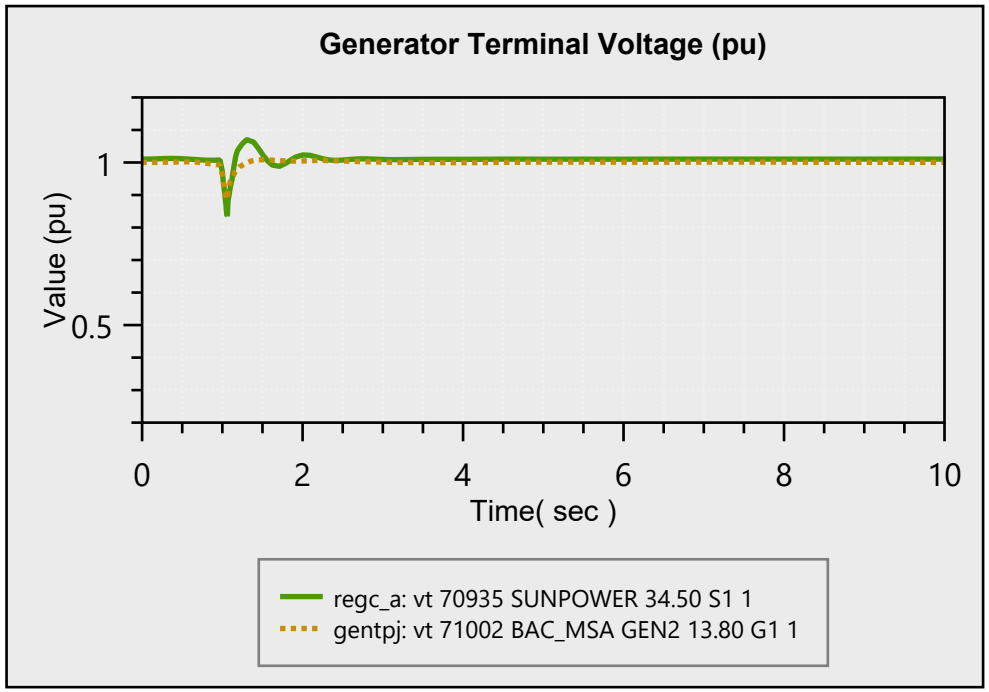

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

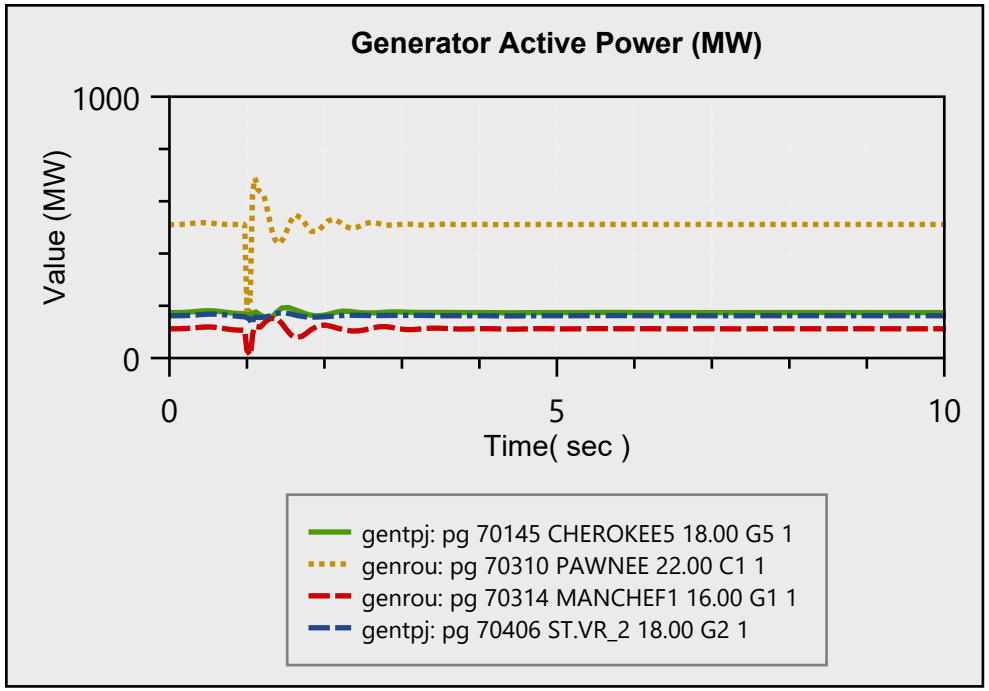

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

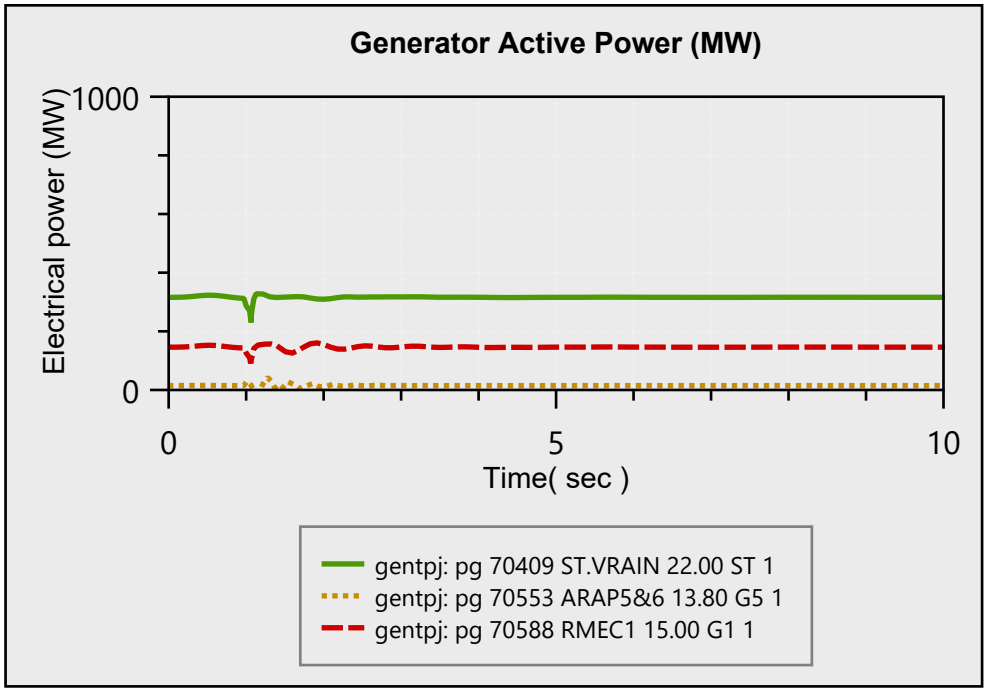

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

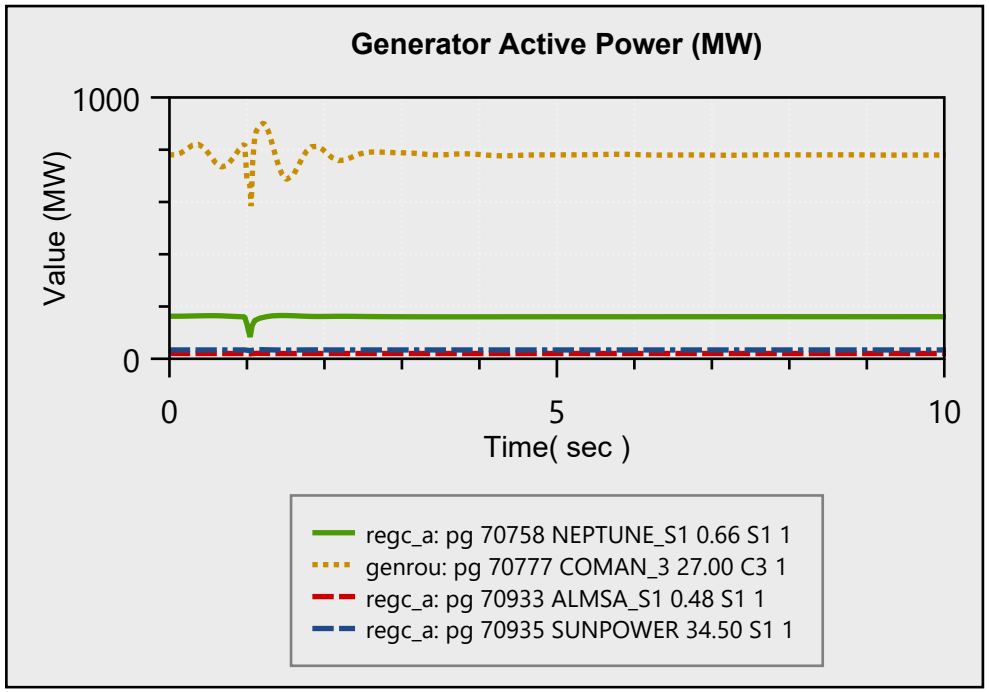

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

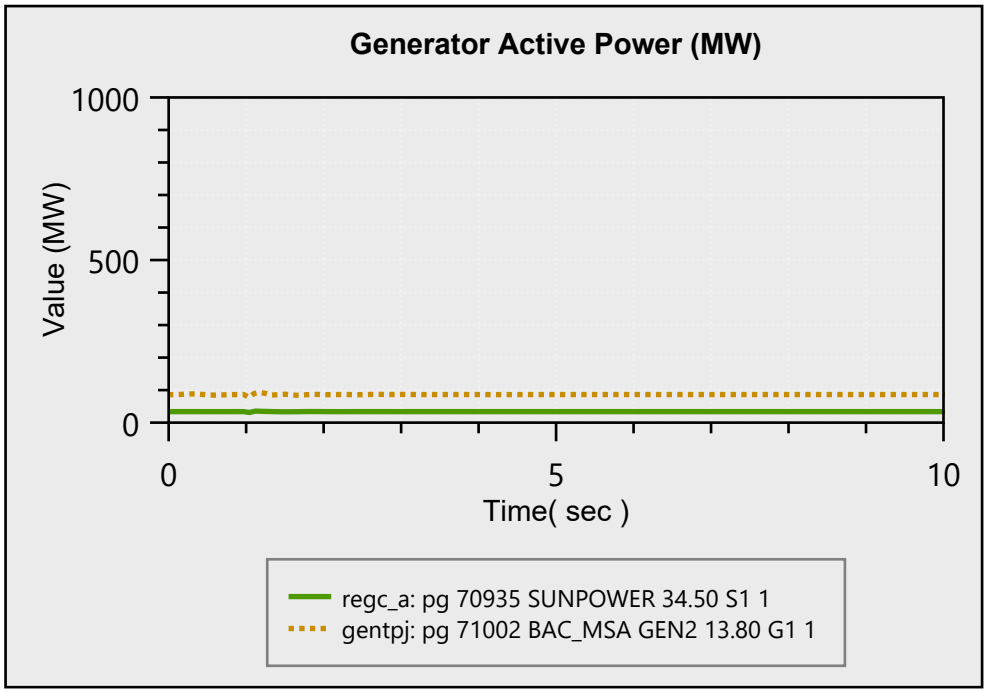

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

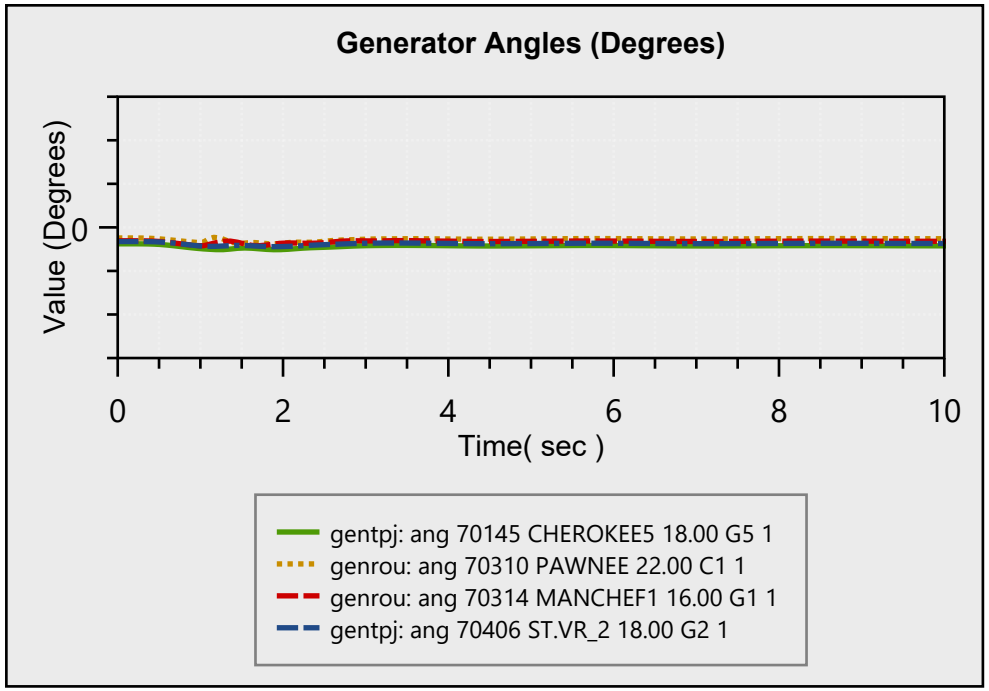

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

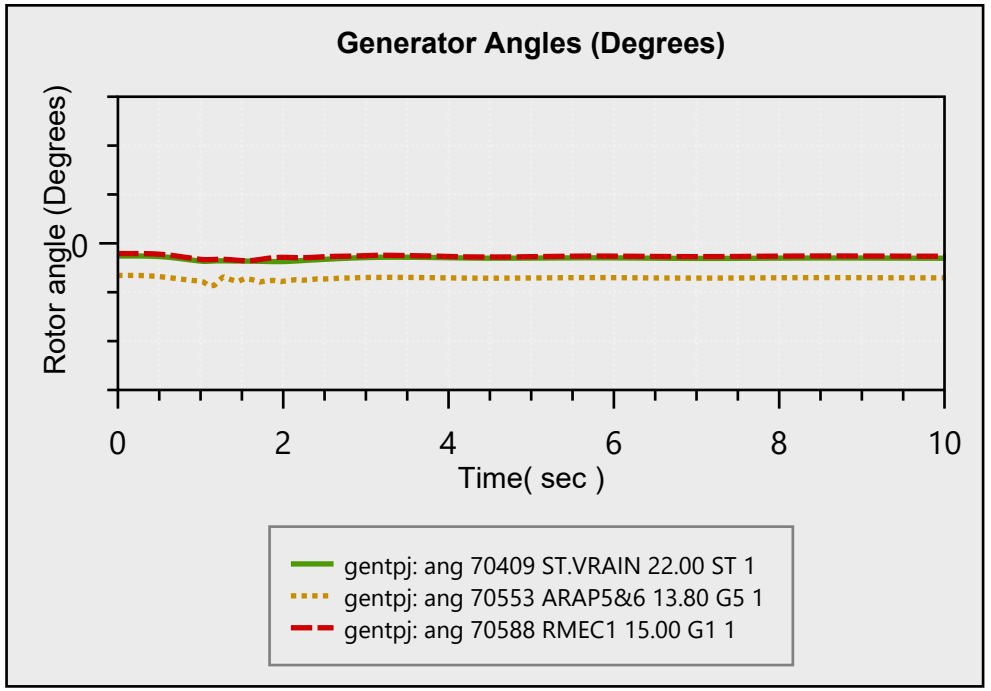

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

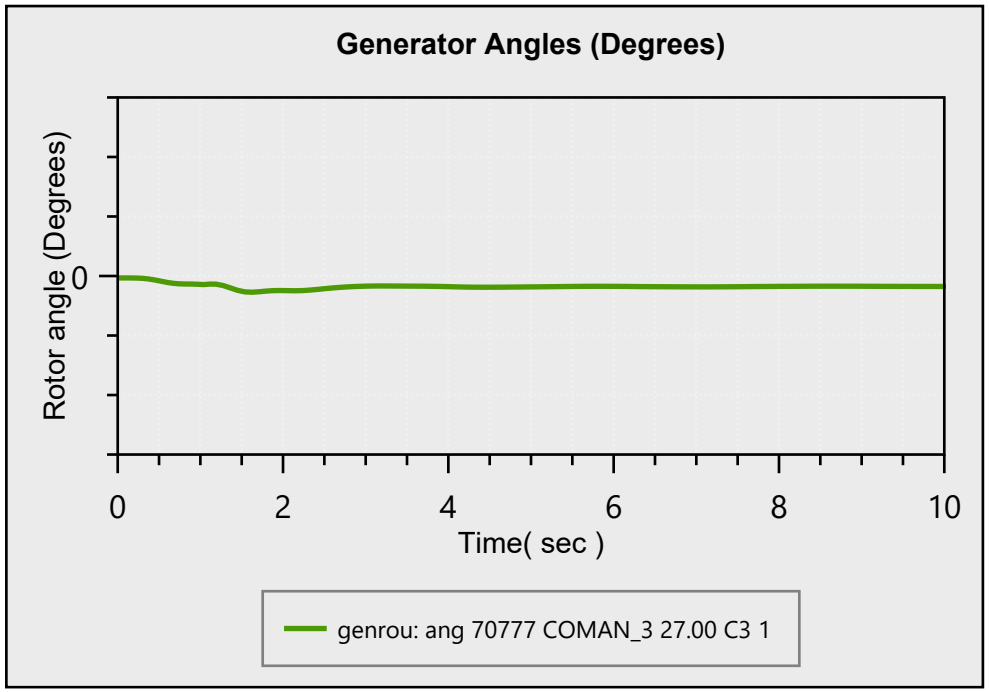

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

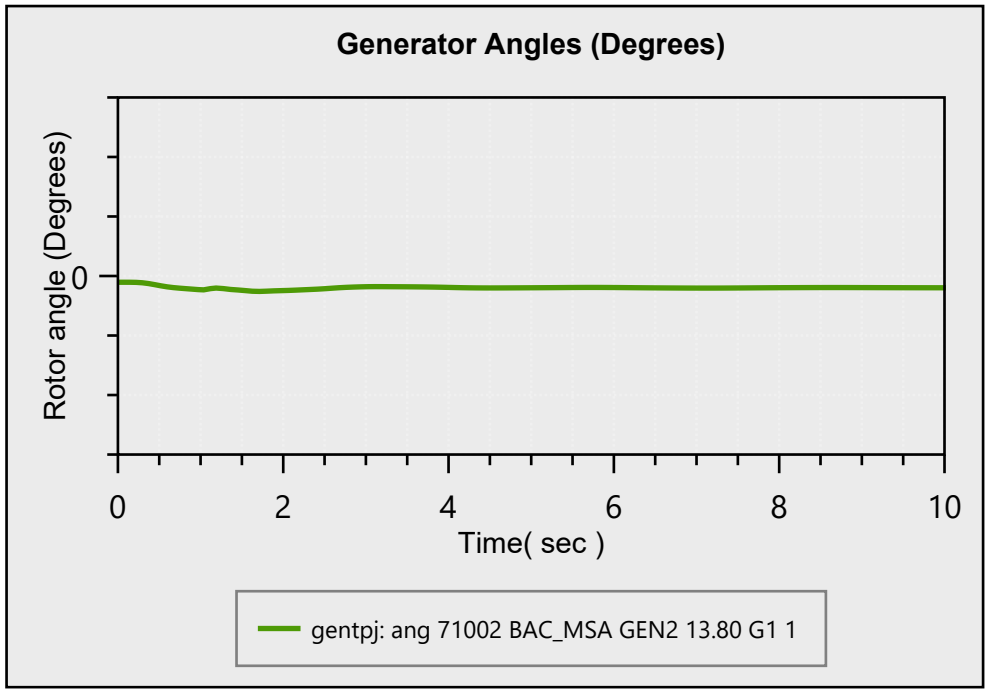

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

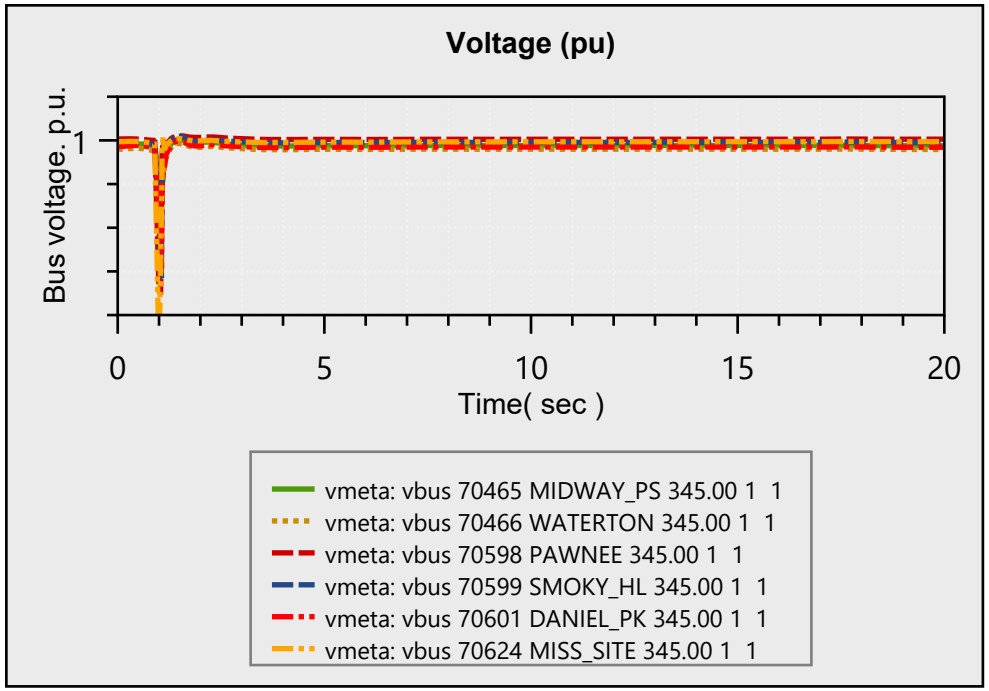

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

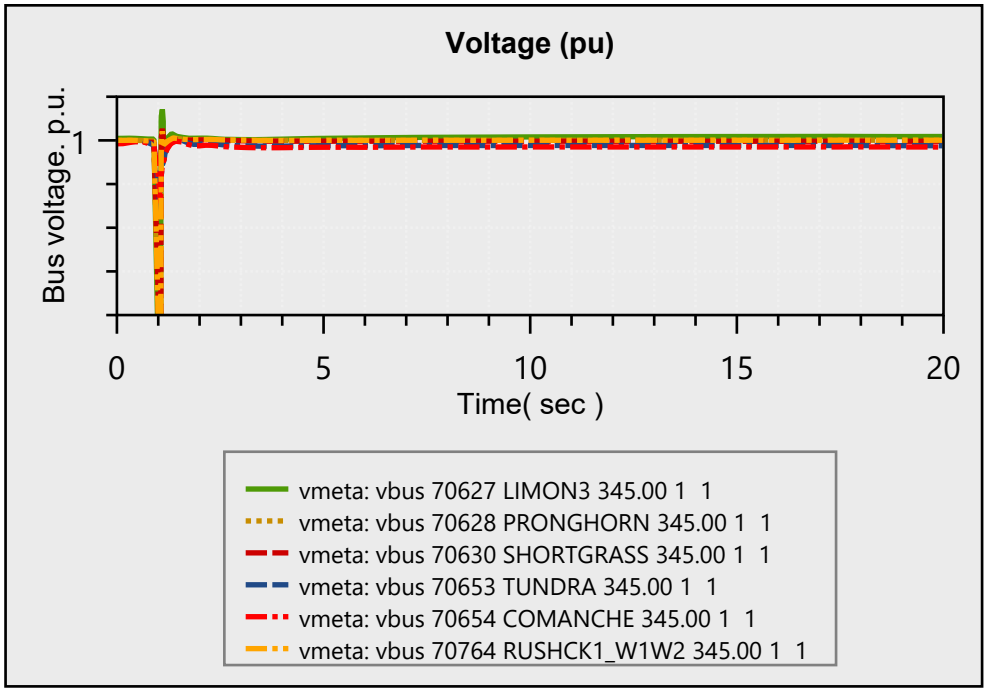

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

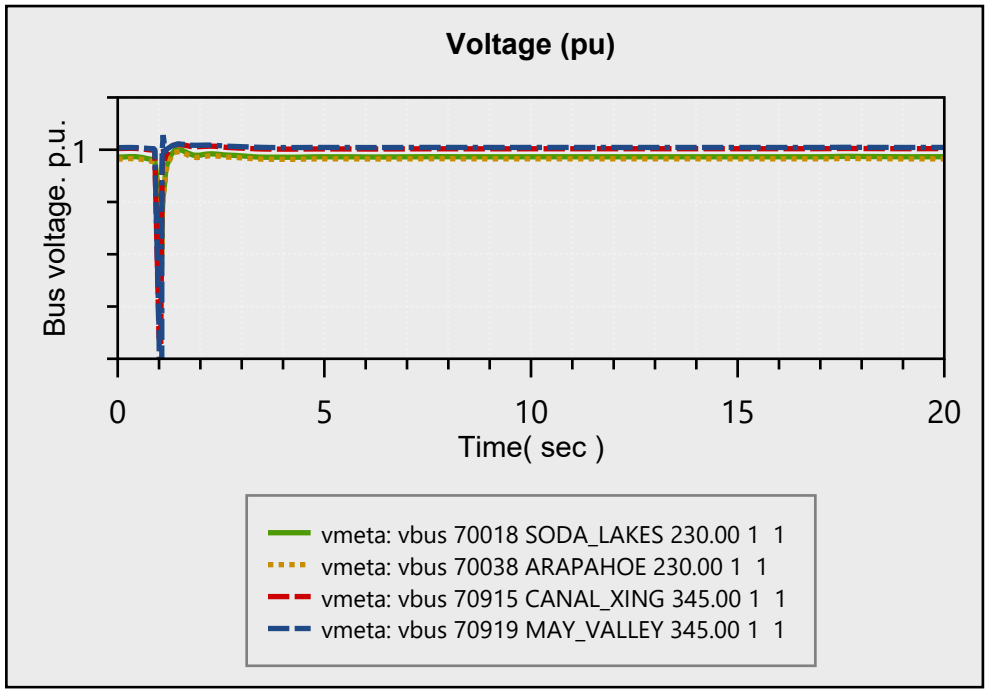

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

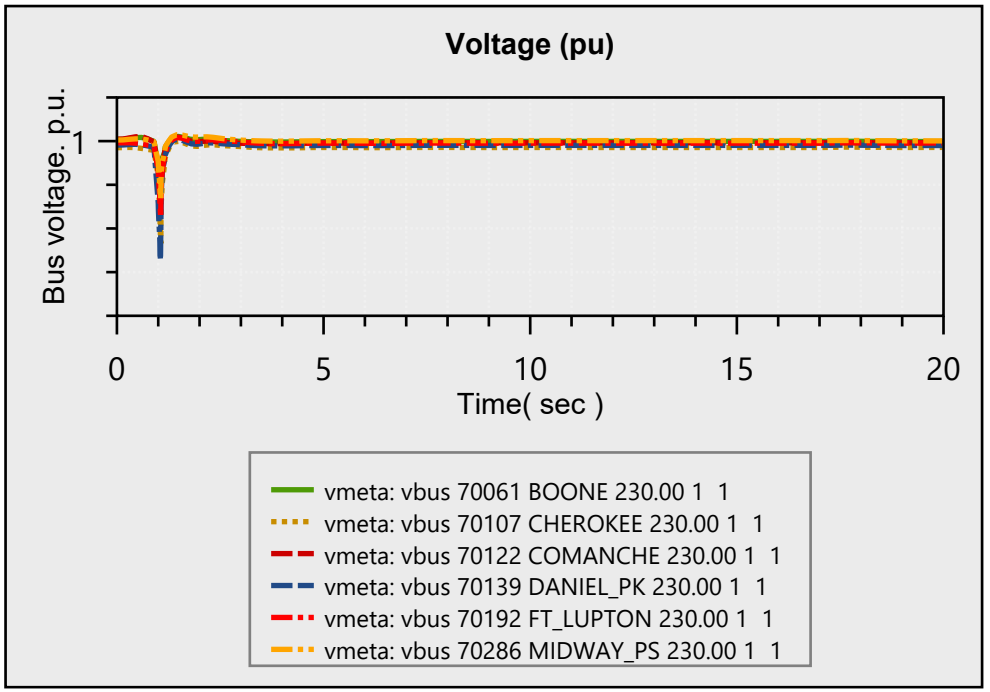

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

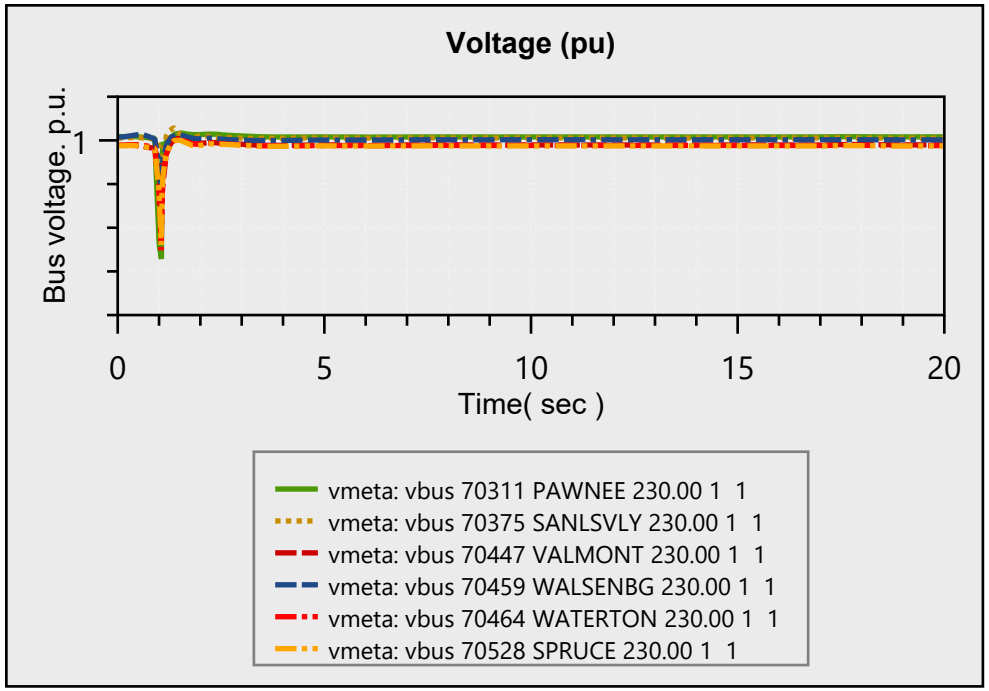

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

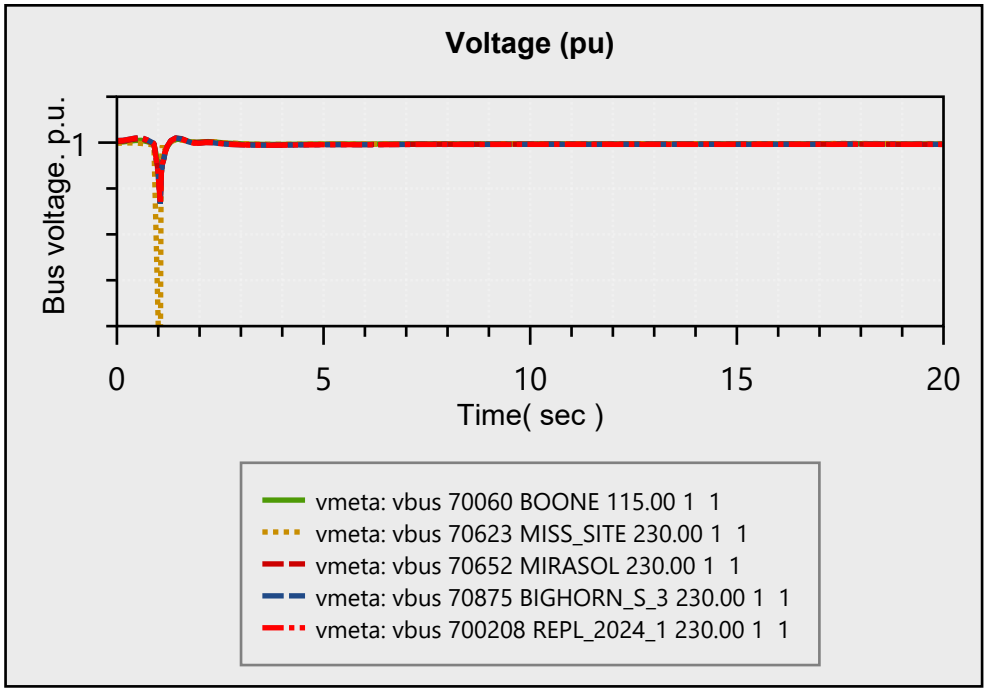

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

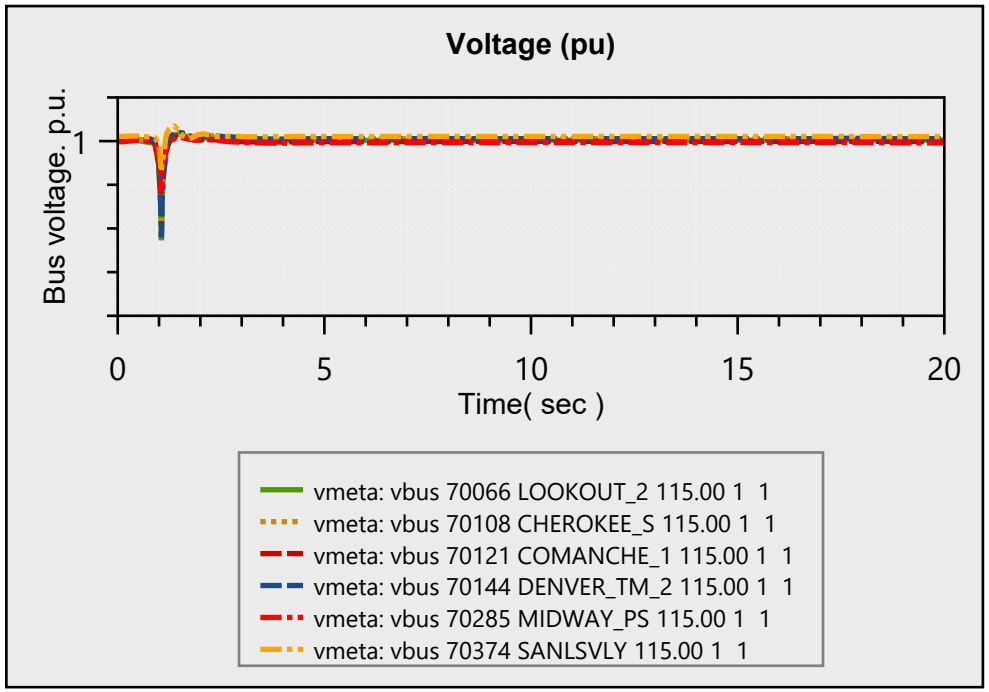

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

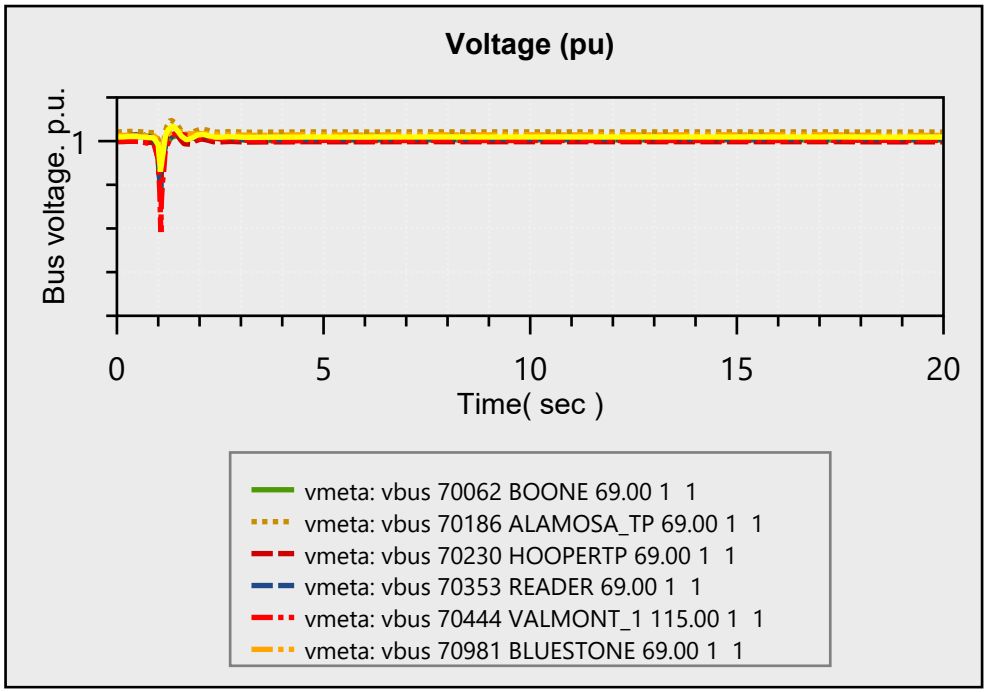

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

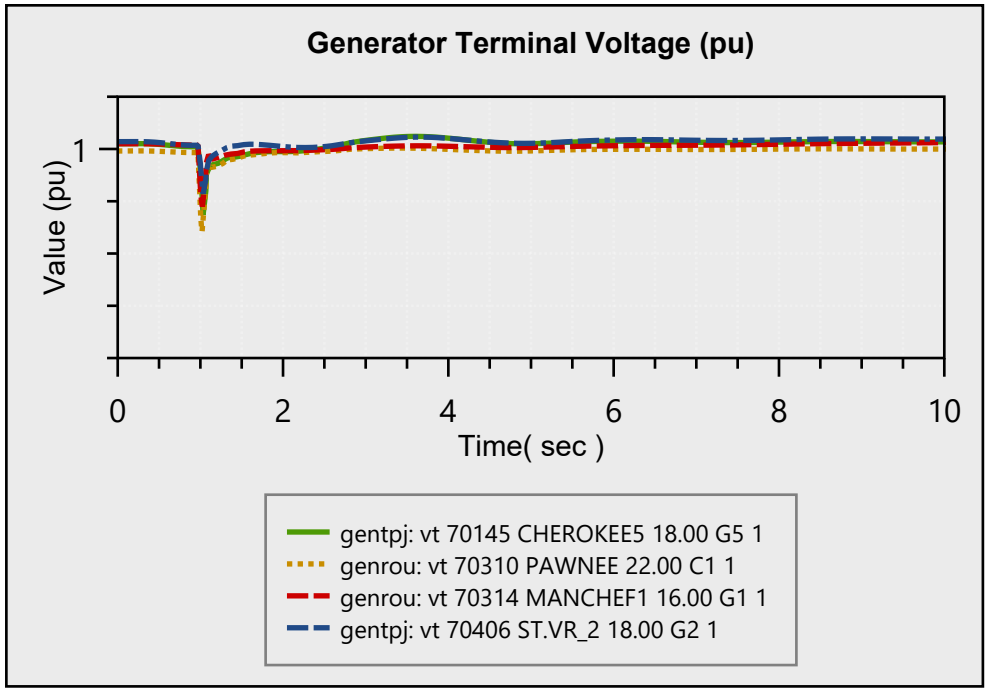

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

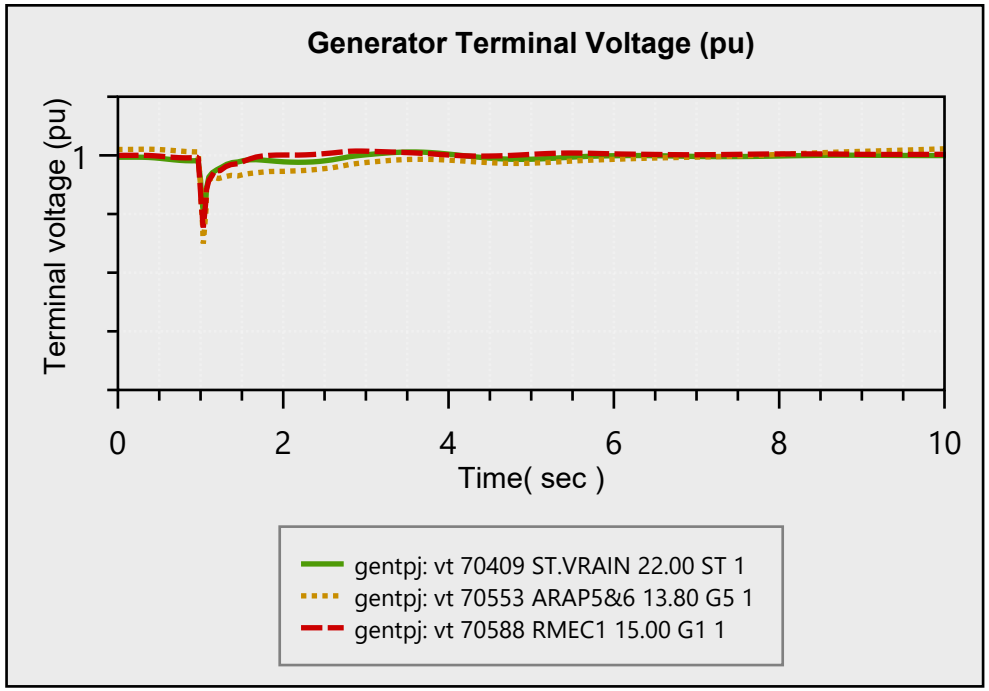

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

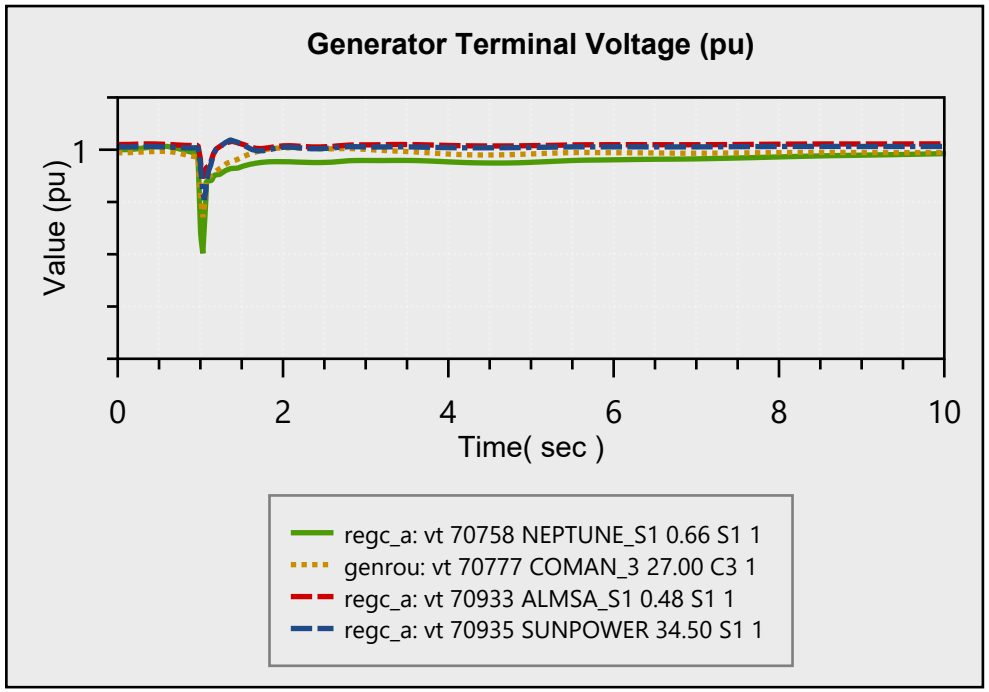

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

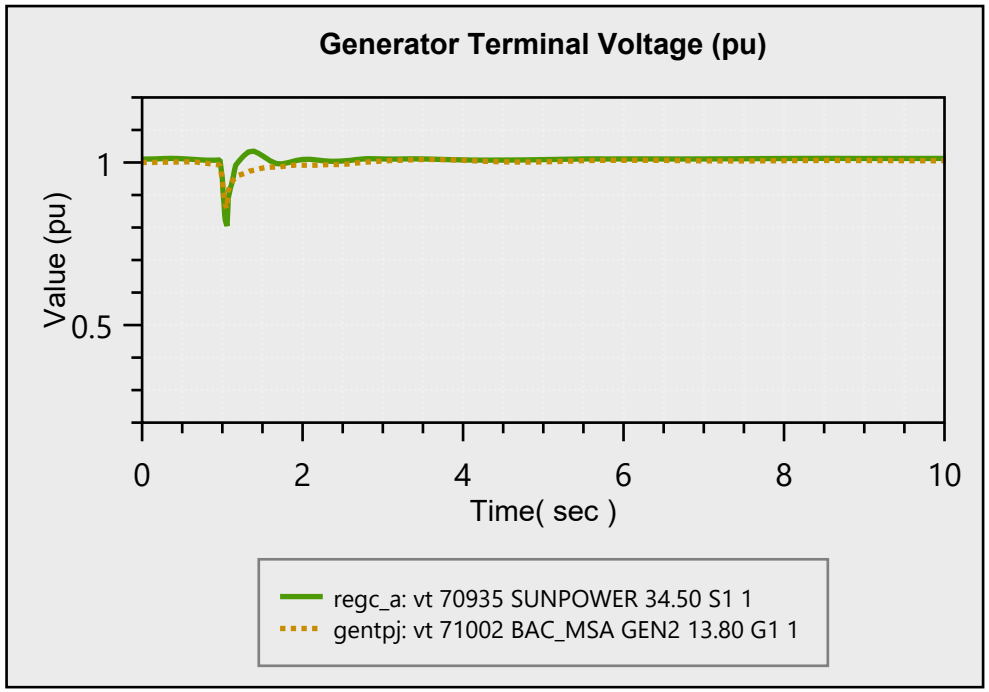

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

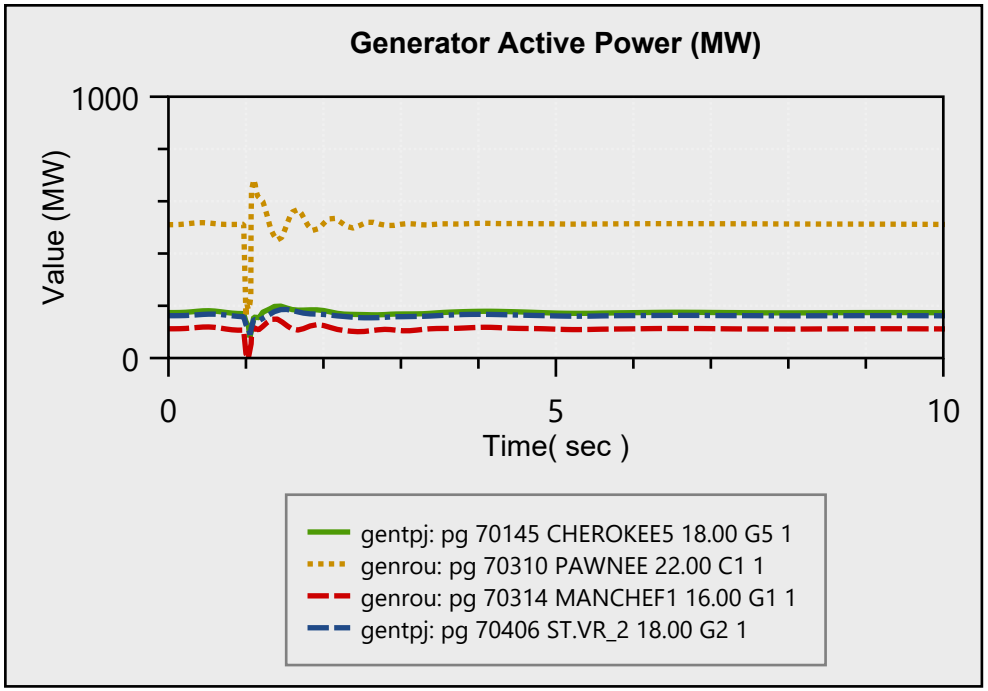

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

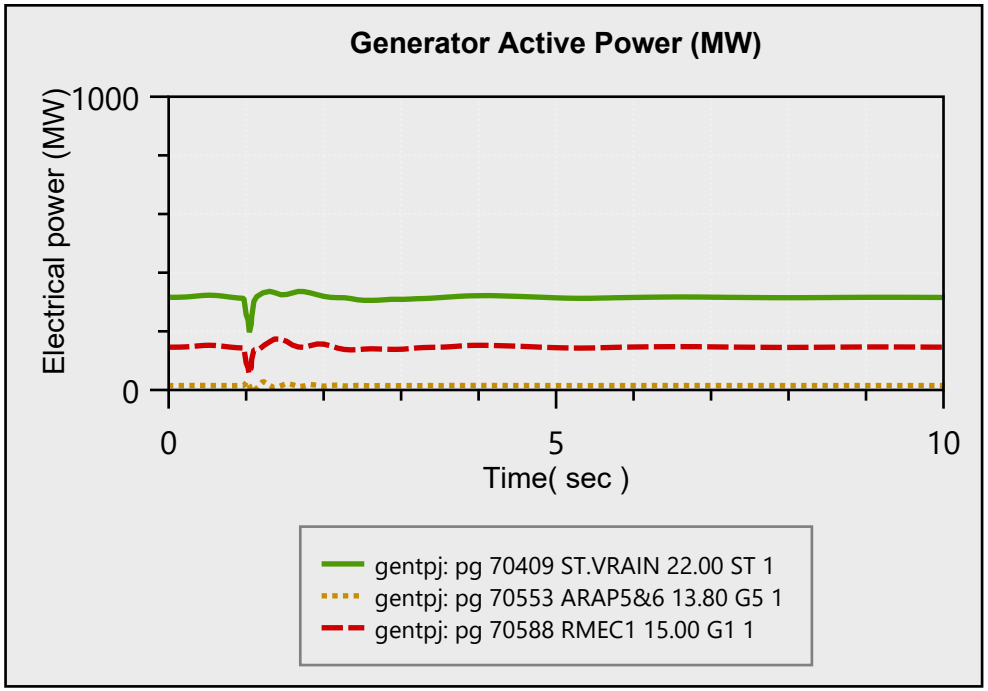

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

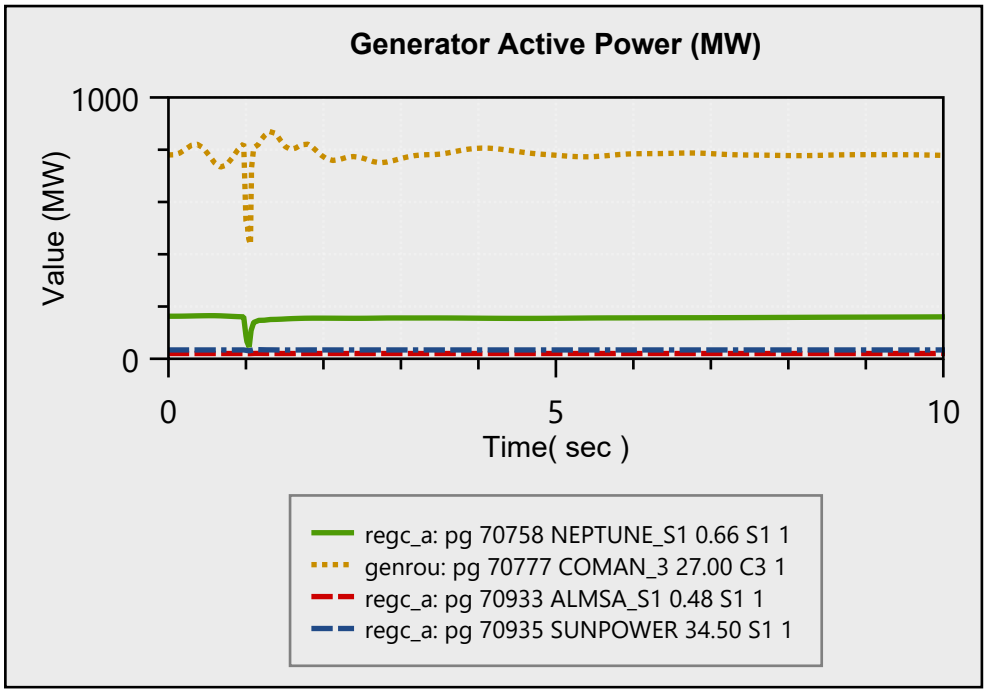

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

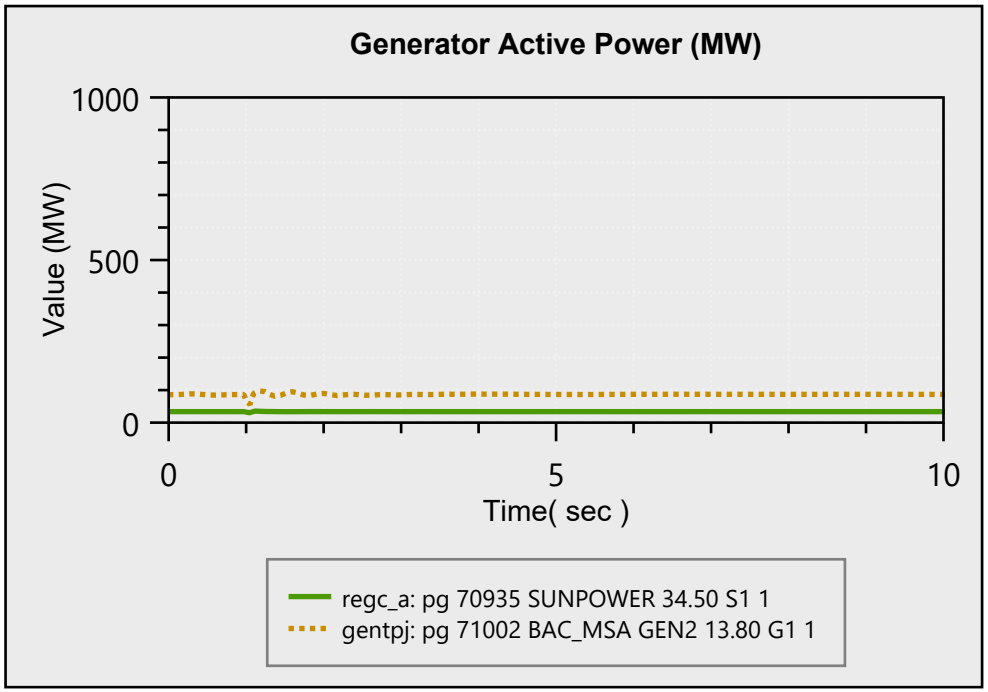

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

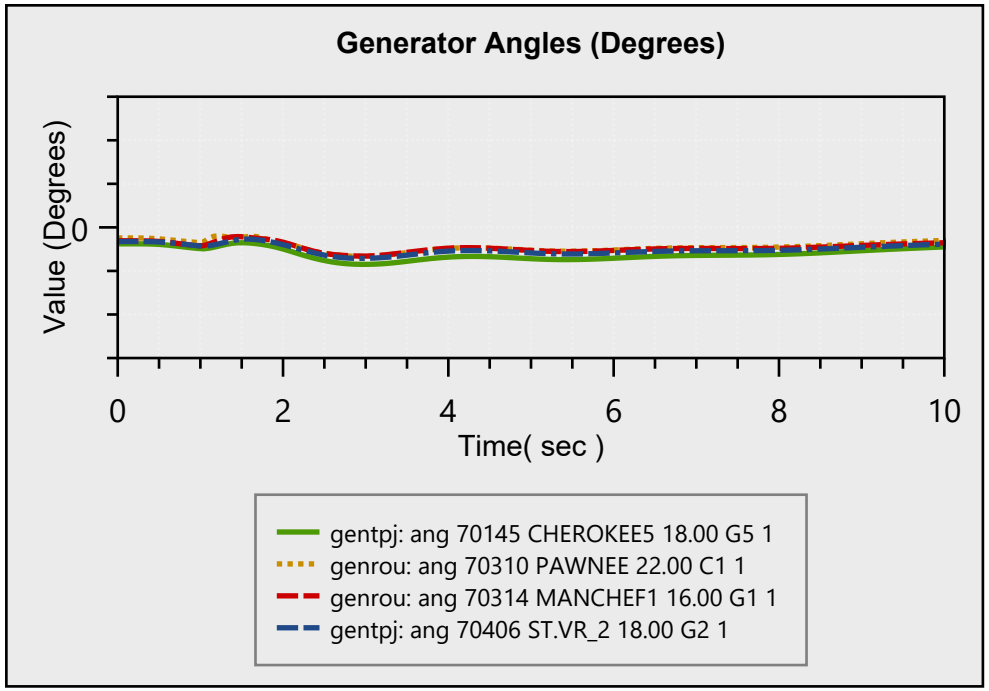

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

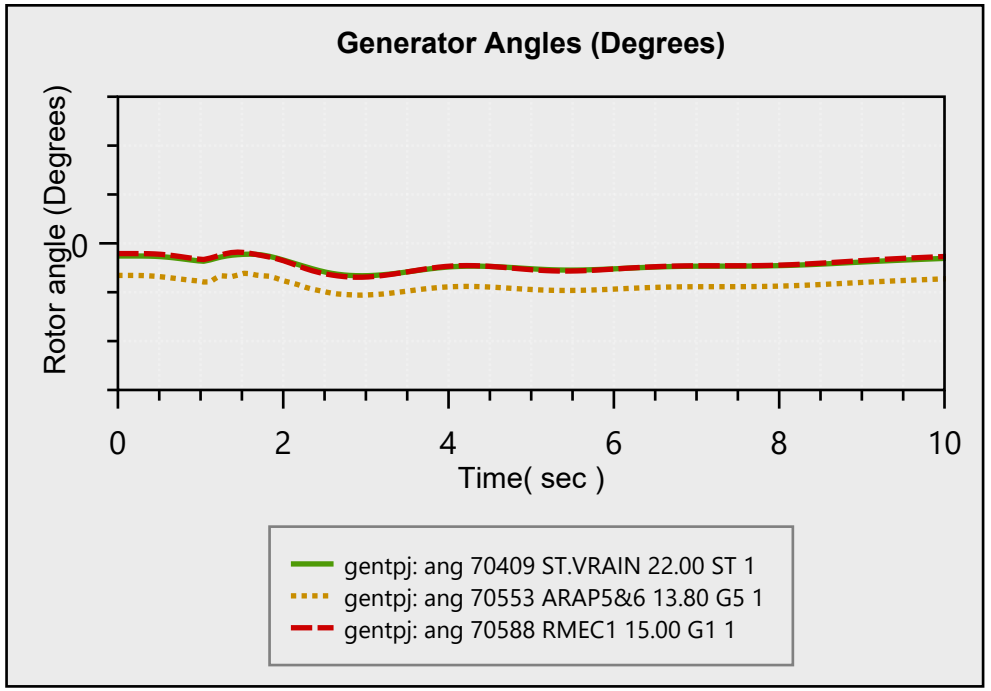

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

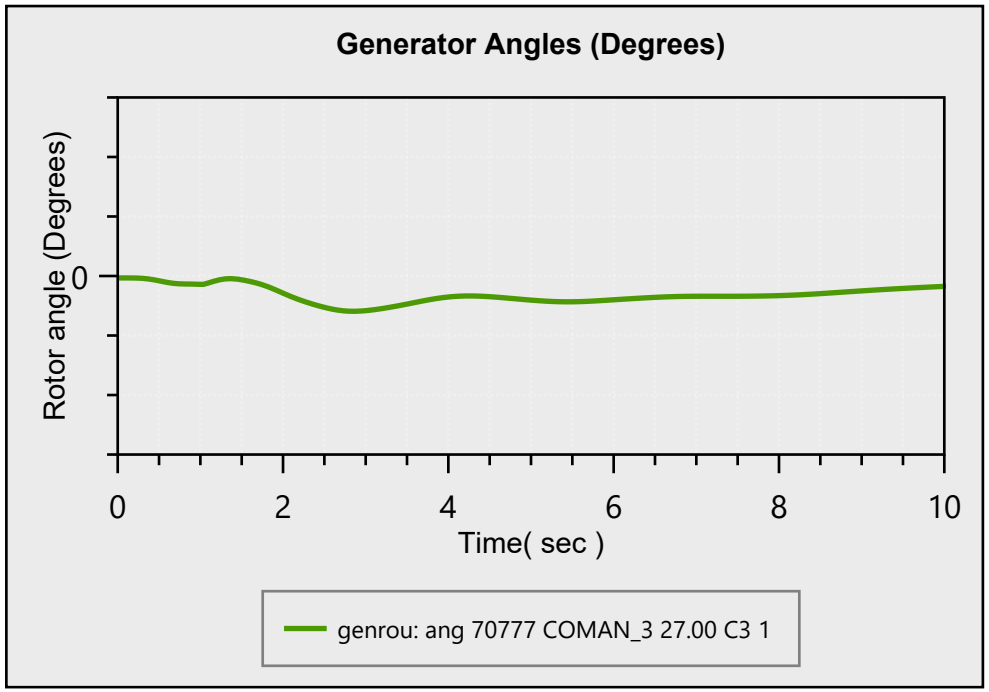

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

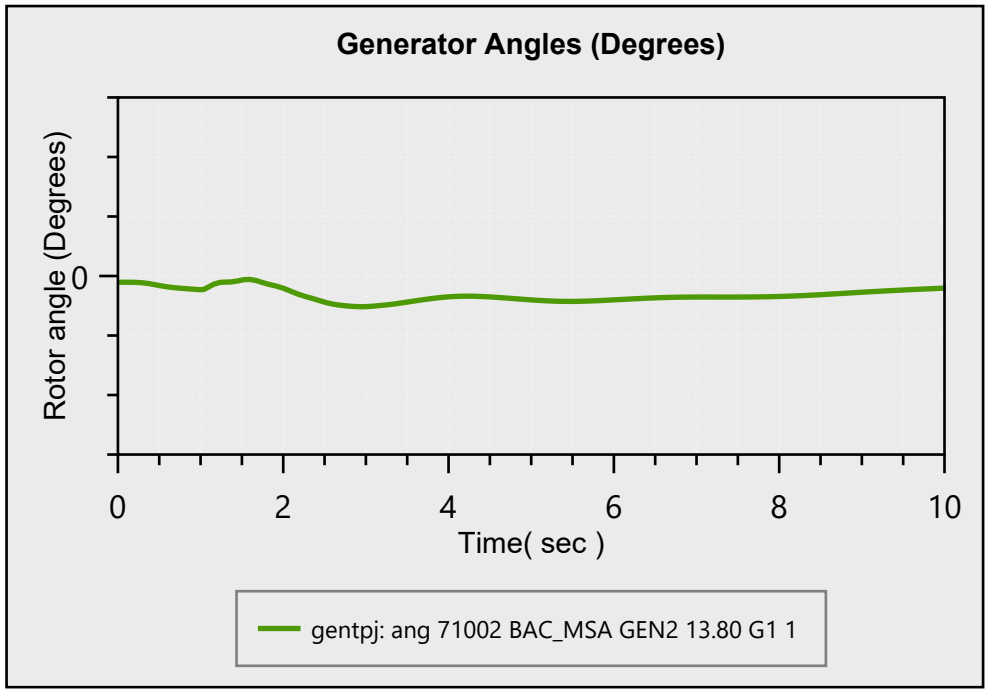

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

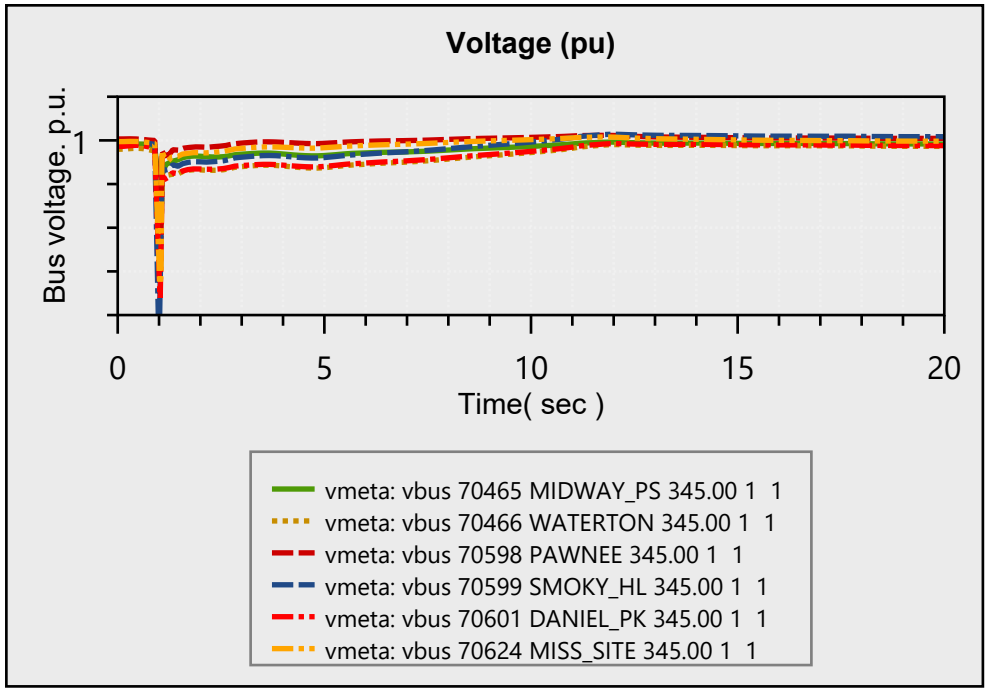

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

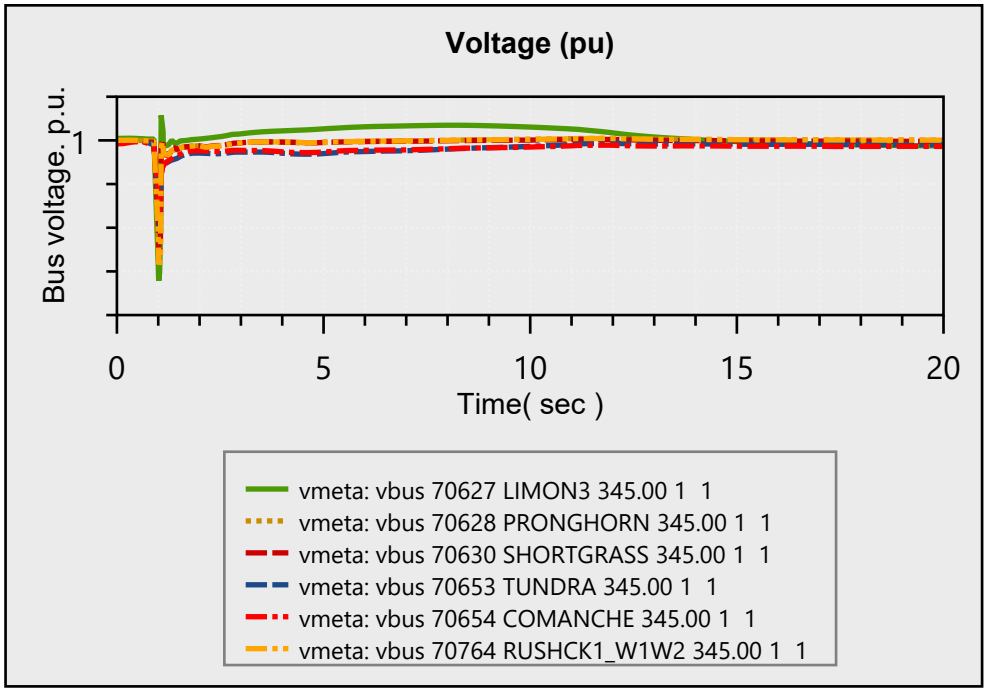

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

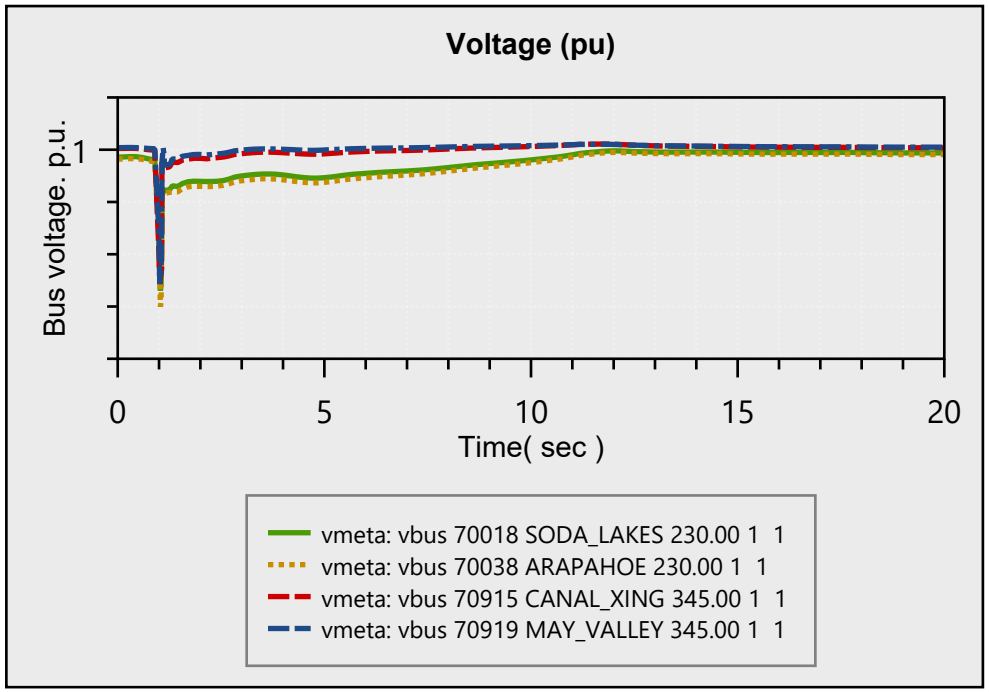

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

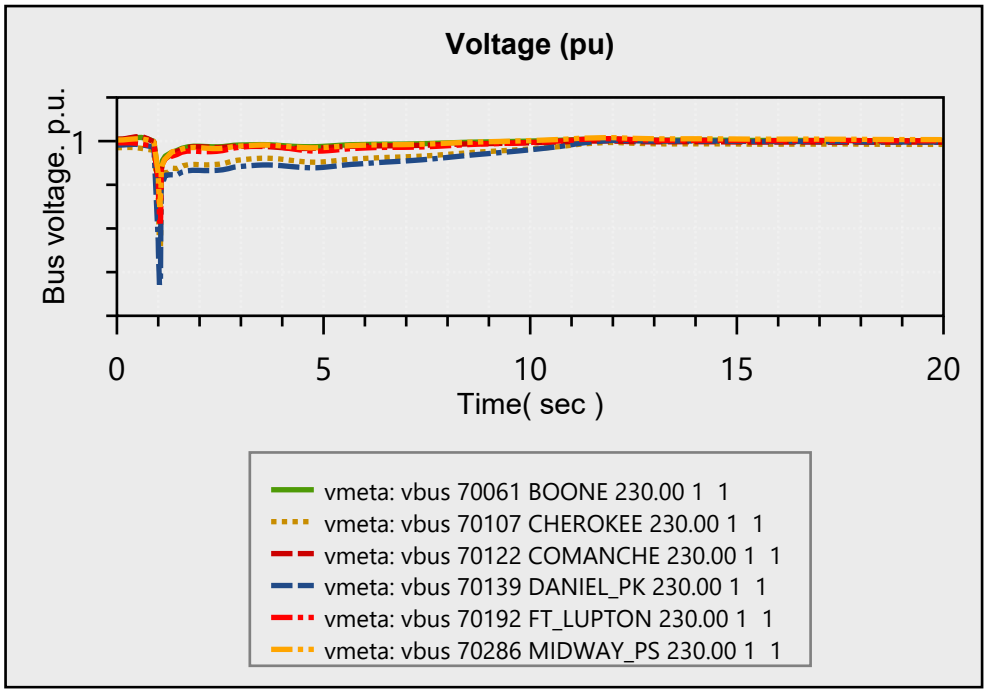

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

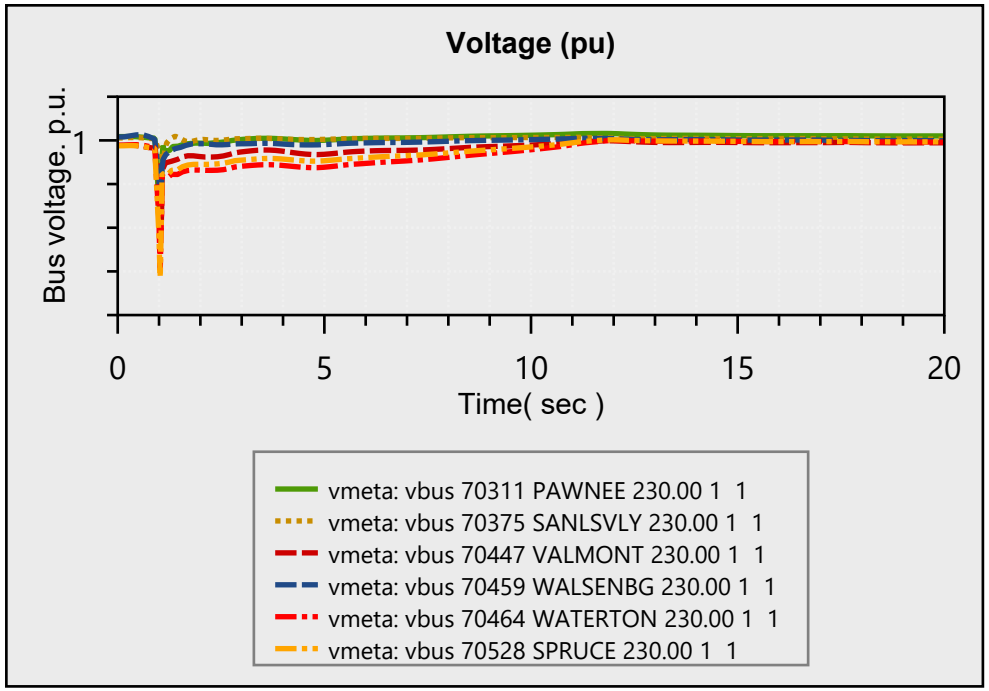

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

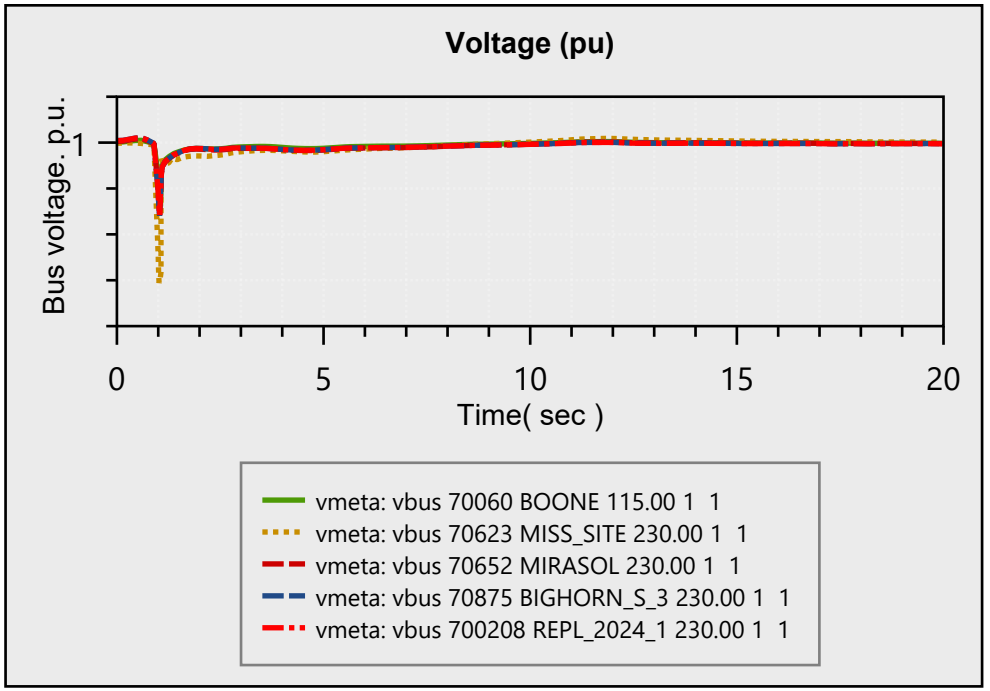

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

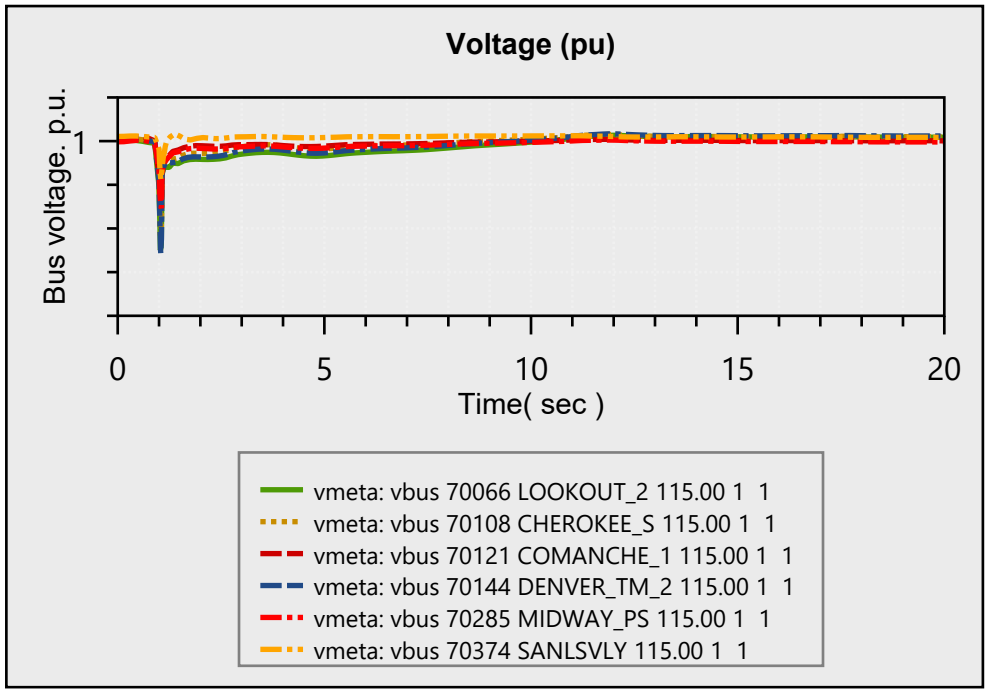

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

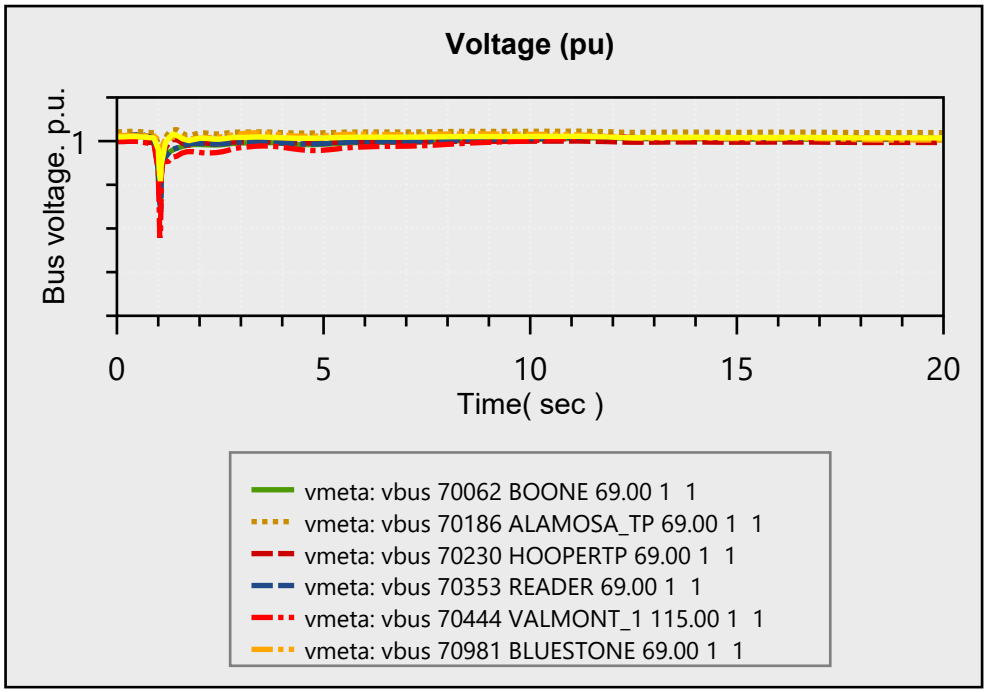

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

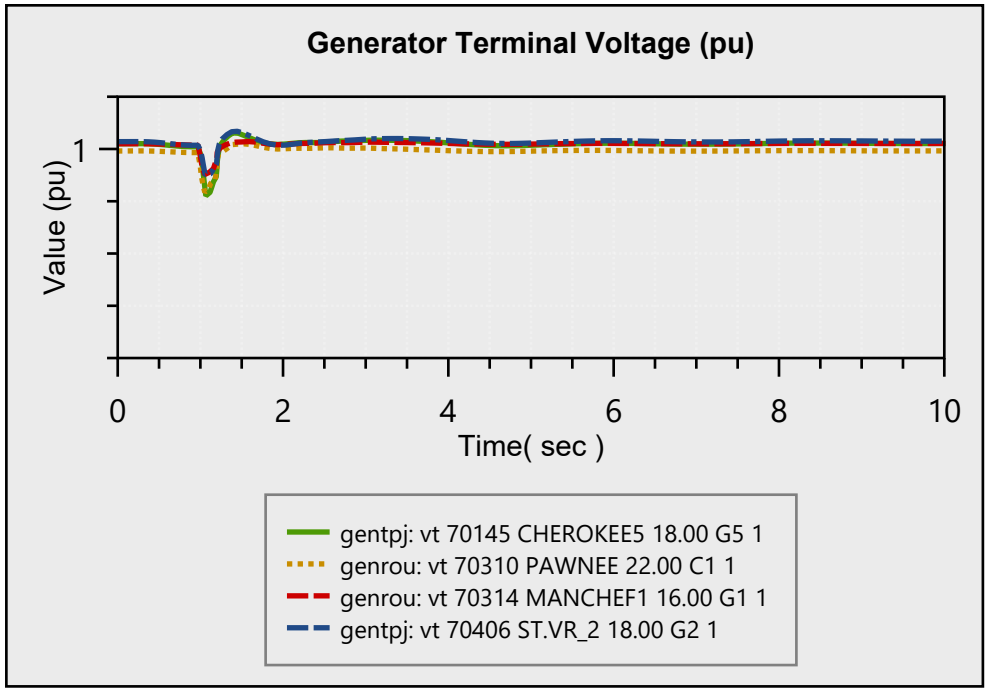

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

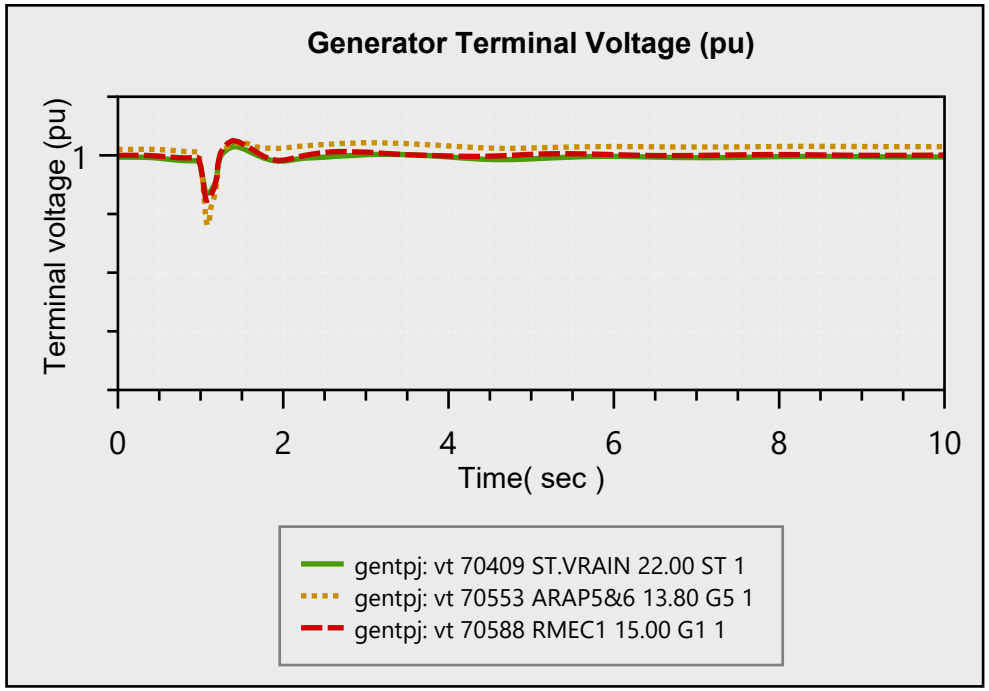

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

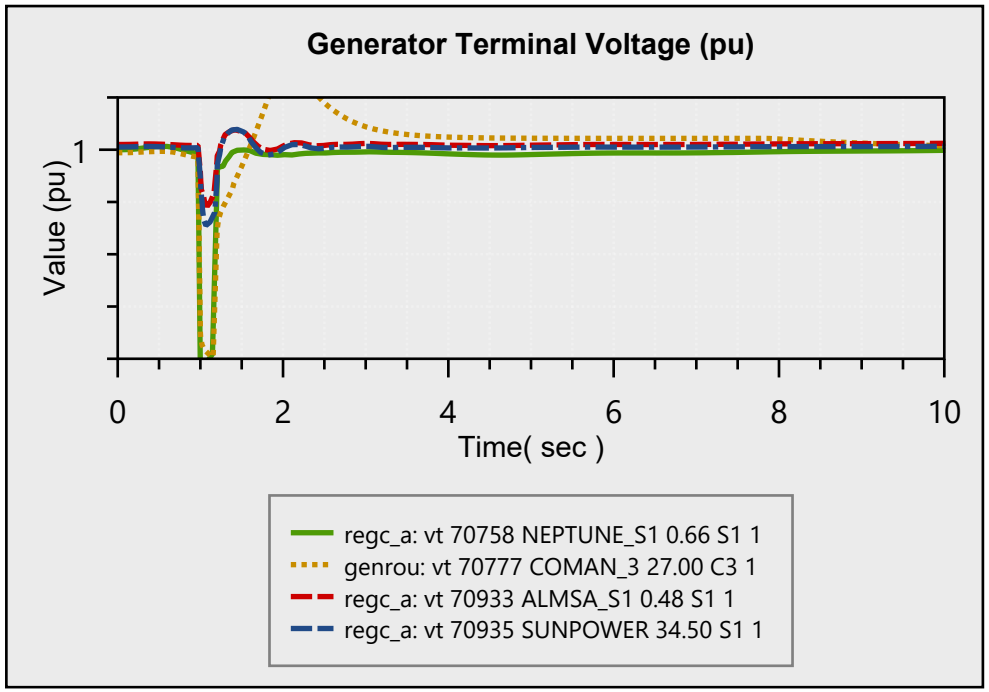

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

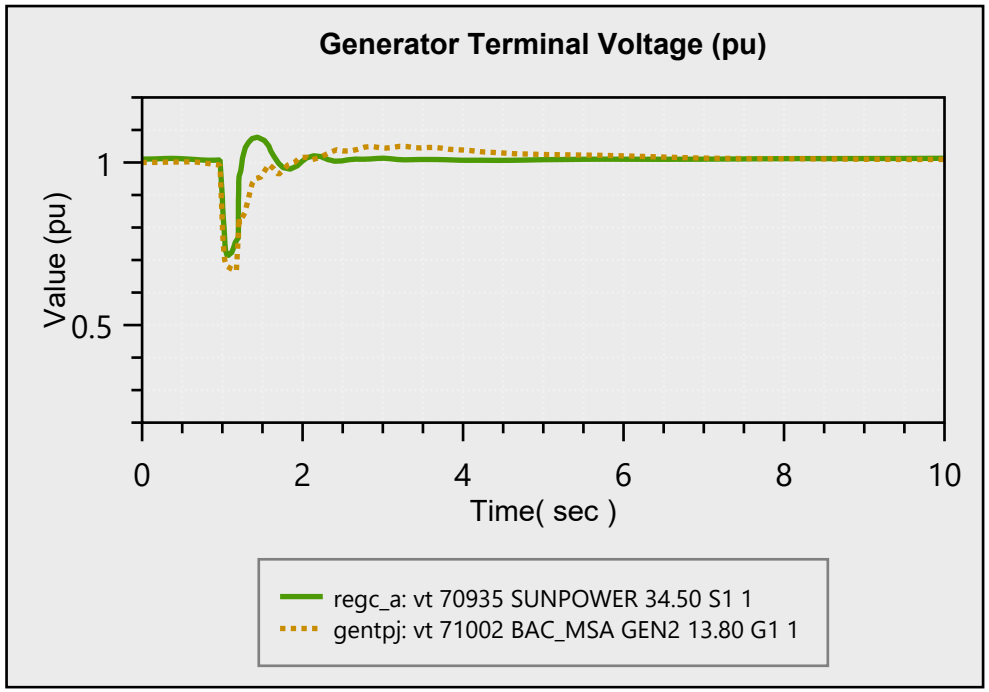

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

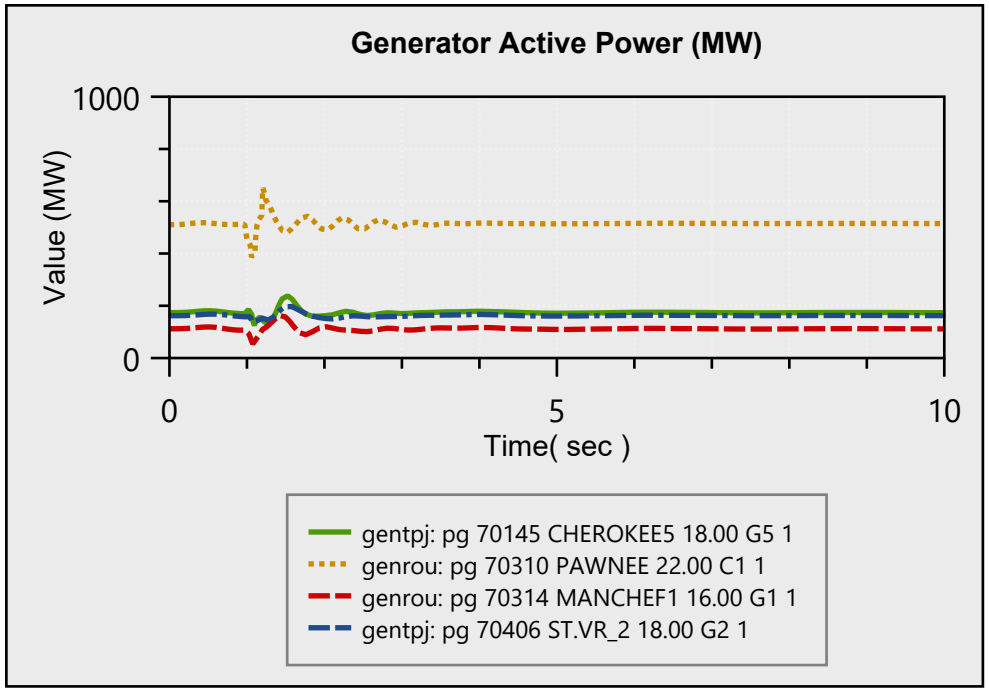

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

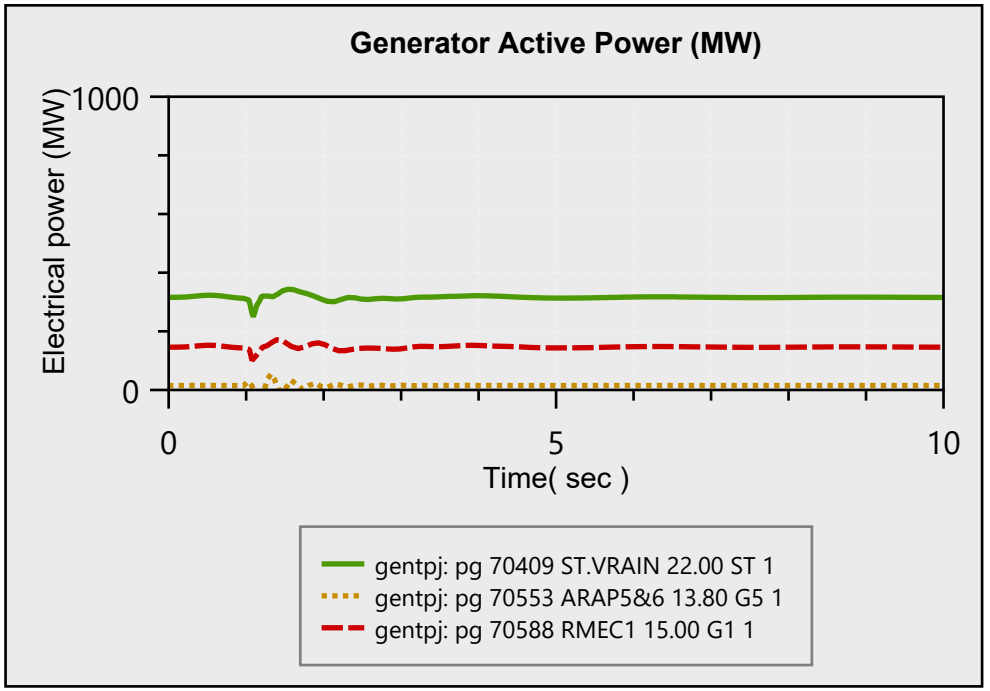

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

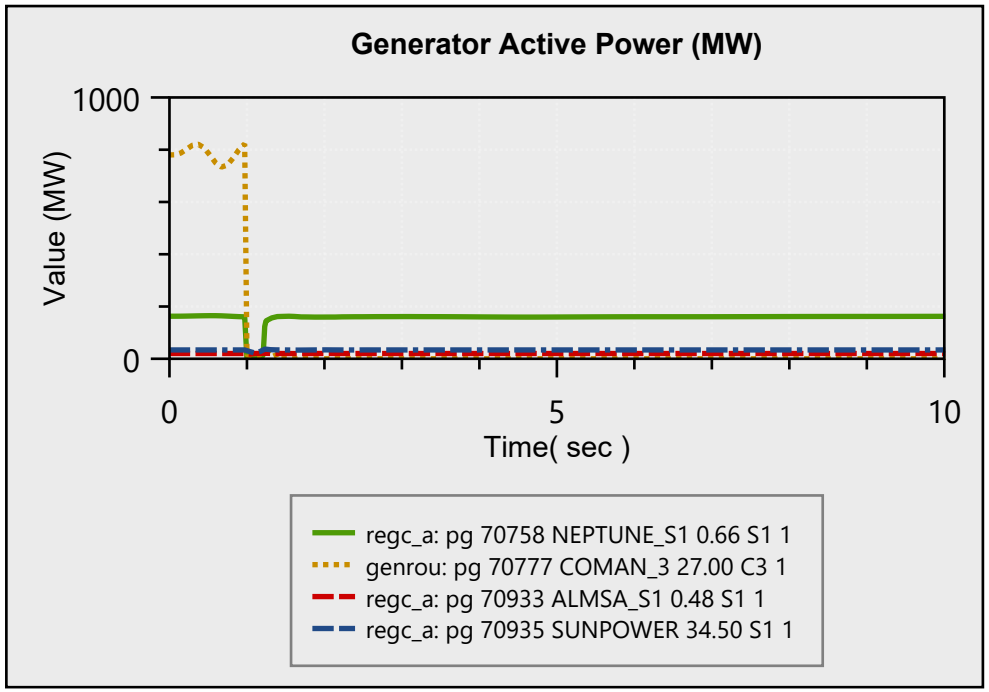

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

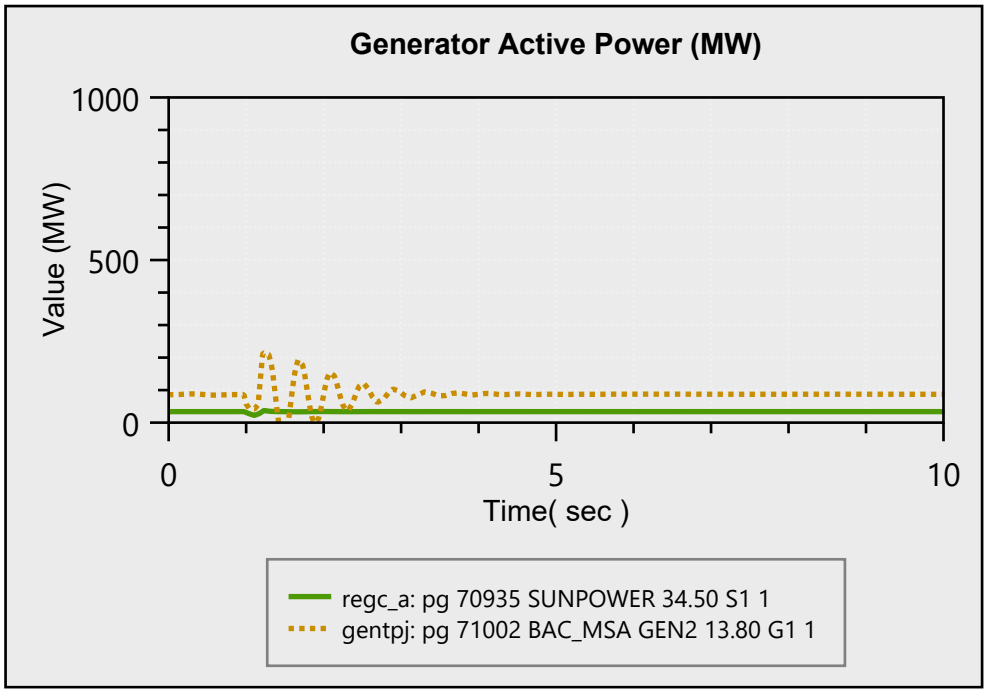

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

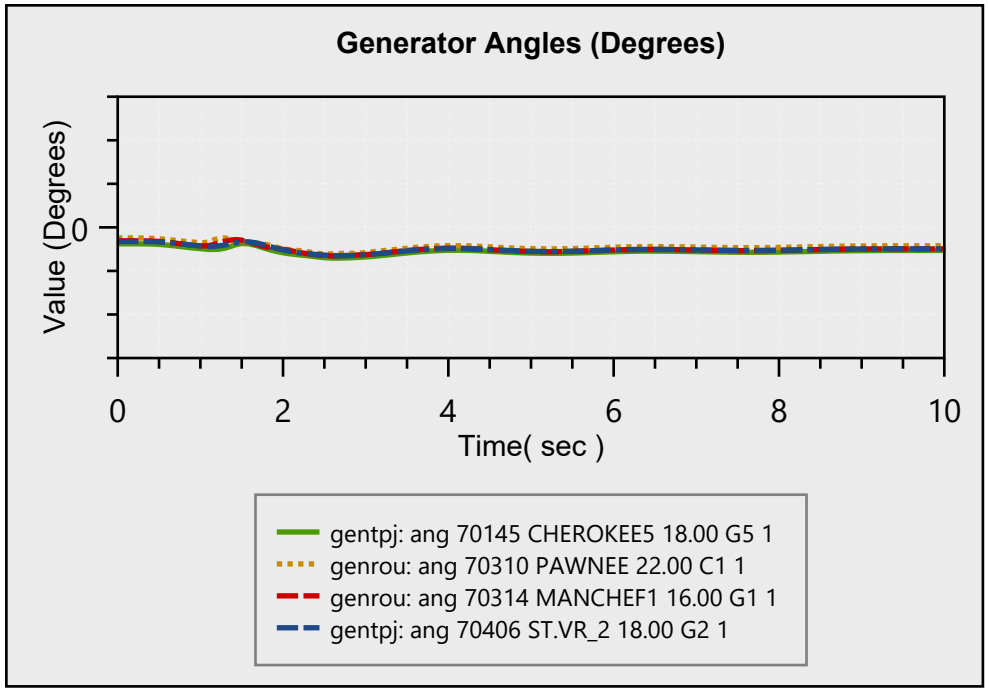

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

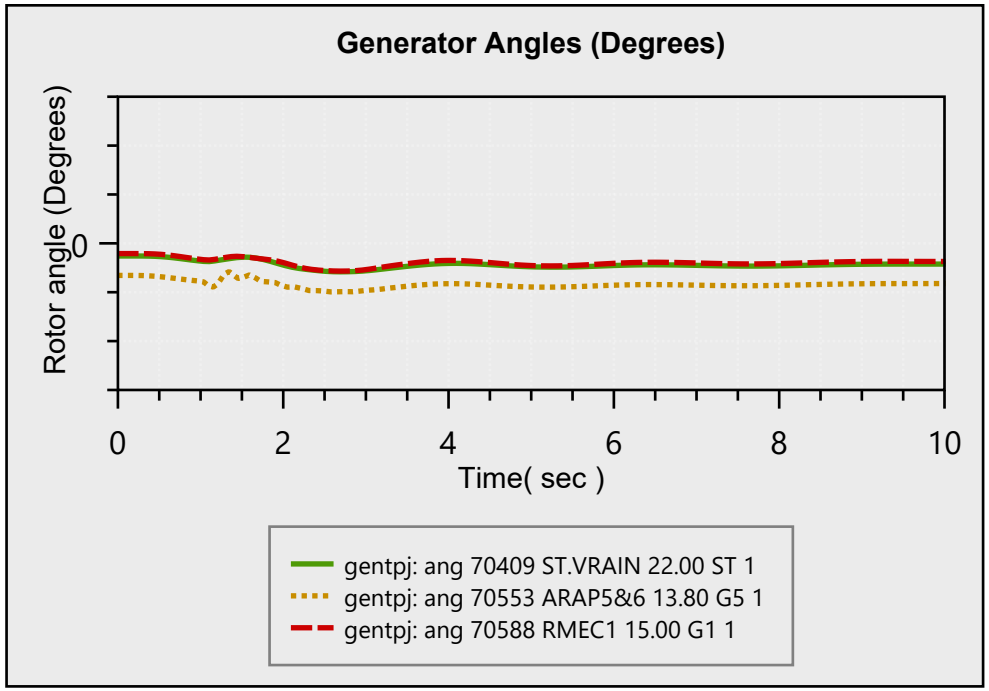

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

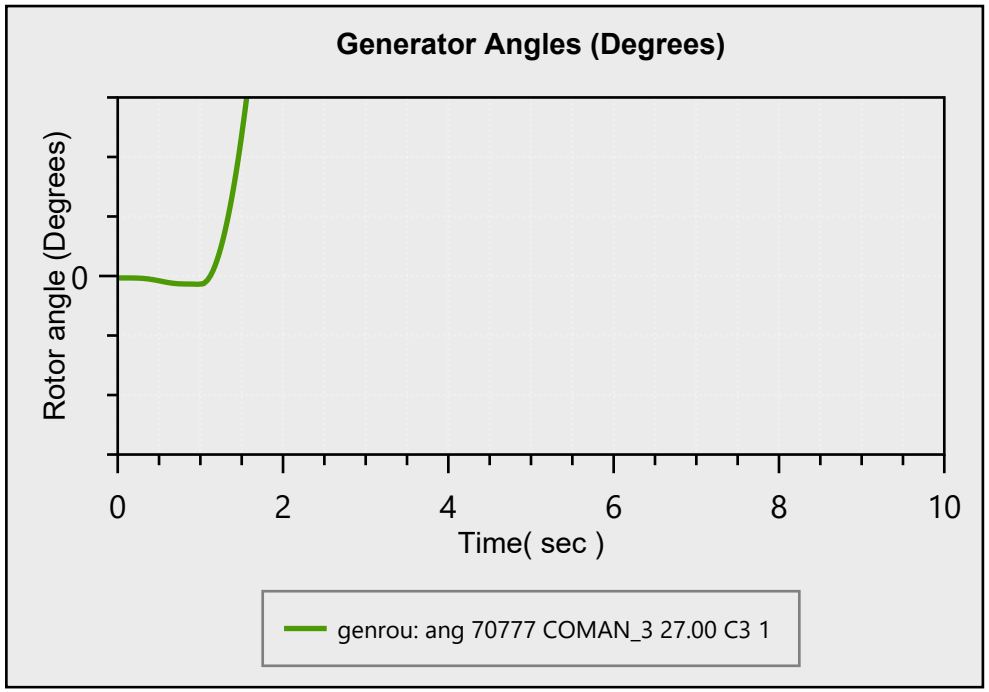

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

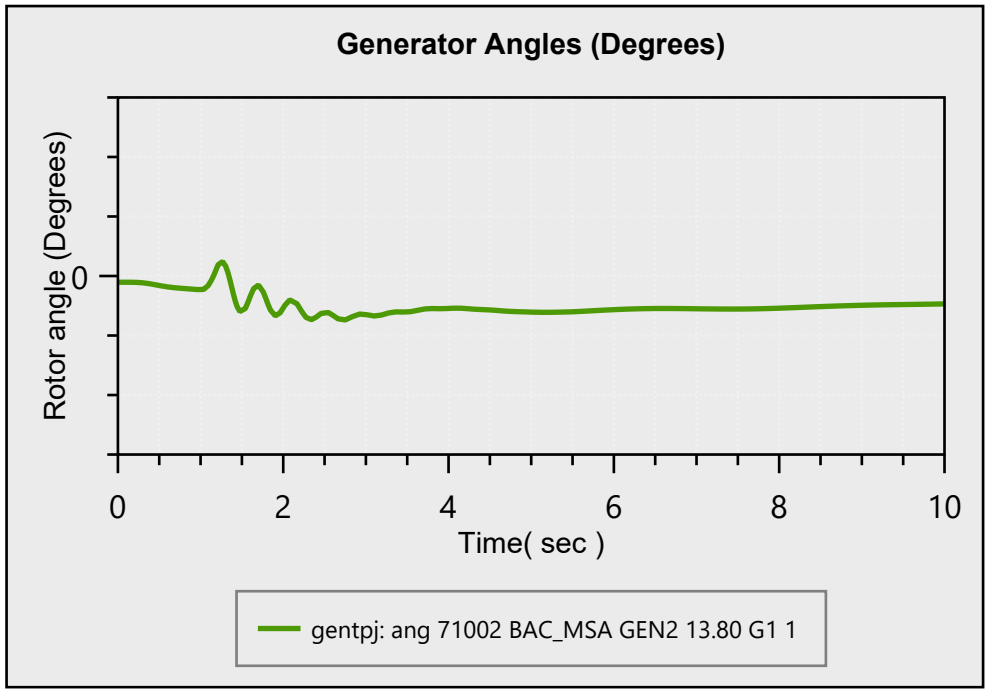

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

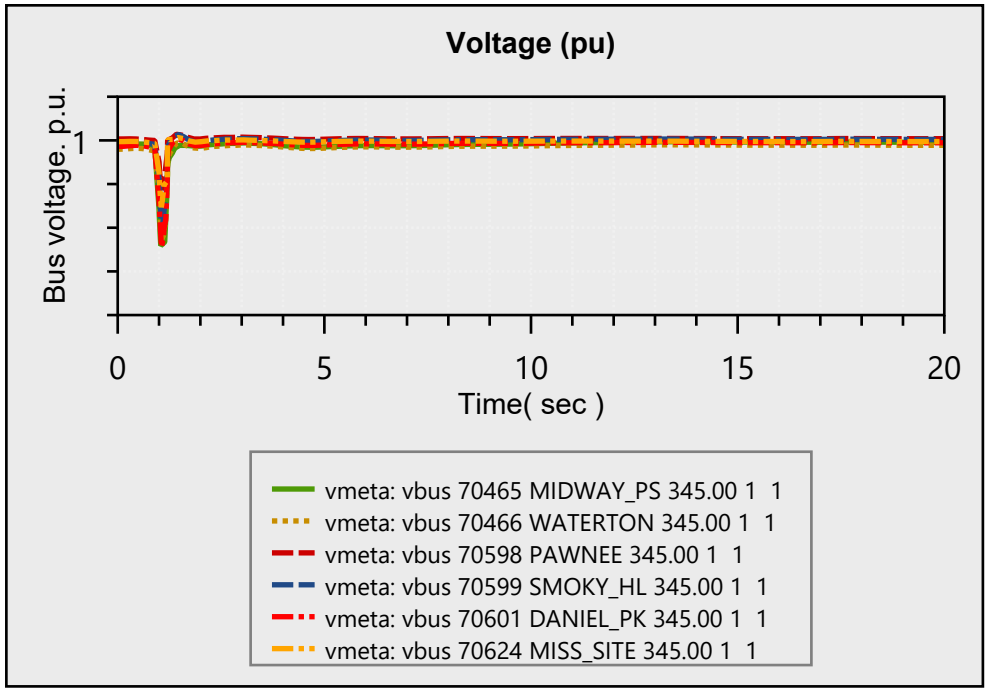

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

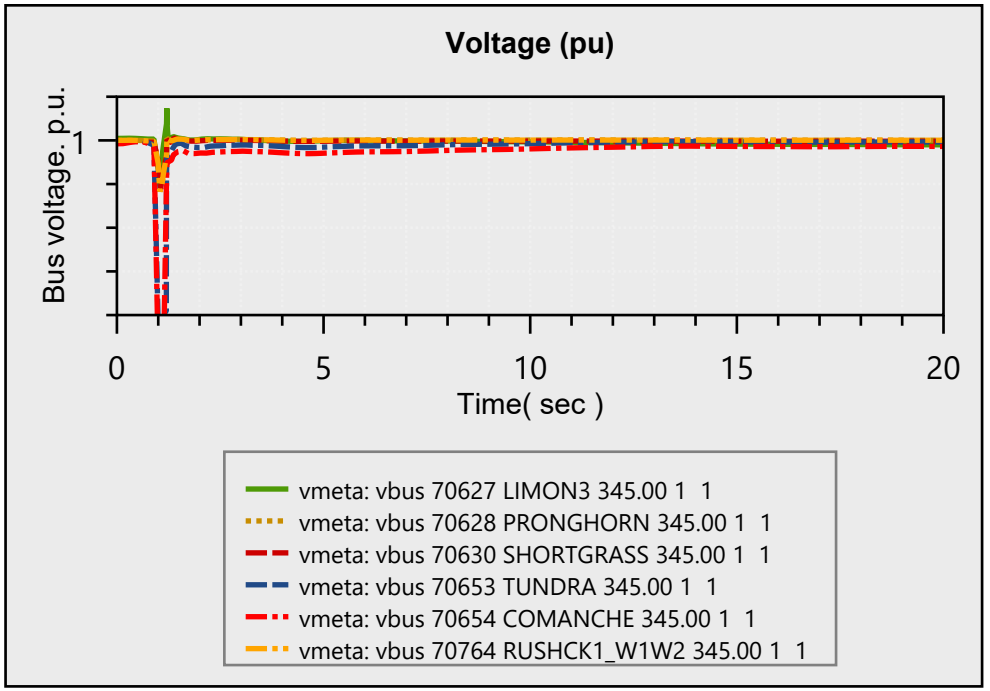

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

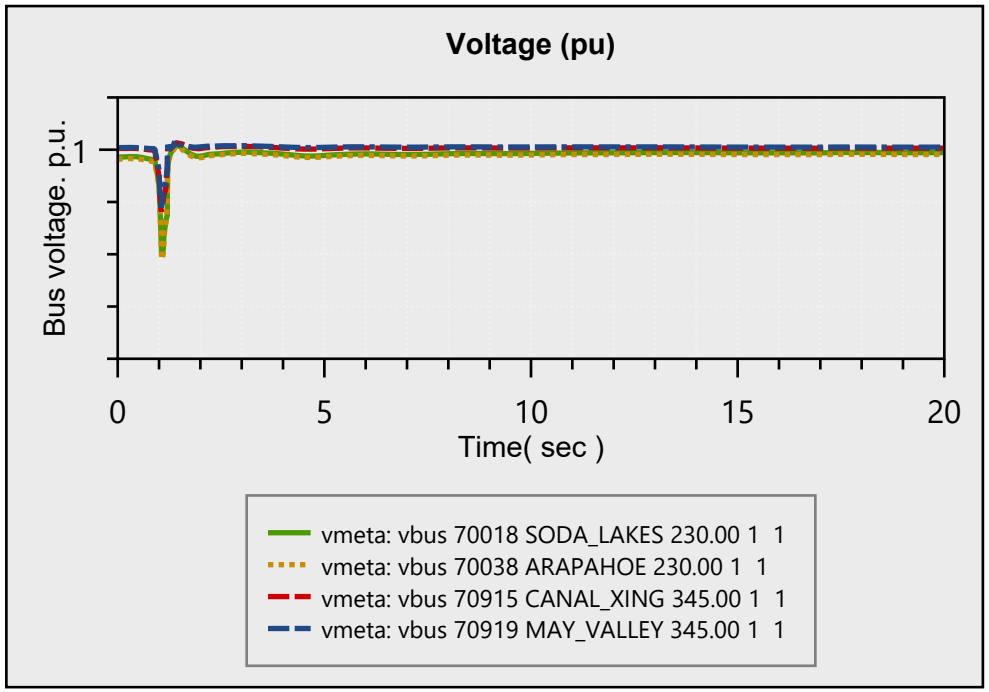

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

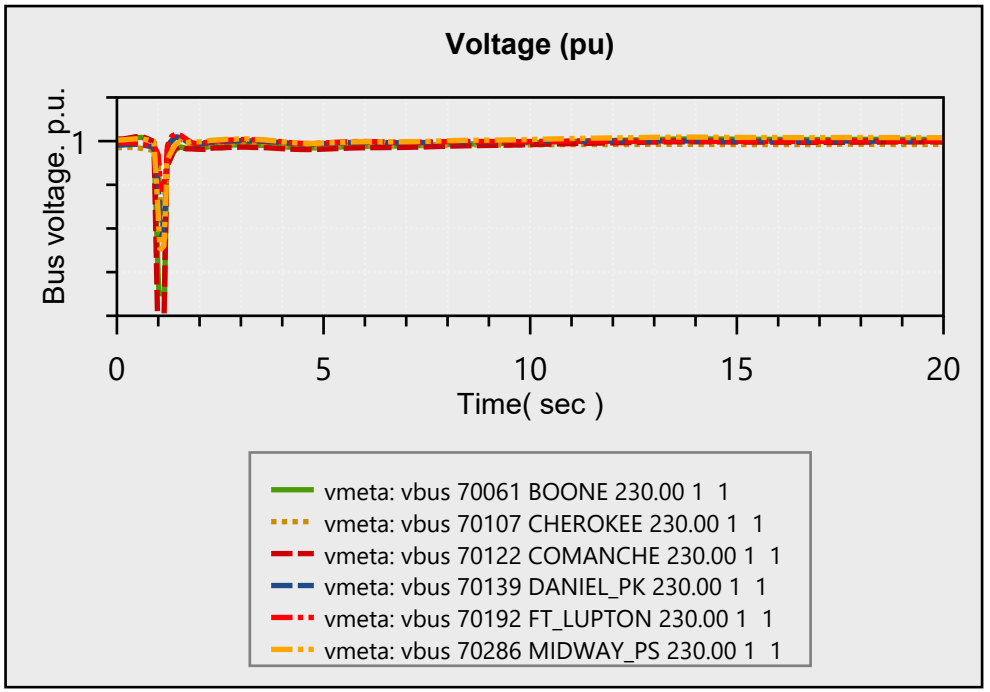

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

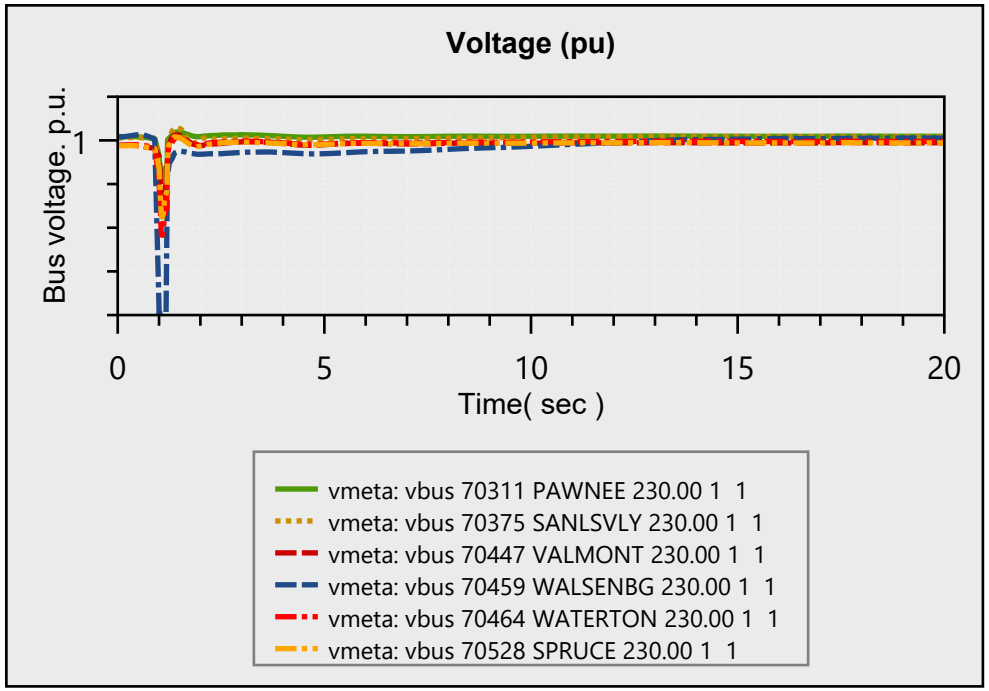

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

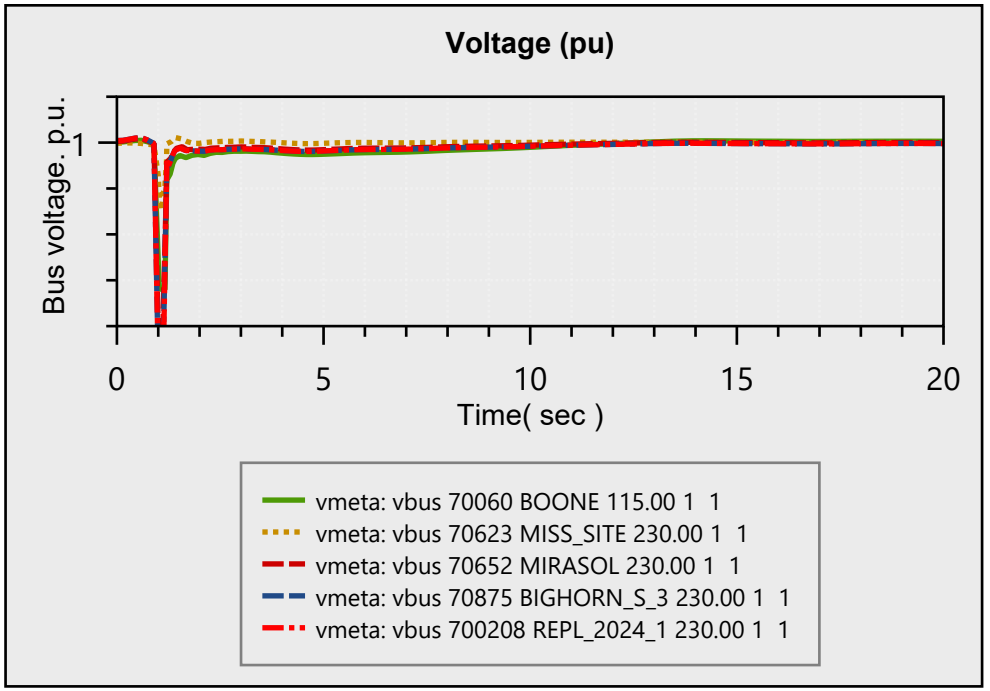

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

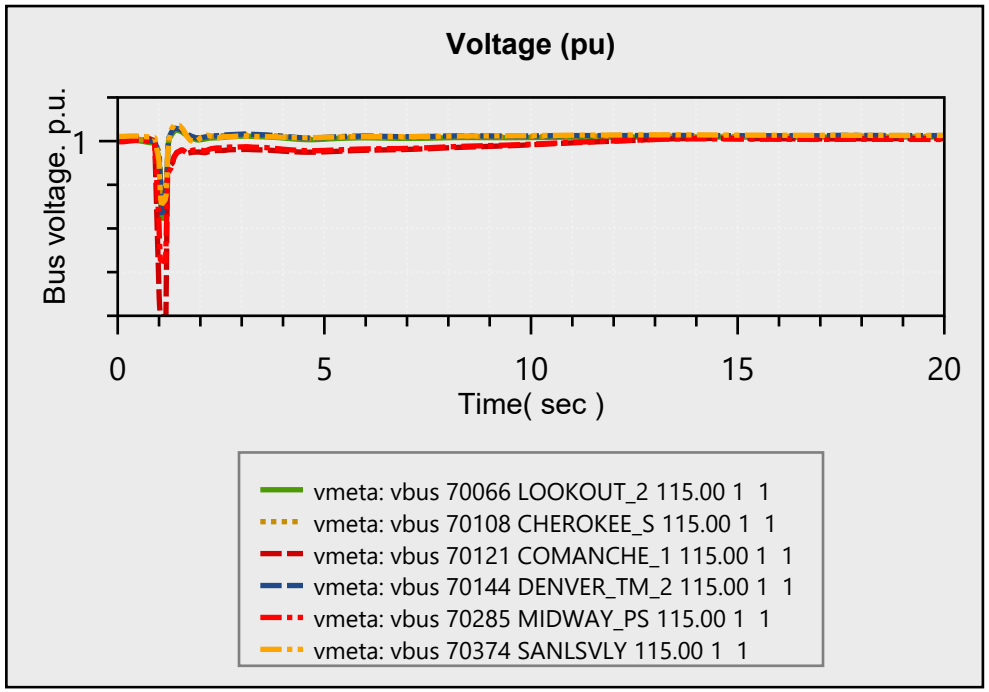

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

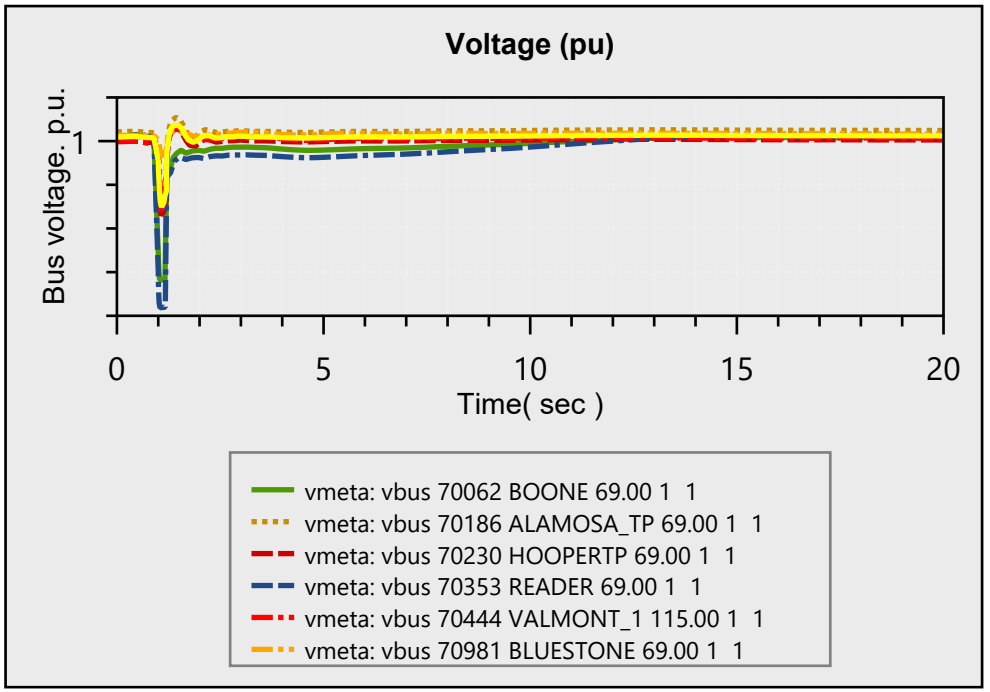

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

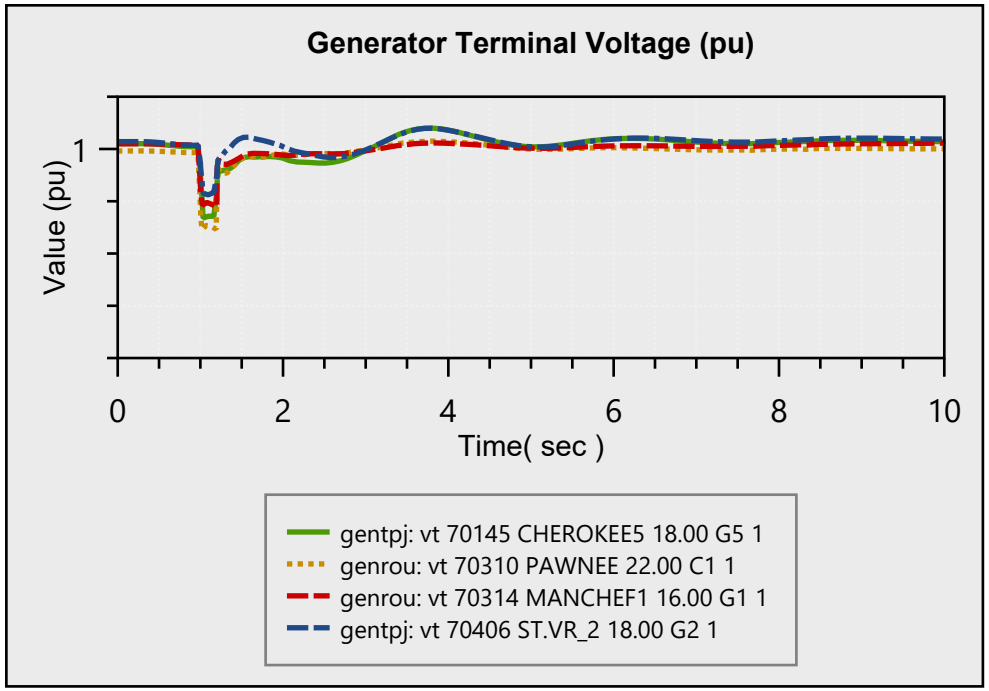

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

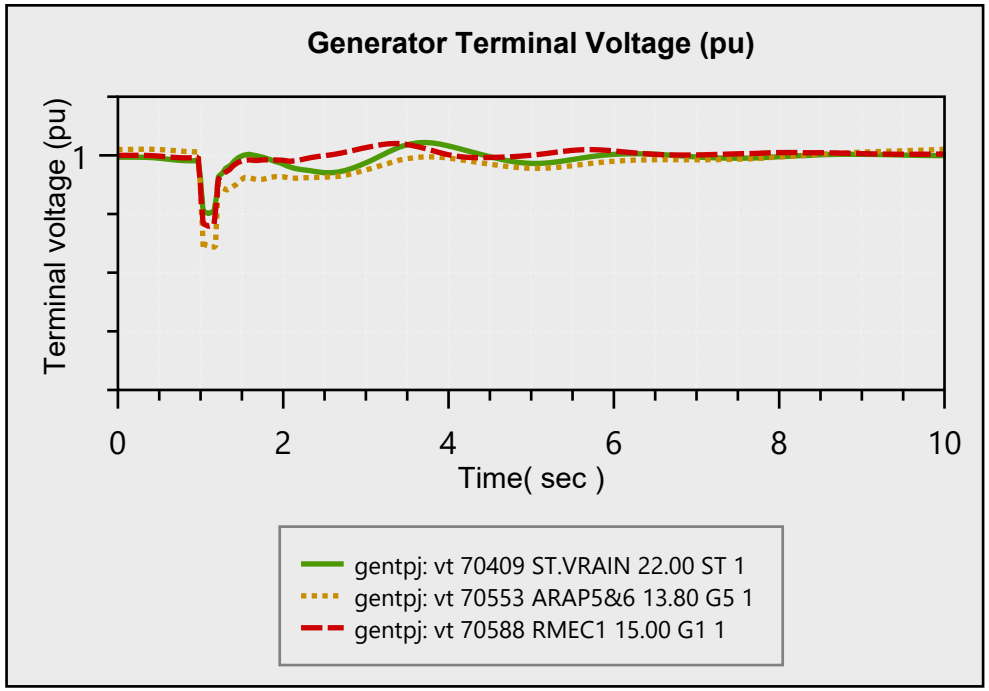

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

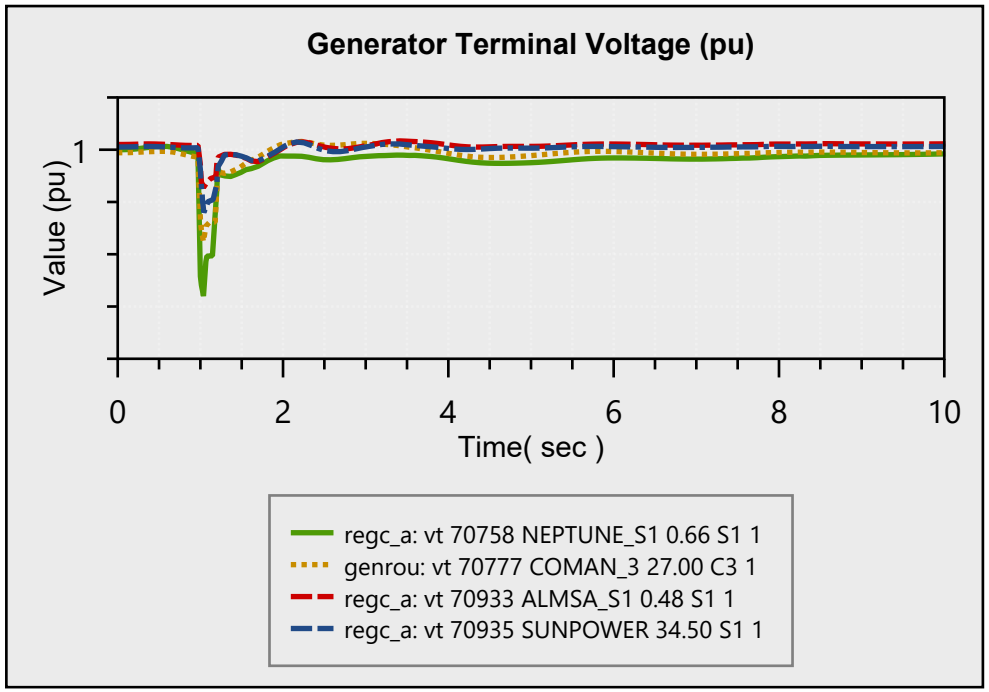

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

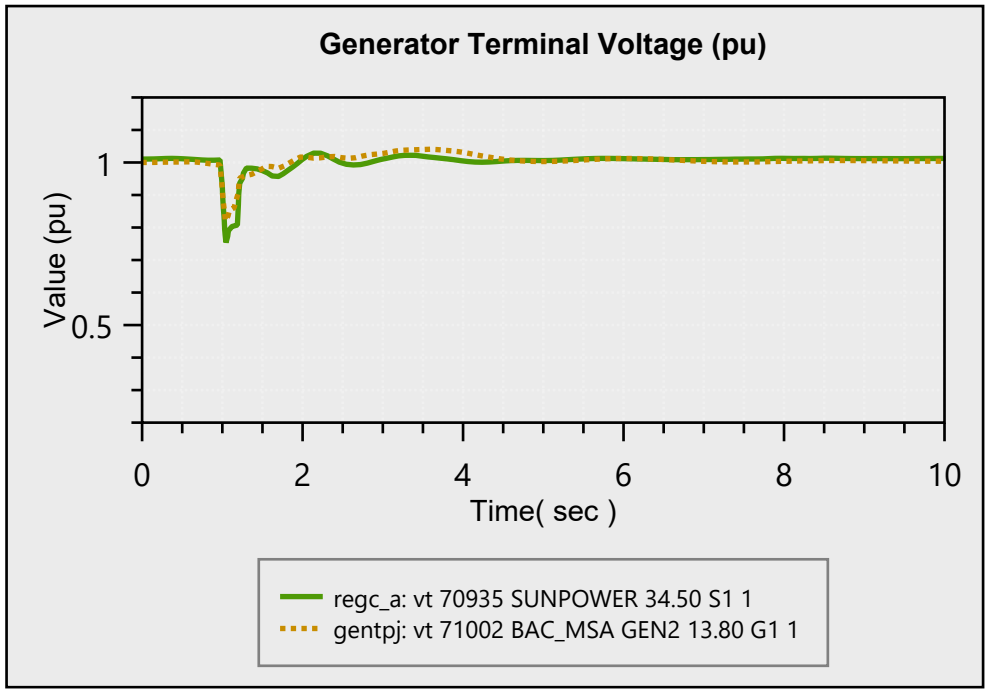

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

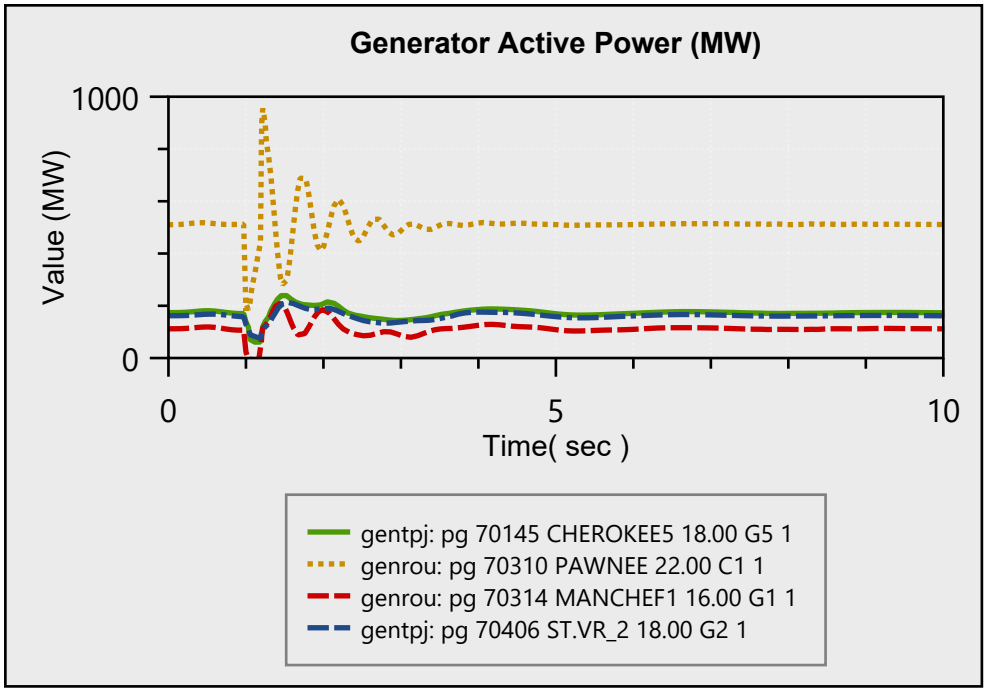

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

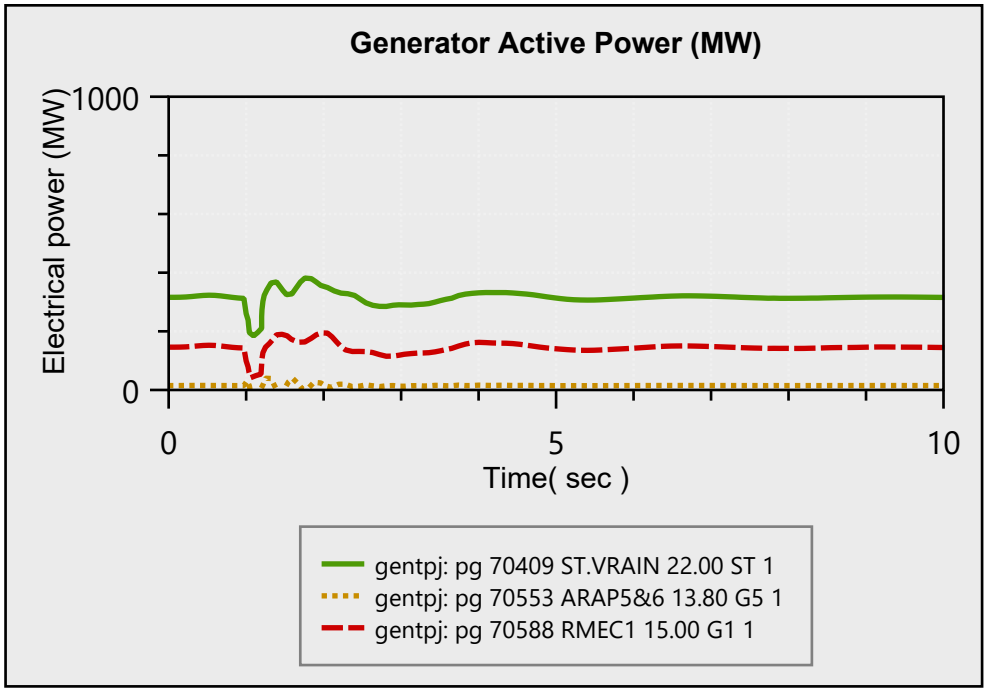

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

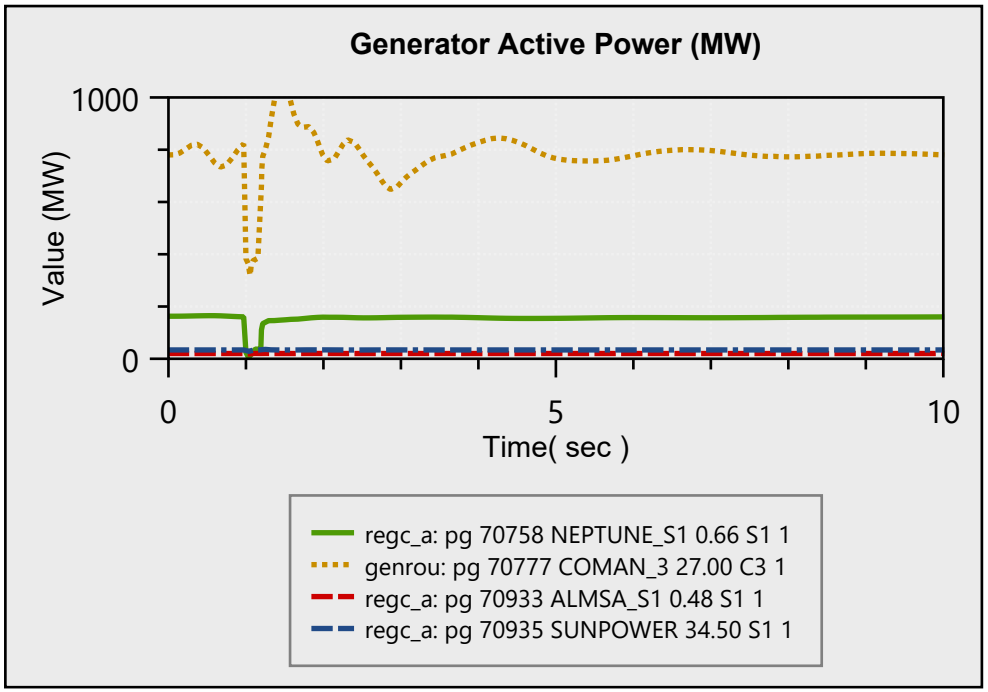

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

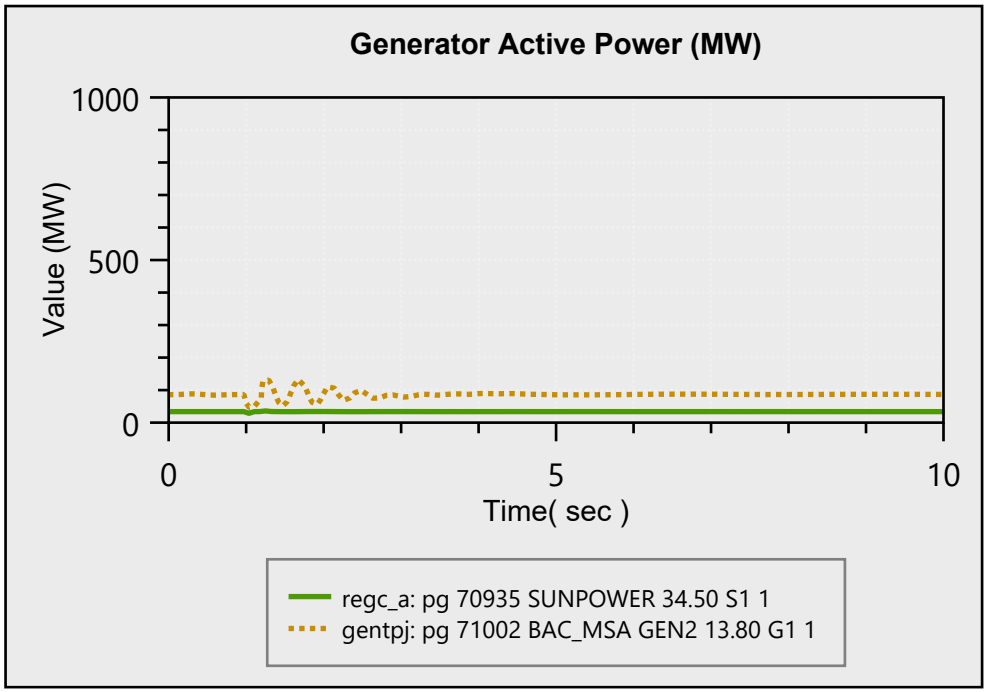

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

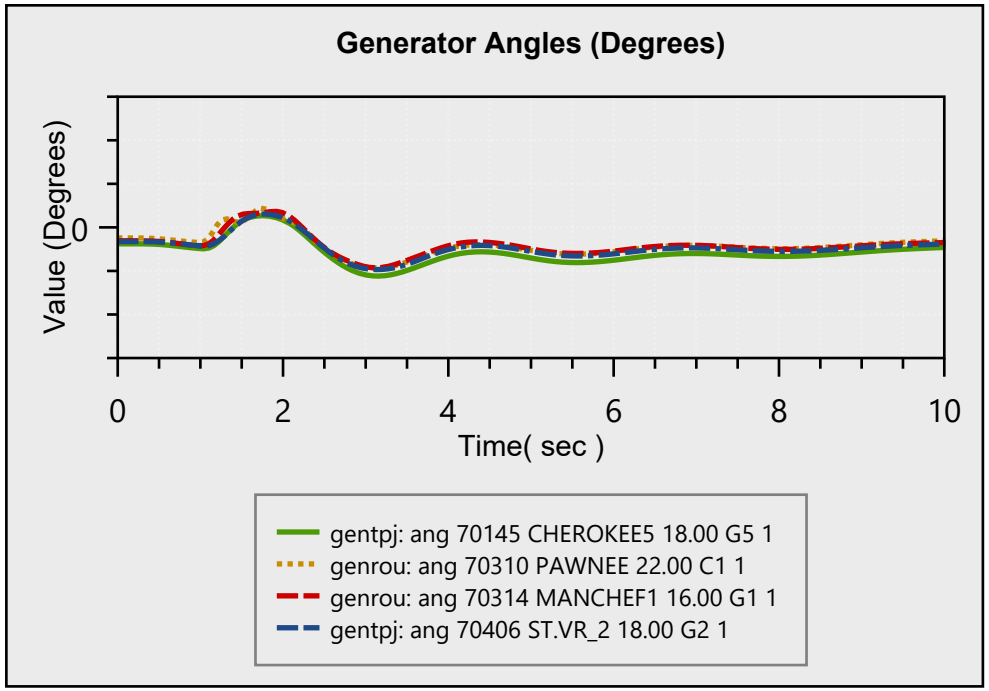

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

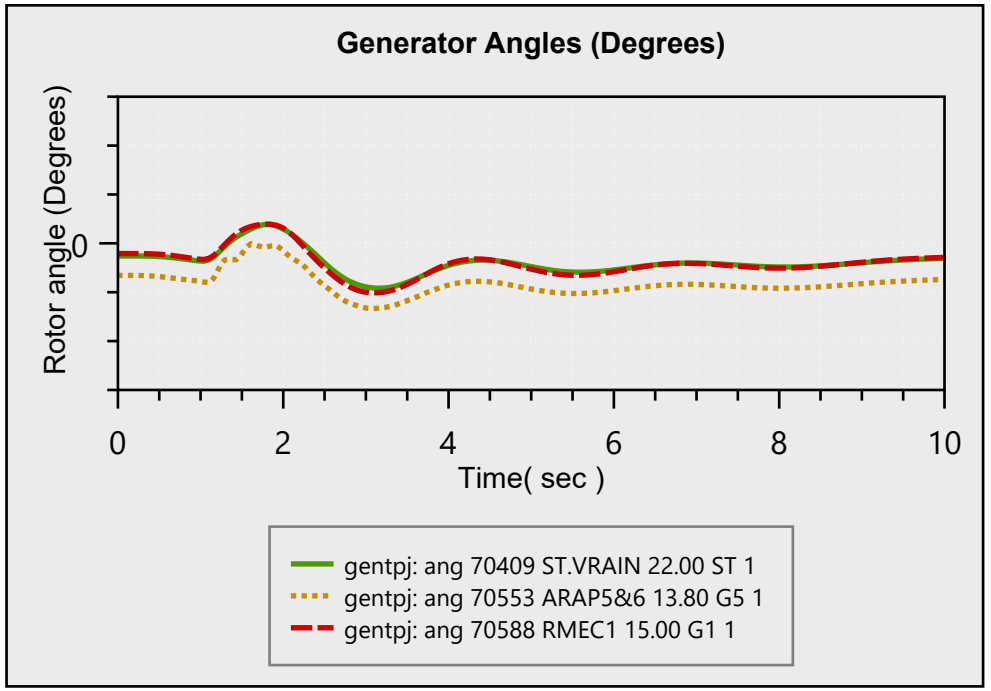

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

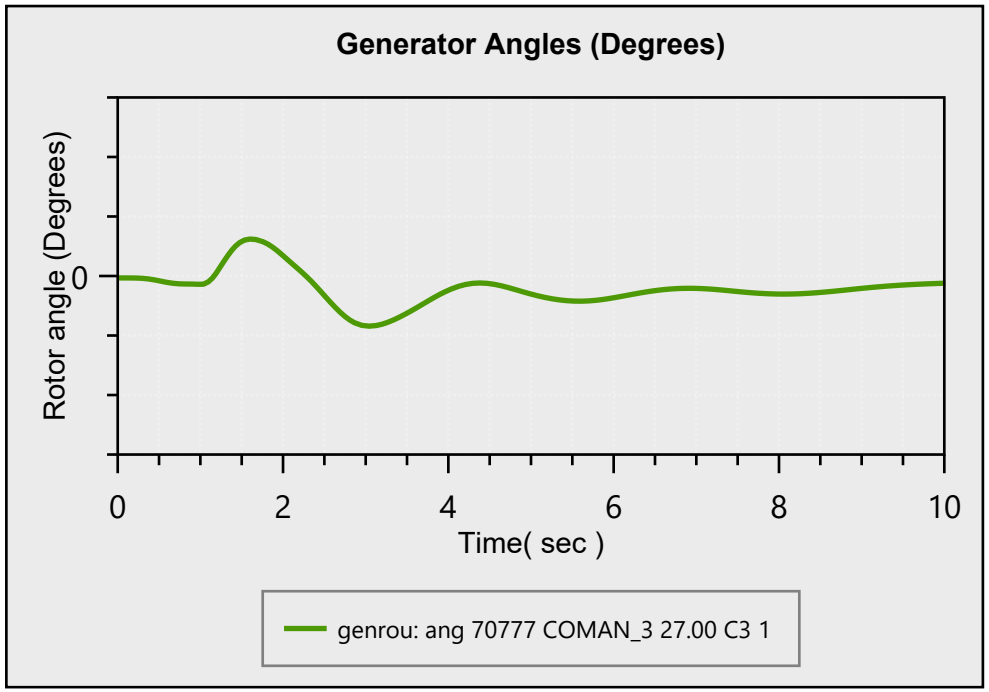

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

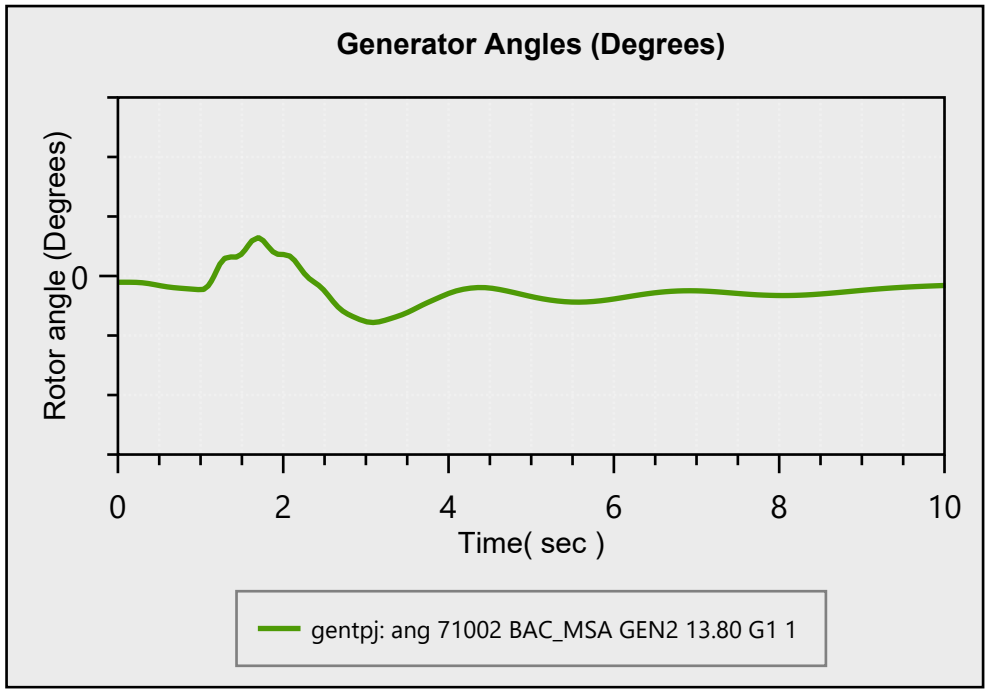

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

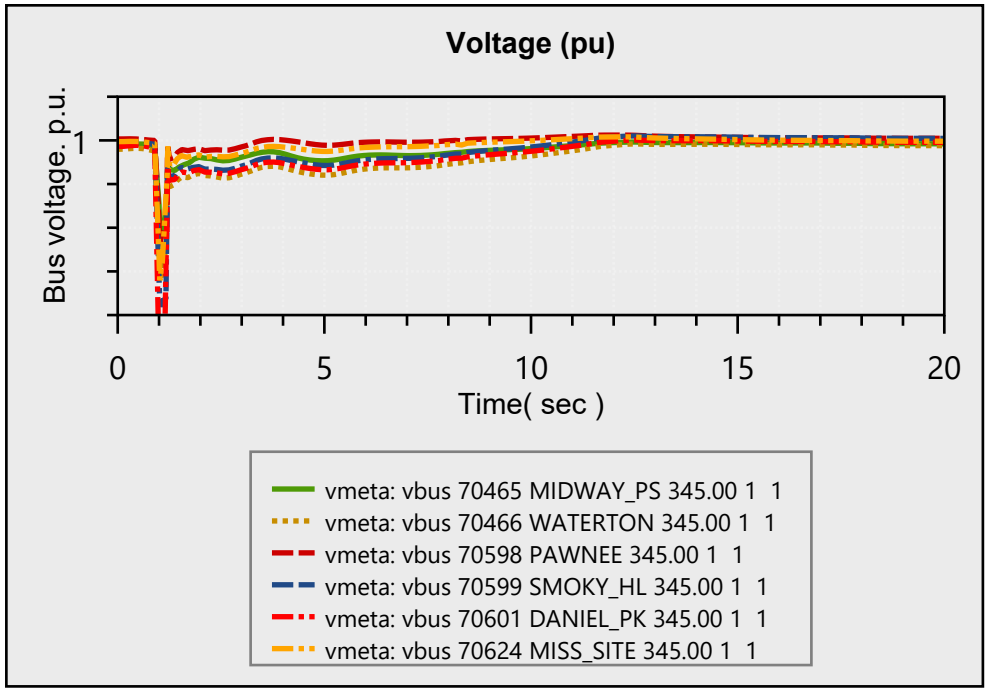

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

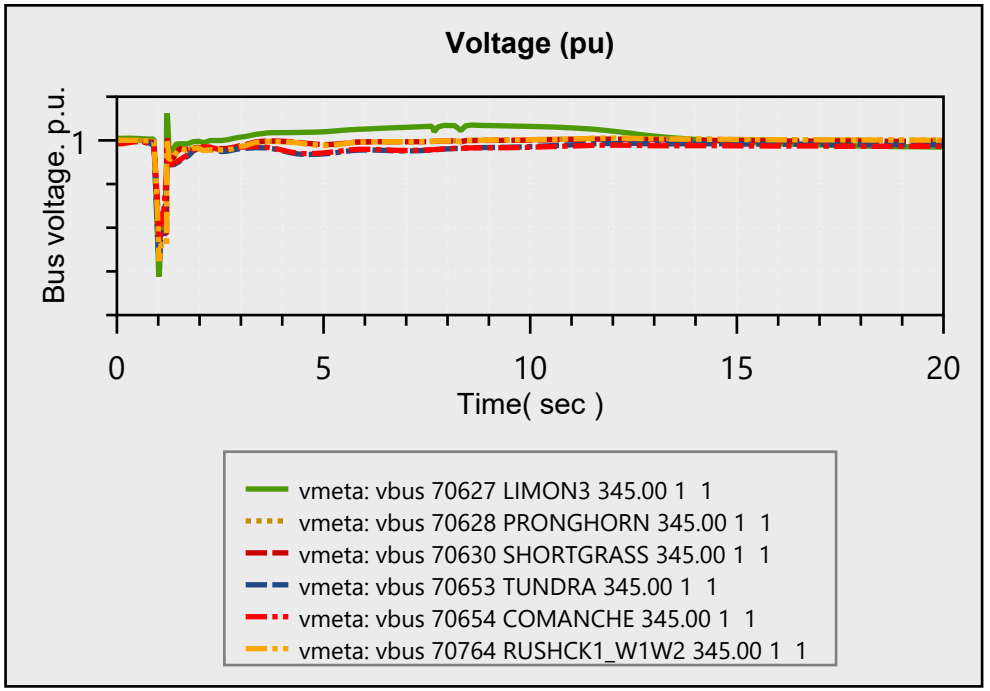

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

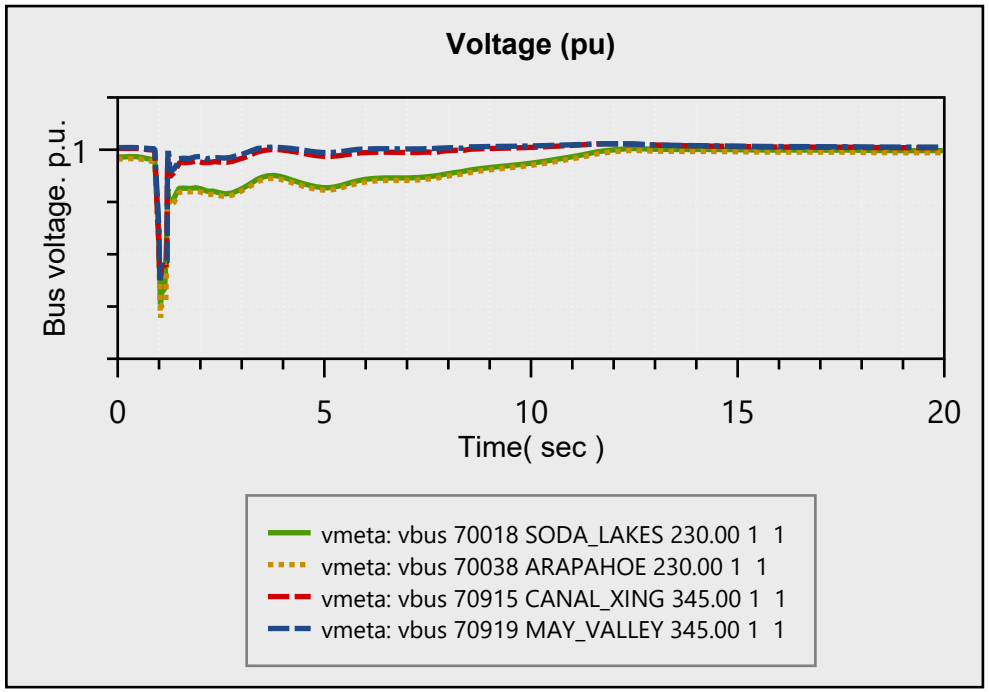

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

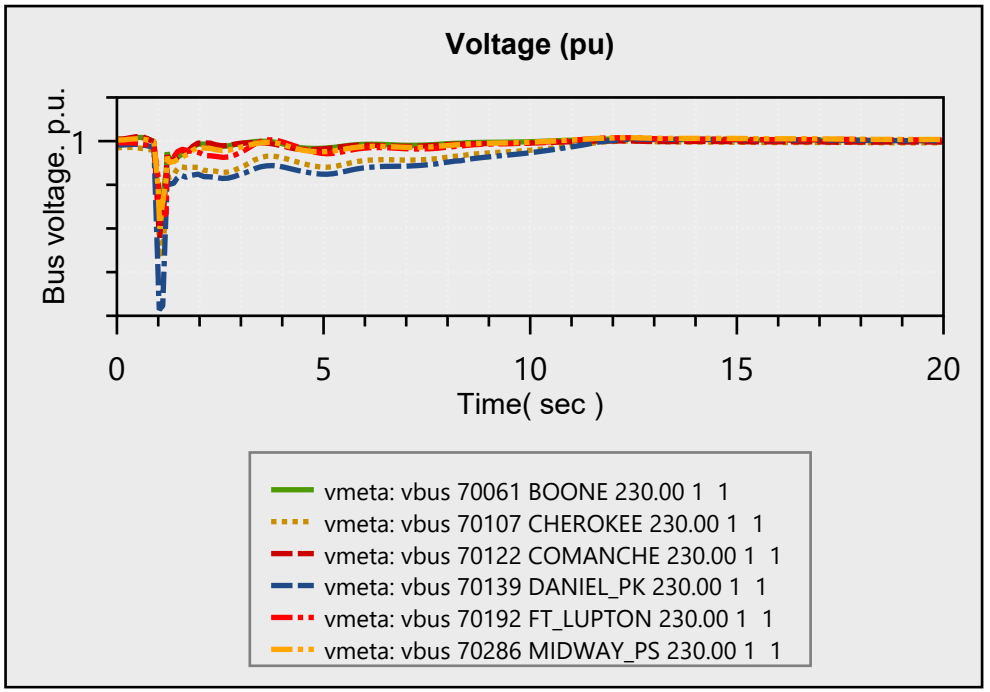

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

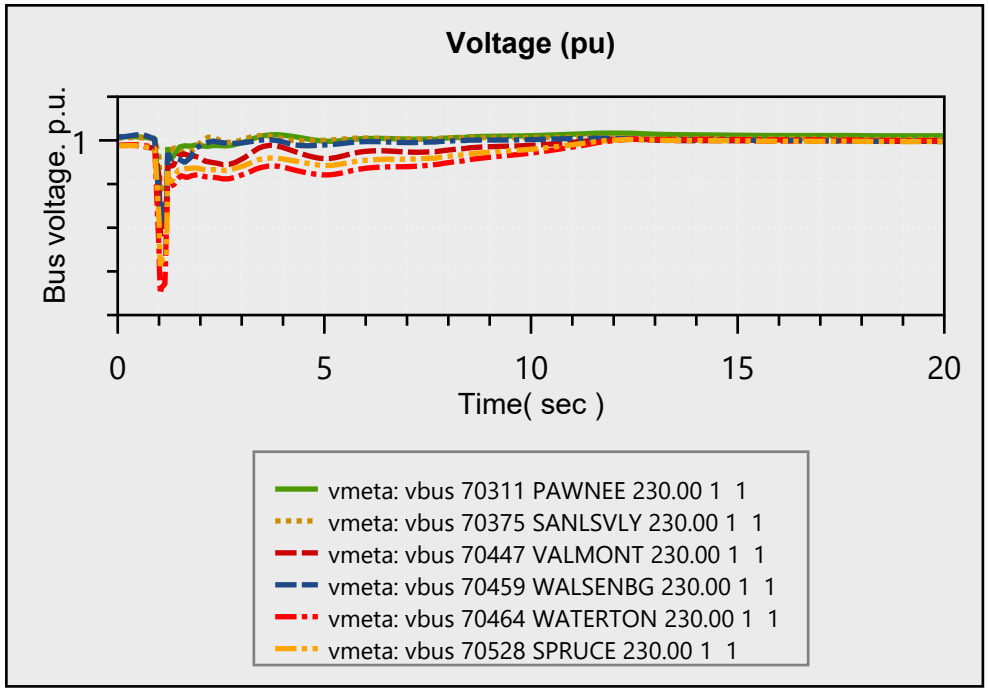

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

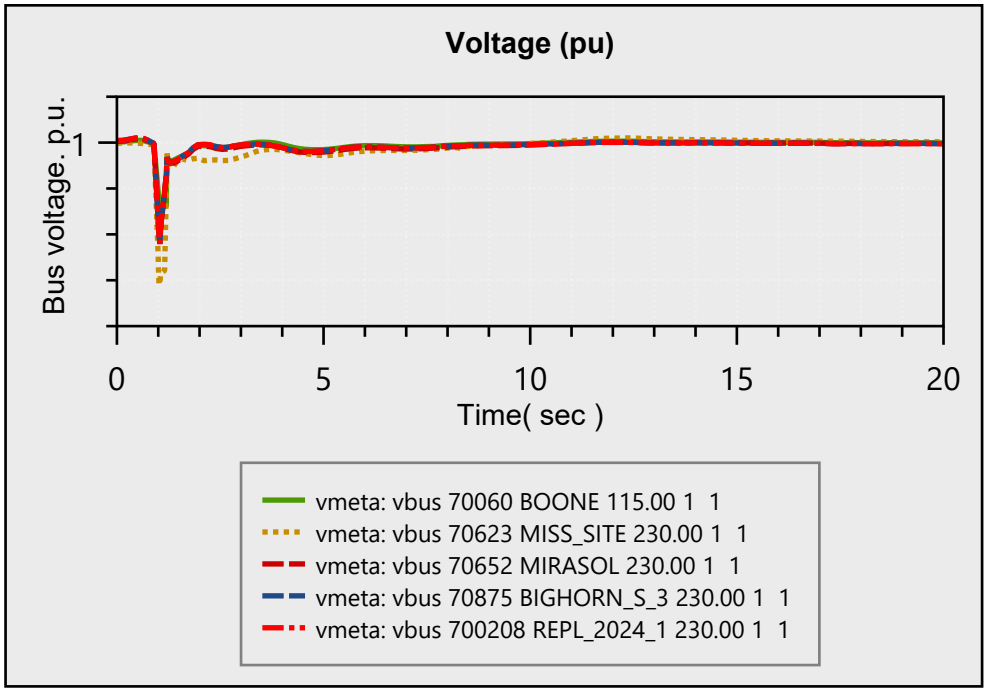

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

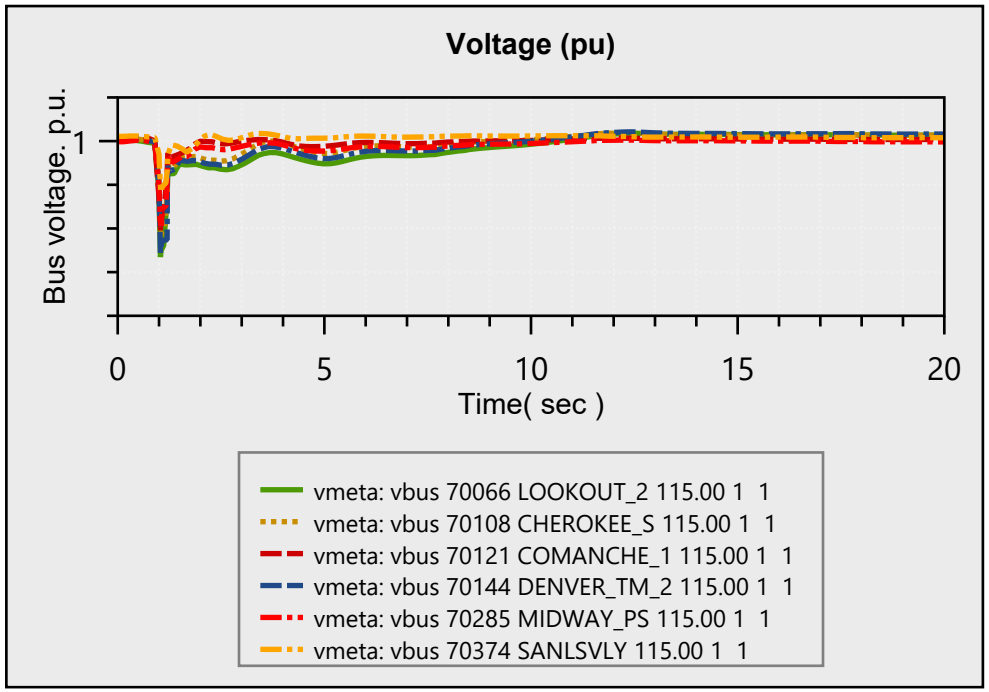

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

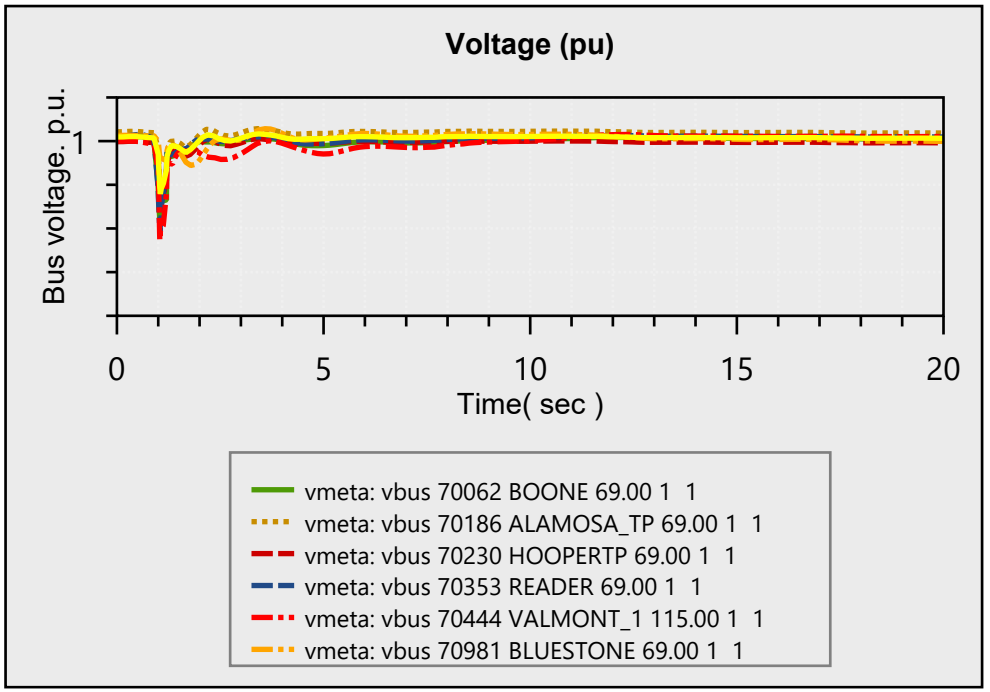

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

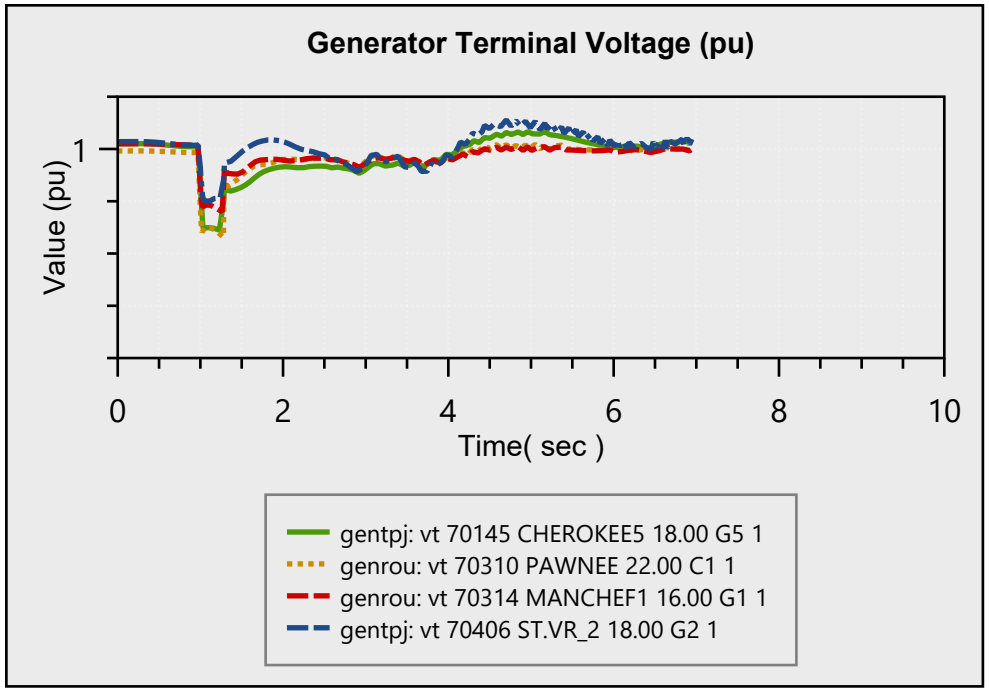

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

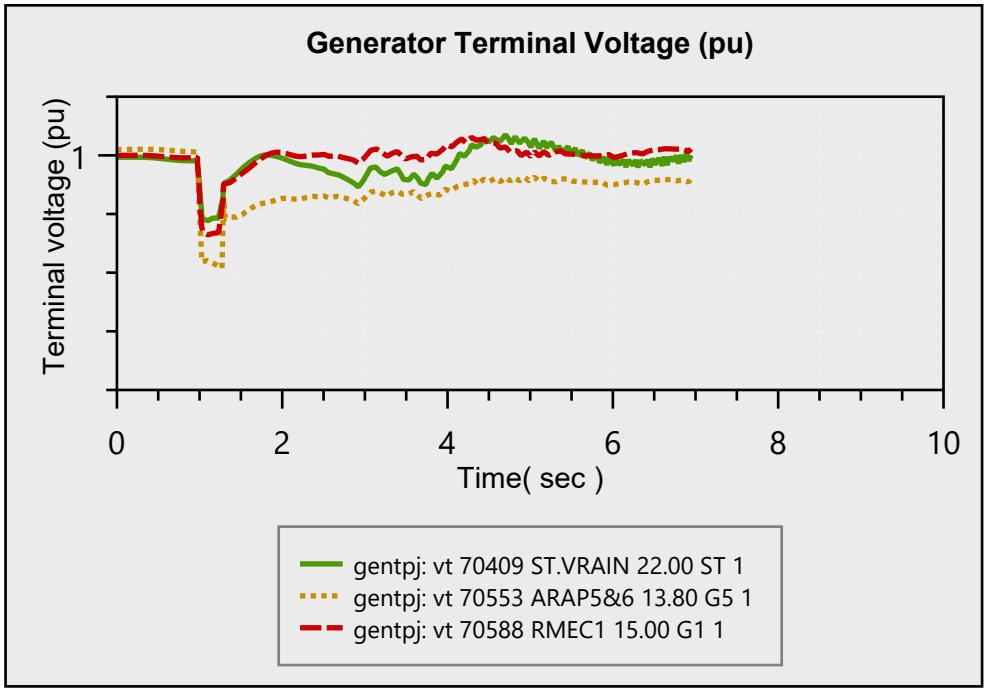

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

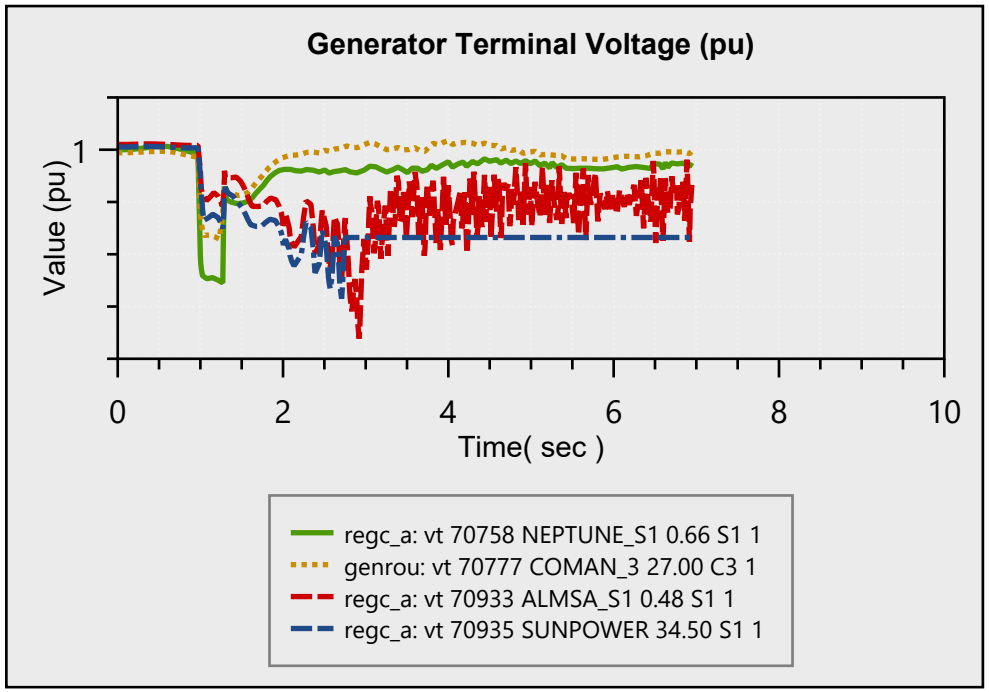

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

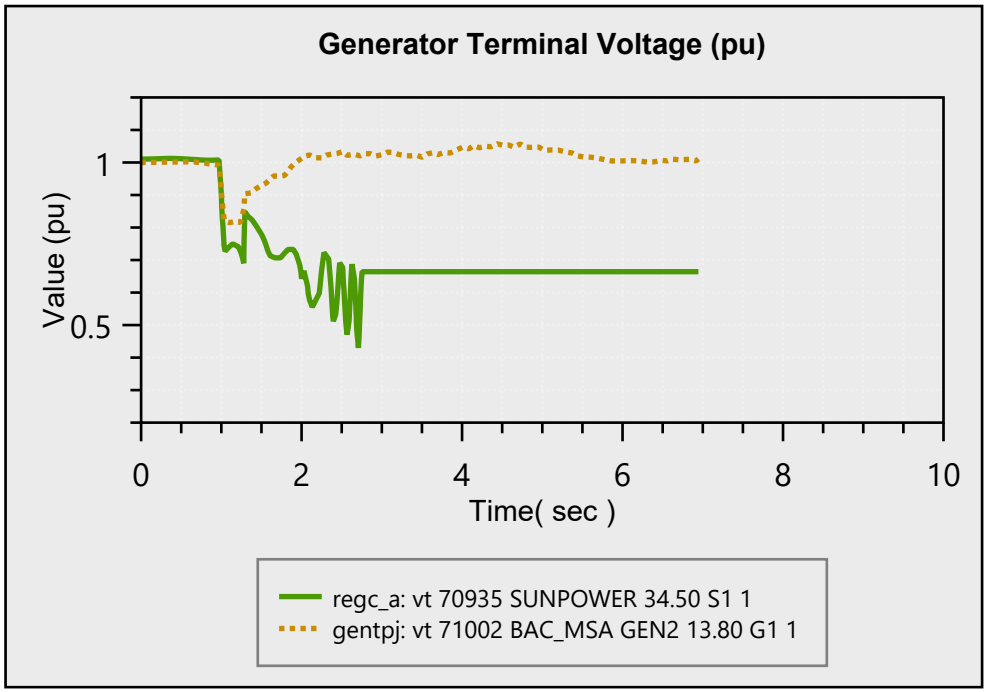

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

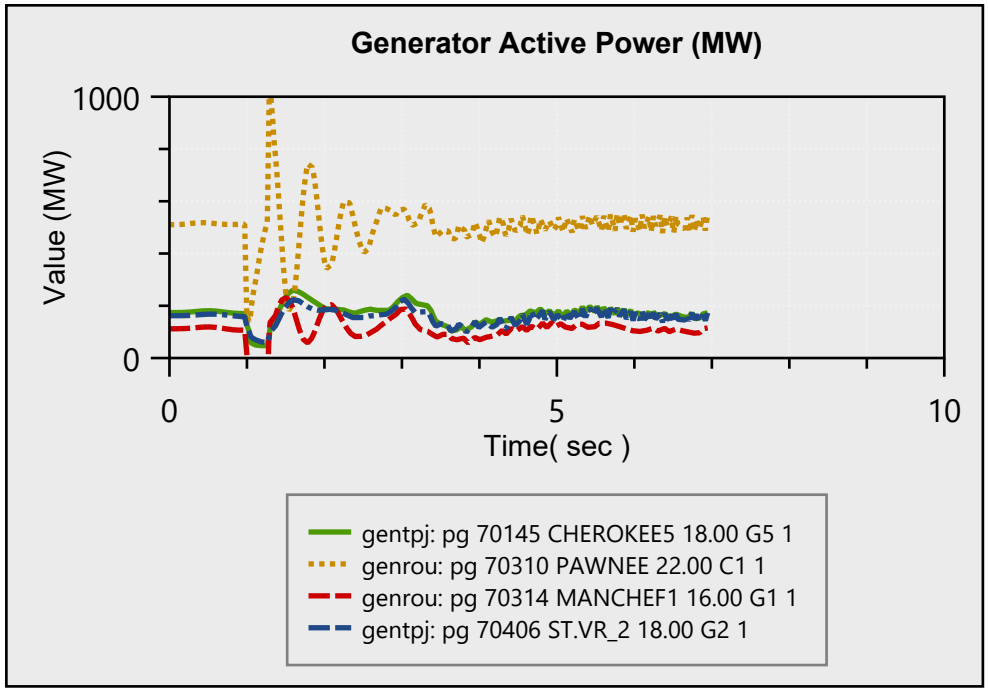

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

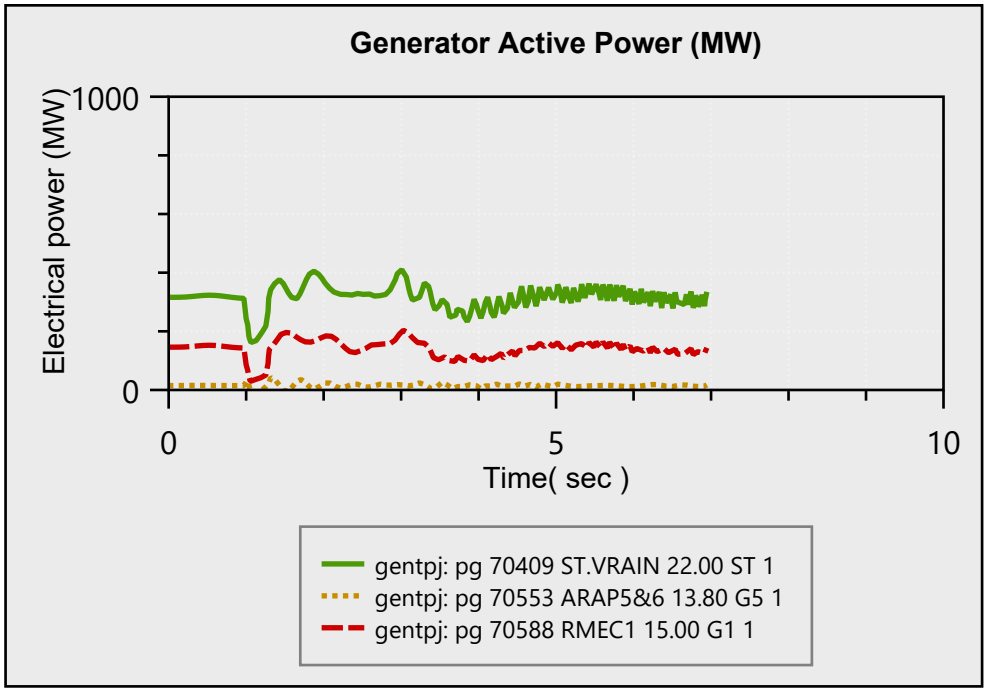

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

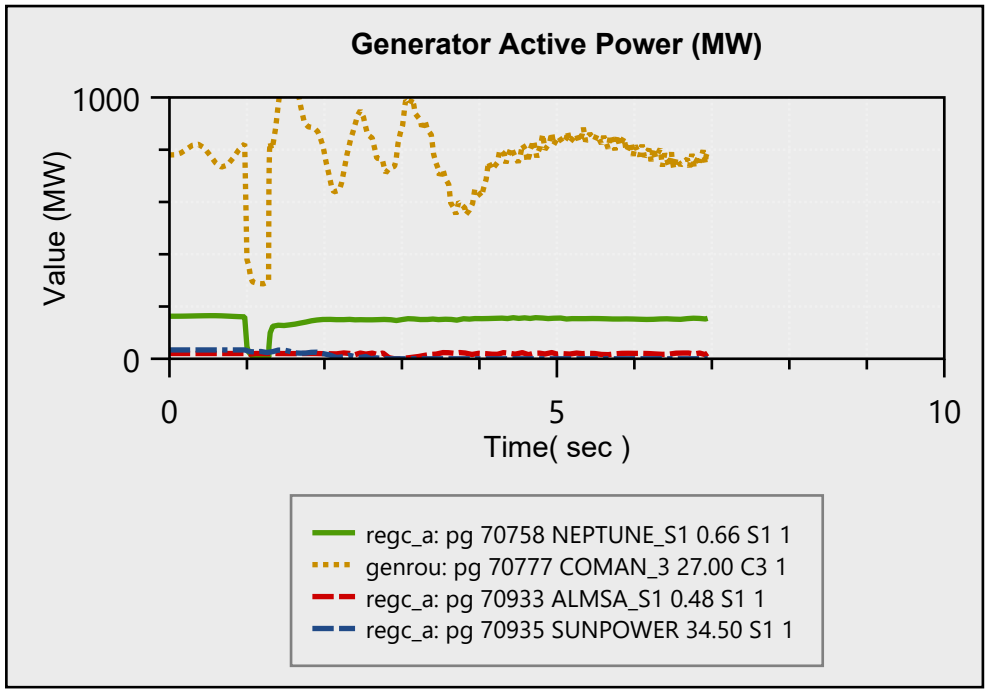

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

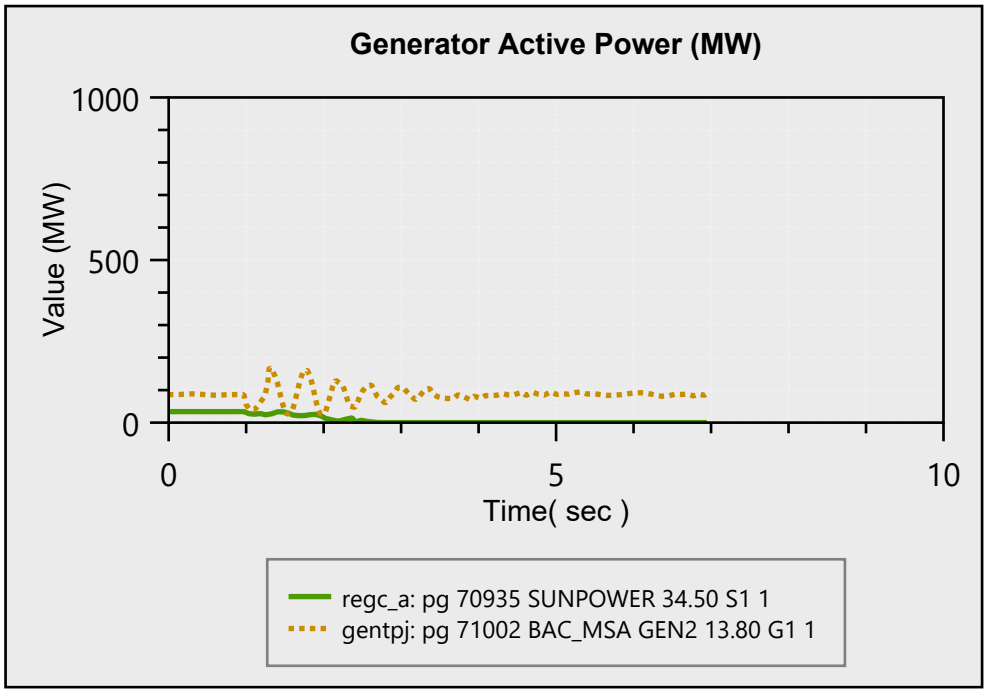

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

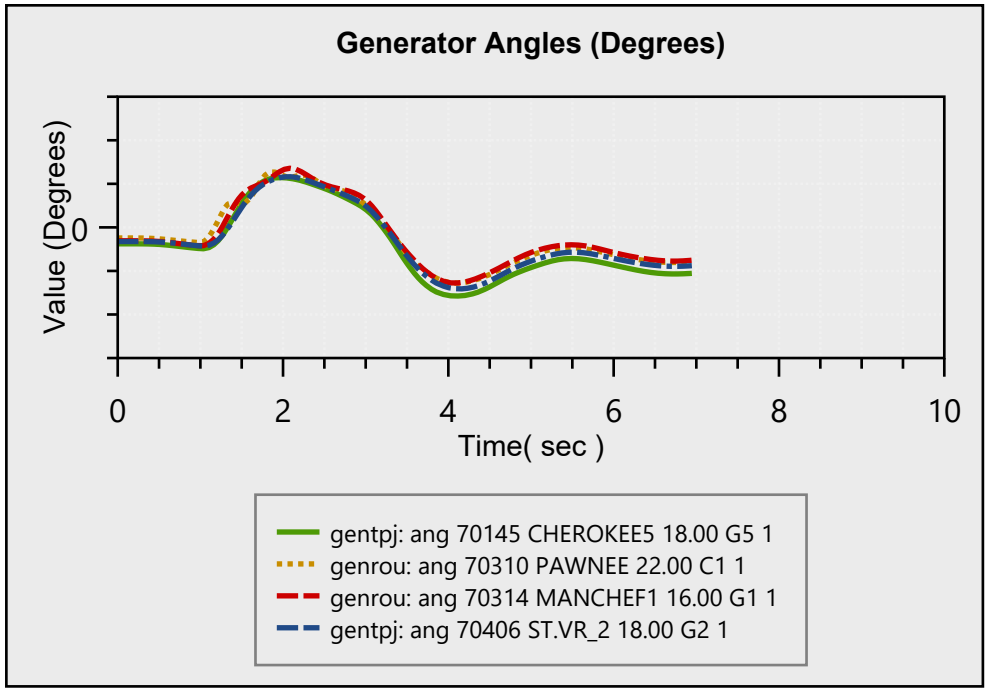

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

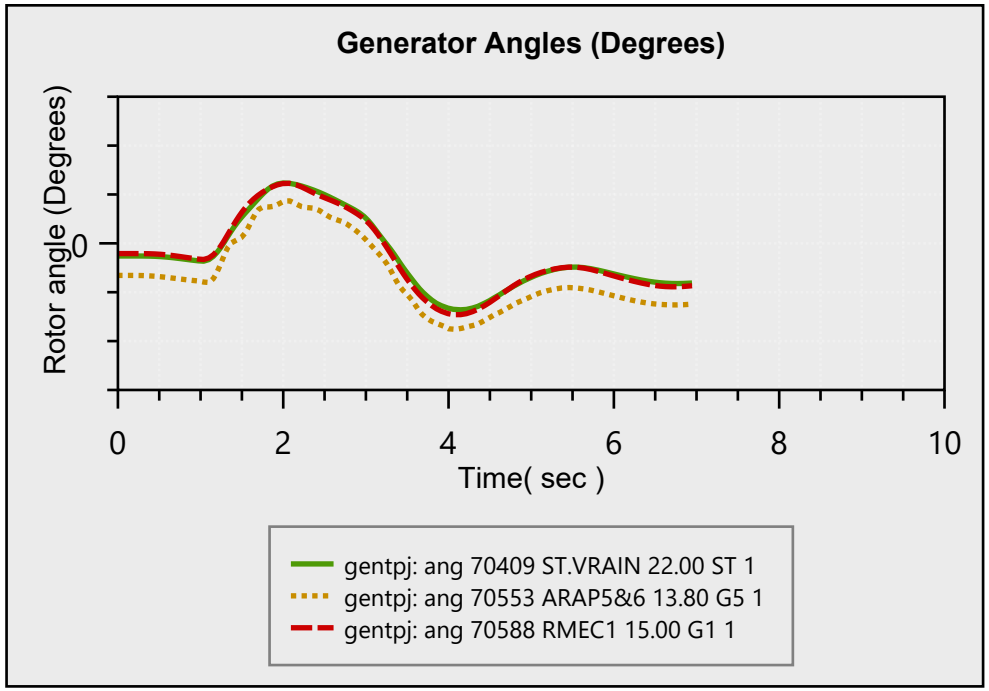

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

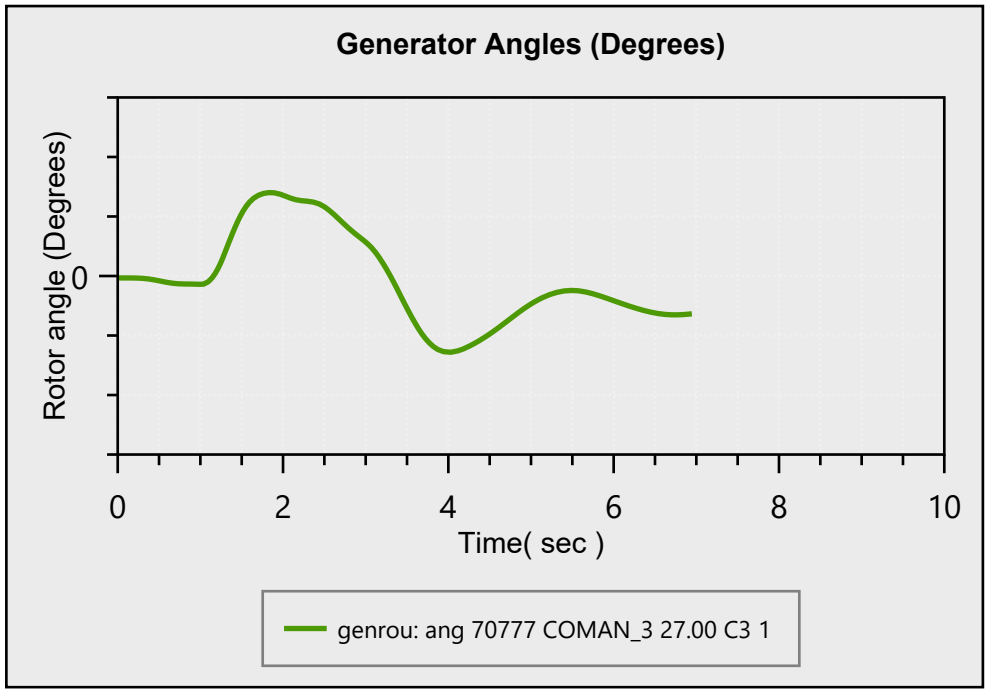

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

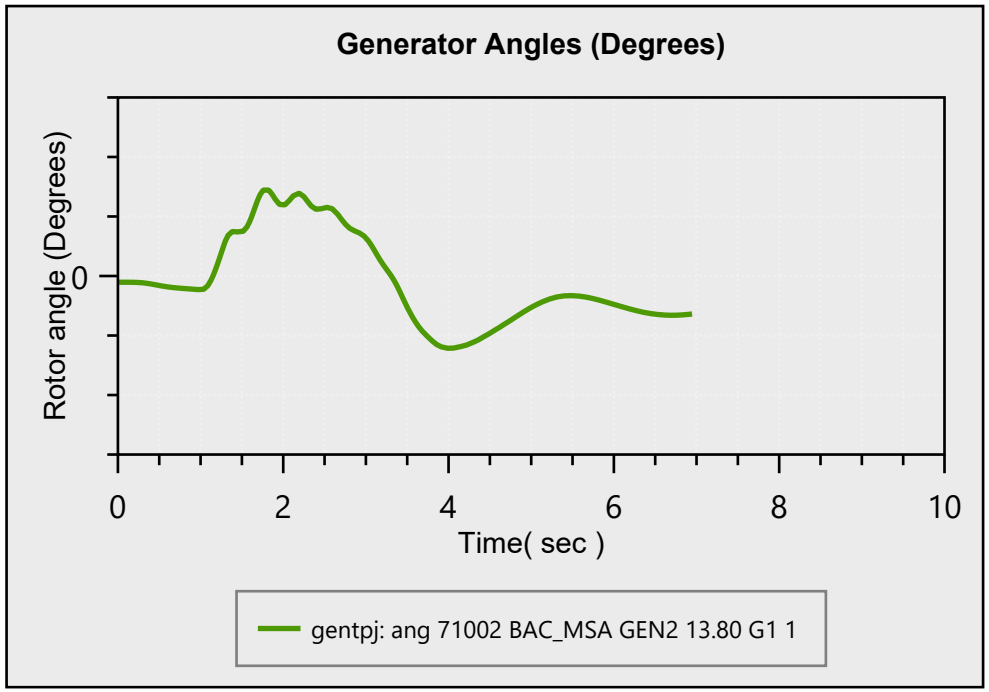

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

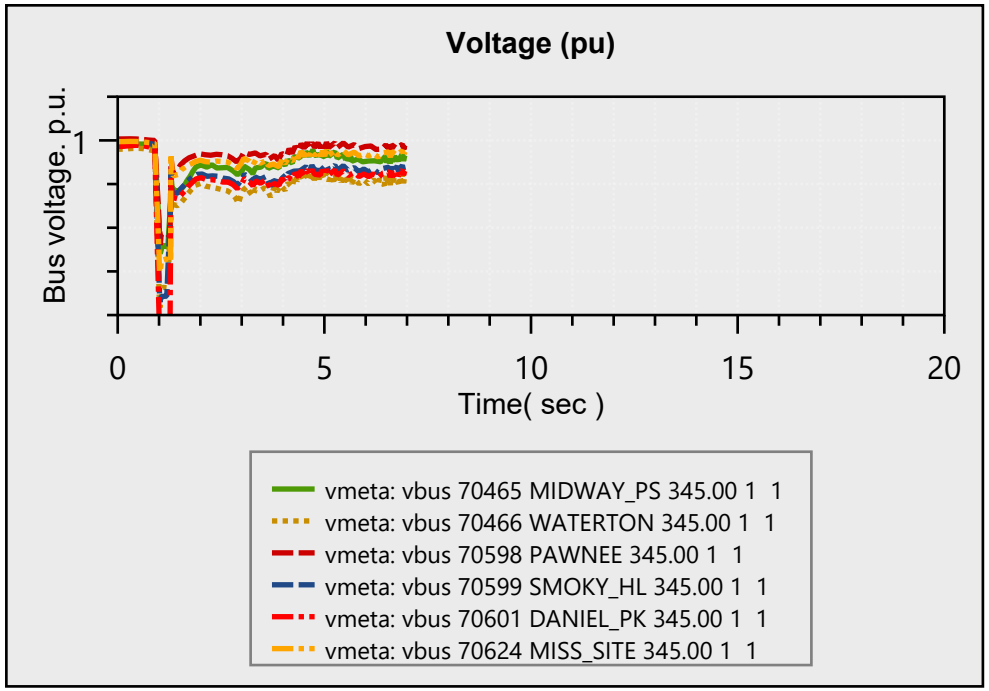

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

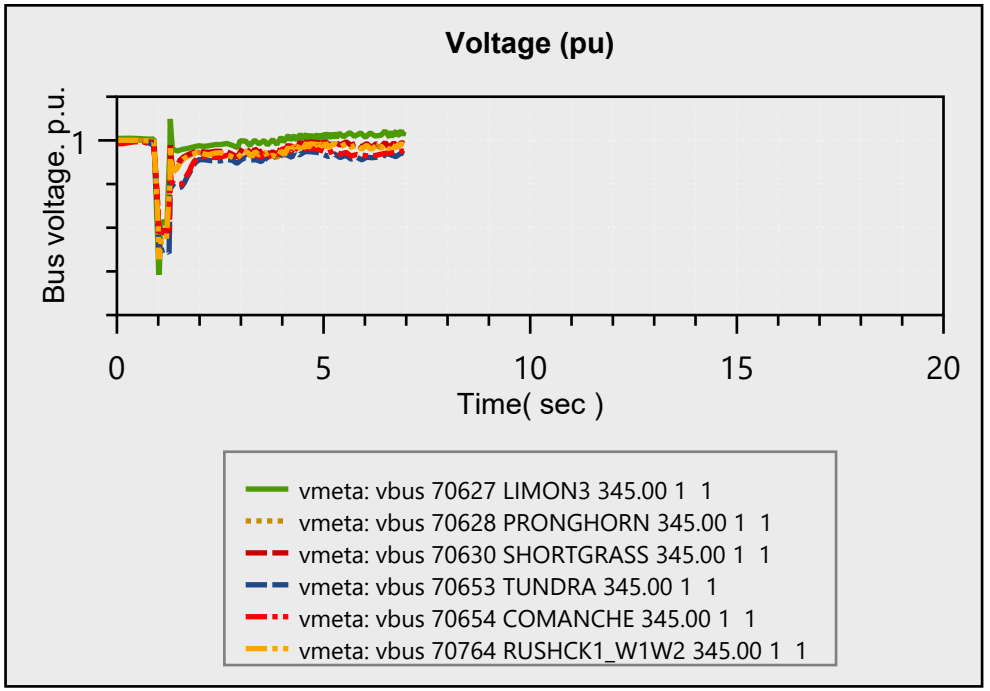

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

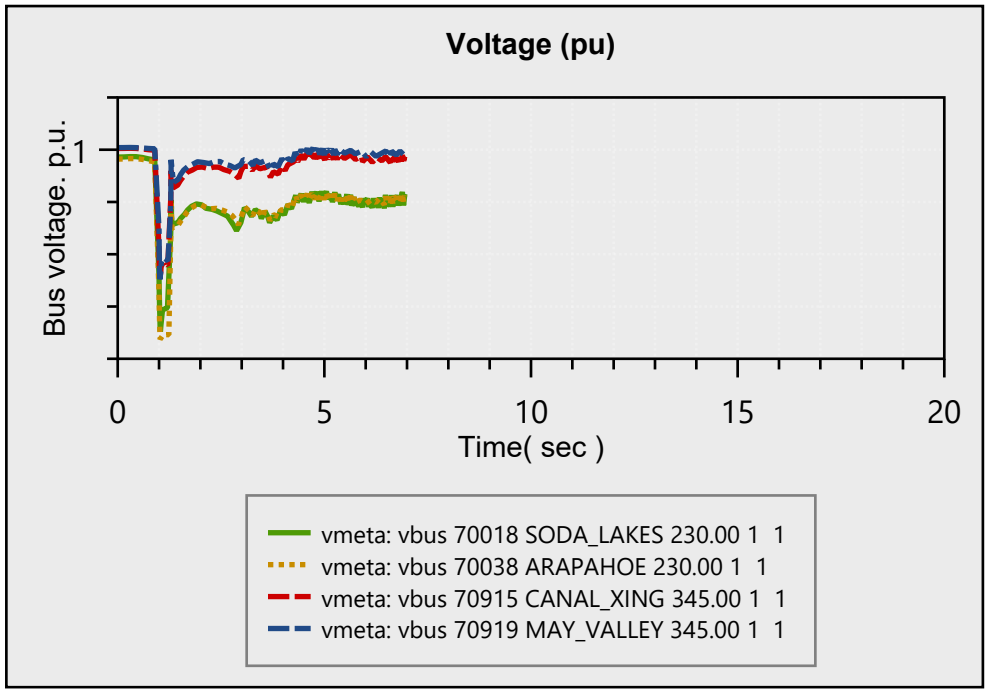

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

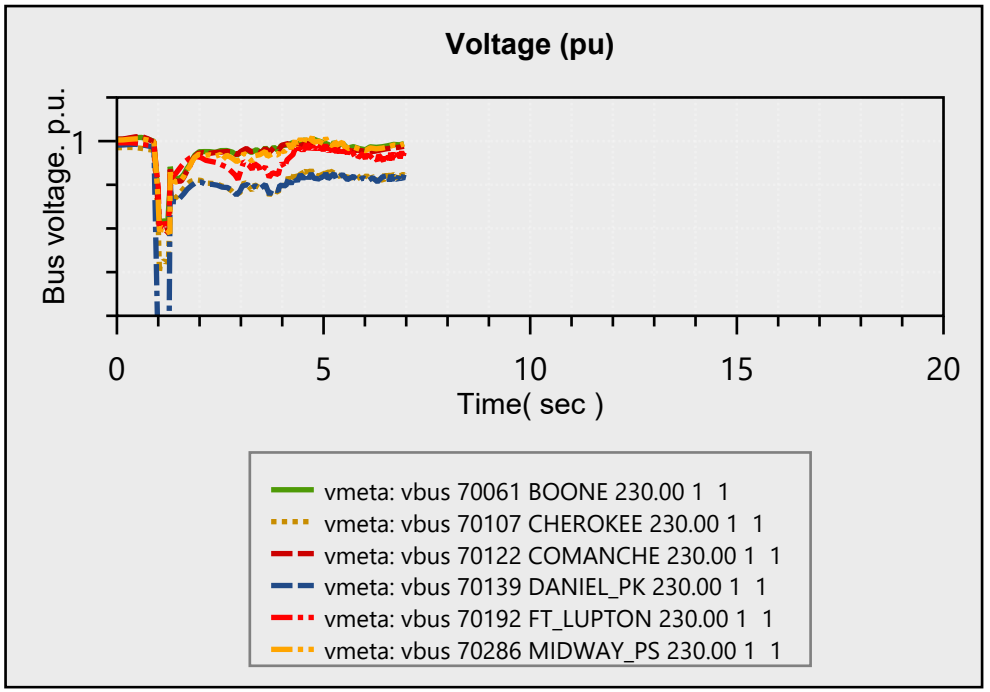

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

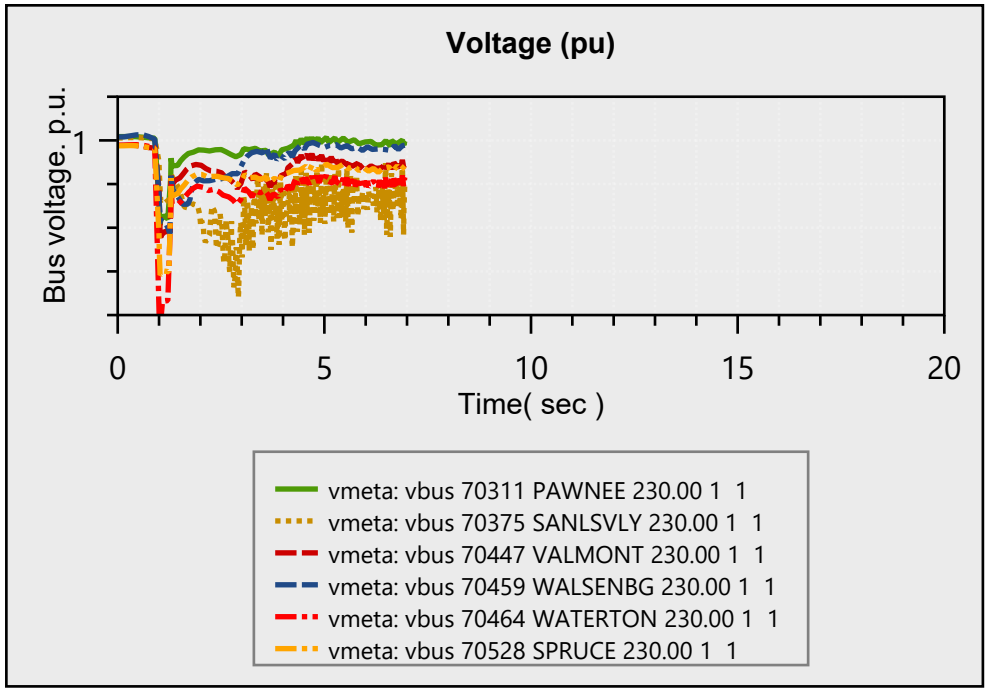

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

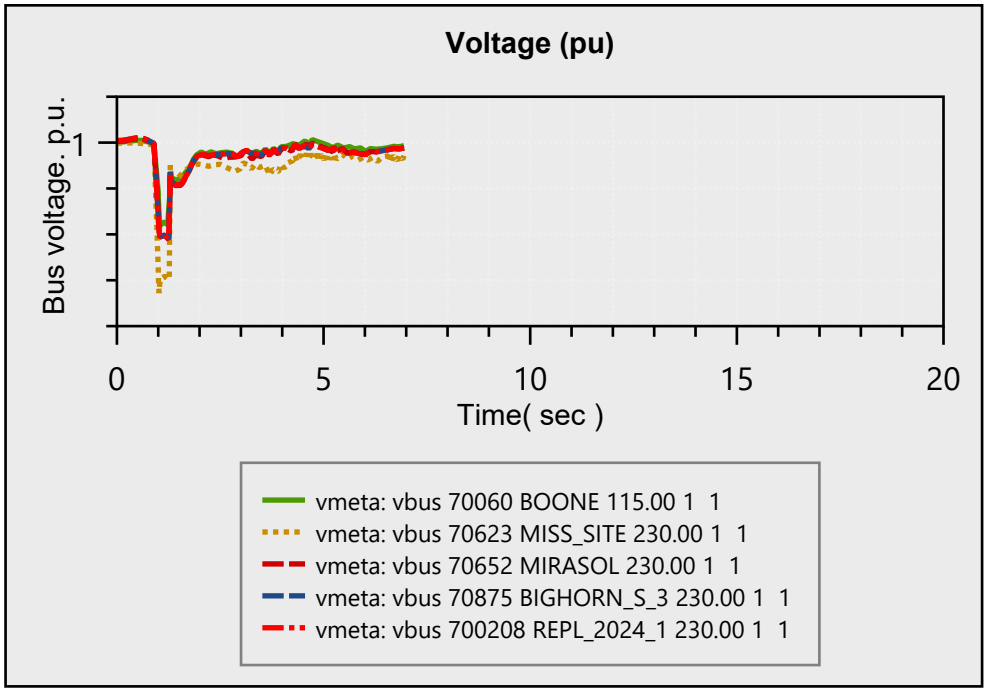

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

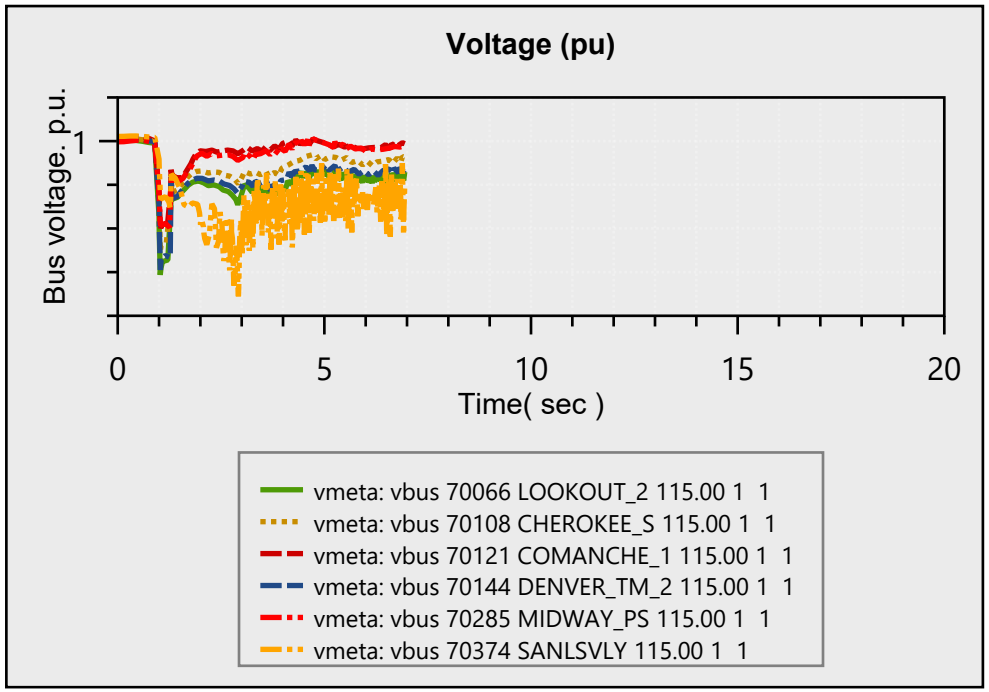

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

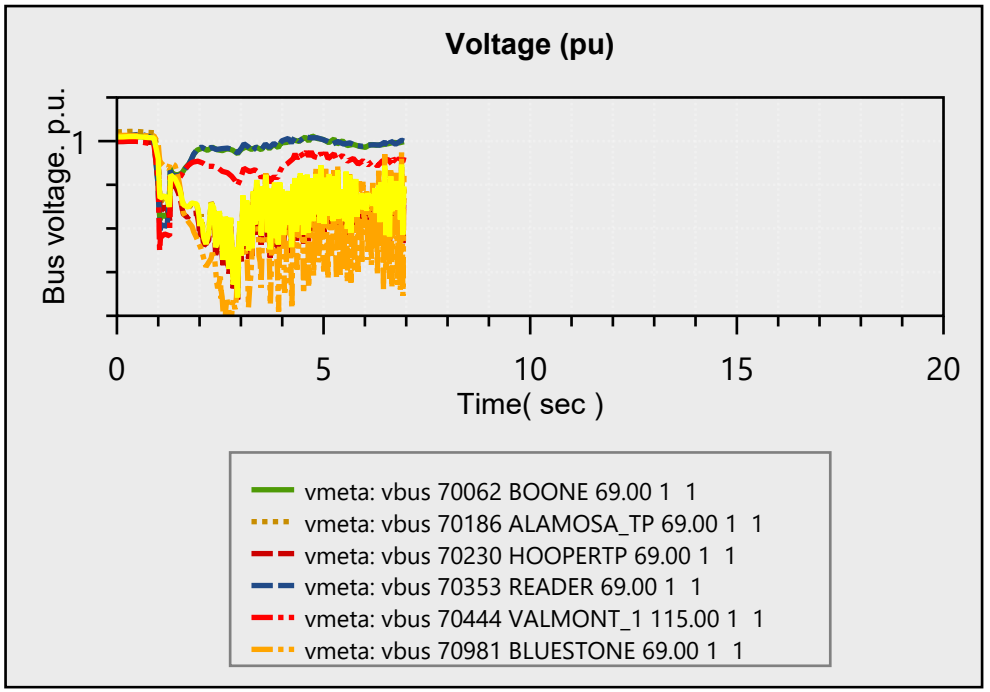

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

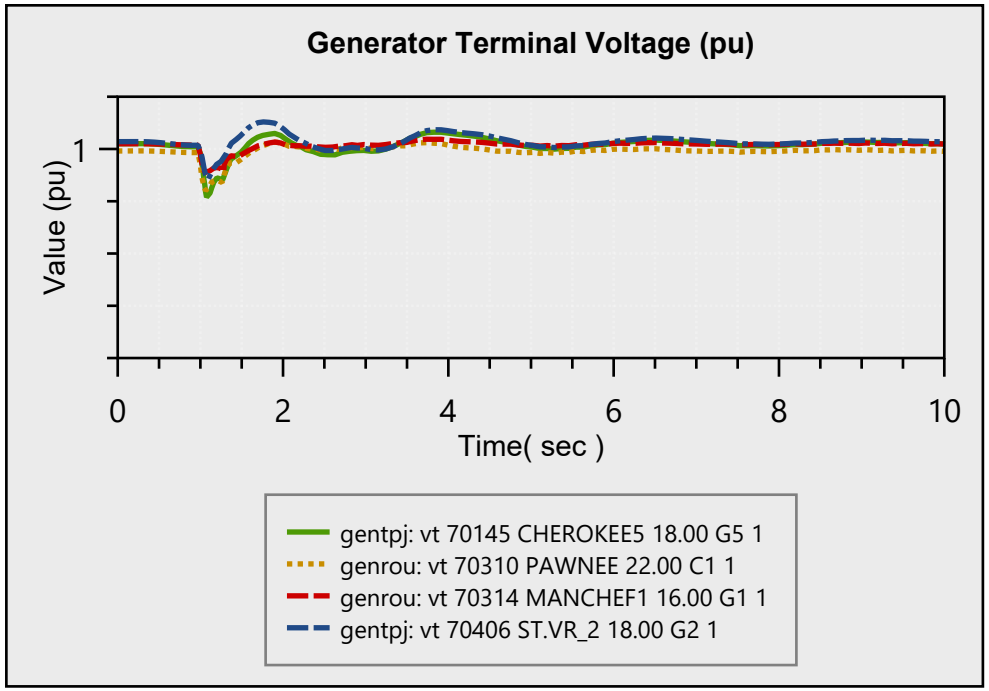

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

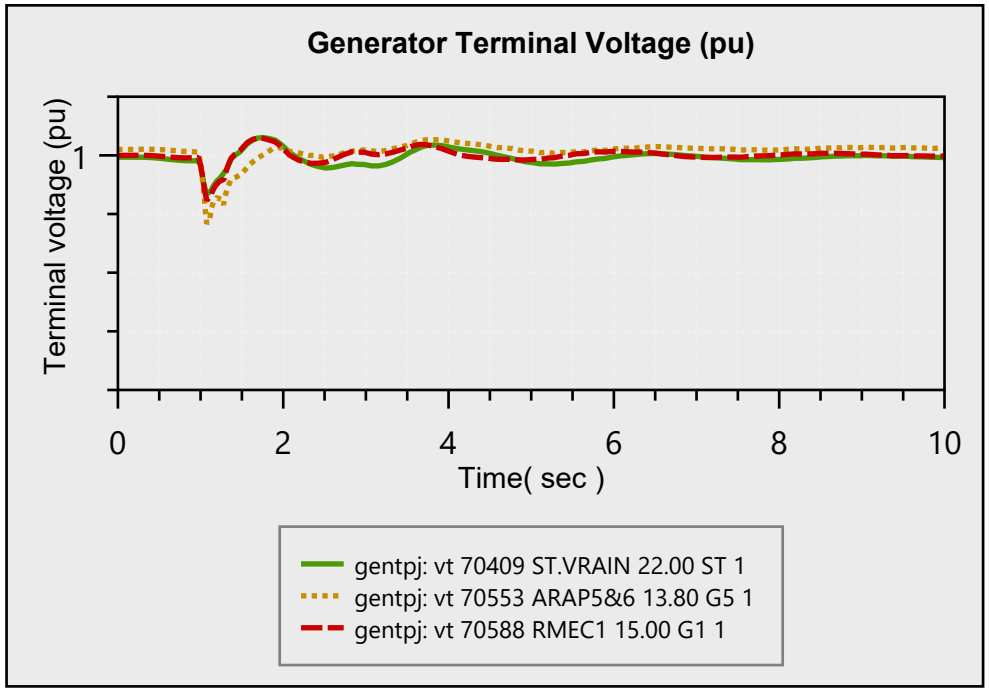

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

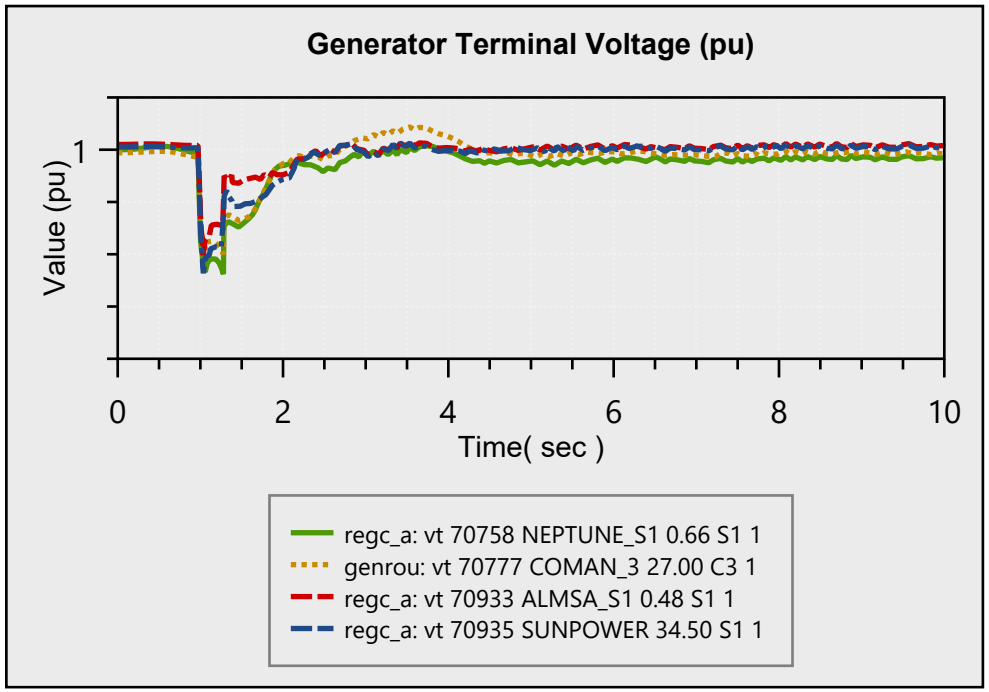

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

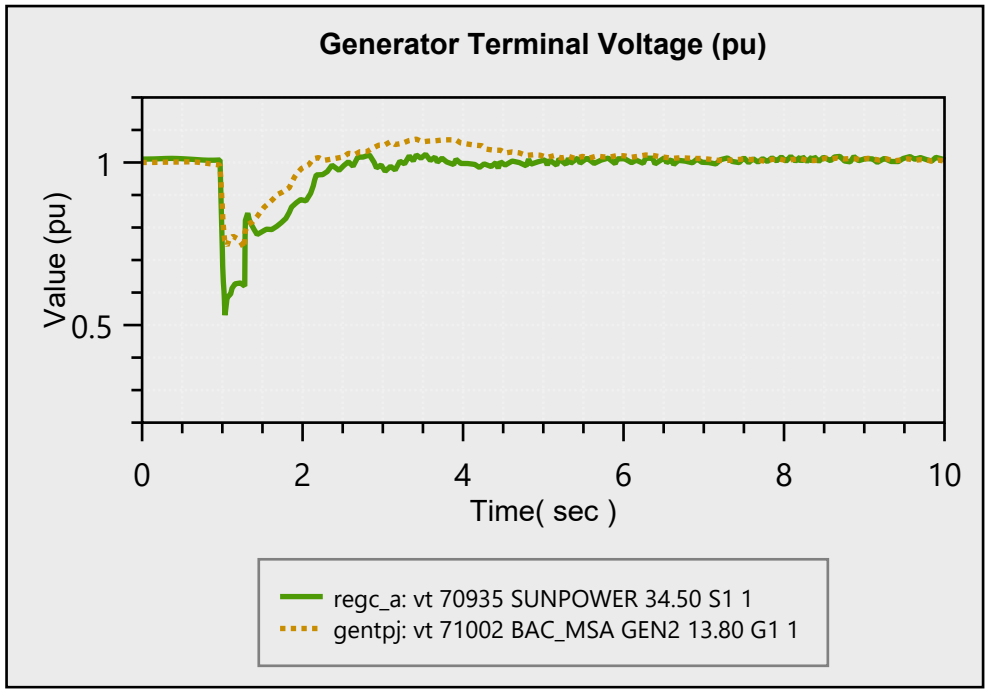

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

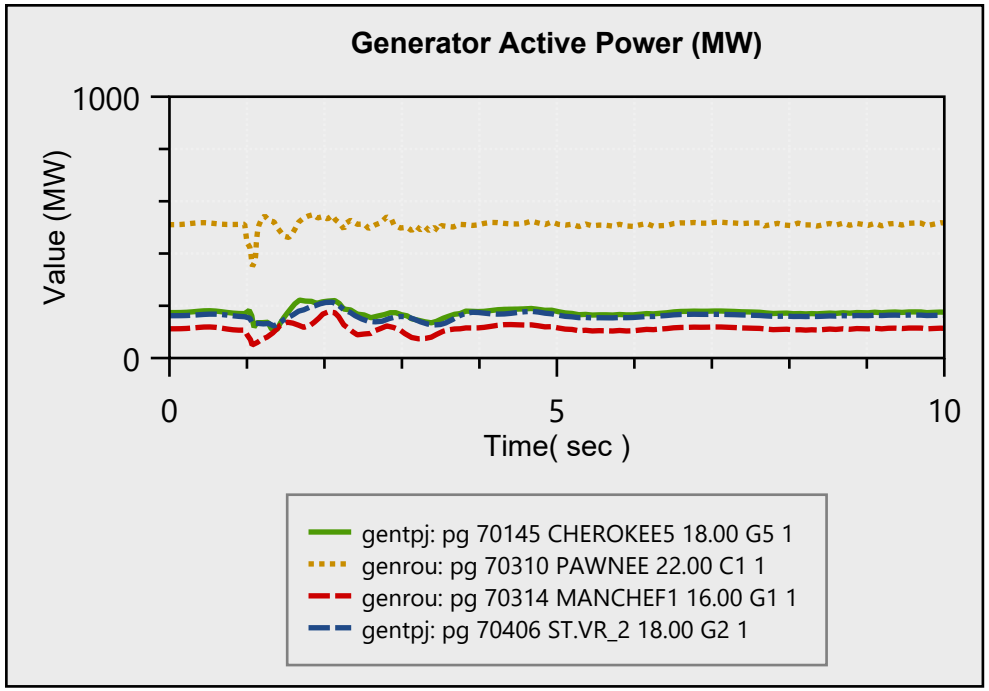

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

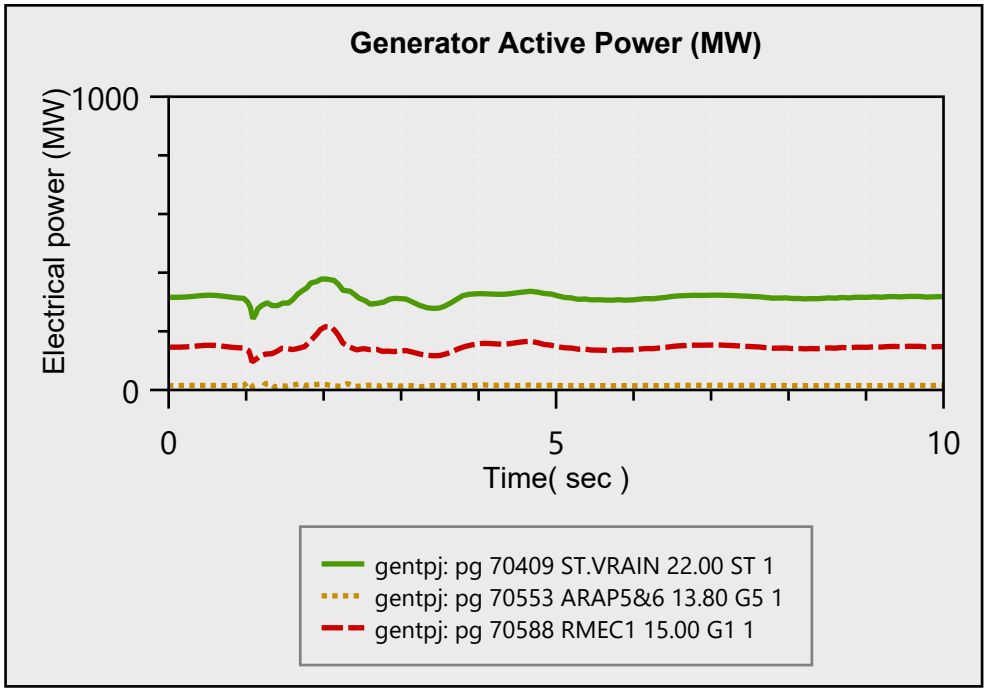

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

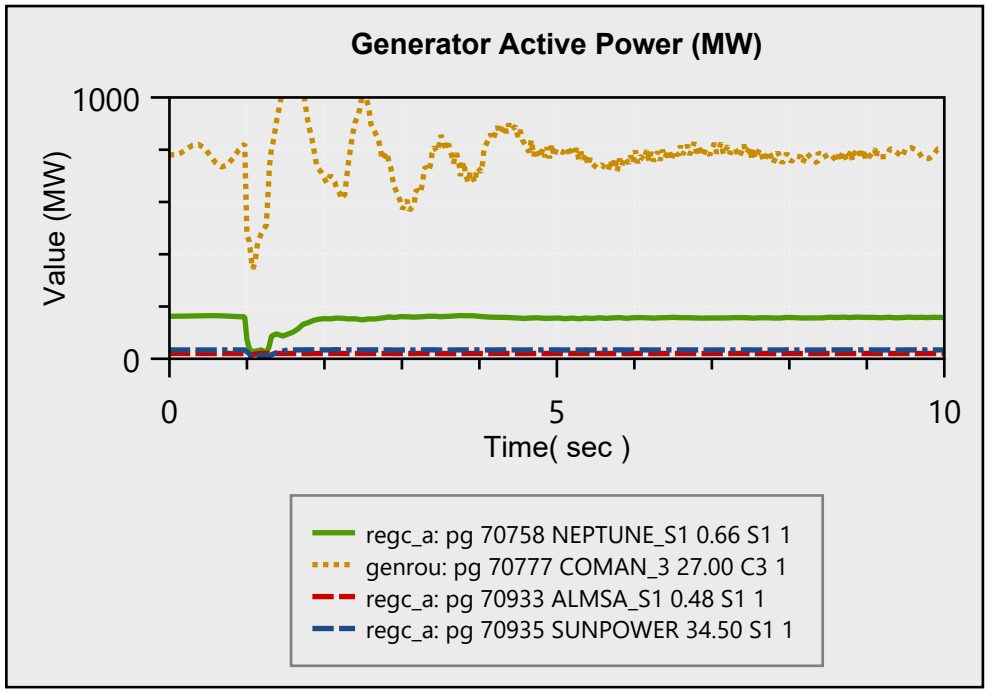

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

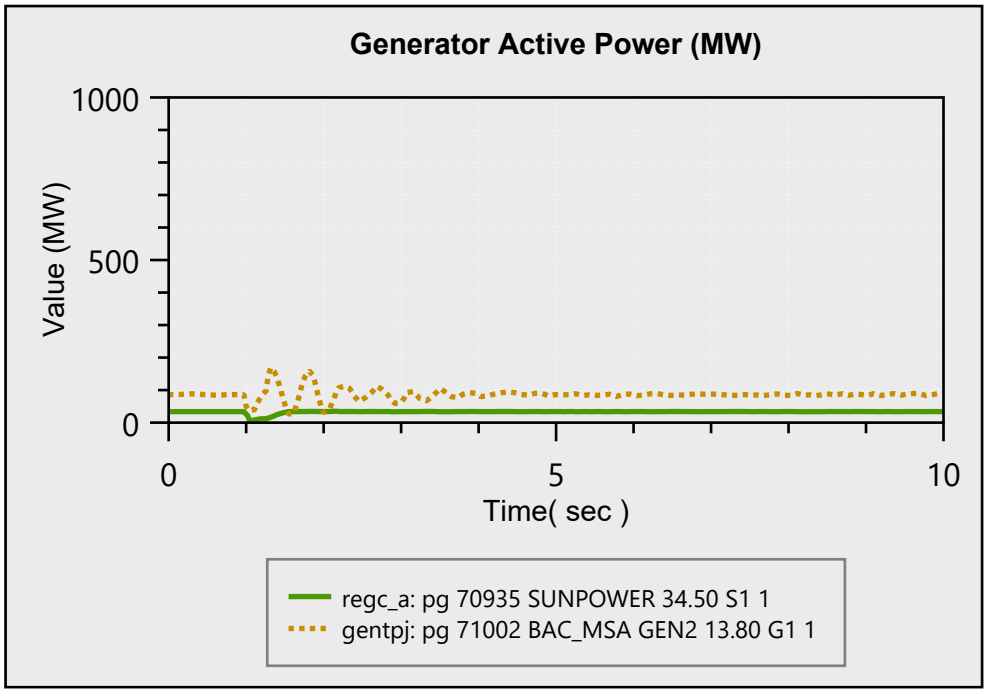

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

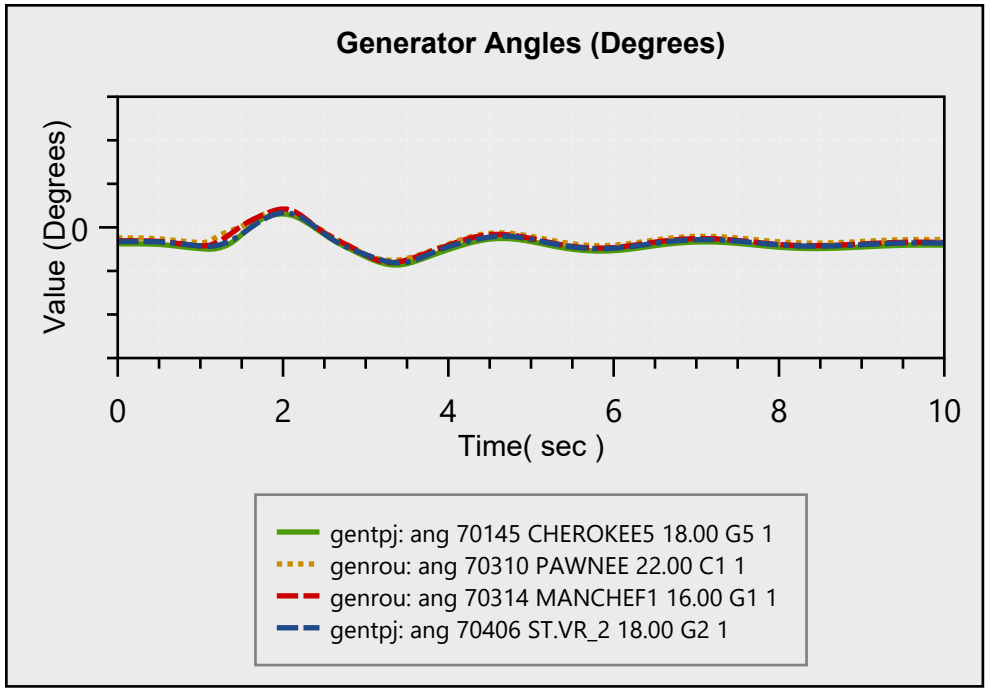

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

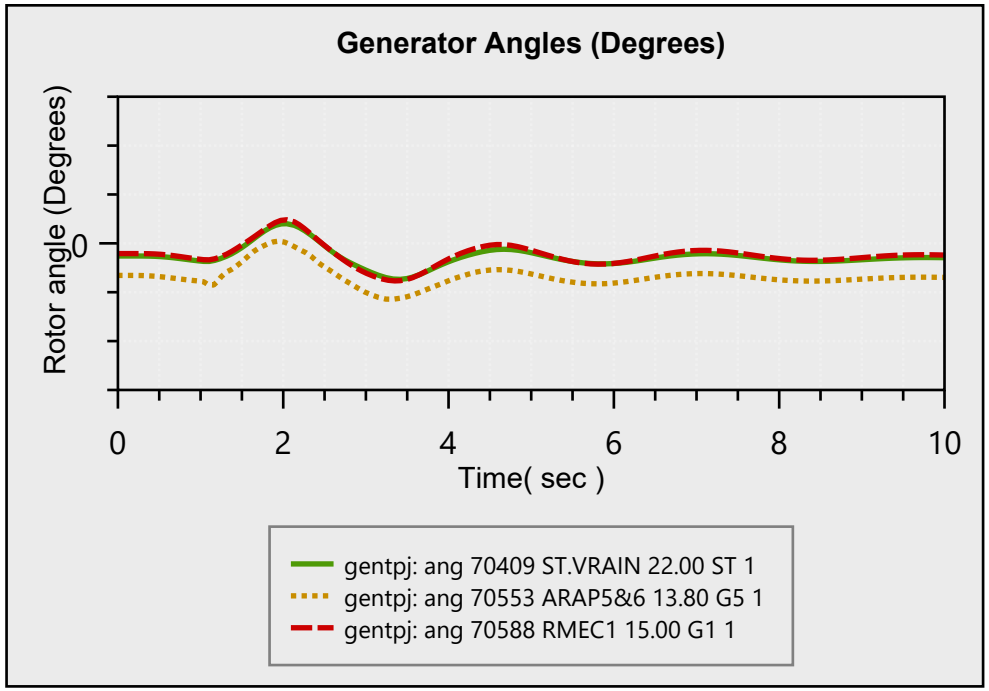

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

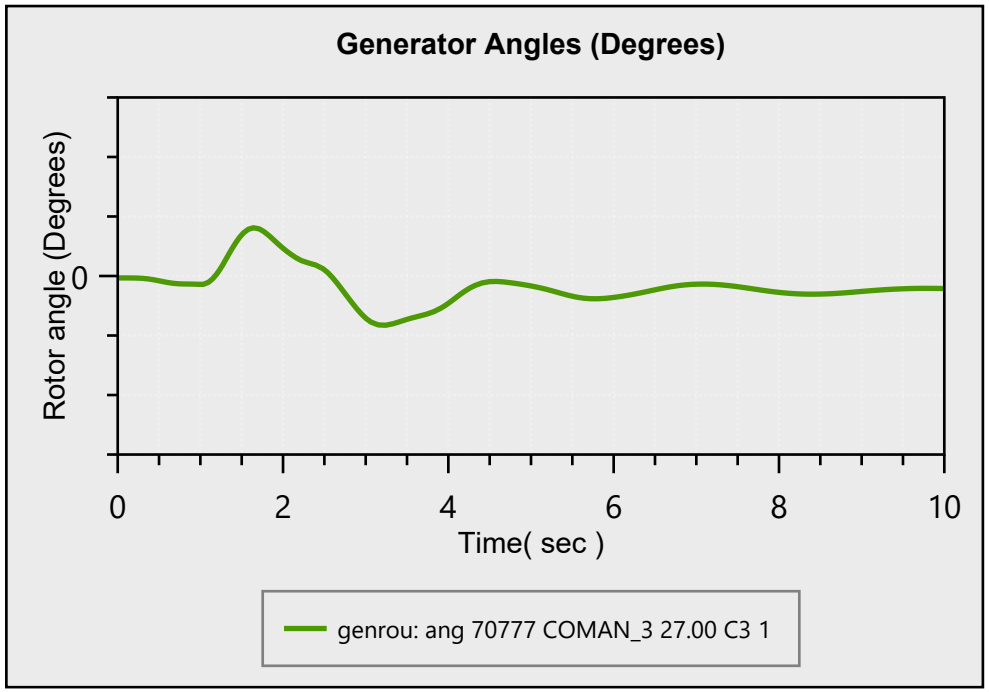

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

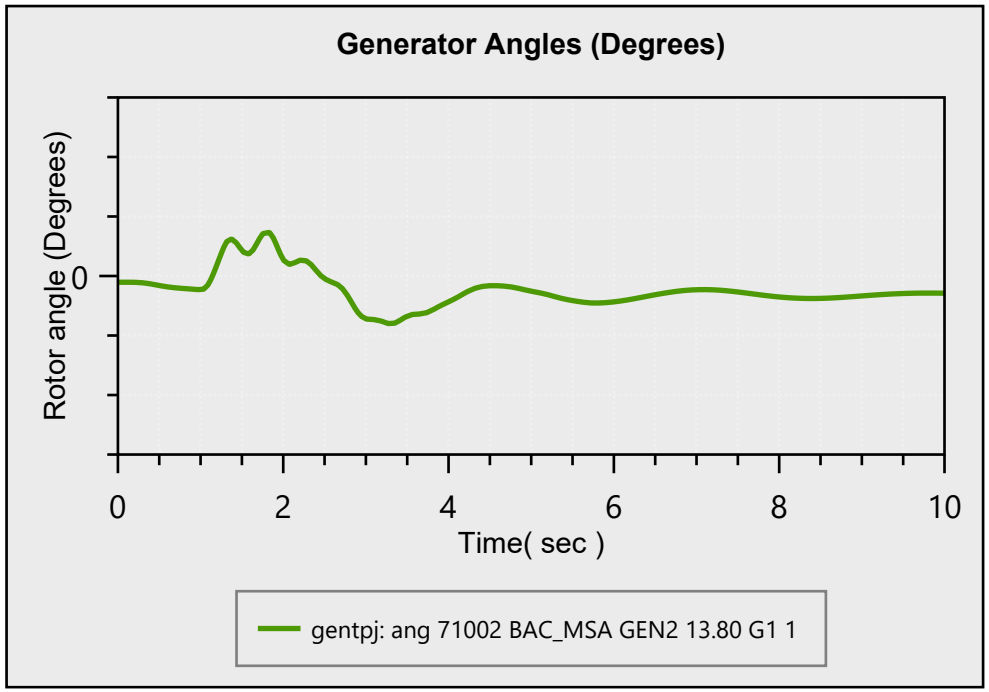

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

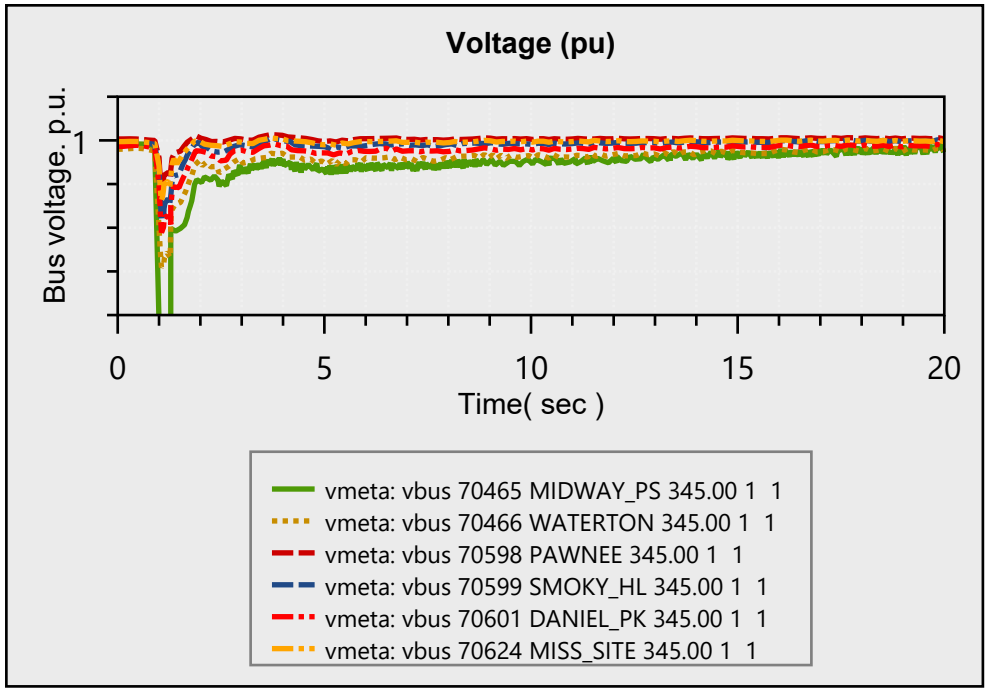

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

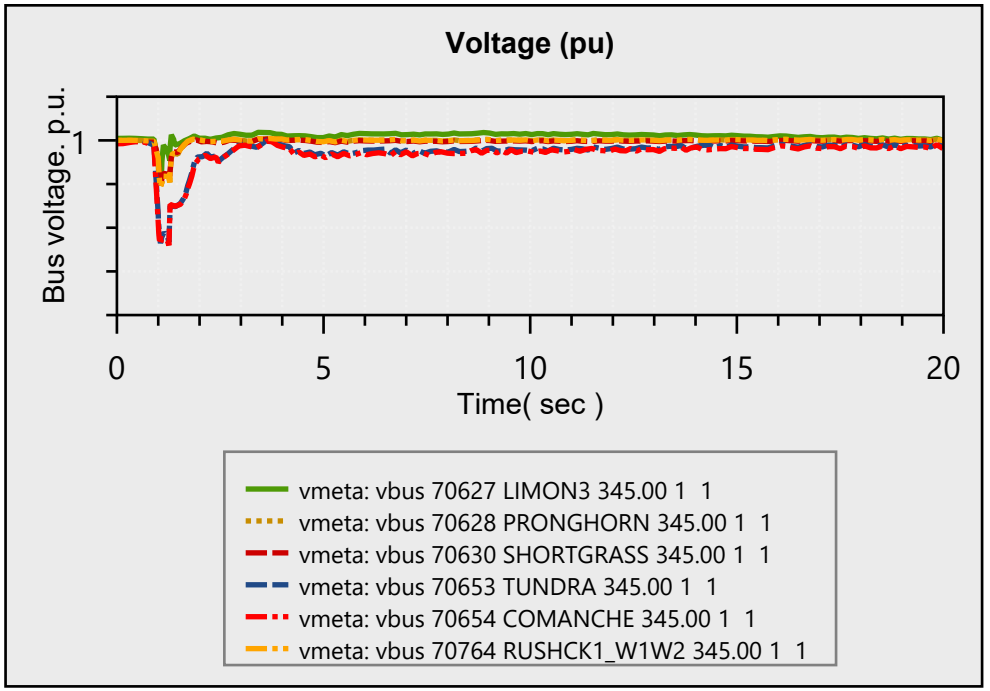

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

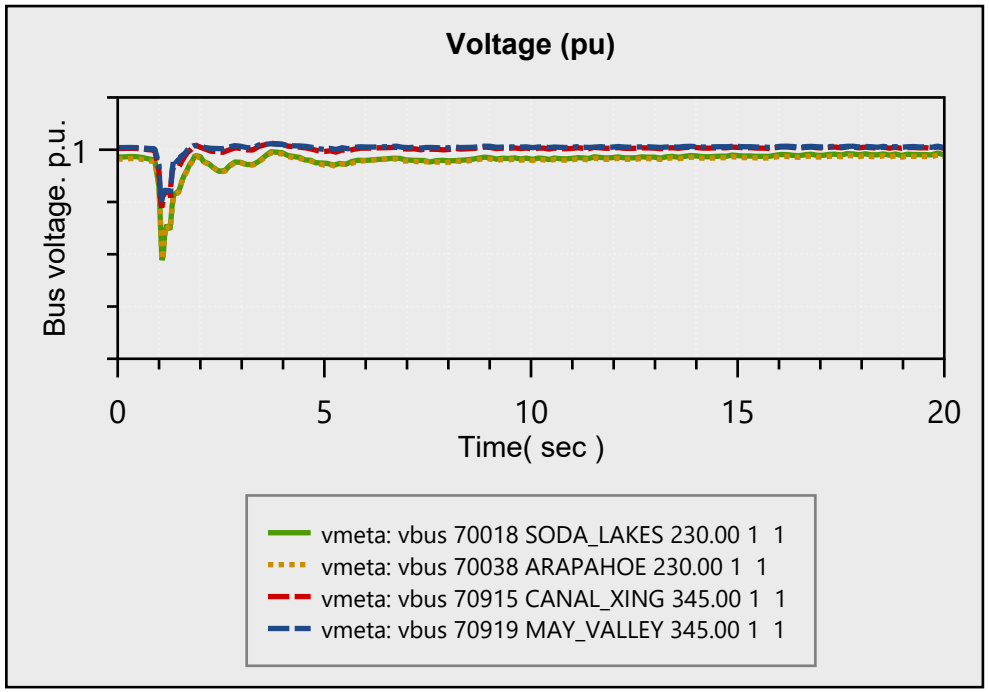

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

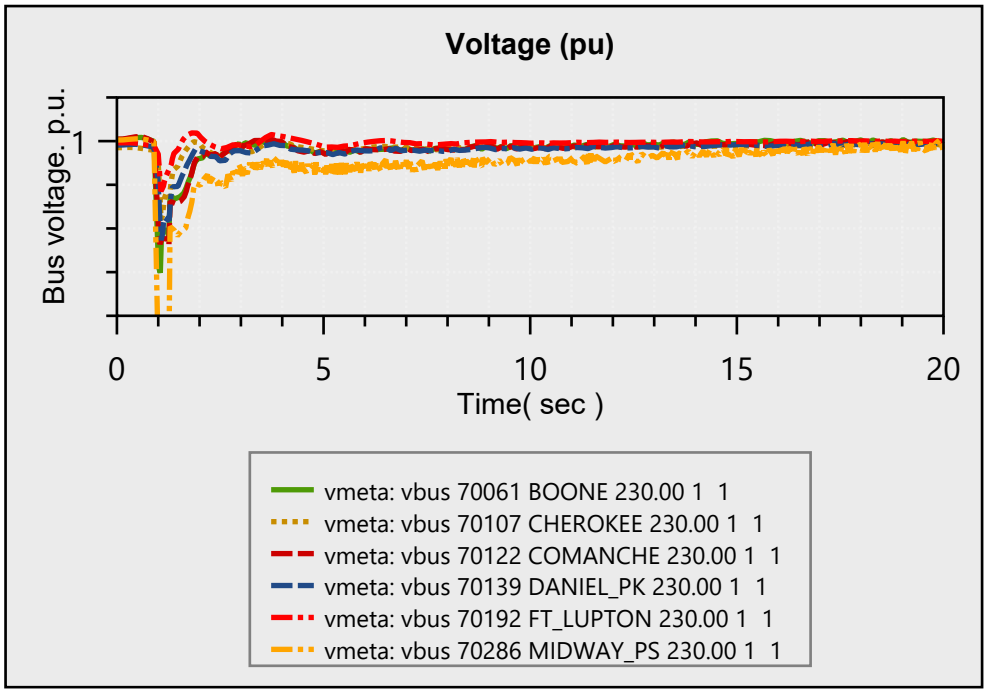

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

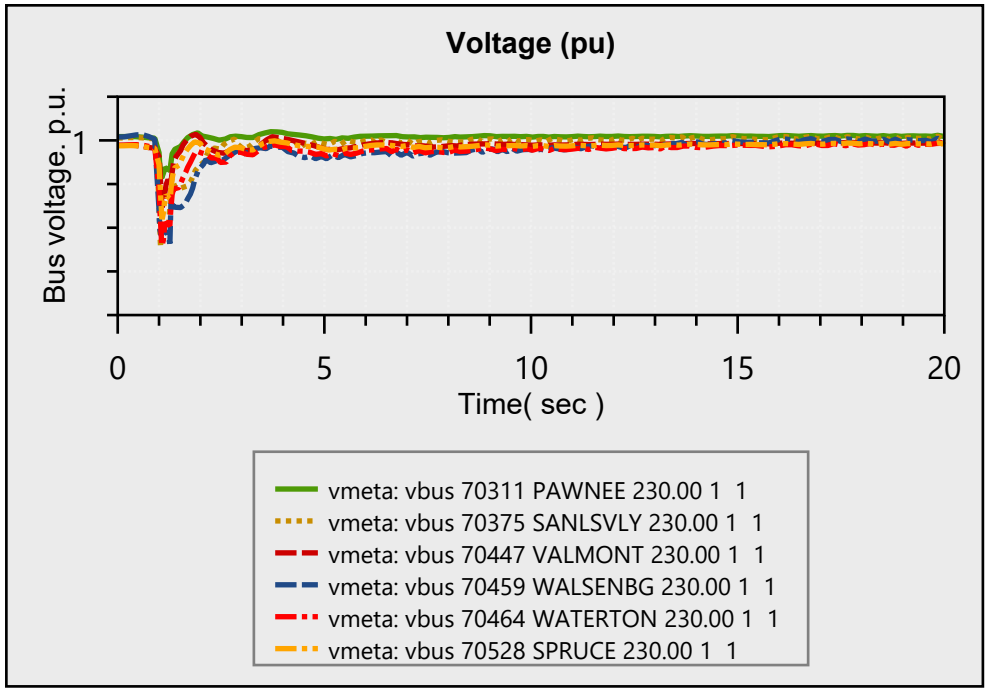

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

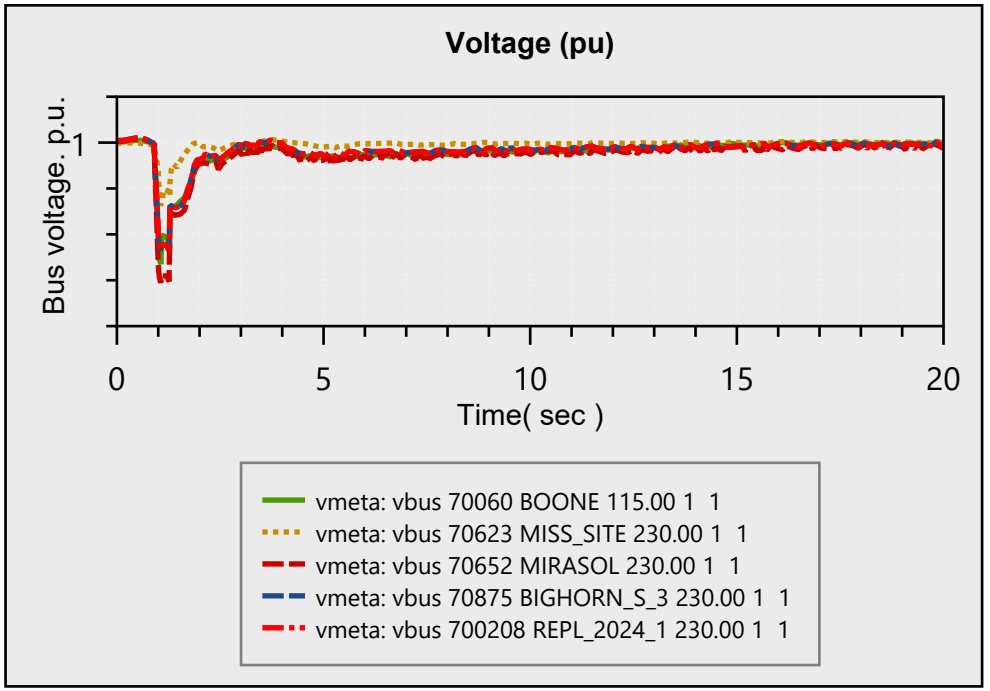

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

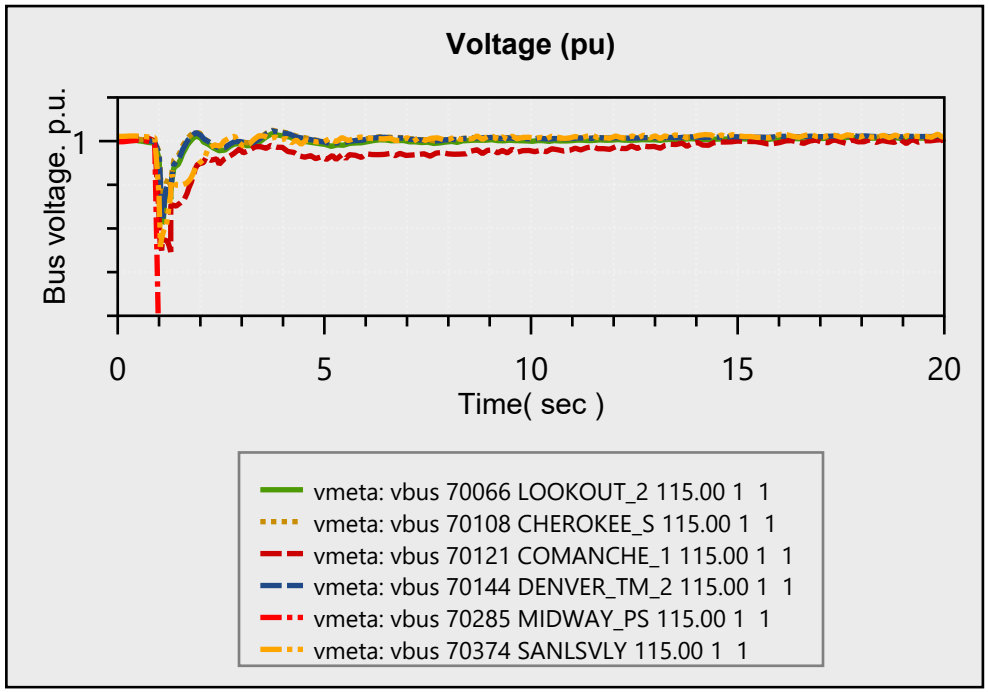

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

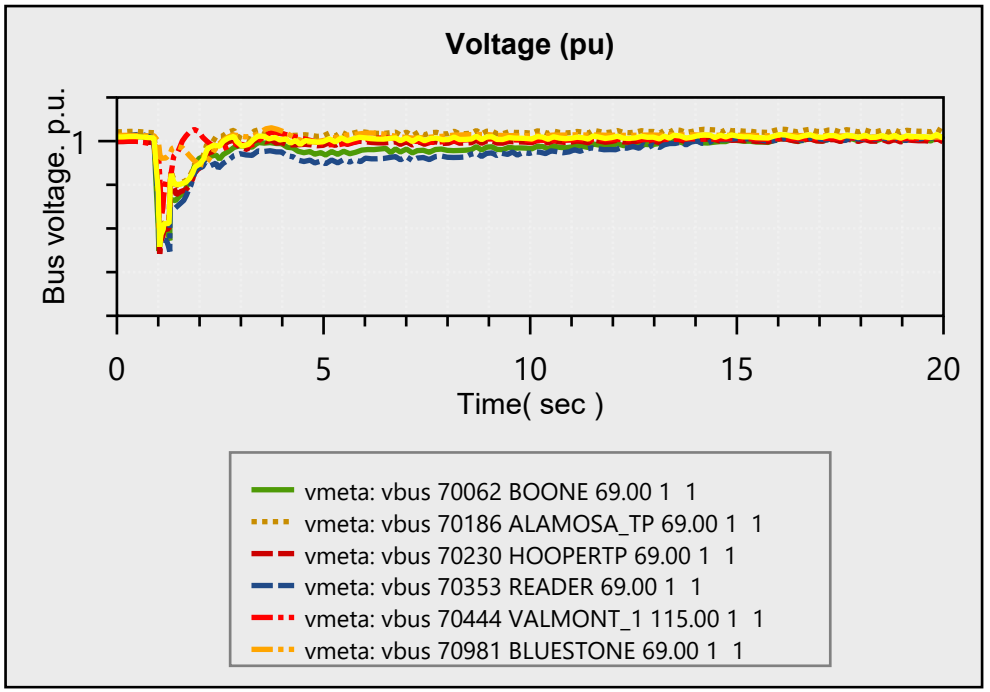

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

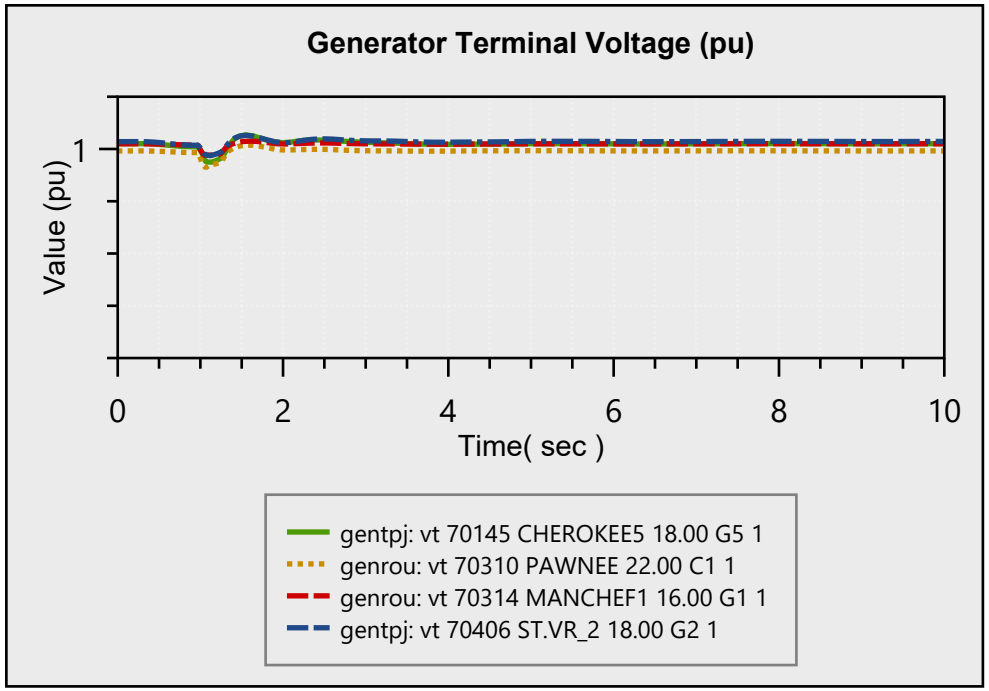

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

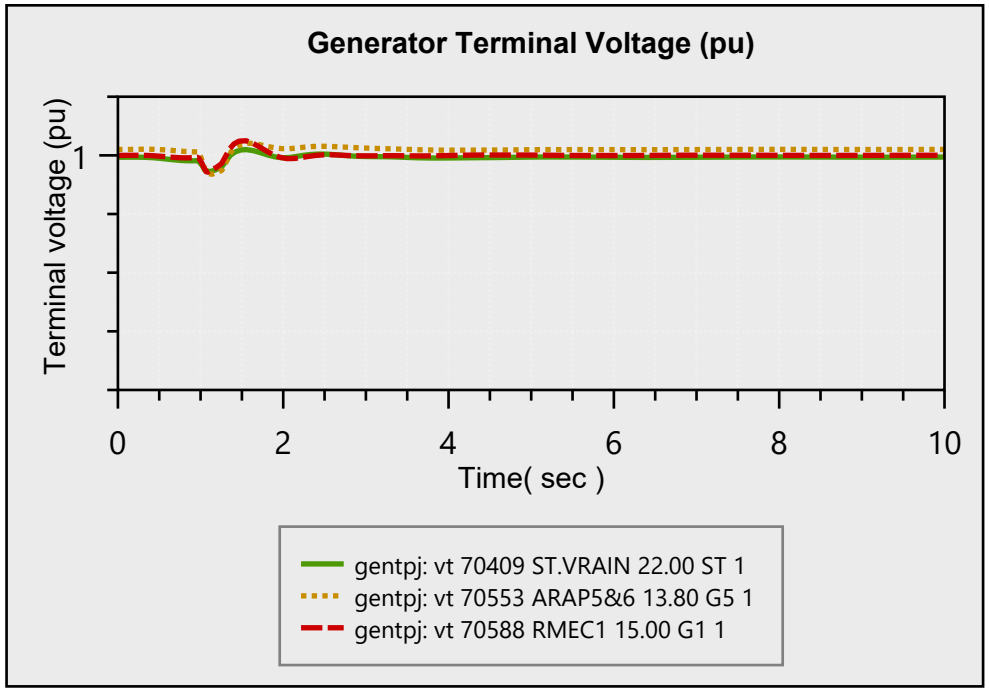

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

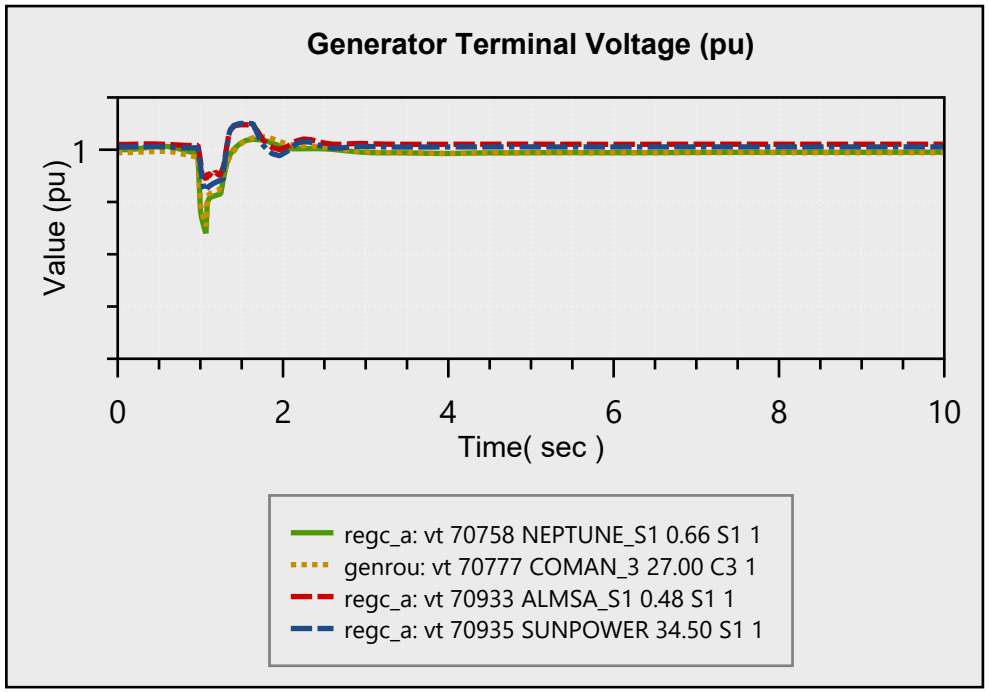

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

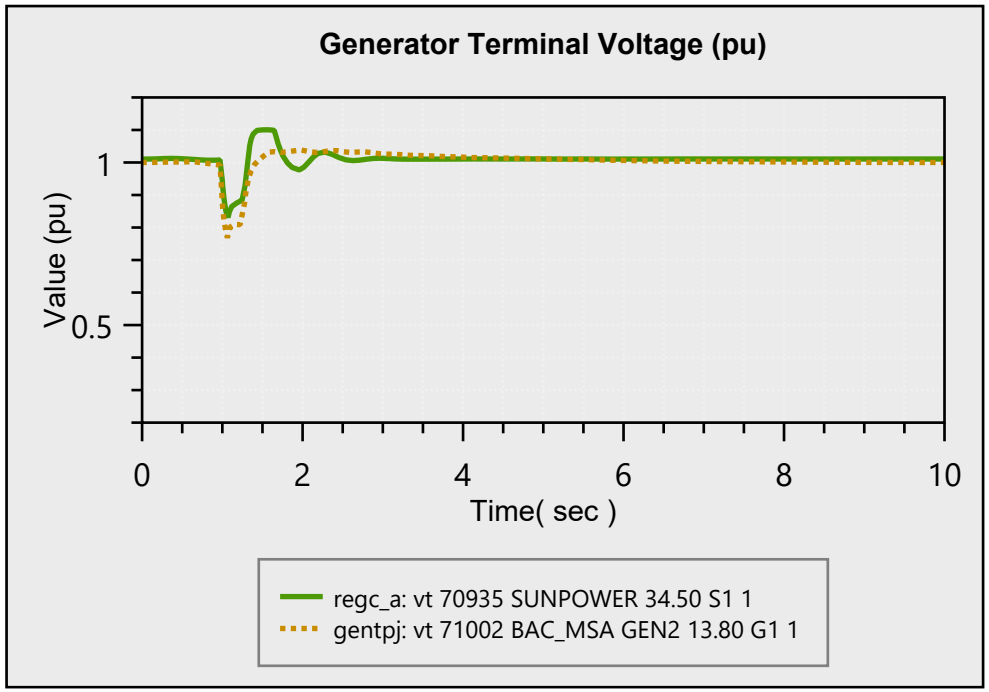

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

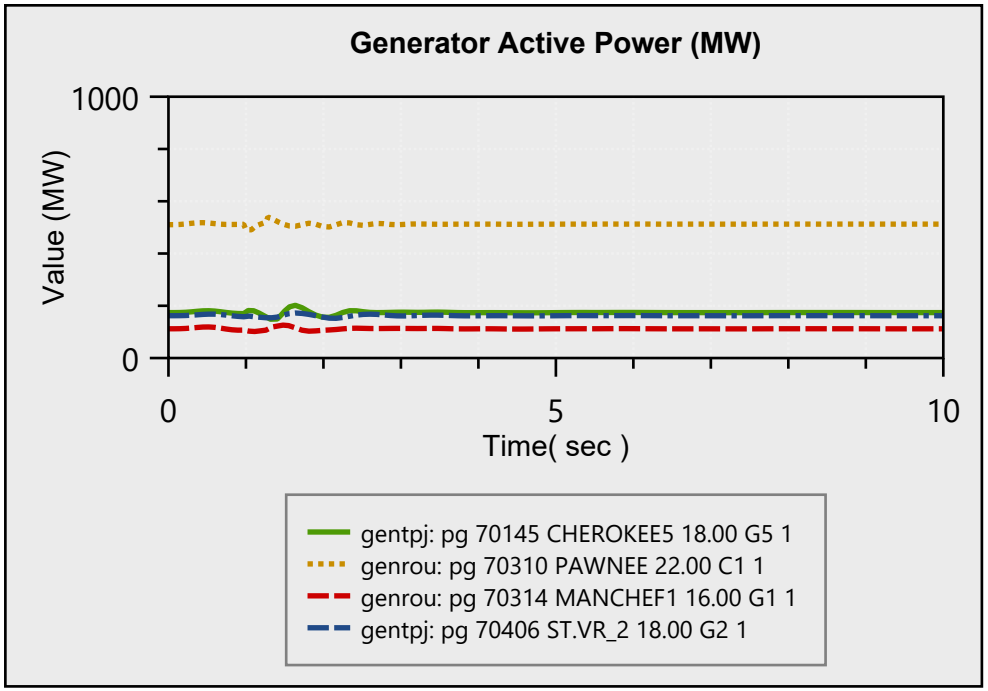

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

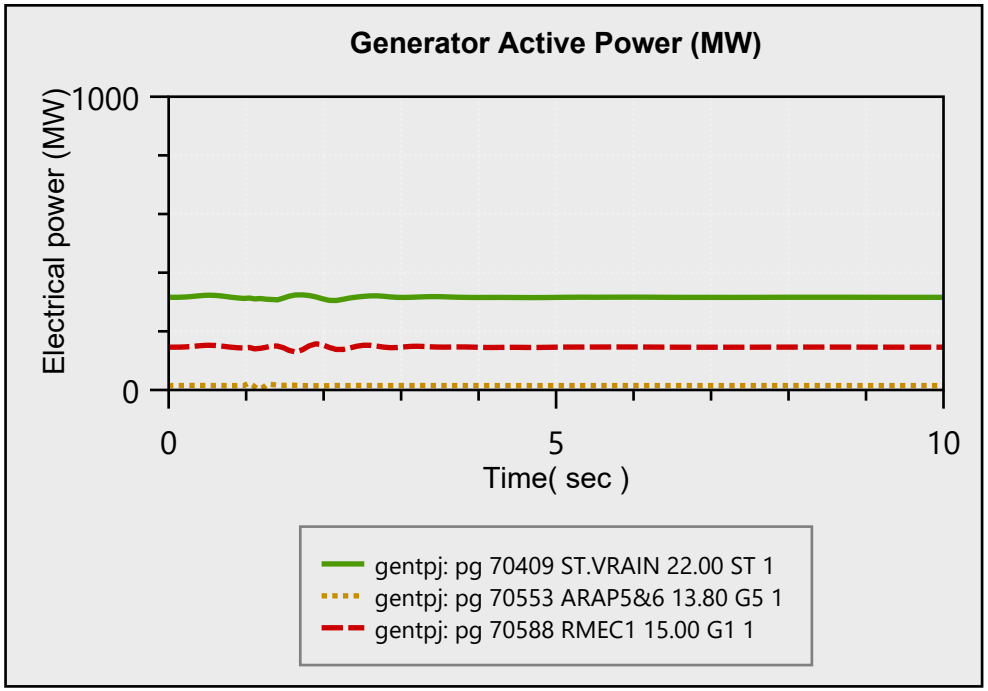

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

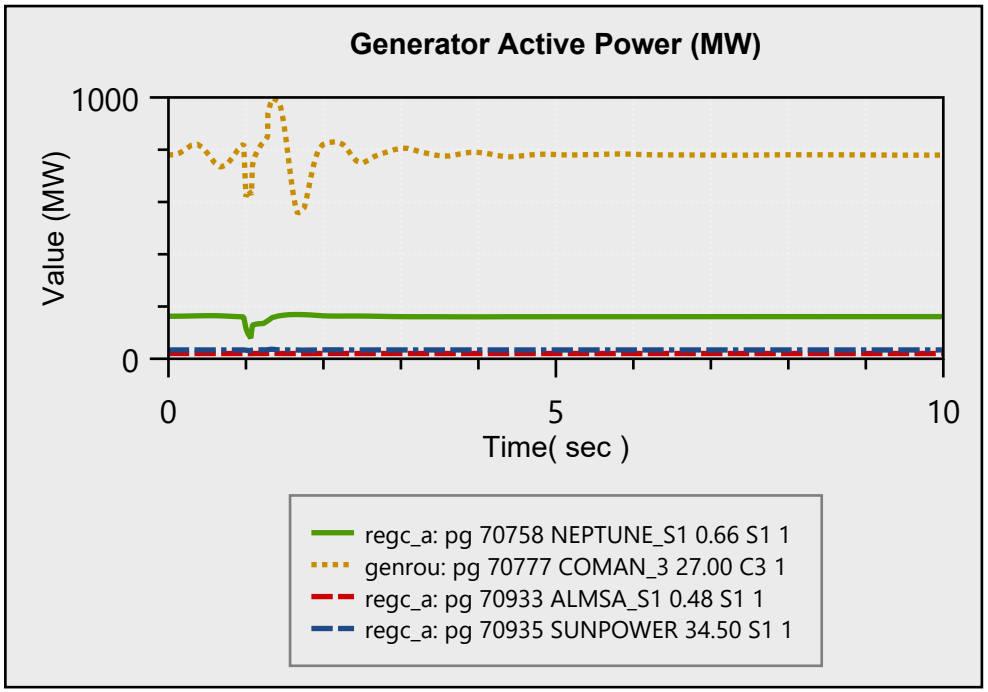

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

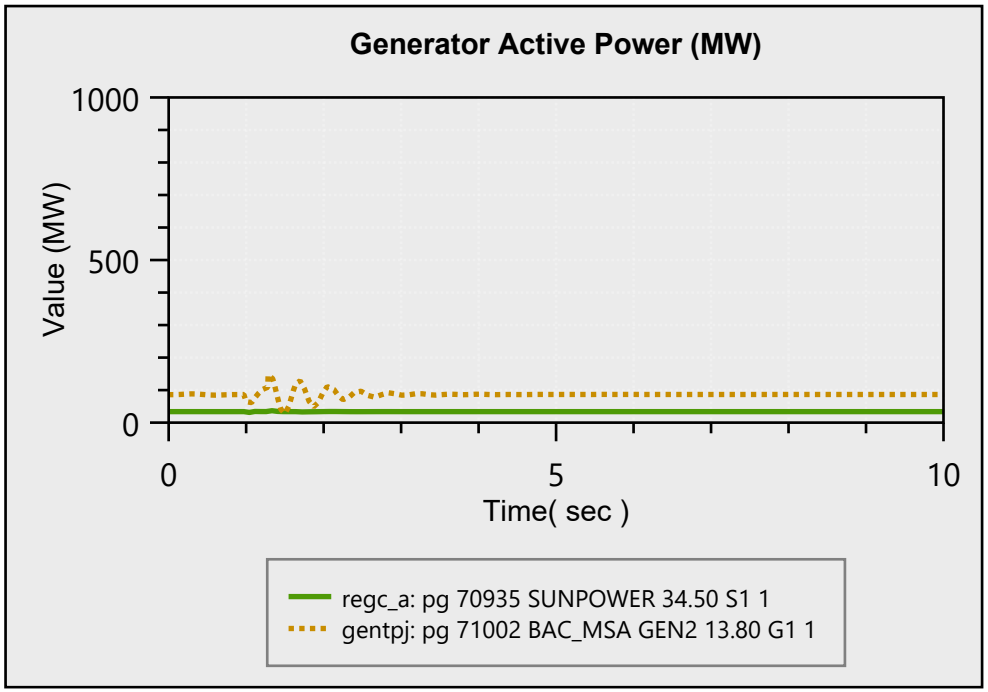

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

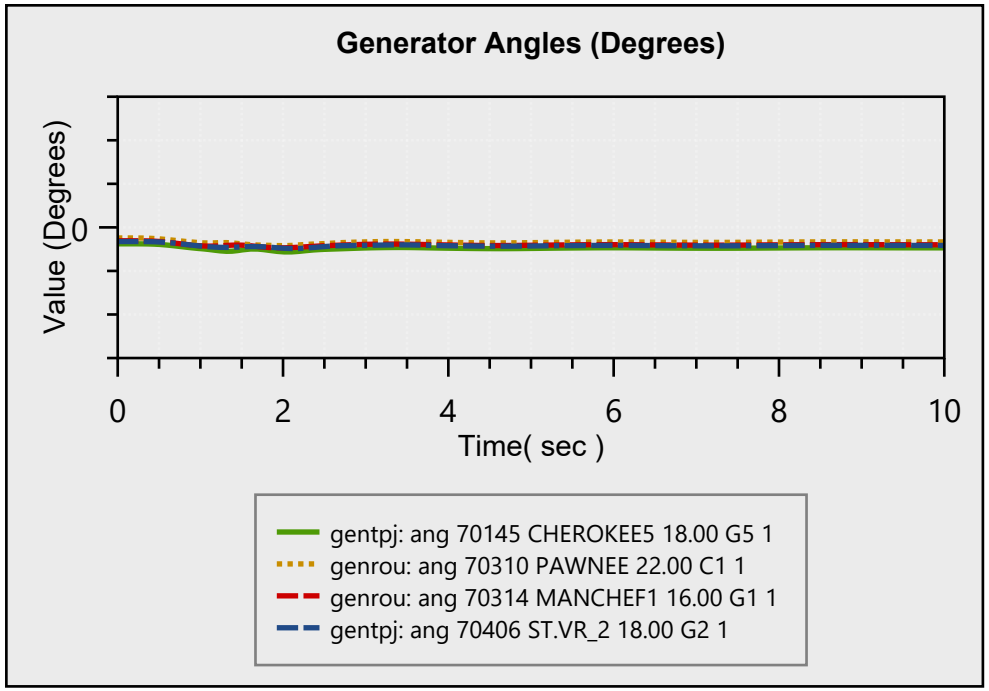

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

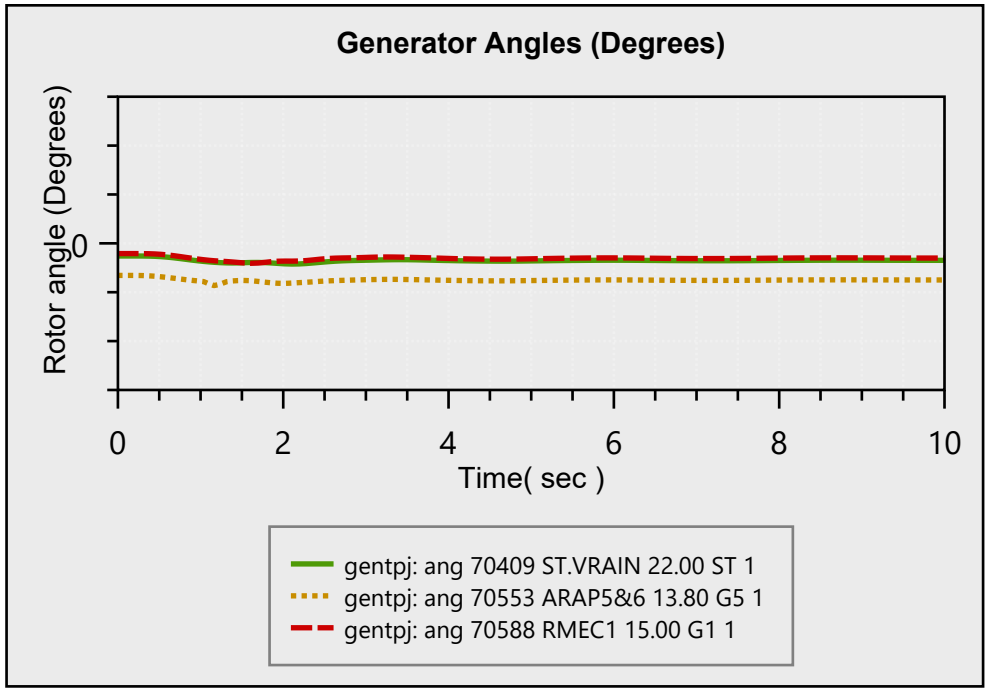

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

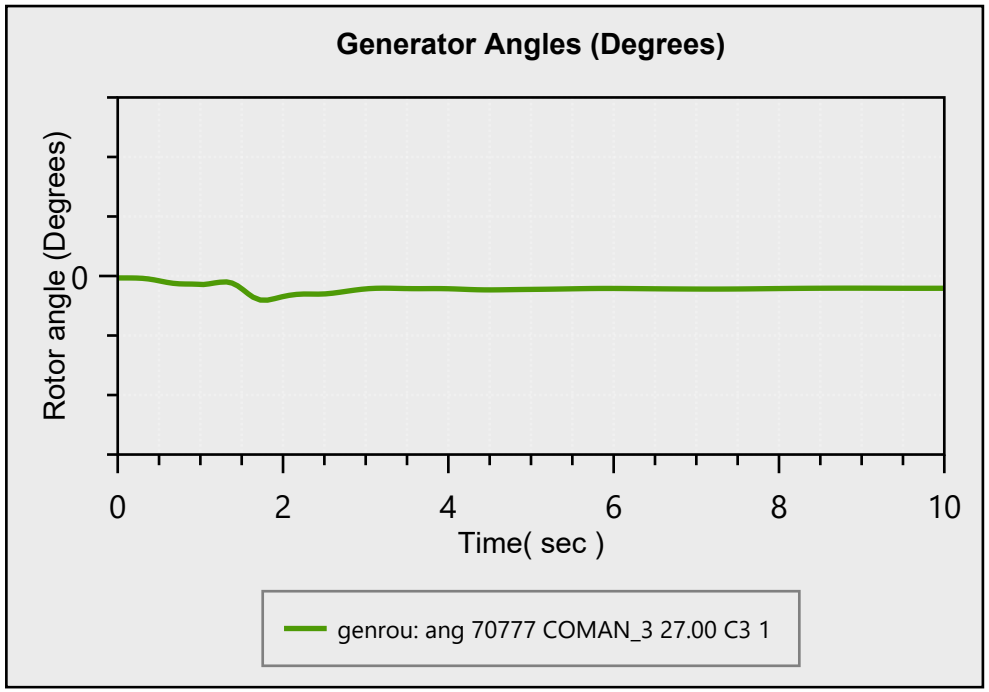

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

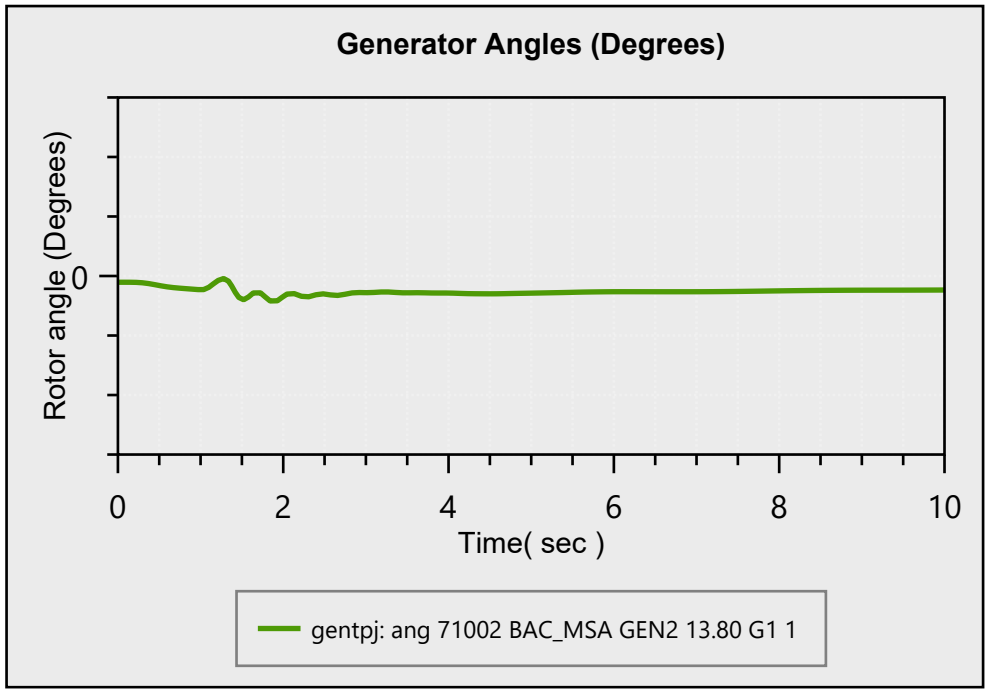

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

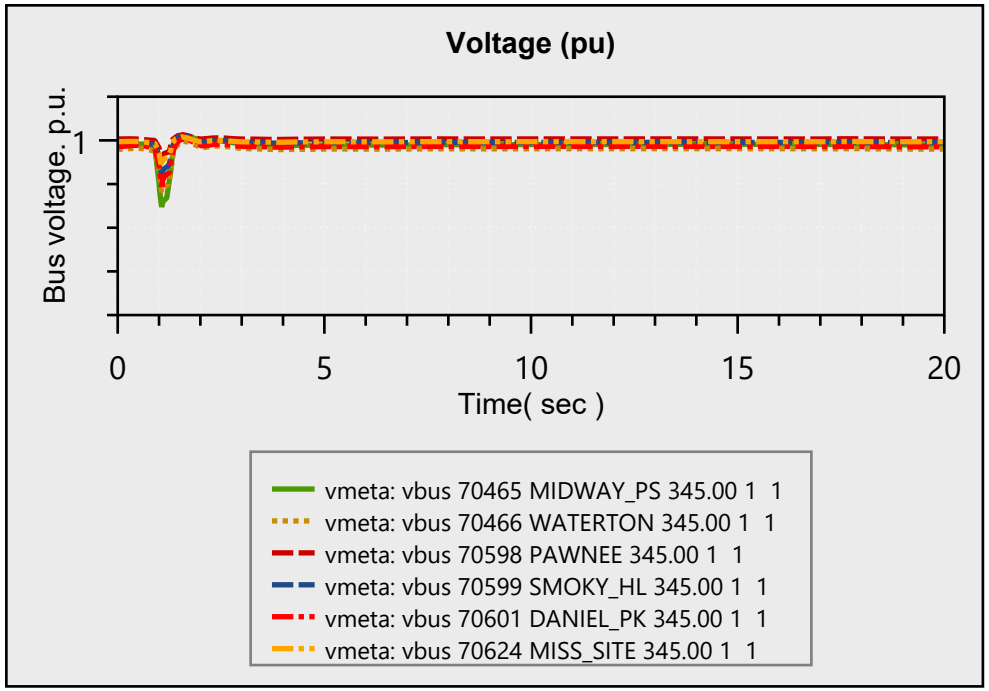

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

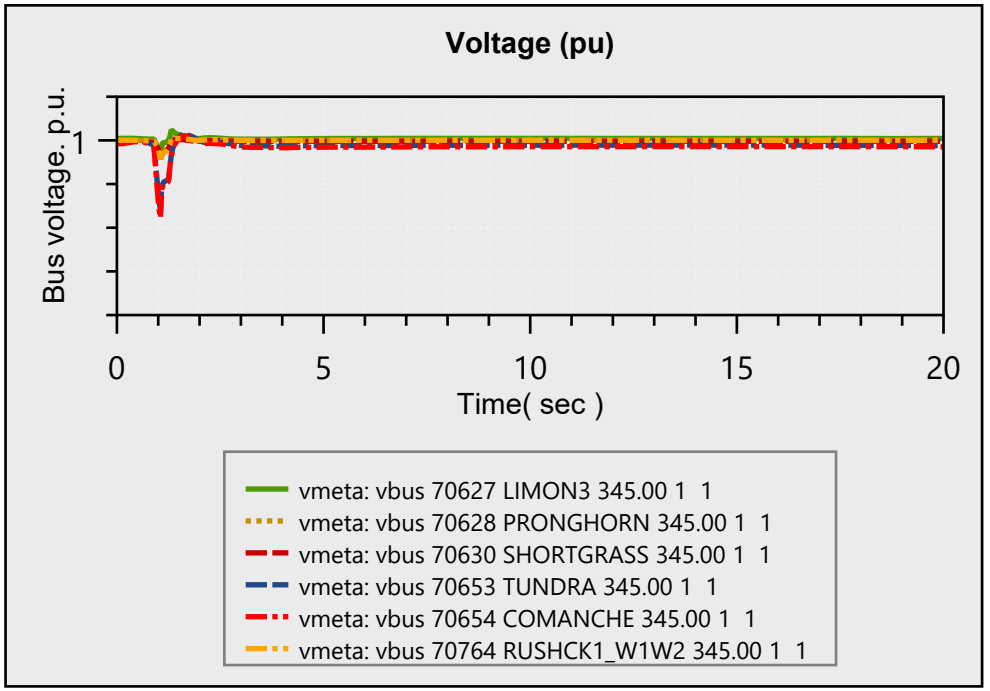

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

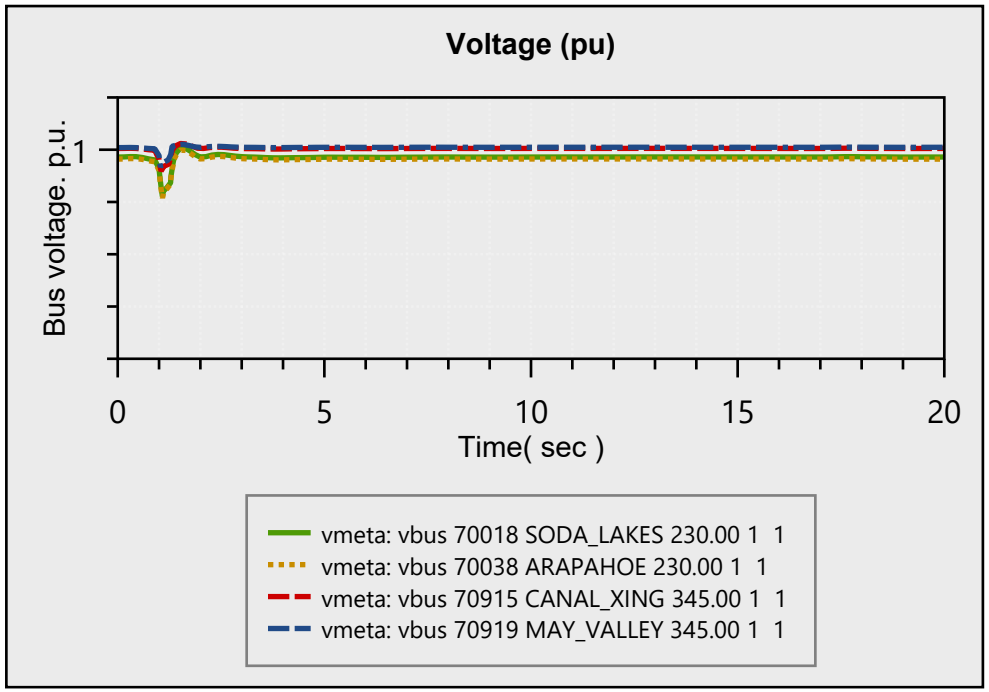

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

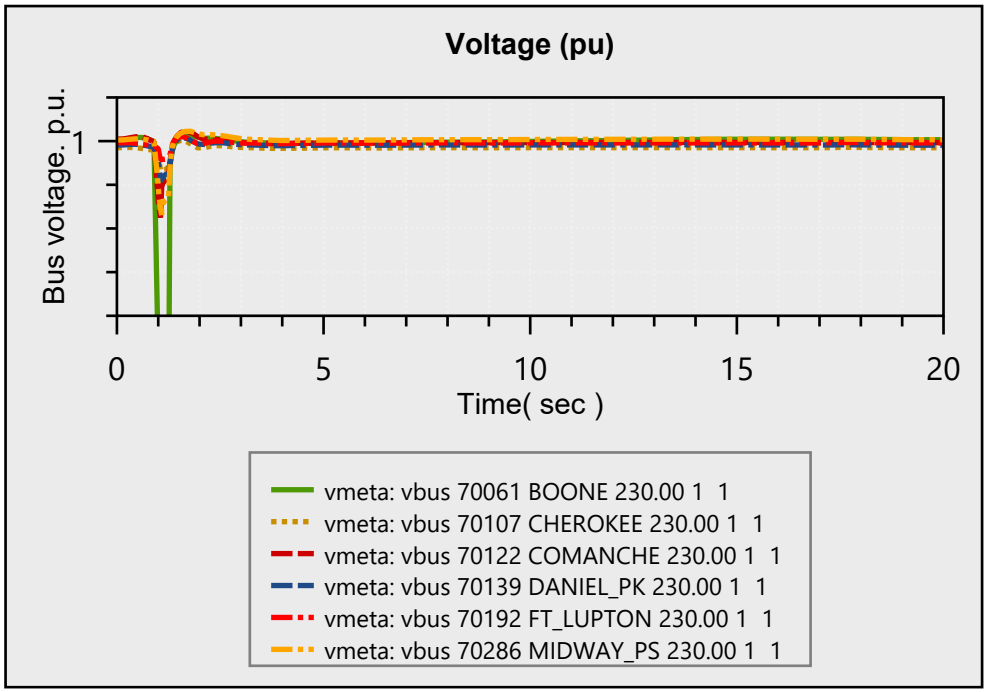

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

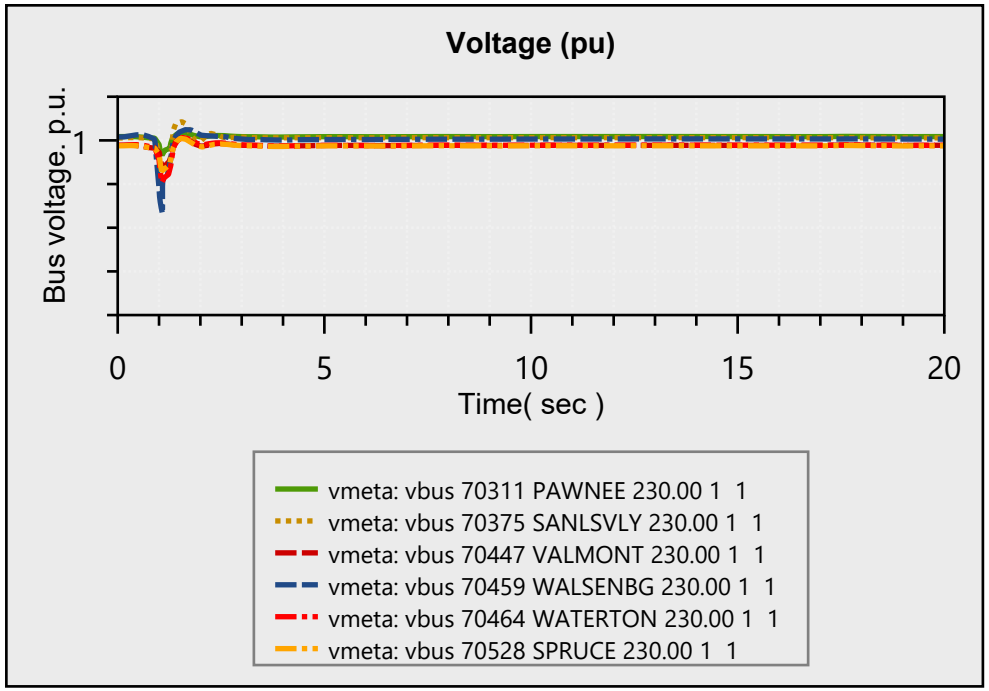

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

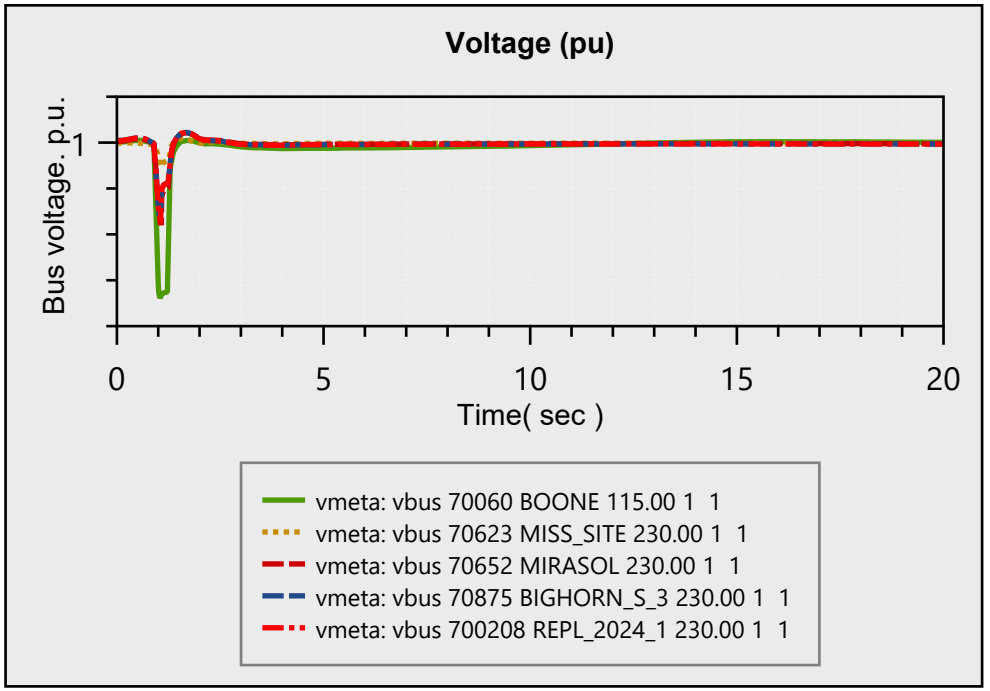

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

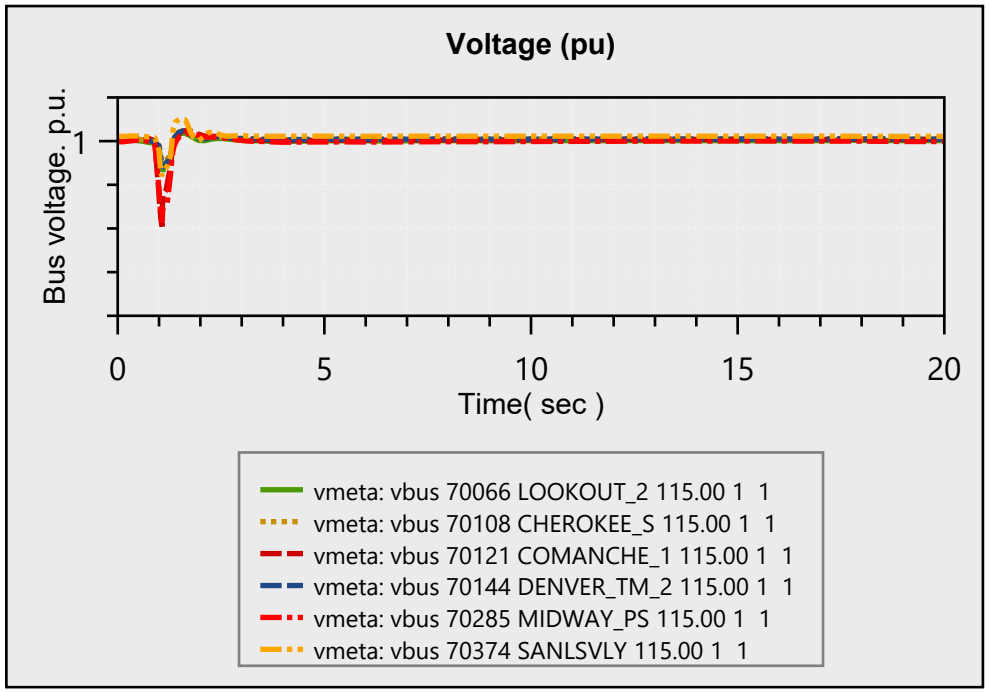

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

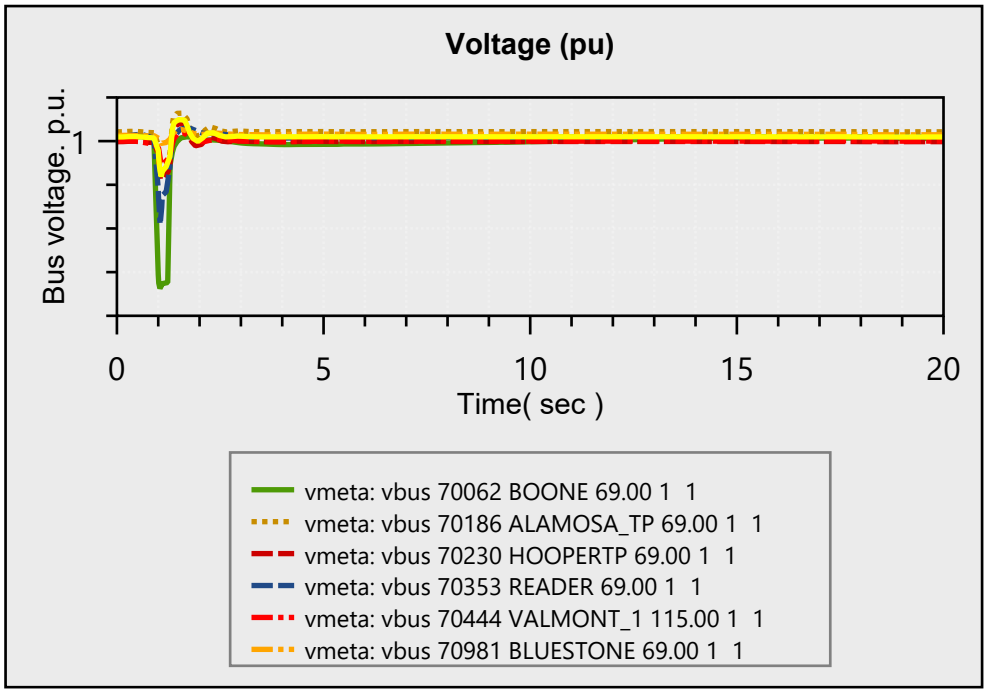

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

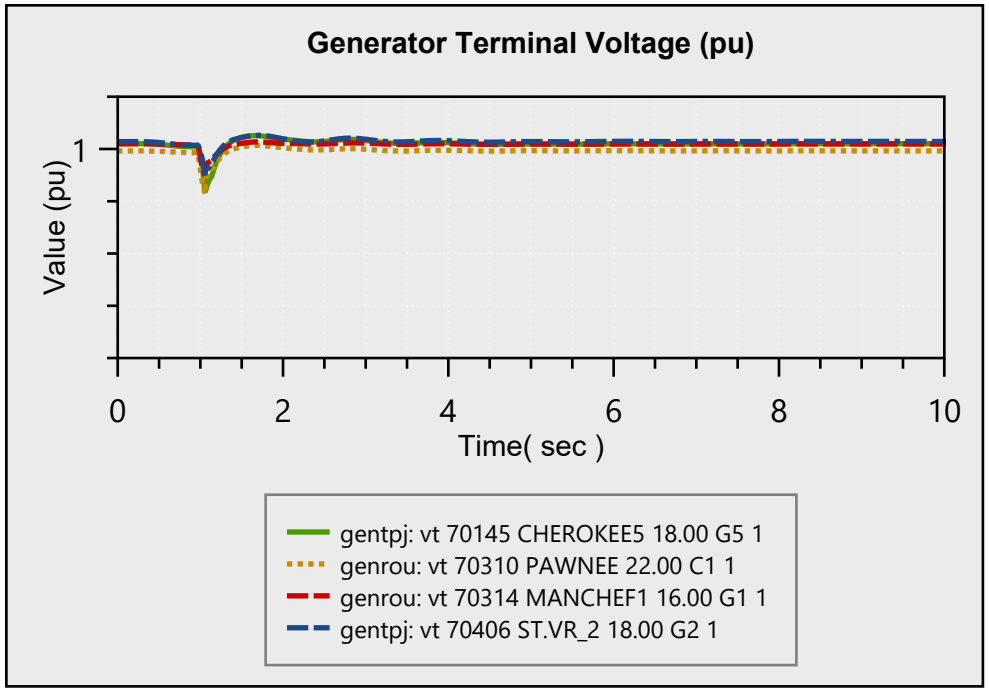

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

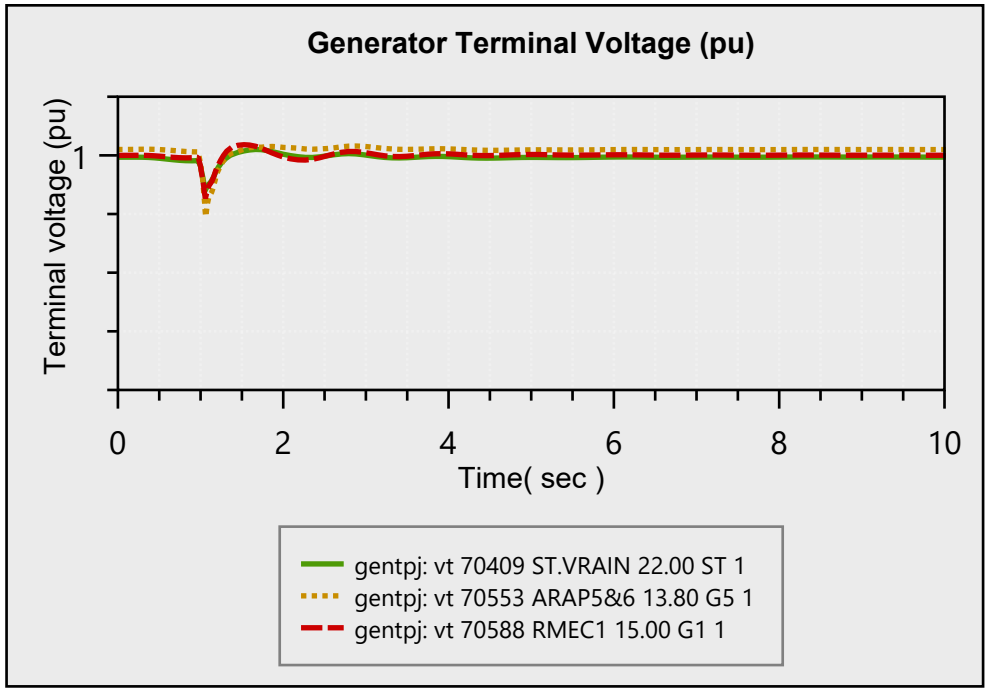

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

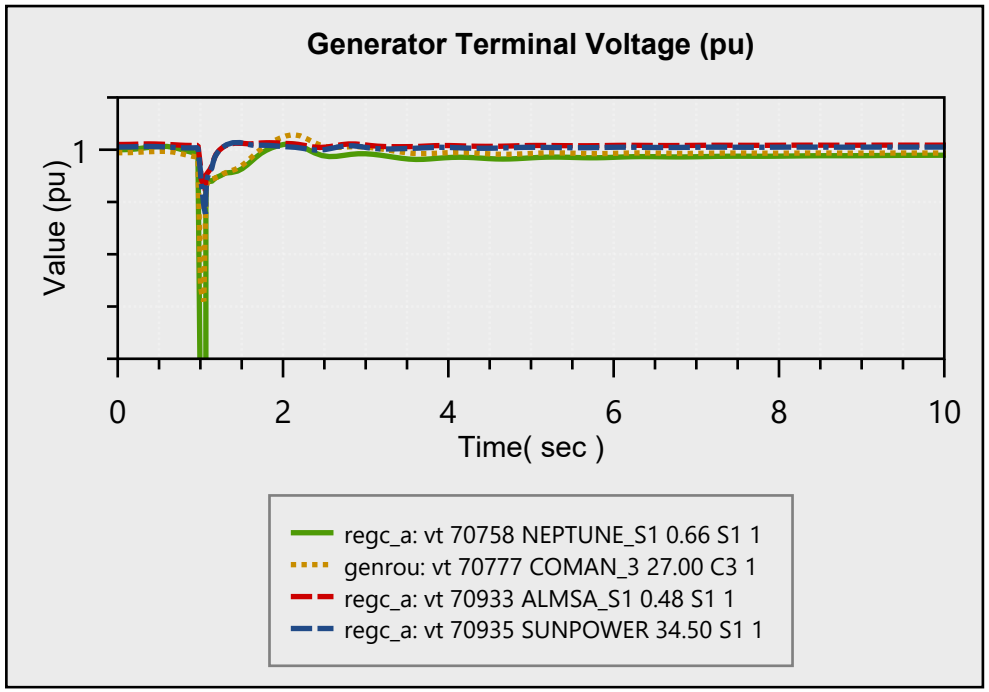

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

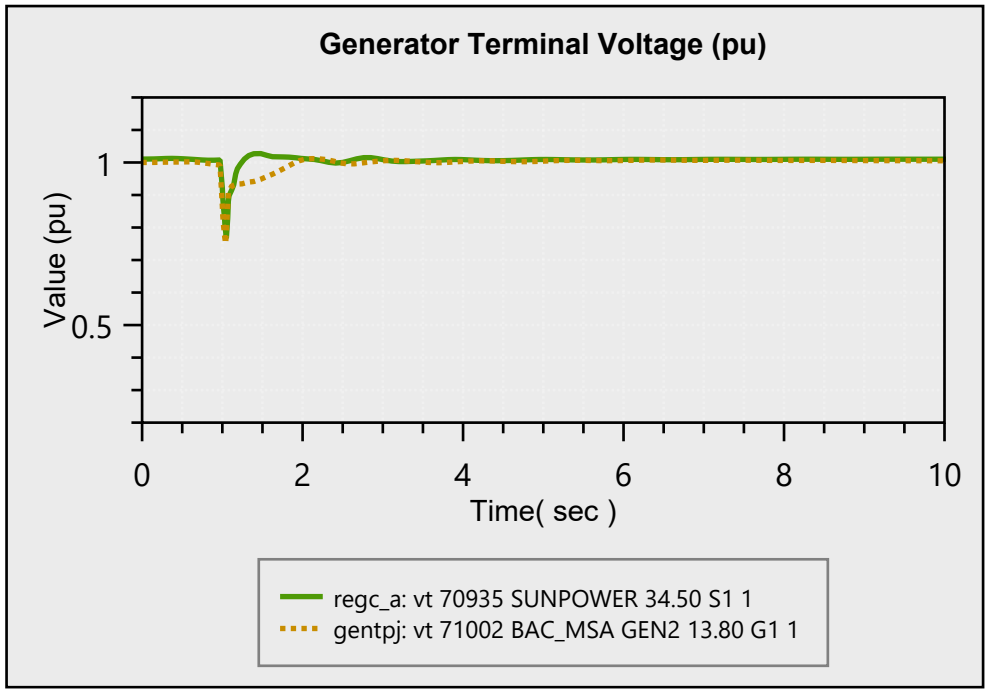

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

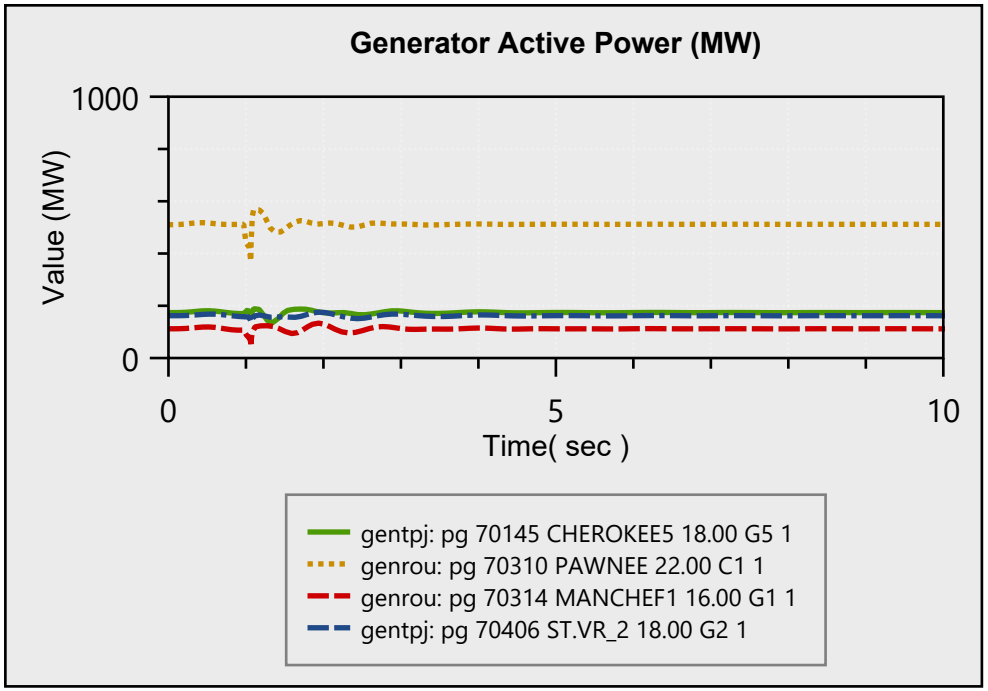

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

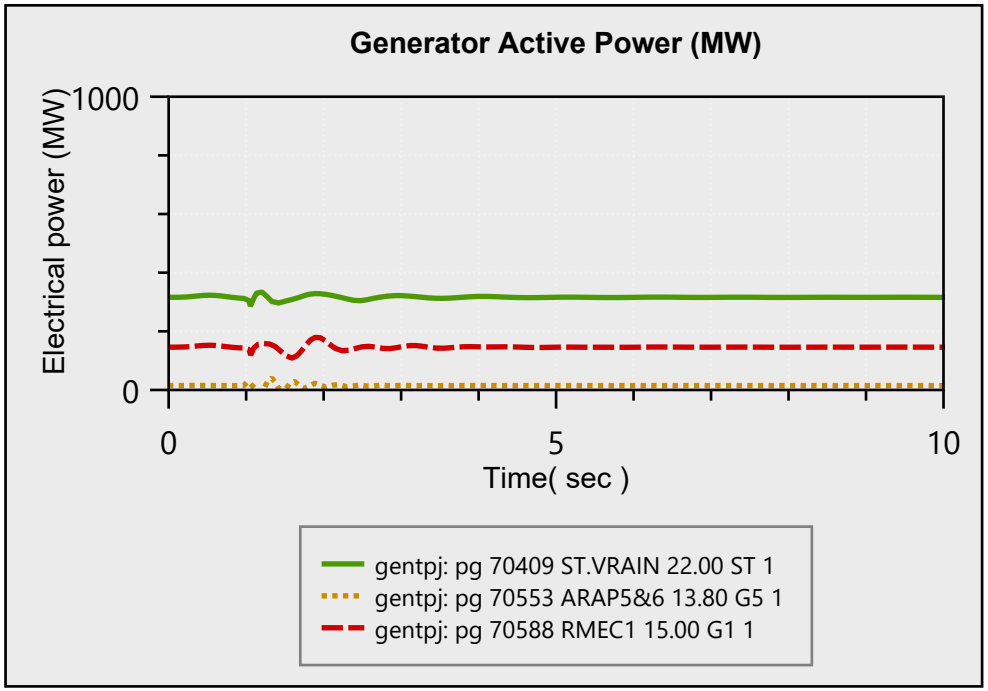

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

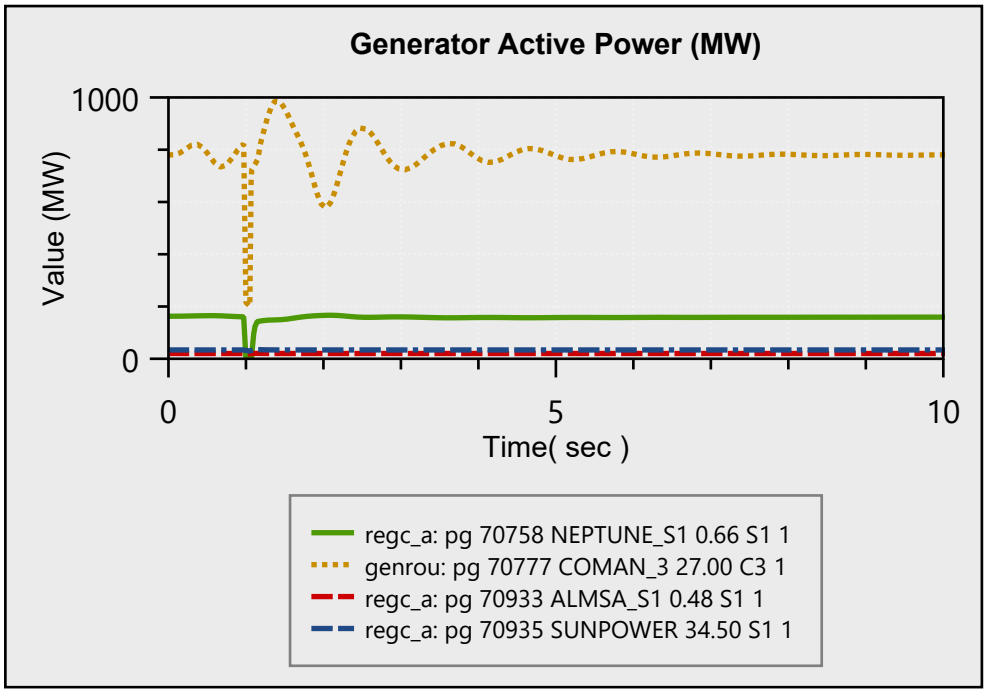

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

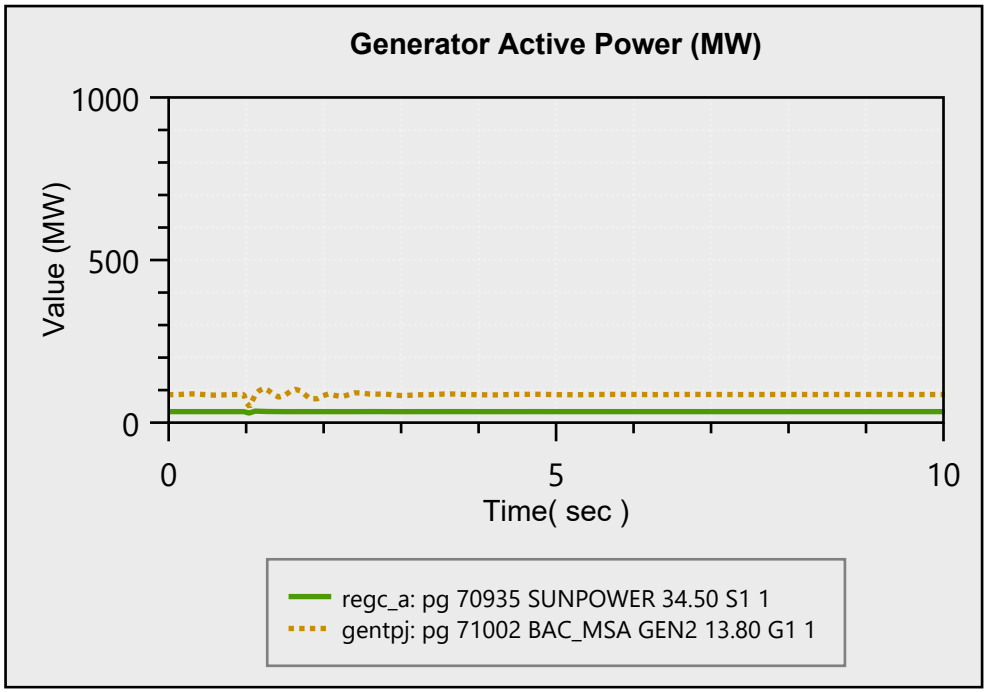

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

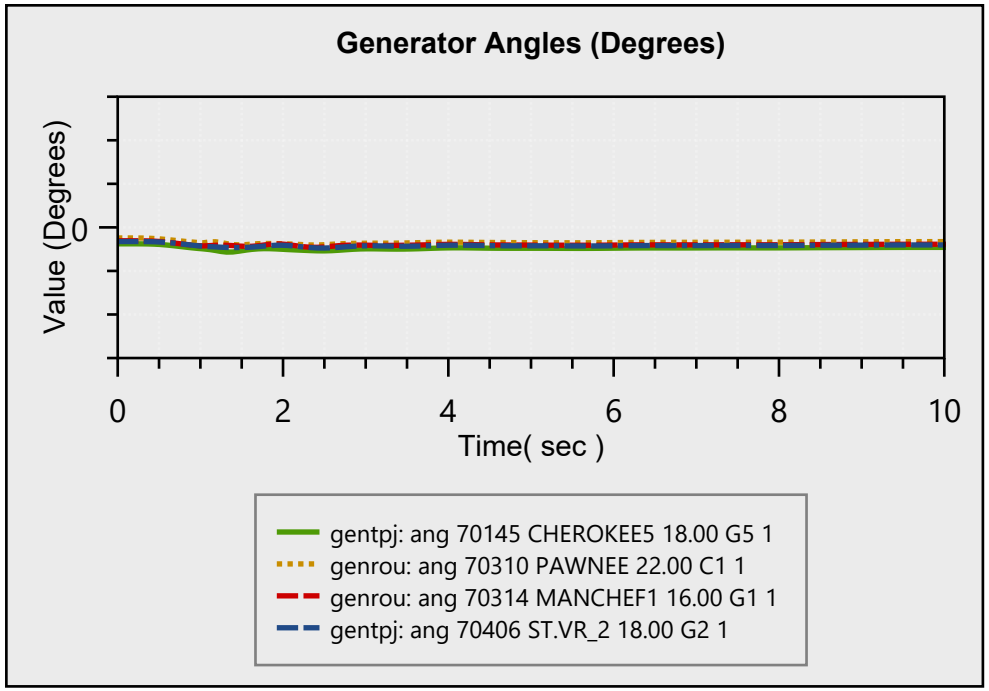

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

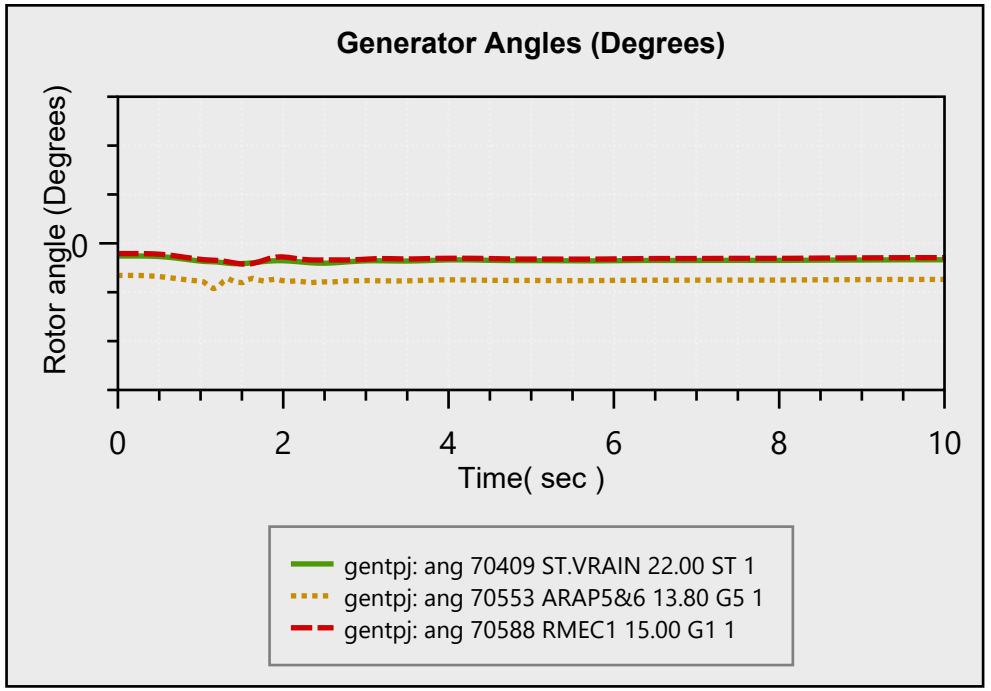

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

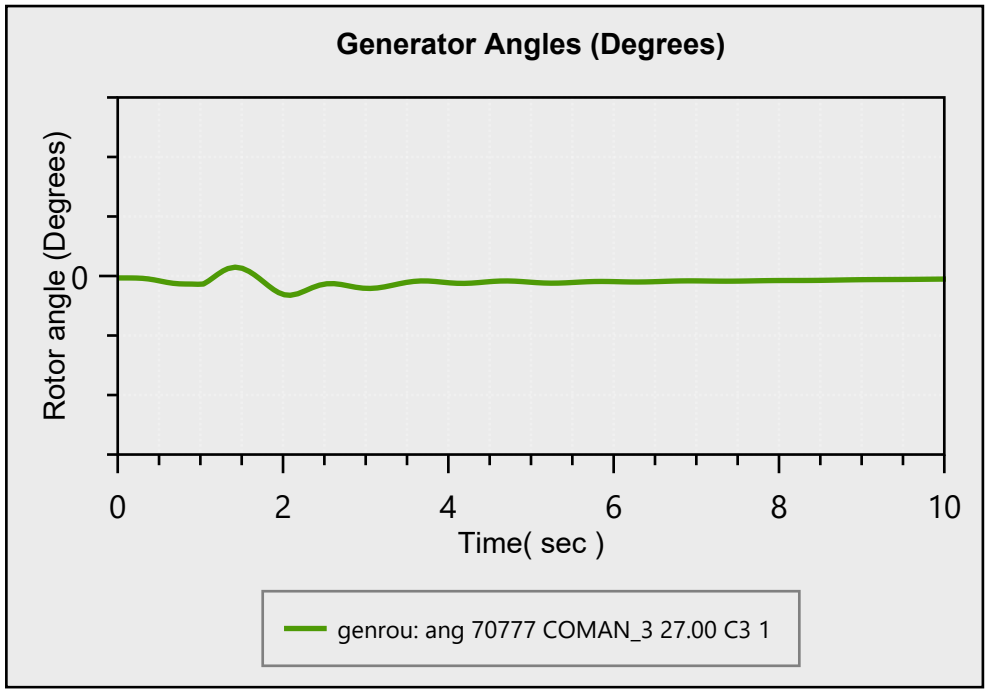

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

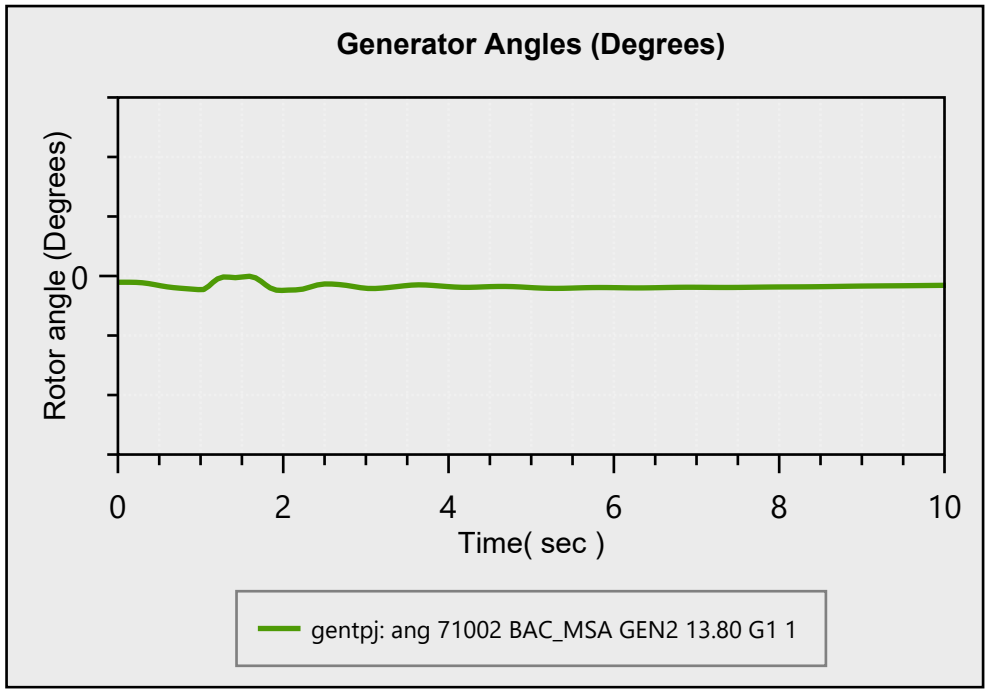

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

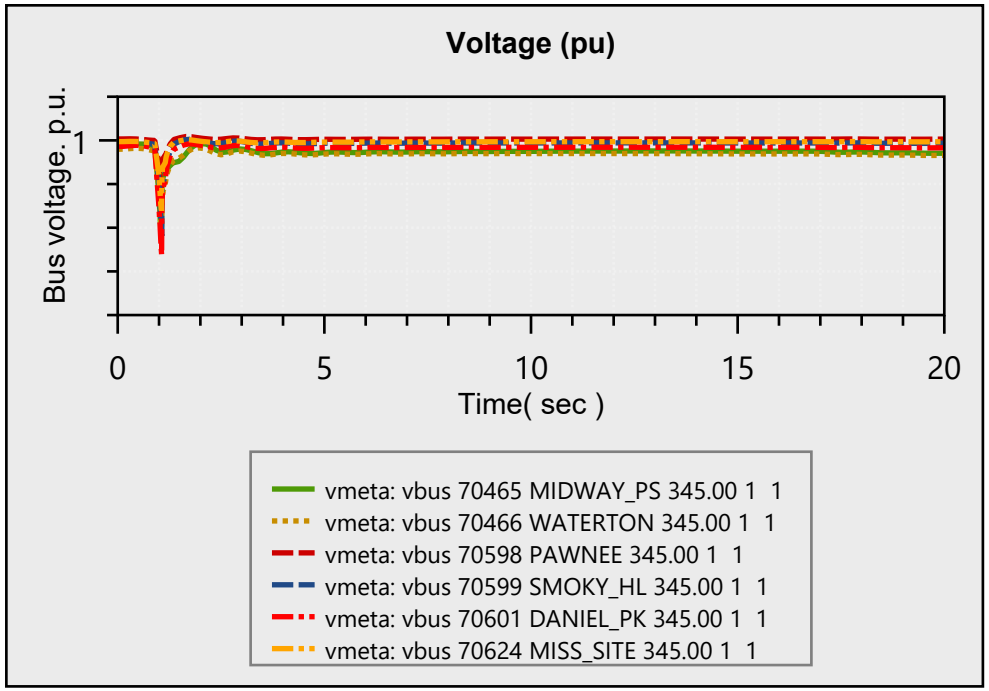

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

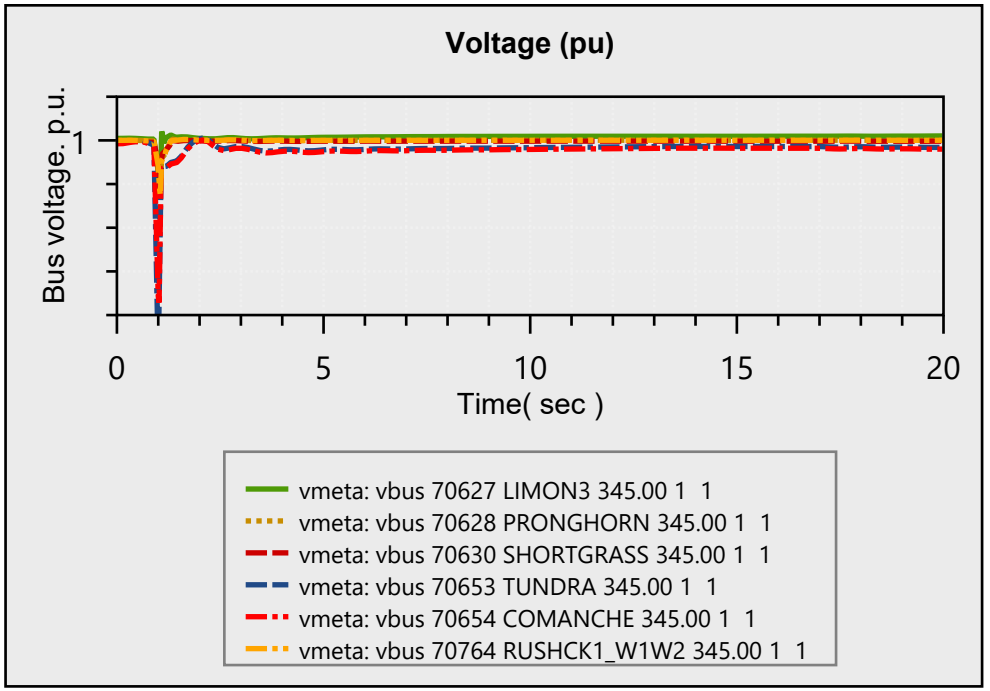

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

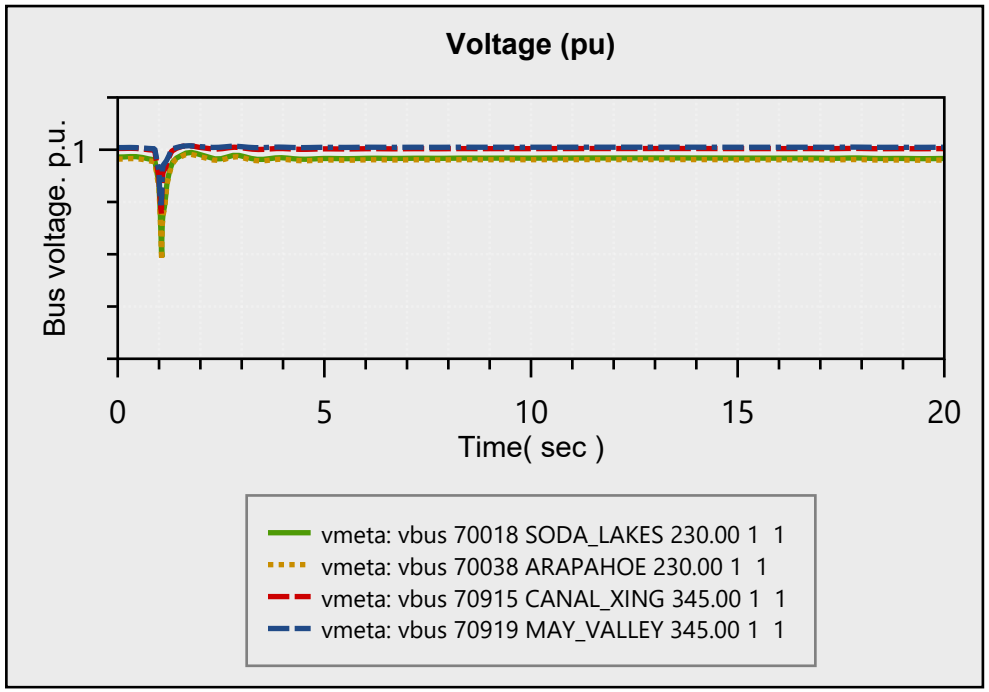

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

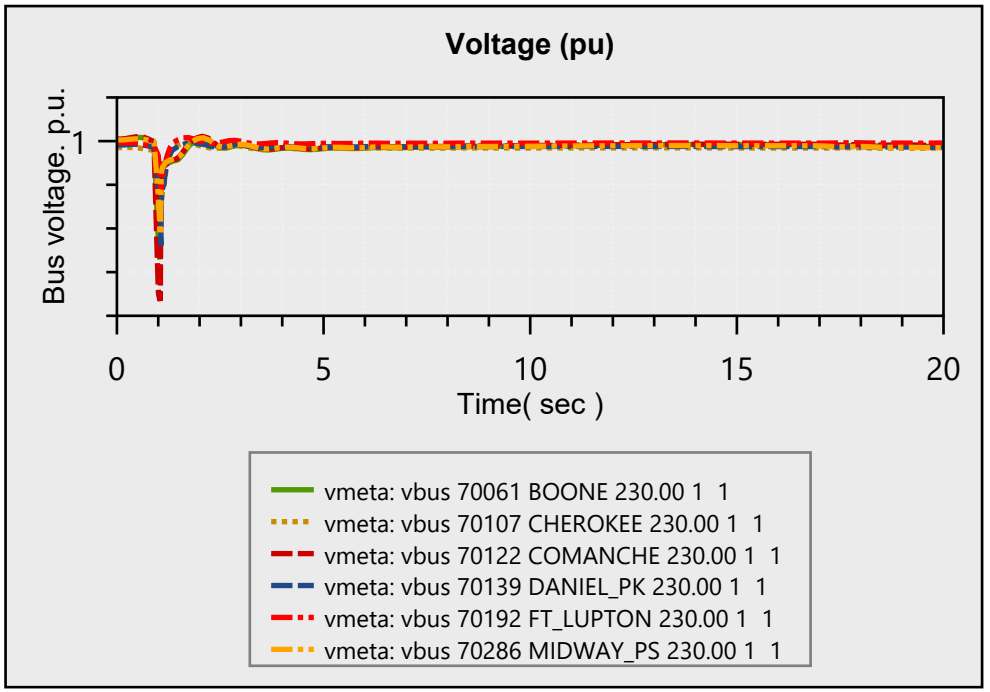

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

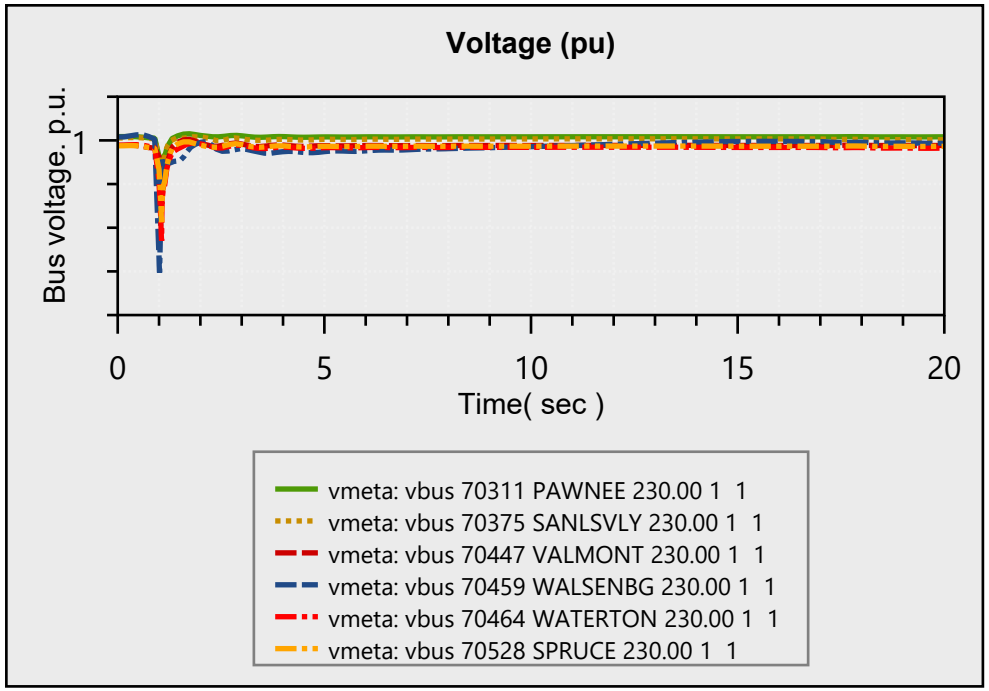

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

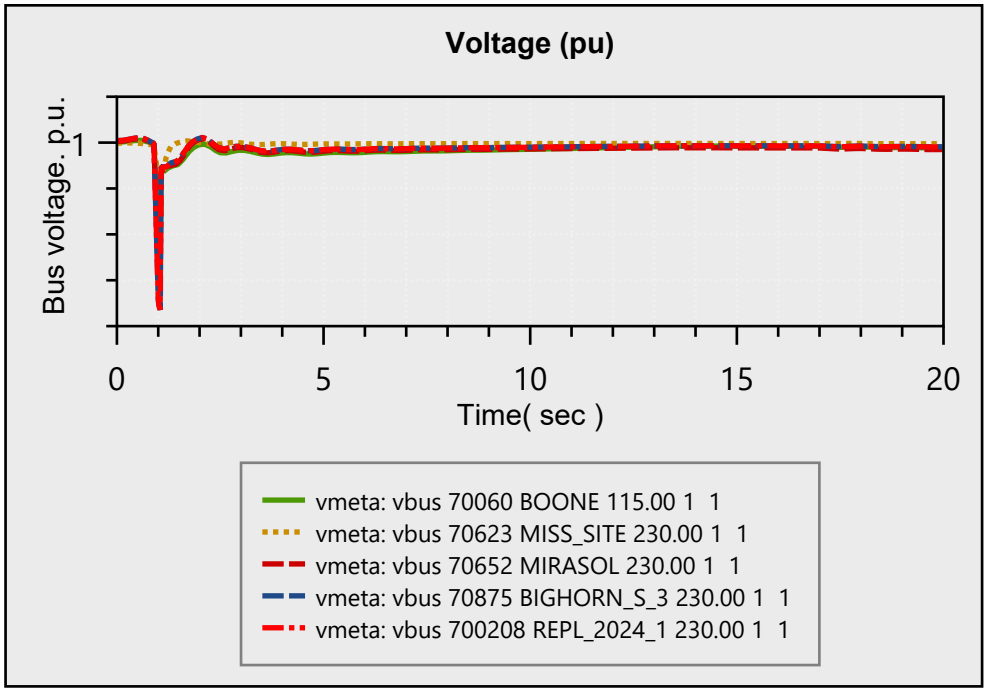

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

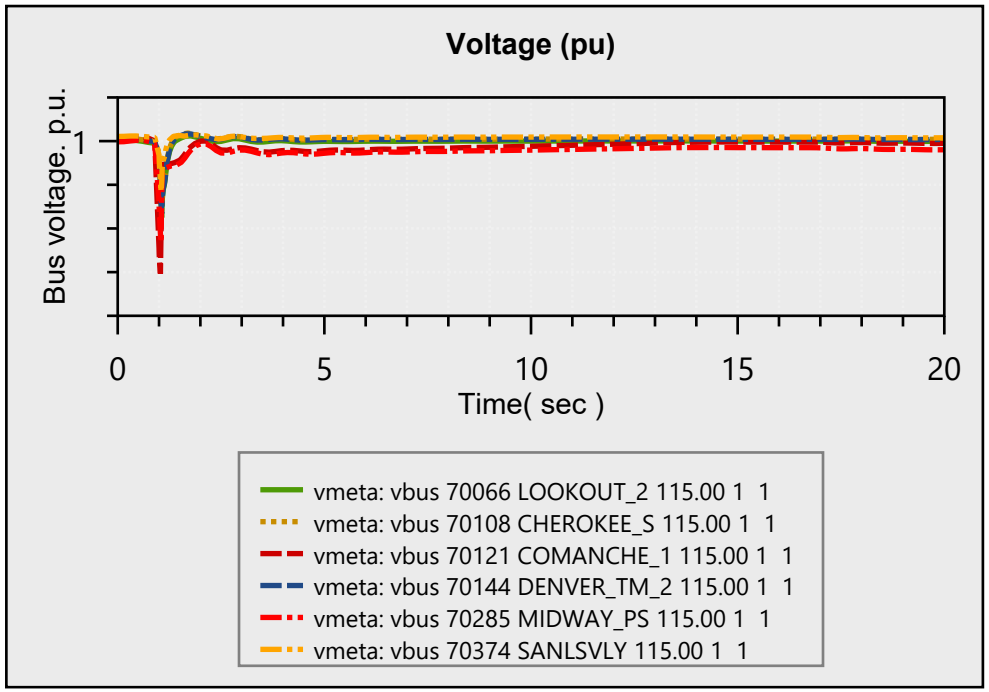

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1

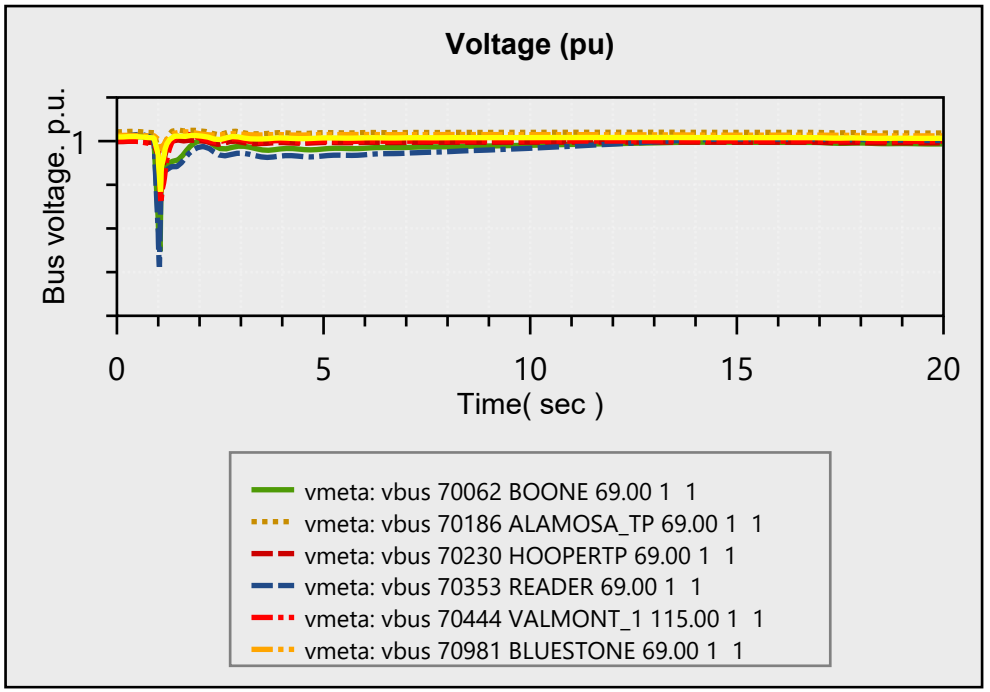

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

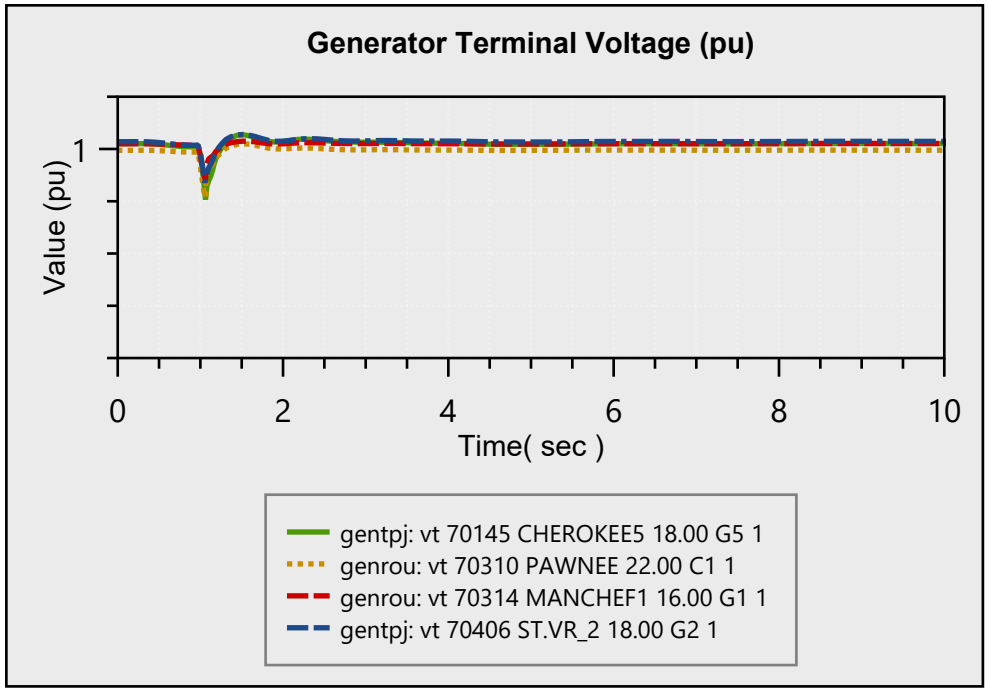

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

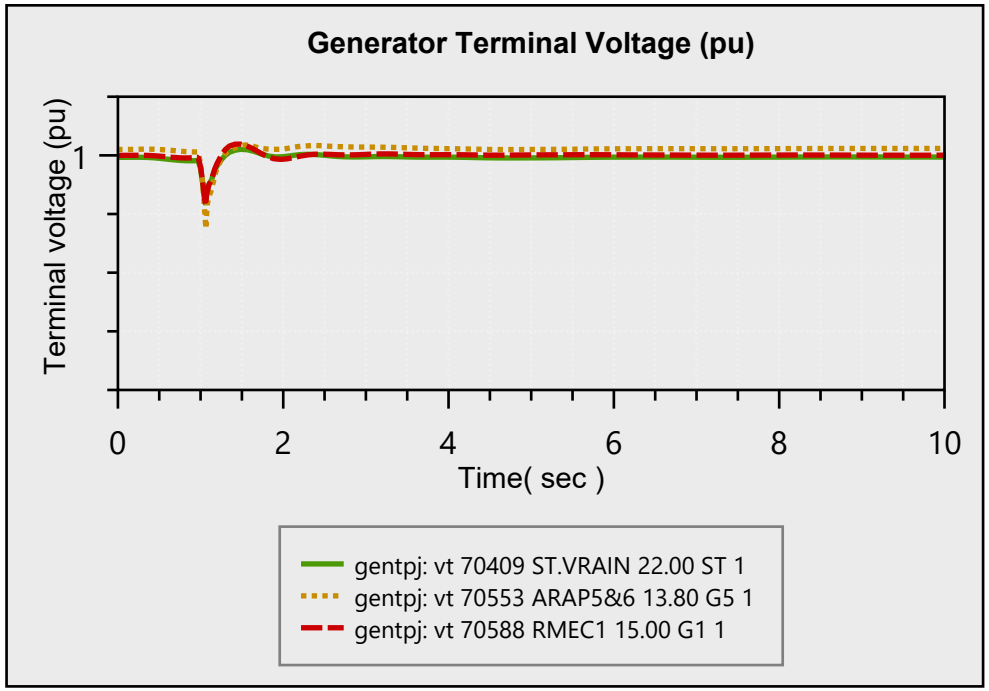

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

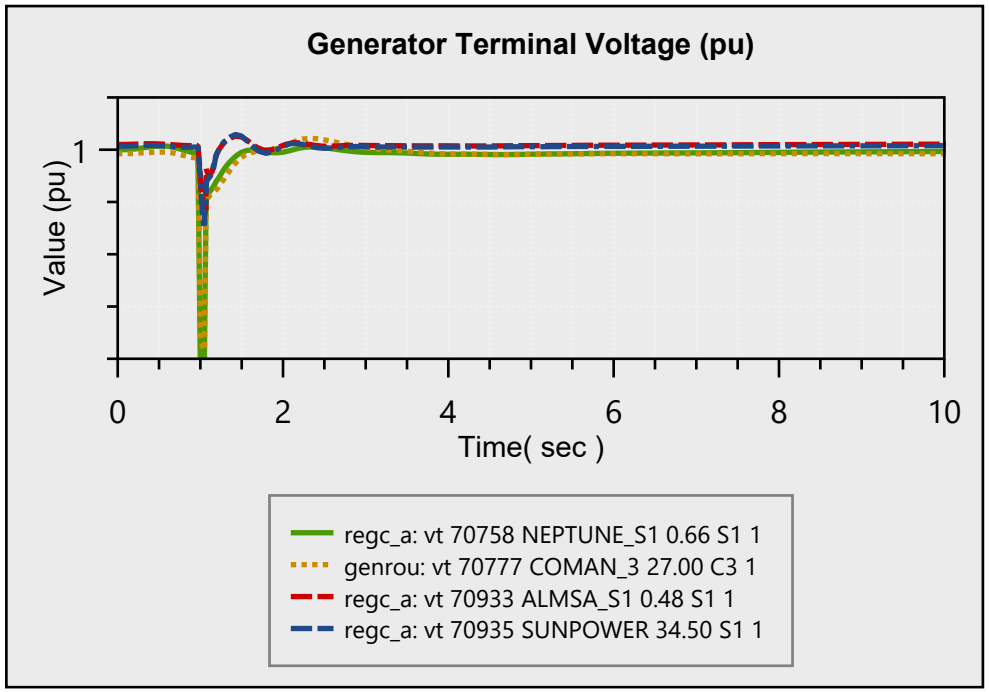

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

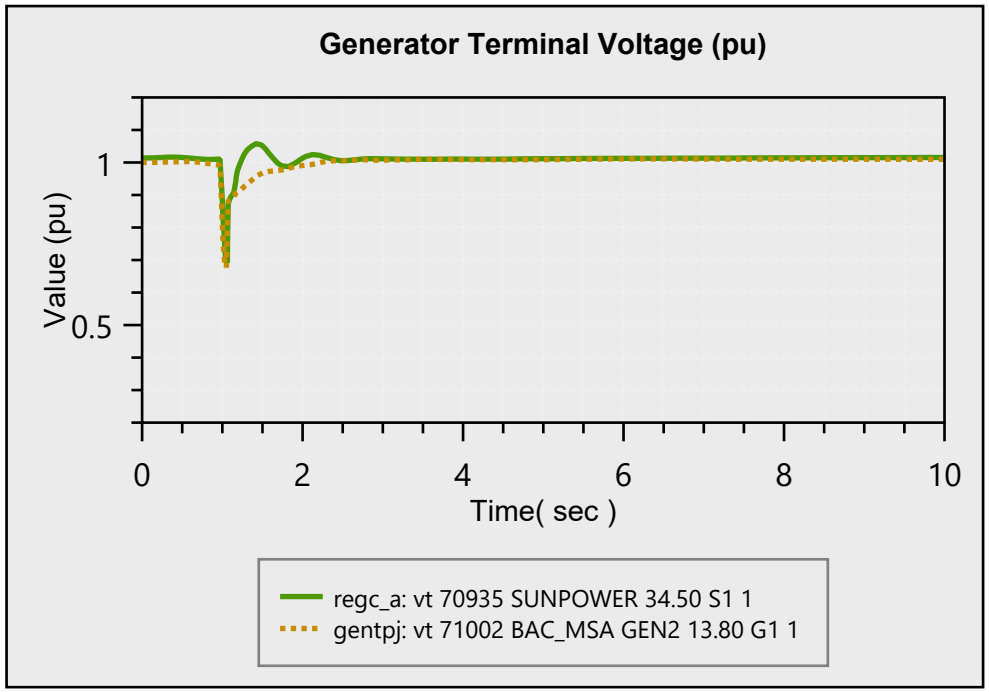

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

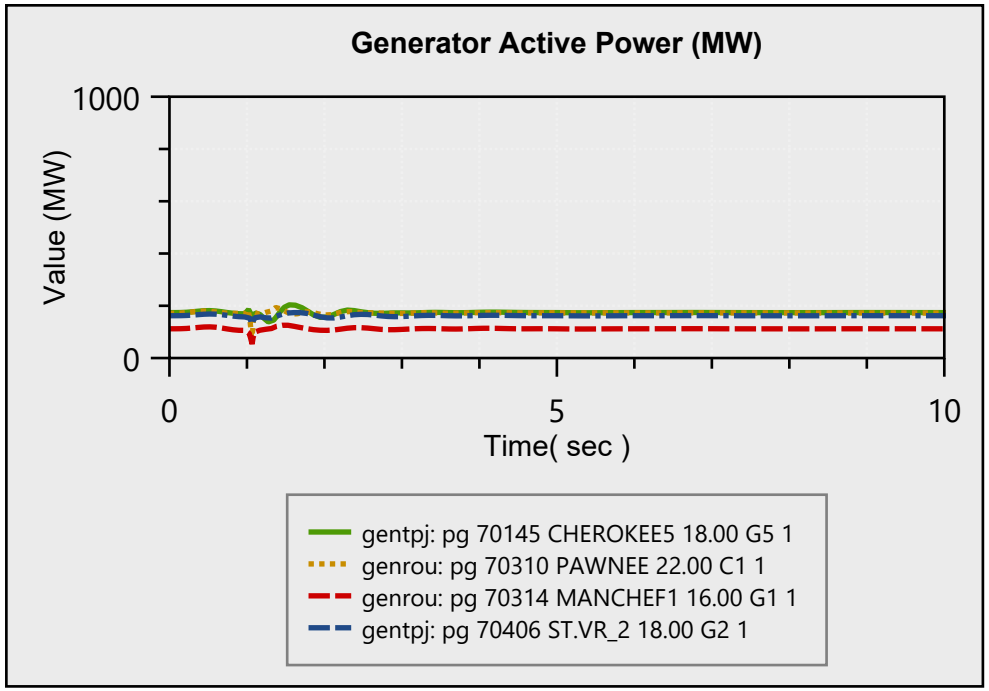

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

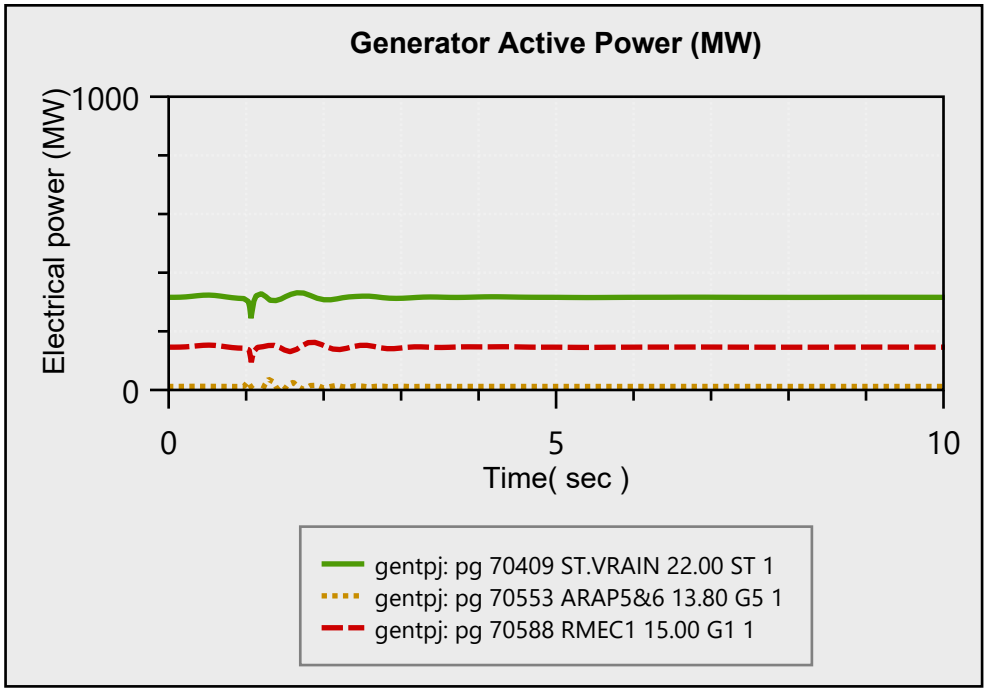

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

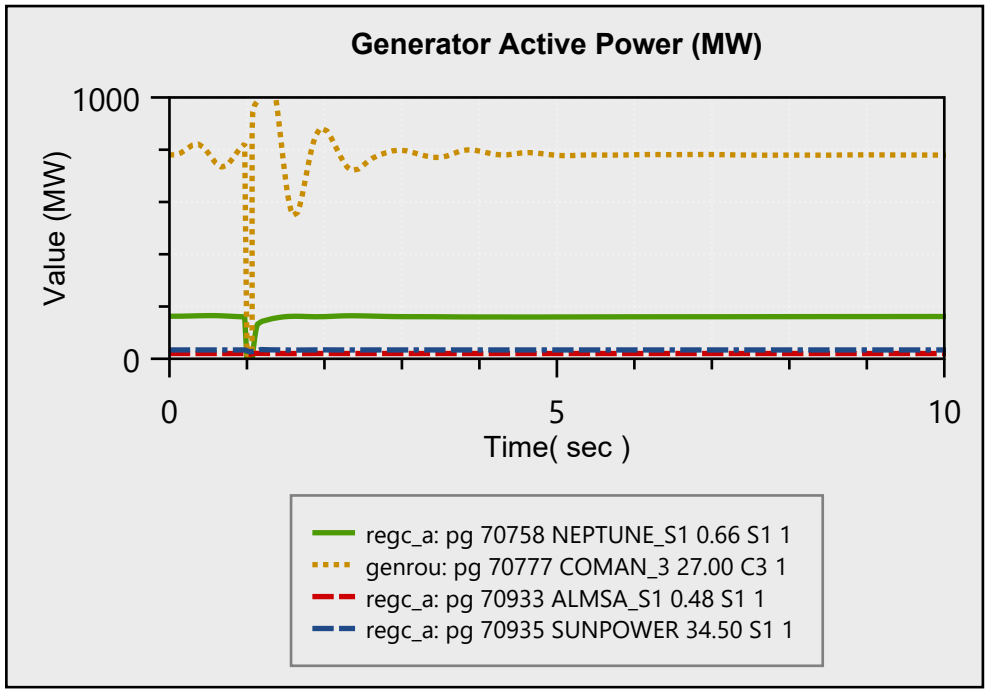

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

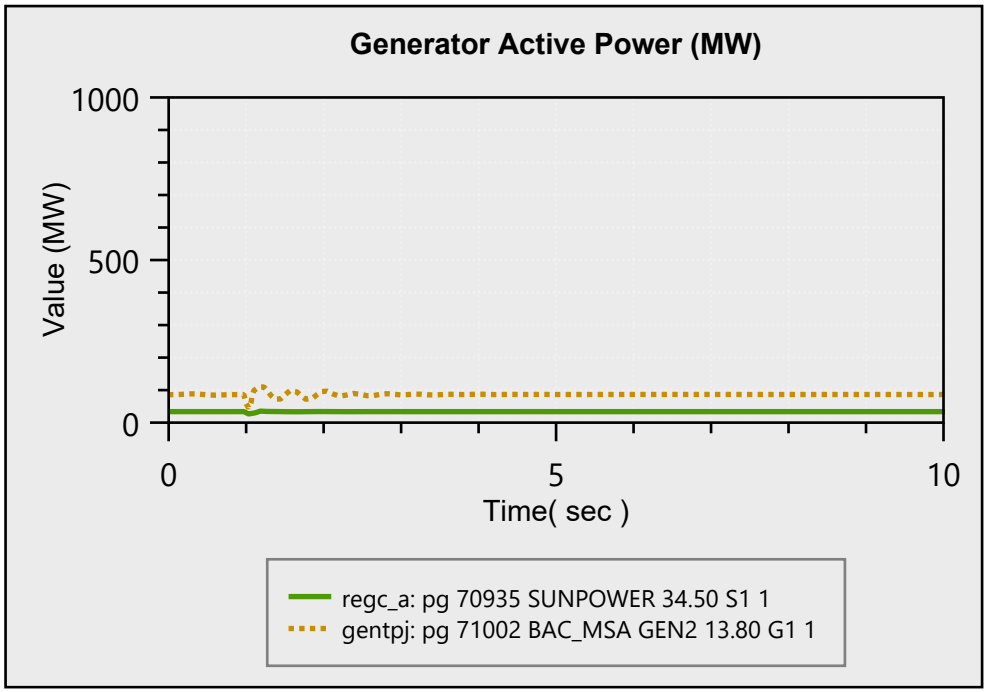

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

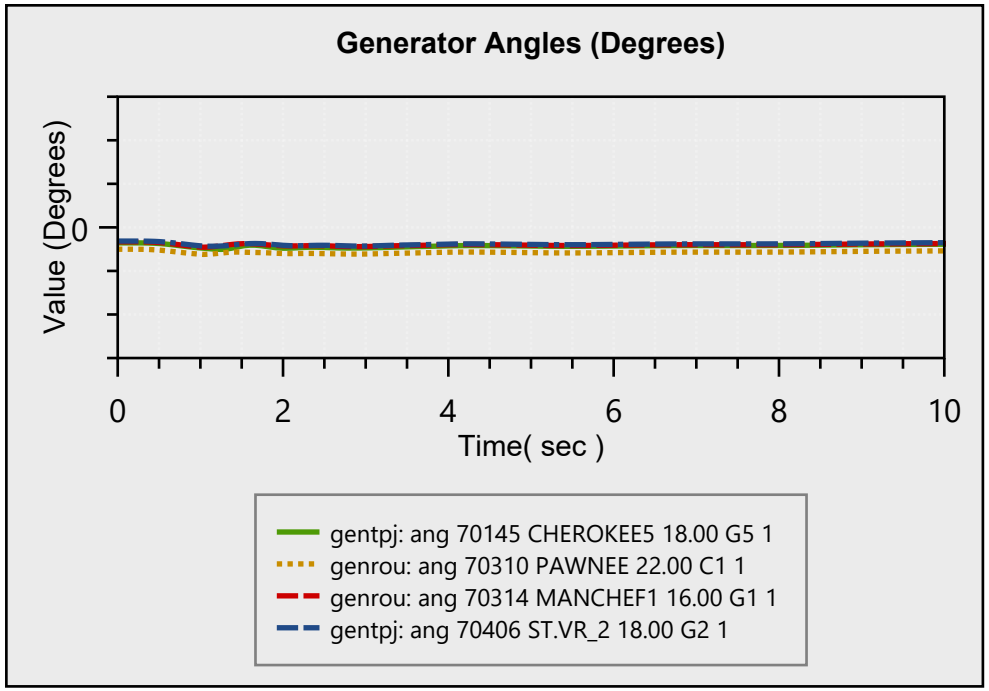

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

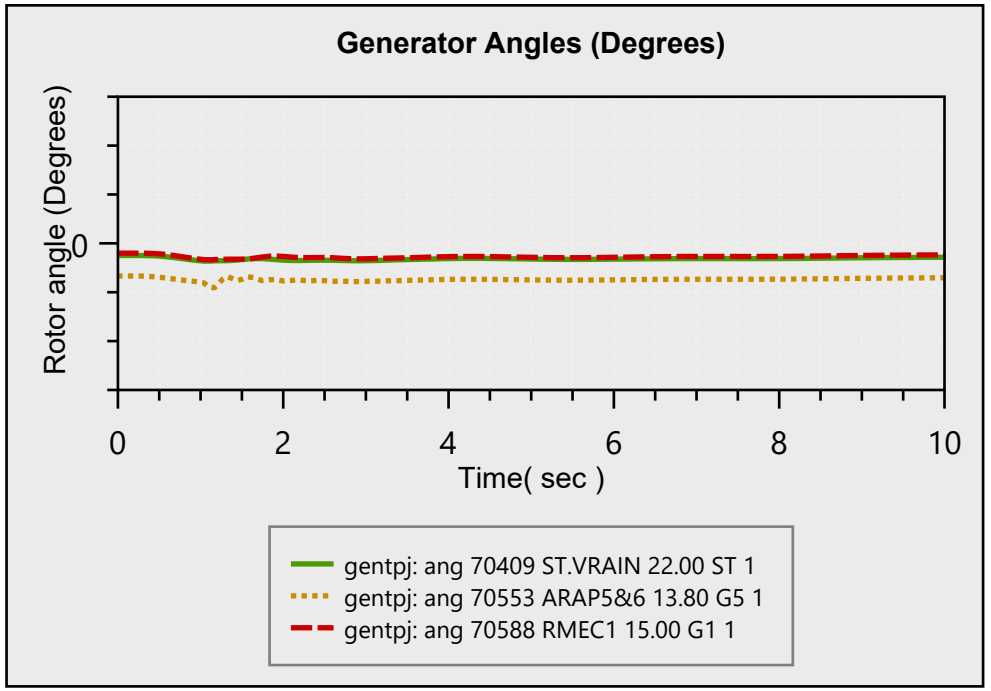

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

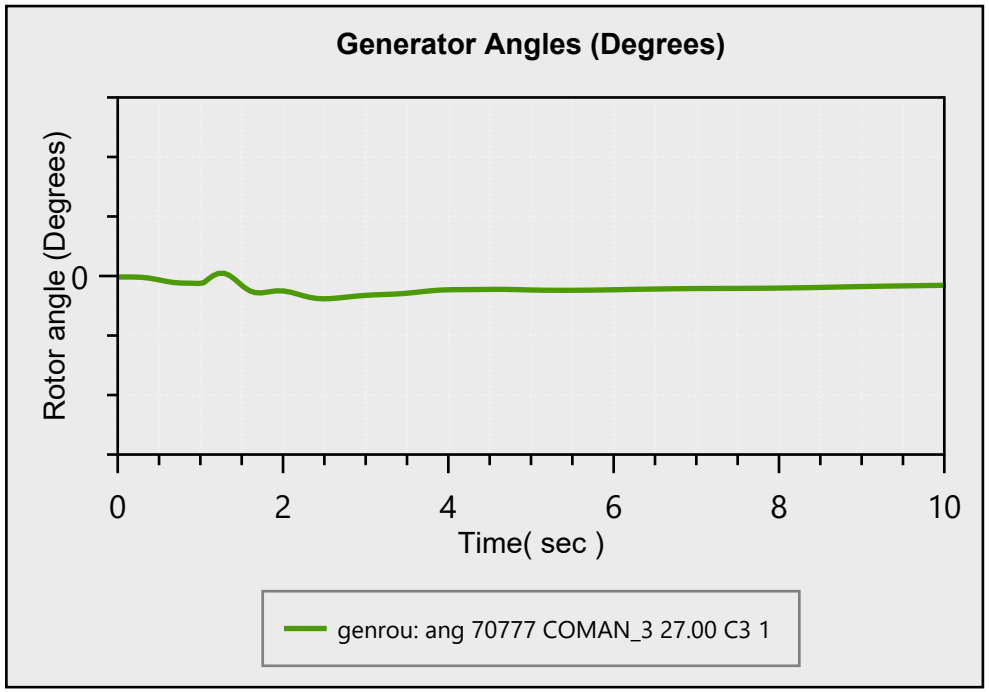

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

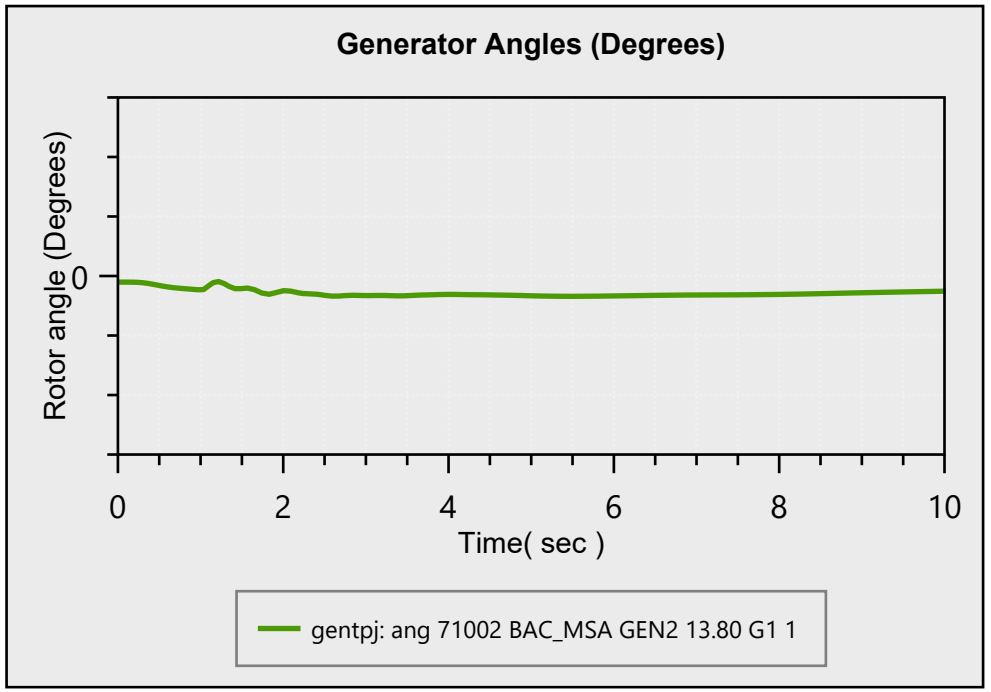

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

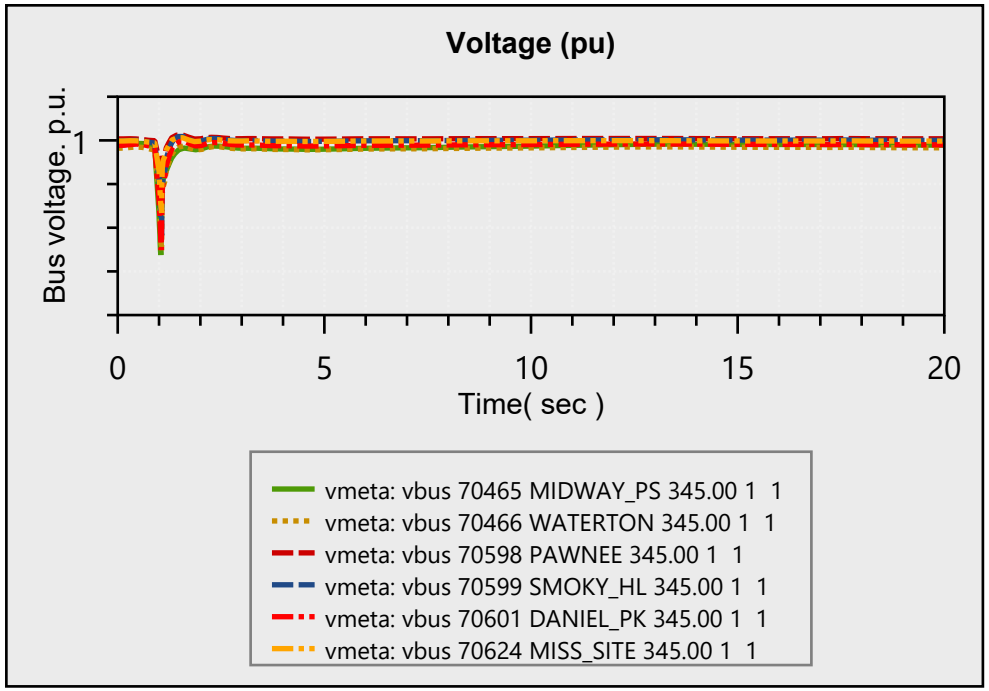

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

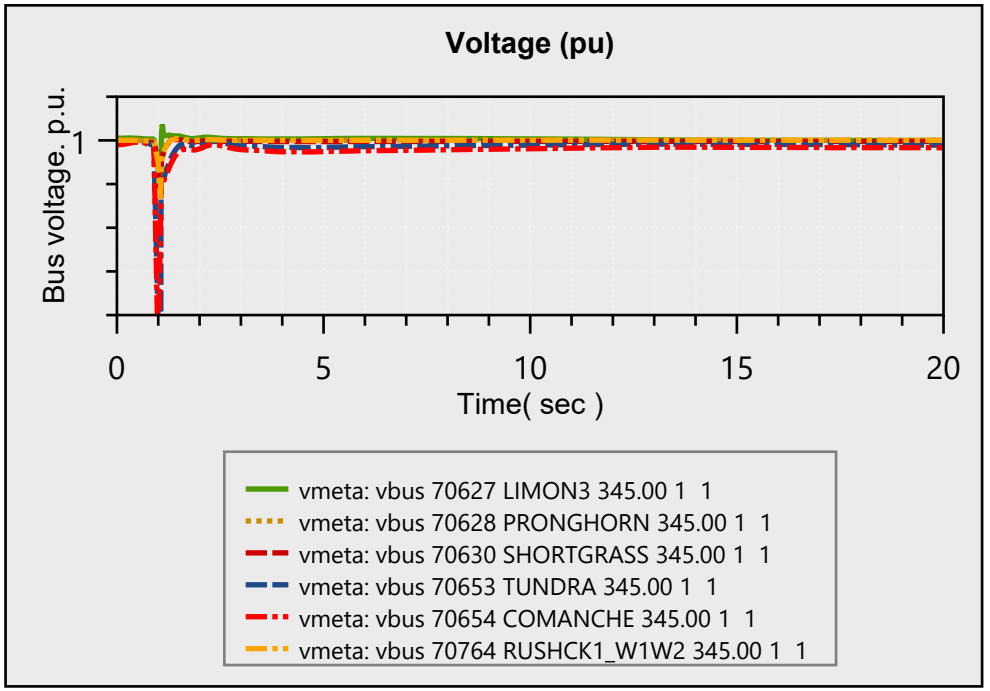

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

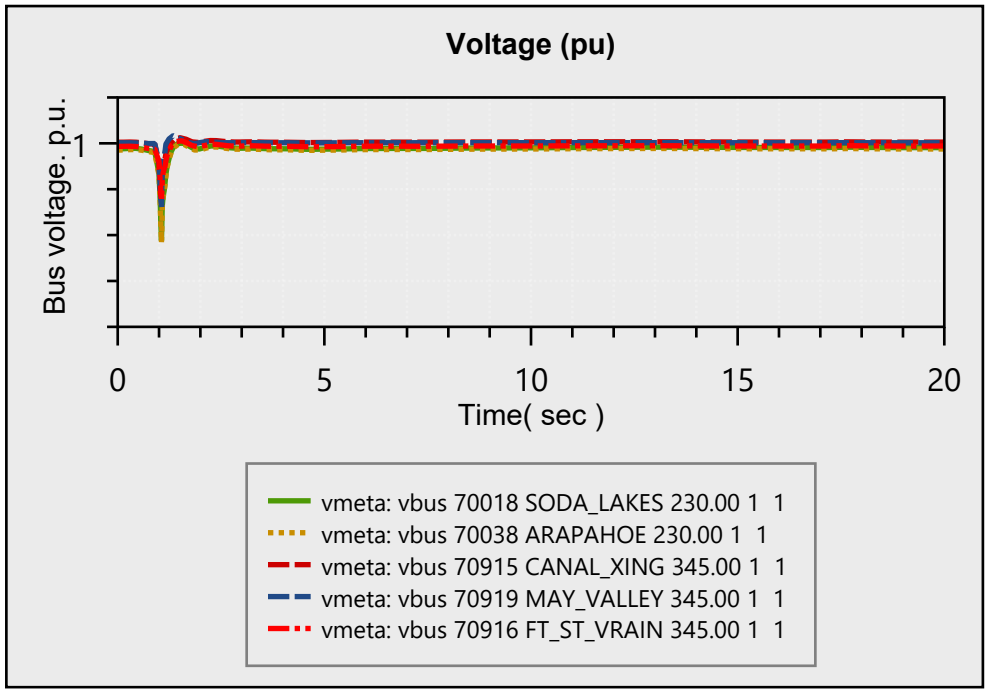

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

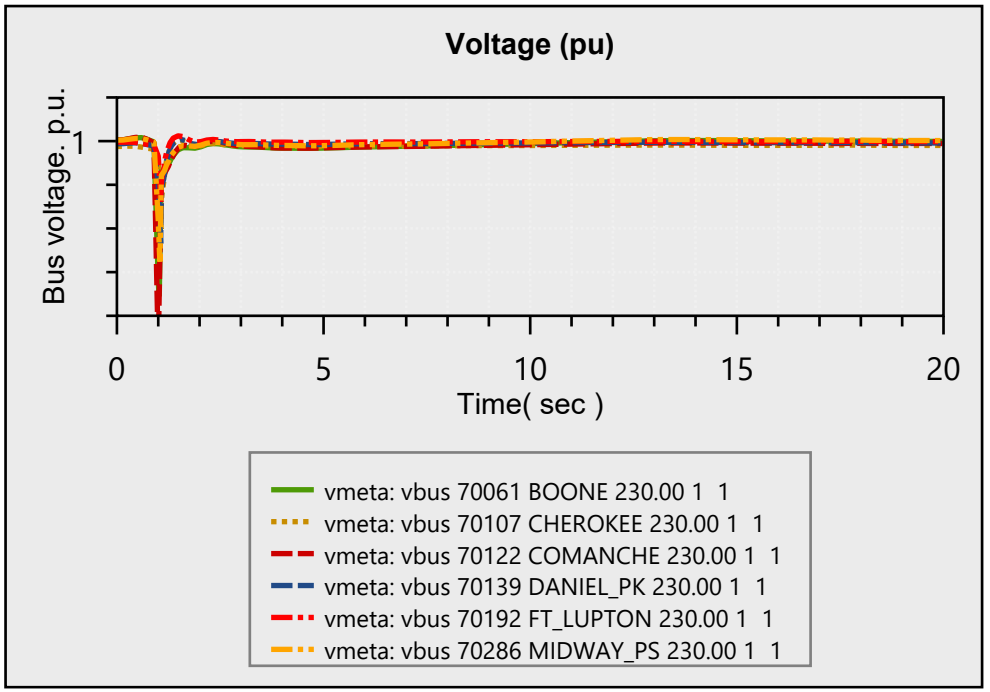

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

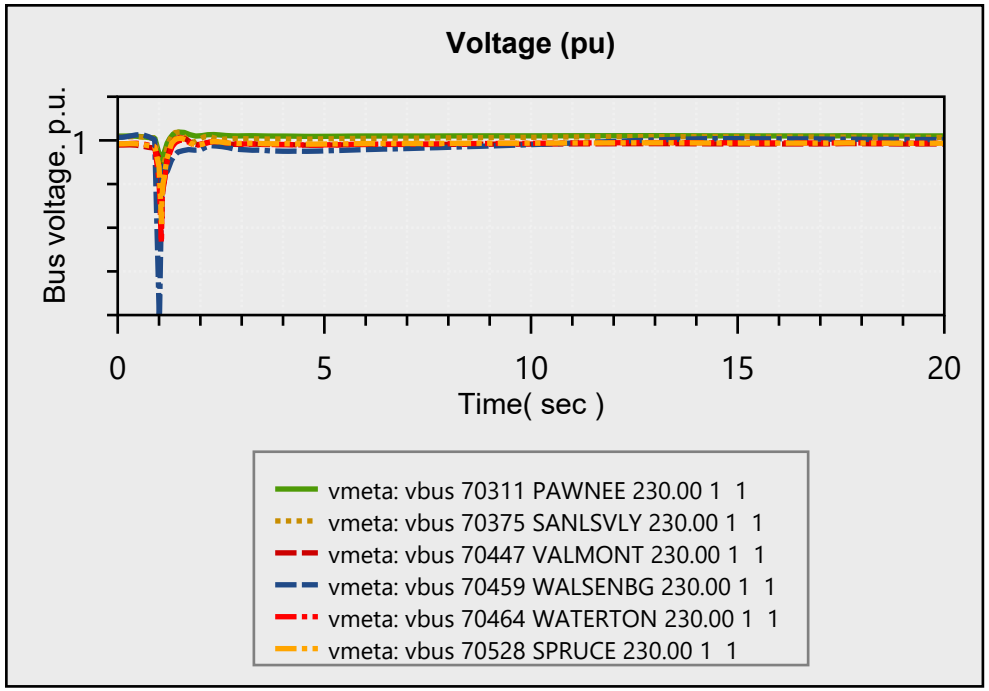

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

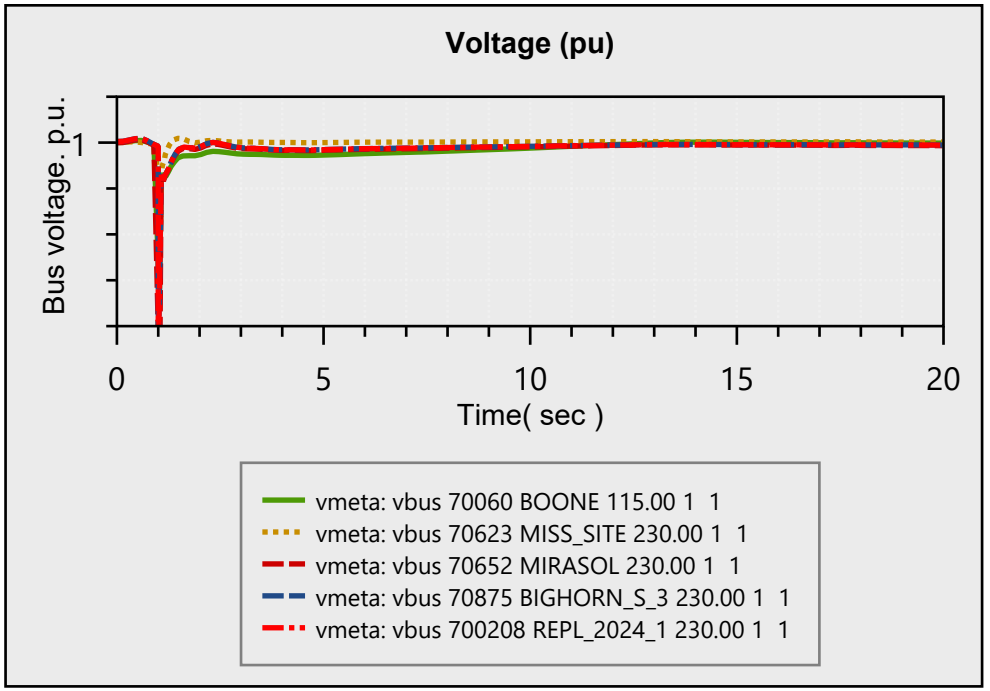

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

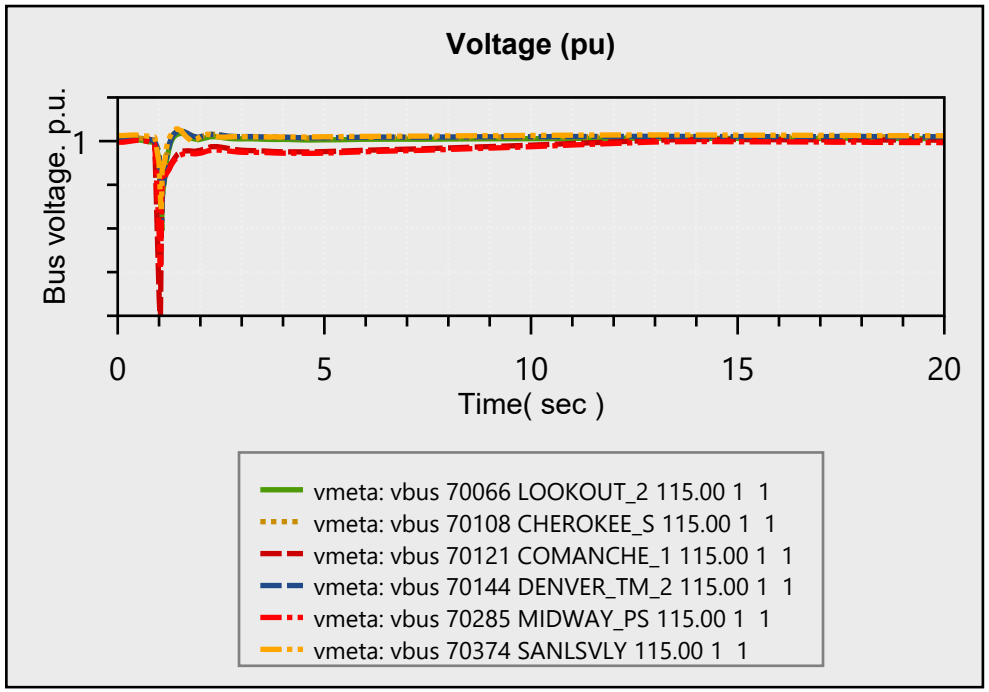

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

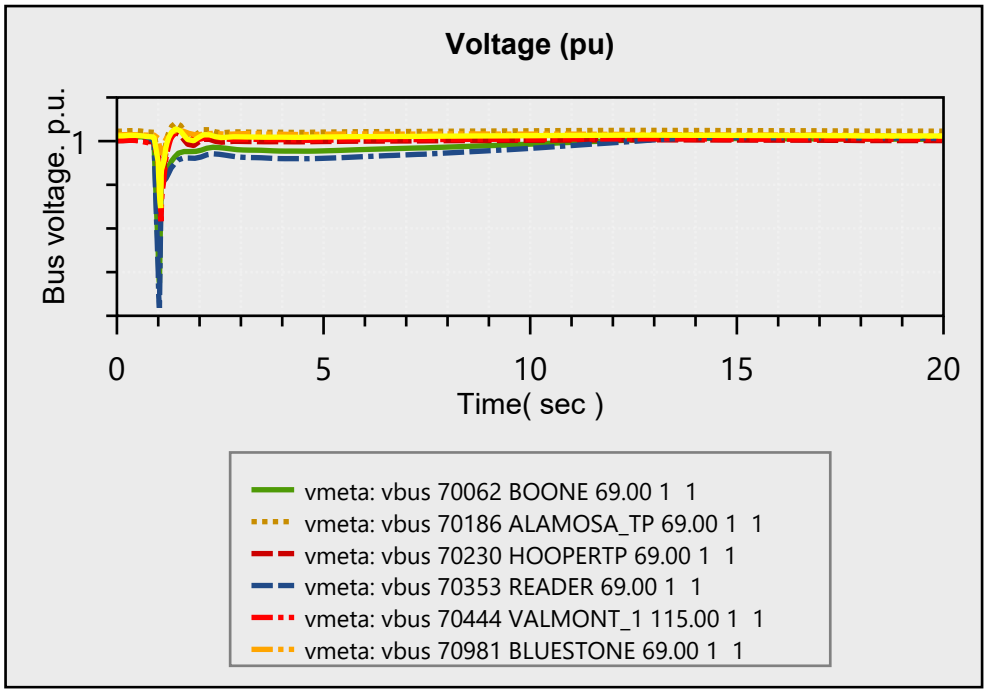

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

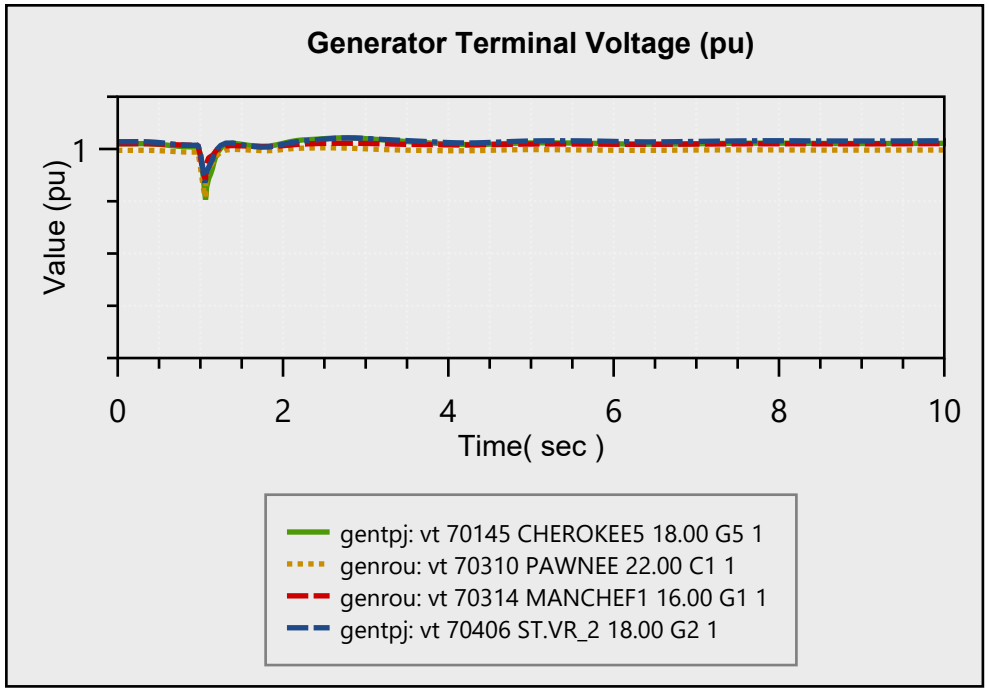

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

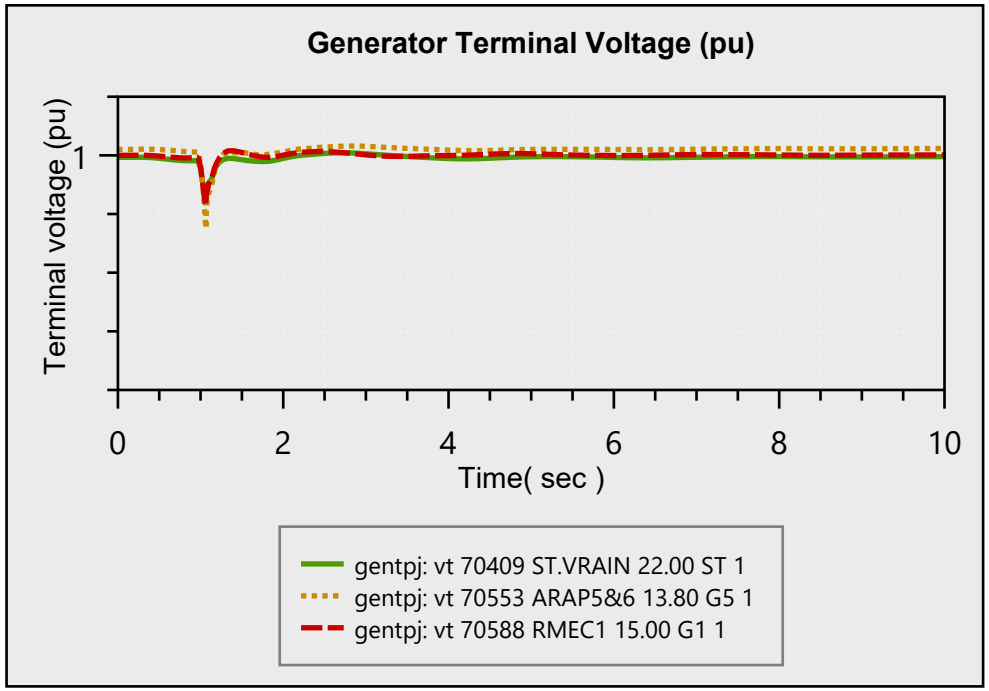

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

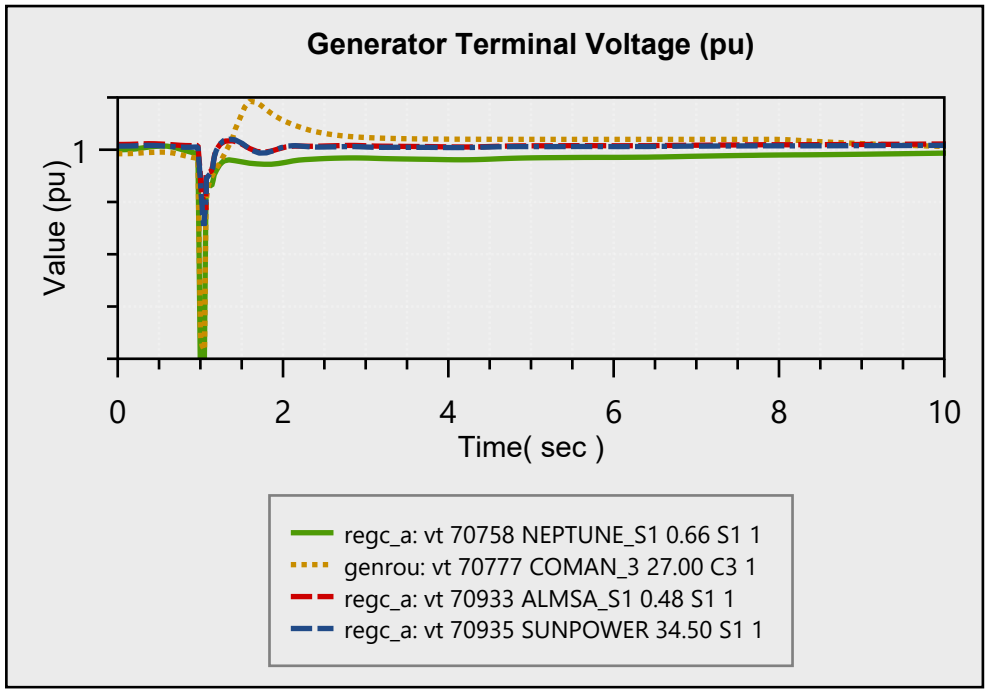

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

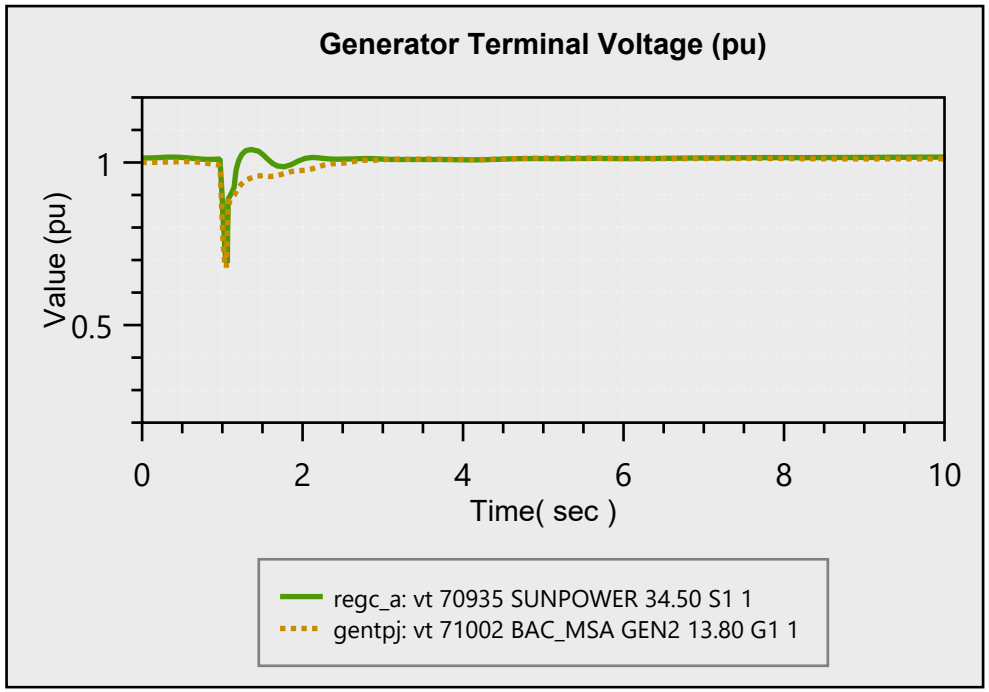

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

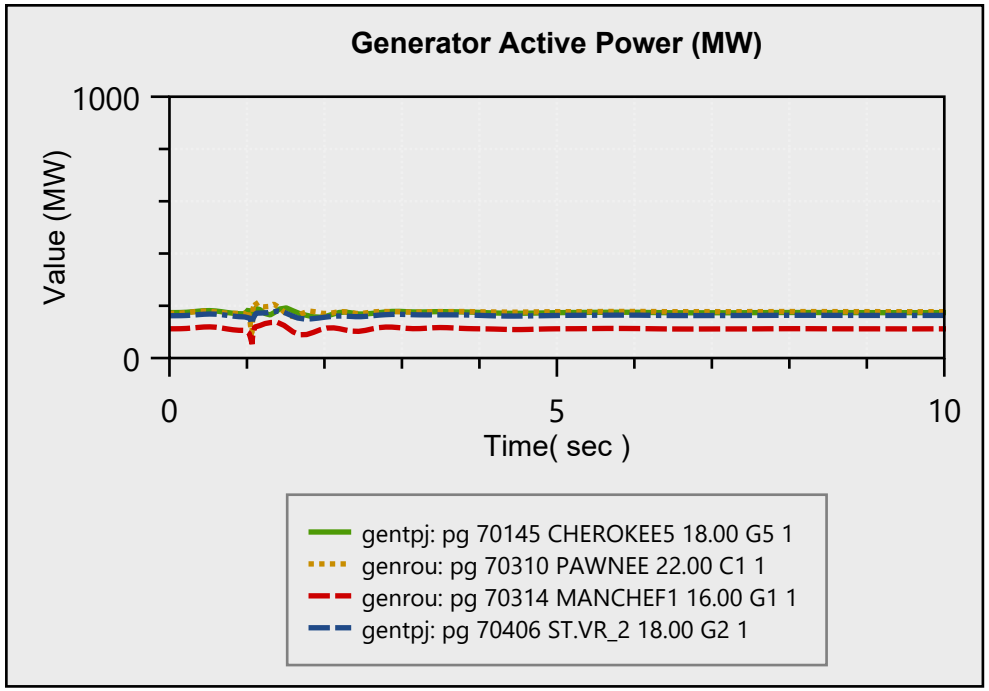

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

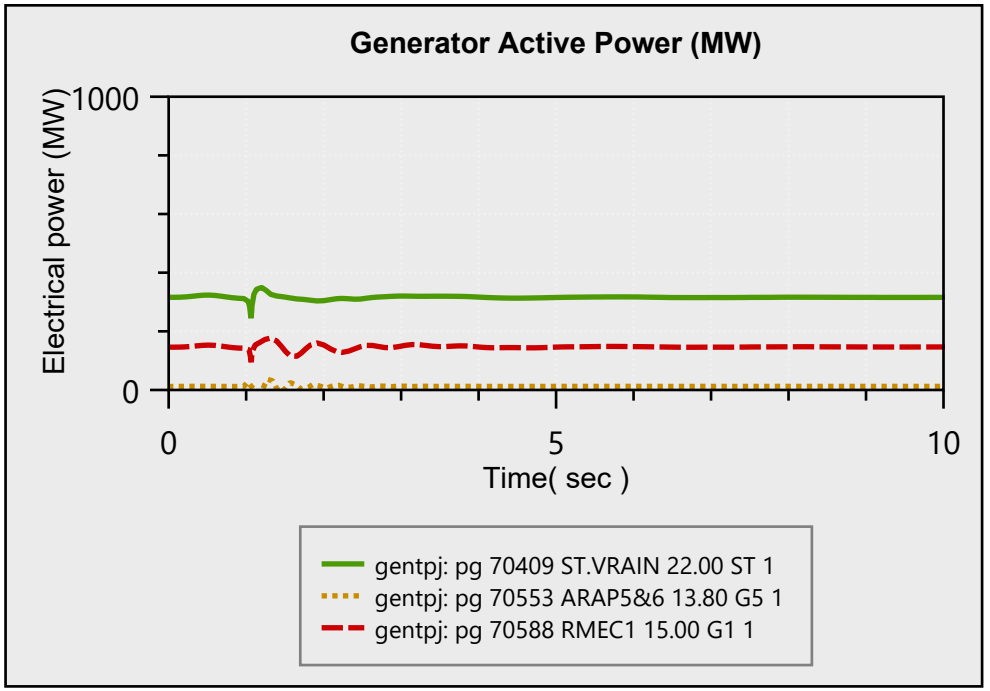

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

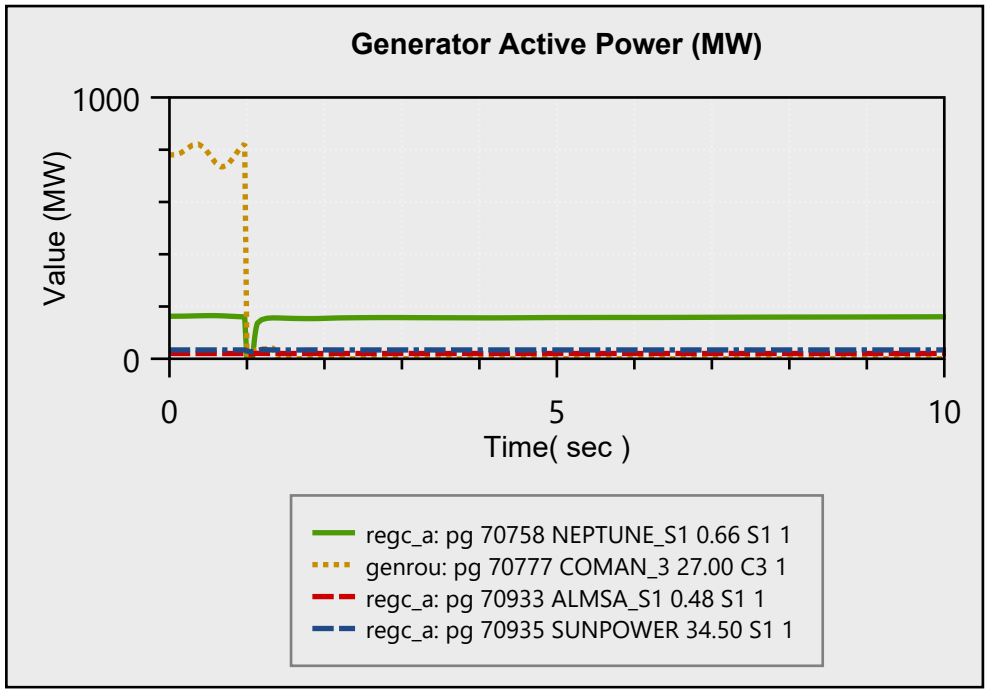

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

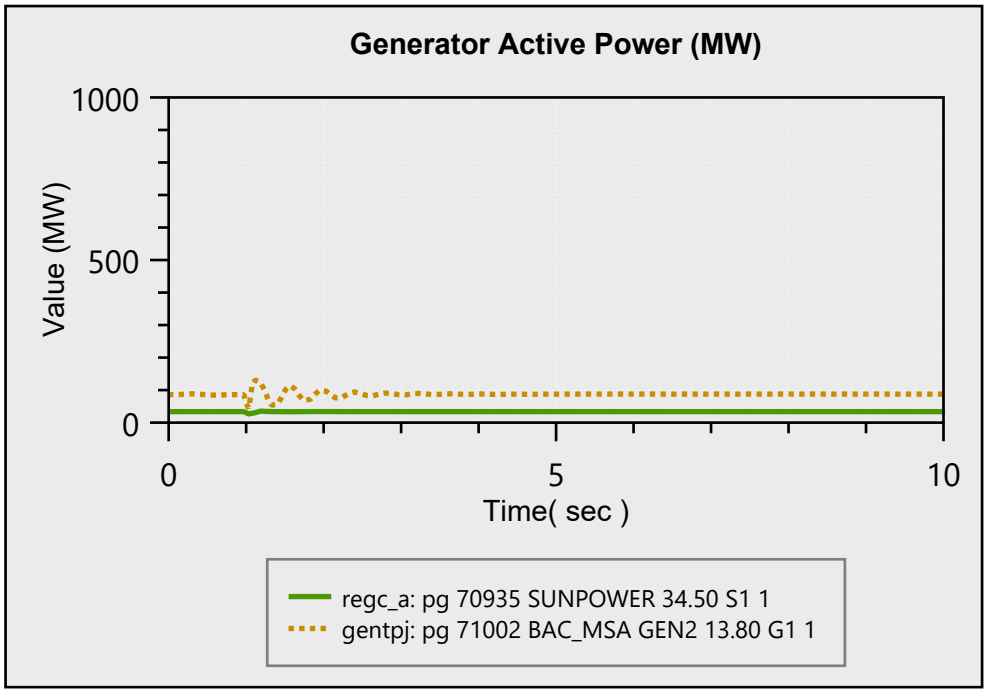

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

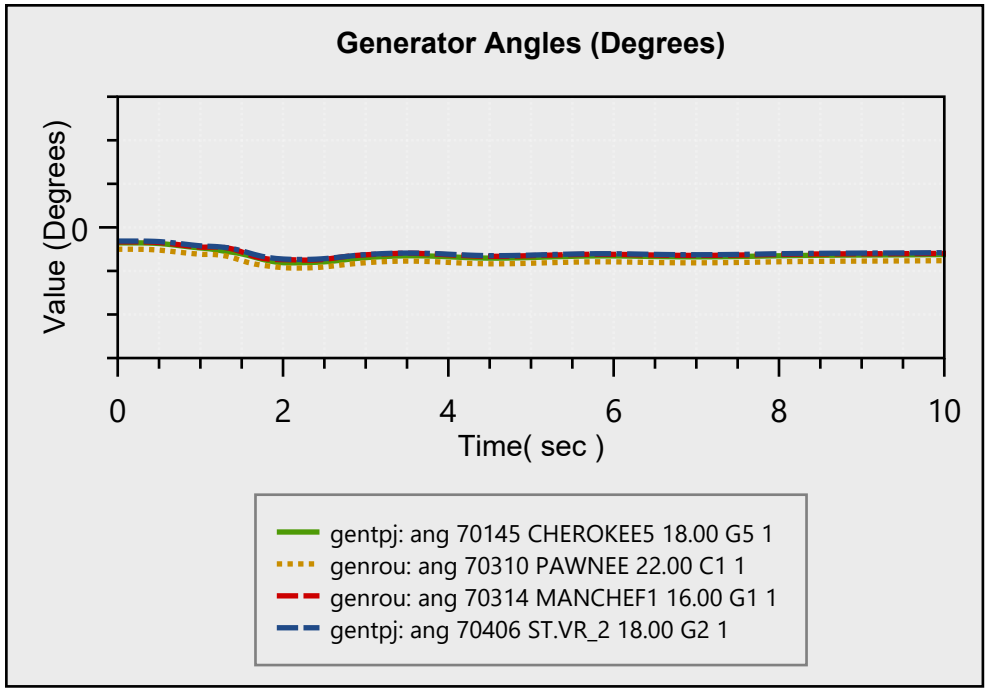

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

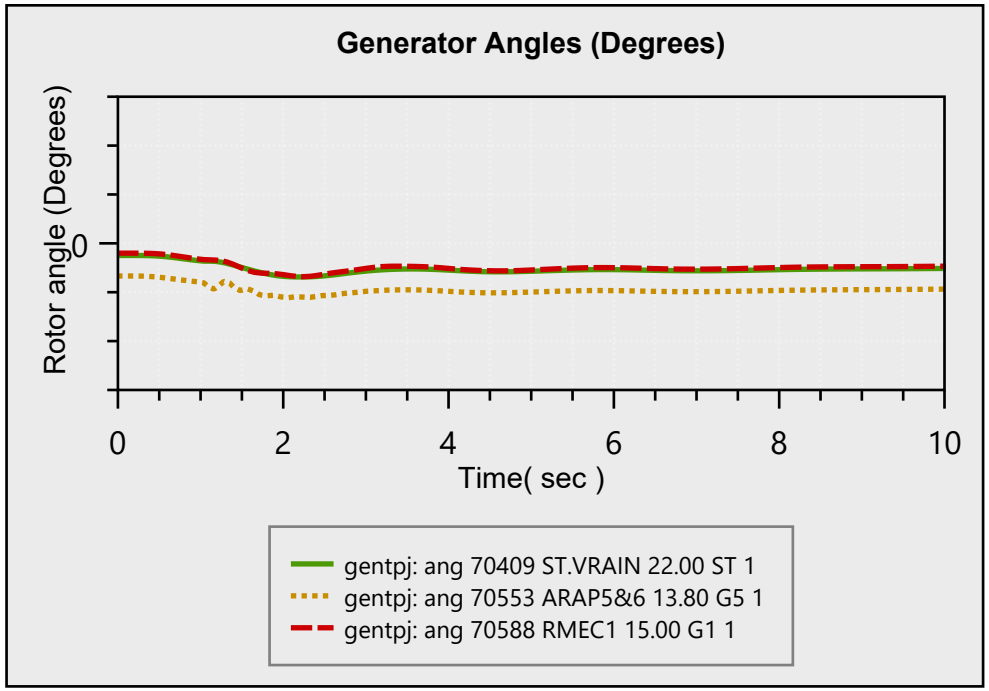

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

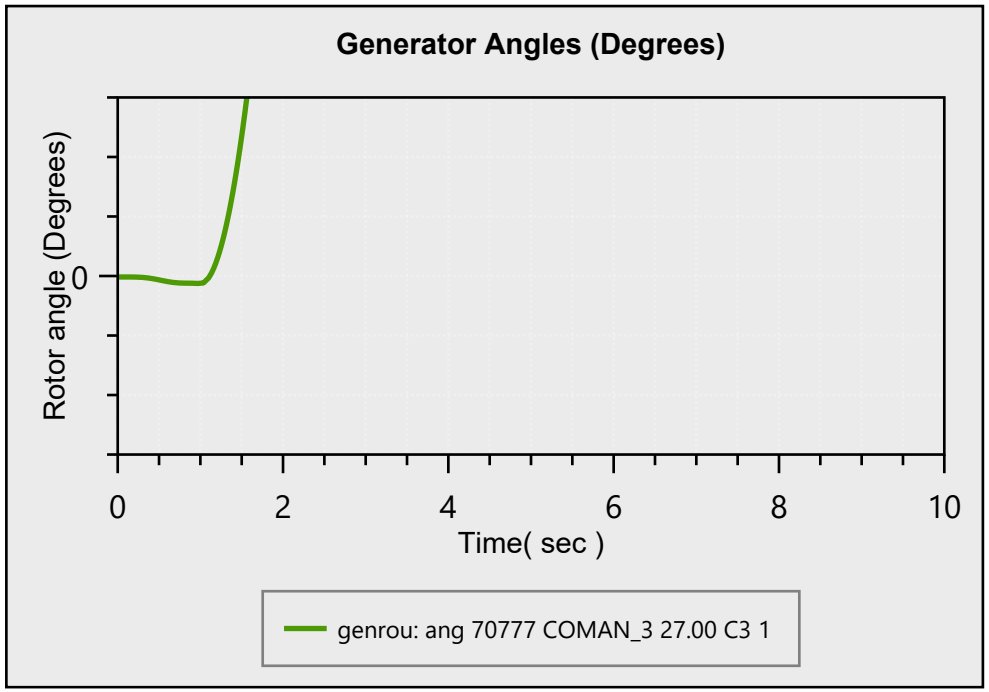

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

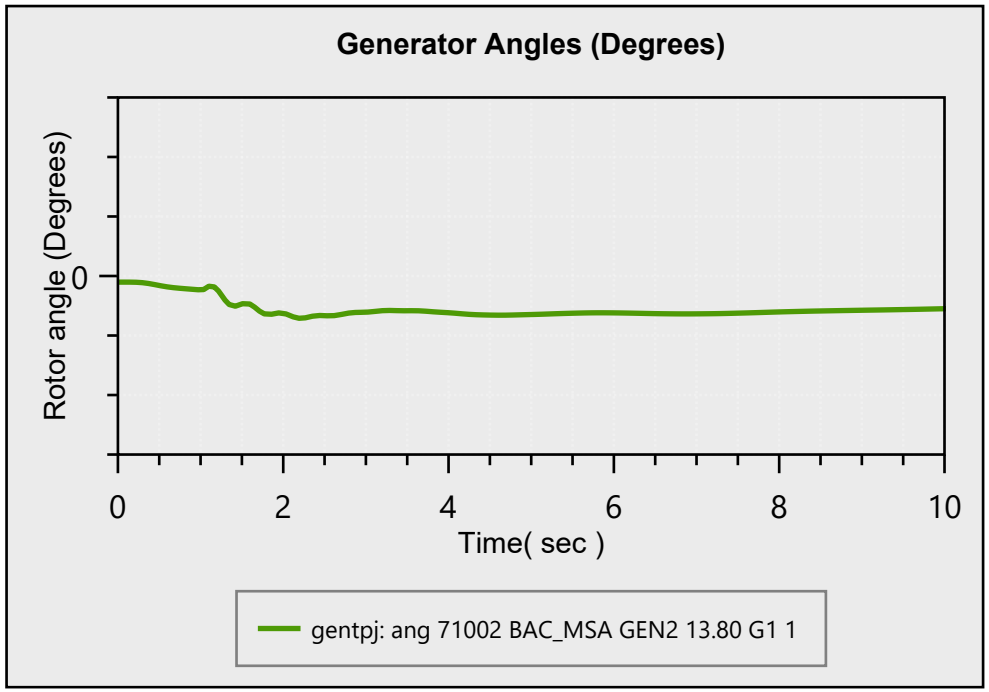

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

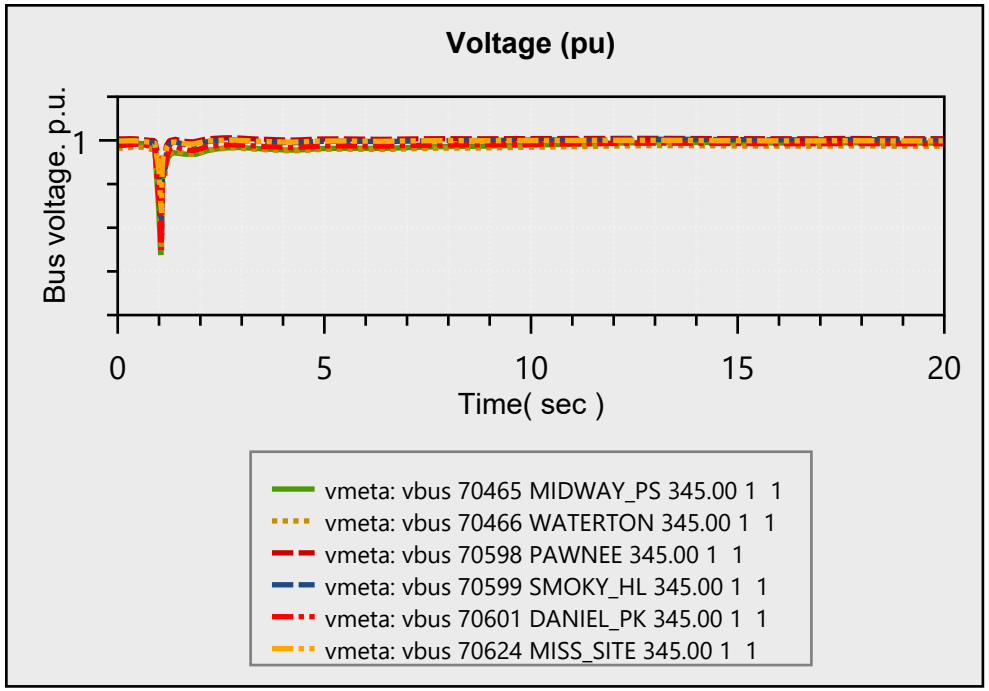

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

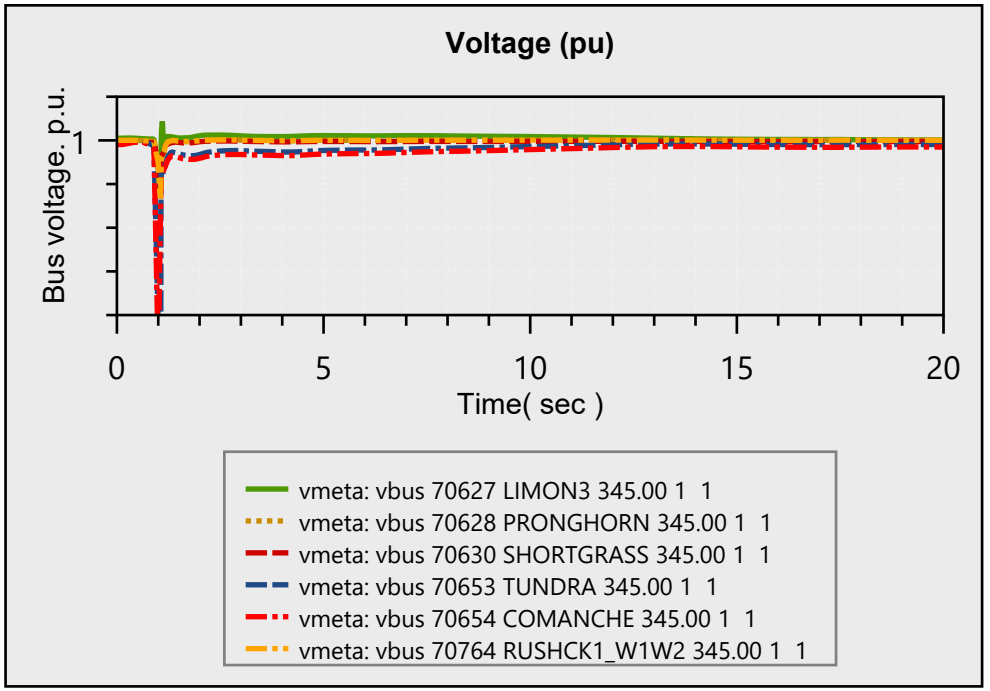

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

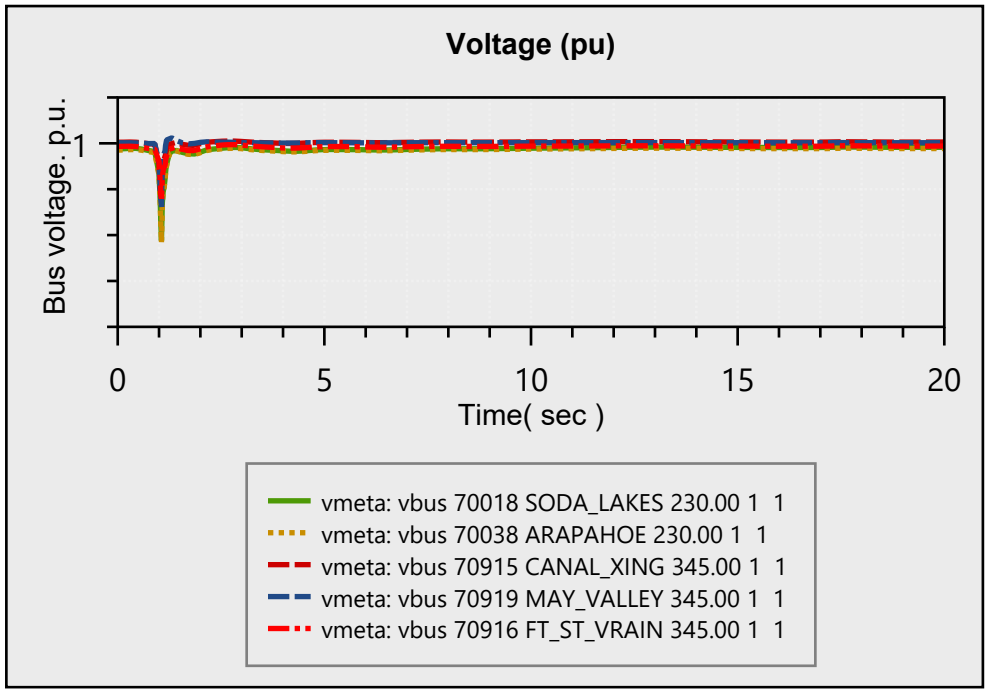

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

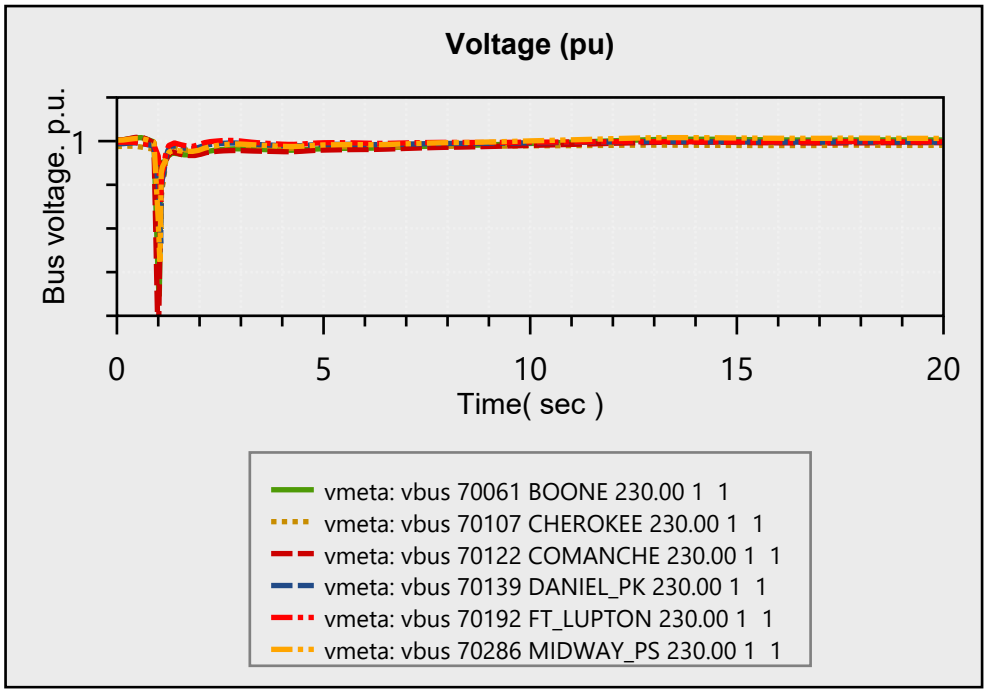

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

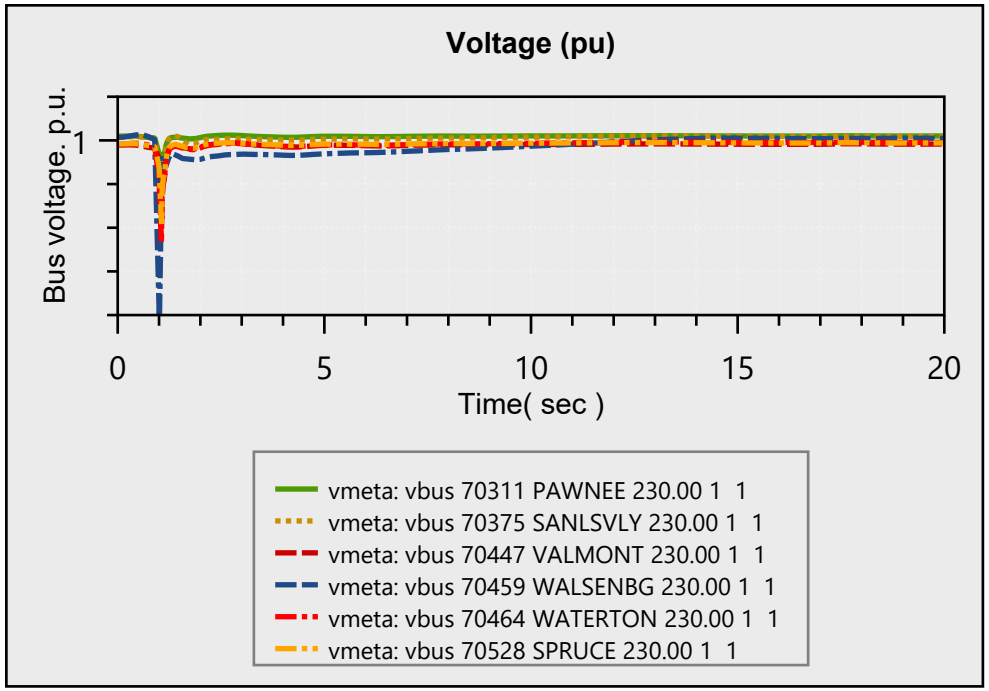

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

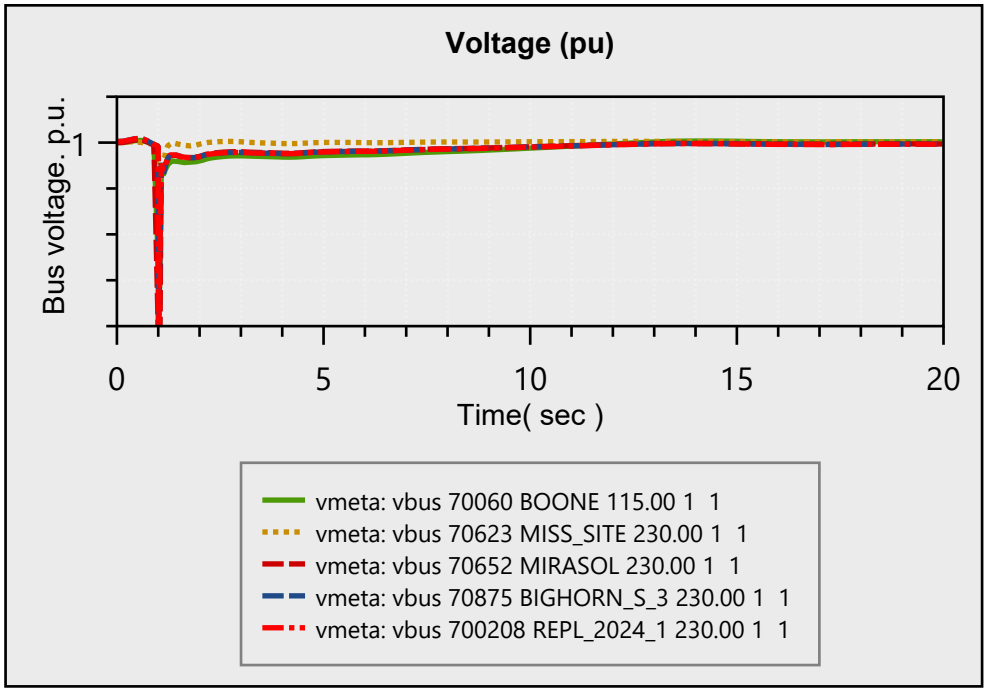

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

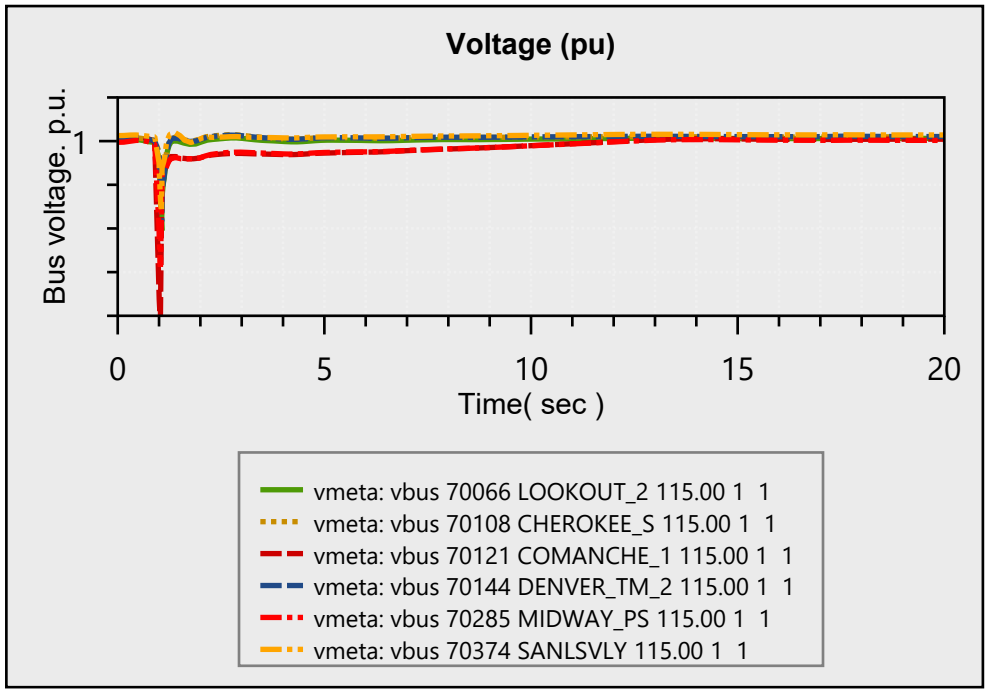

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

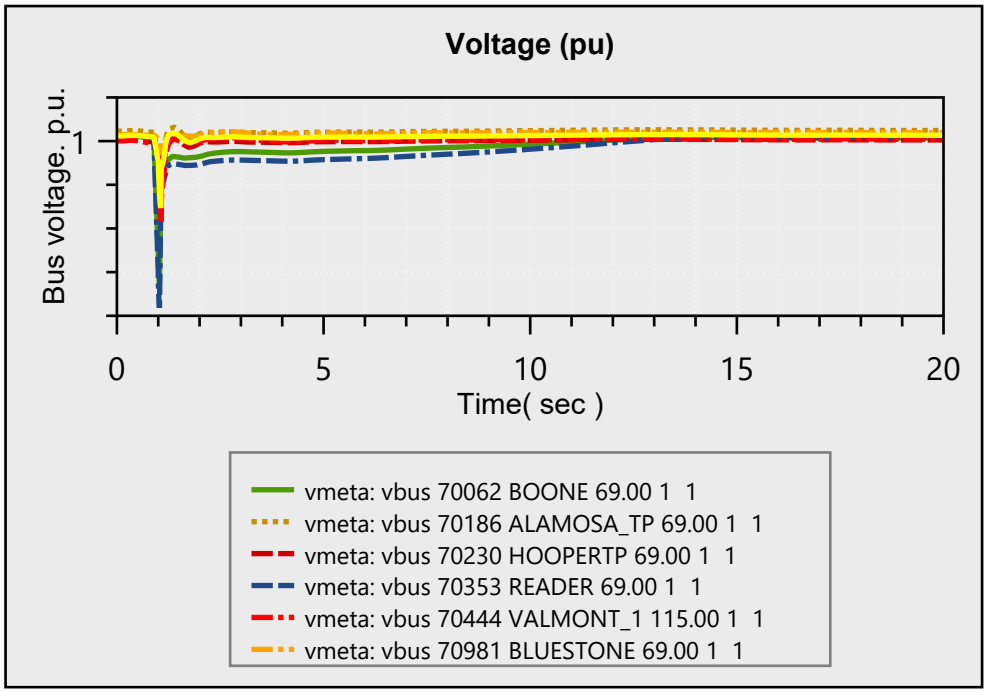

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

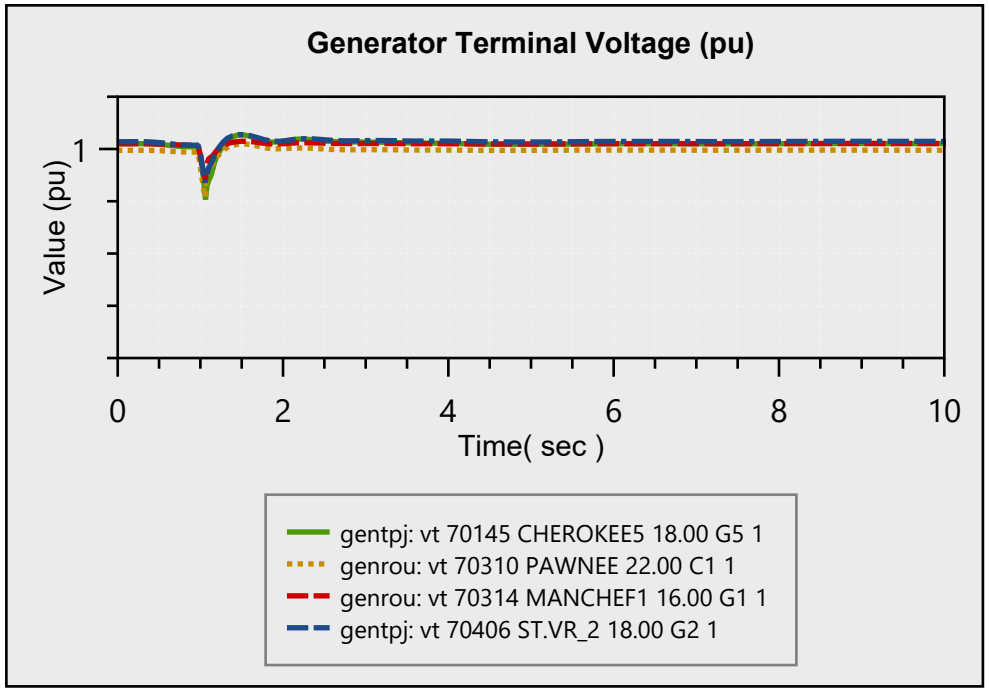

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

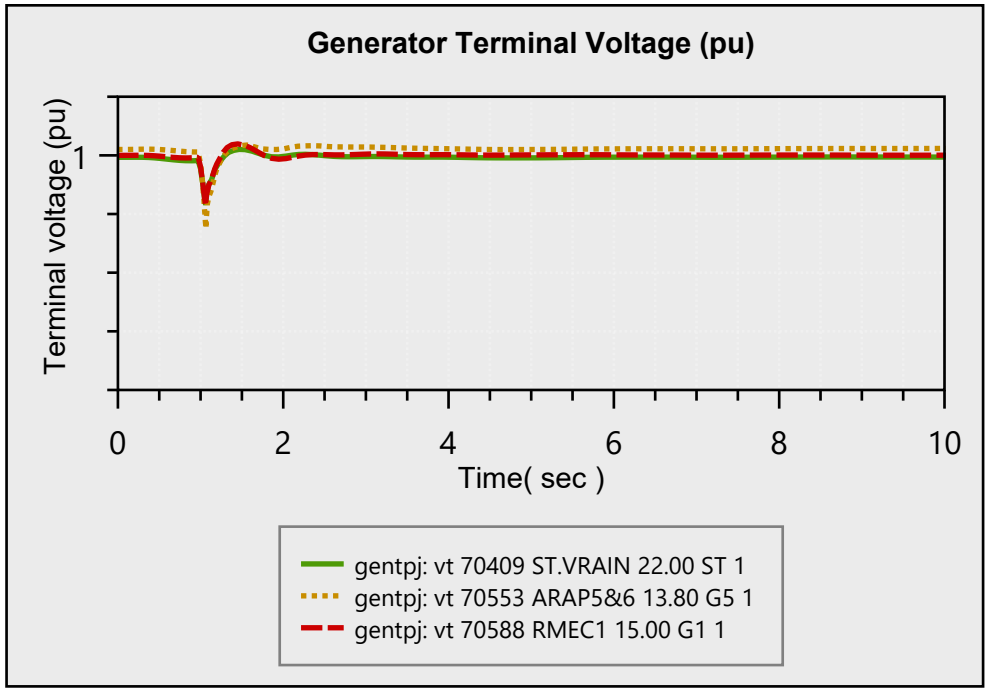

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

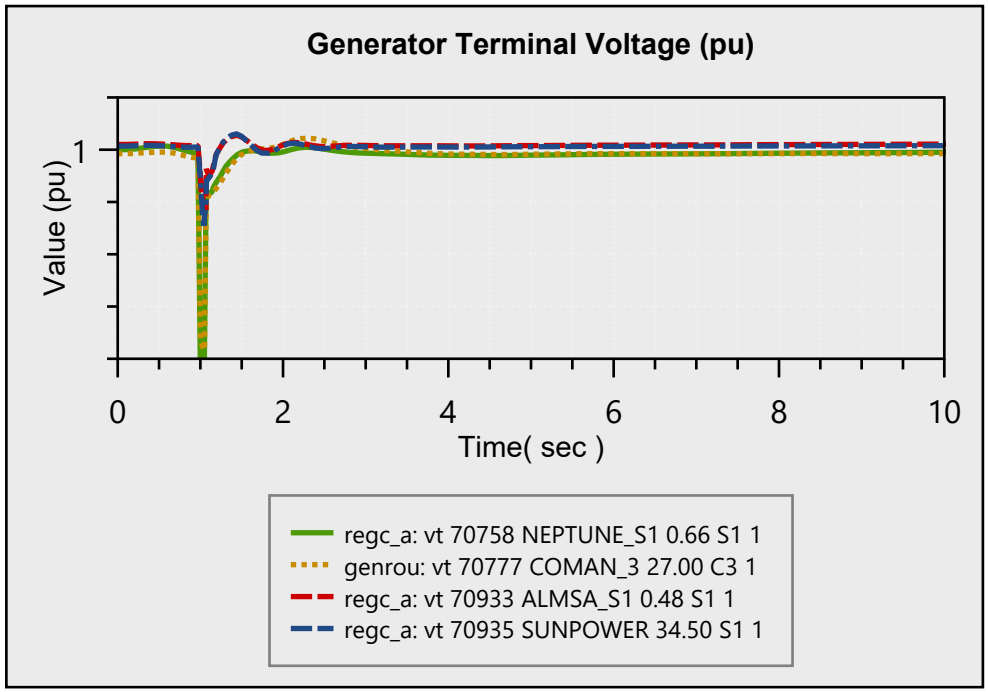

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

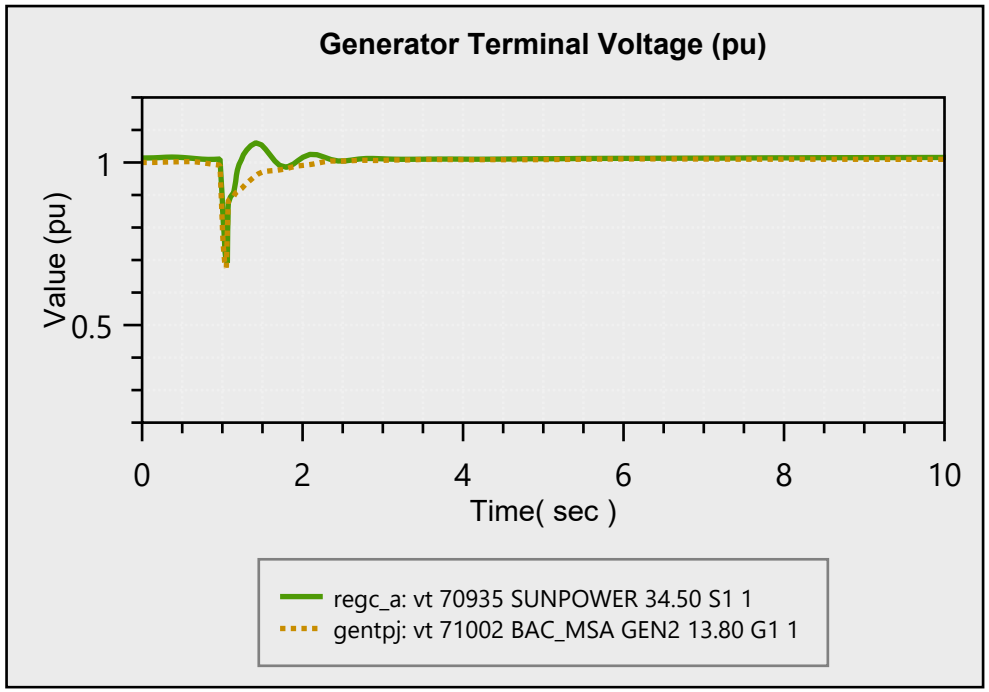

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

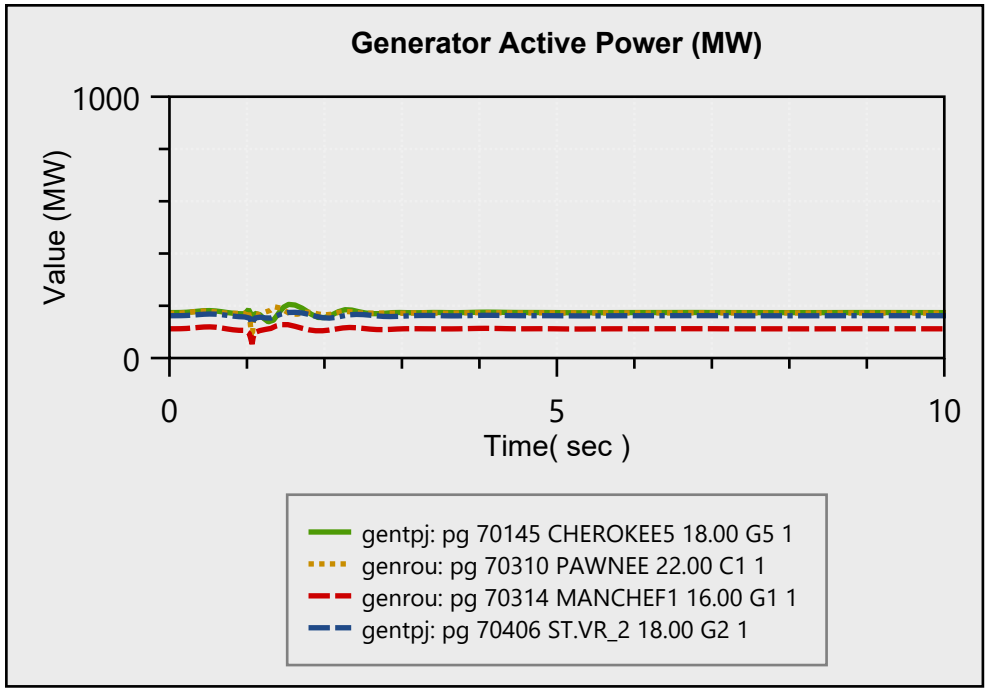

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

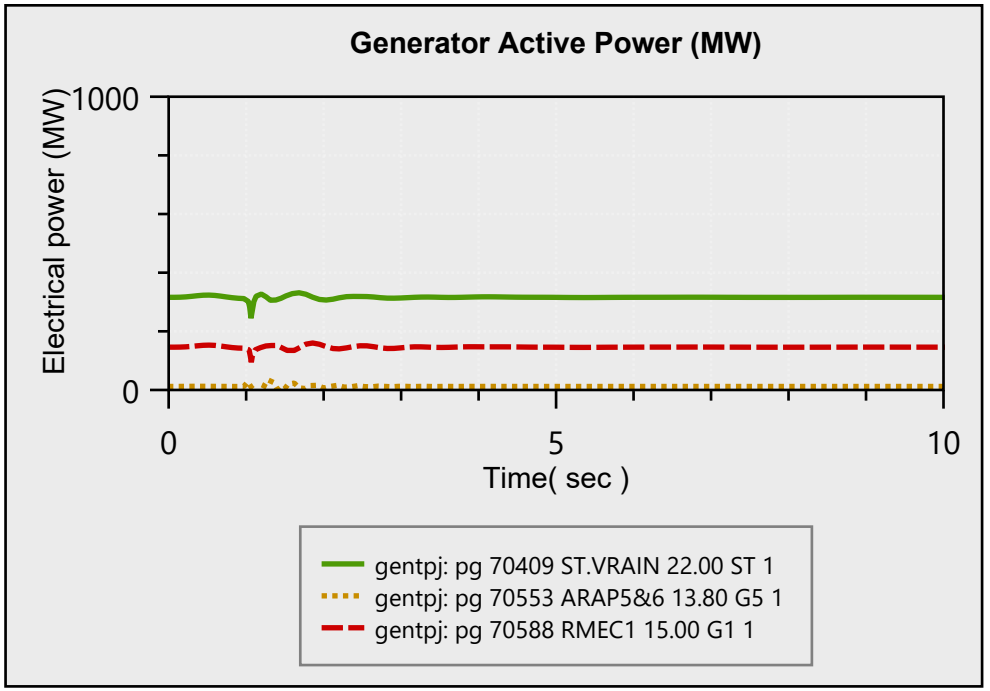

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

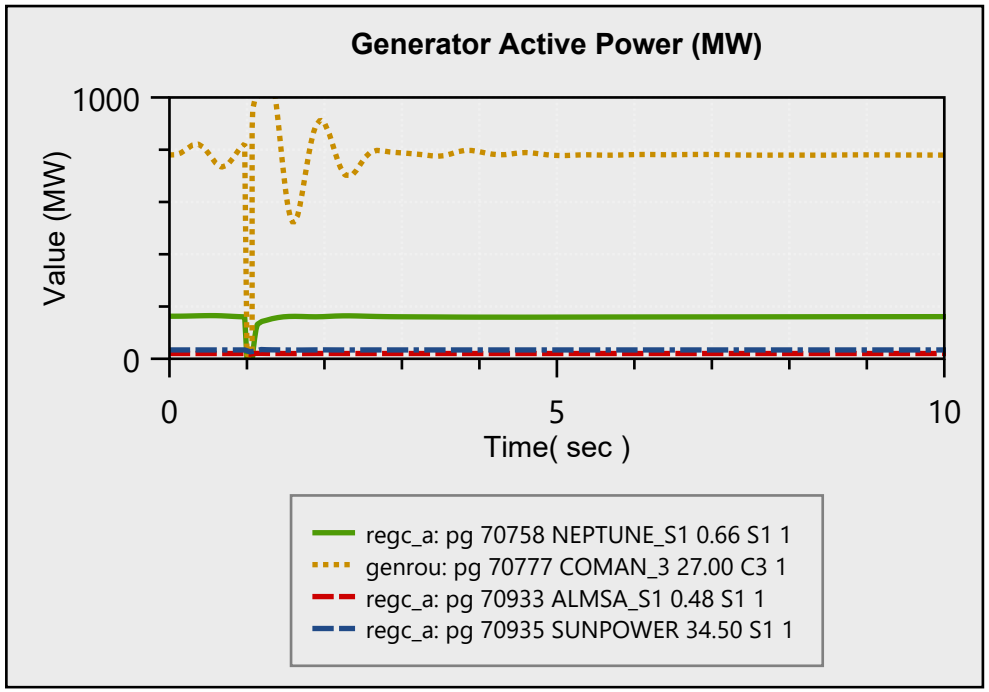

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

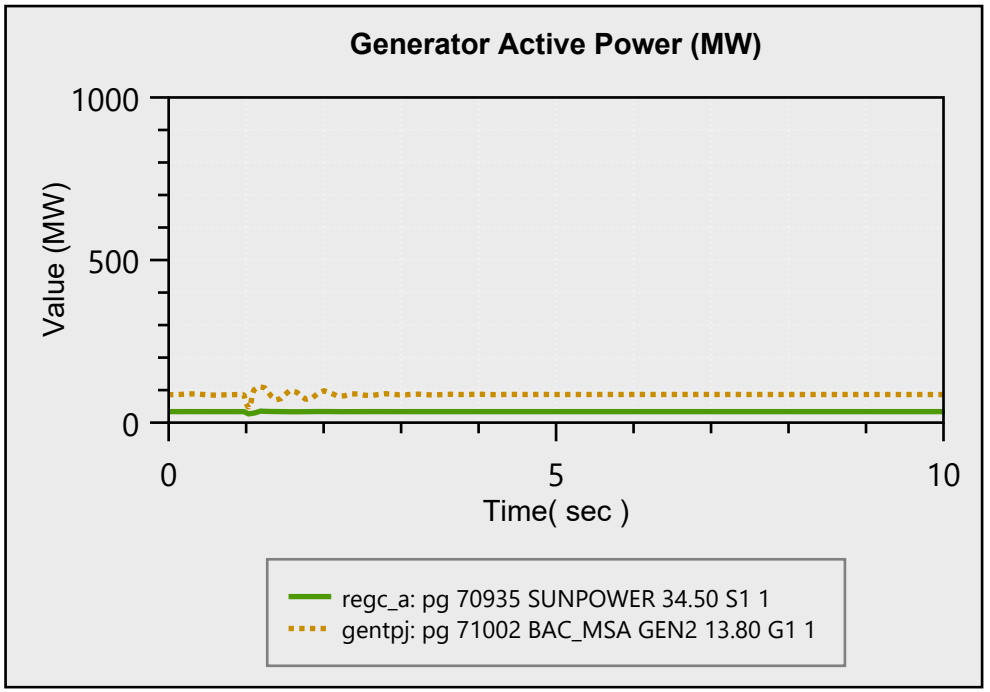

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

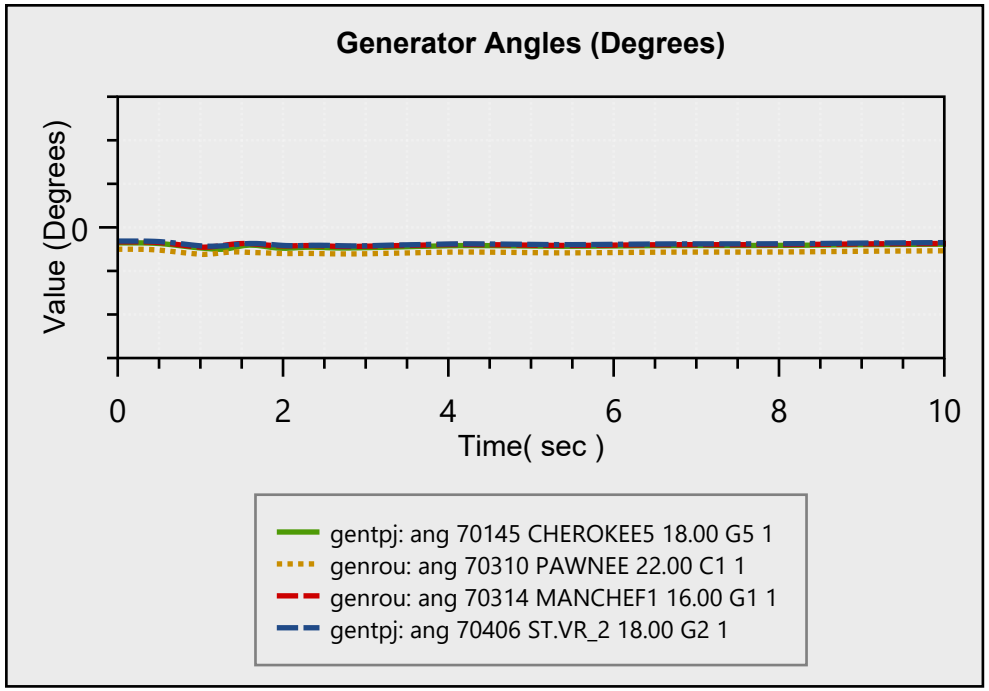

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

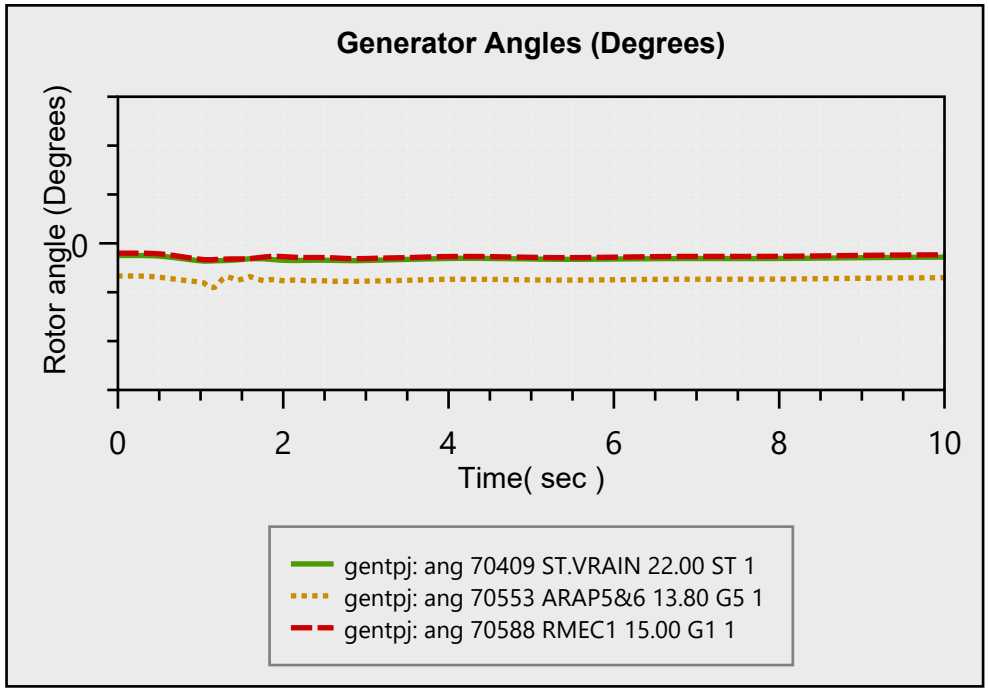

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

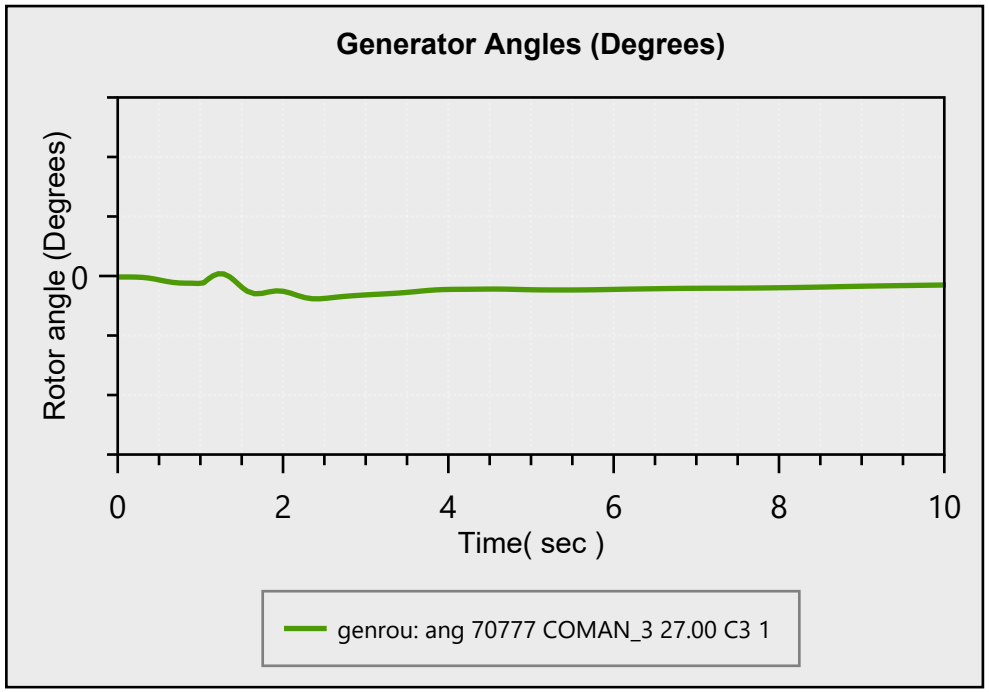

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

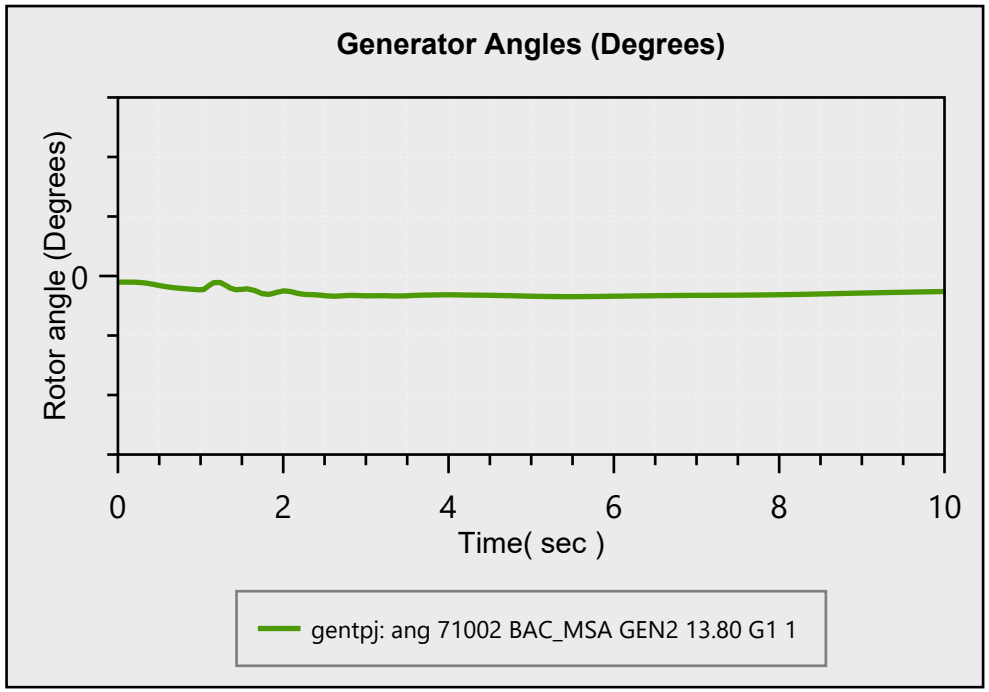

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

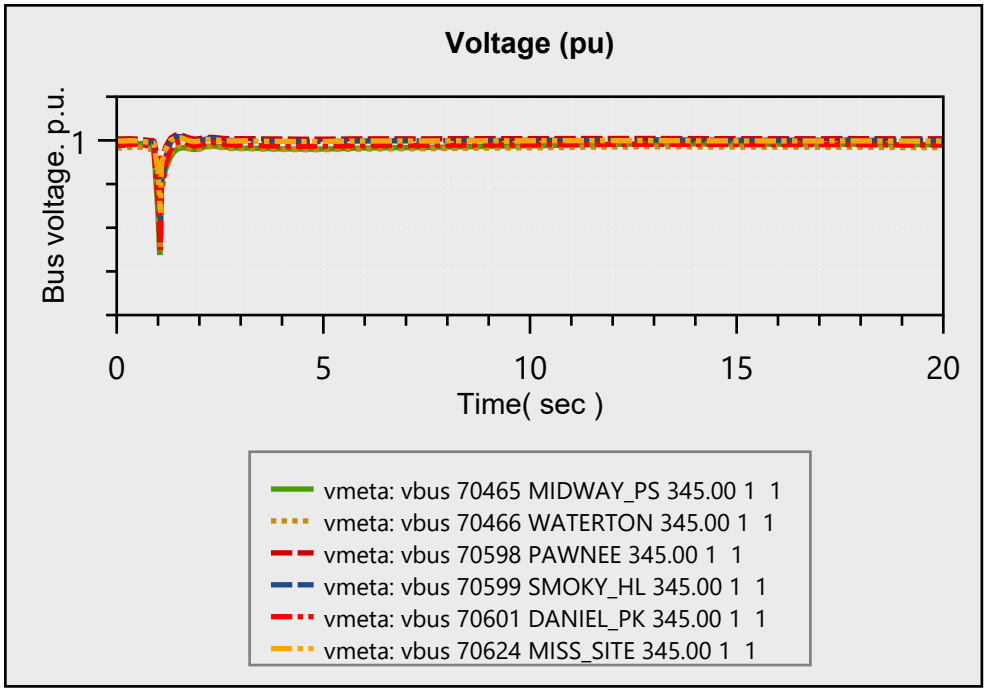

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

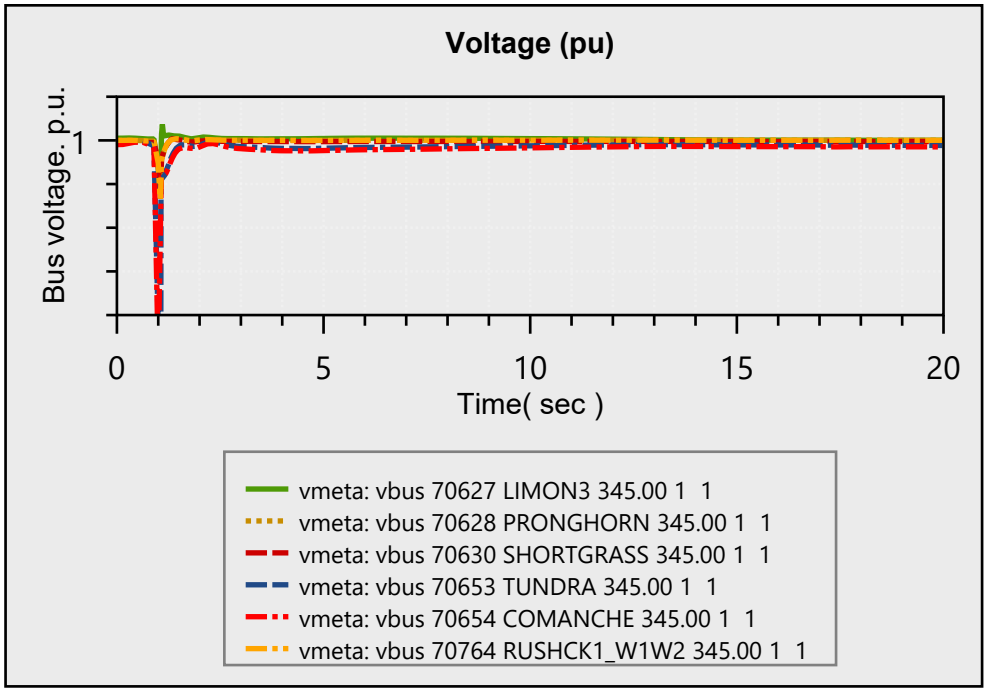

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

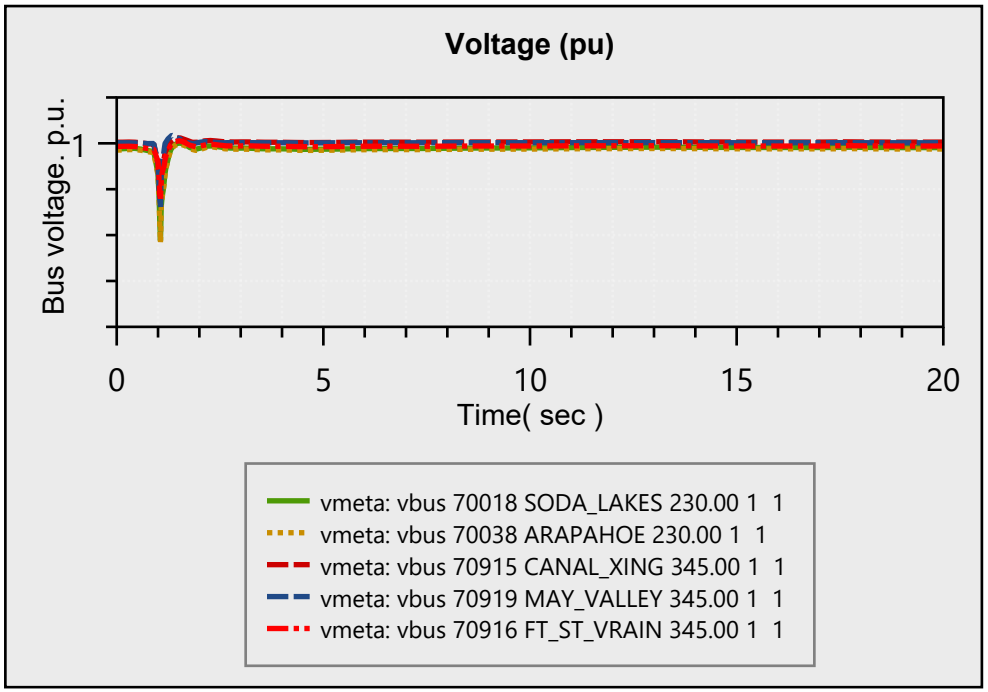

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

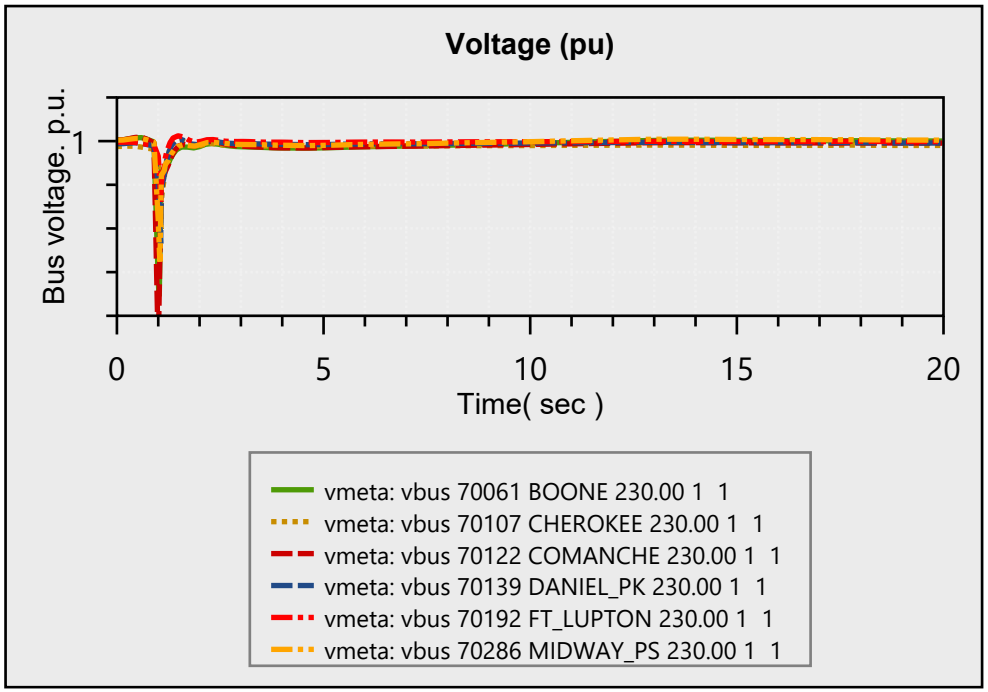

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

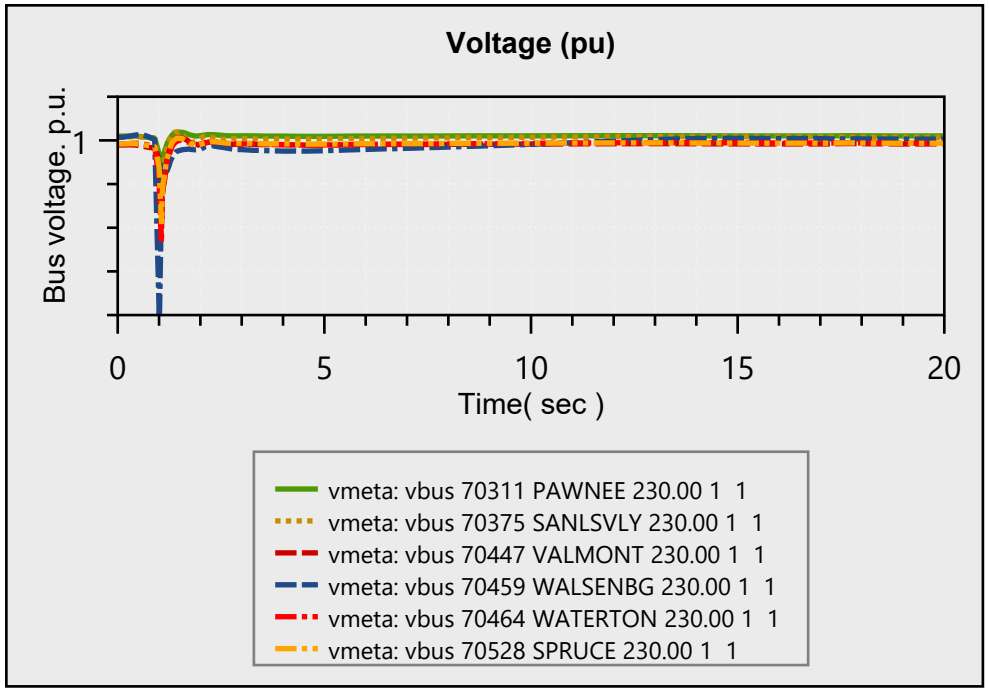

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

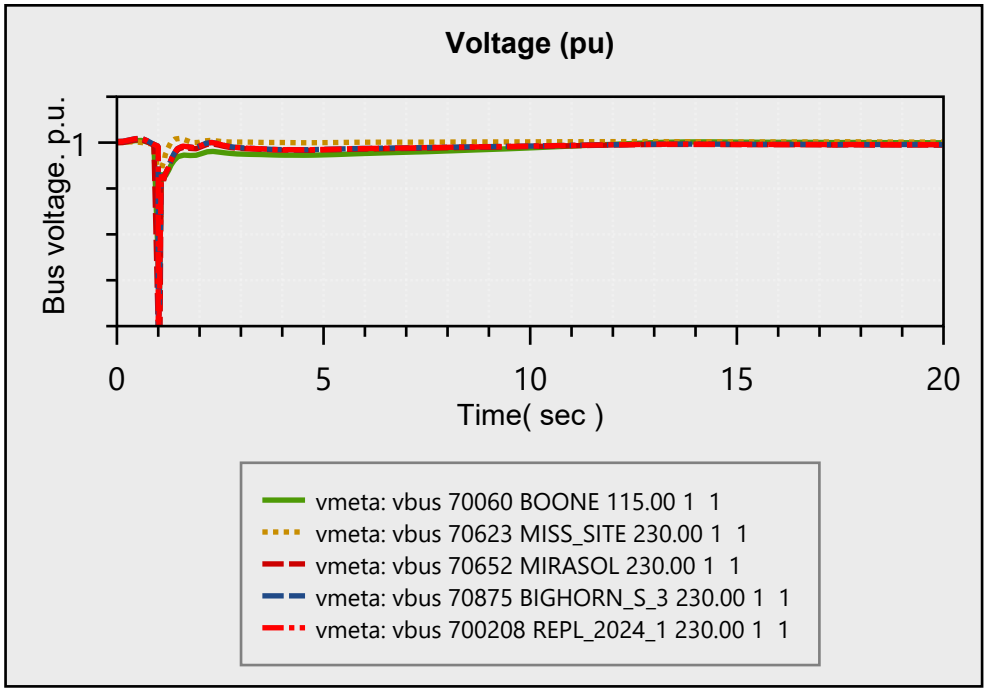

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

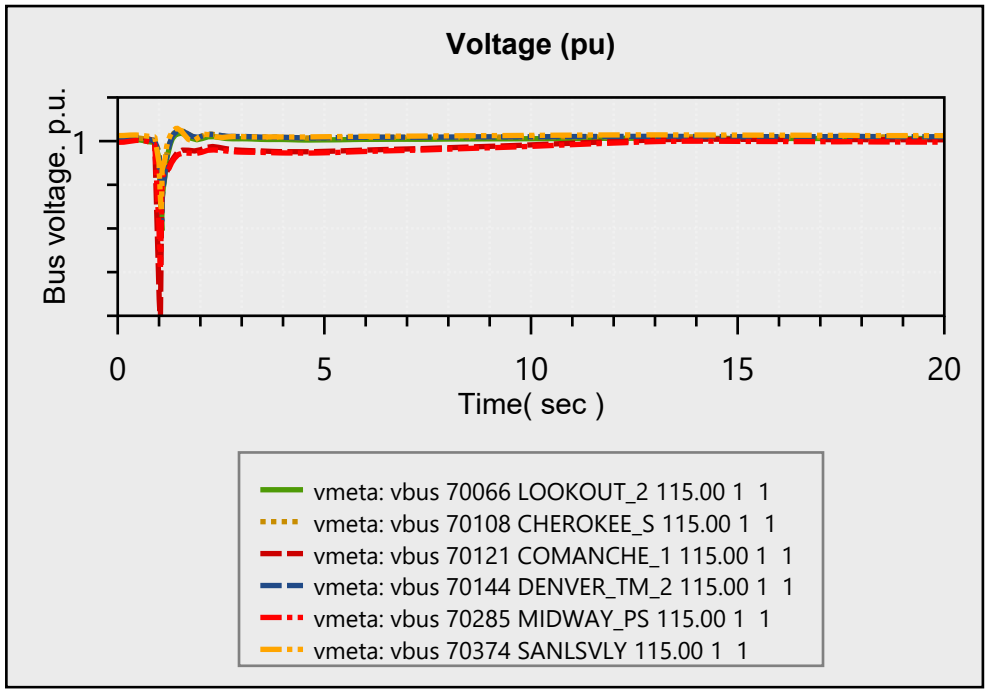

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

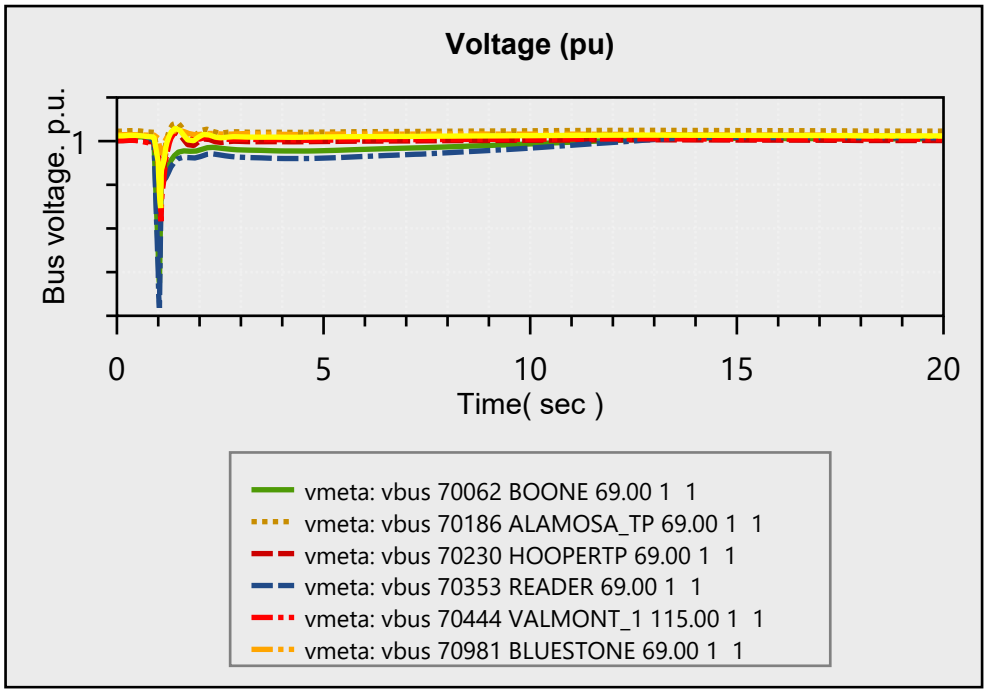

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

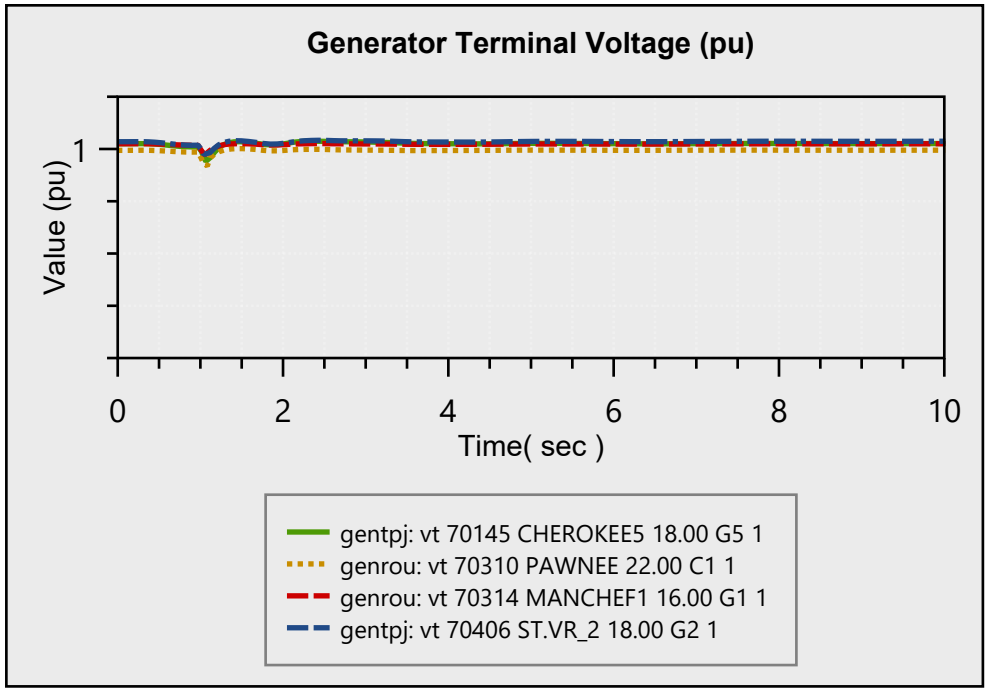

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

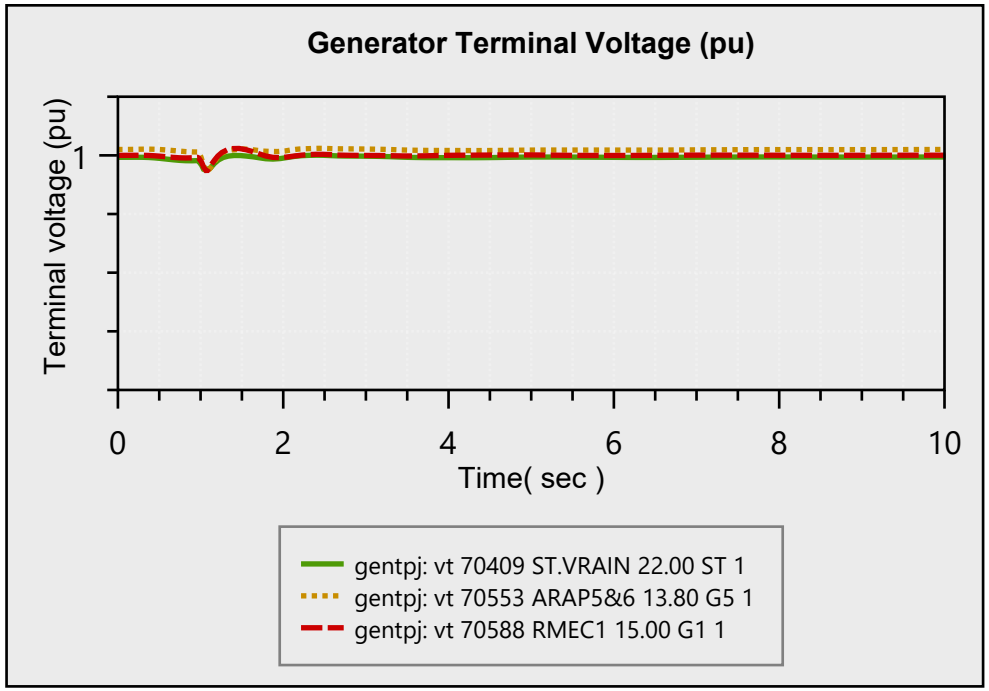

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

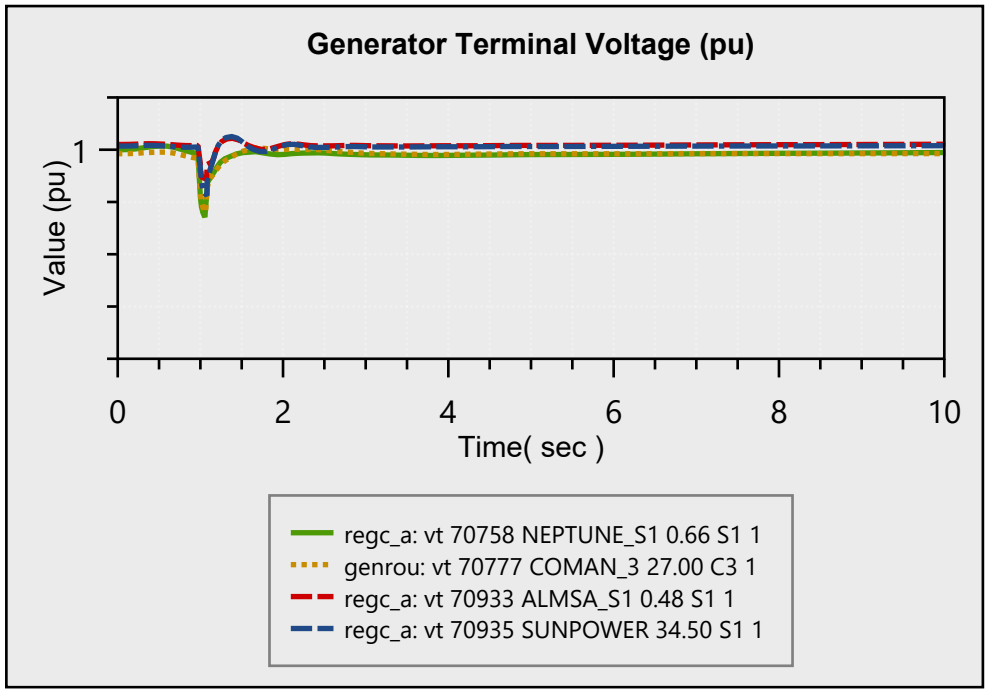

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

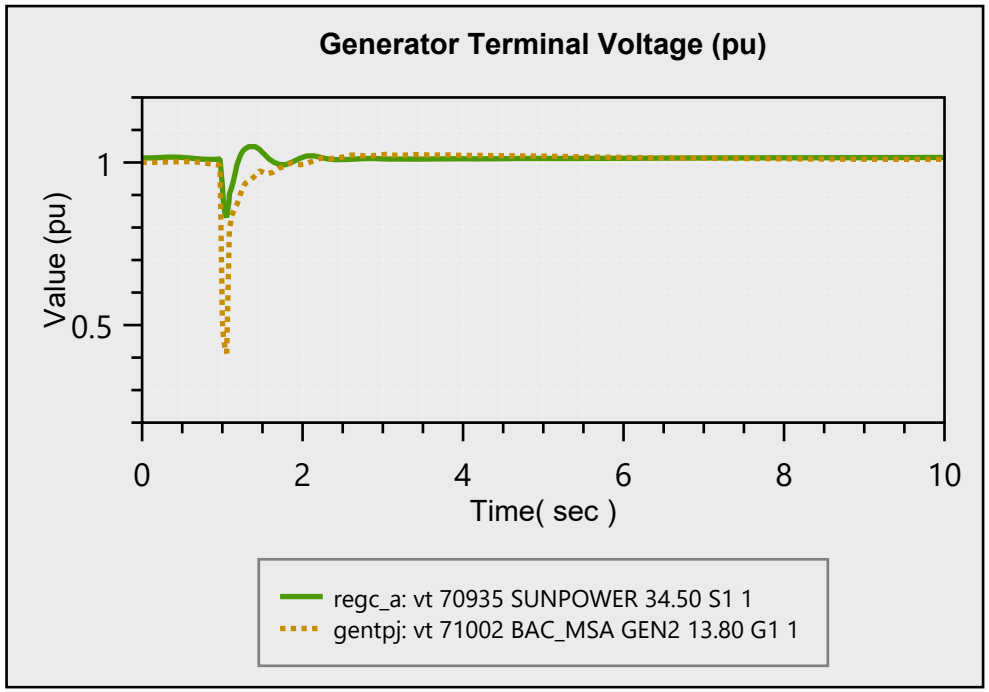

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

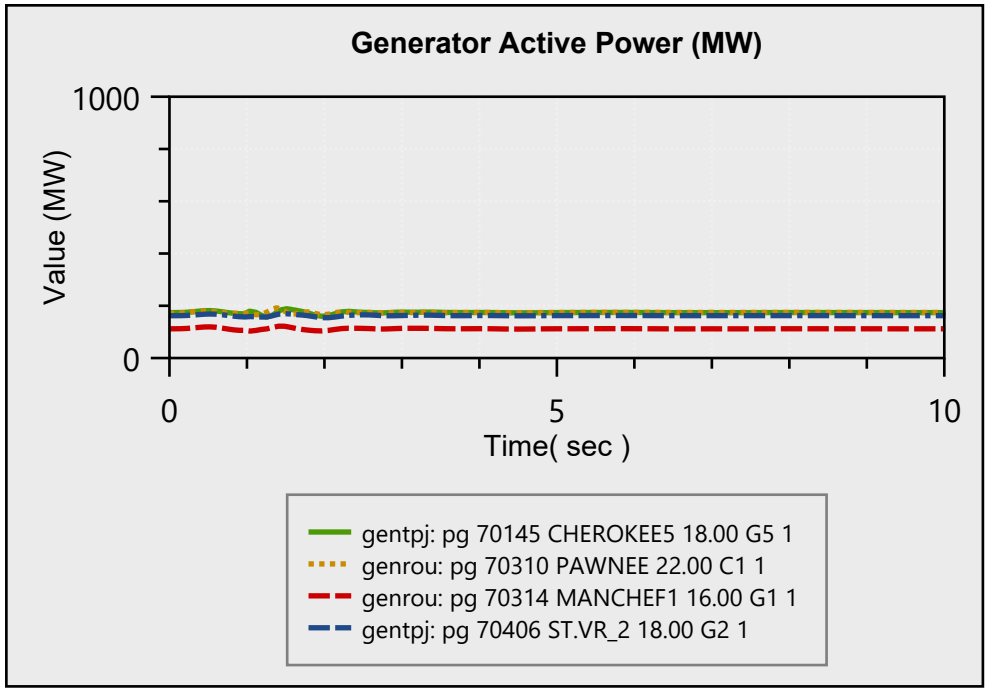

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

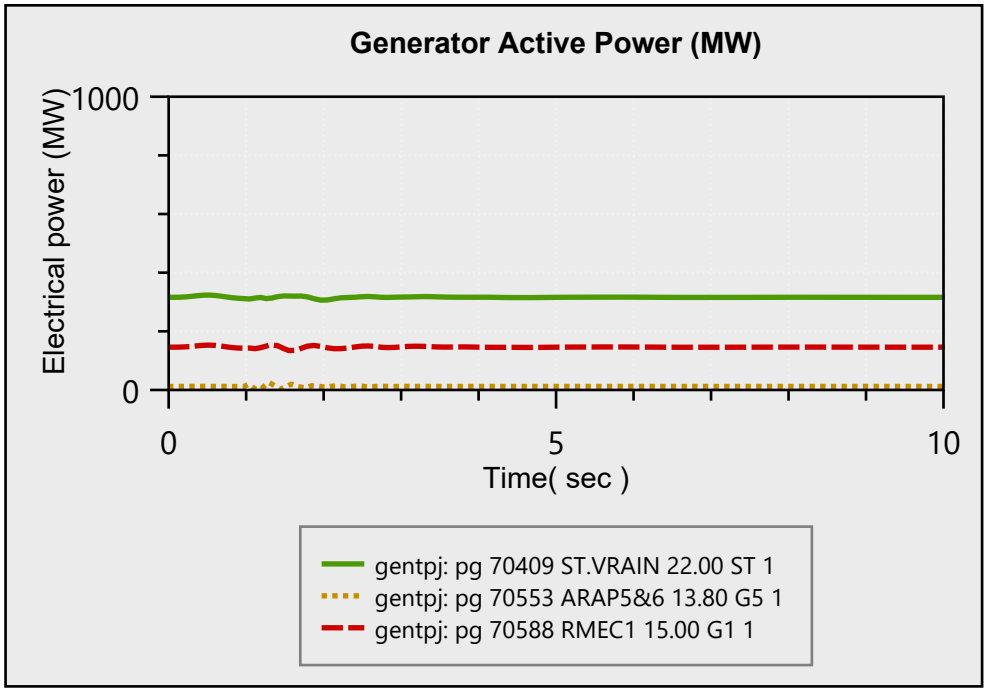

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

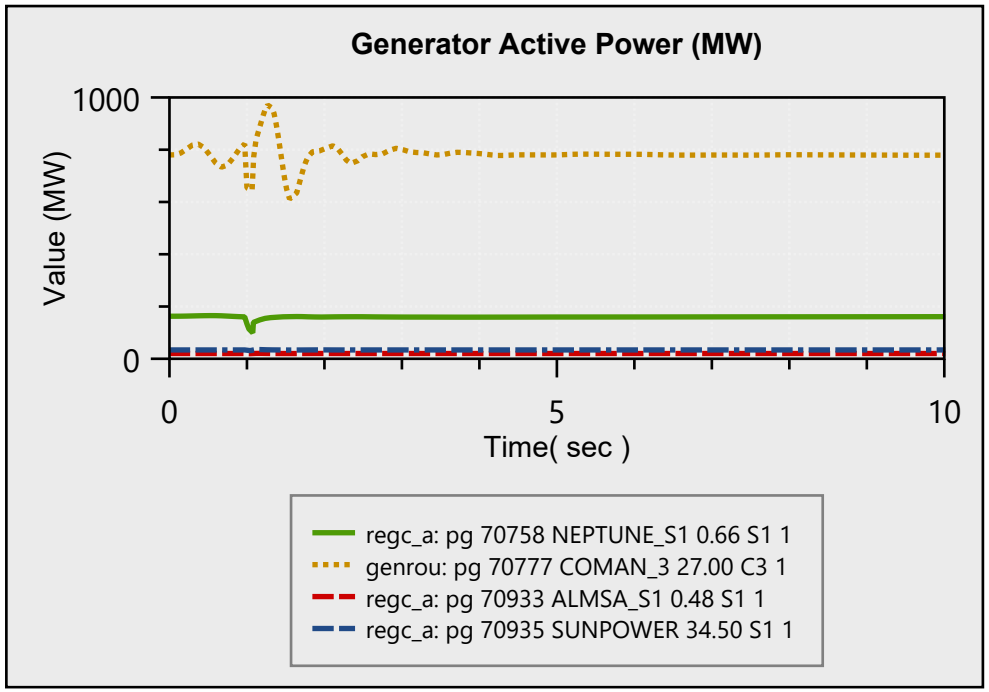

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

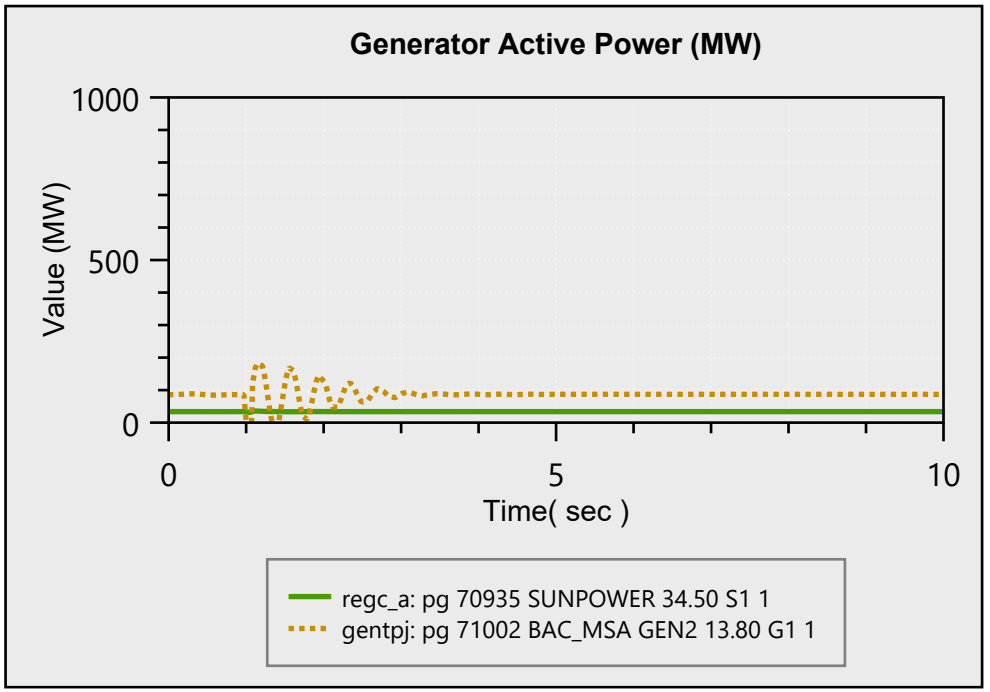

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

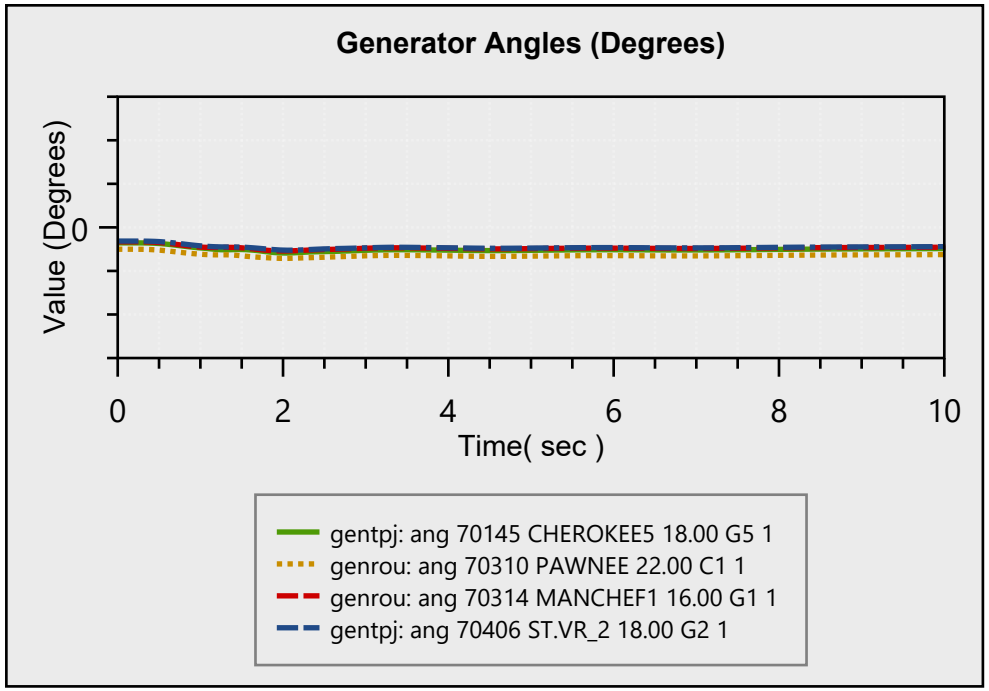

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

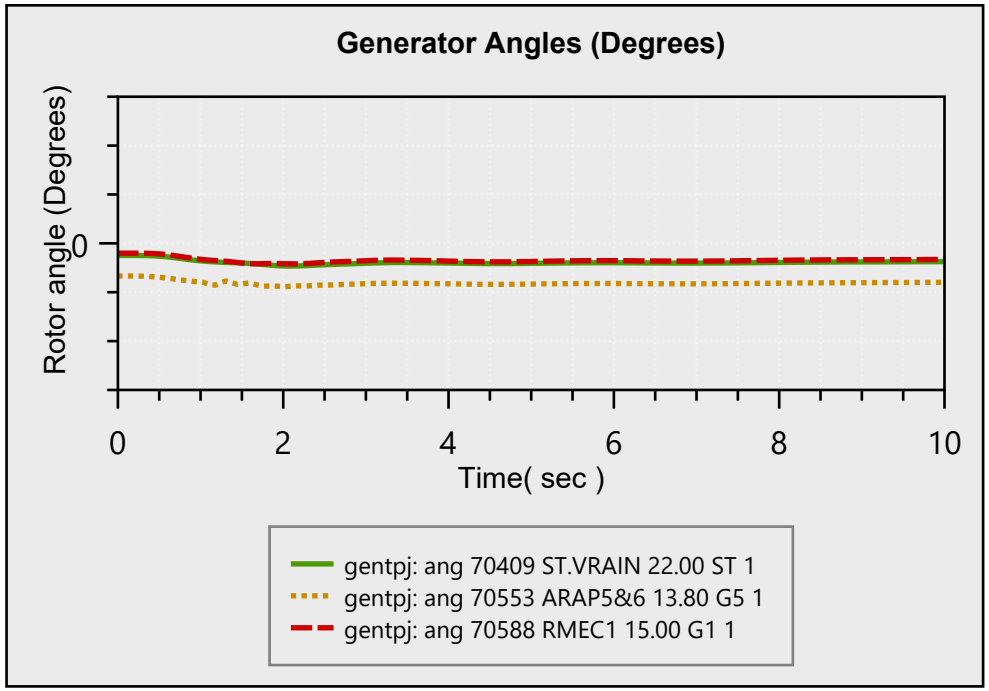

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

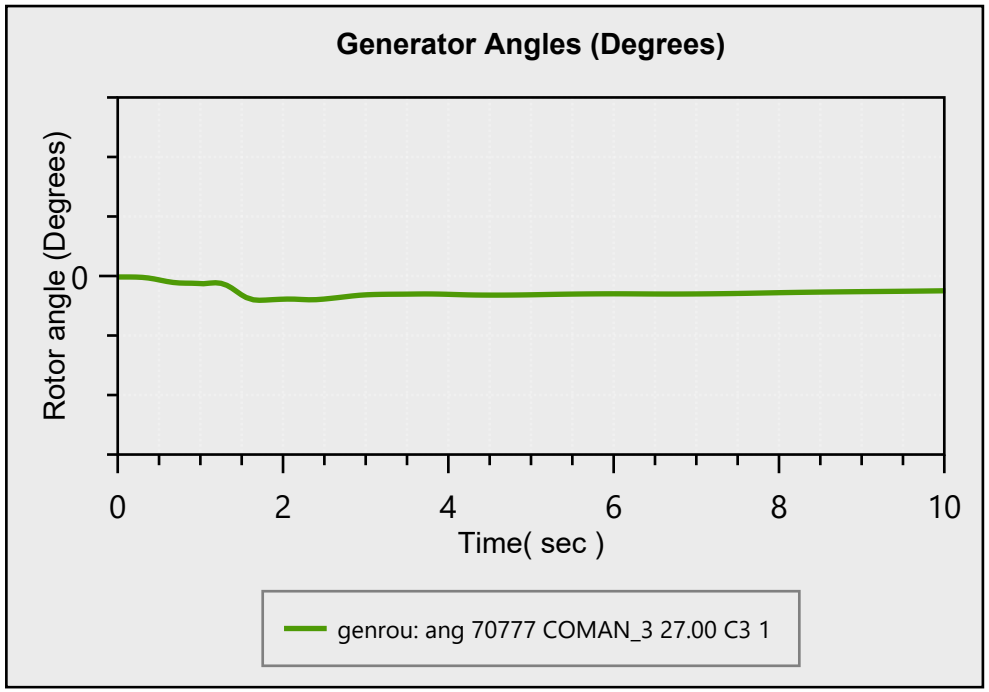

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

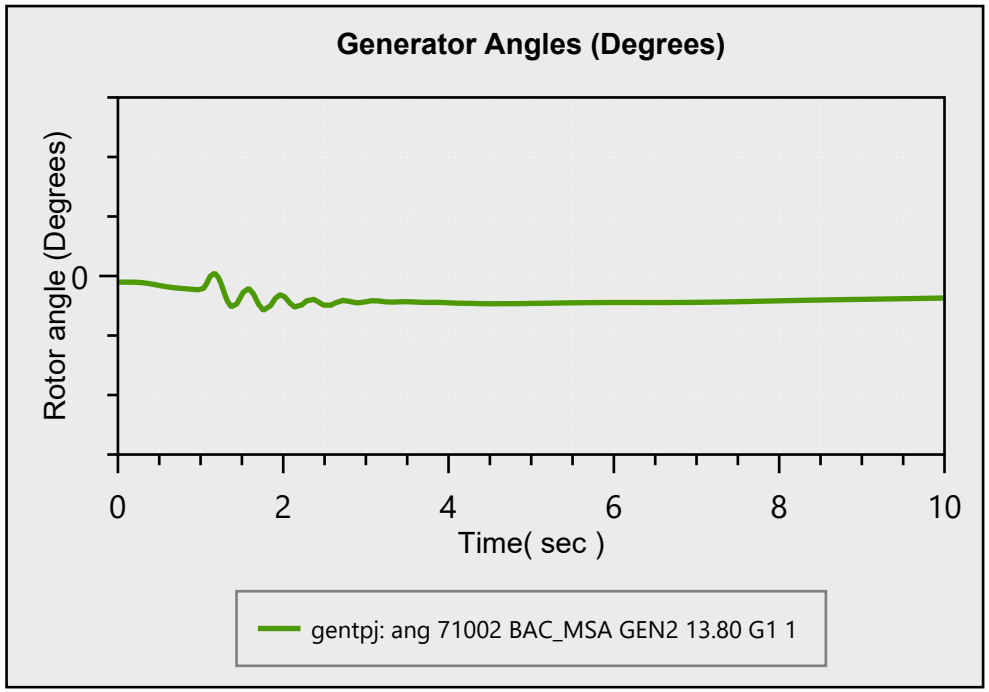

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

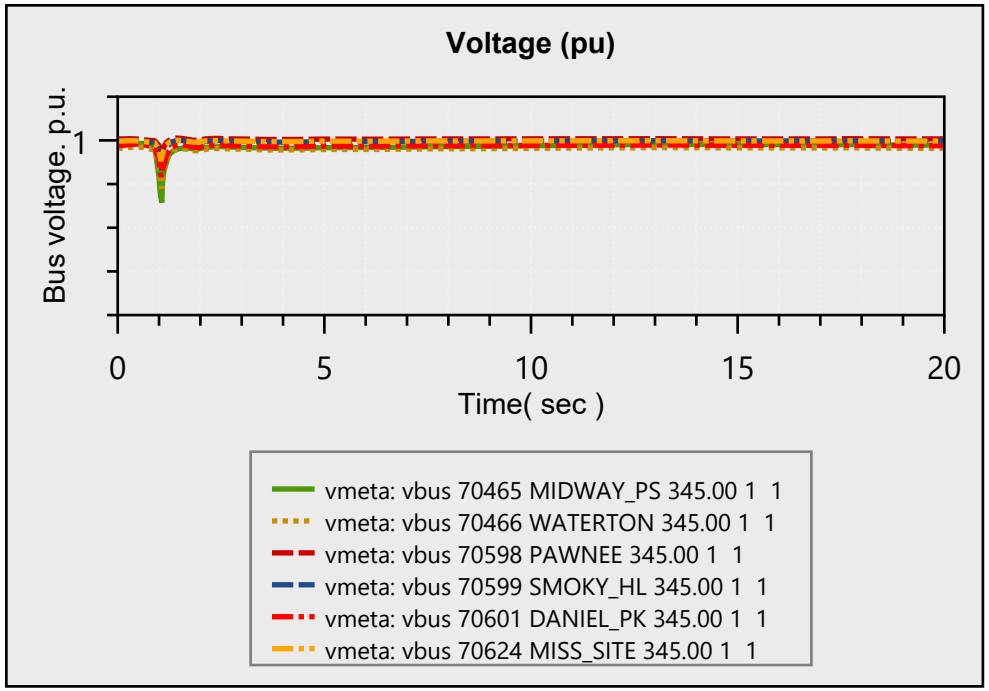

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

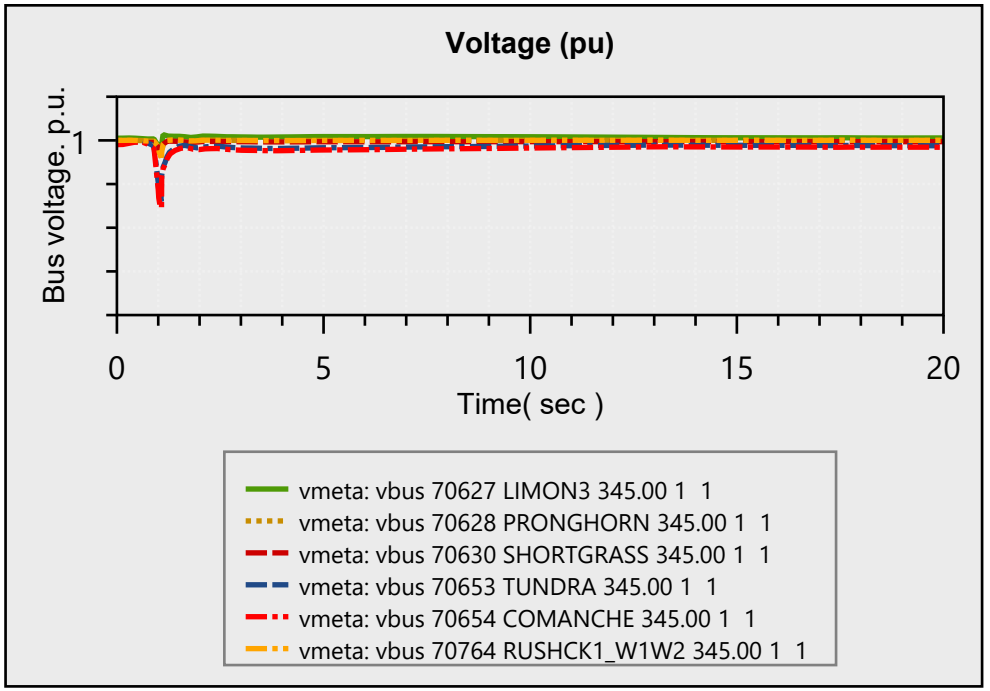

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

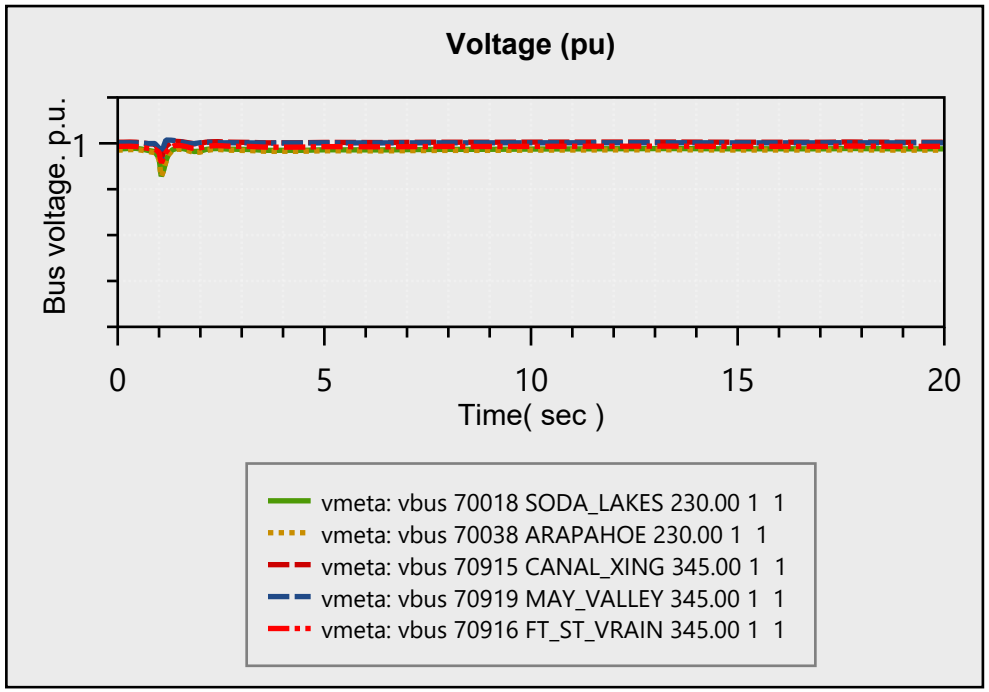

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

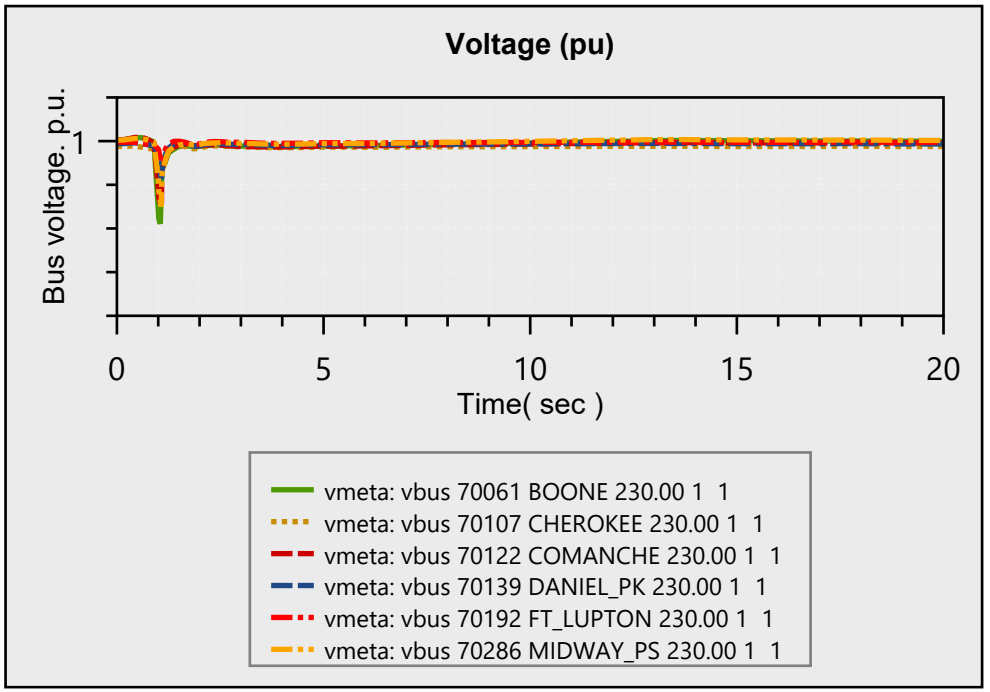

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

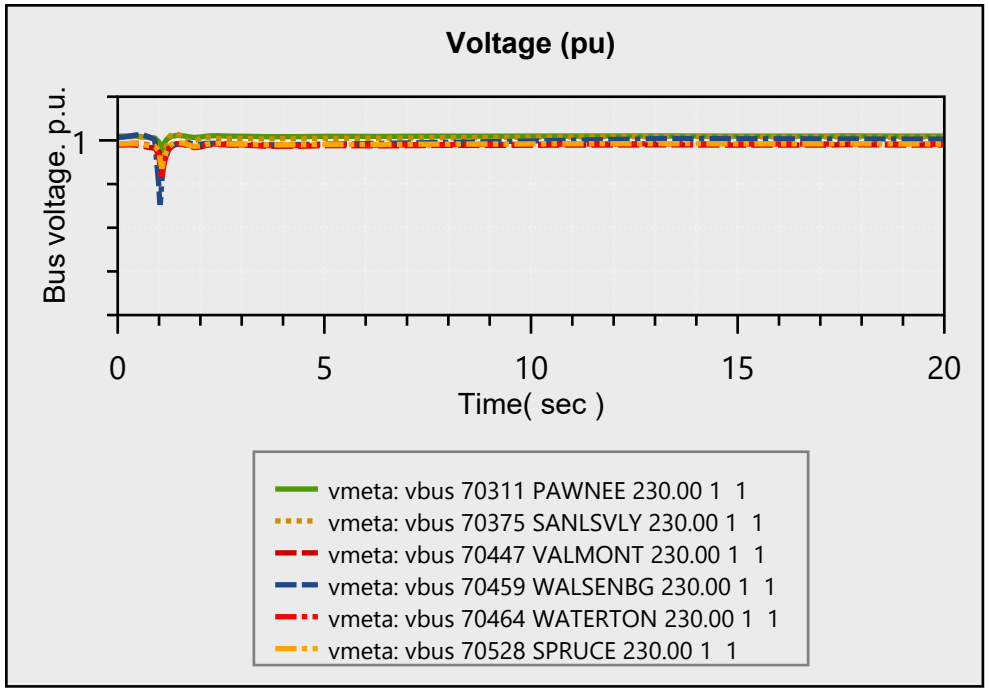

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

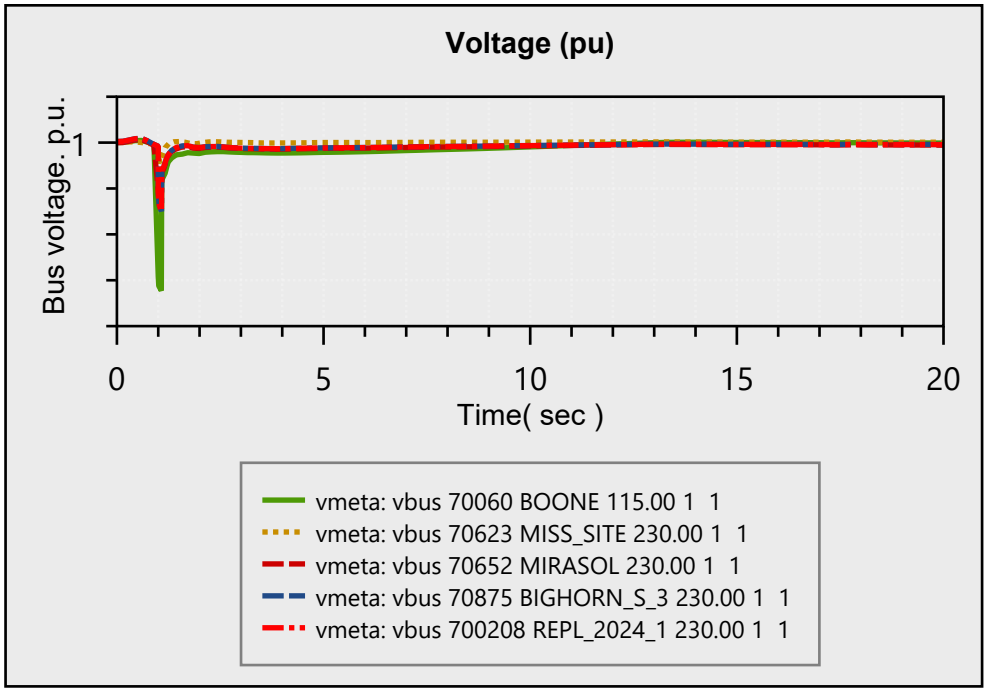

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

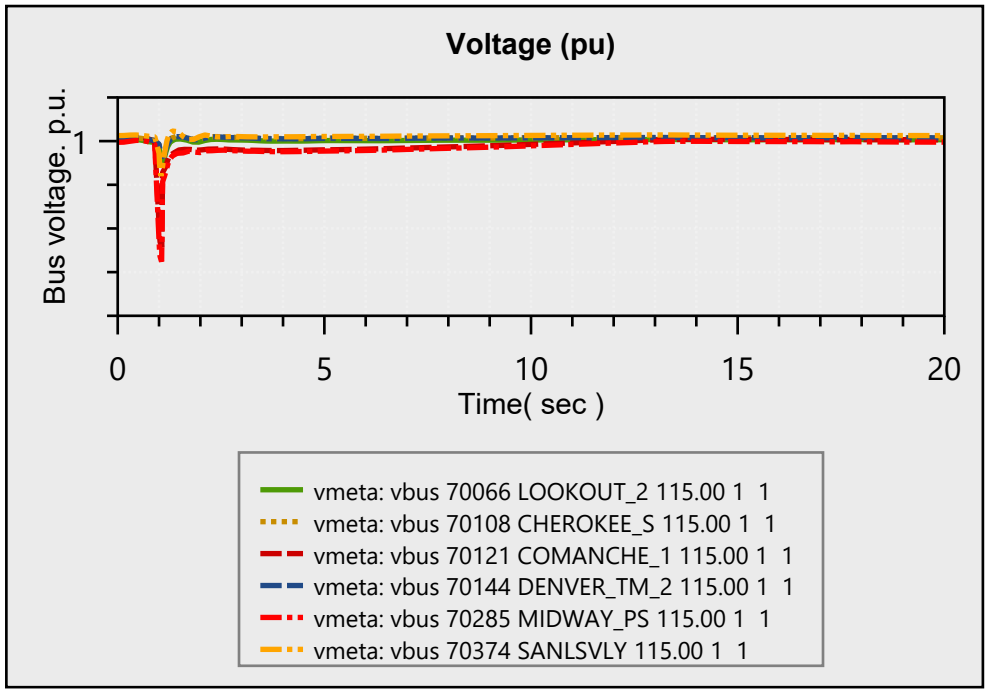

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

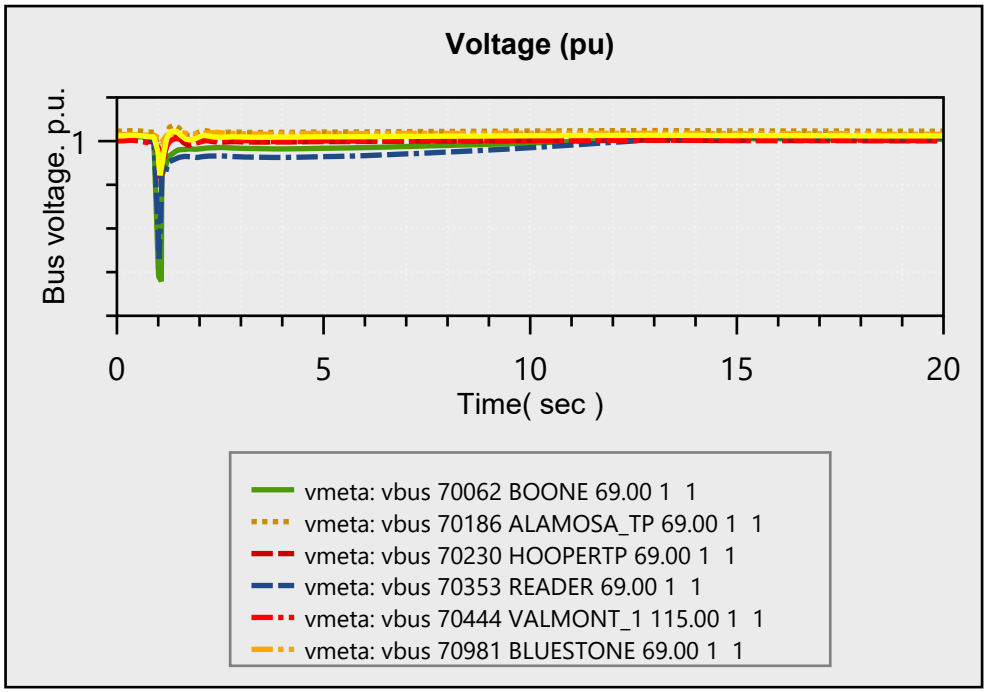

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

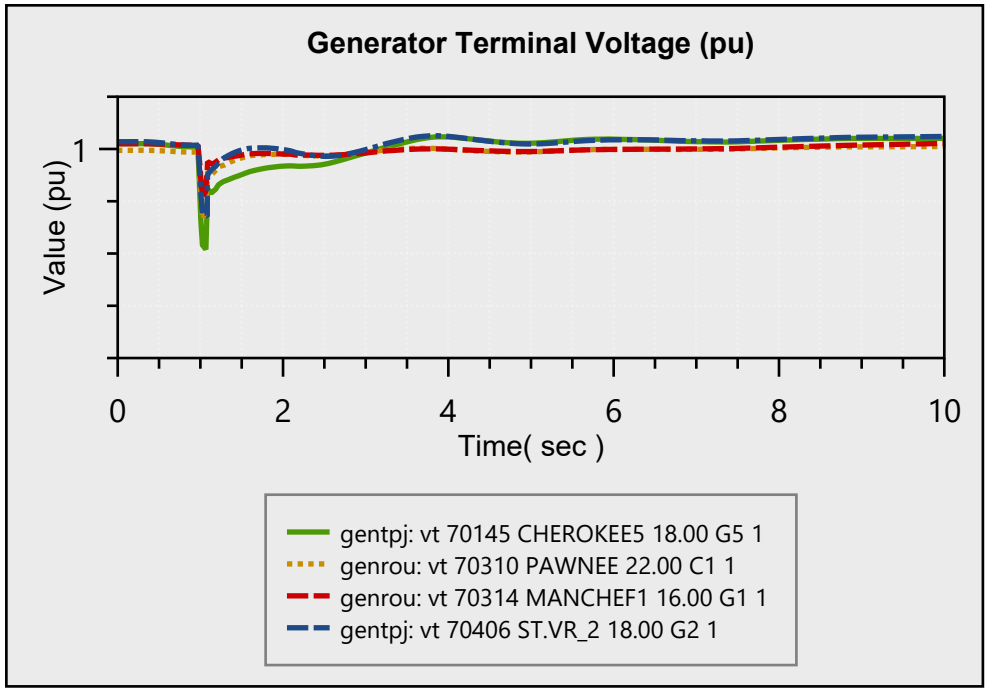

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

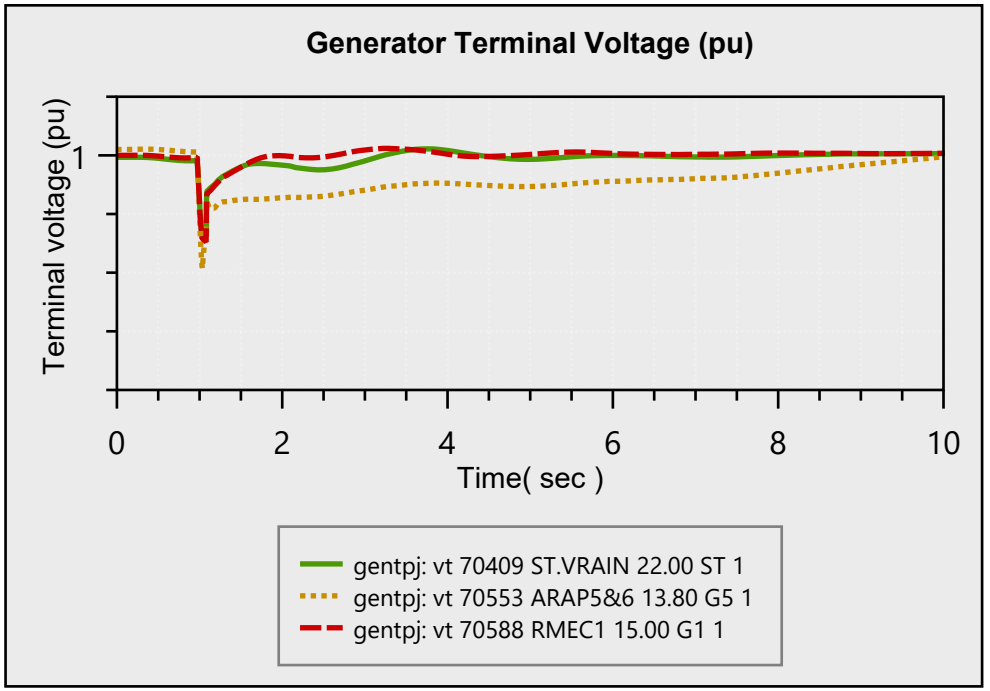

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

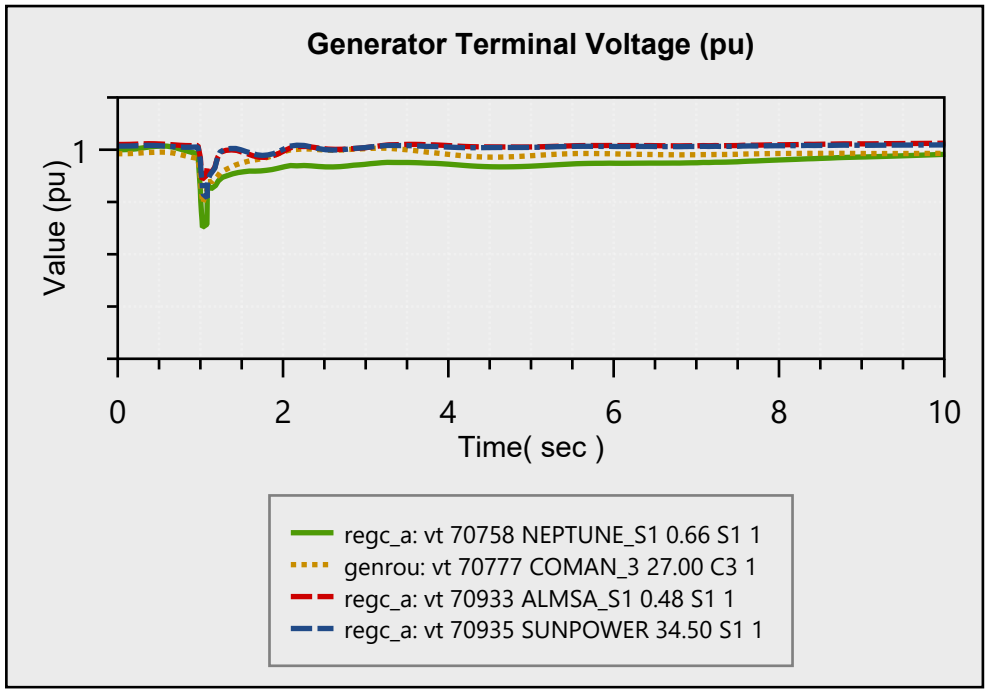

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

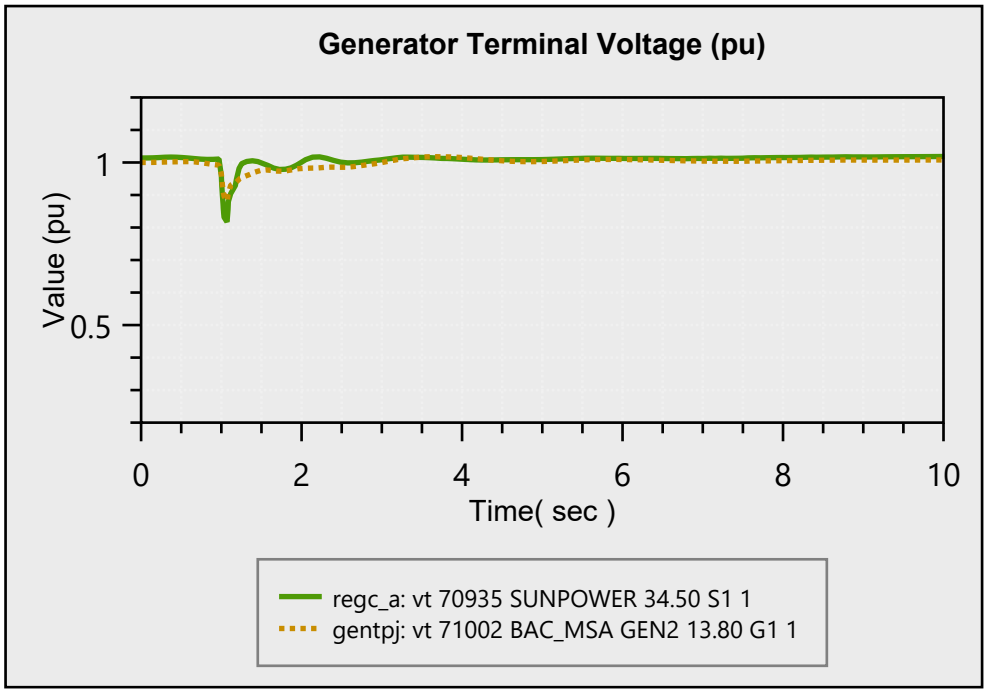

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

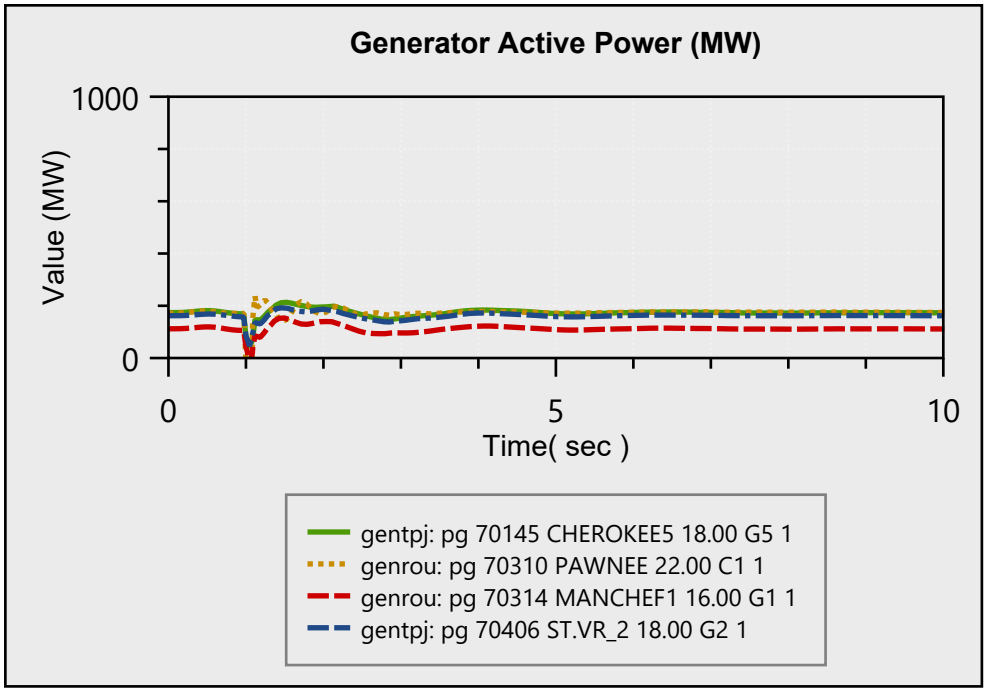

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

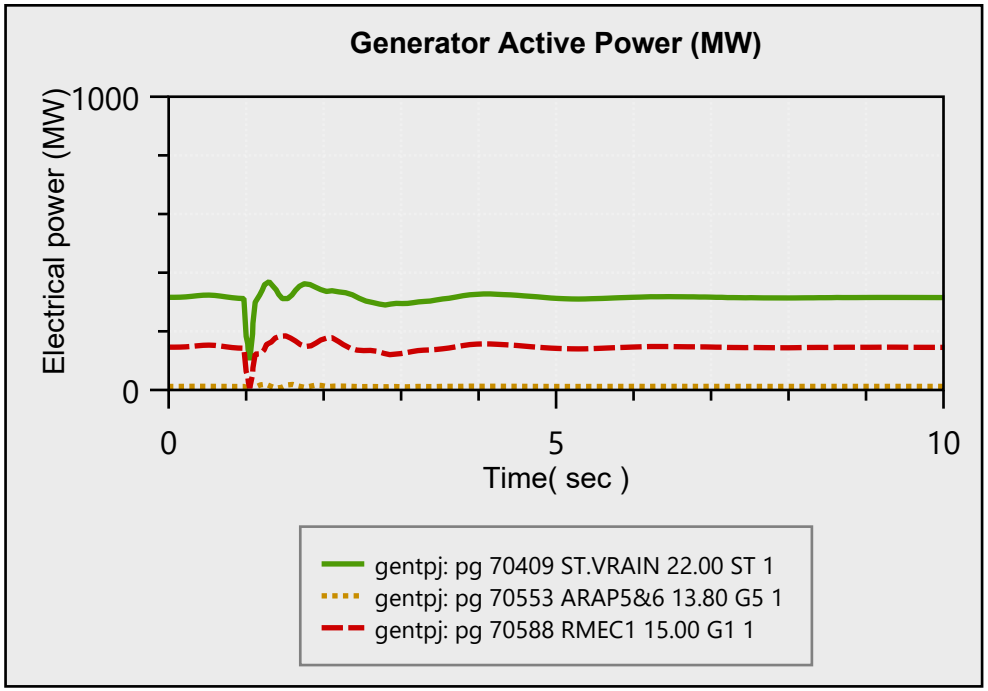

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

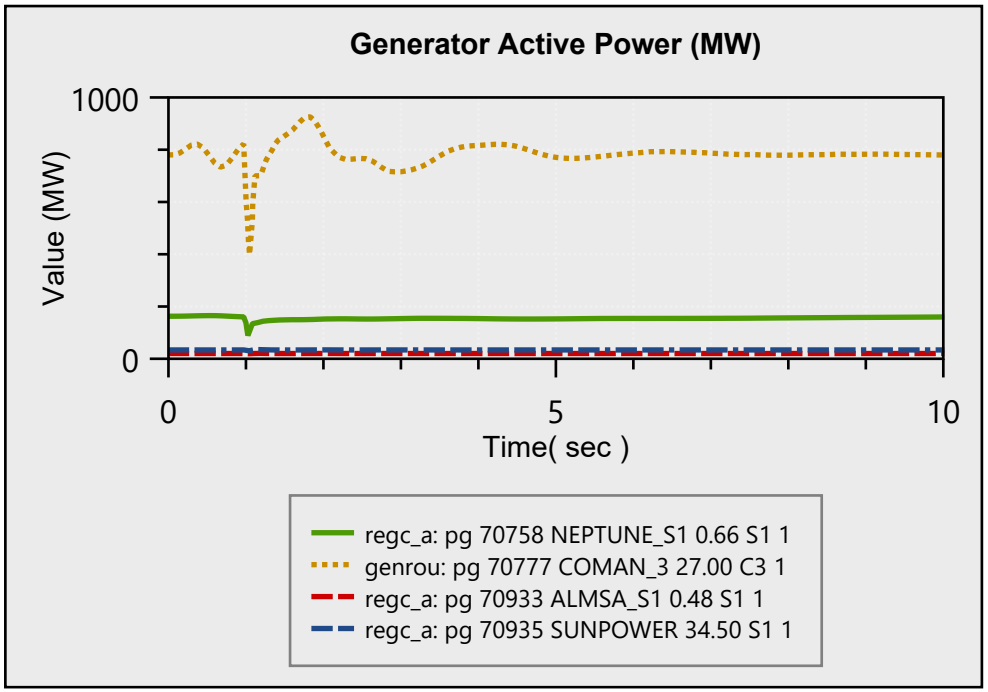

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

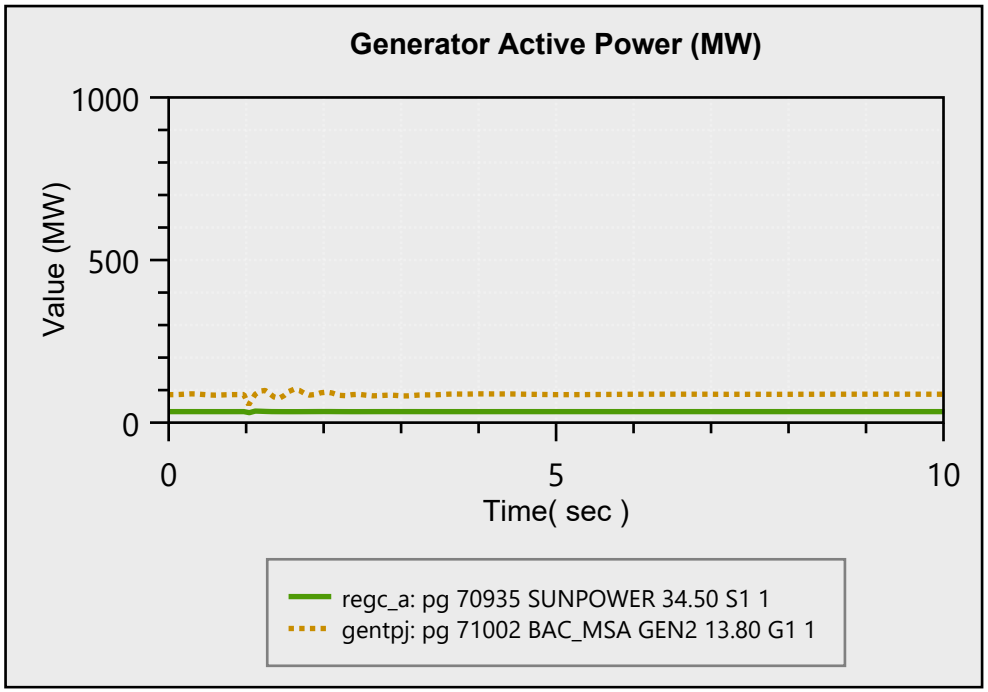

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

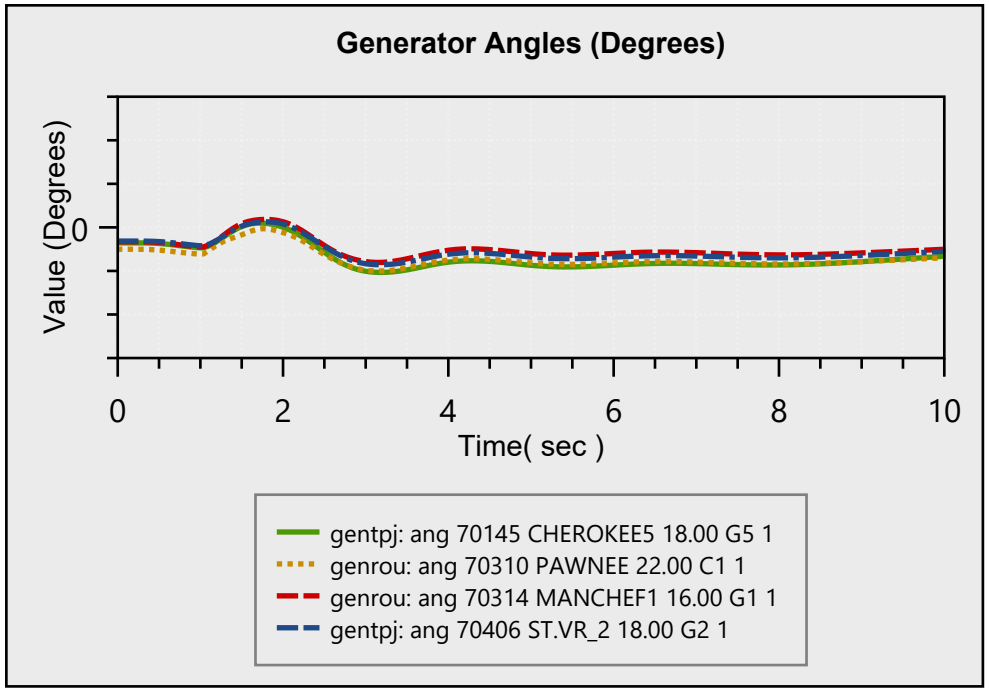

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

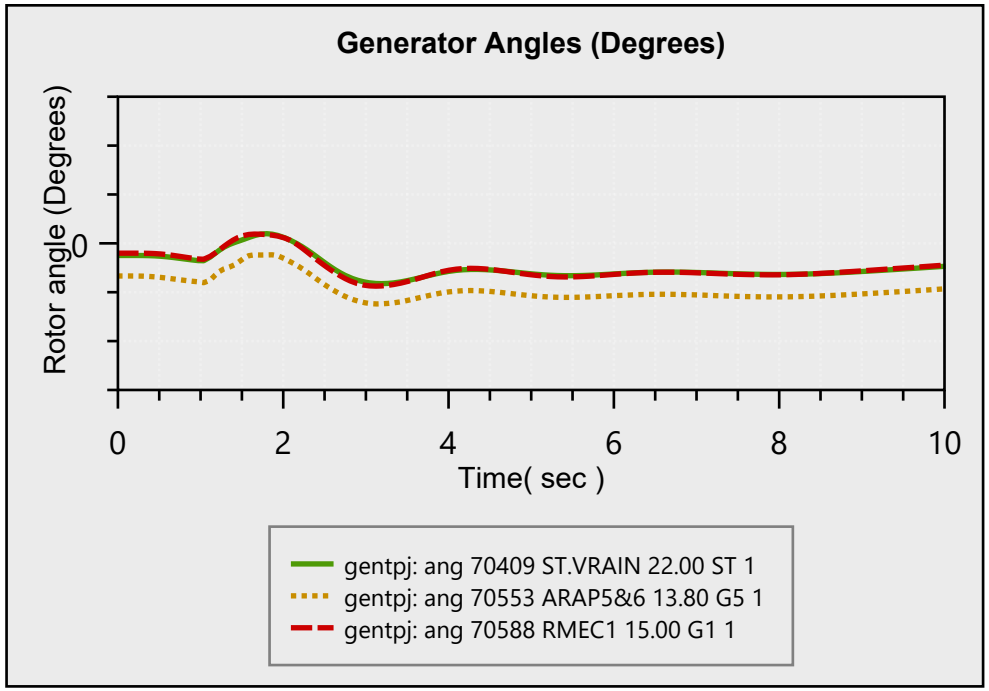

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

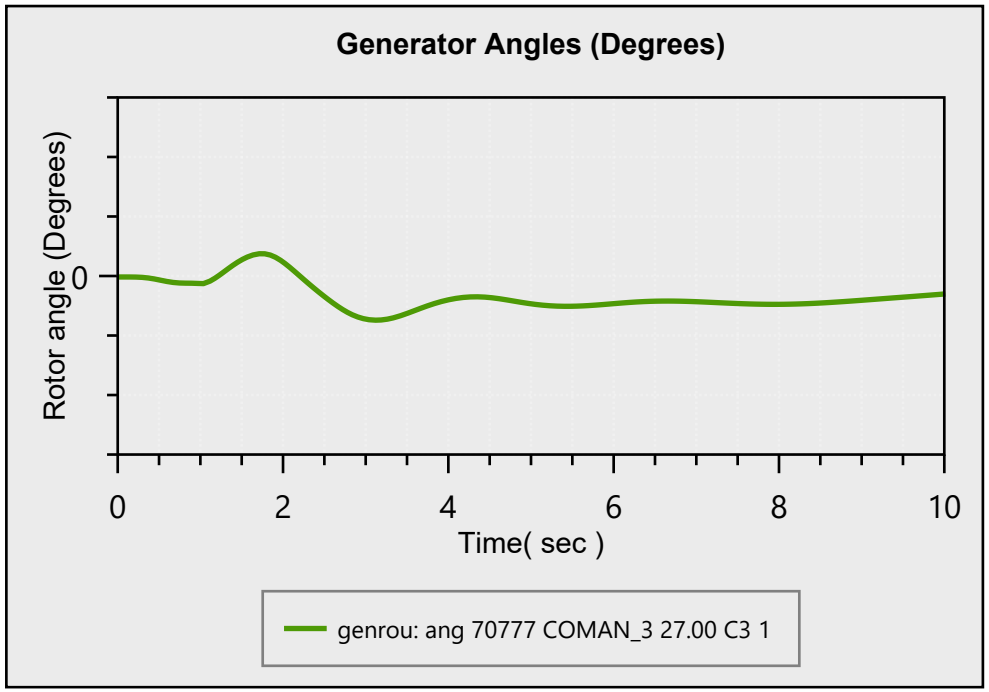

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

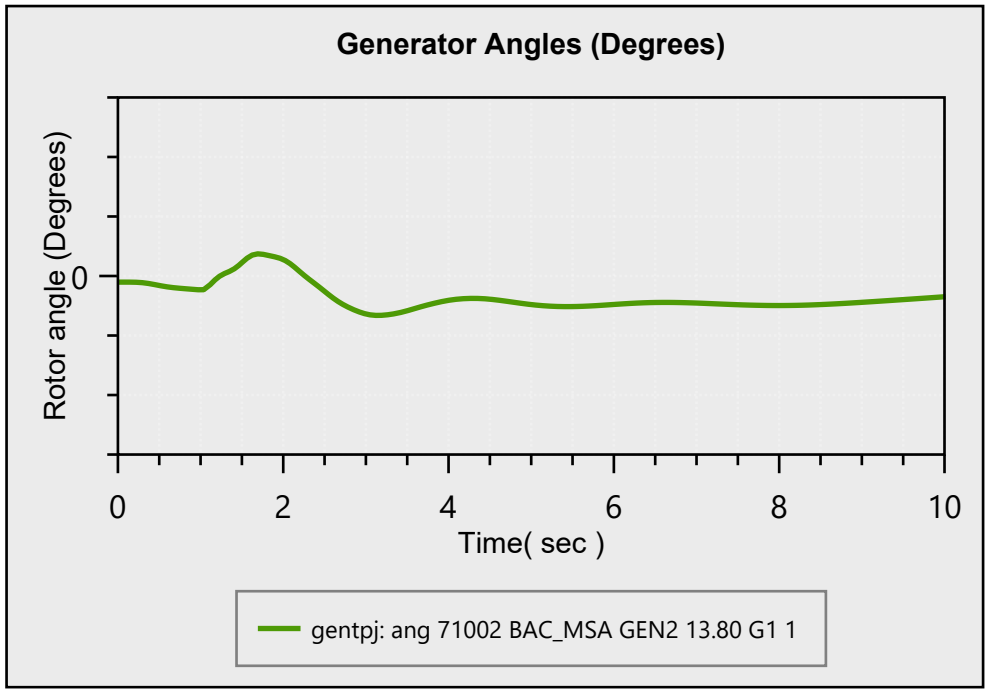

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

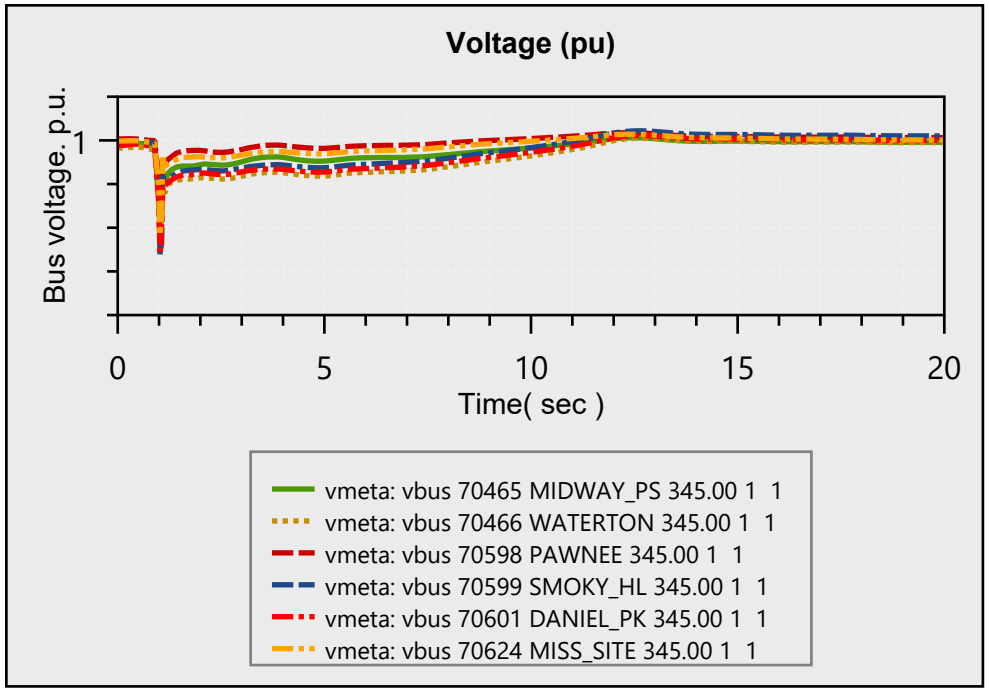

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

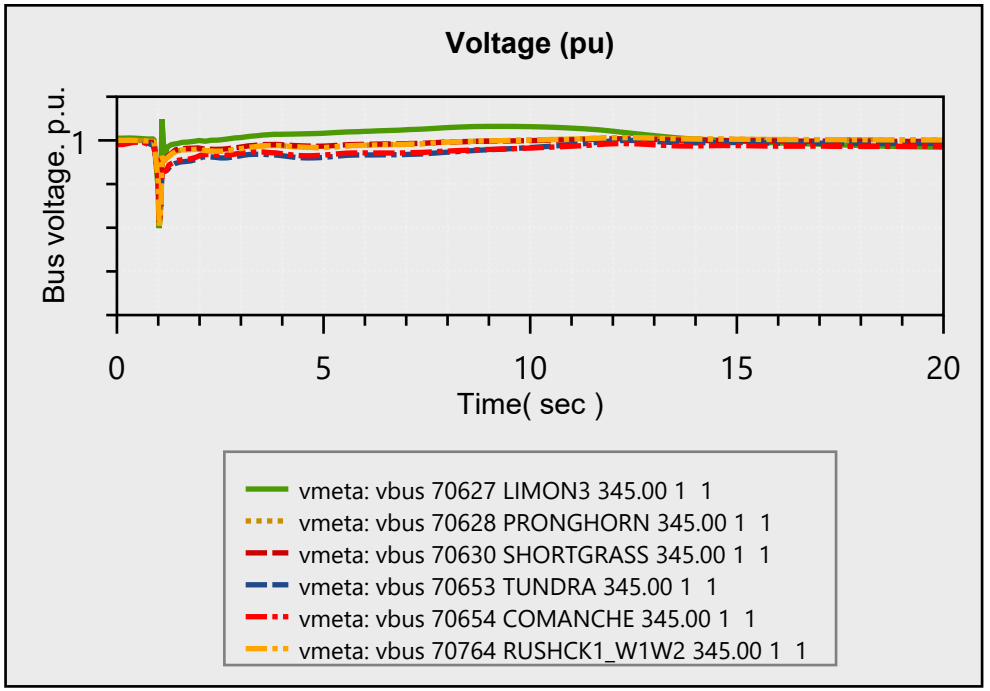

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

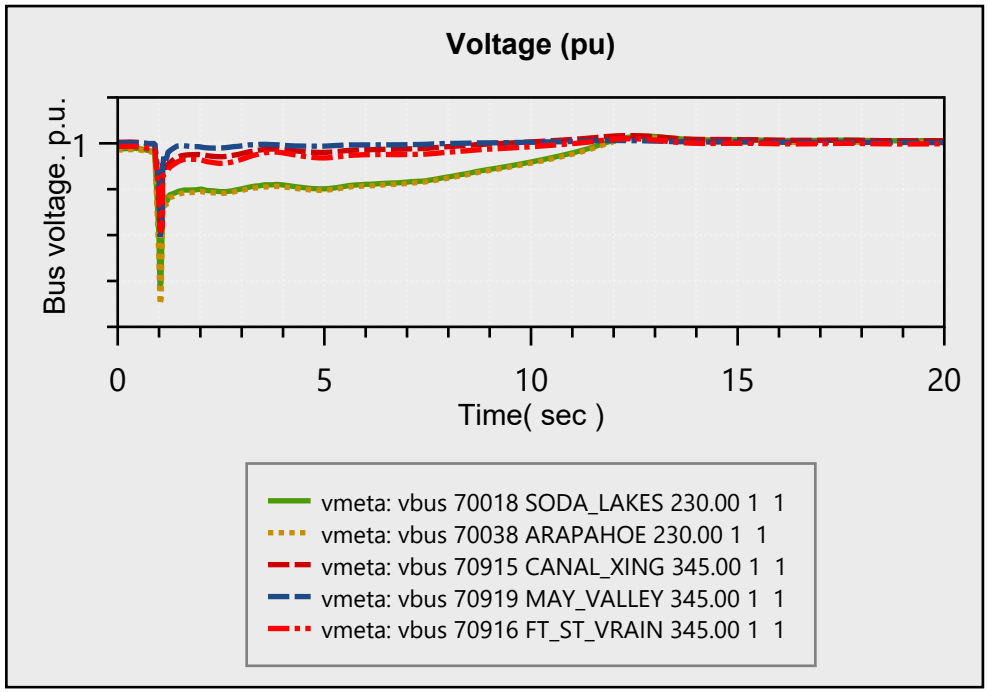

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

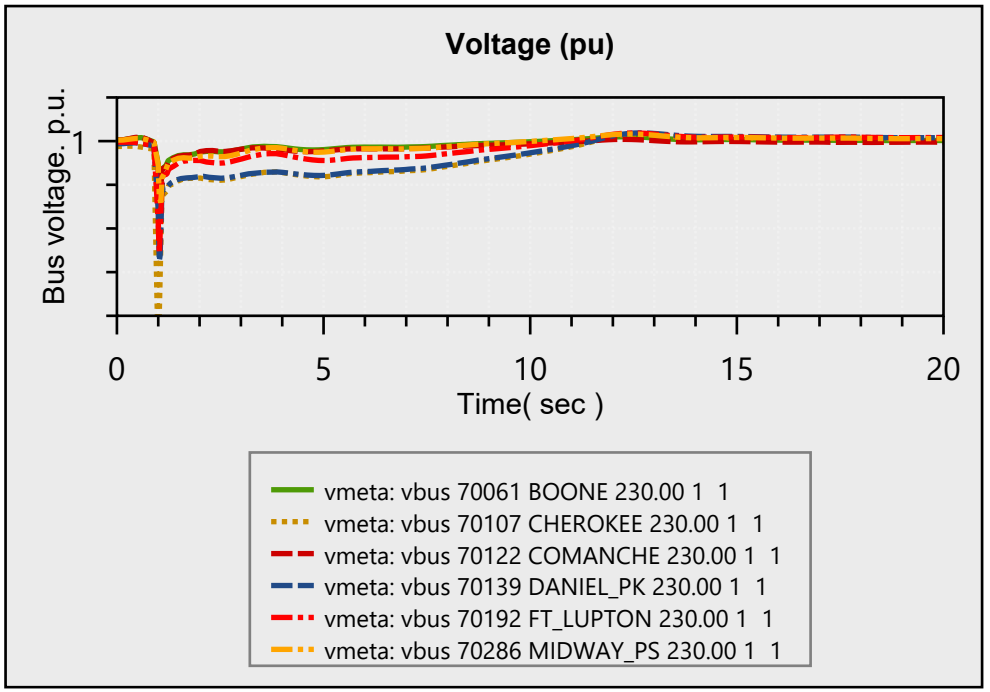

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

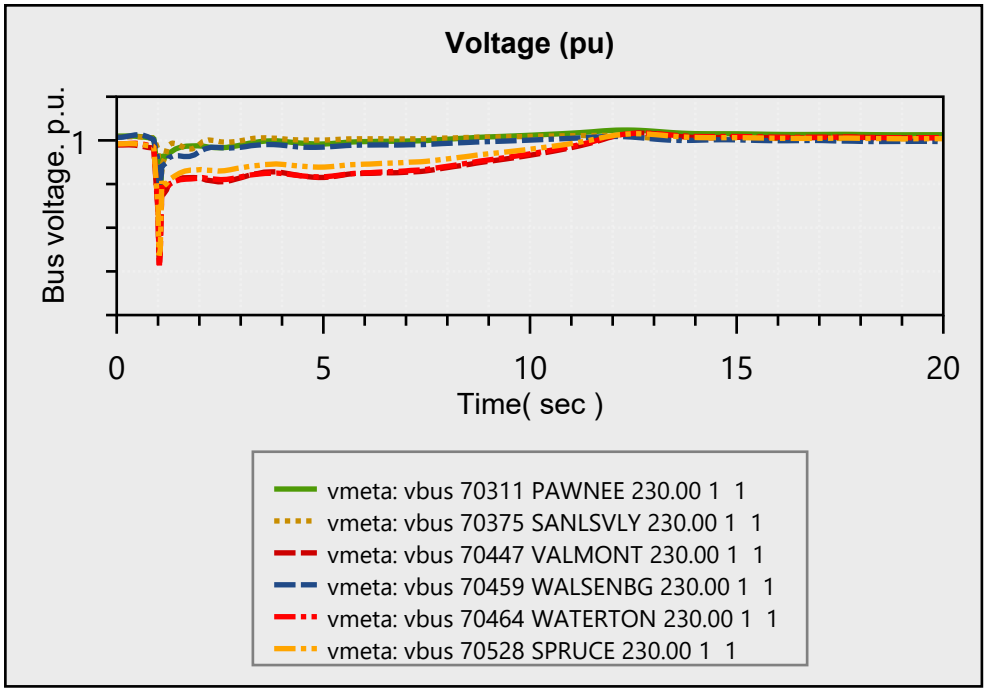

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

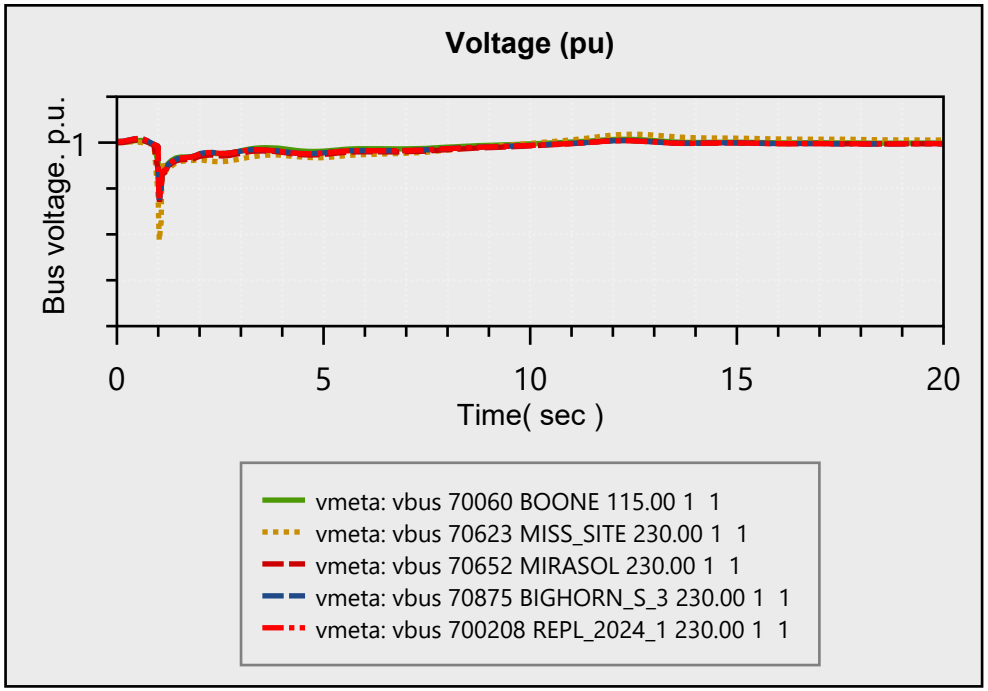

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

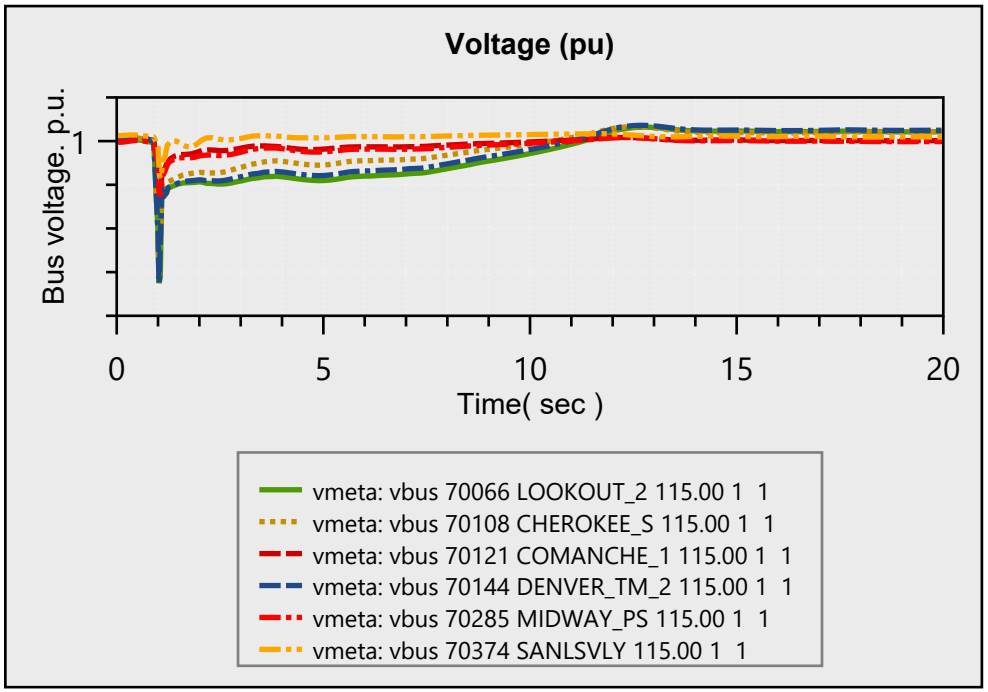

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

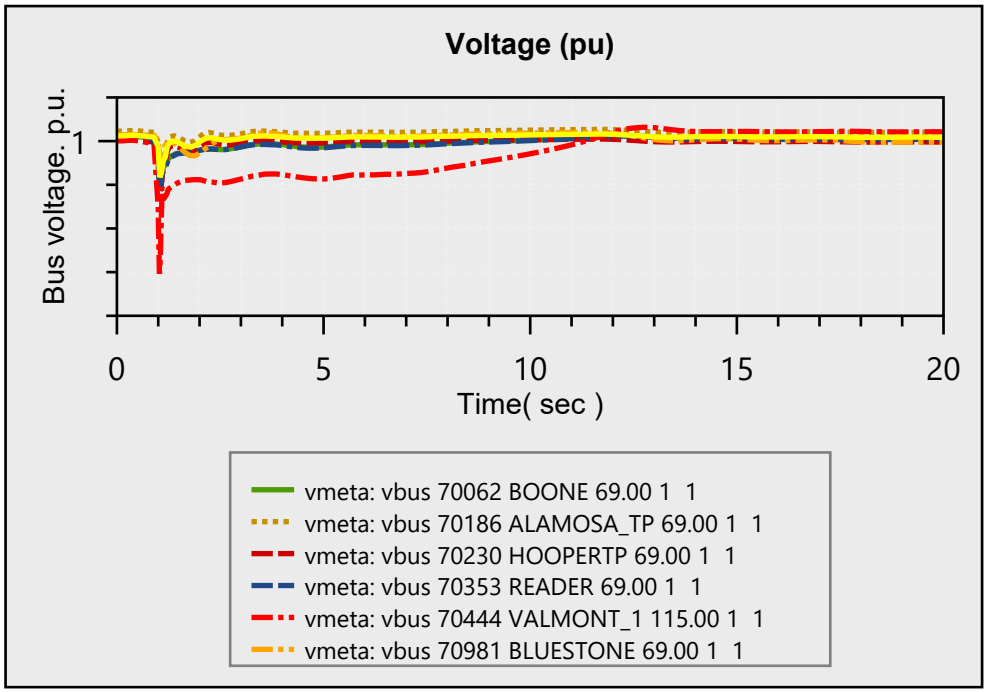

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

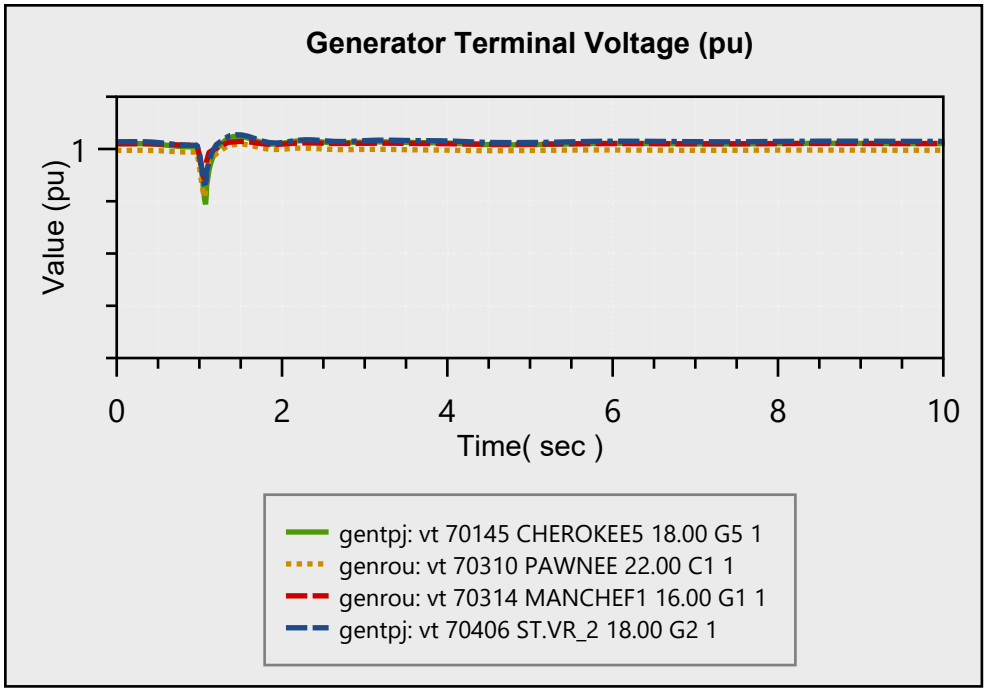

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

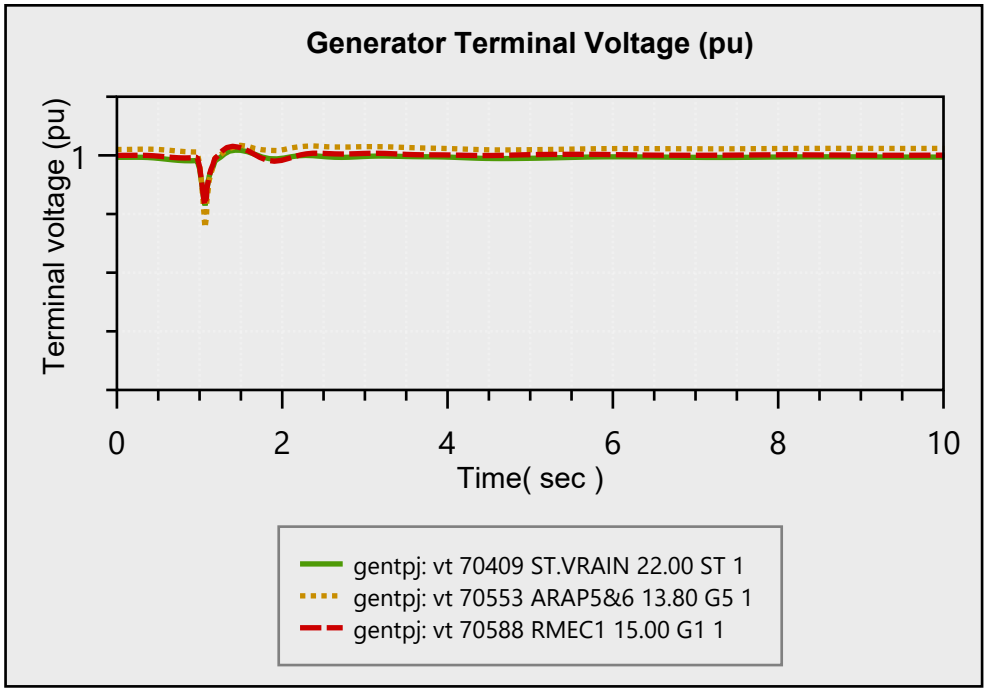

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

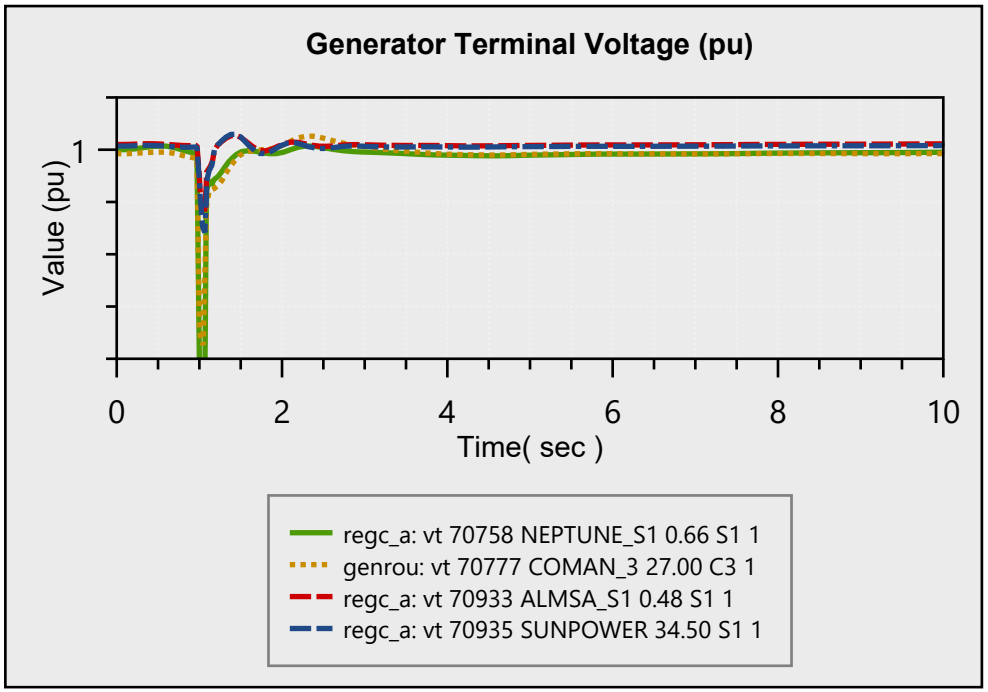

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

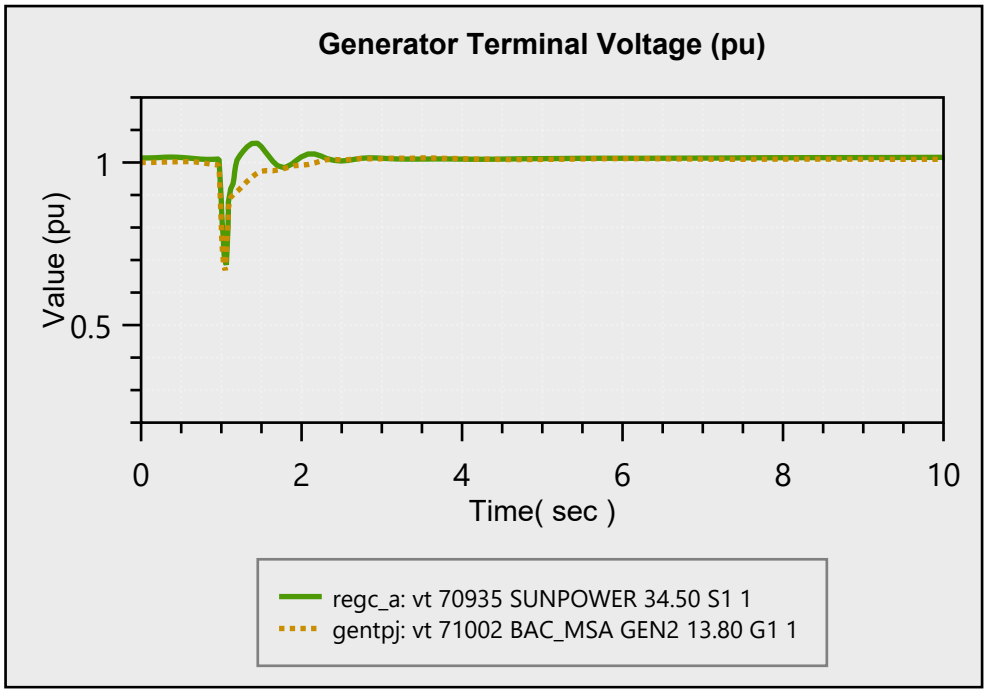

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

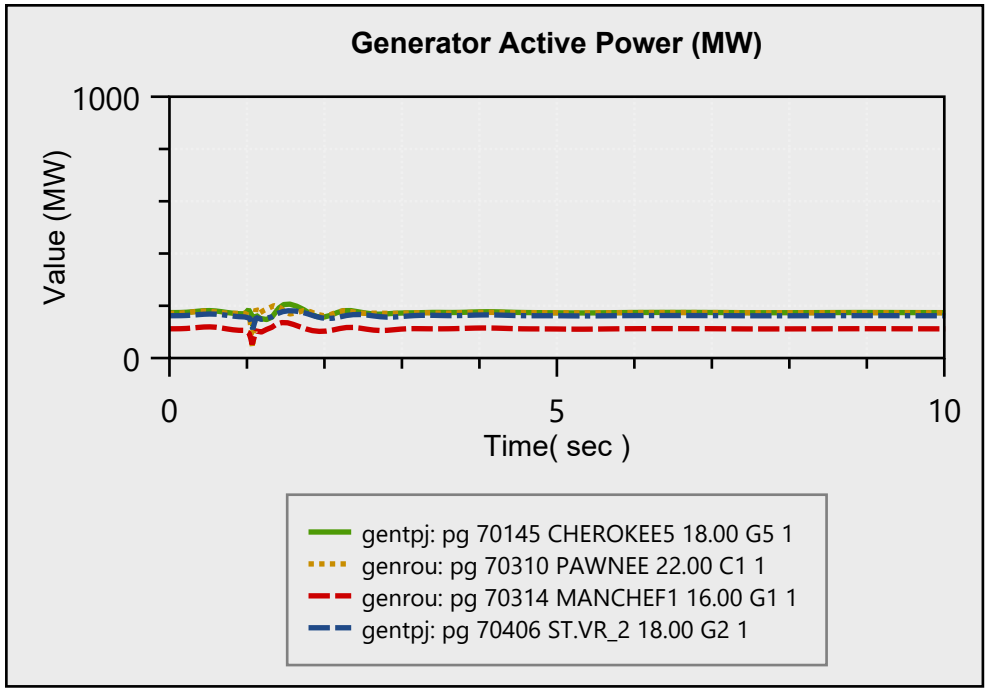

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

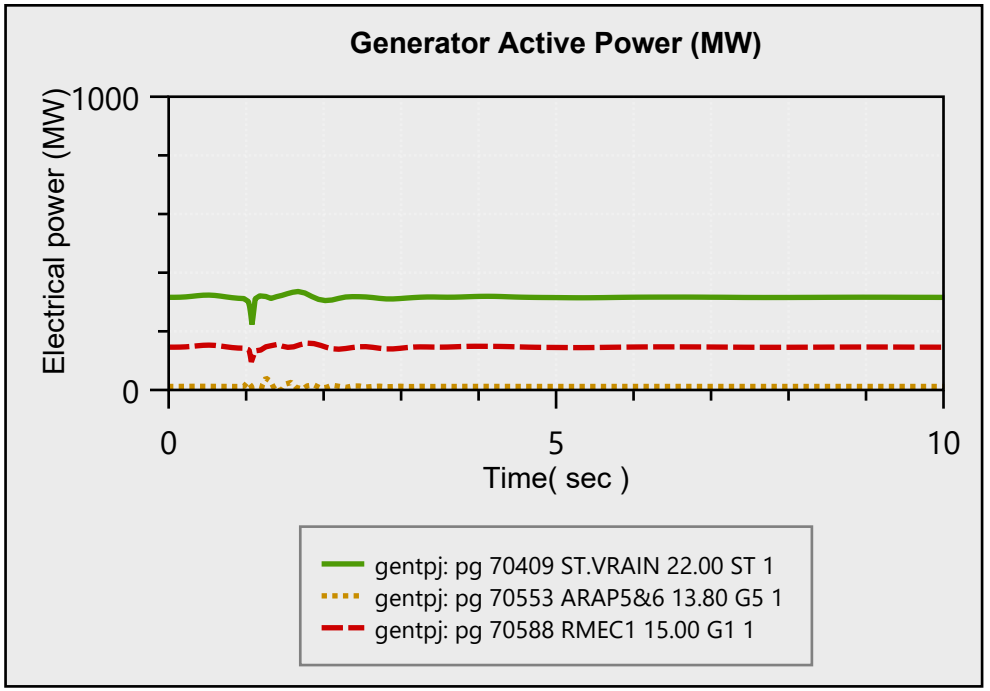

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

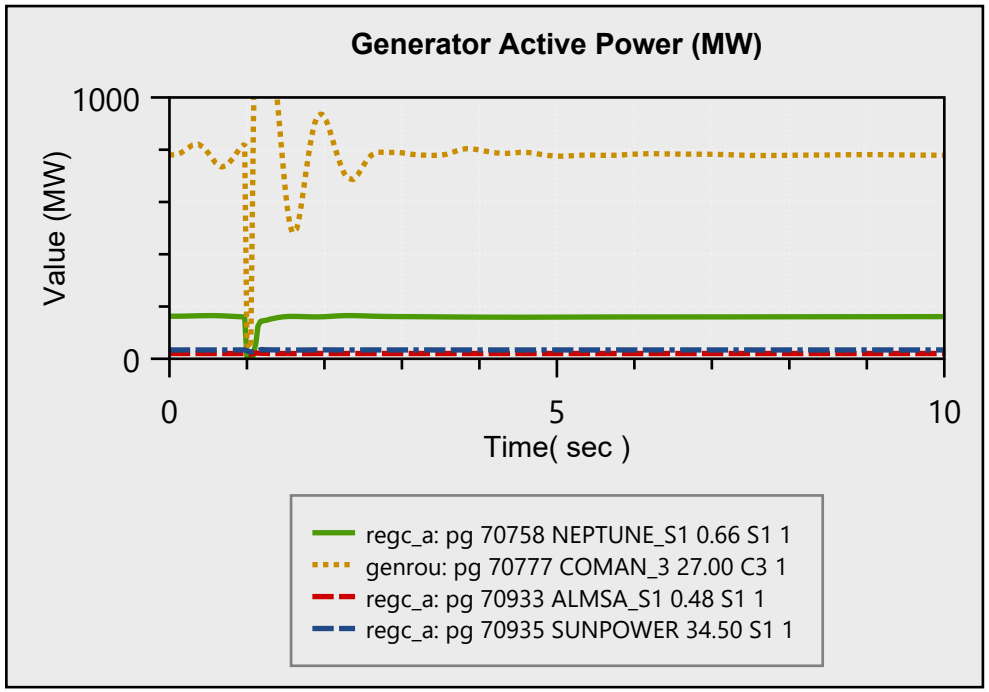

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

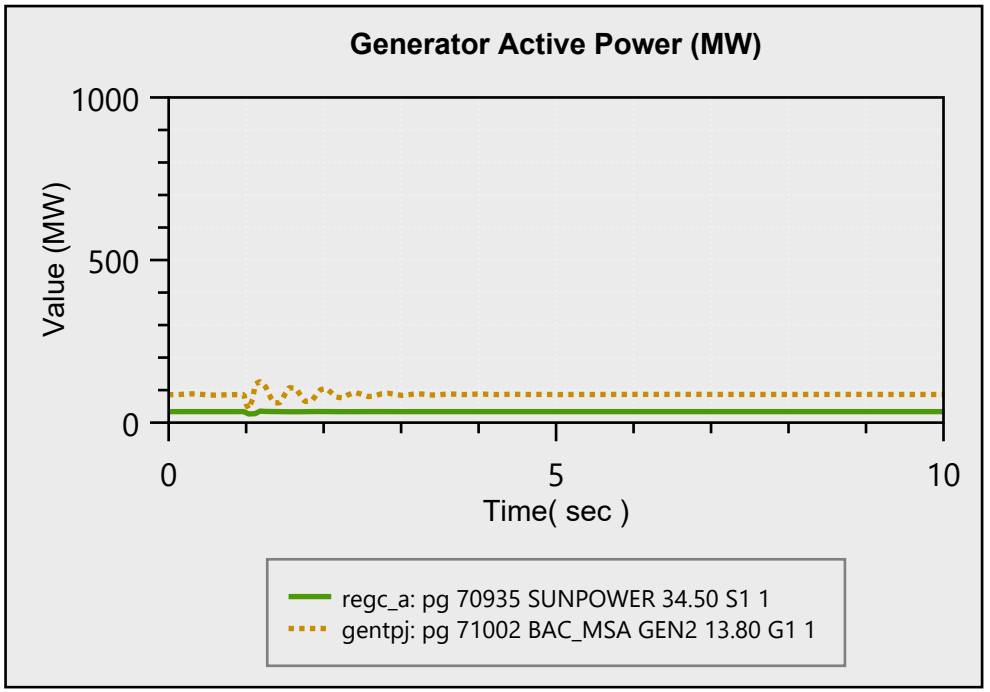

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

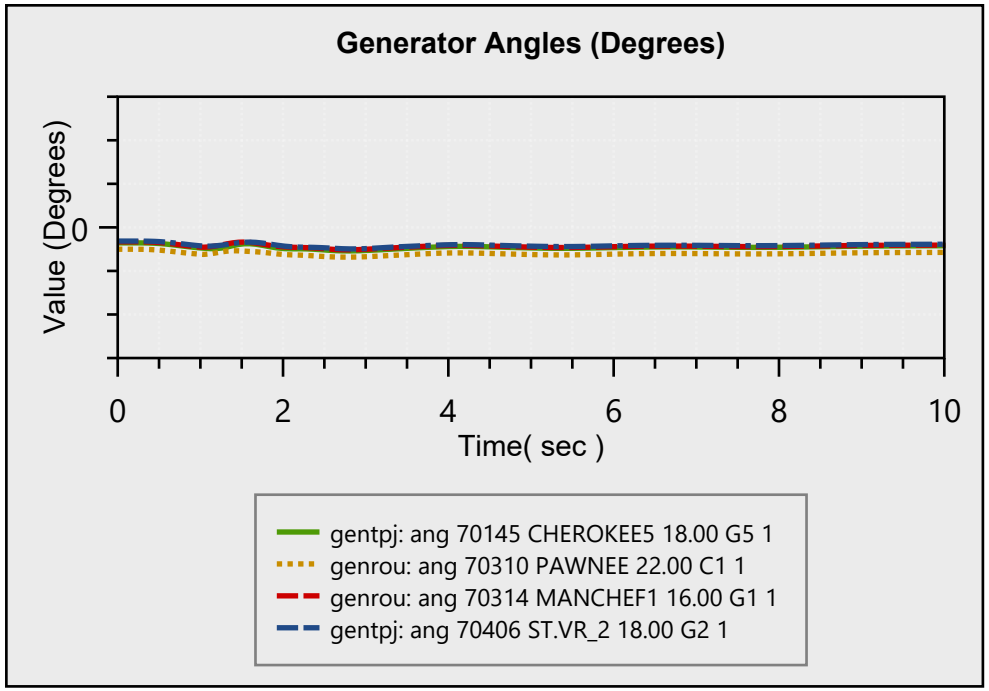

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

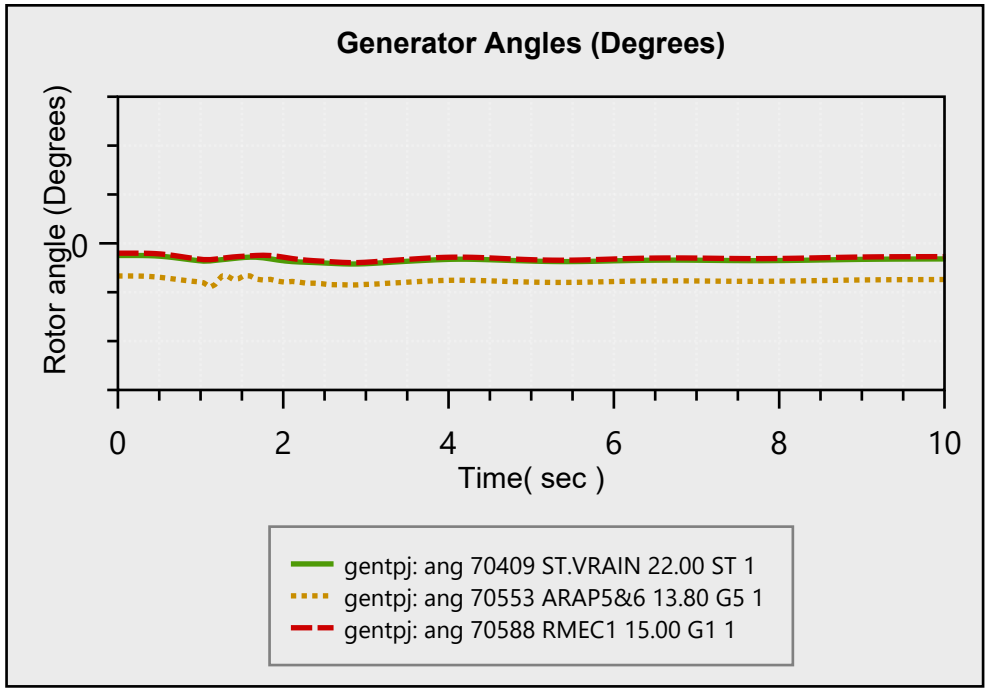

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

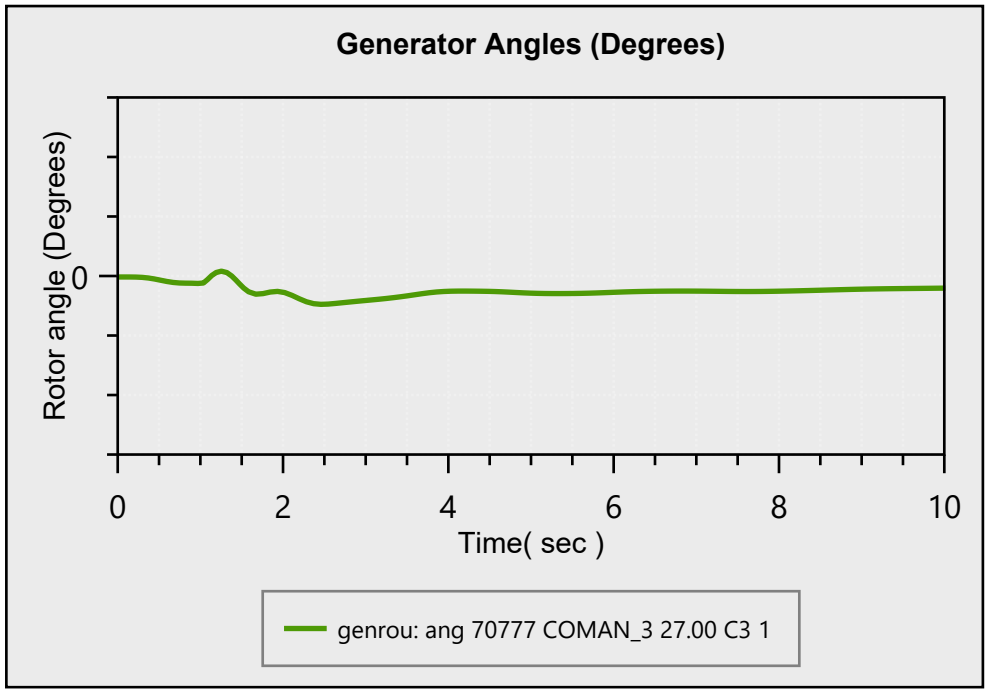

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

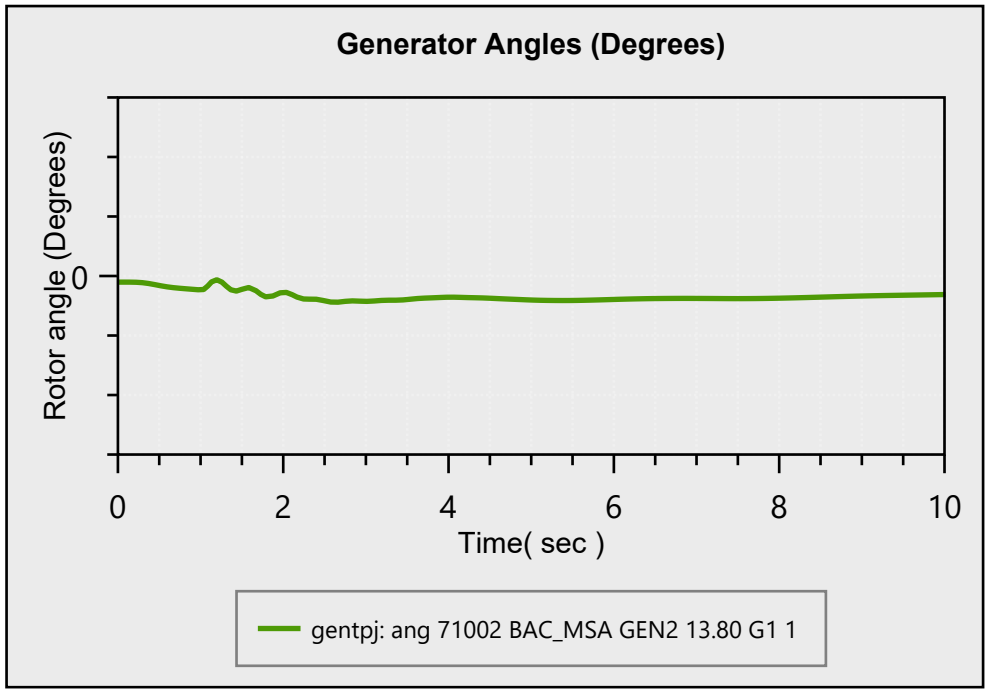

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

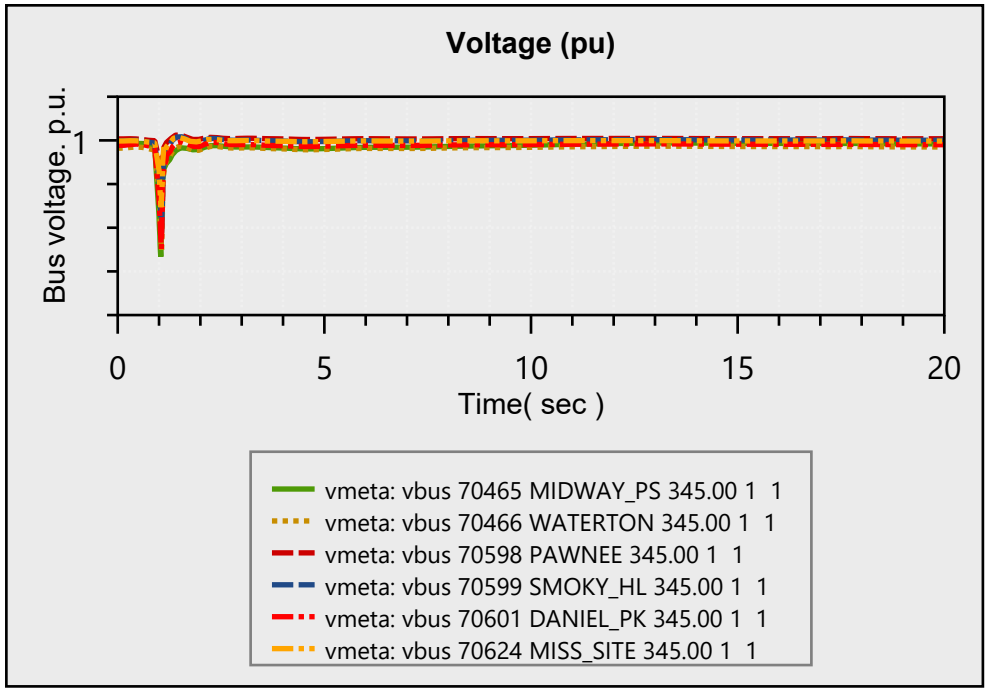

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

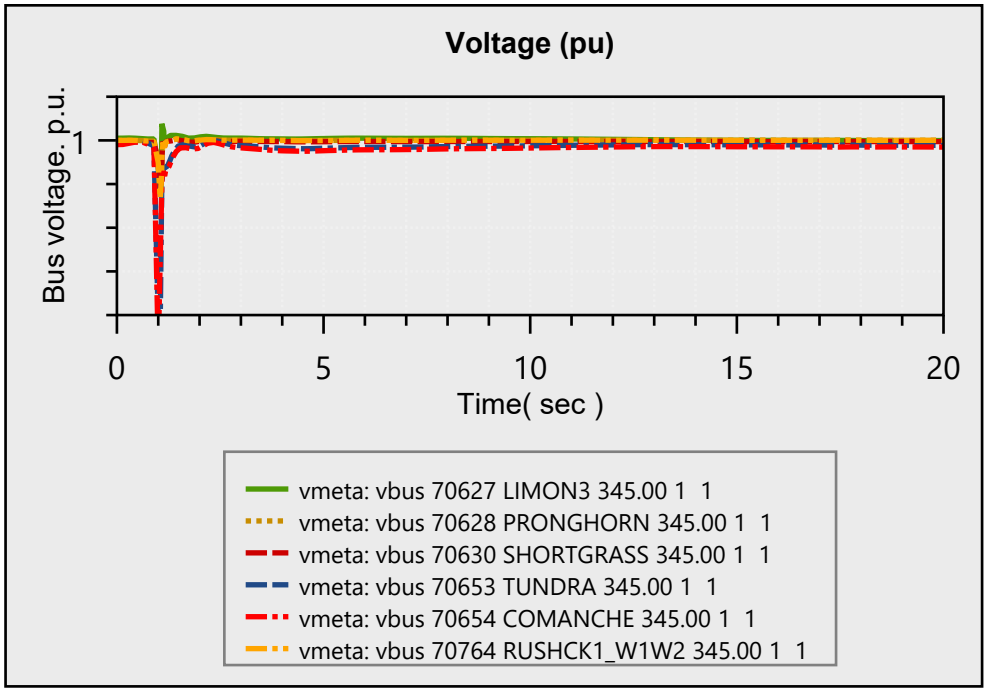

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

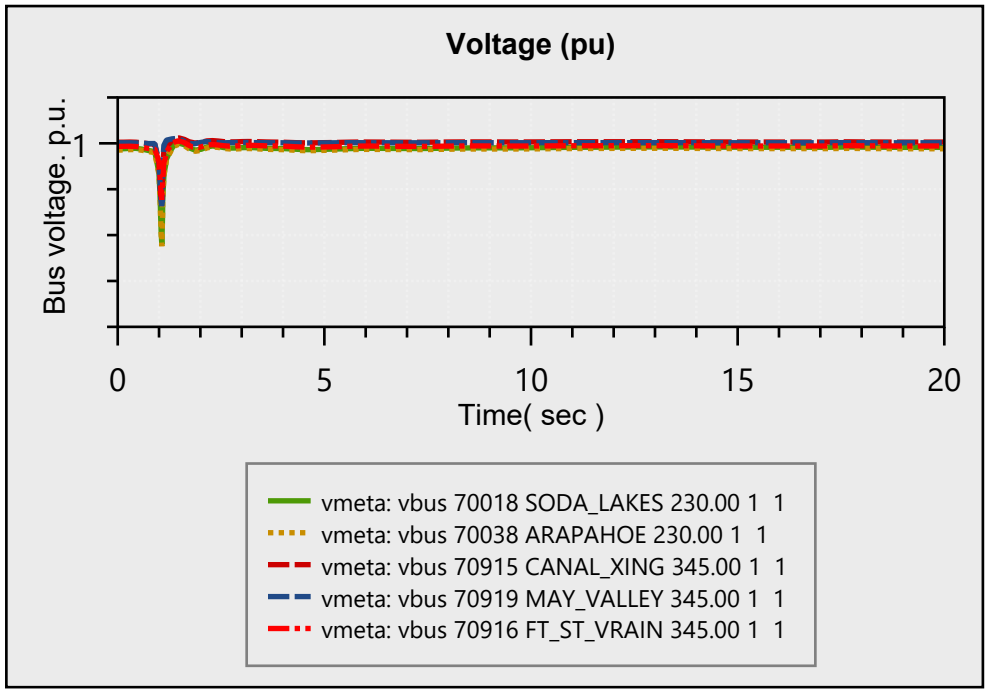

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

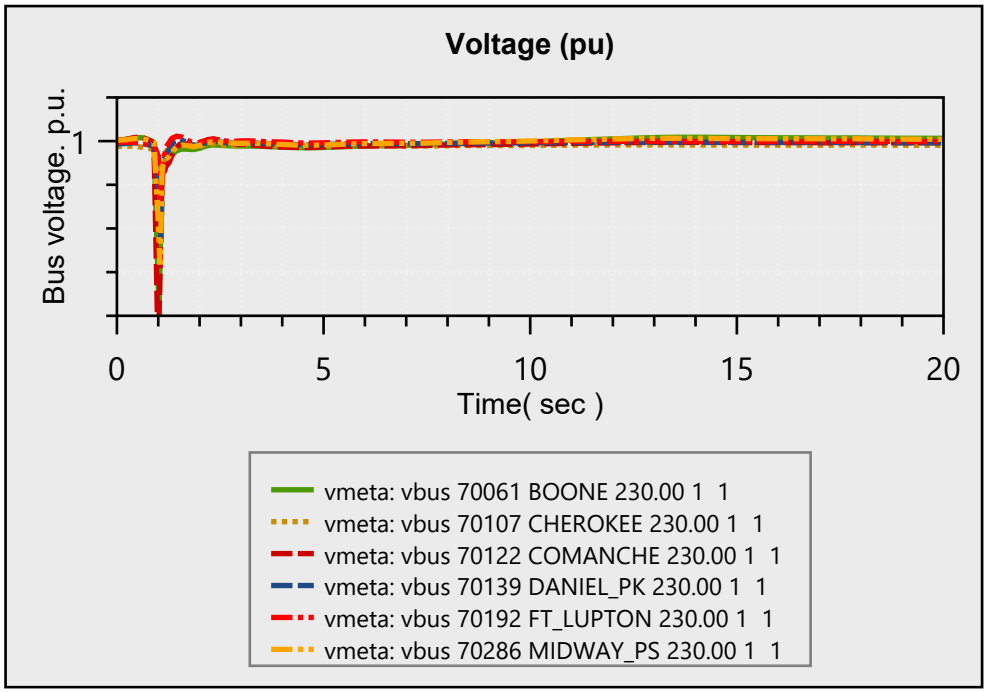

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

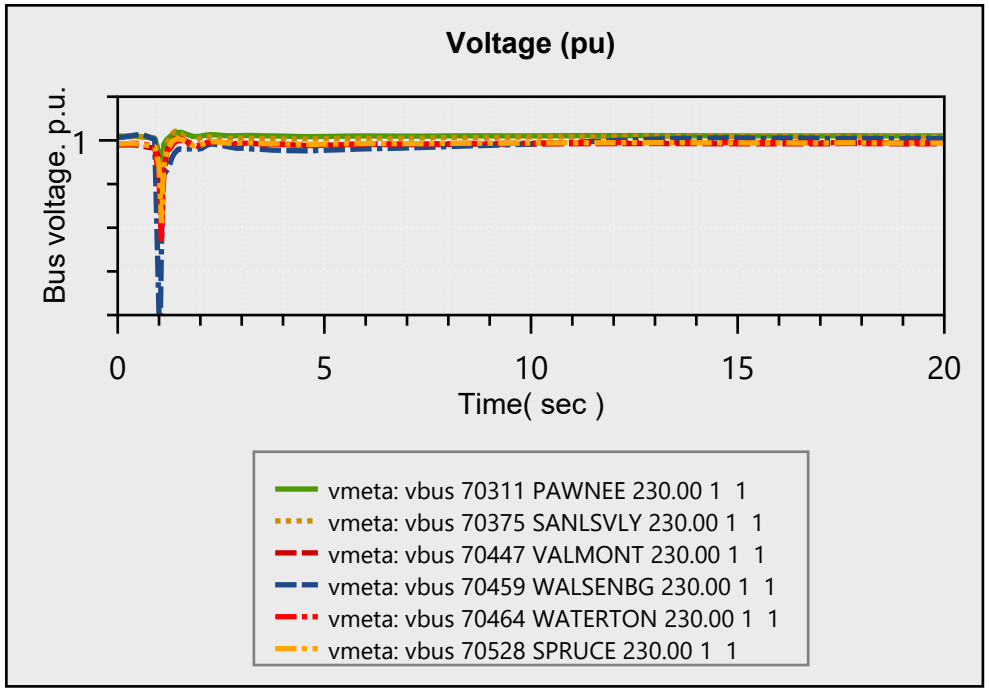

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

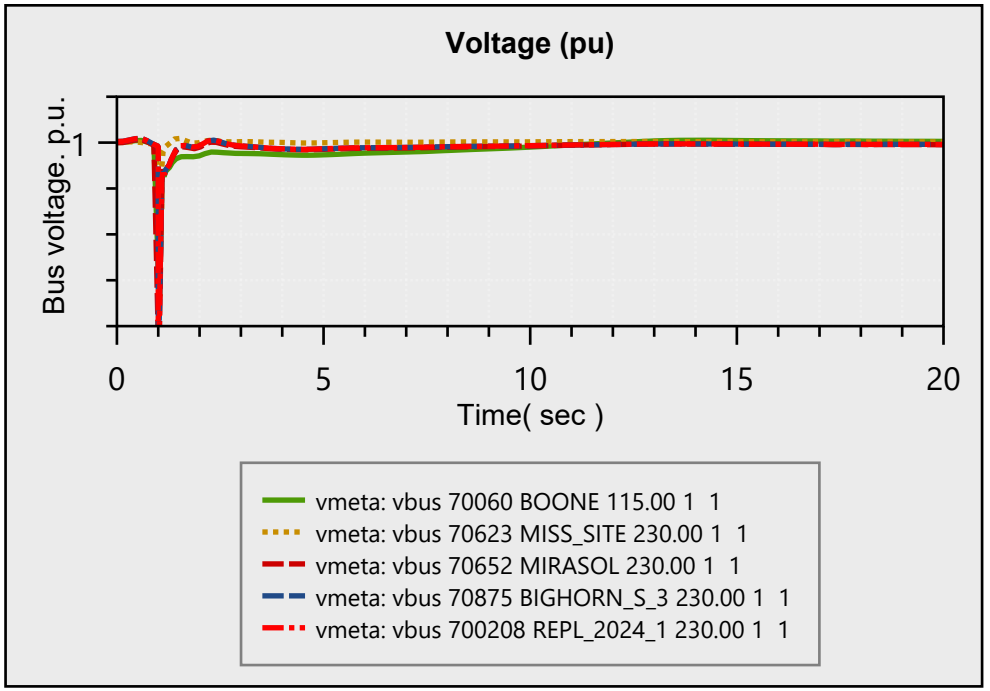

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

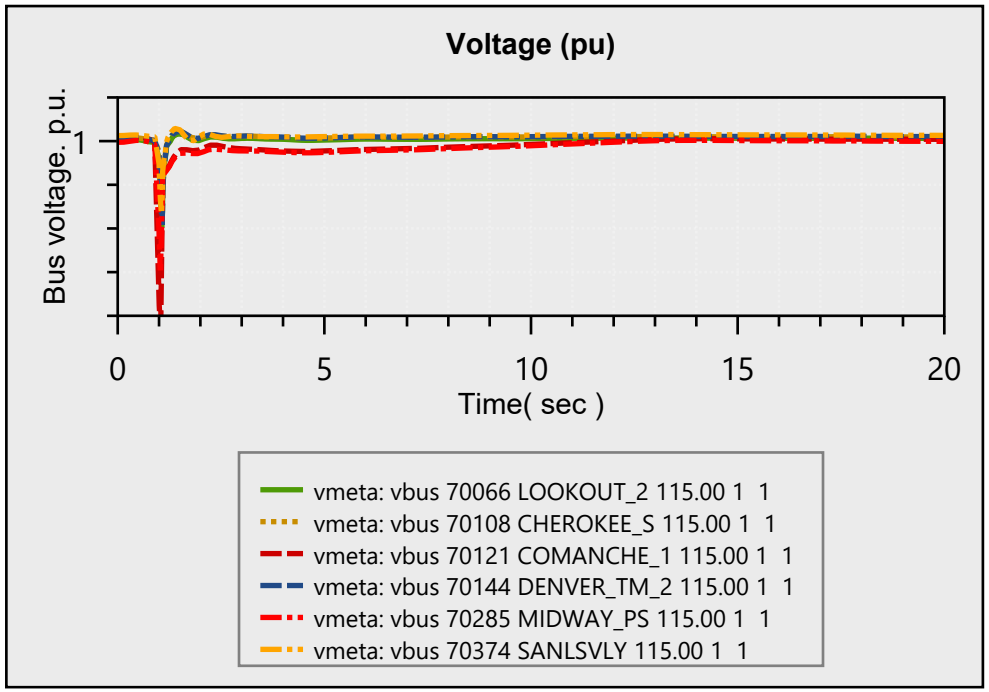

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

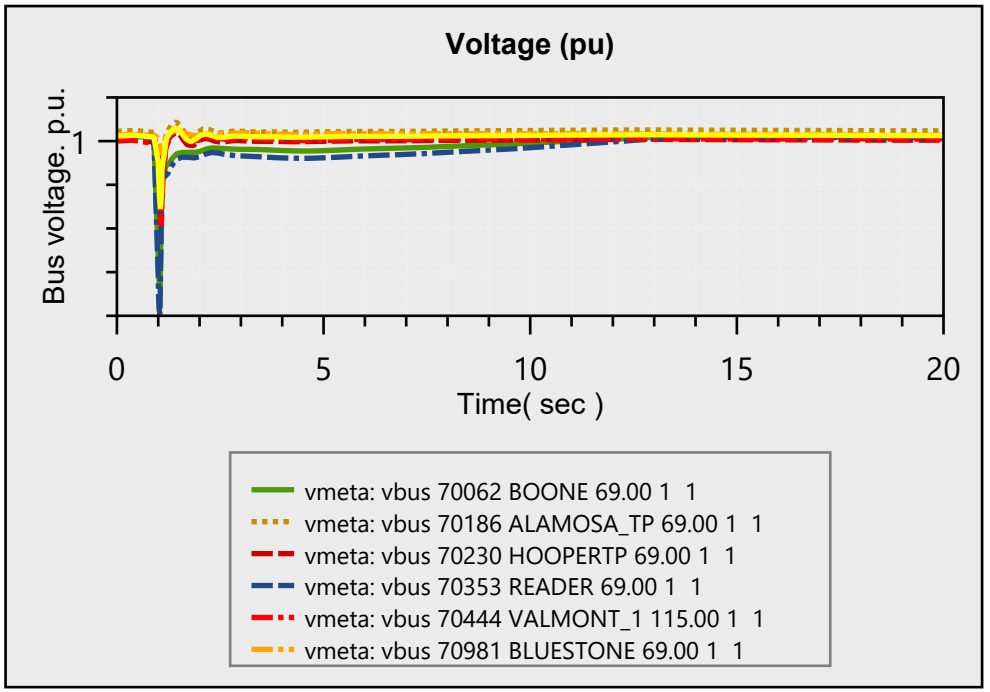

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

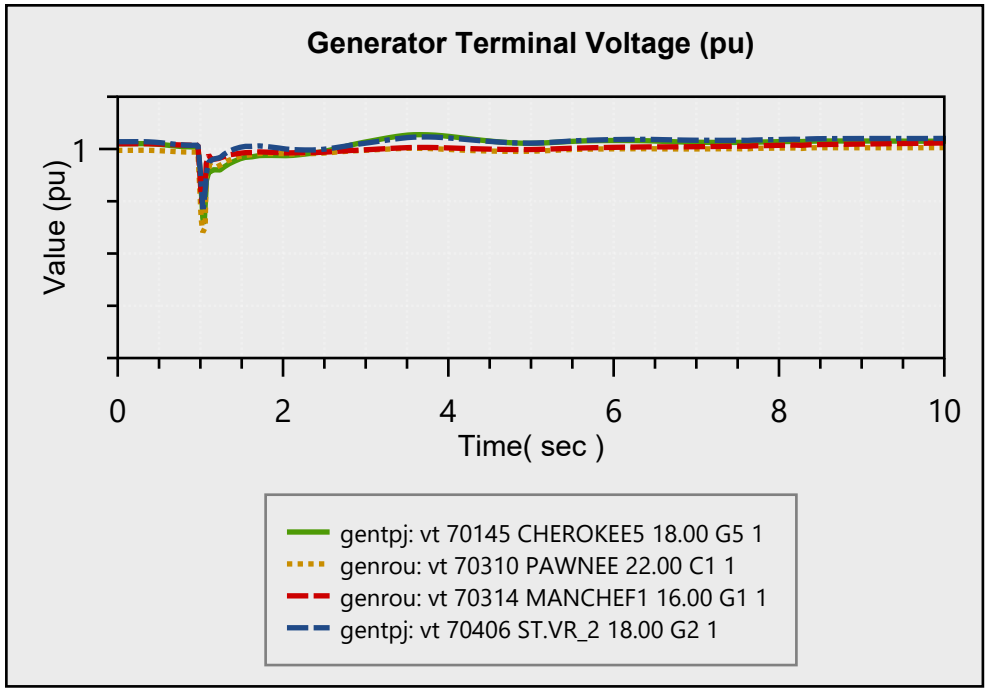

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

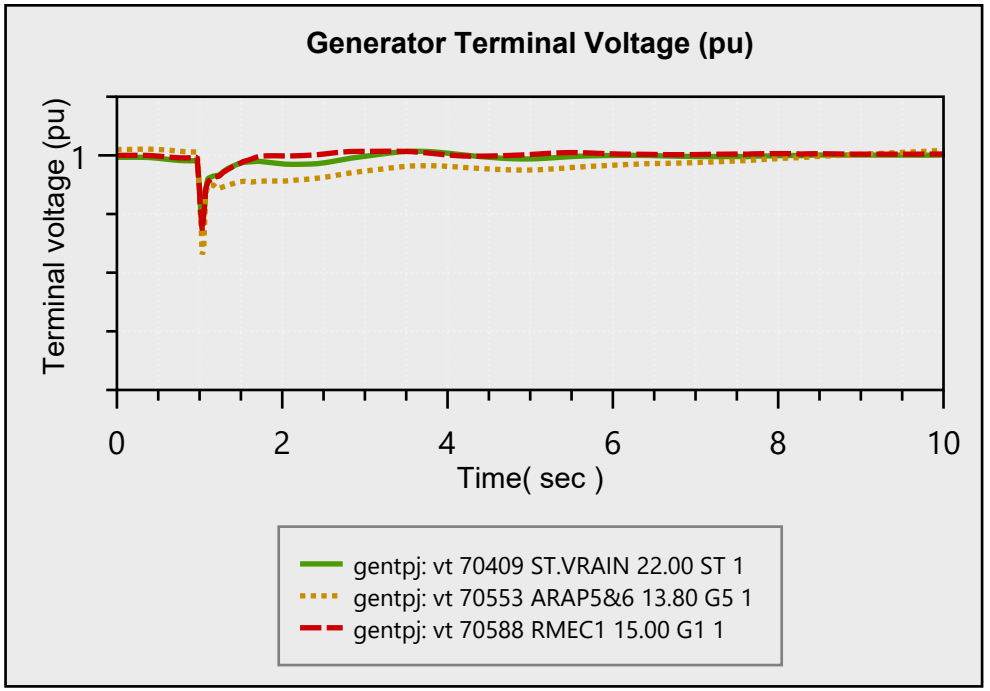

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

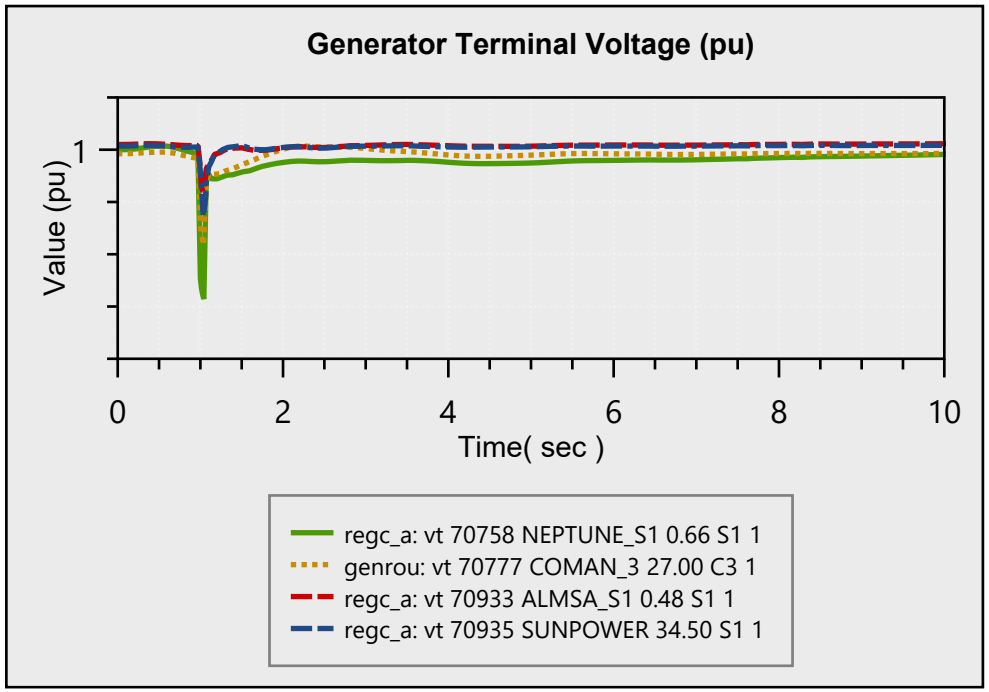

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

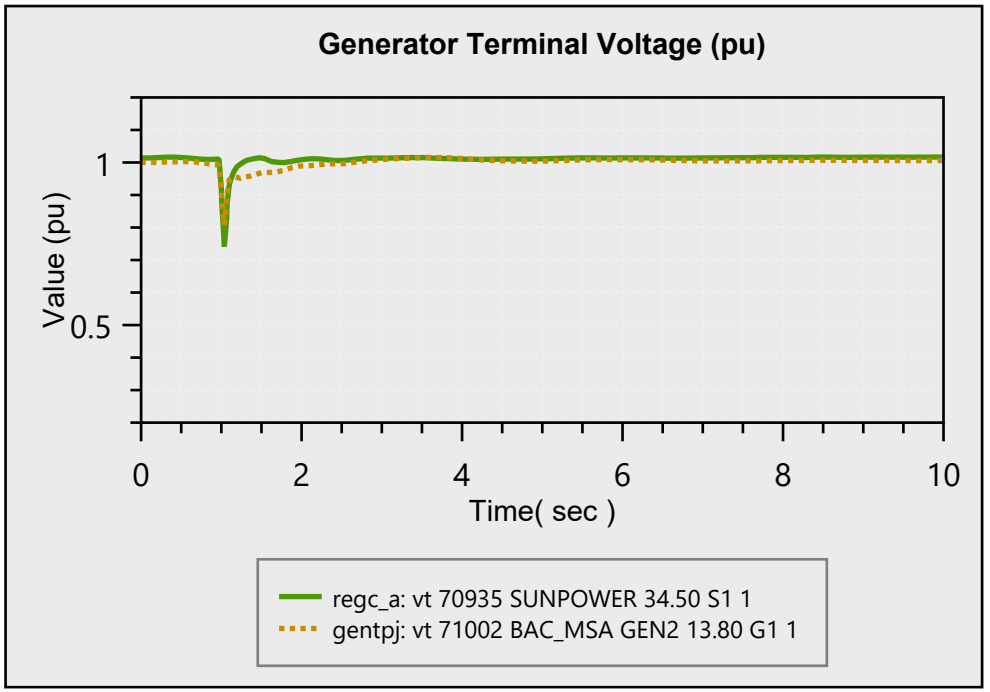

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

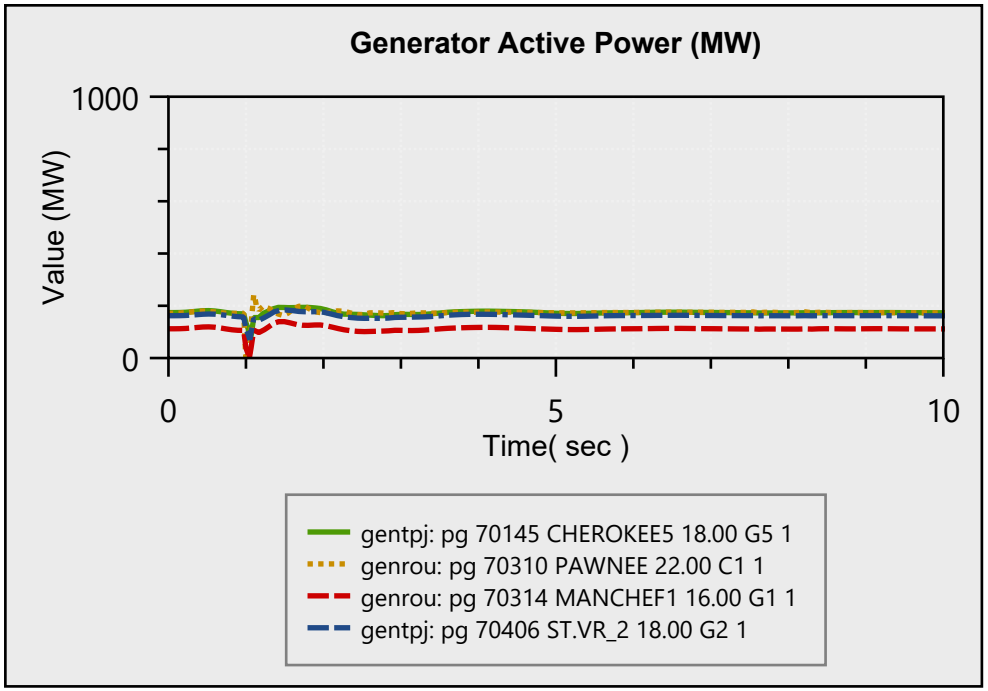

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

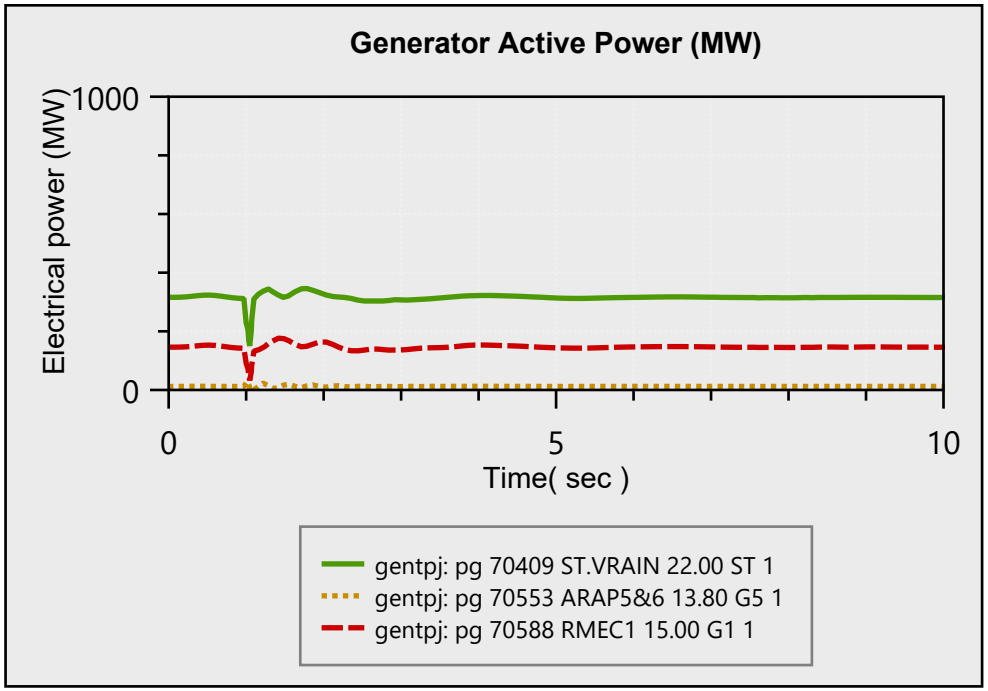

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

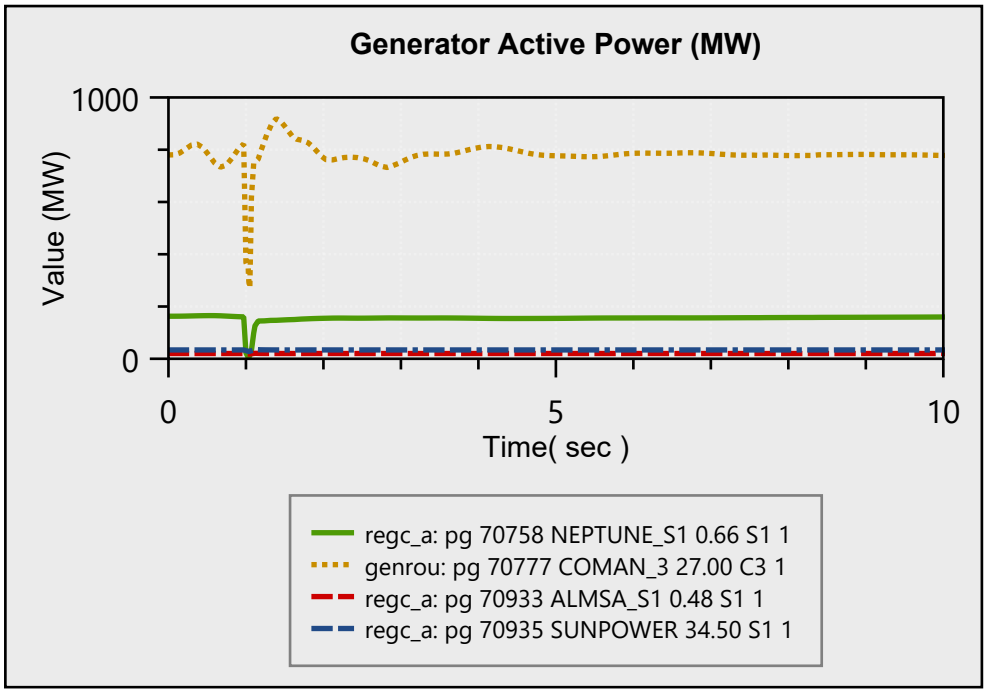

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

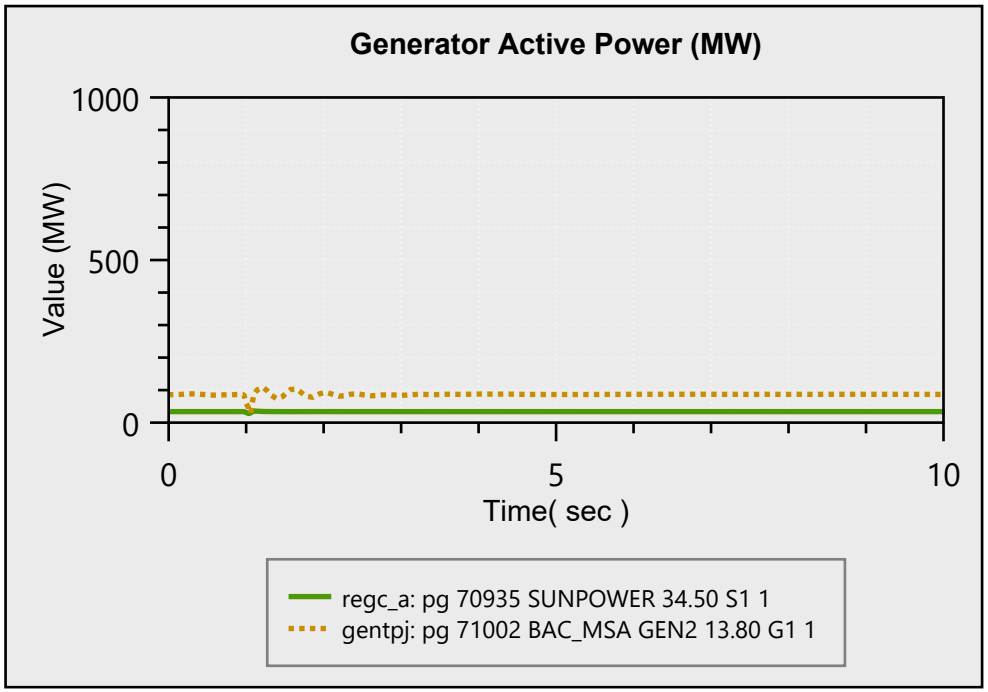

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

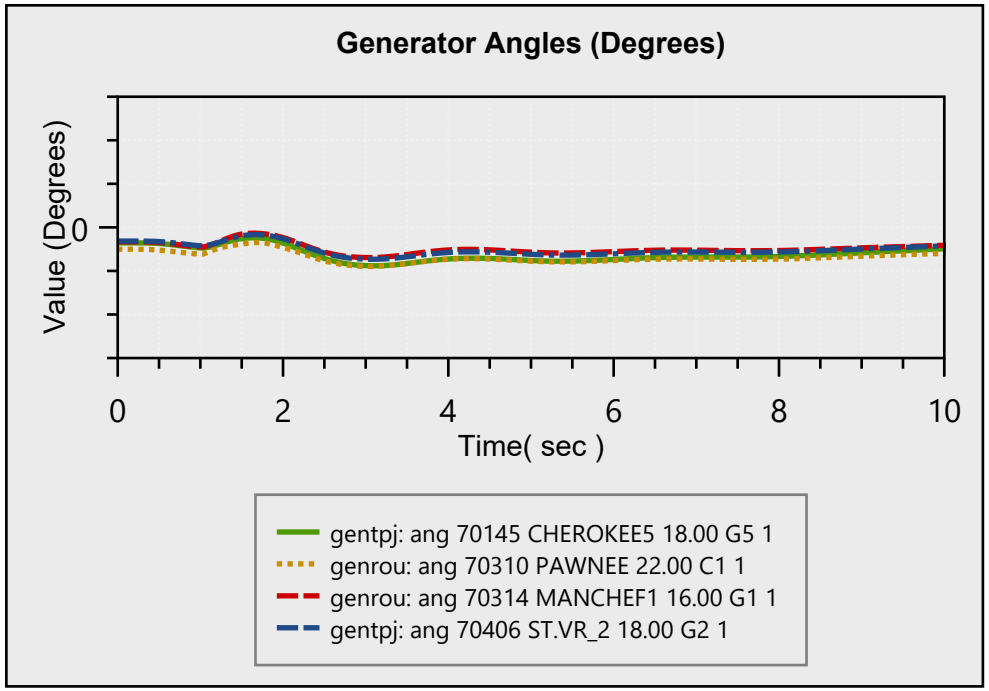

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

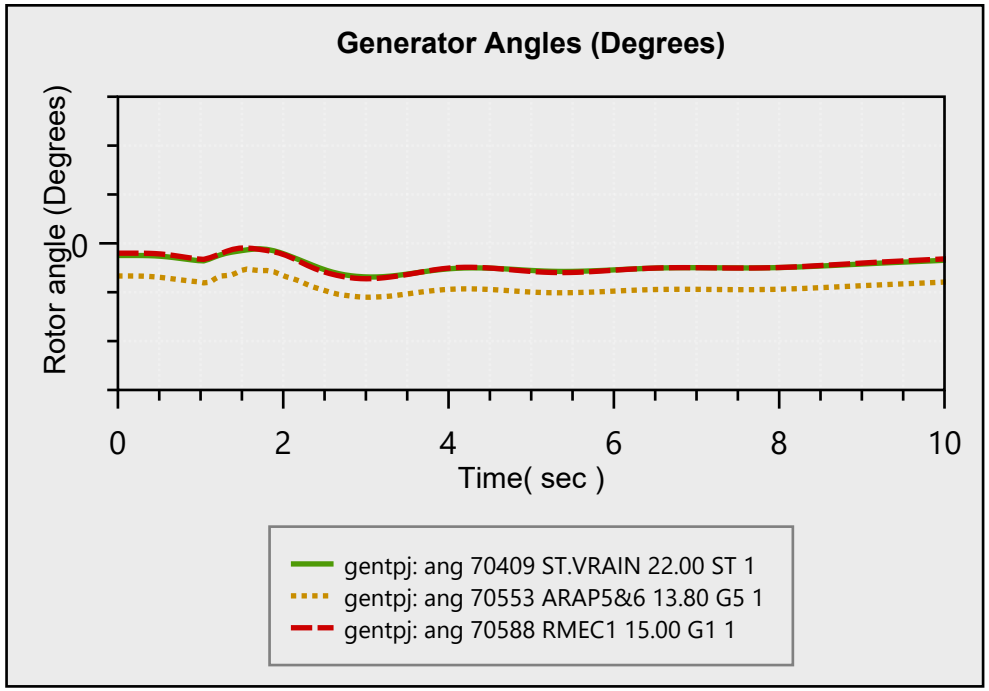

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

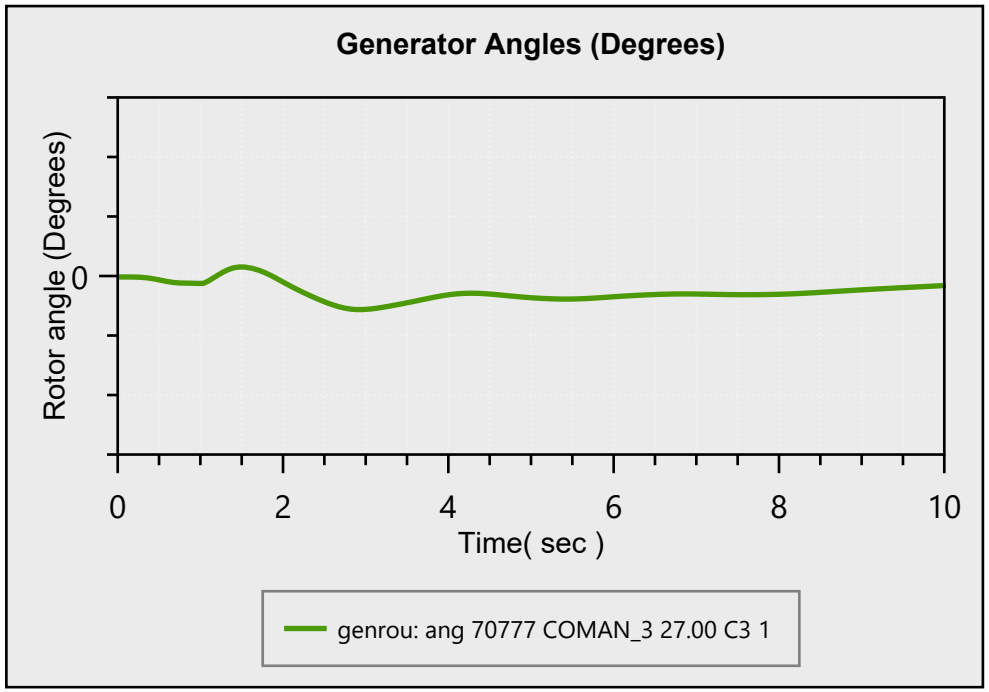

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

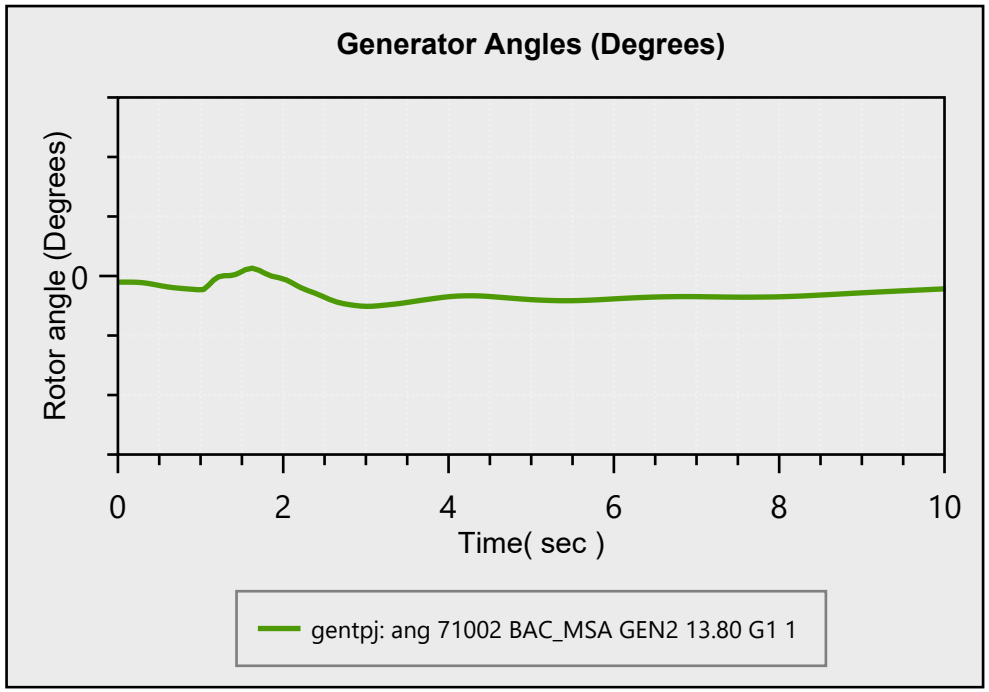

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

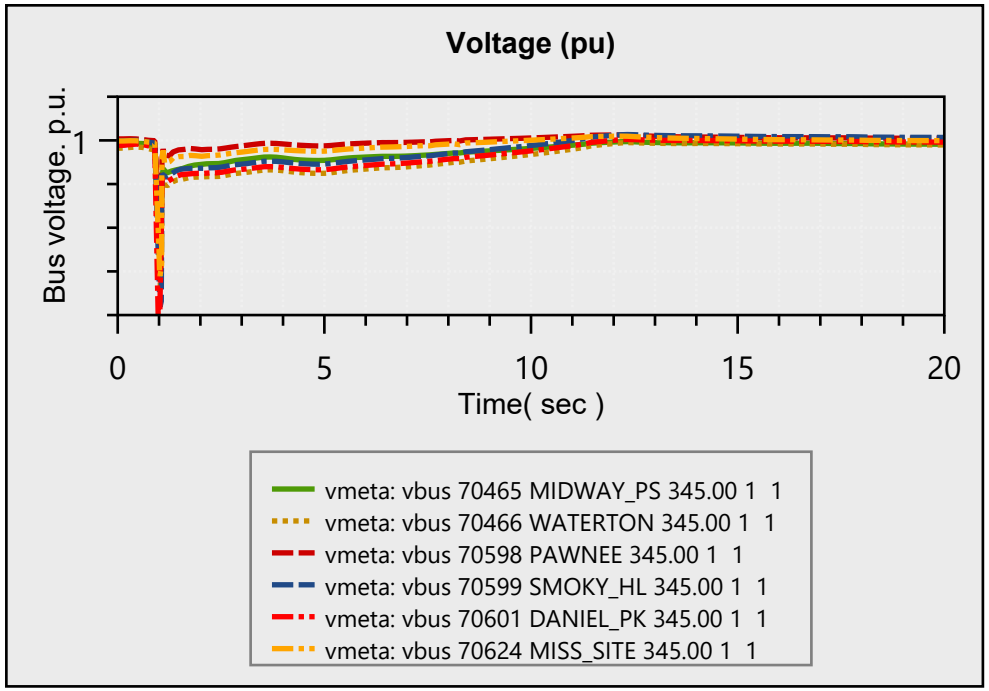

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

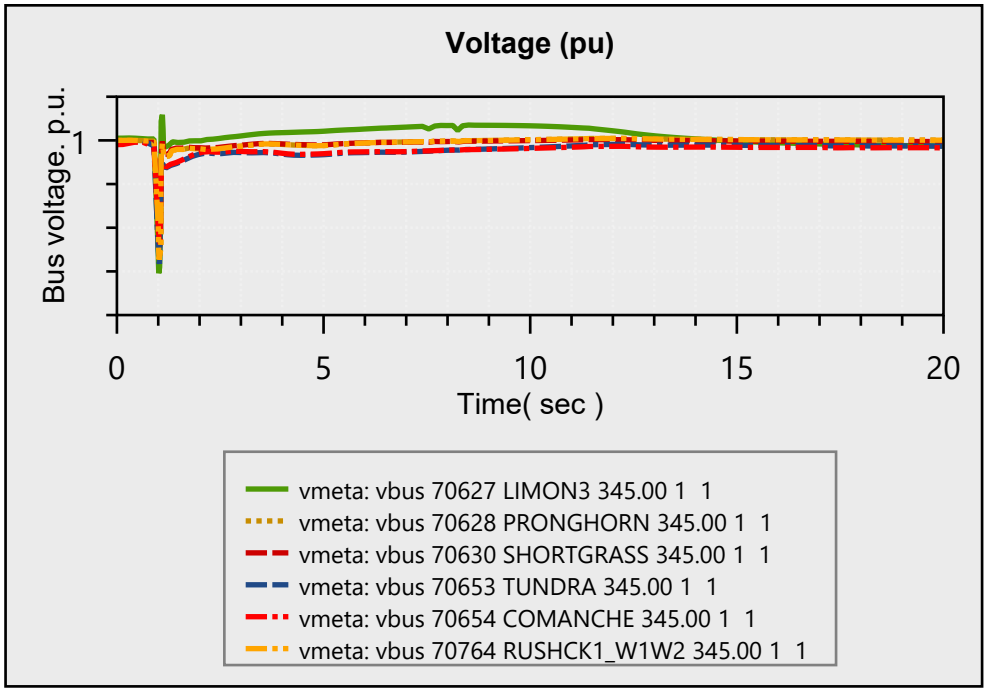

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

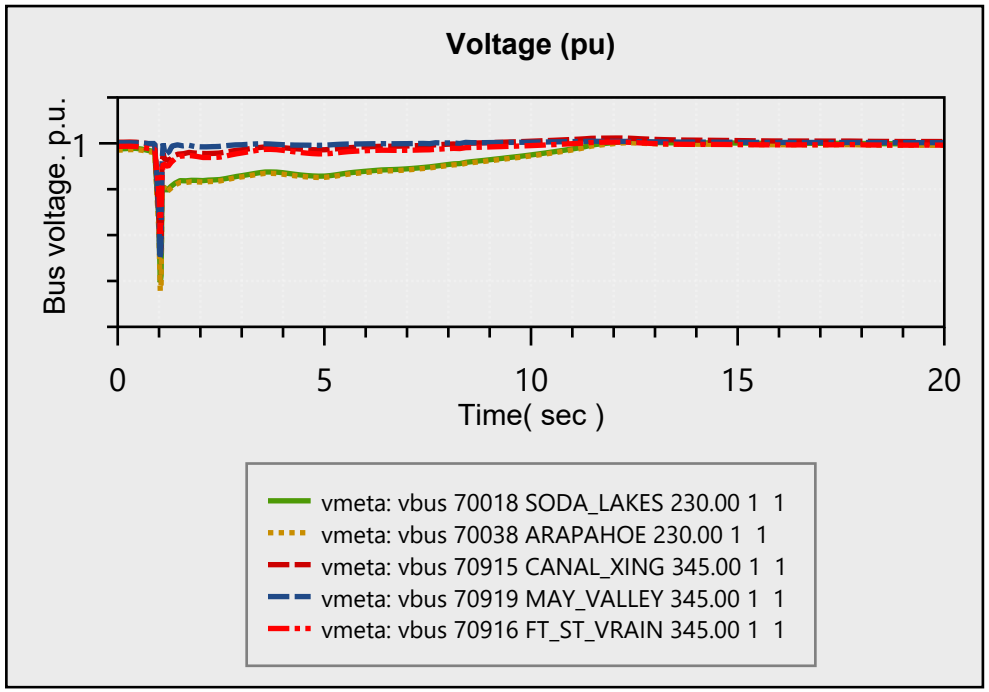

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

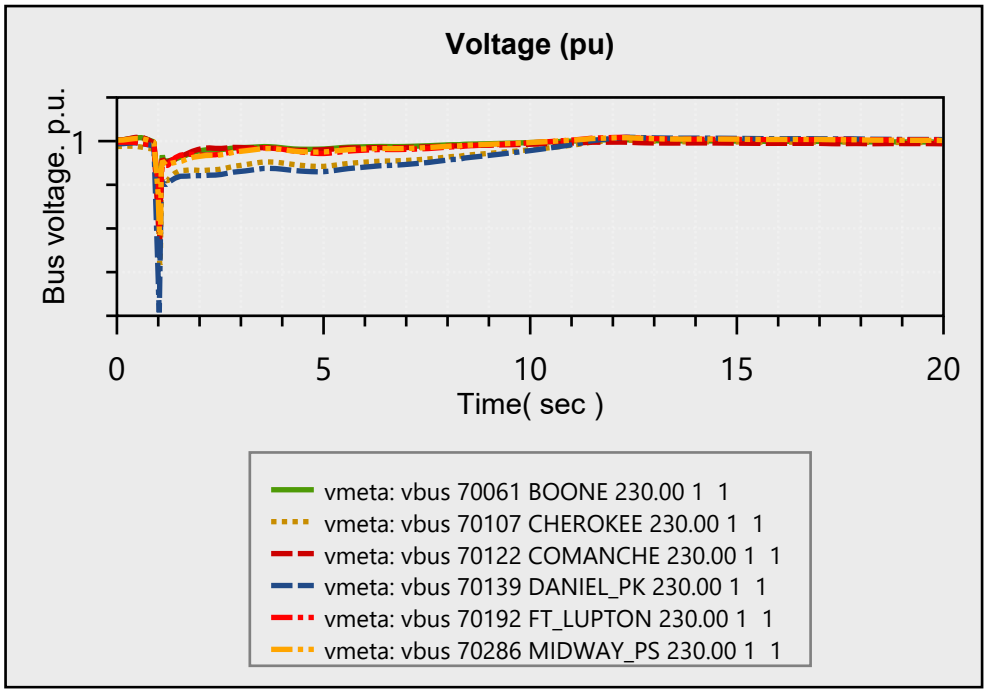

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

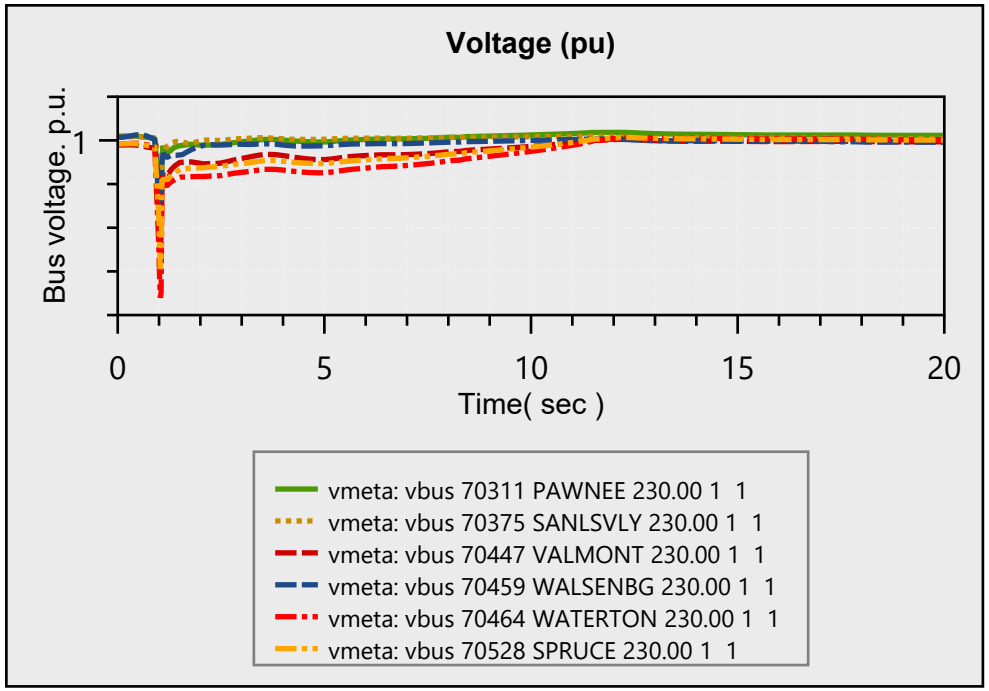

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

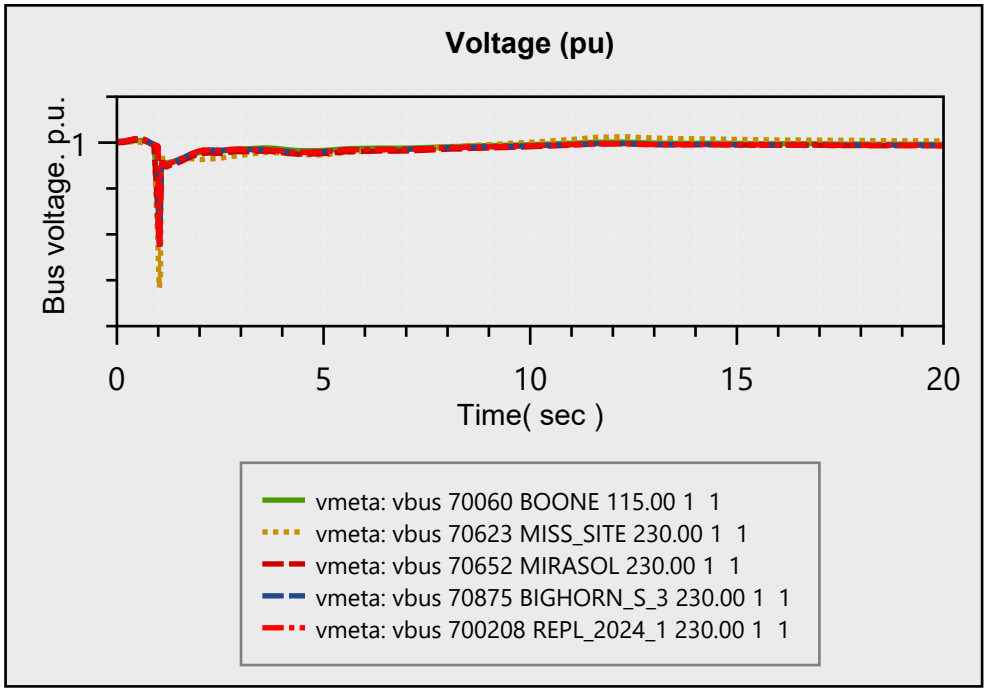

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

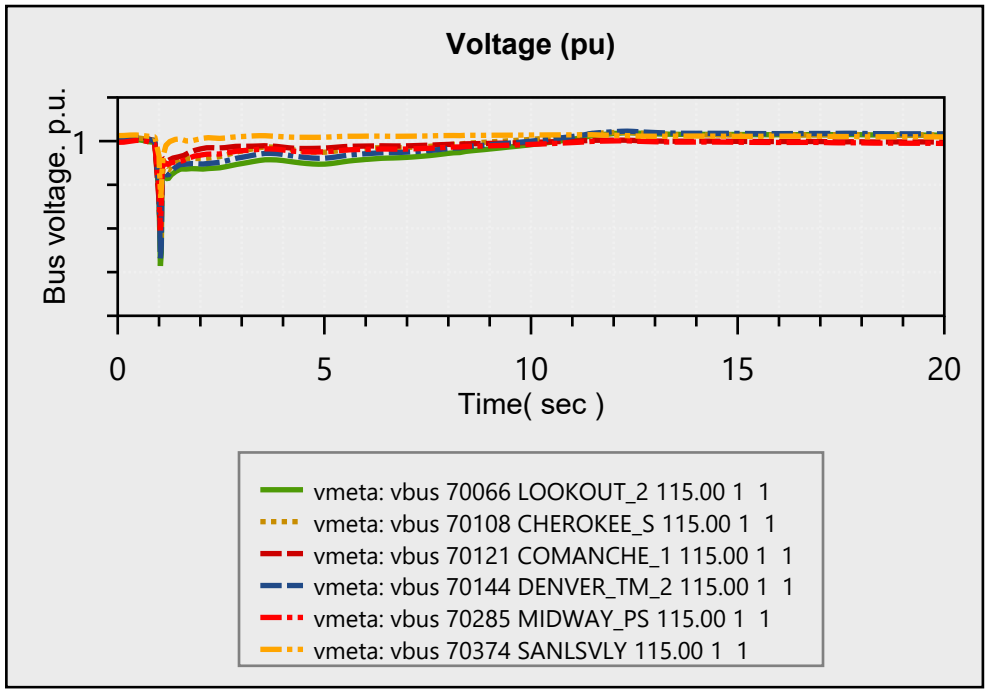

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

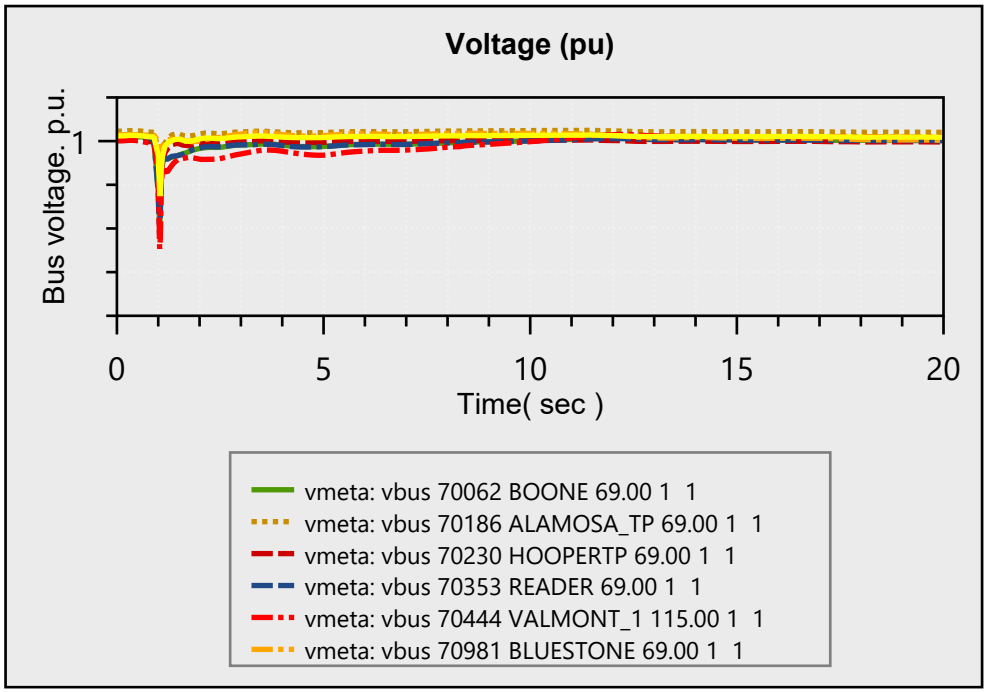

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

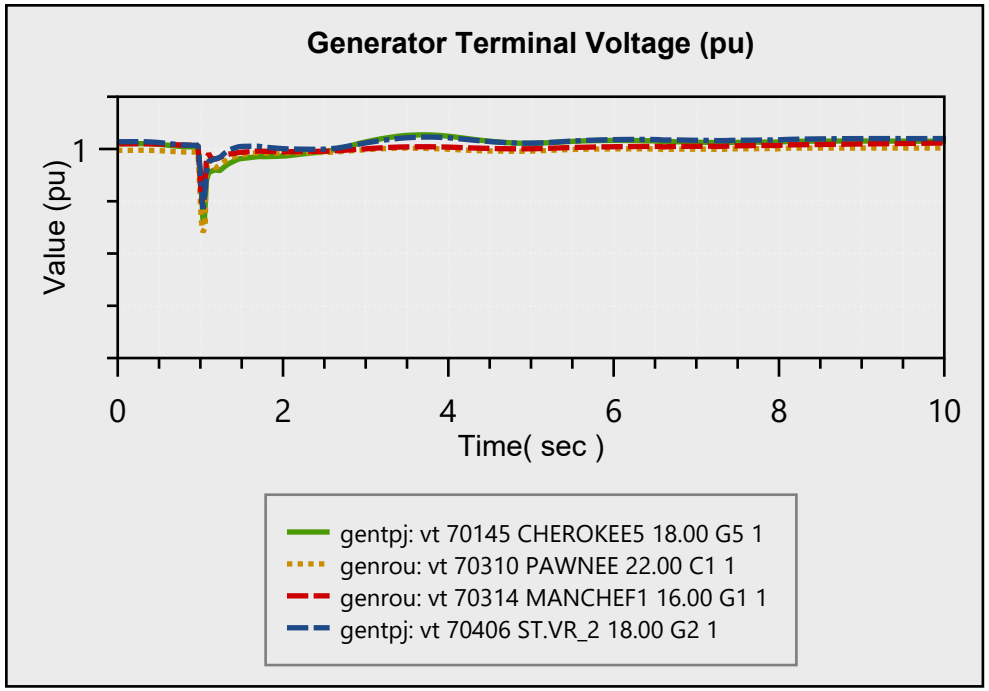

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

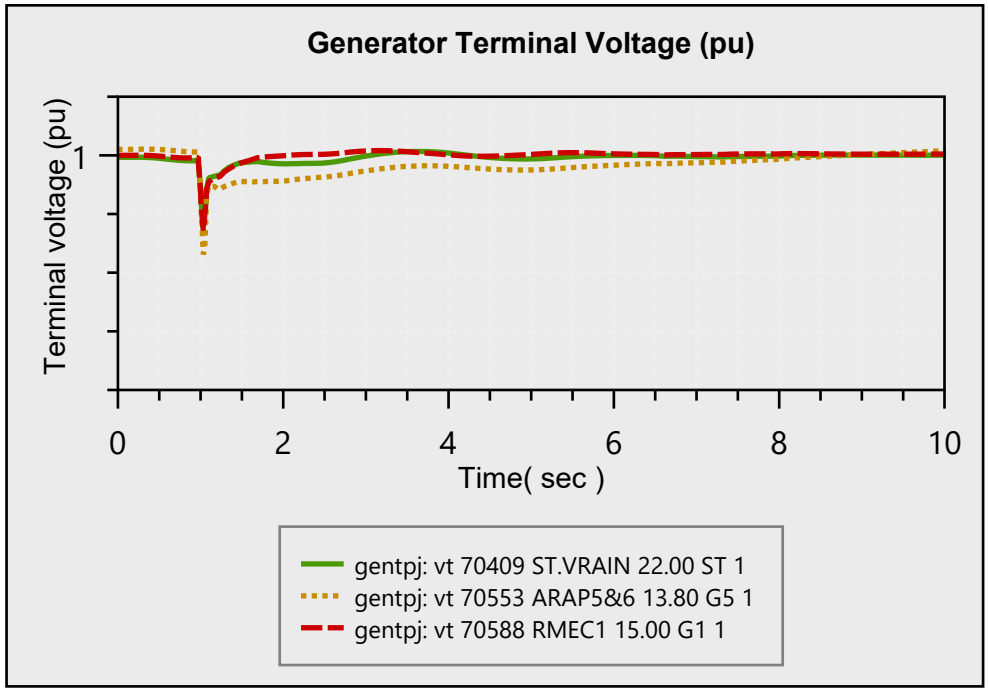

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

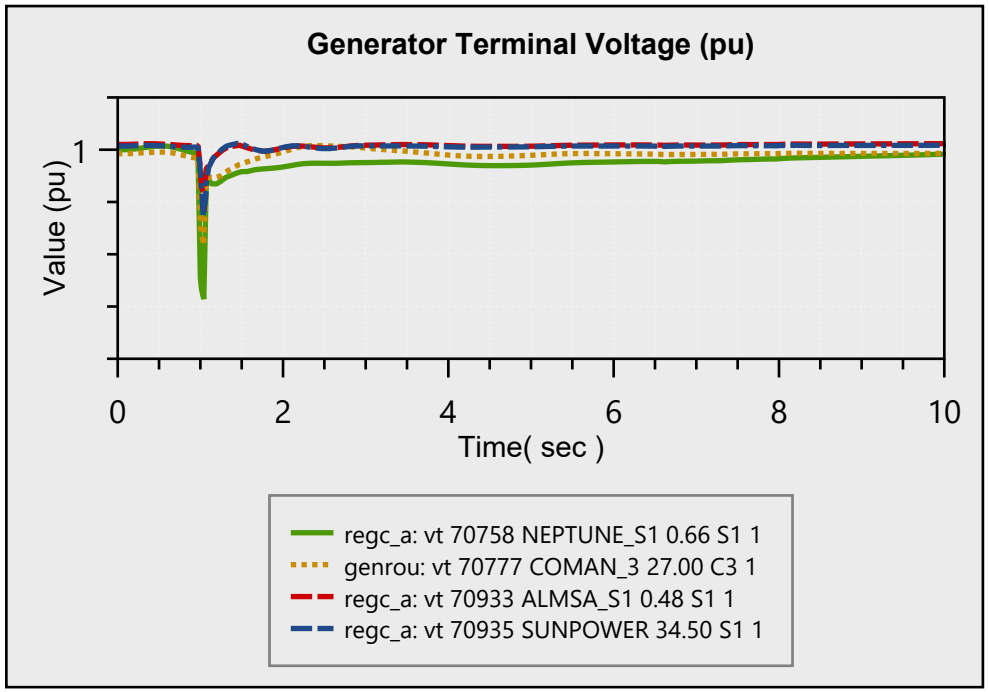

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

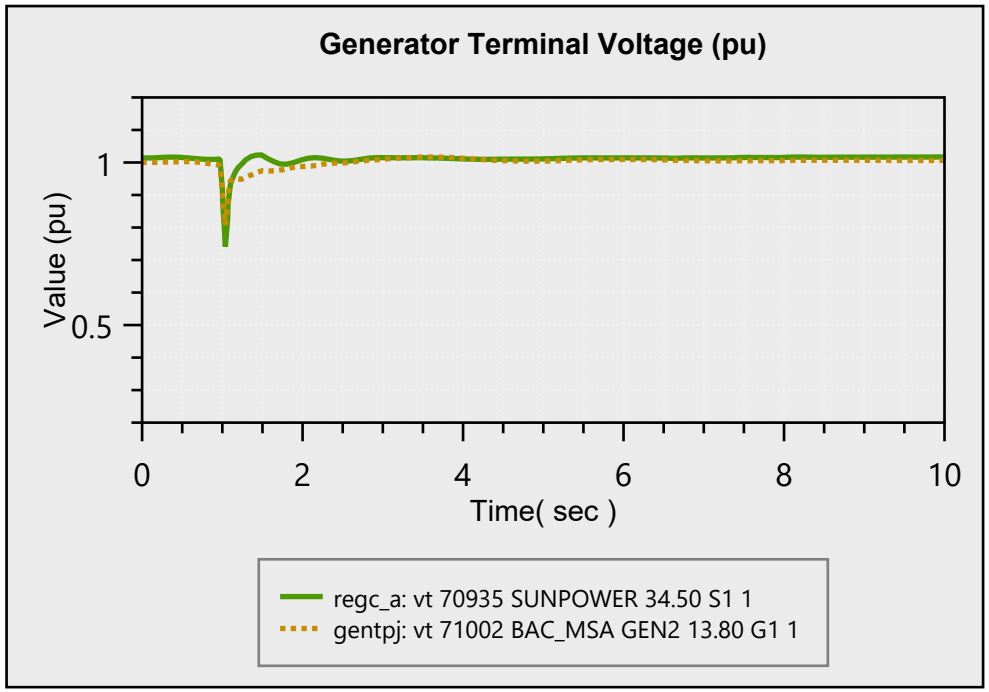

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

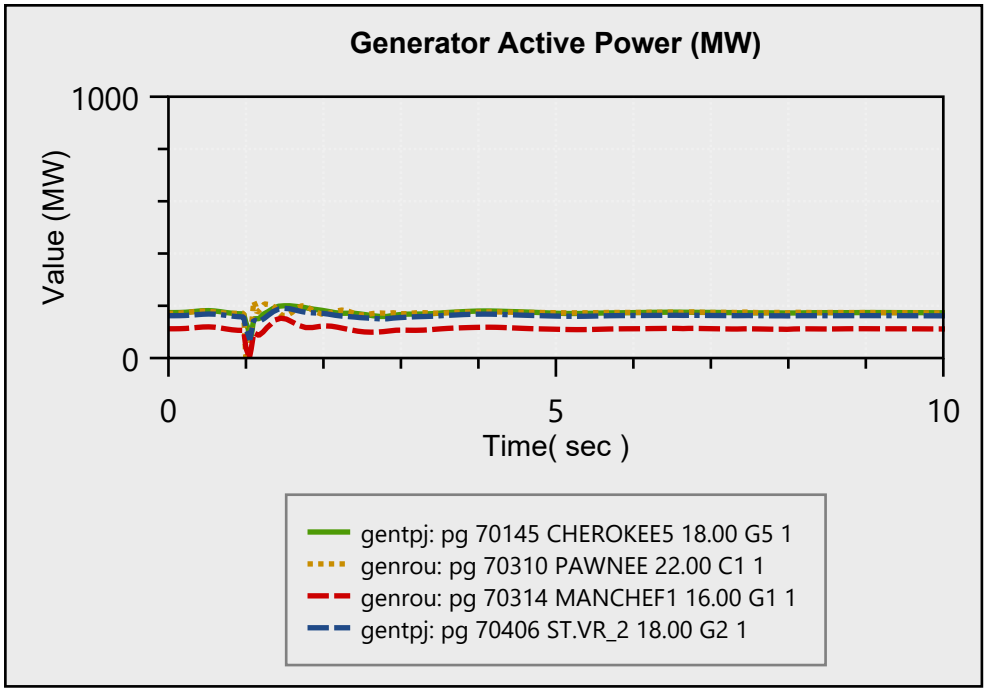

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

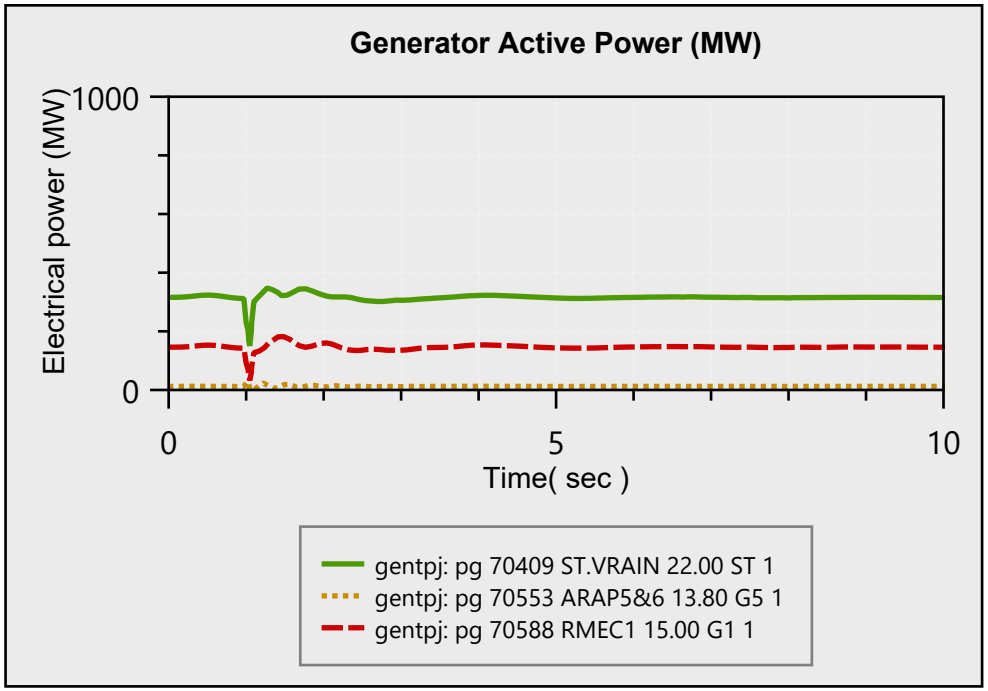

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

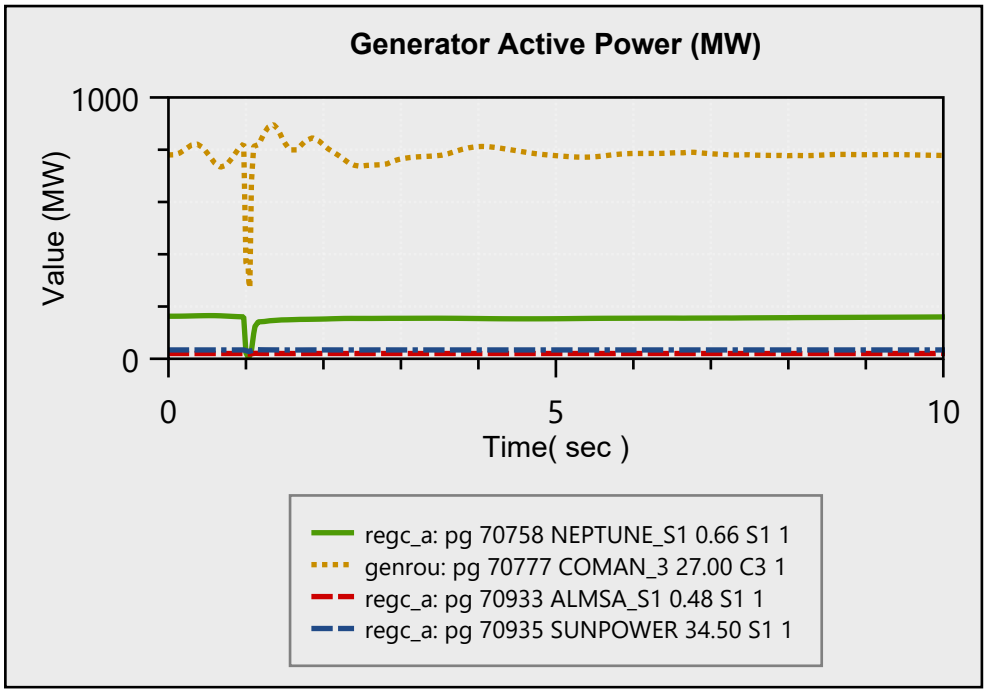

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

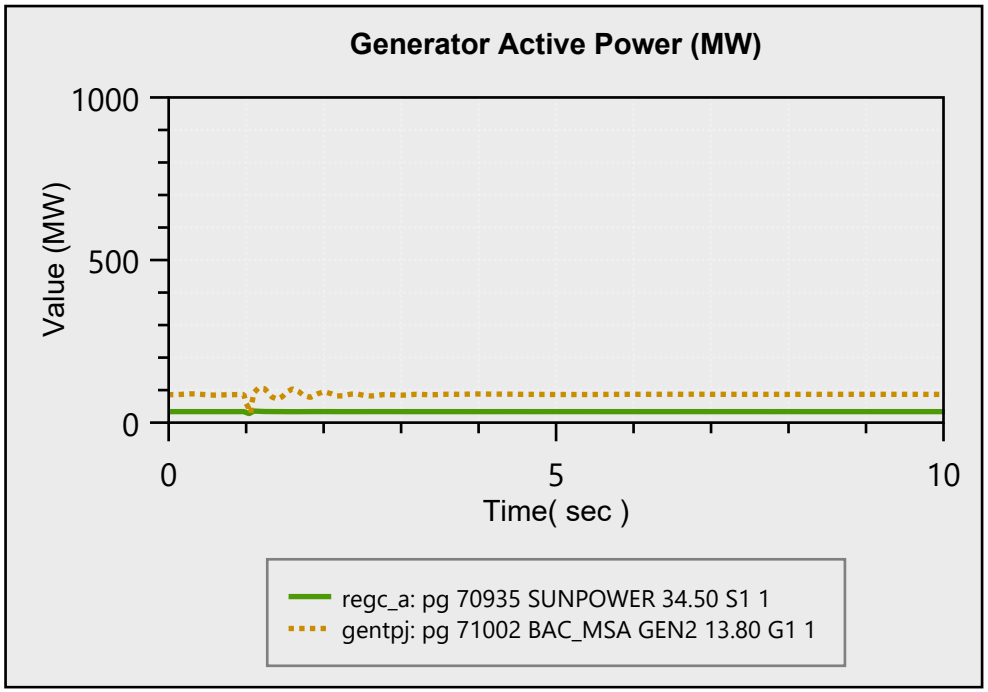

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

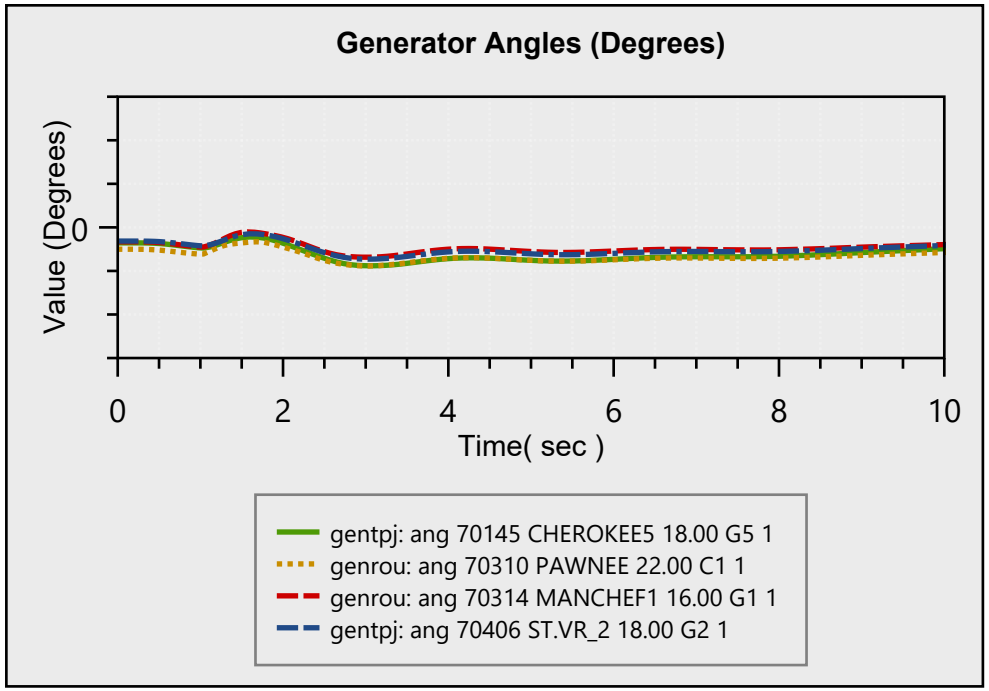

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

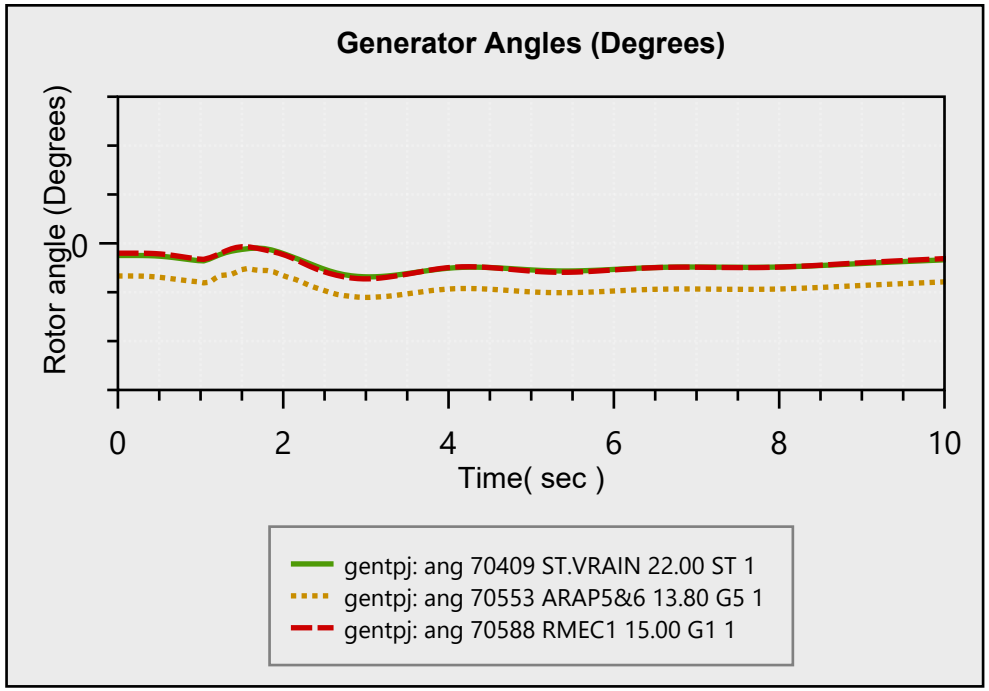

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

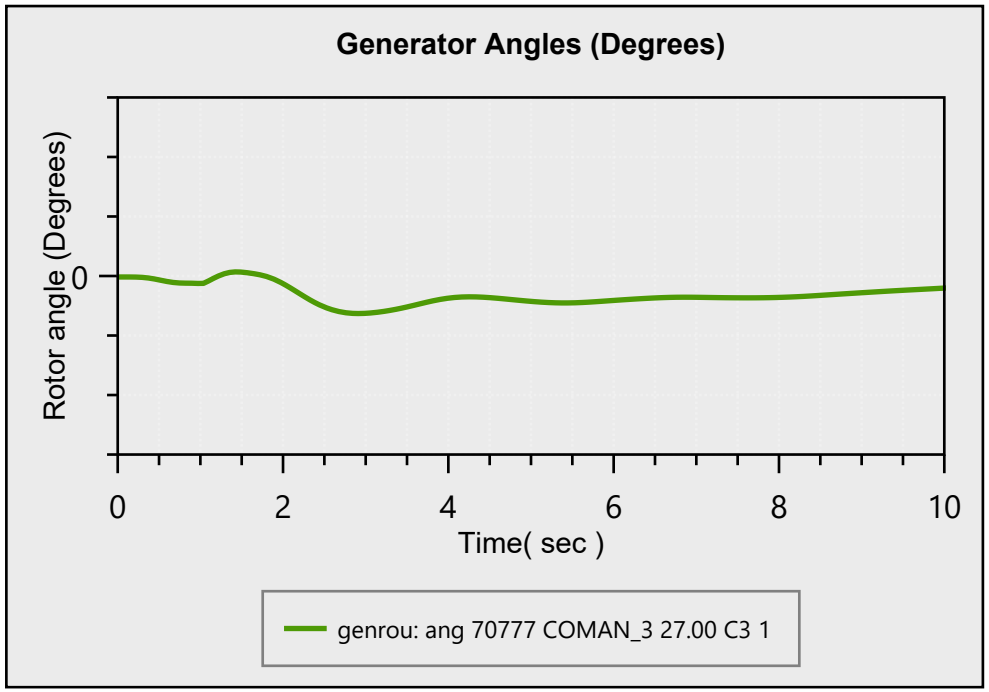

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

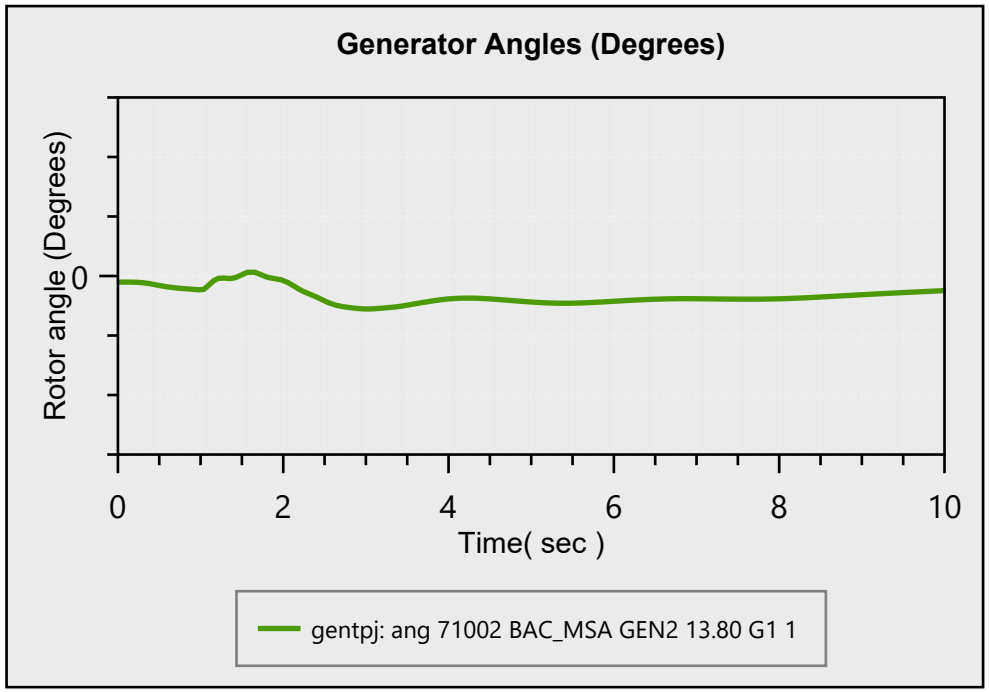

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

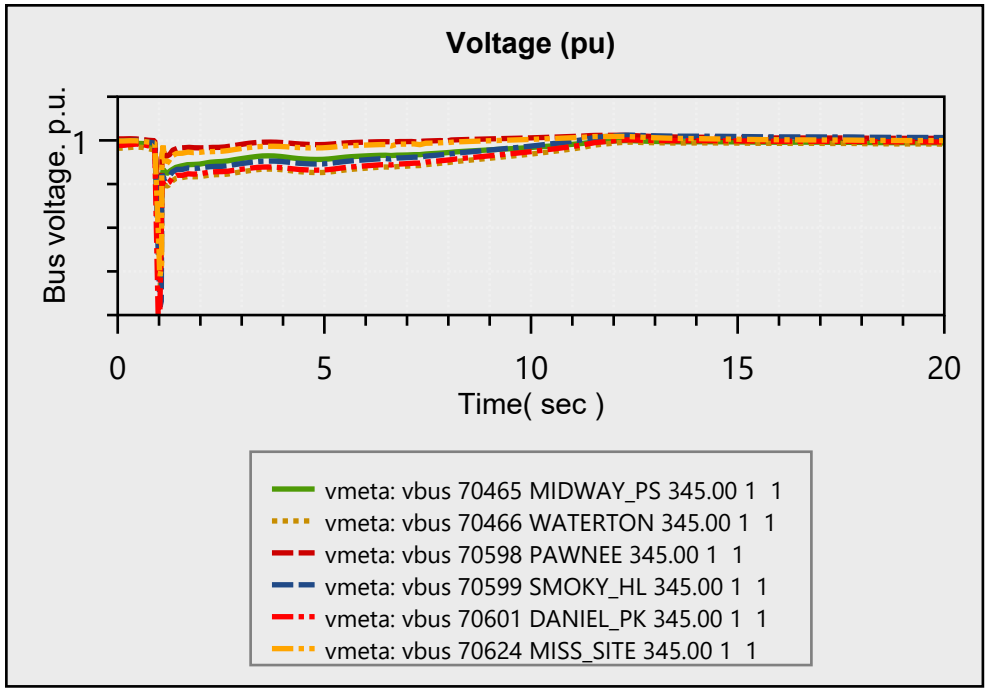

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

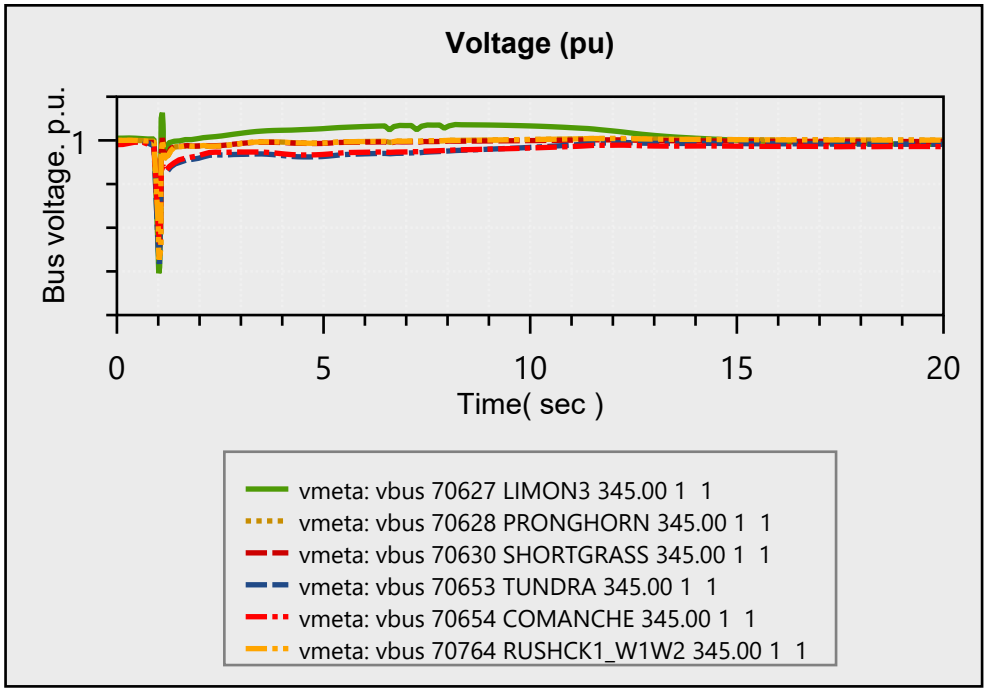

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

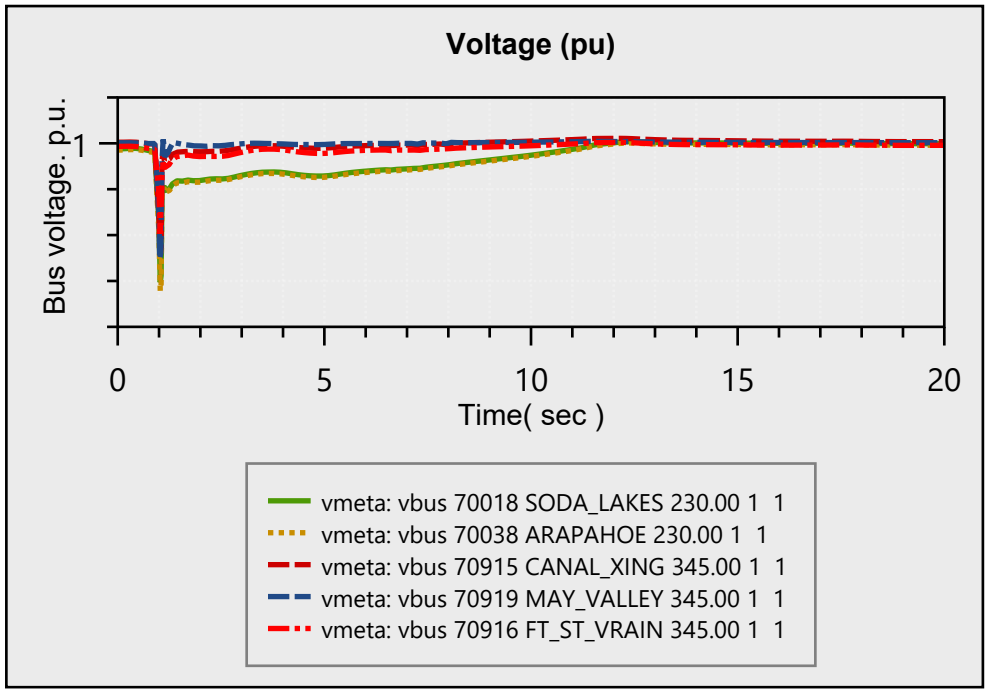

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

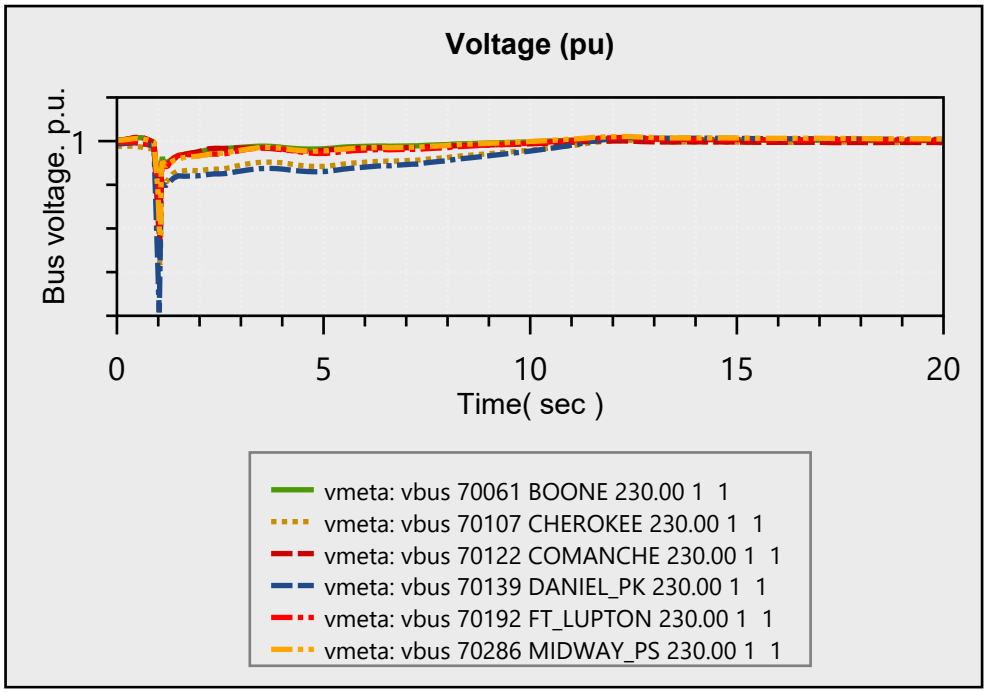

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

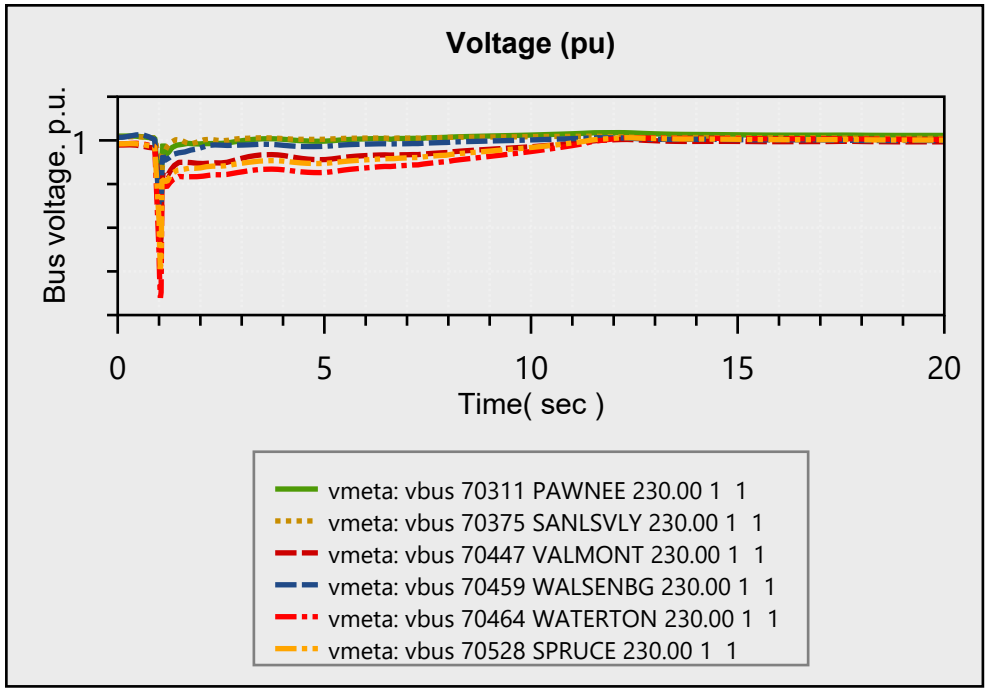

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

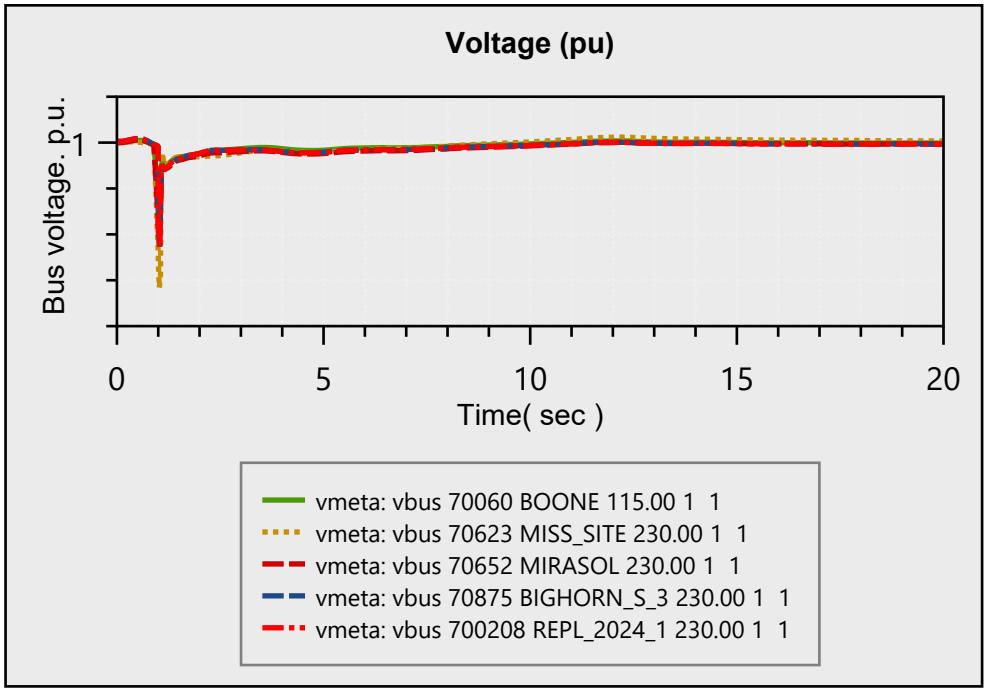

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

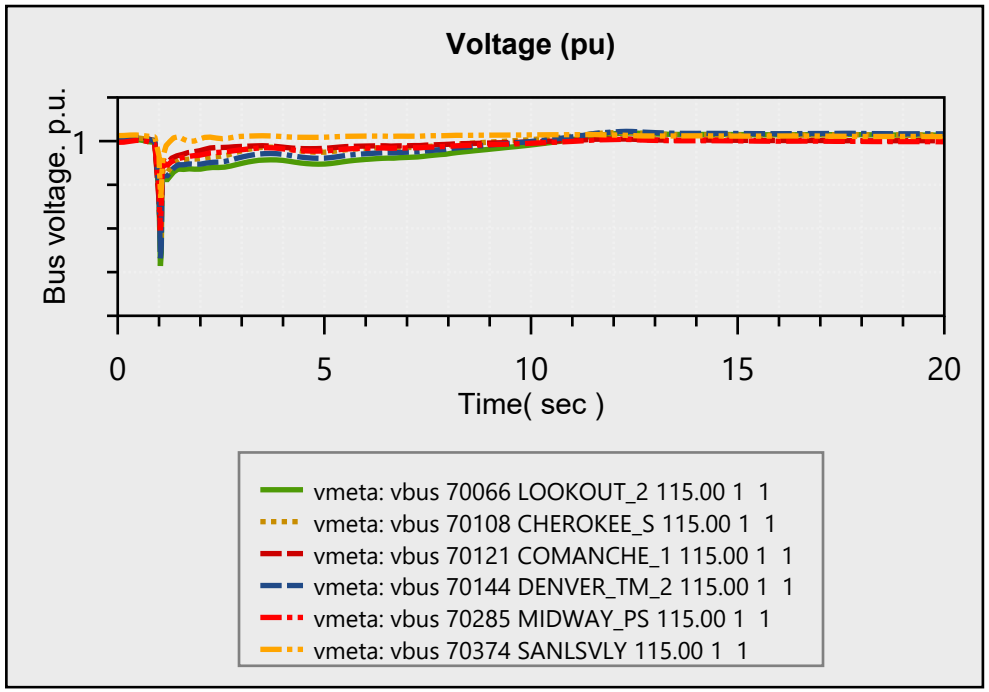

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

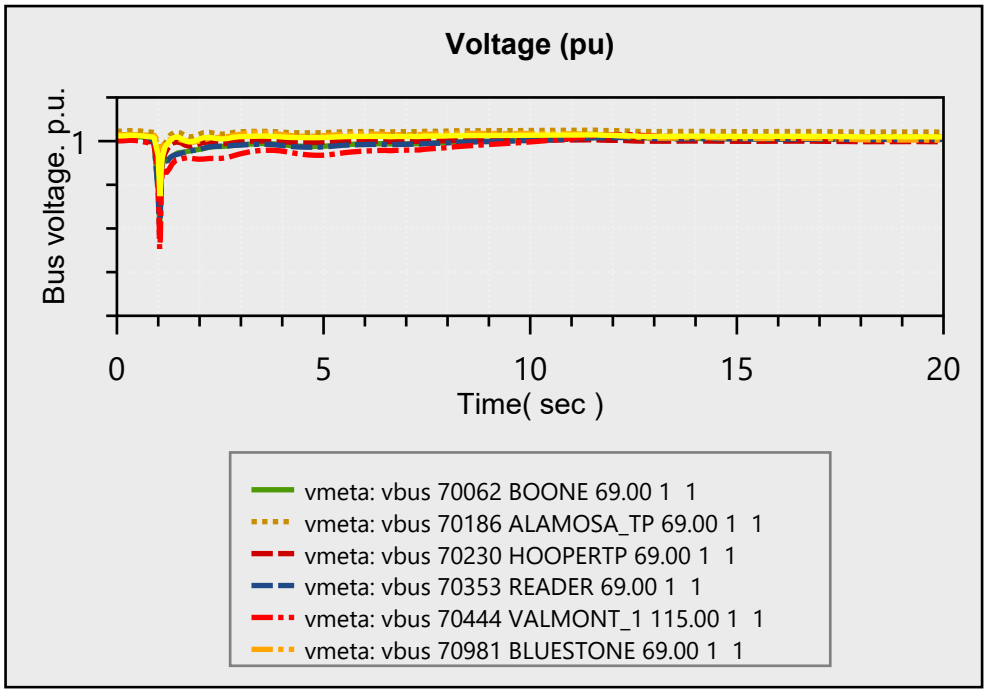

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

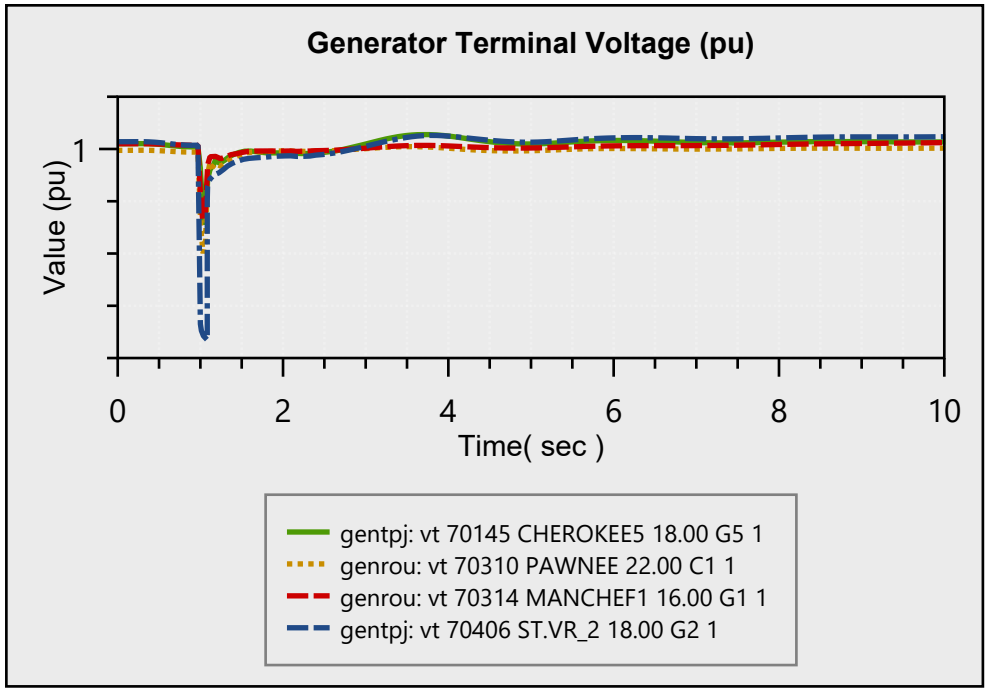

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

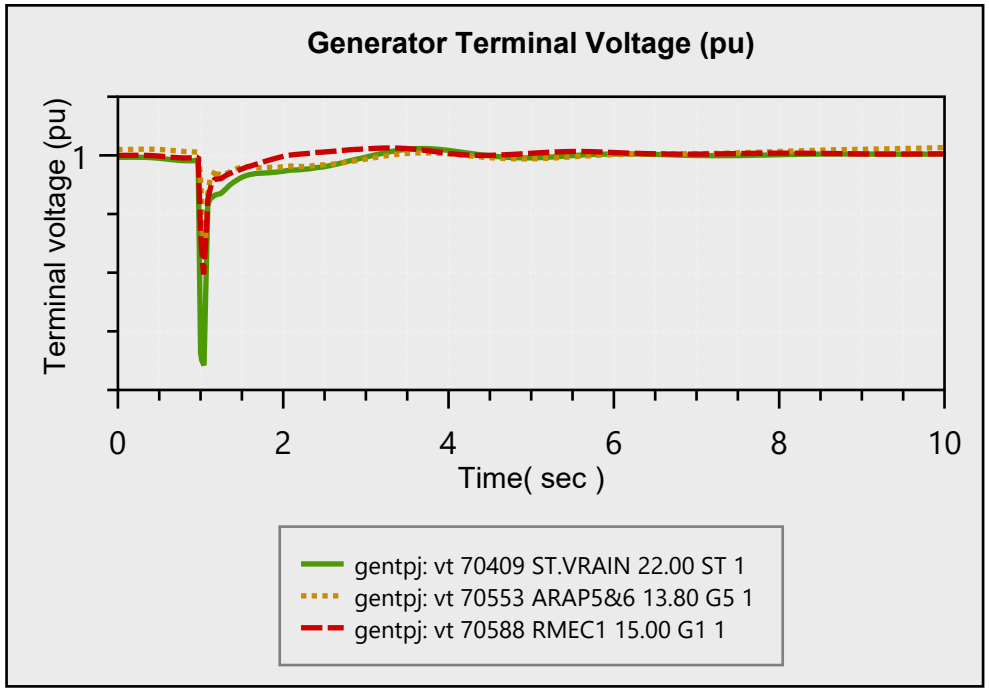

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

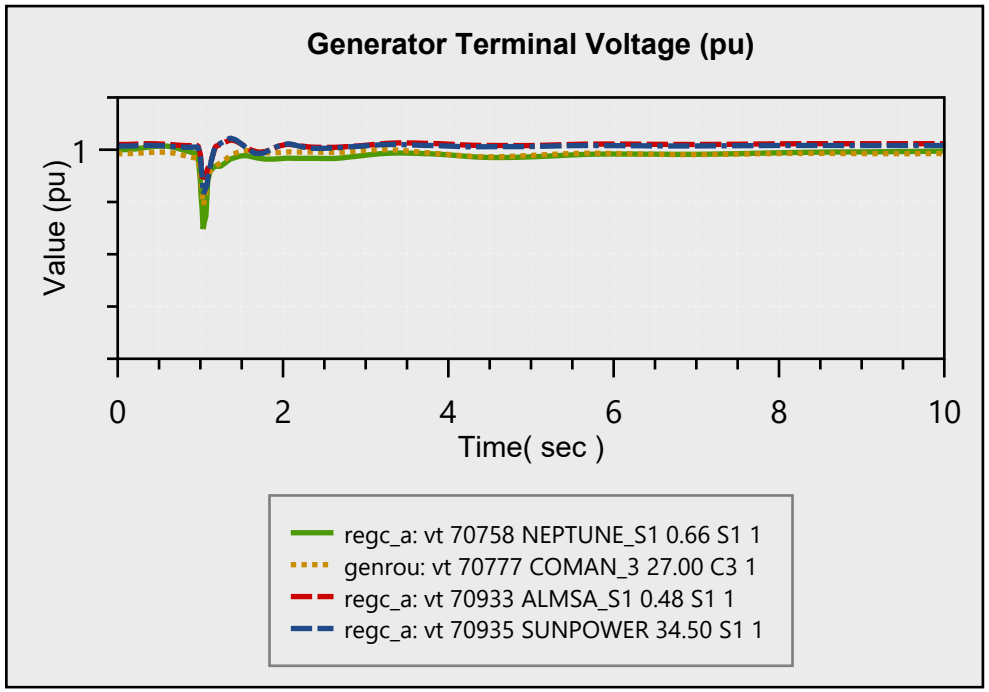

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

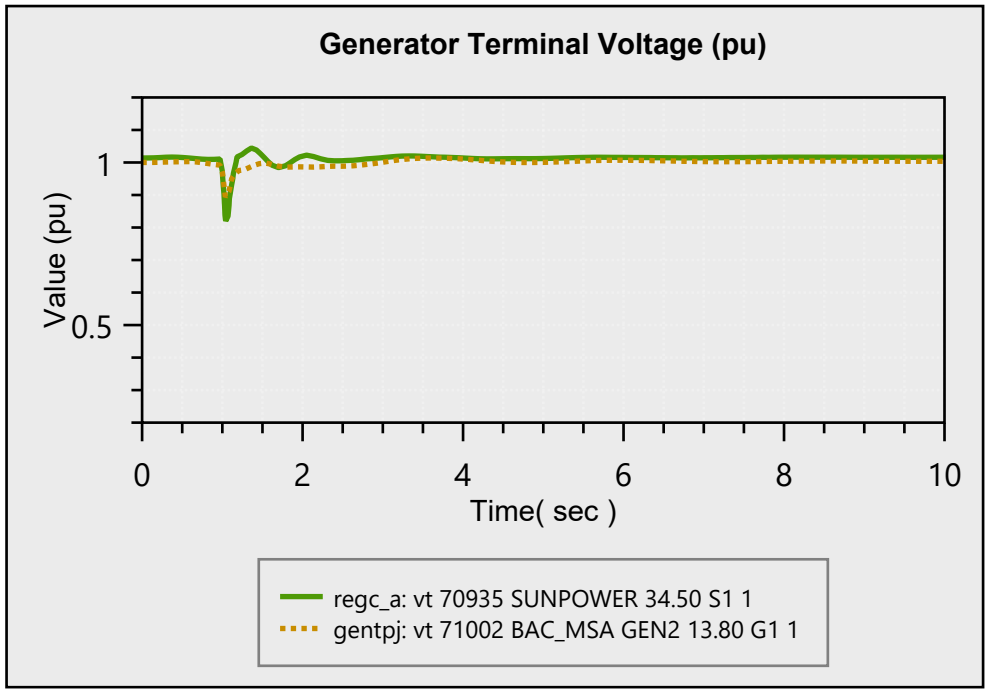

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

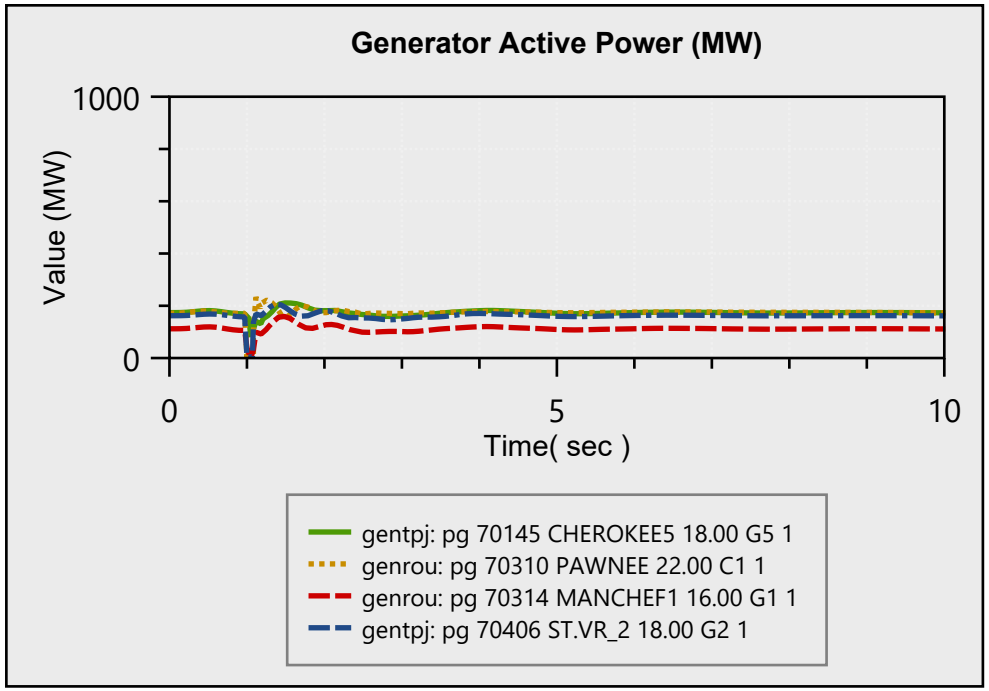

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

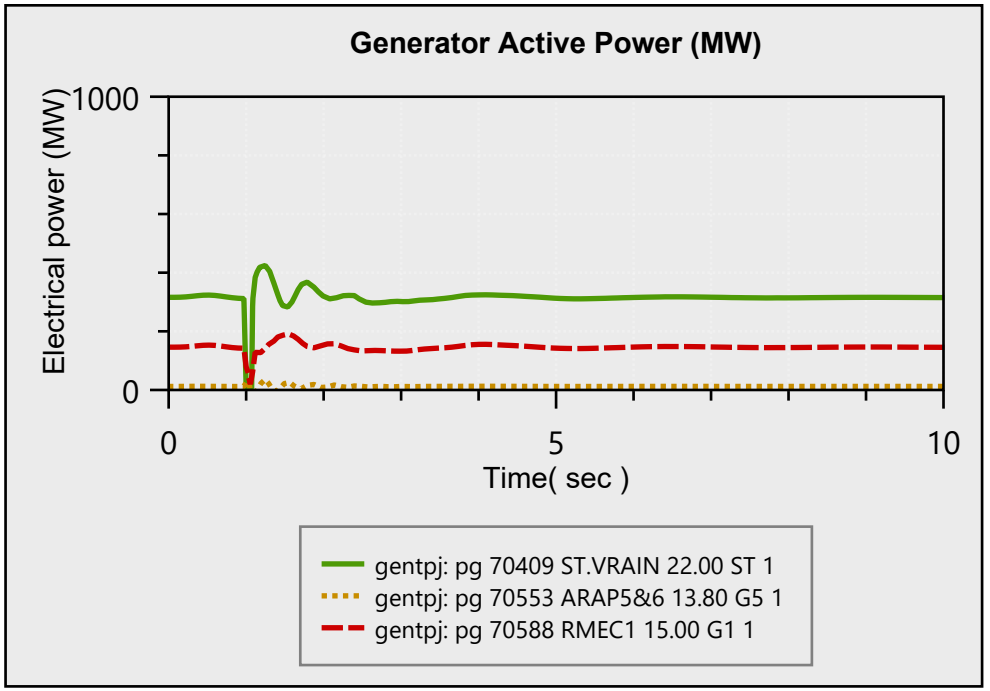

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

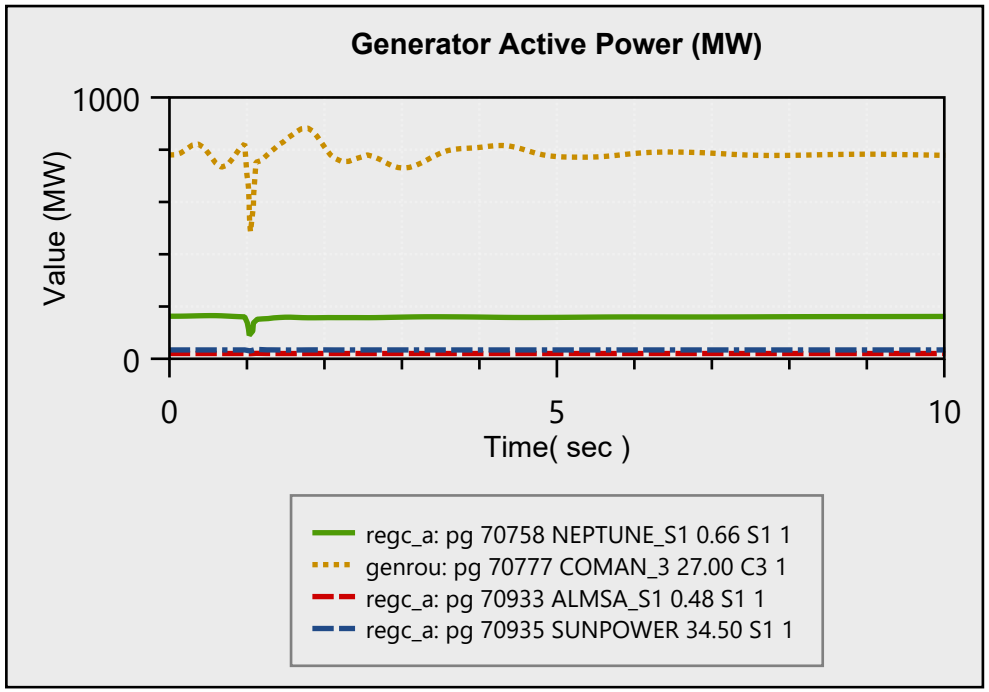

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

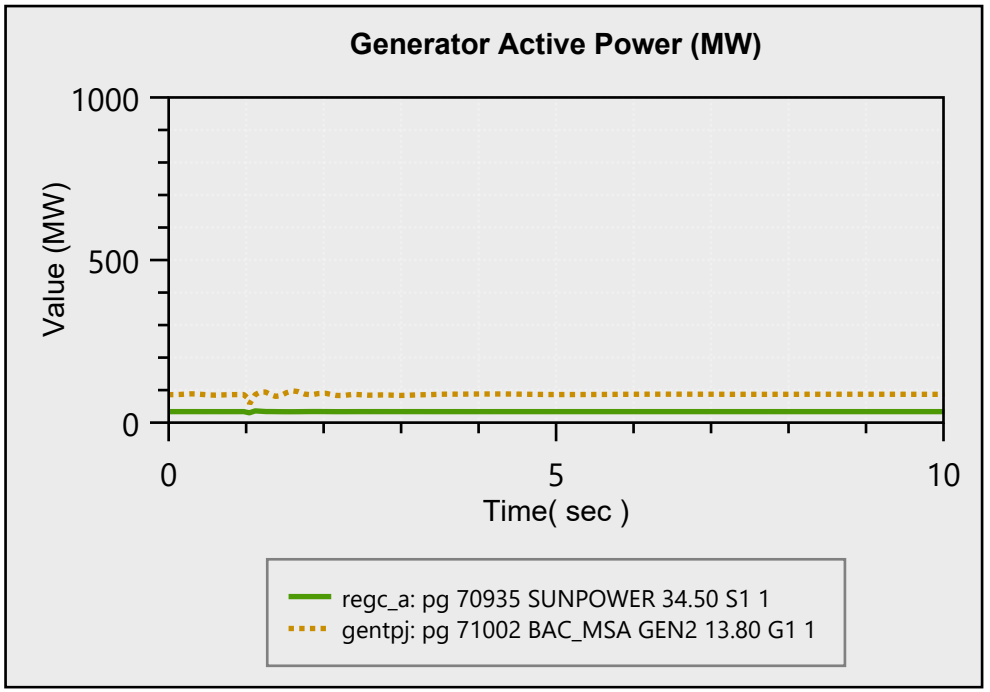

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

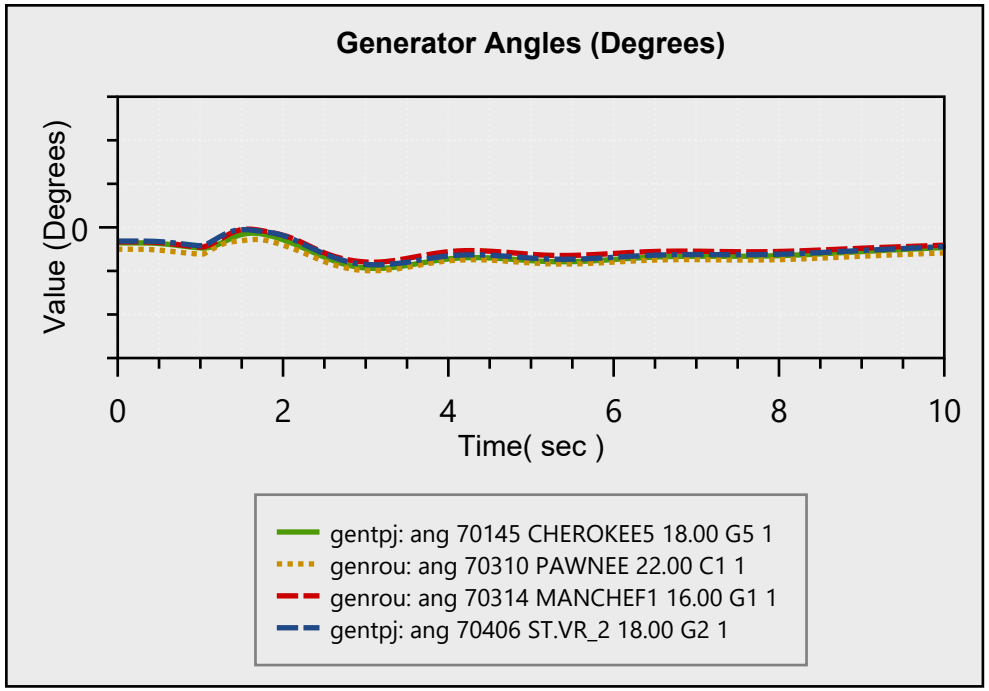

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

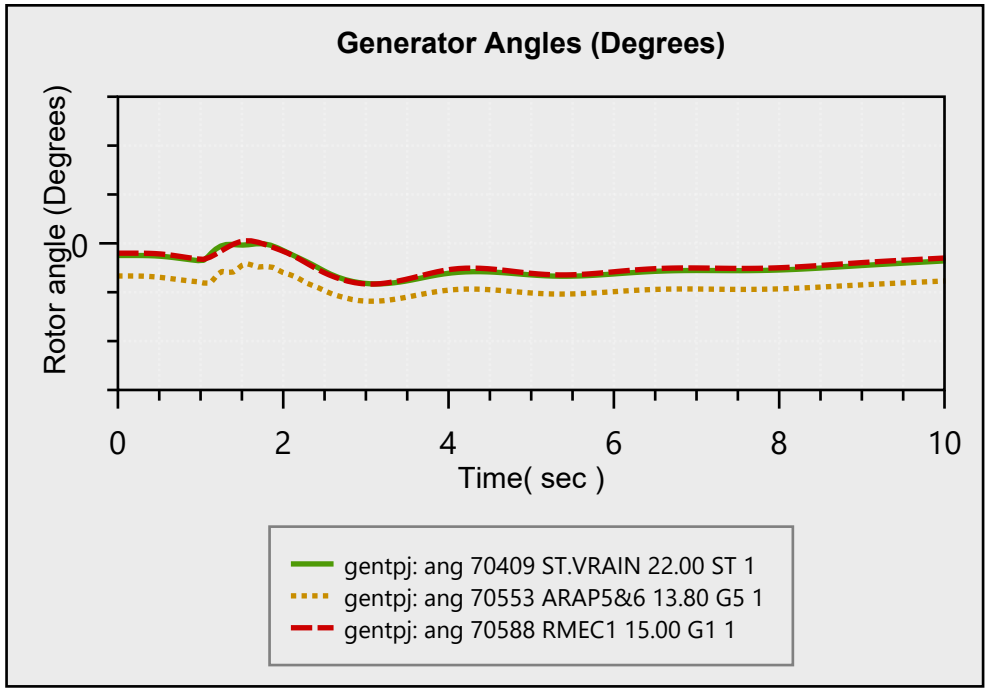

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

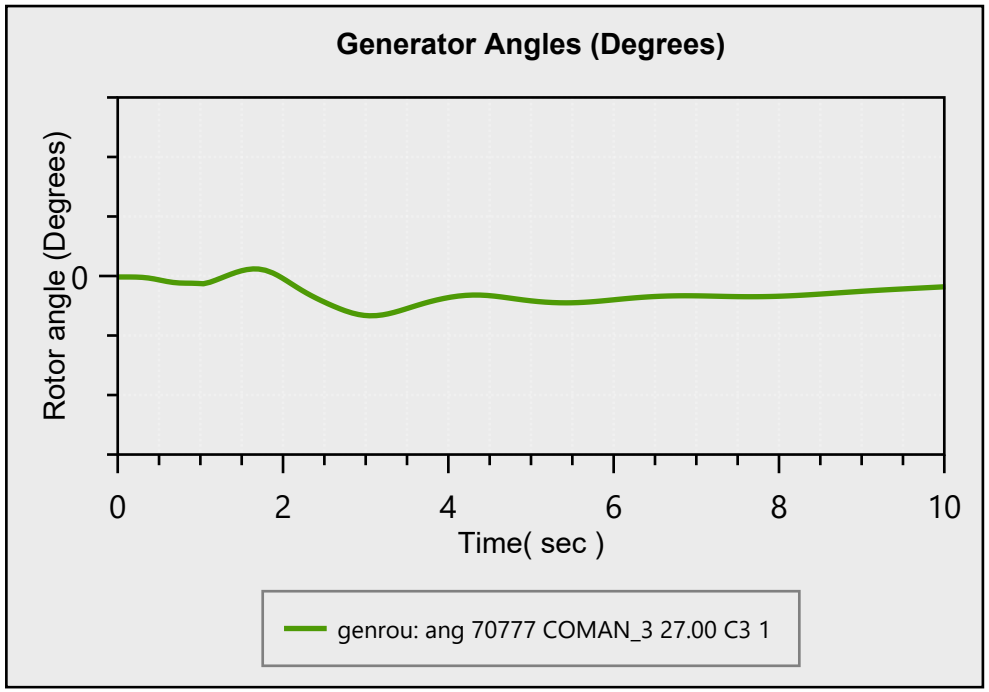

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

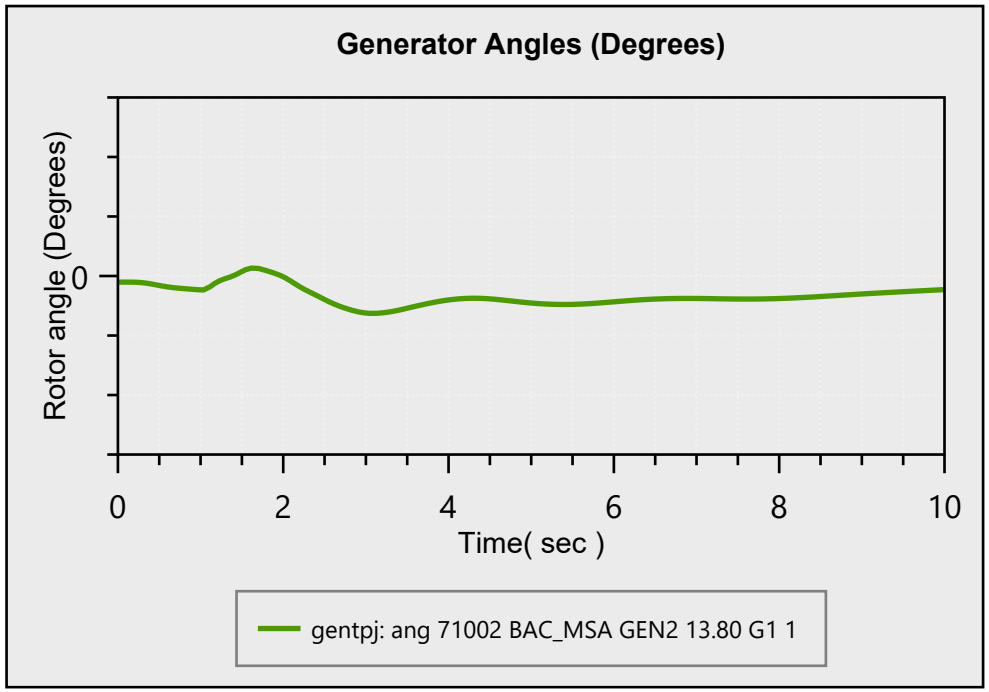

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

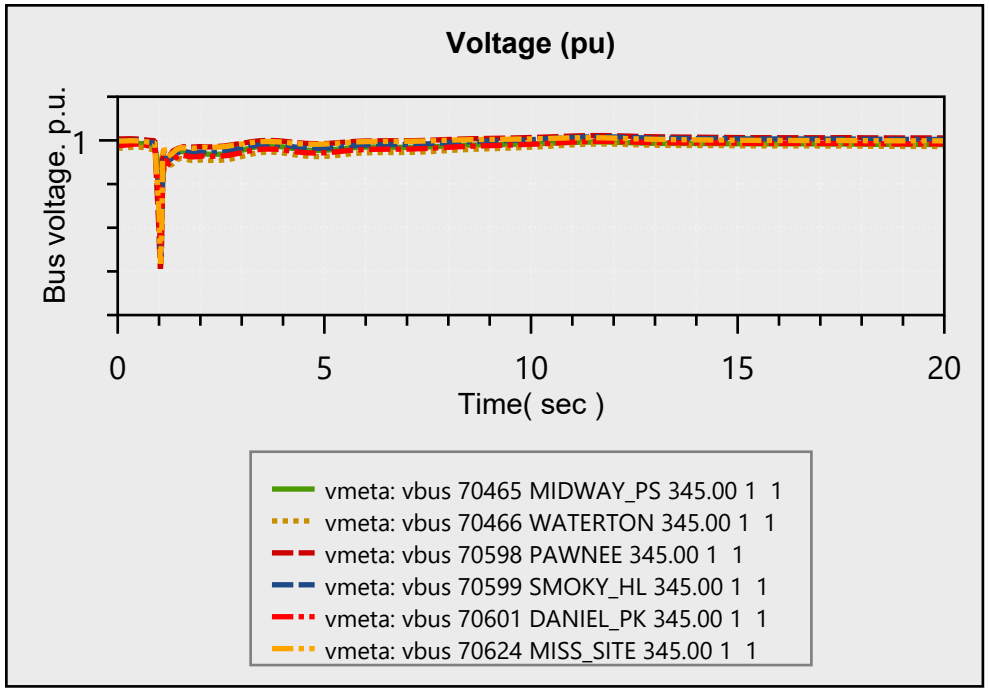

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

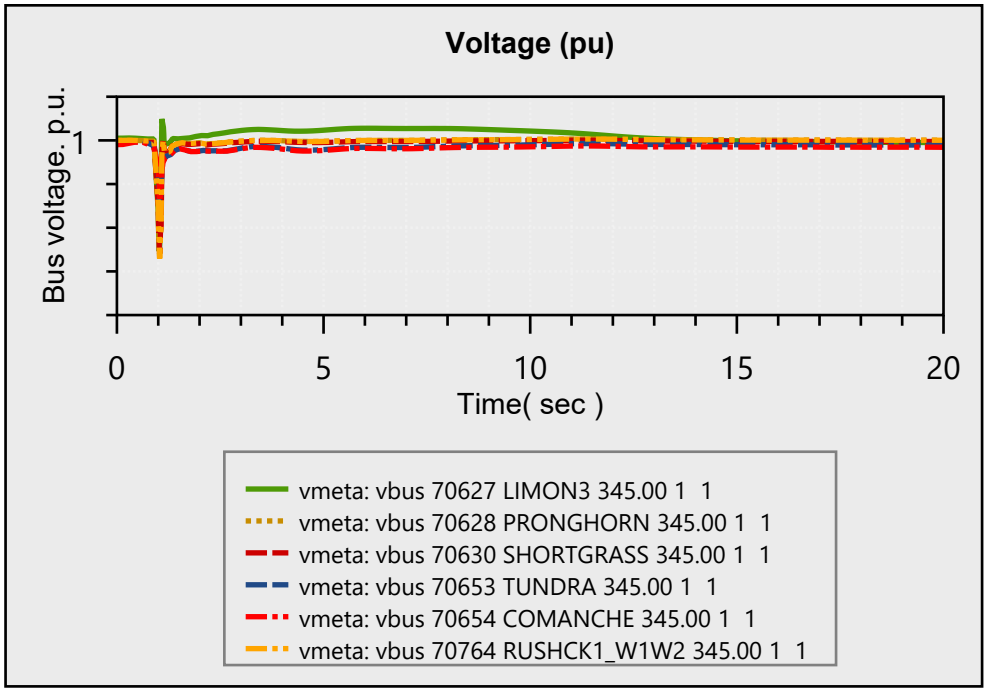

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

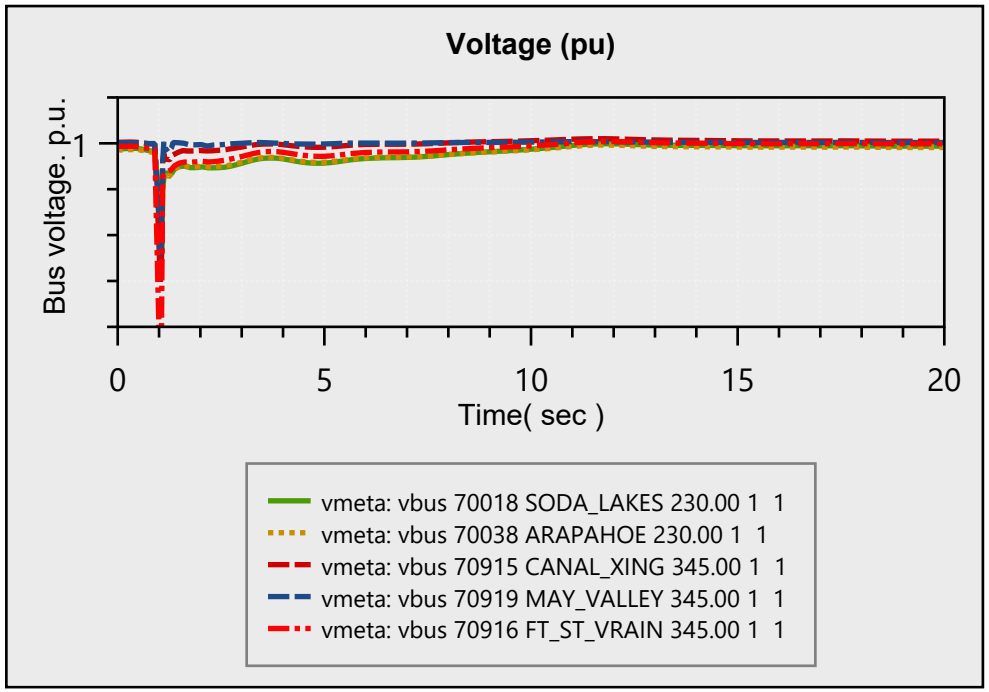

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

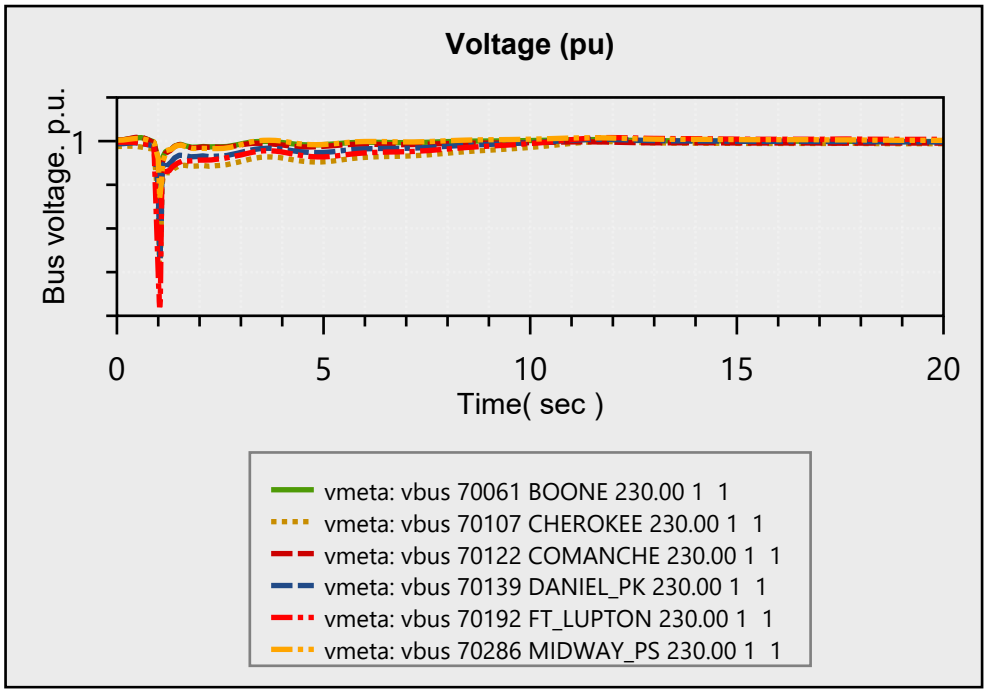

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

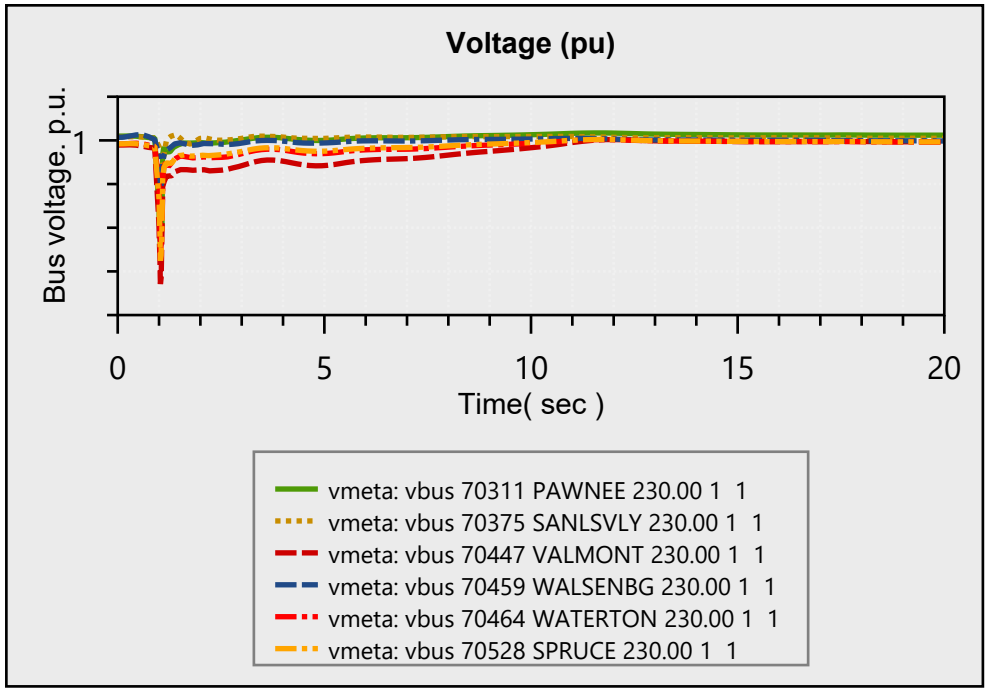

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

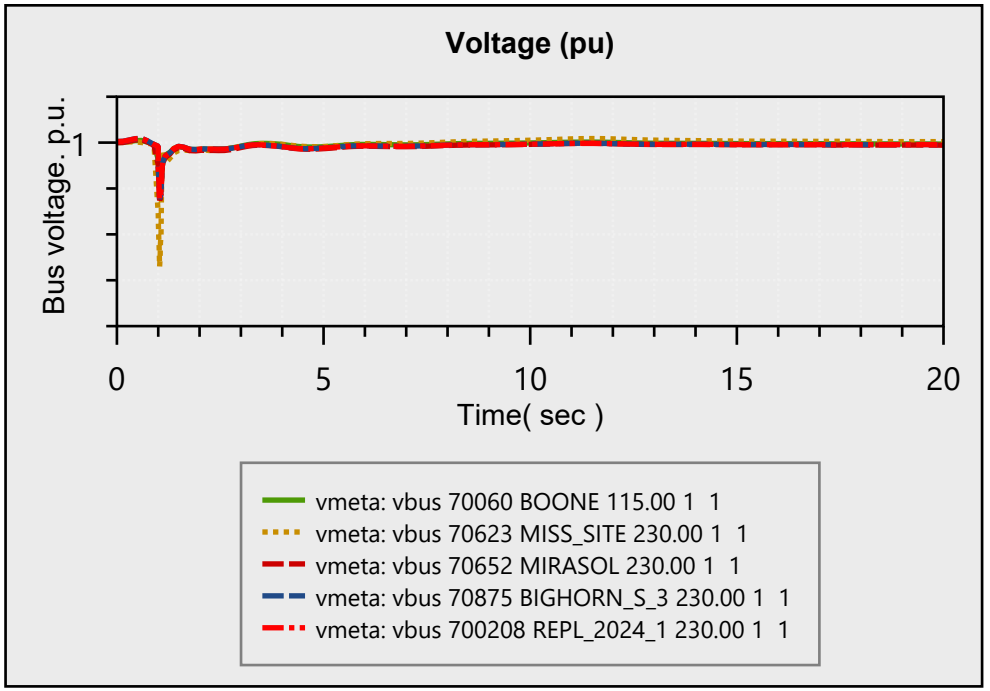

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

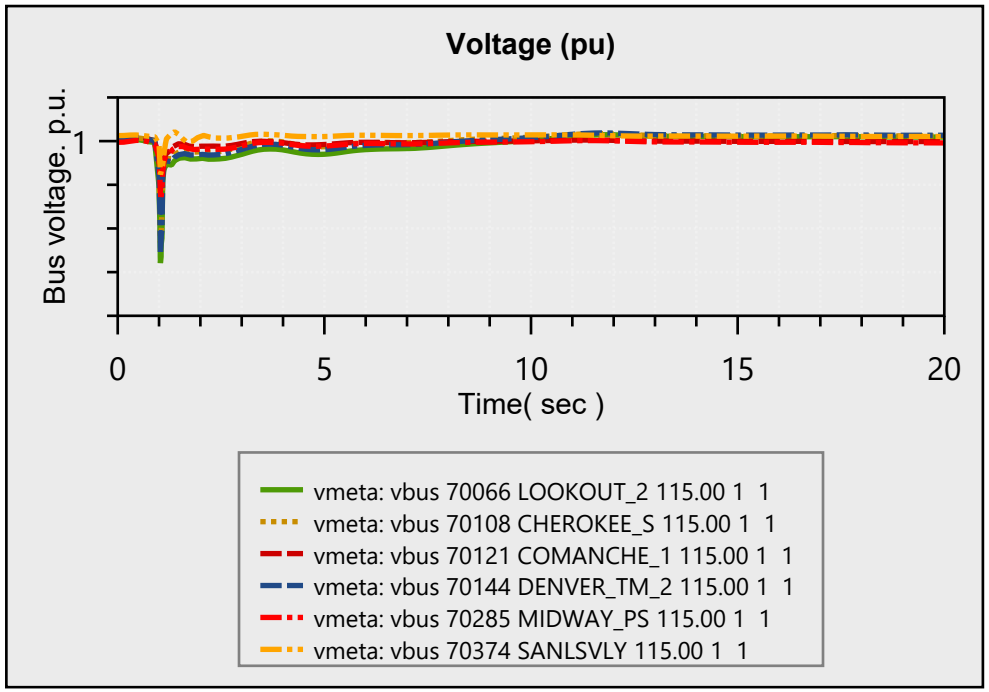

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

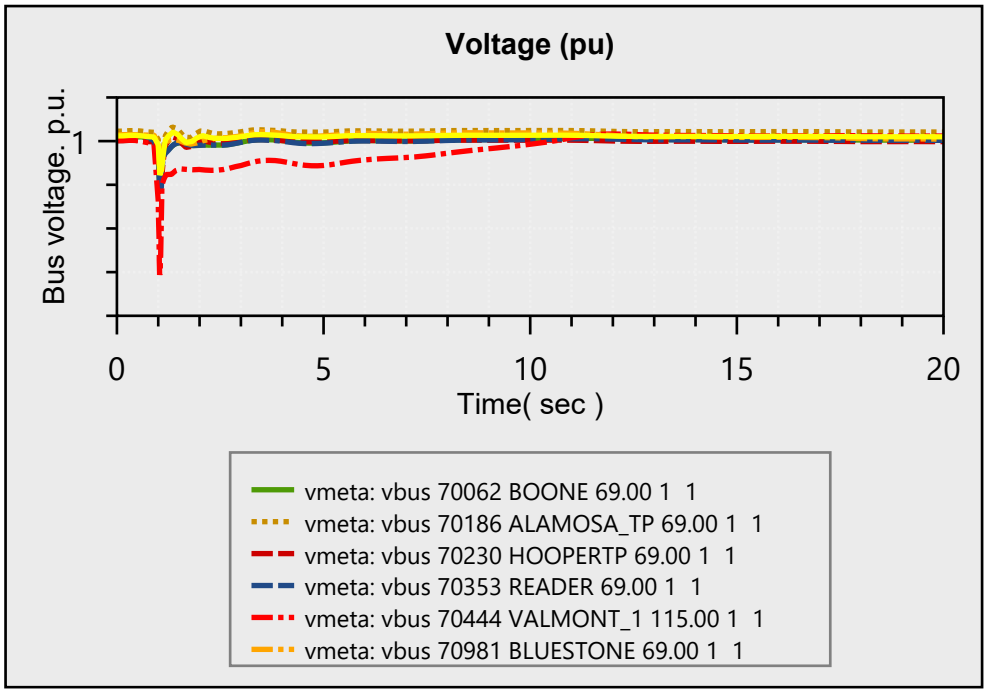

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

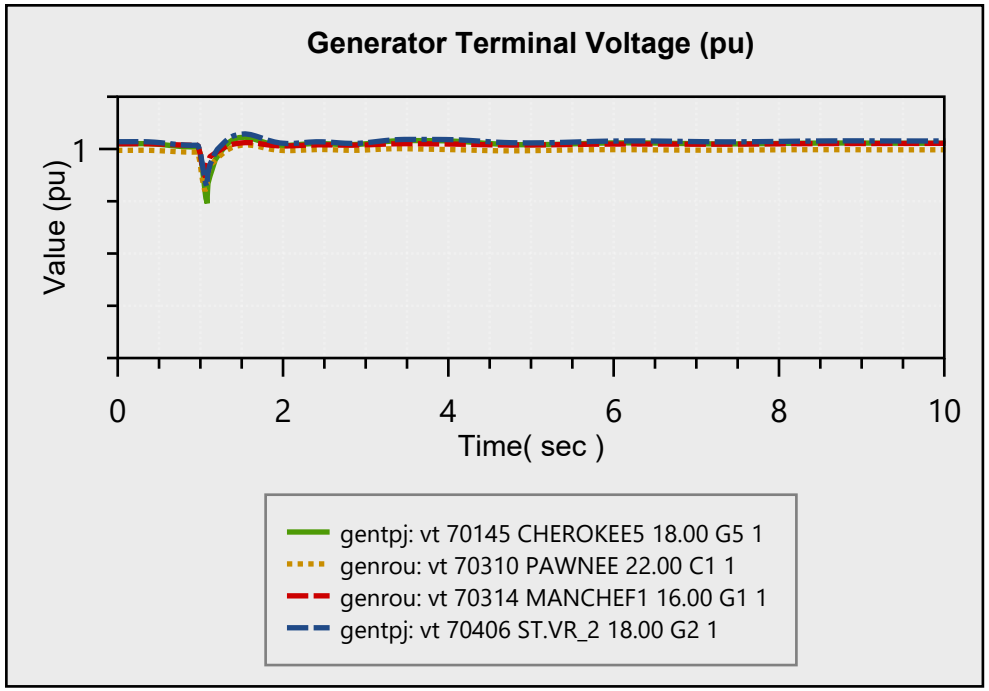

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

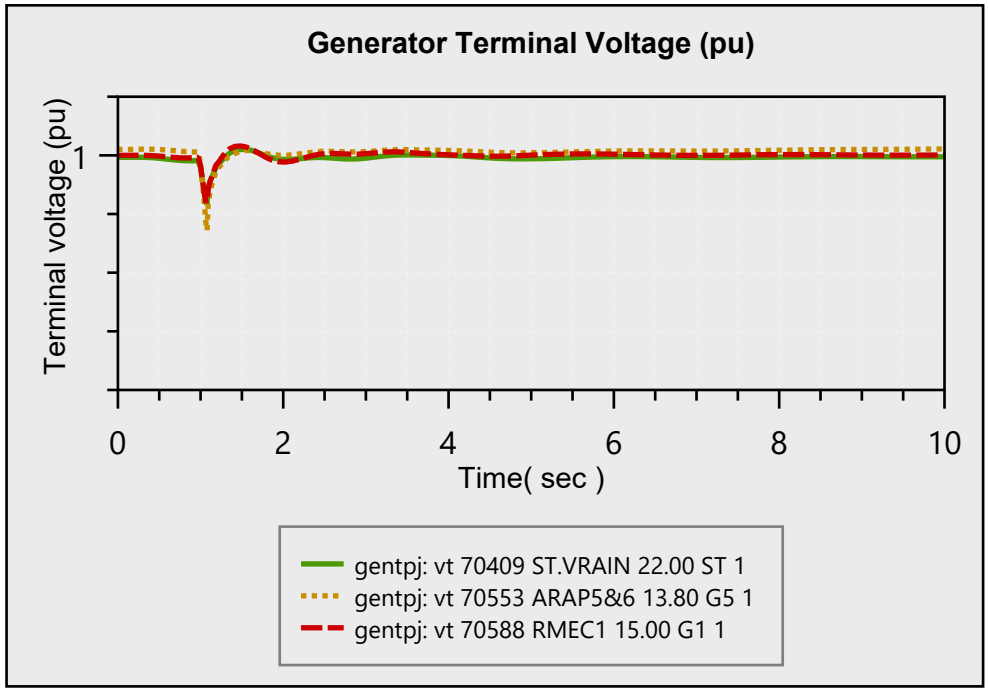

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

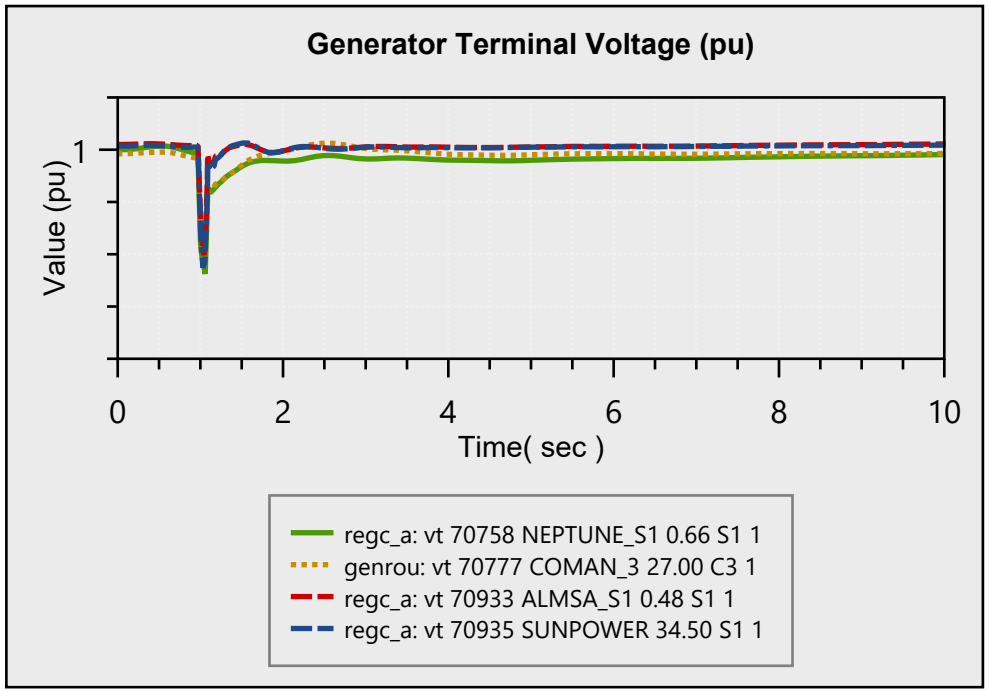

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

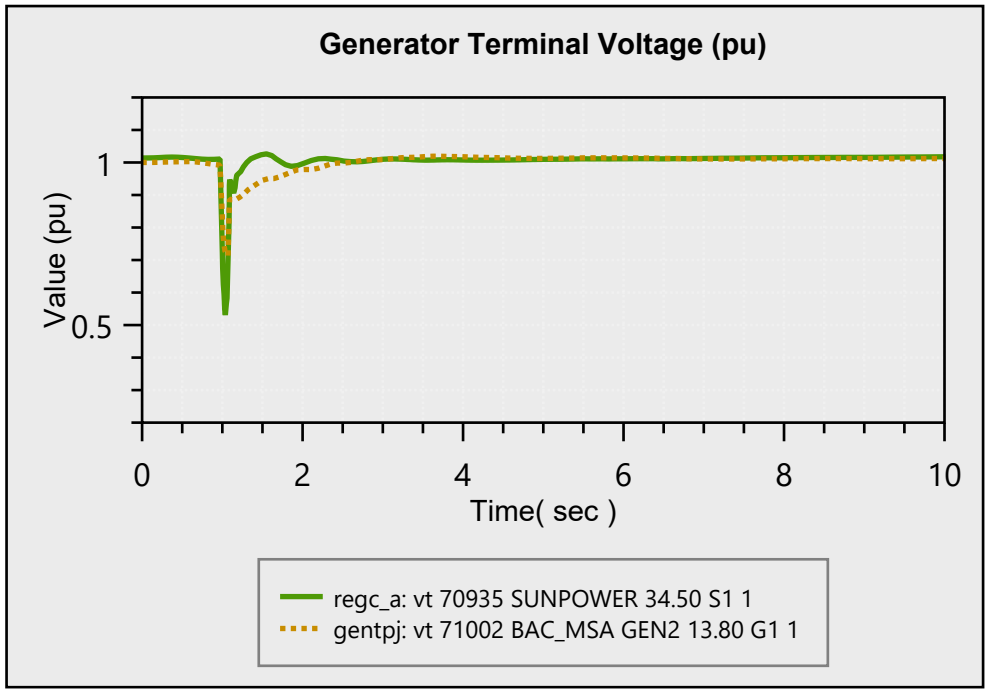

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

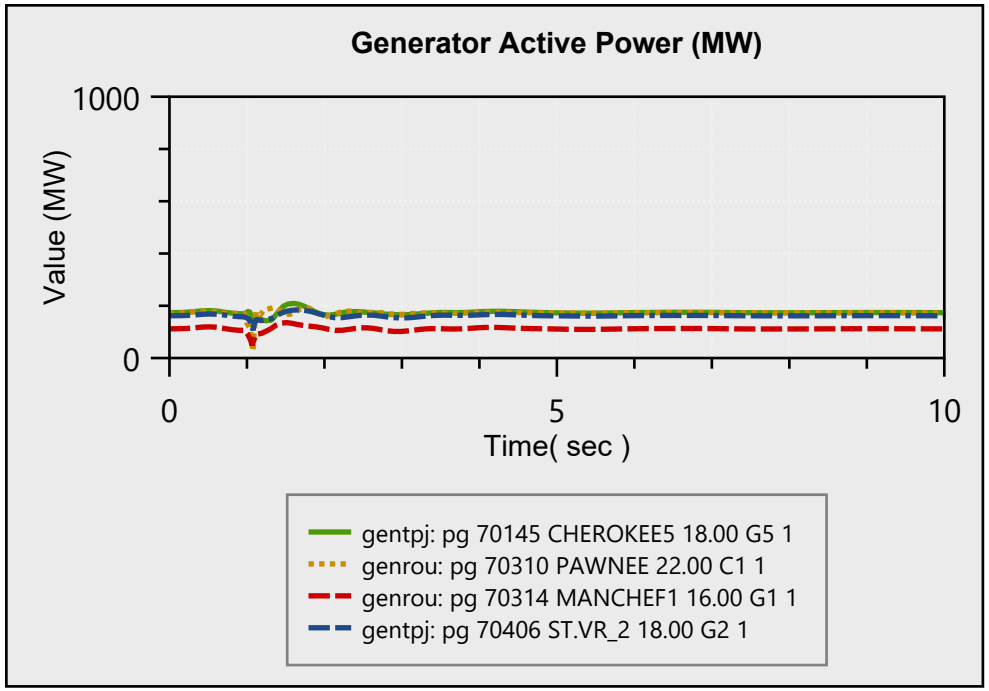

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

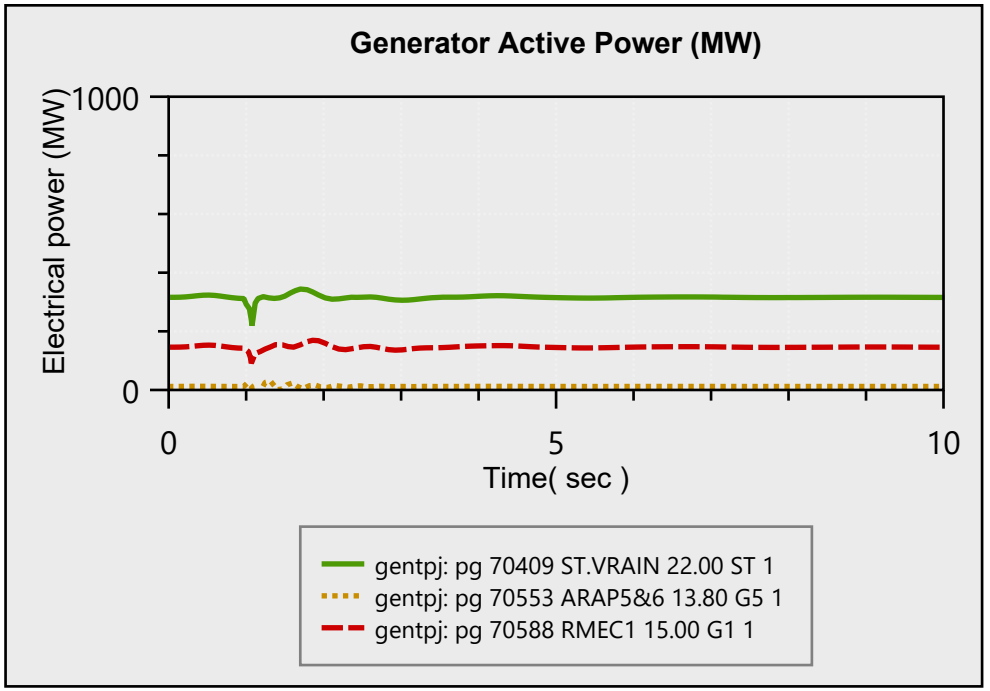

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

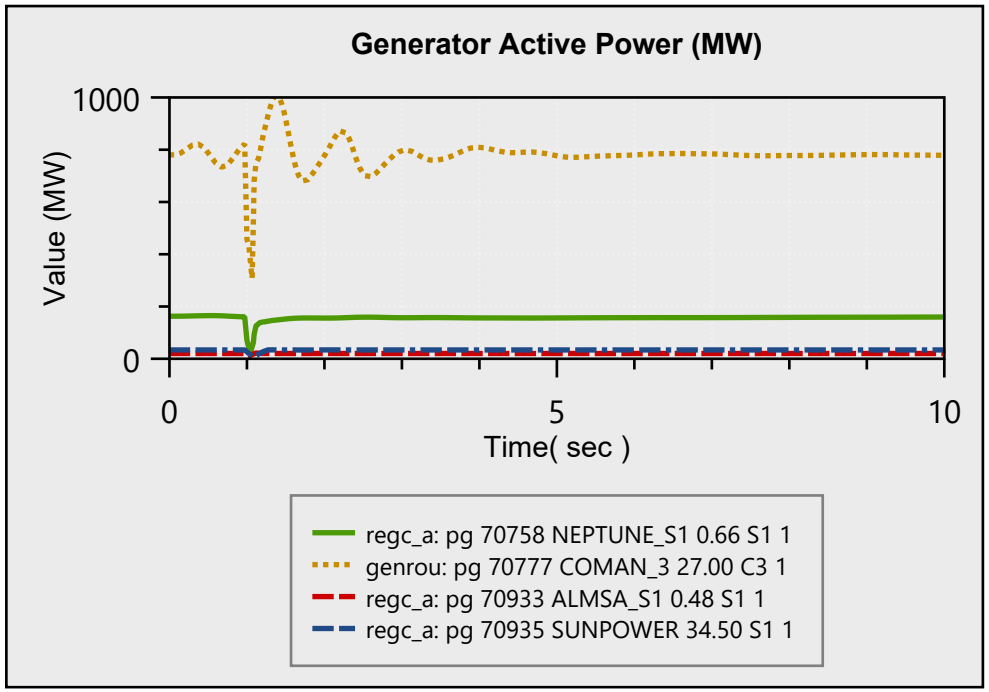

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

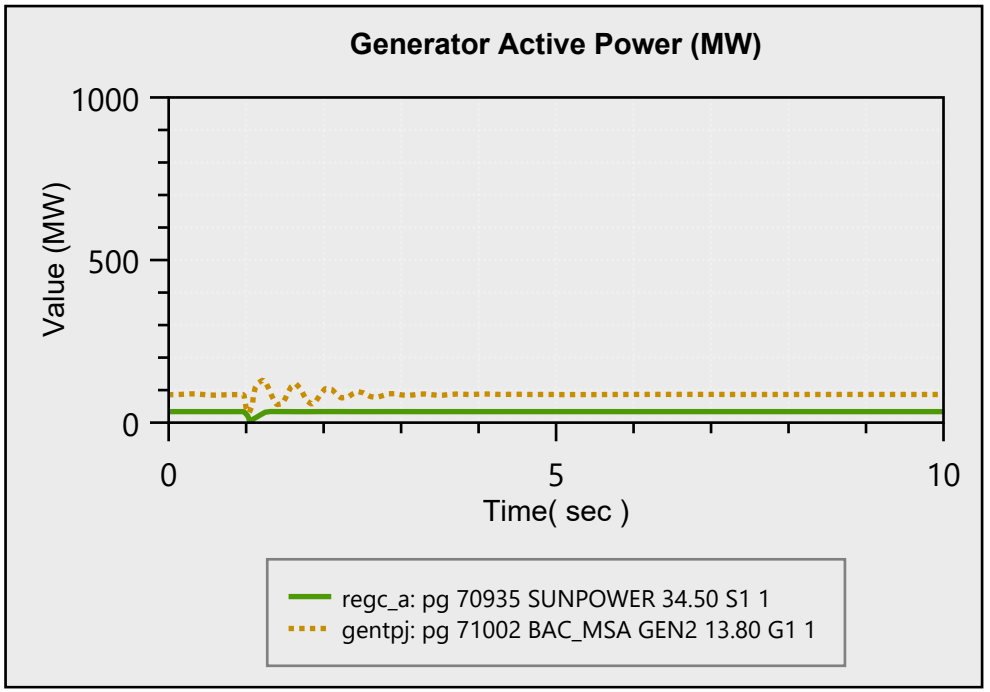

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

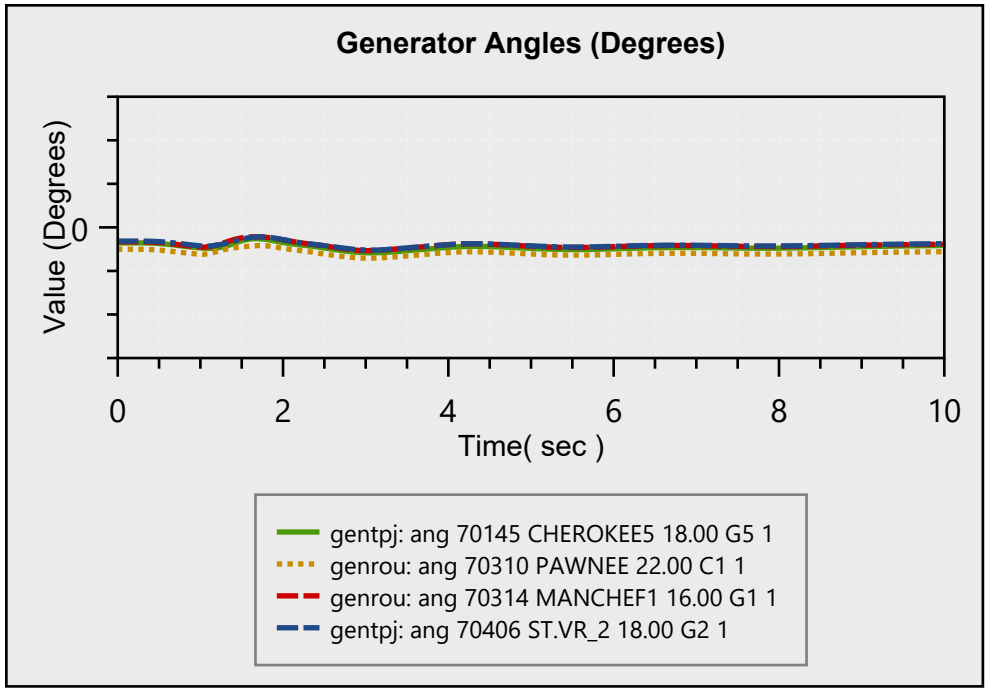

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

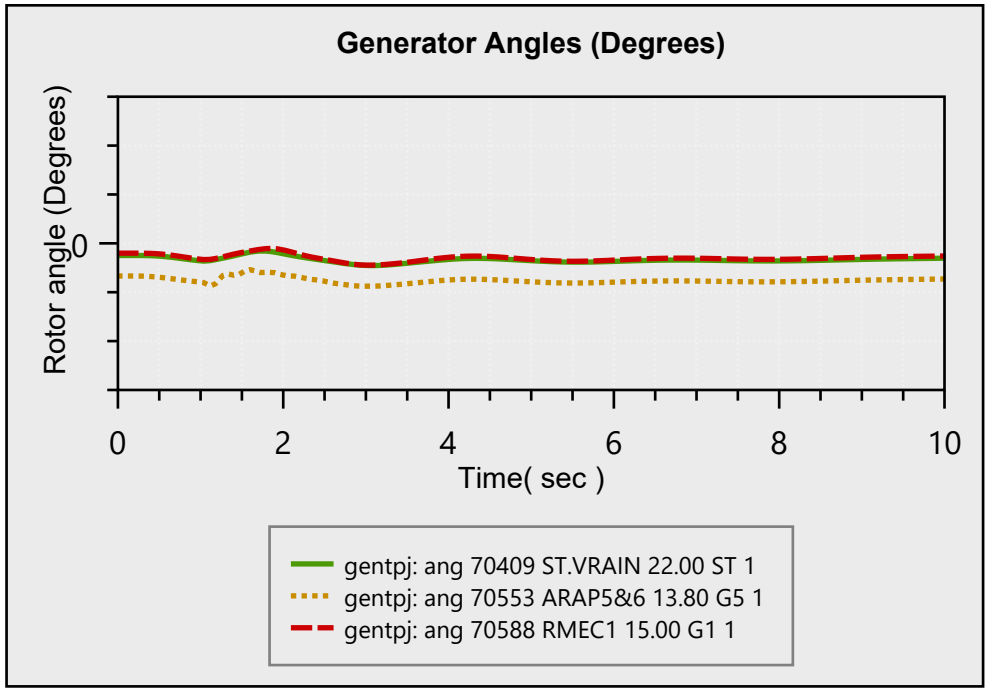

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

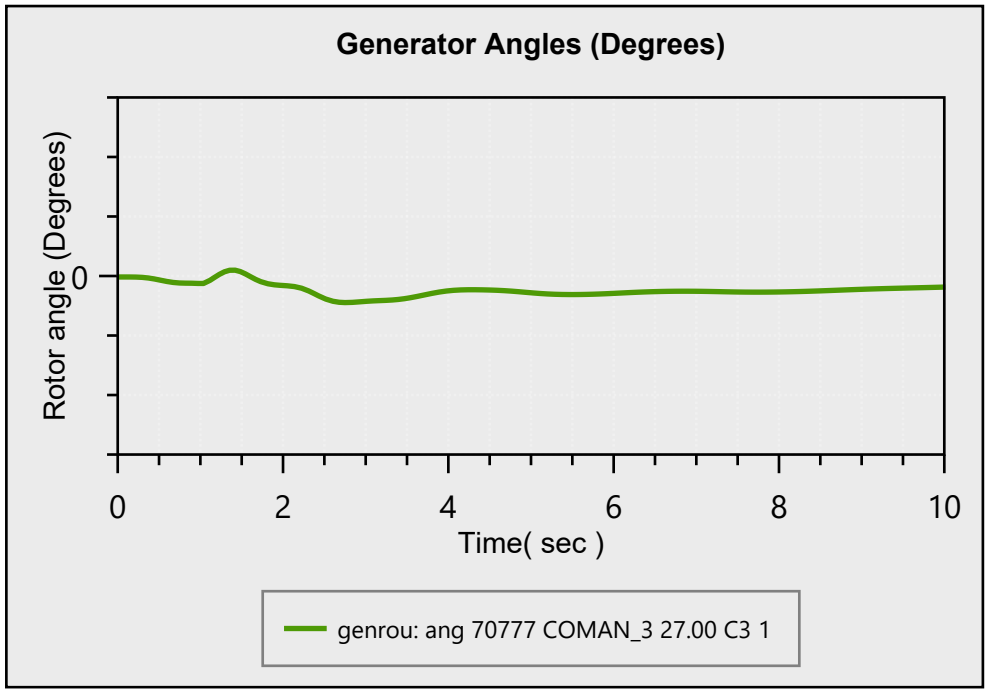

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

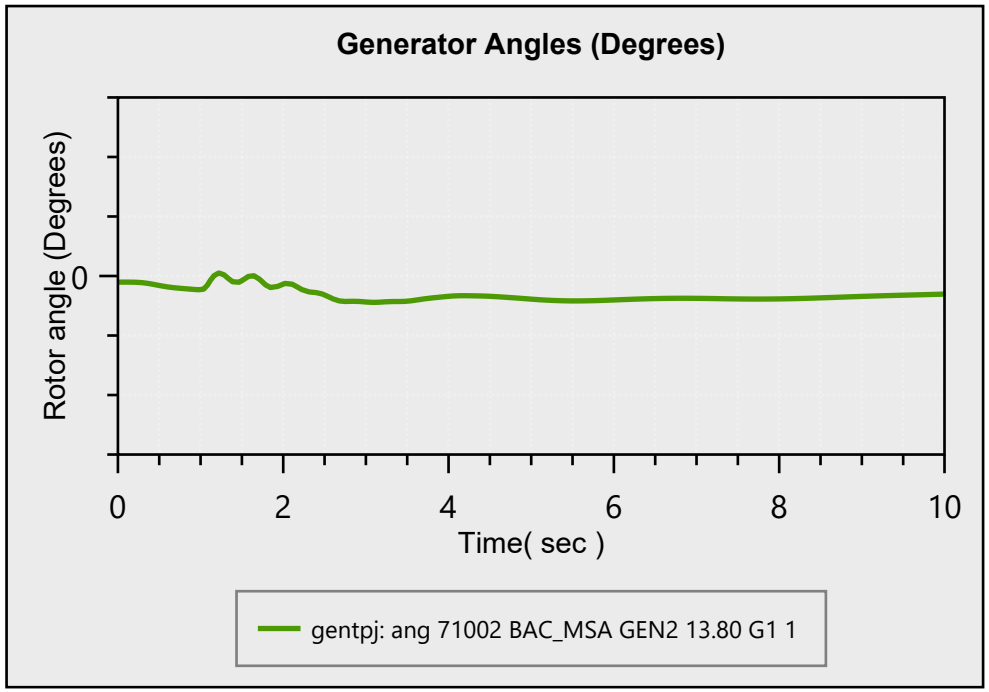

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

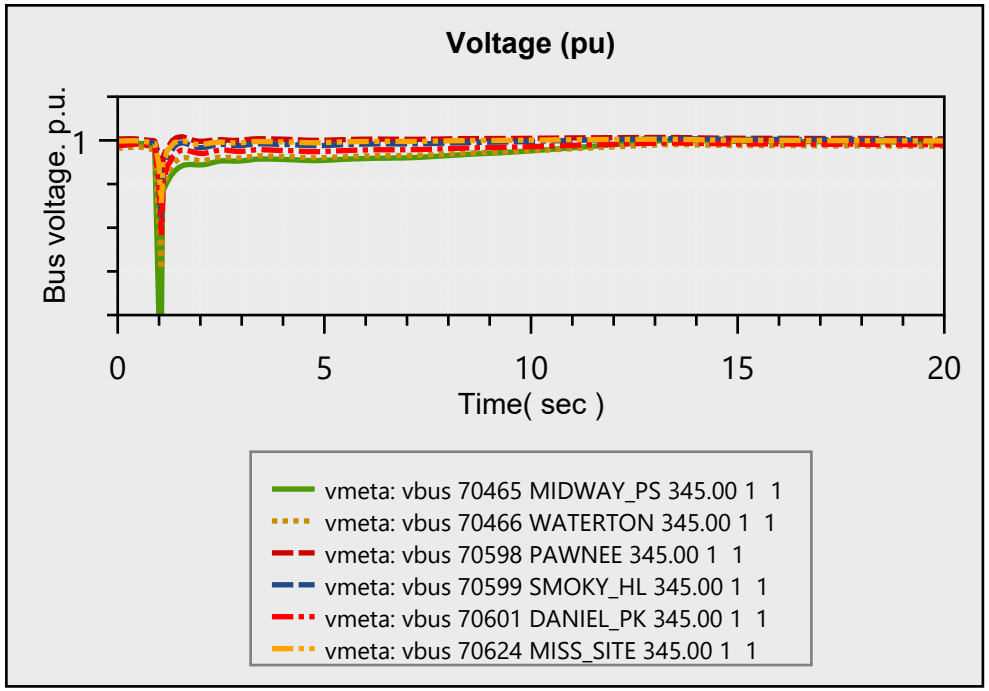

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

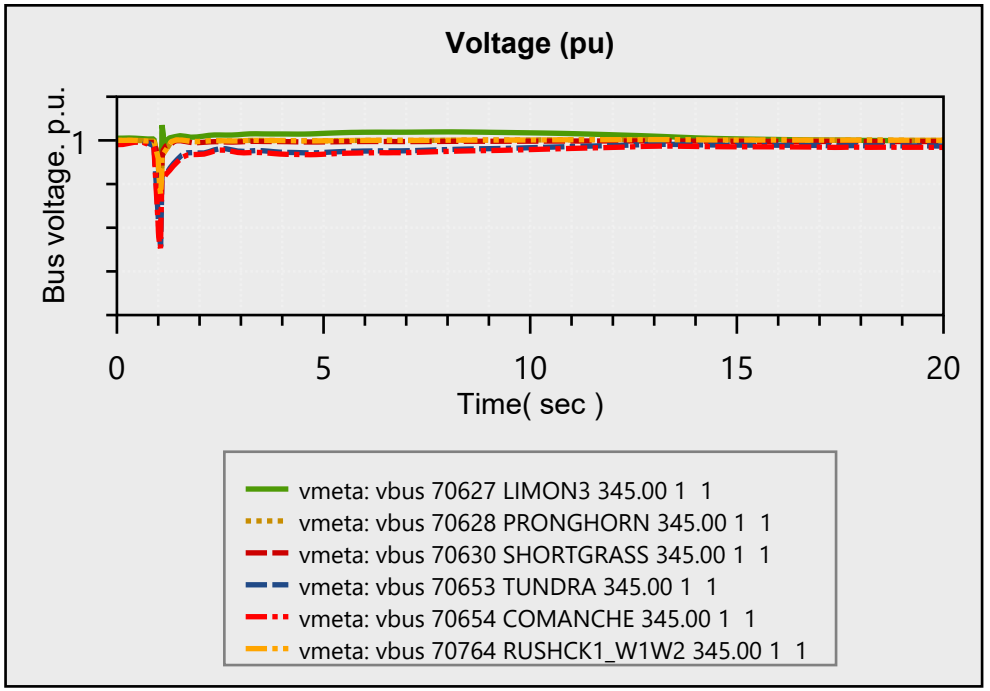

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

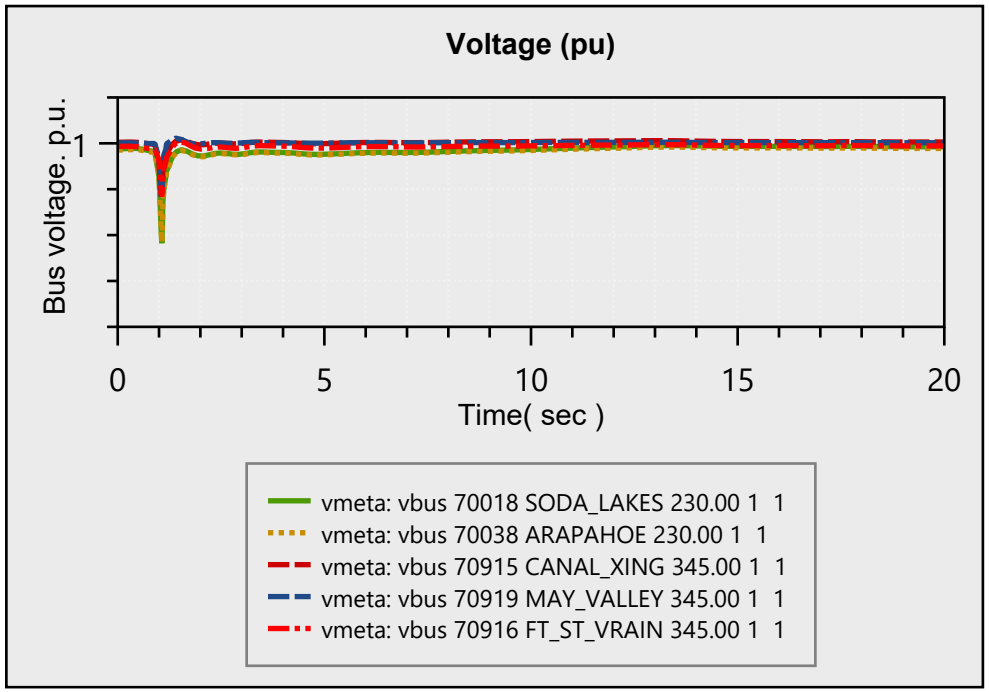

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

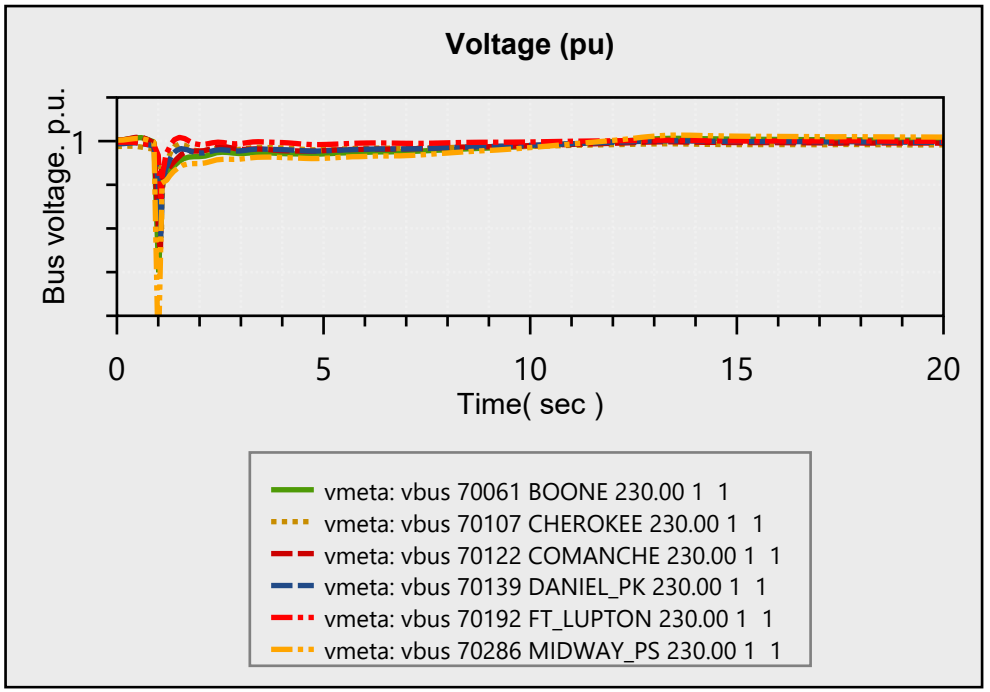

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

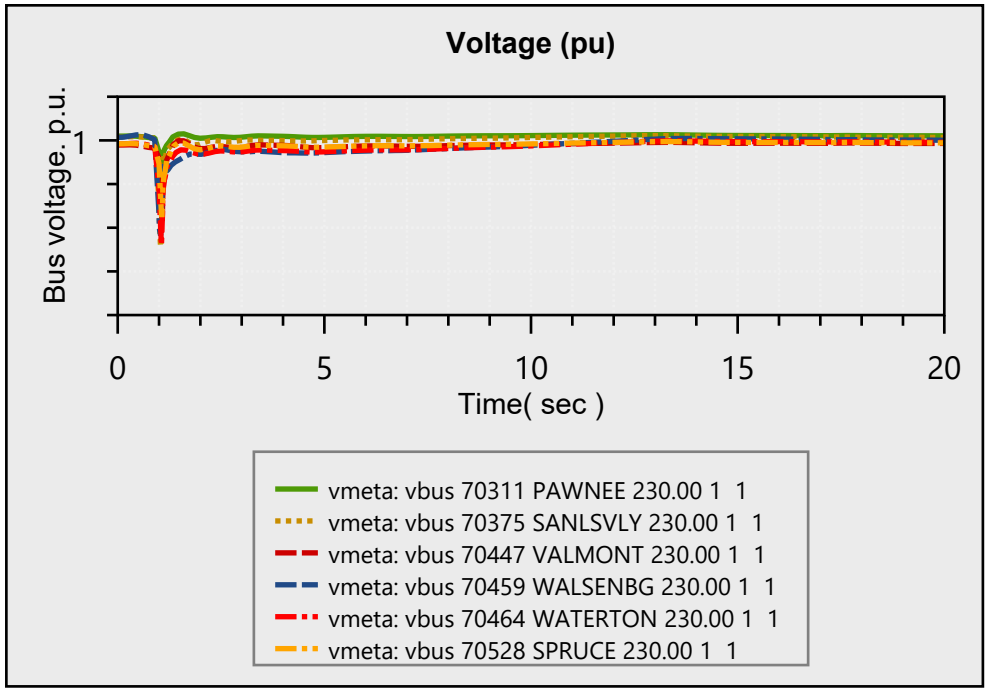

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

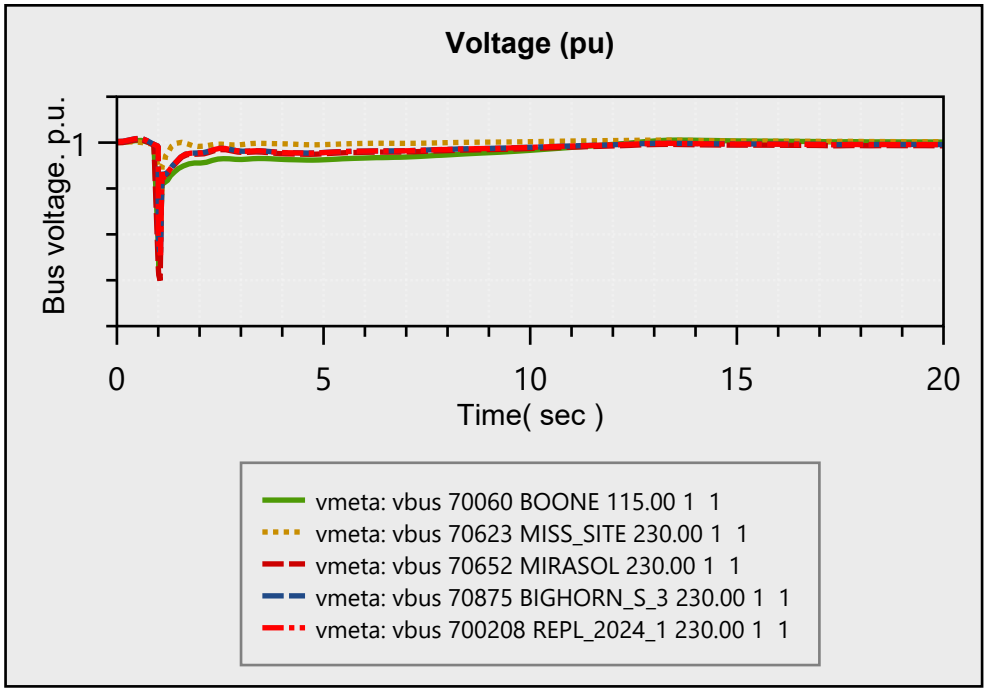

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

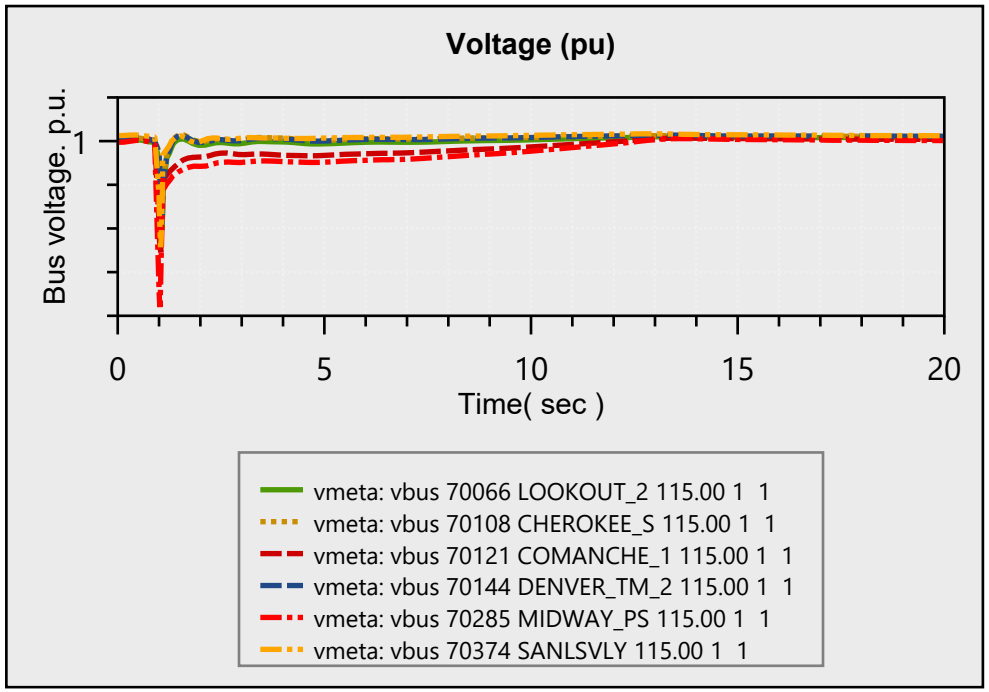

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

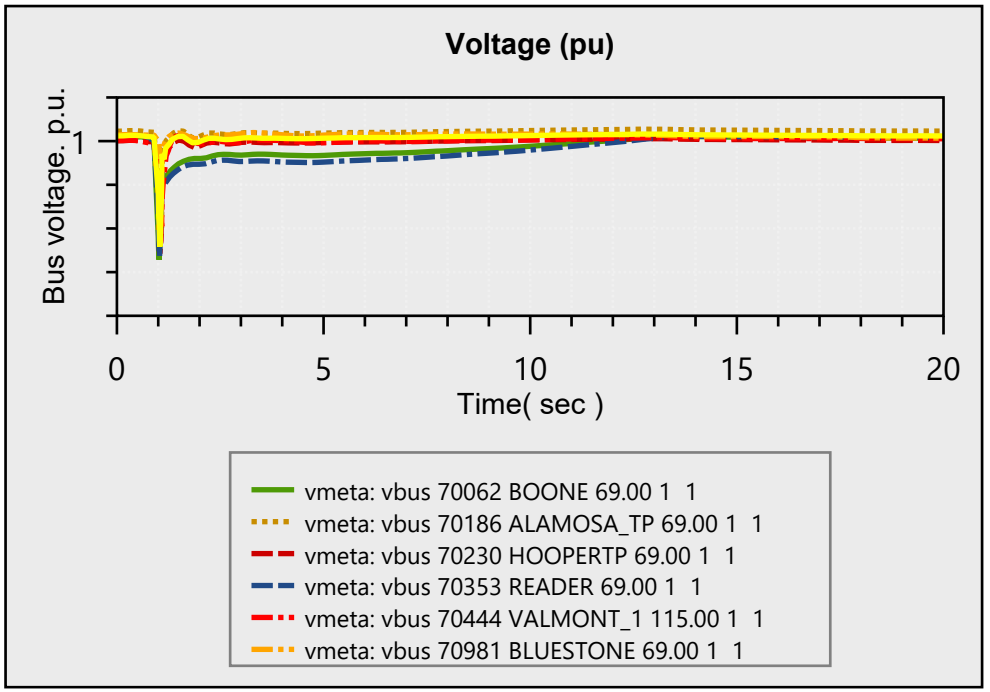

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

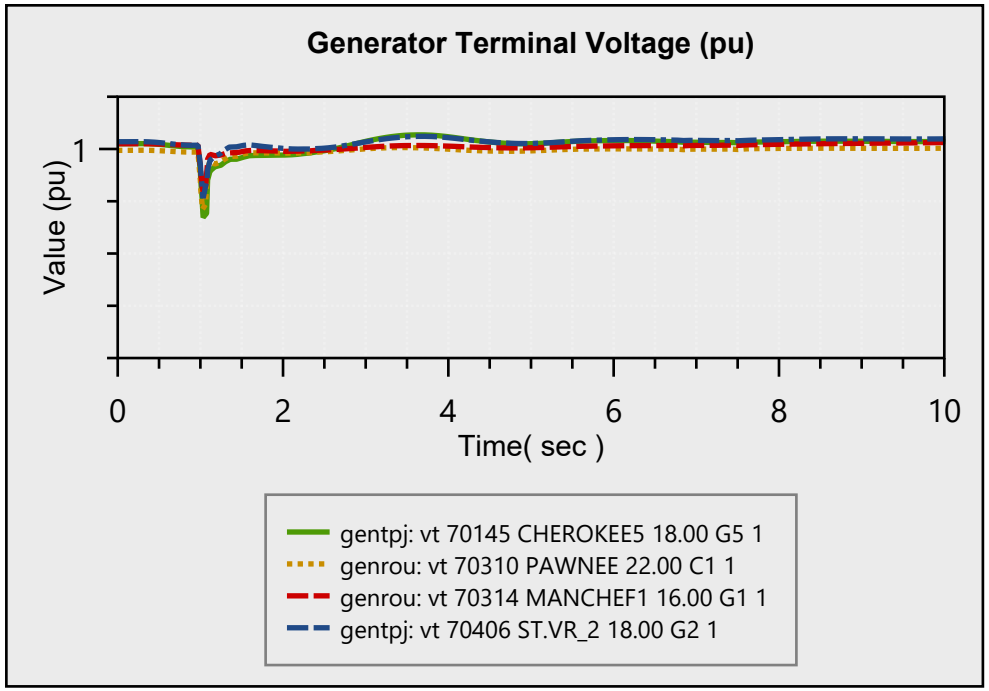

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

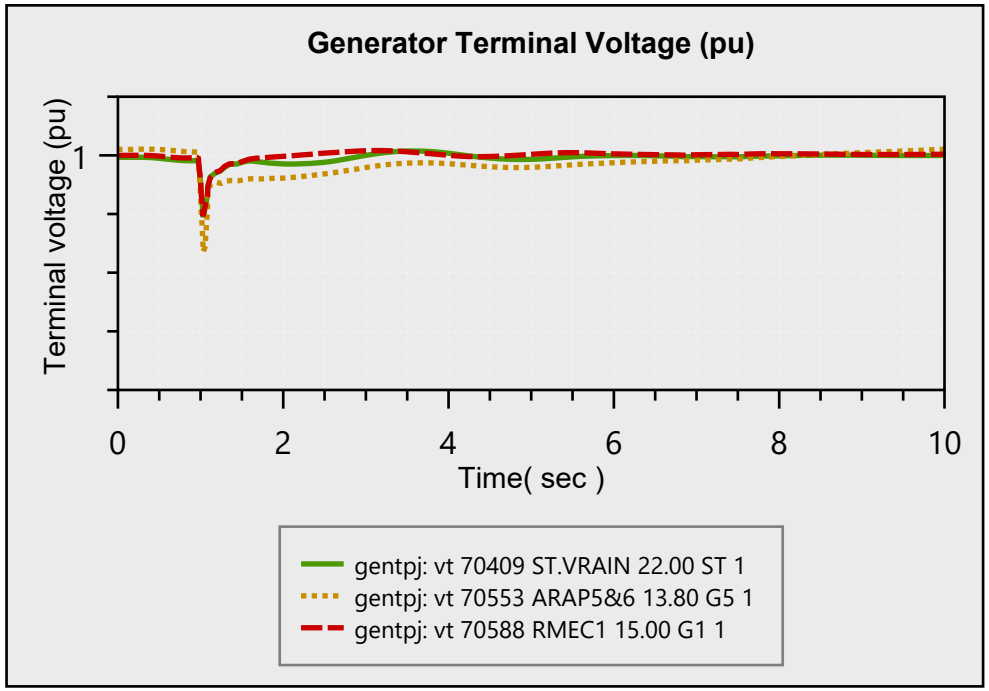

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

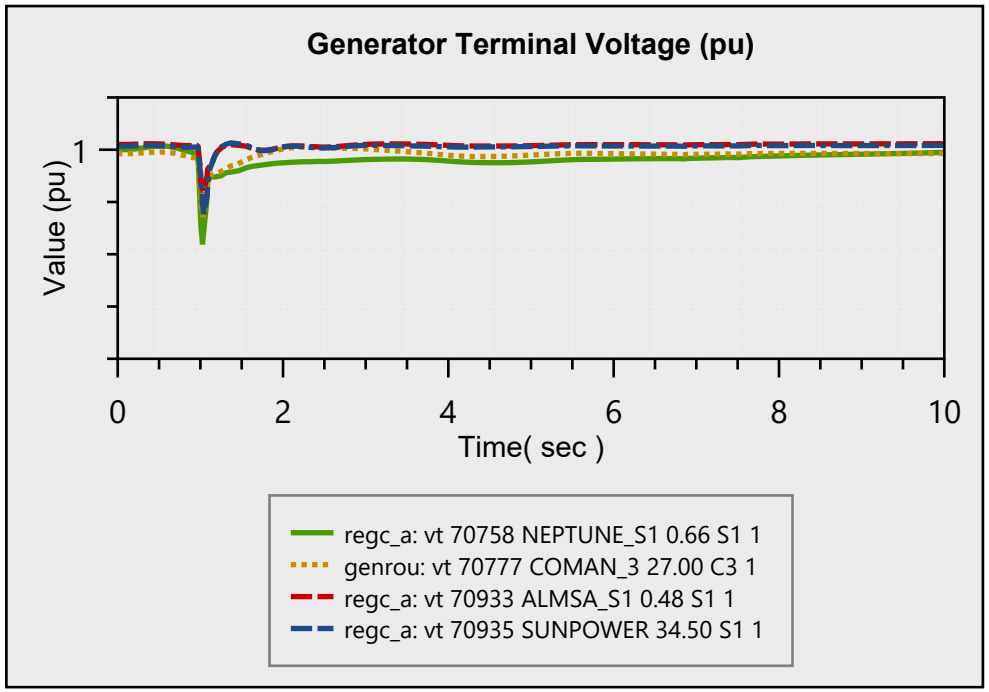

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

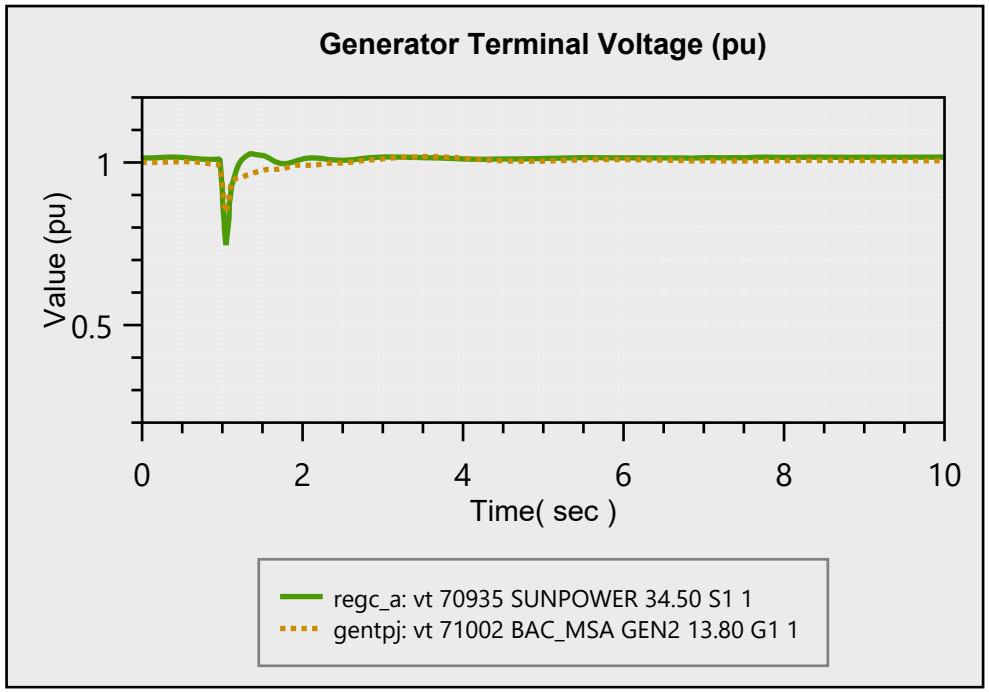

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

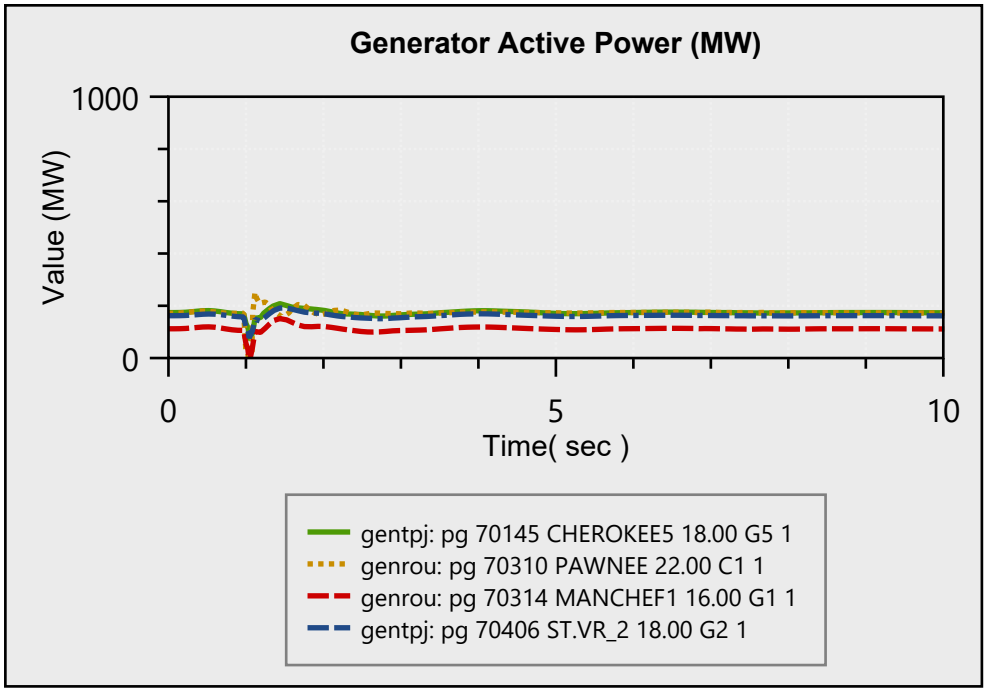

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

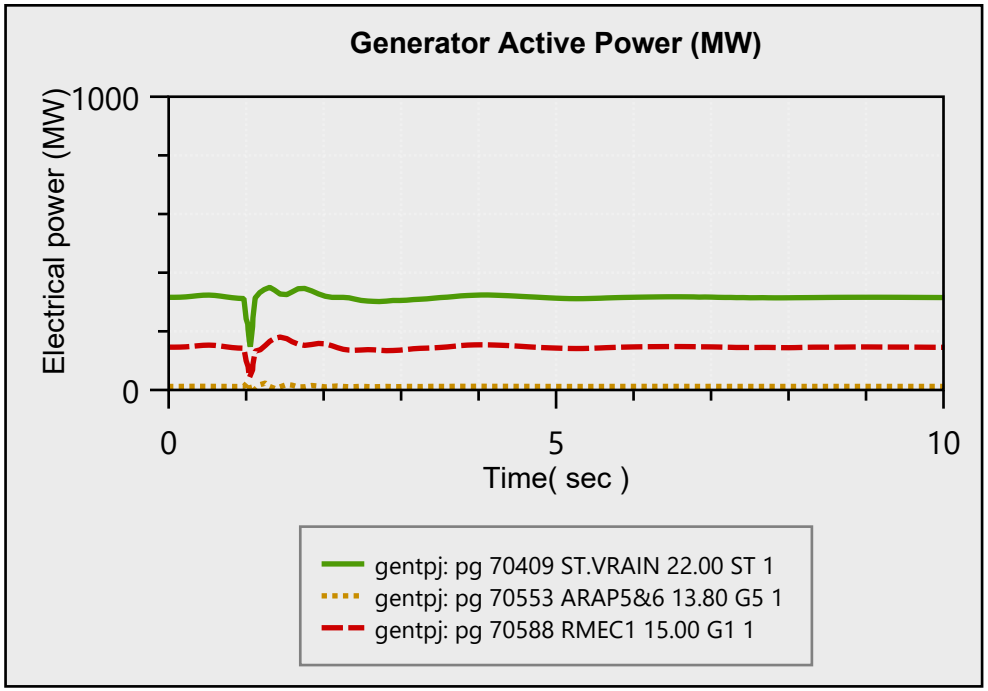

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

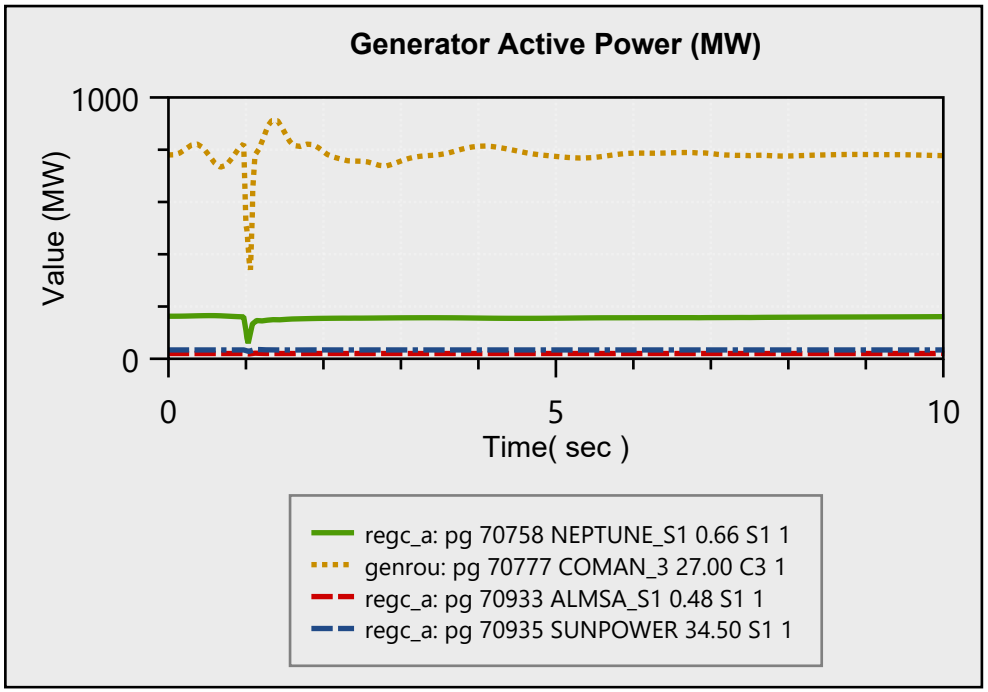

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

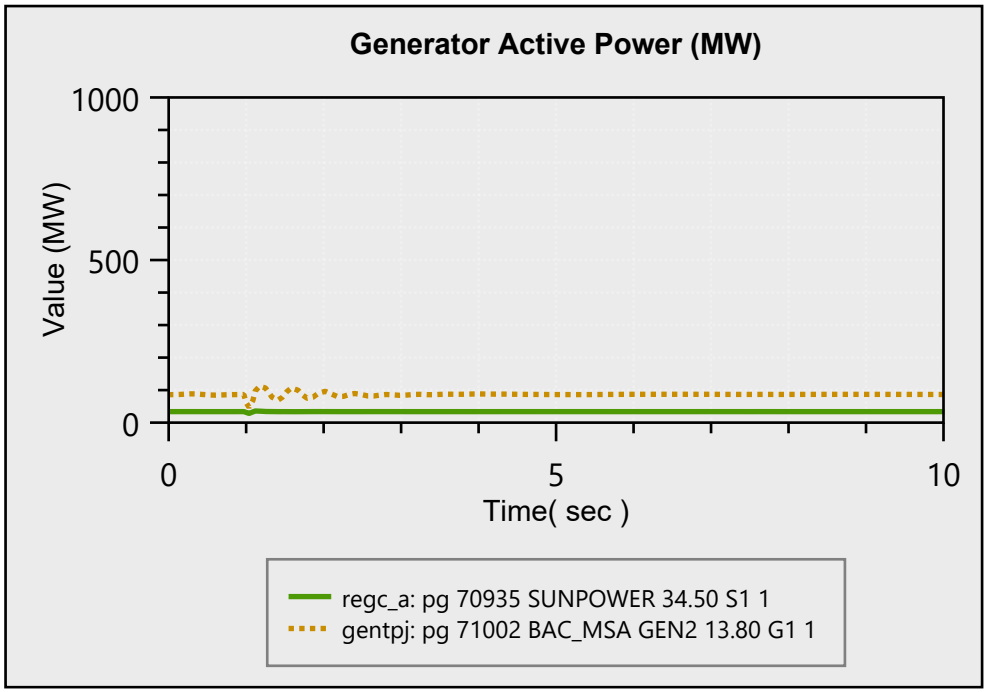

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

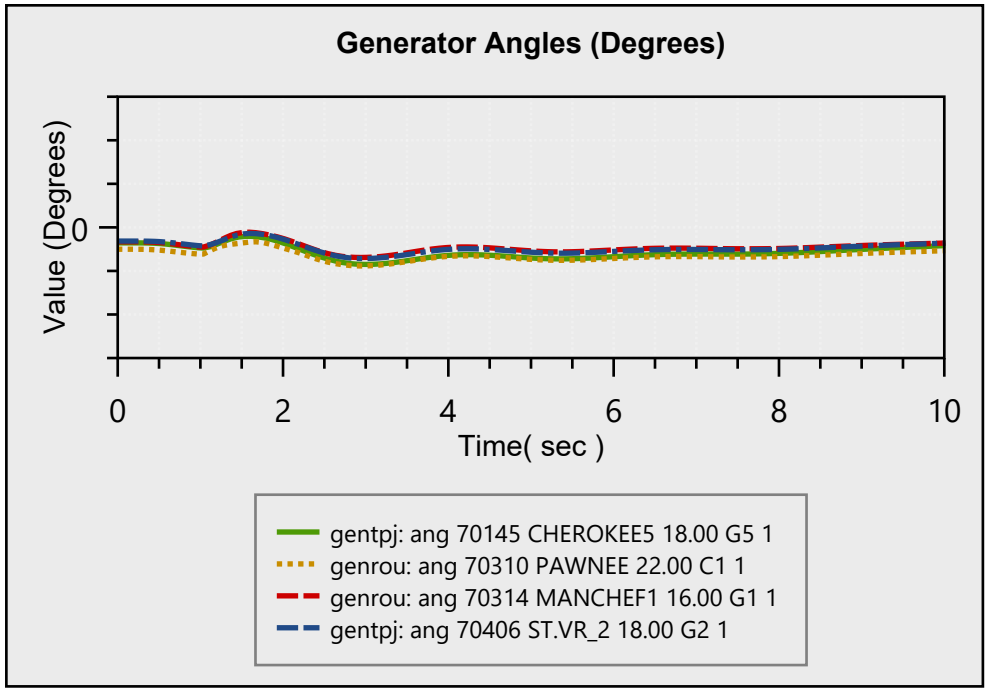

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

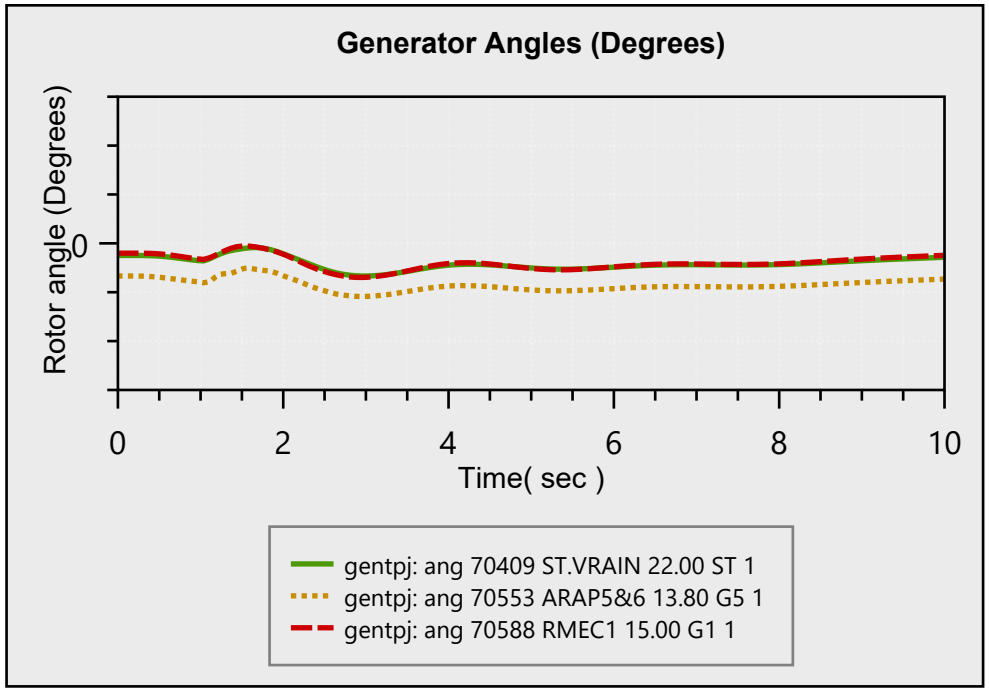

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

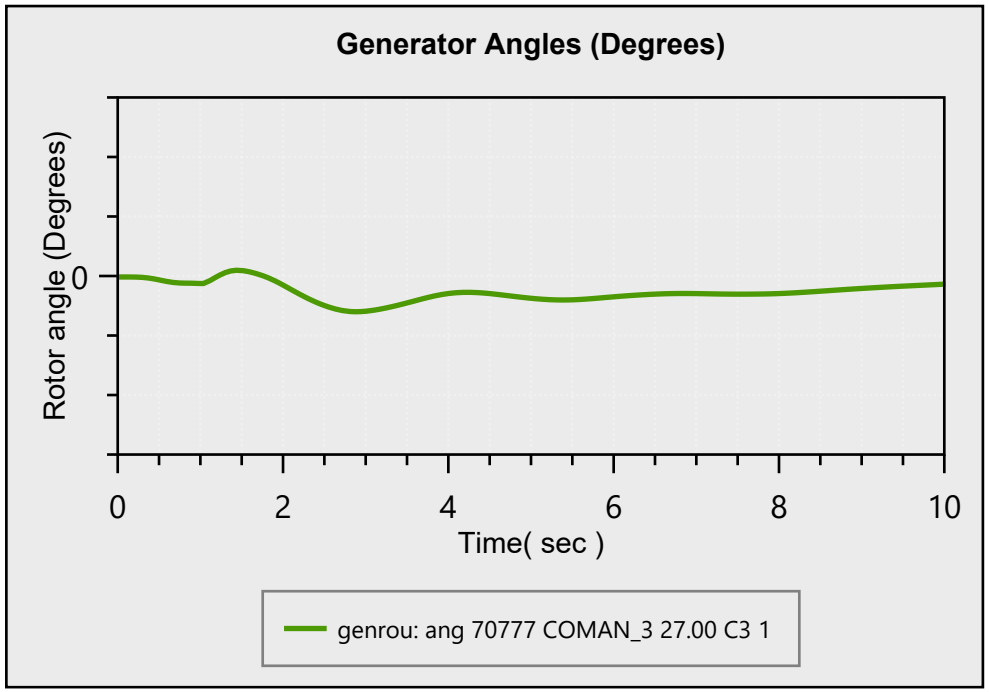

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

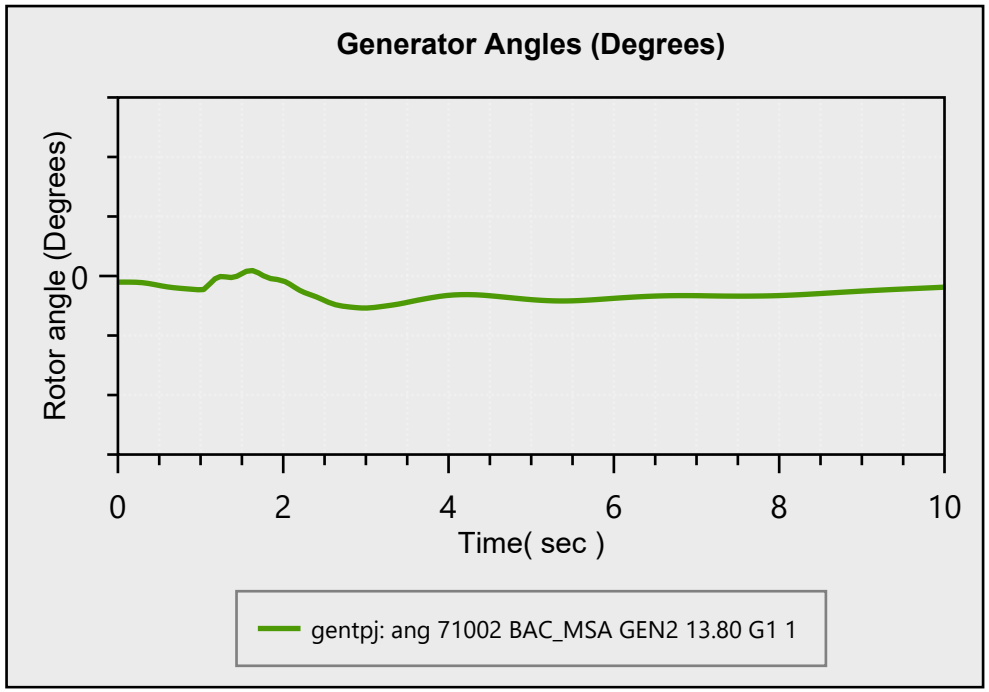

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

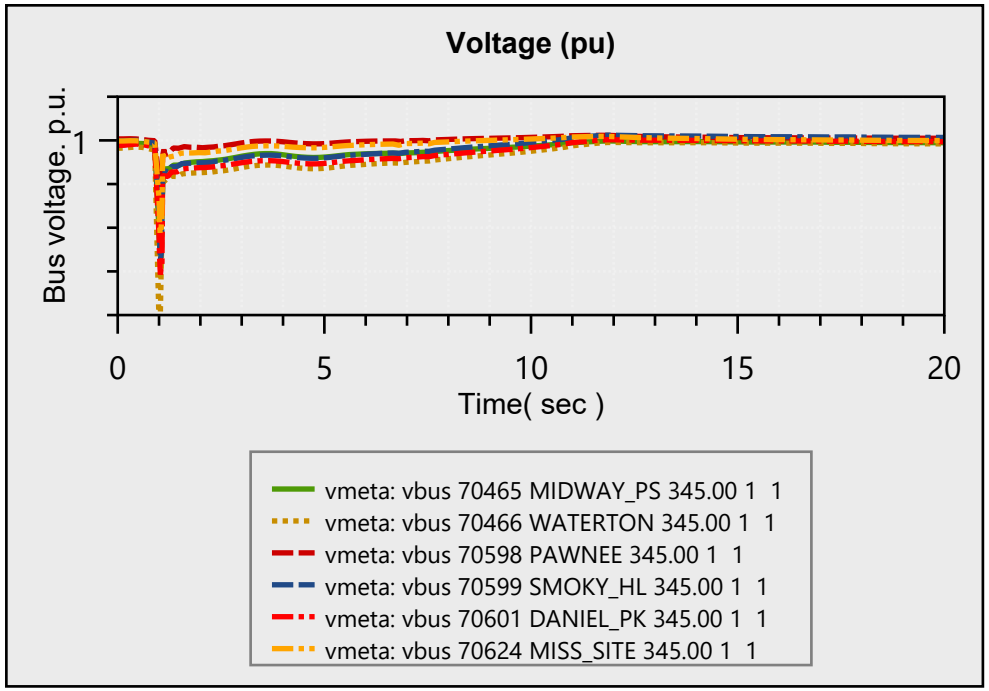

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

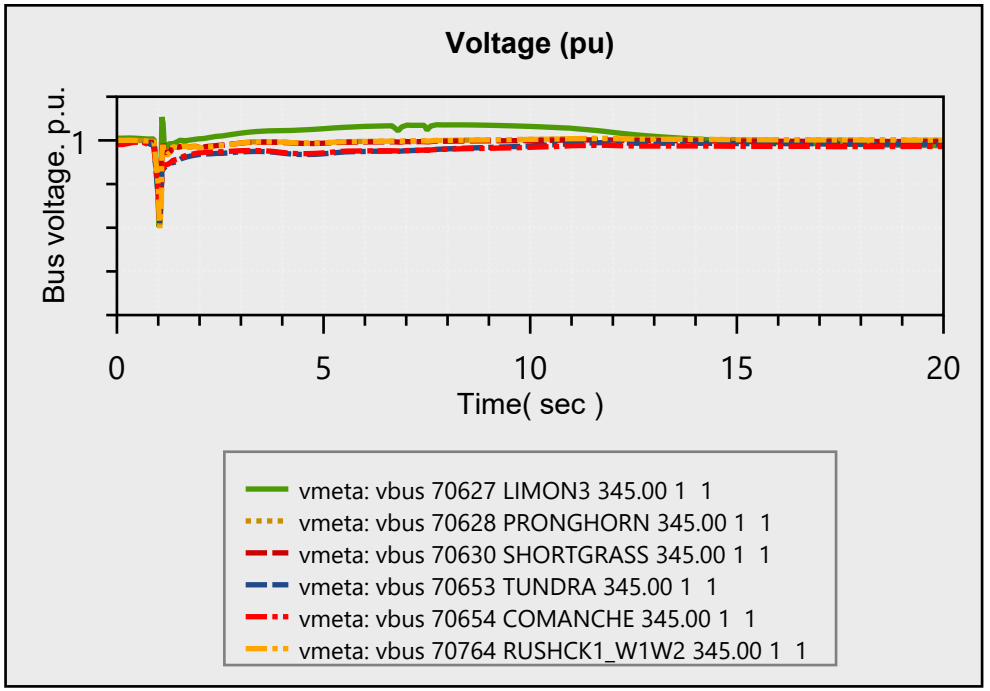

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

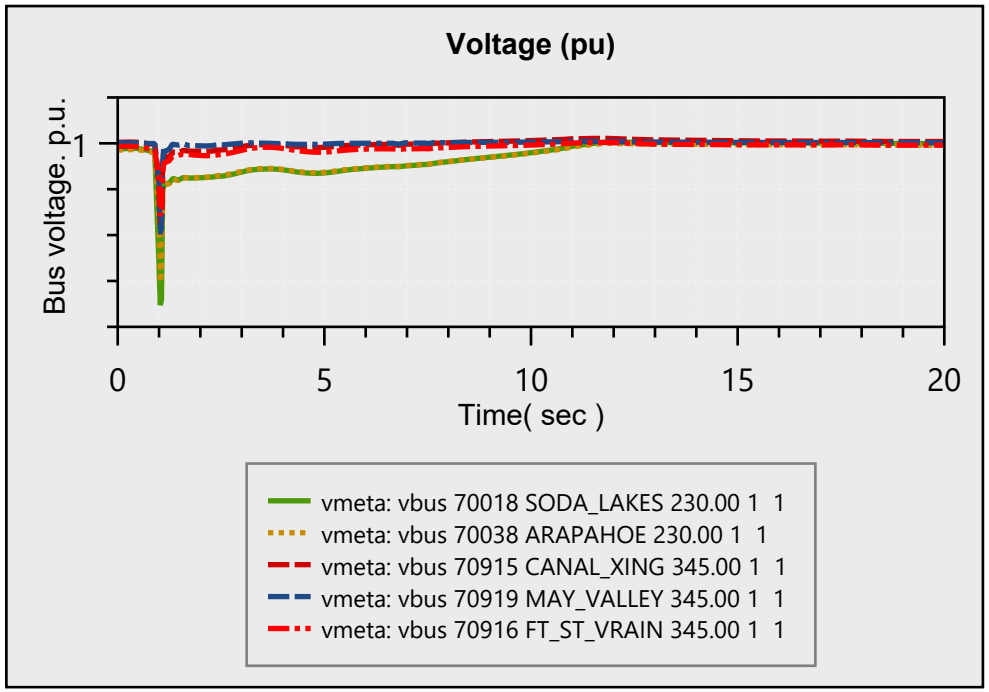

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

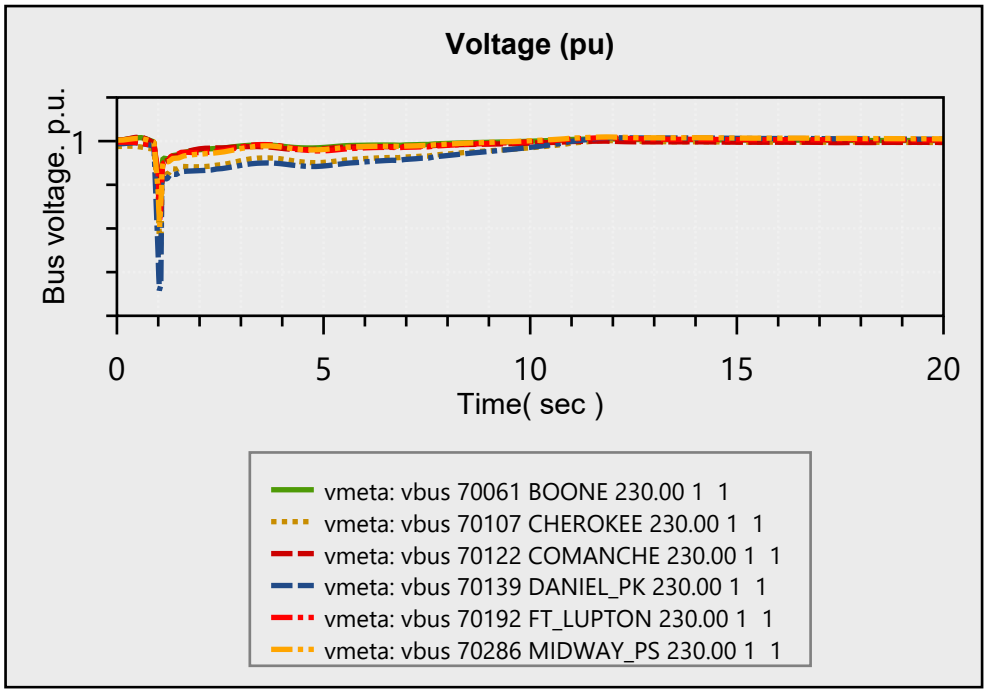

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

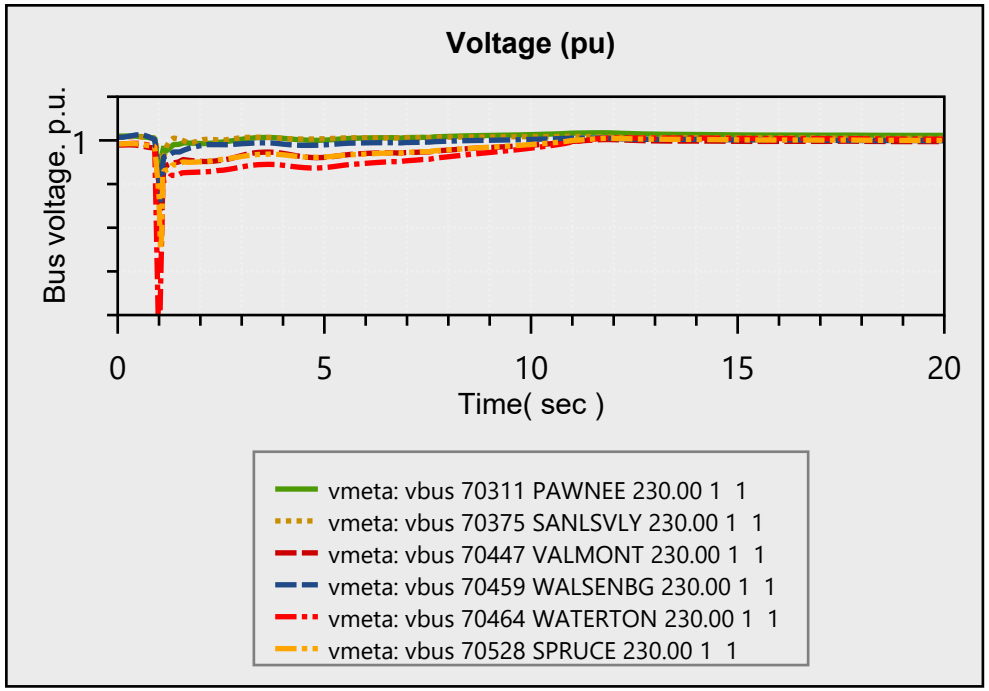

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

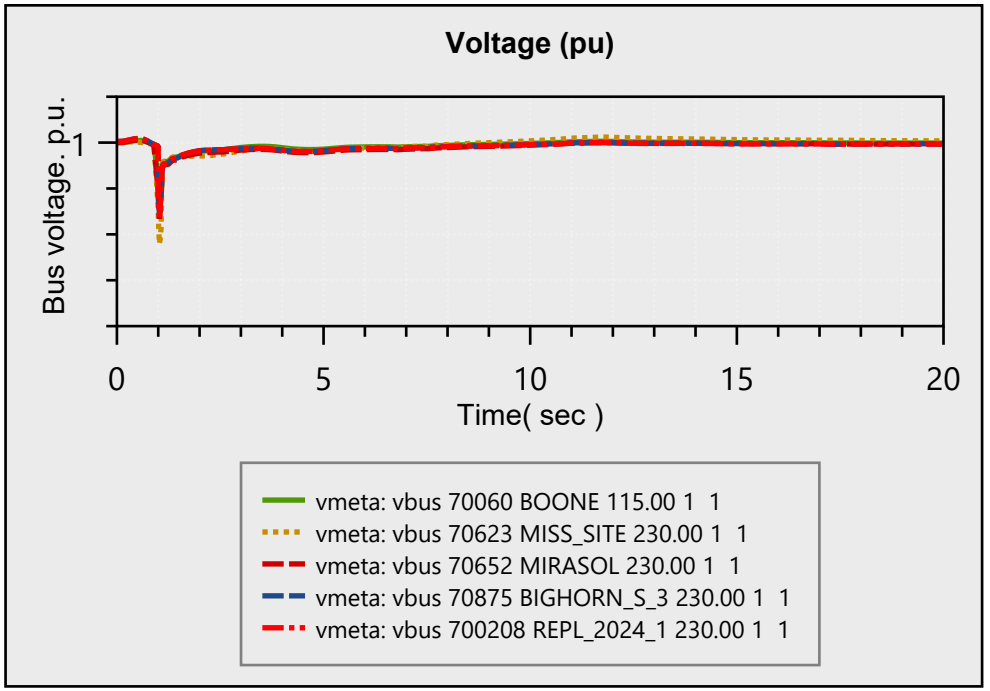

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

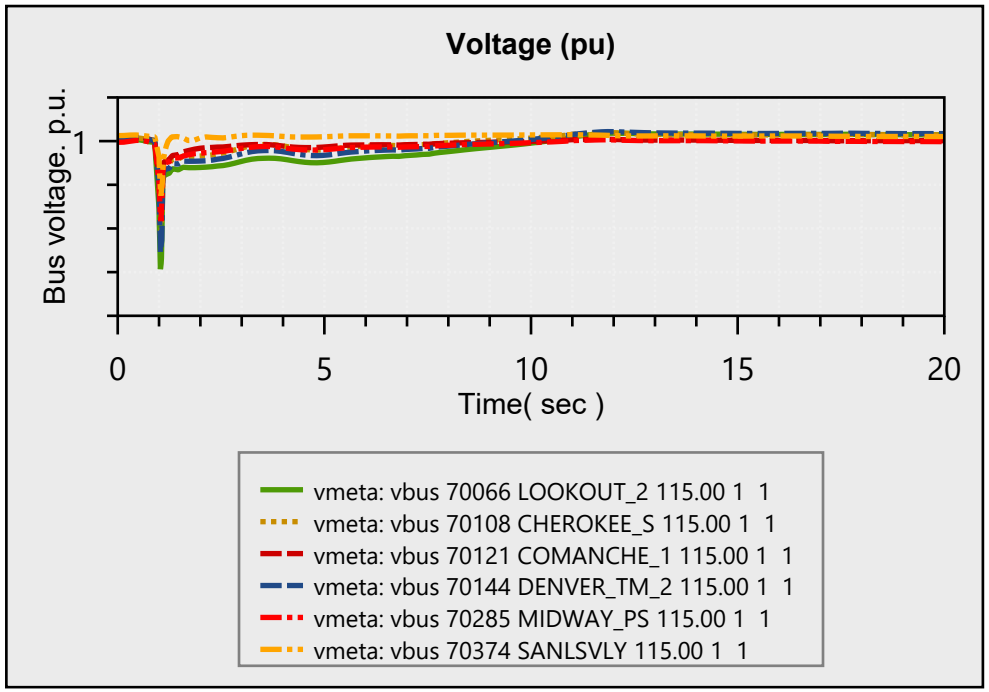

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

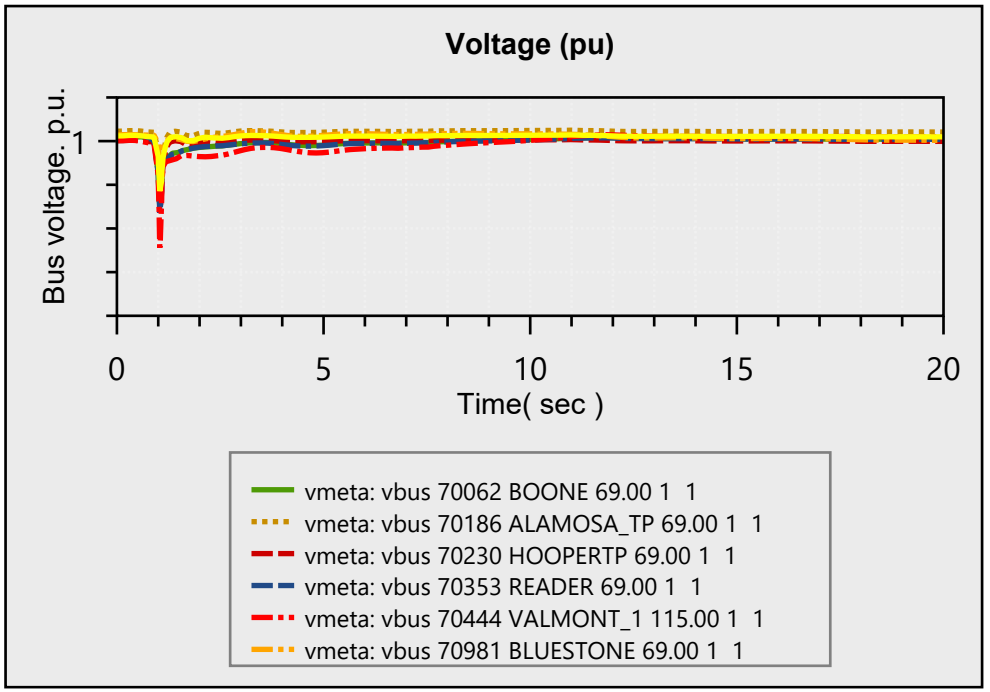

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

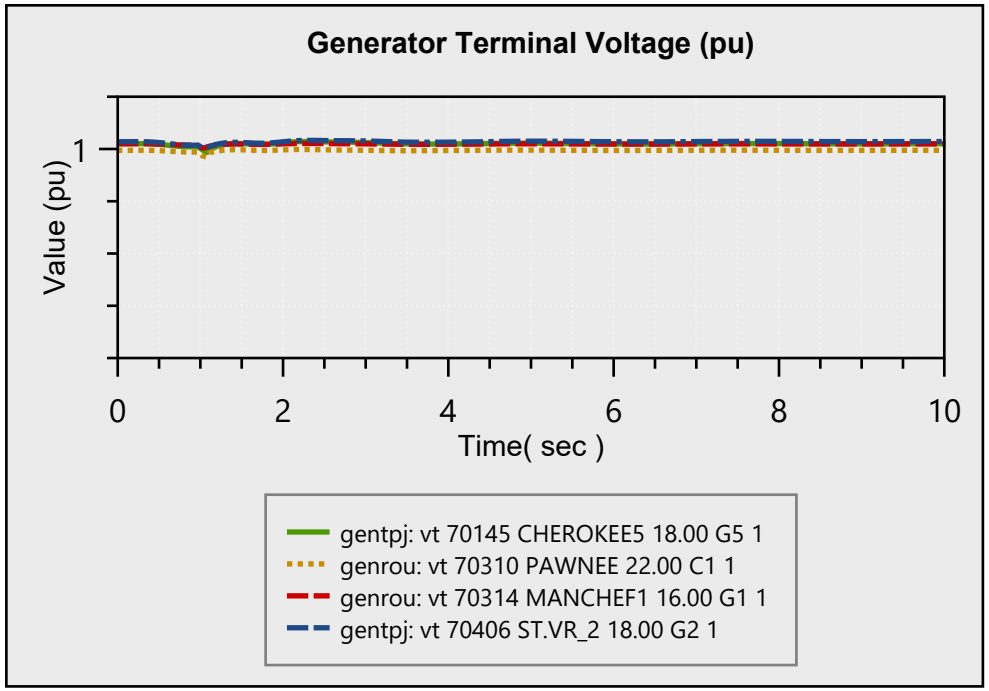

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

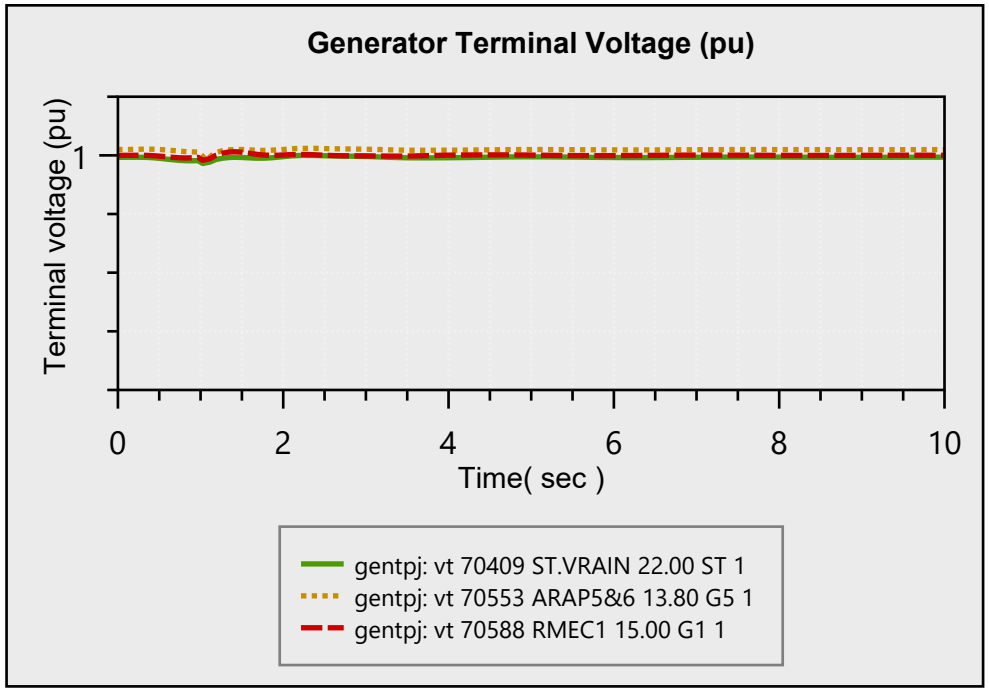

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

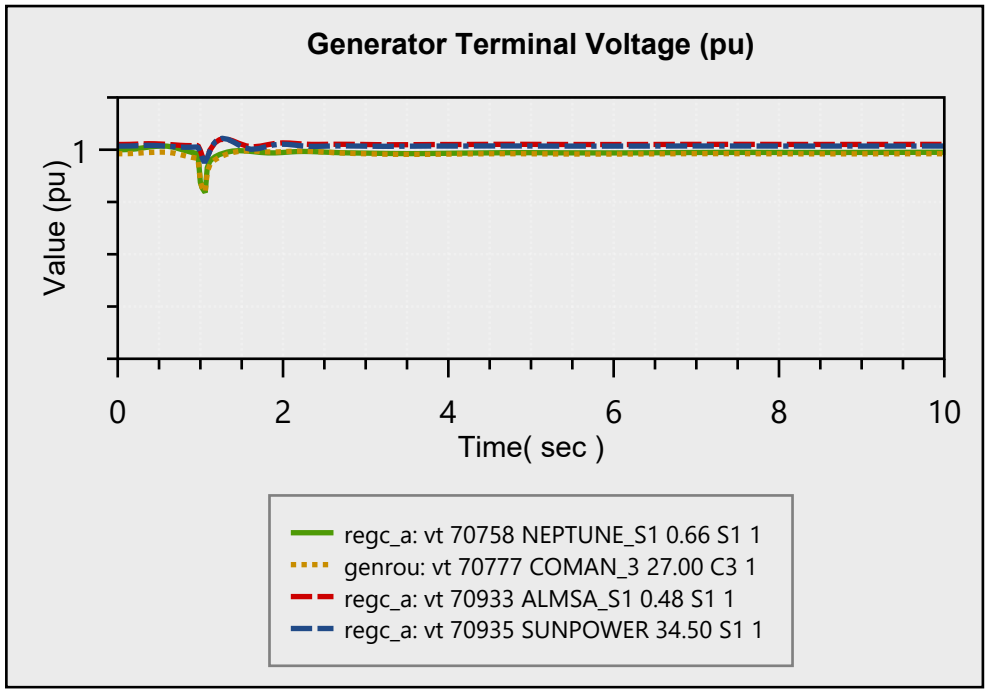

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

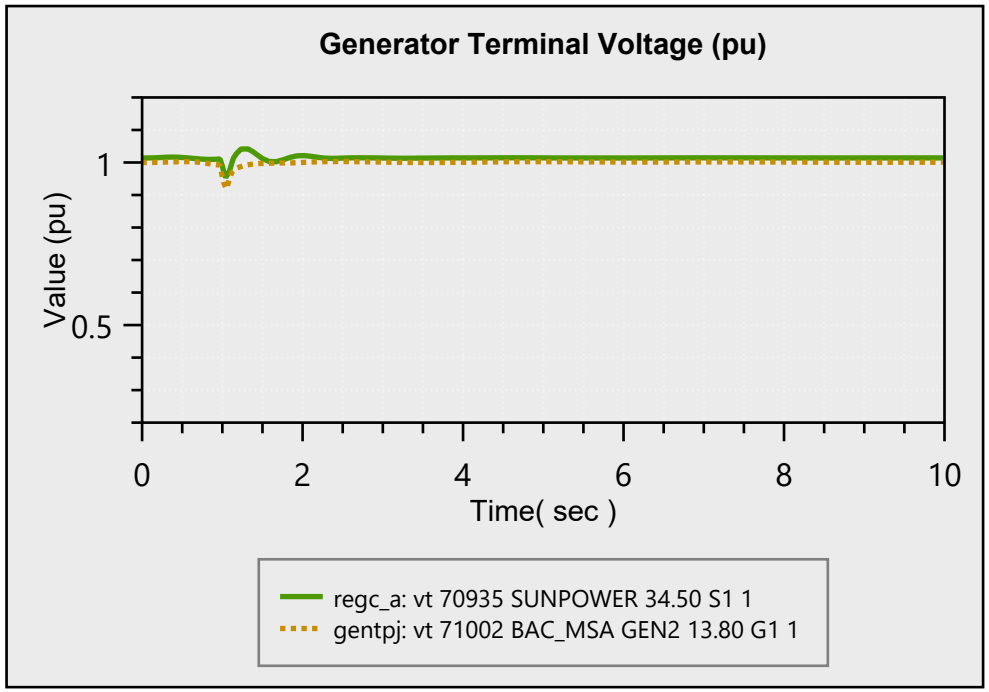

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

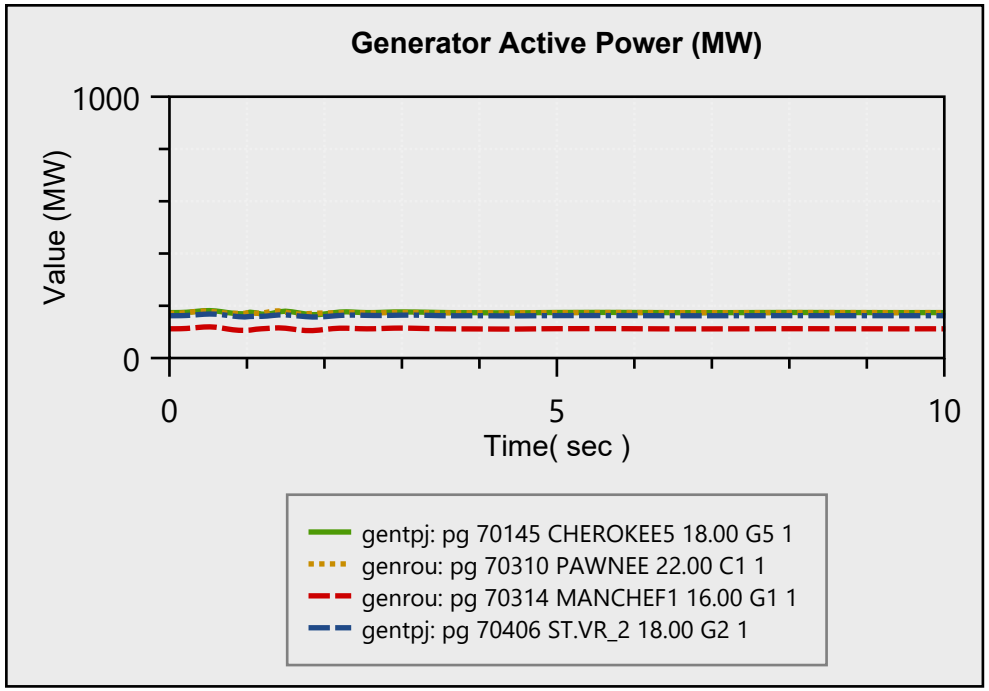

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

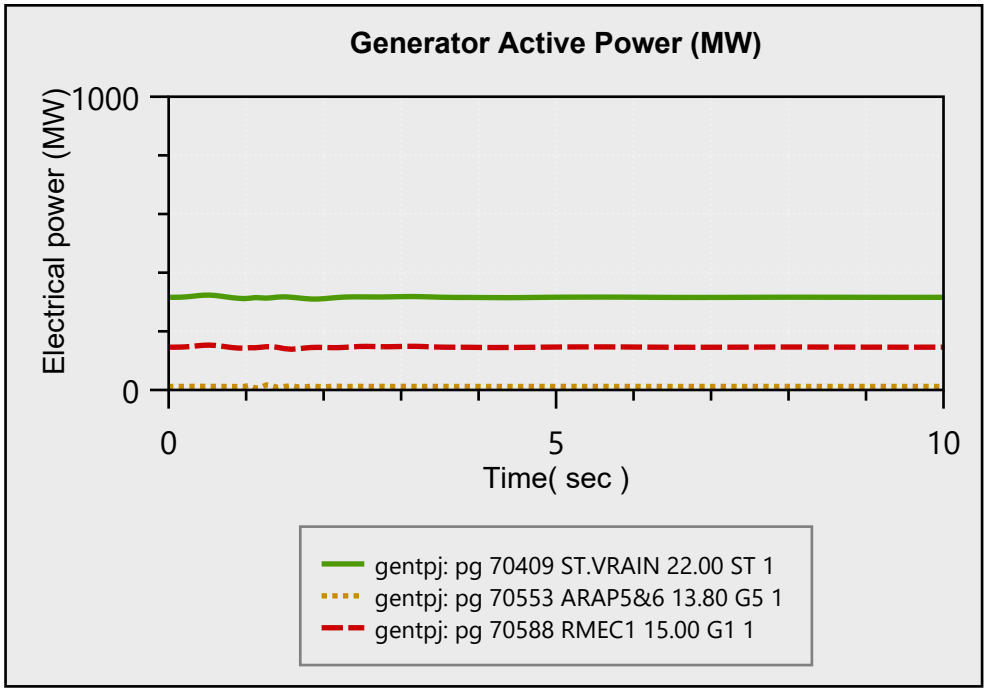

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

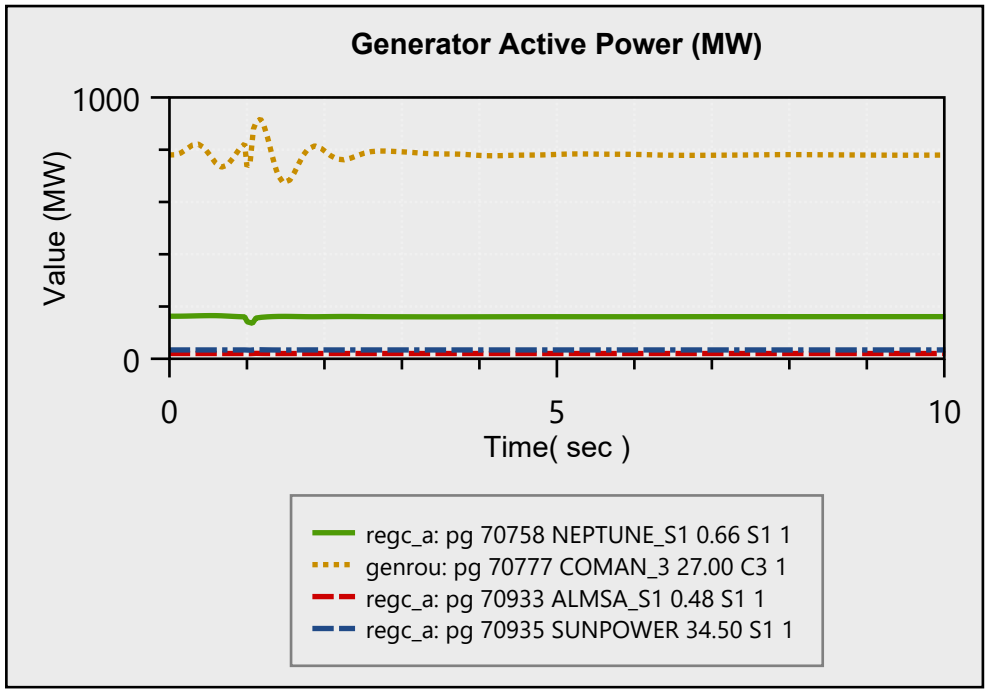

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

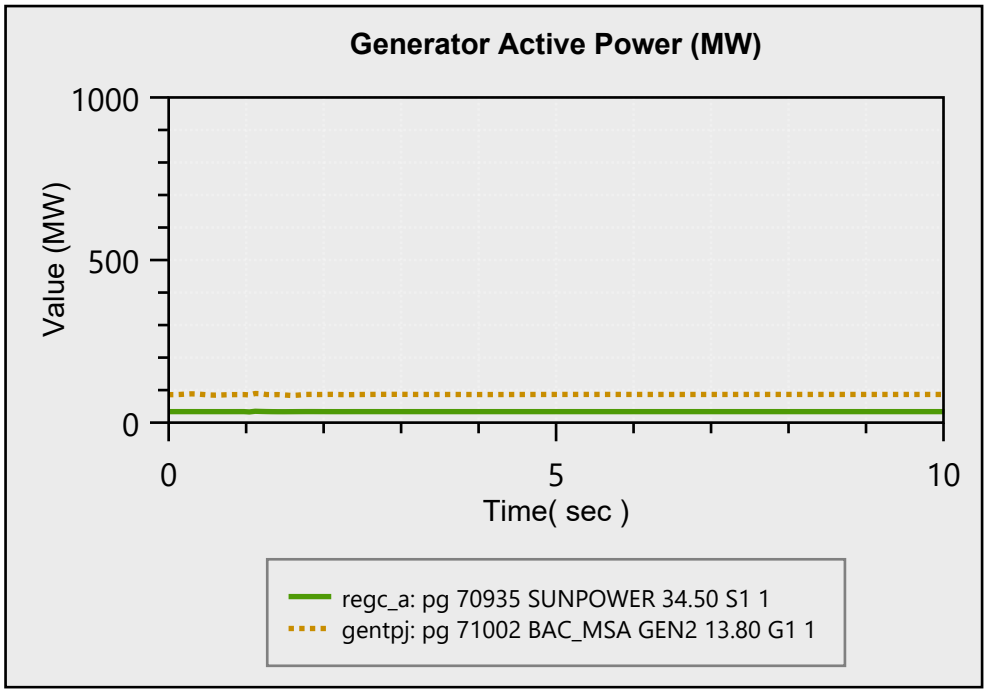

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

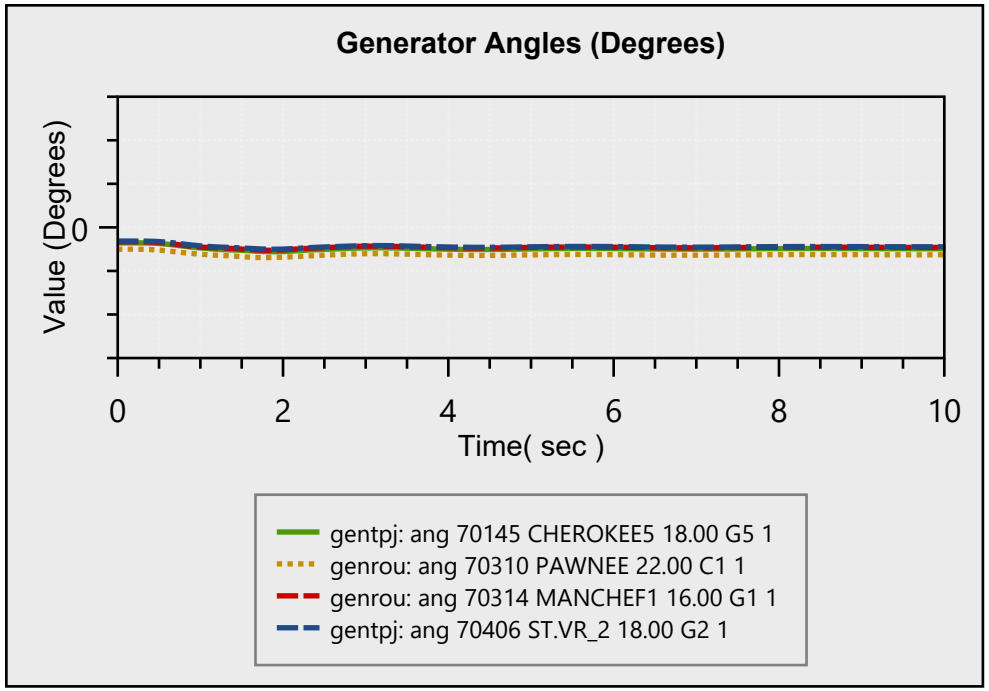

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

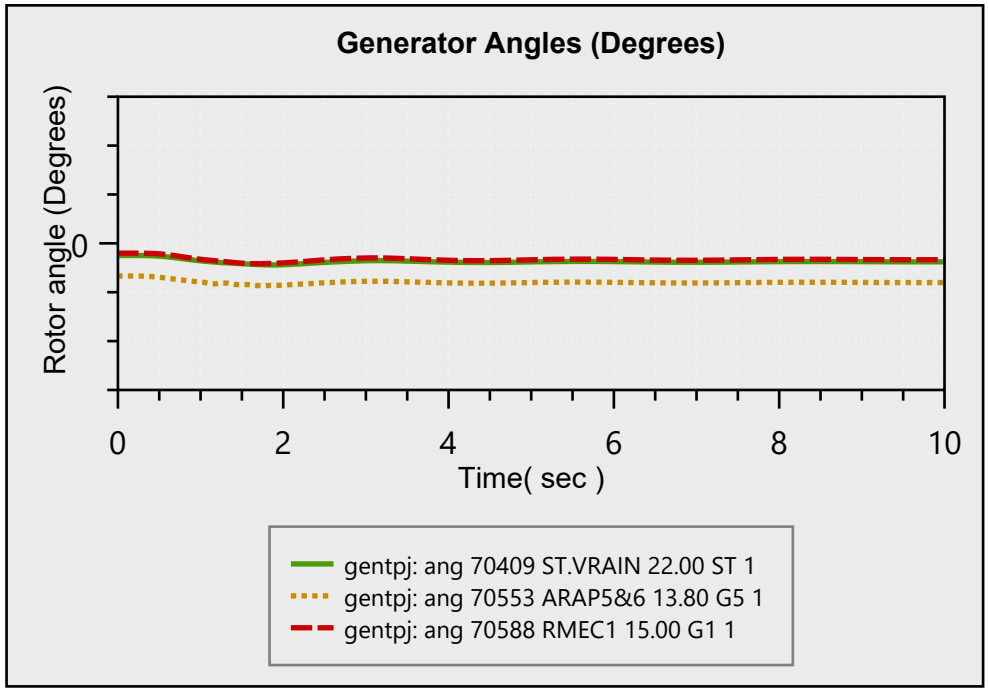

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

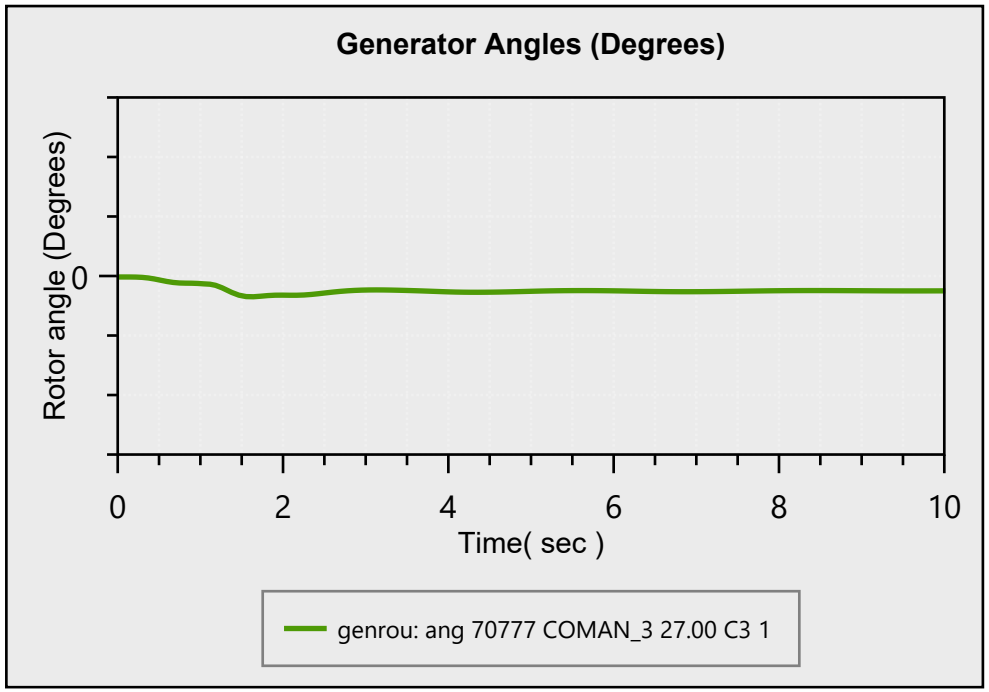

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

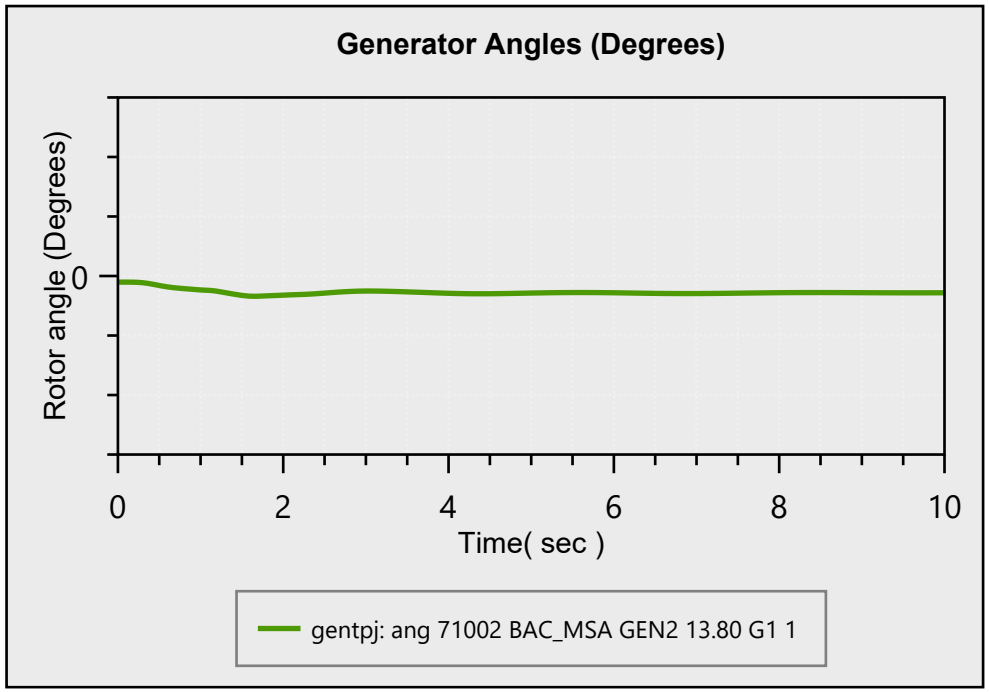

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

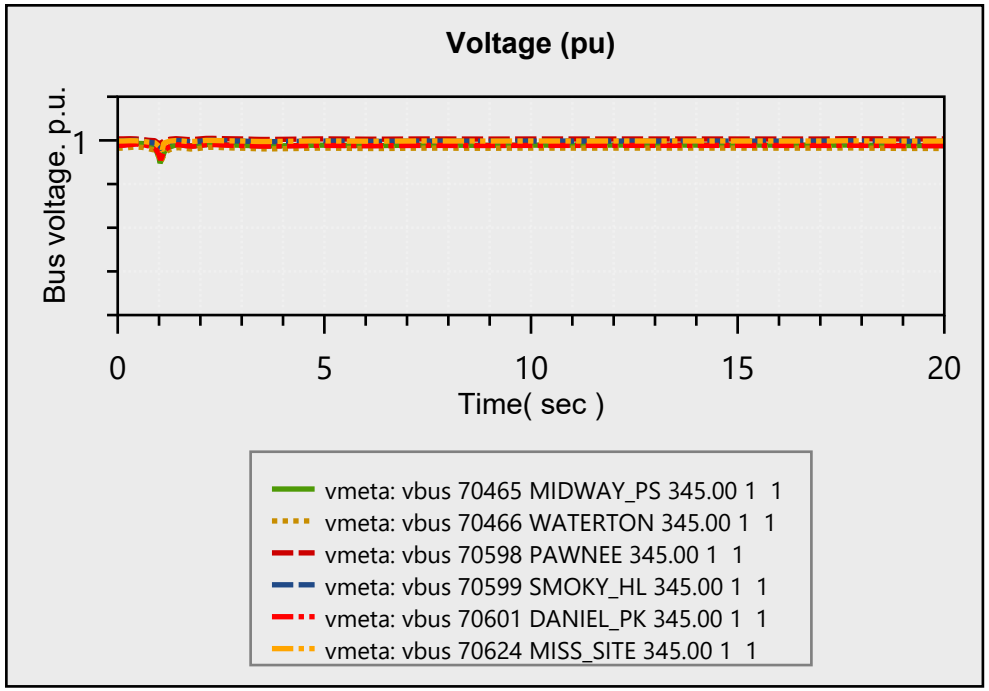

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

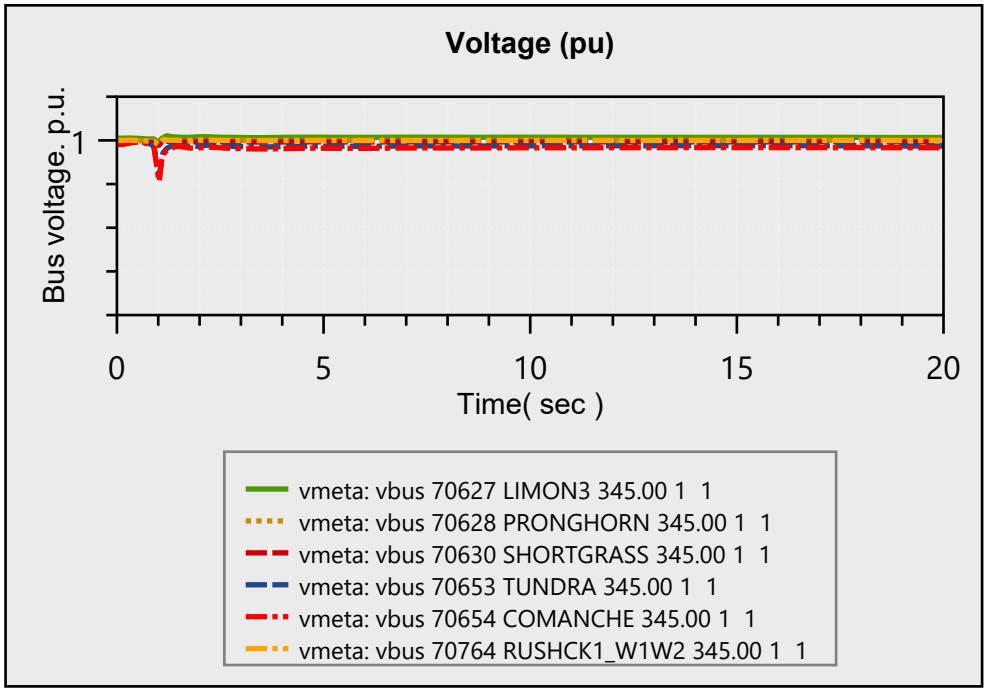

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

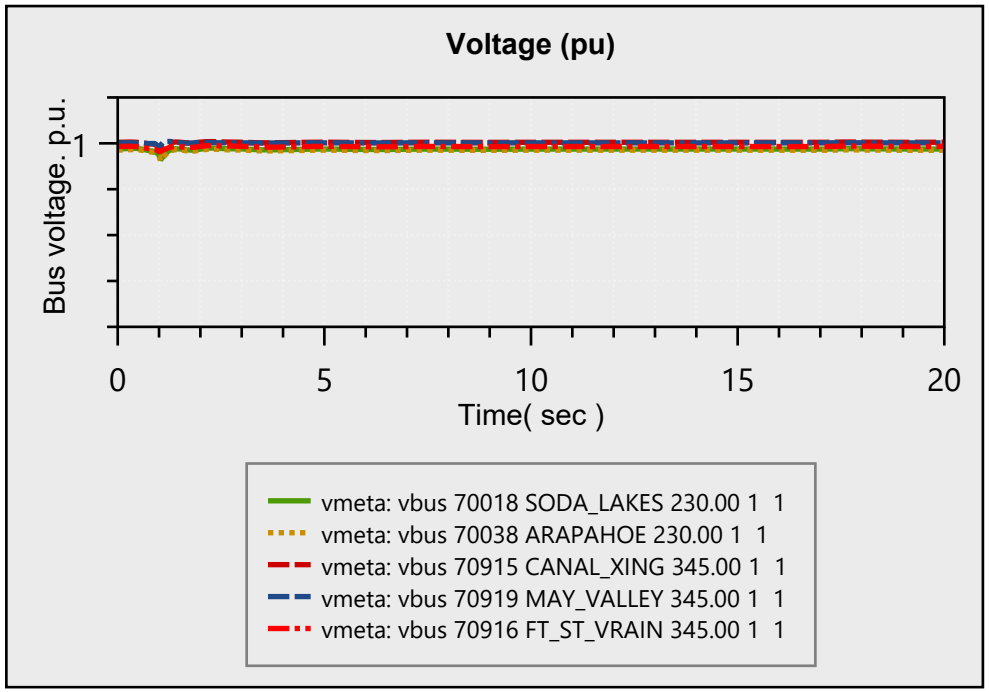

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

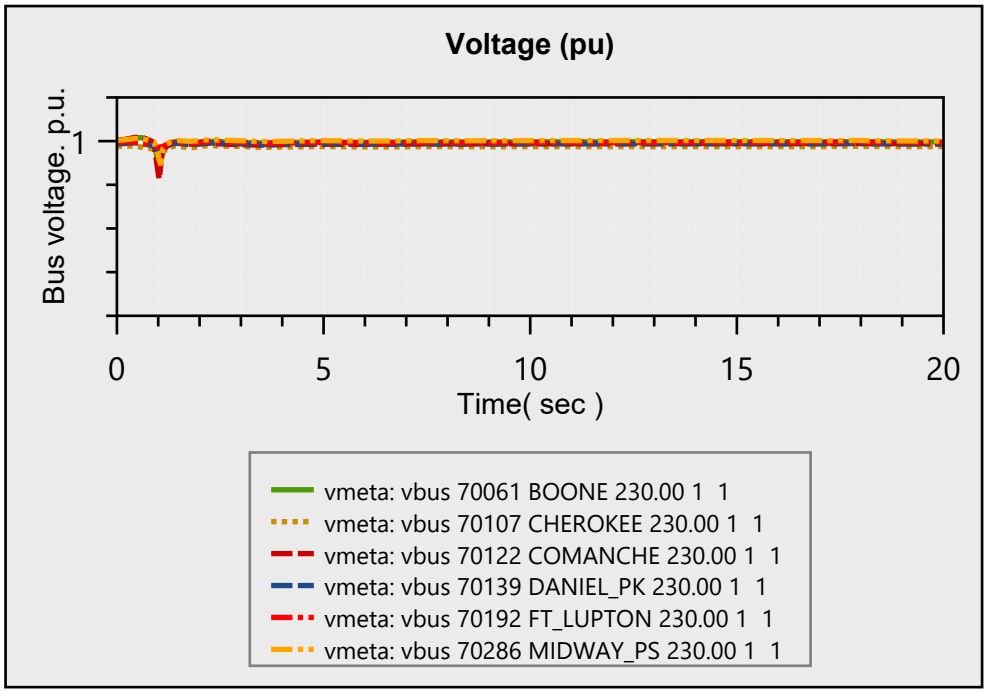

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

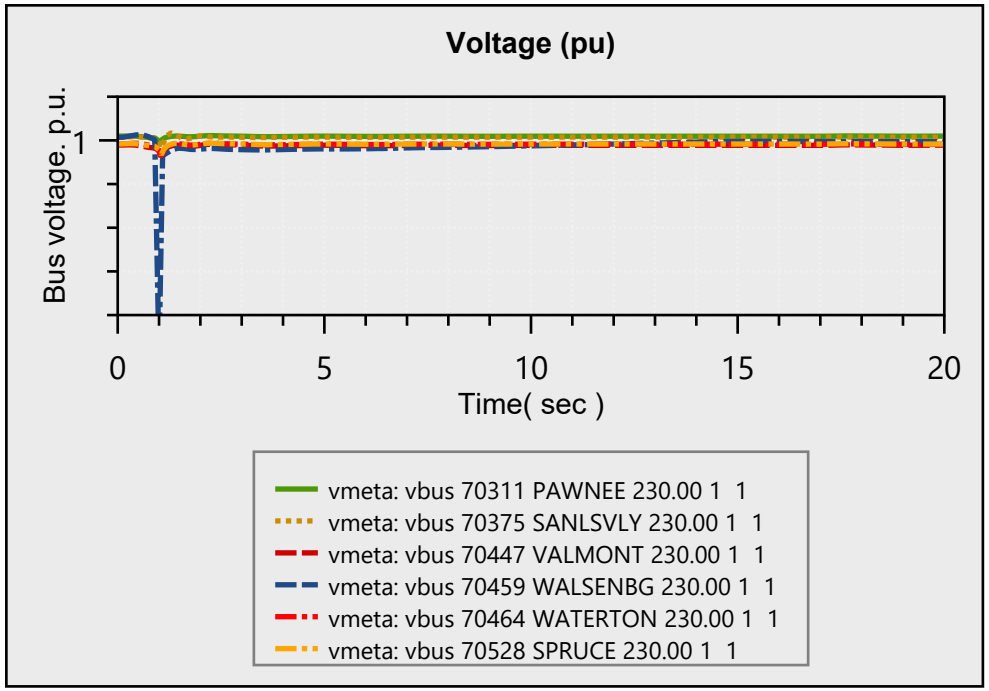

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

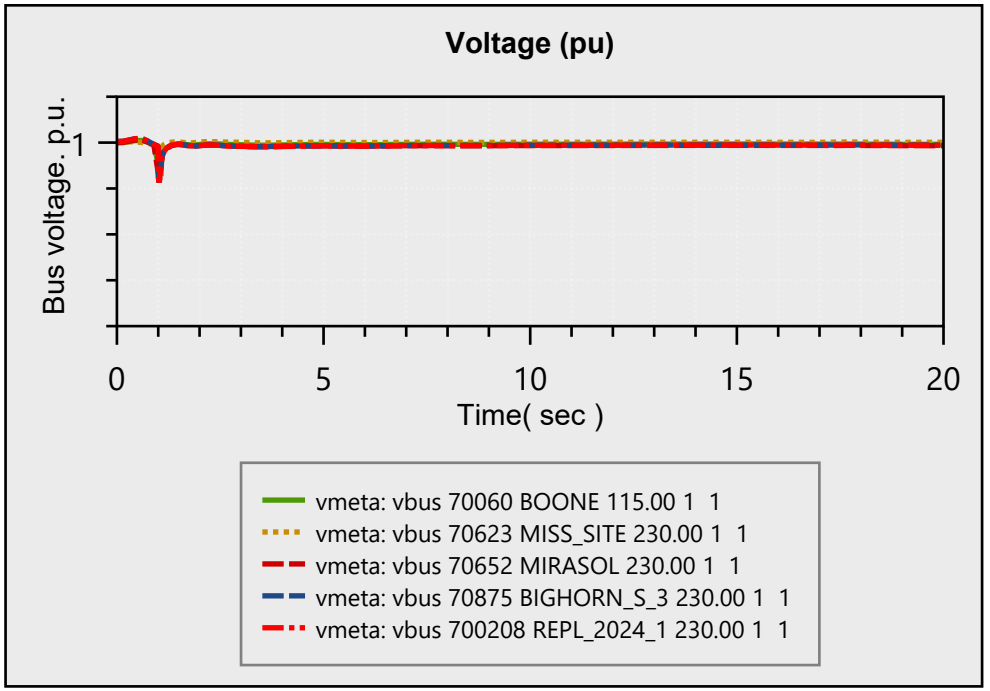

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

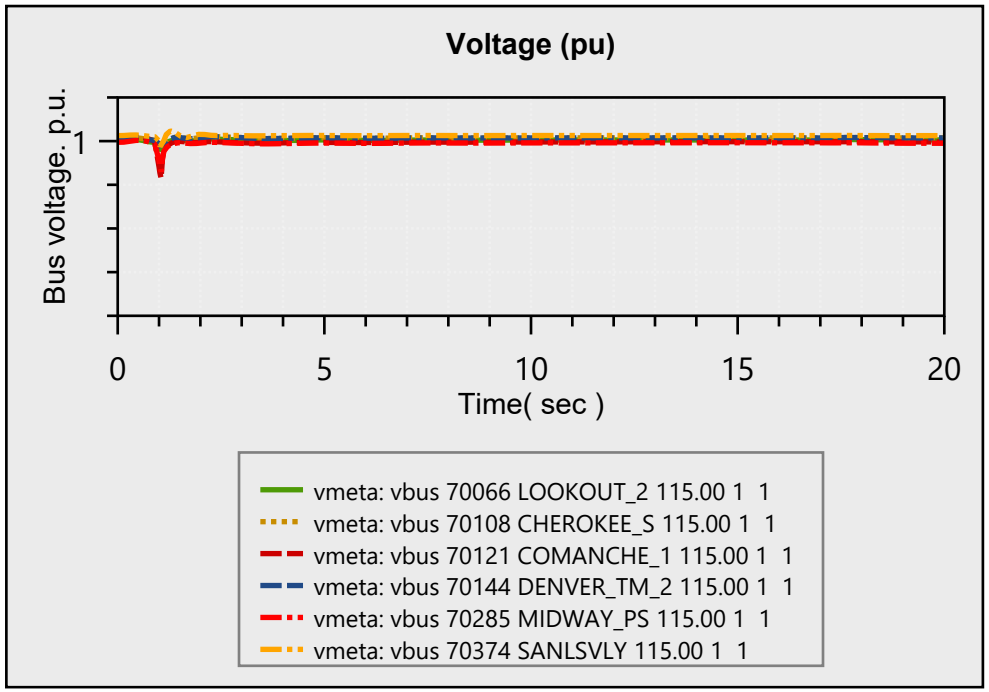

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

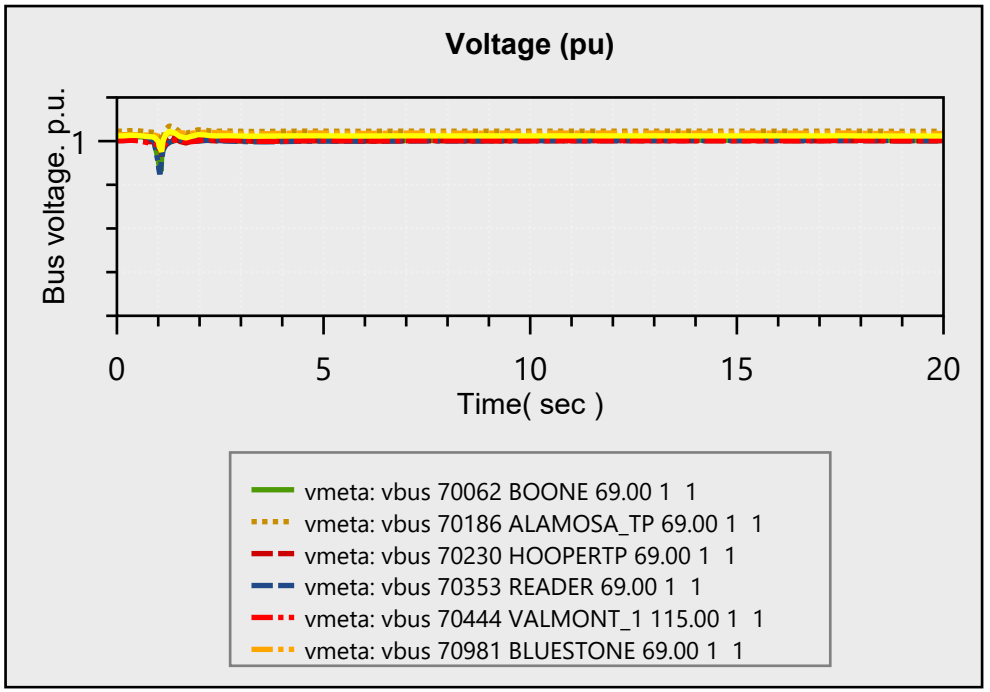

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

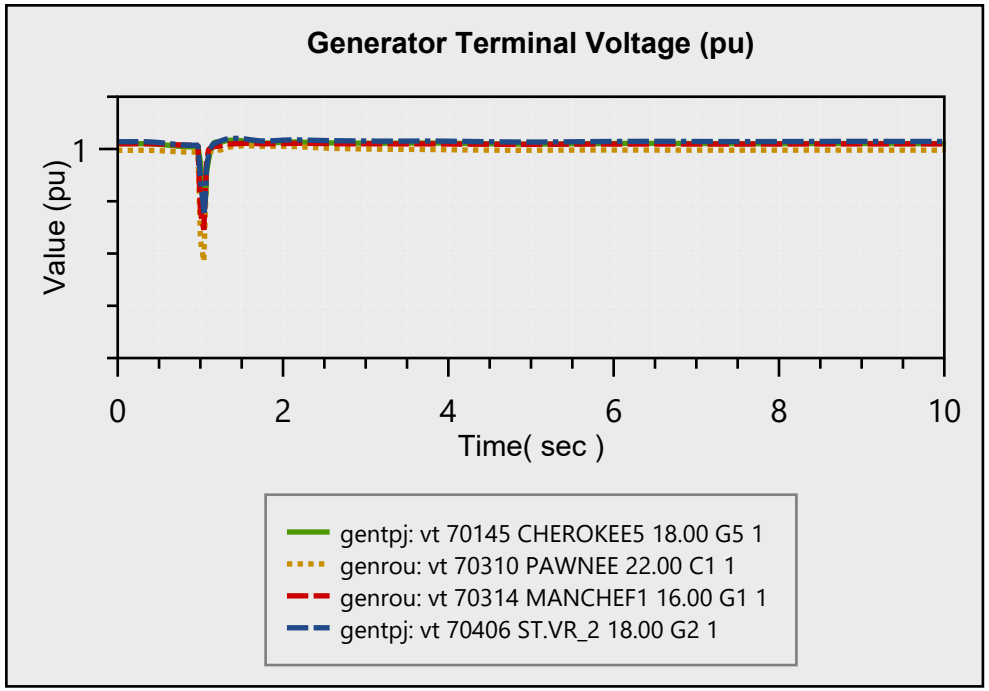

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

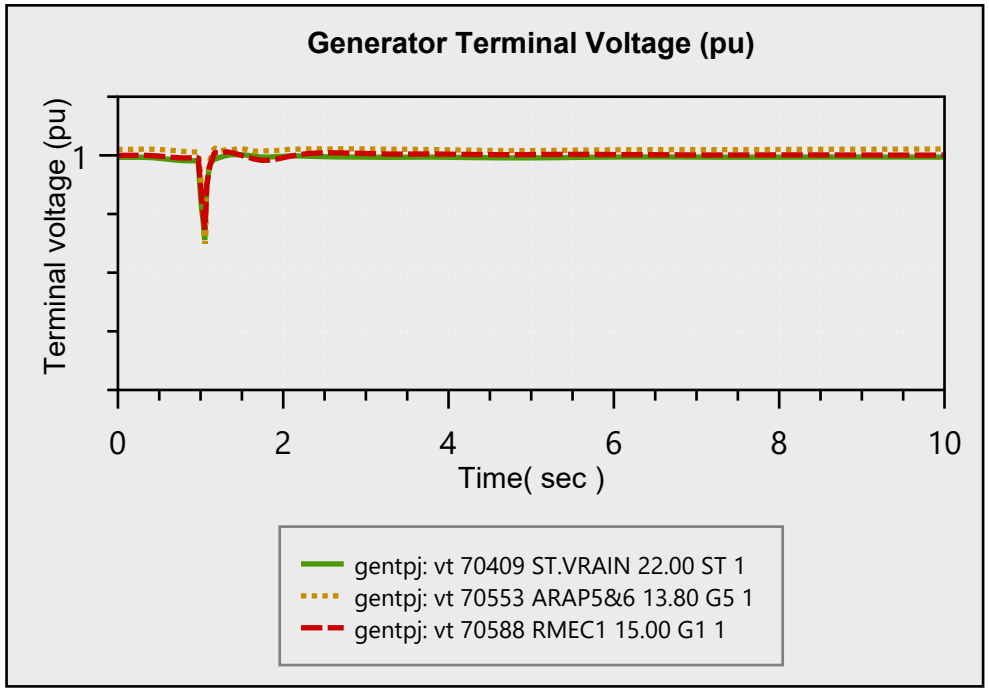

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

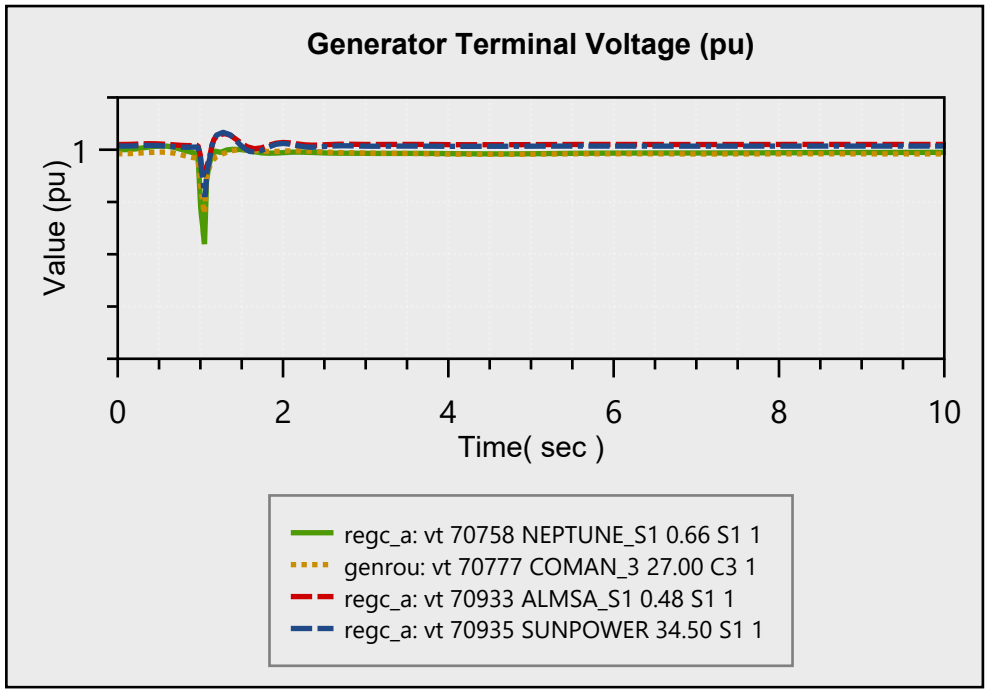

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

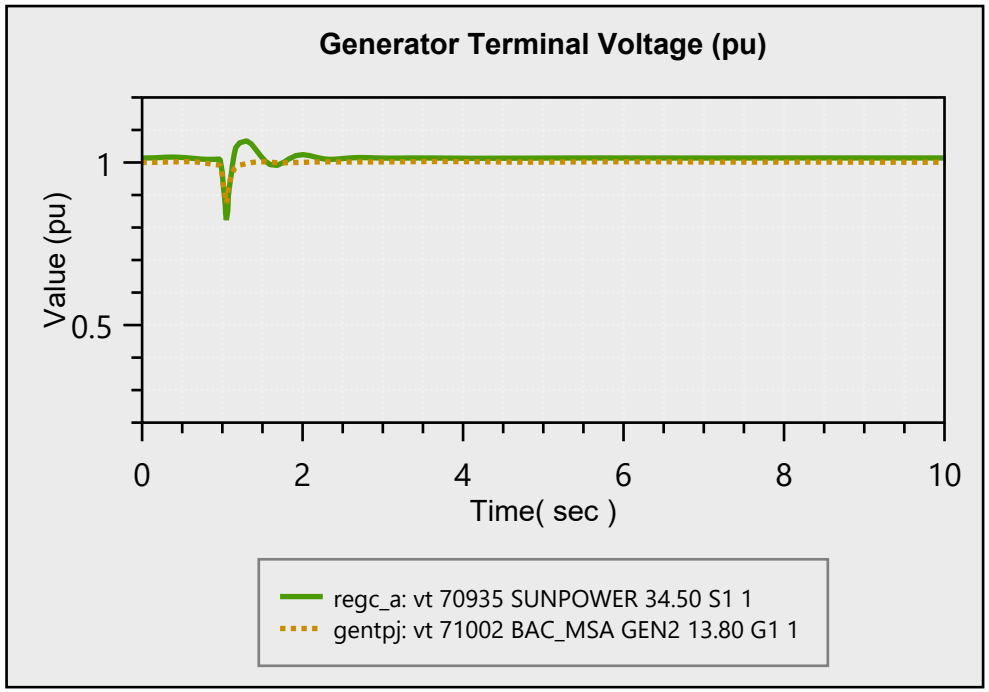

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

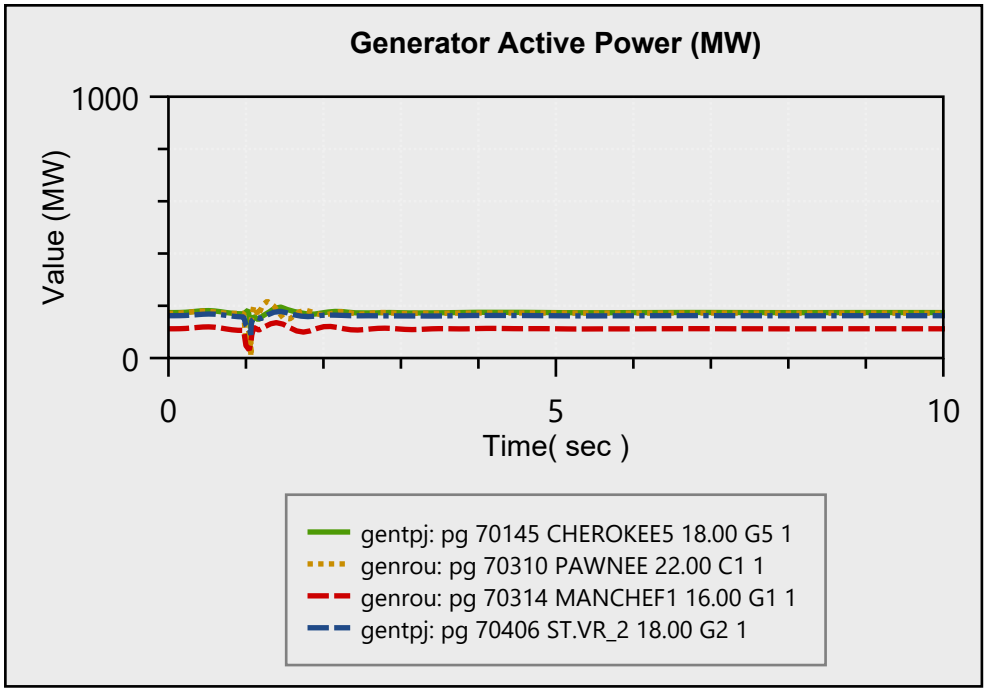

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

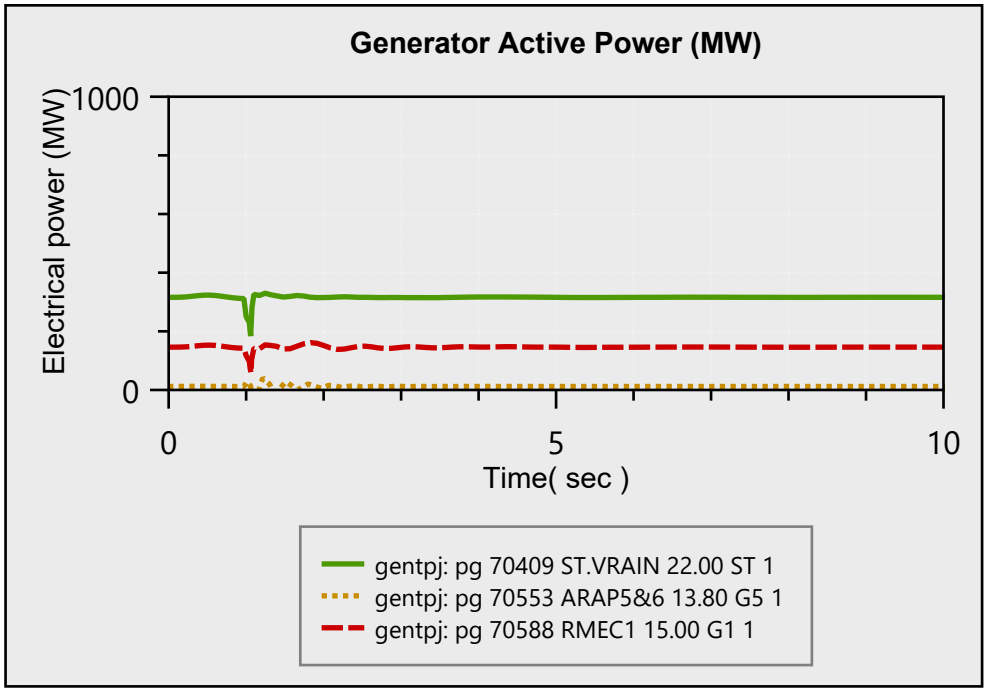

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

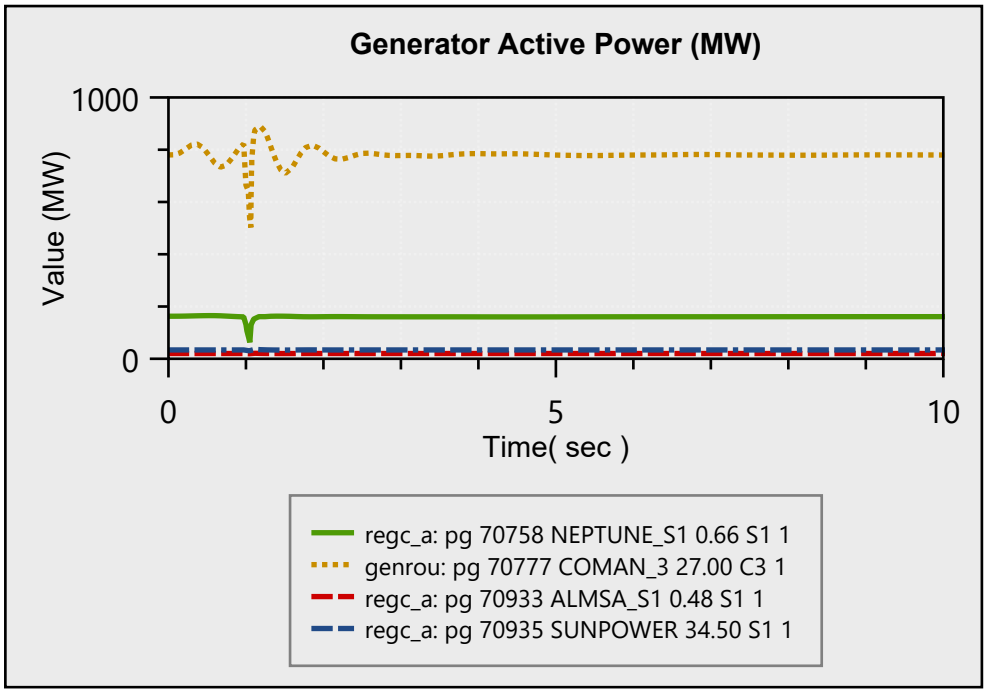

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

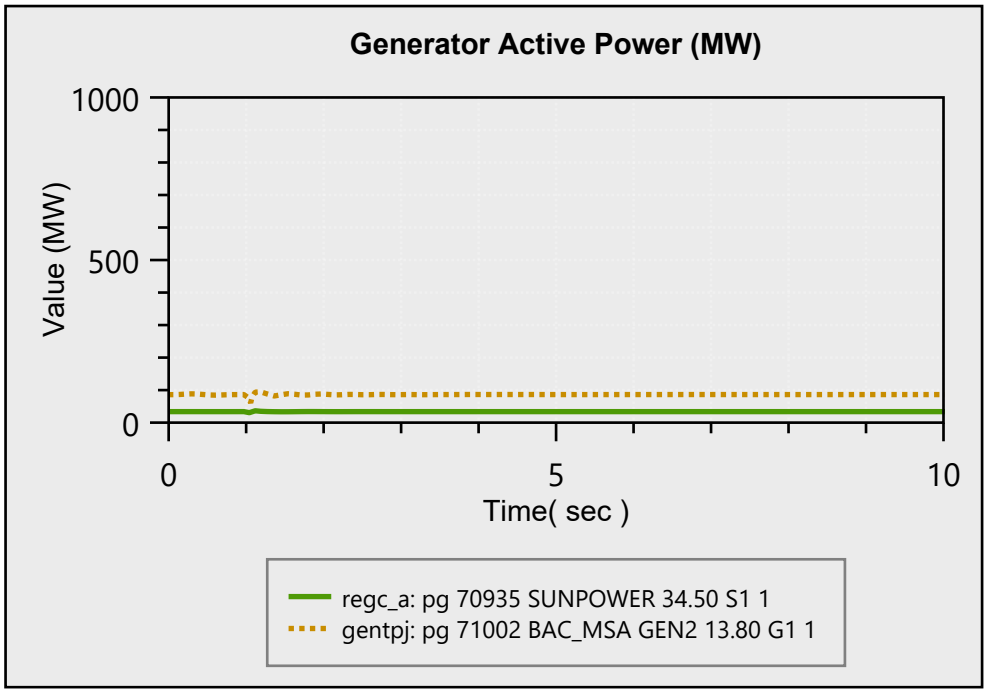

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

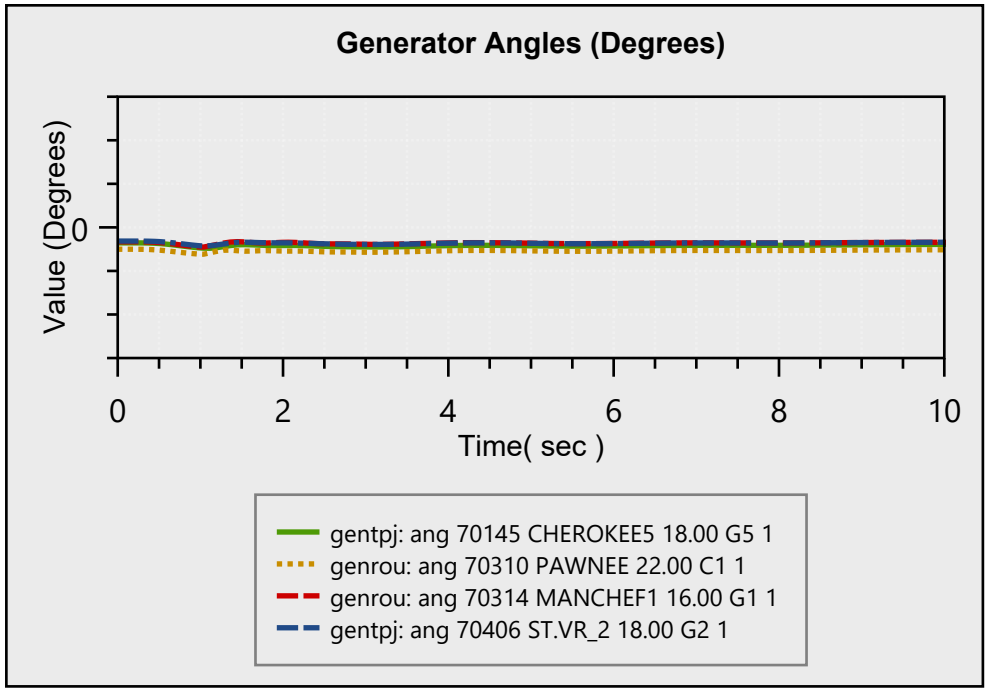

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

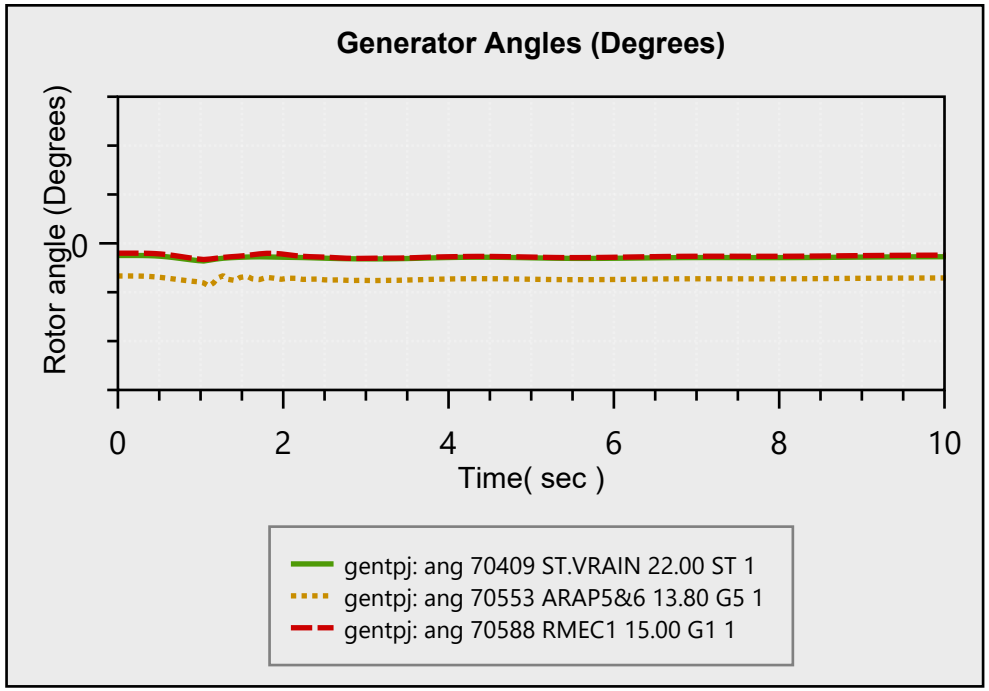

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

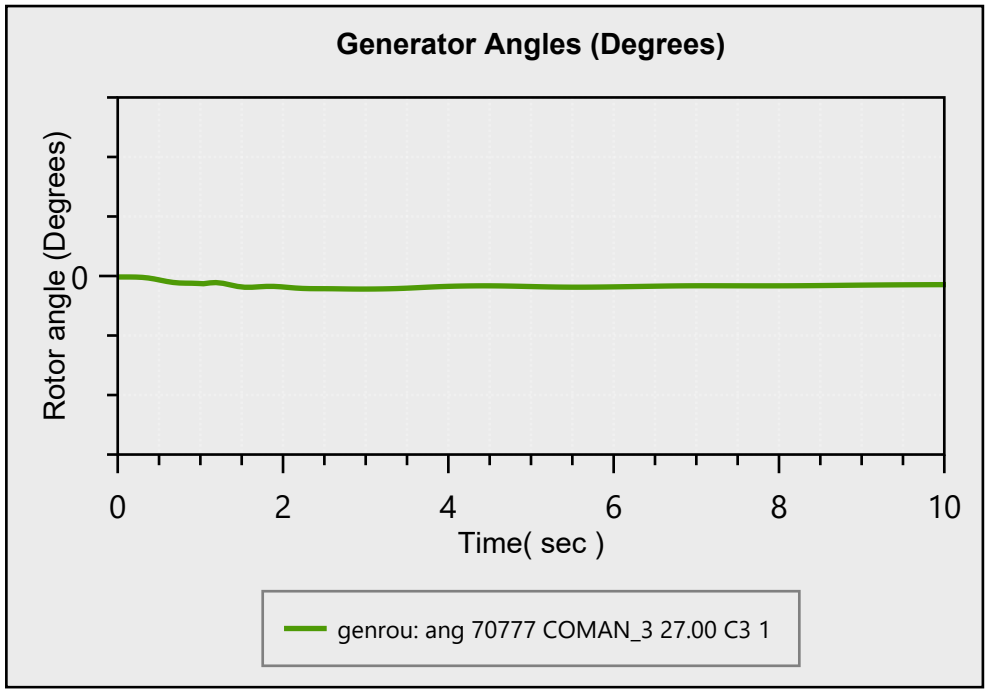

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

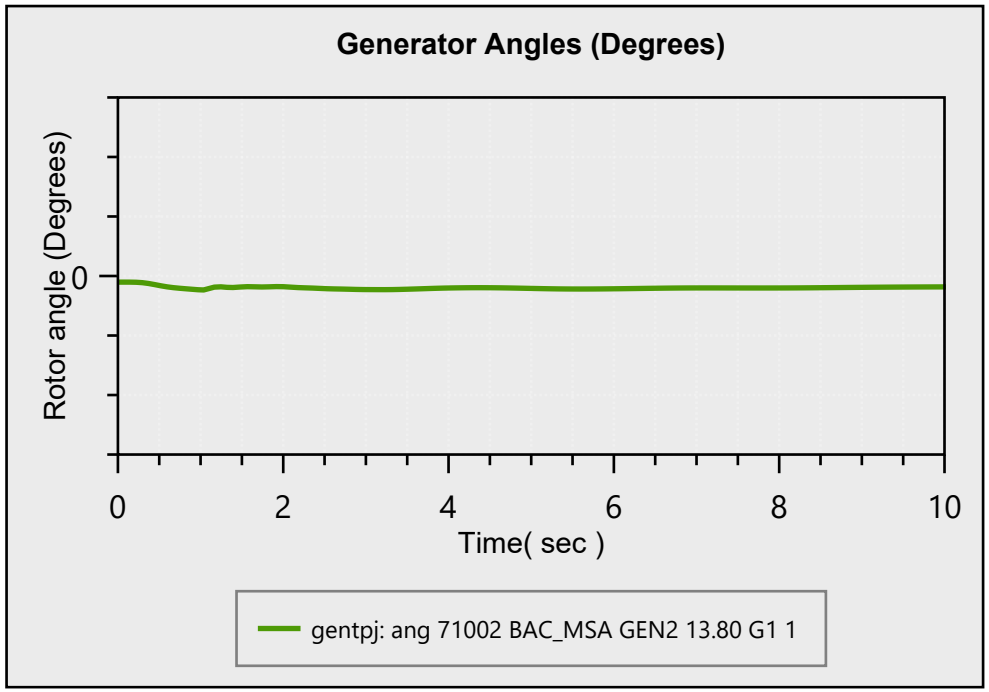

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

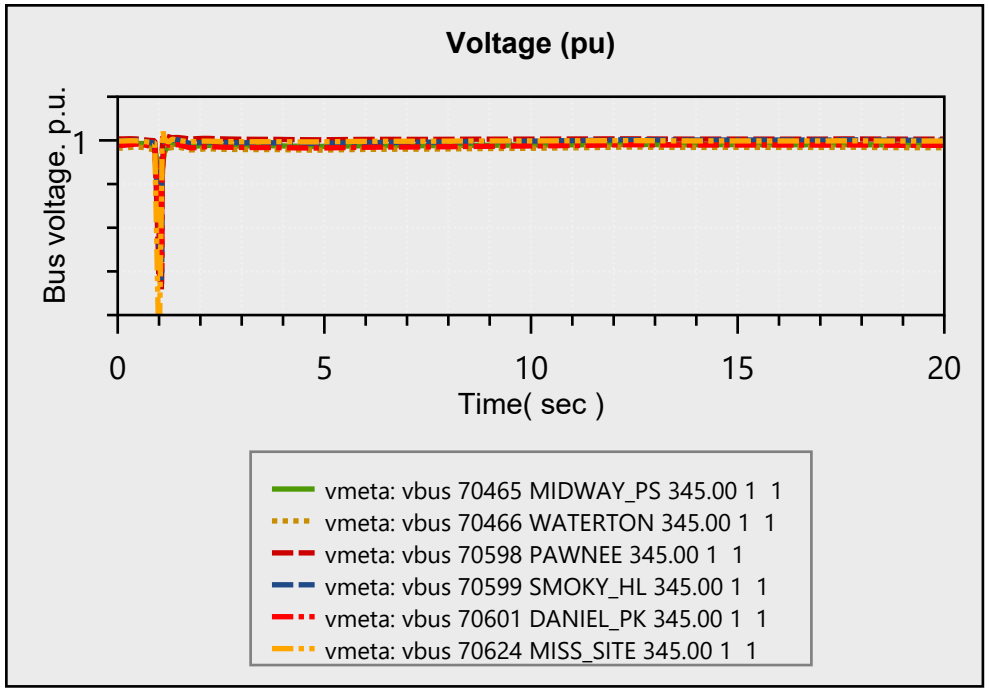

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

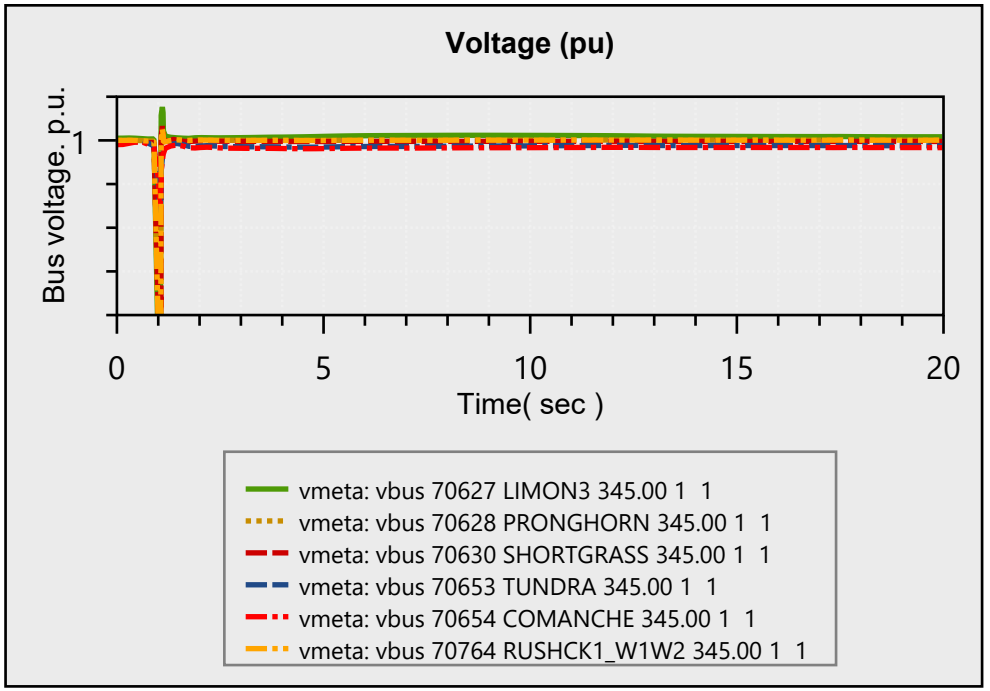

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

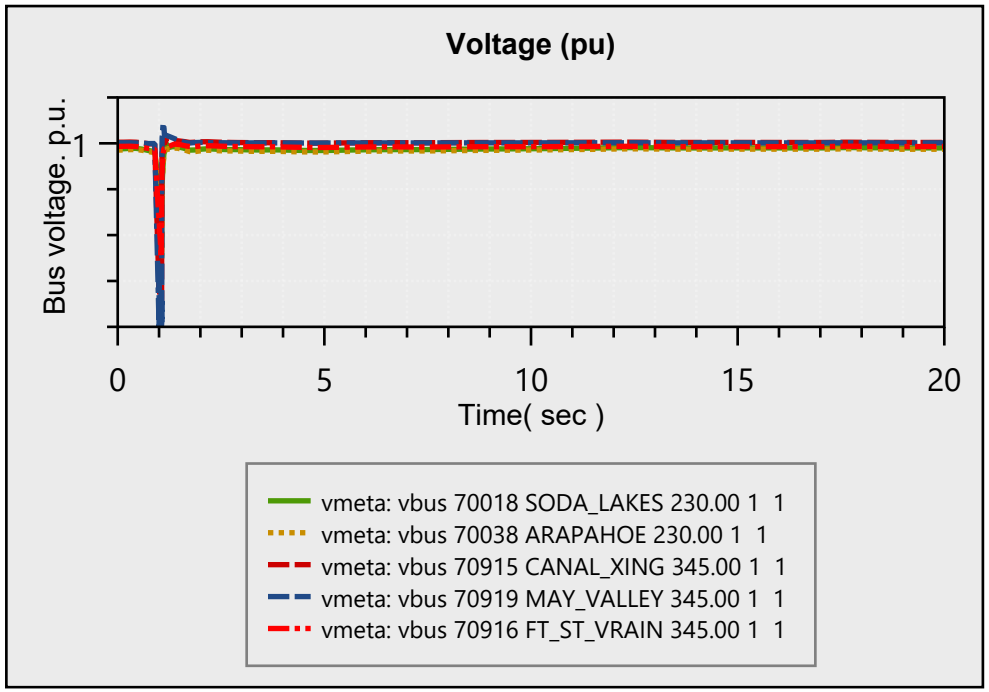

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

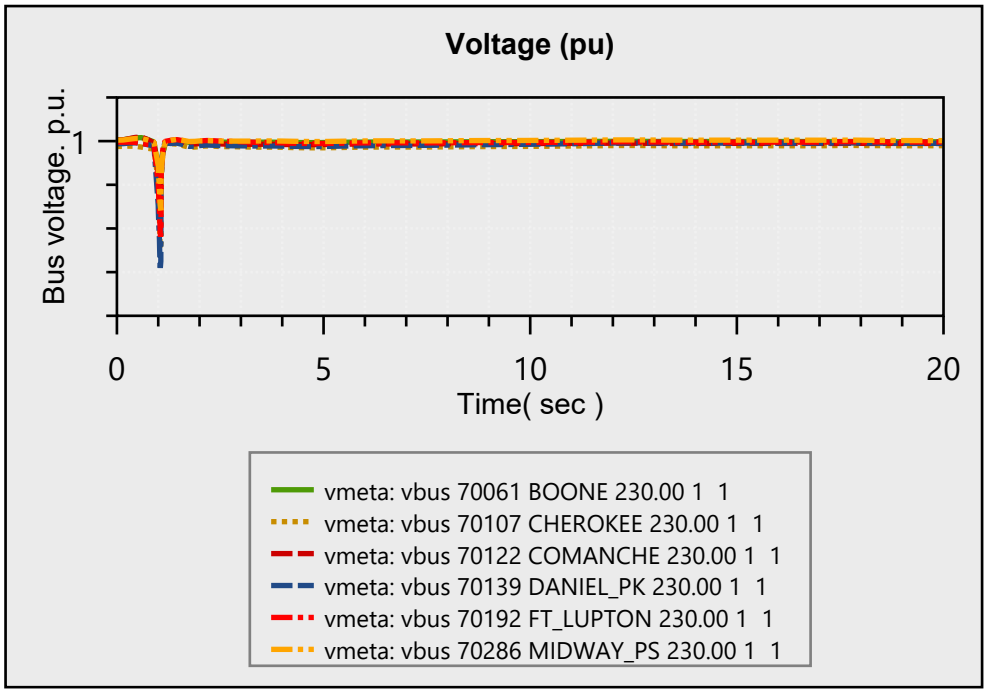

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

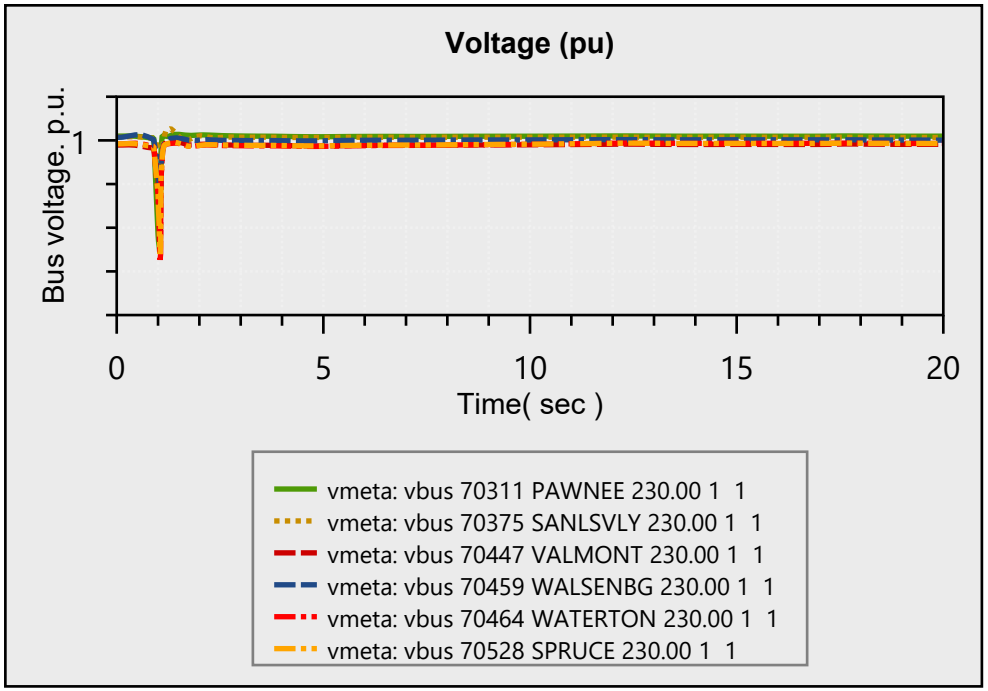

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

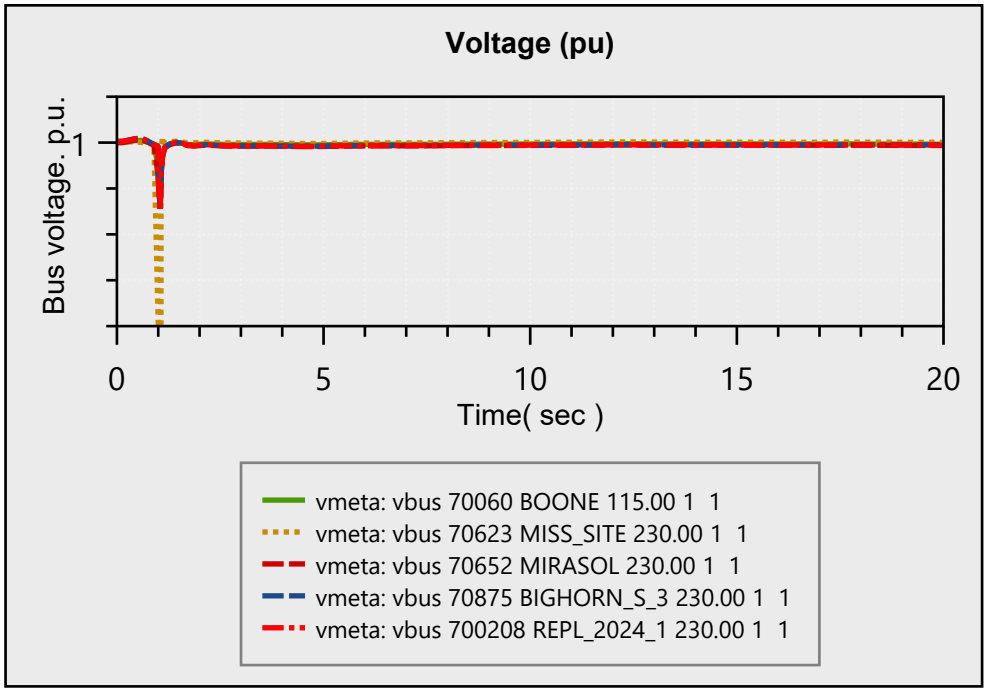

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

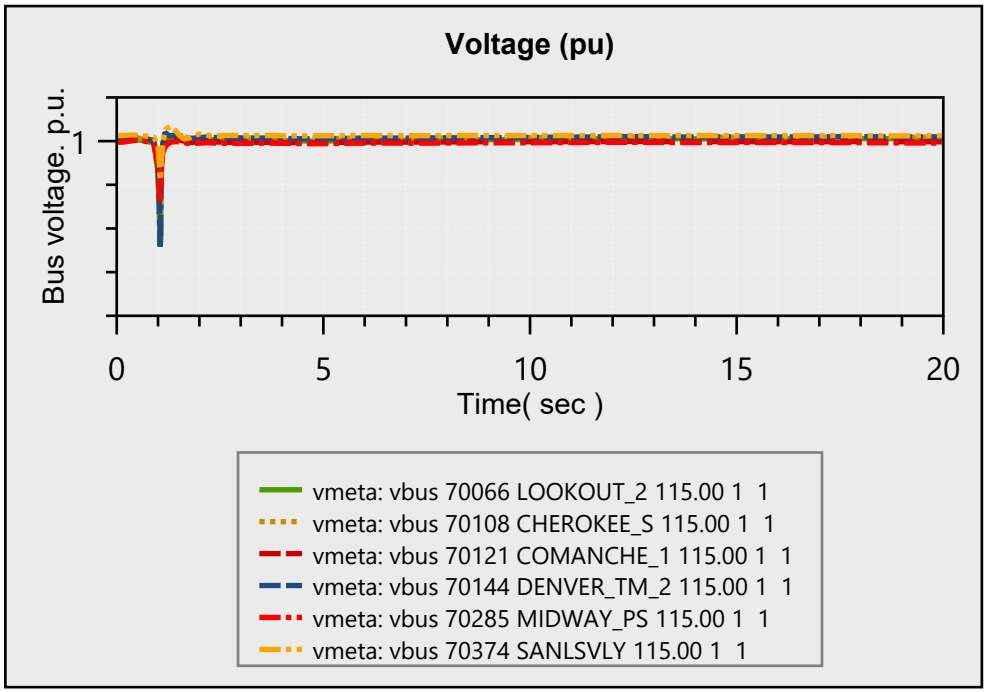

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

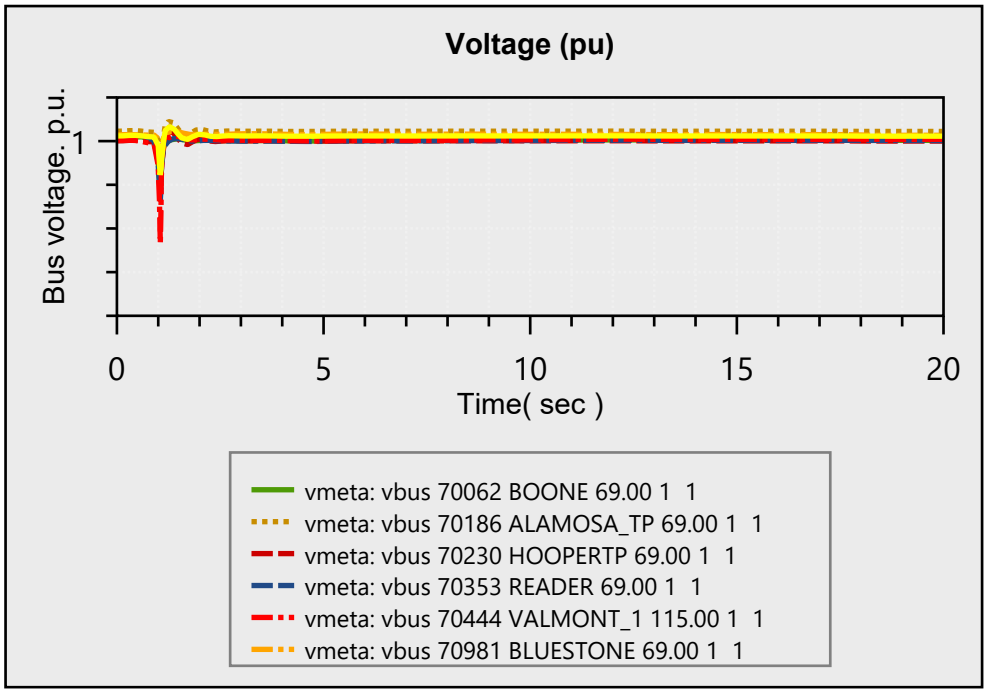

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

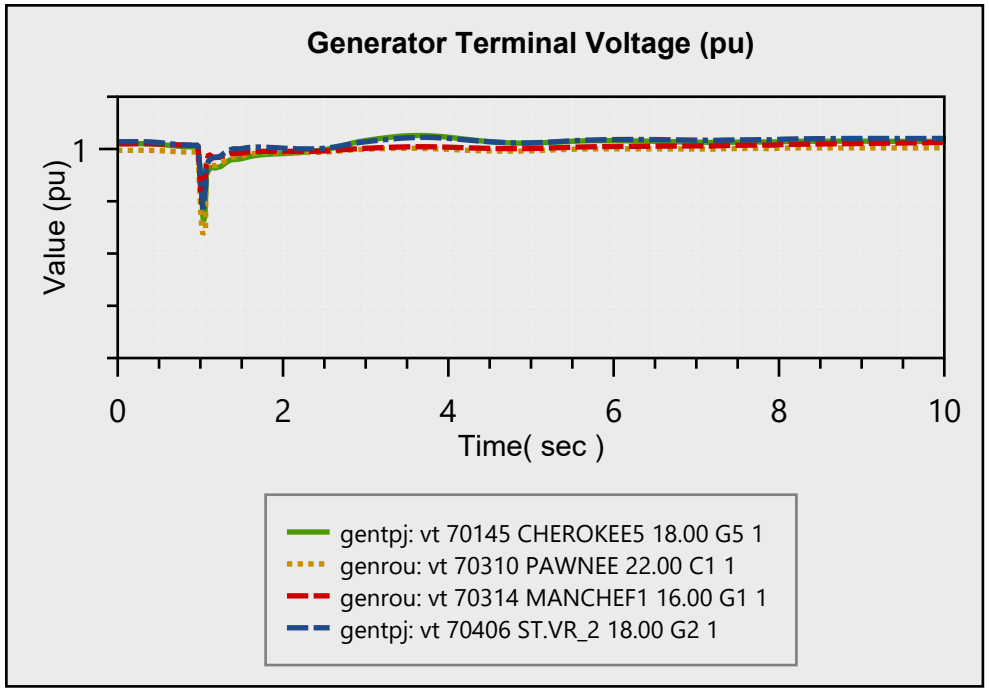

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

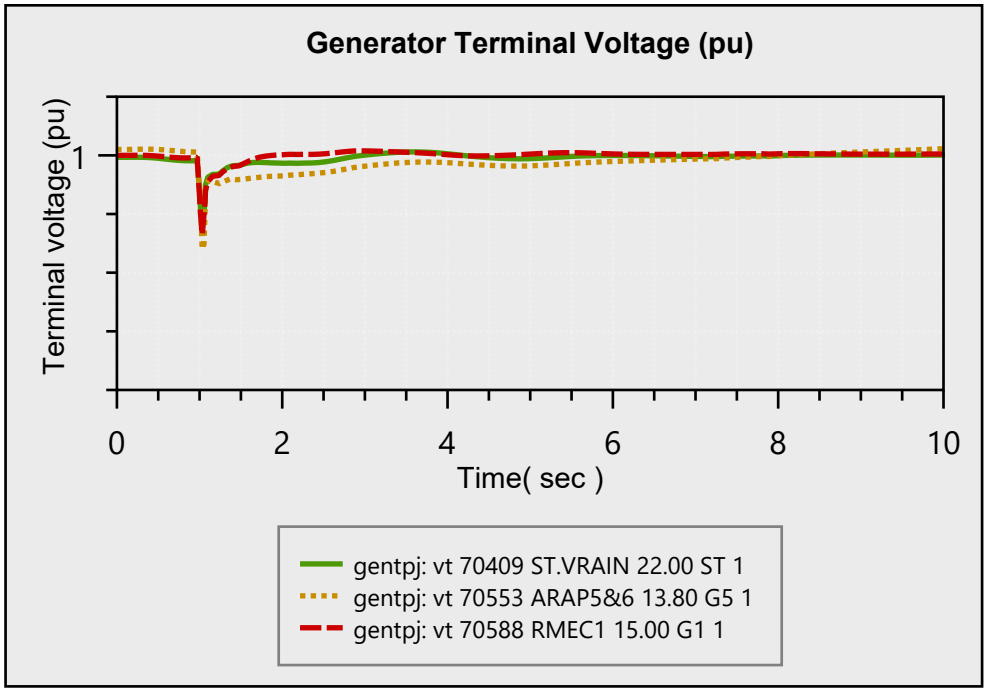

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

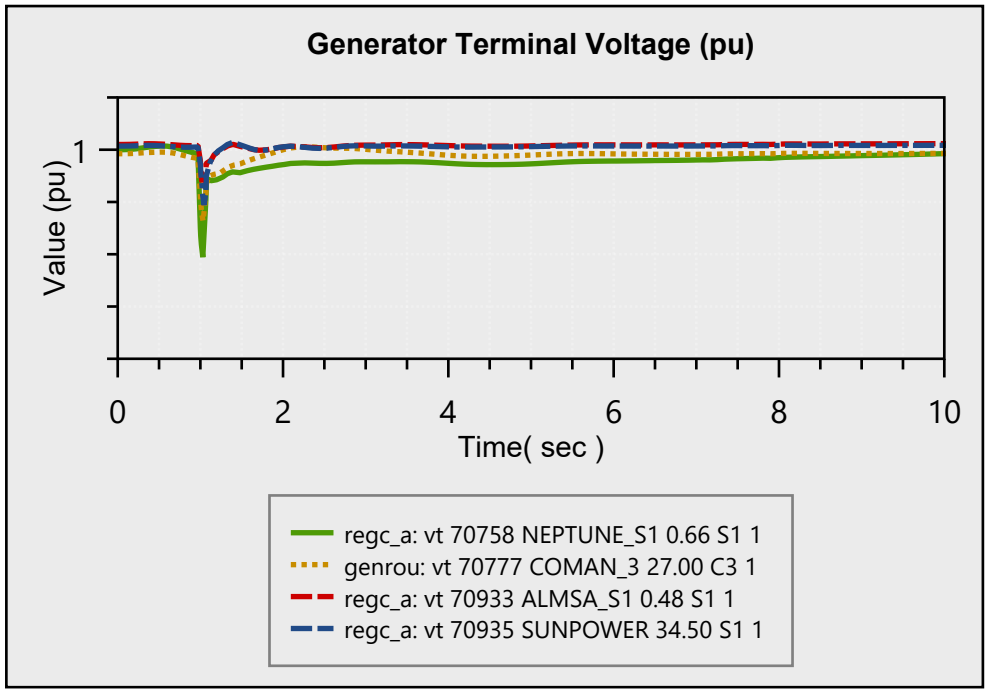

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

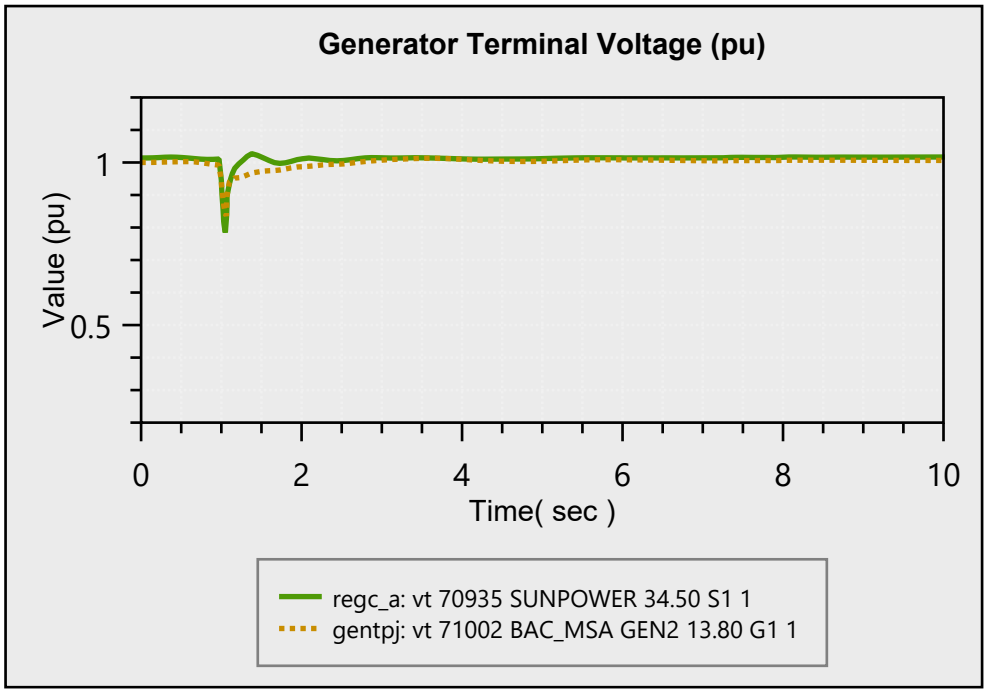

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

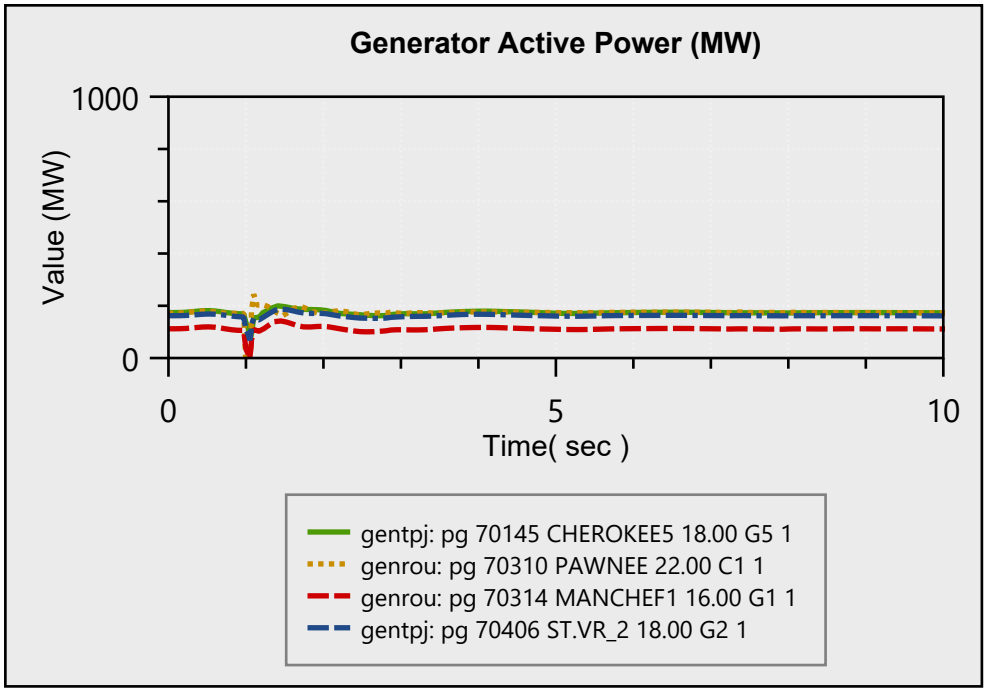

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

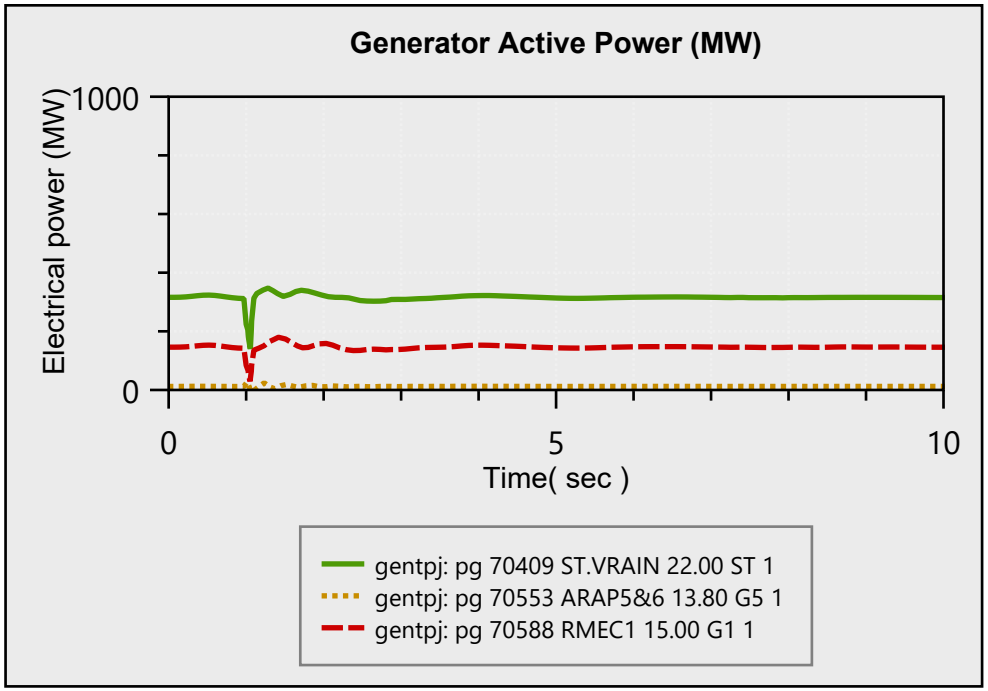

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

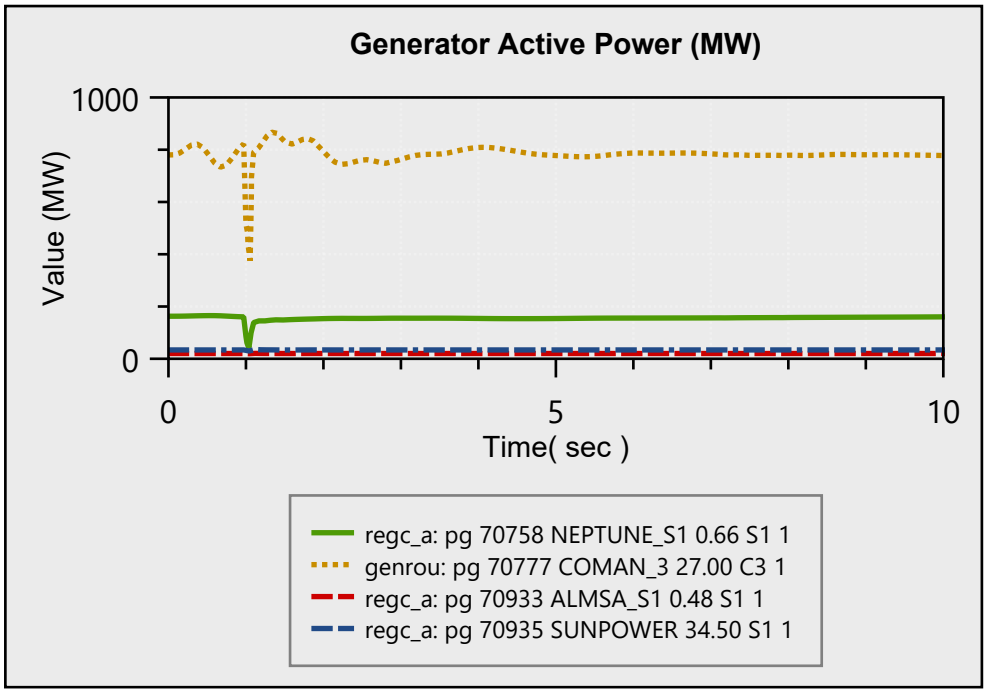

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

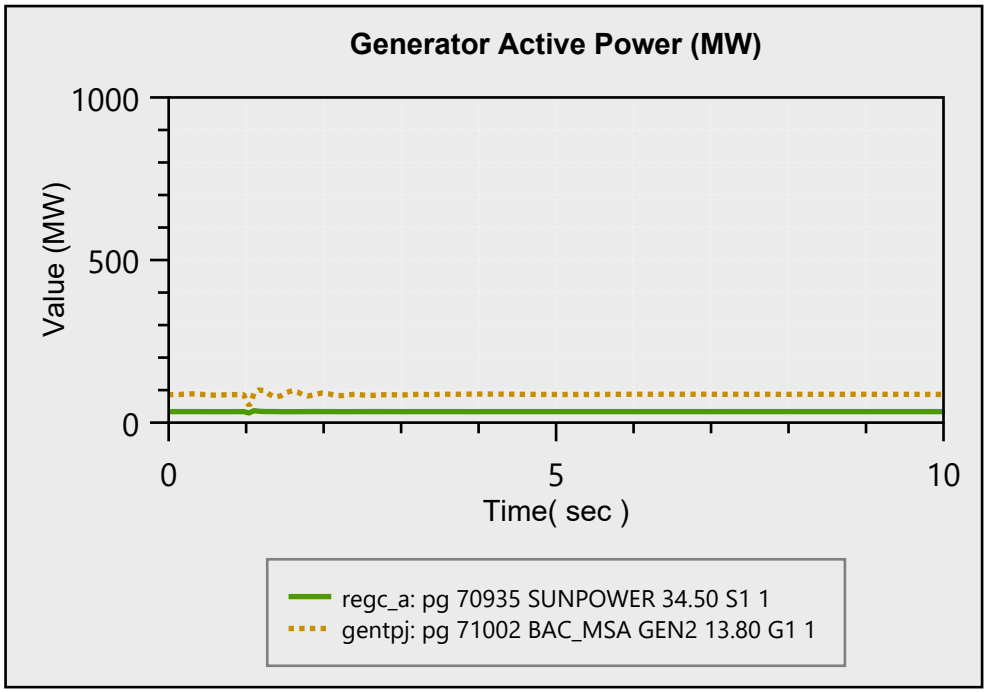

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

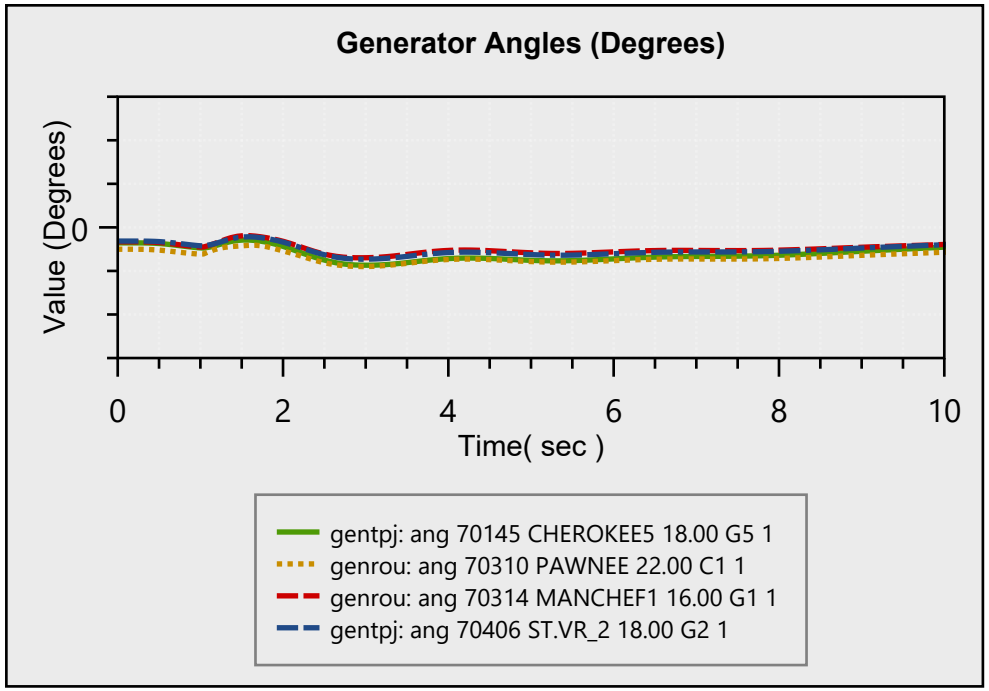

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

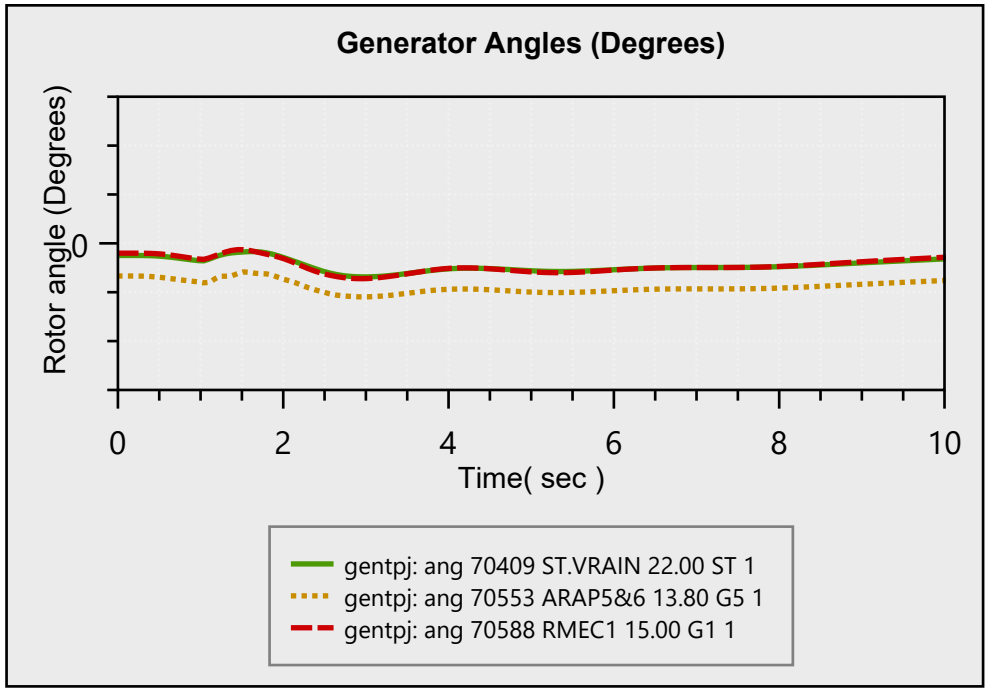

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

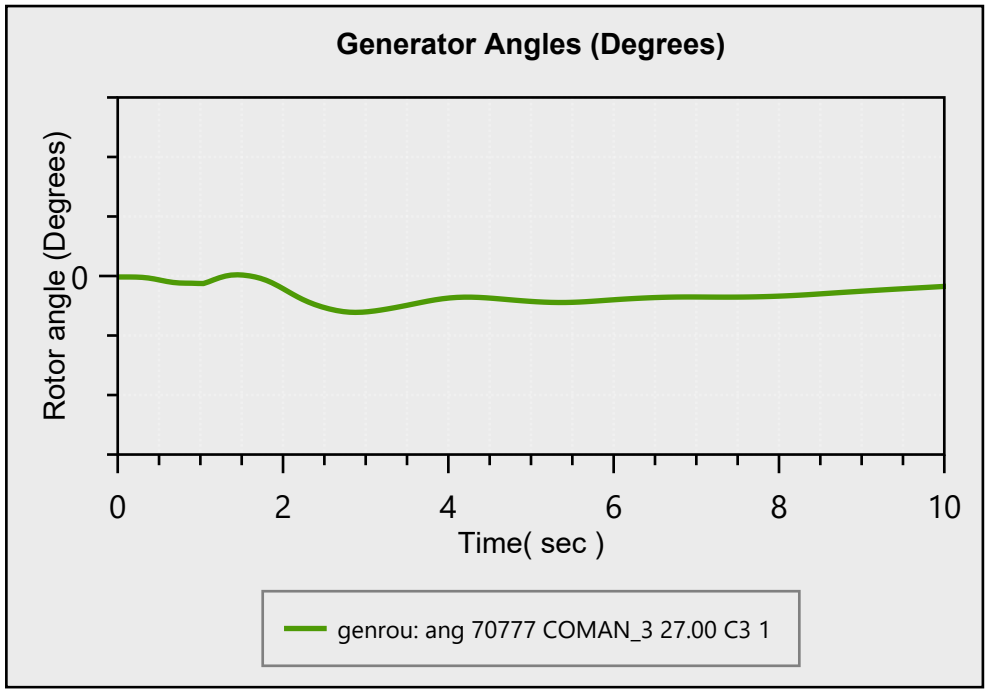

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

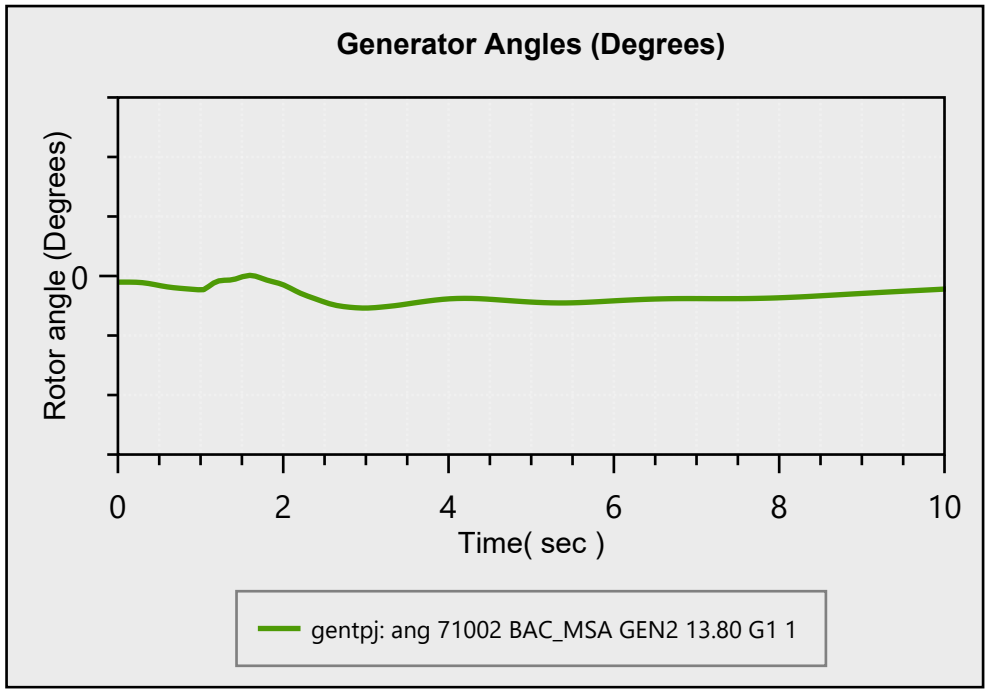

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

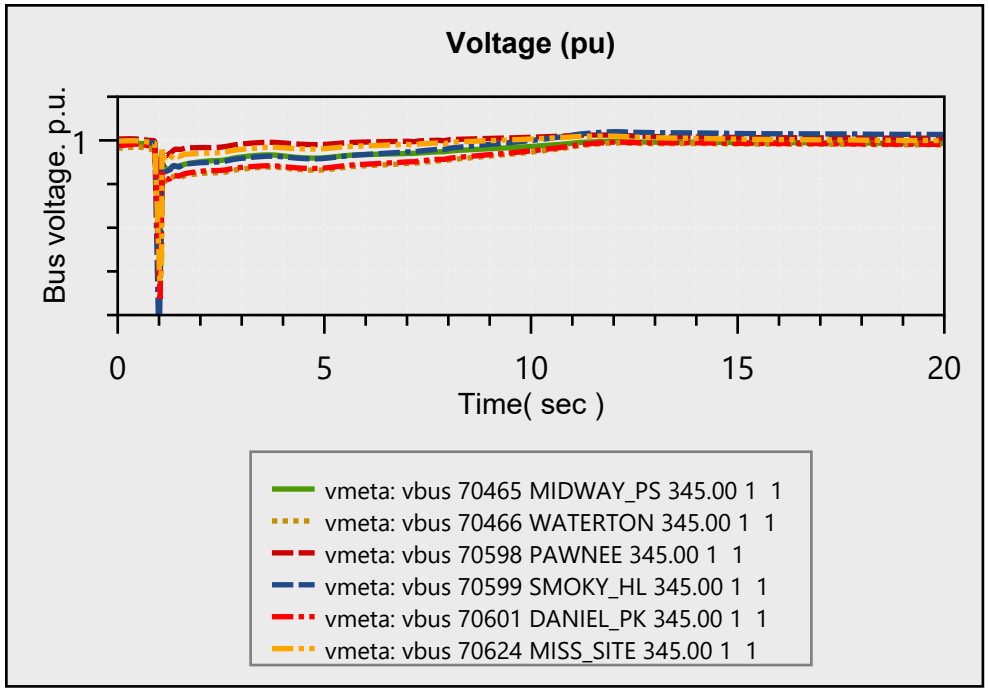

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

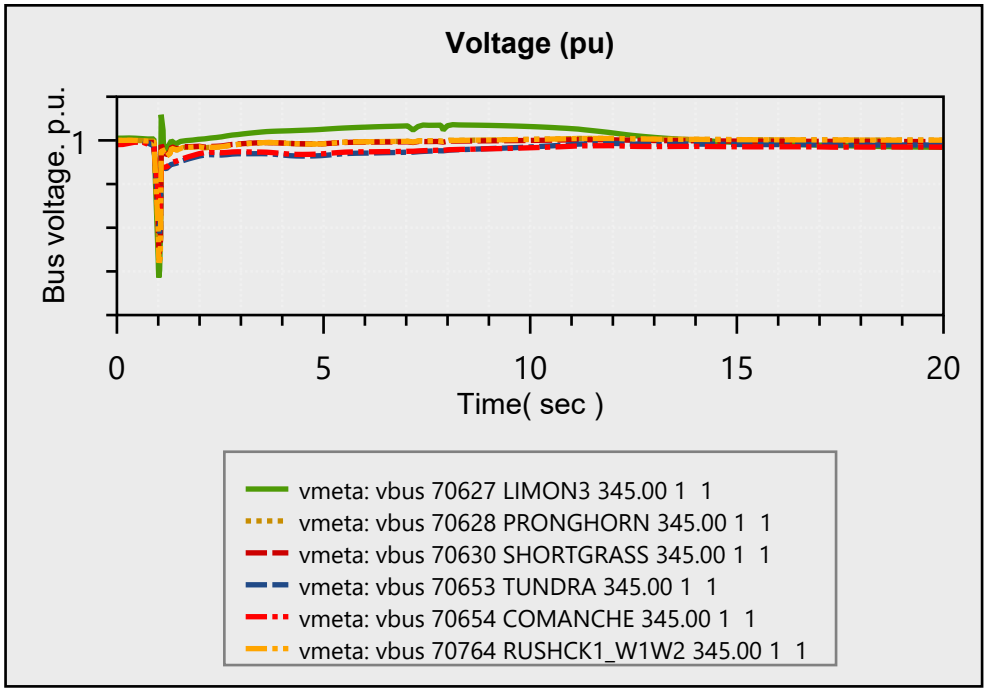

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

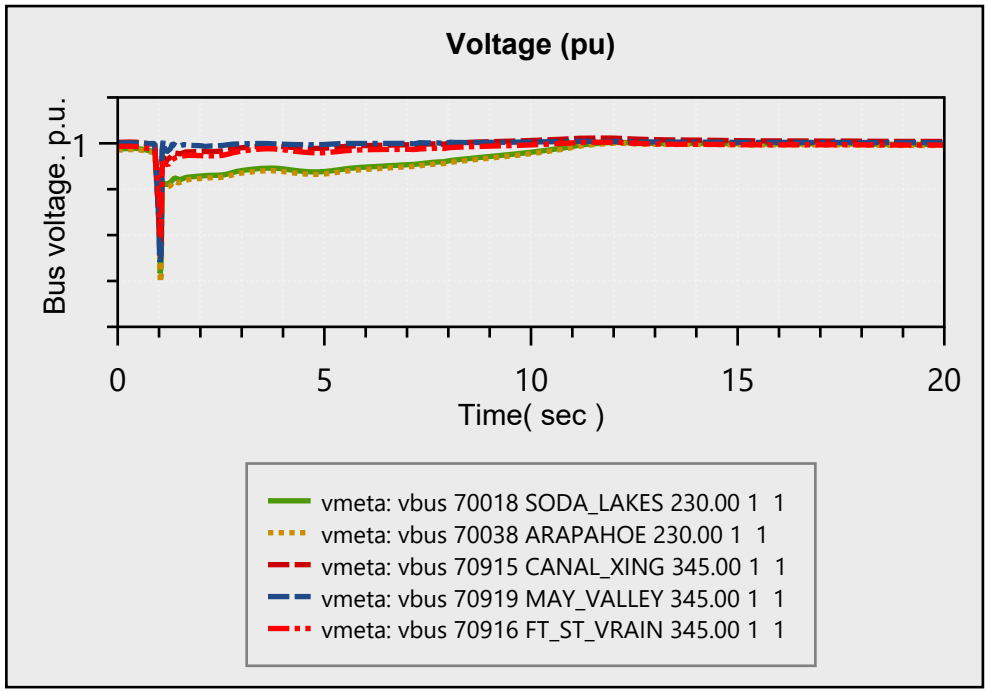

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

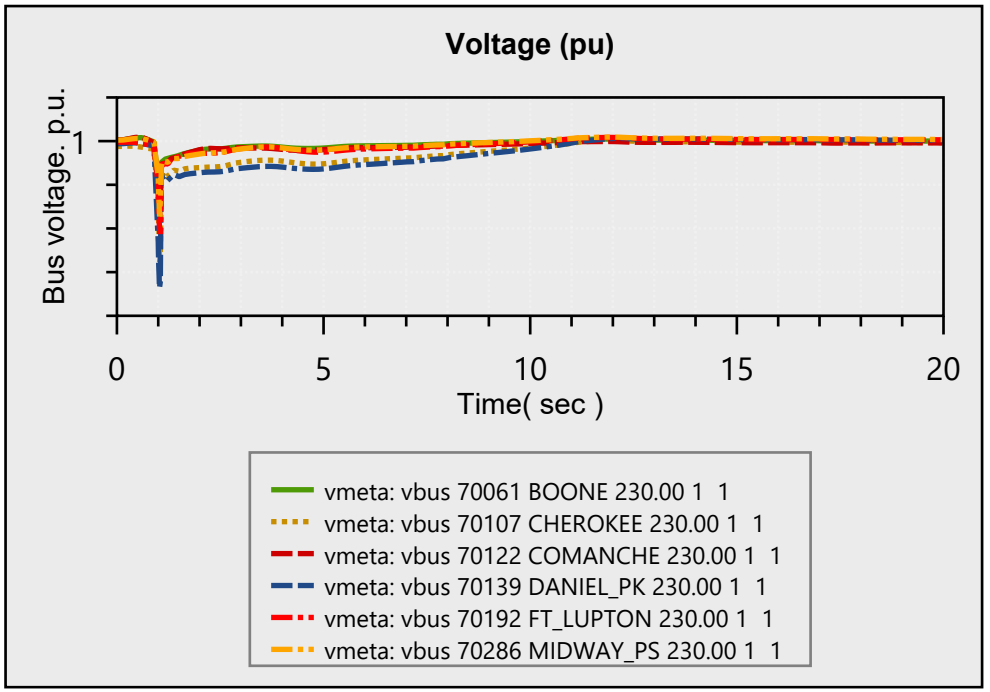

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

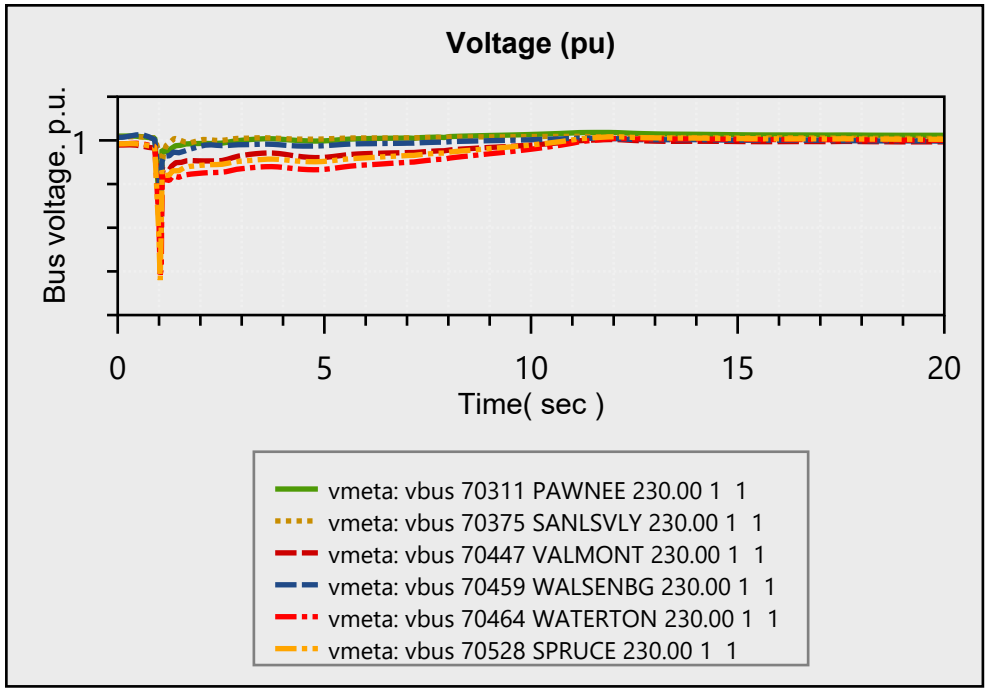

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

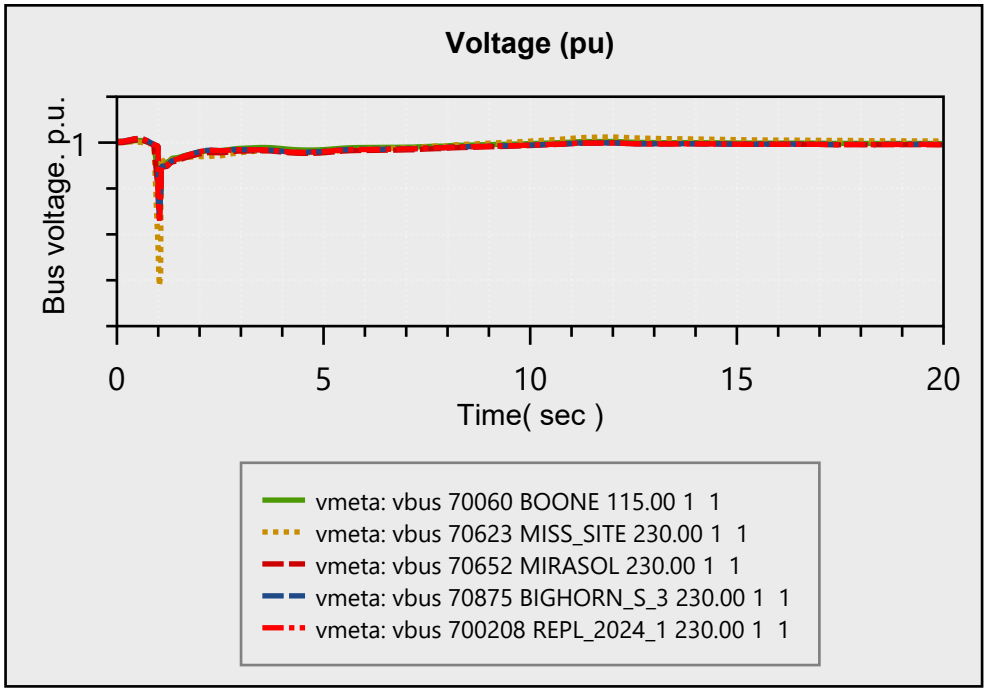

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

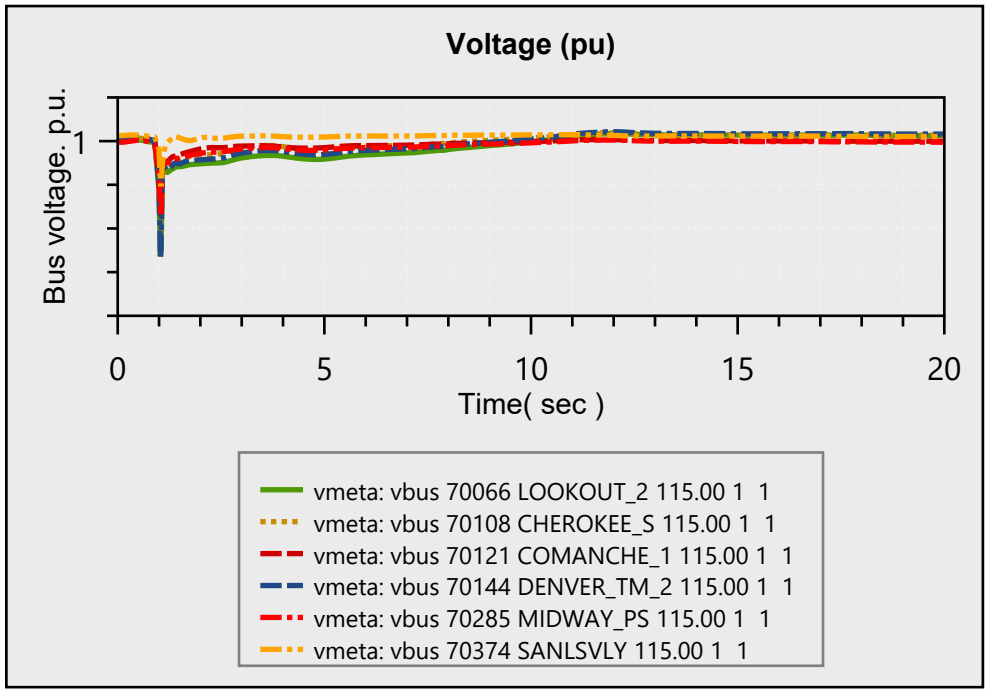

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

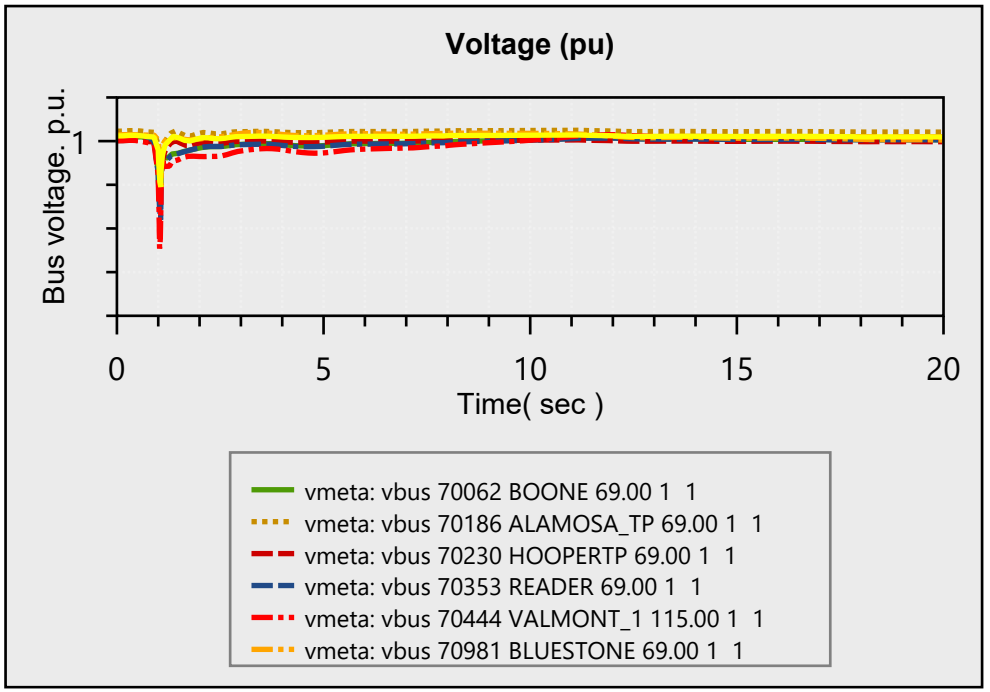

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

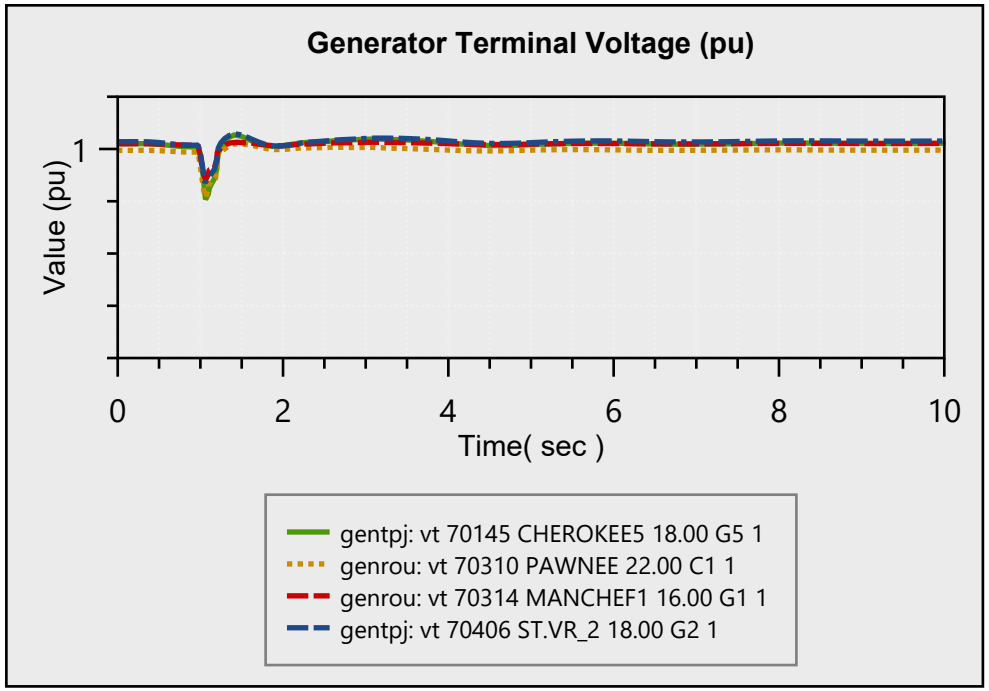

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

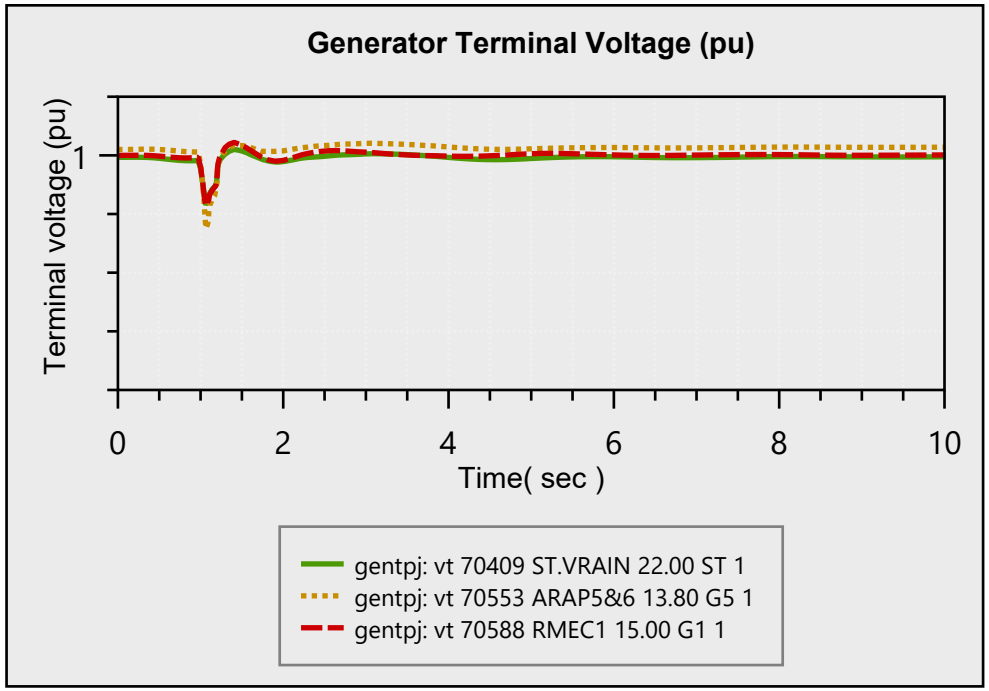

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

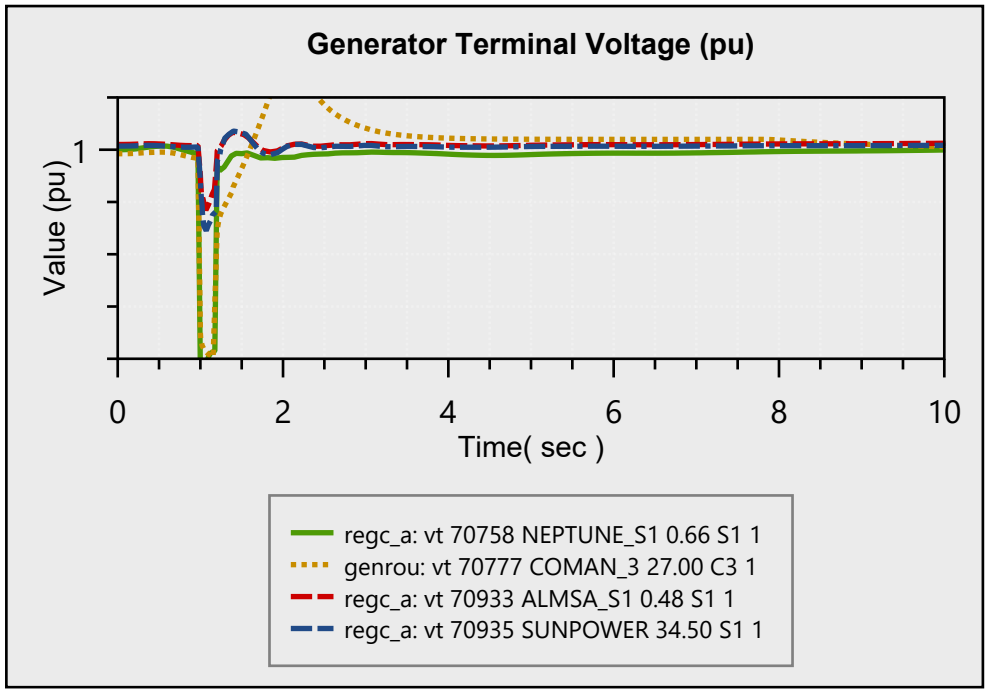

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

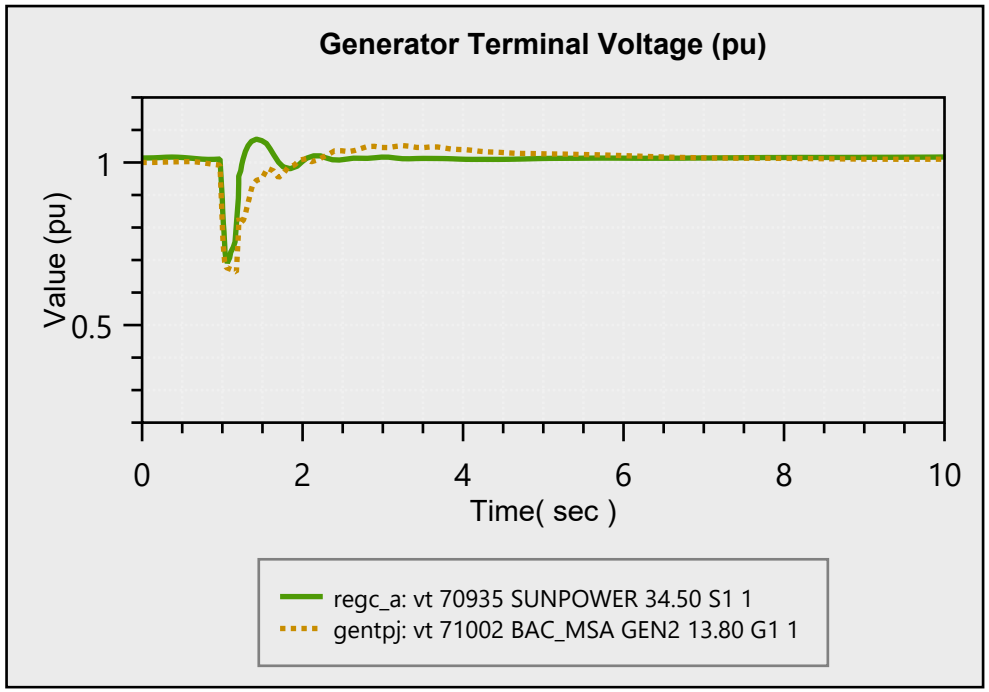

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

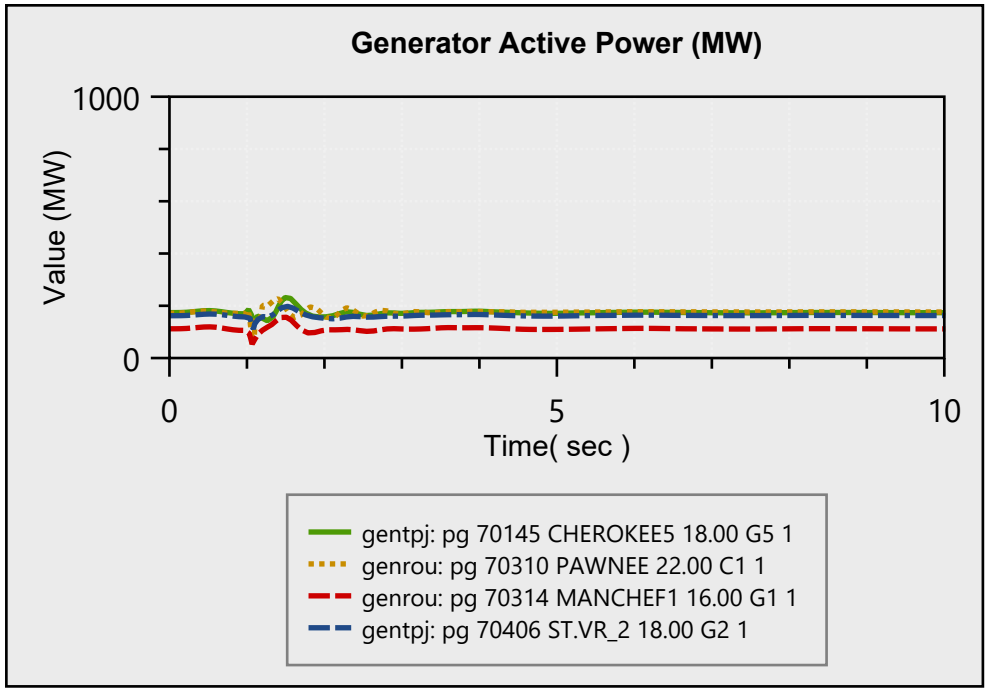

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

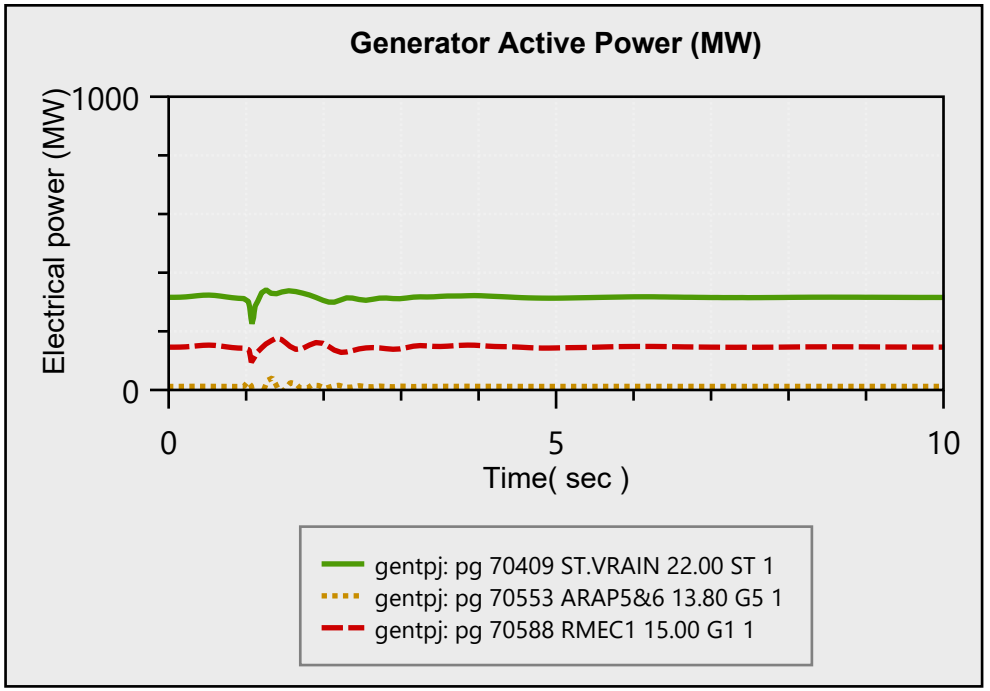

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

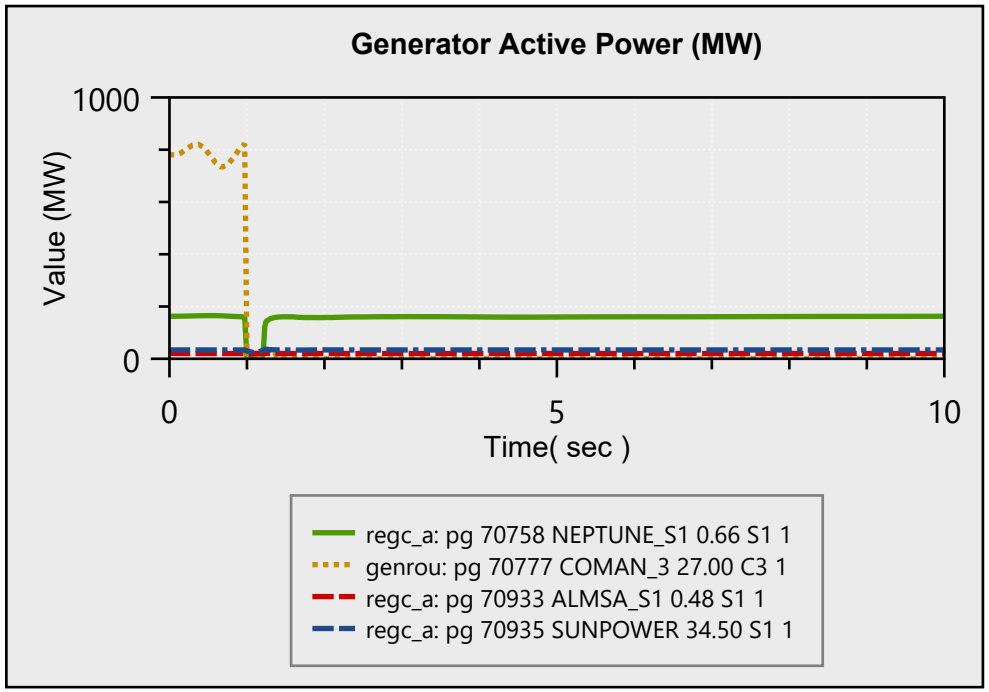

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

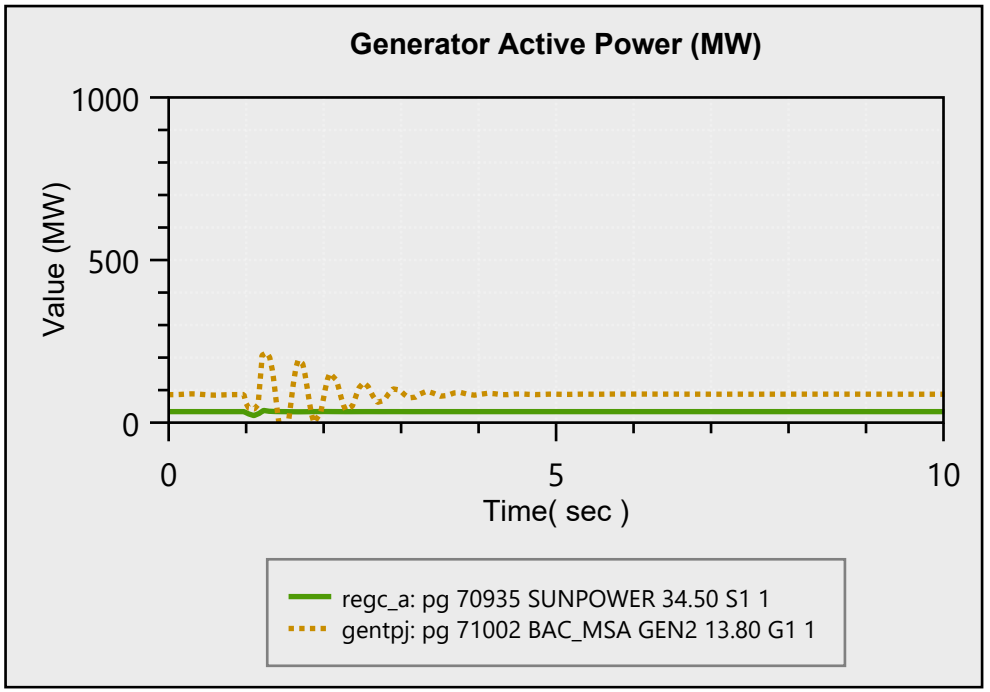

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

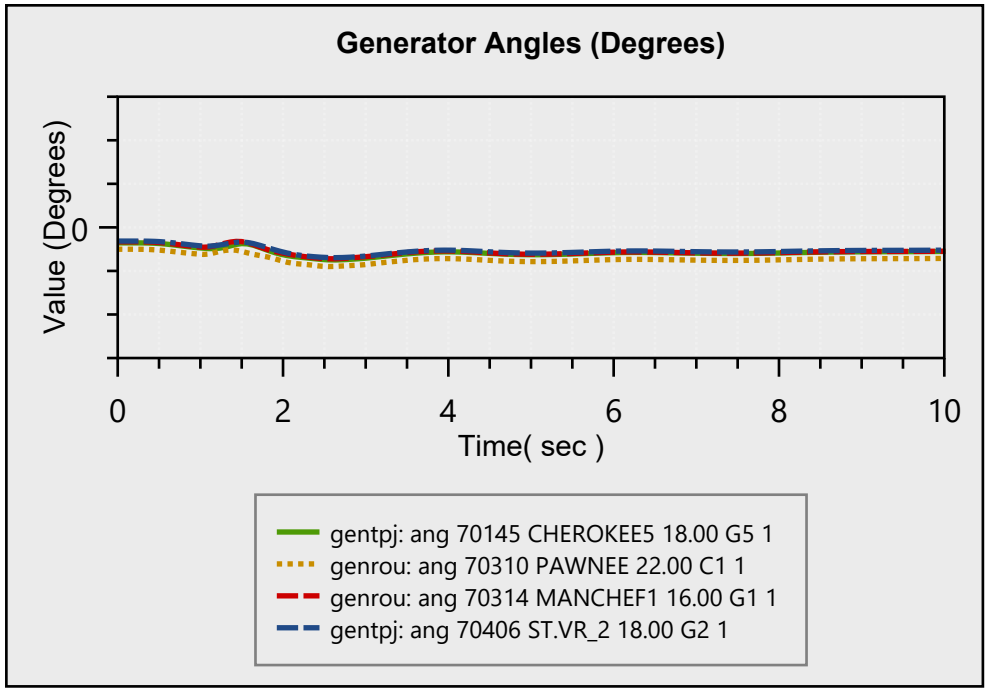

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

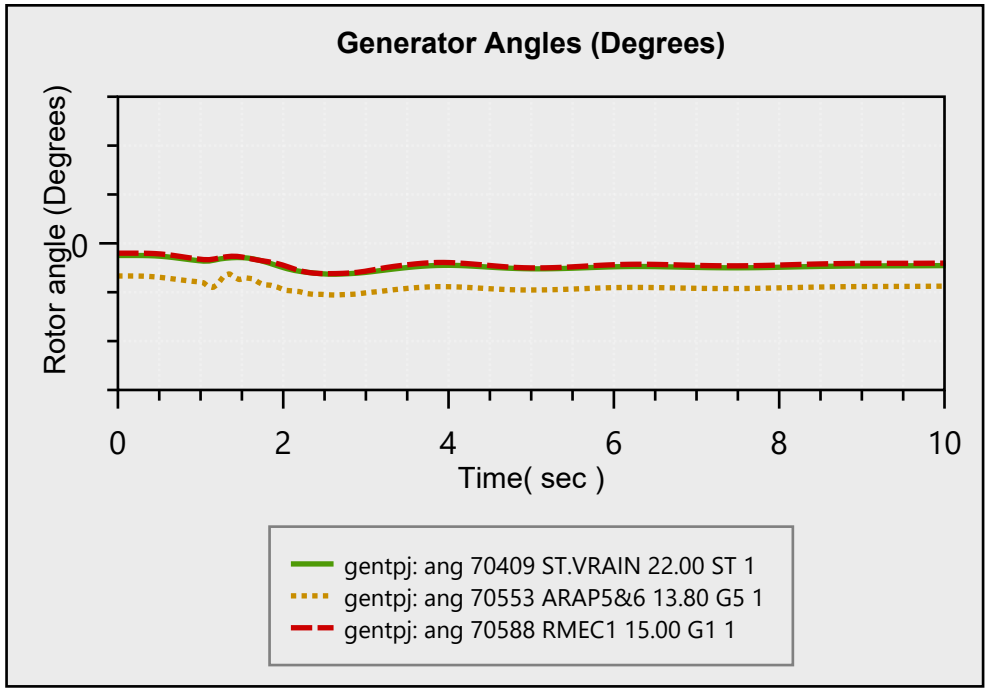

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

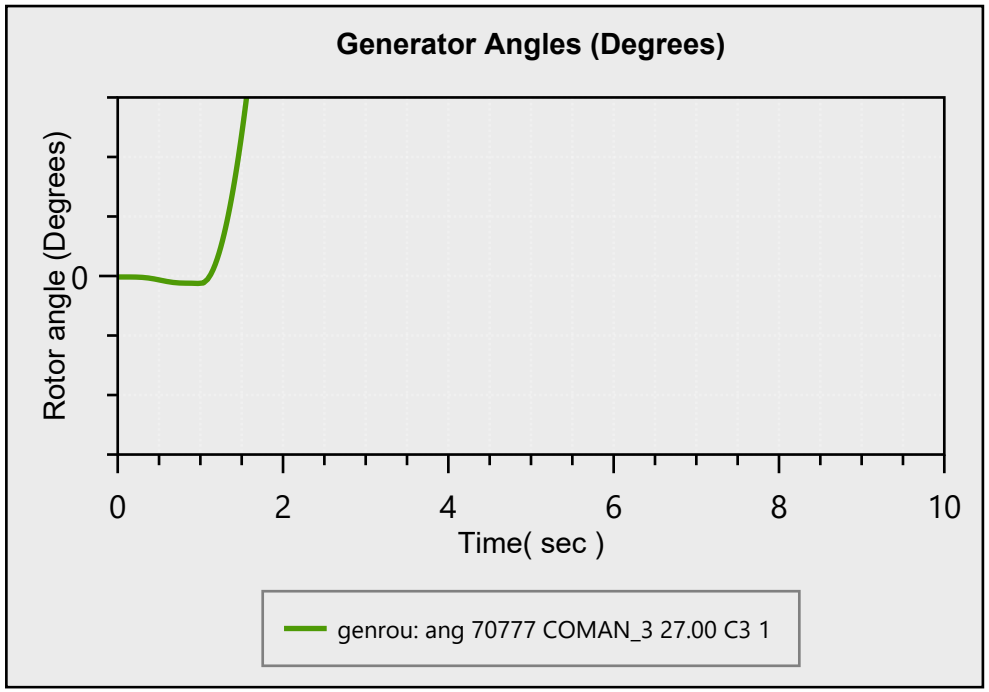

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

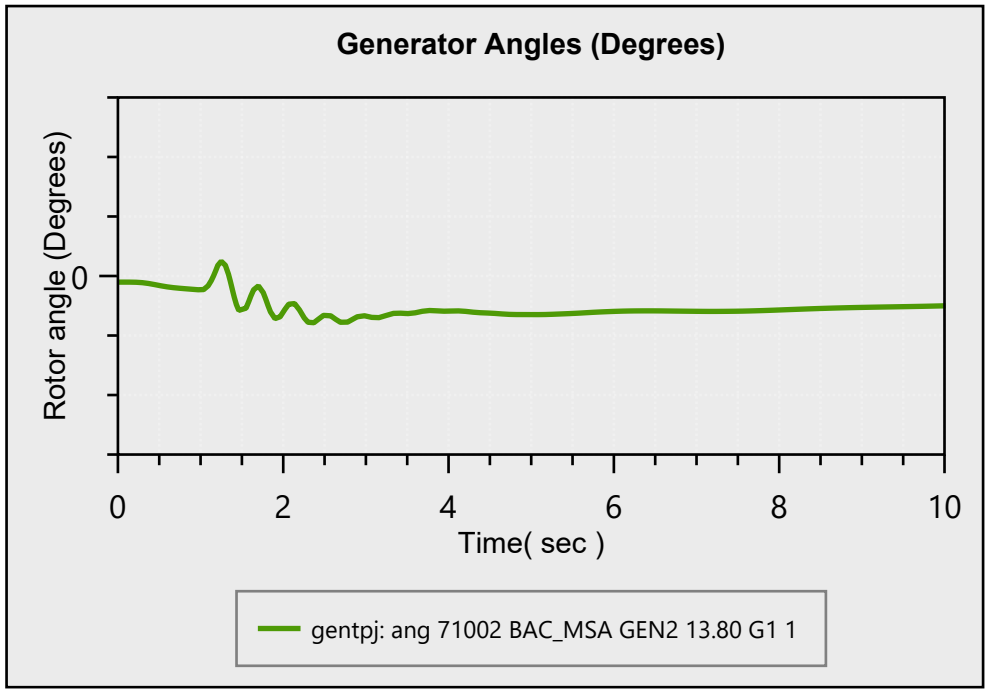

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

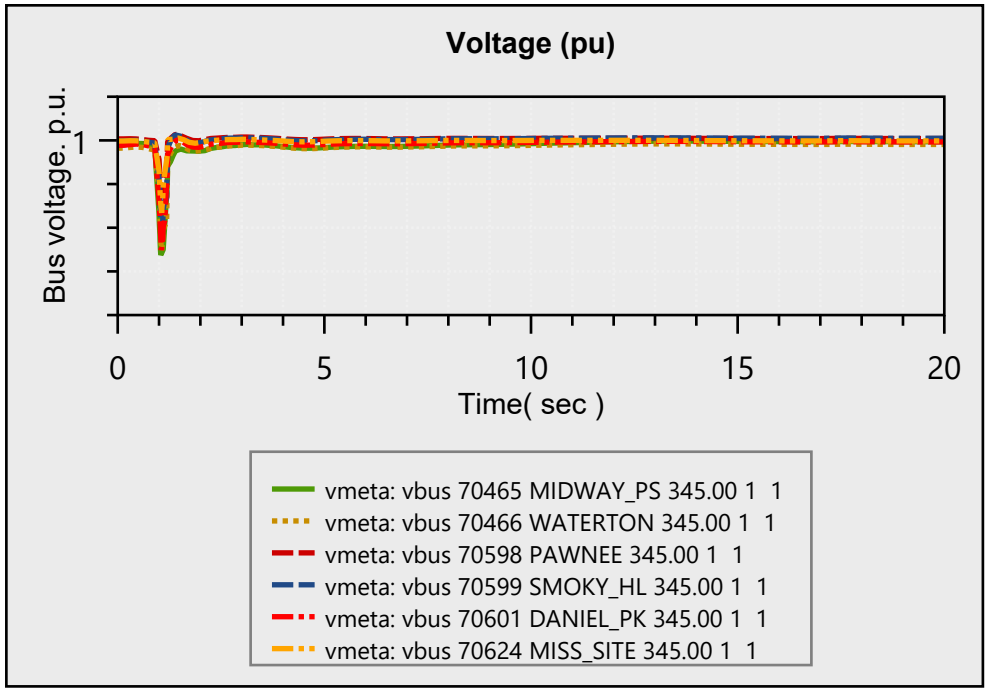

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

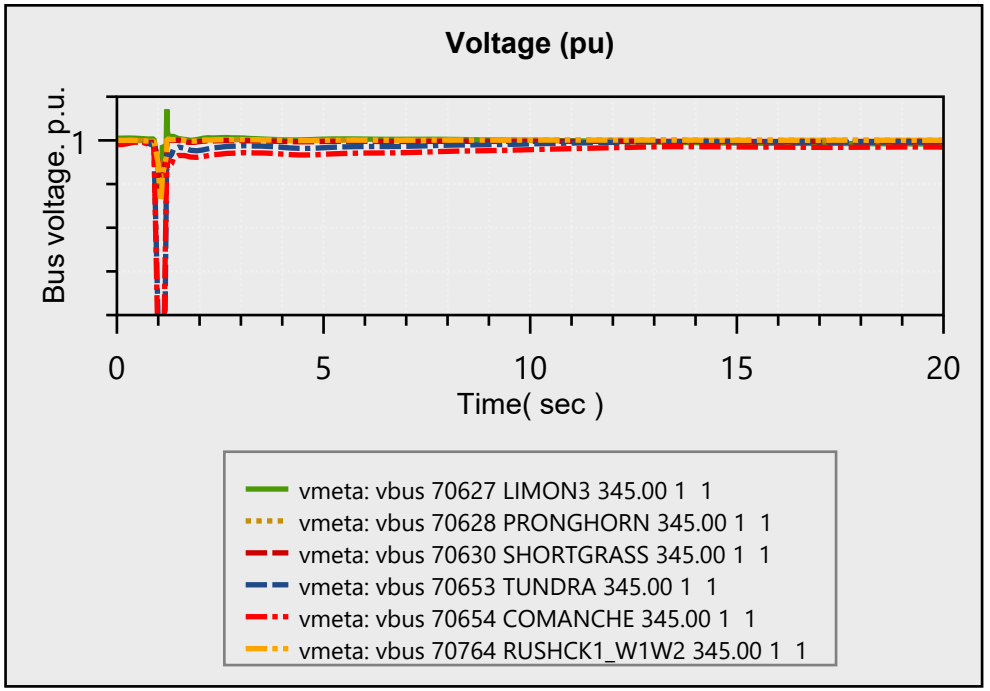

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

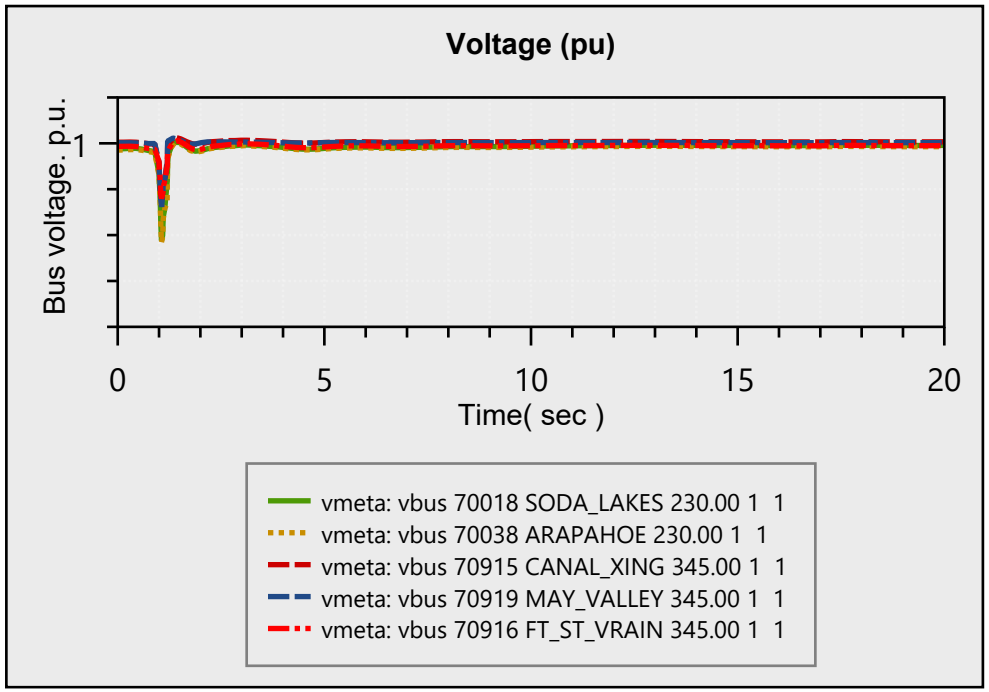

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

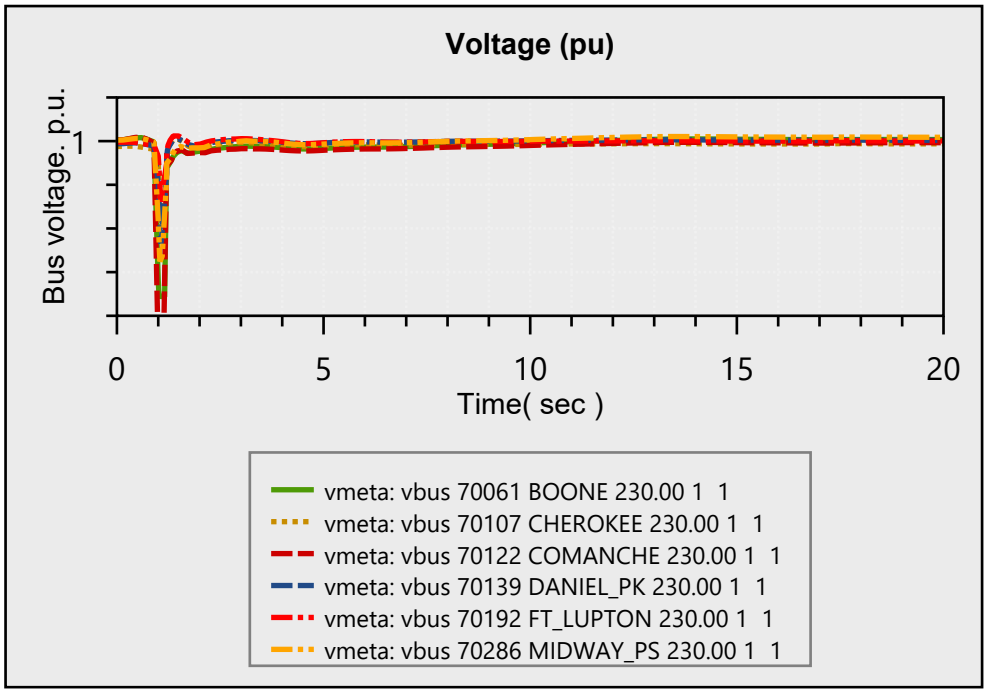

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

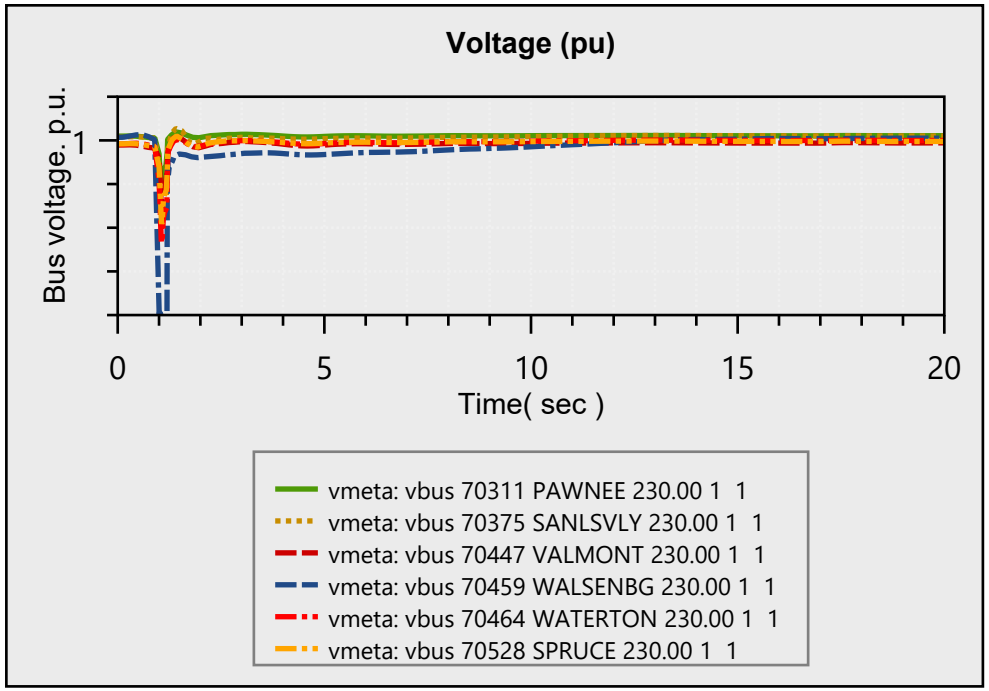

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

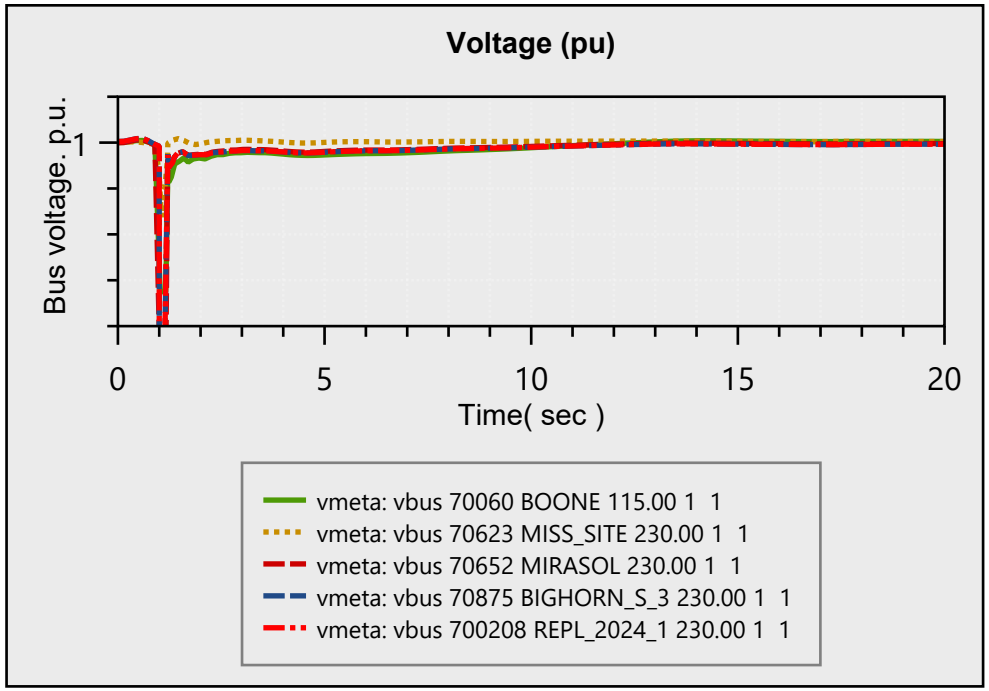

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

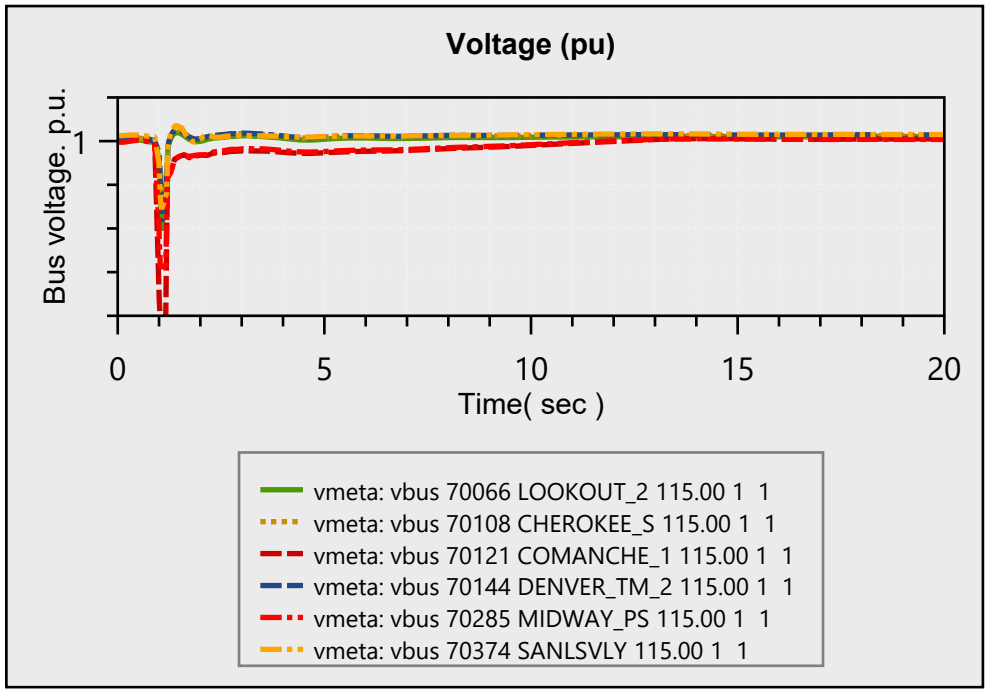

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

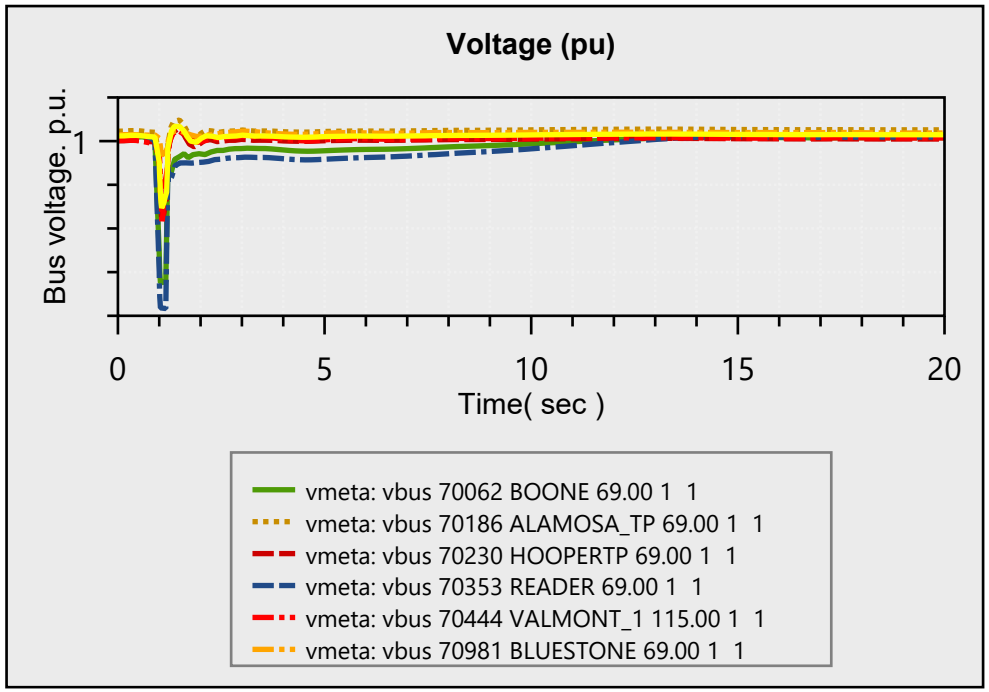

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

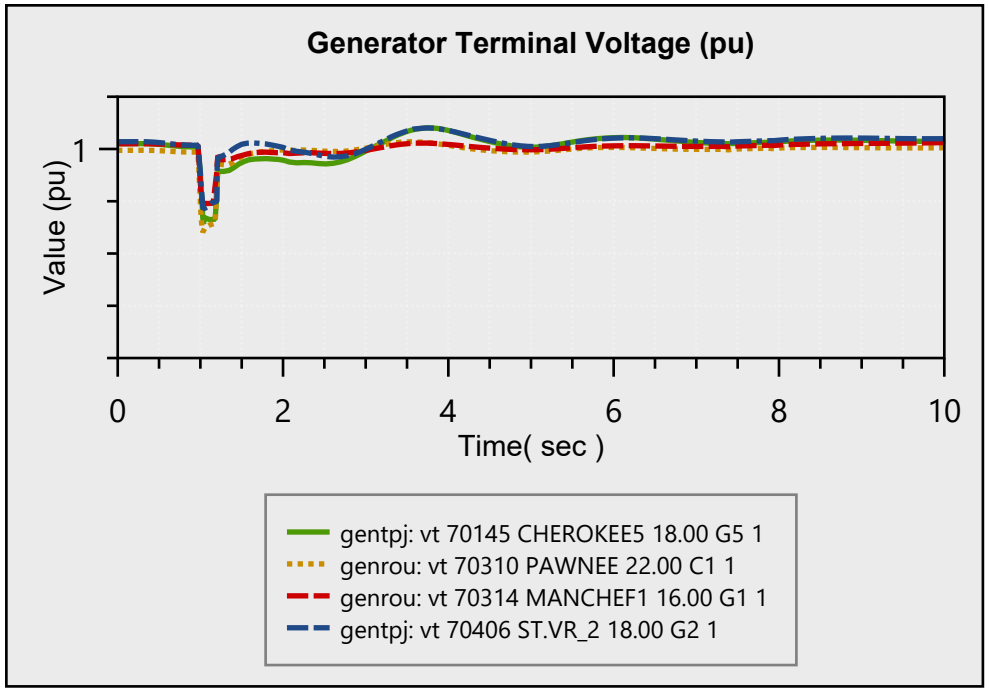

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

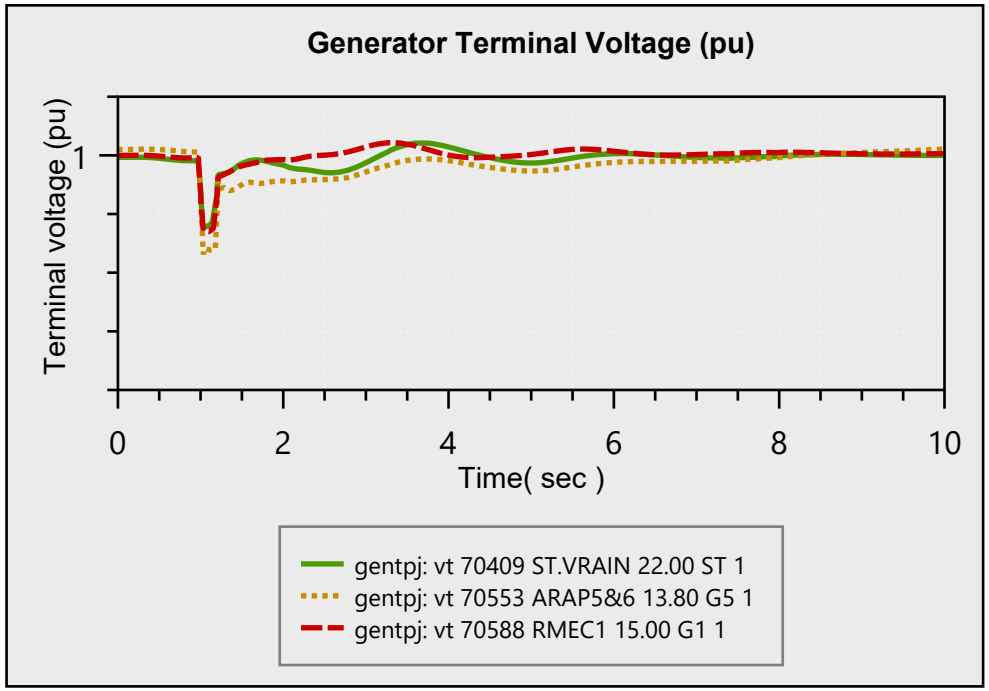

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

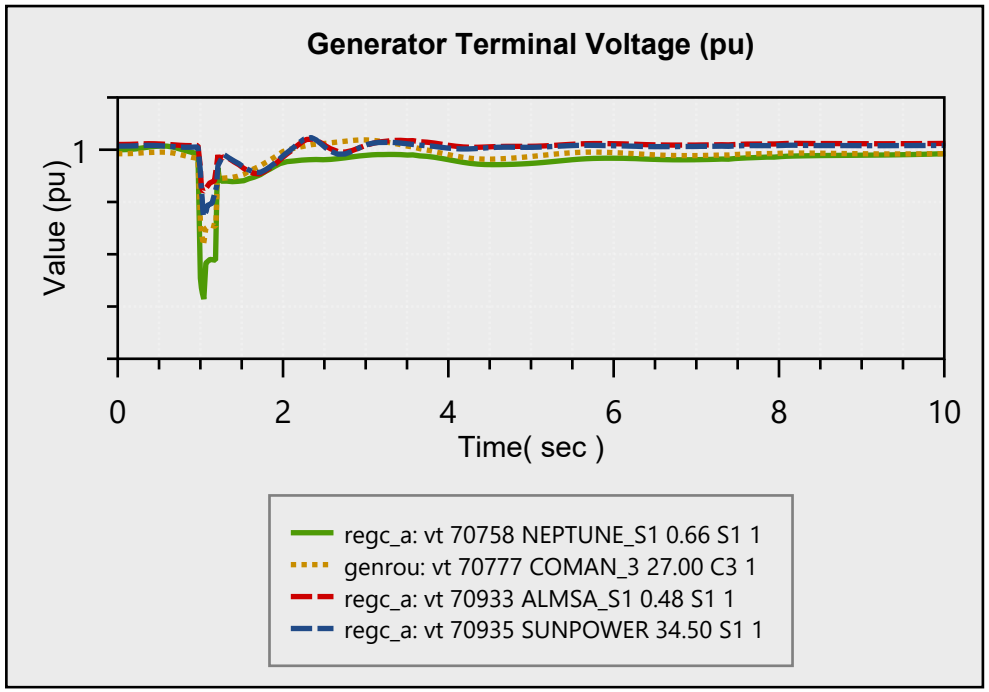

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

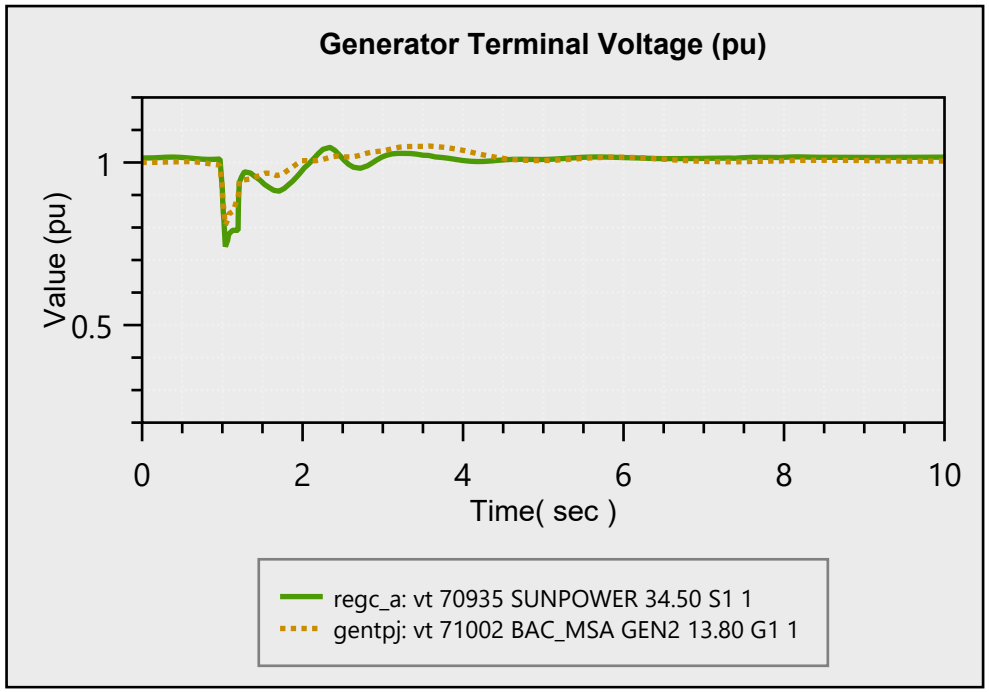

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

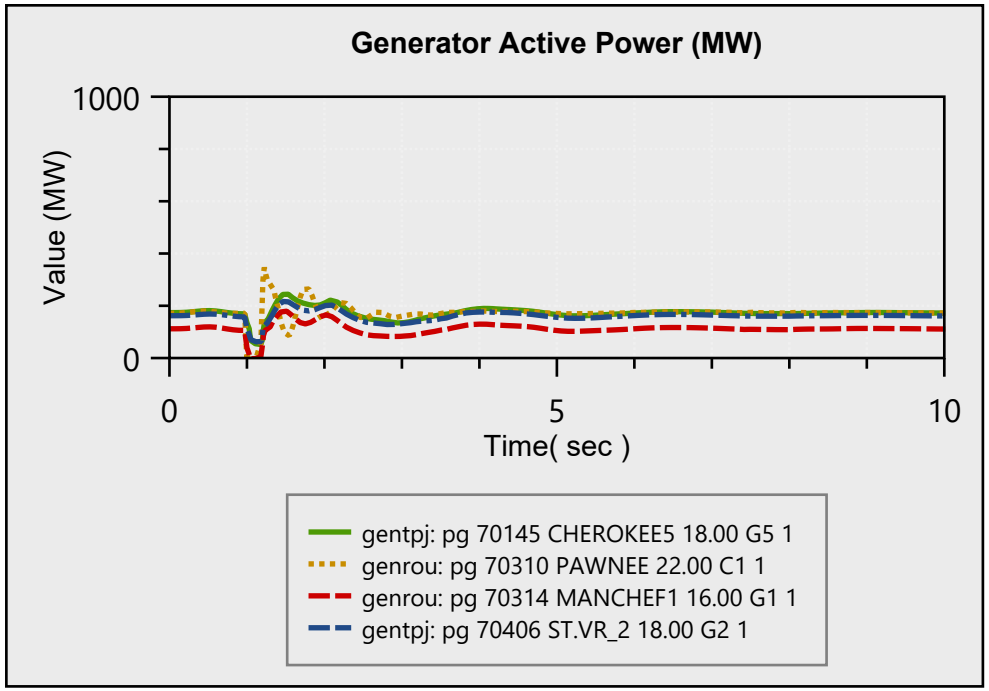

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

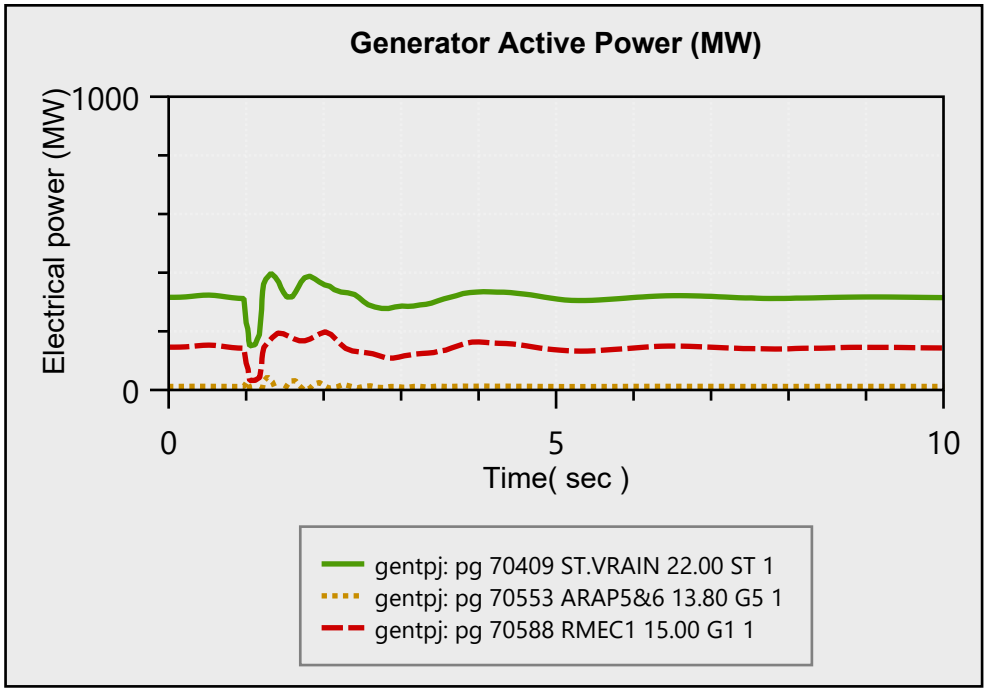

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

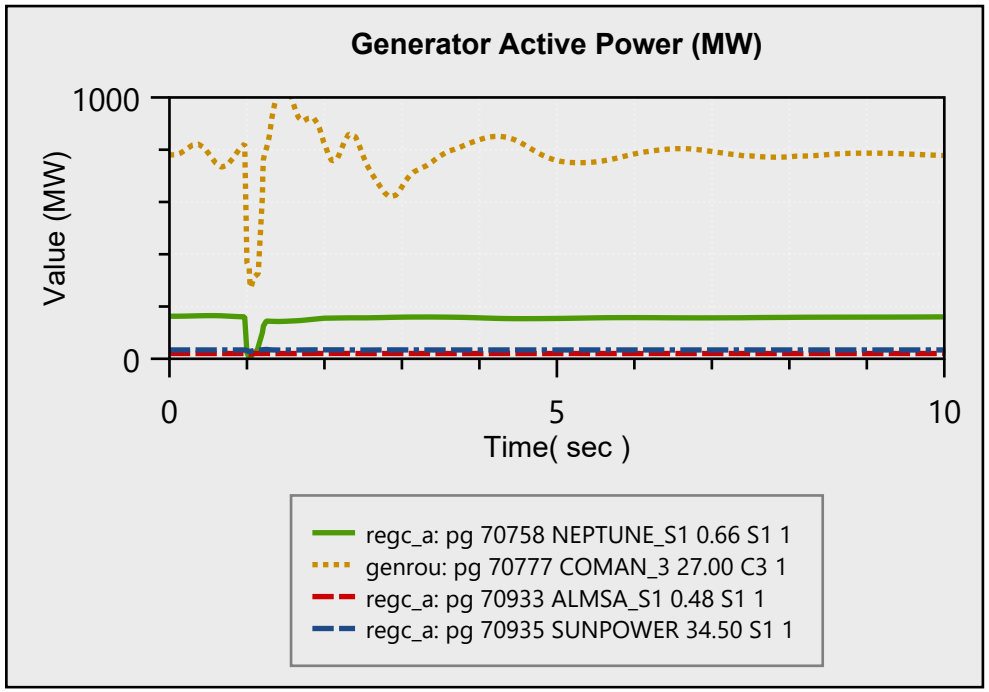

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

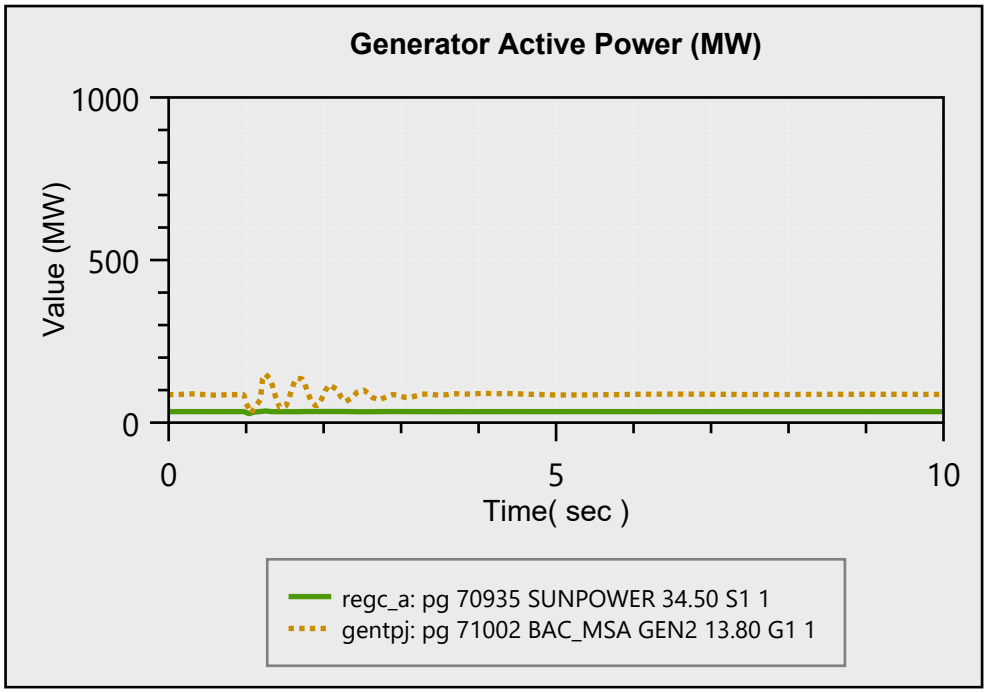

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

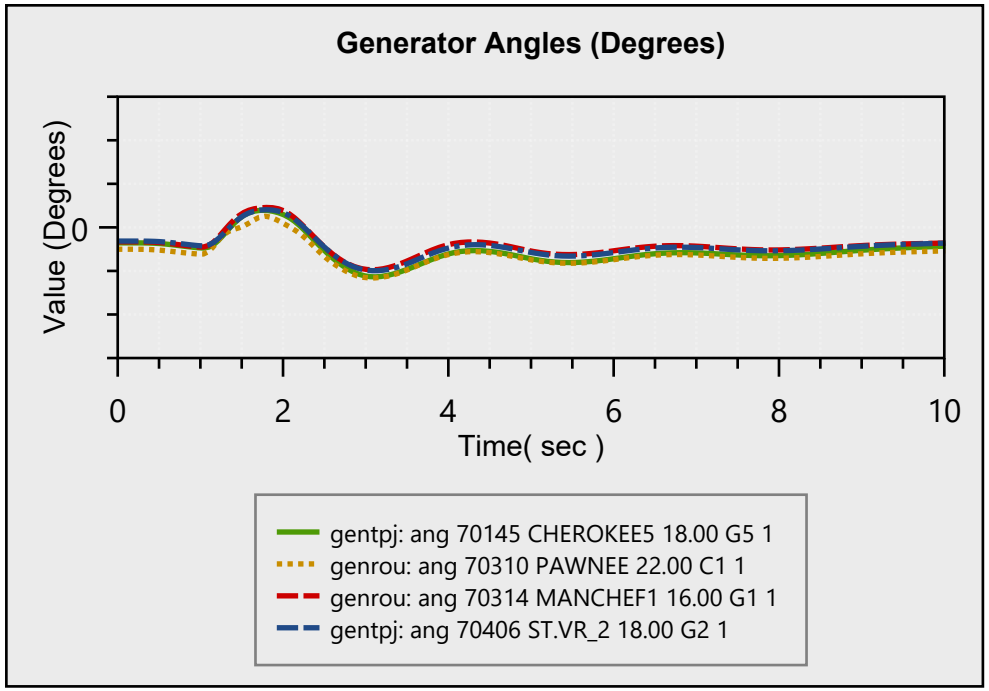

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

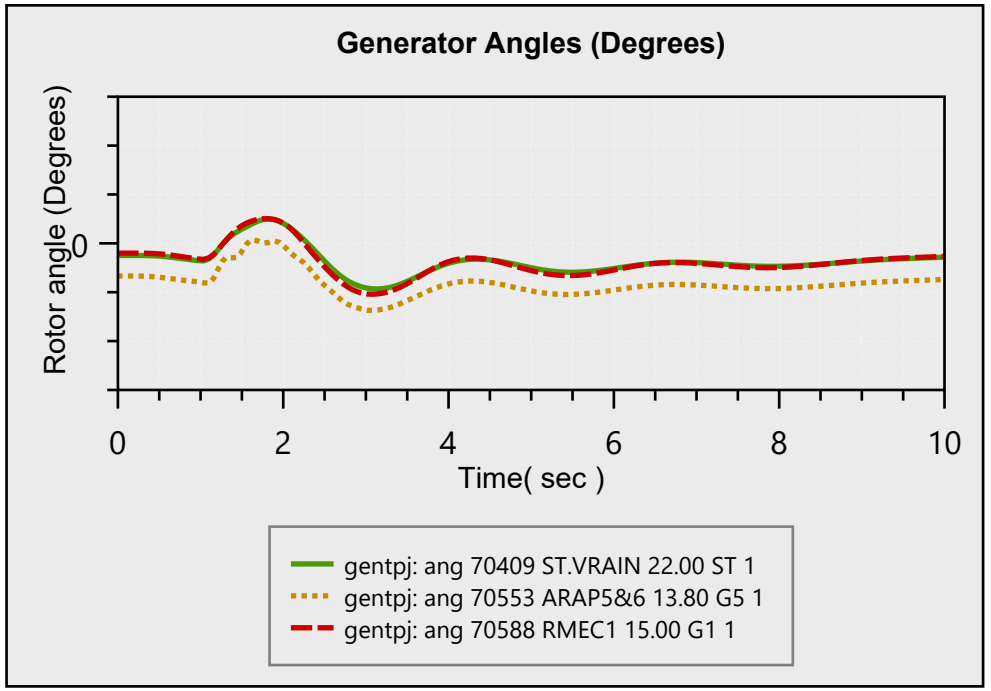

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

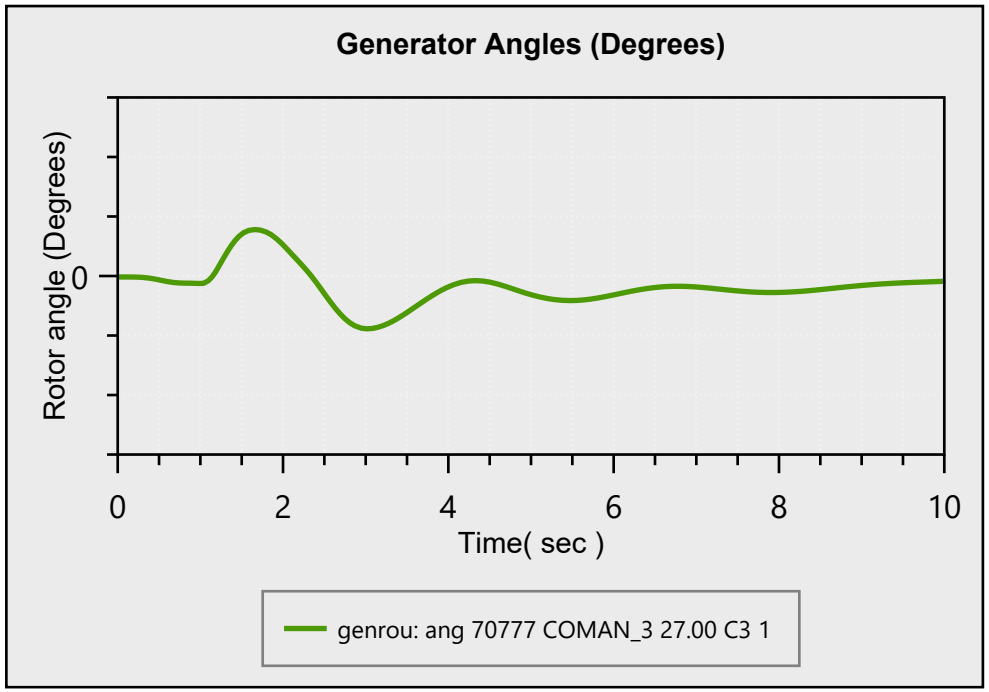

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

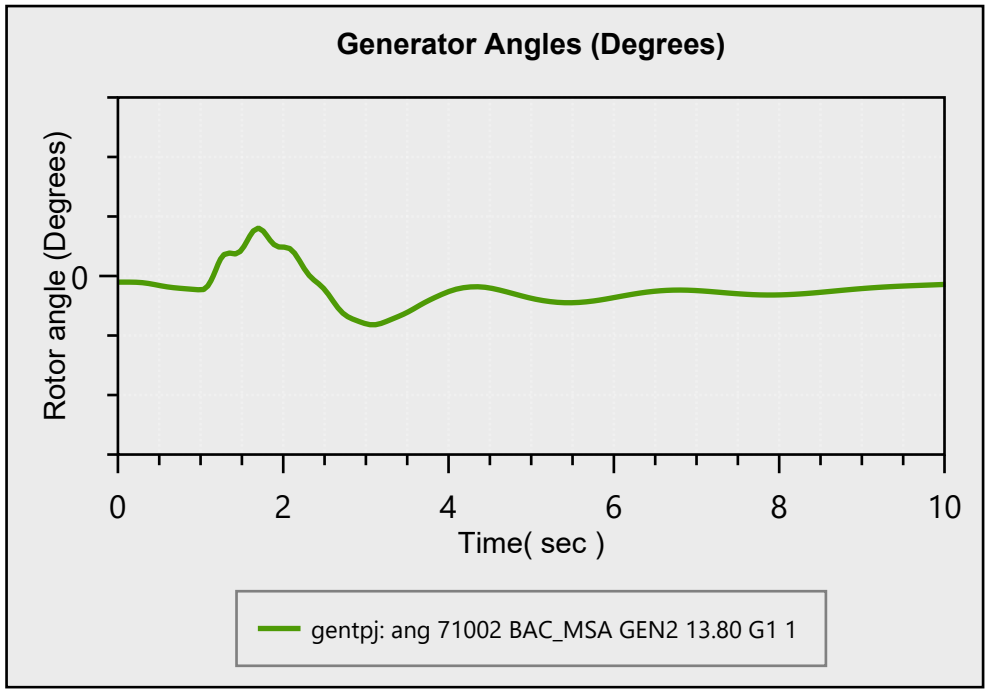

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

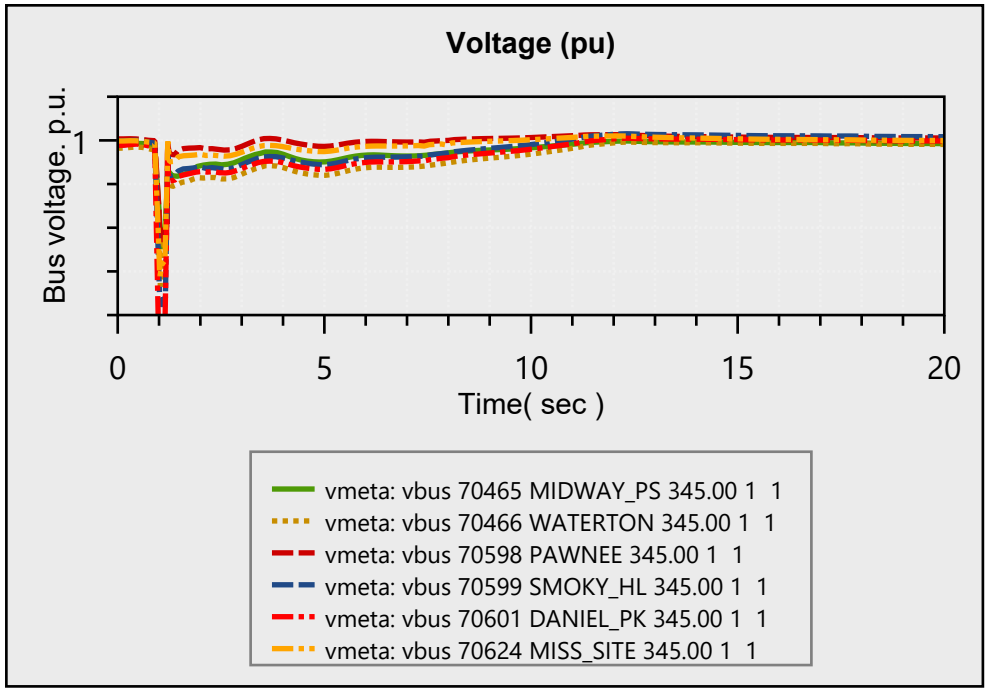

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

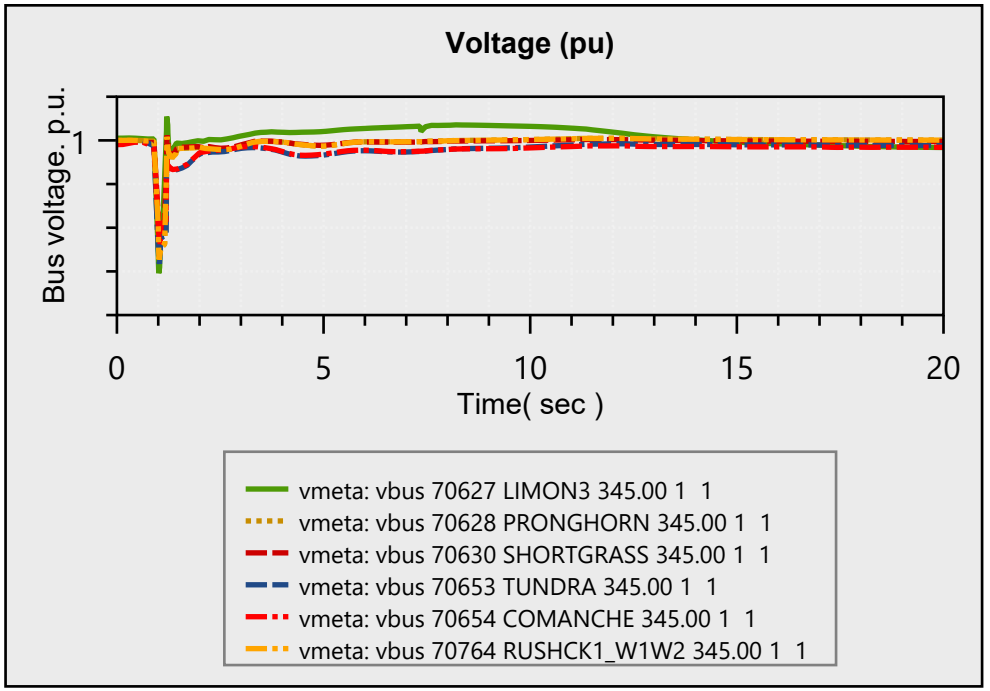

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

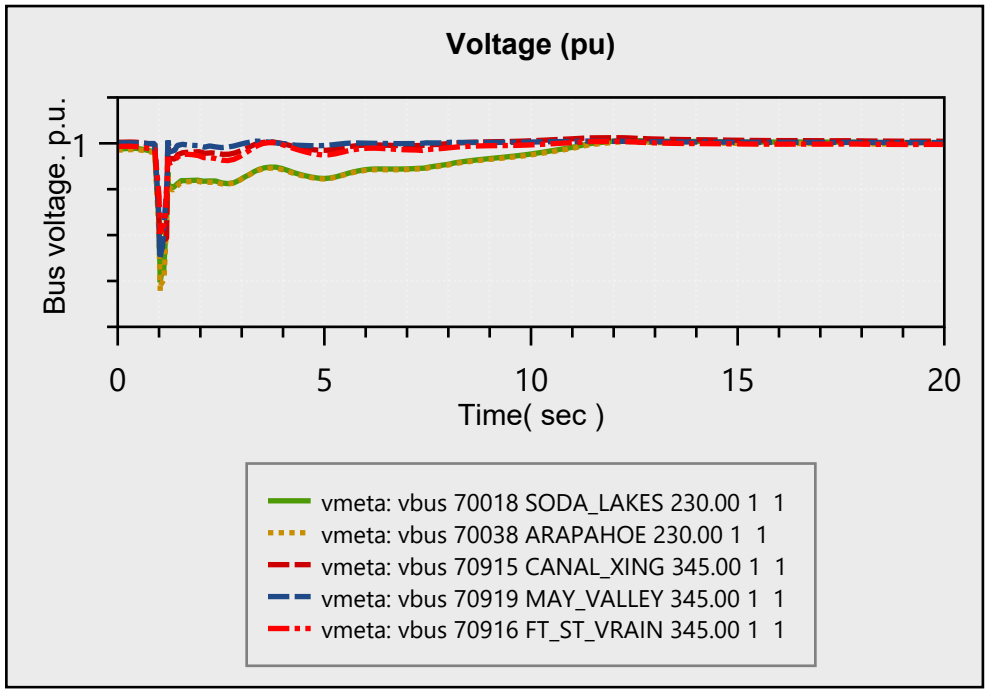

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

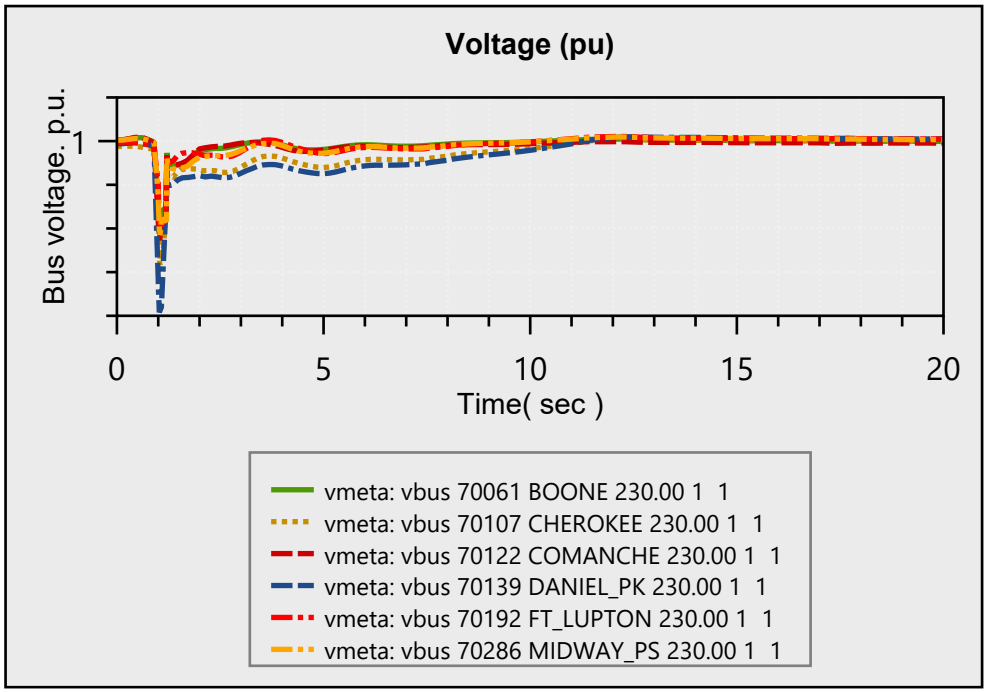

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

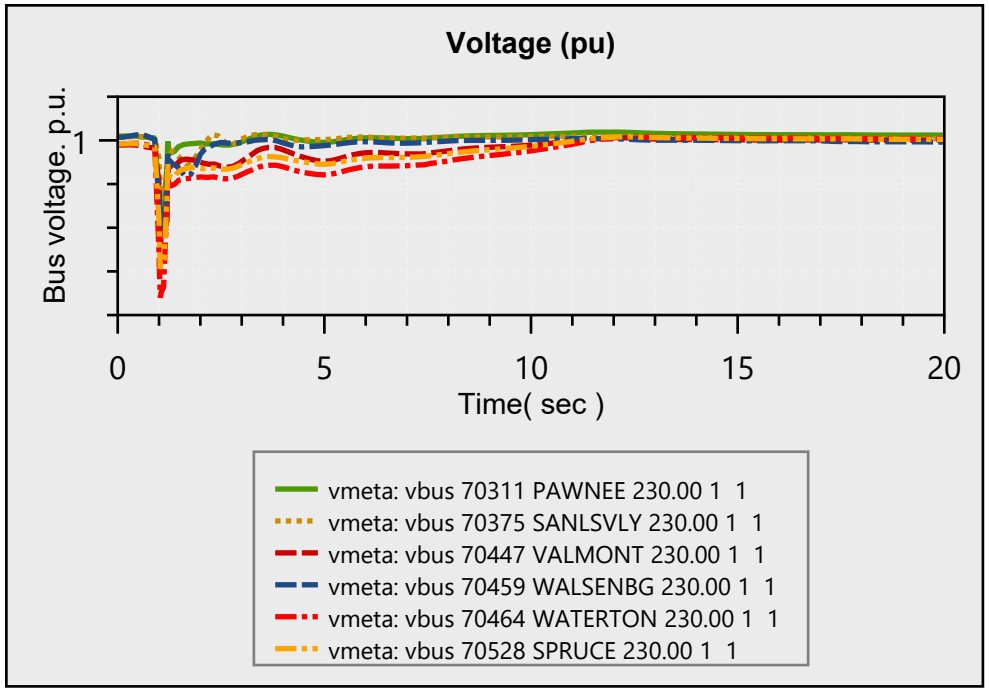

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

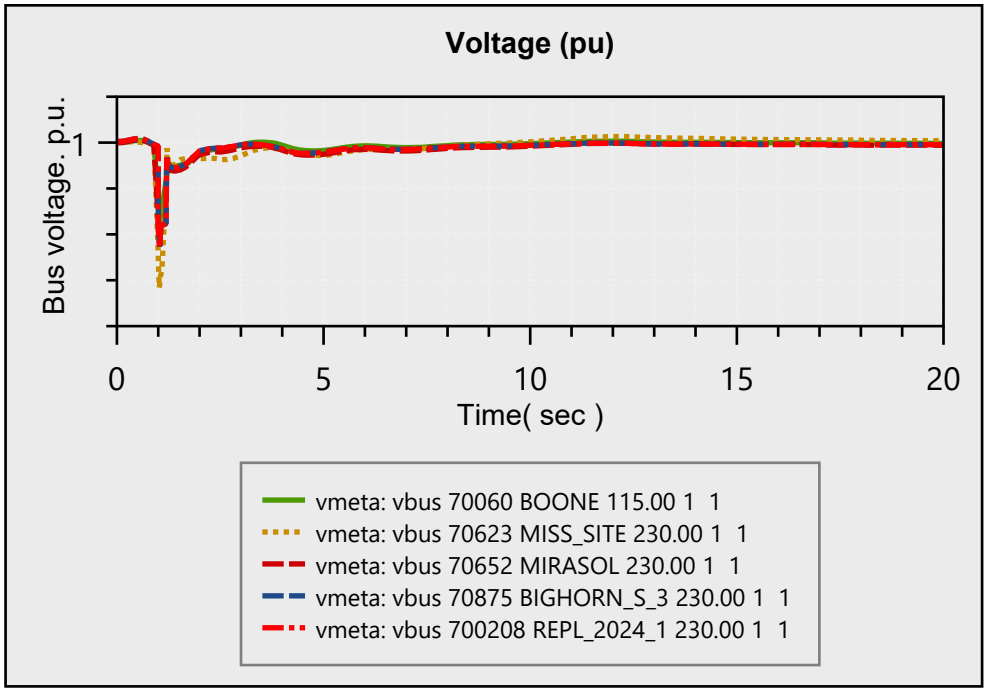

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

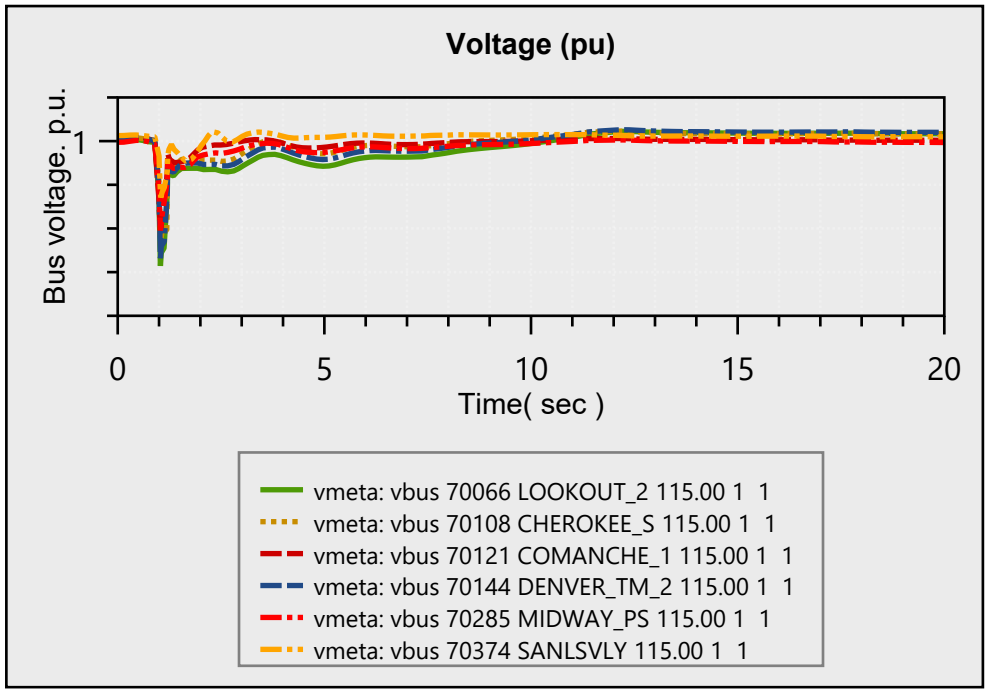

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

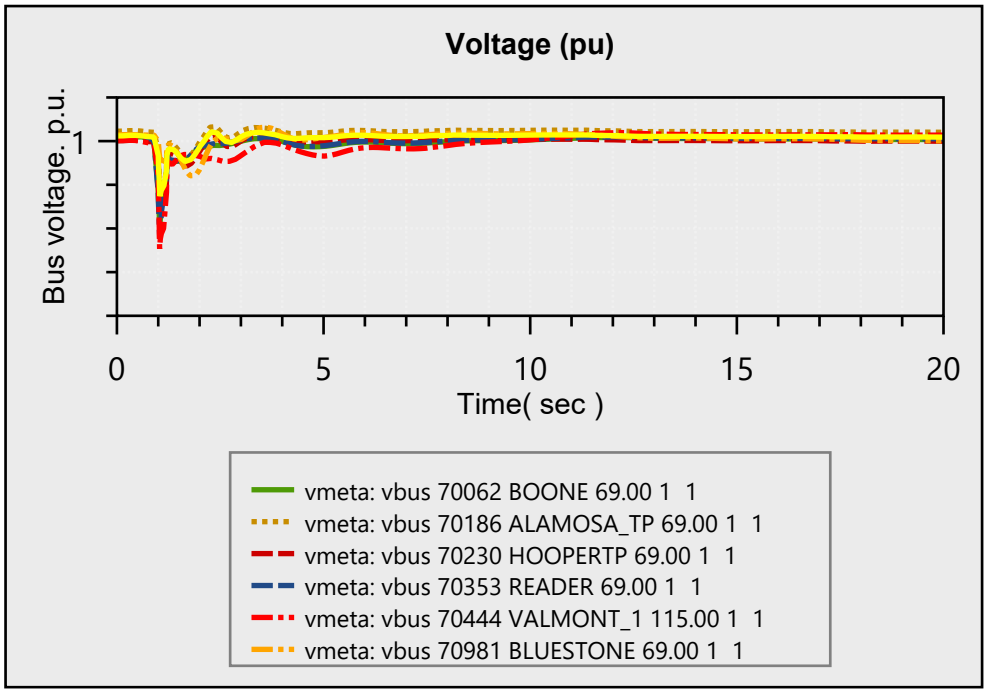

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

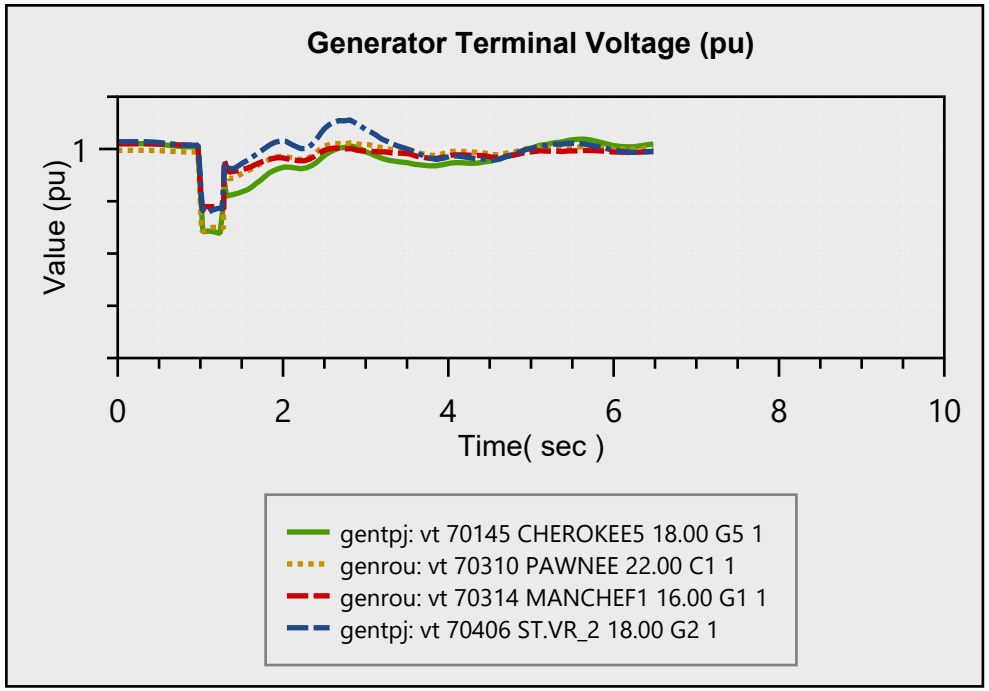

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

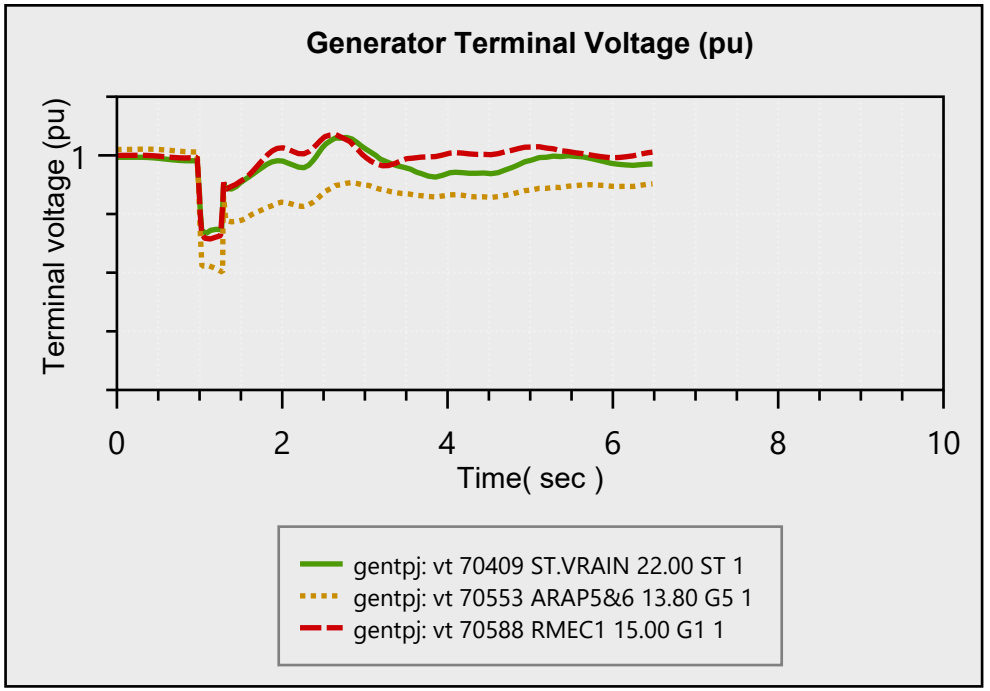

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

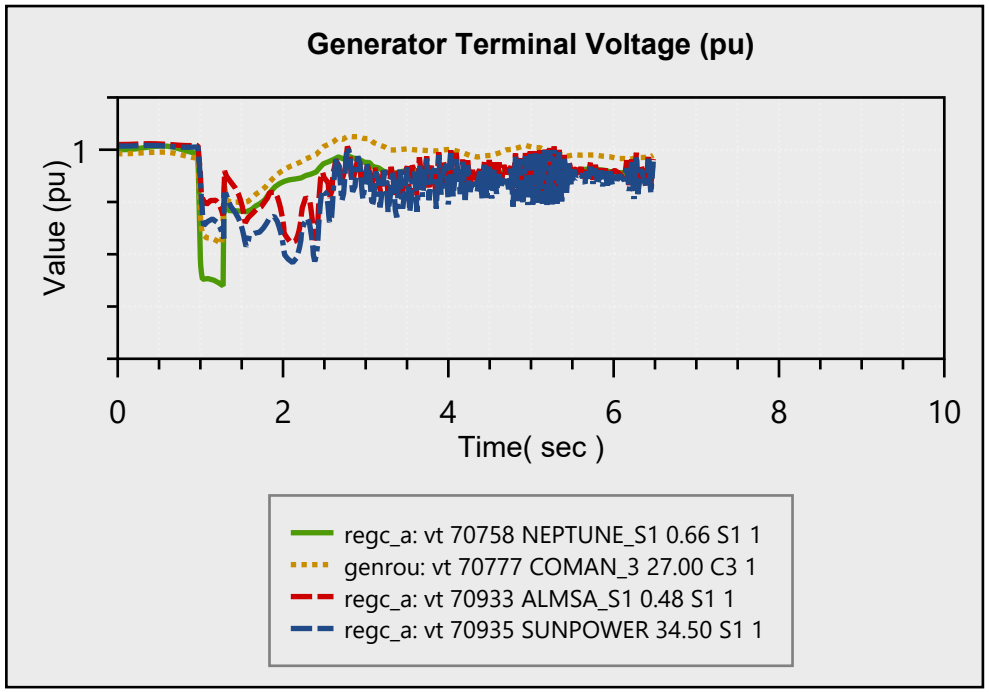

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

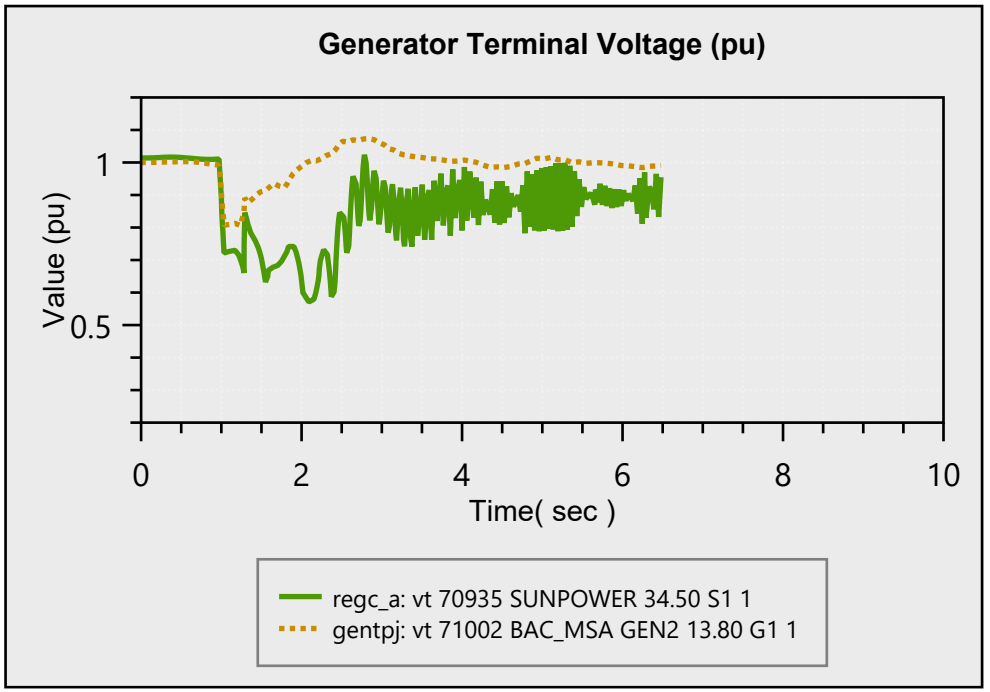

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

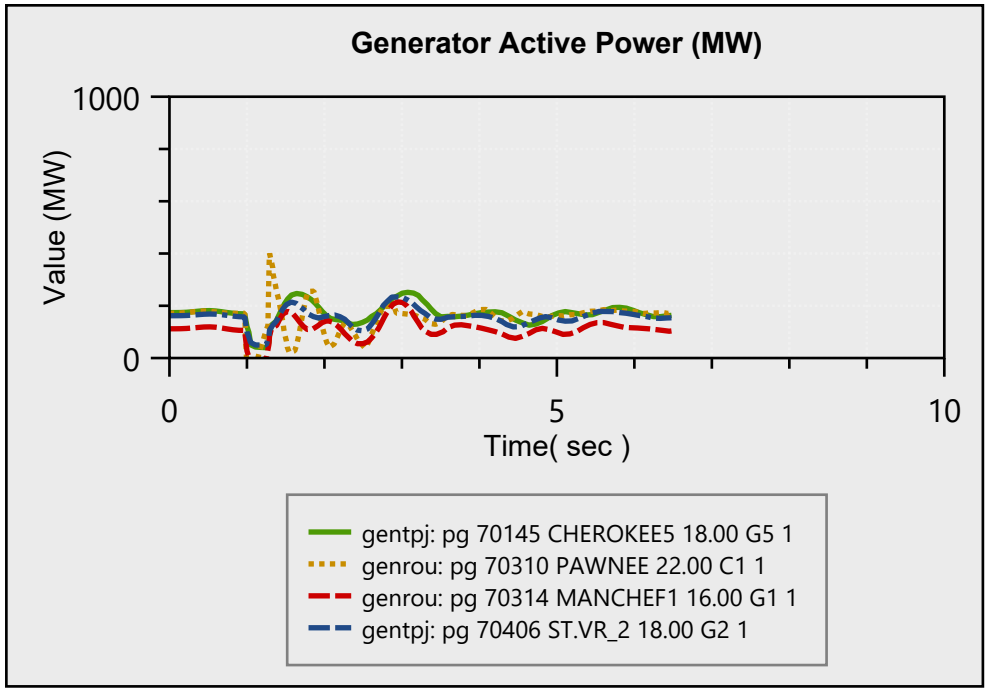

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

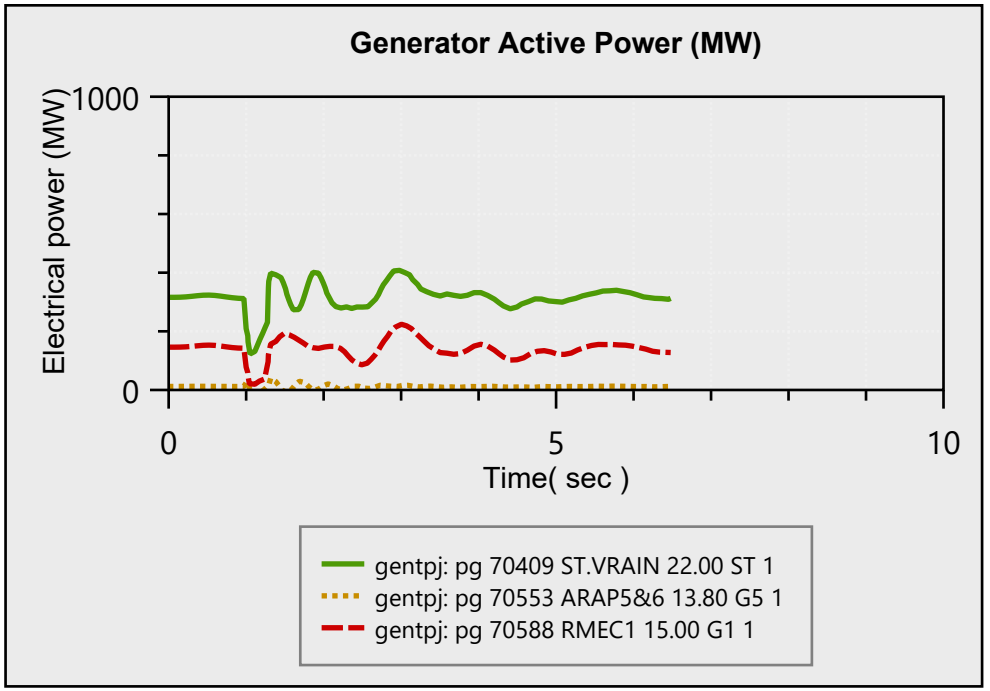

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

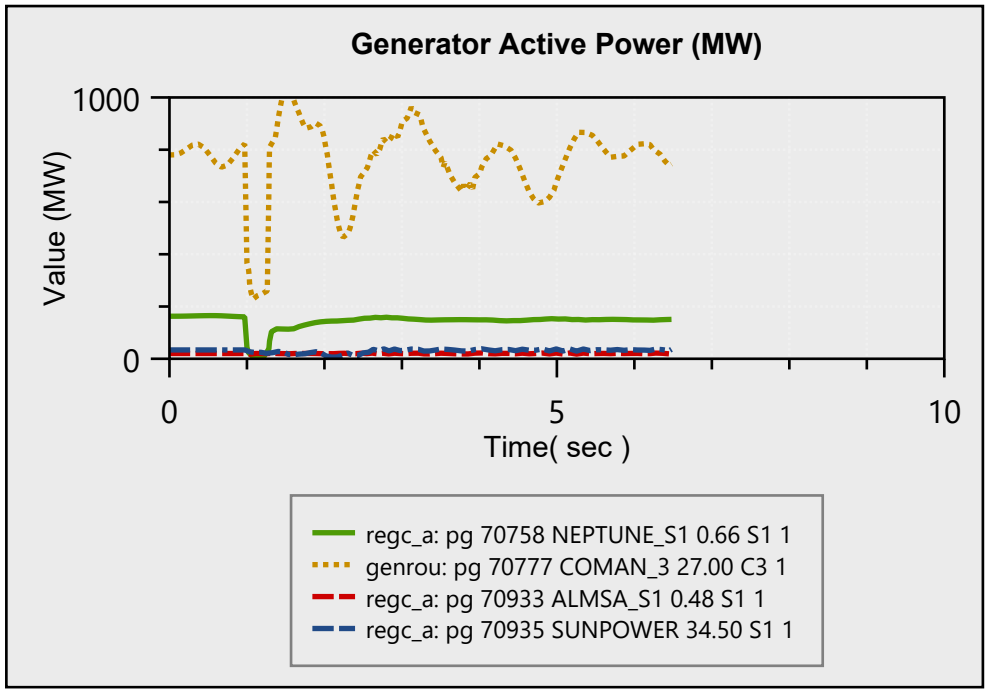

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

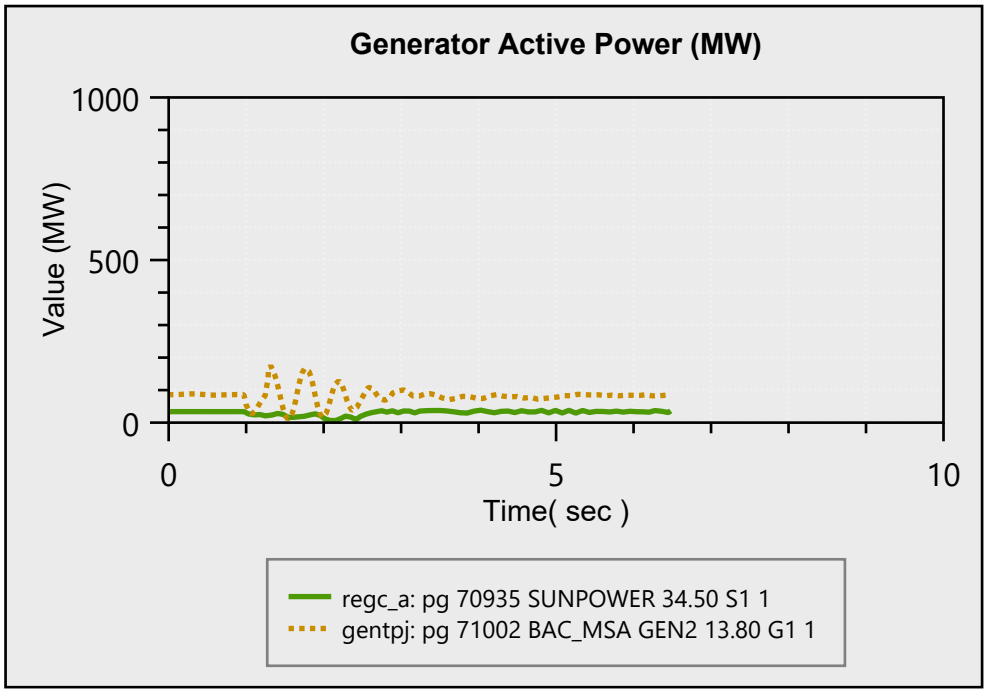

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

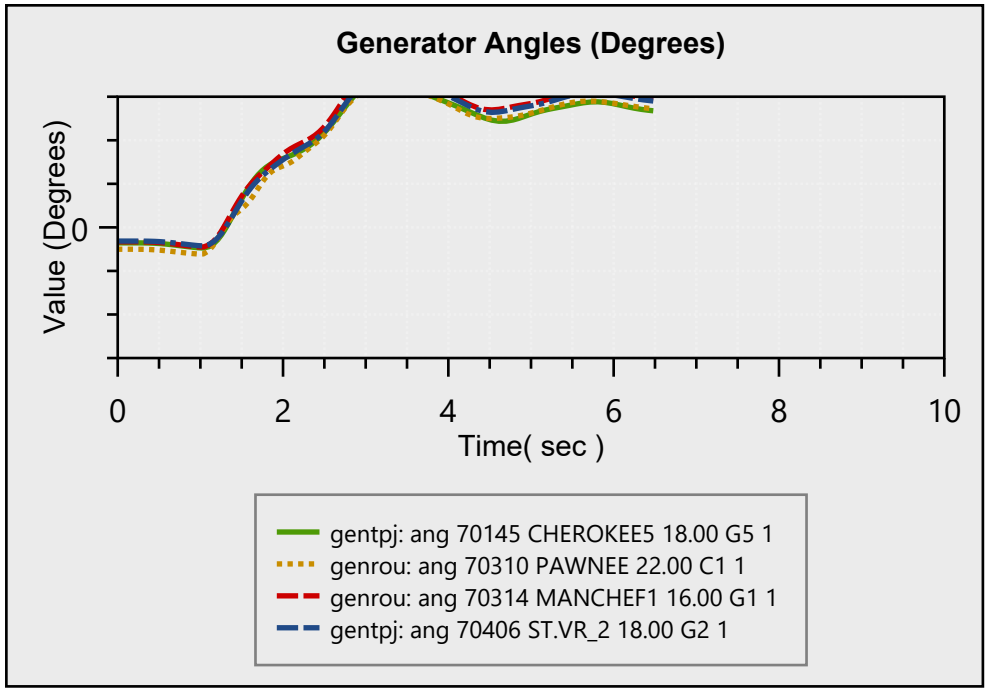

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

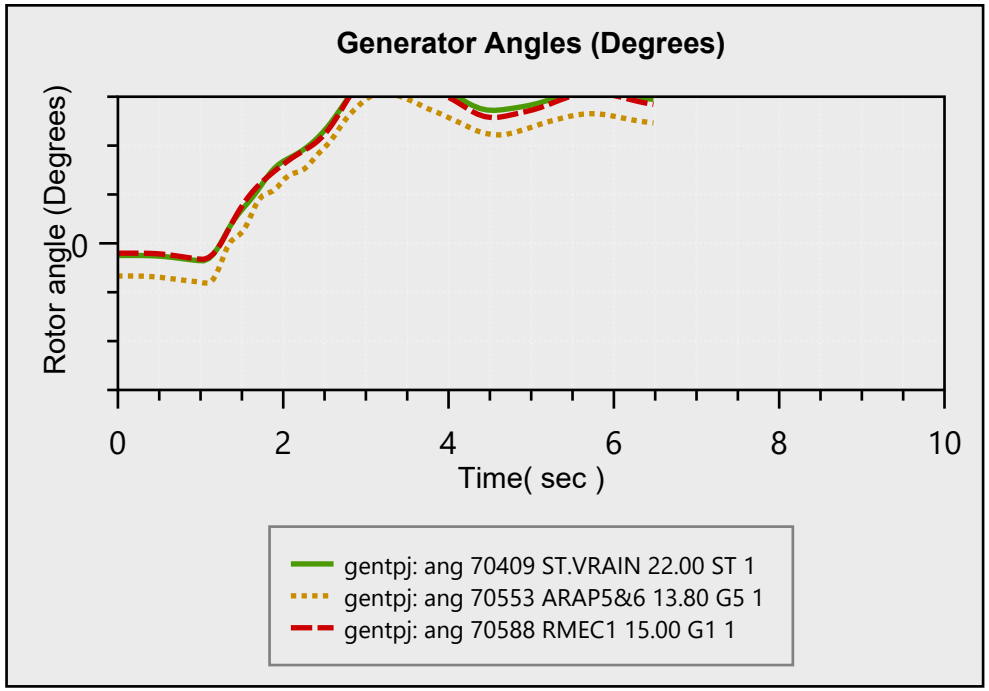

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

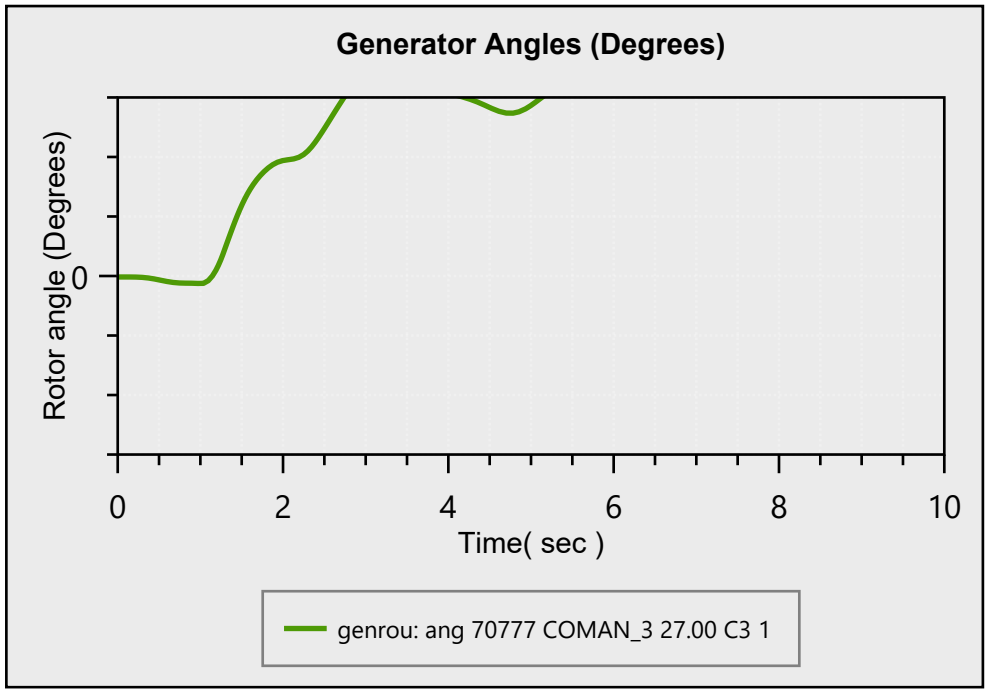

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

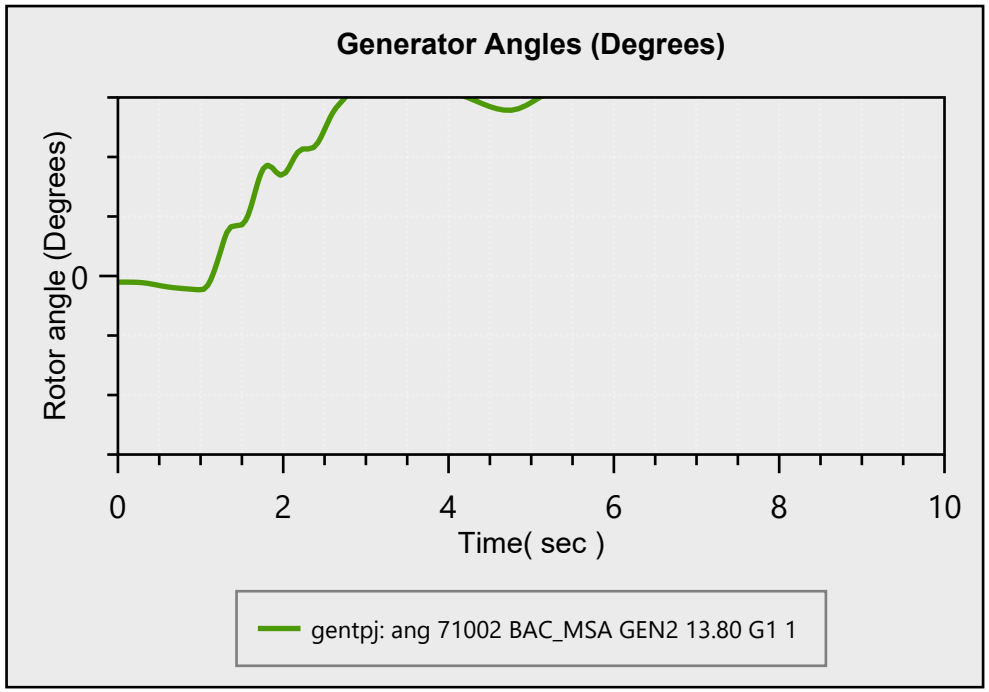

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

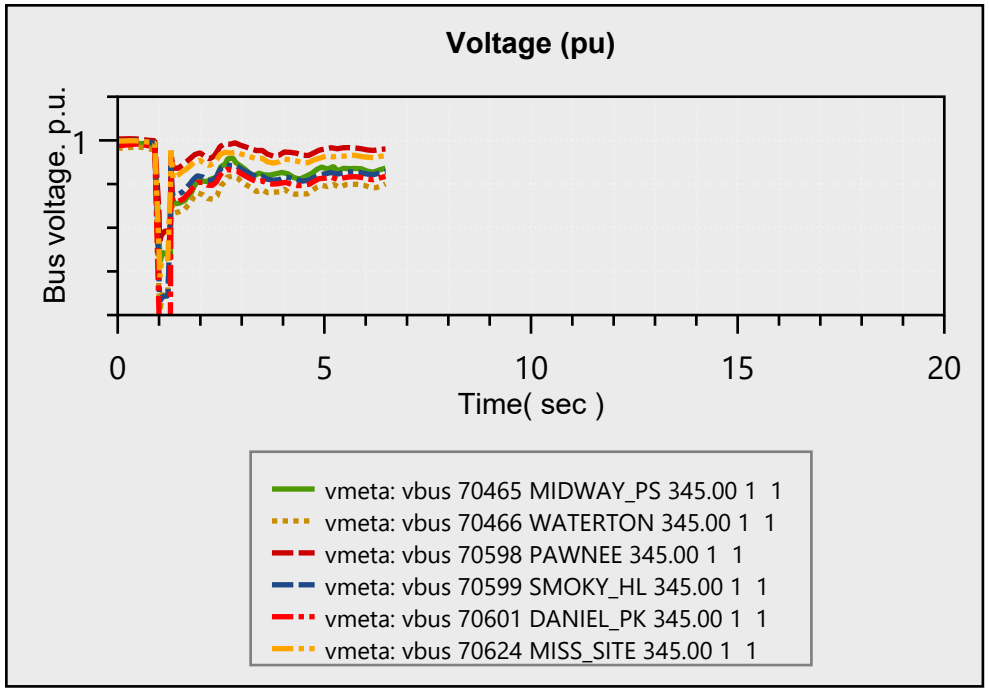

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

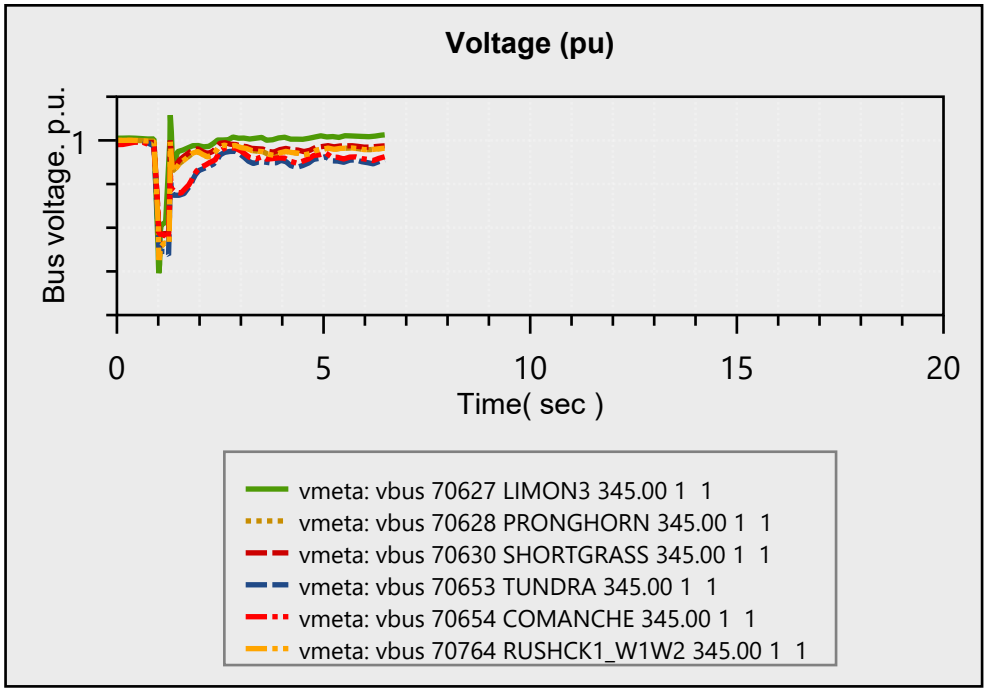

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

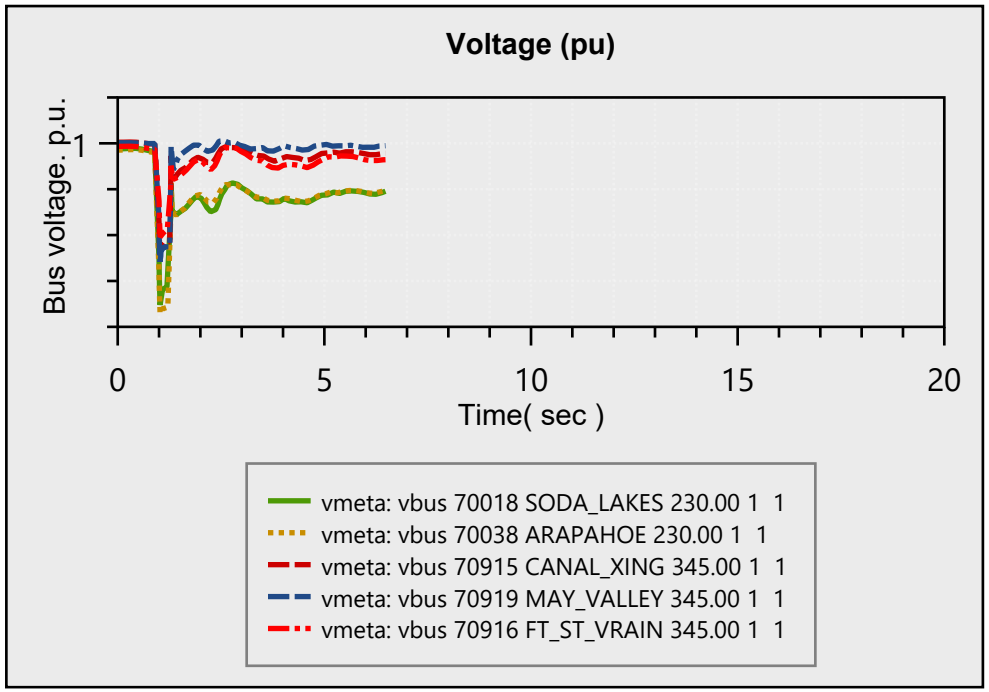

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

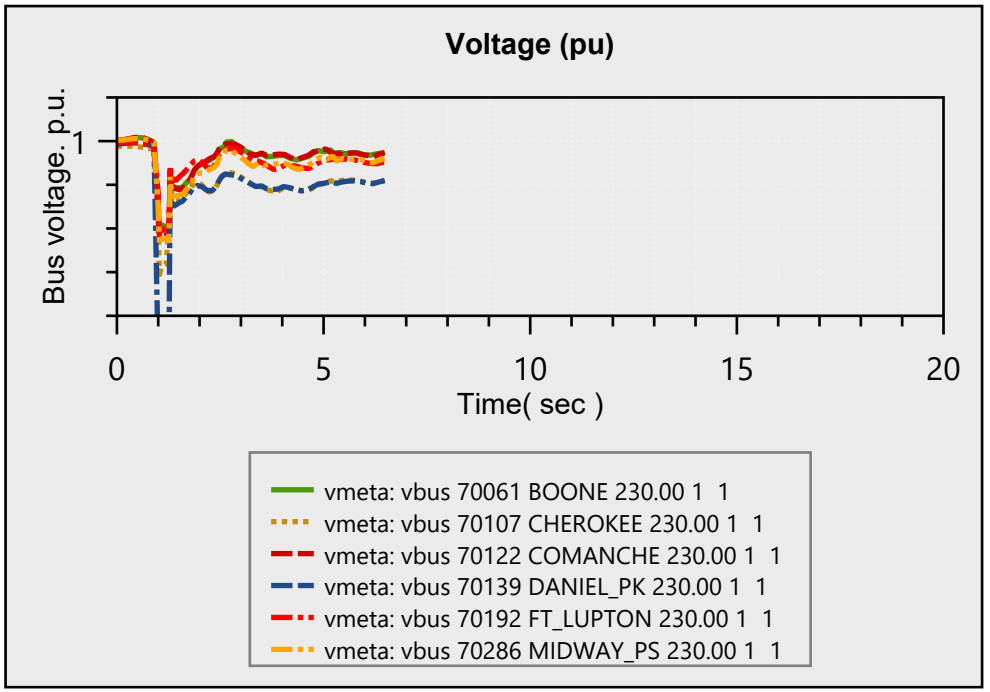

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

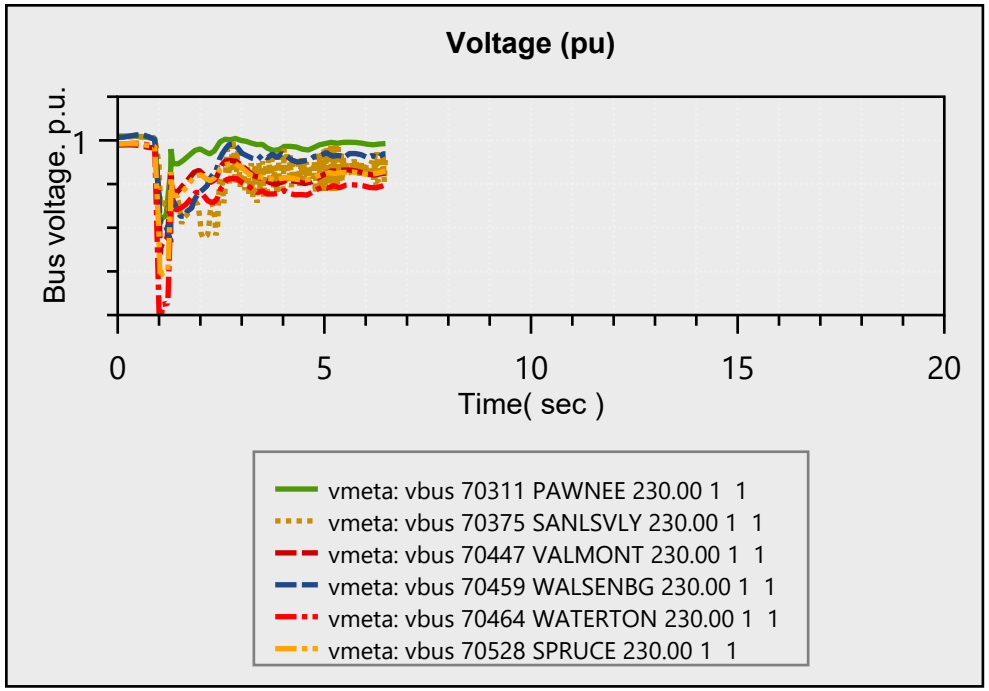

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

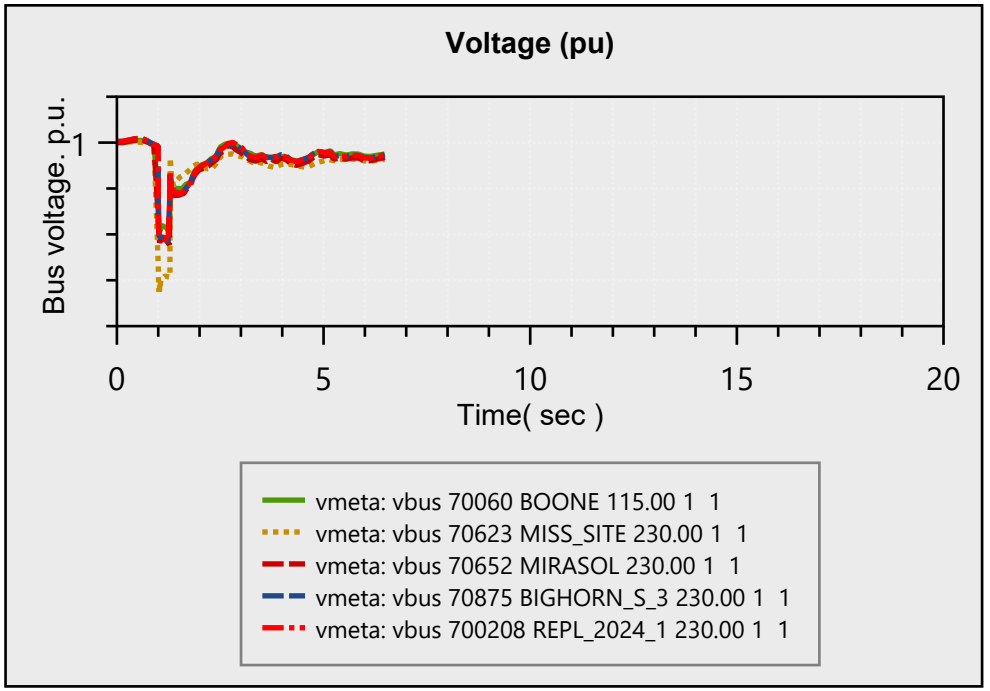

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

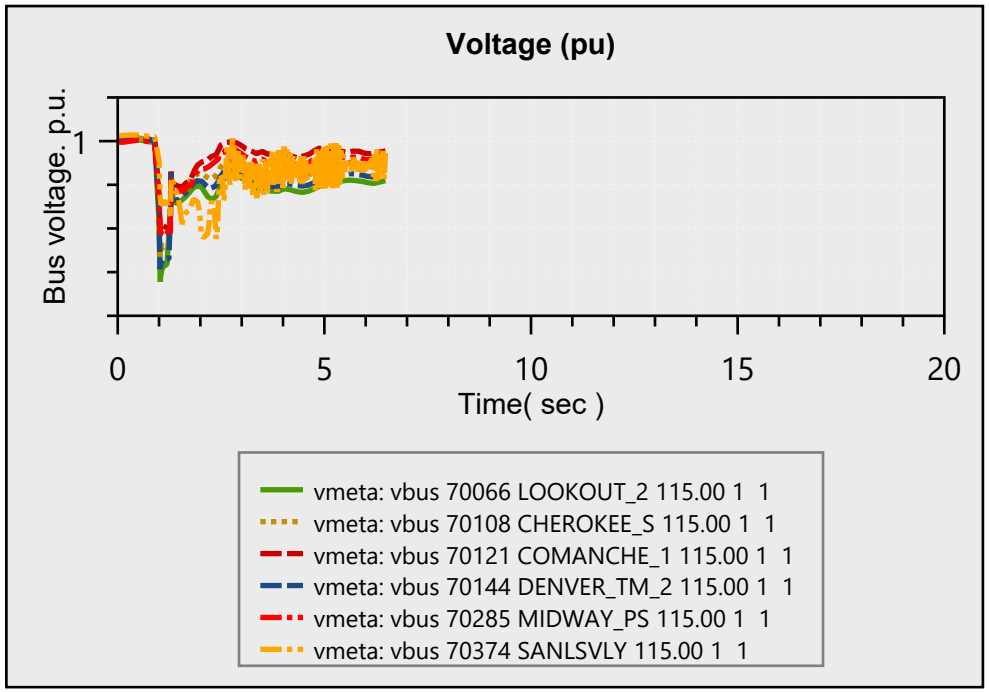

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

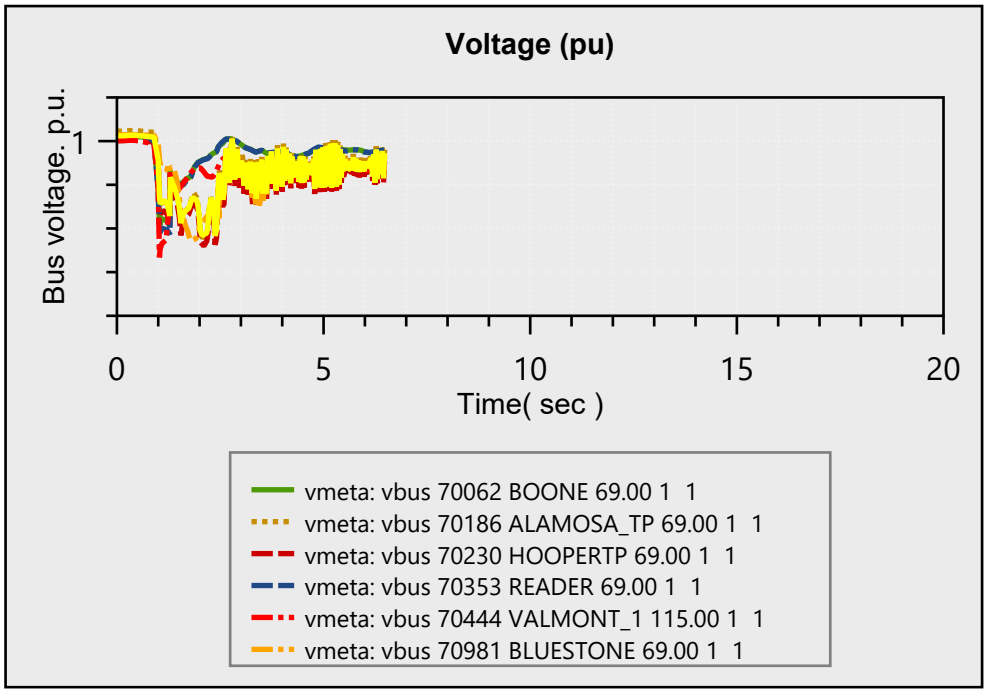

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

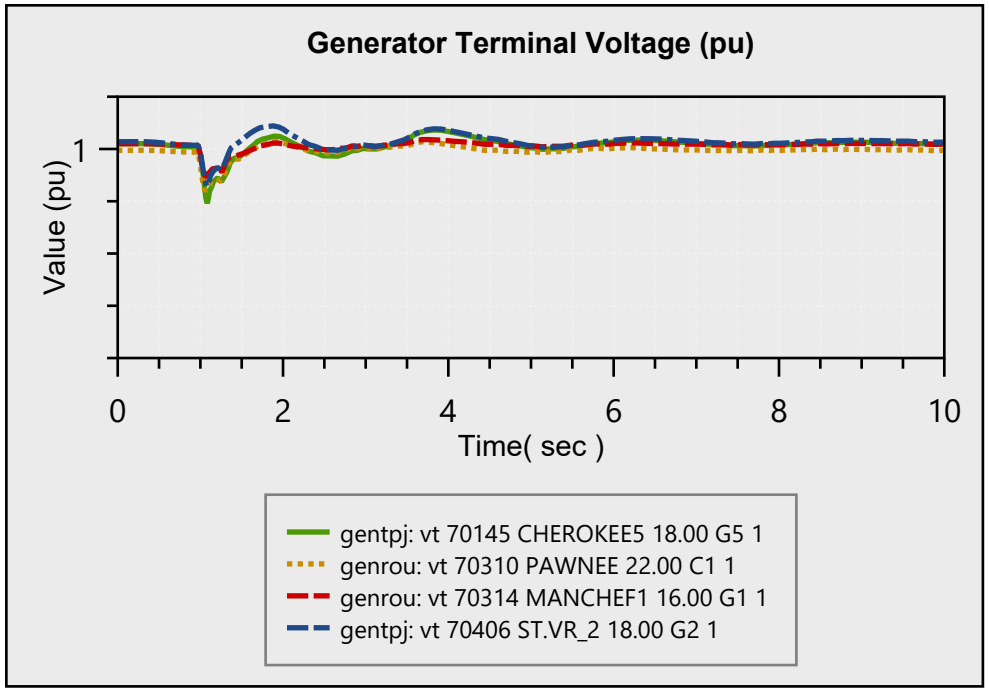

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

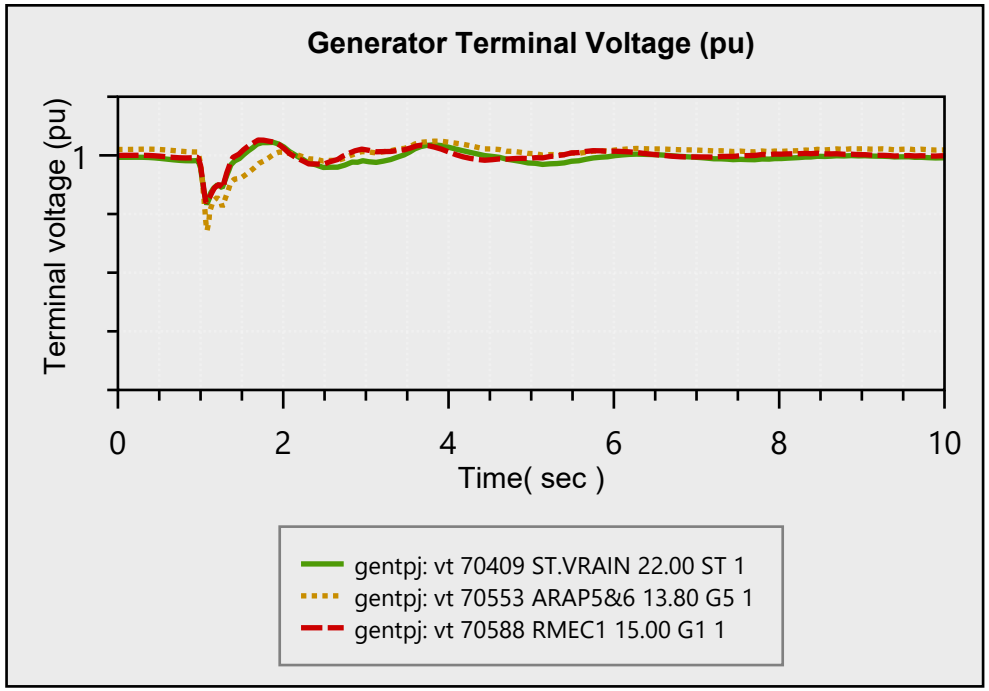

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

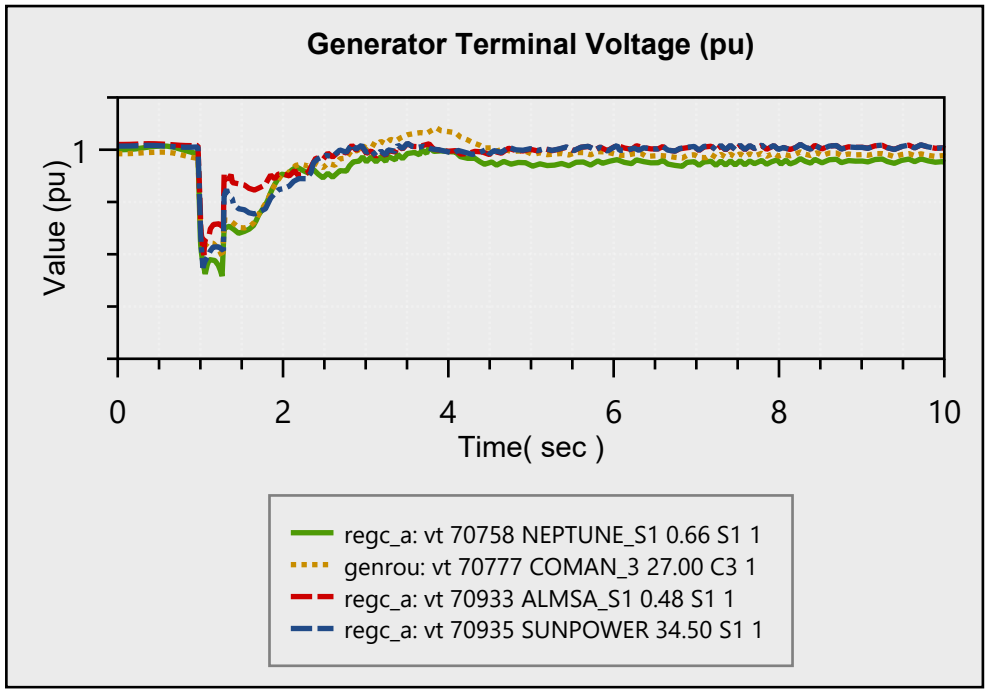

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

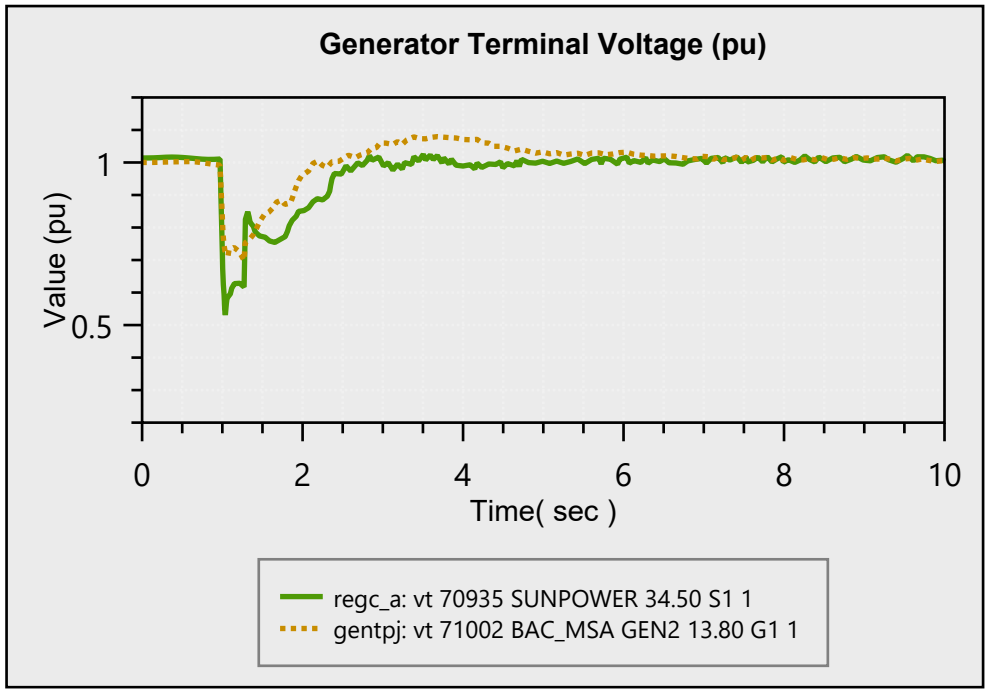

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

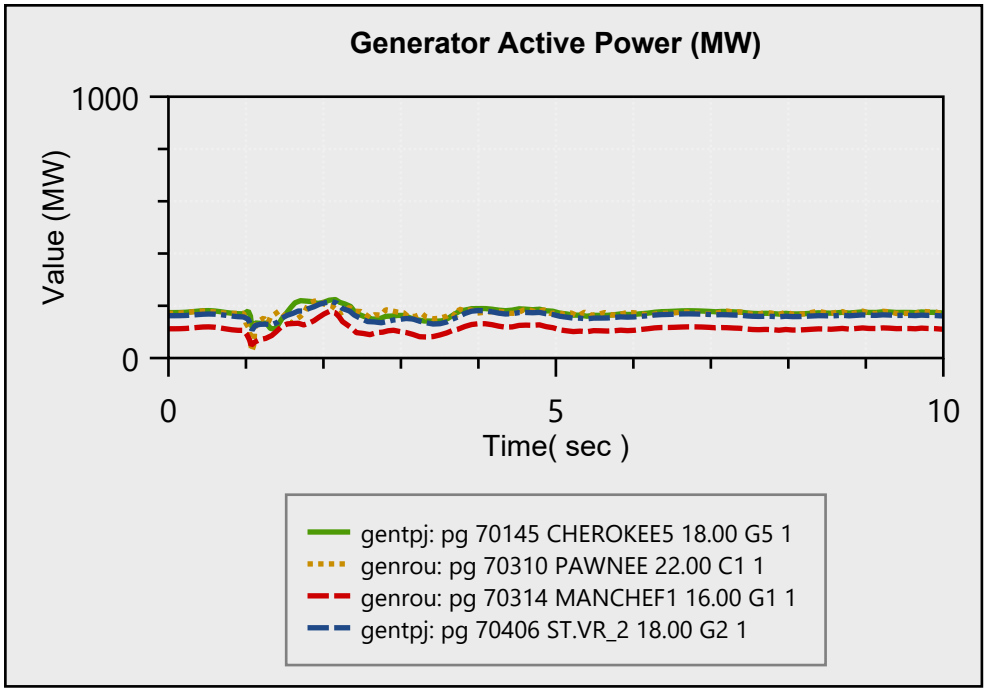

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

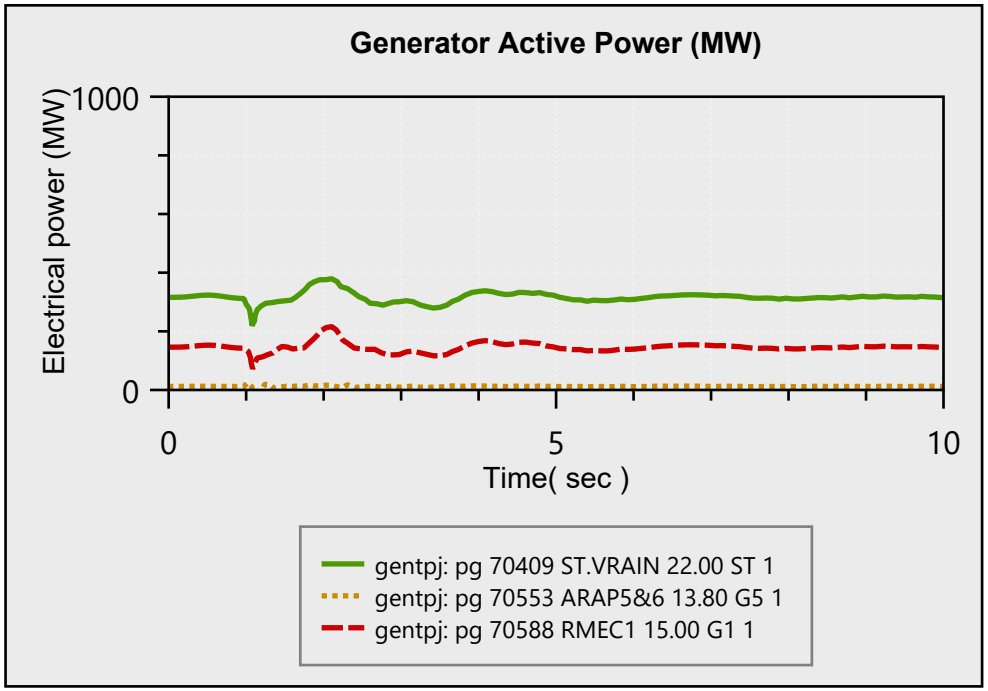

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

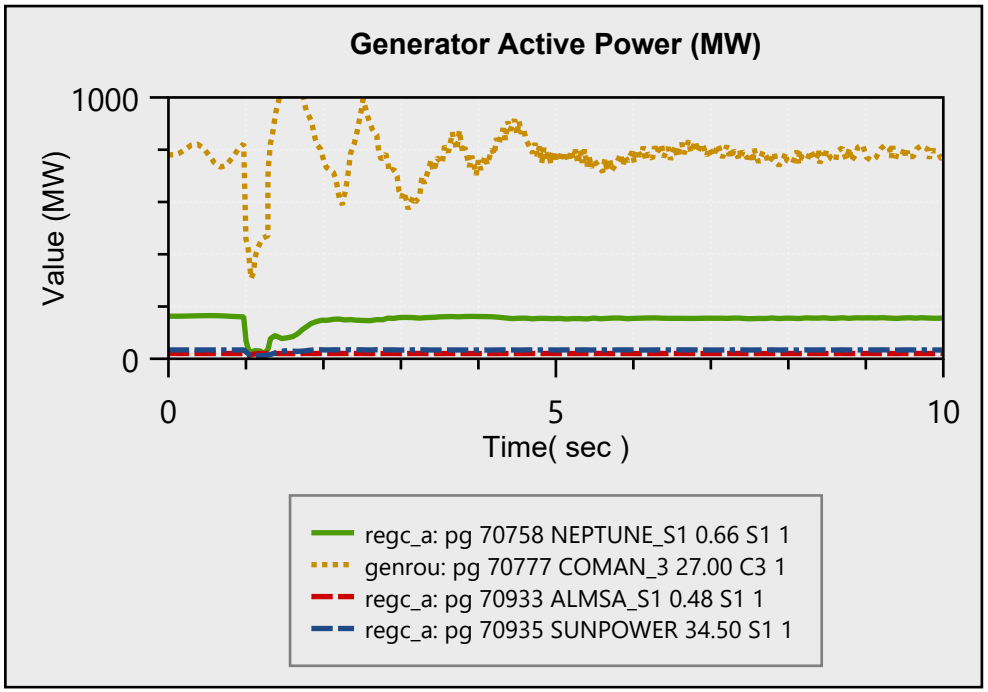

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

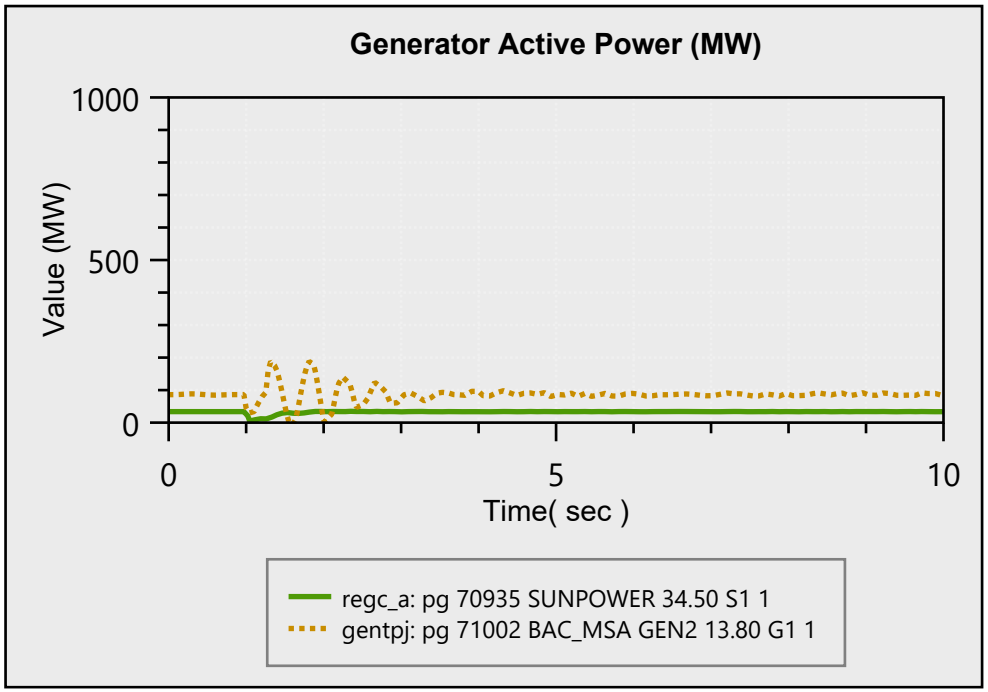

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

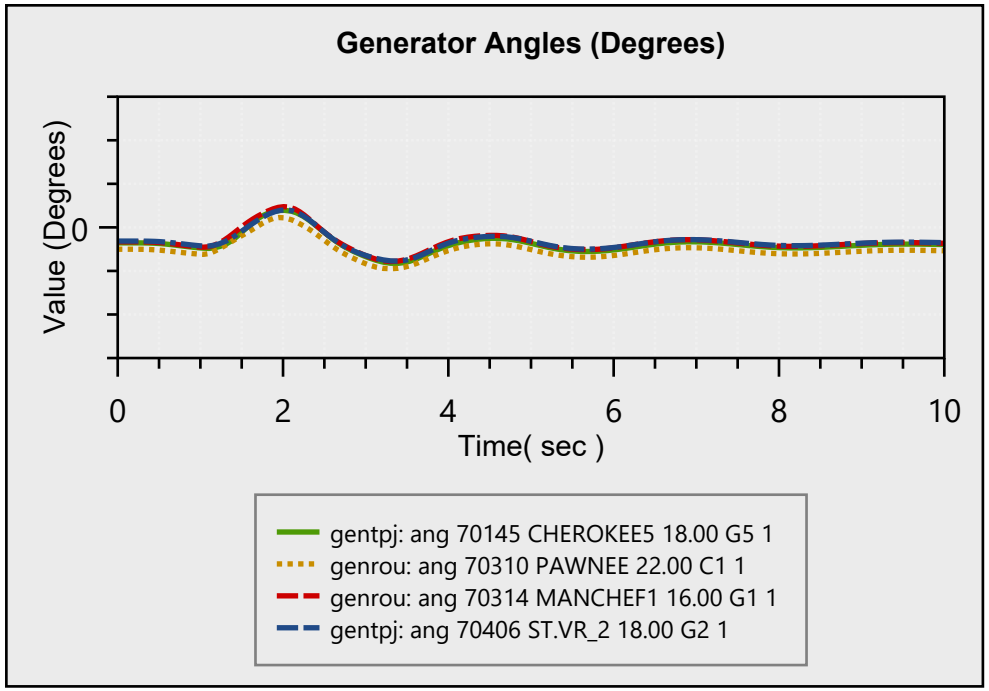

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

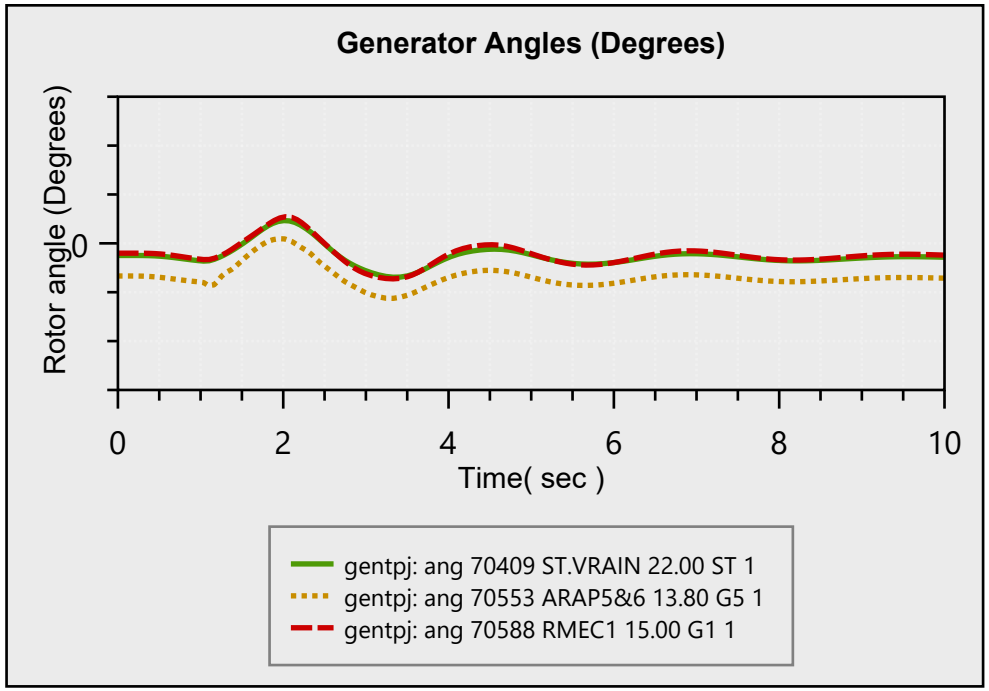

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

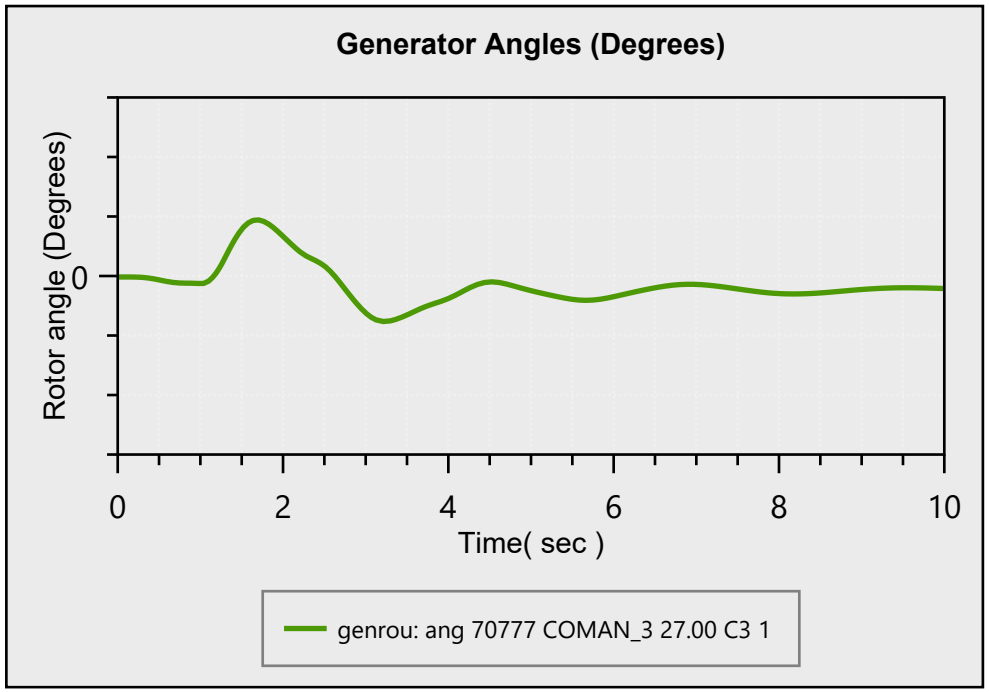

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

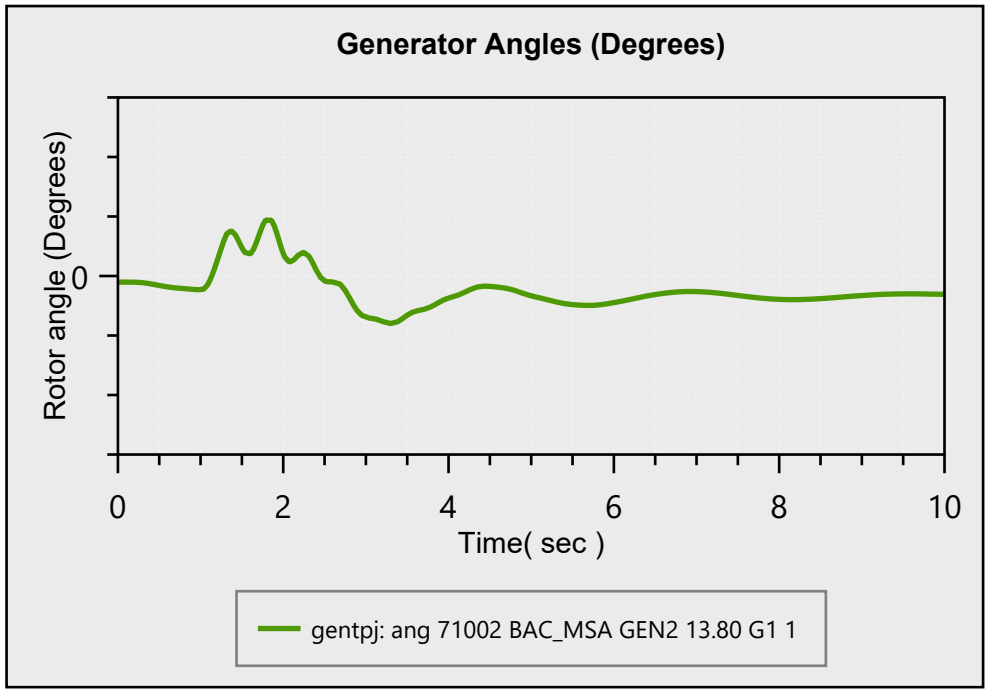

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

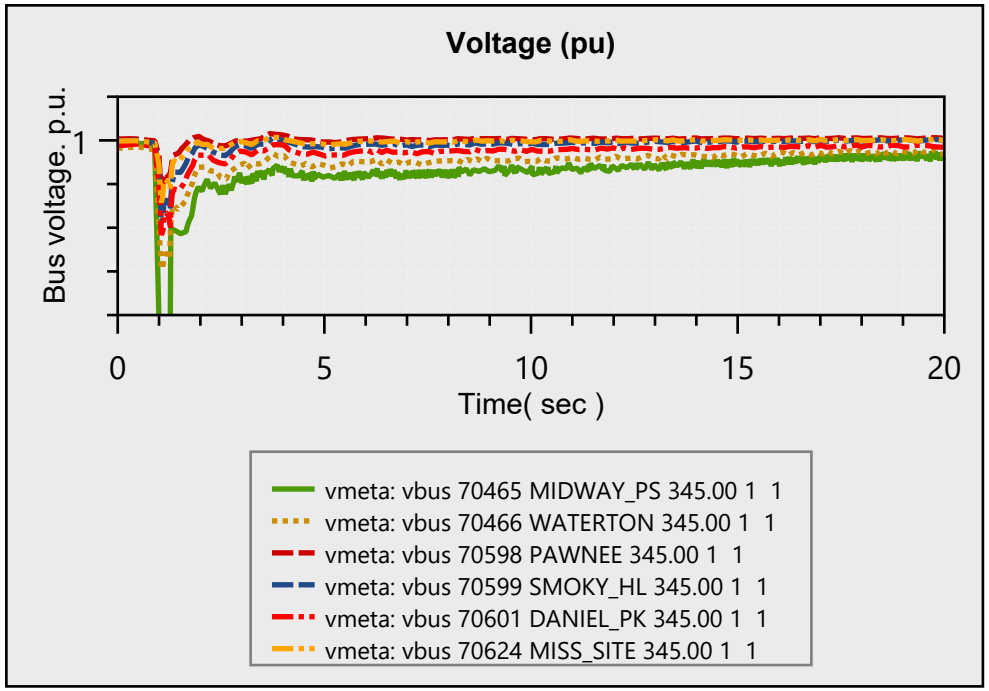

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

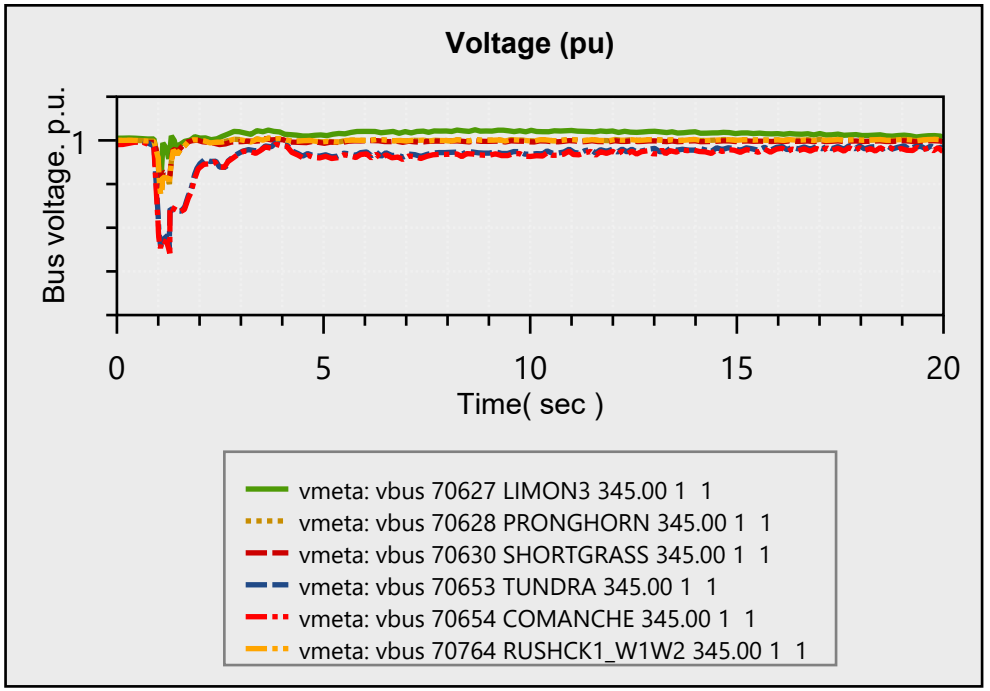

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

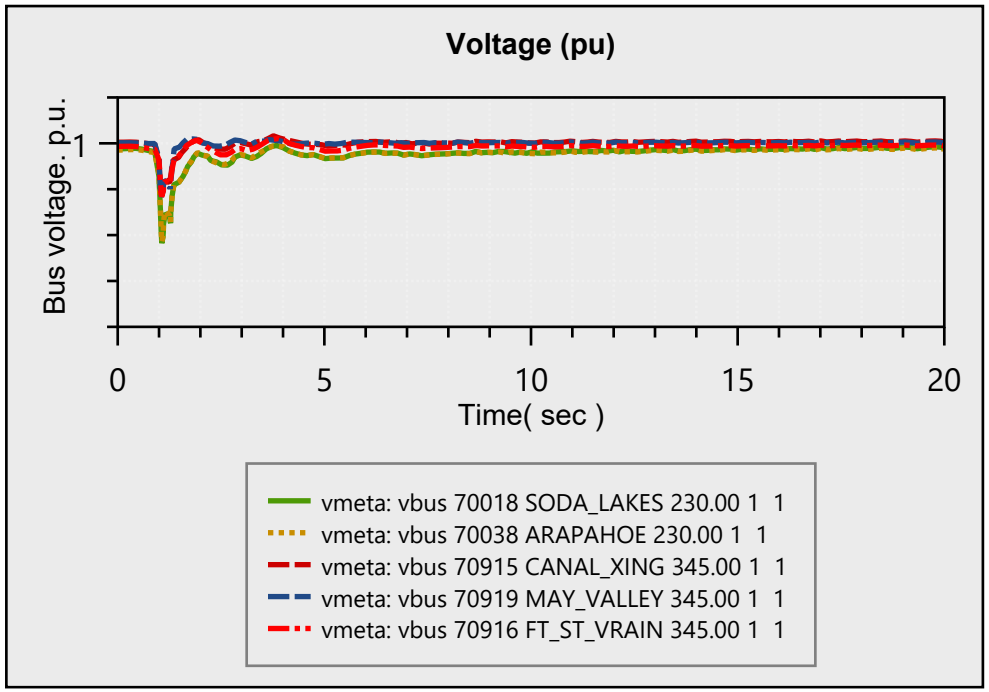

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

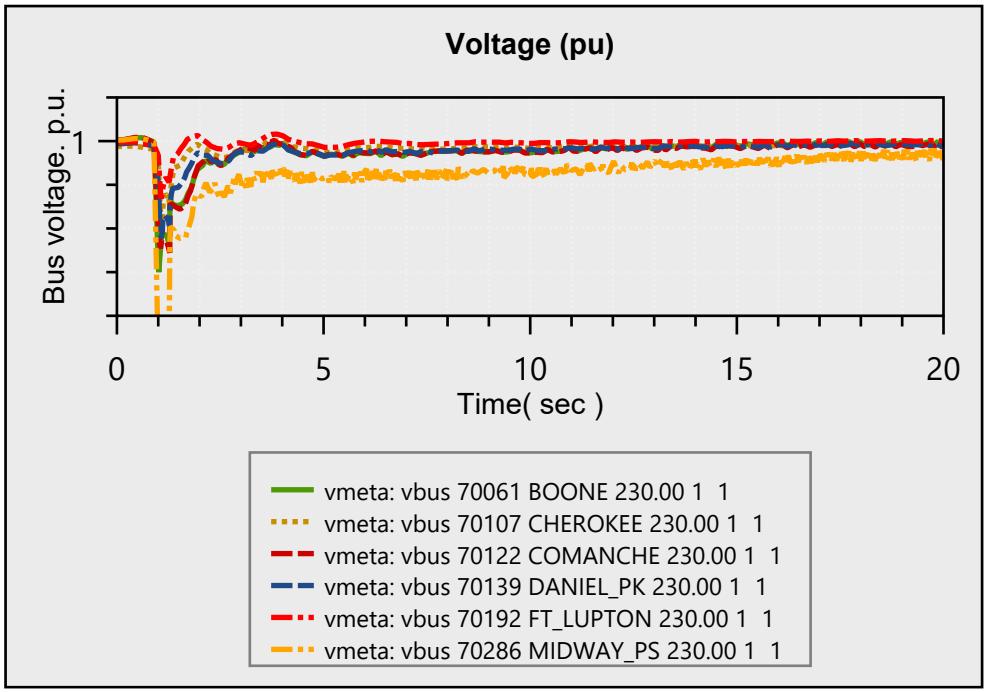

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

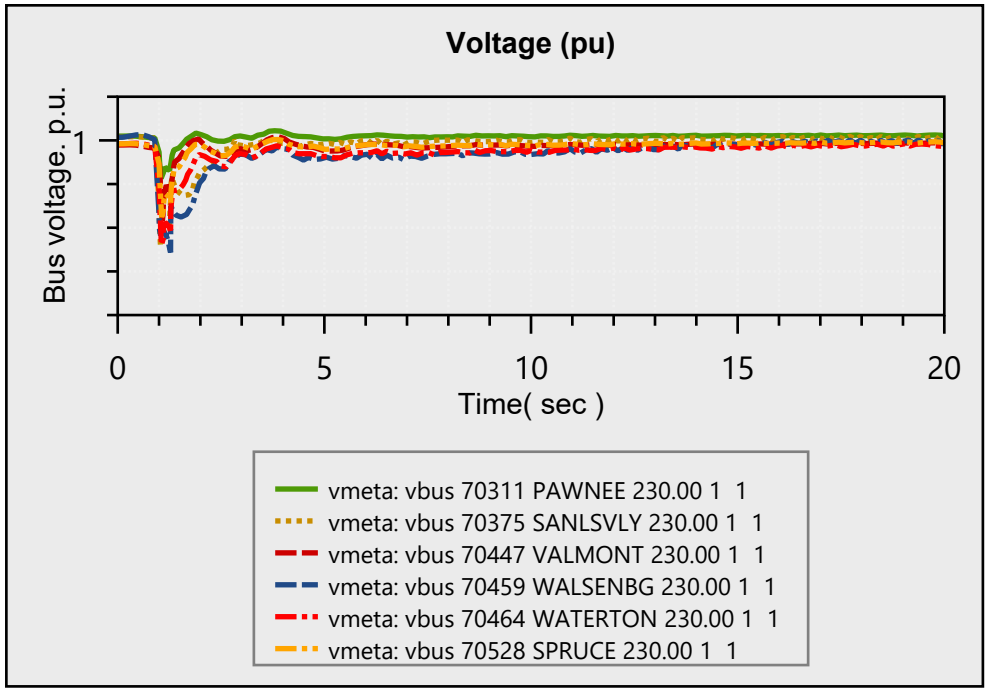

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

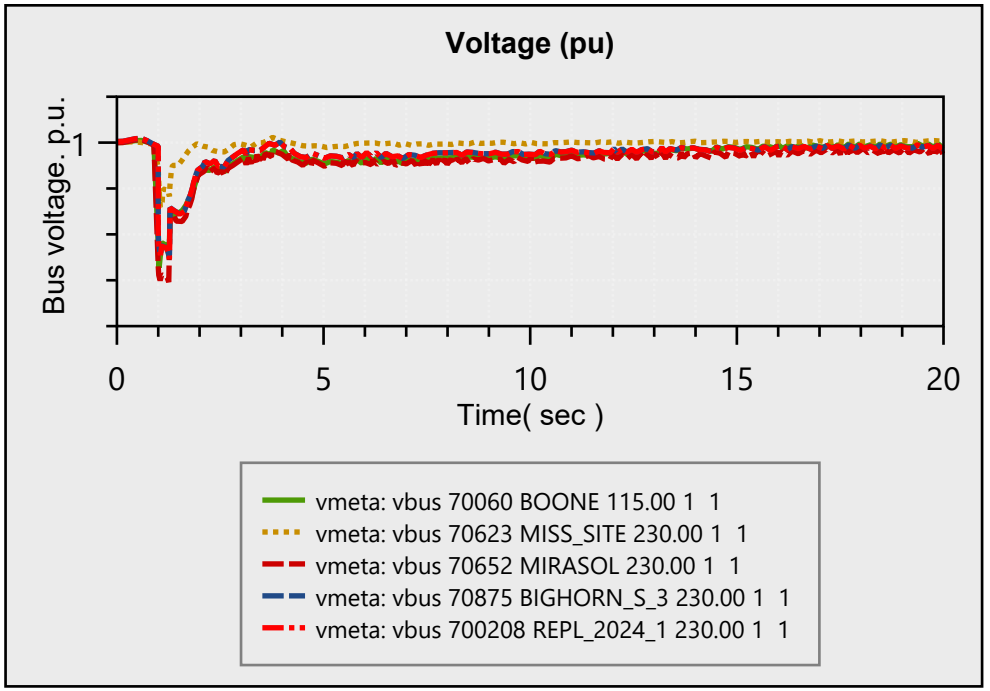

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

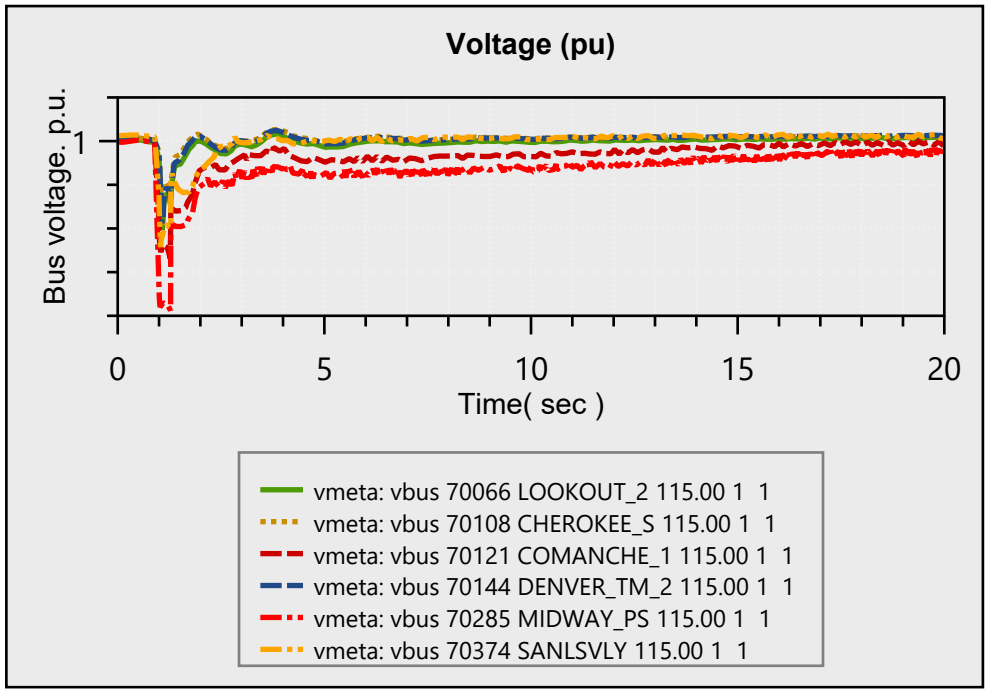

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

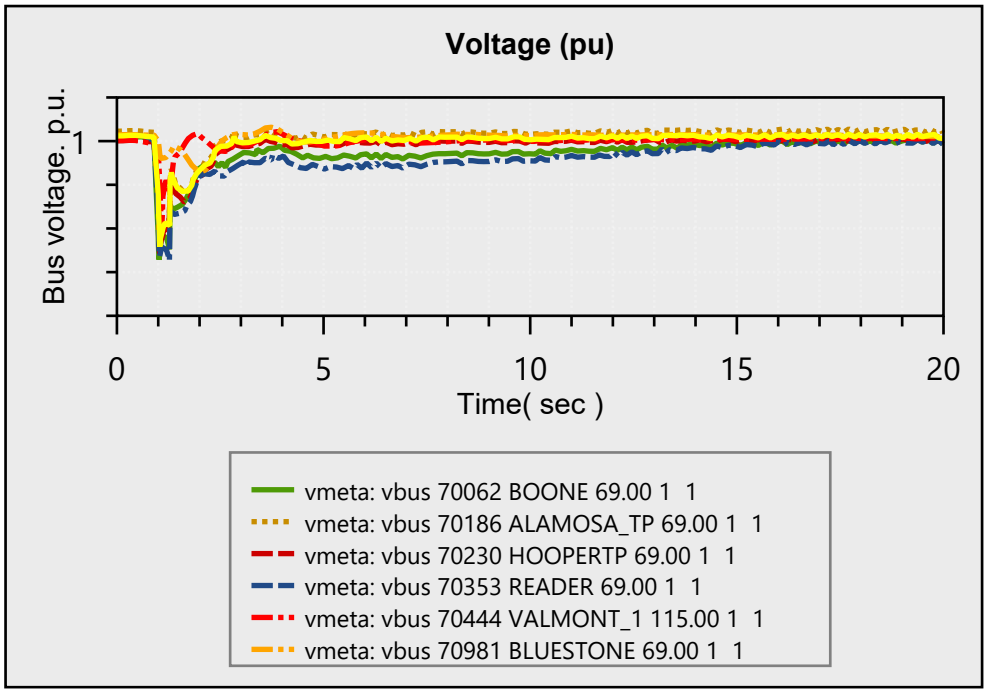

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

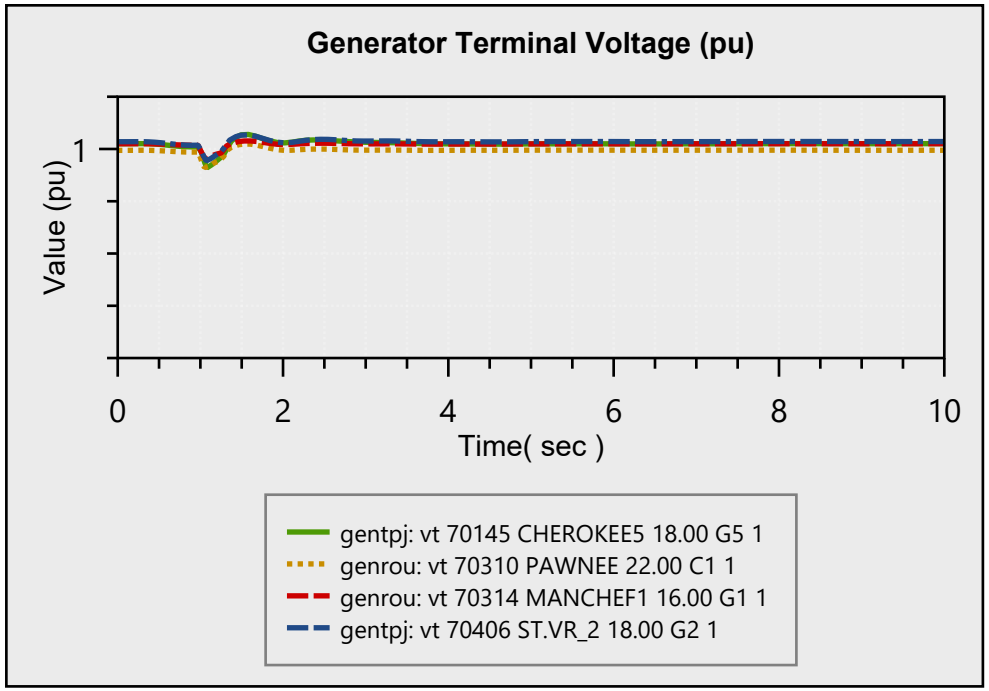

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

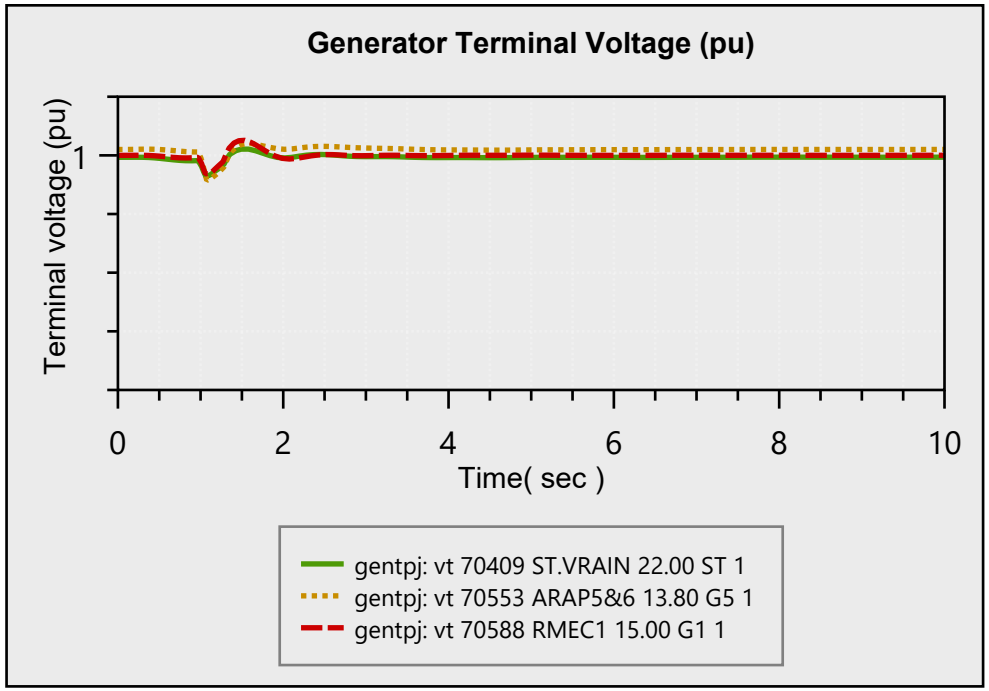

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

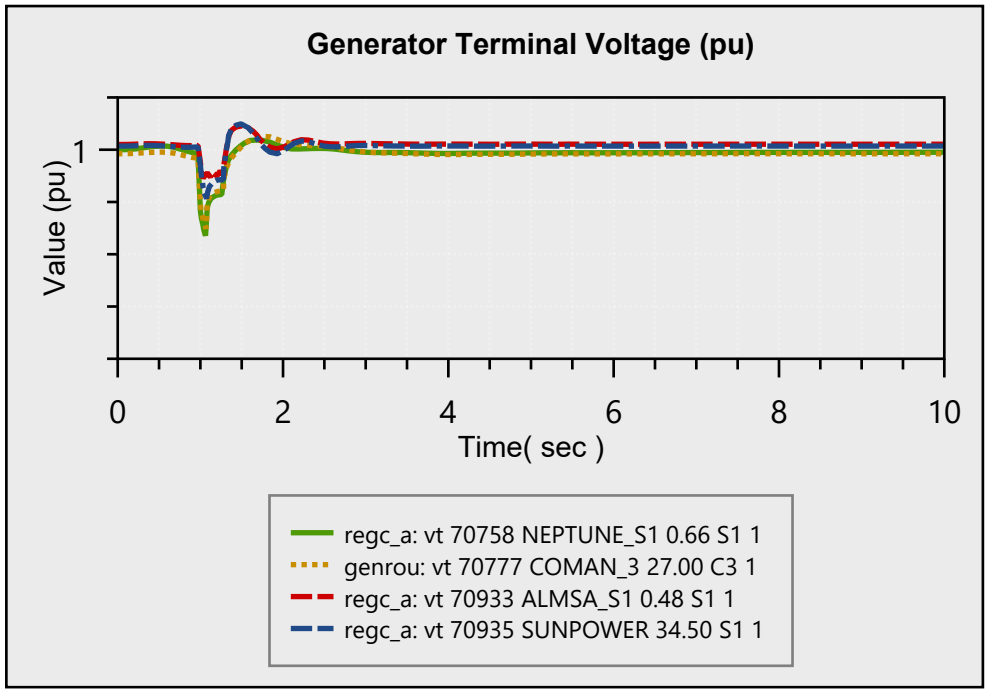

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

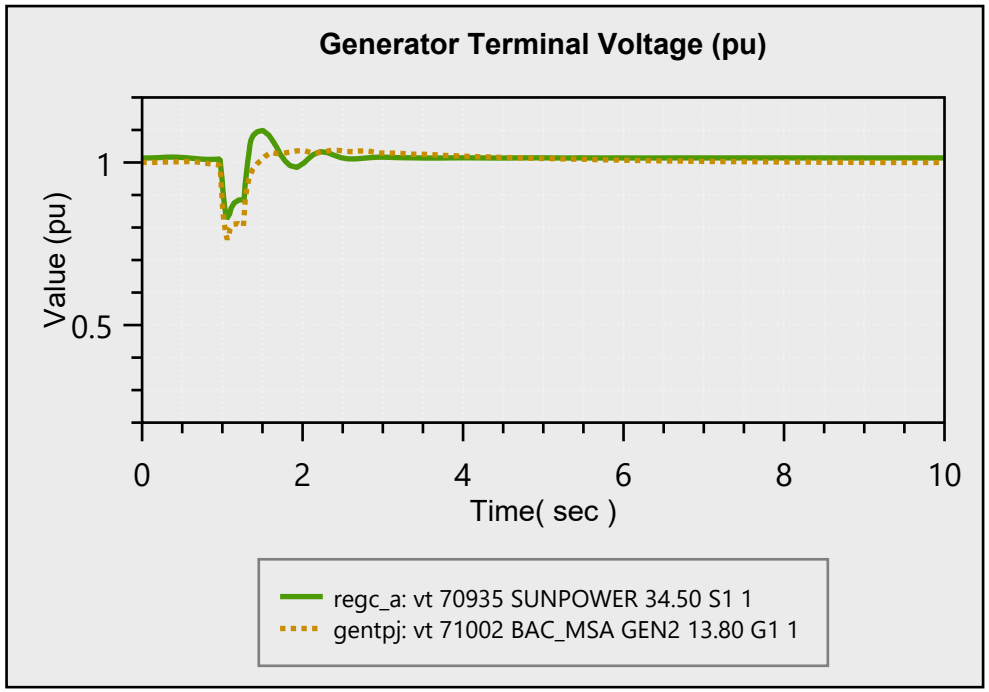

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

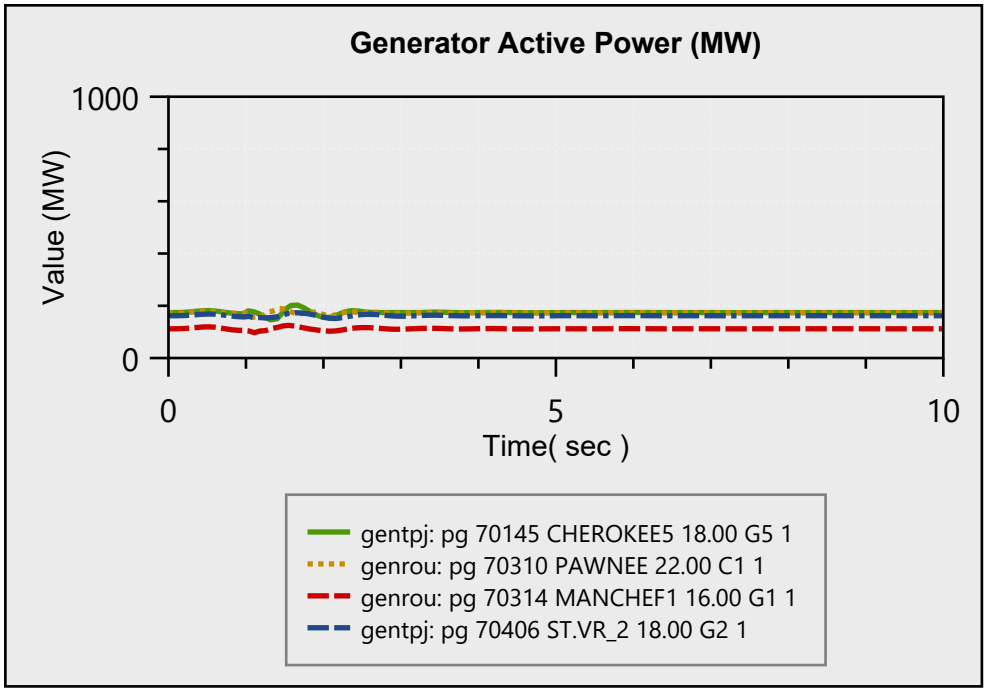

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

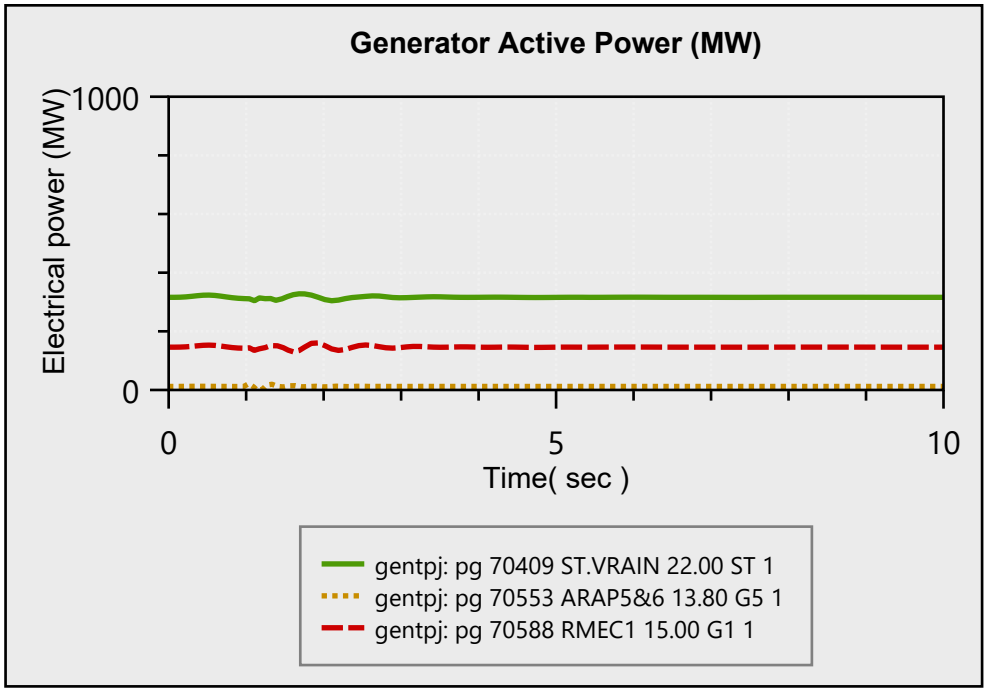

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

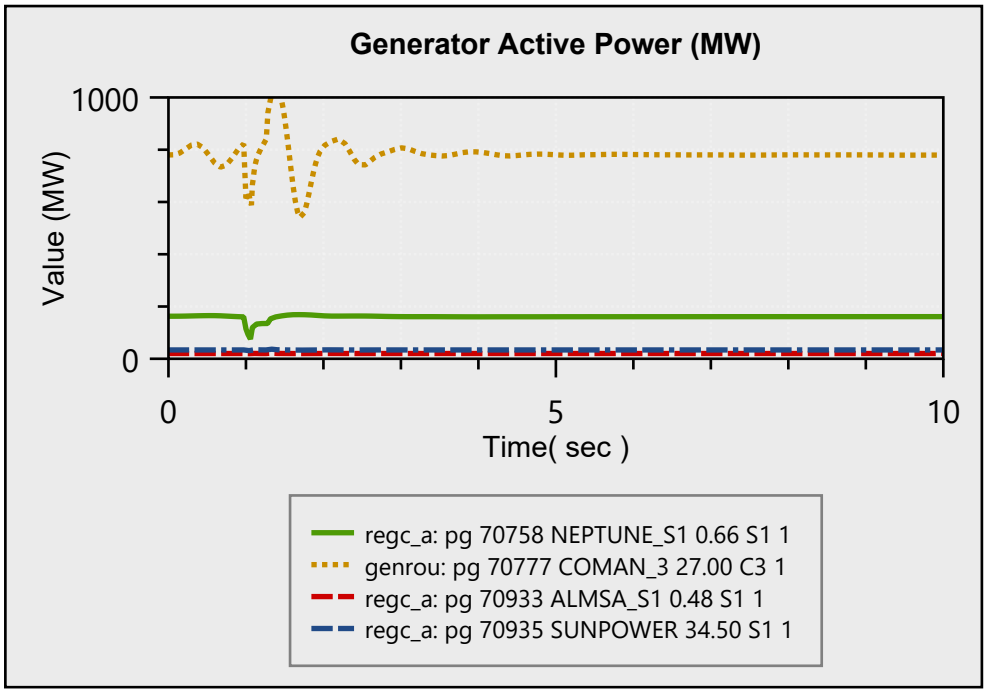

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

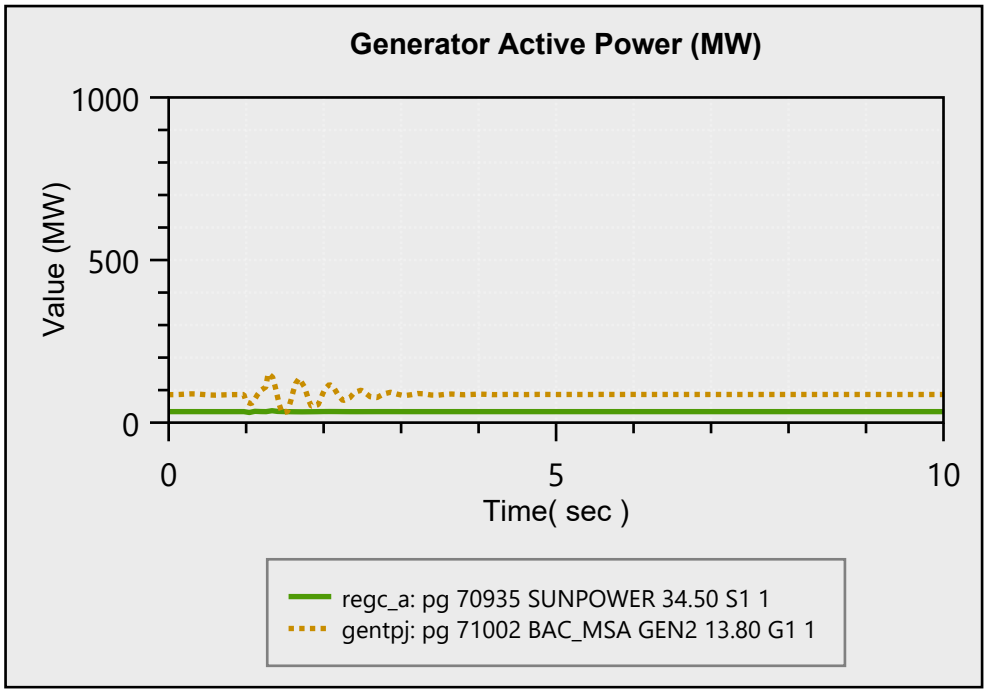

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

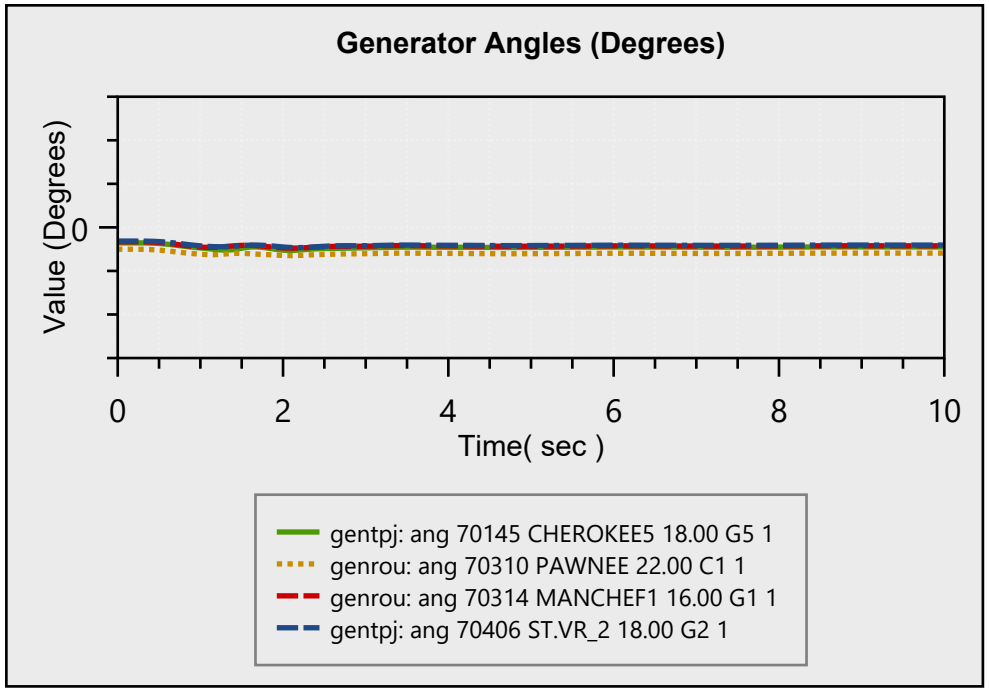

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

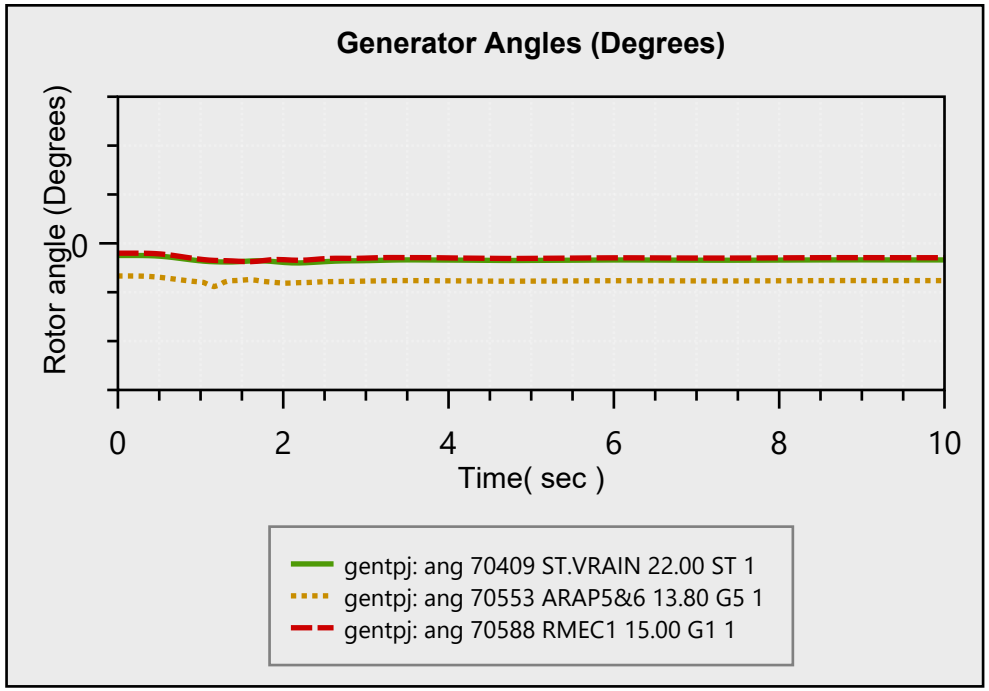

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

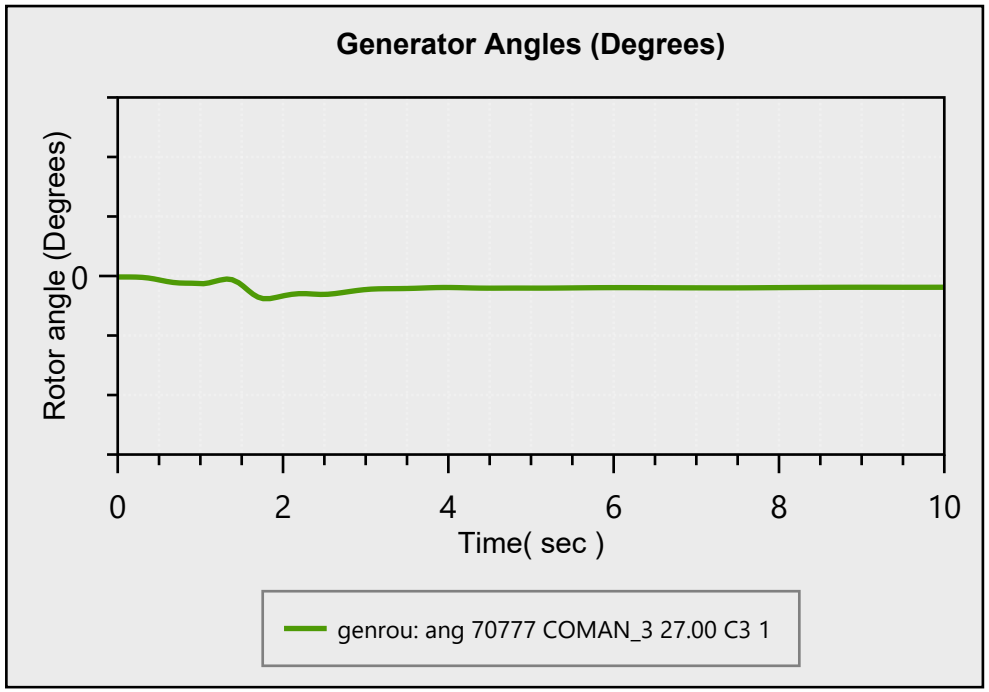

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

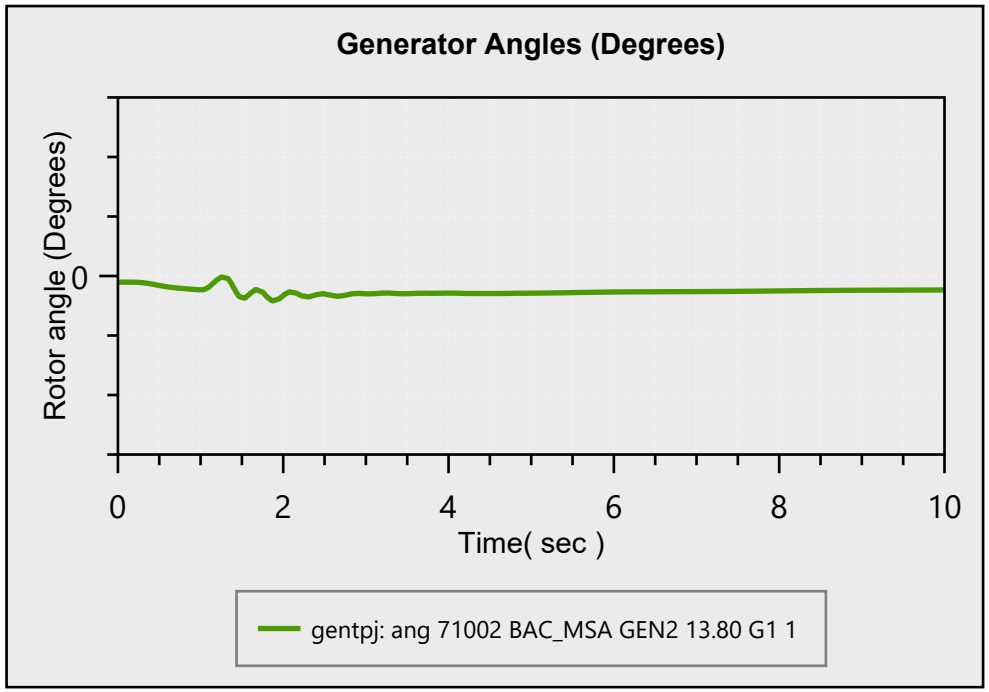

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

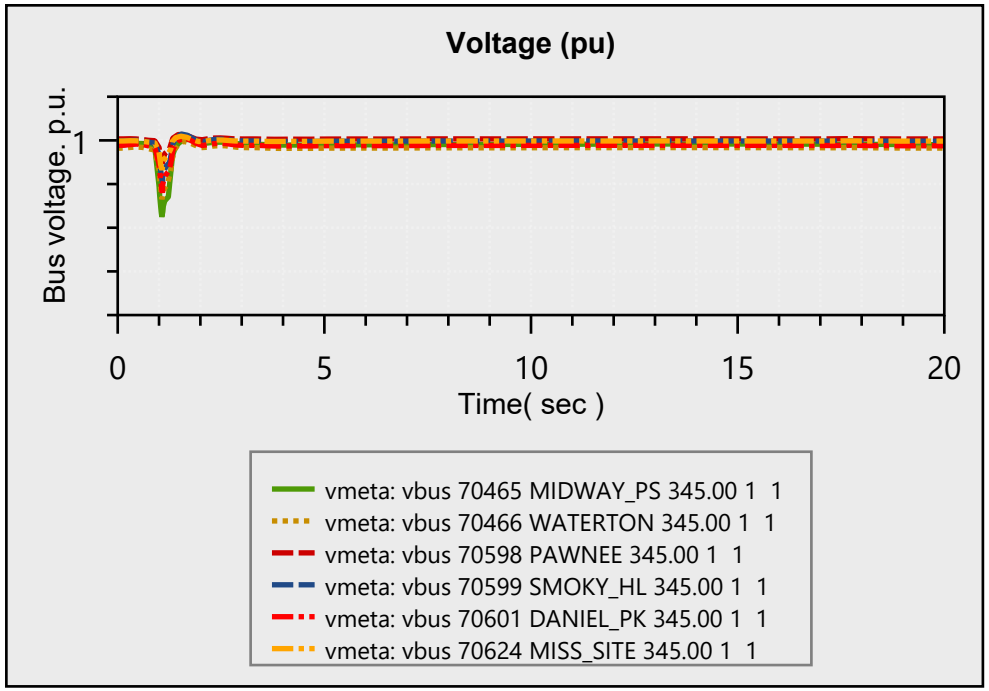

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

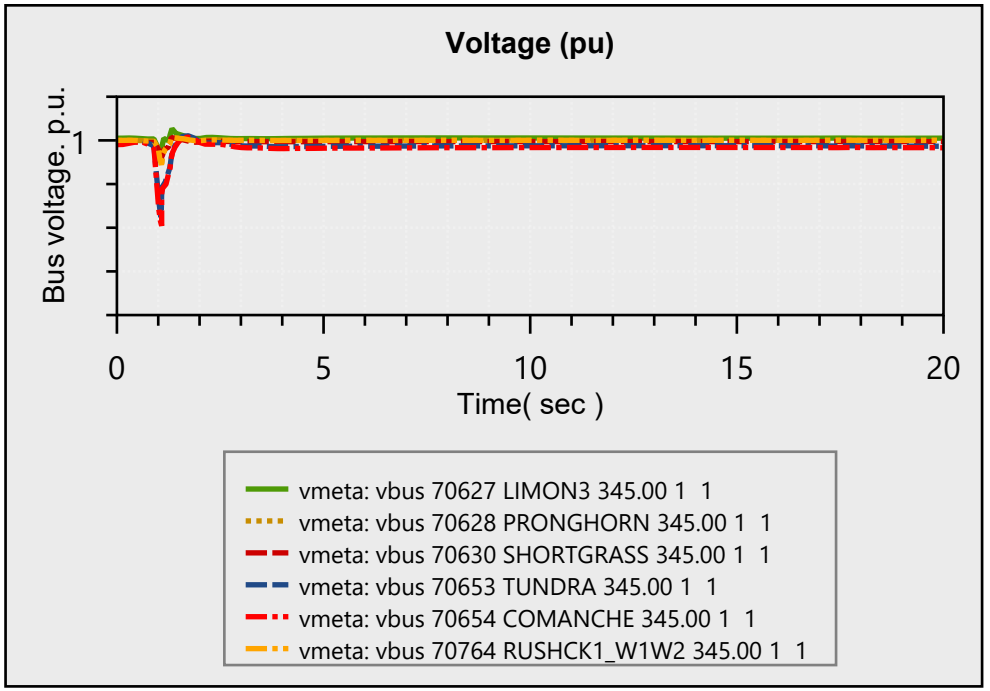

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

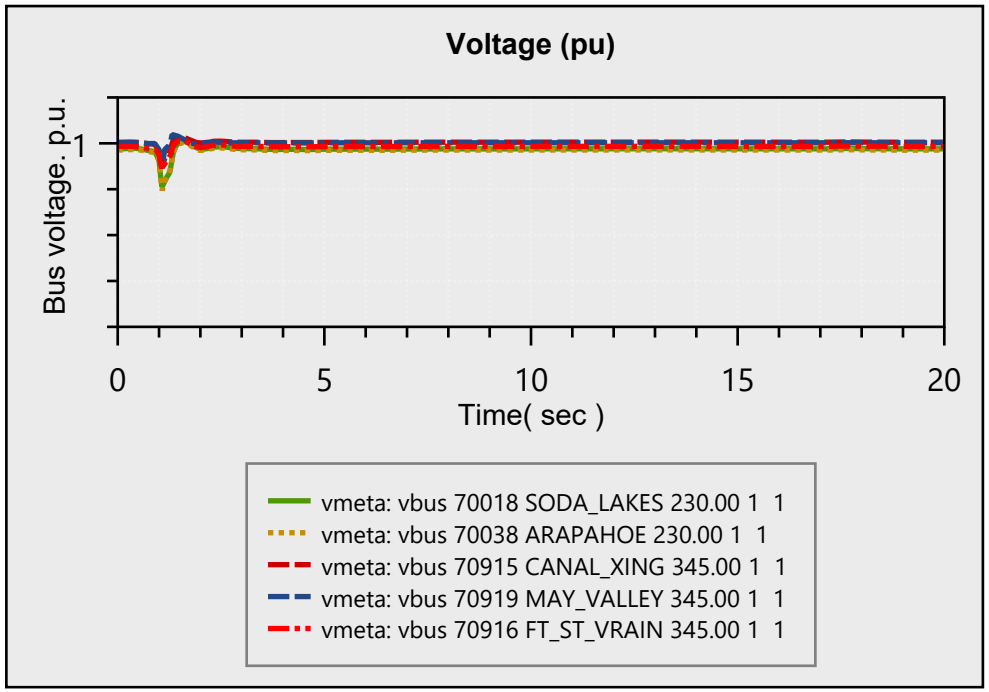

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

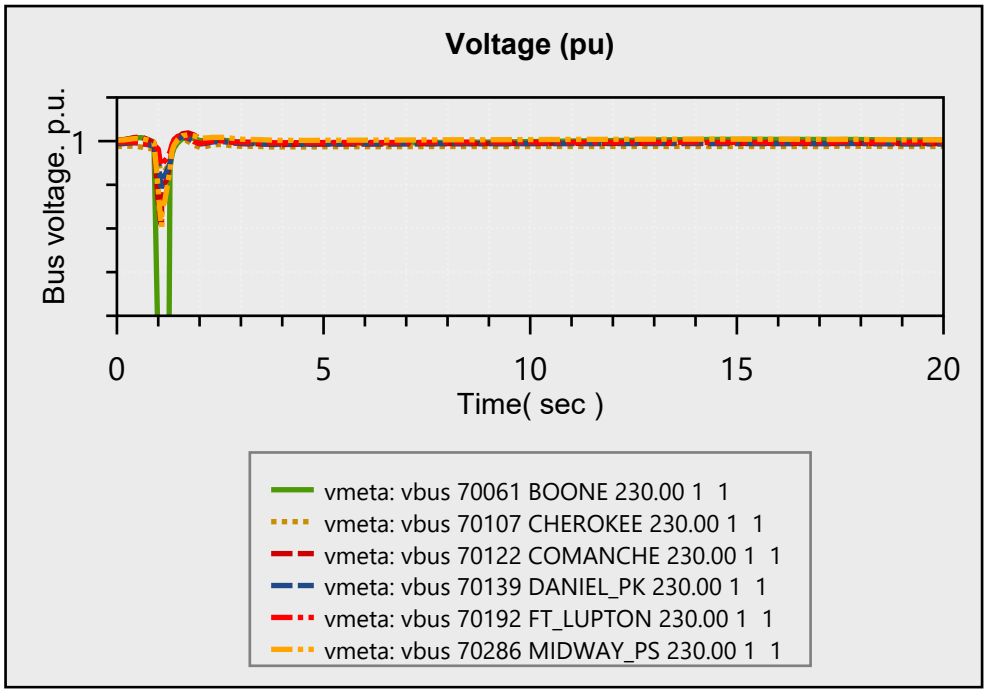

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

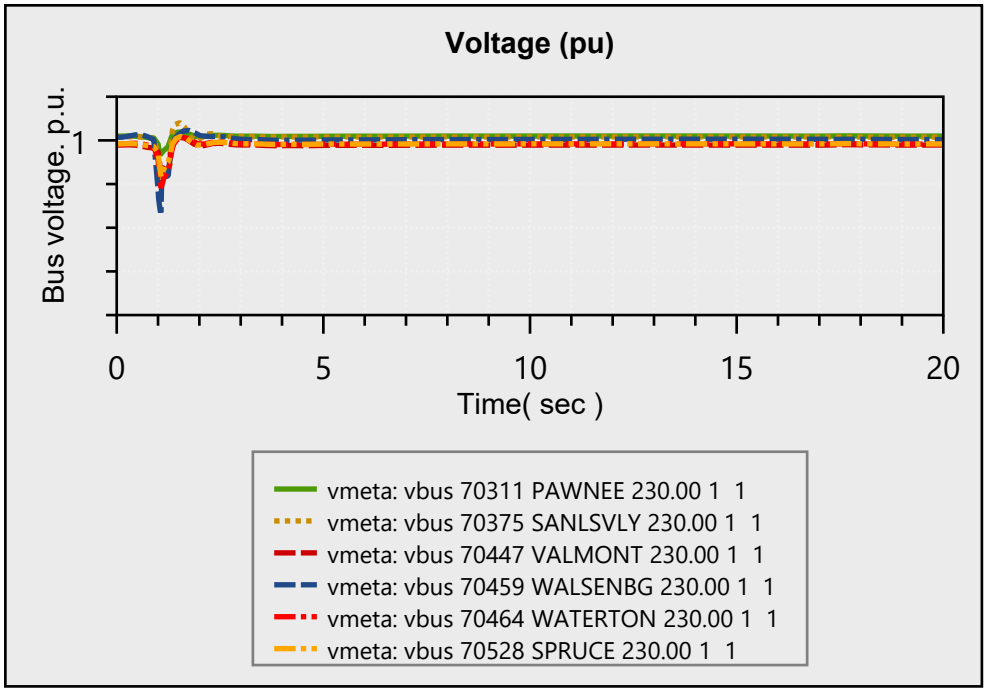

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

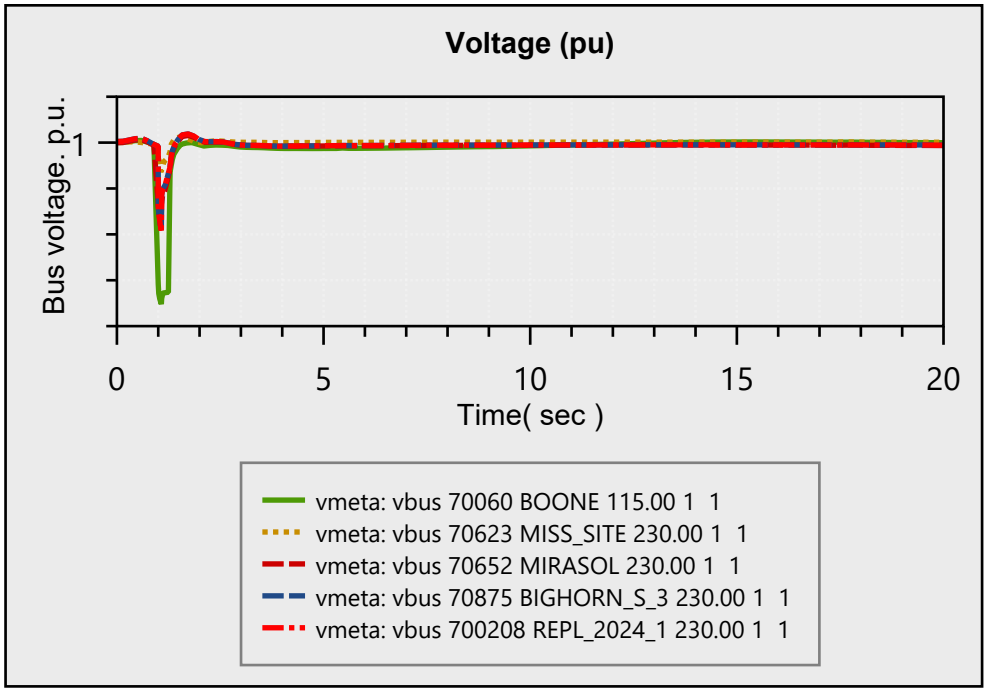

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

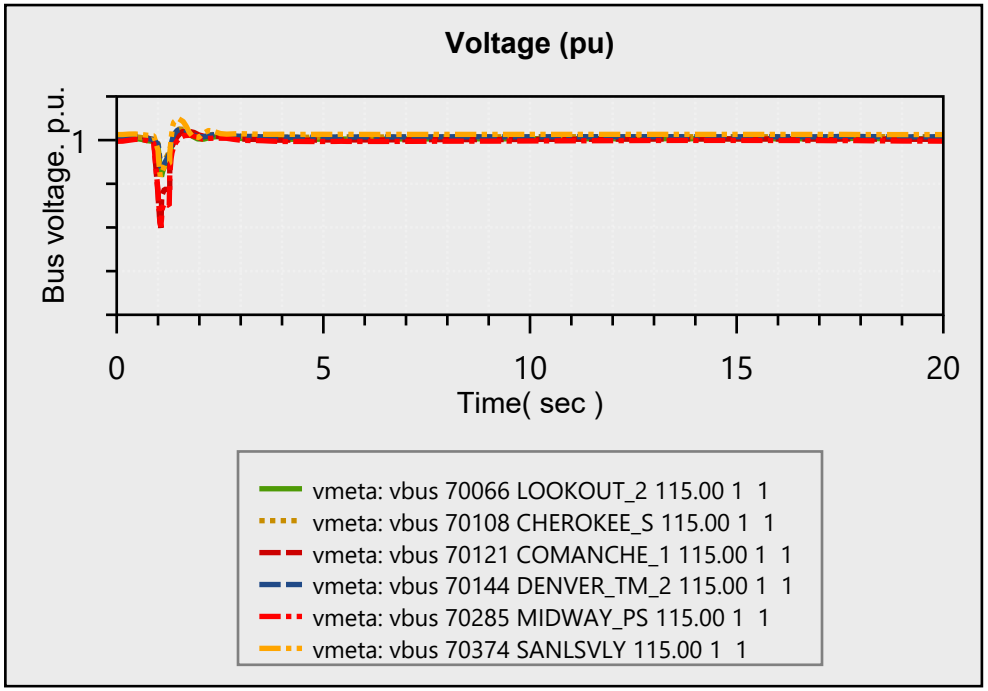

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

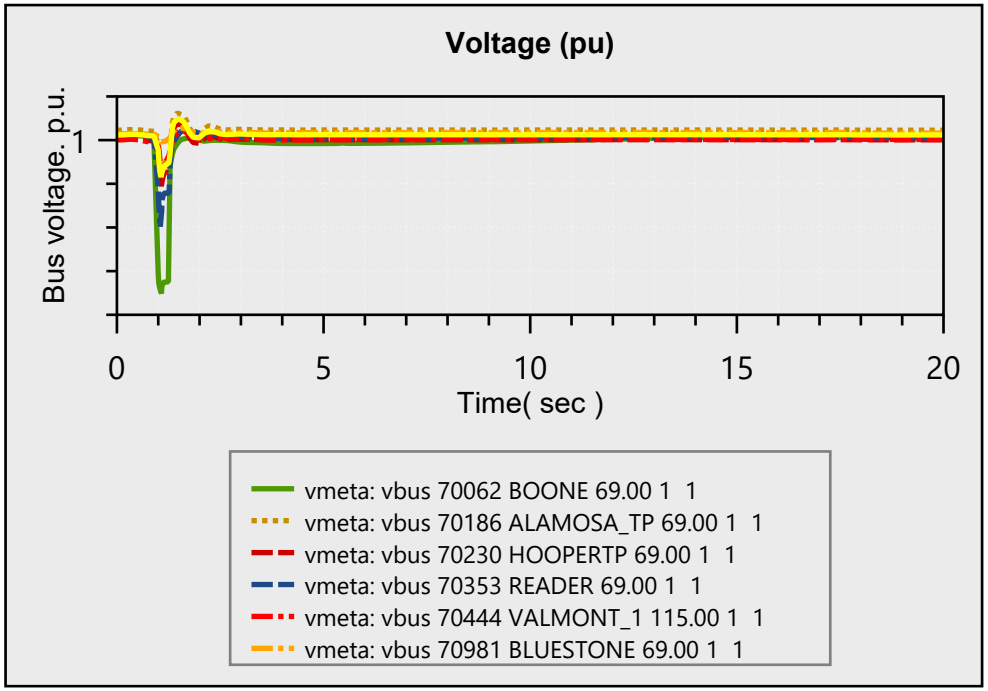

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

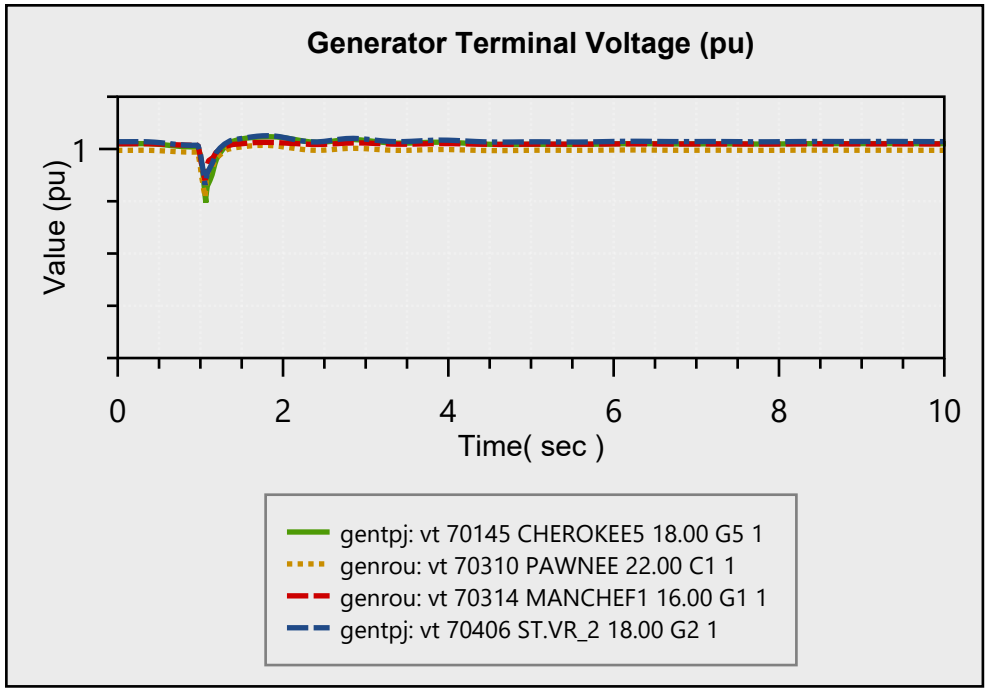

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

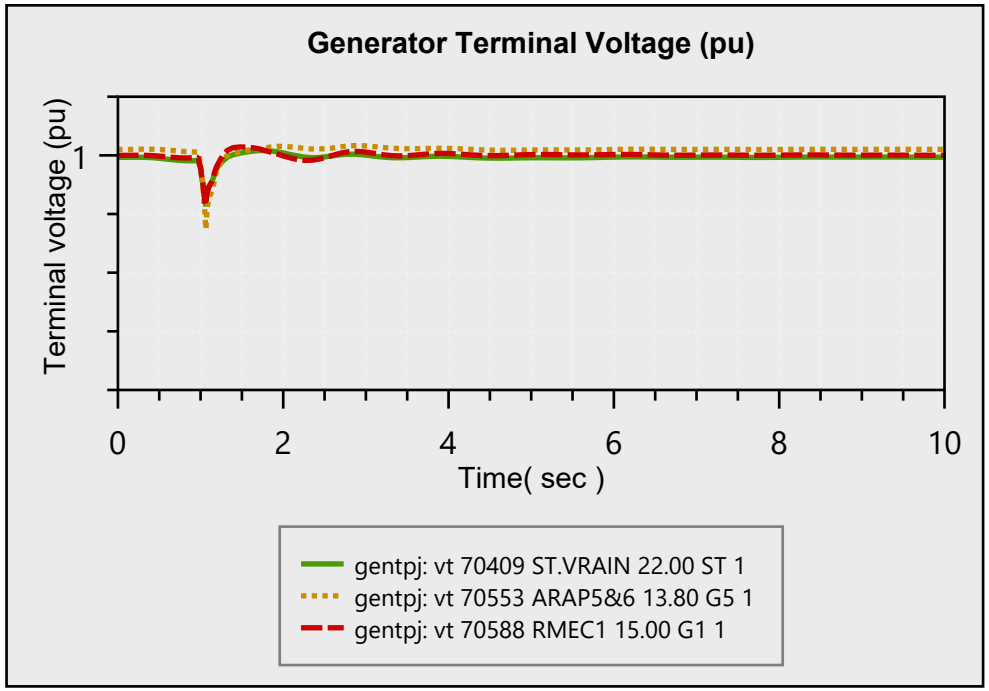

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

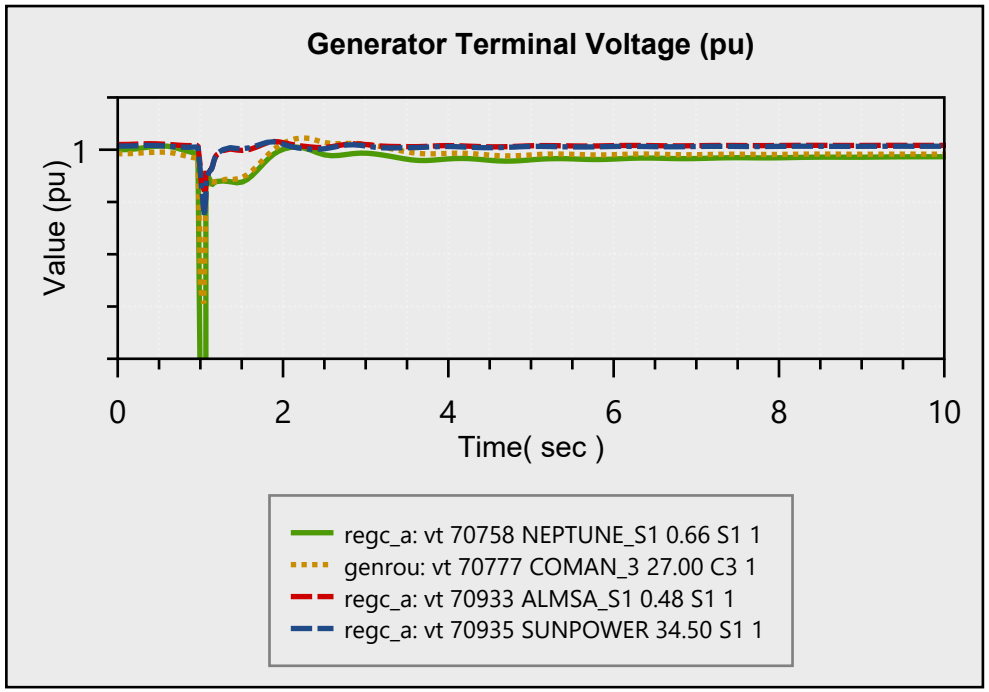

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

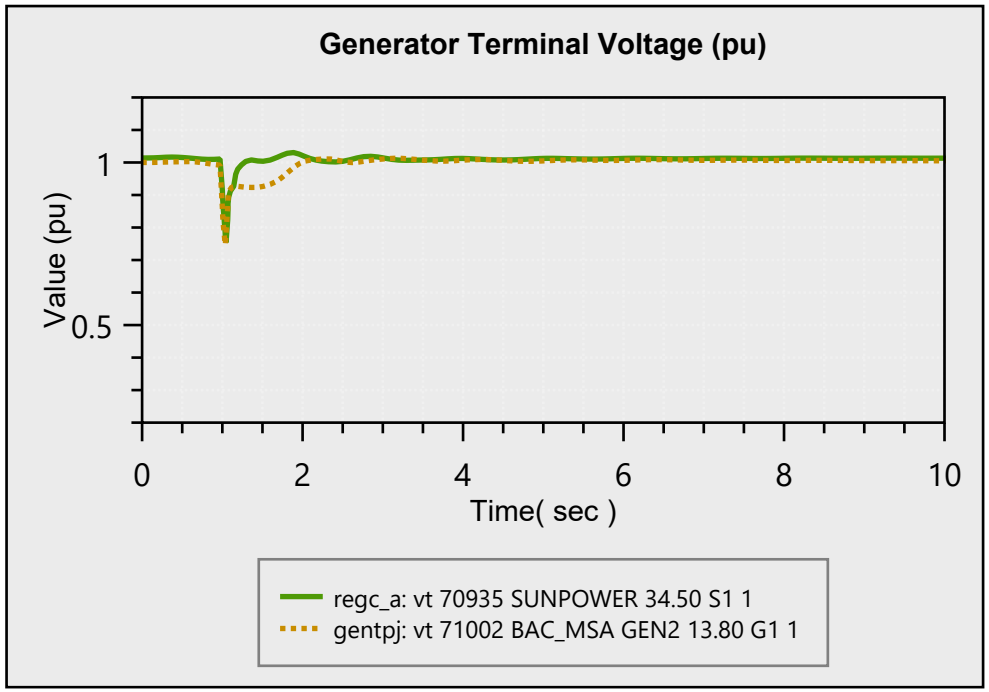

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

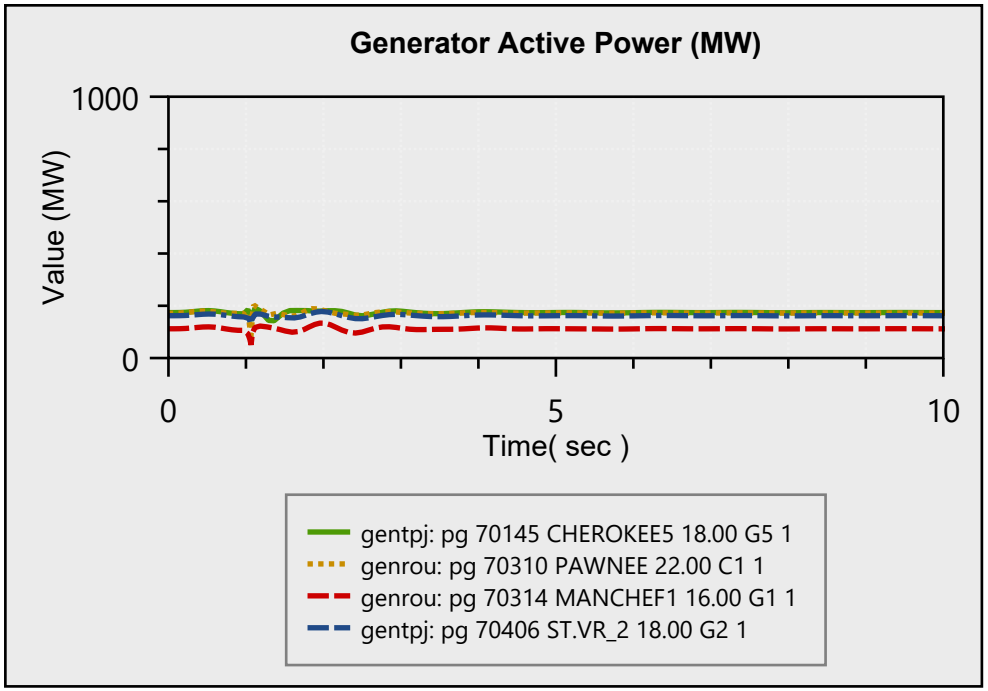

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

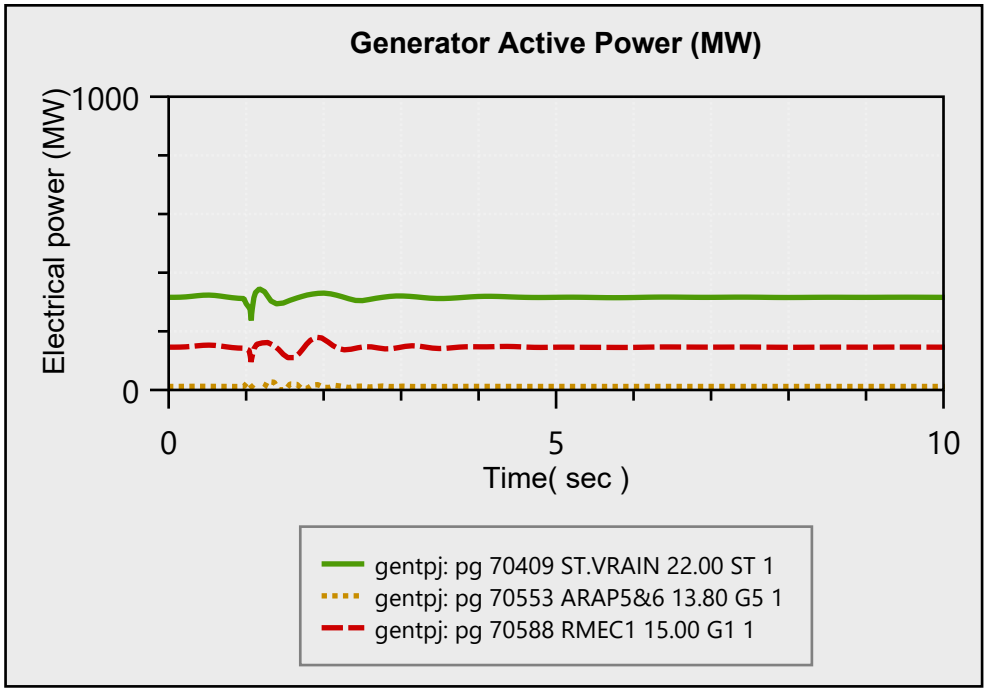

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

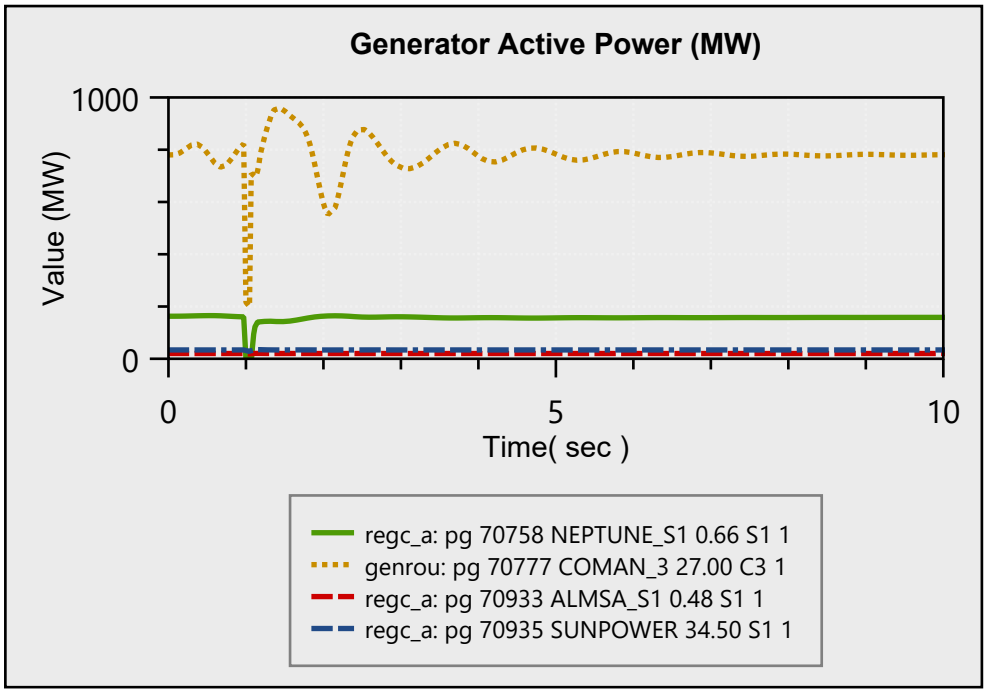

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

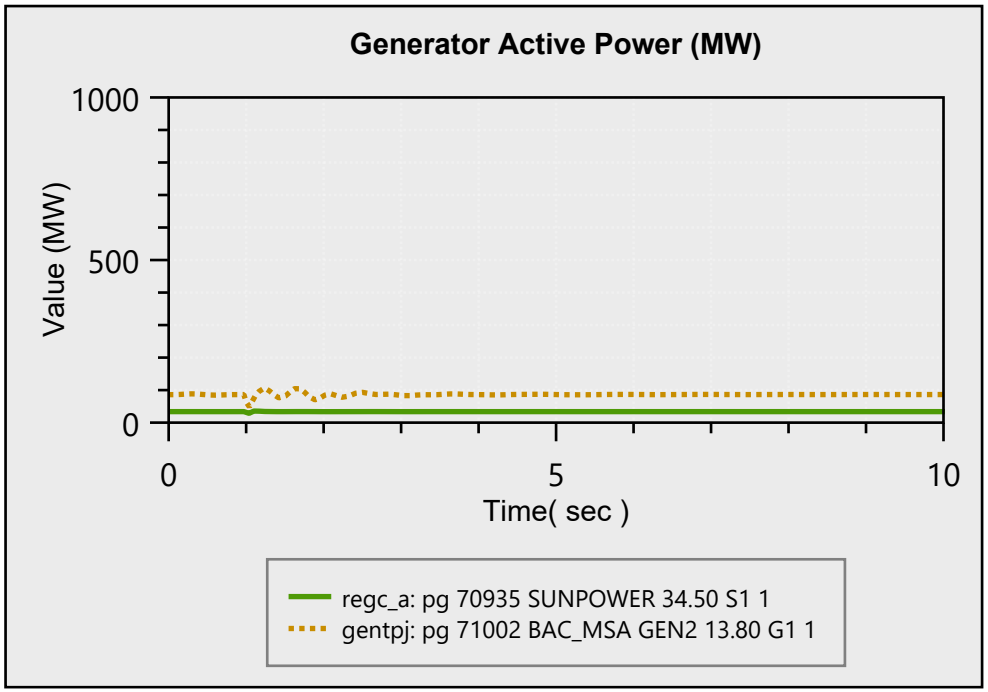

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

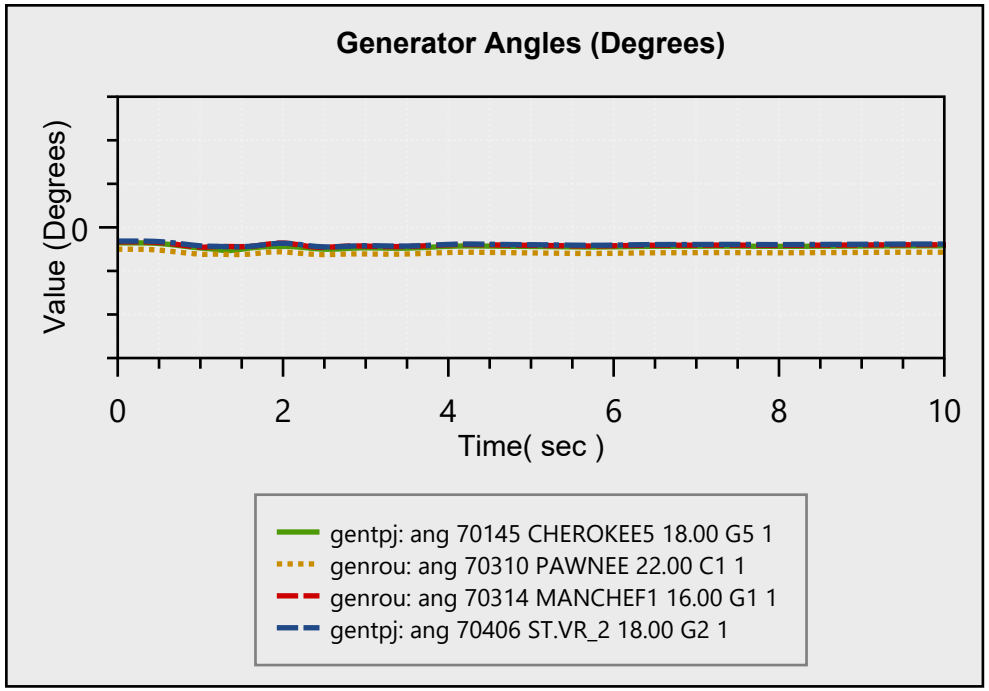

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

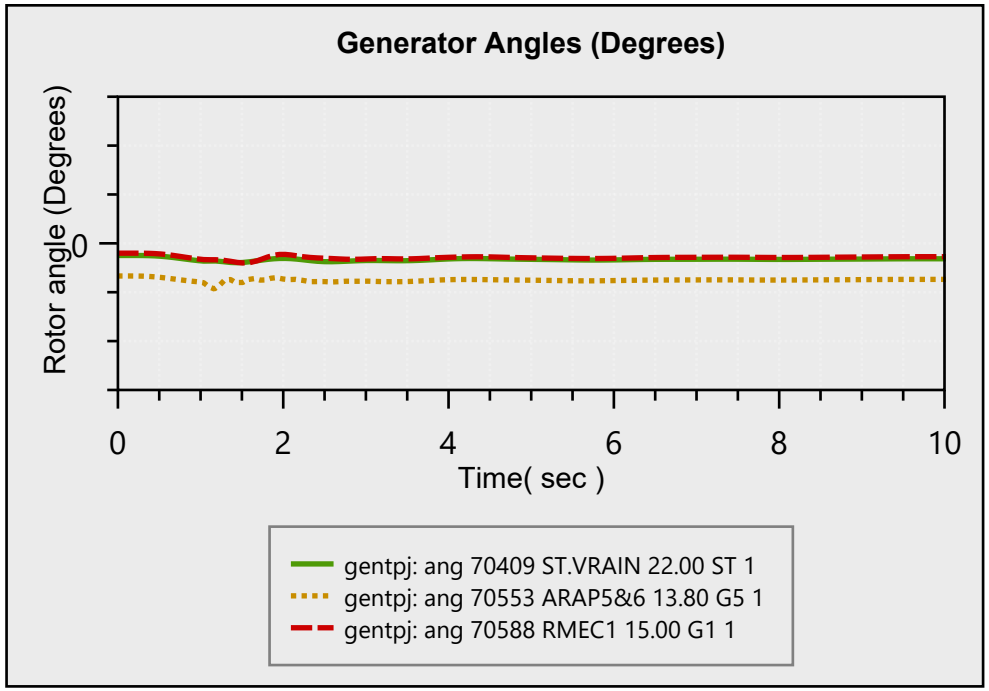

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

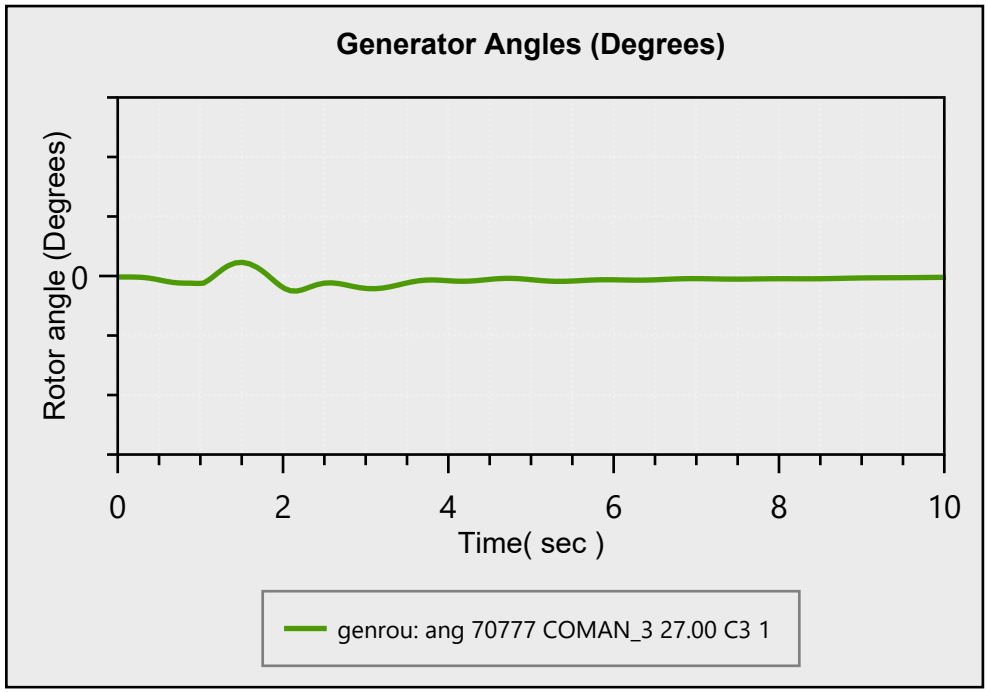

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

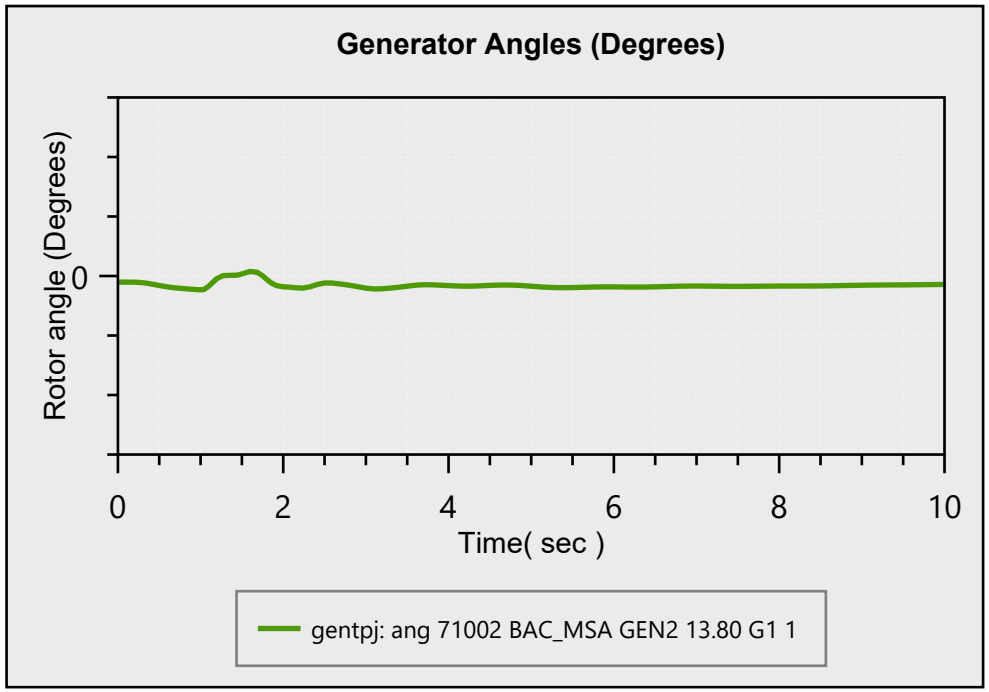

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

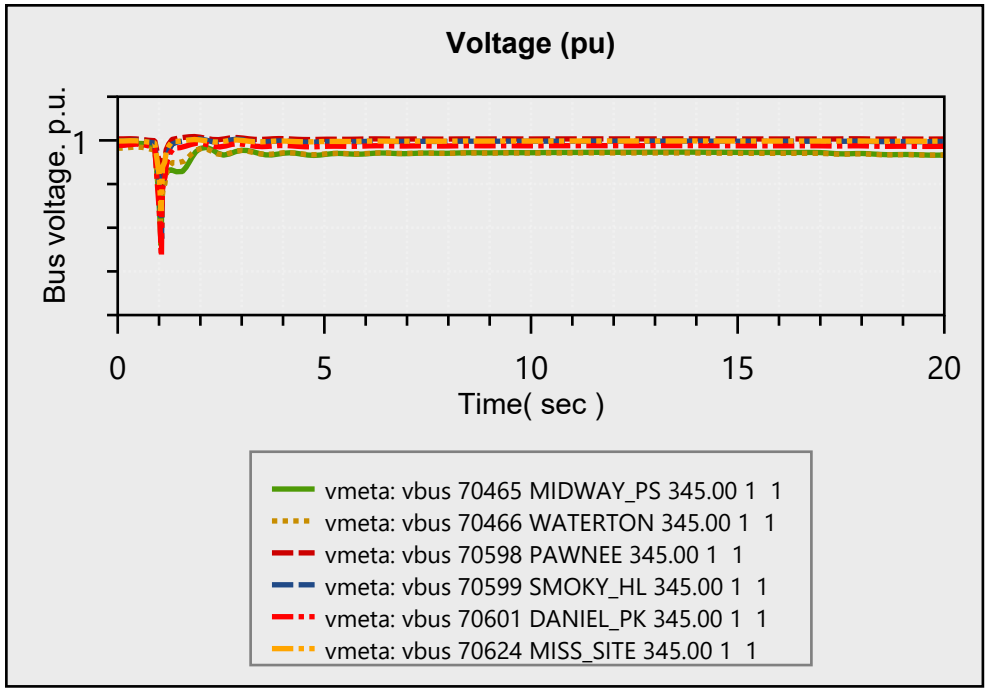

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

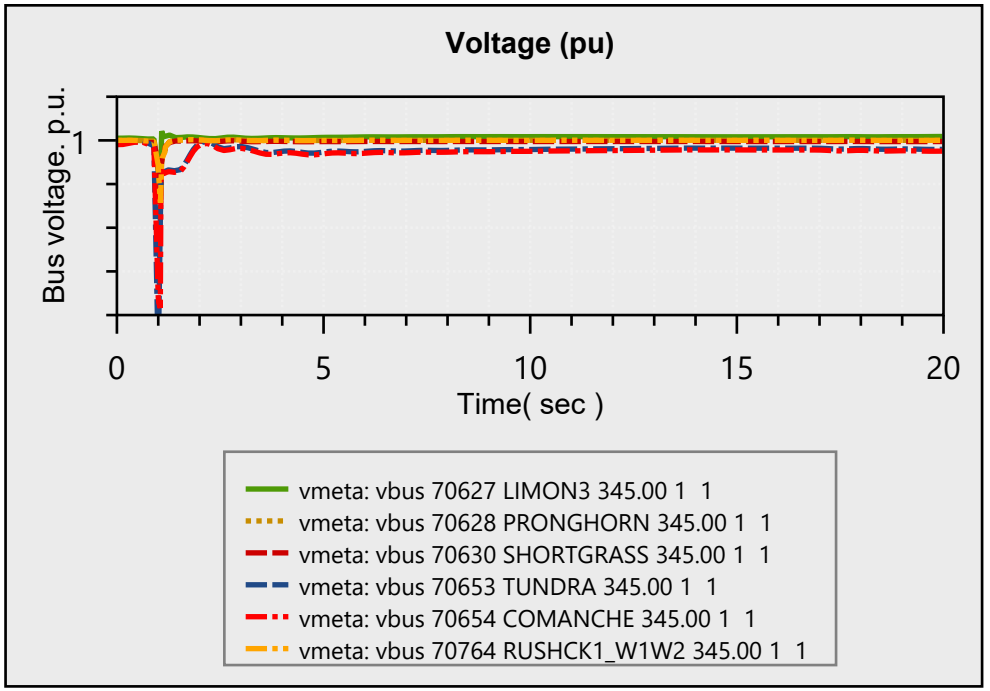

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

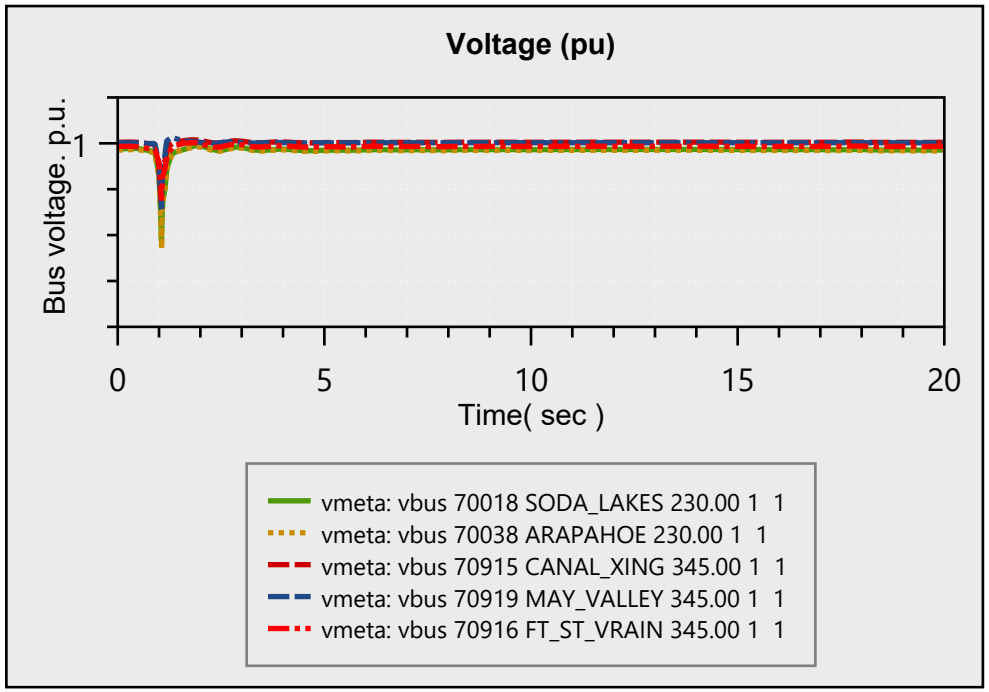

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

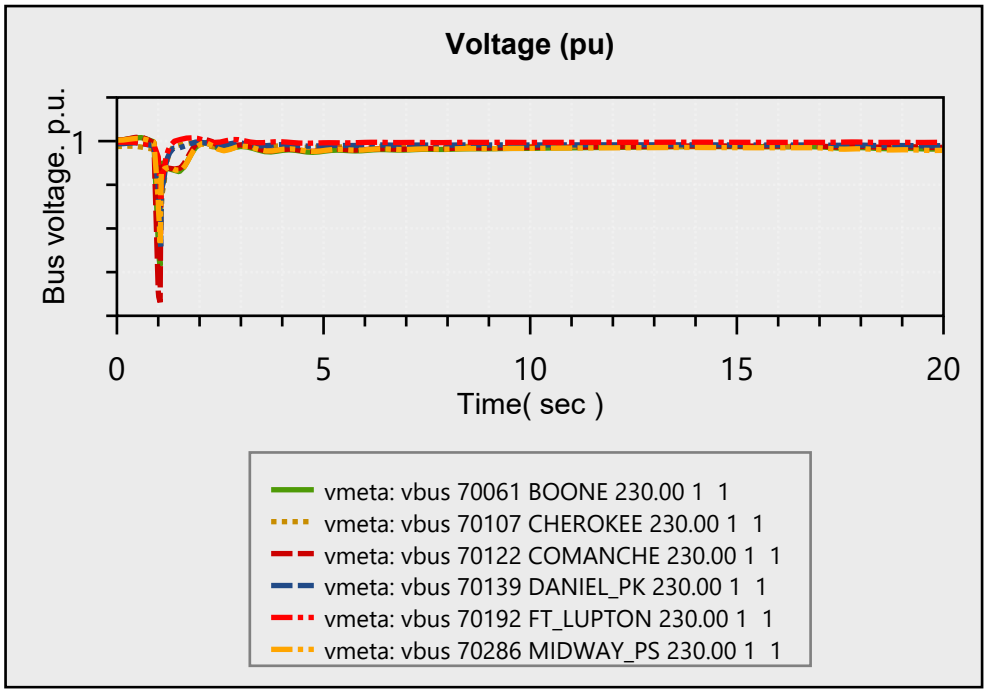

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

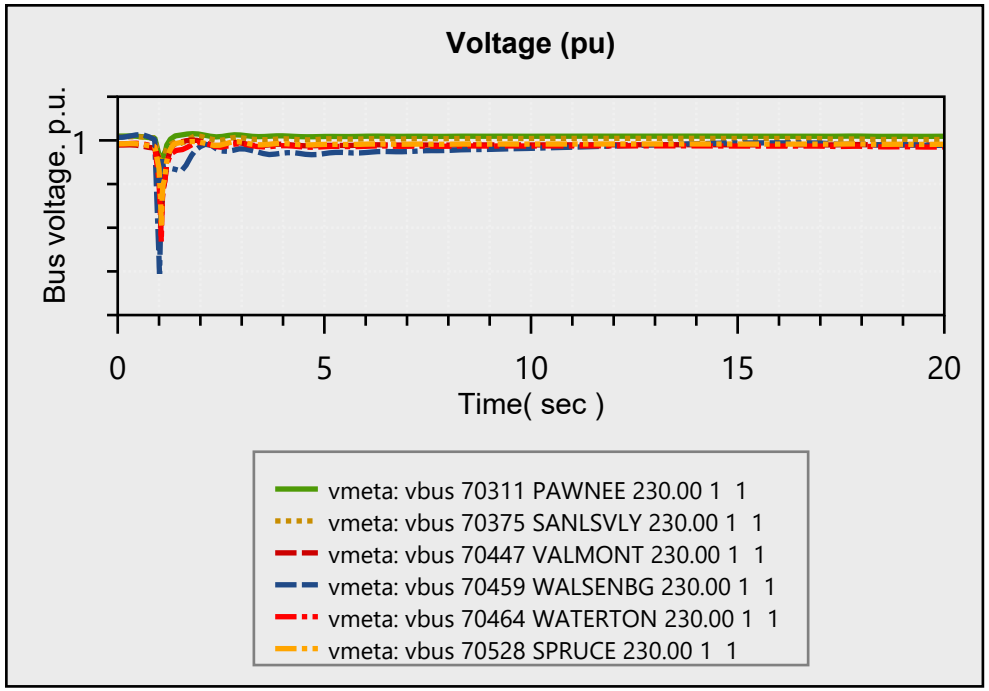

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

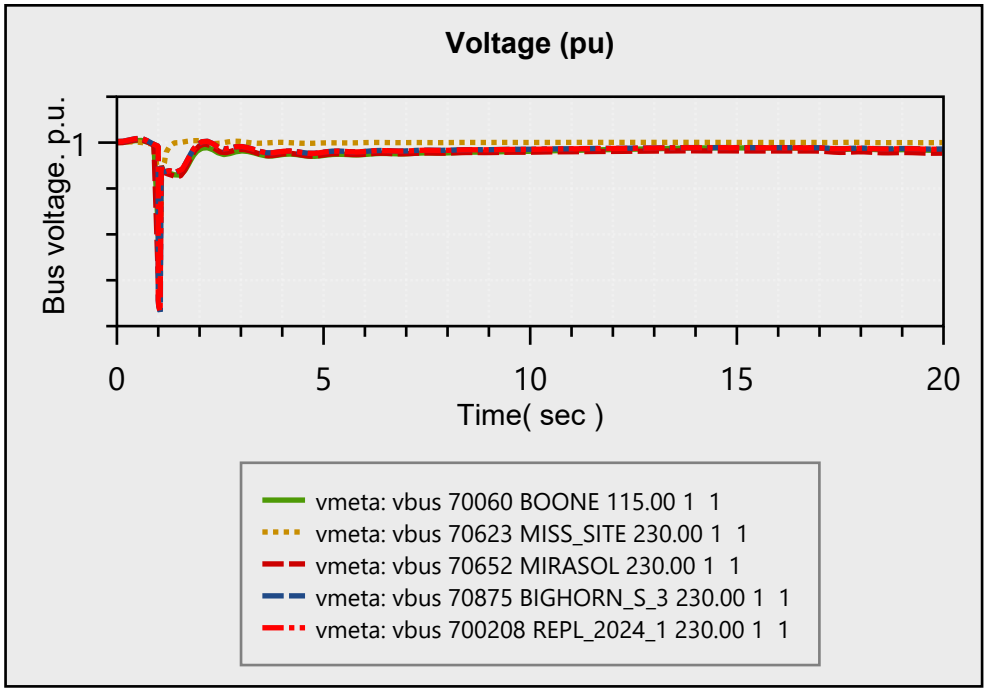

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

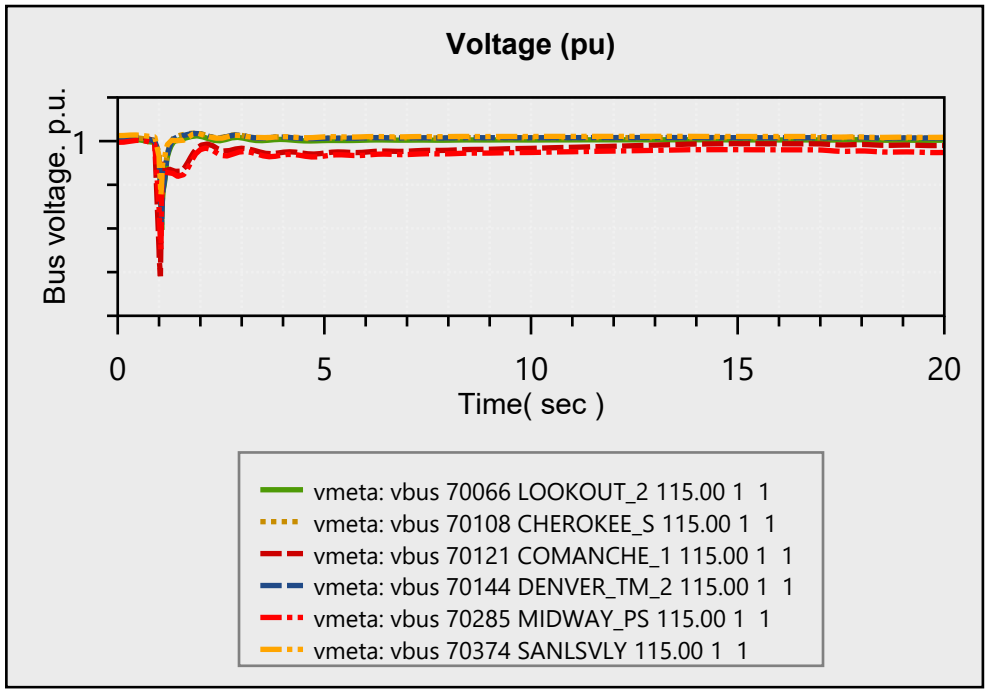

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

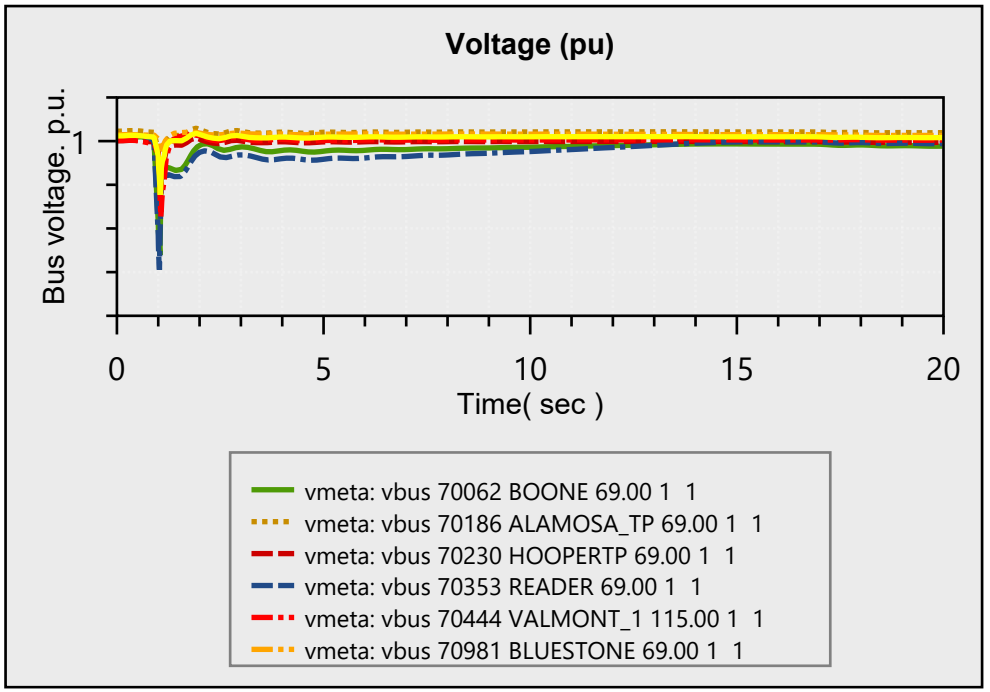

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

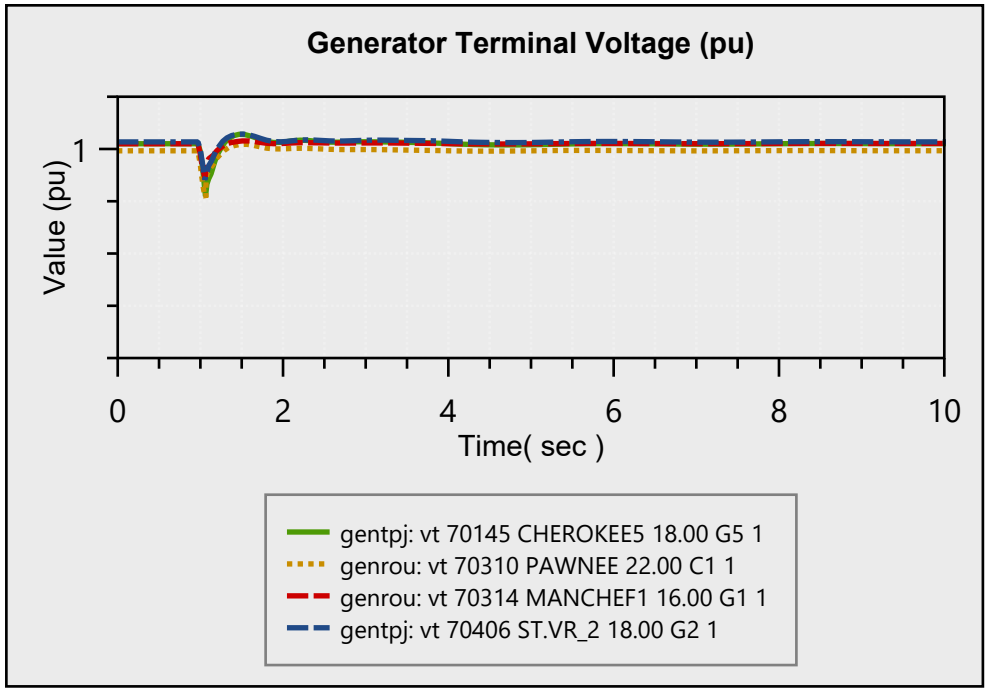

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

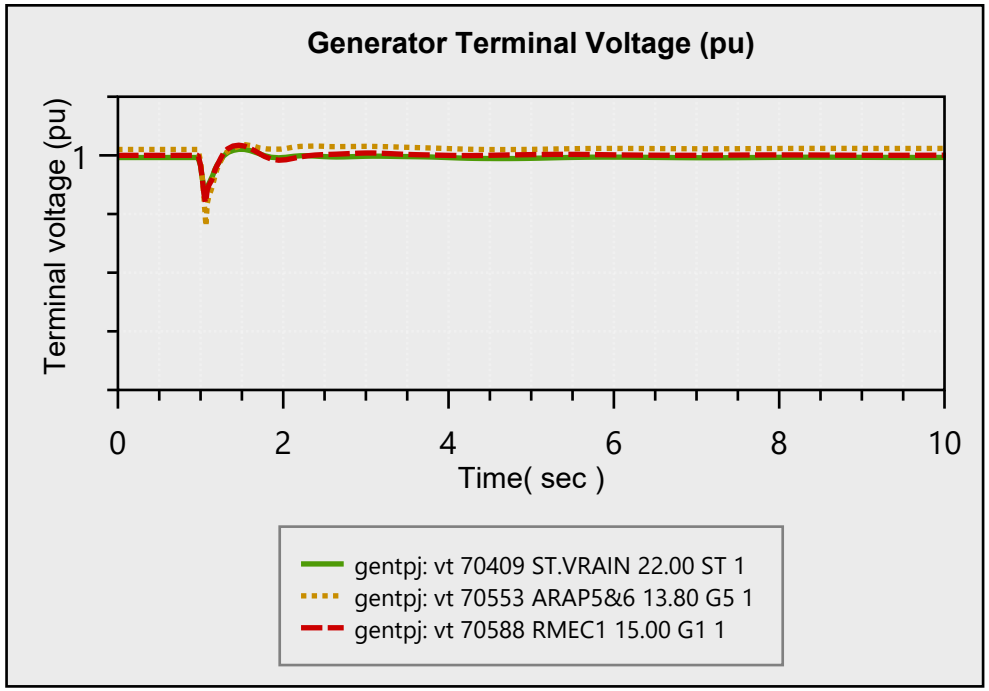

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

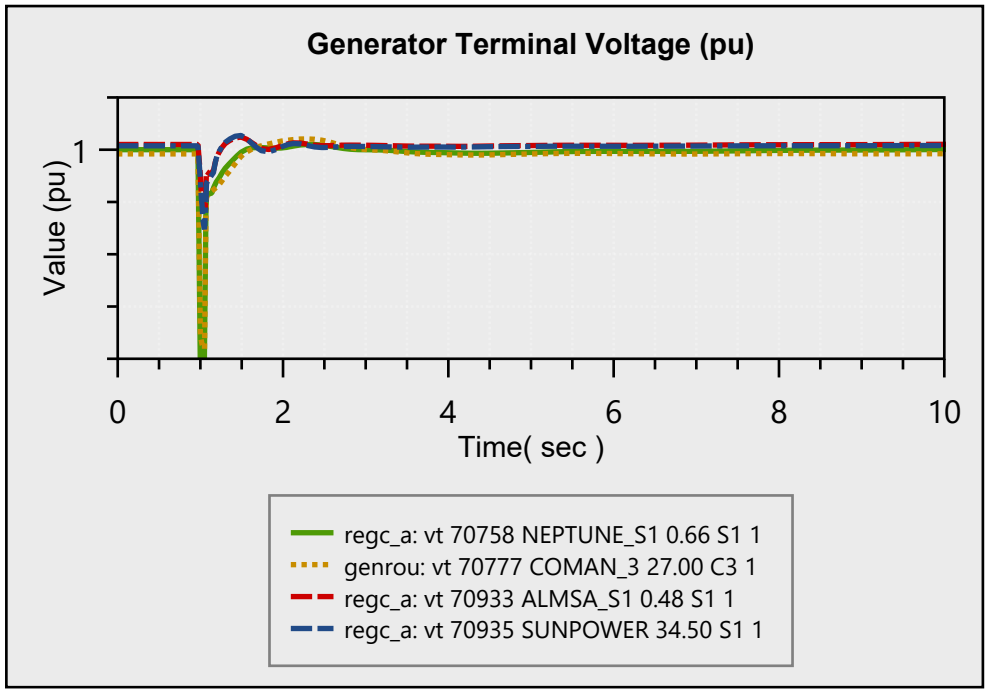

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

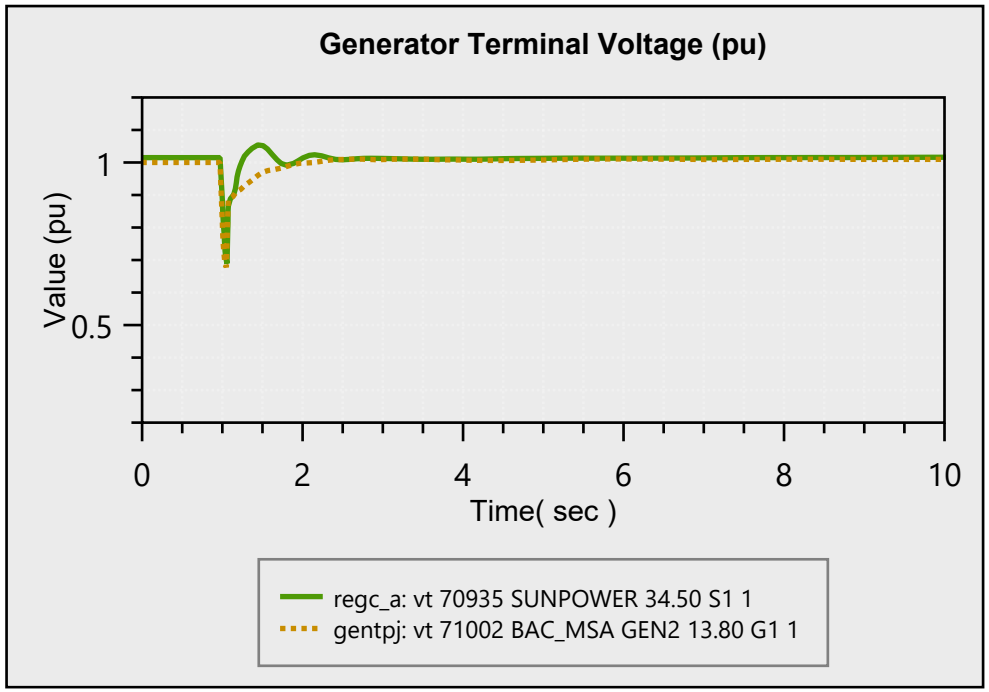

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

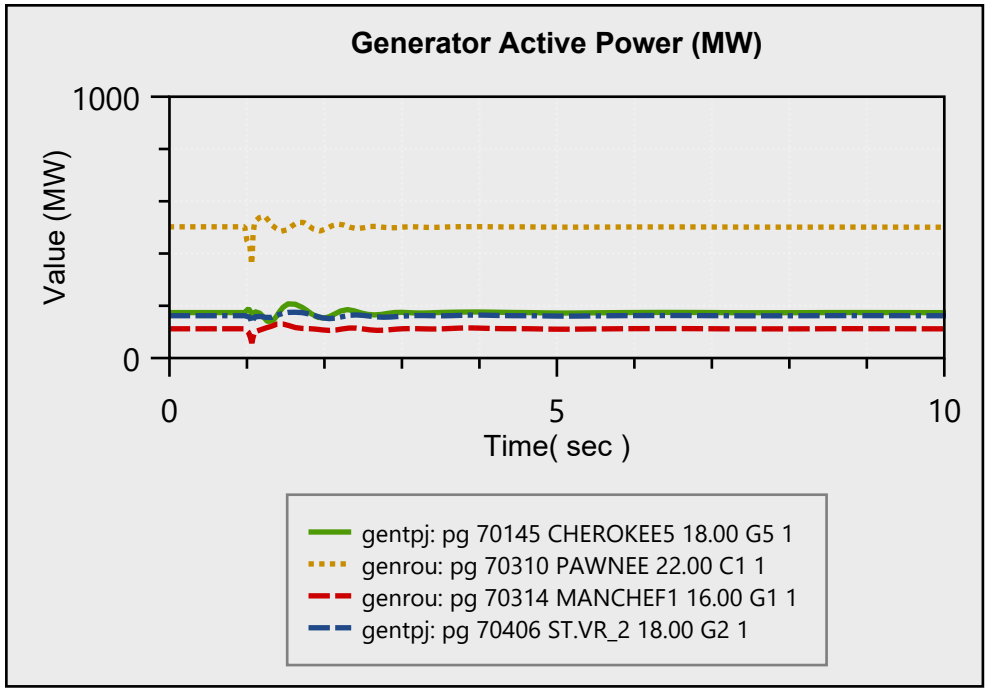

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

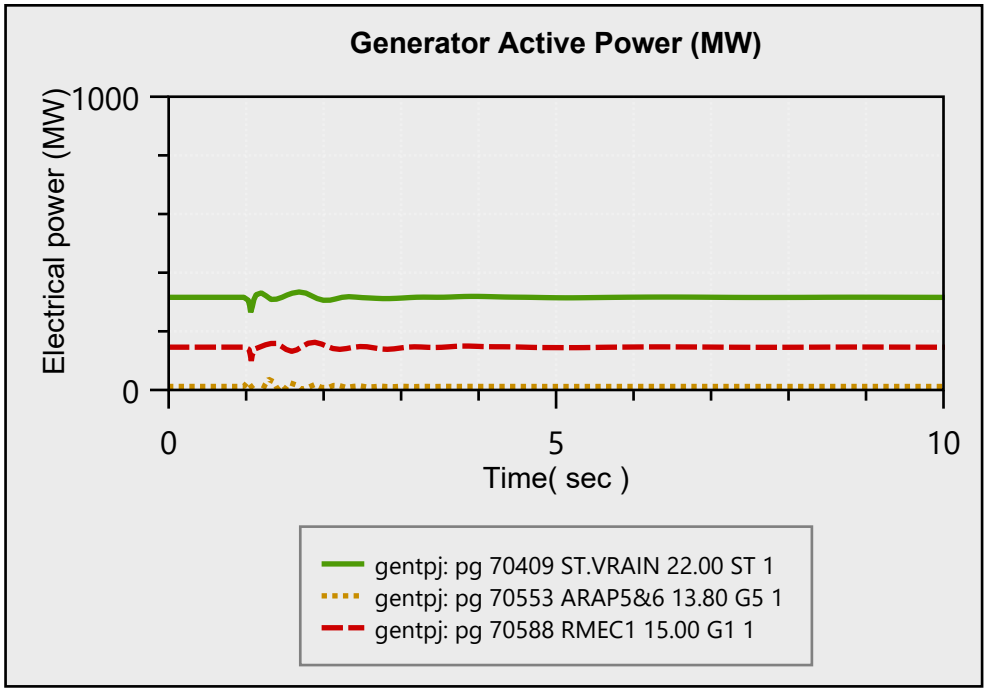

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

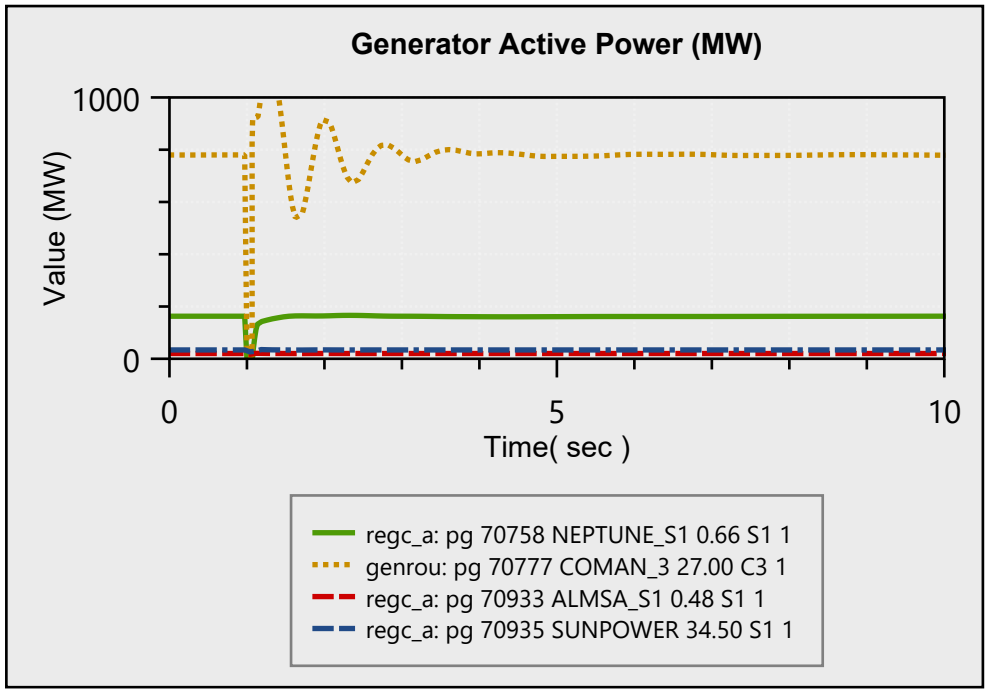

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

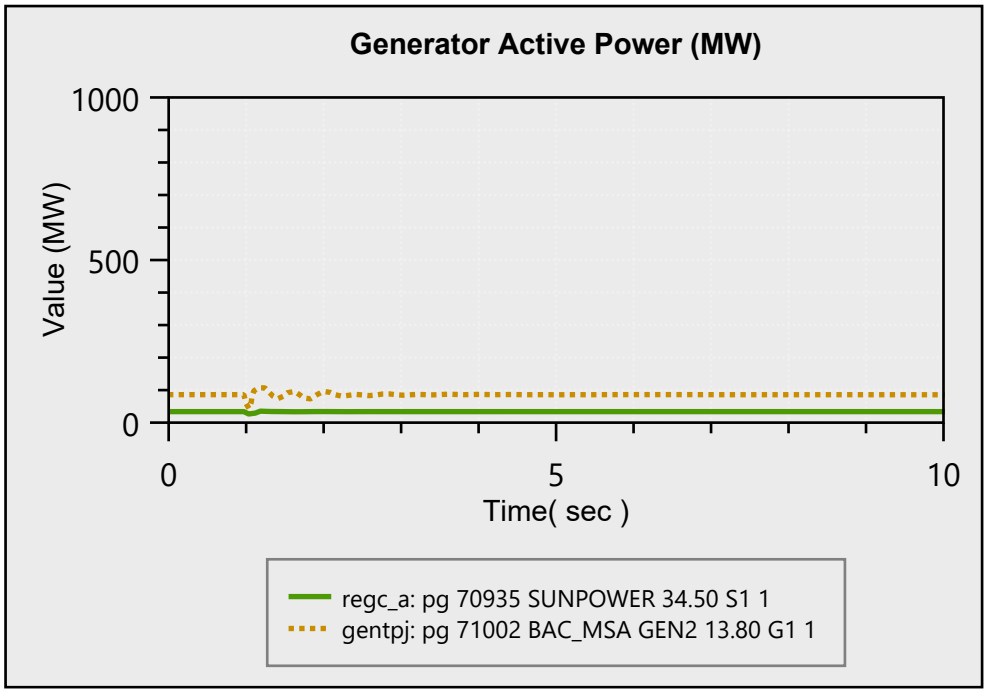

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

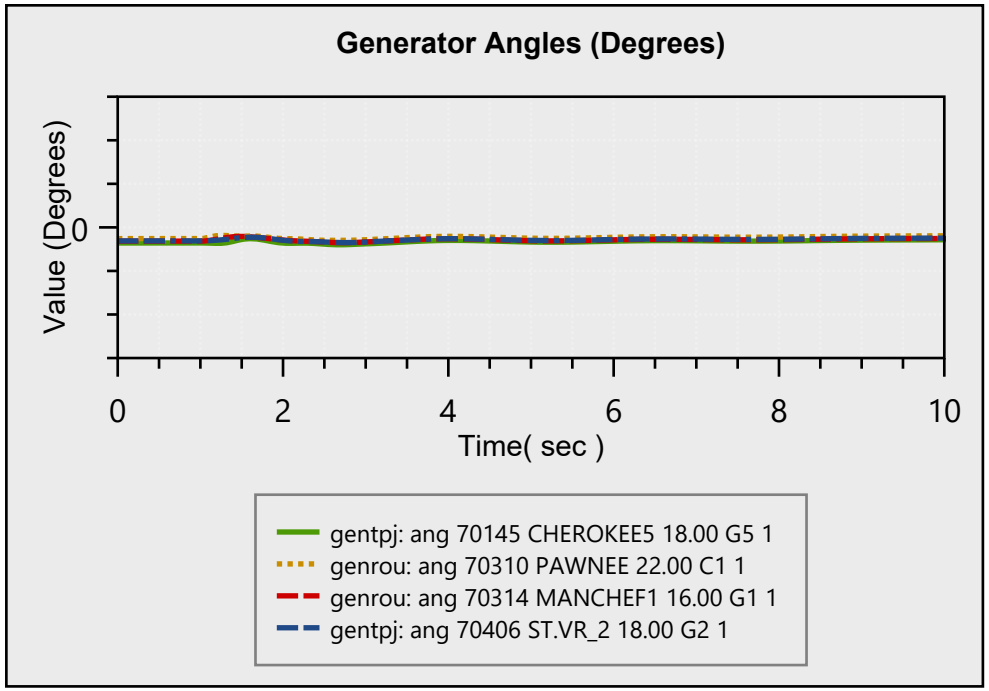

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

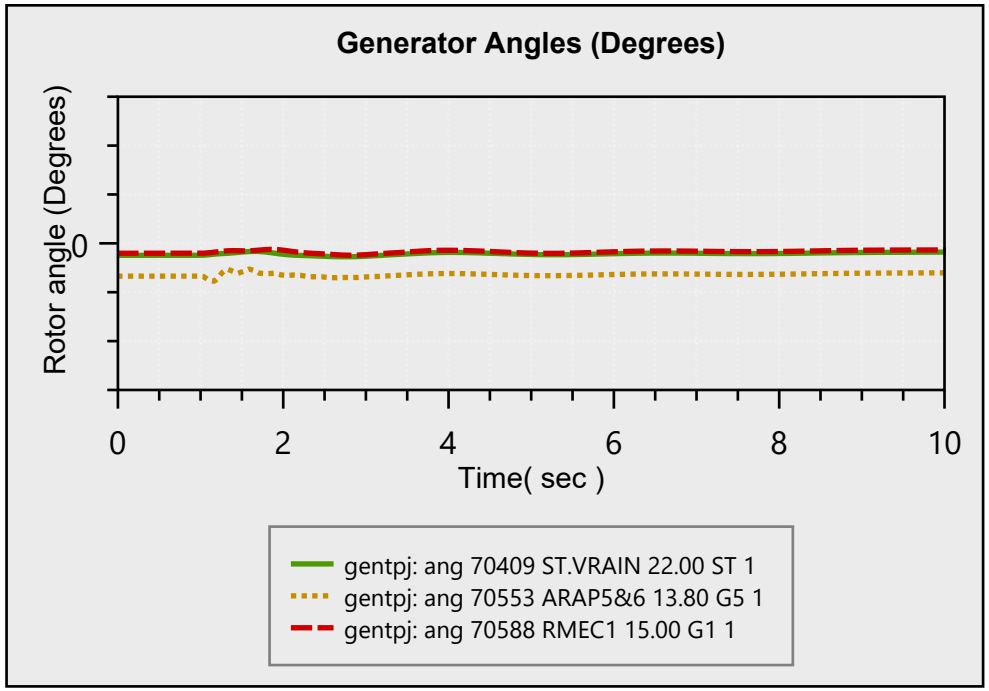

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

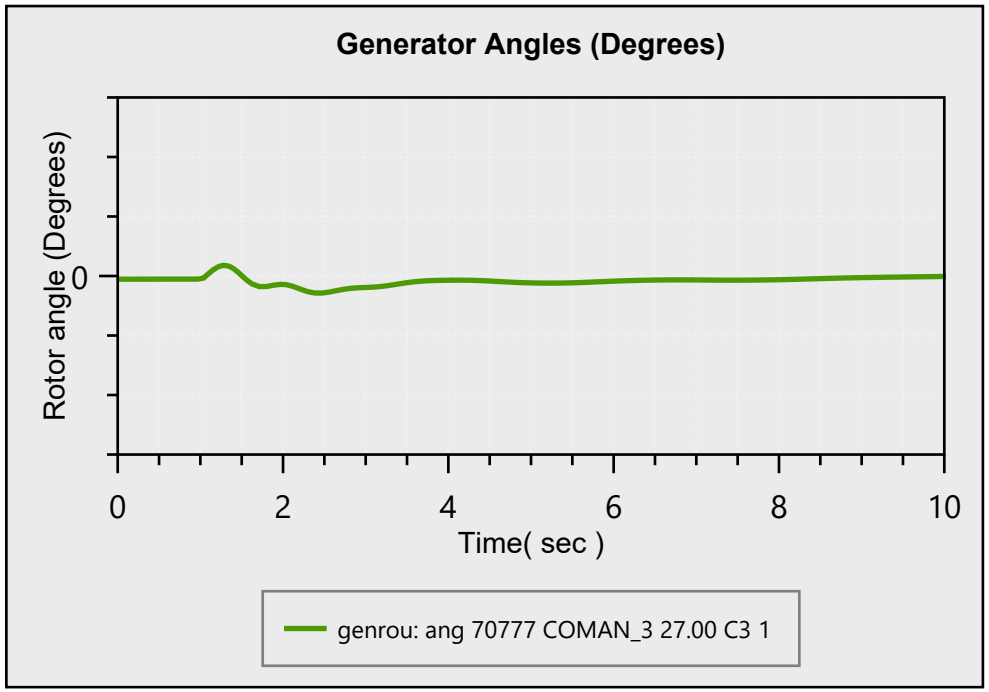

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

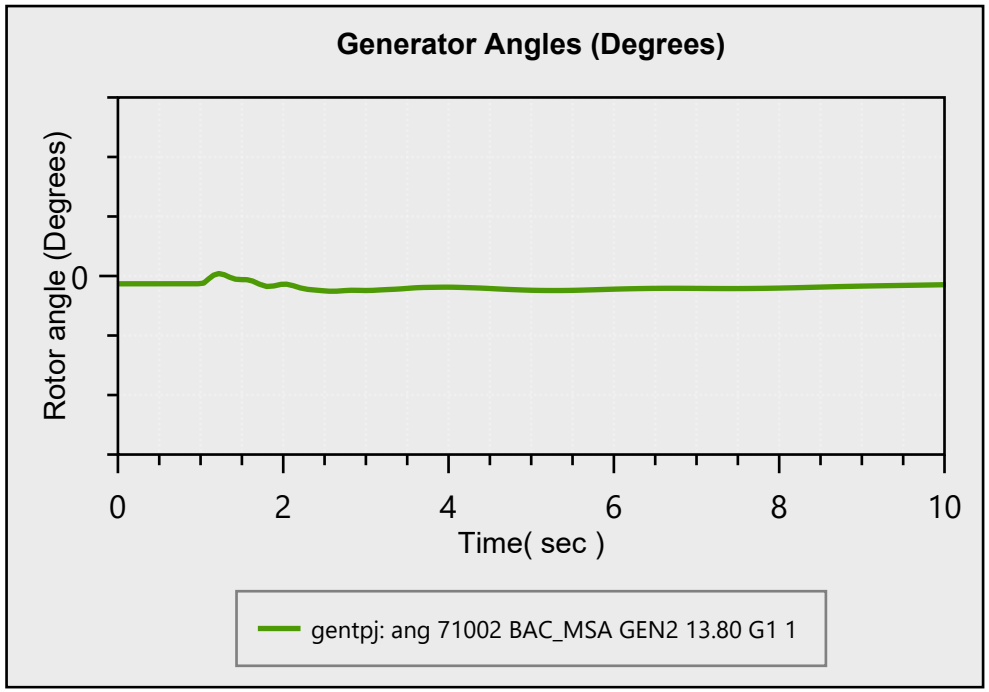

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

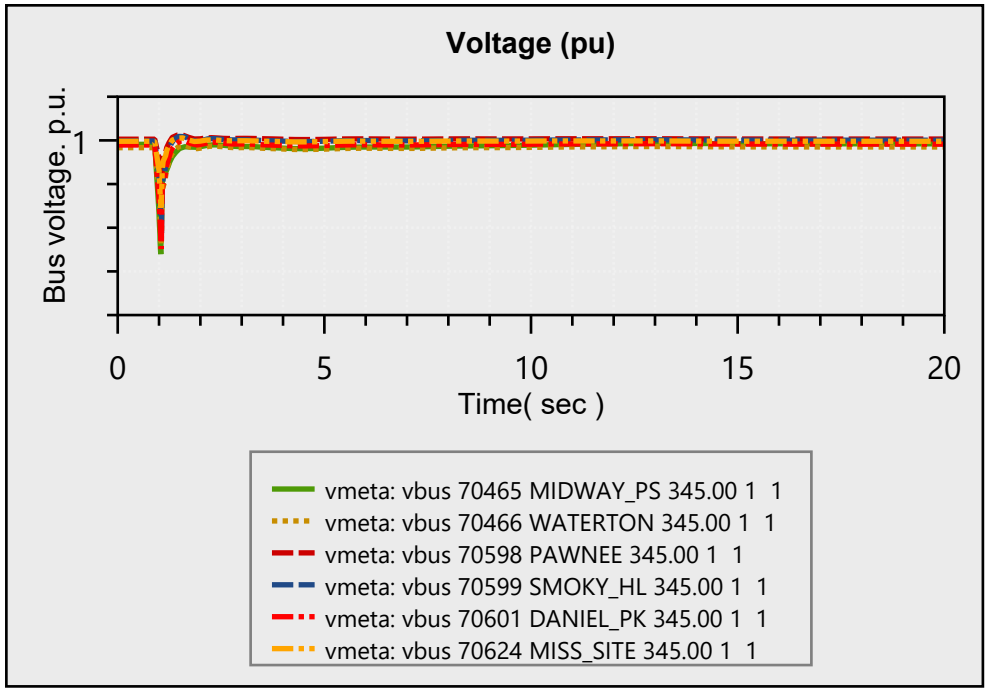

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

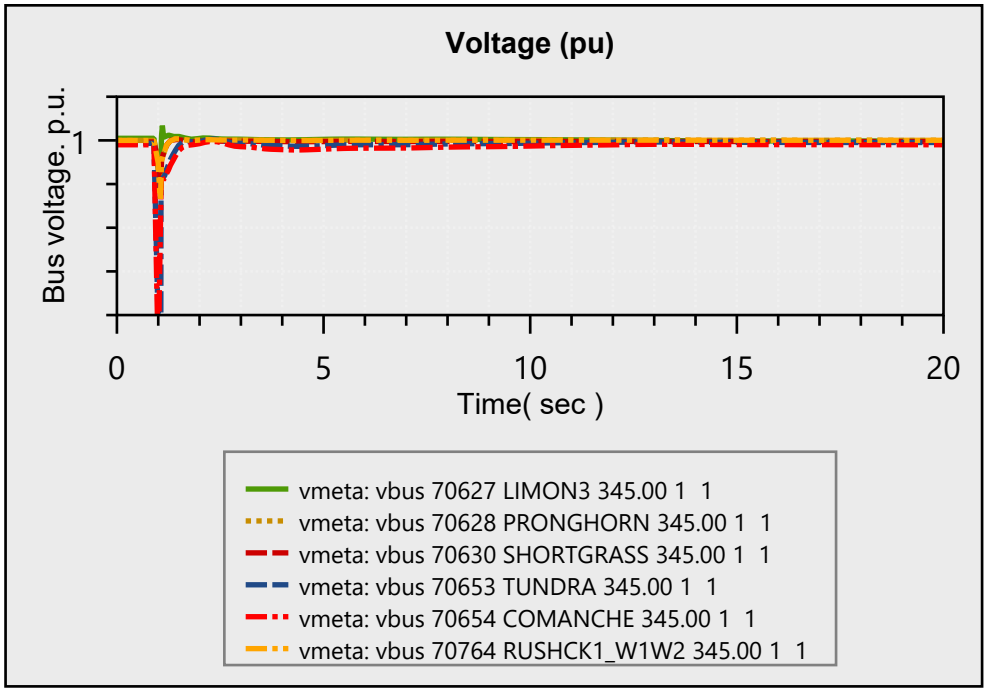

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

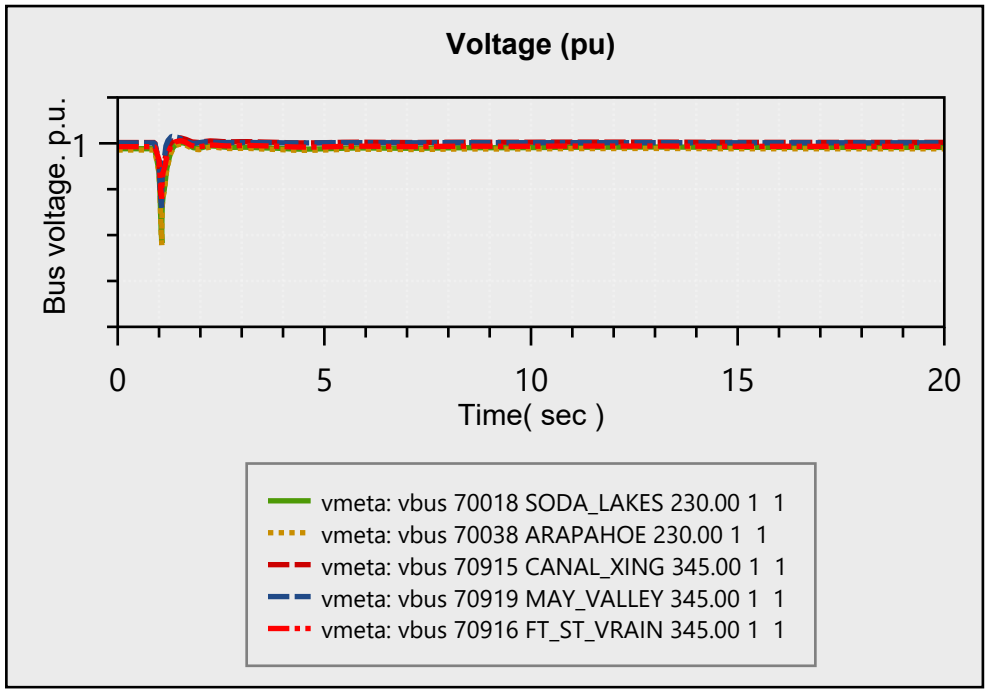

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

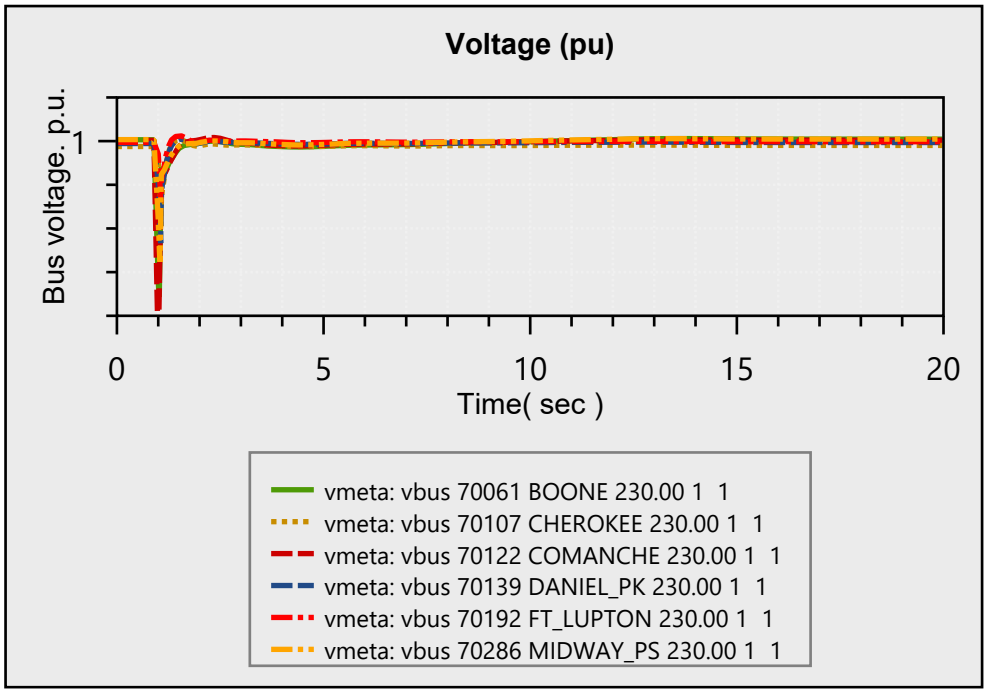

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

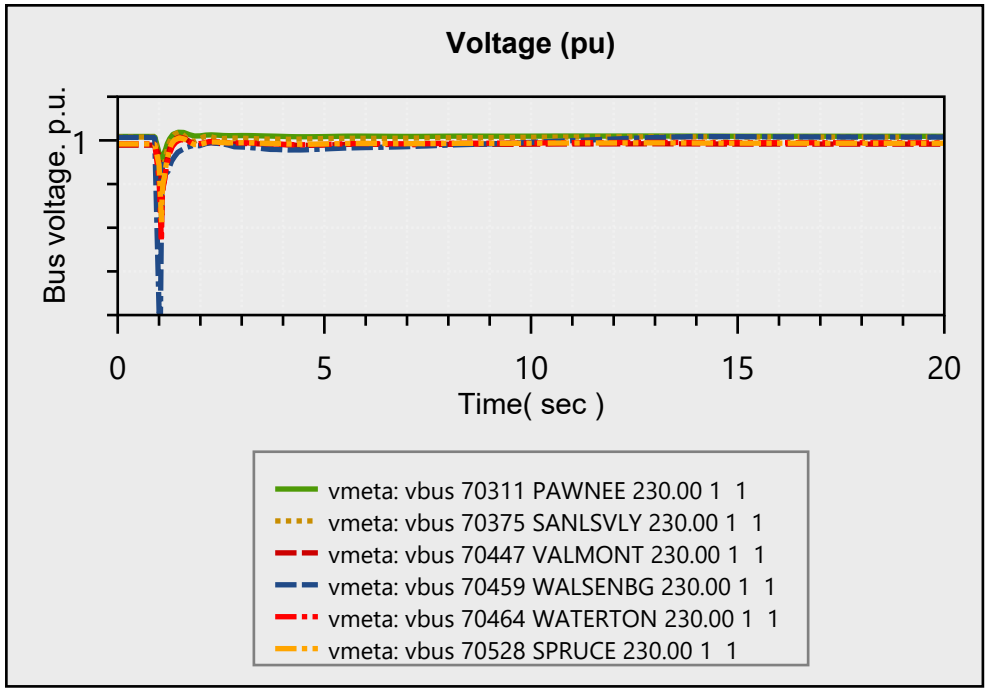

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

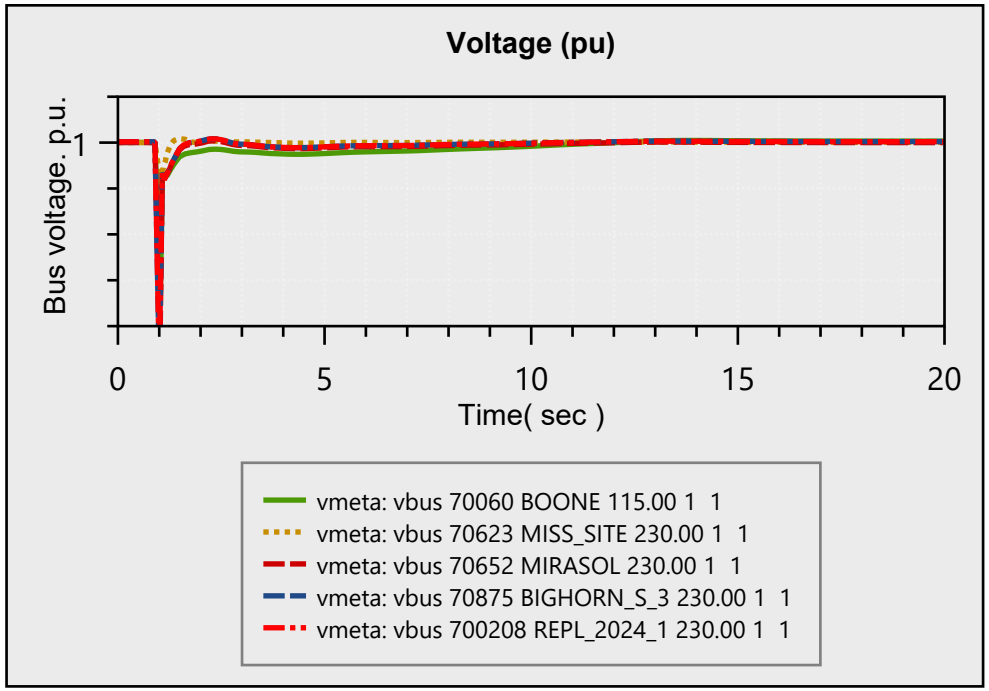

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

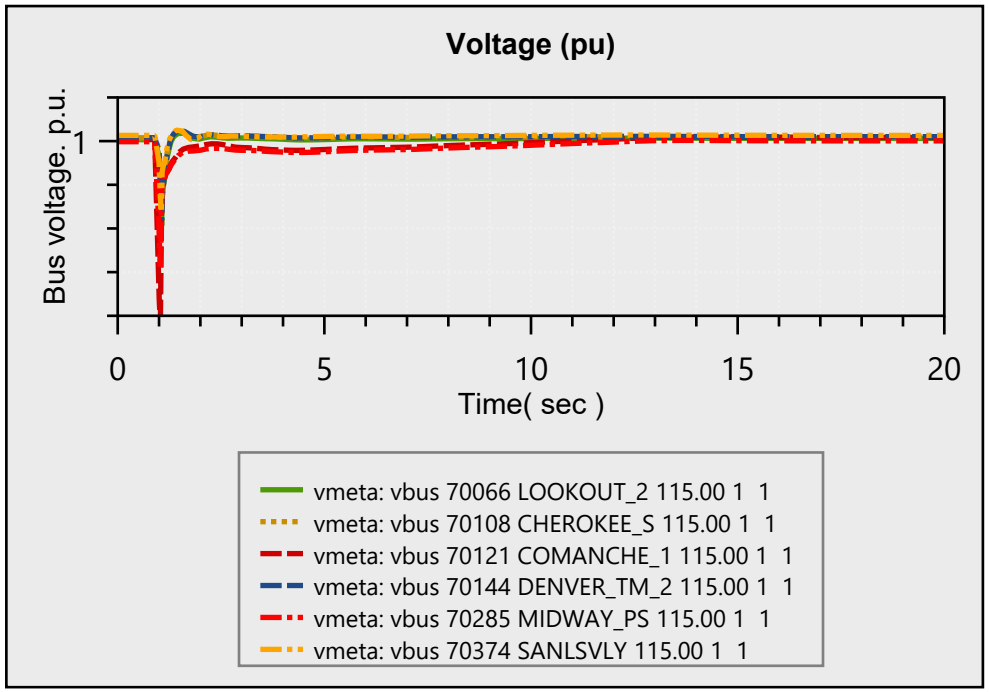

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

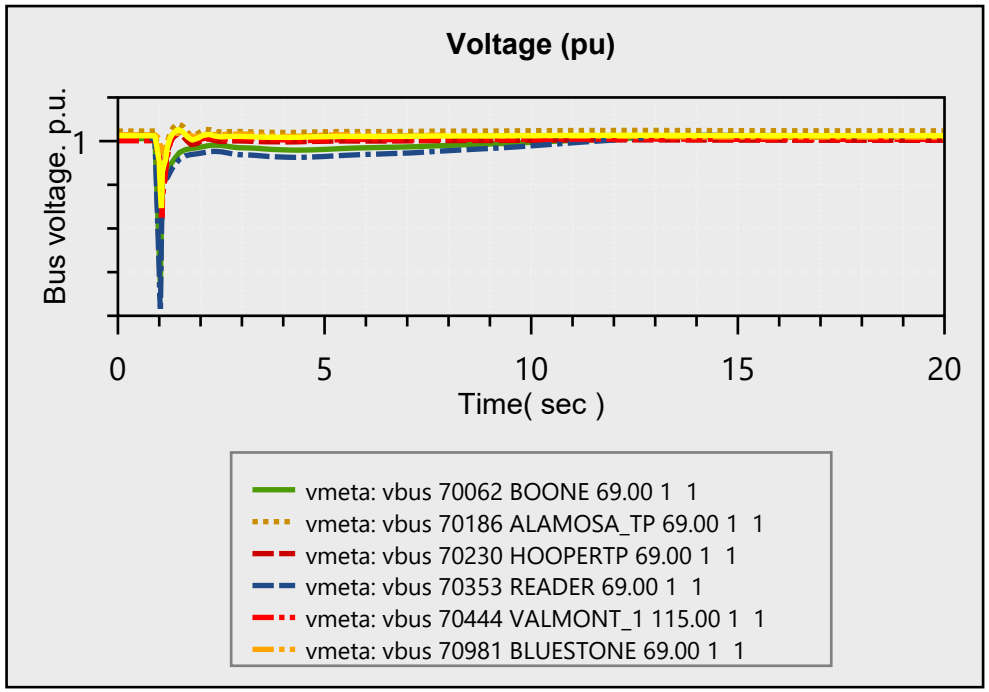

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

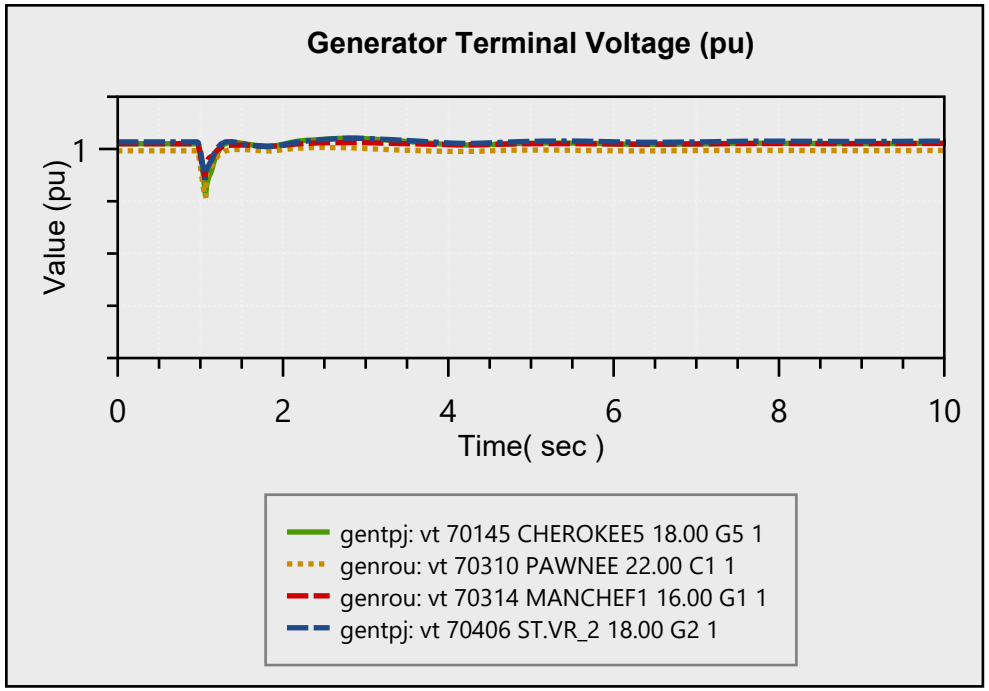

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

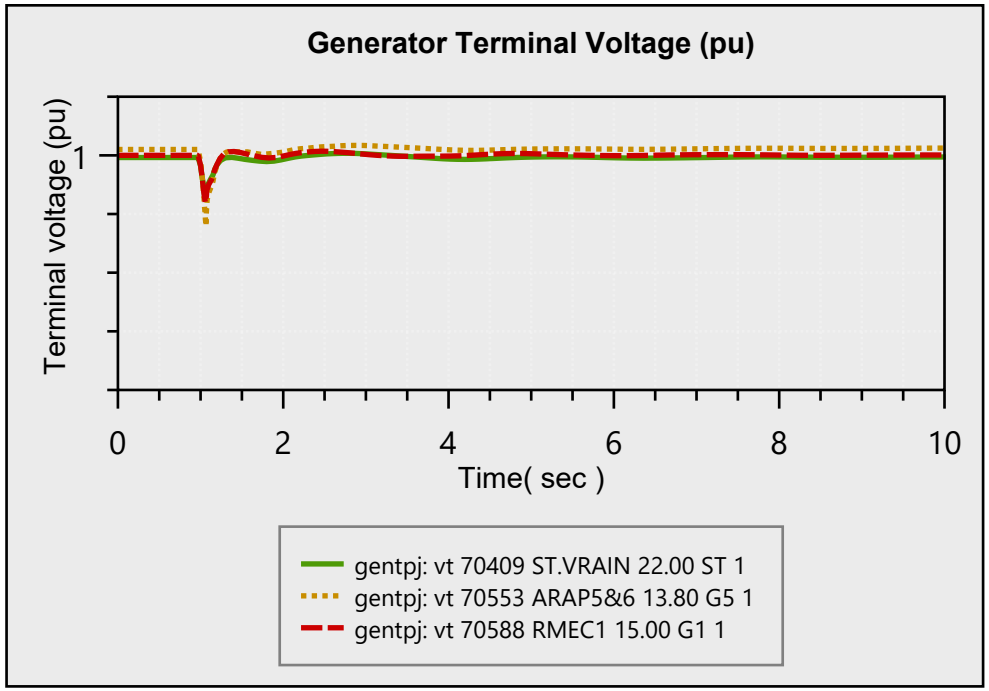

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

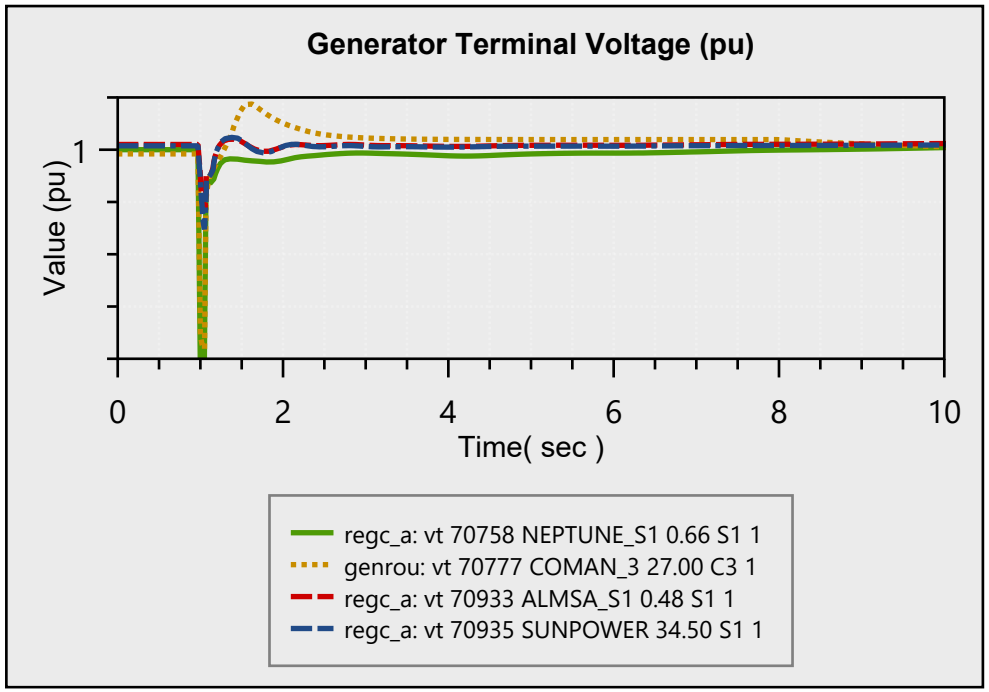

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

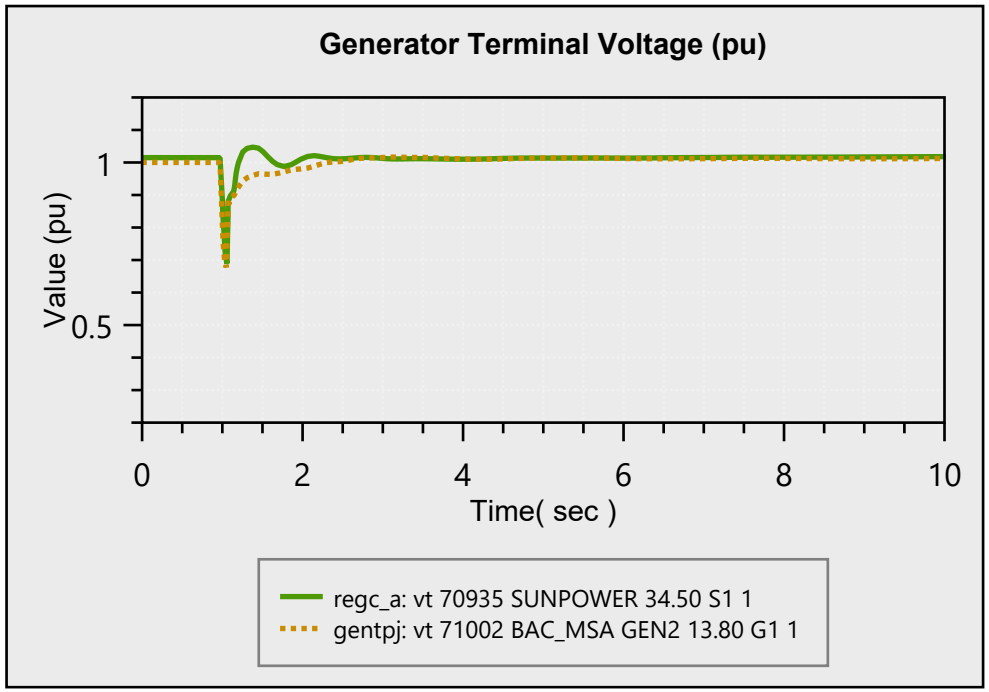

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

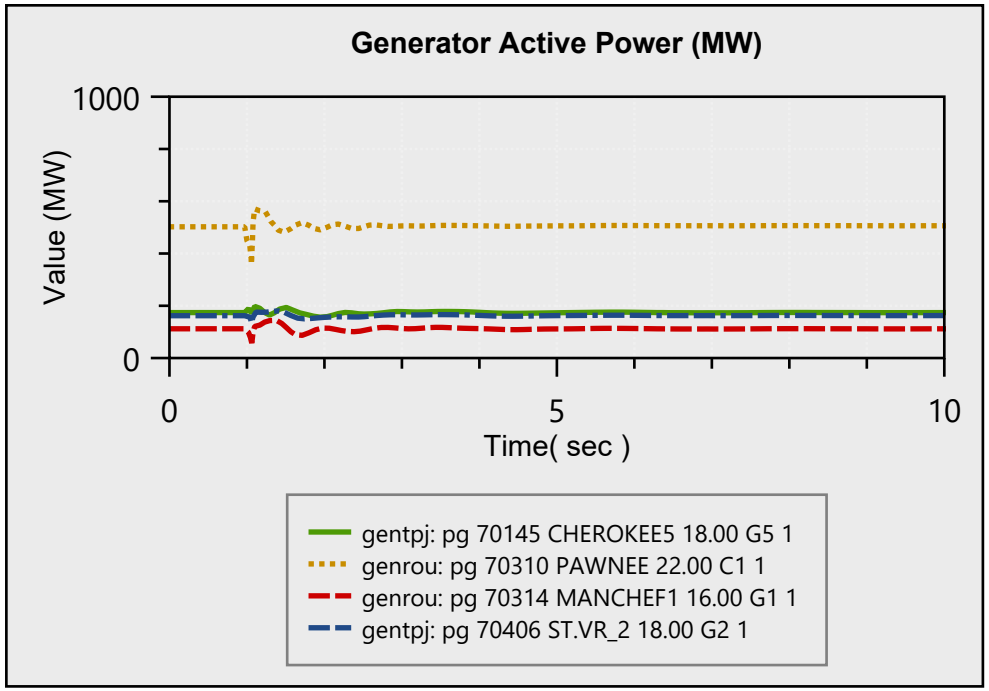

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

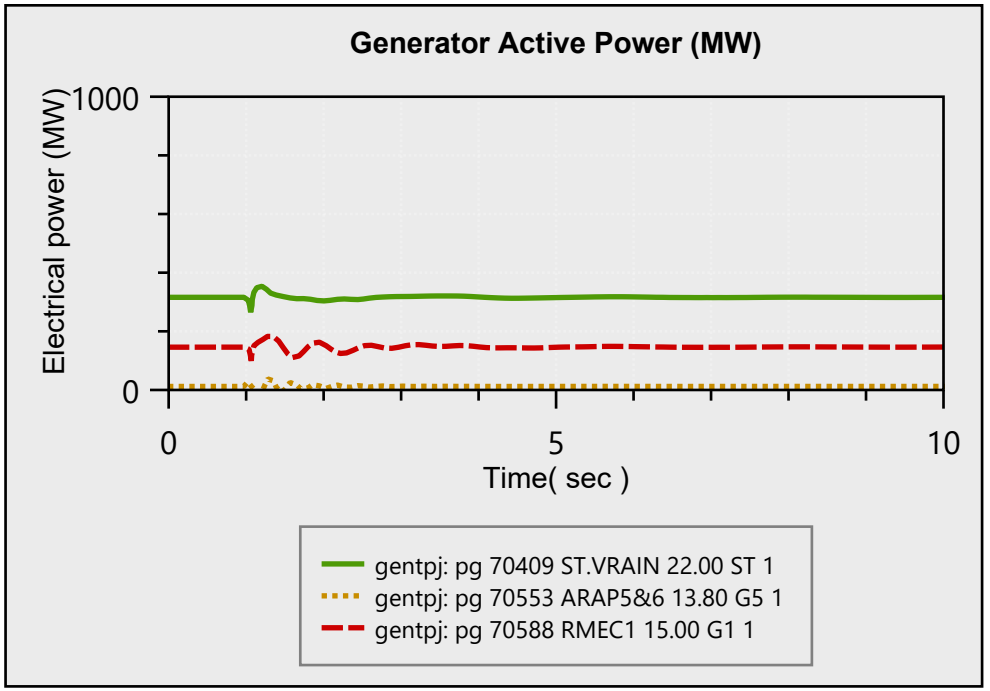

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

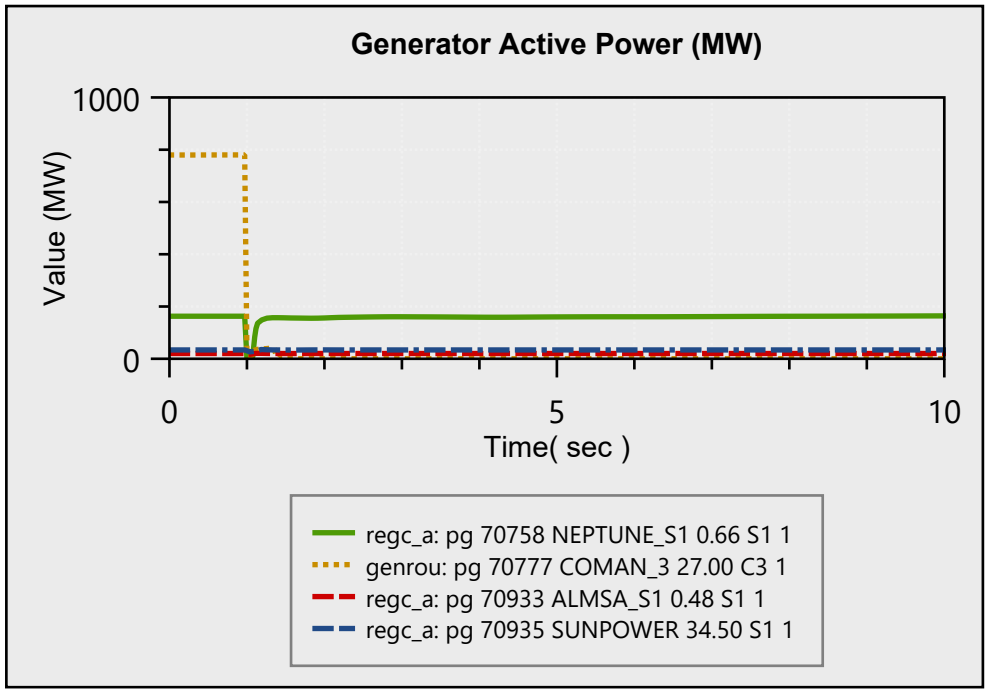

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

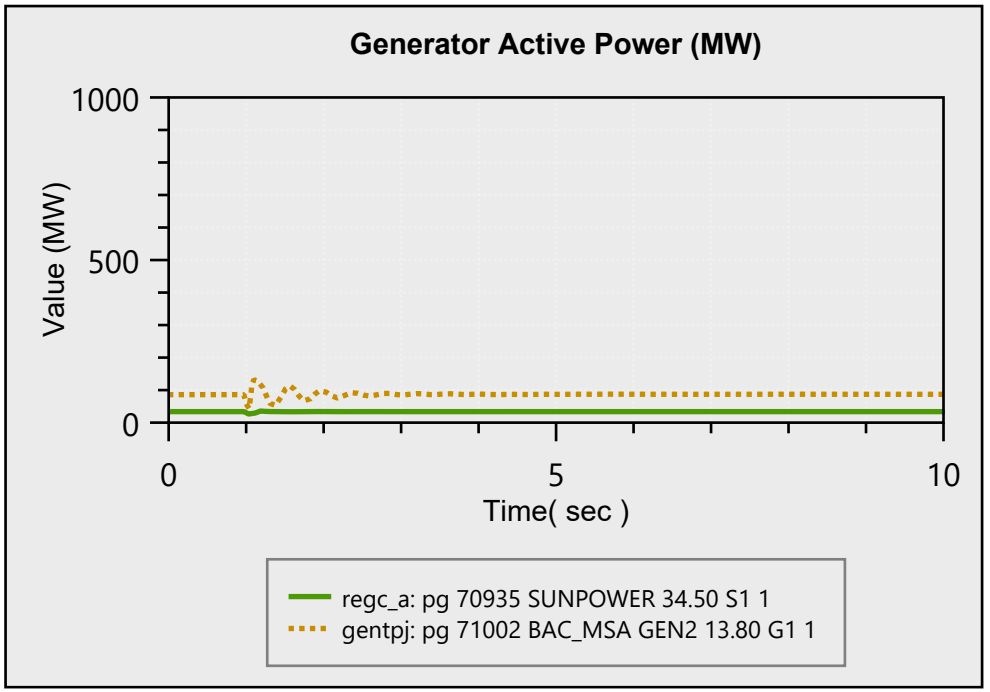

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

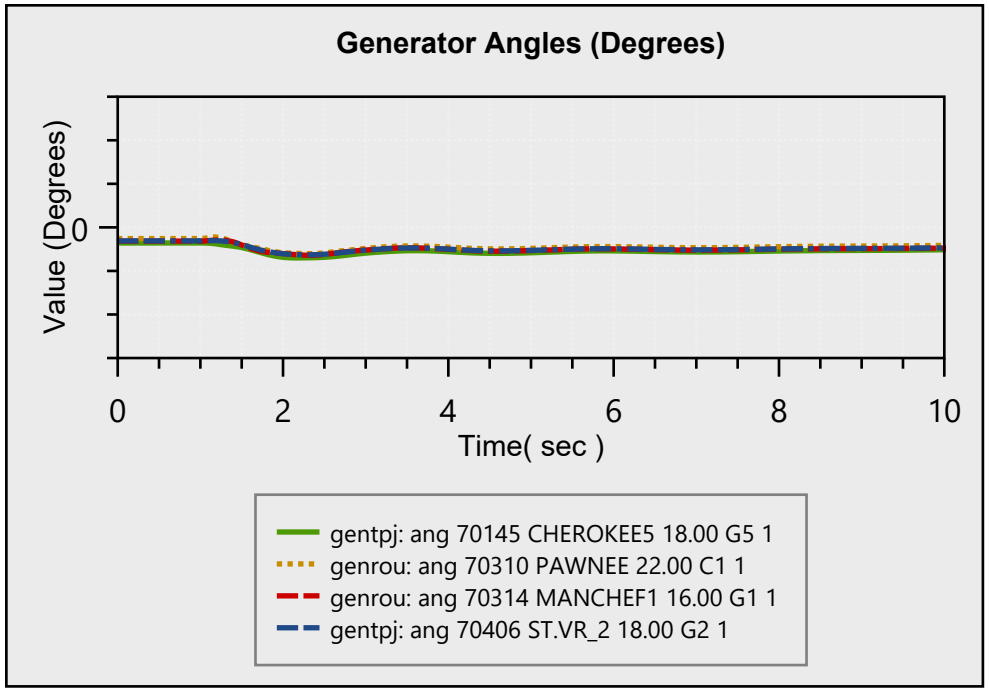

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

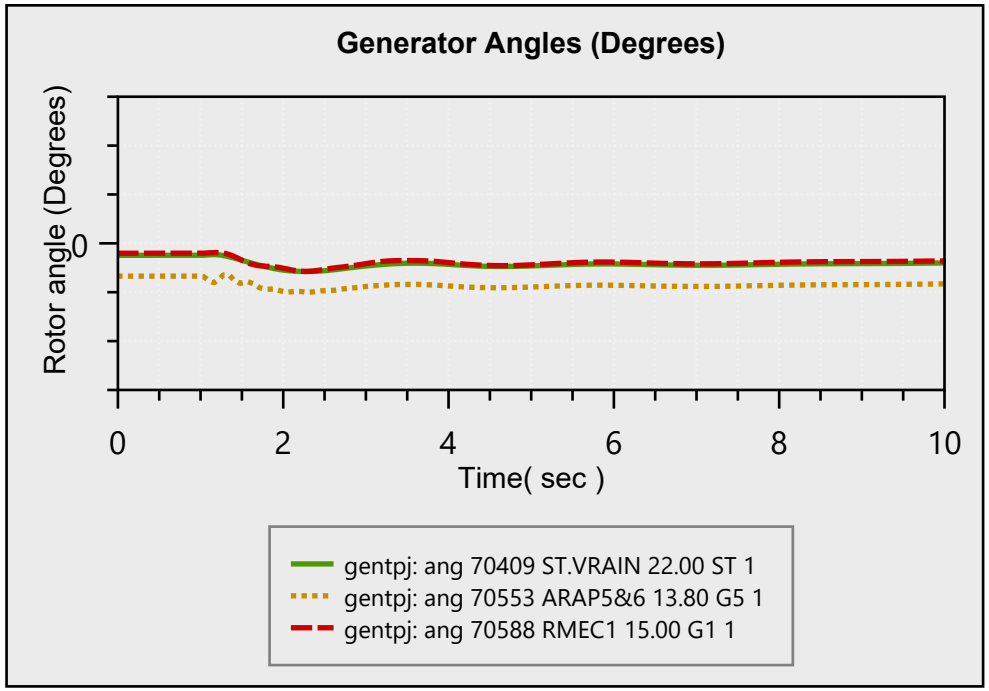

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

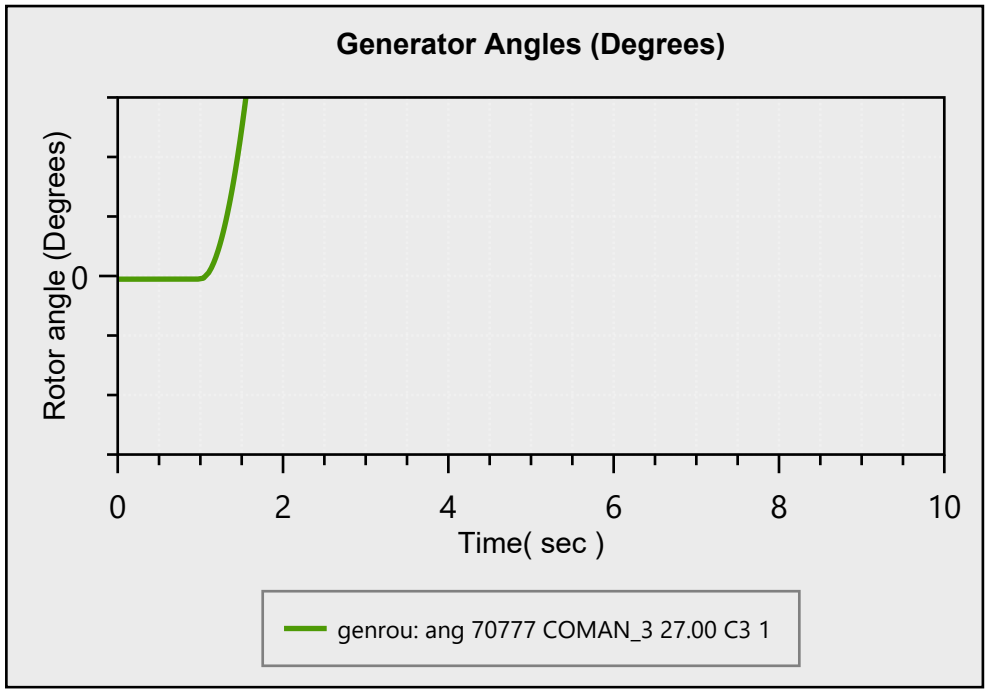

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

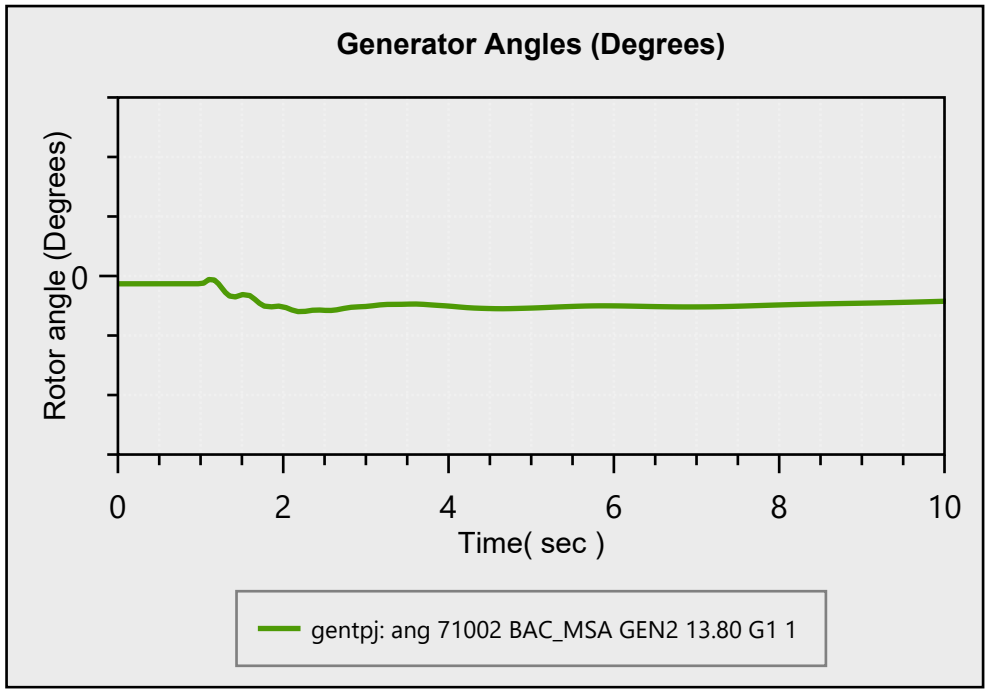

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

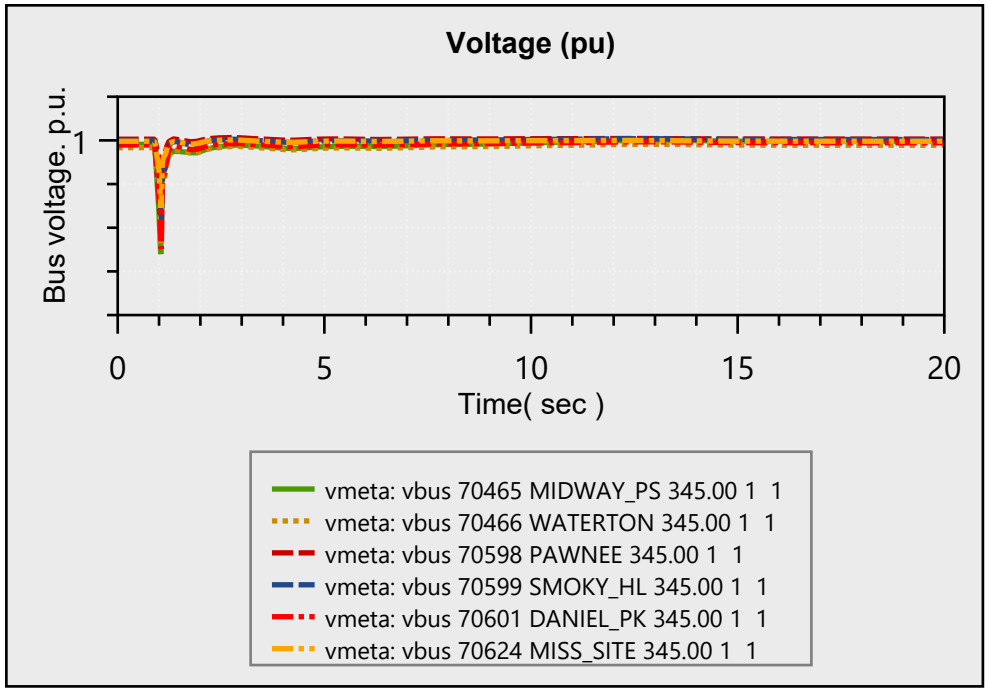

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

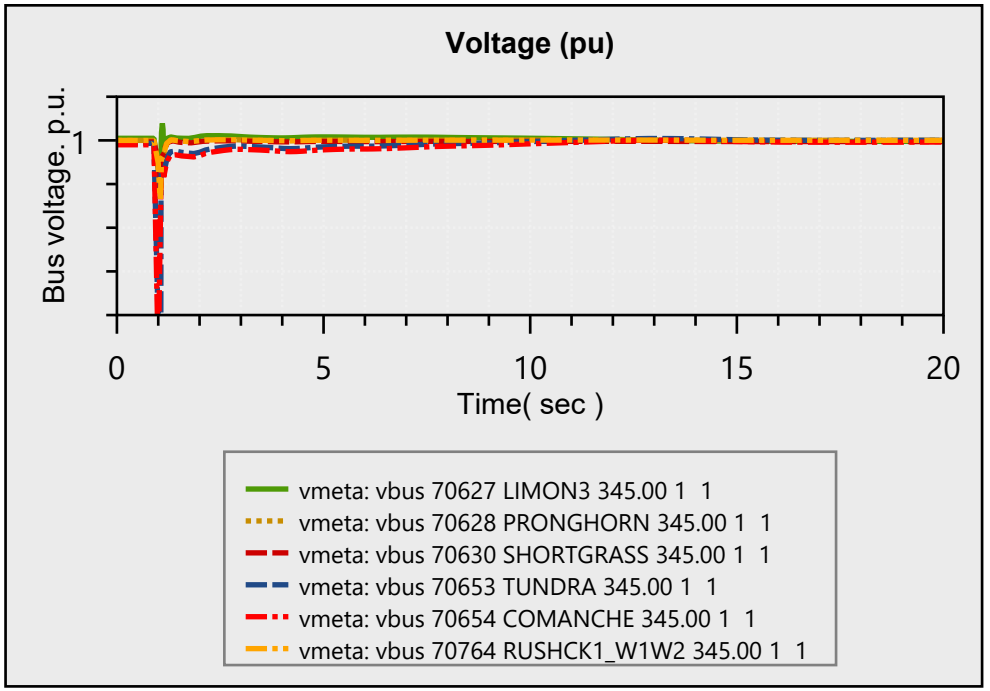

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

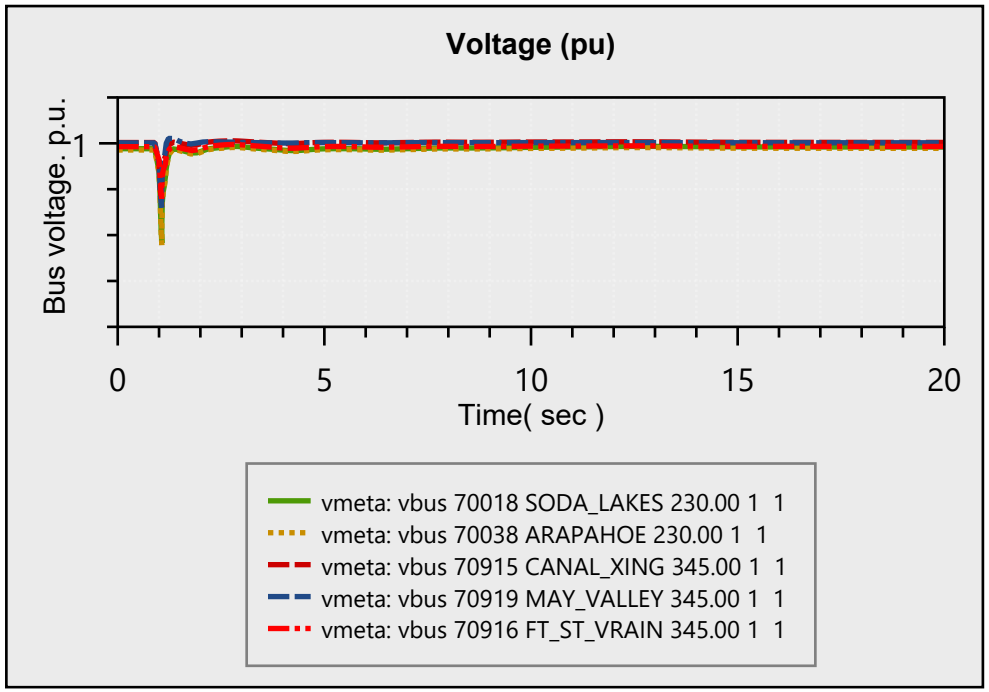

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

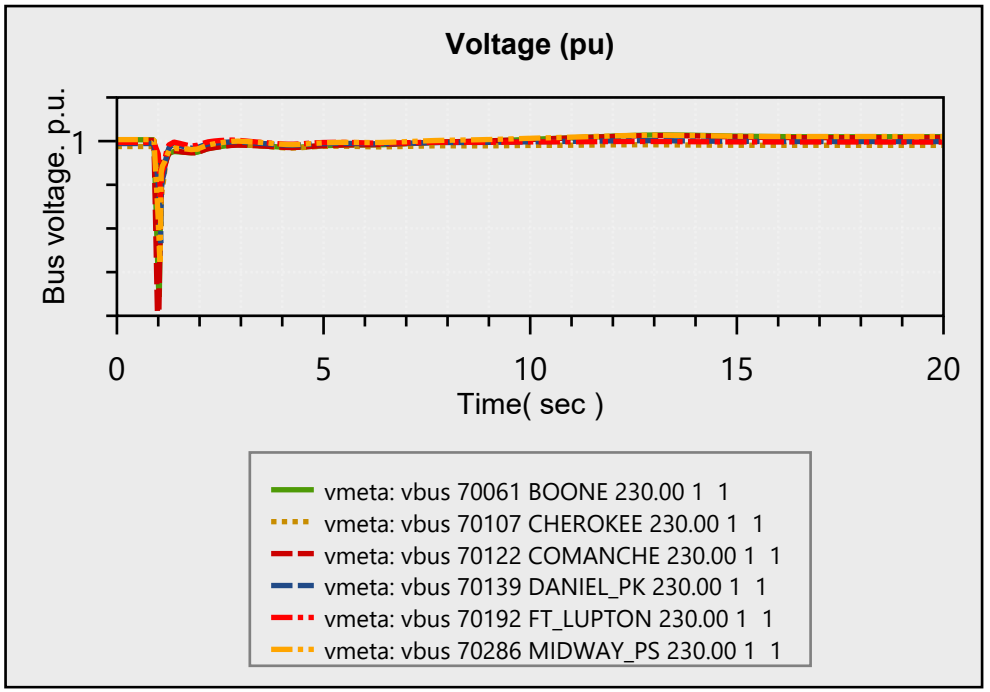

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

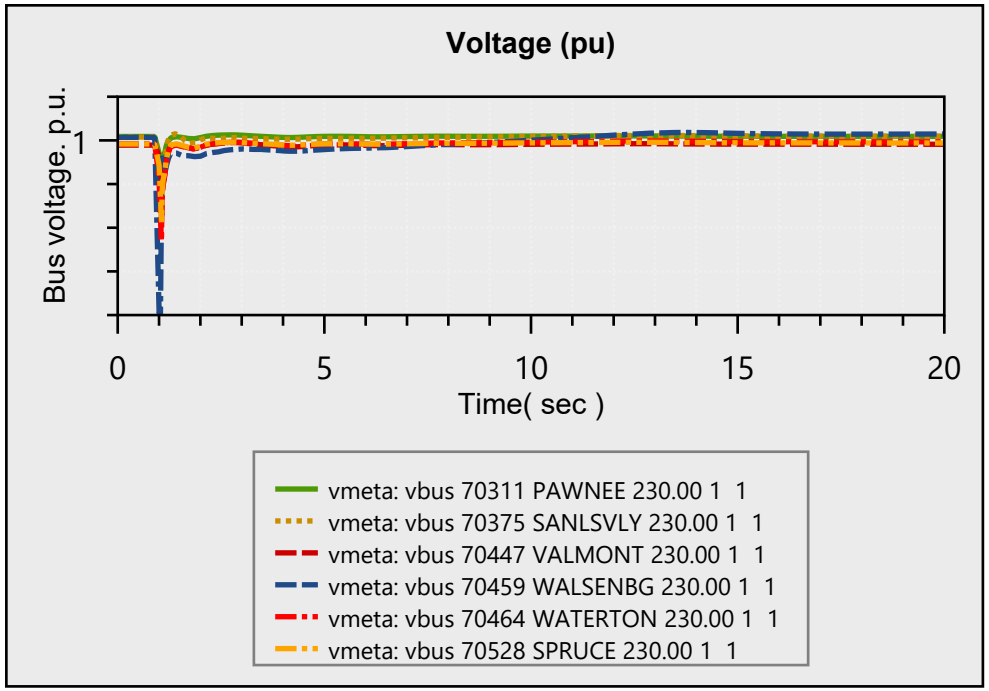

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

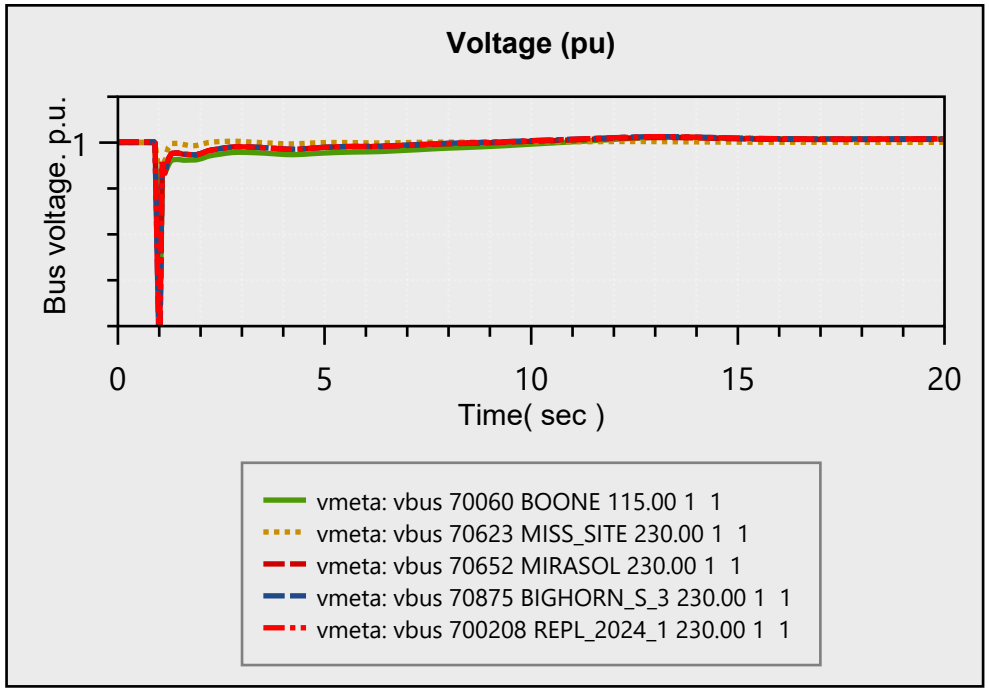

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

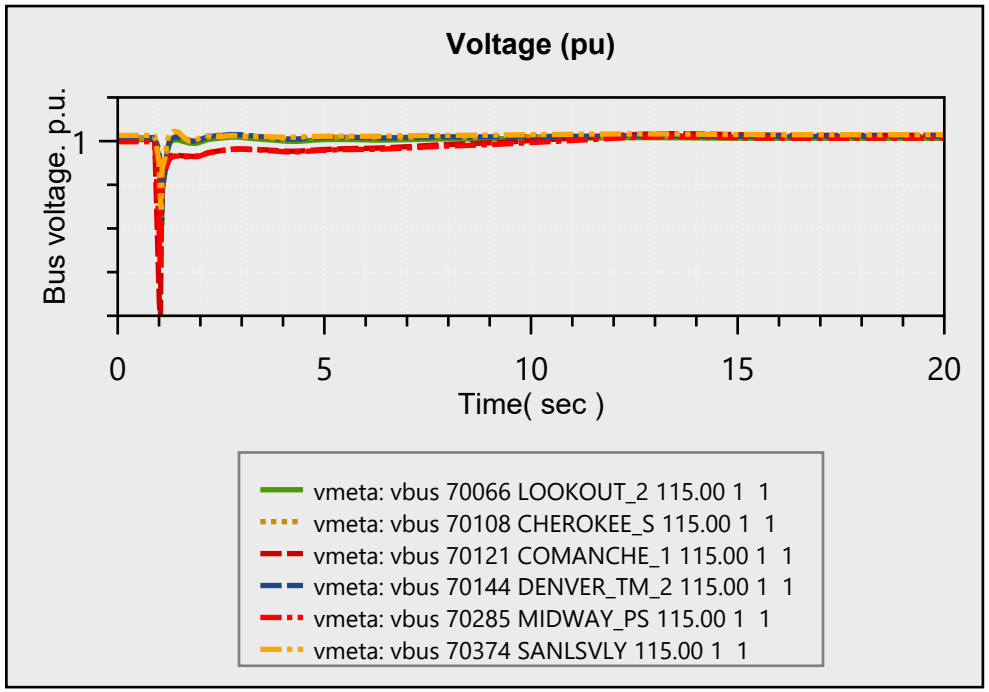

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

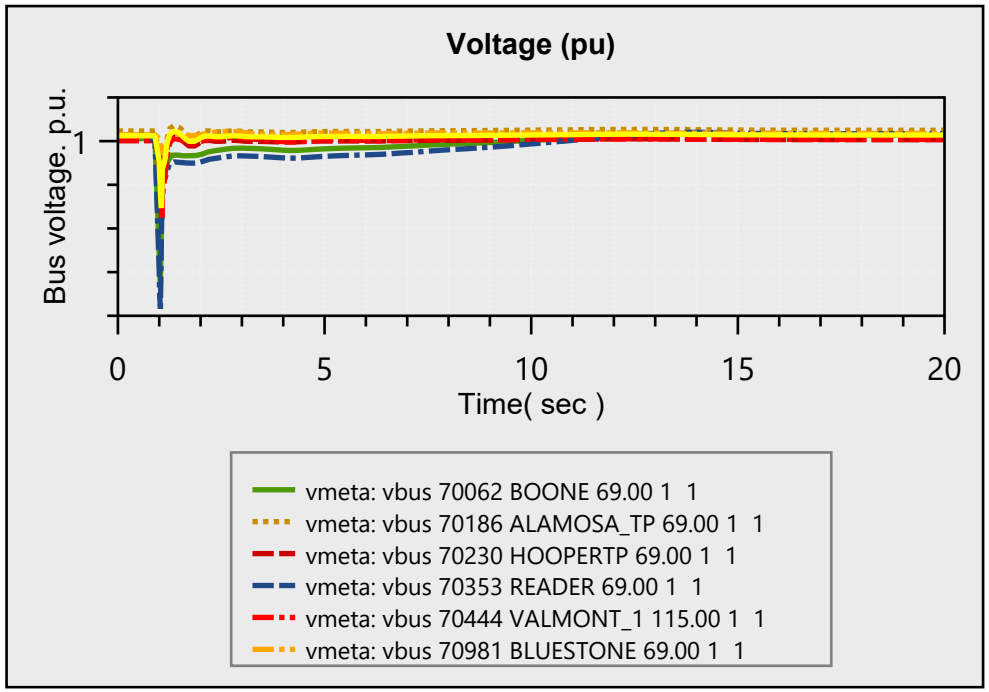

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

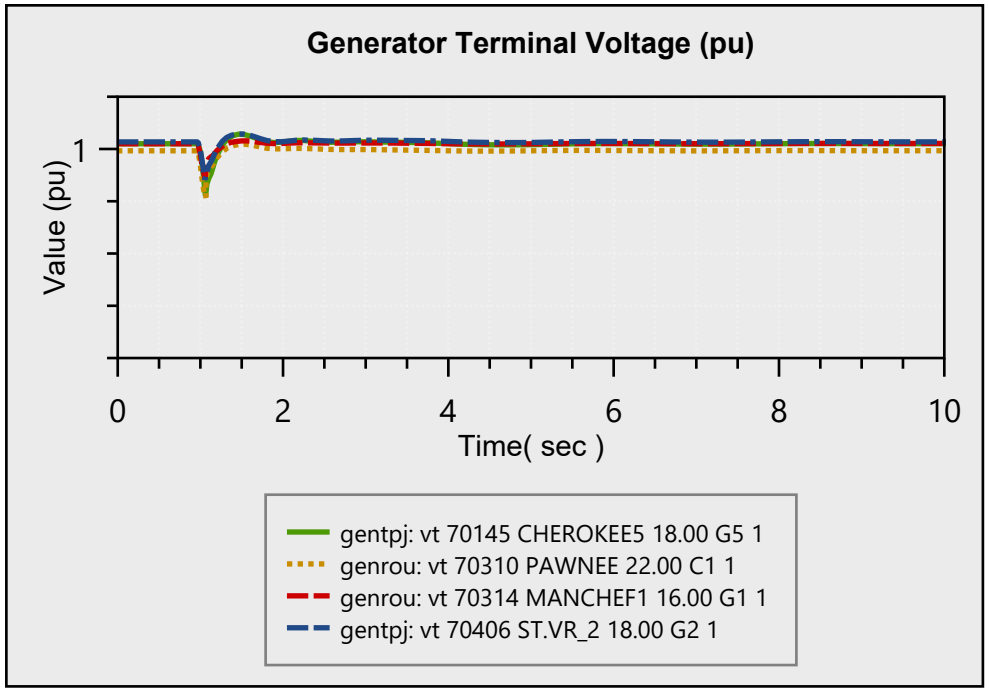

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

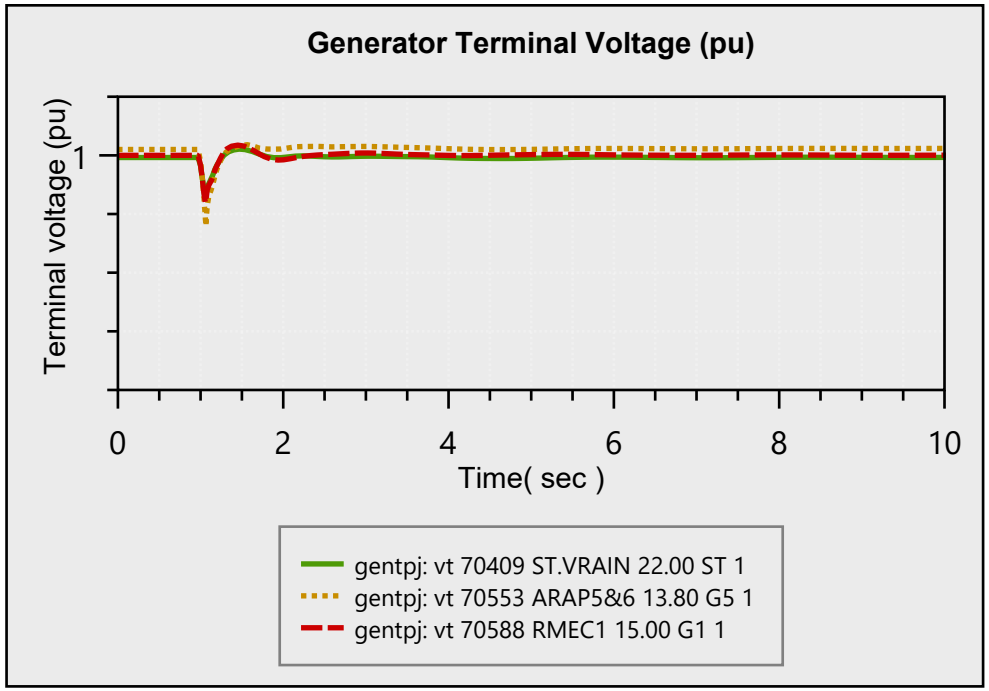

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

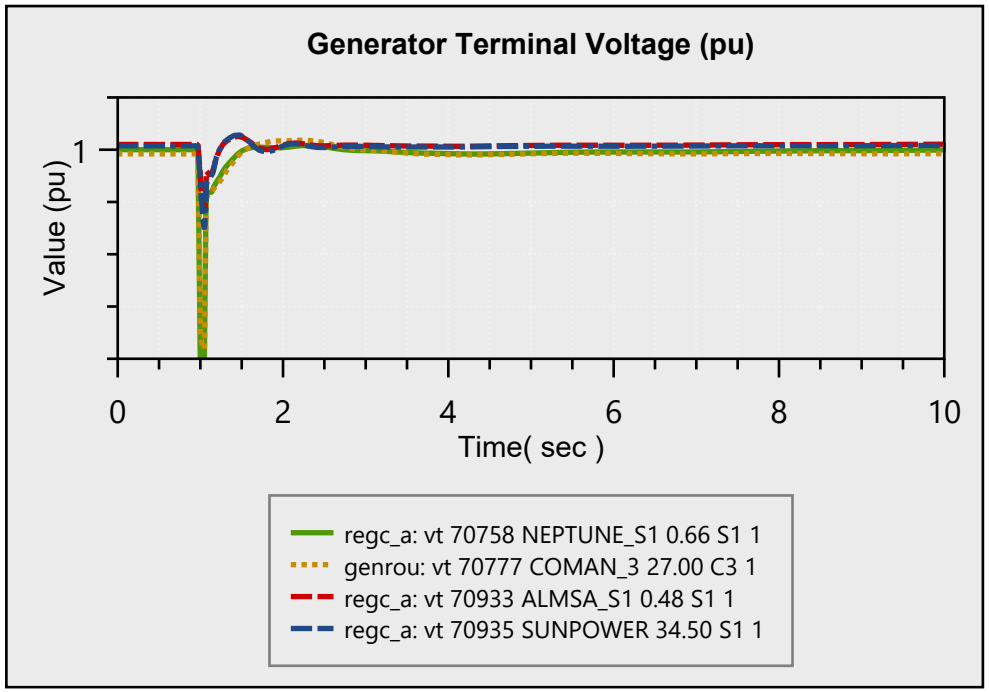

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

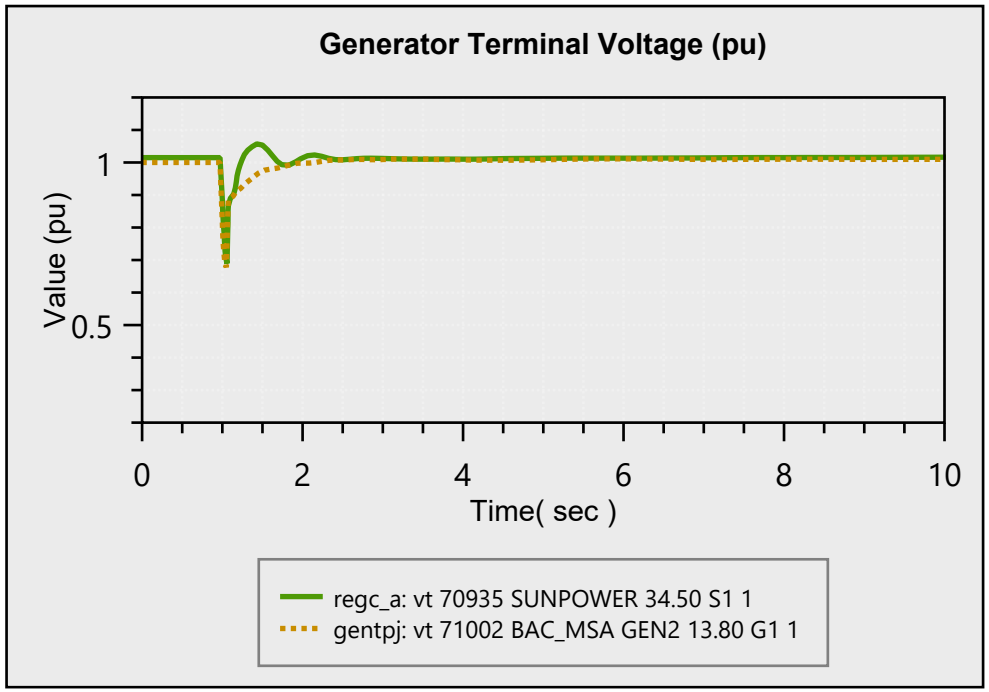

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

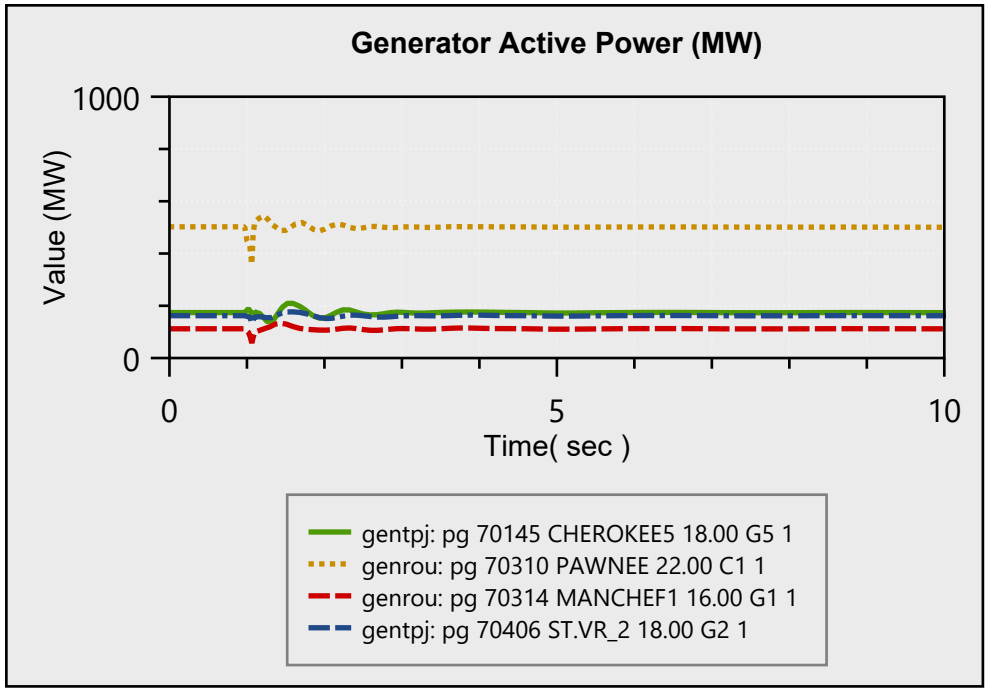

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

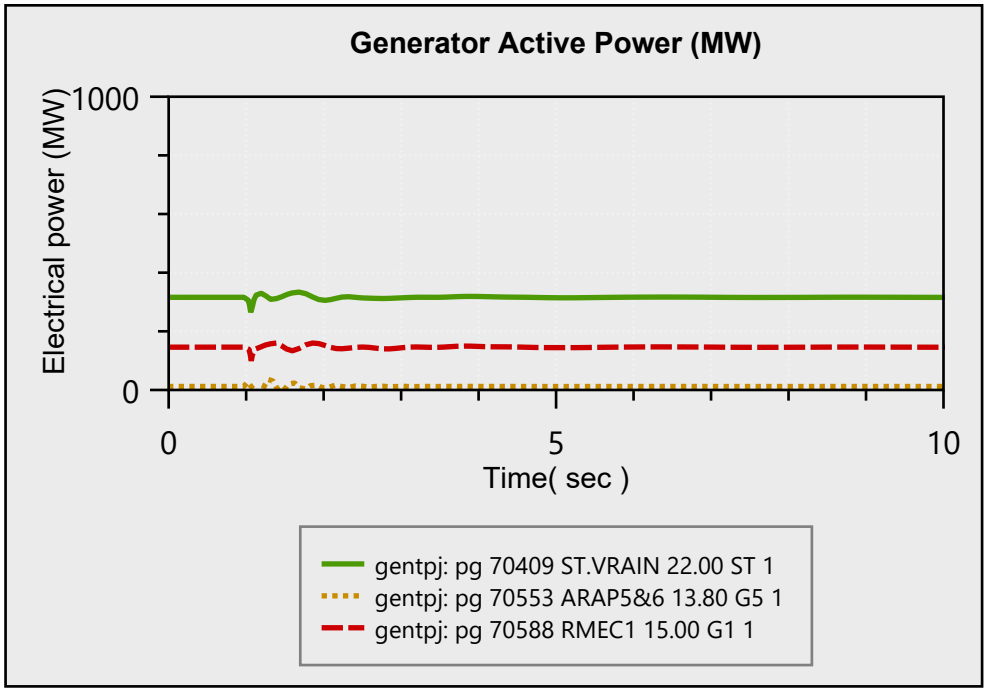

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

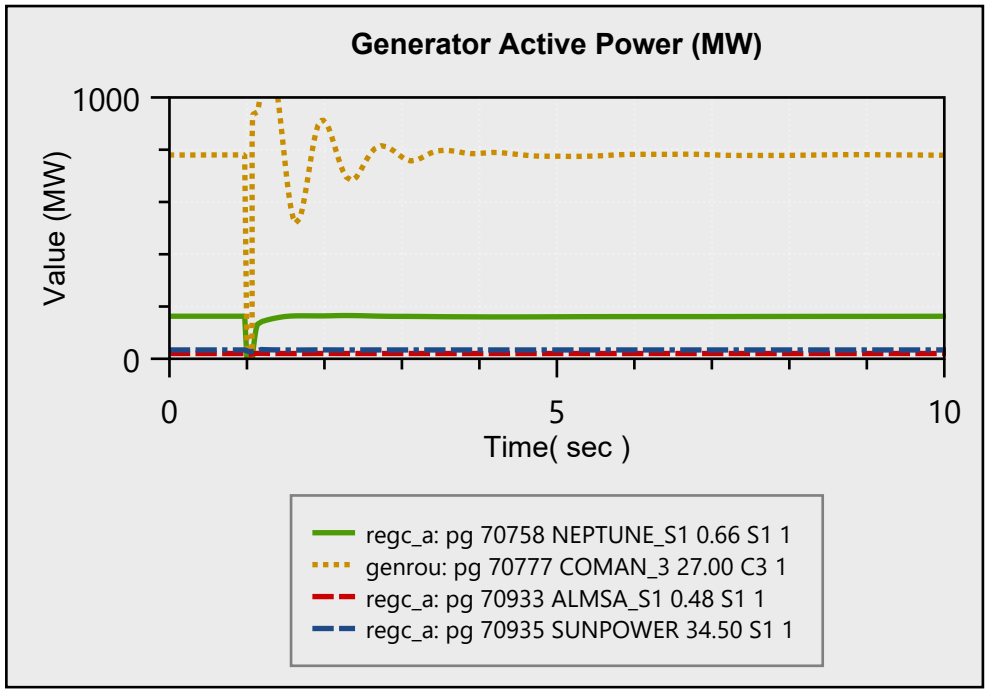

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

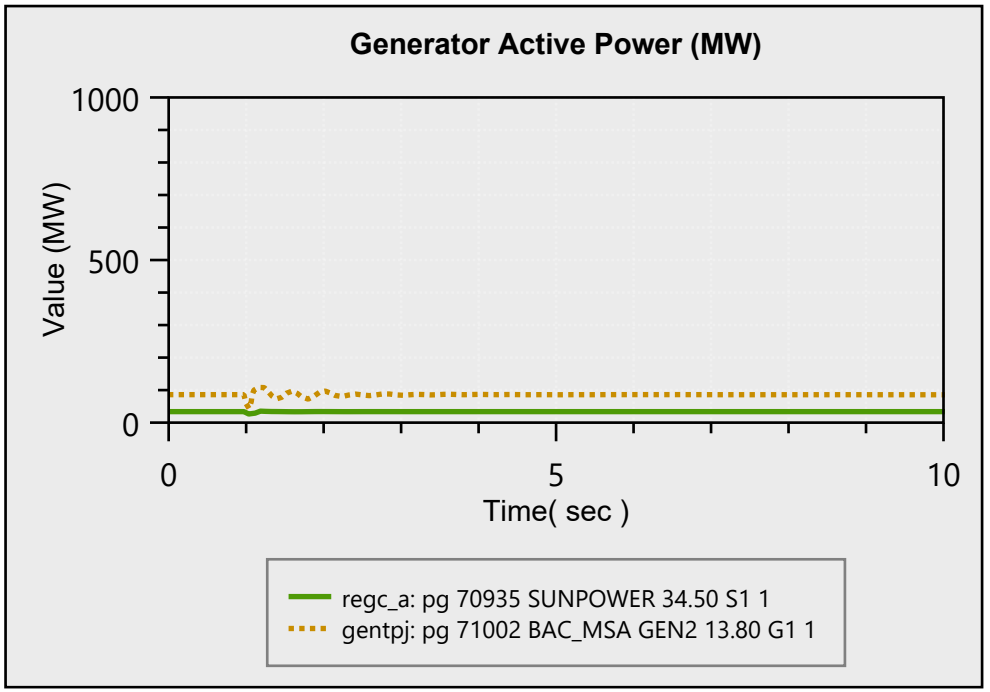

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

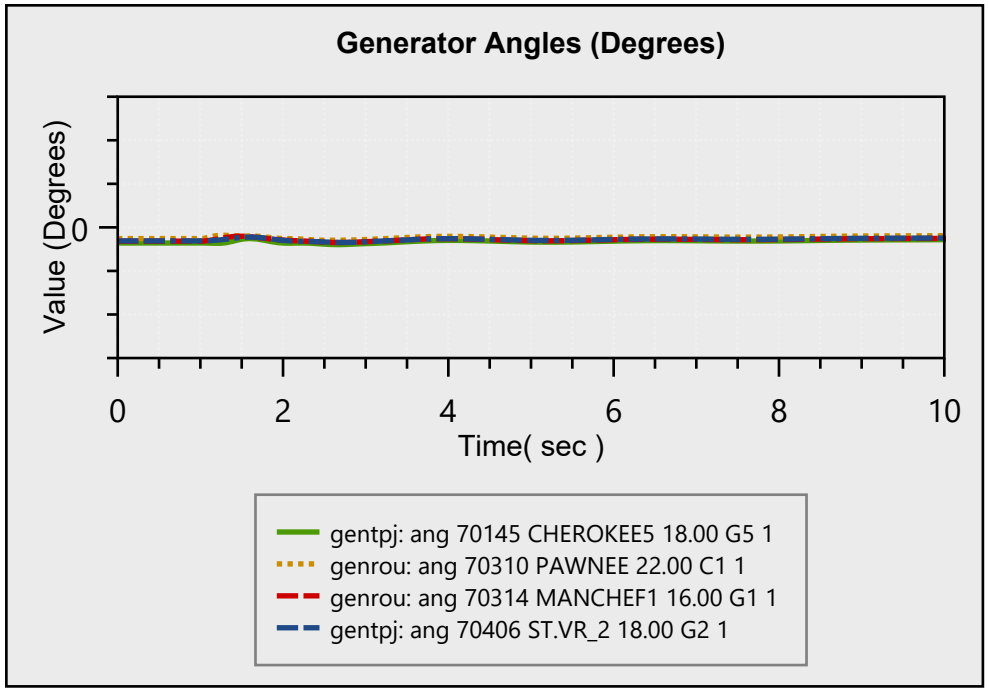

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

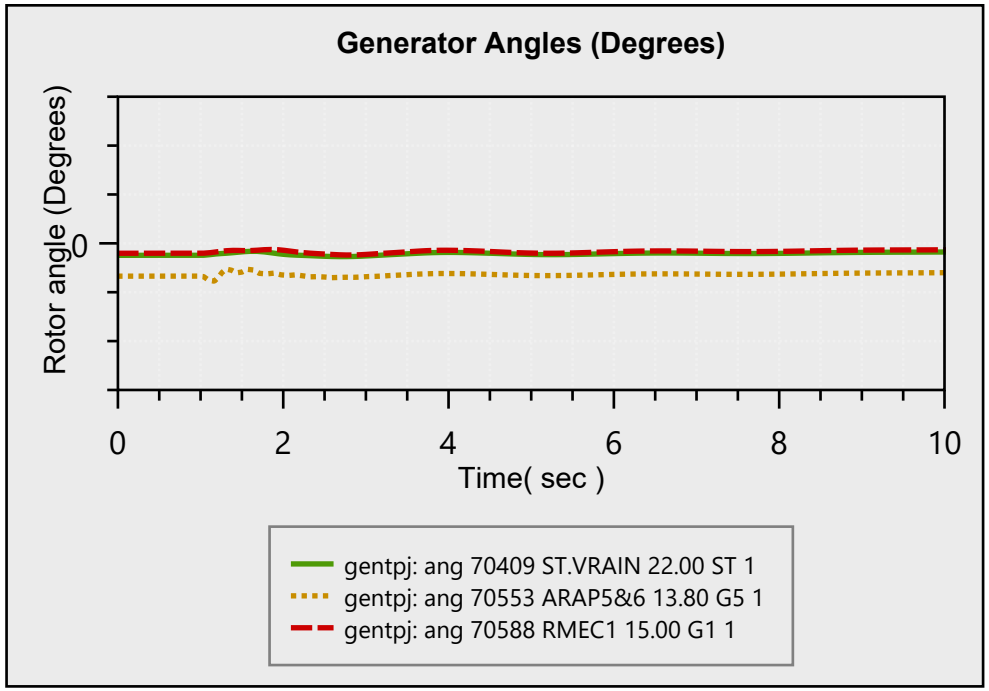

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

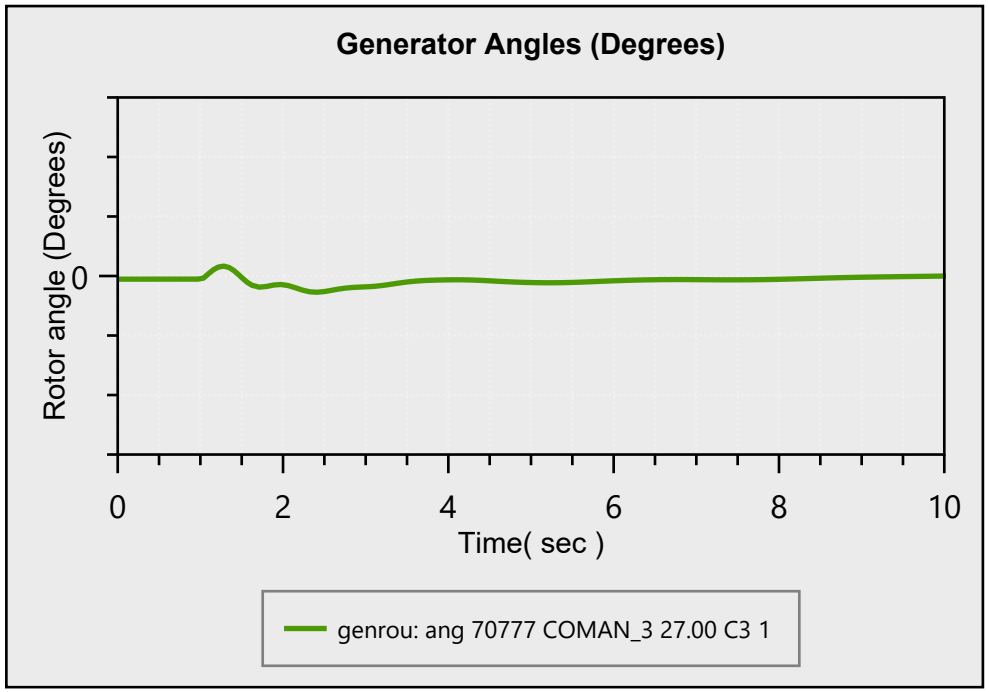

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

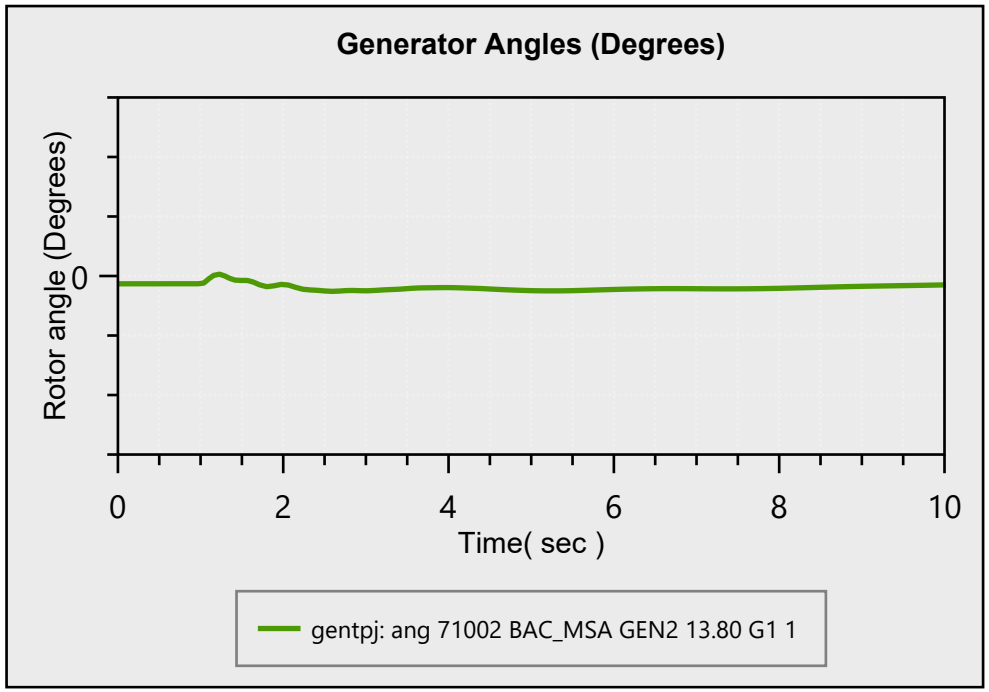

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

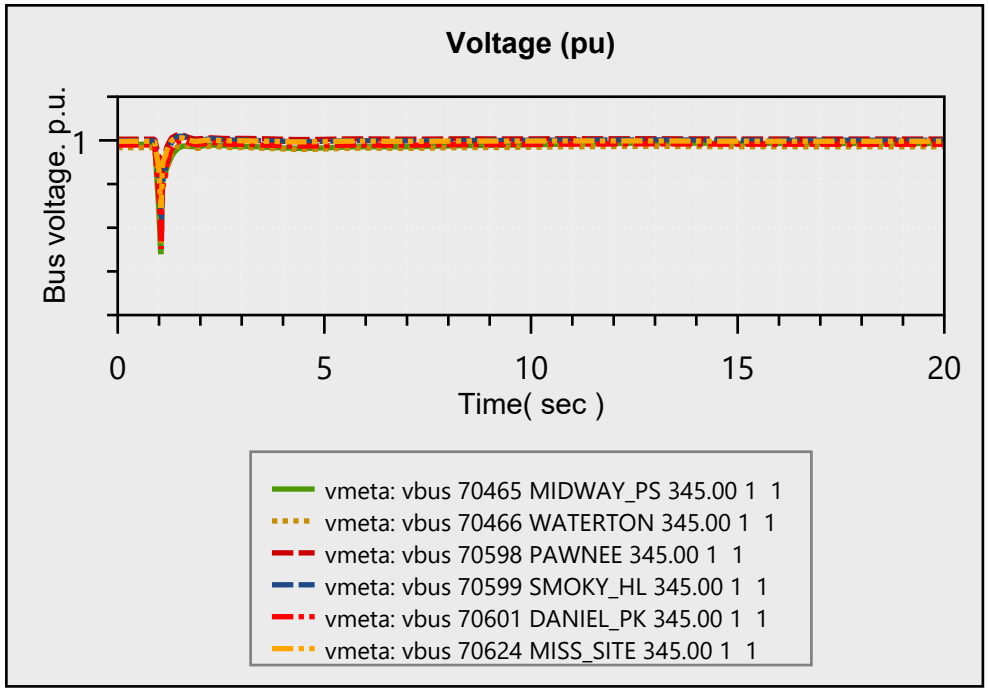

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

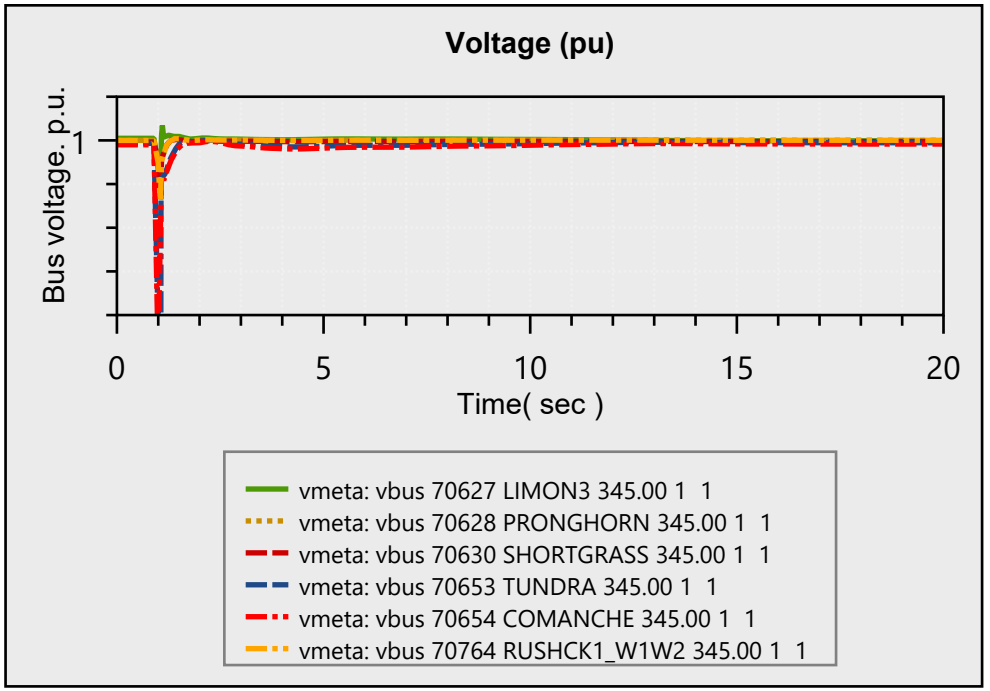

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

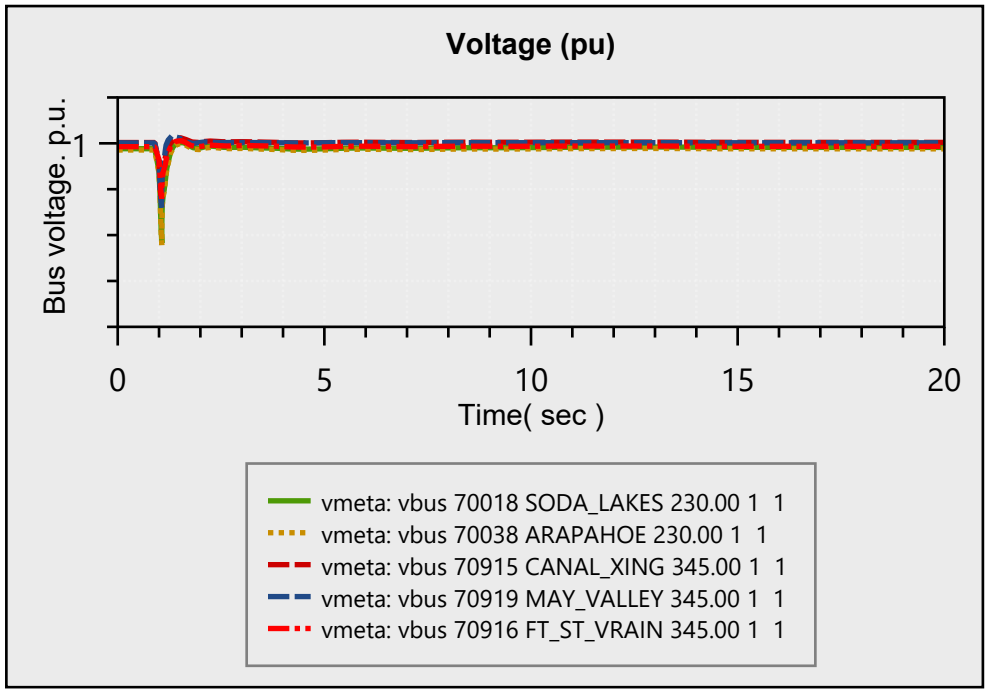

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

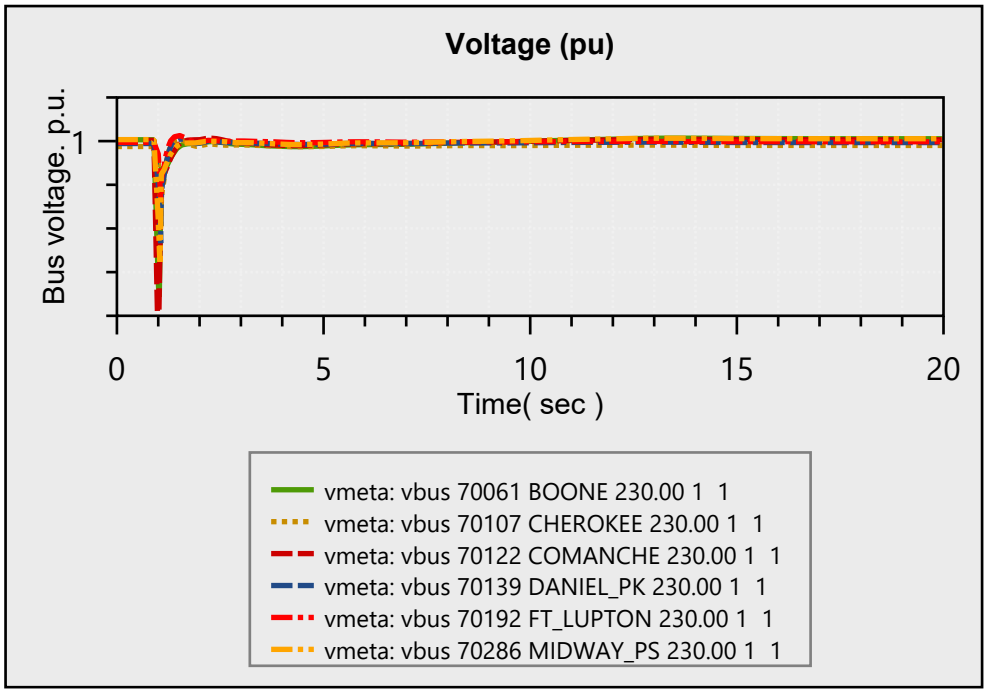

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

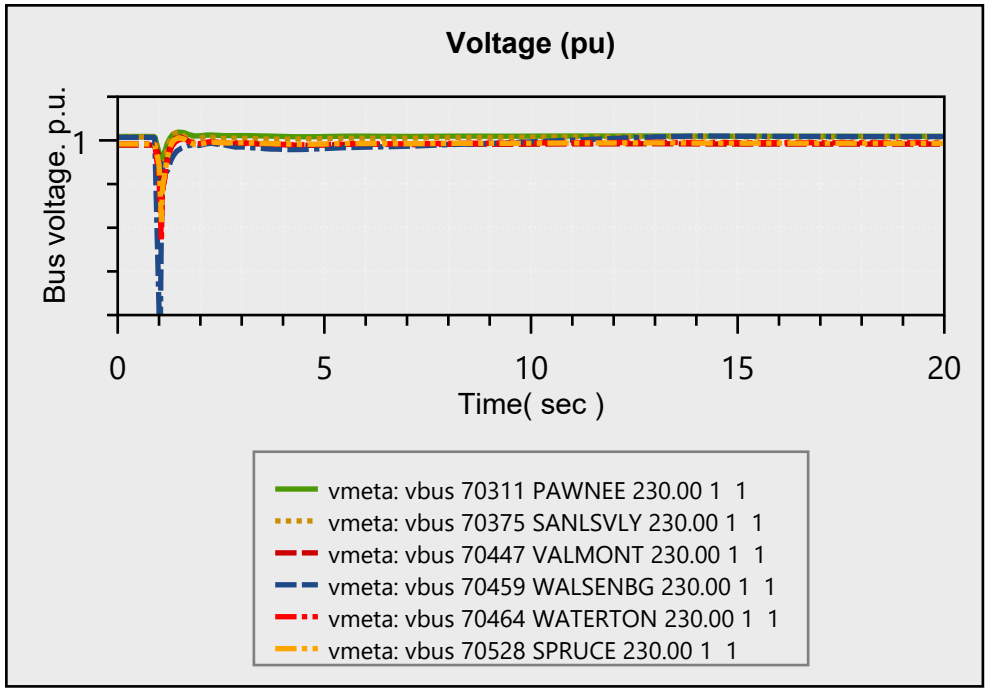

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

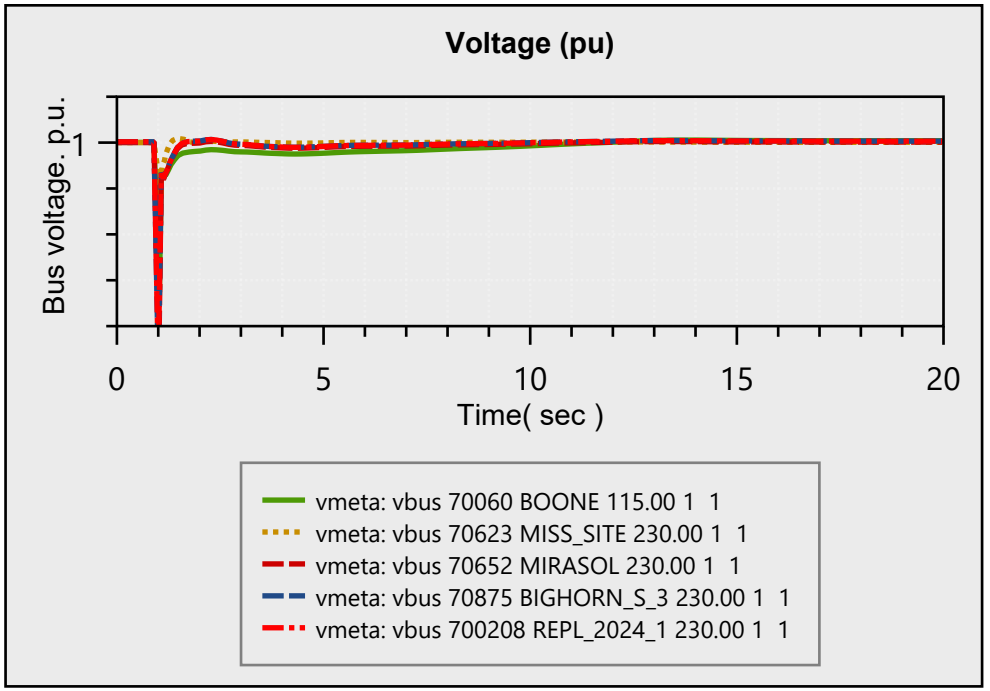

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

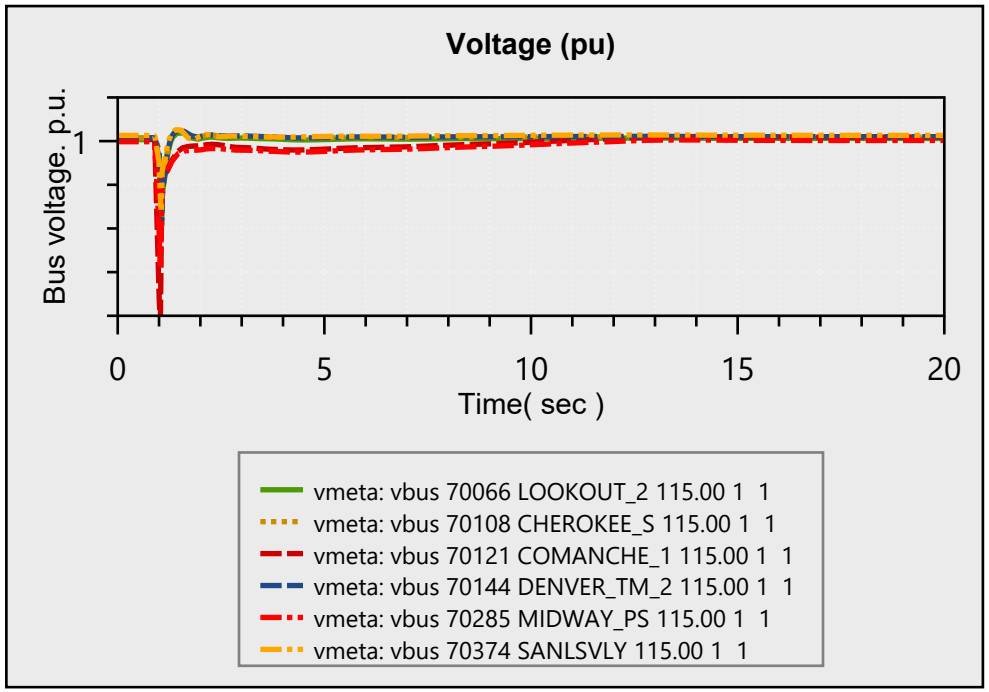

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

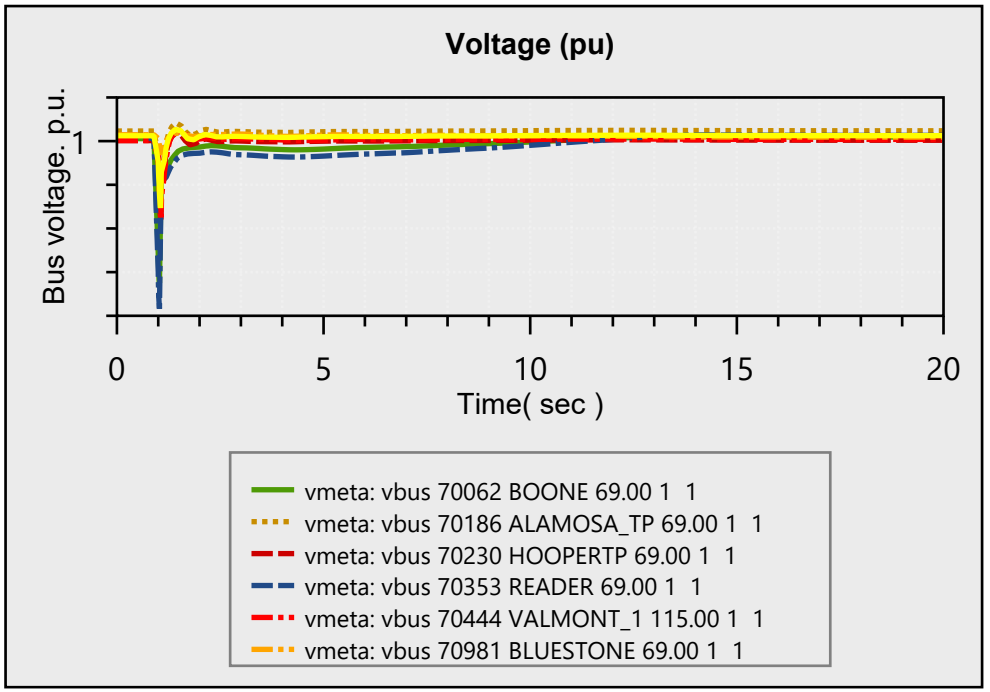

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

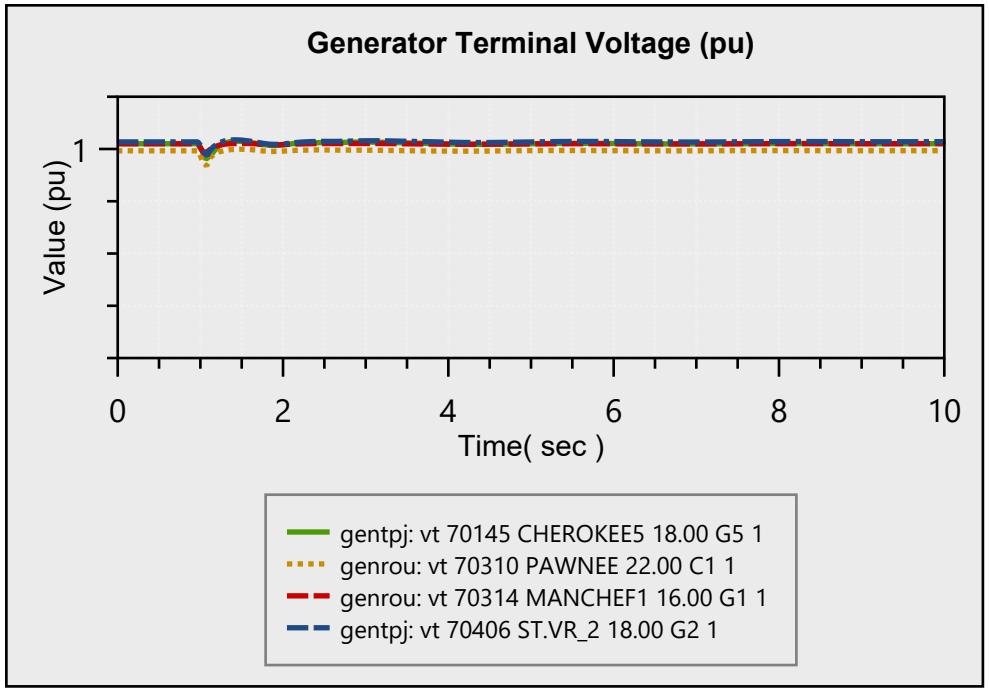

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

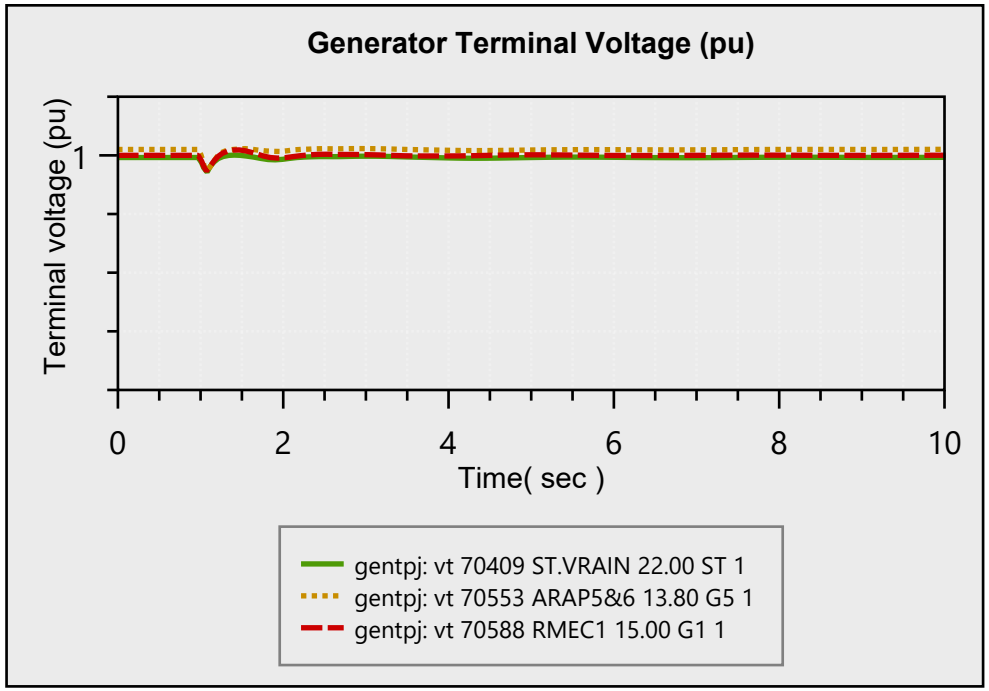

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

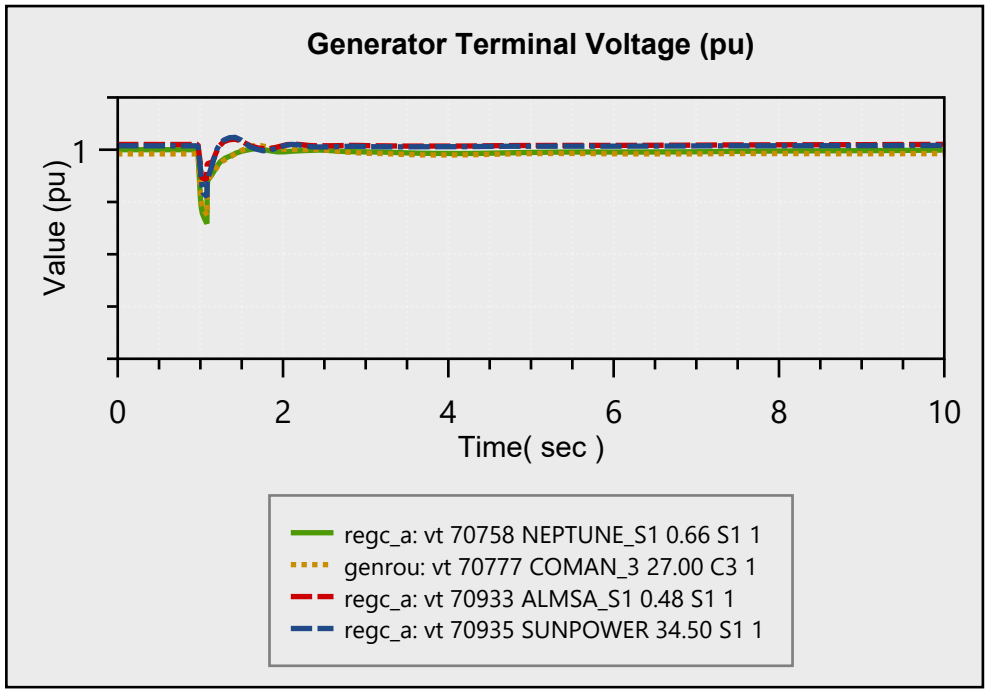

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

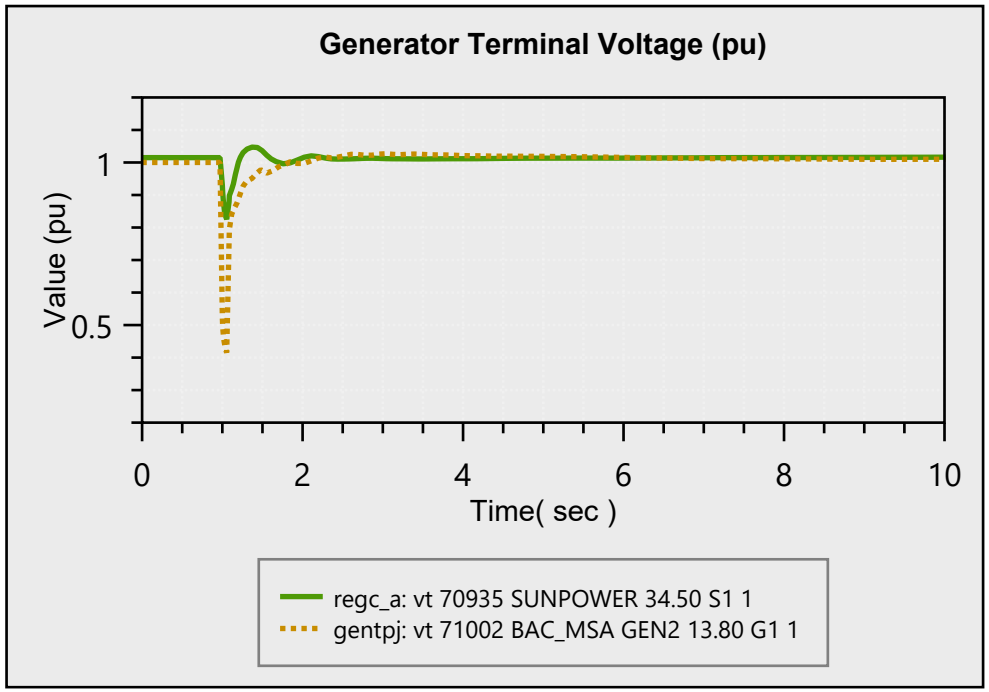

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

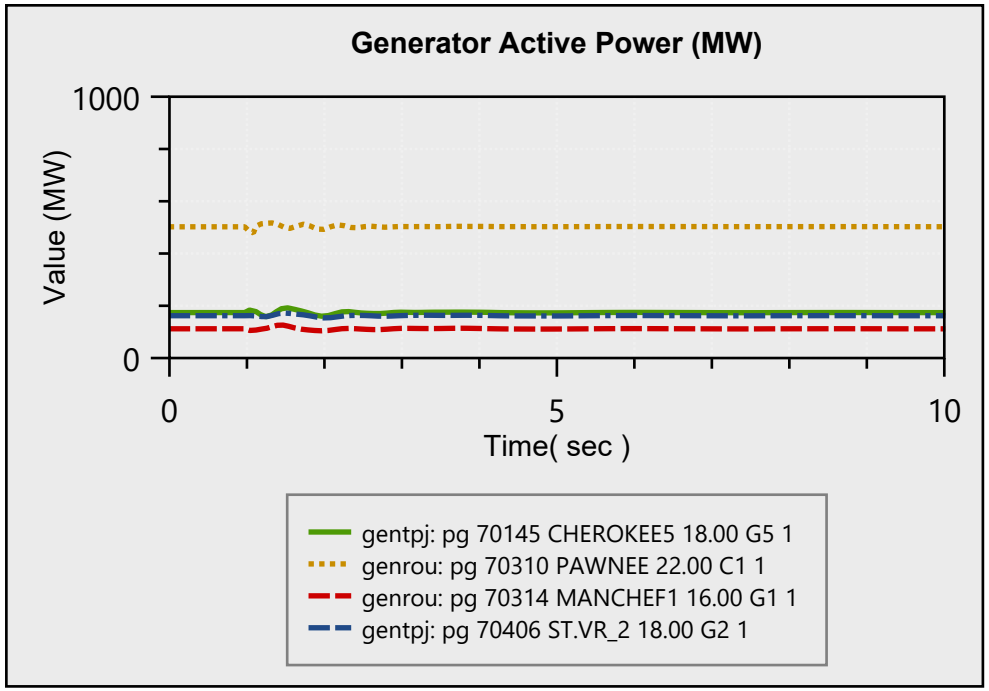

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

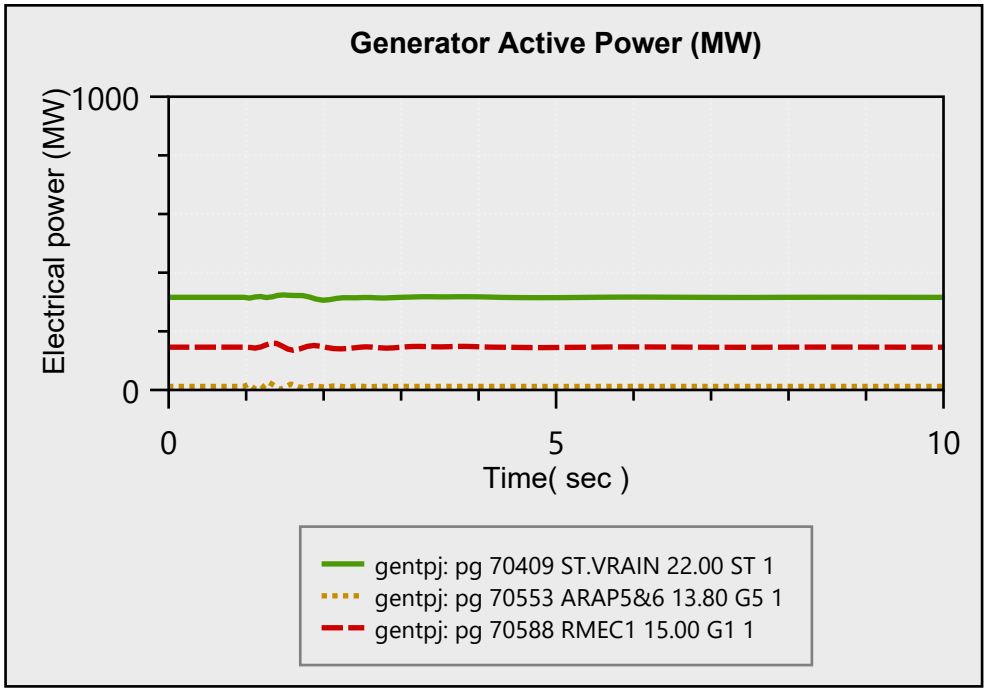

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

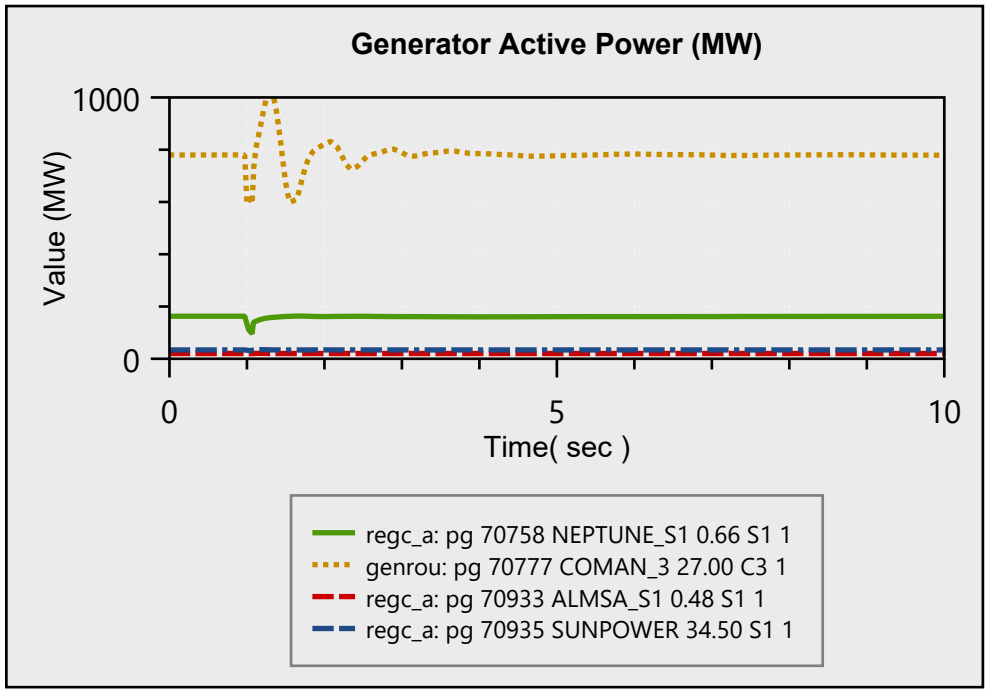

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

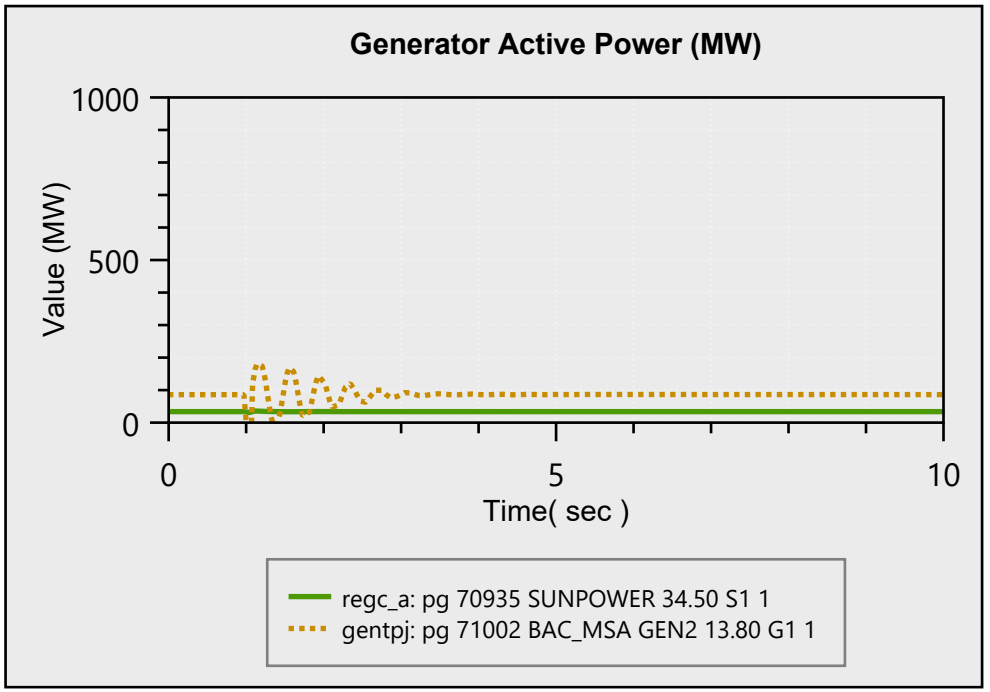

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

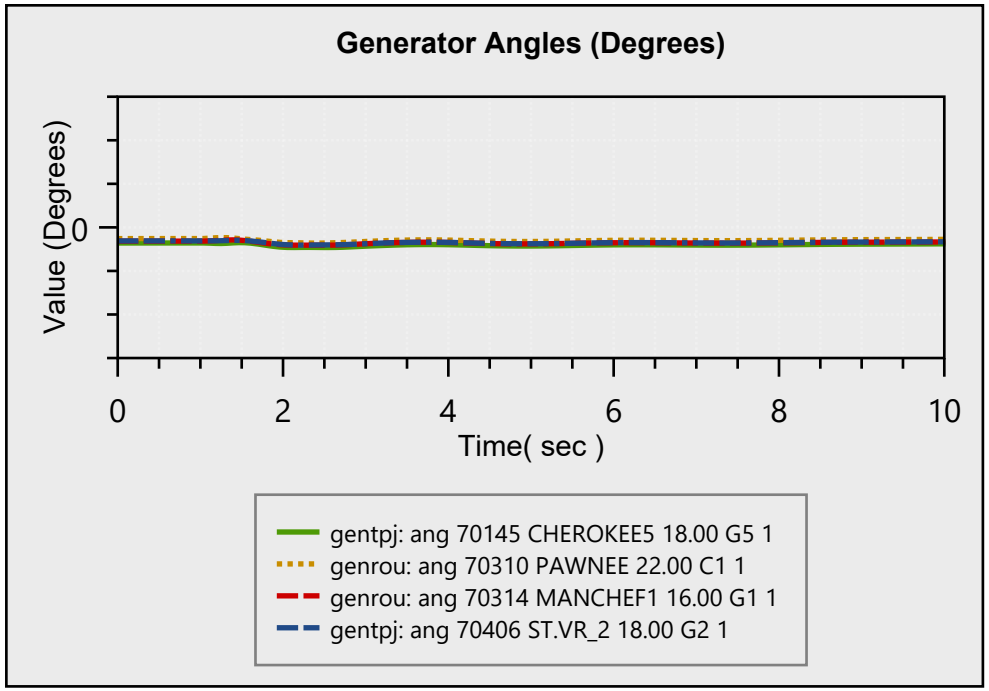

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

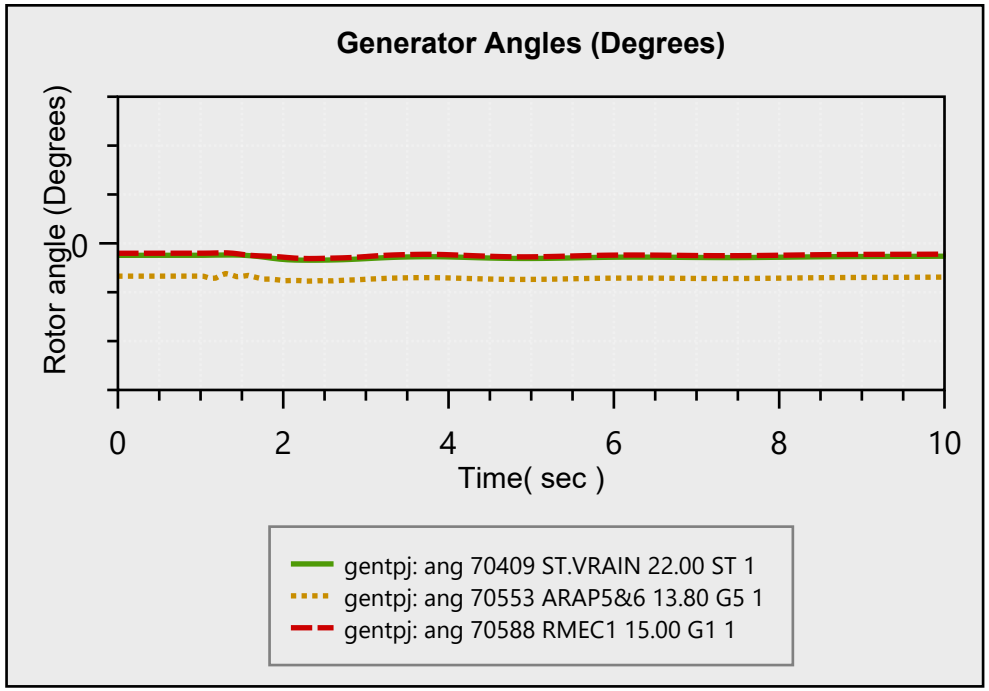

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

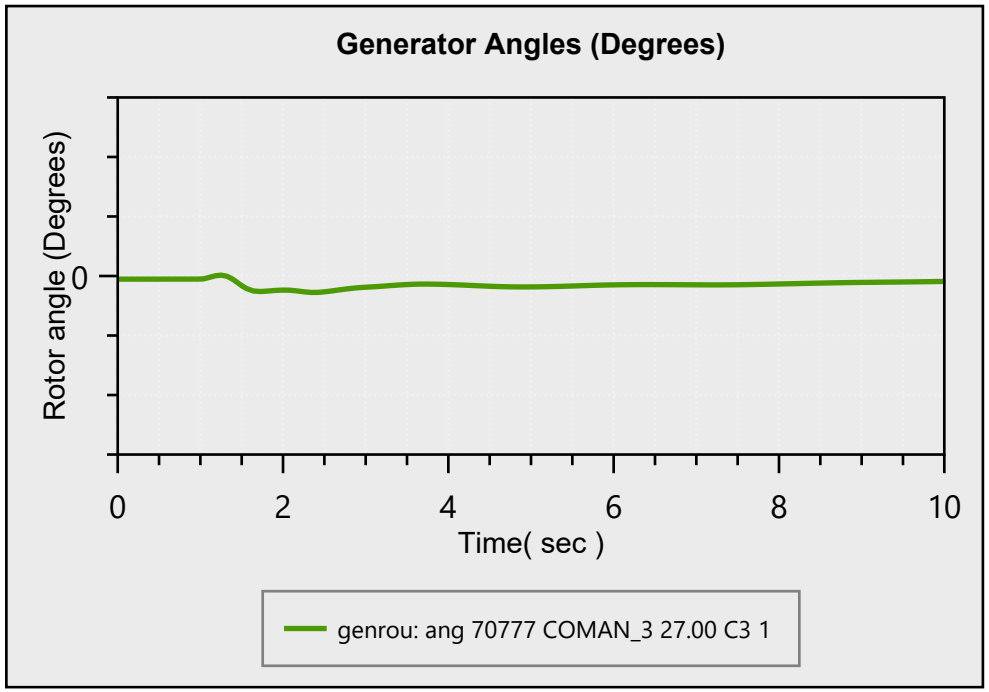

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

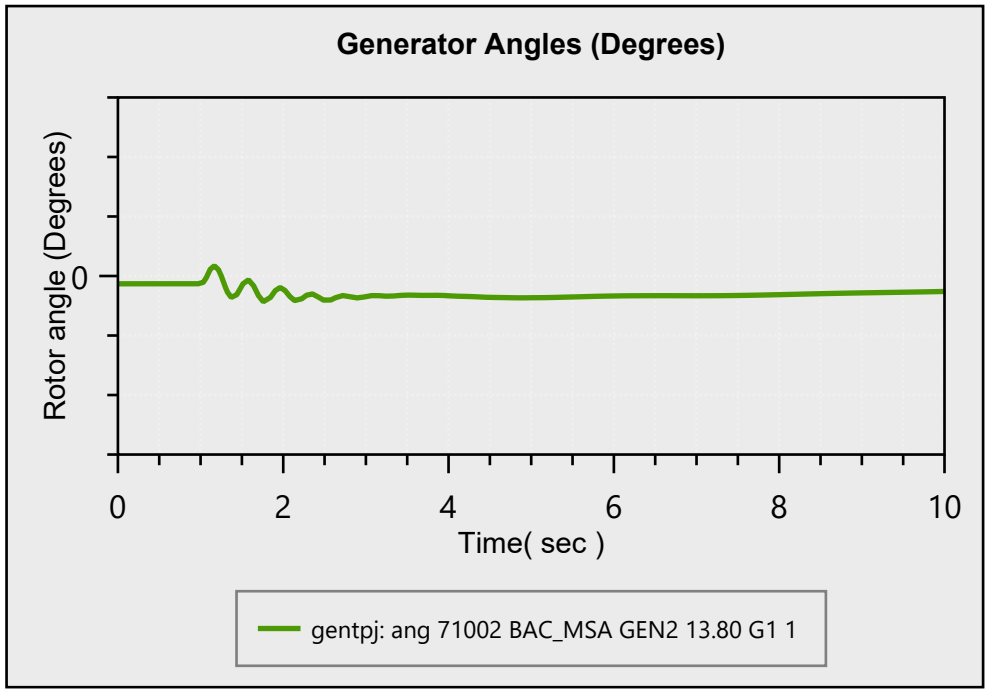

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

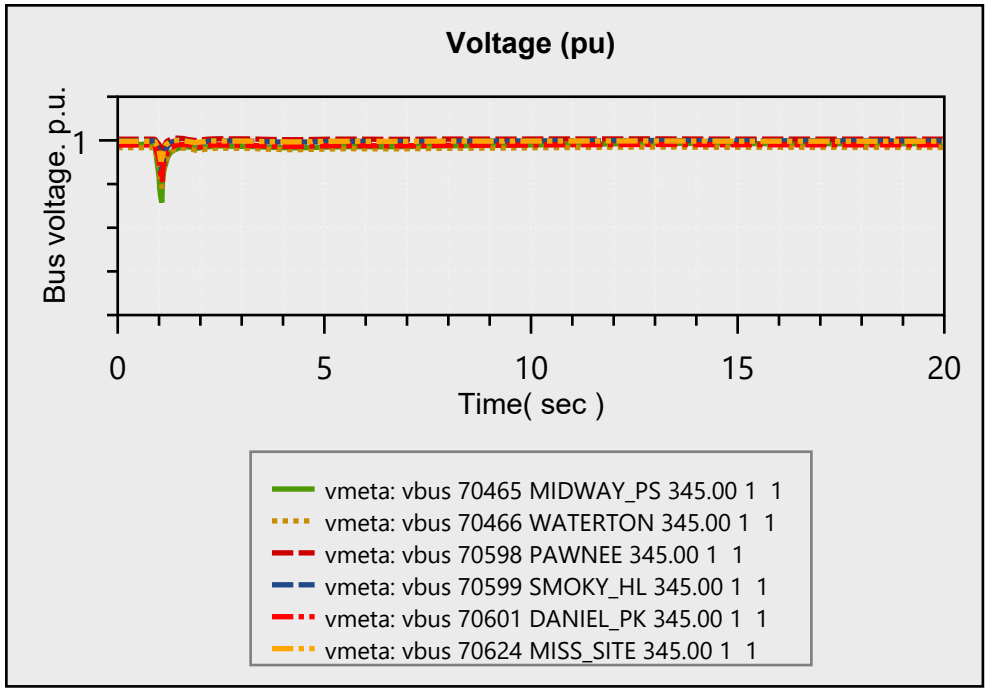

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

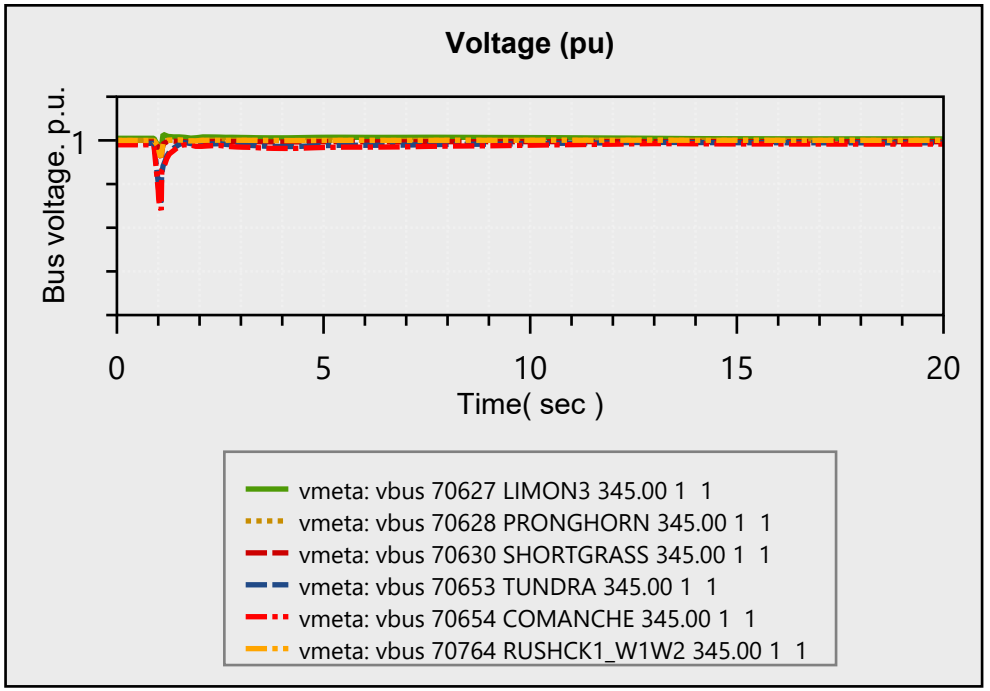

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

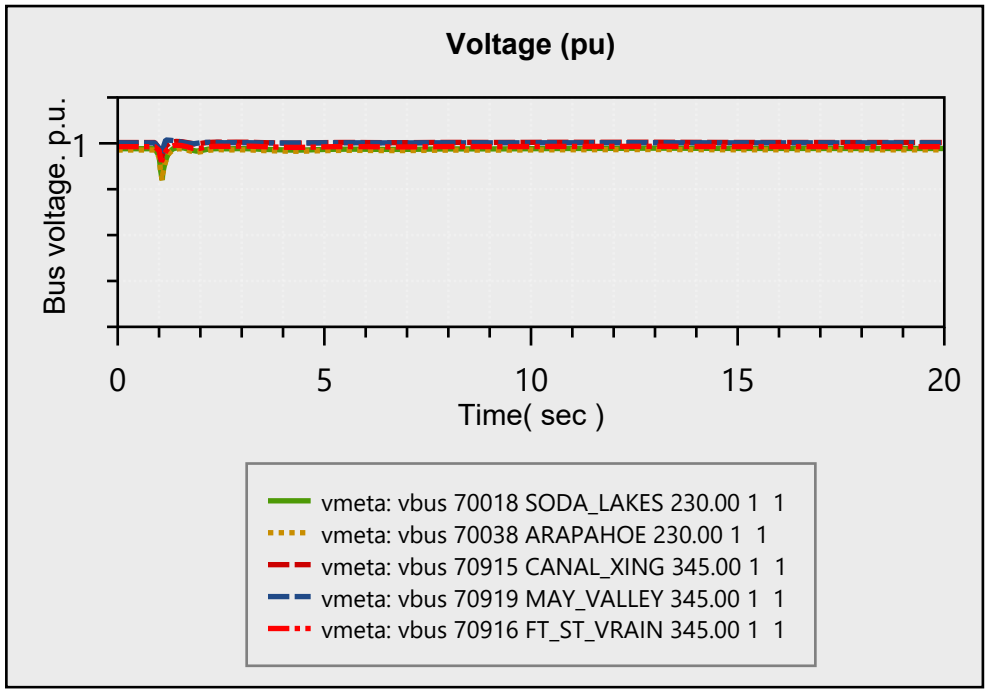

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

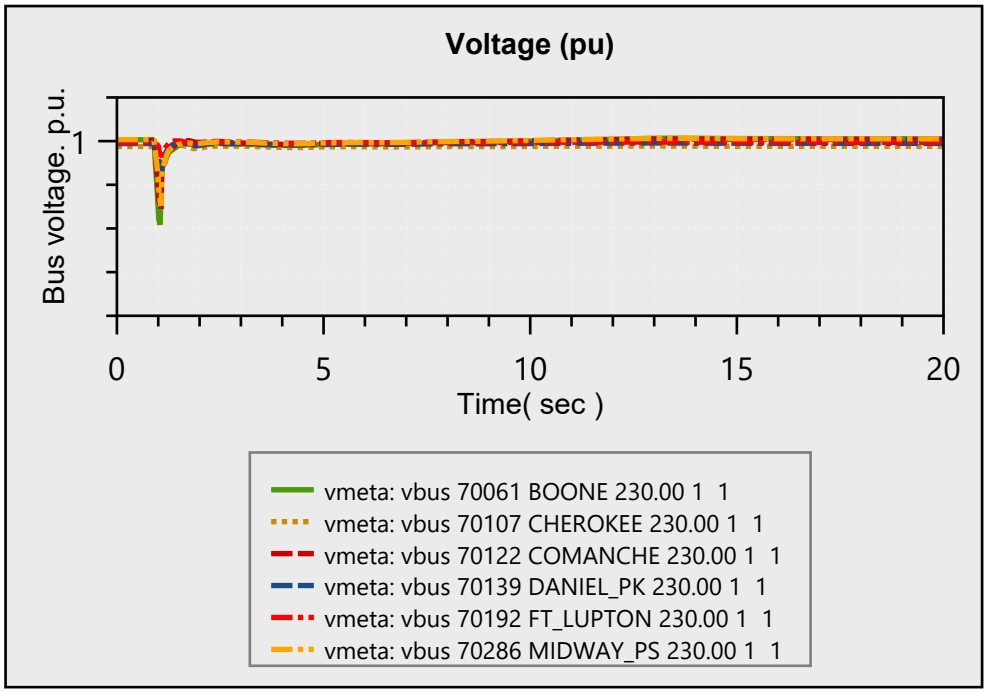

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

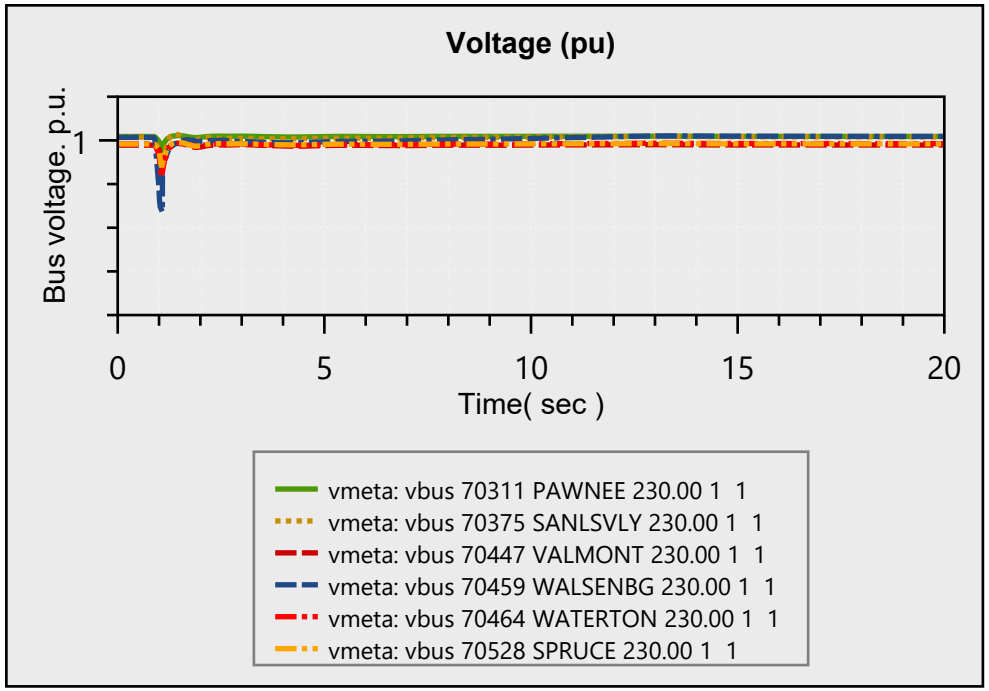

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

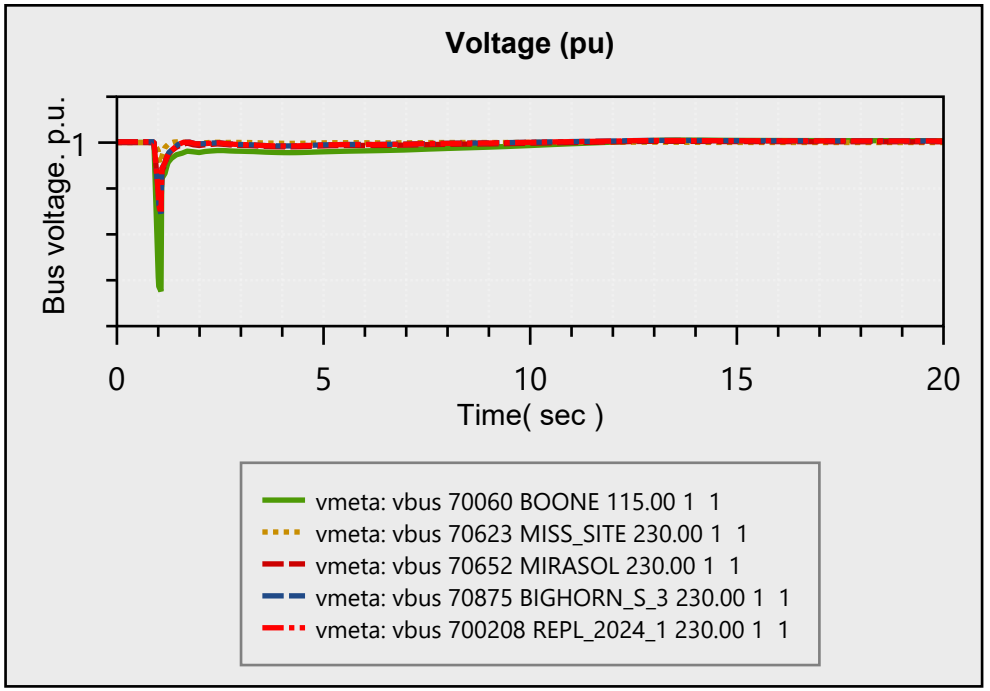

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

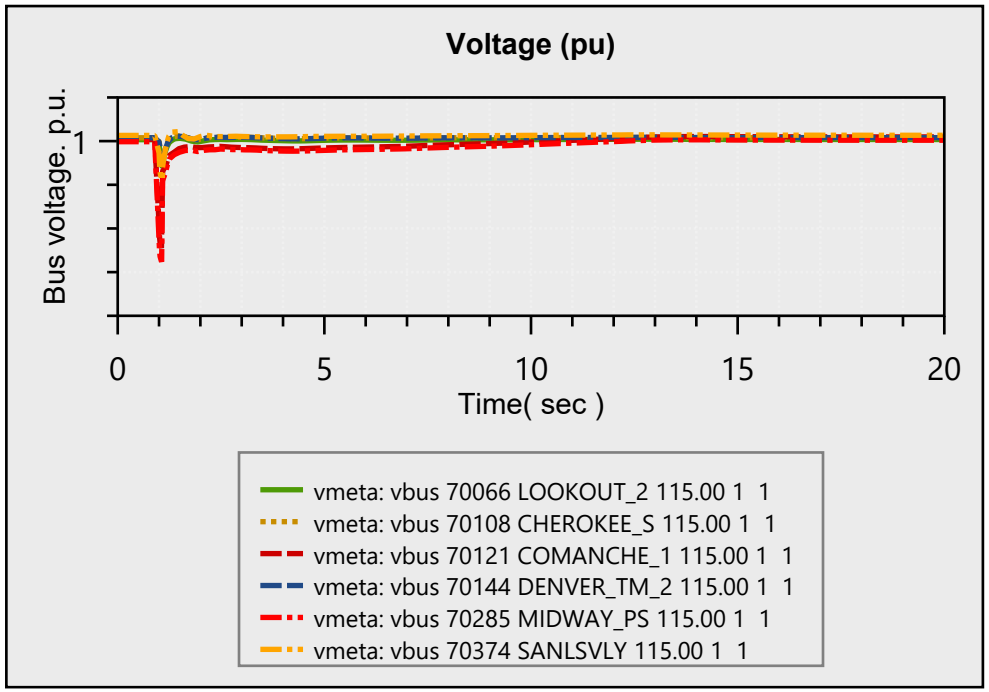

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

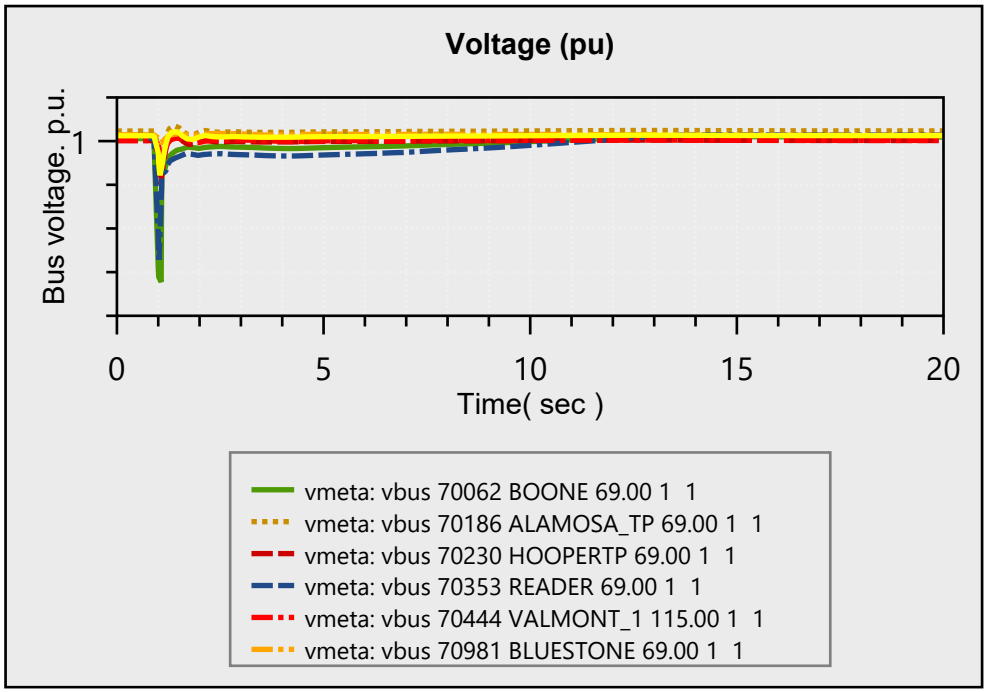

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

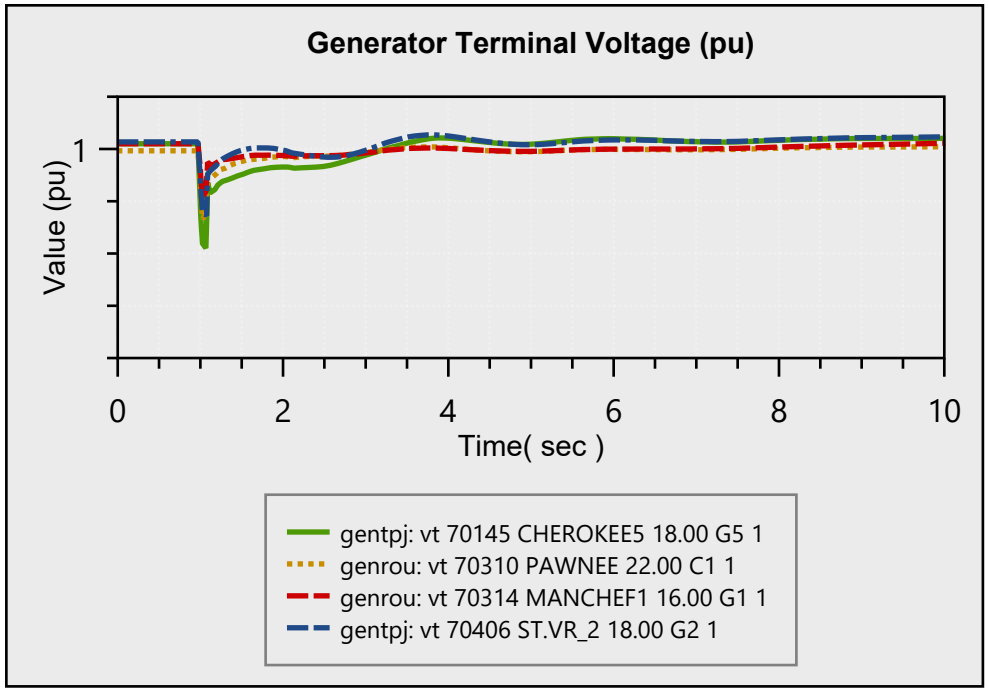

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

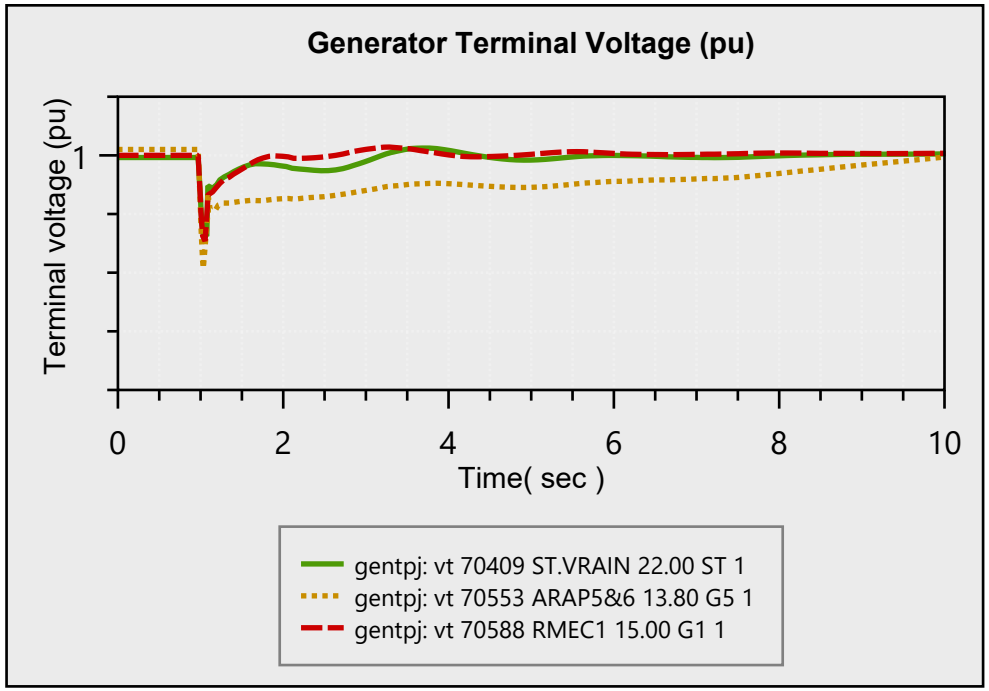

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

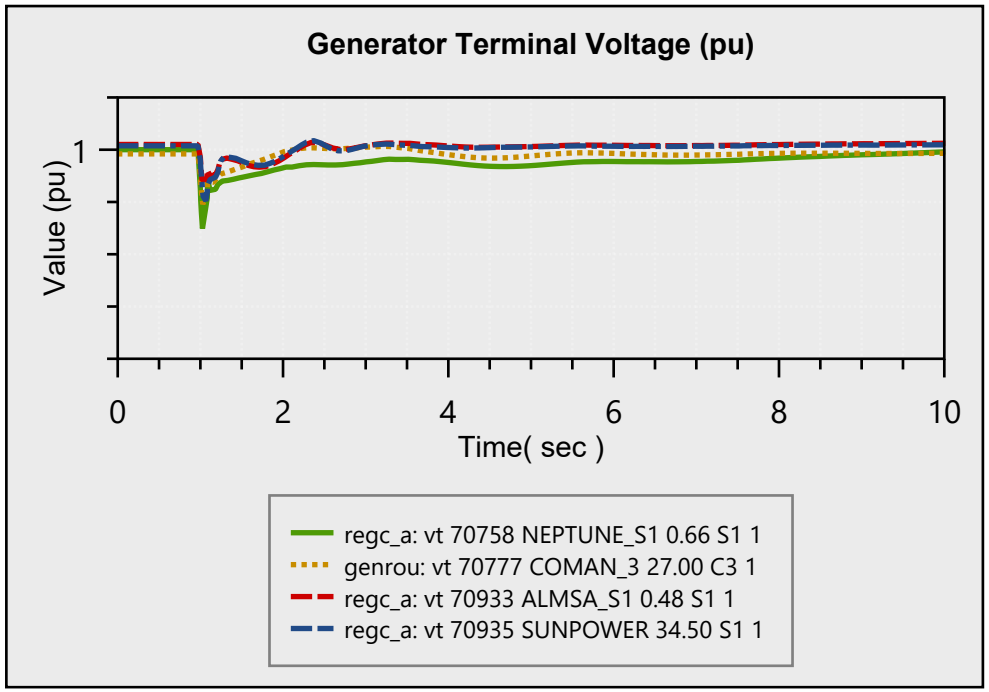

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

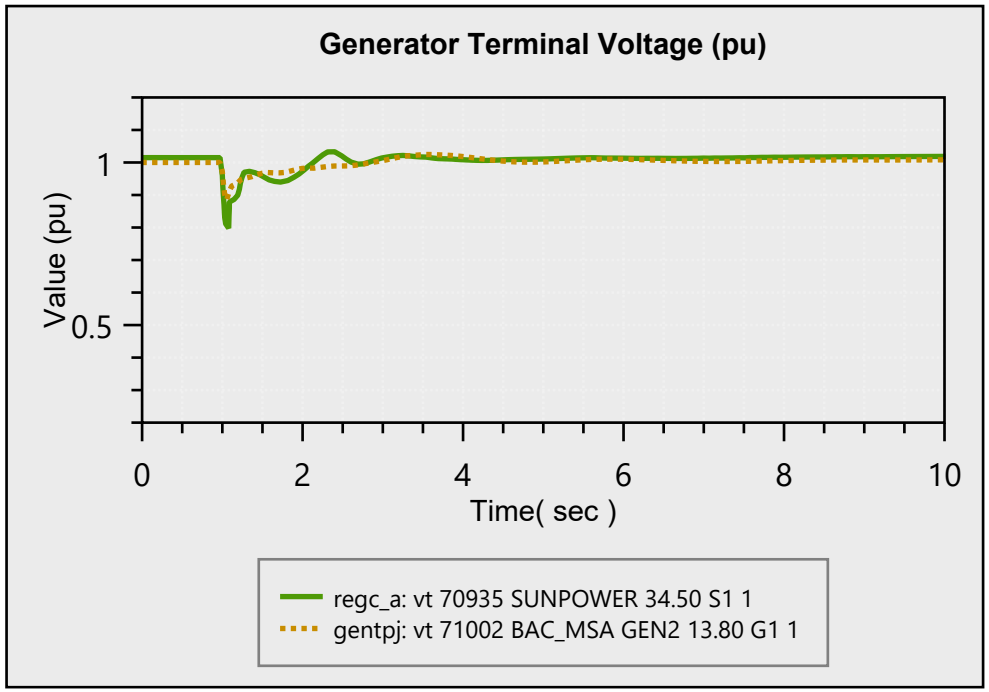

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

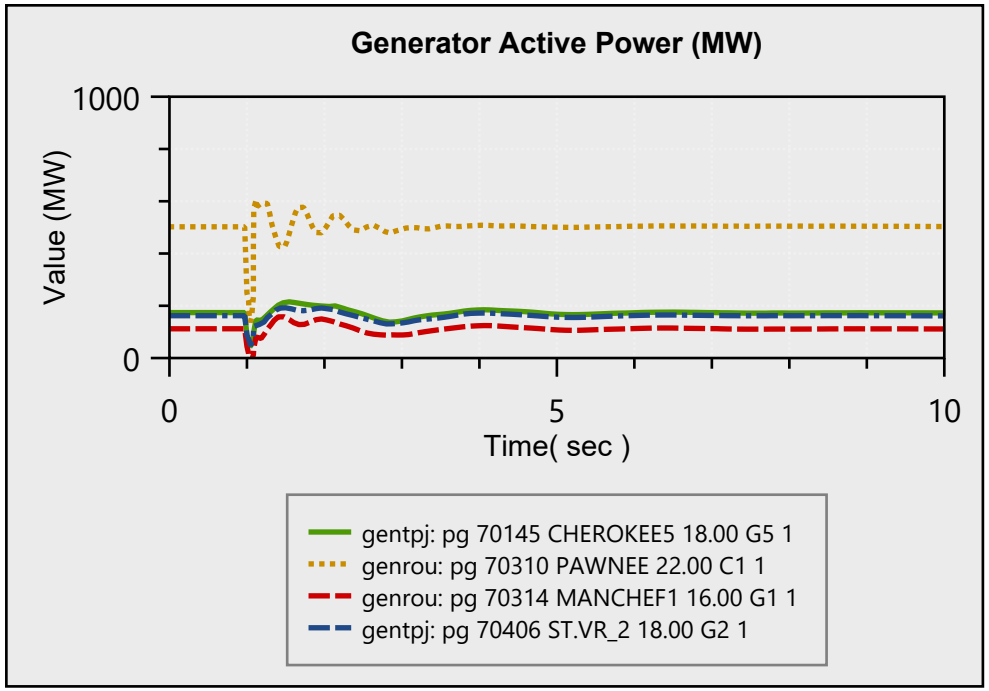

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

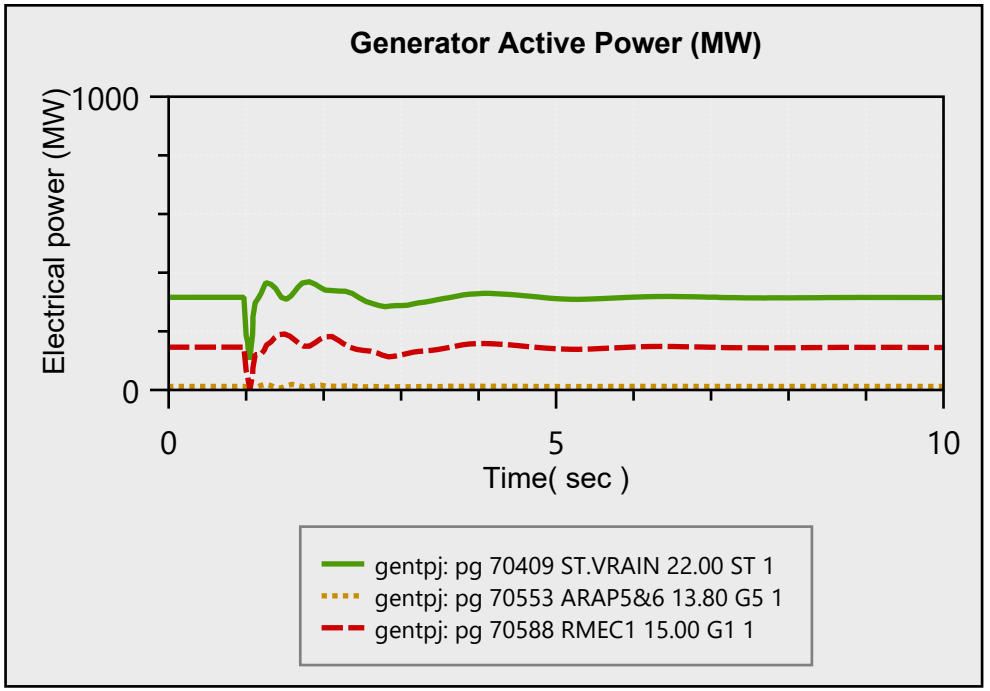

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

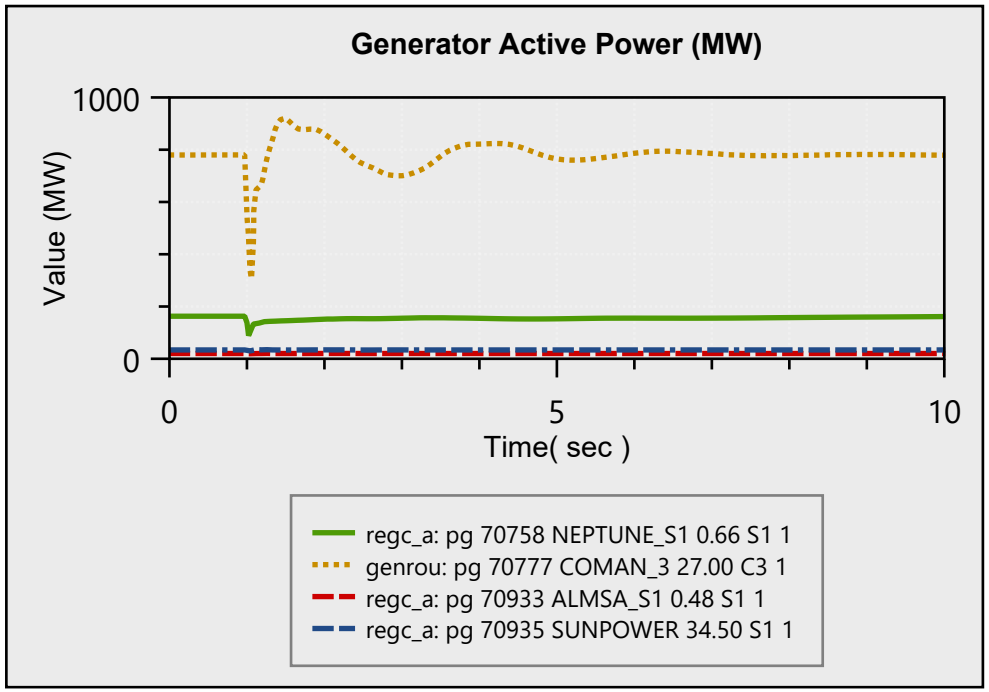

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

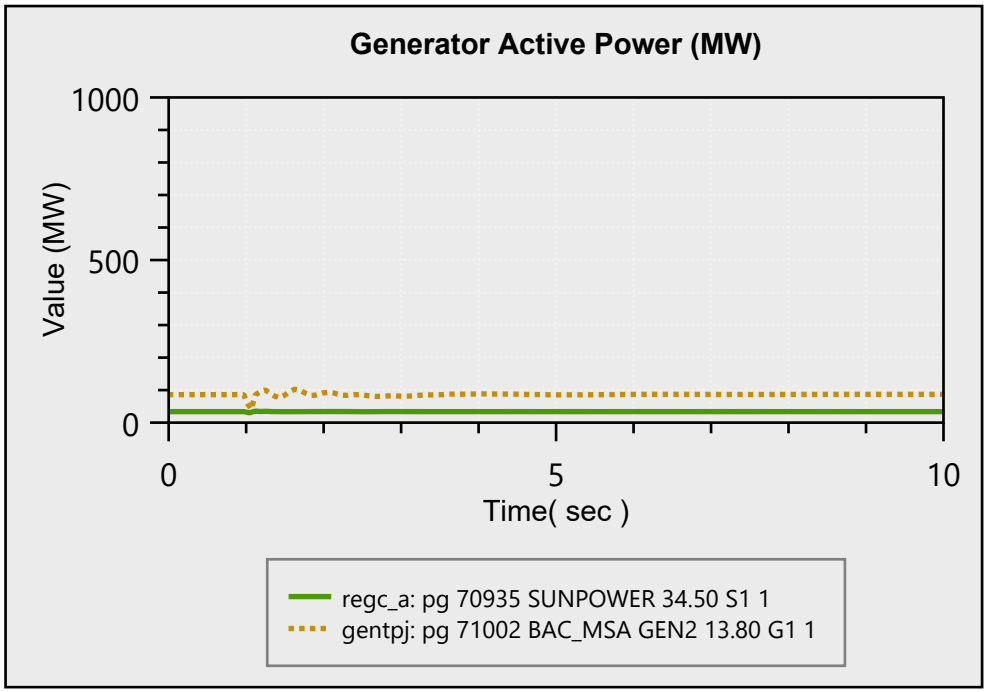

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

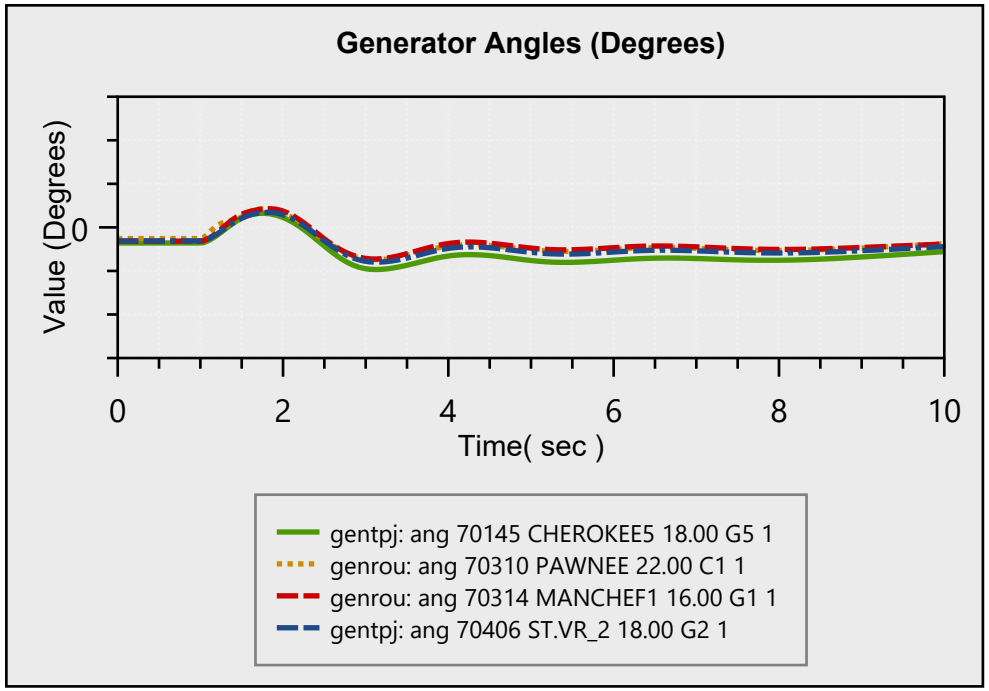

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

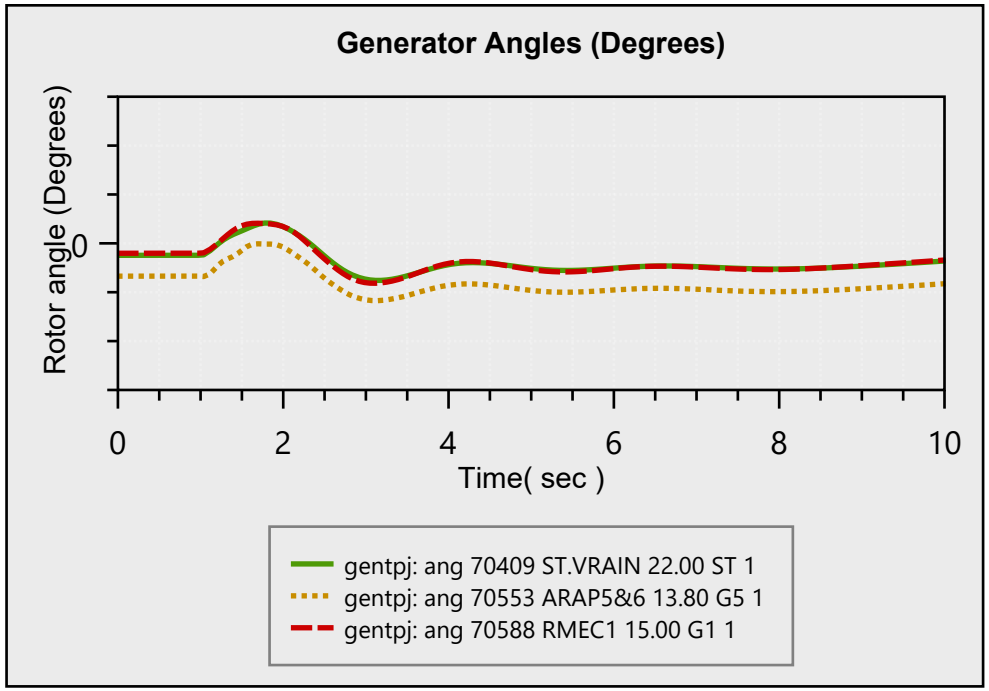

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

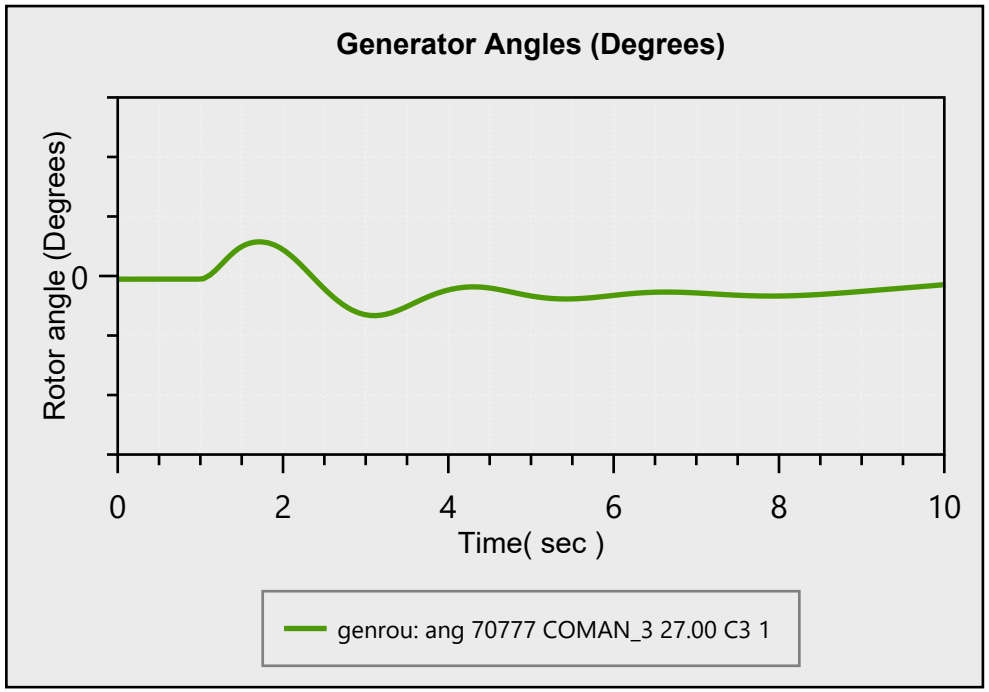

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

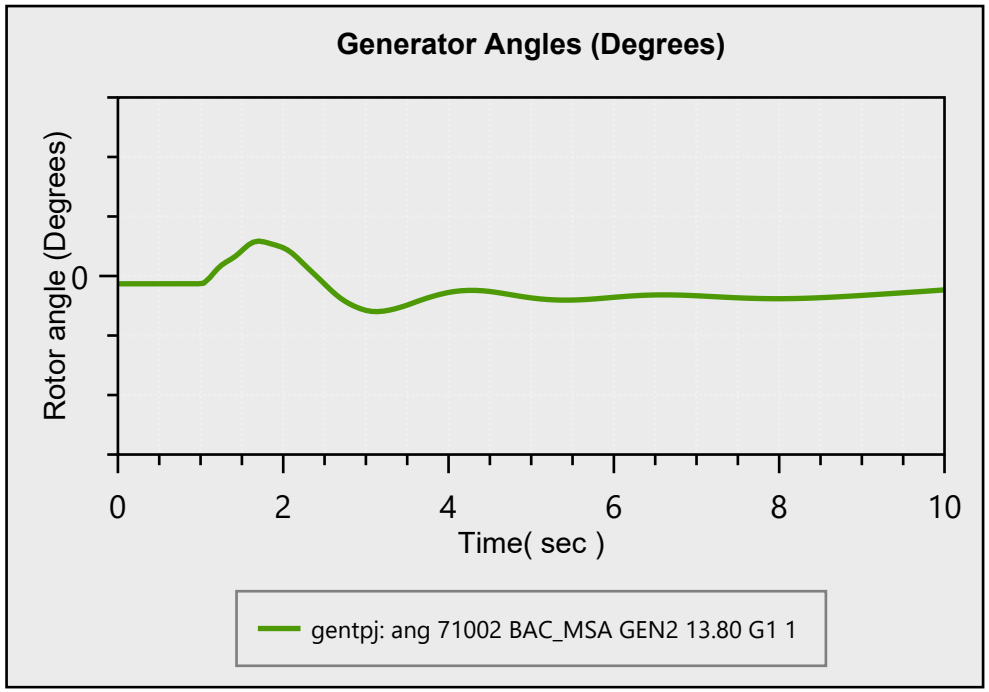

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

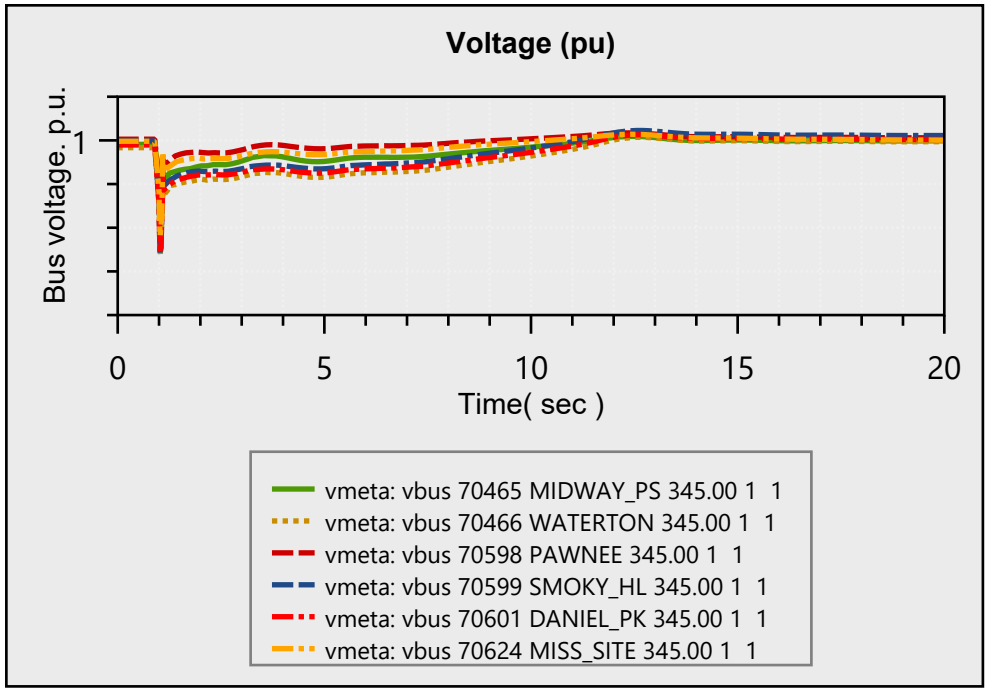

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

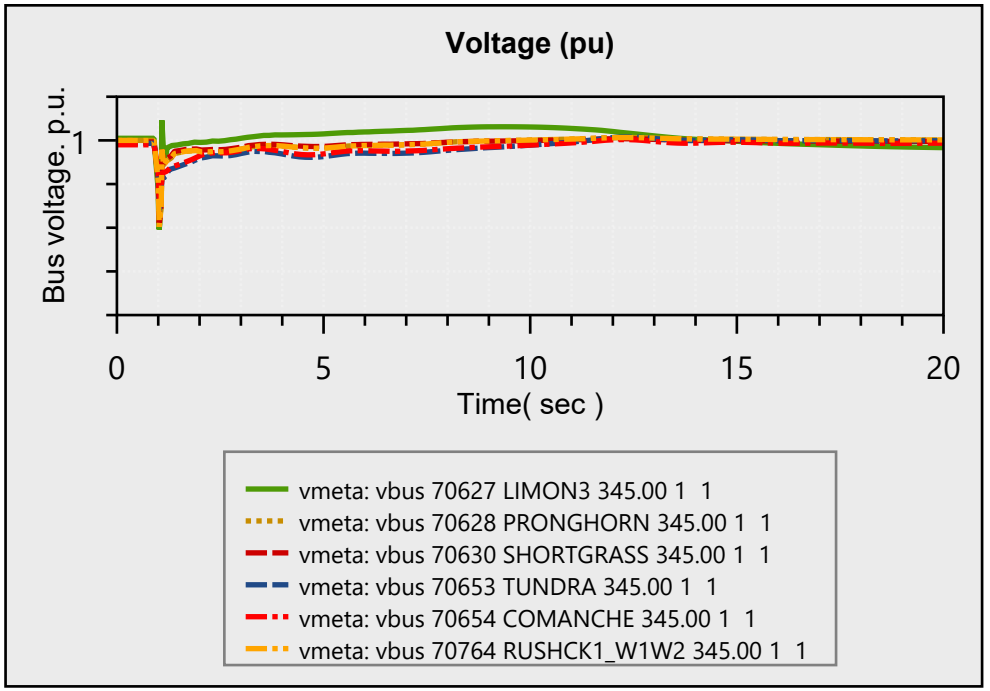

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

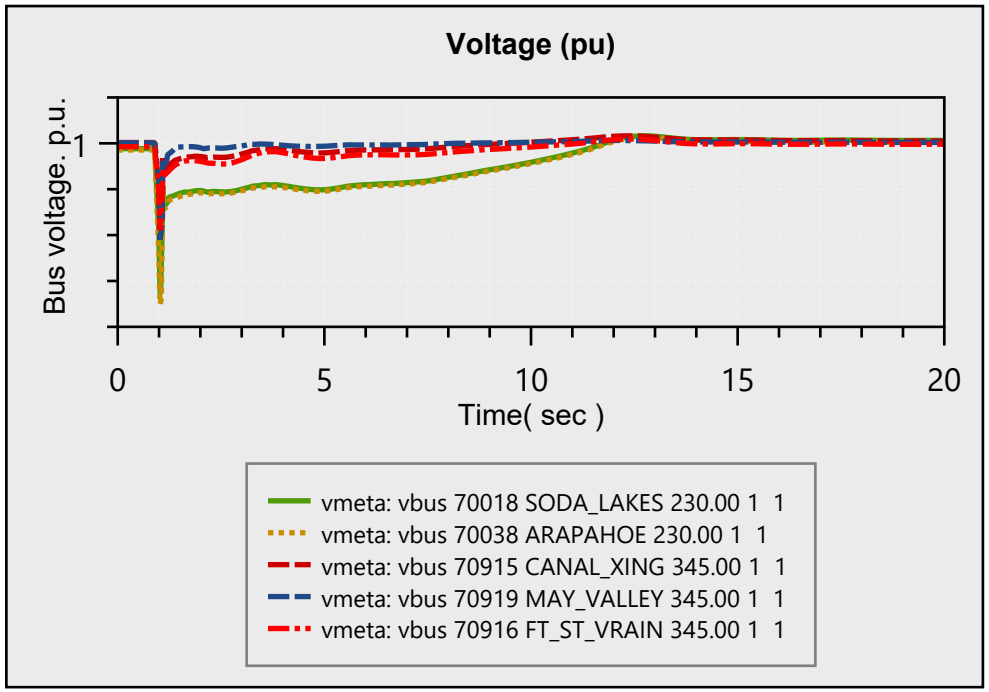

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

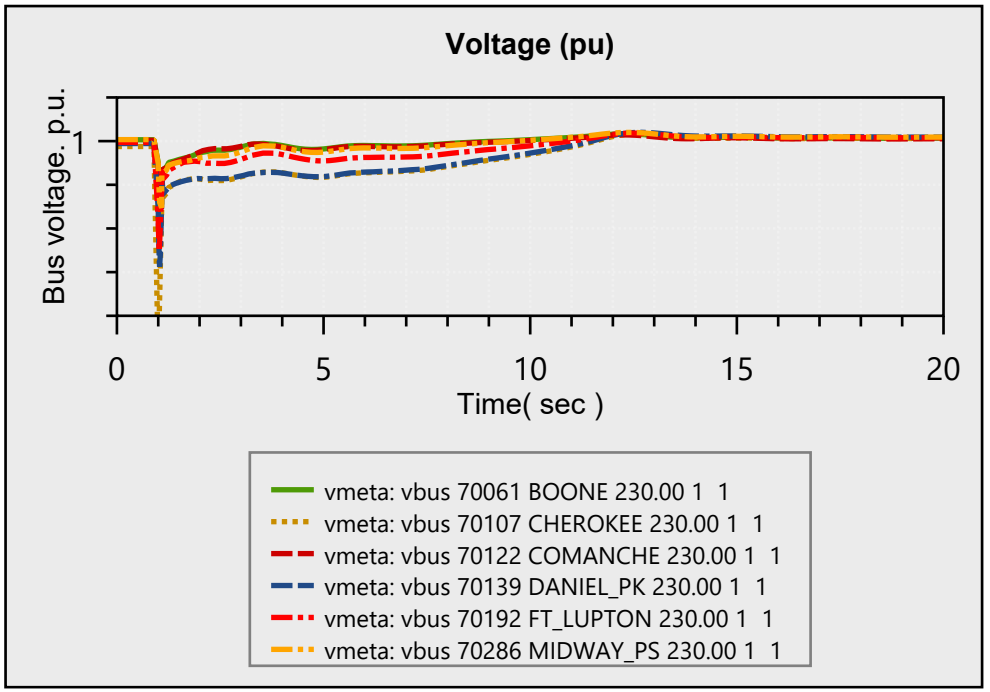

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

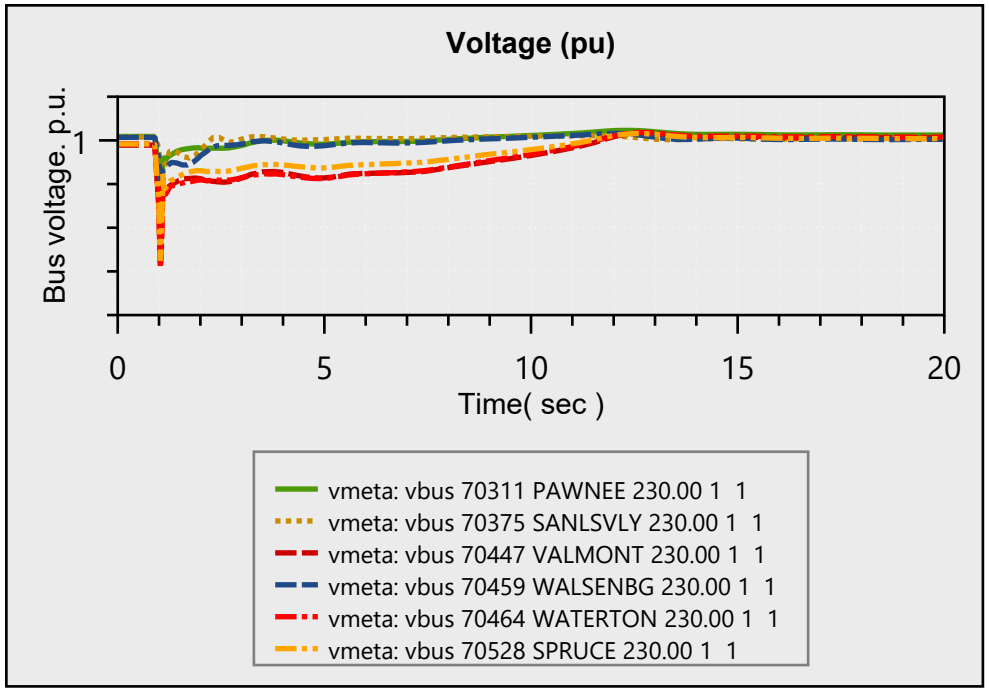

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

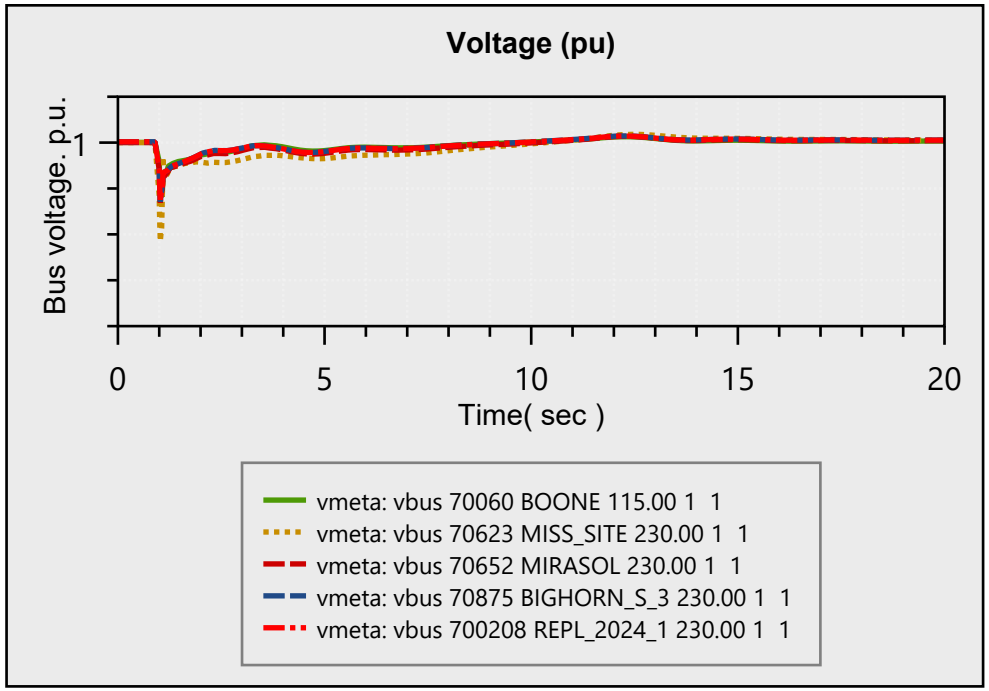

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

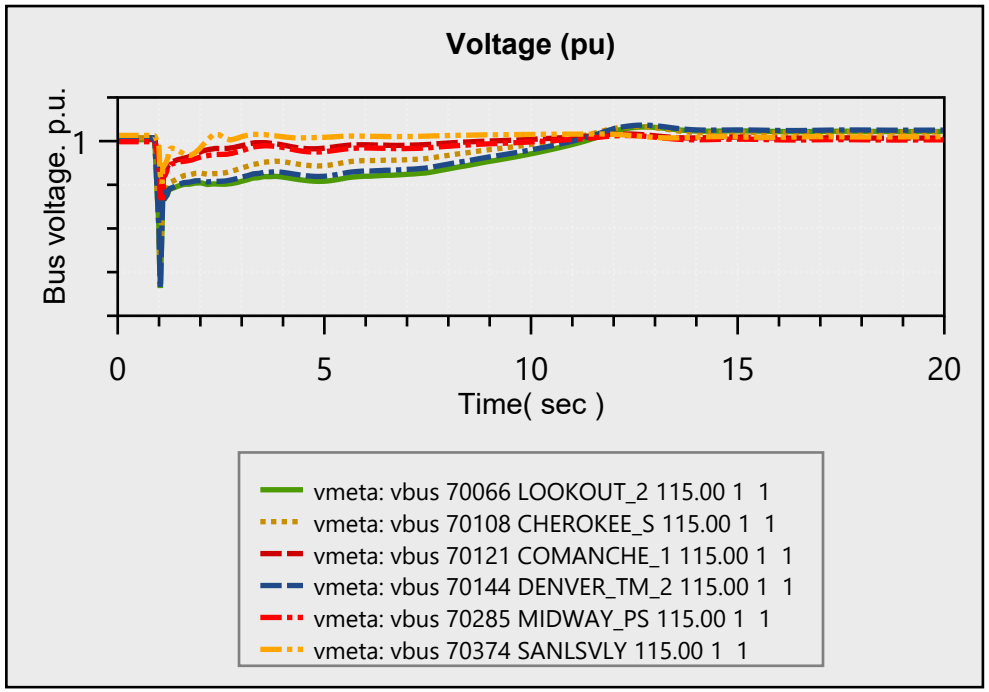

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

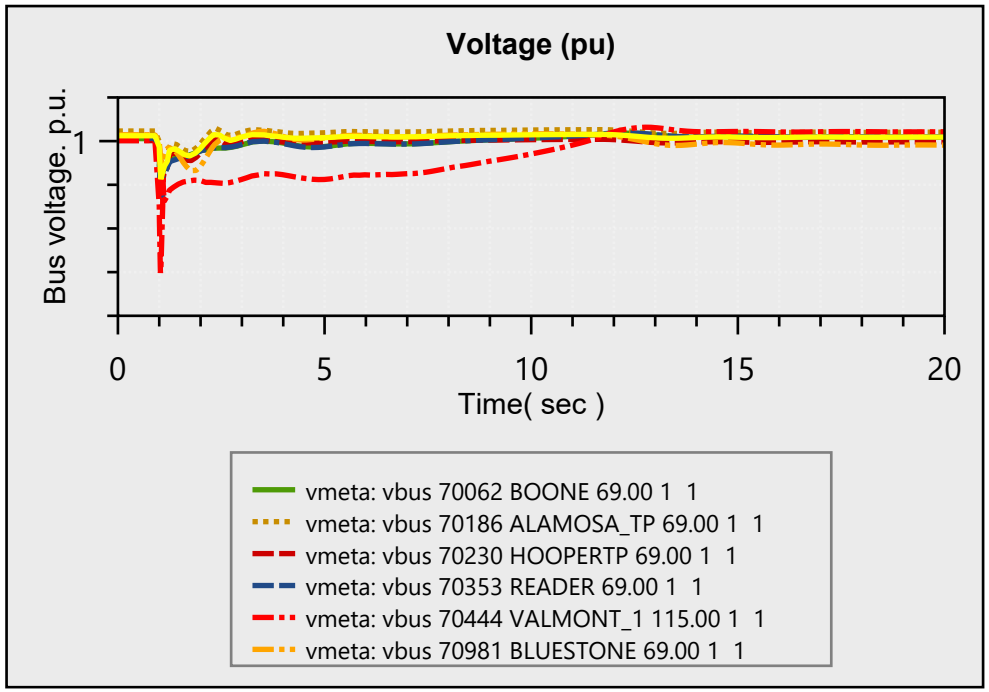

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

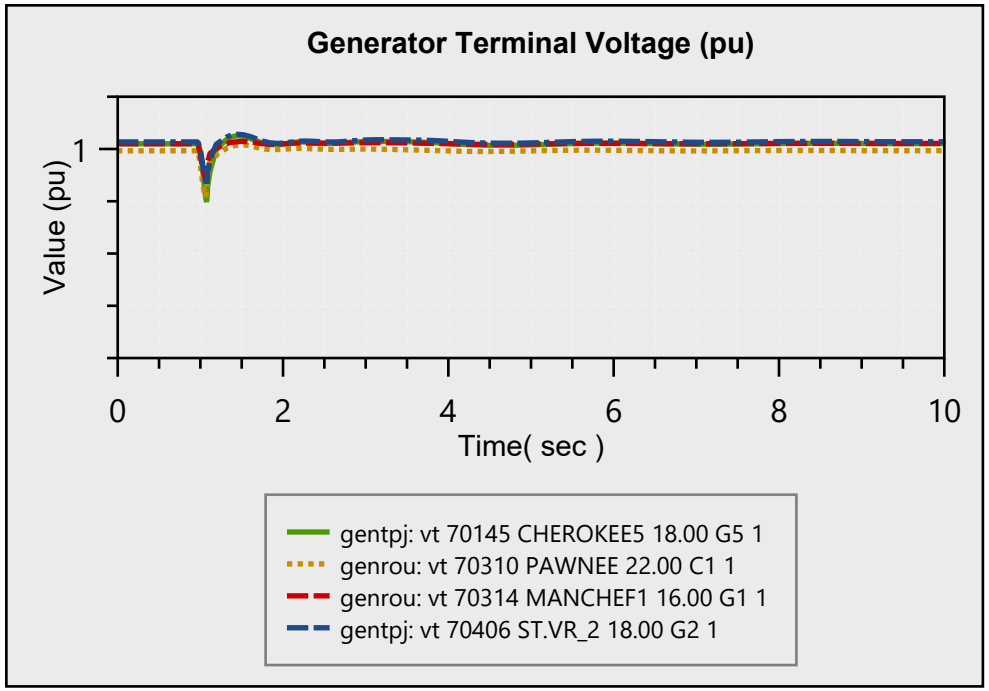

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

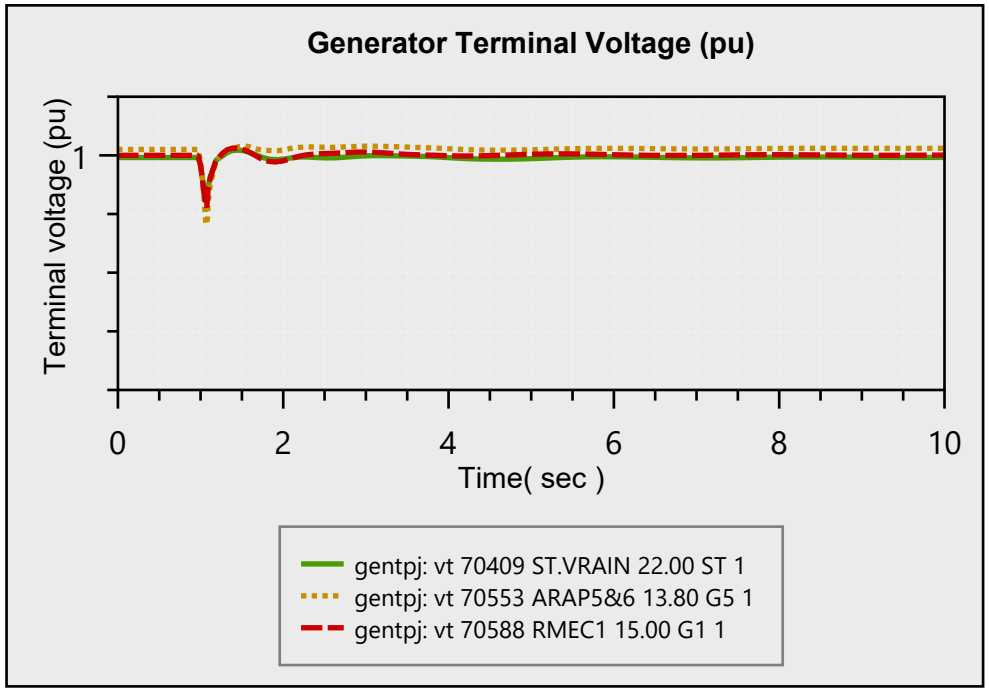

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

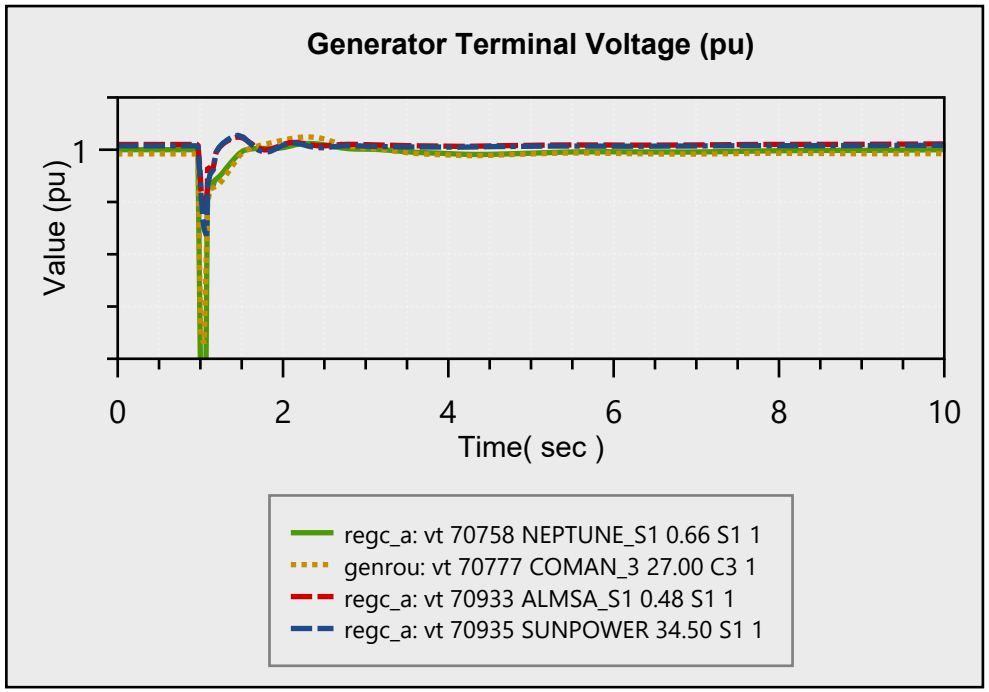

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

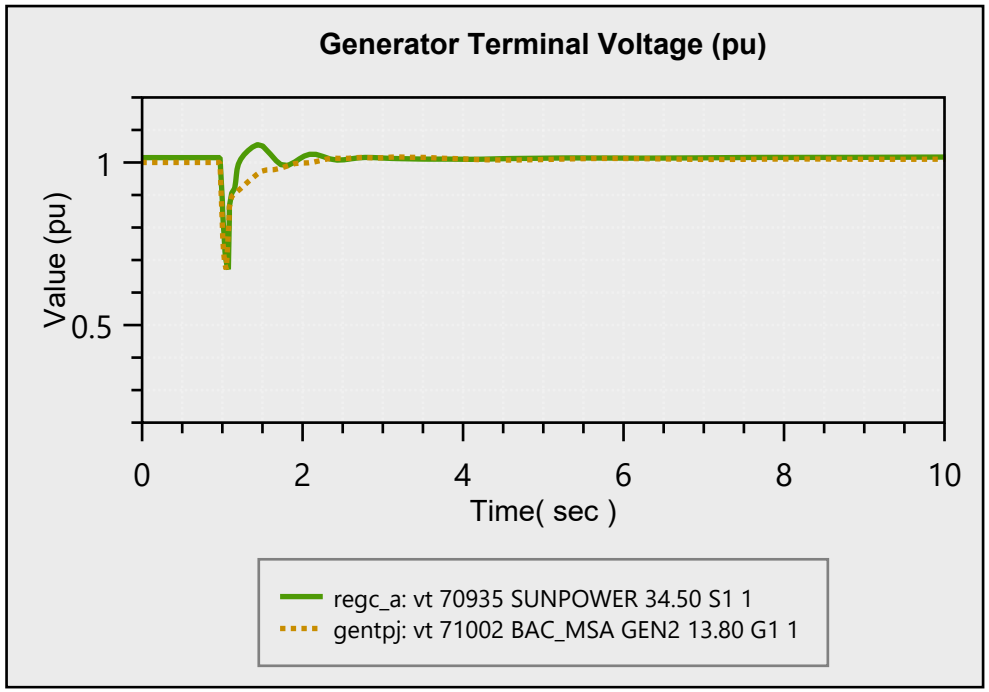

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

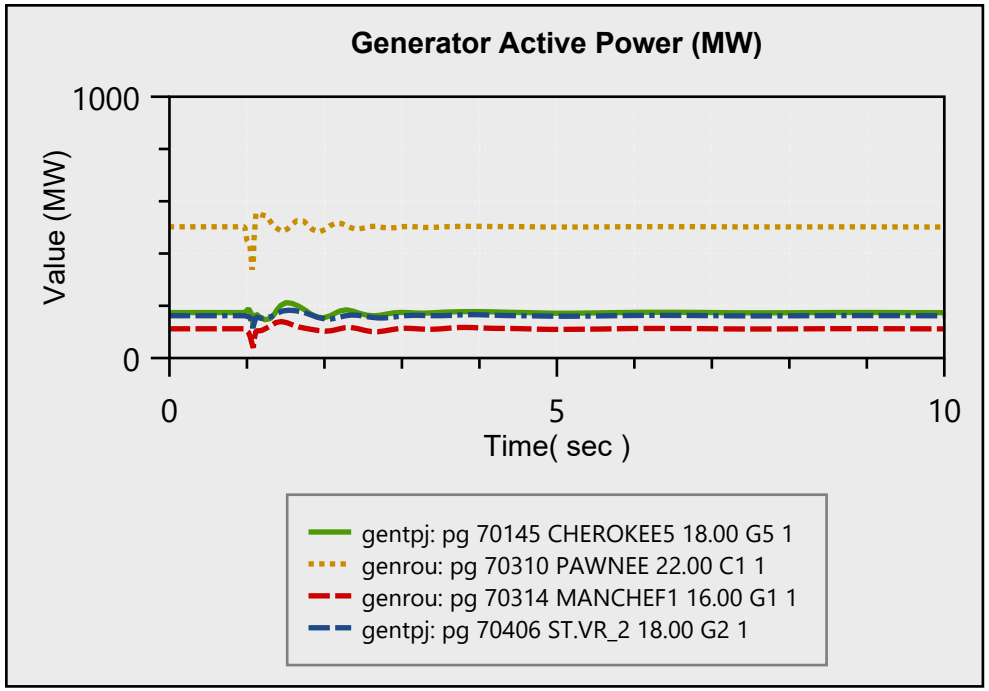

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

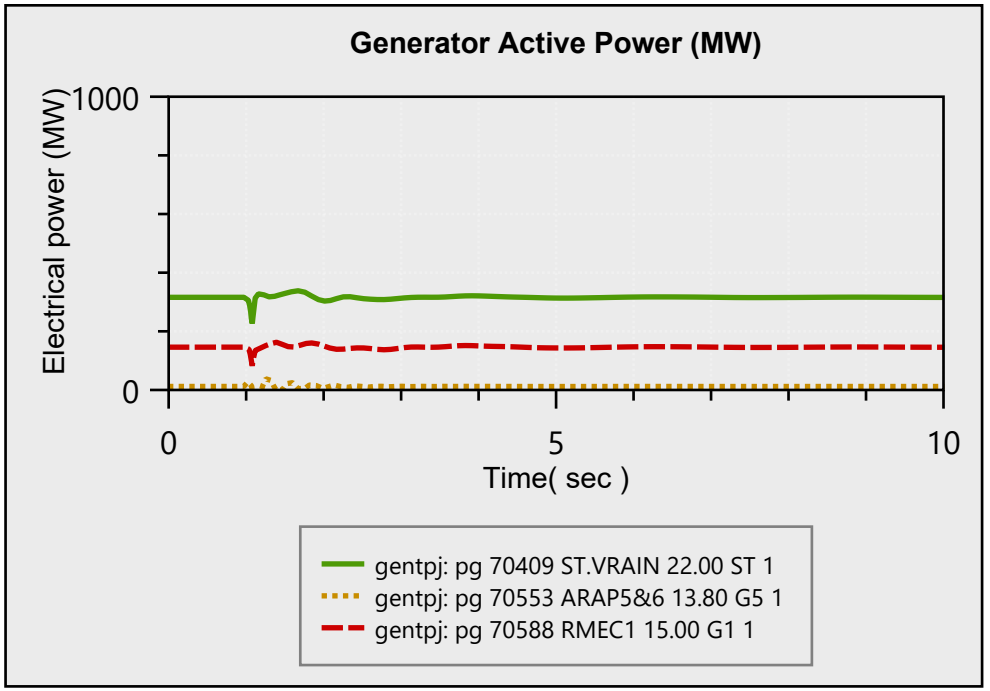

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

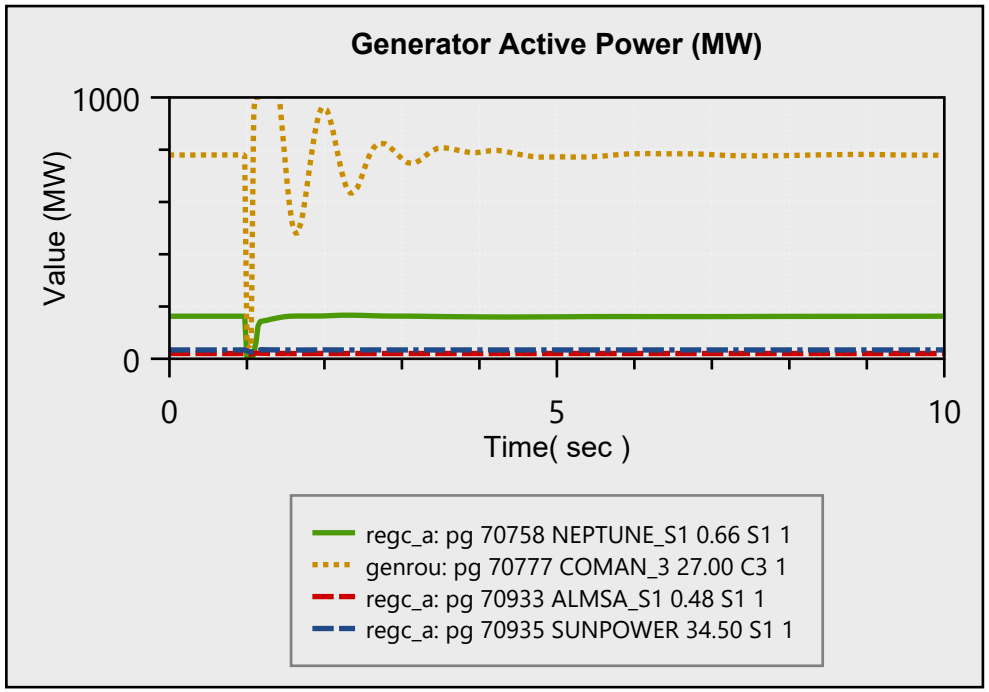

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

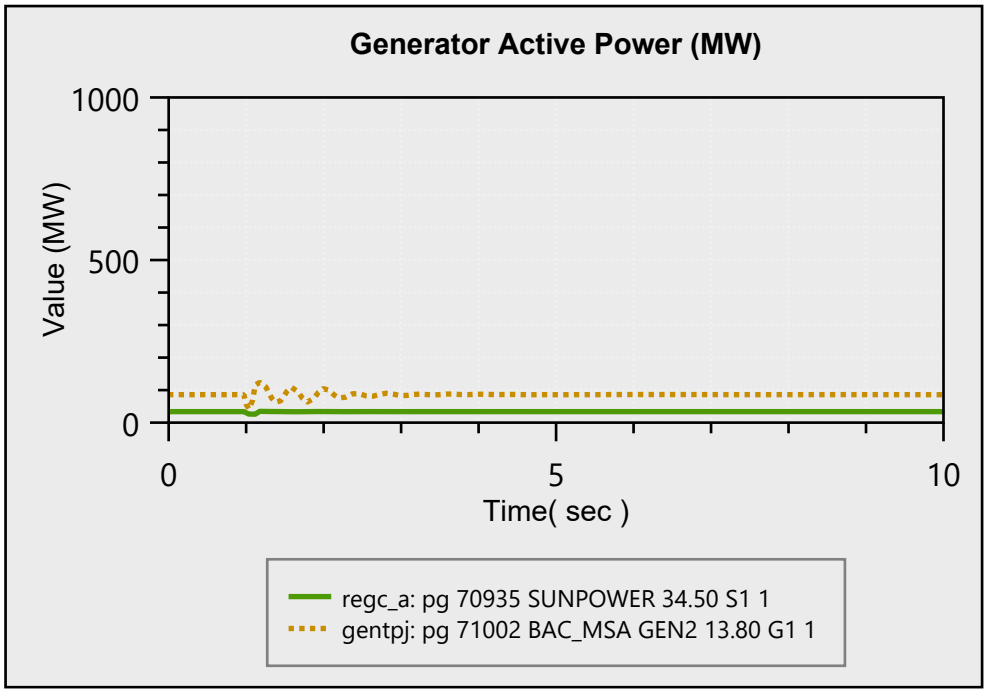

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

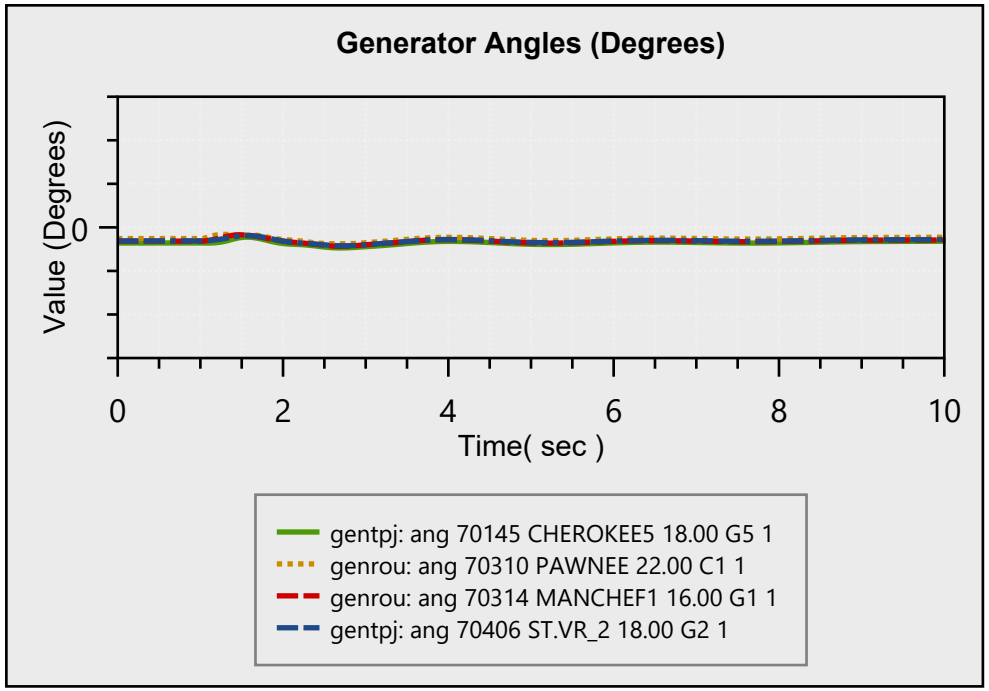

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

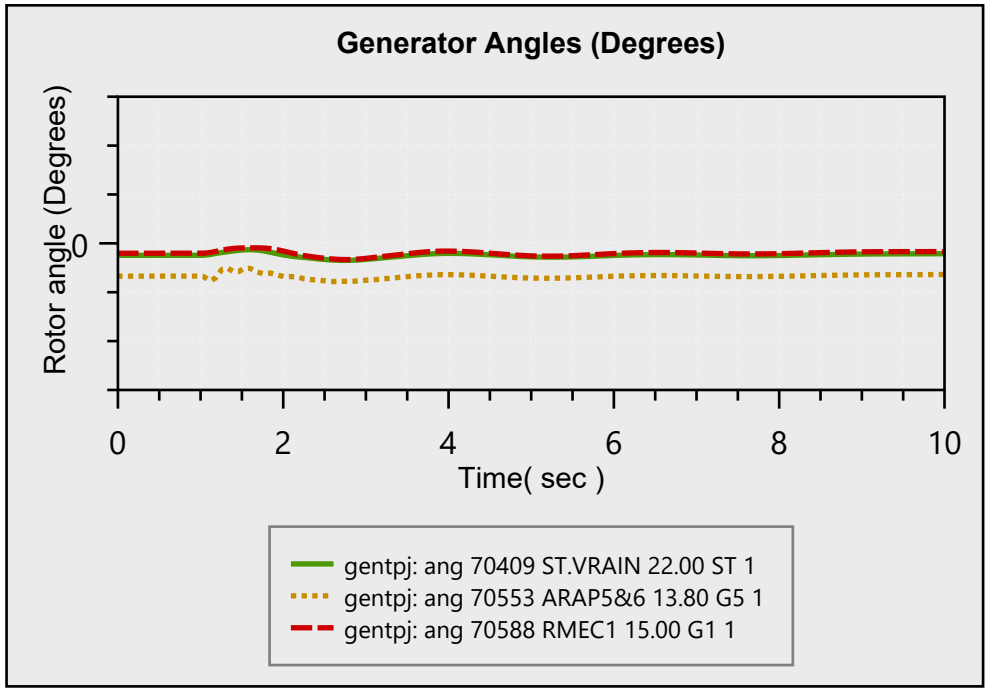

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

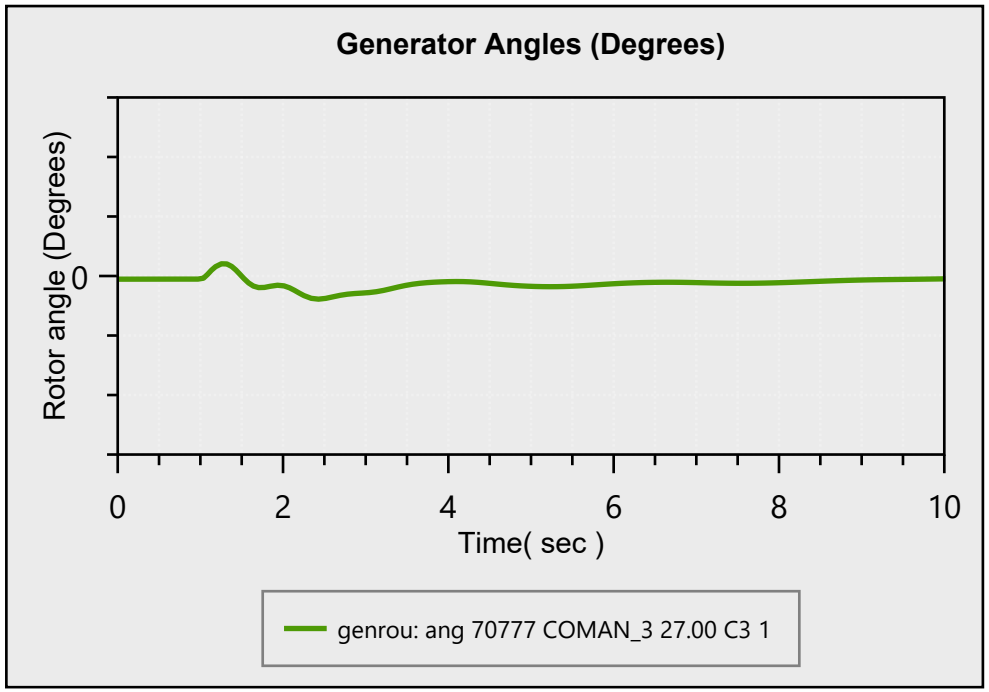

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

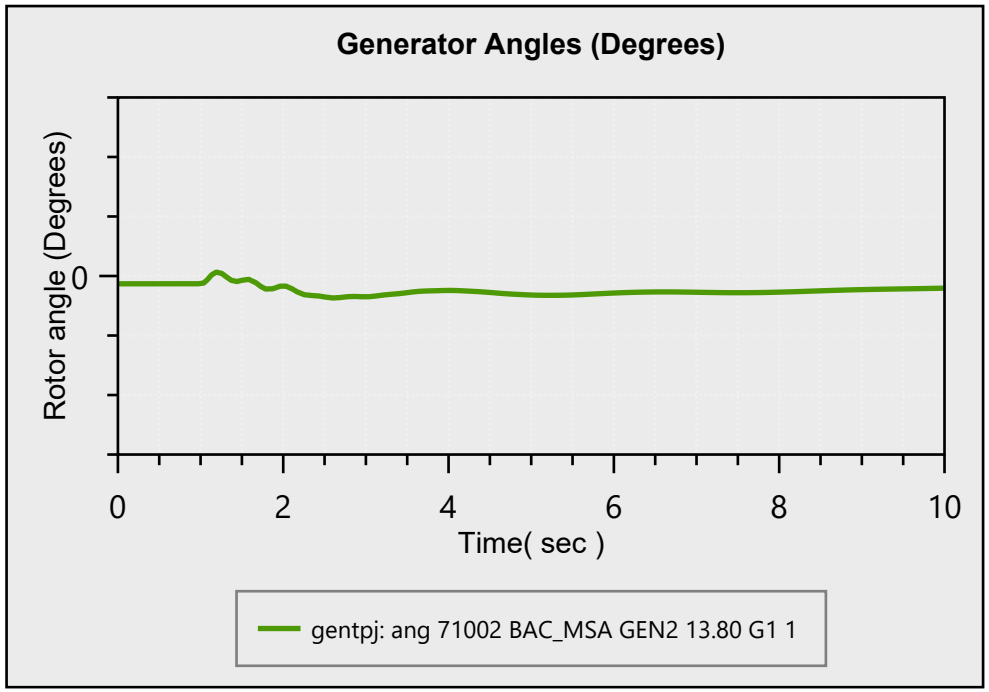

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

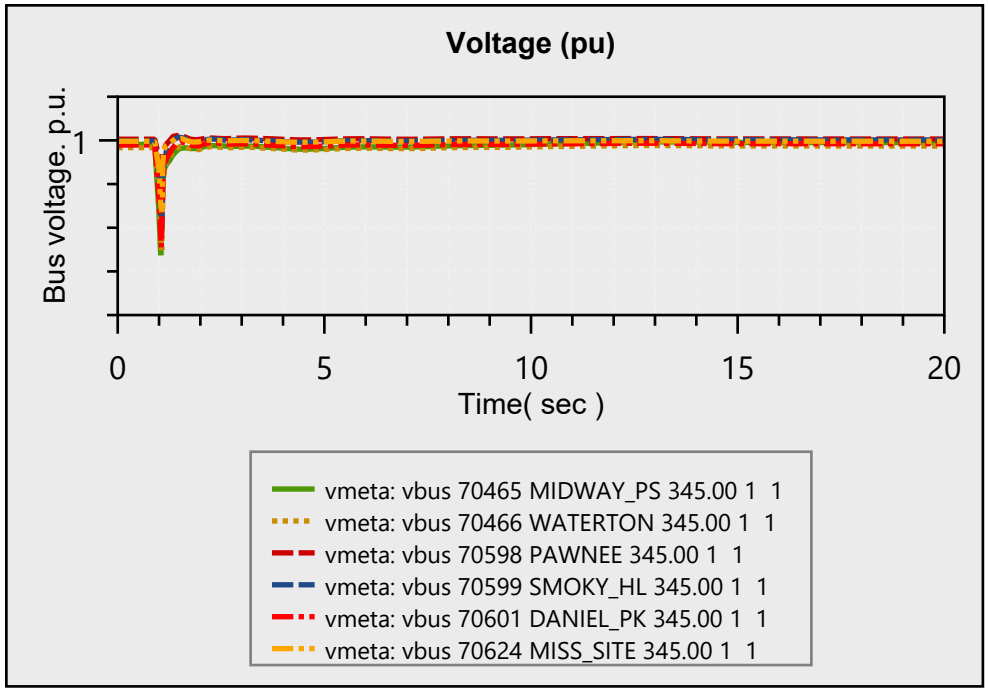

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

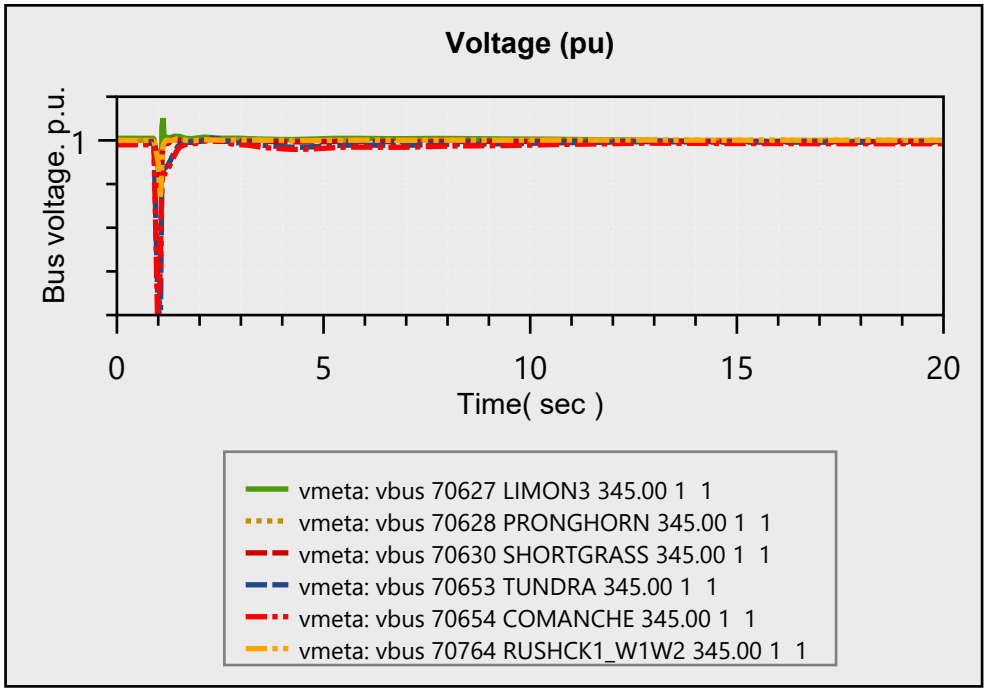

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

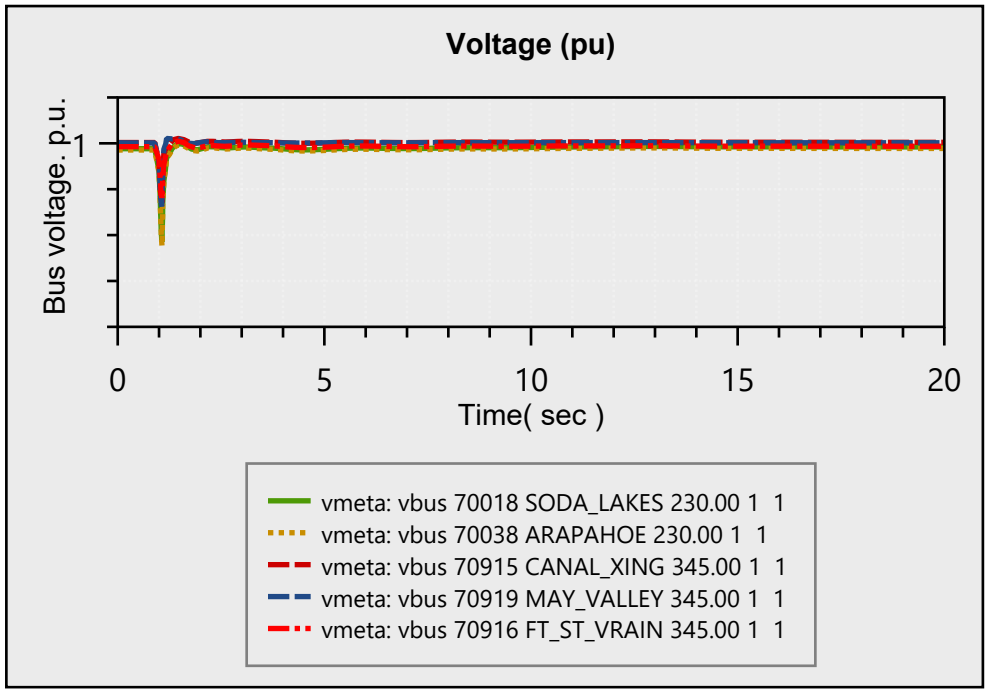

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

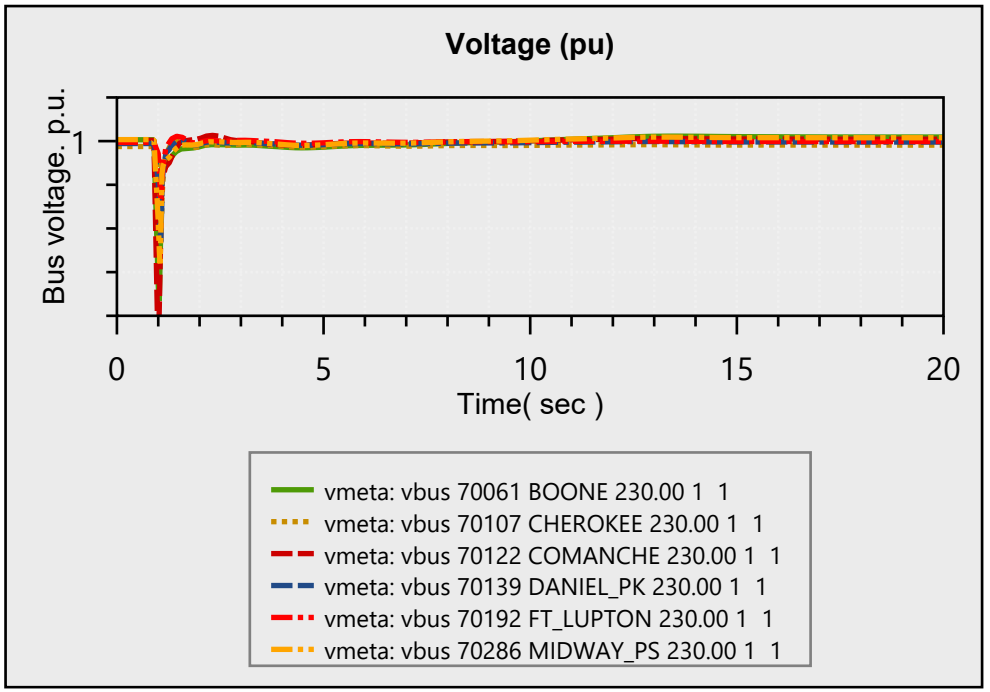

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

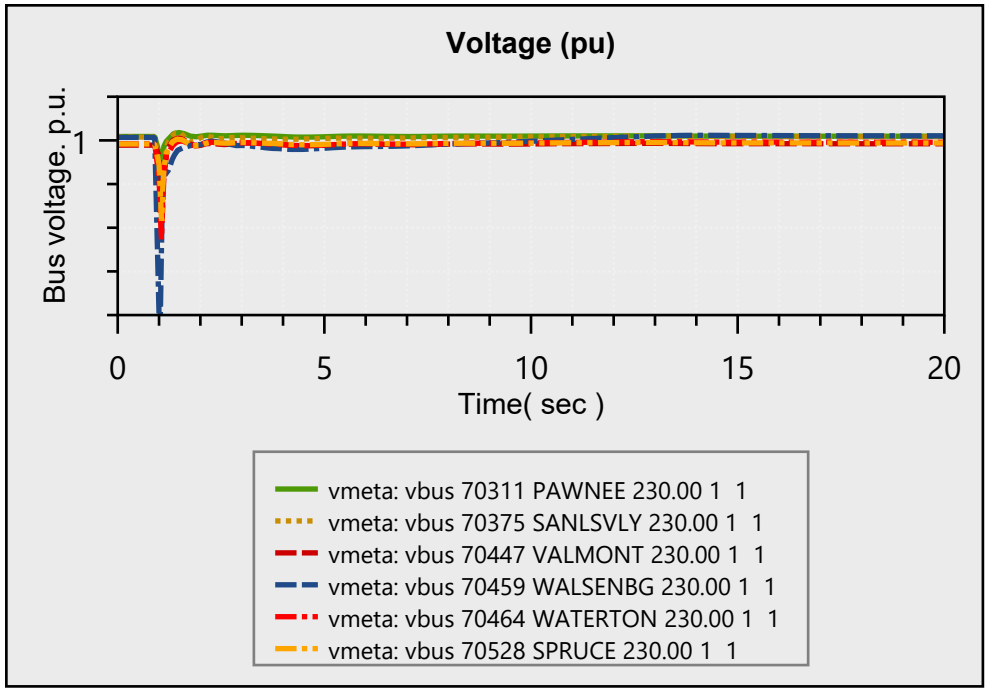

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

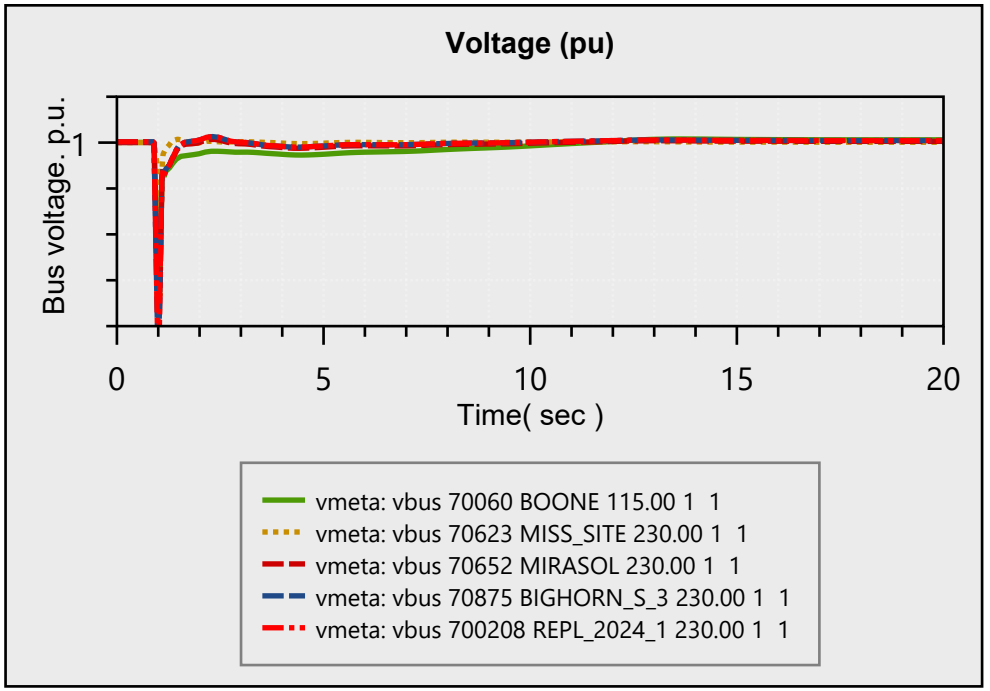

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

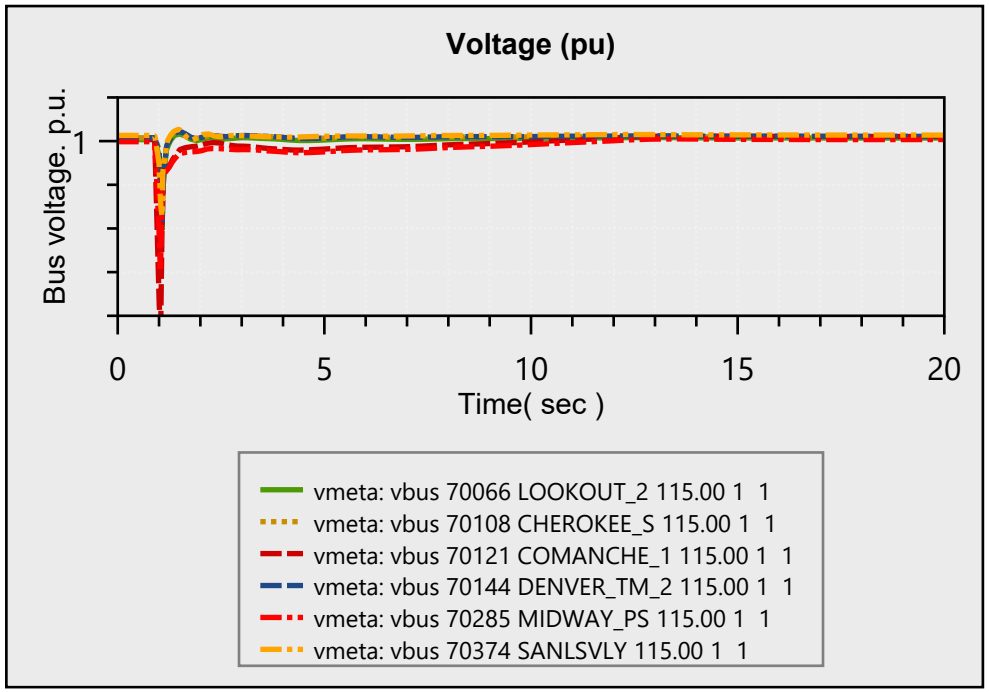

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

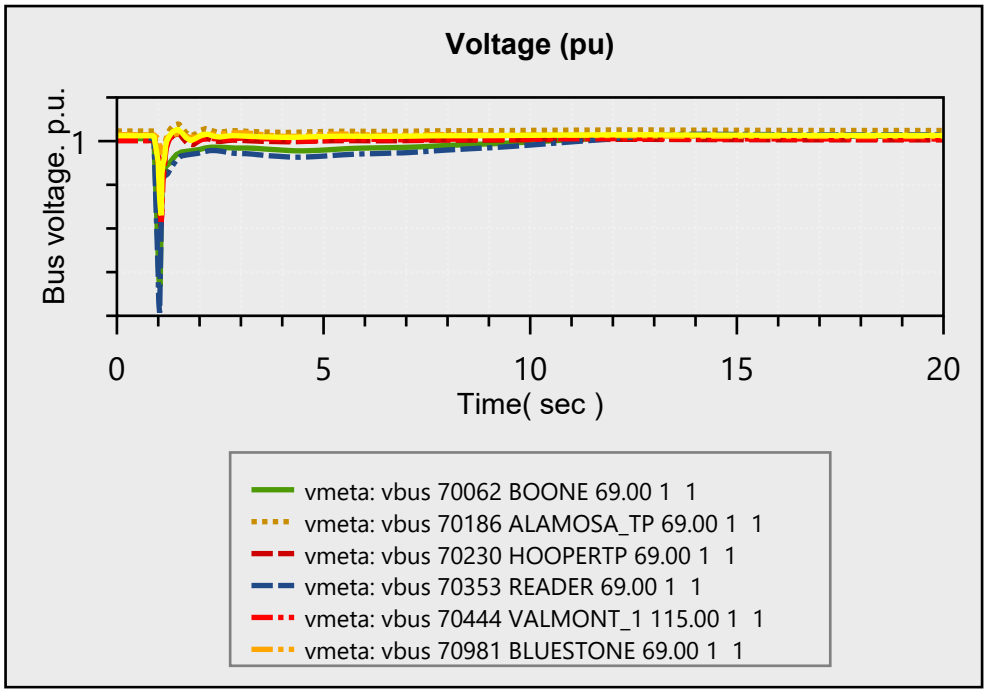

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

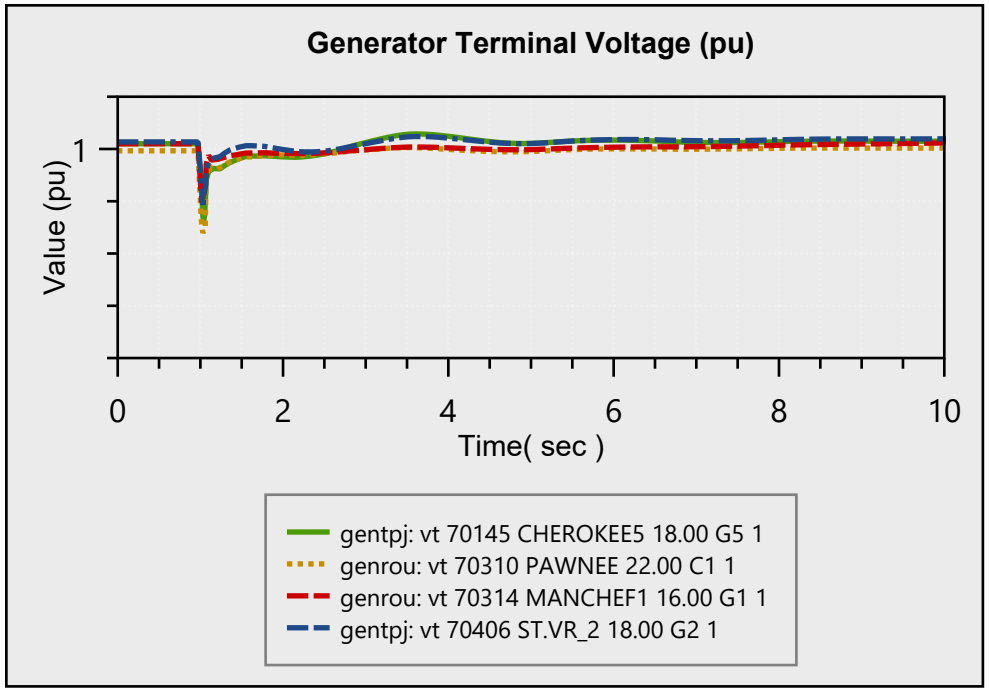

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

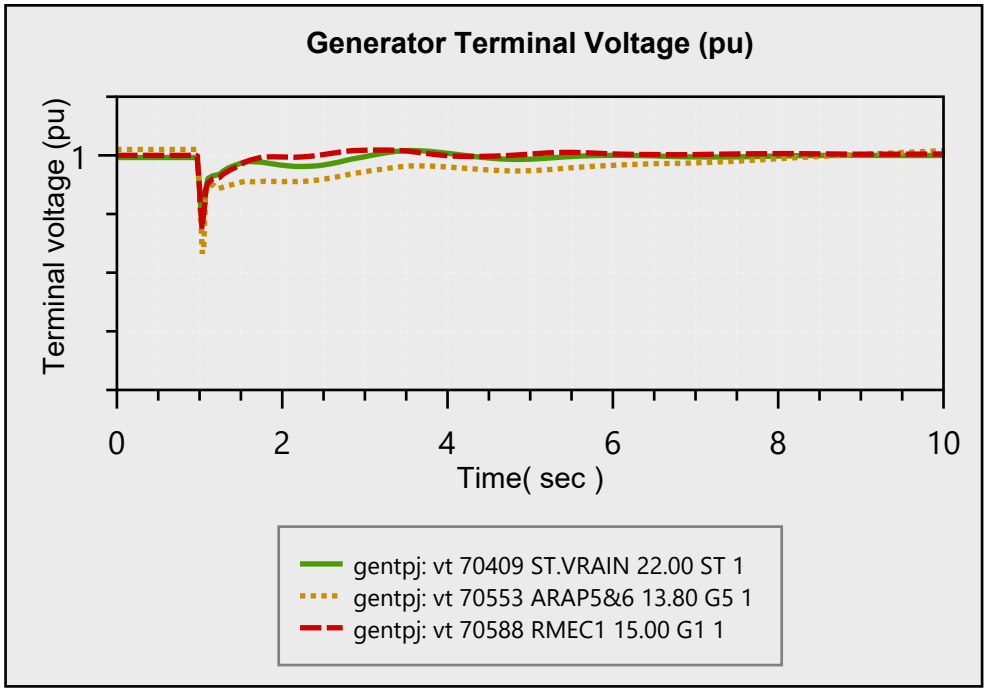

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

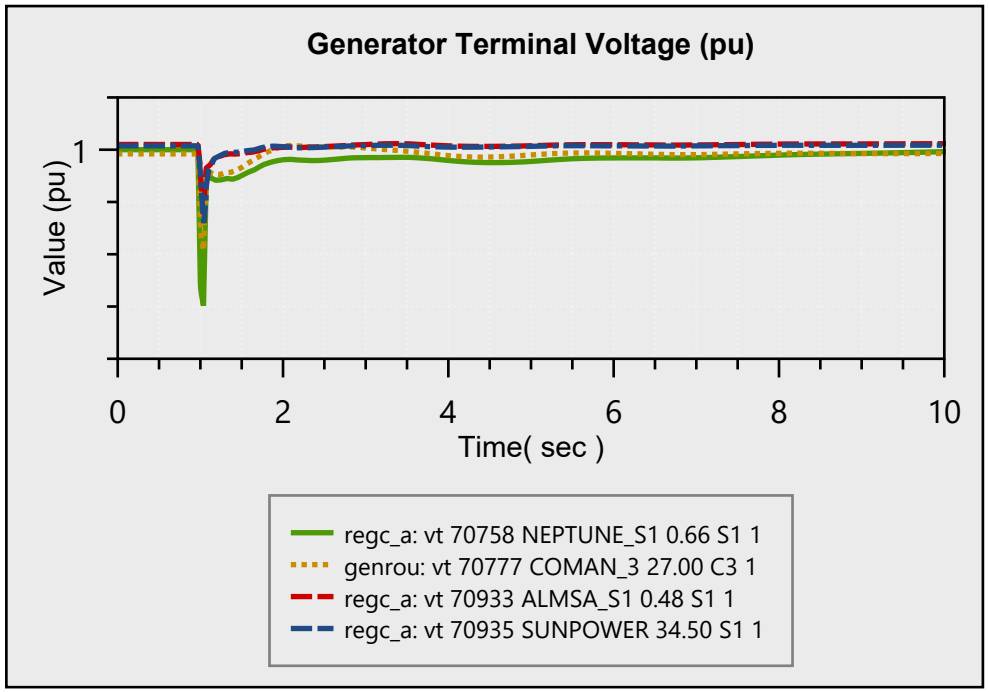

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

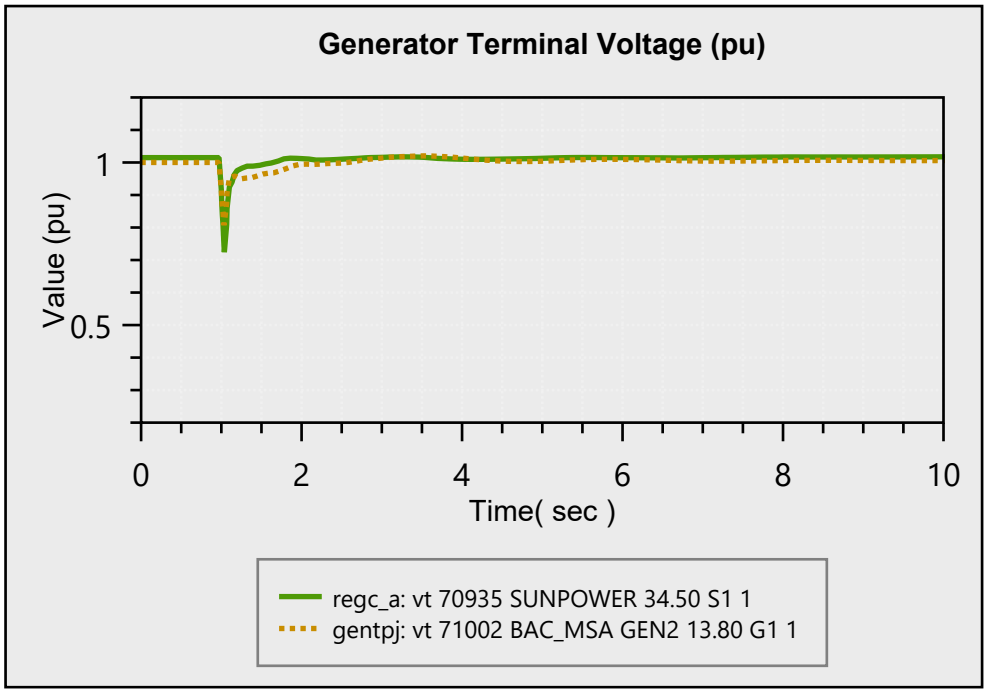

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

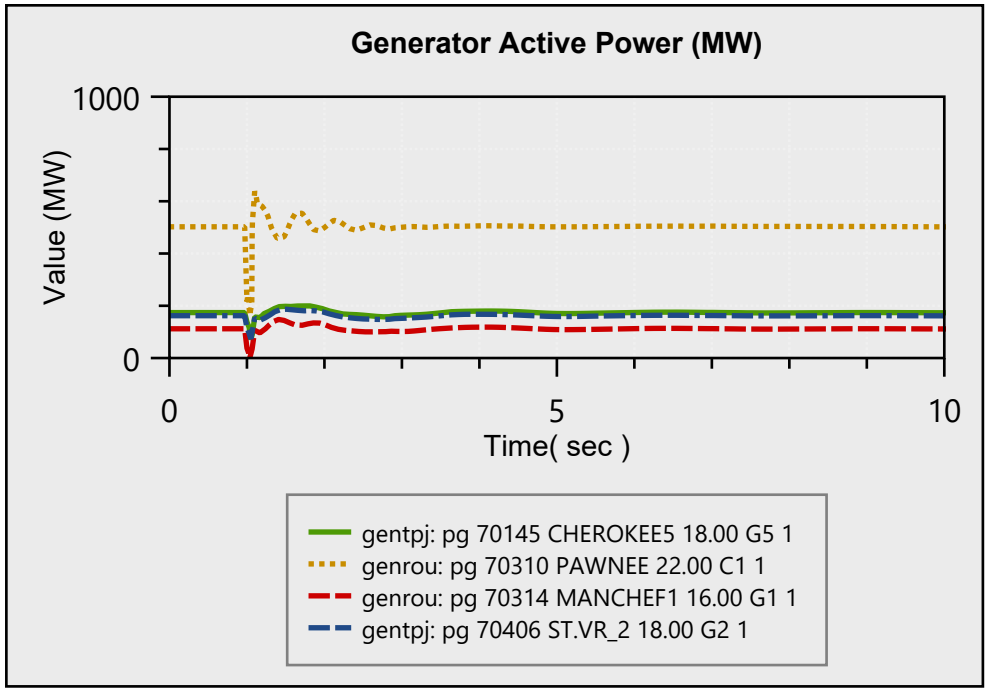

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

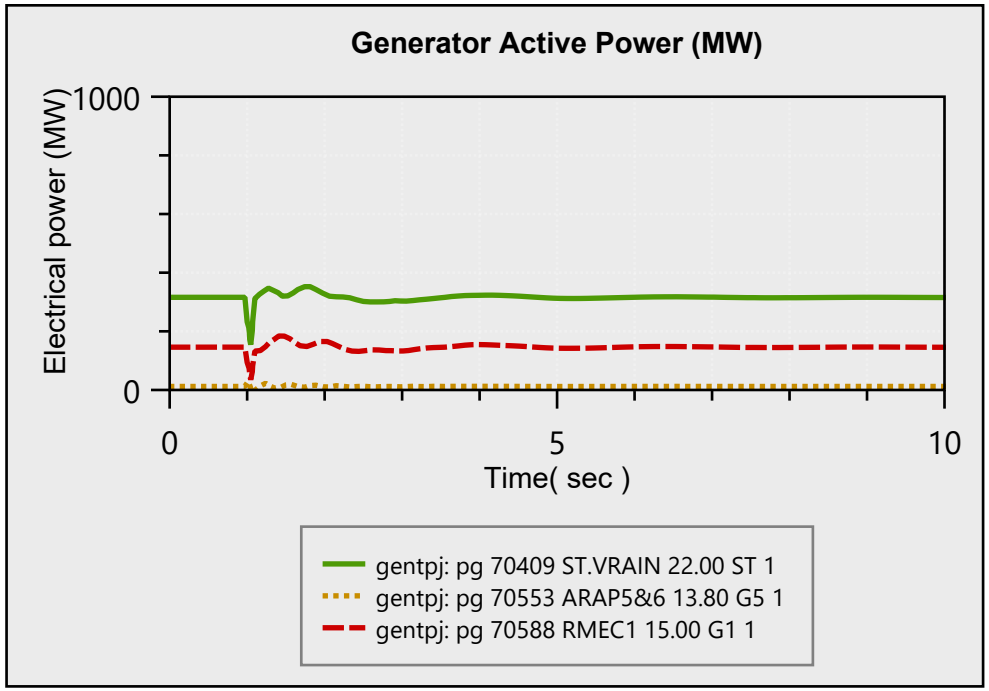

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

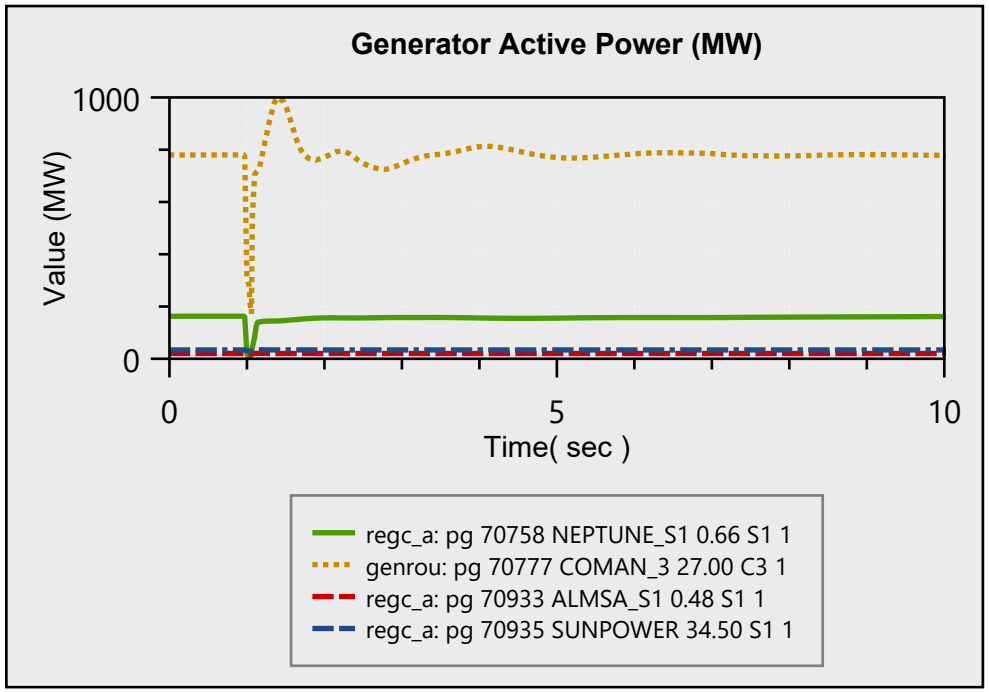

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

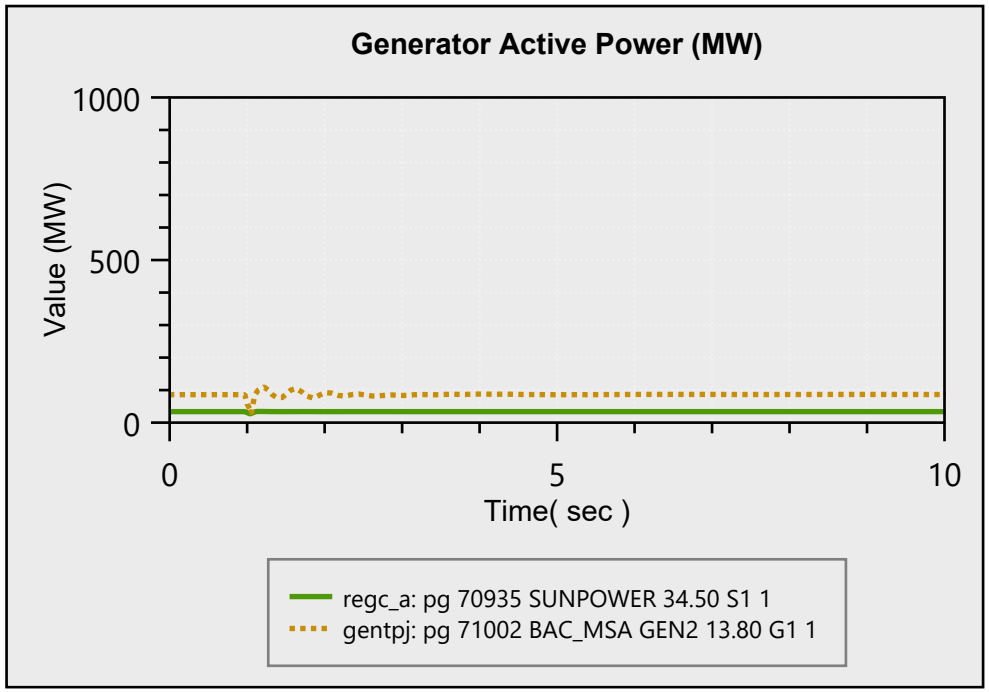

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

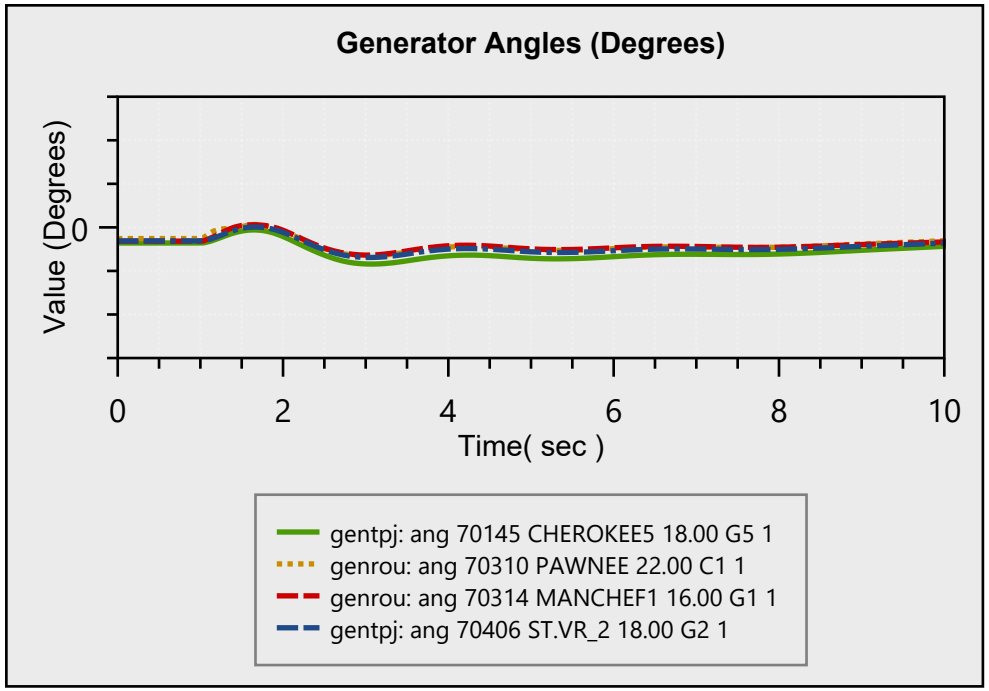

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

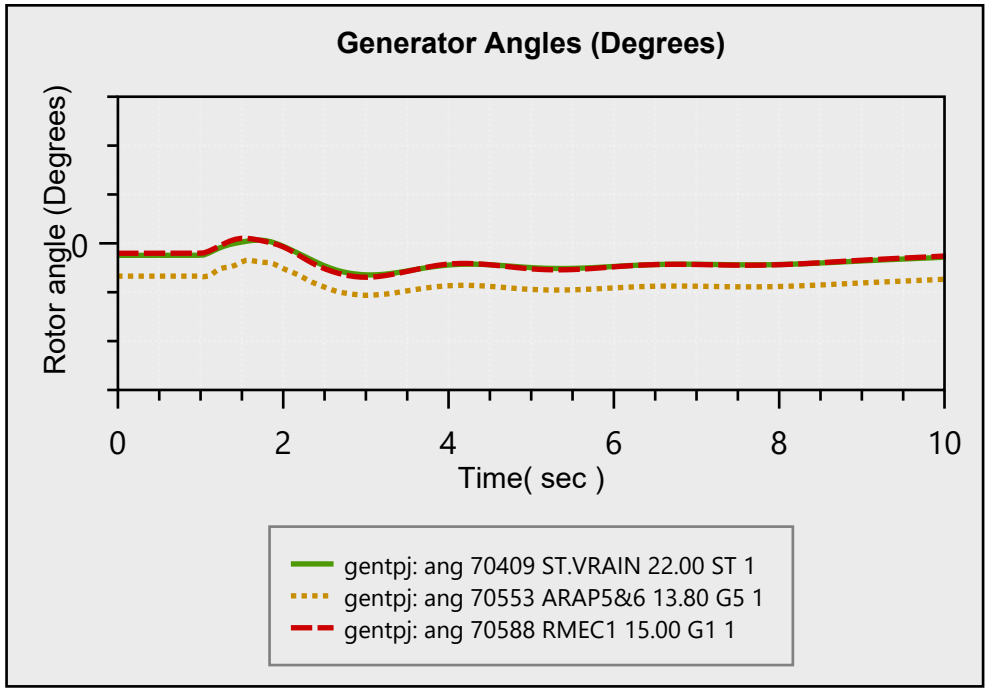

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

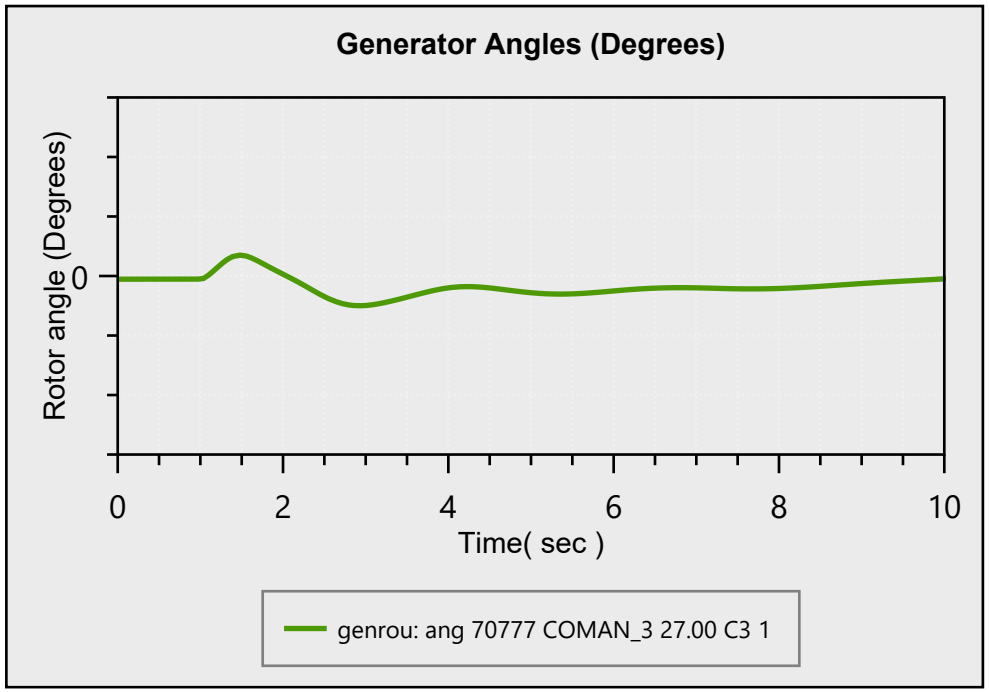

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

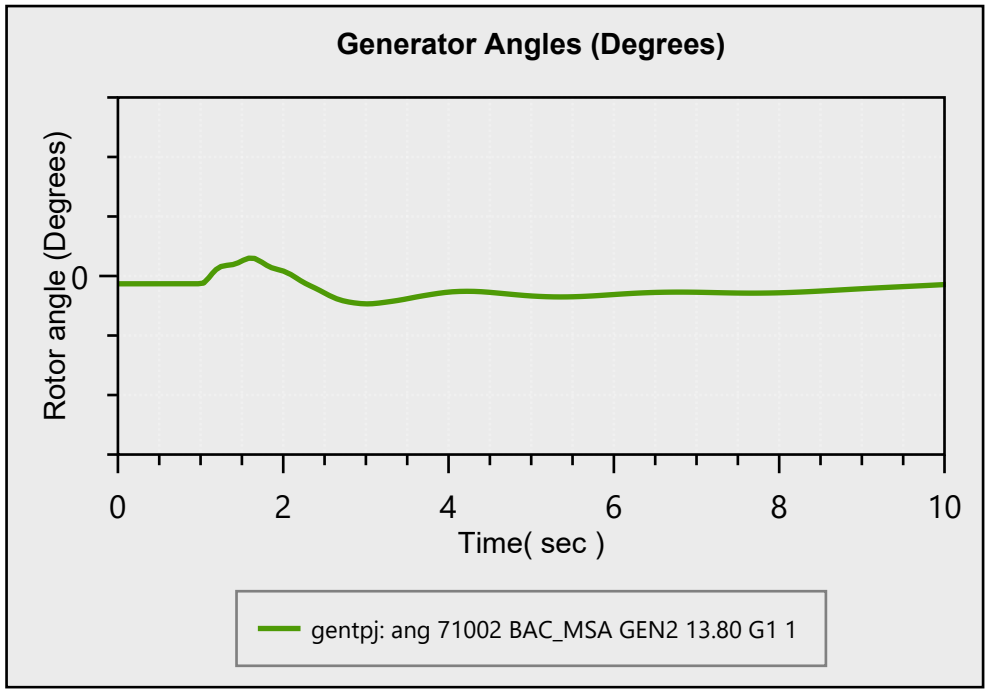

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

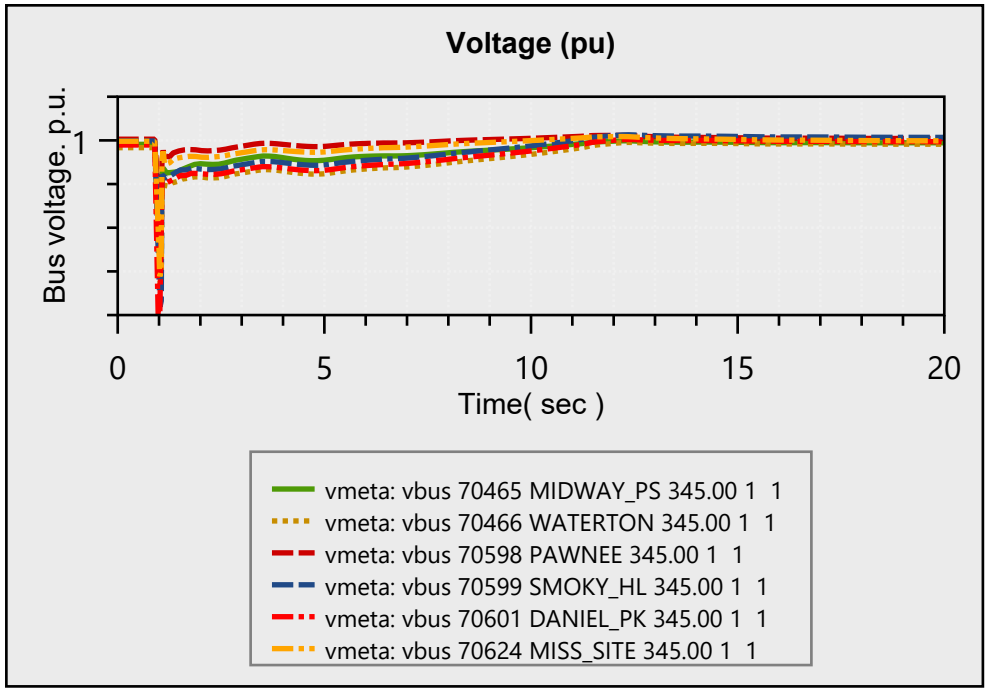

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

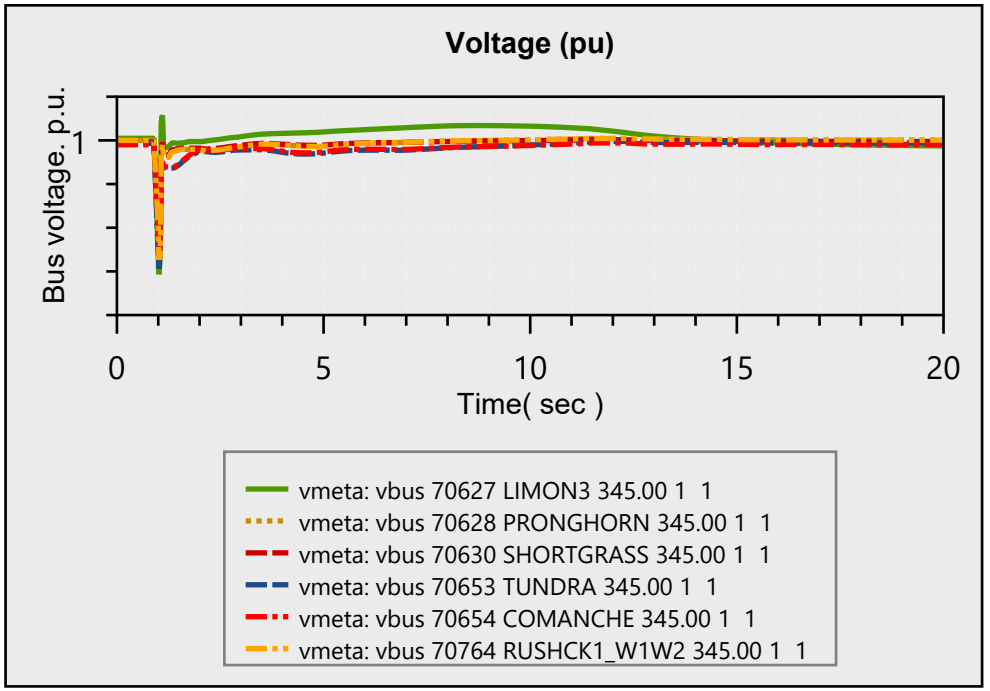

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

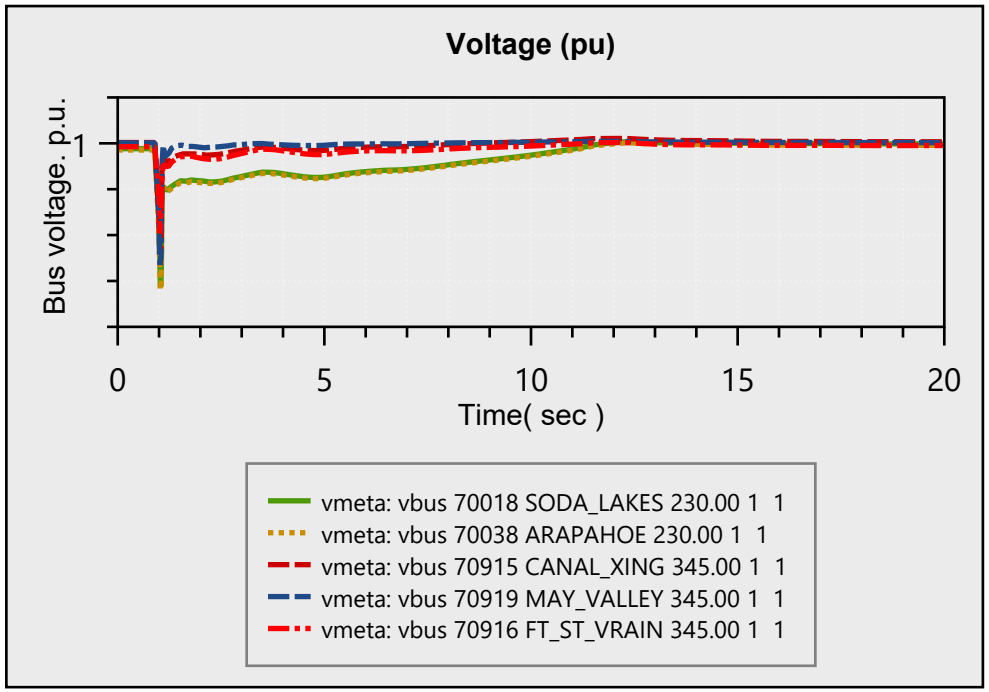

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

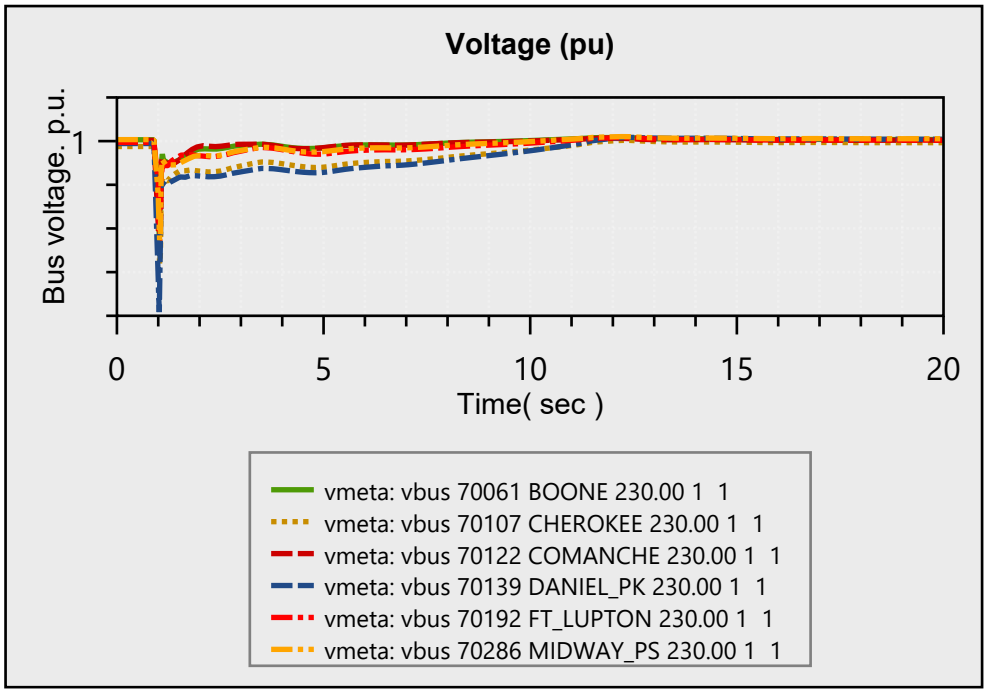

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

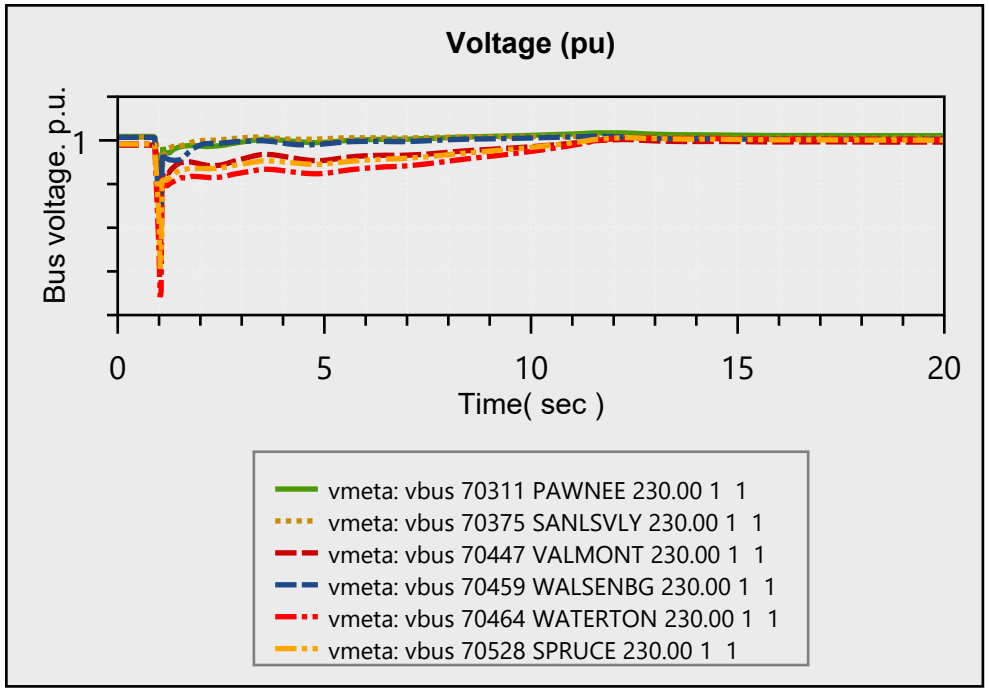

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

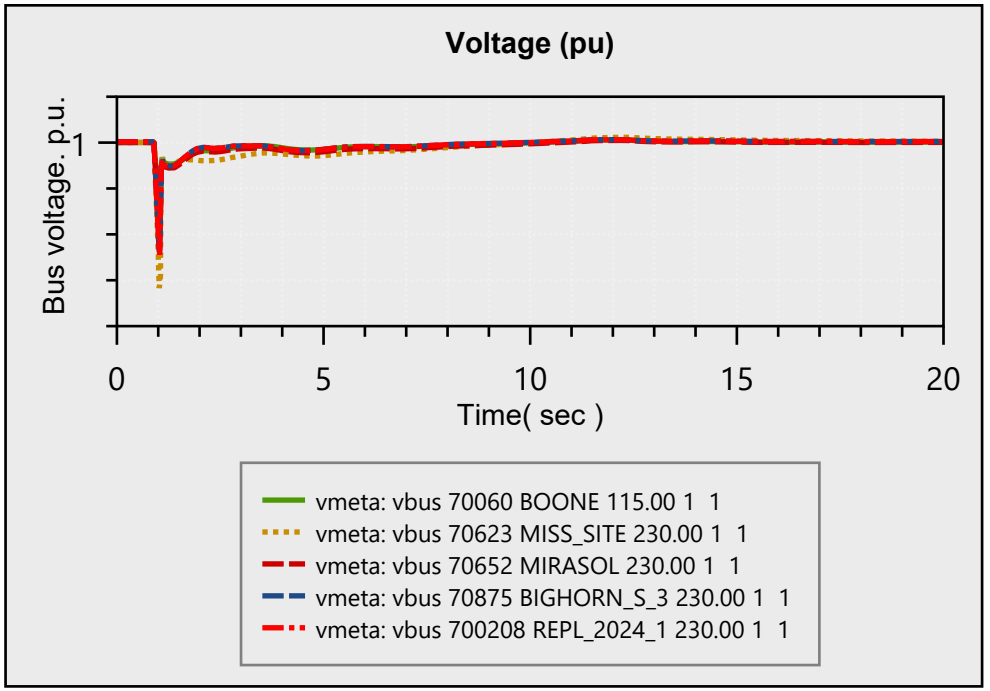

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

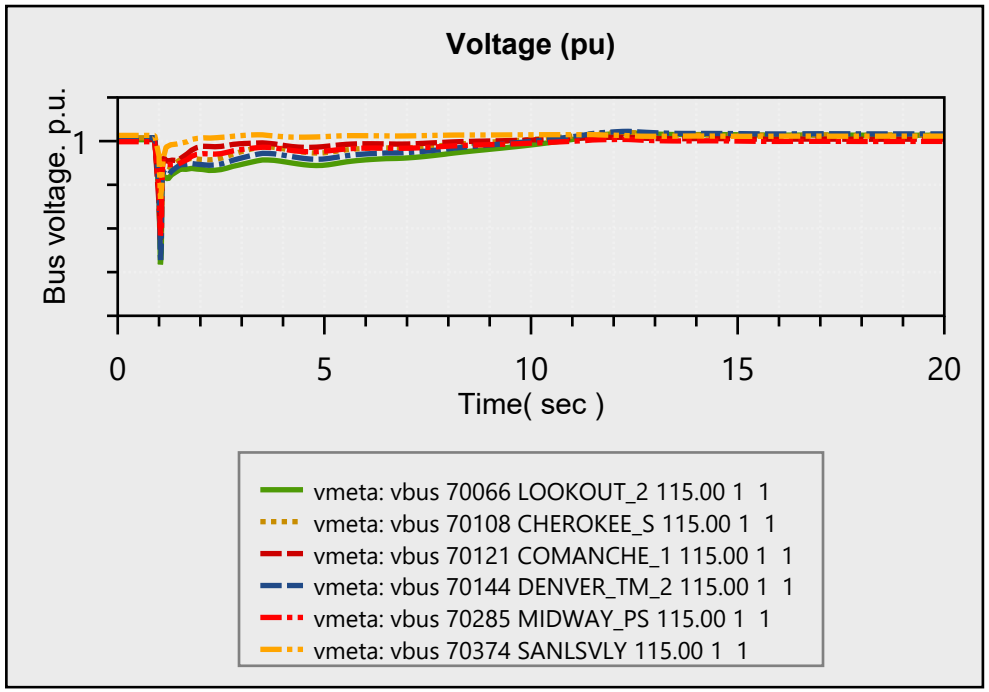

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

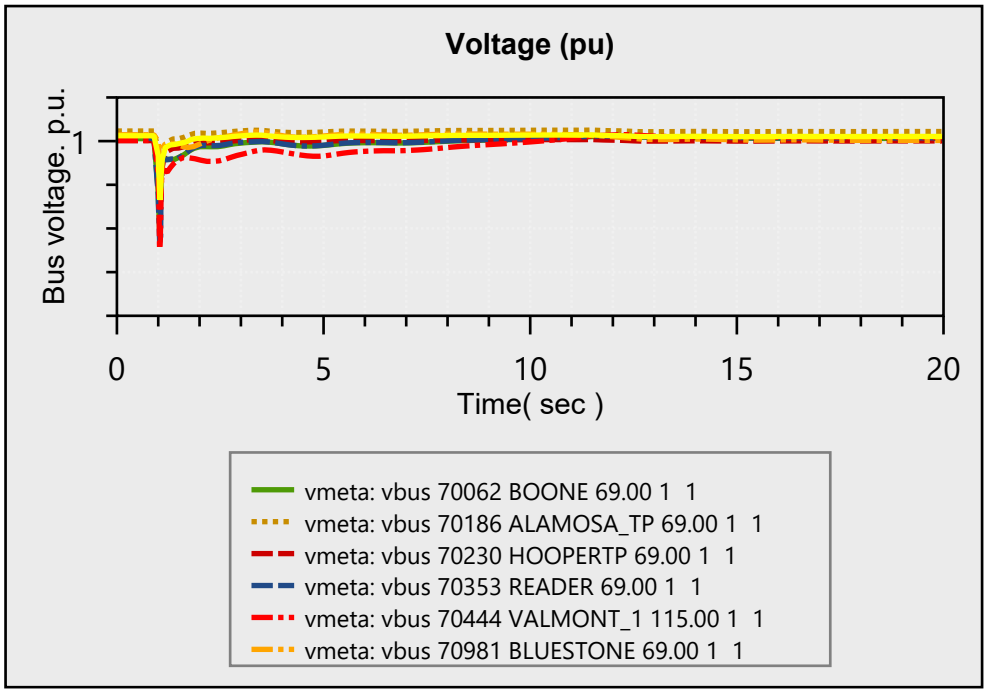

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

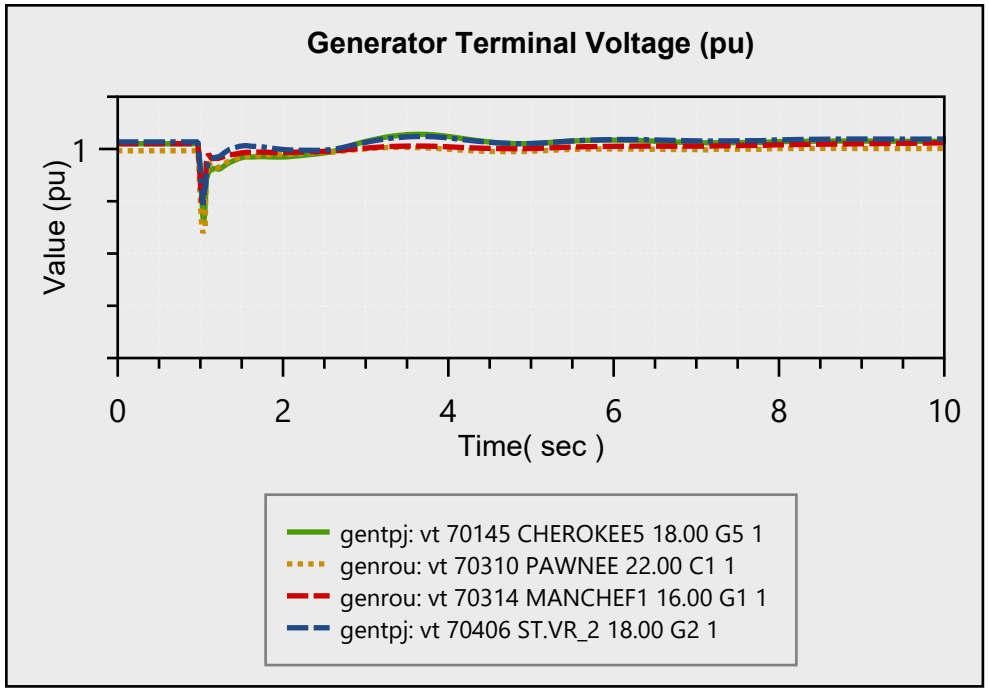

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

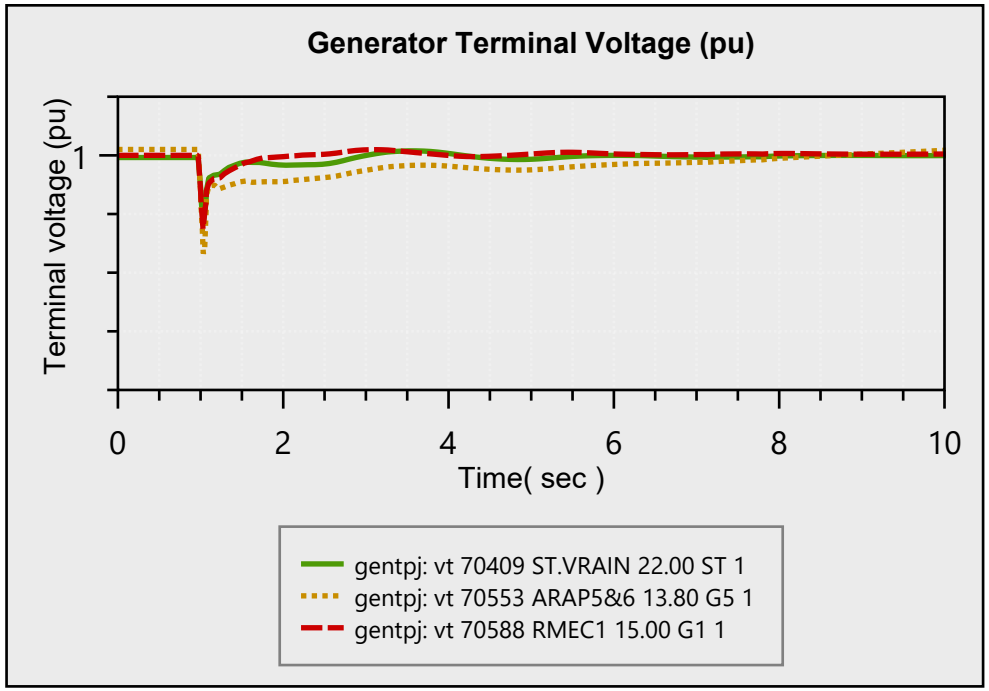

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

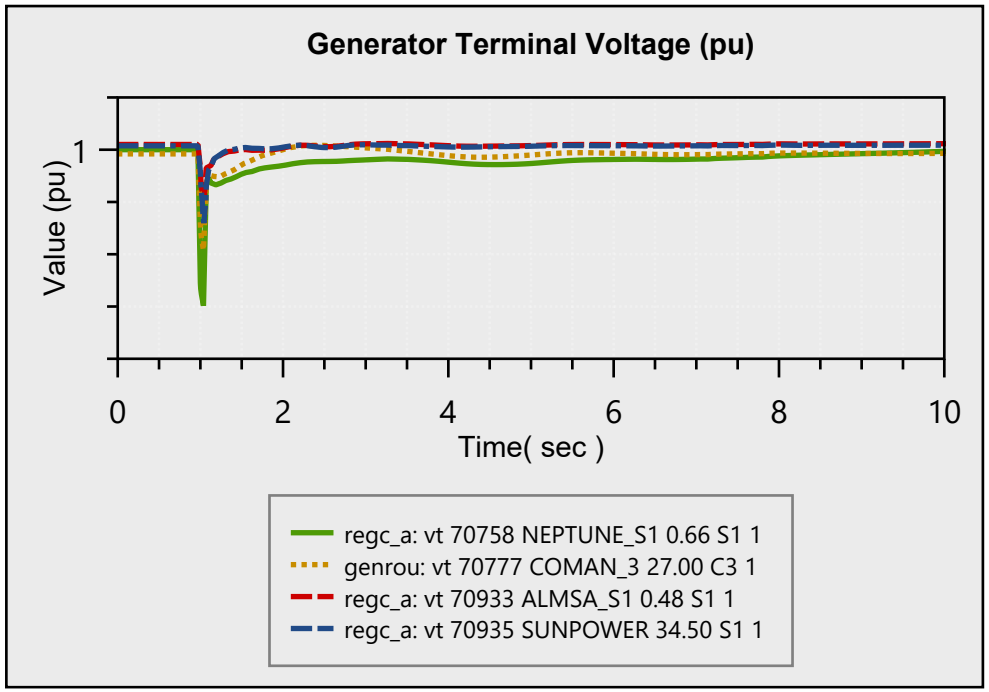

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

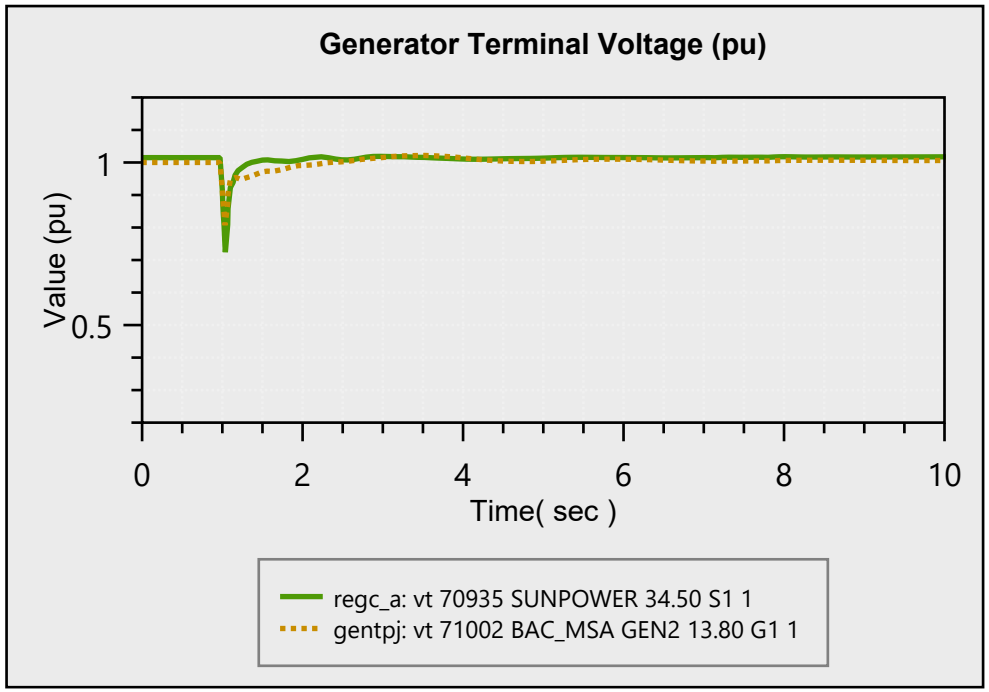

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

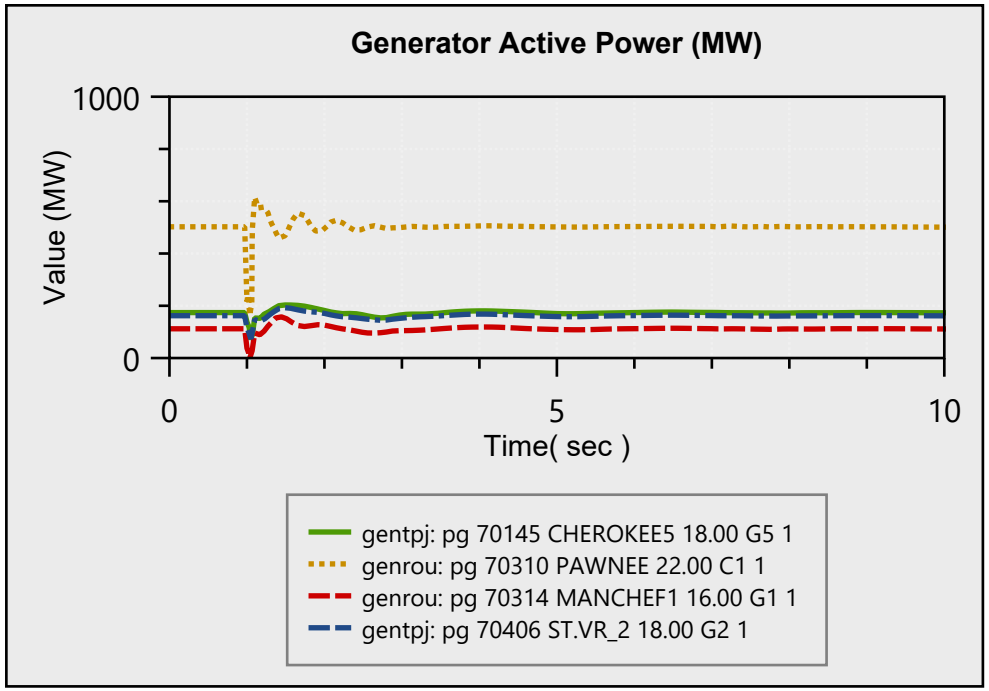

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

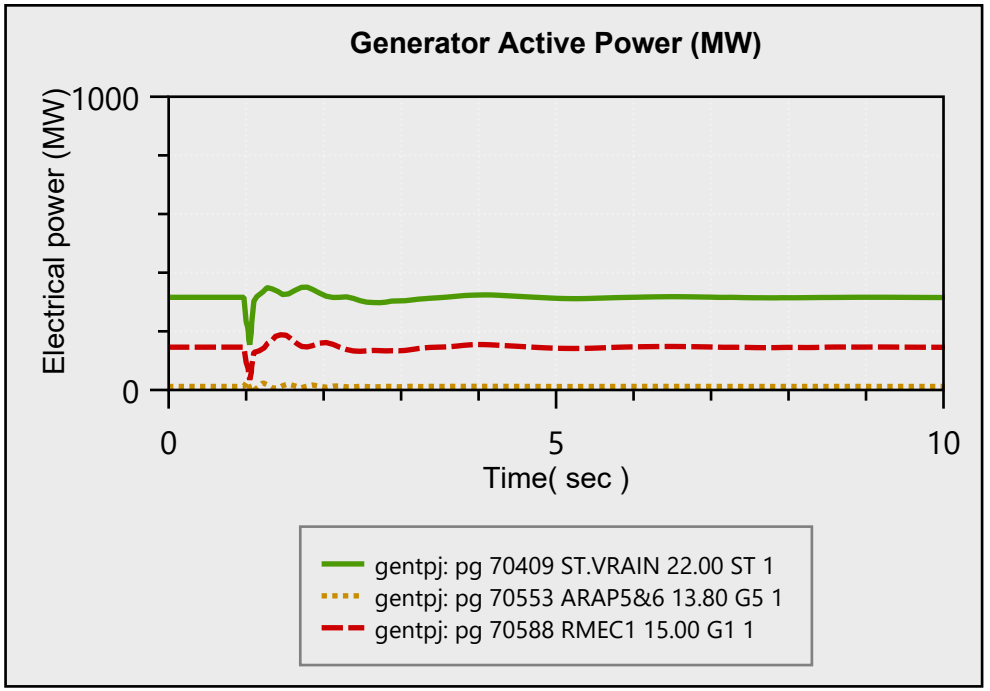

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

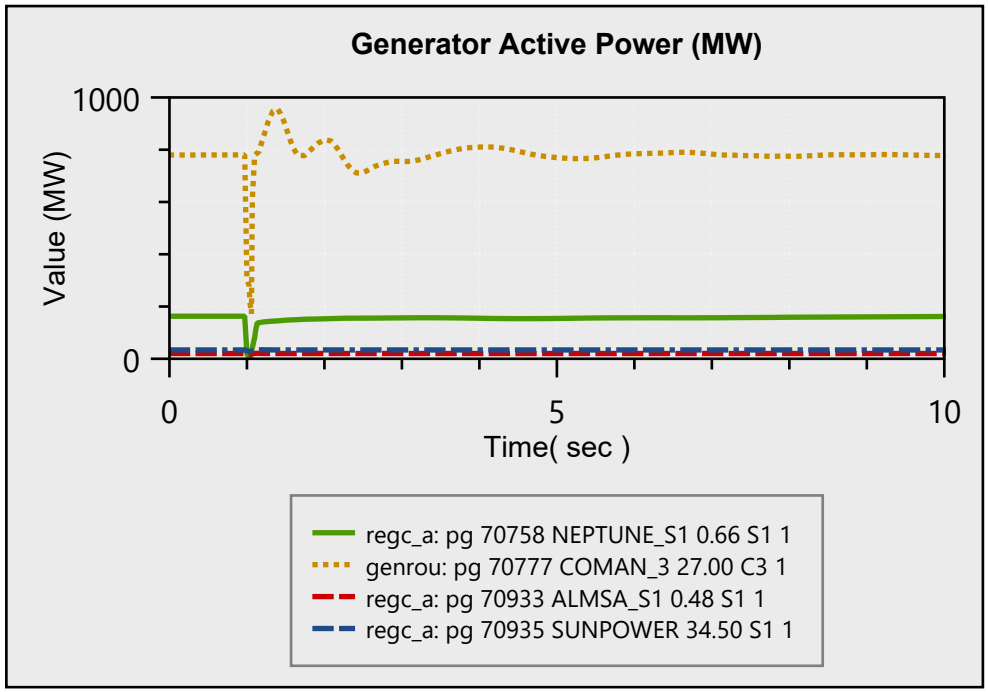

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

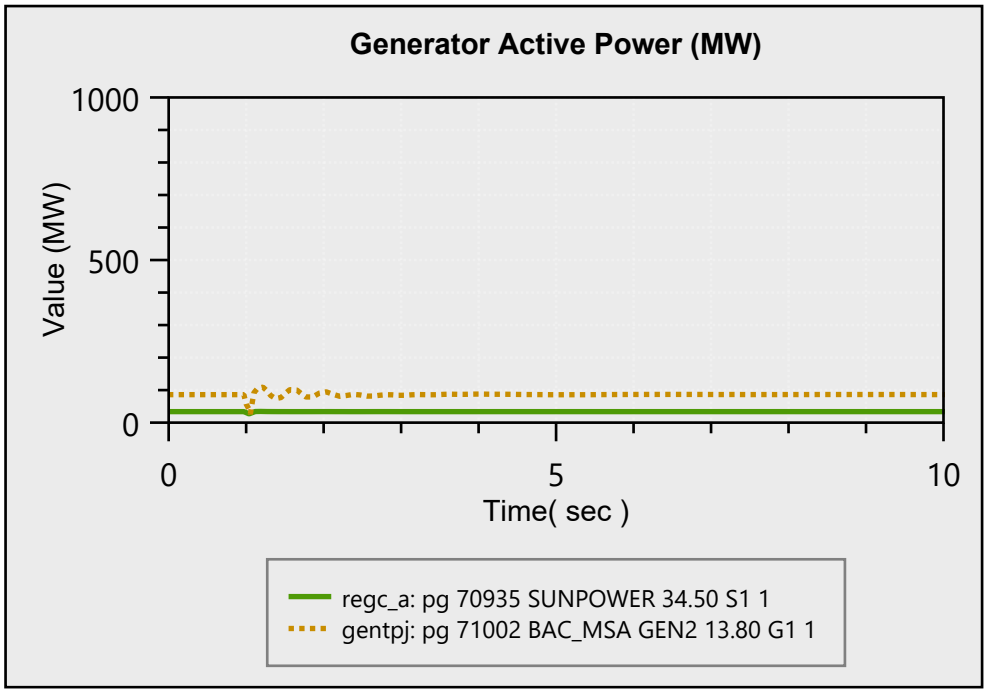

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

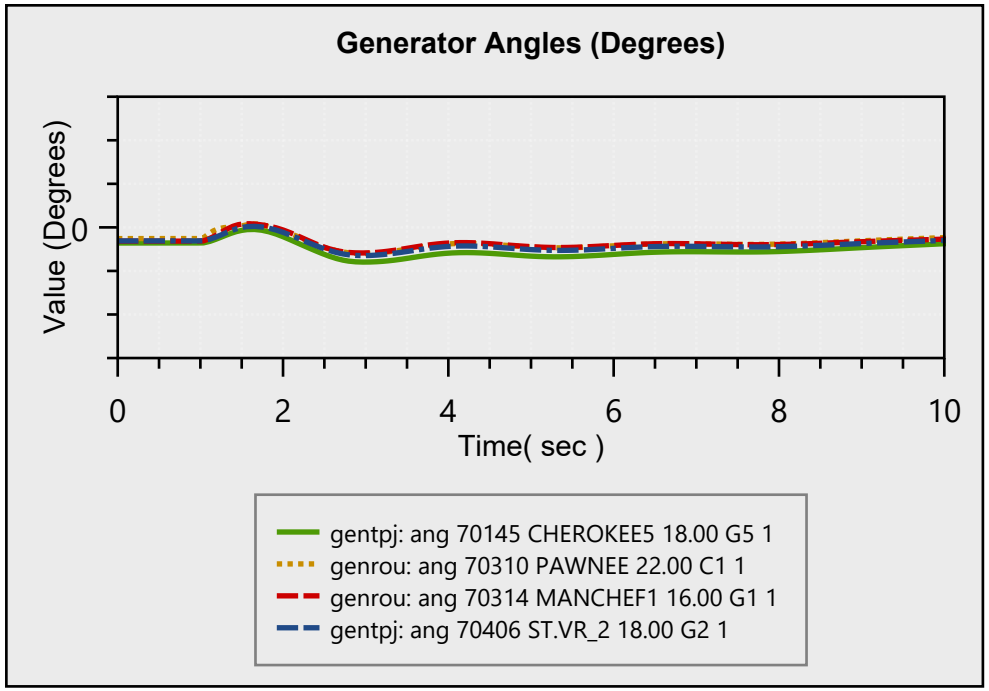

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

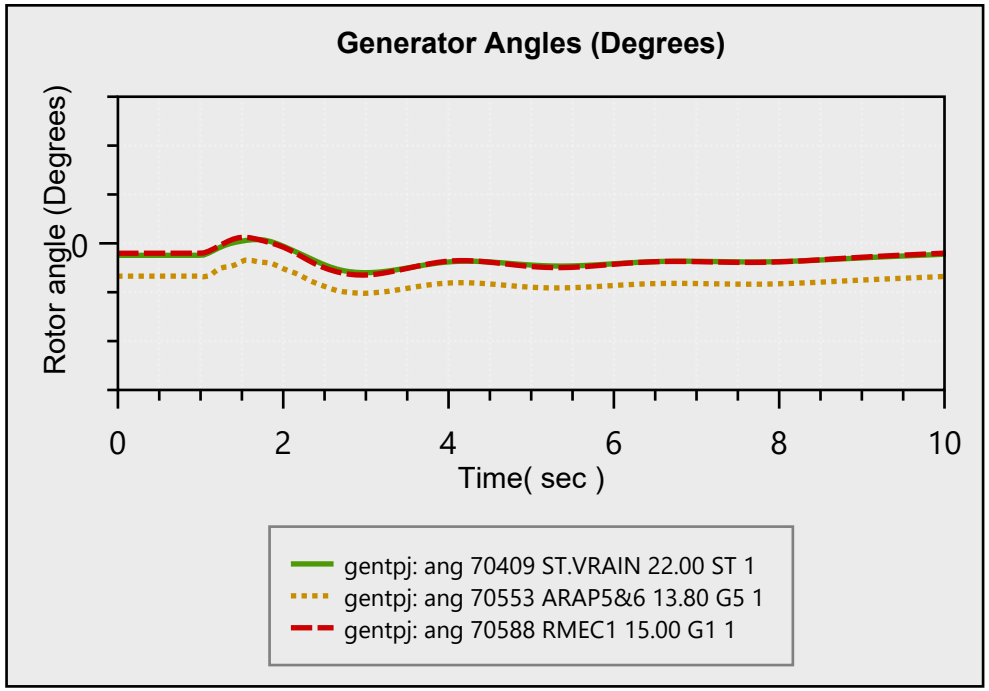

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

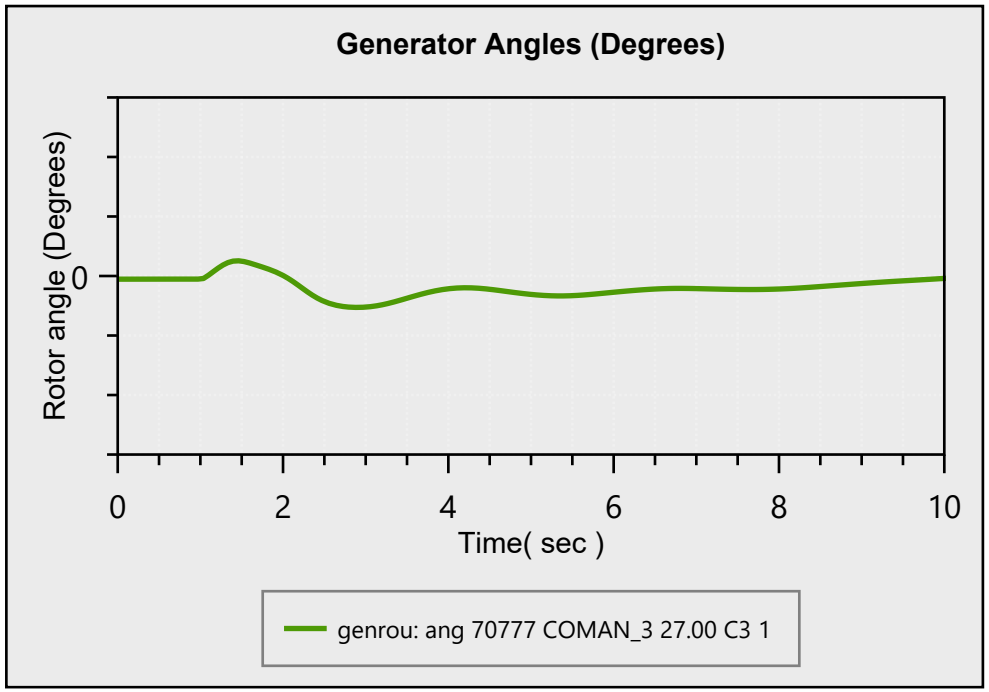

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

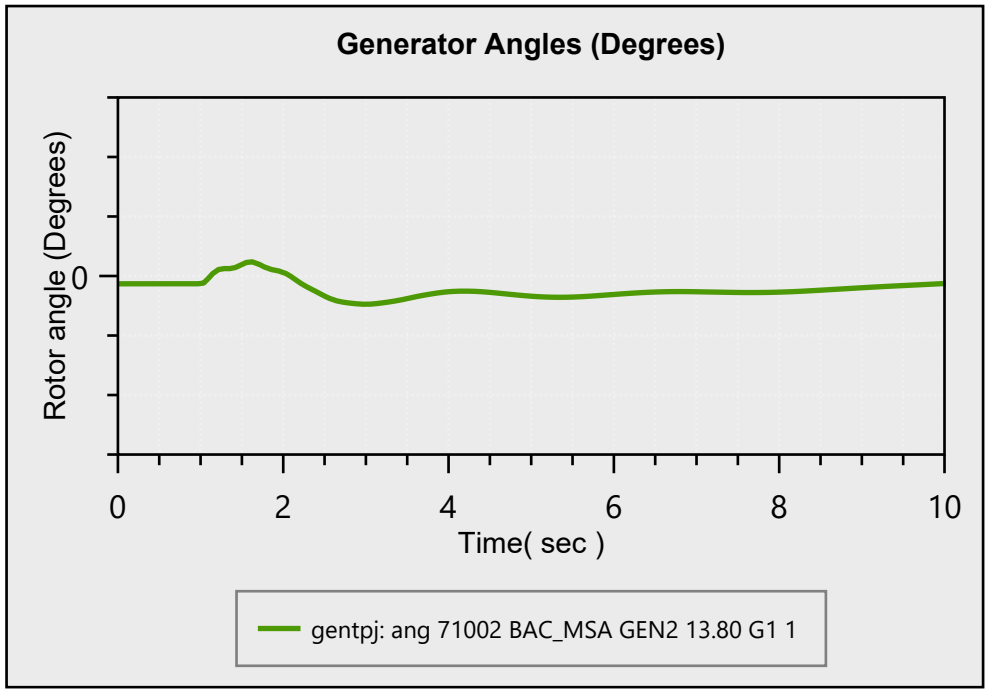

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

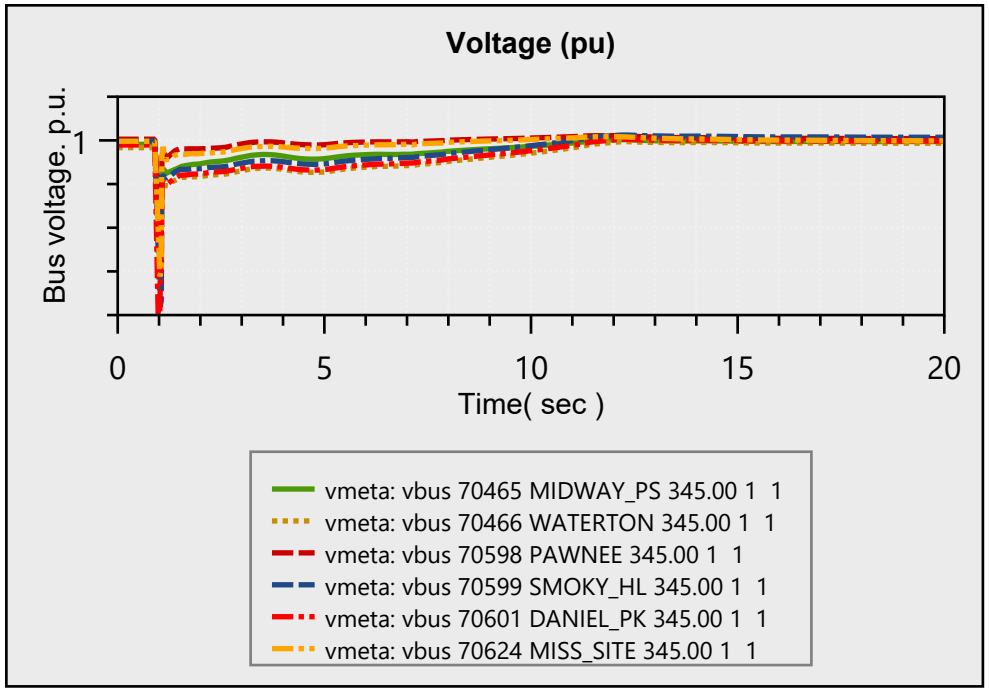

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

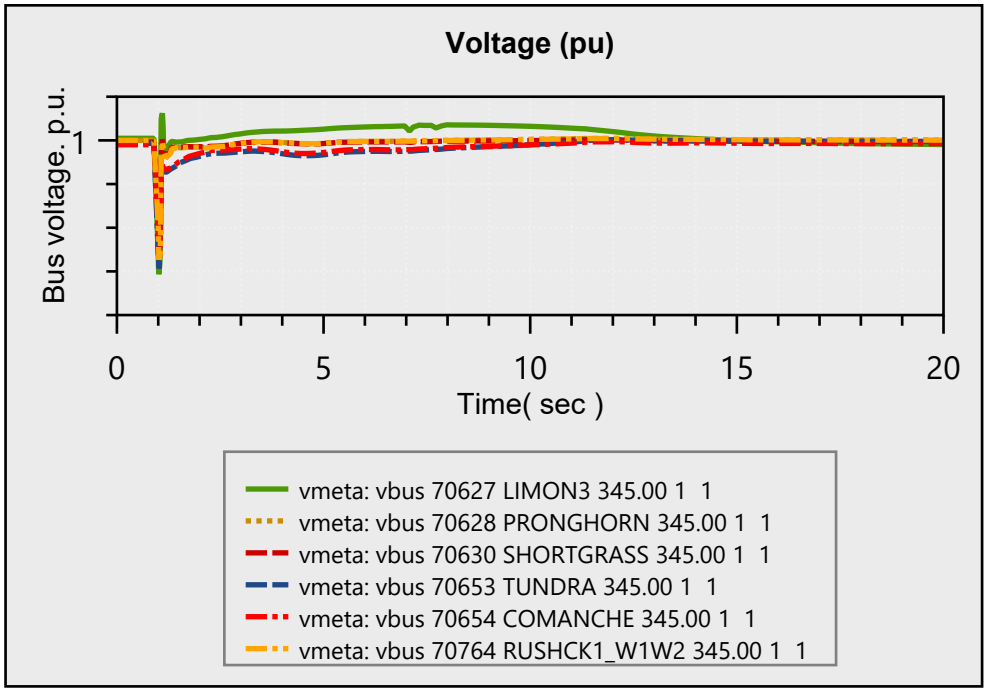

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

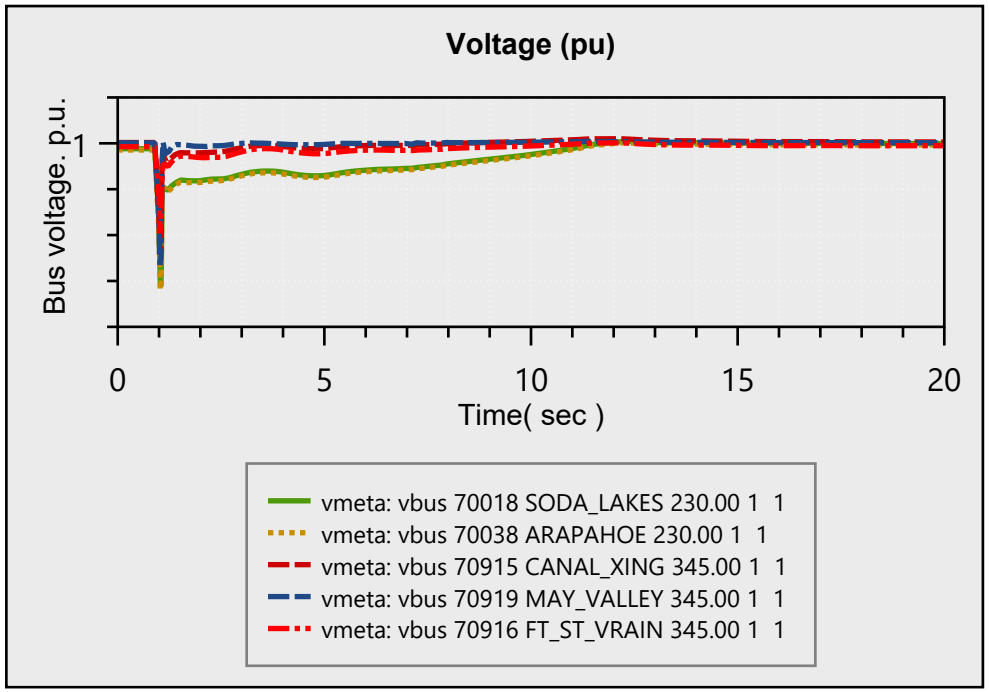

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

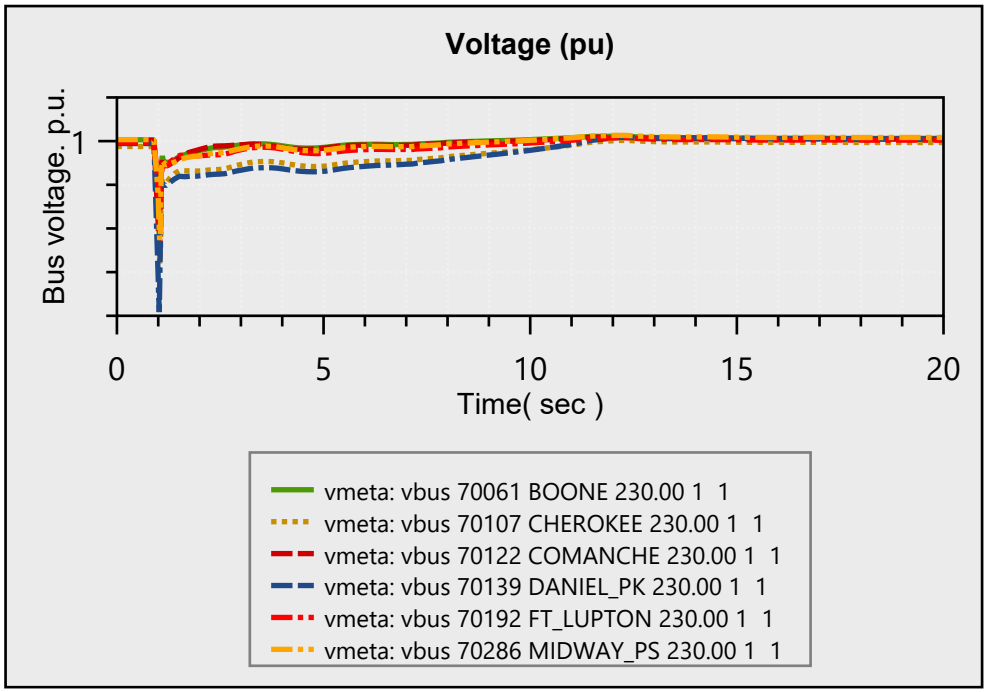

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

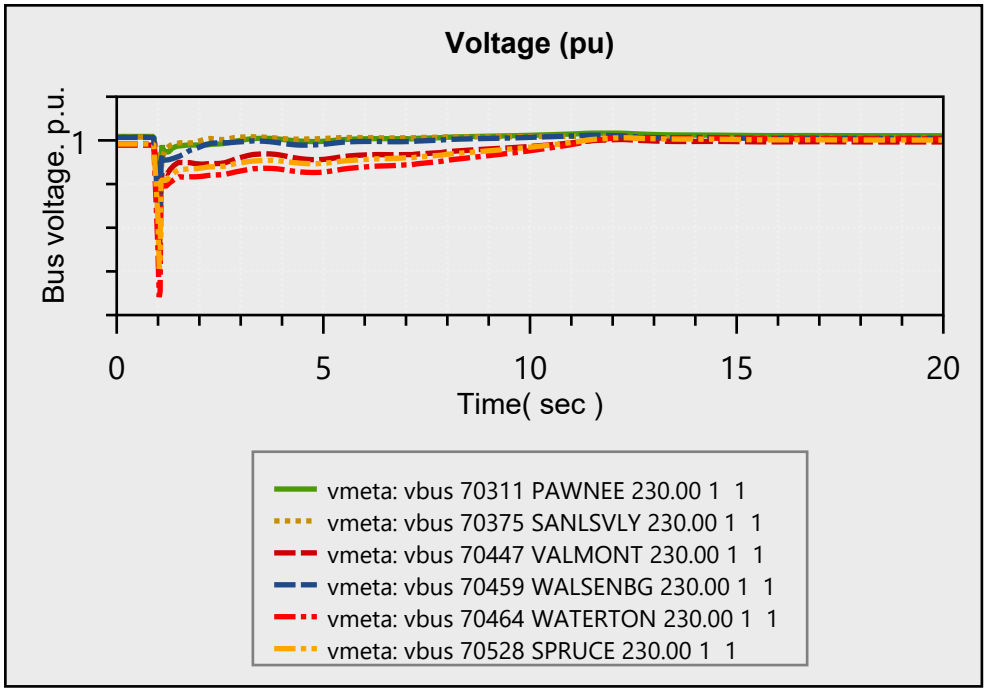

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

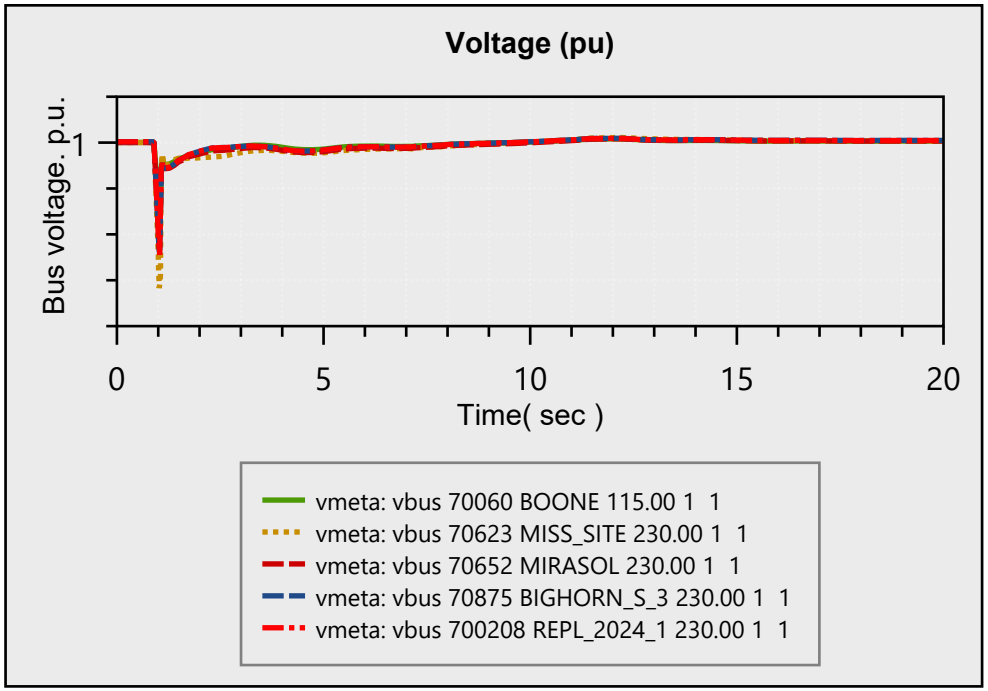

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

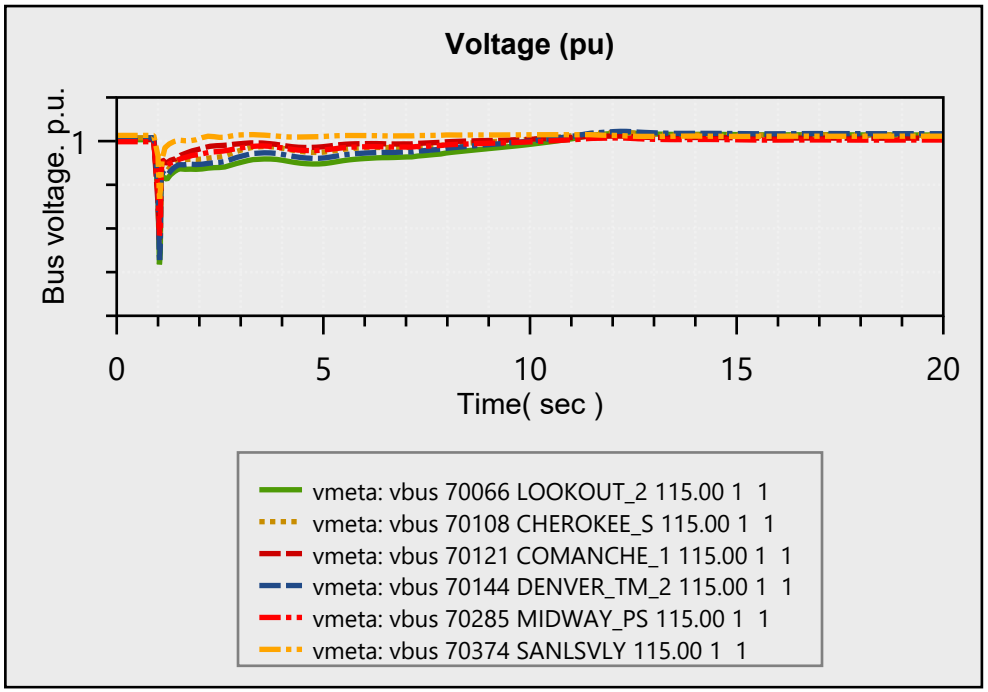

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

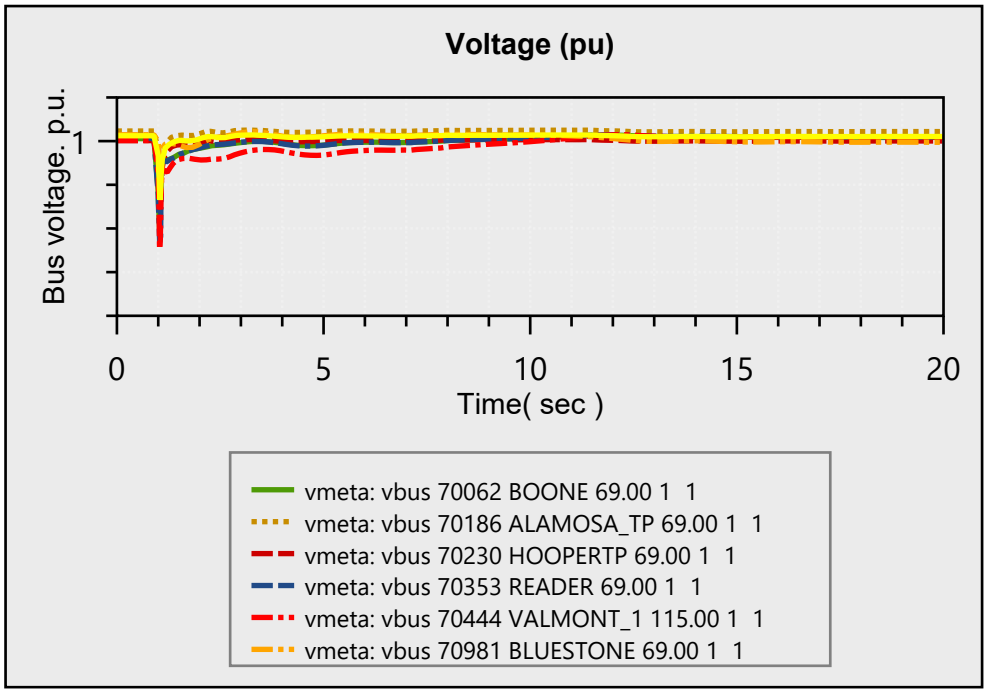

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

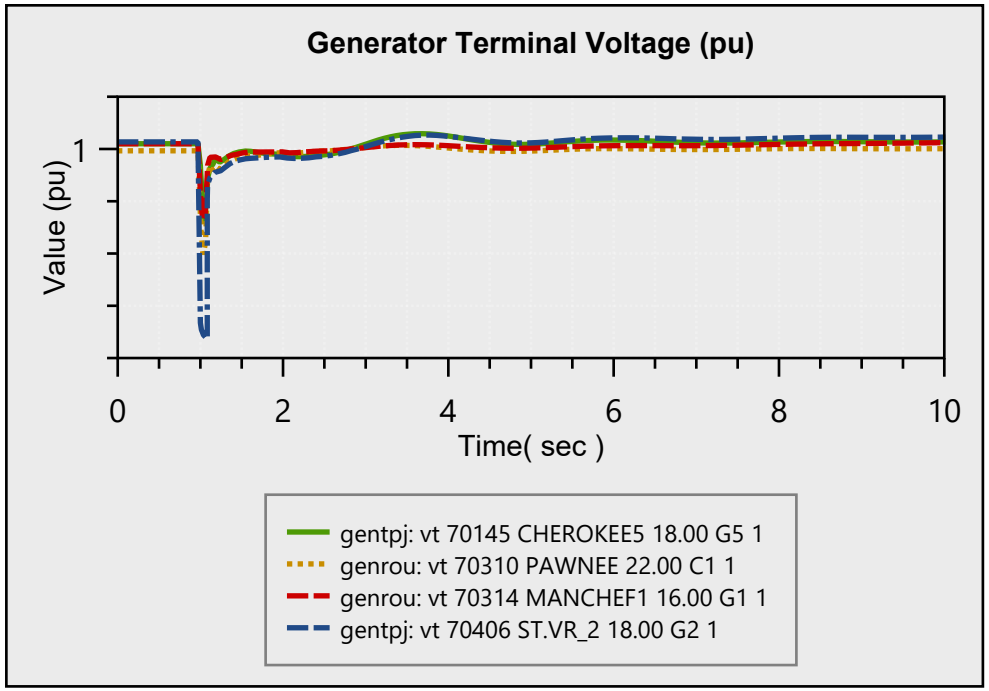

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

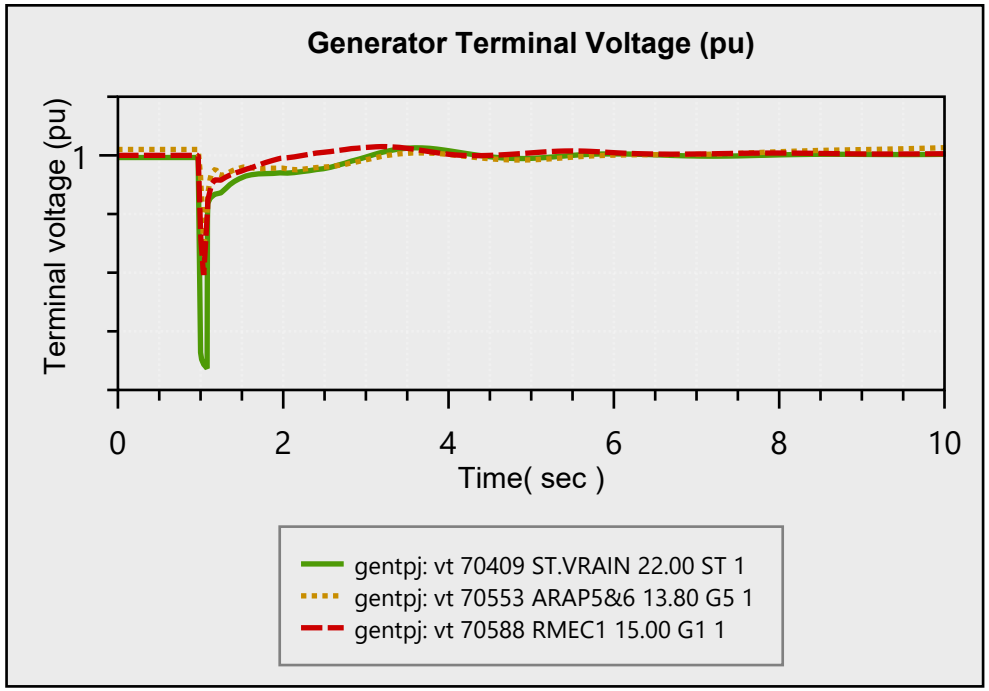

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

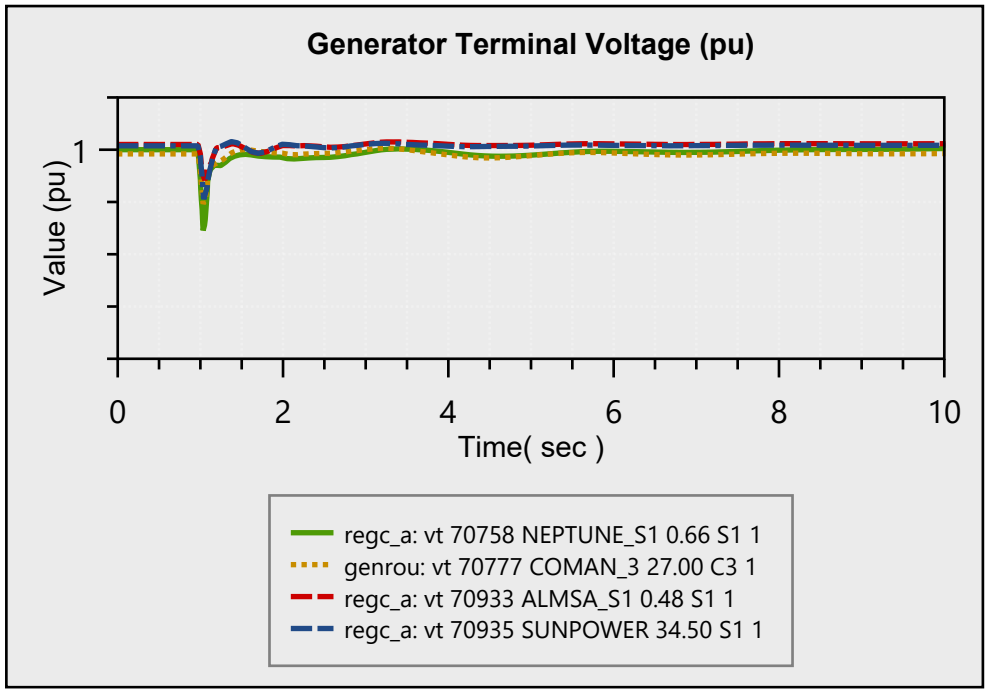

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

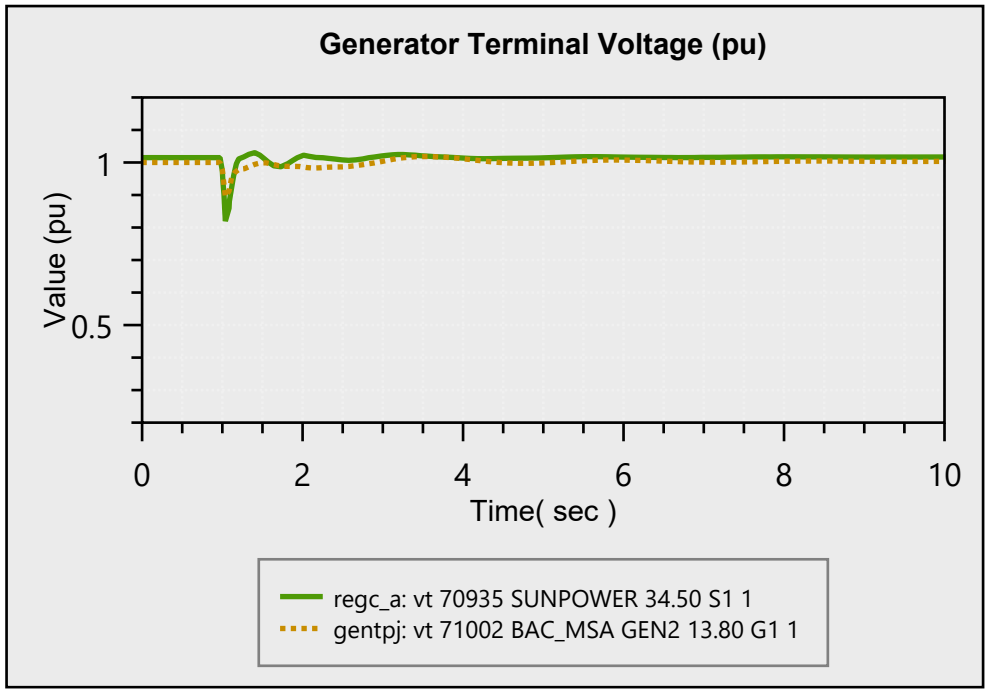

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

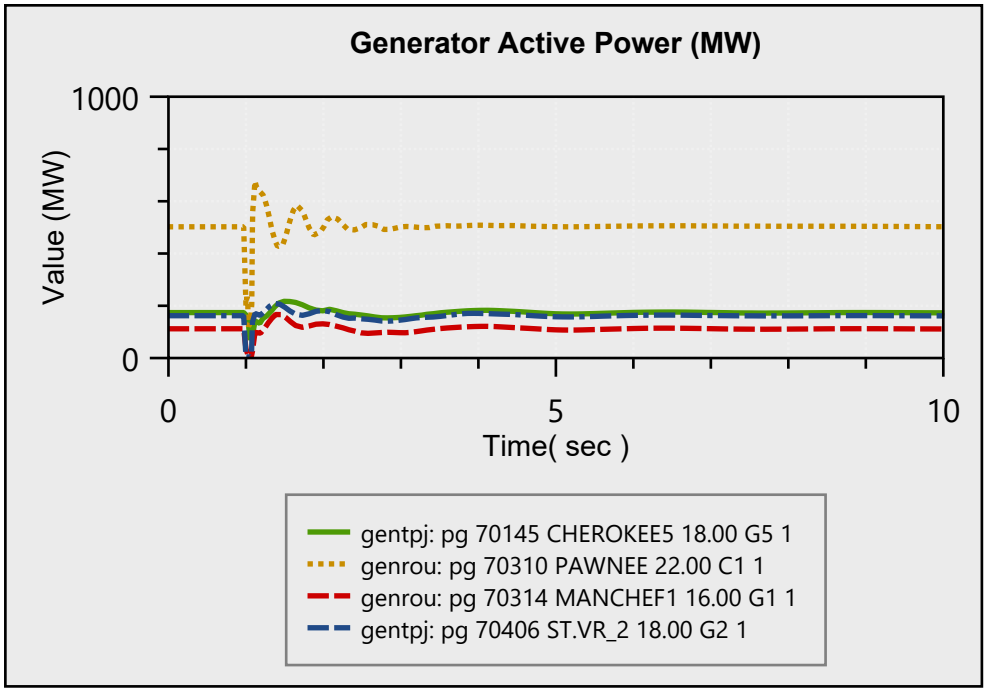

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

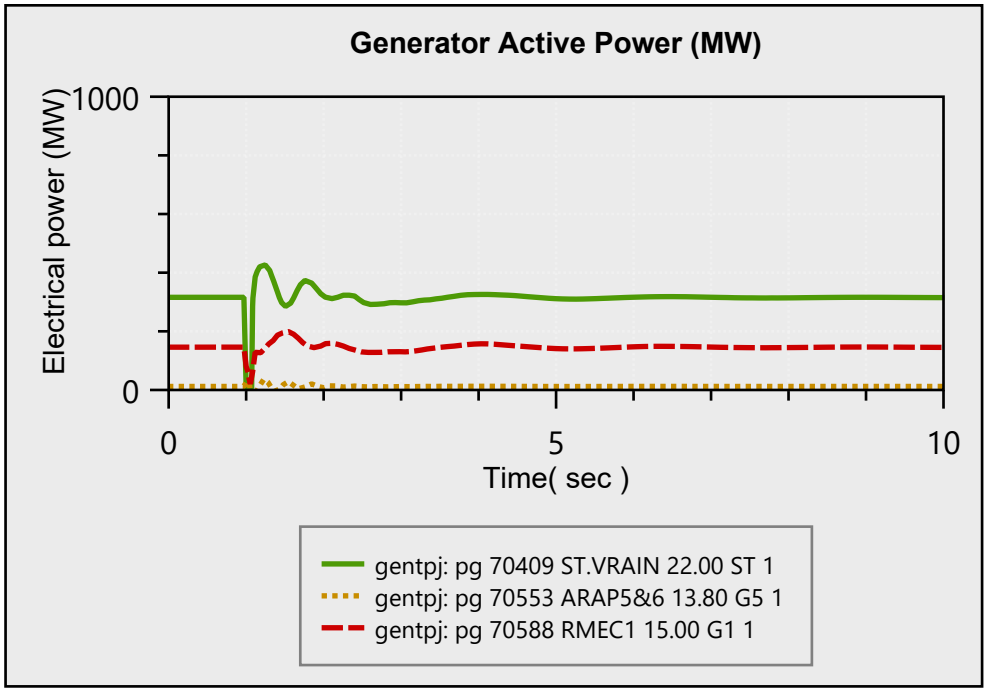

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

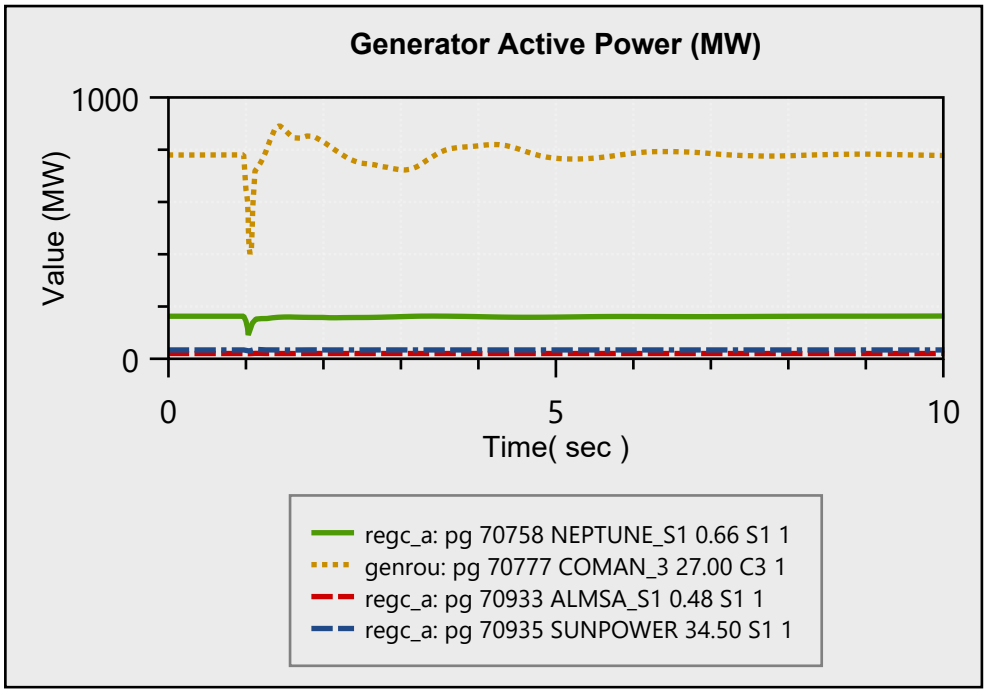

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

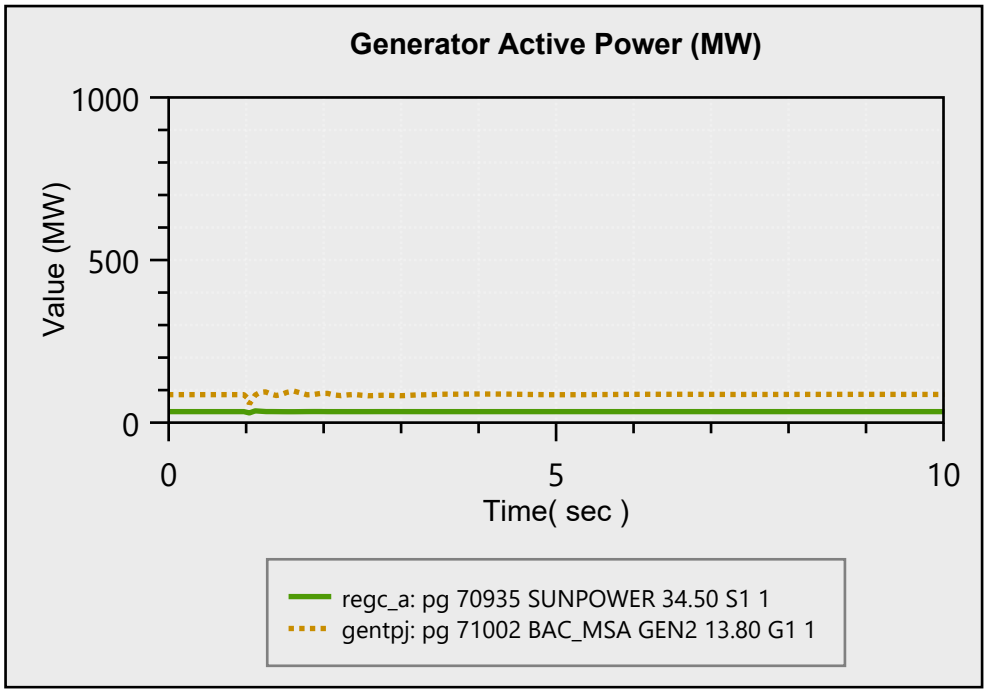

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

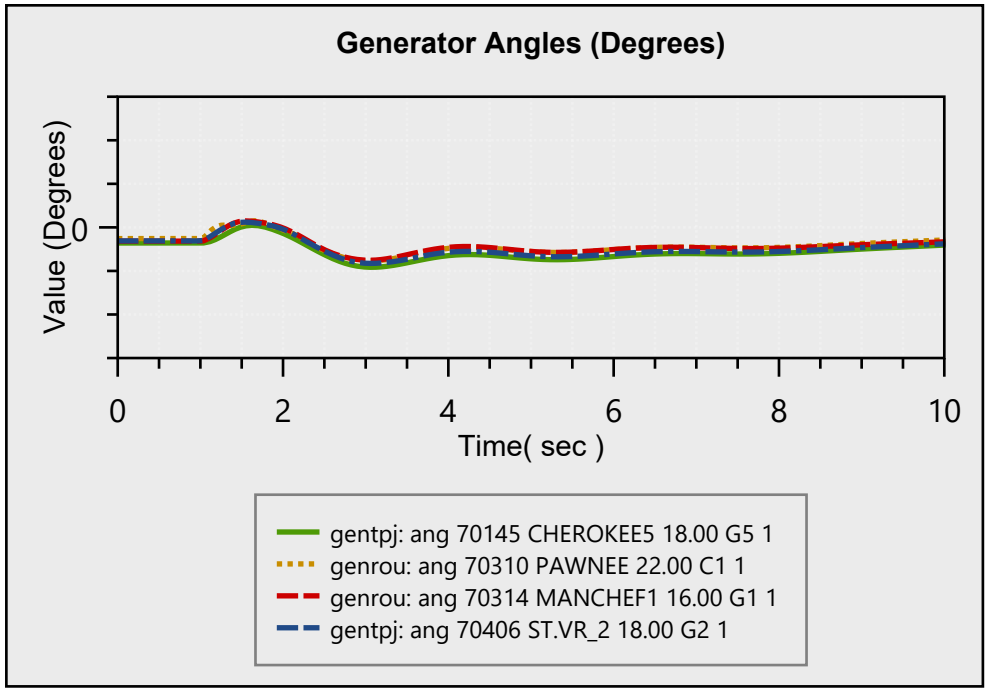

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

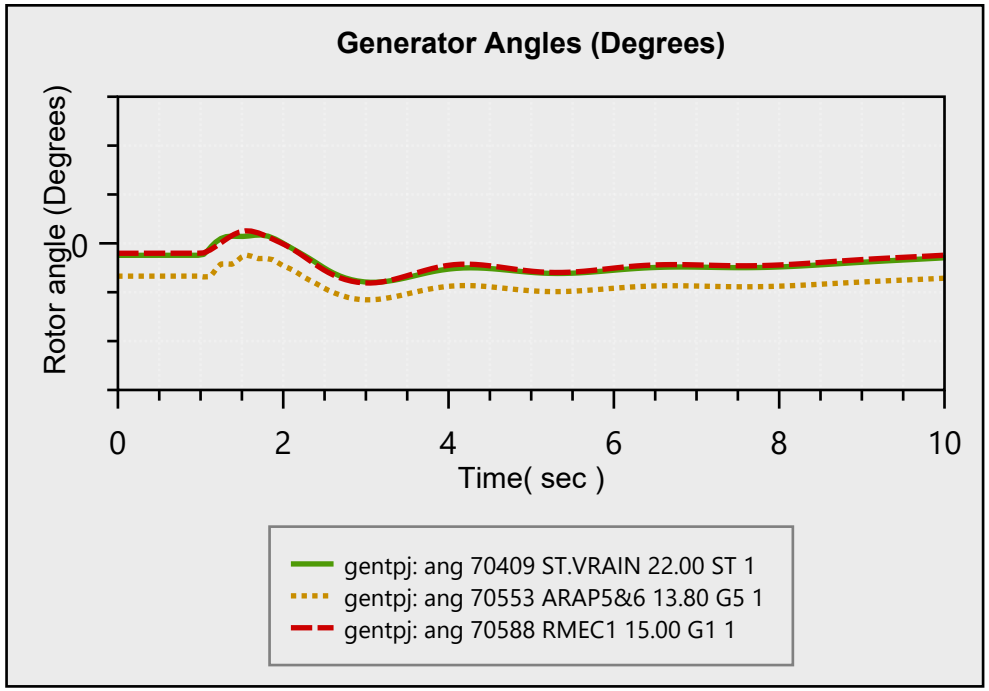

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

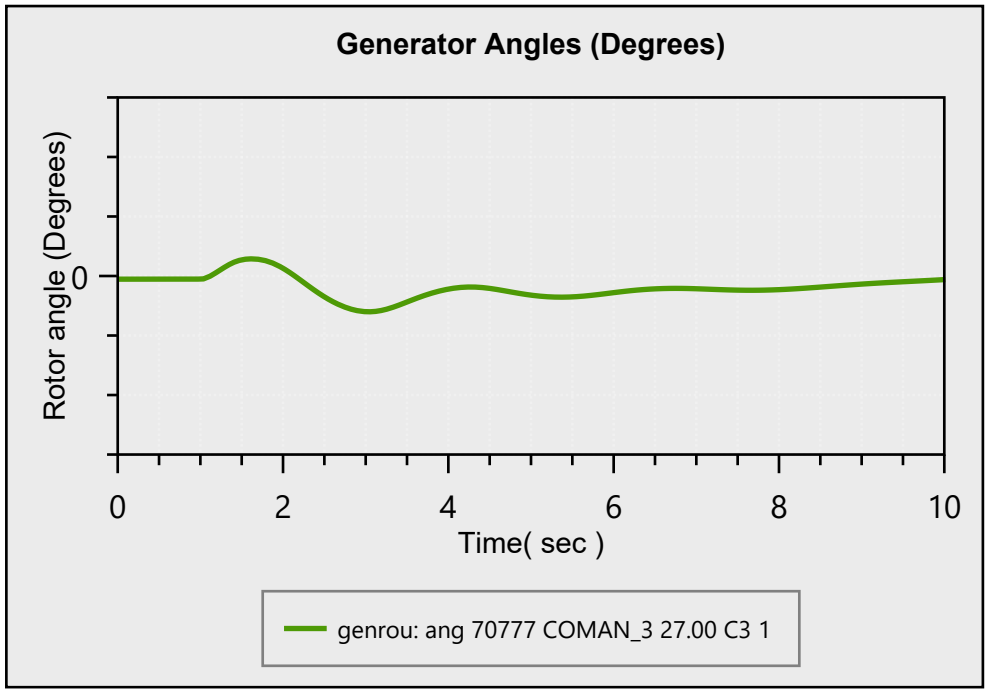

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

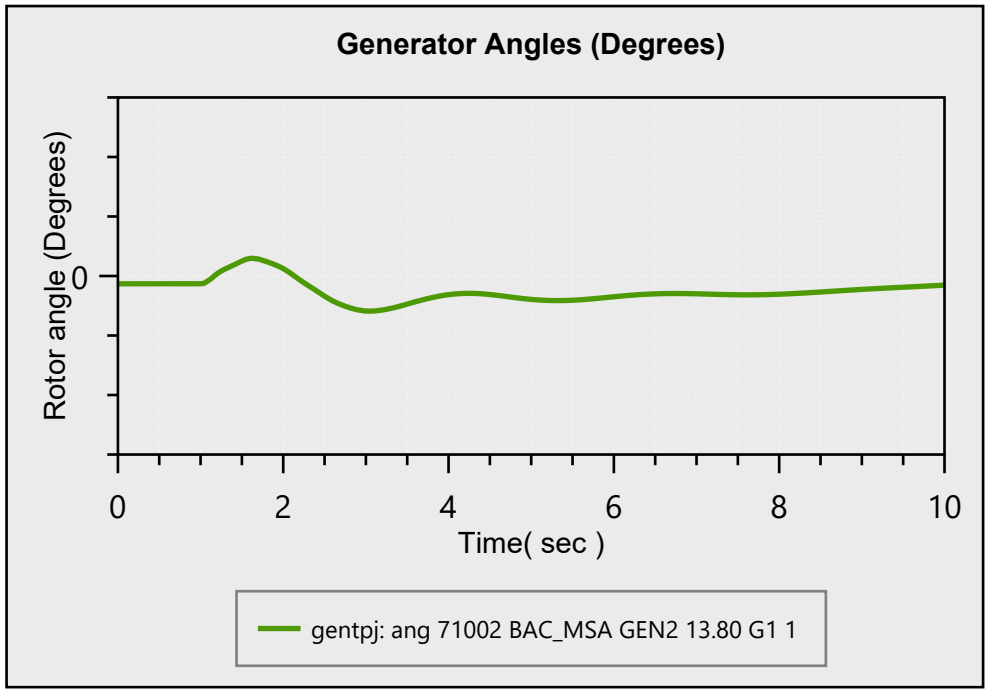

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

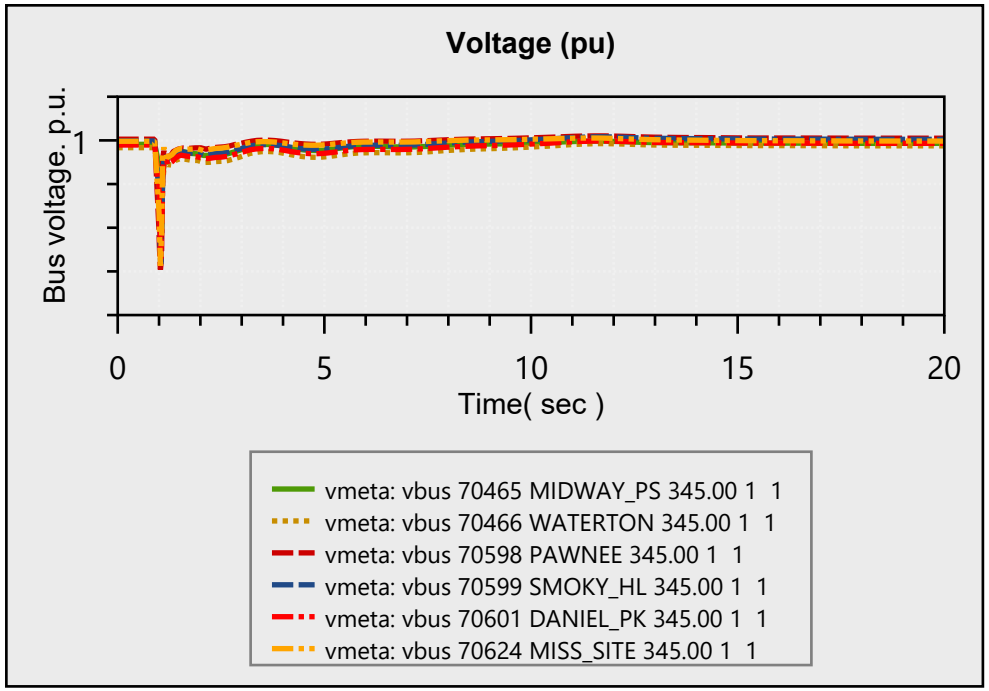

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

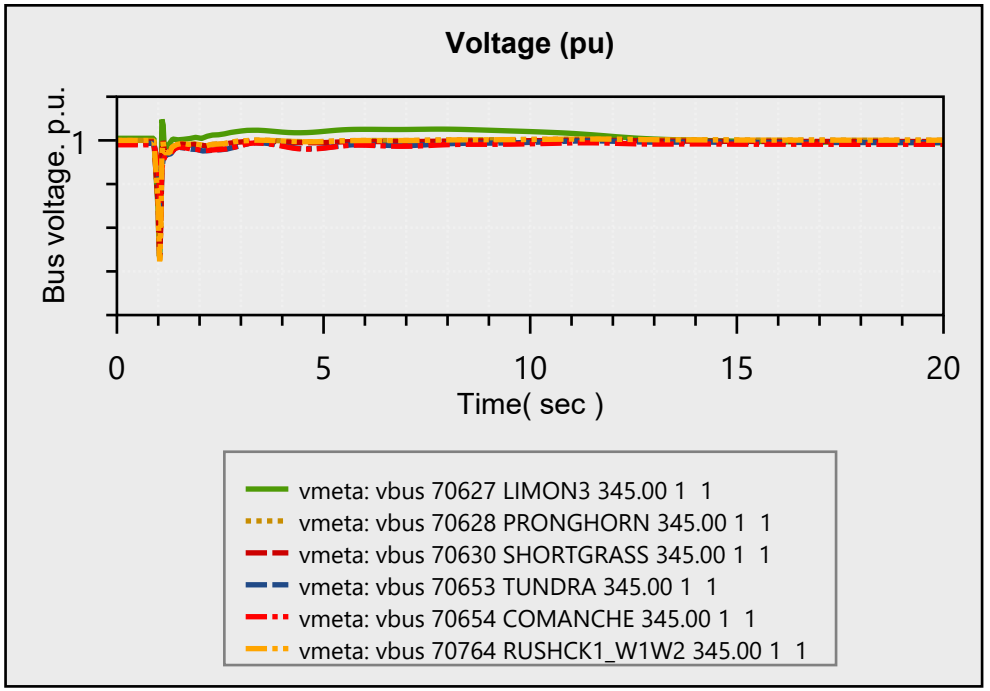

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

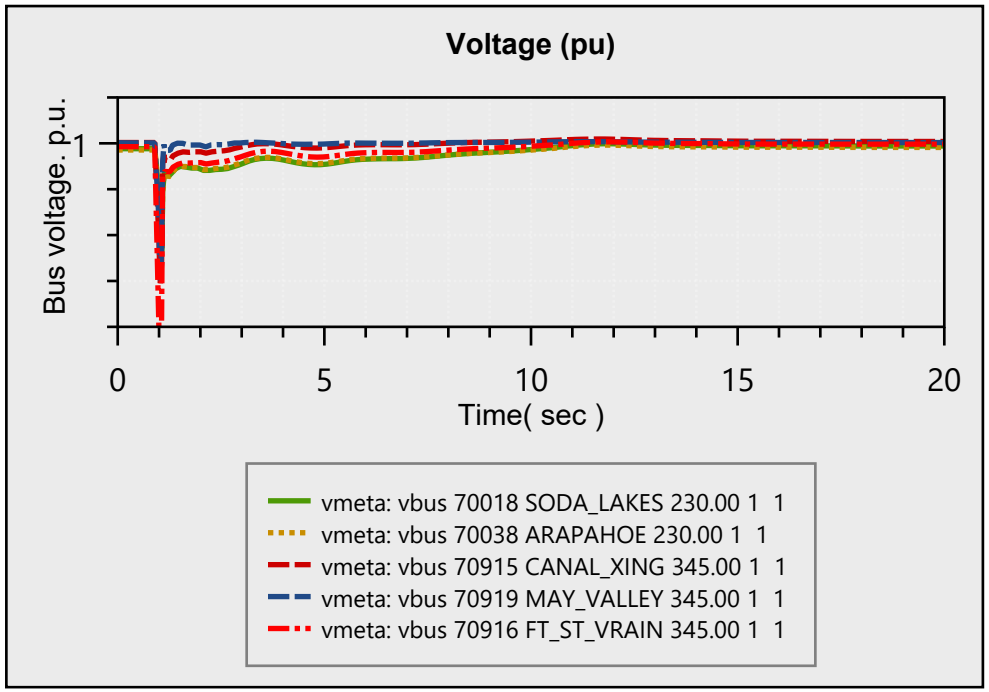

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

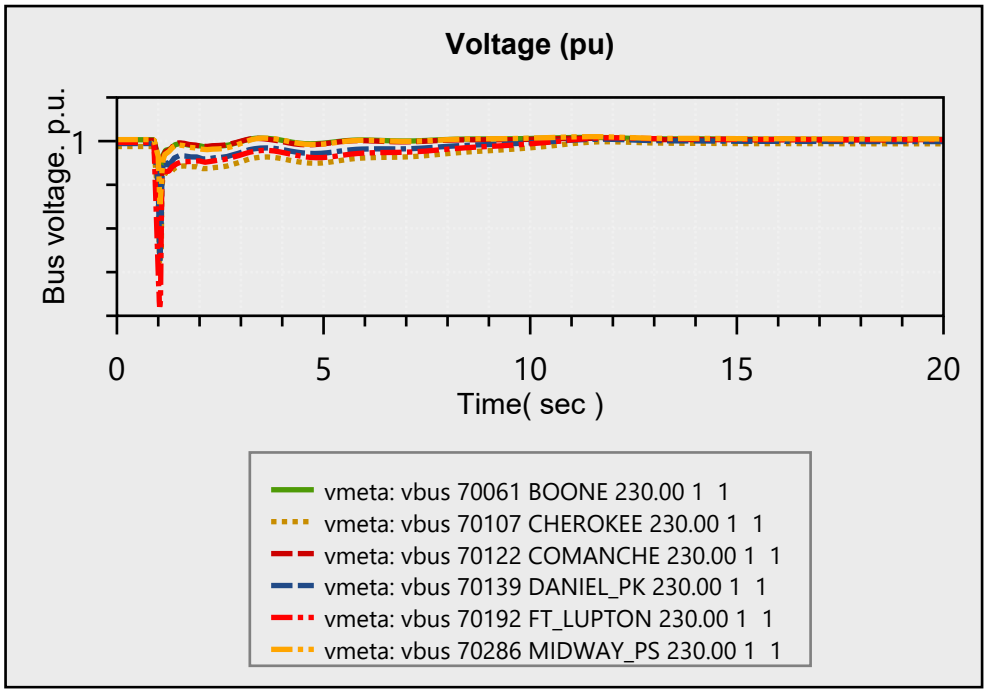

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

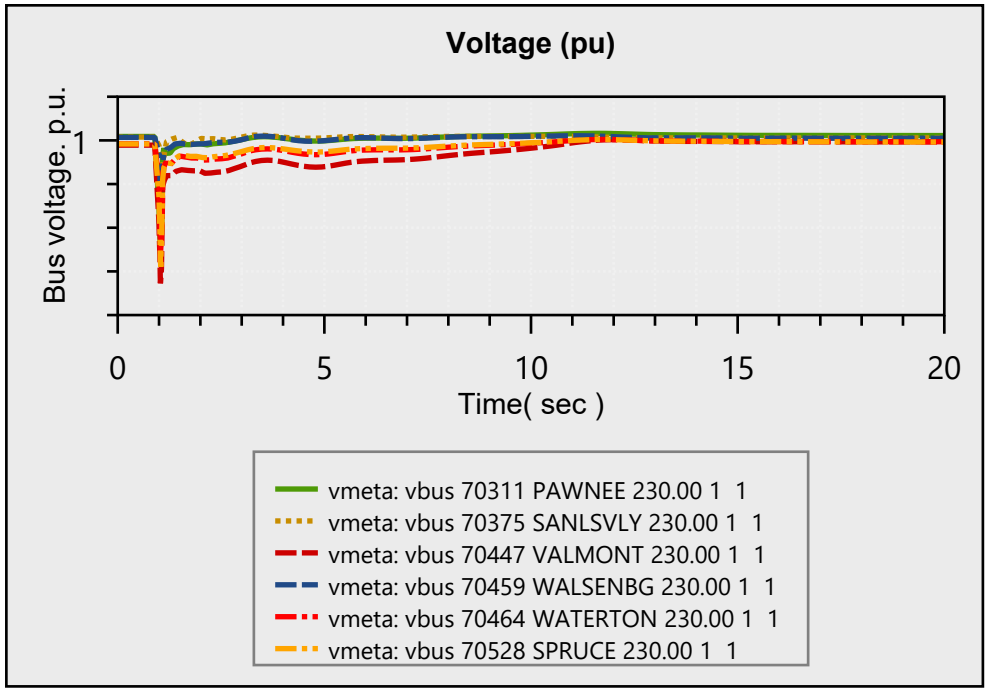

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

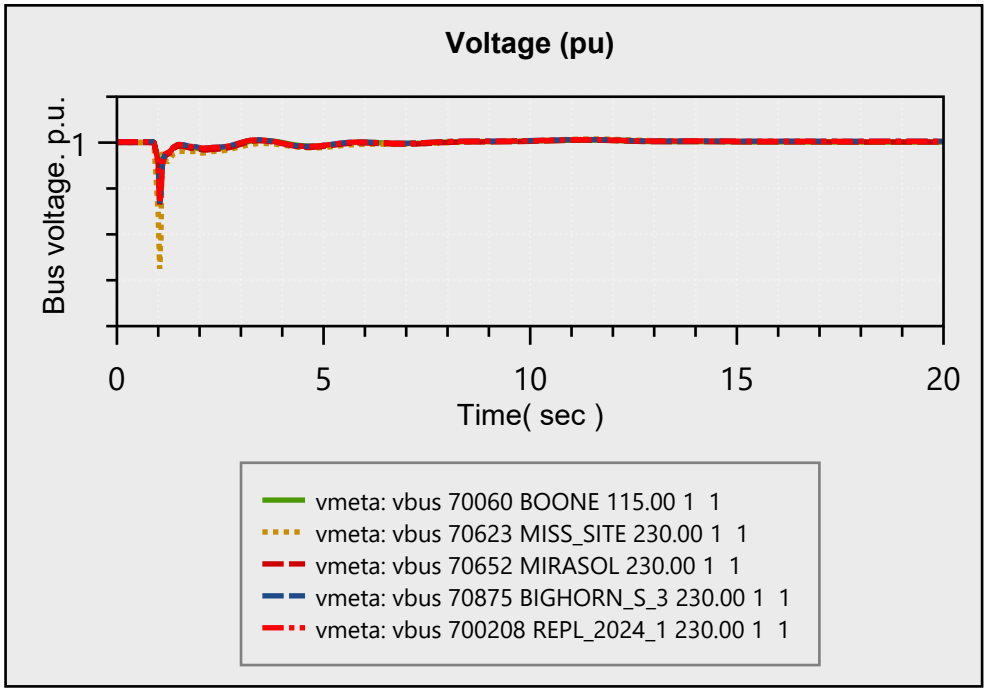

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

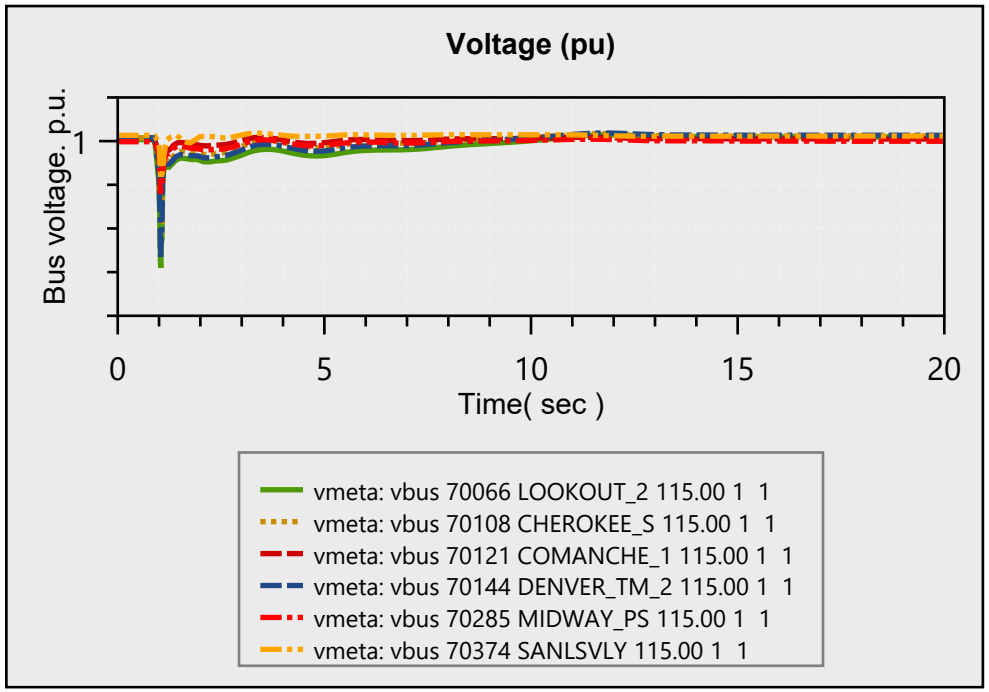

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

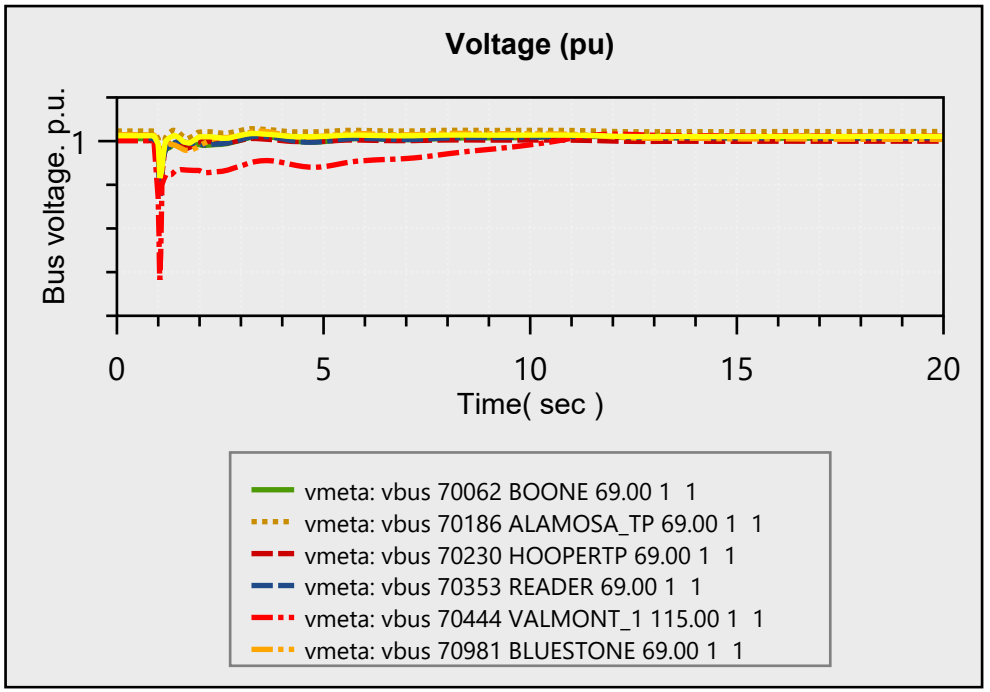

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

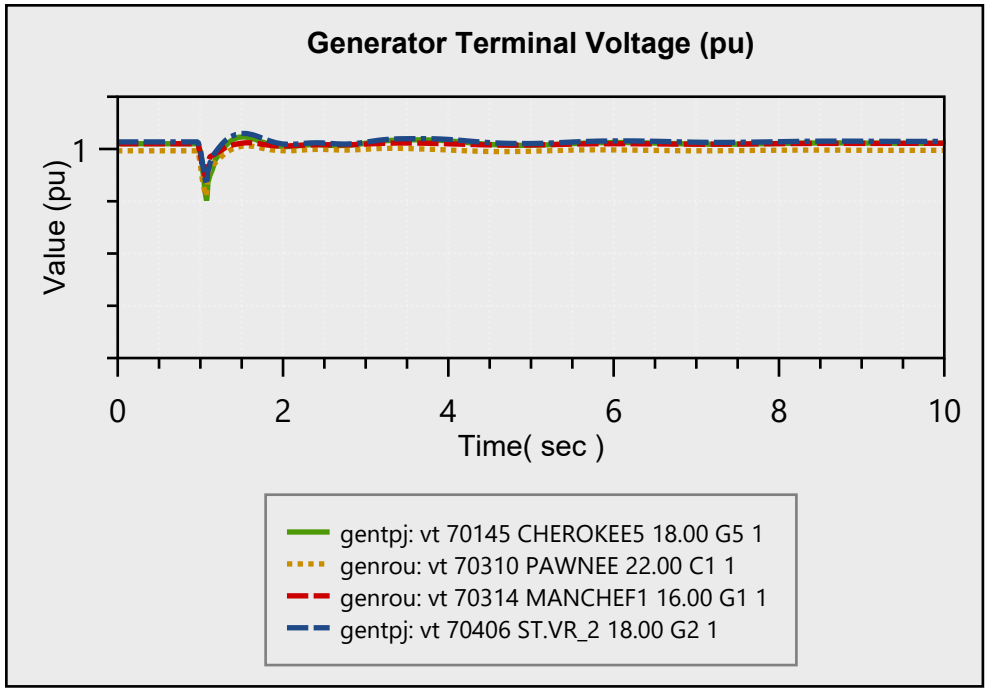

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

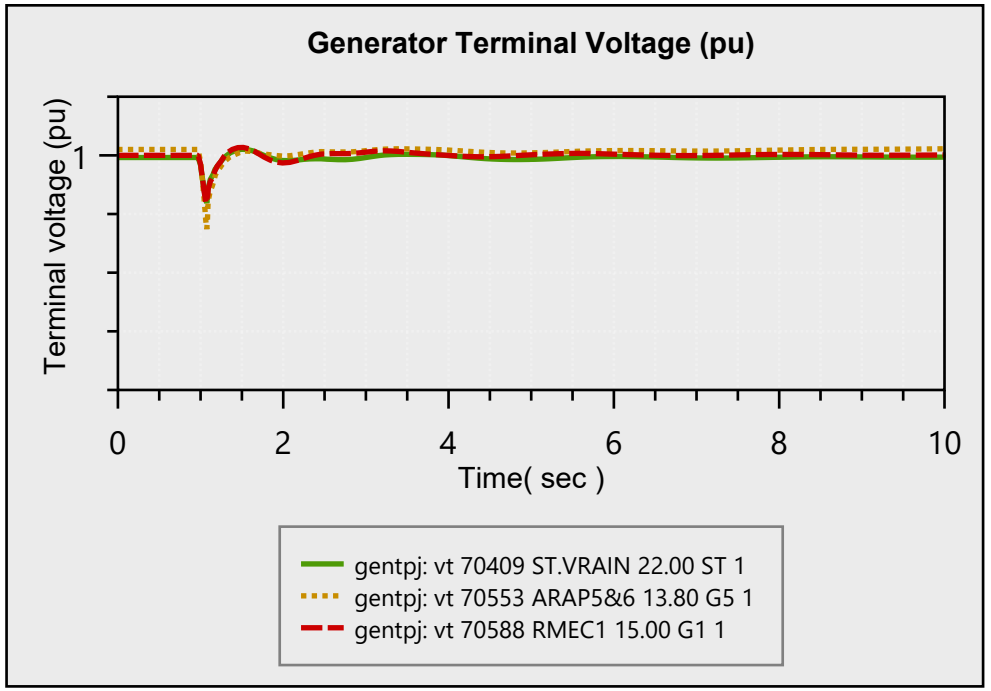

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

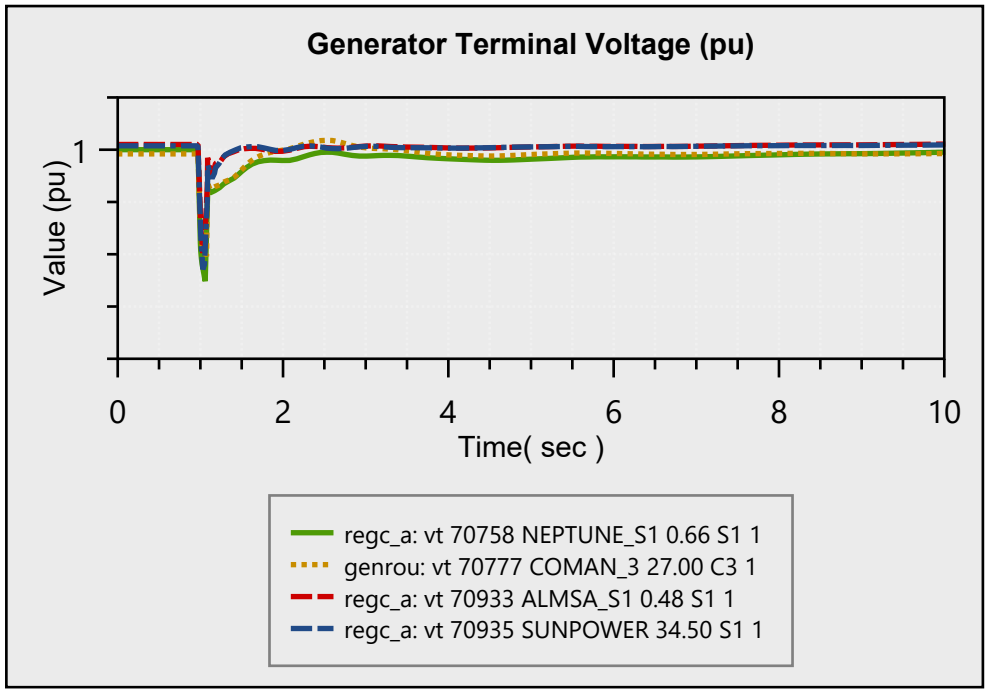

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

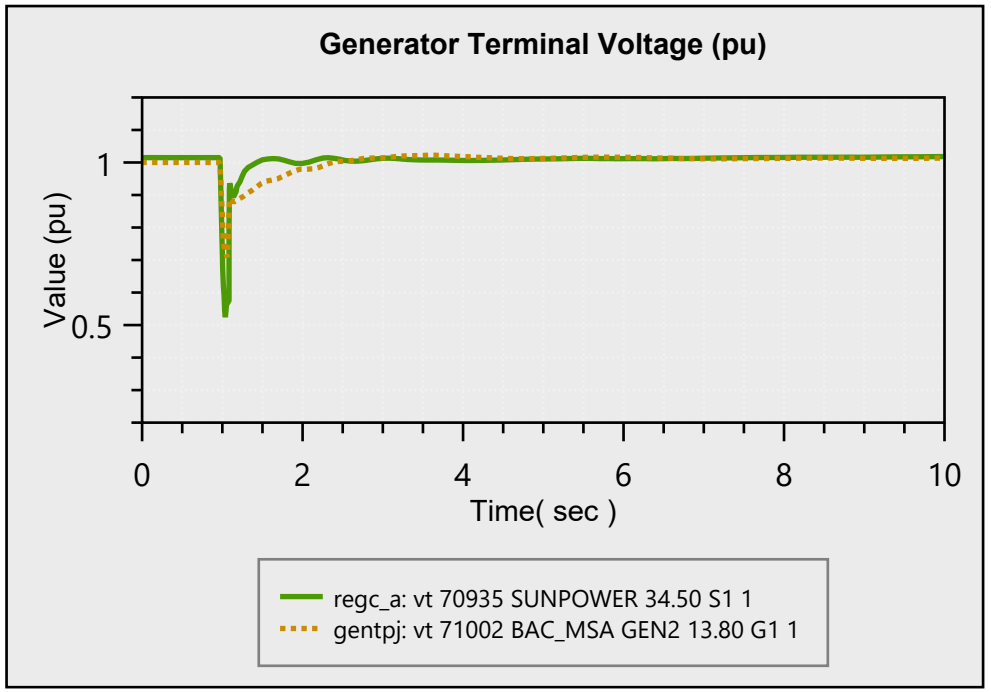

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

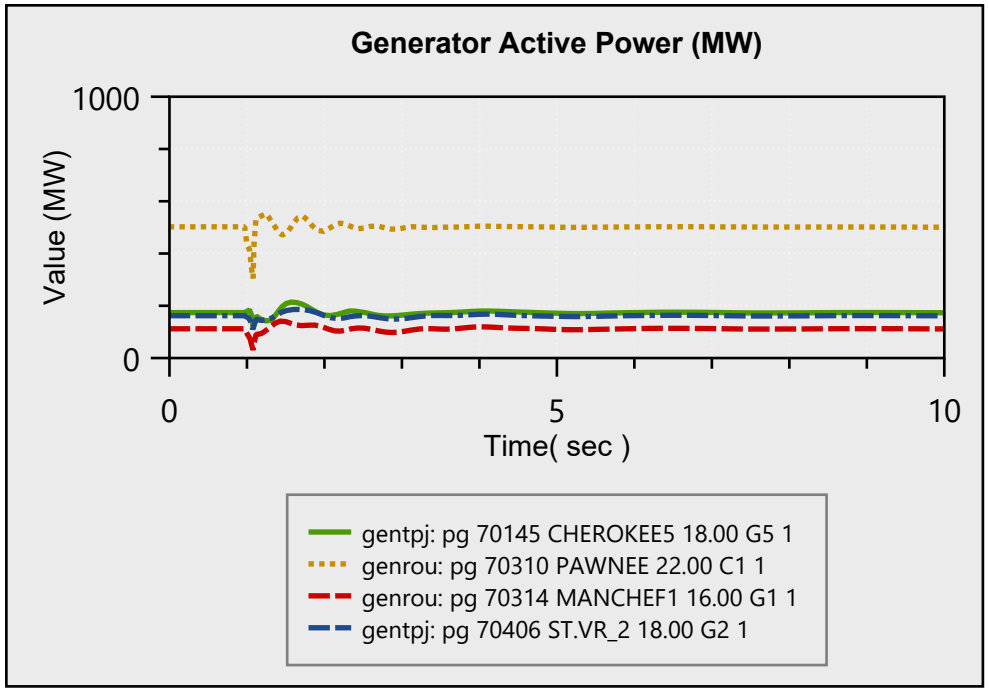

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

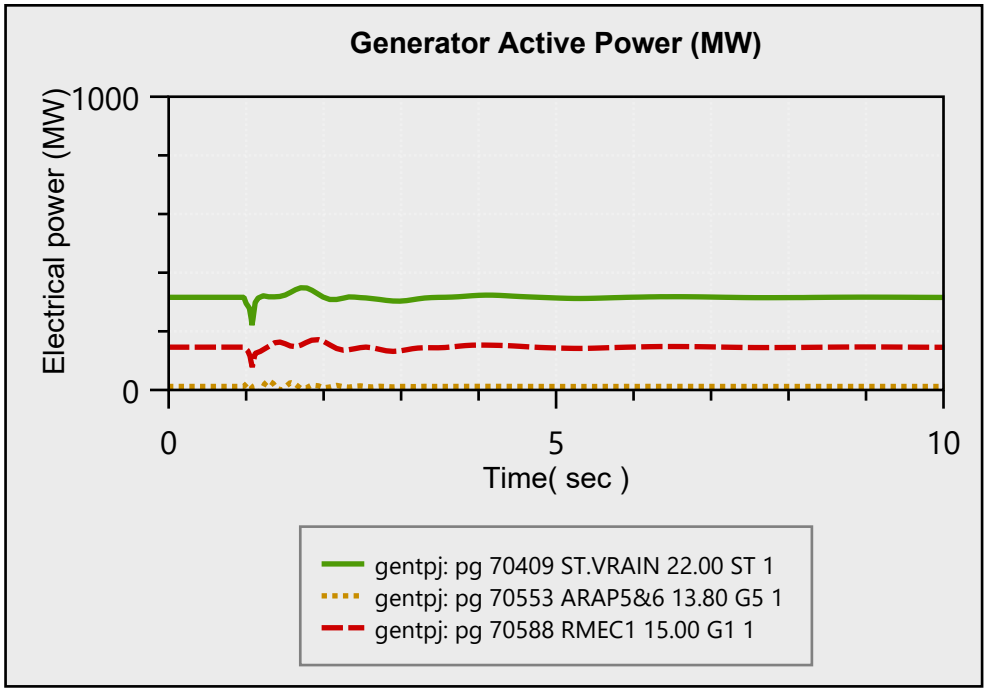

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

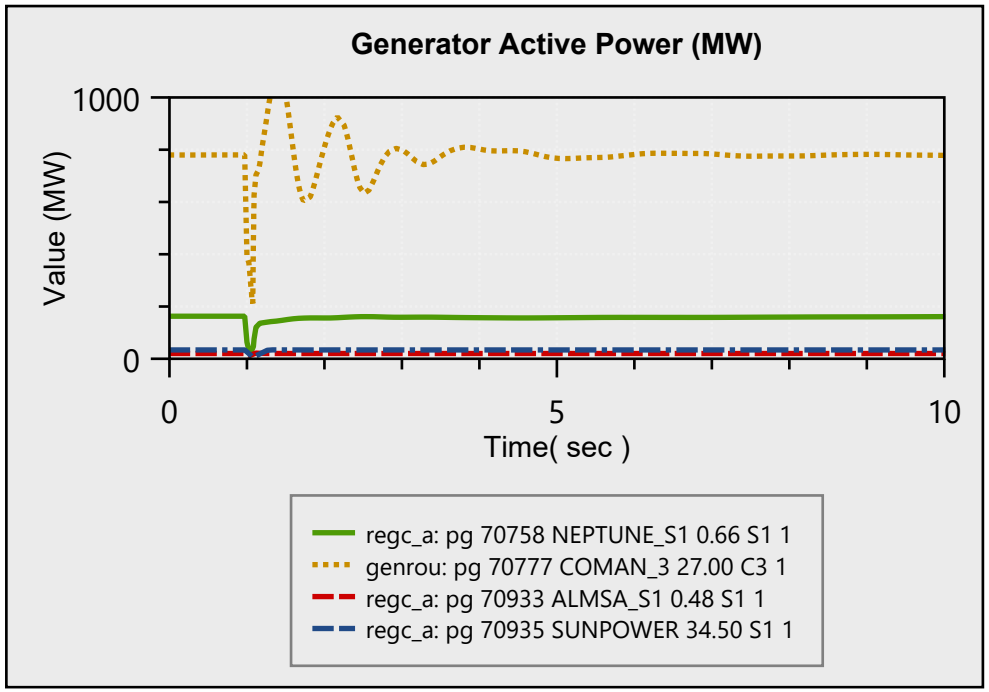

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

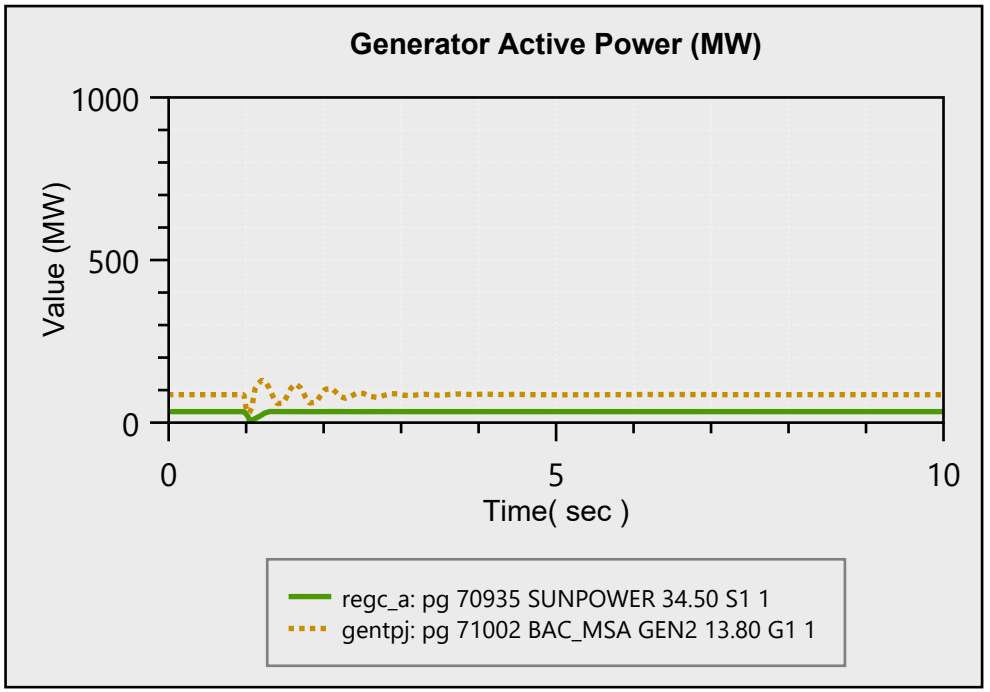

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

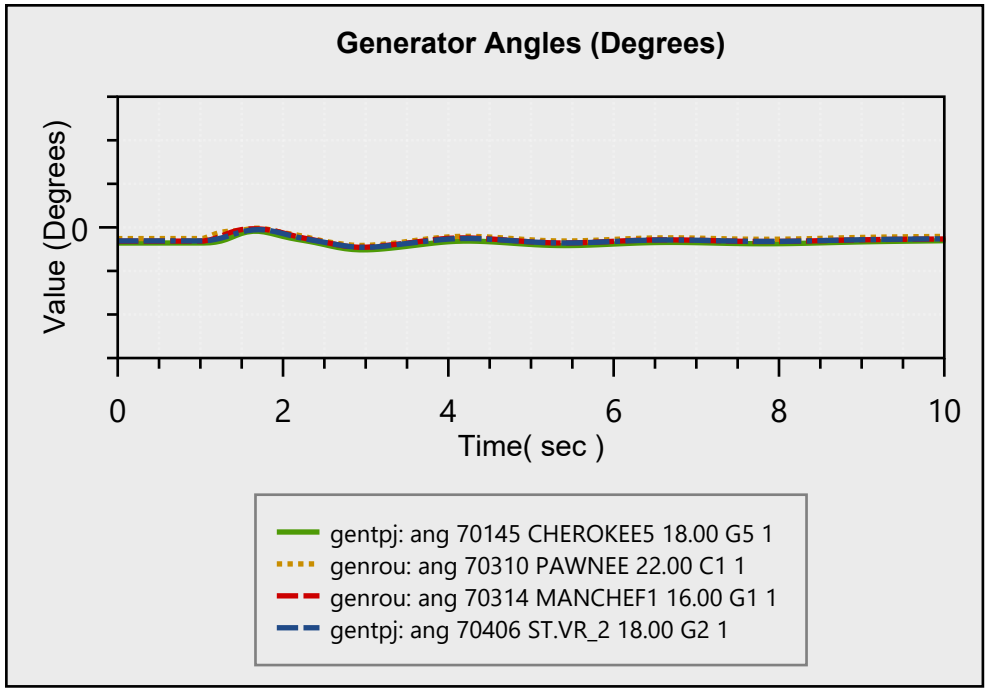

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

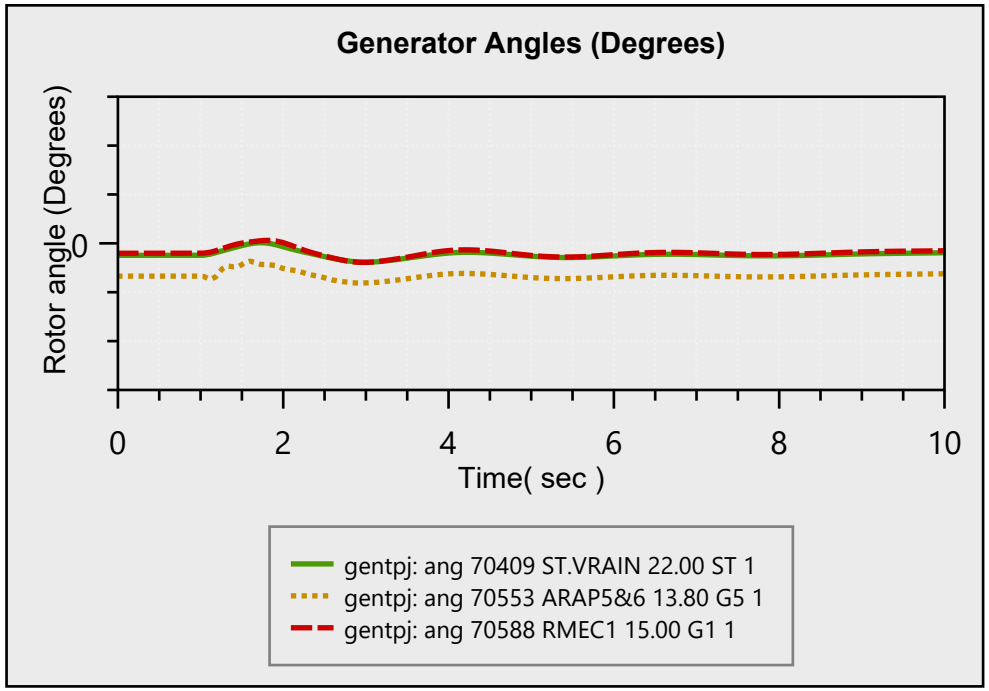

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

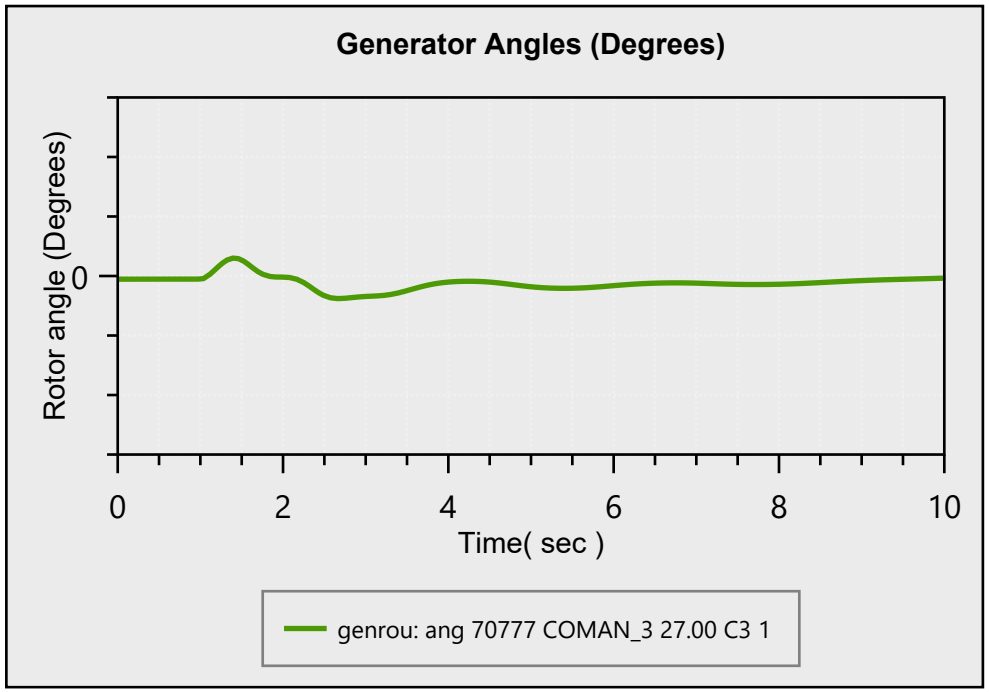

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

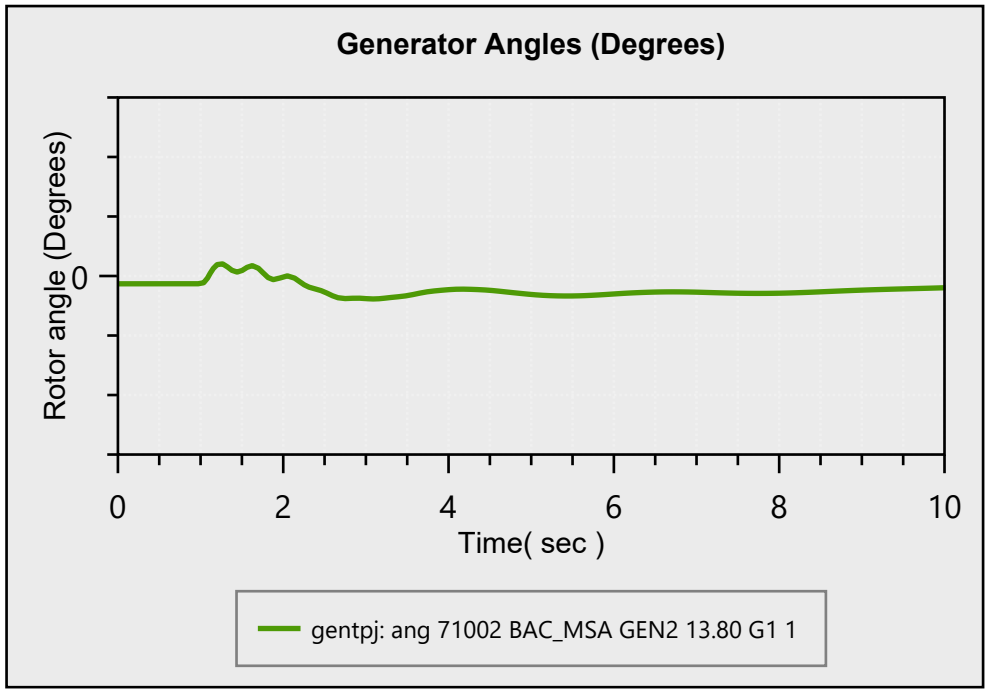

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

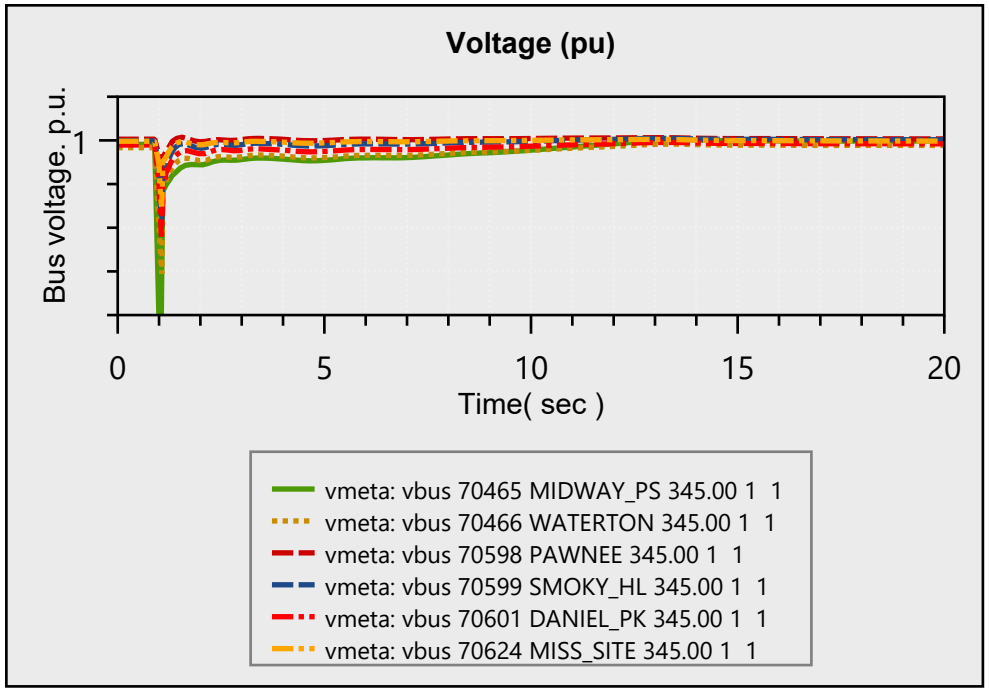

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

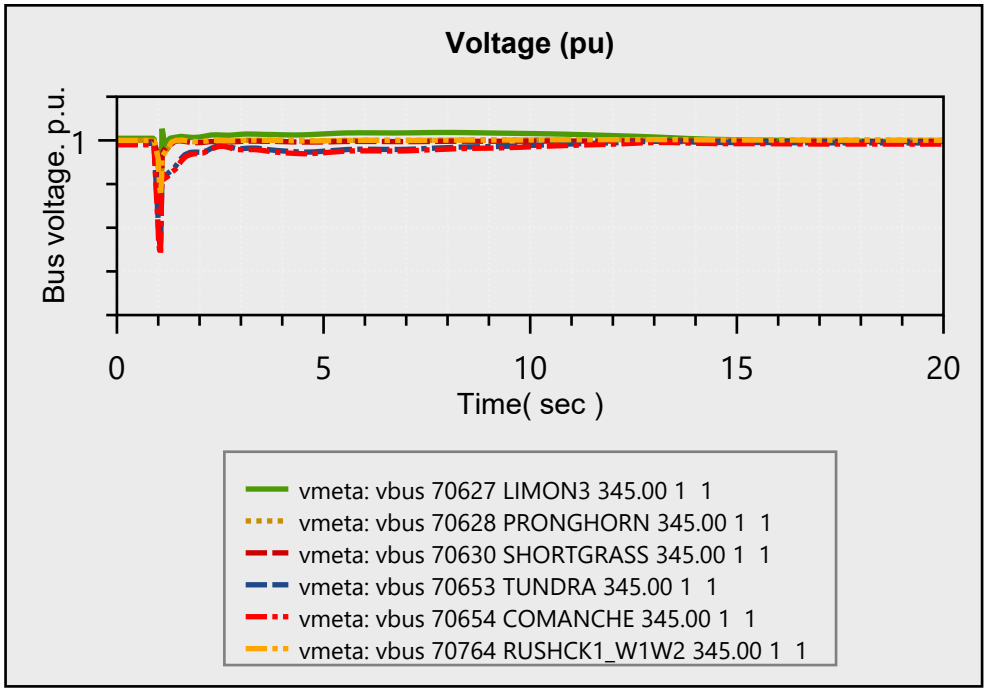

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

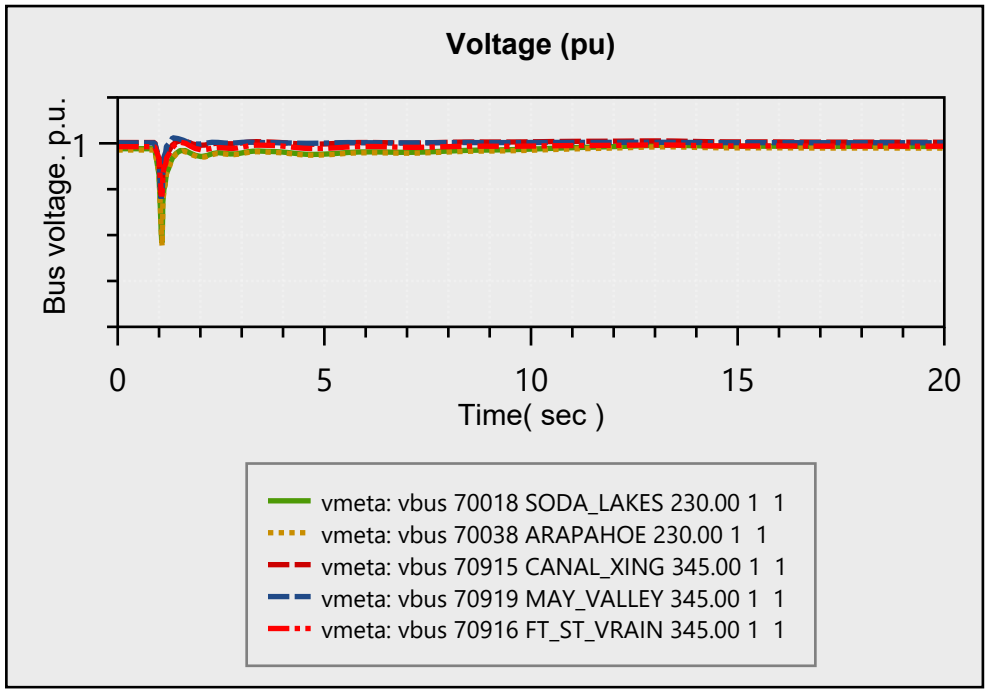

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

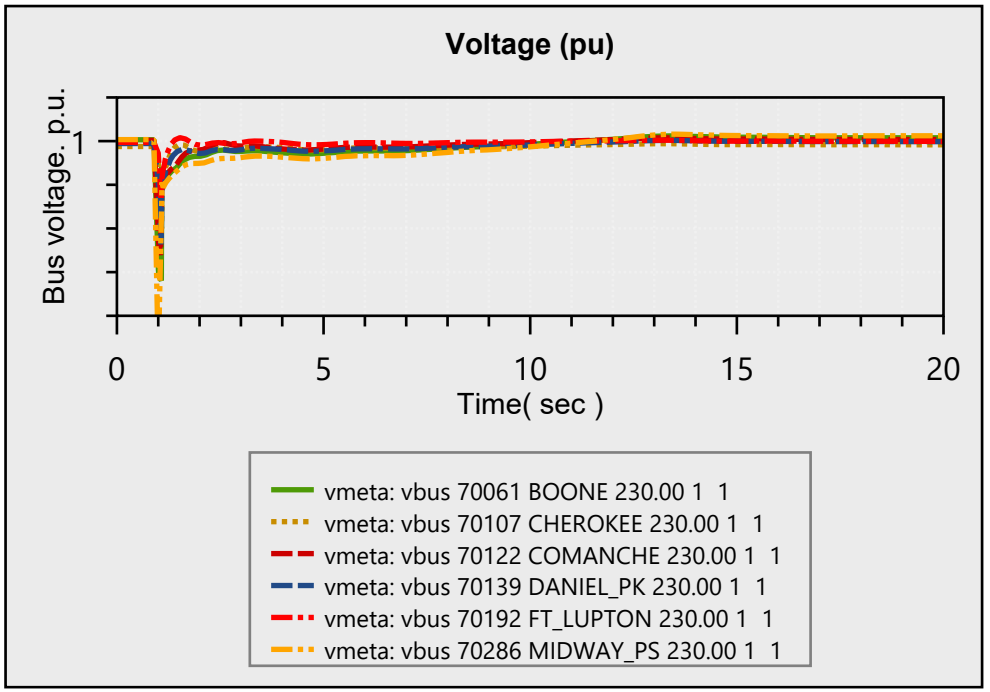

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

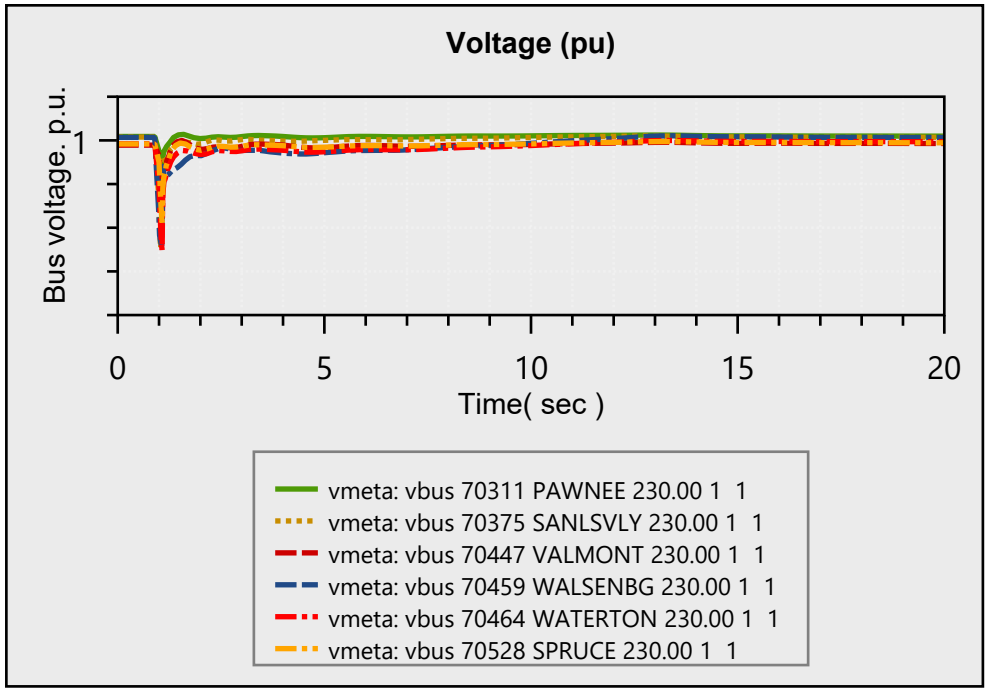

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

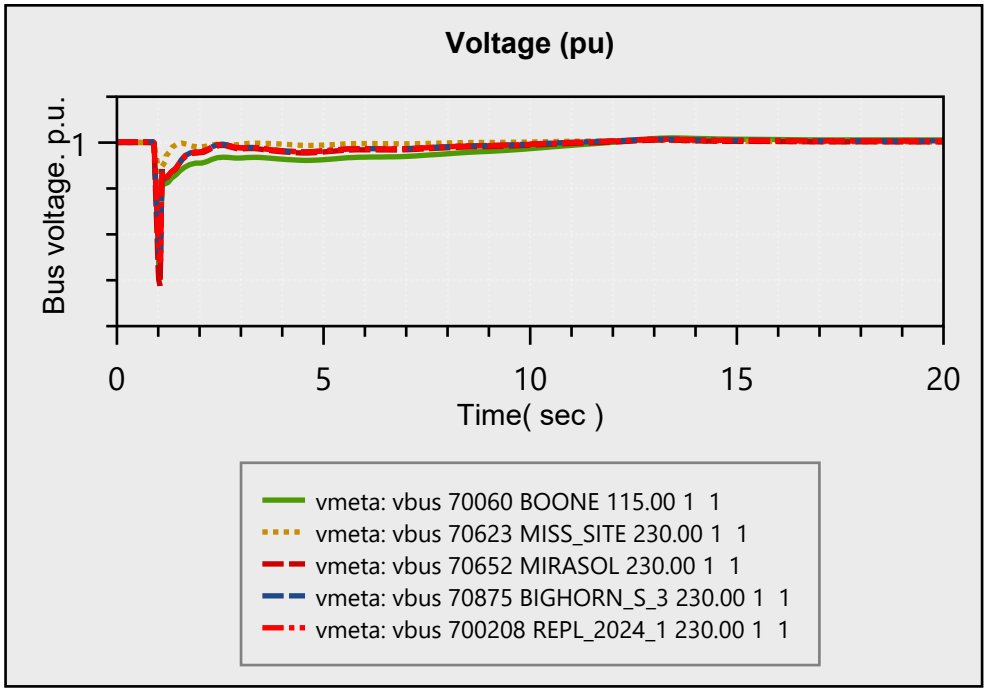

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

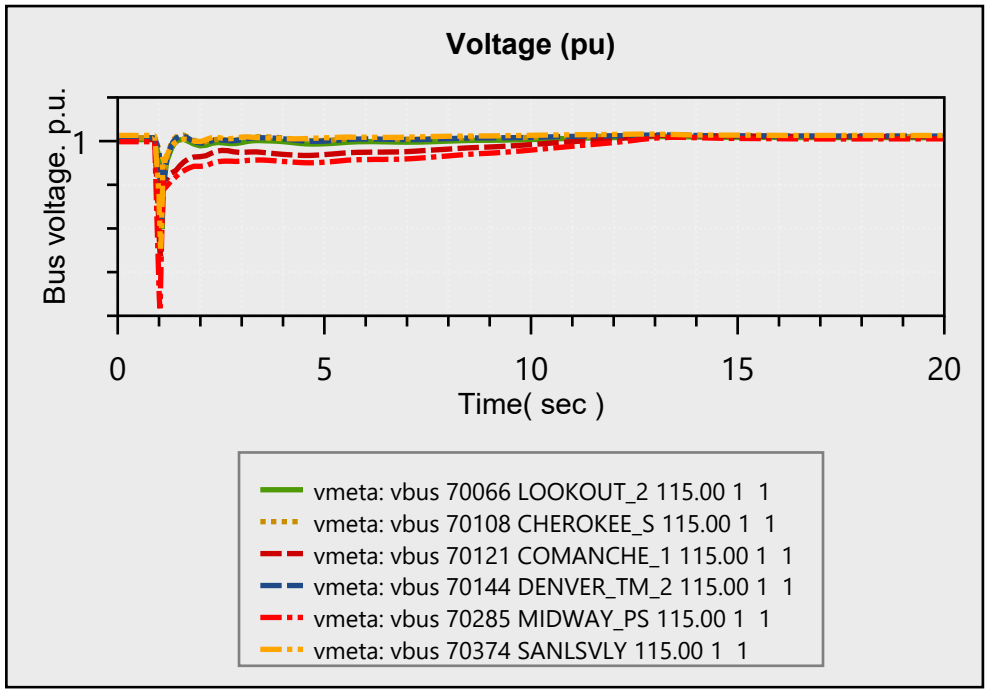

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

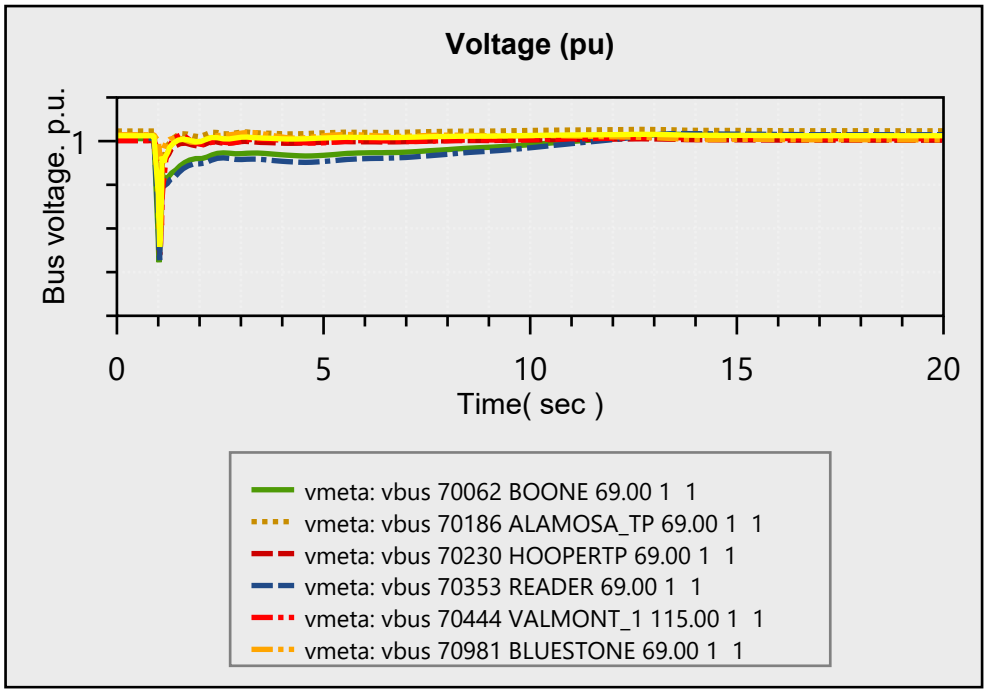

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

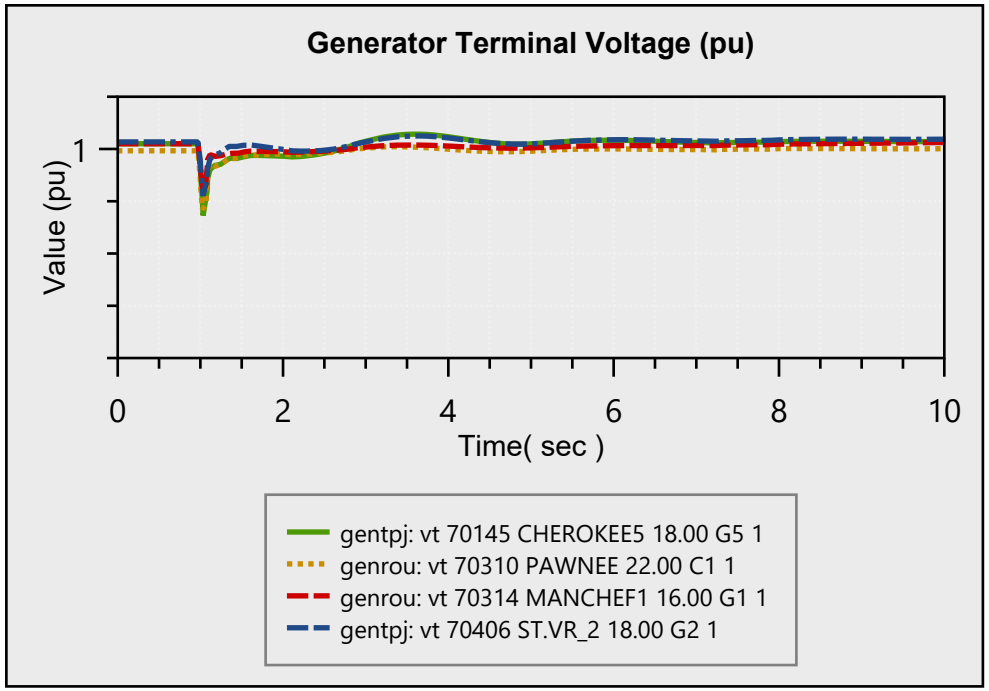

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

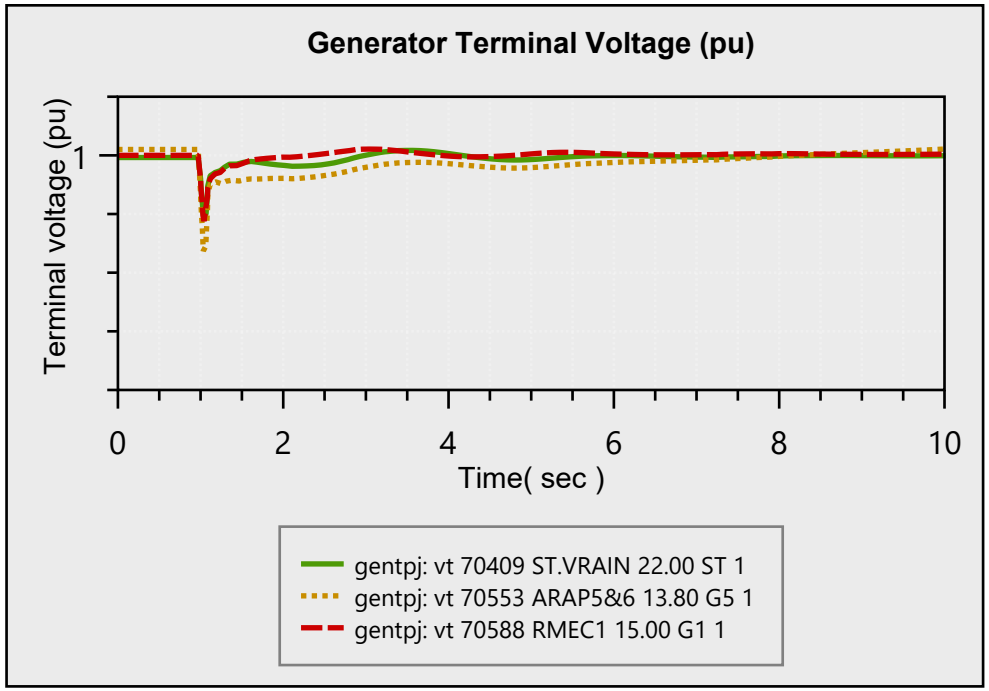

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

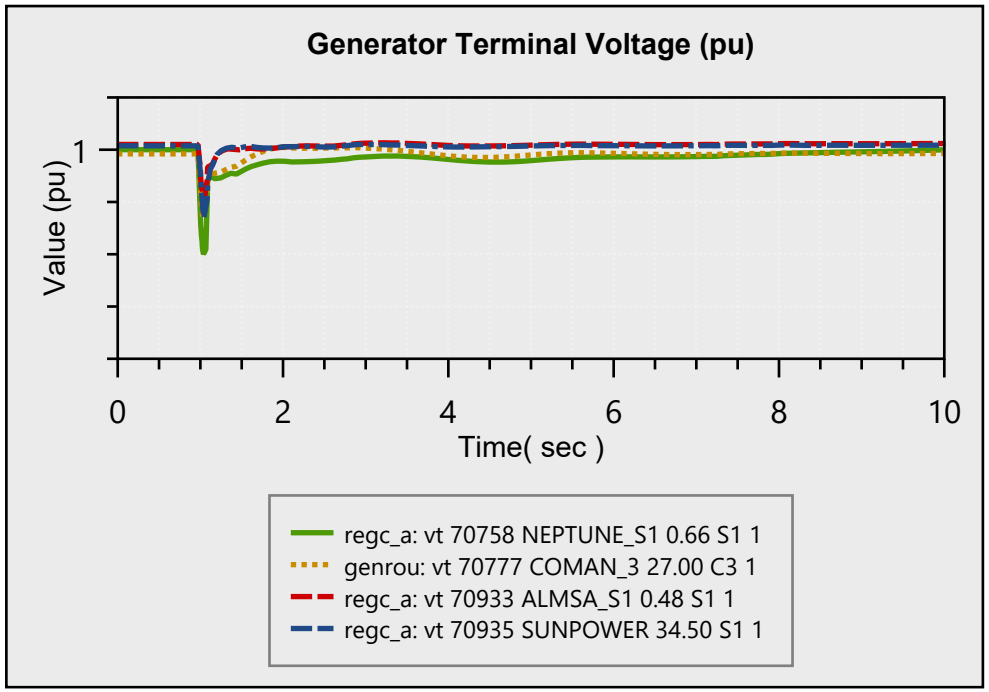

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

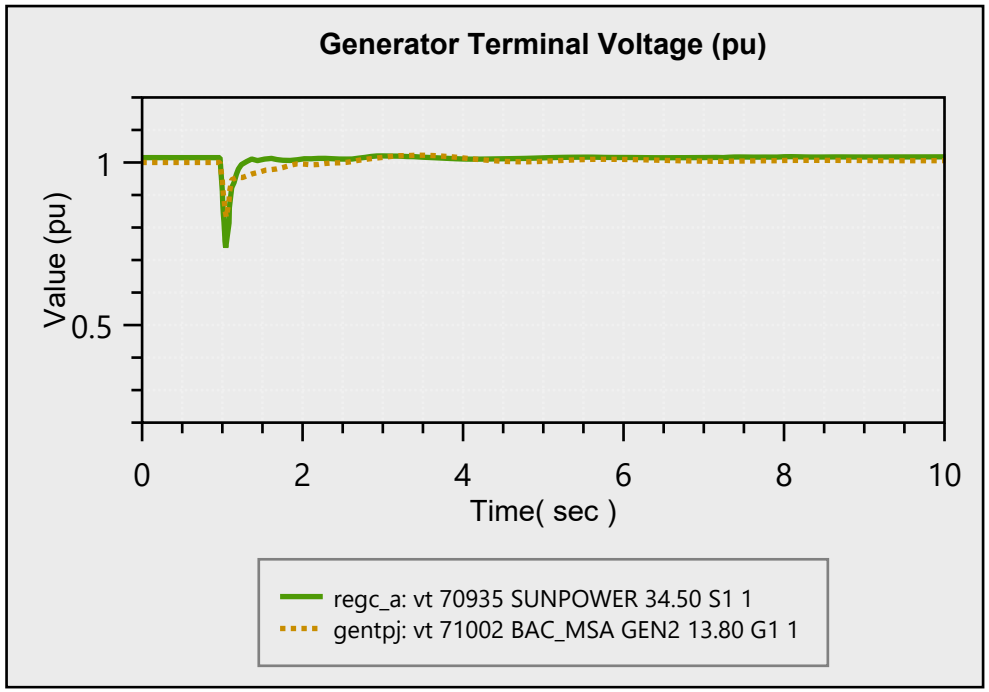

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

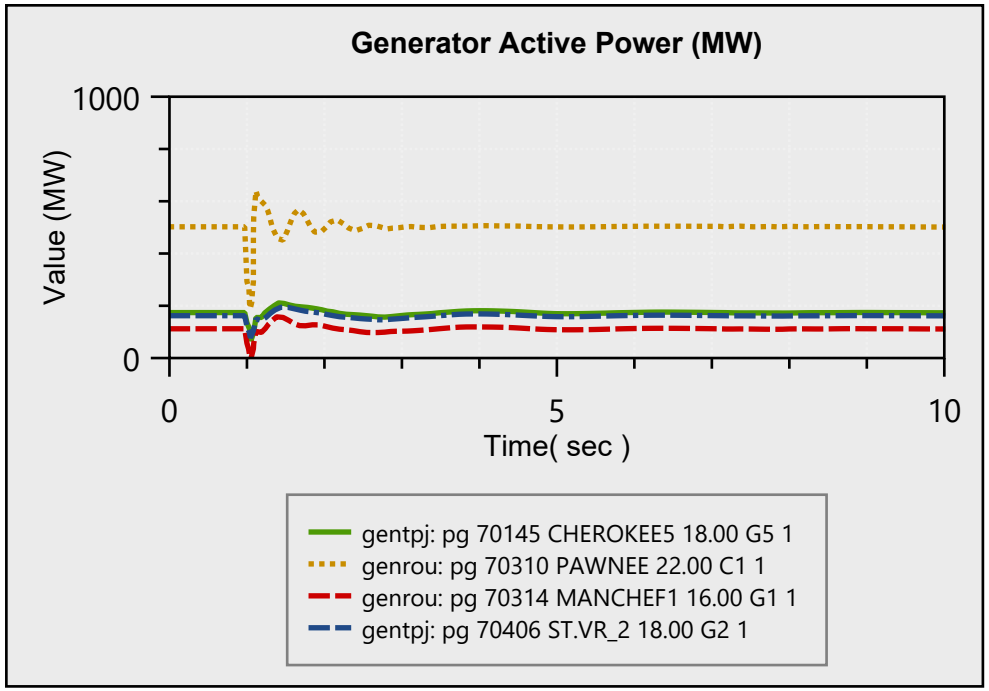

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

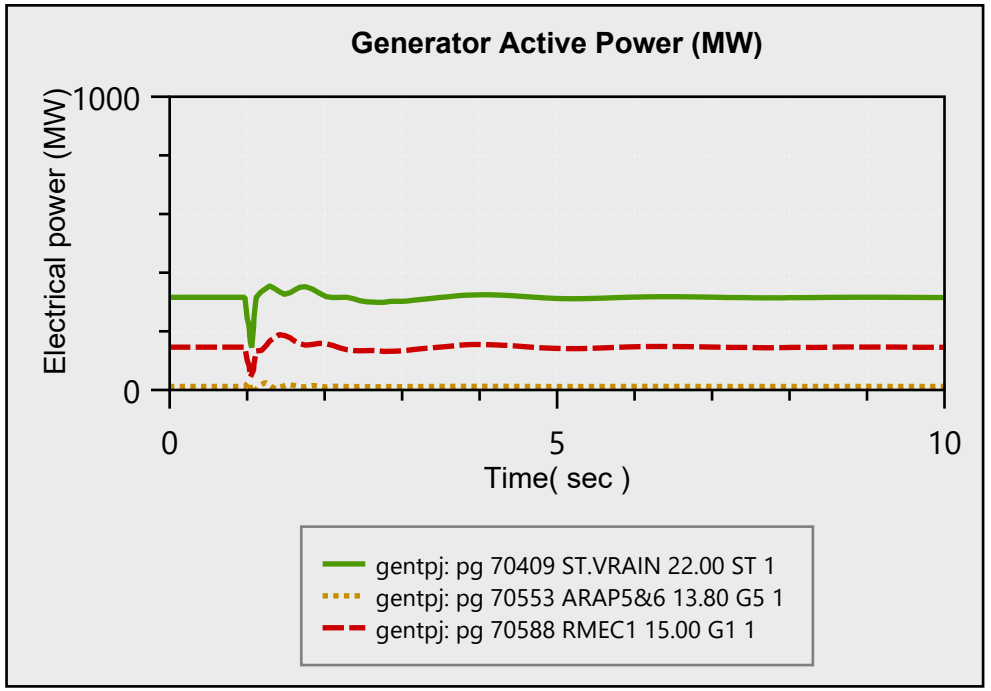

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

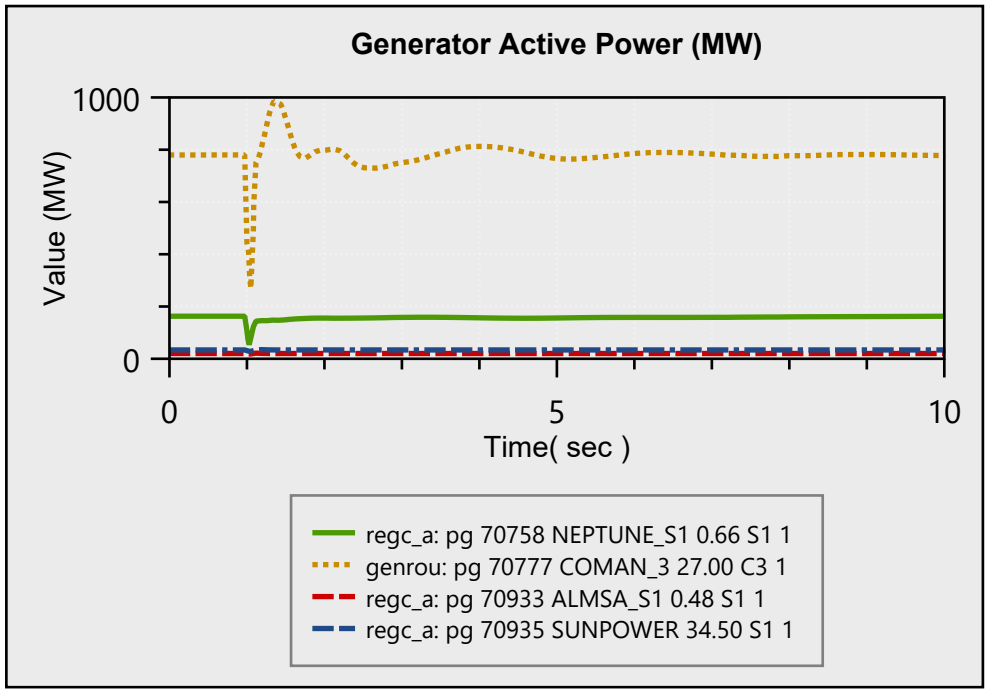

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

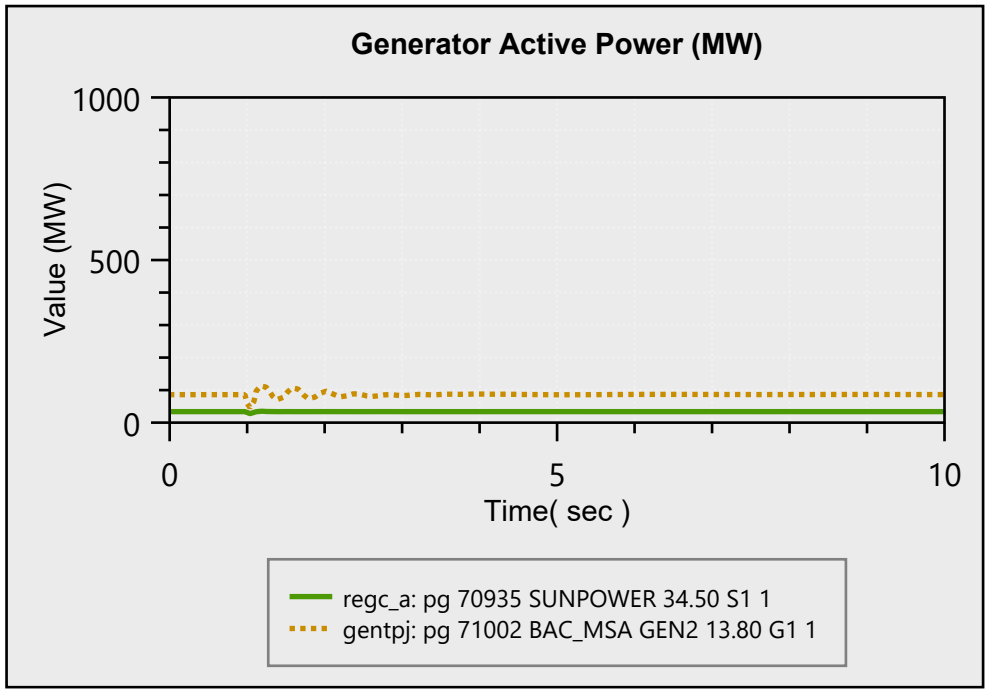

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

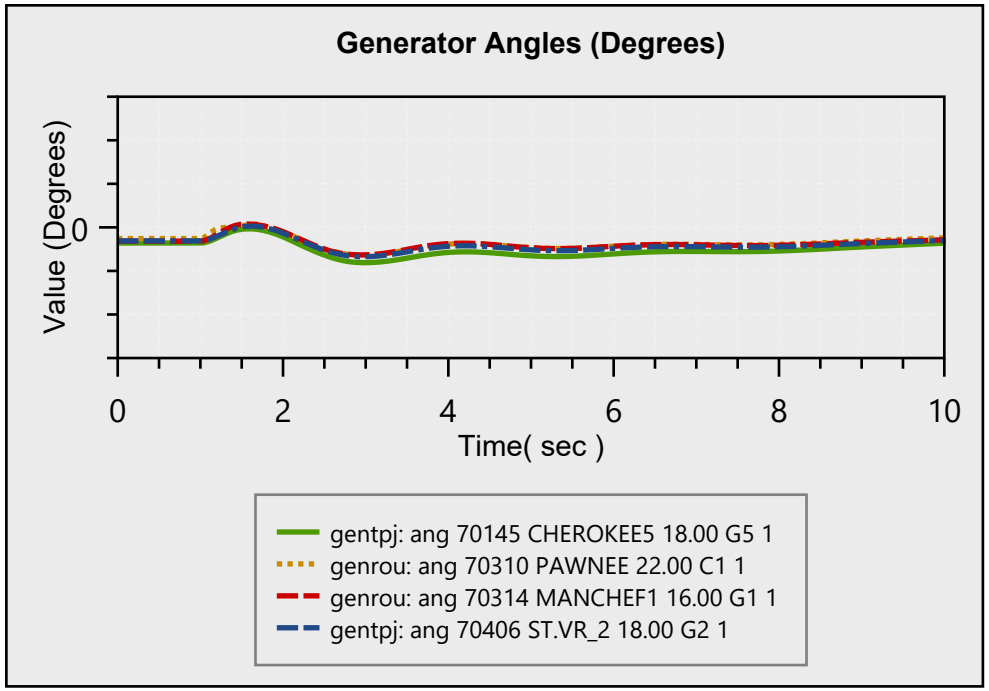

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

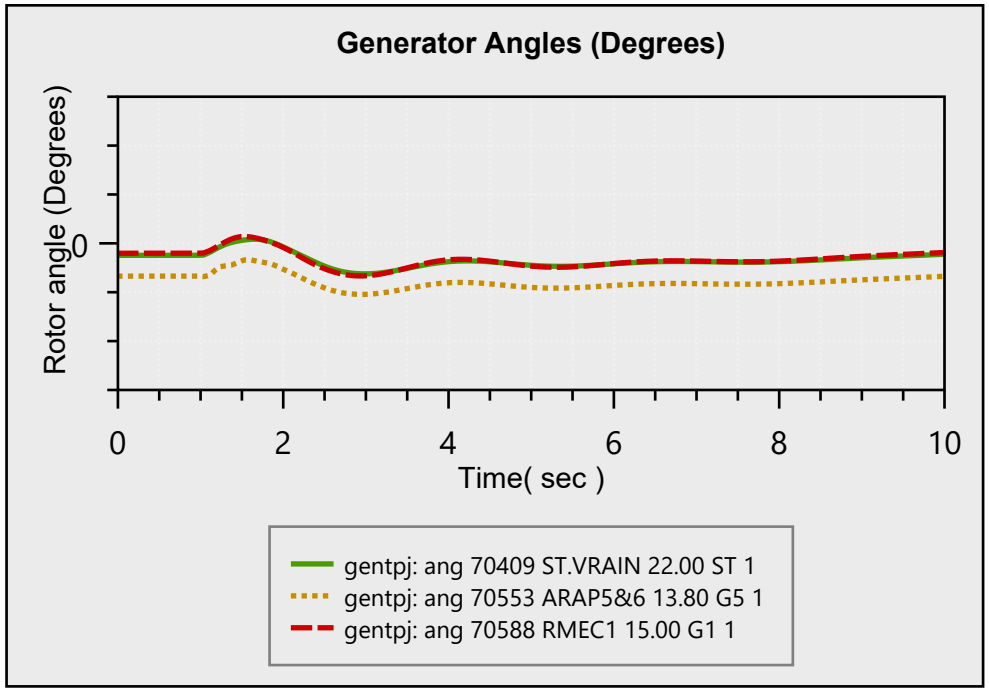

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

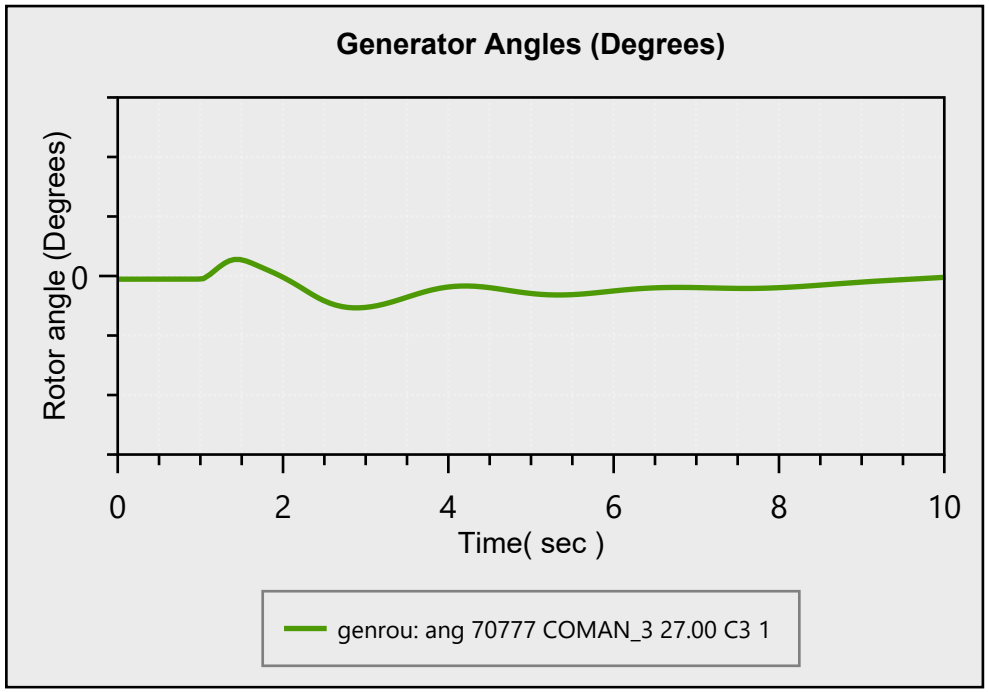

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

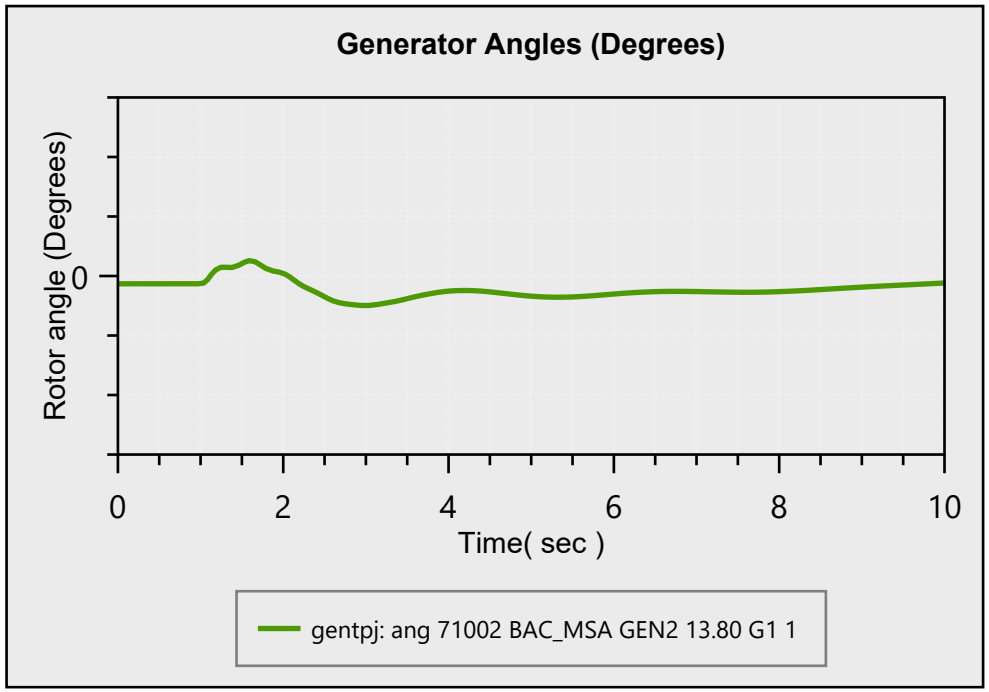

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

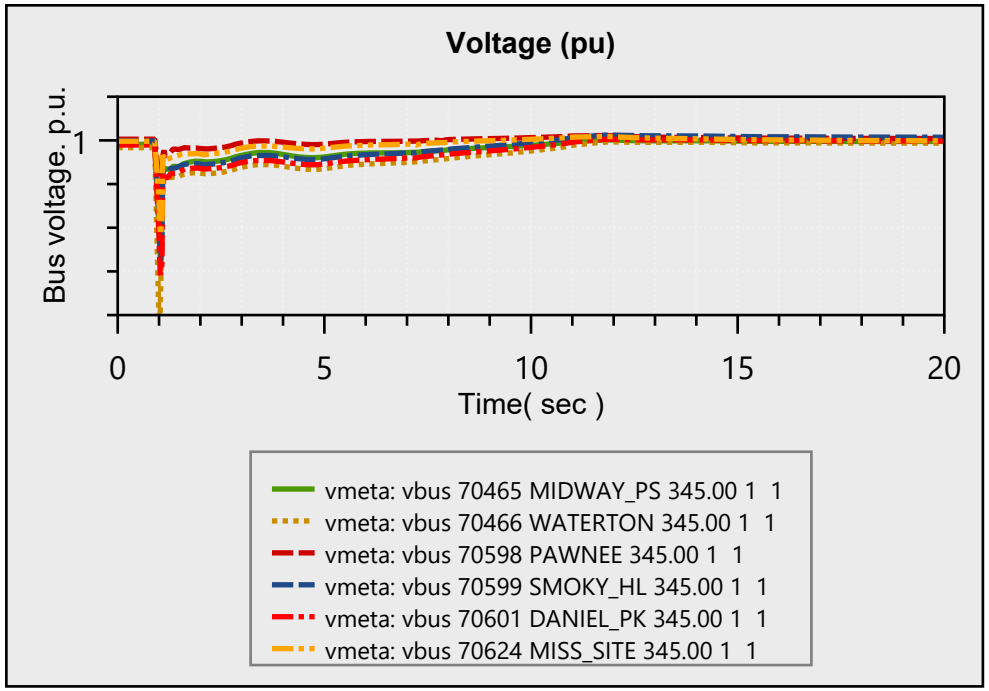

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

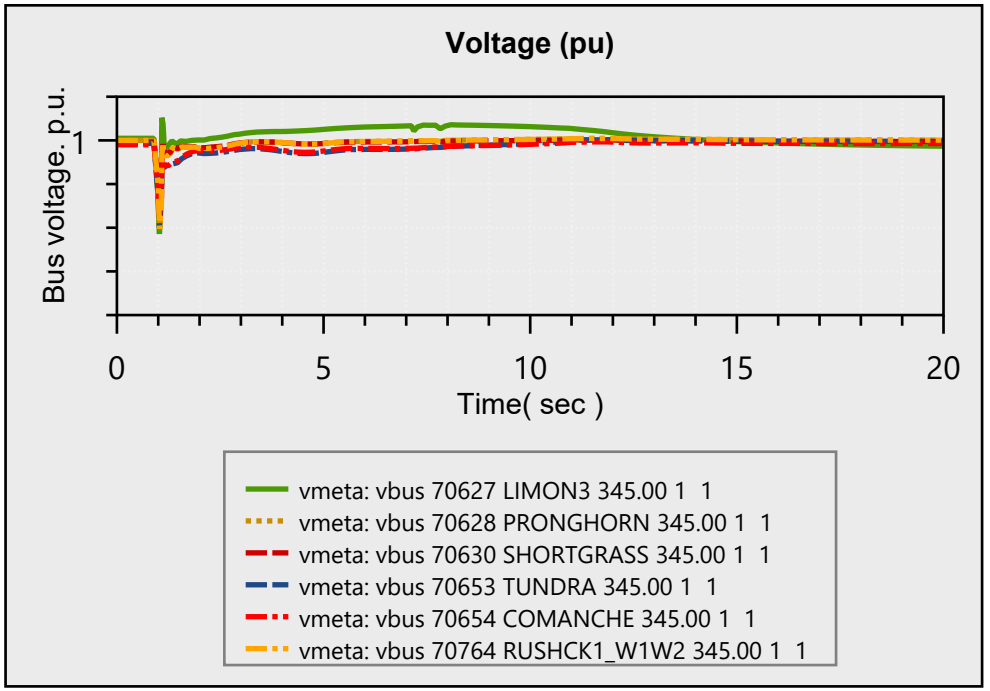

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

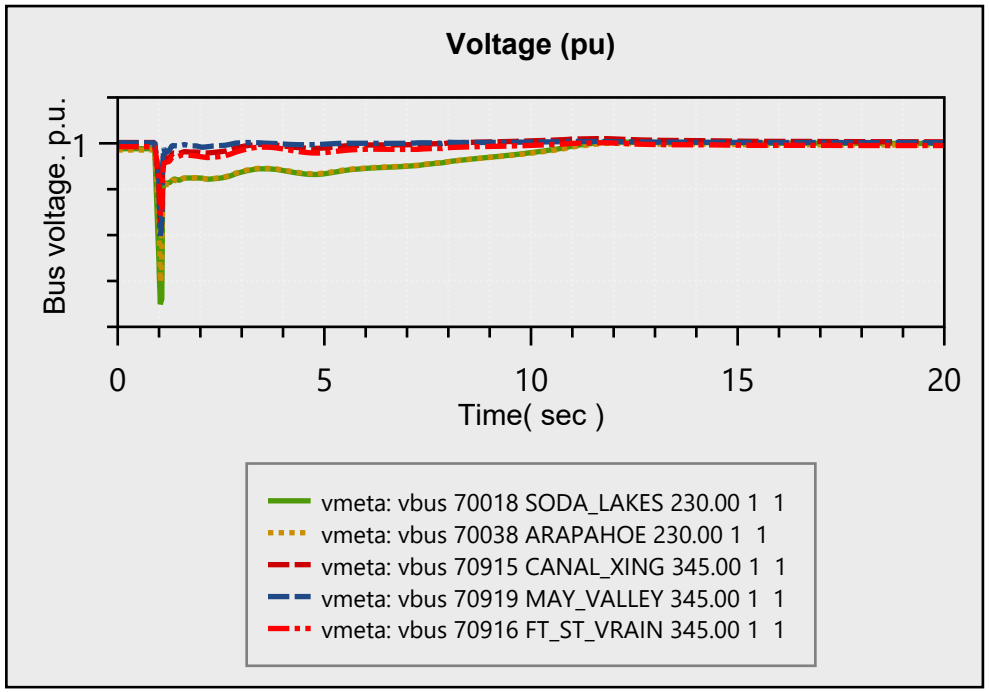

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

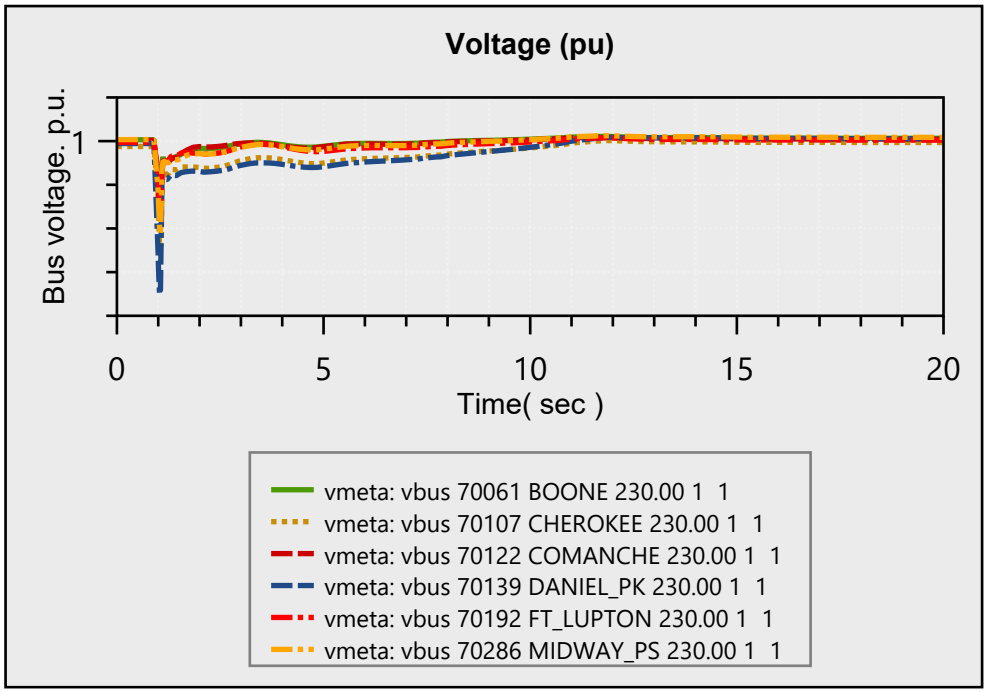

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

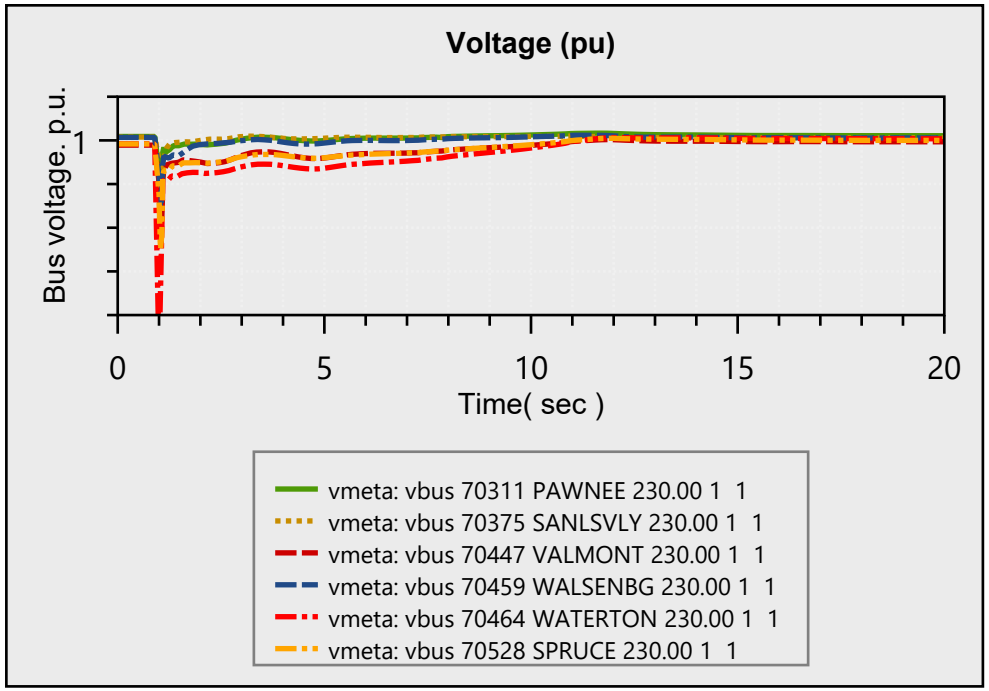

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

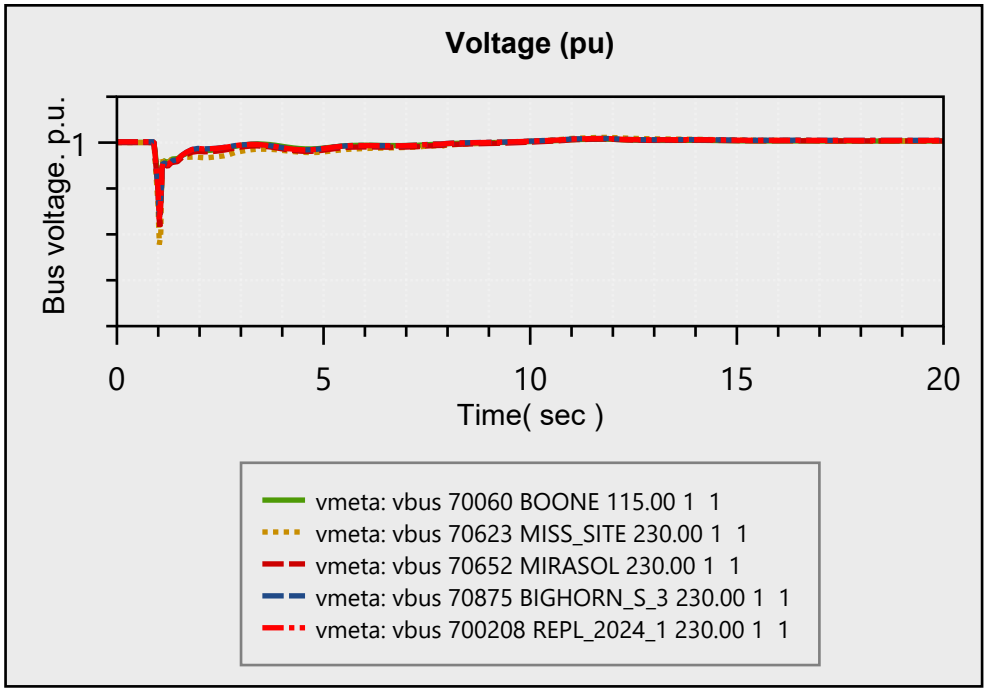

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

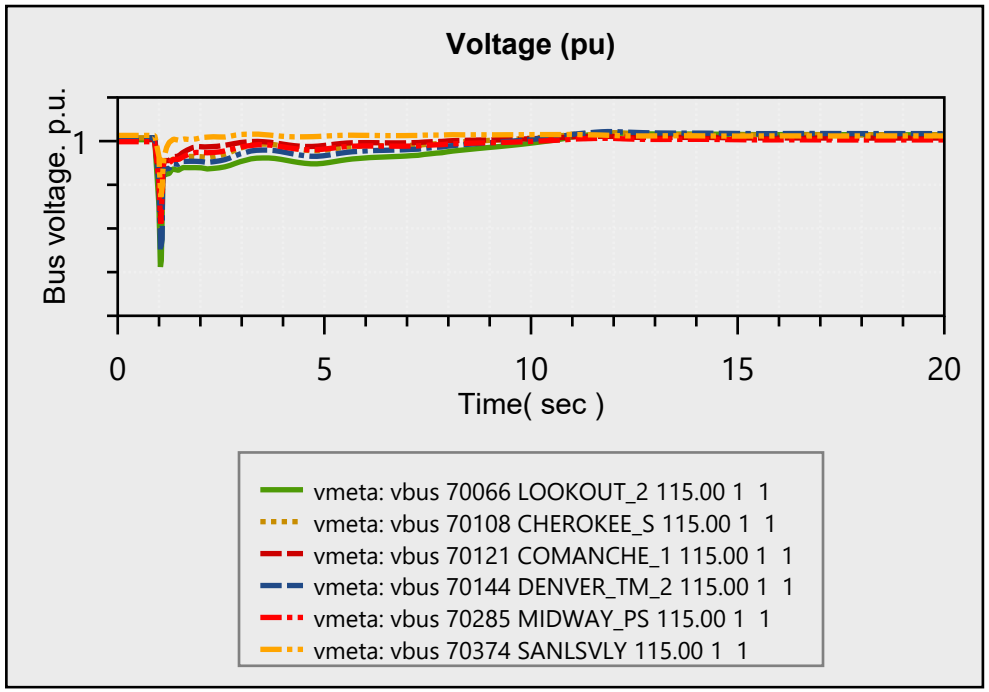

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

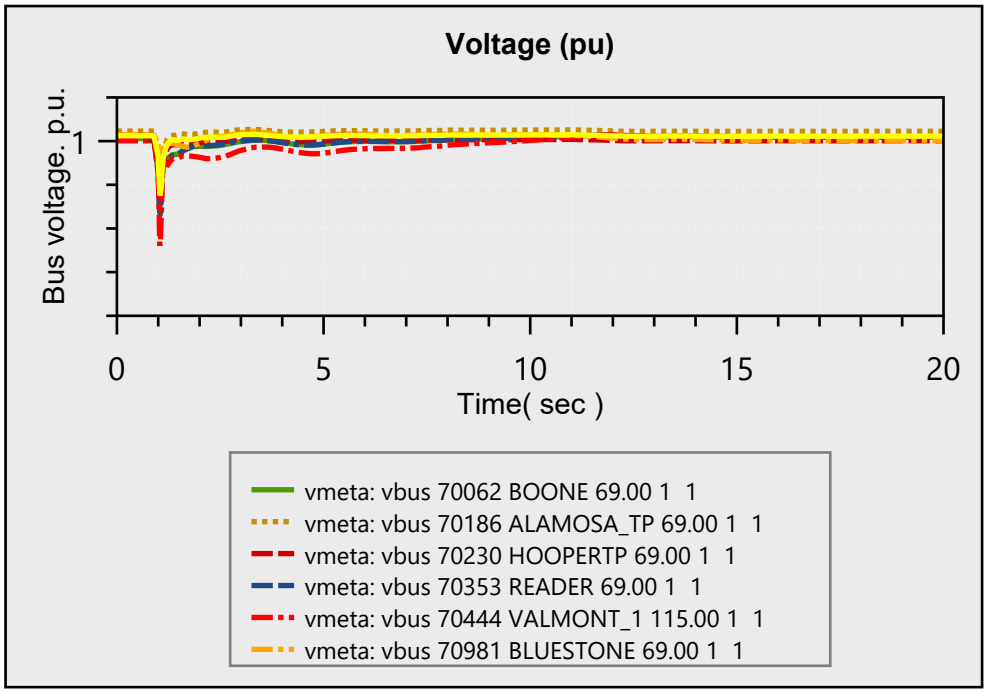

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

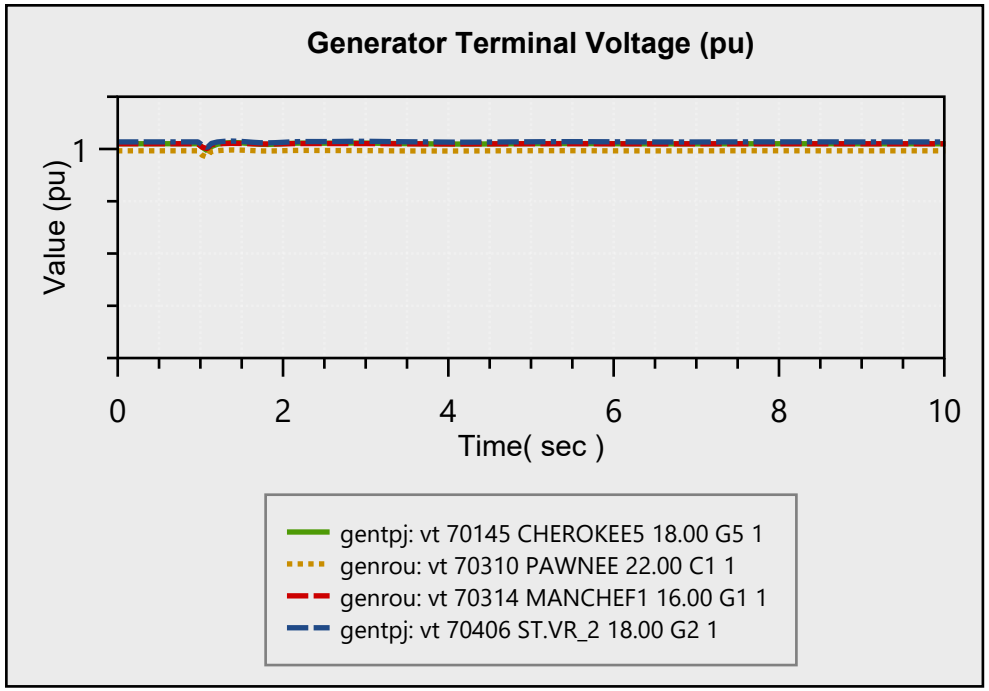

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

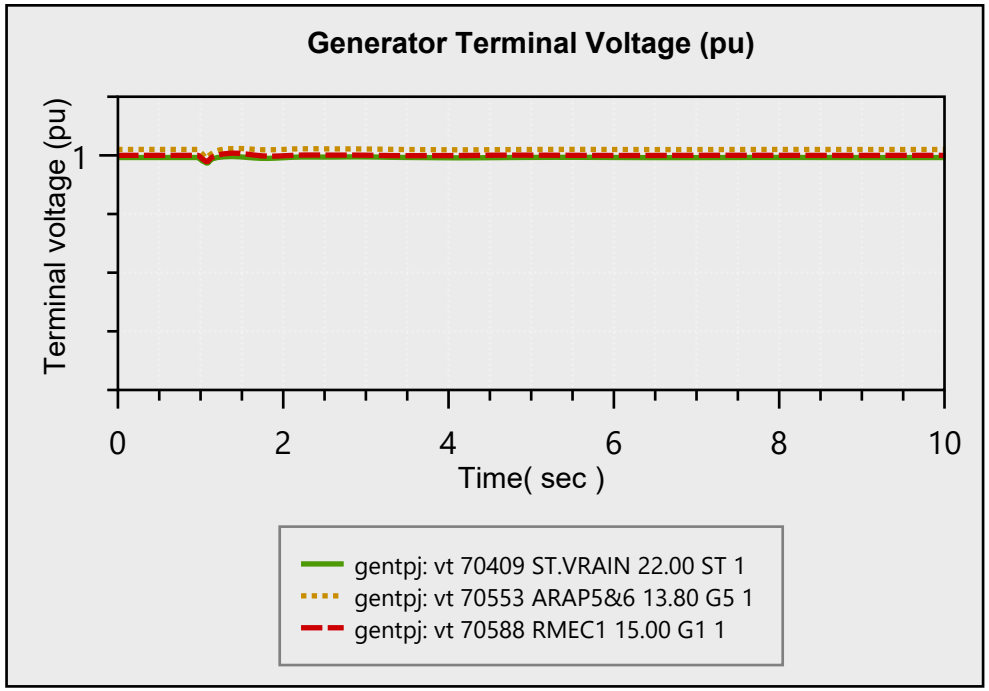

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

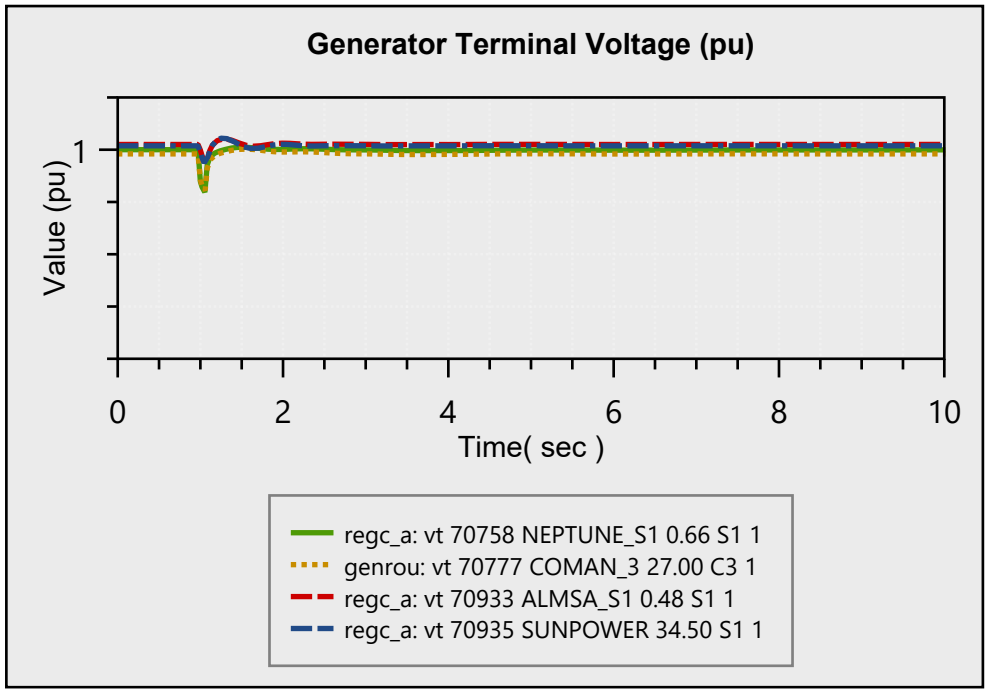

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

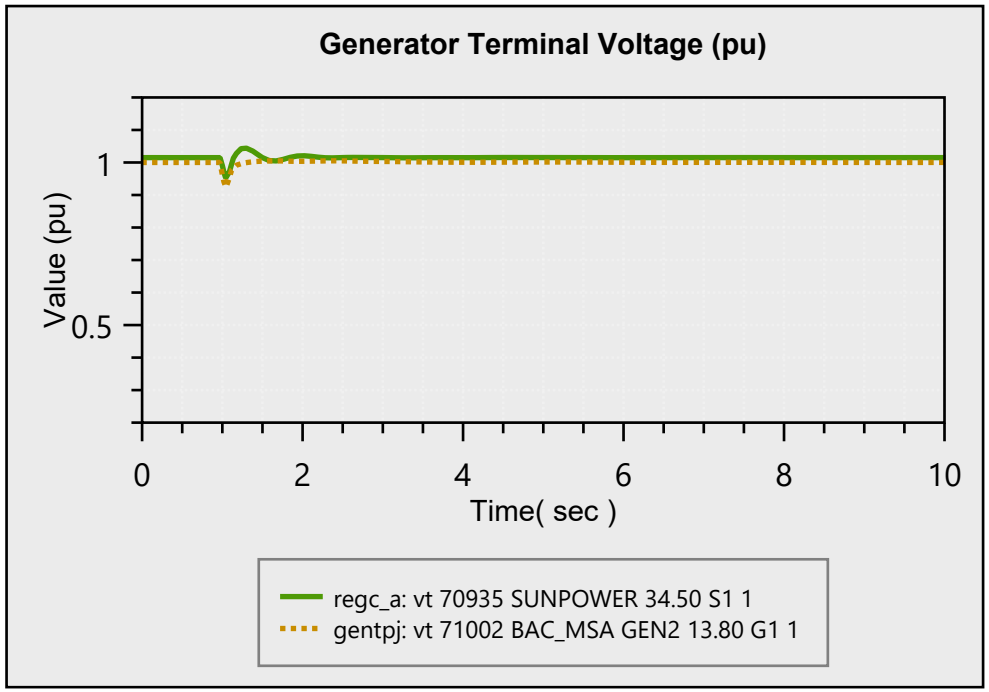

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

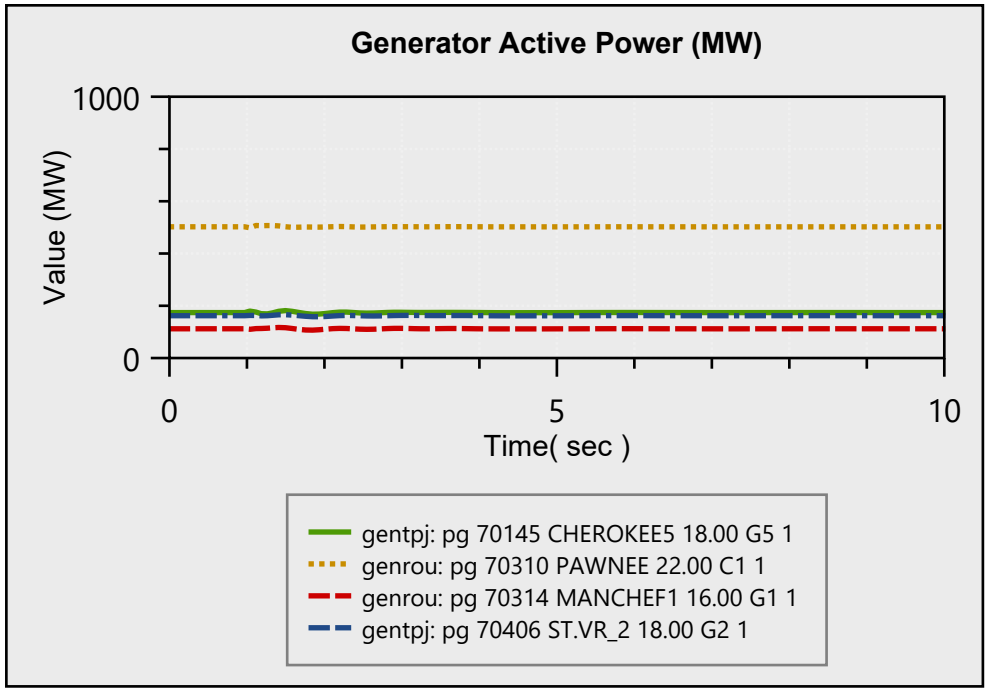

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

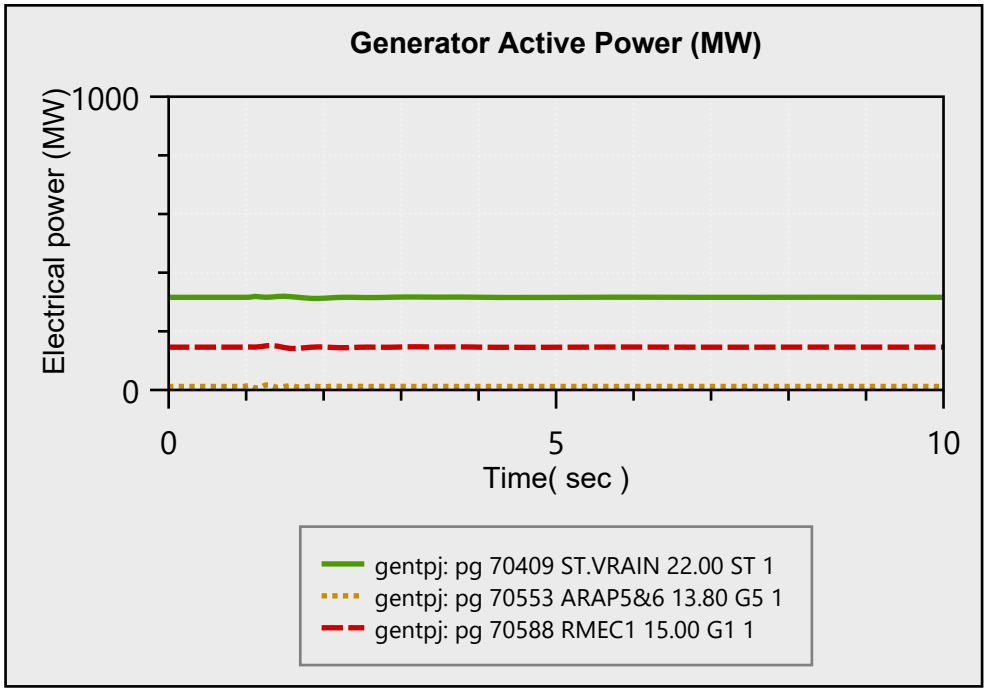

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

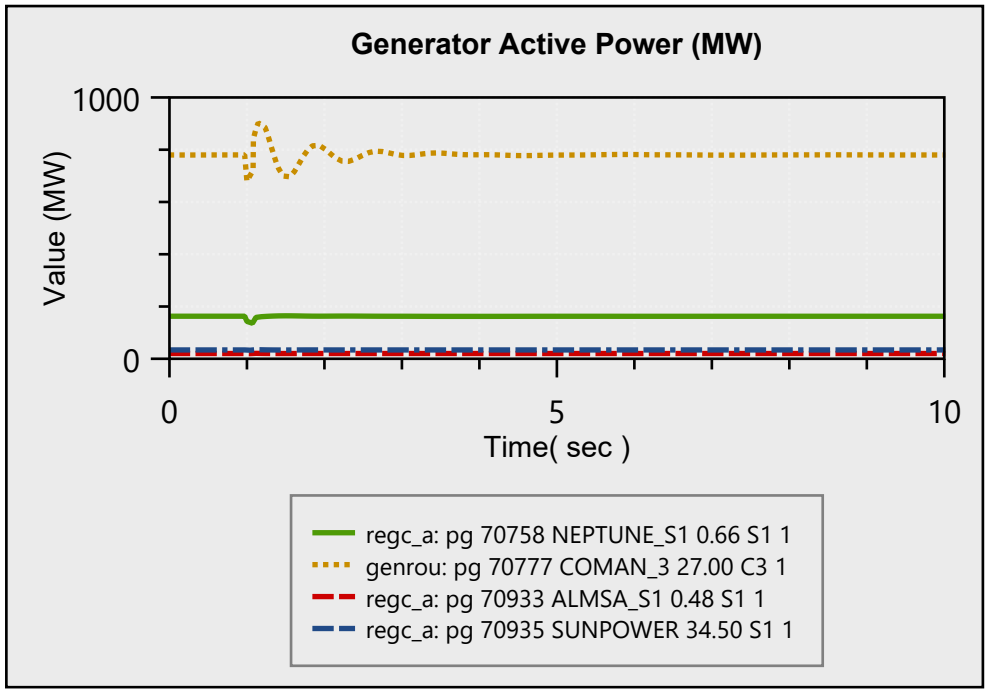

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

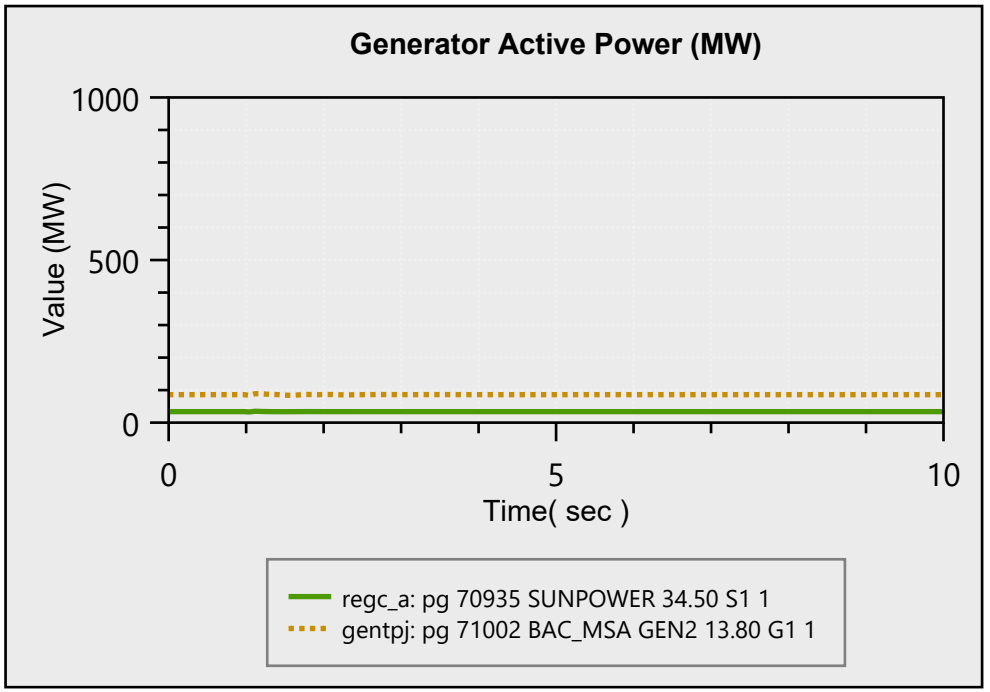

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

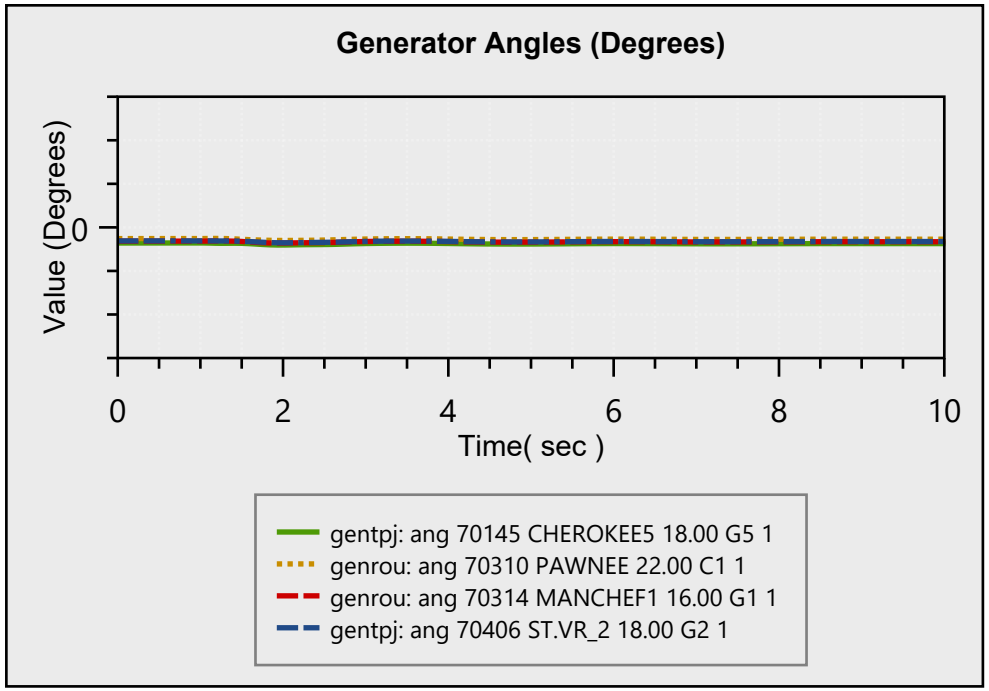

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

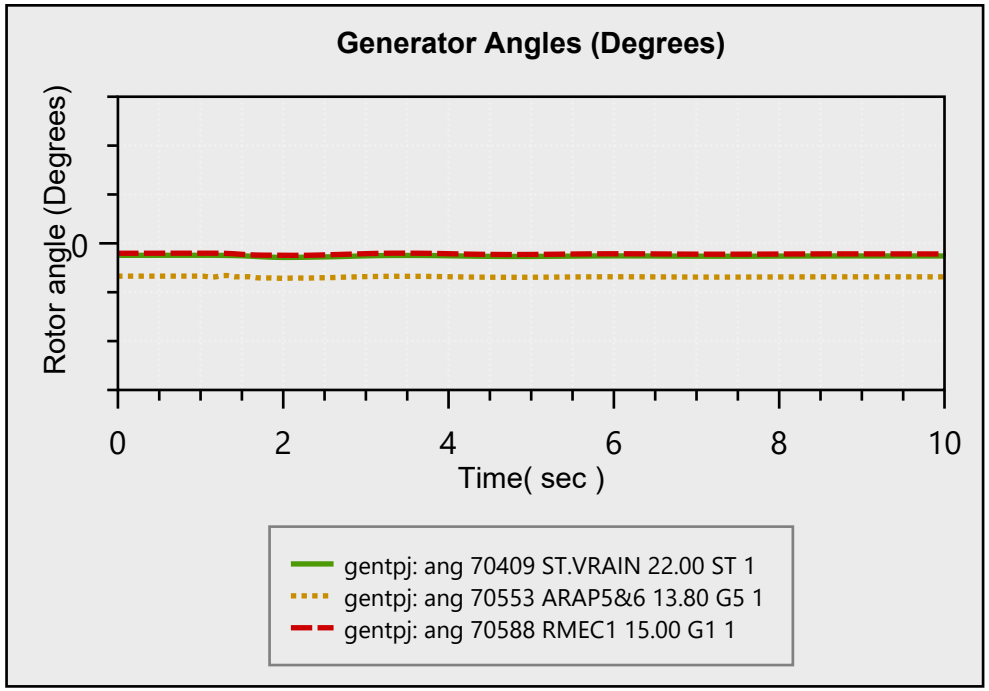

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

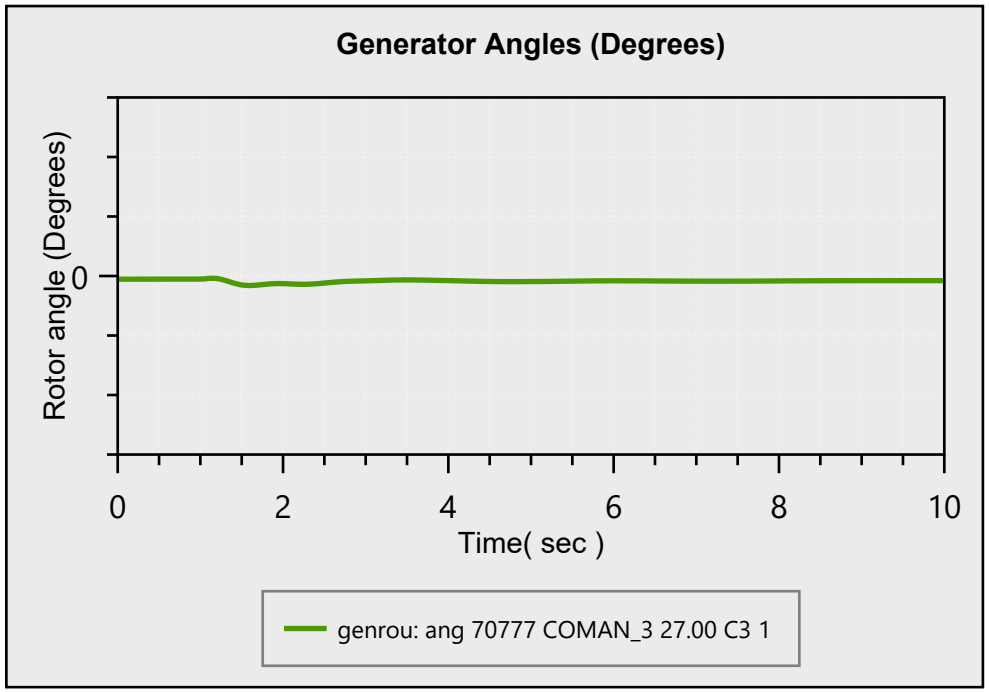

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

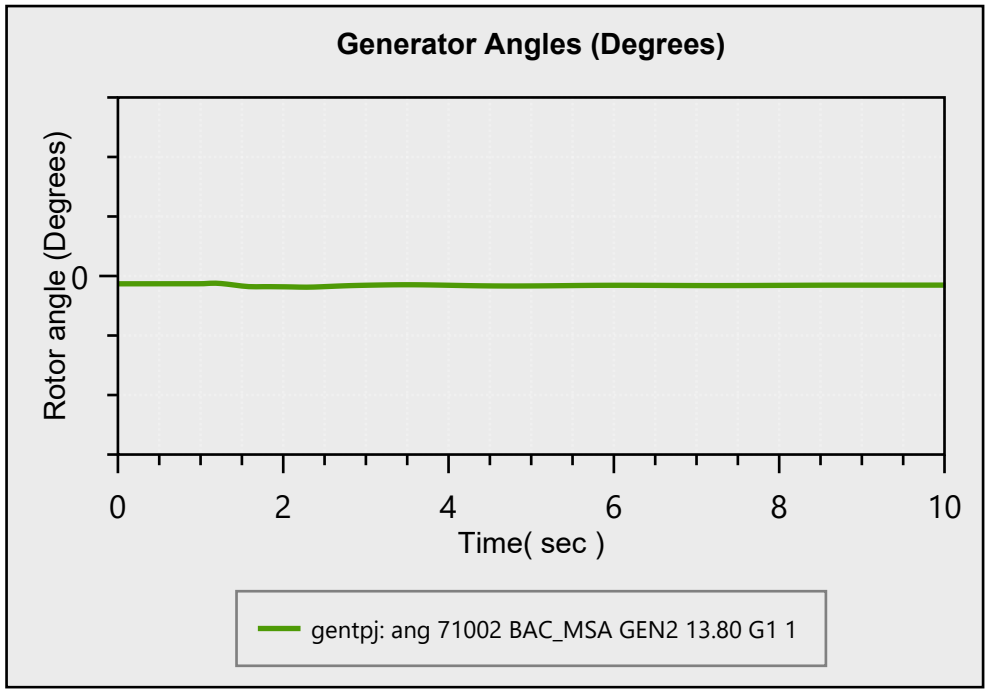

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

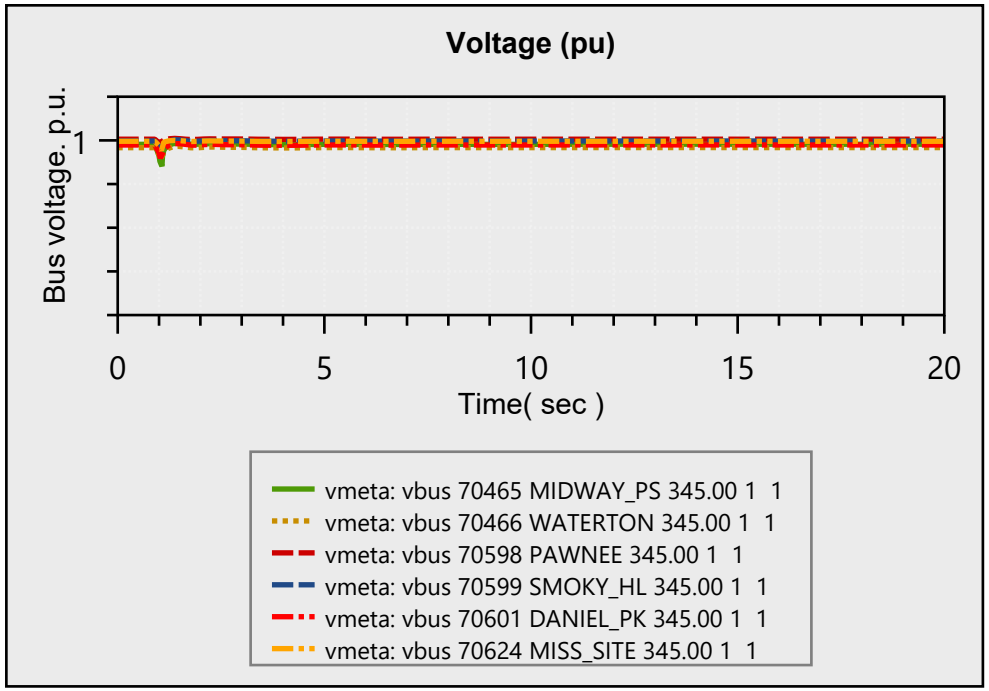

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

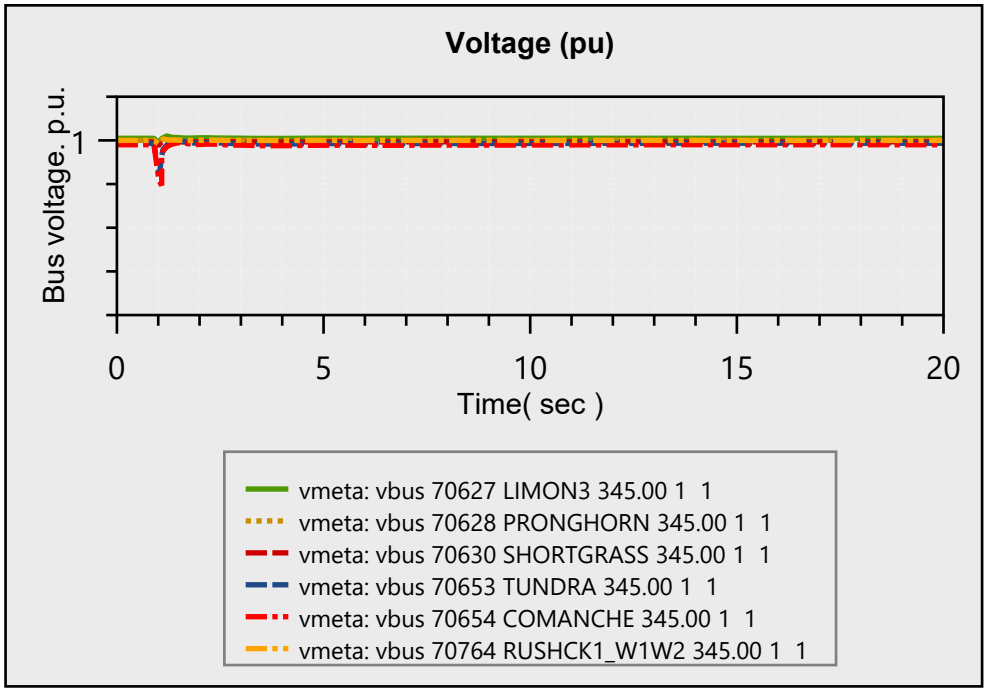

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

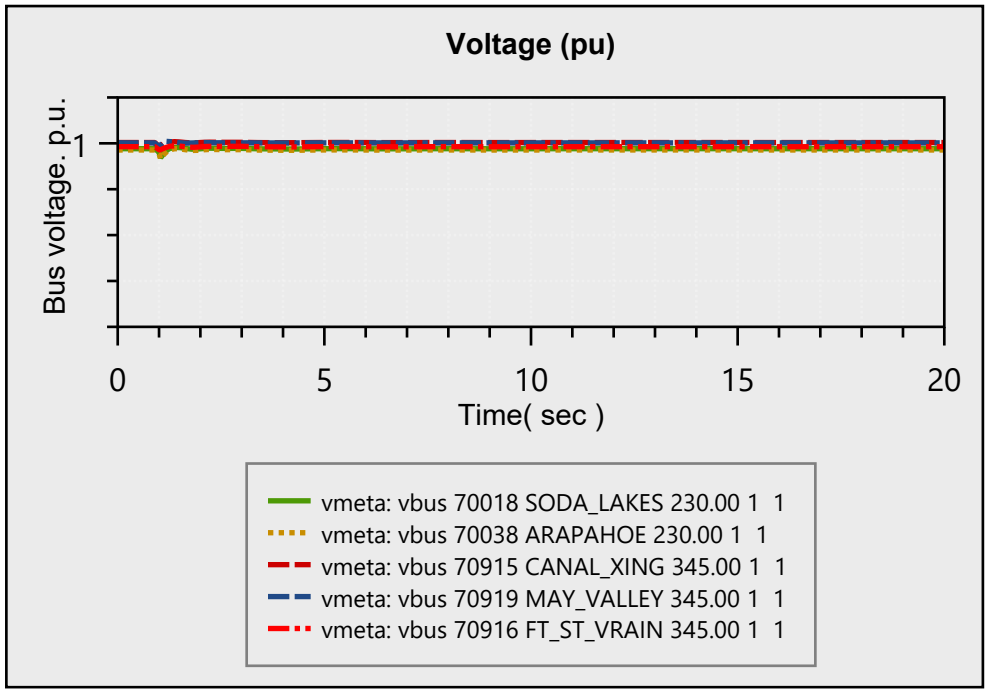

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

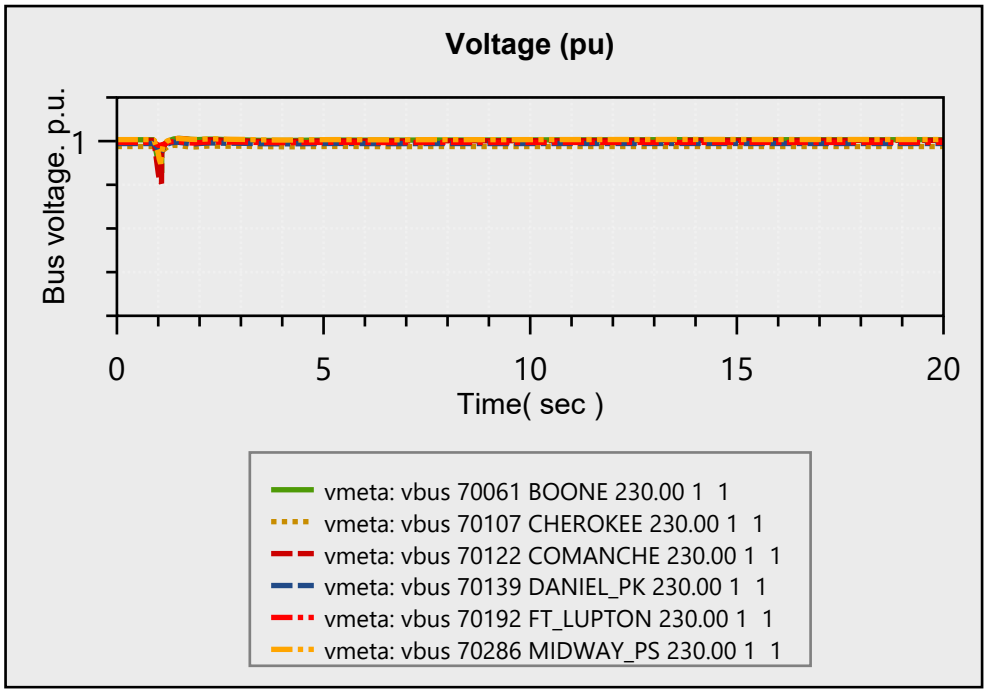

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

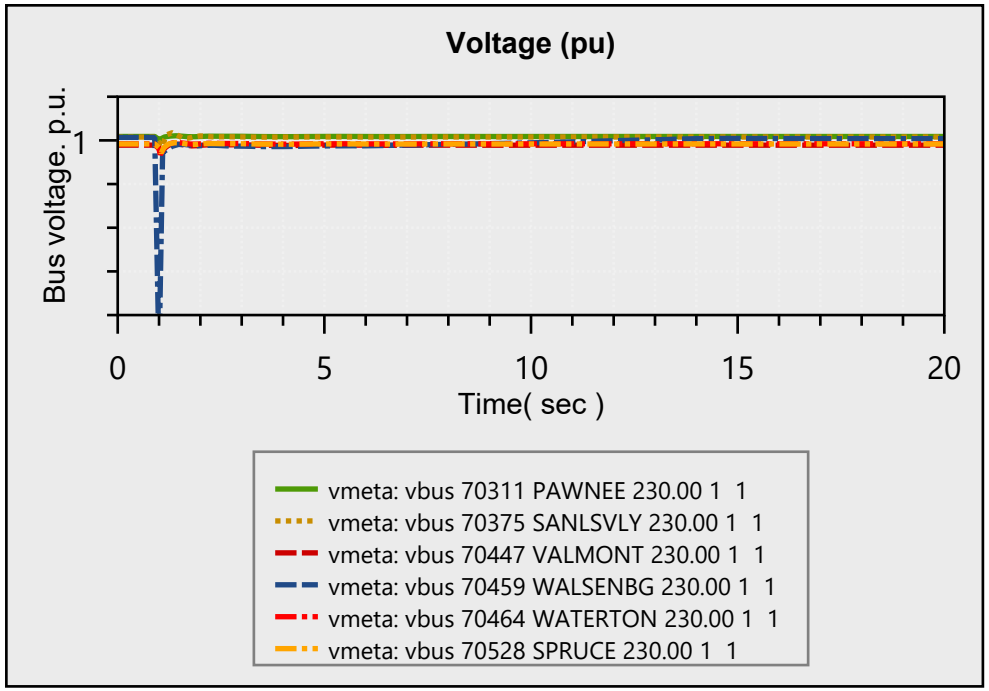

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

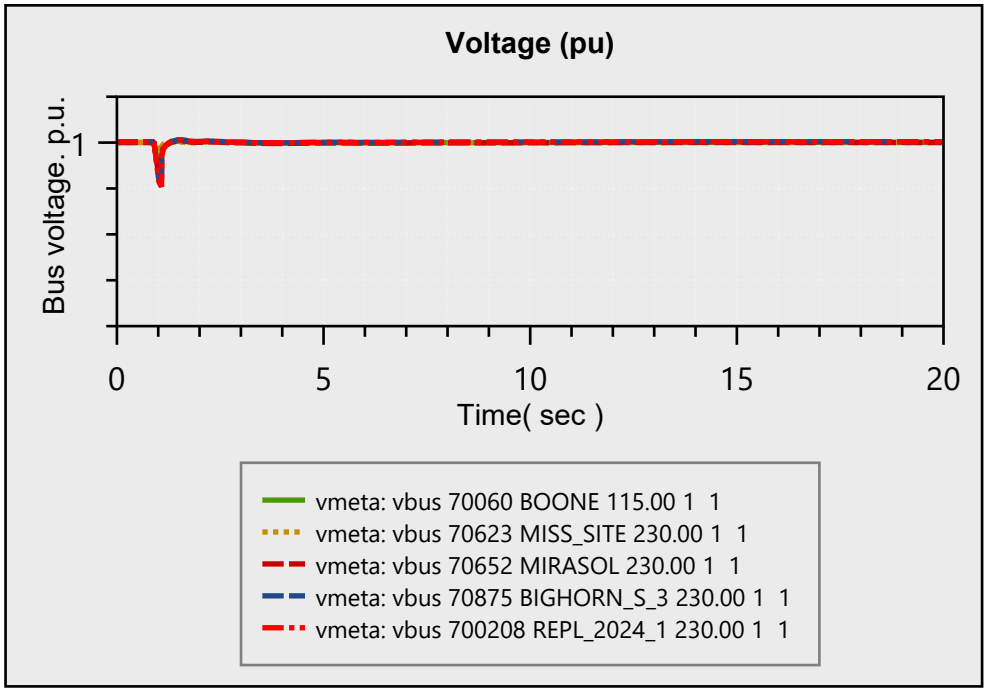

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

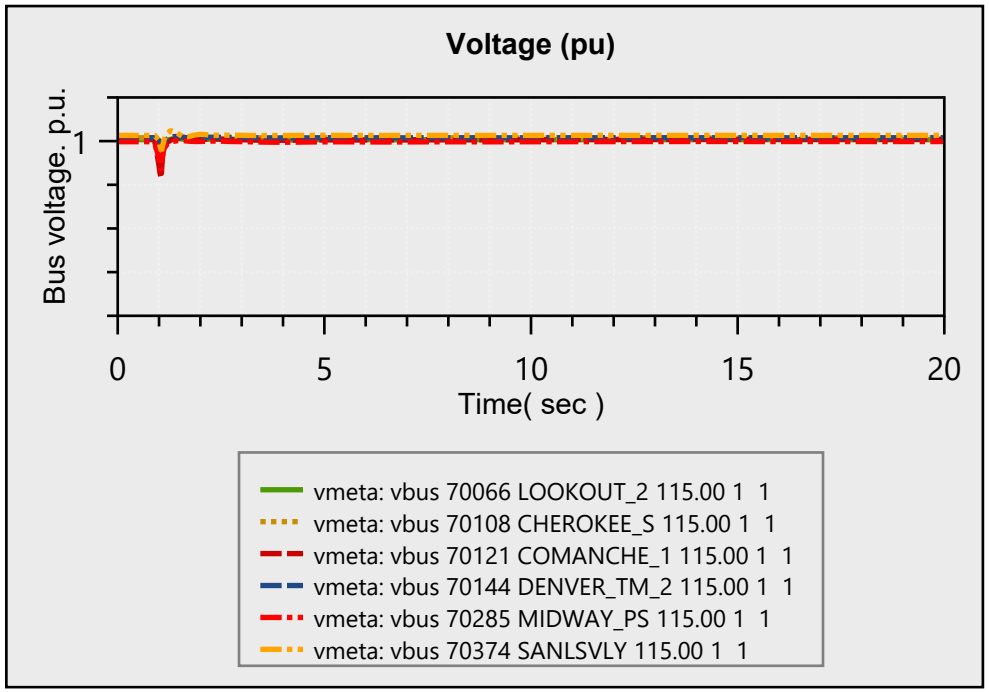

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

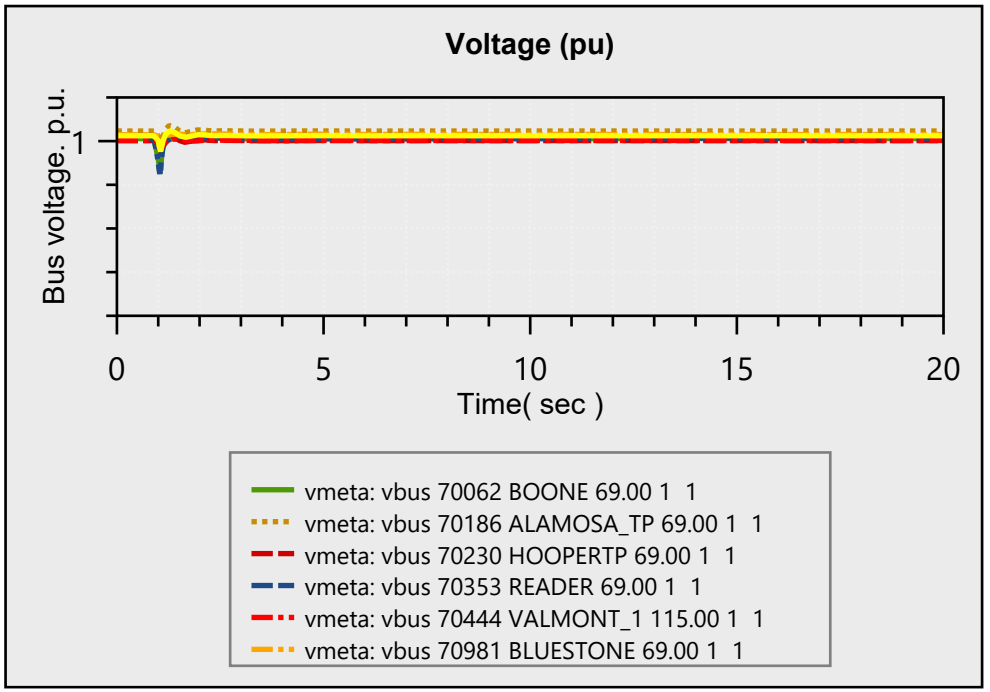

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

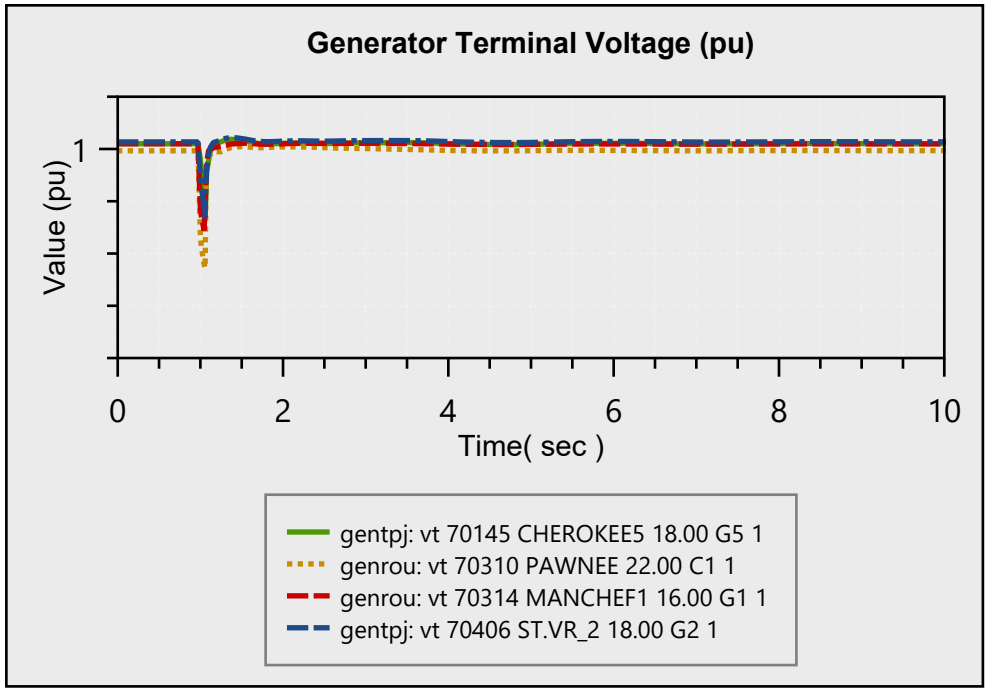

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

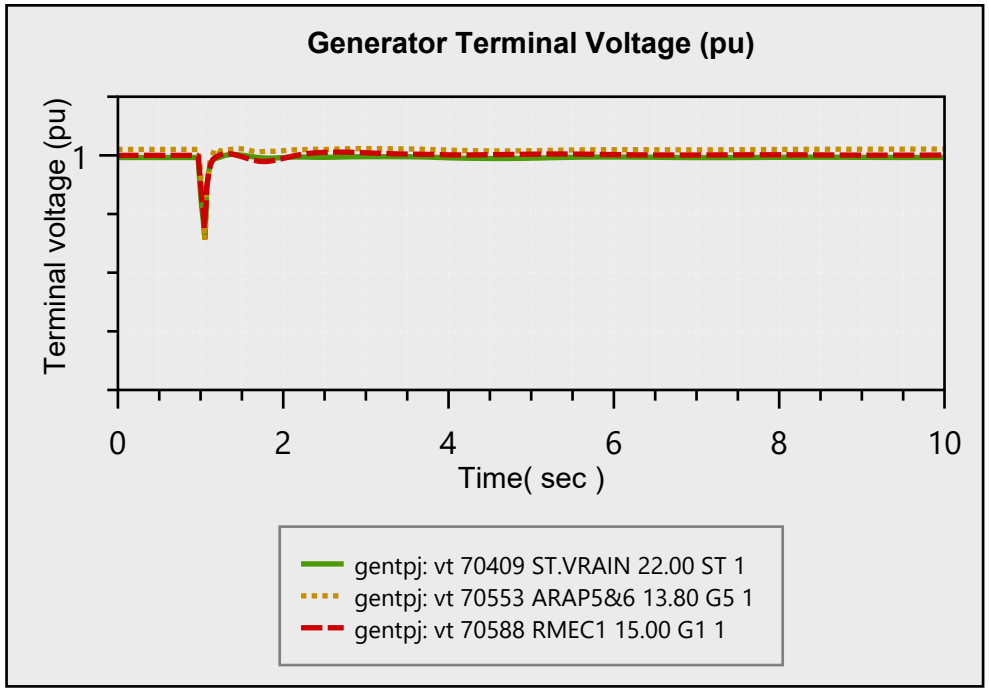

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

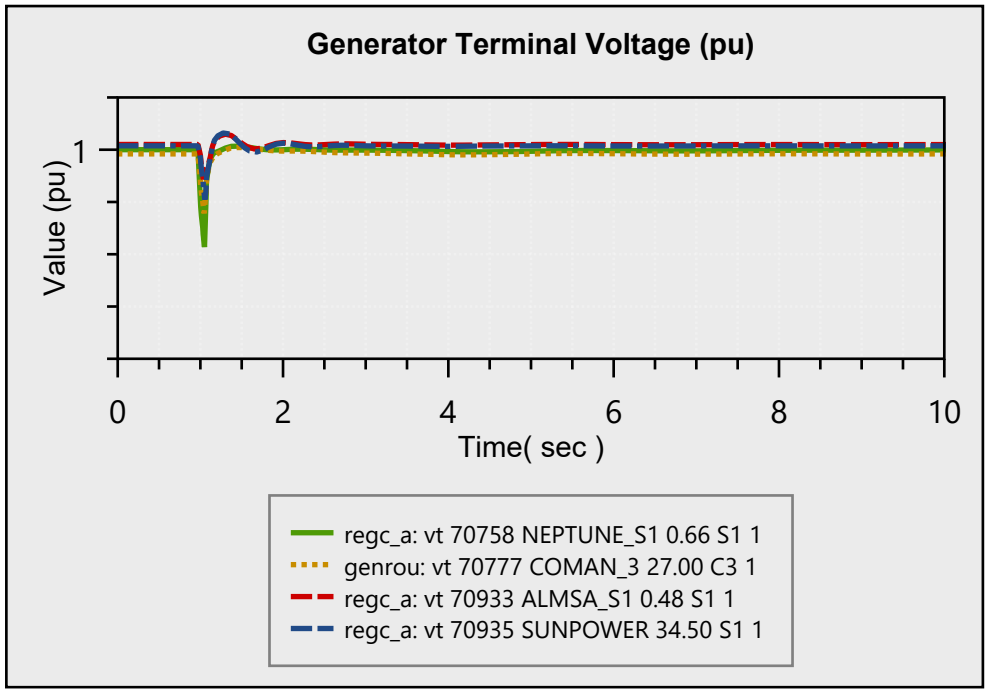

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

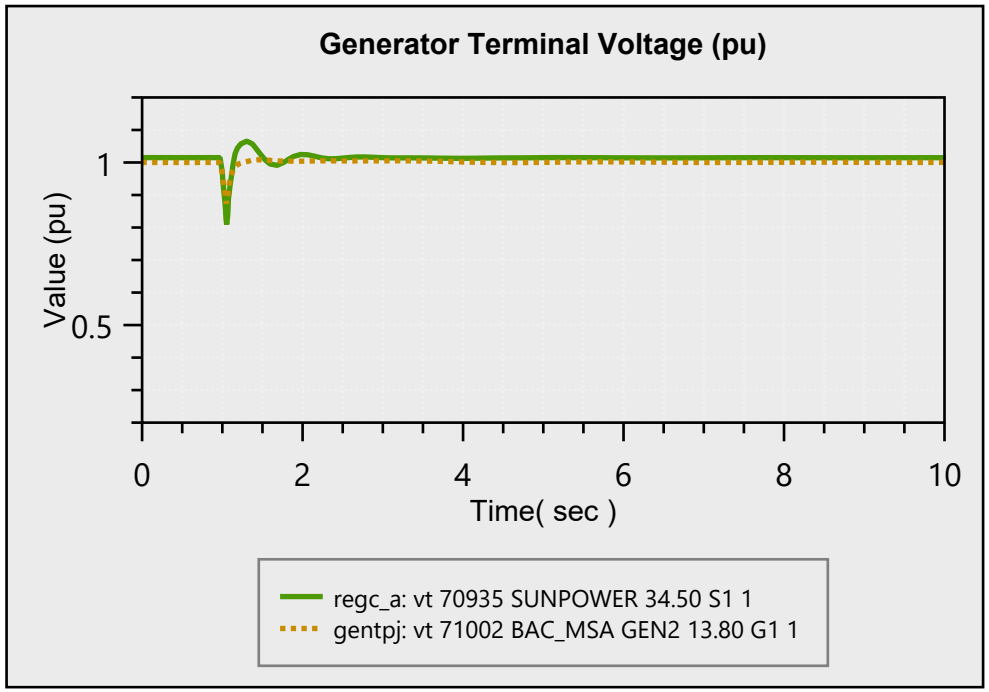

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

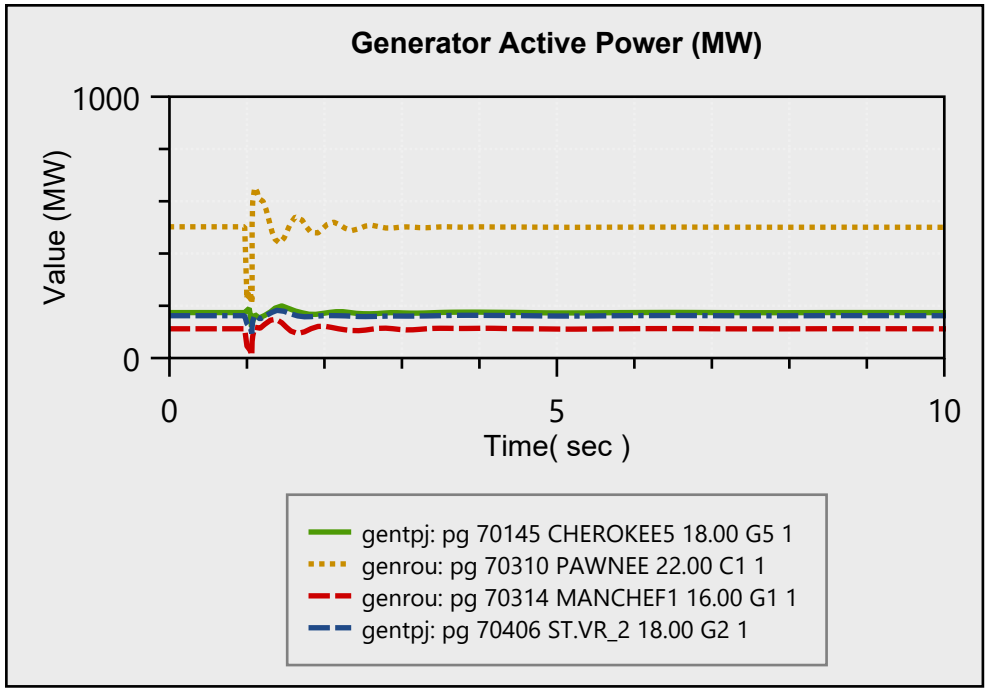

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

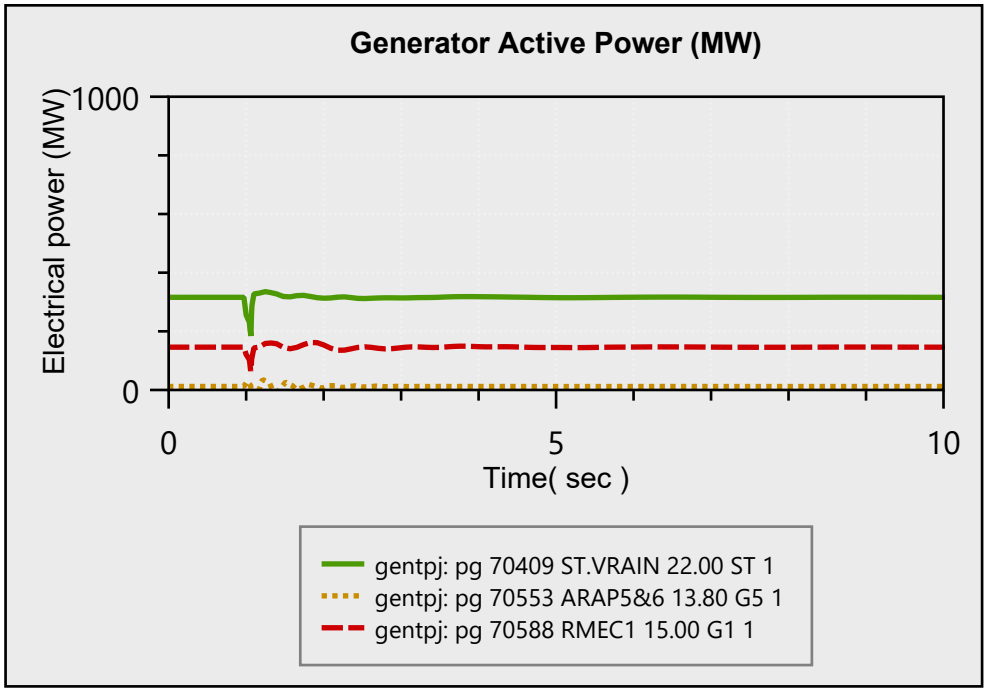

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

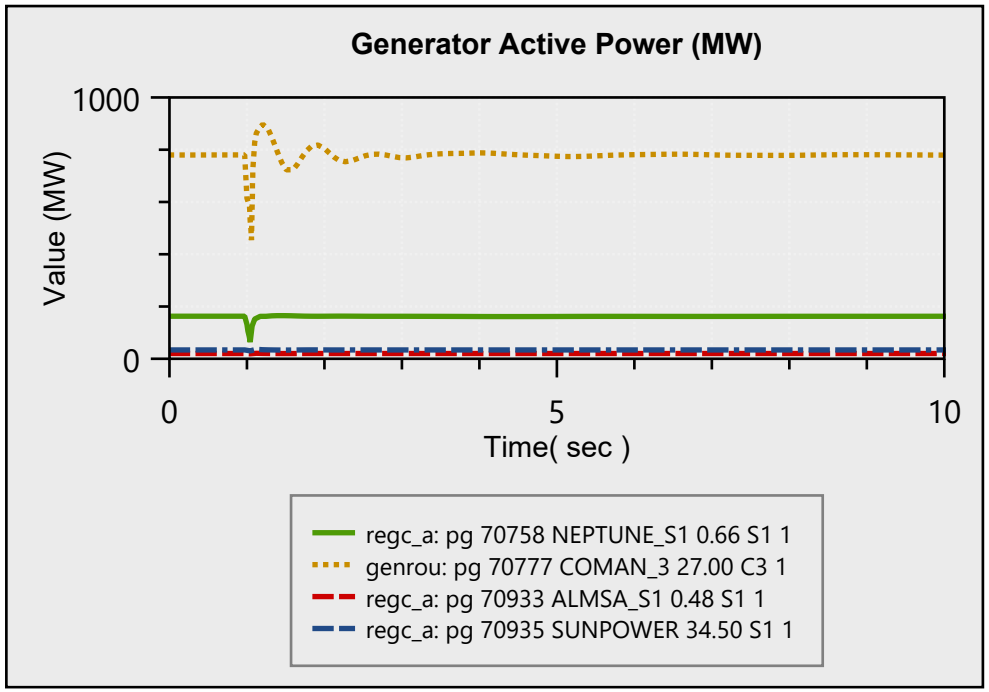

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

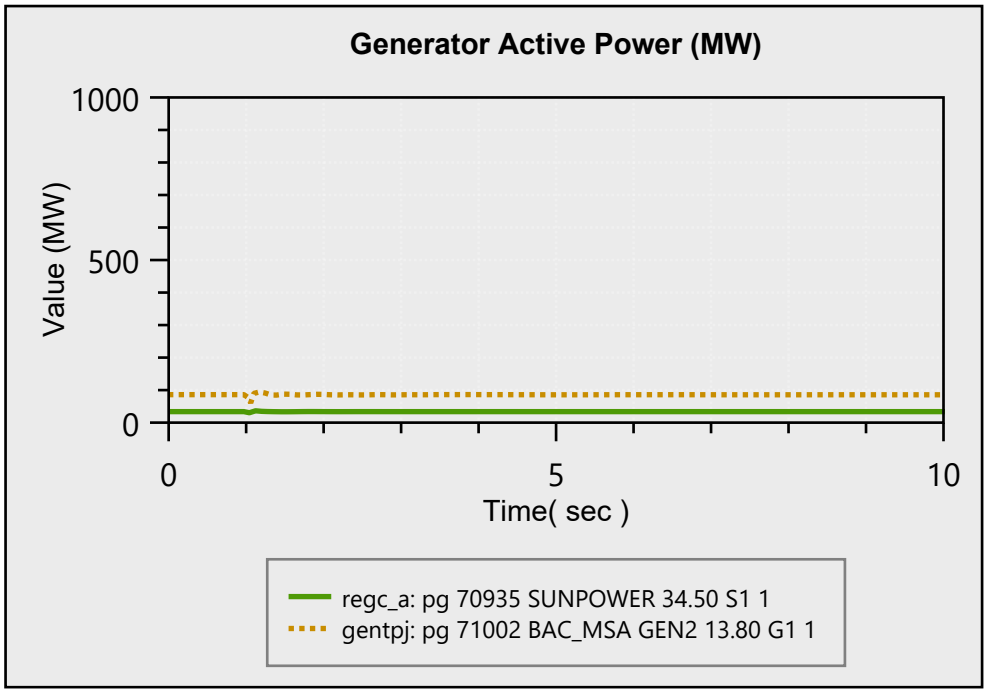

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

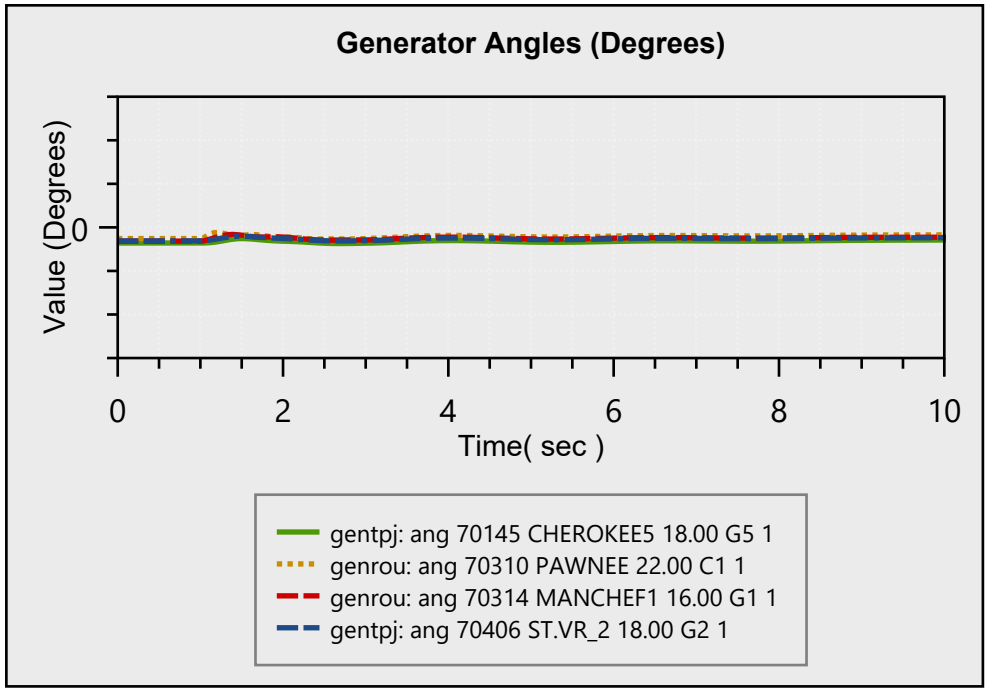

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

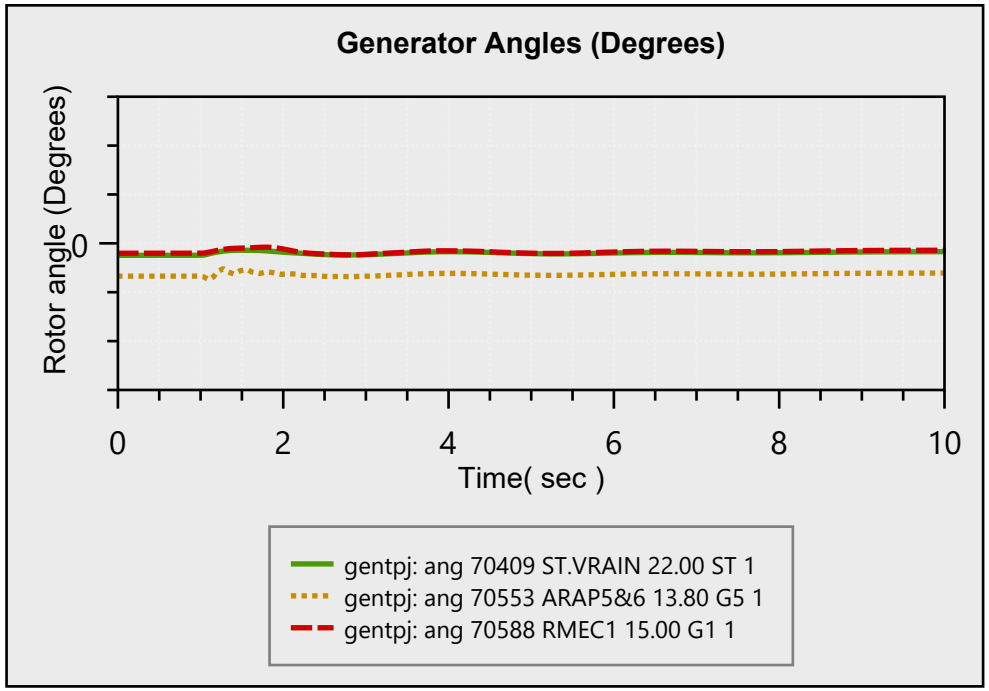

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

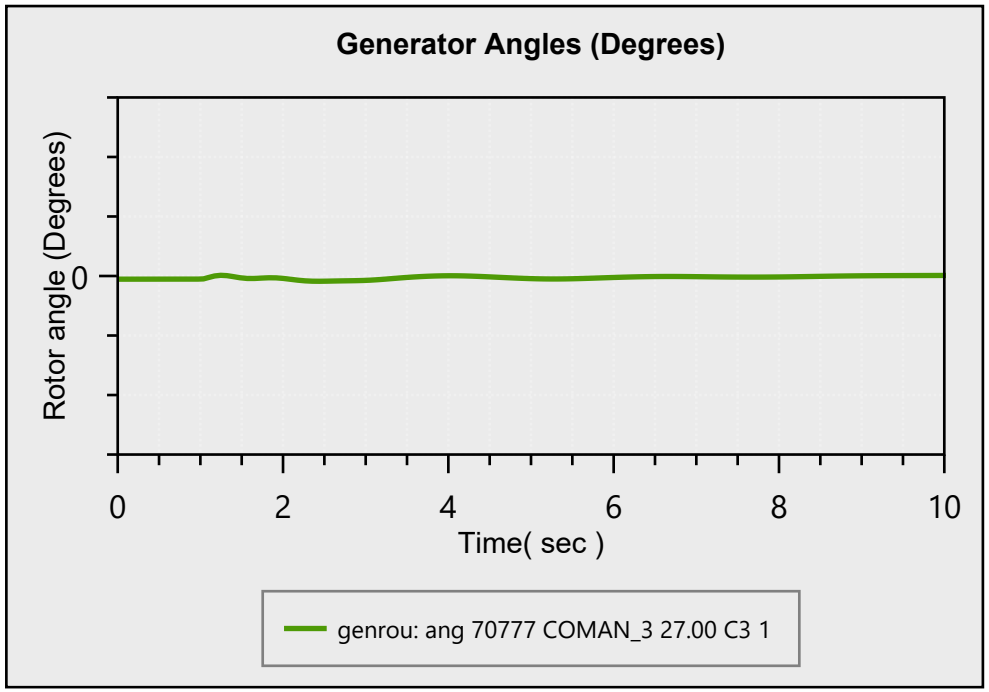

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

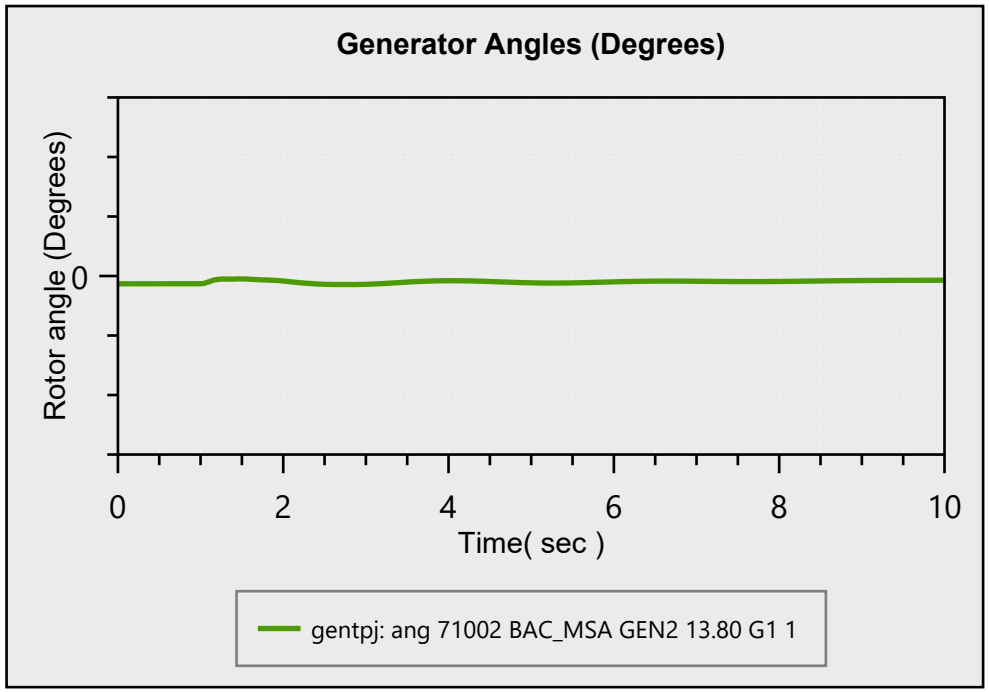

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

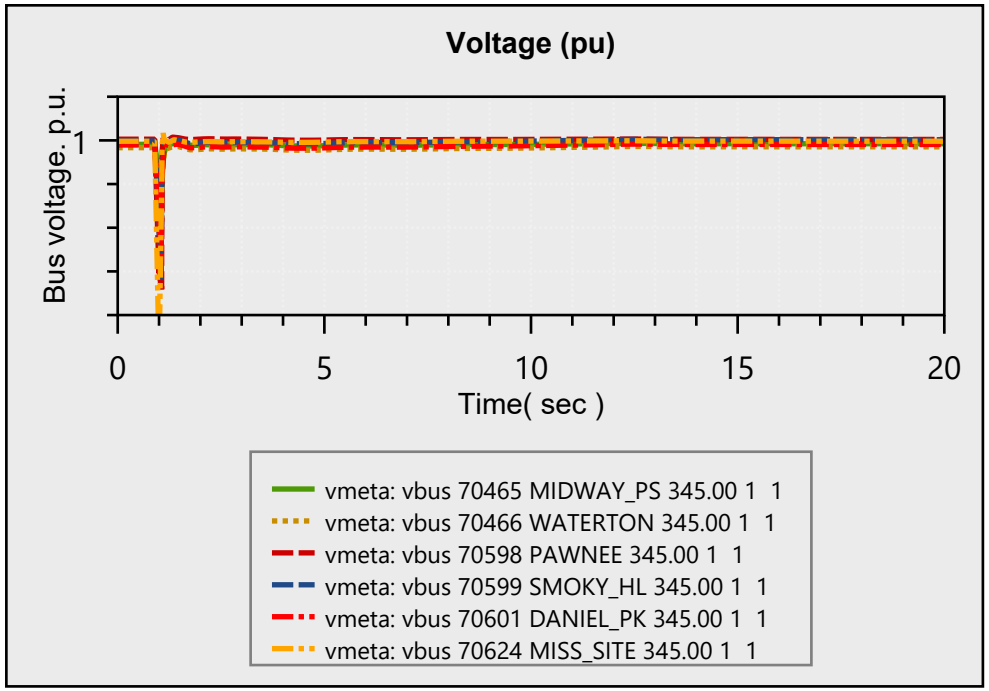

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

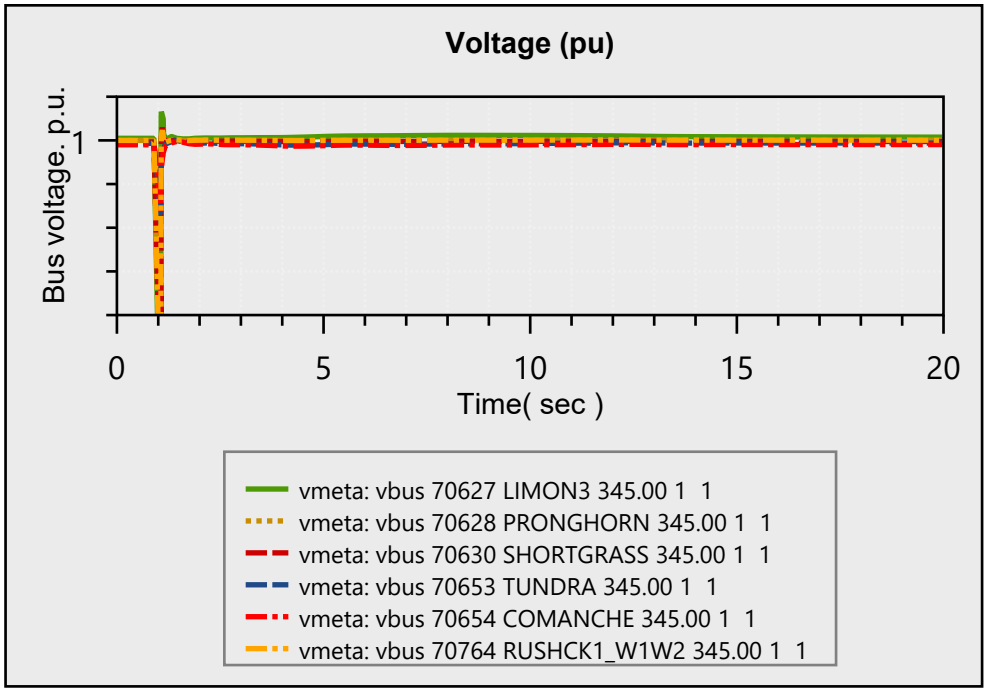

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

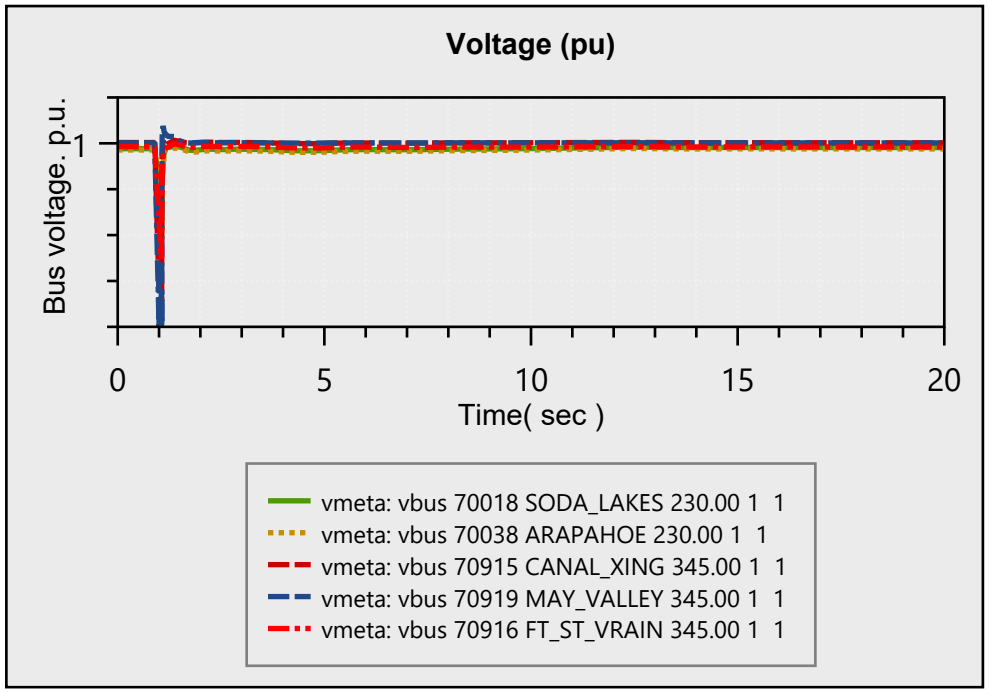

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

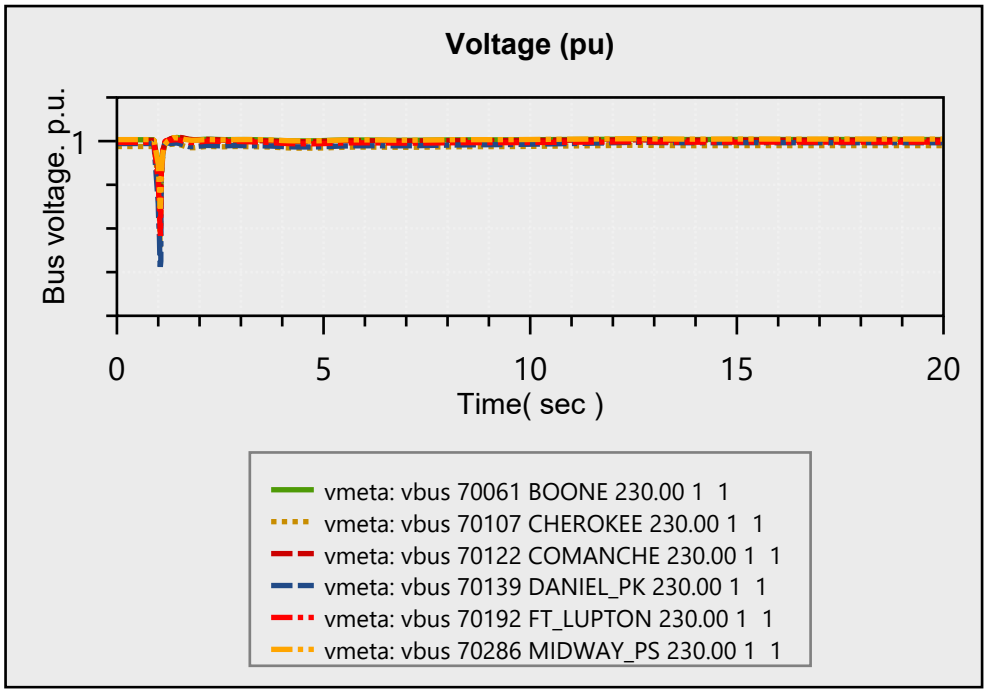

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

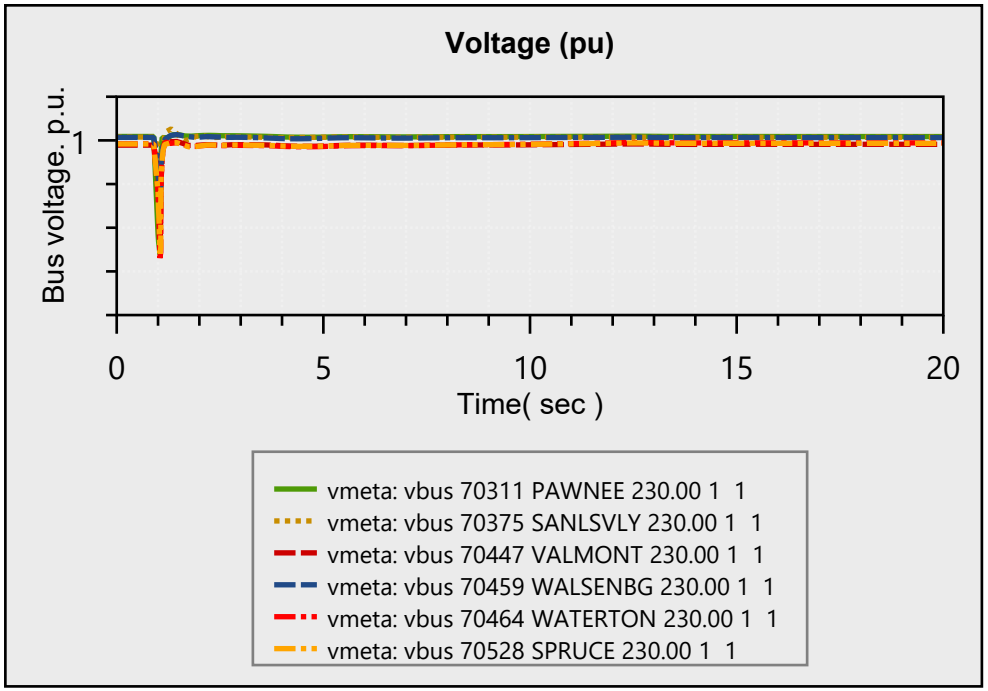

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

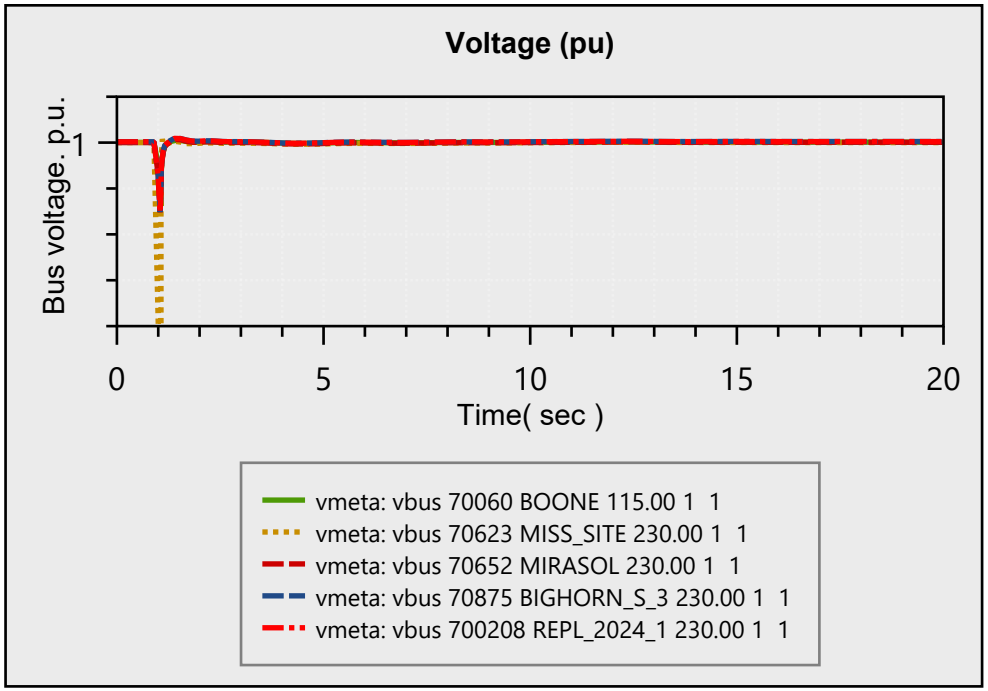

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

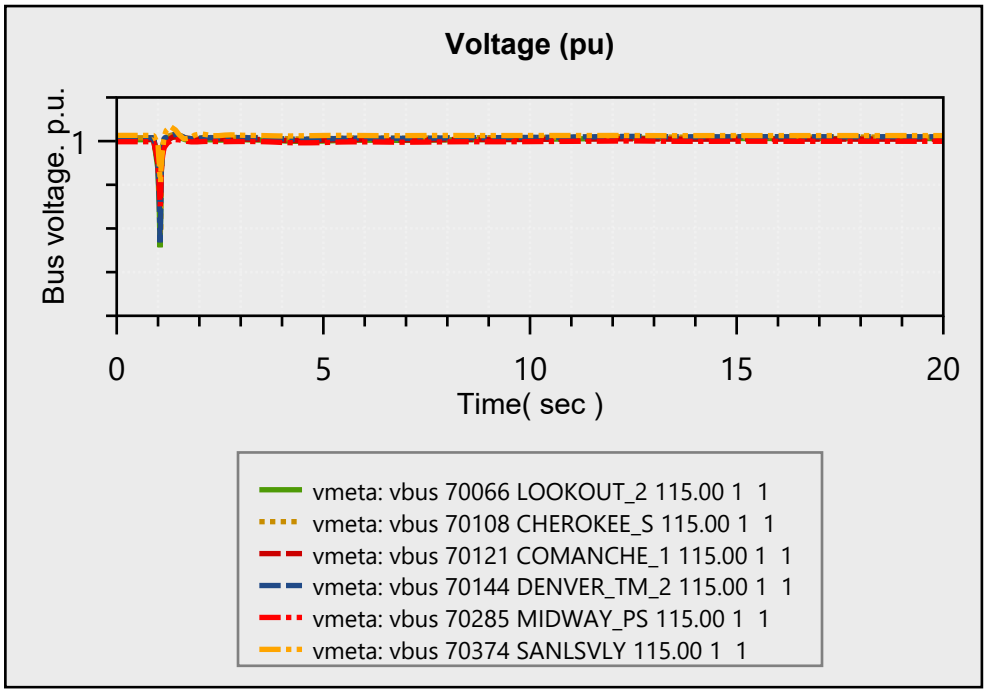

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

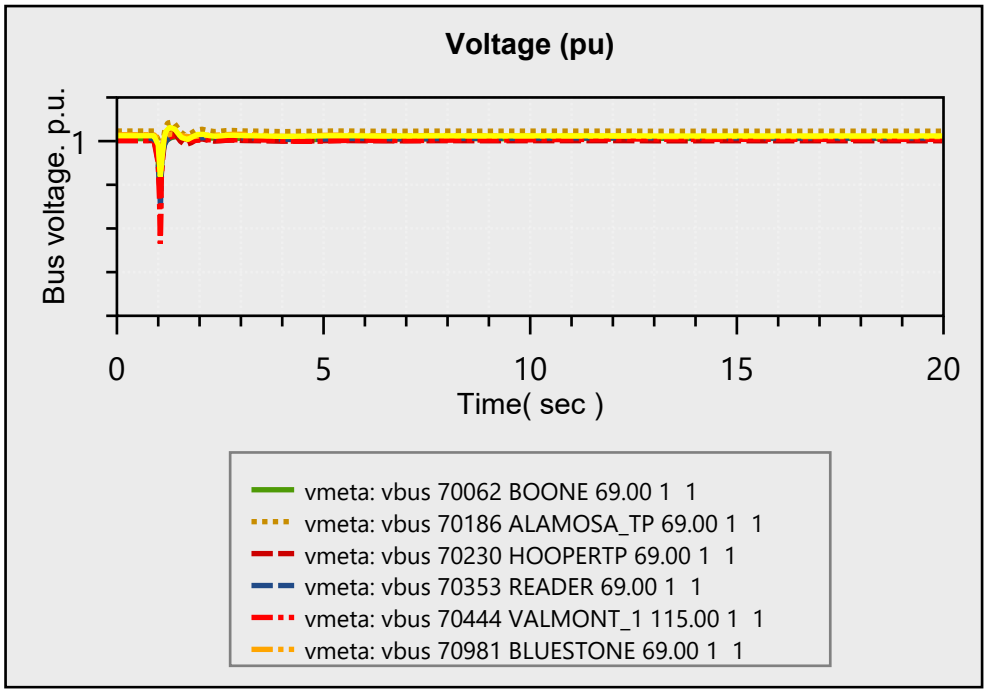

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

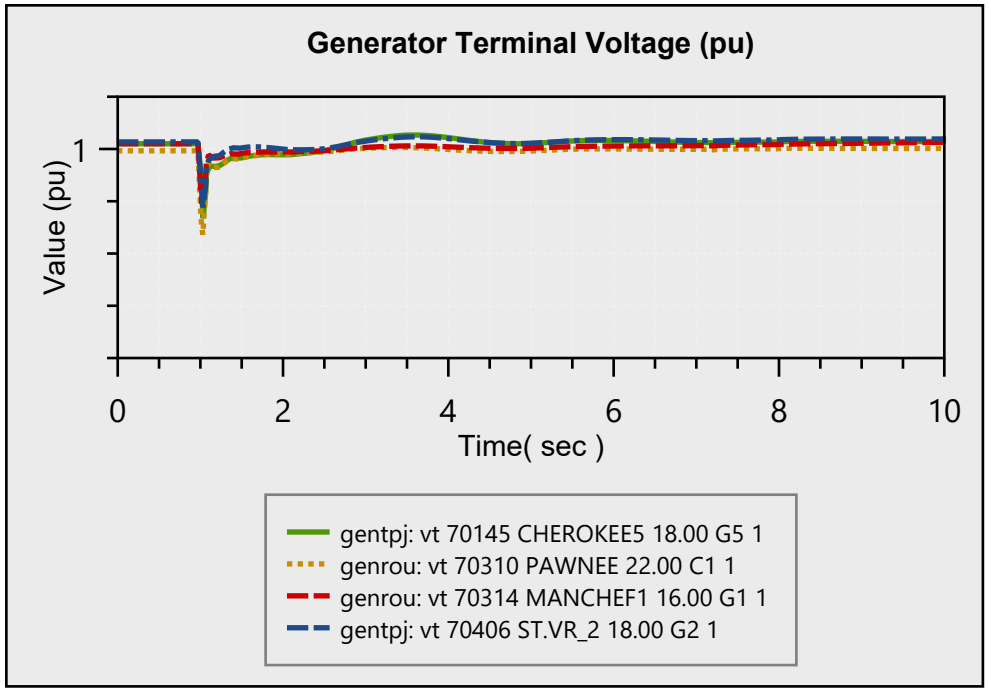

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

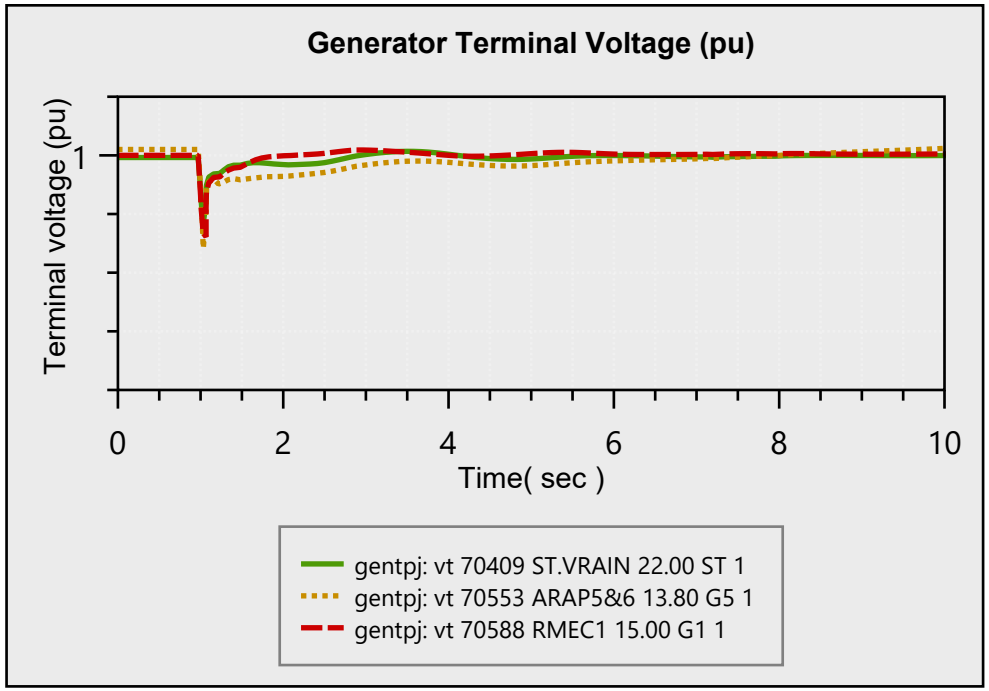

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

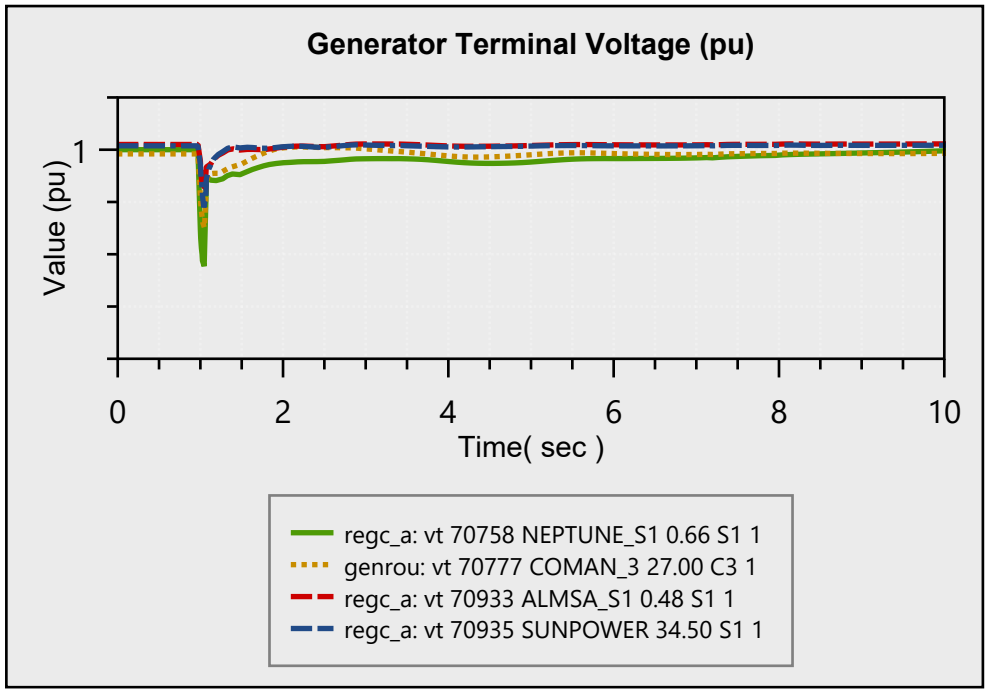

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

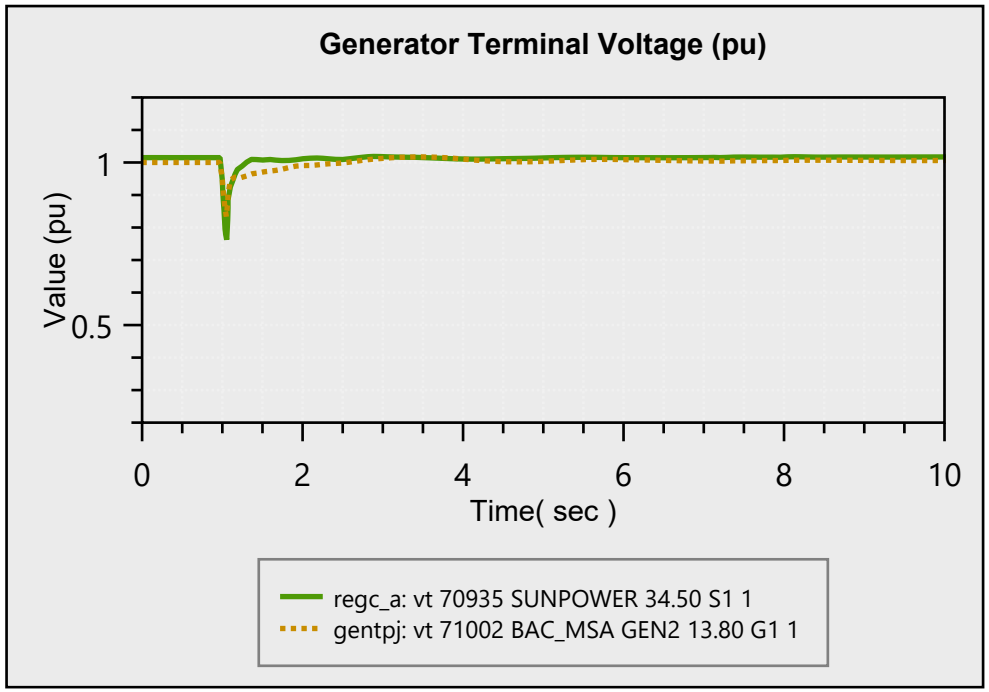

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

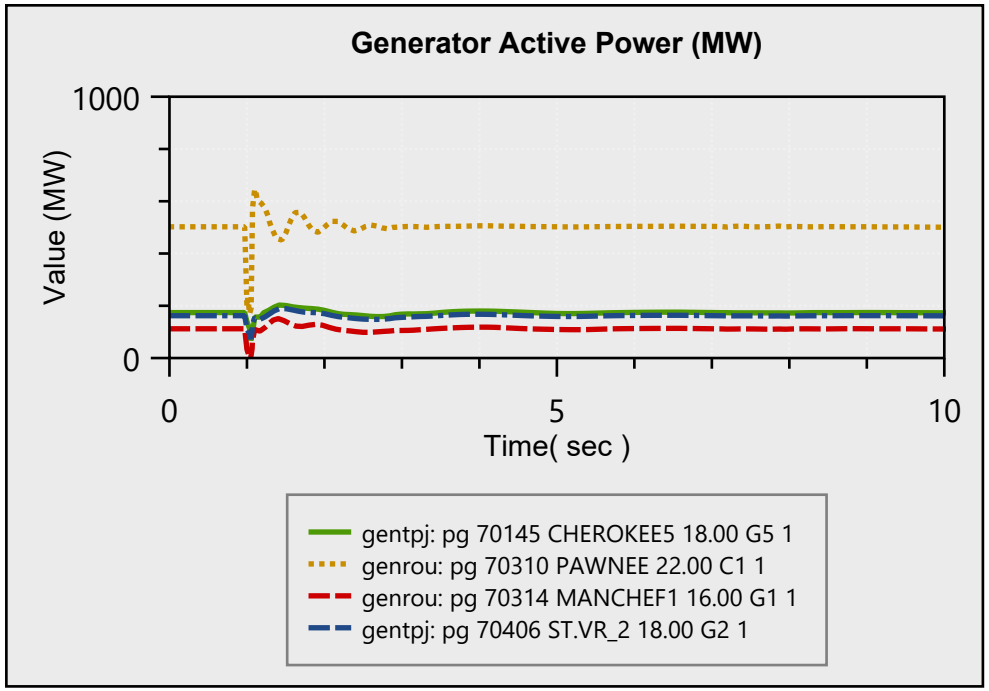

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

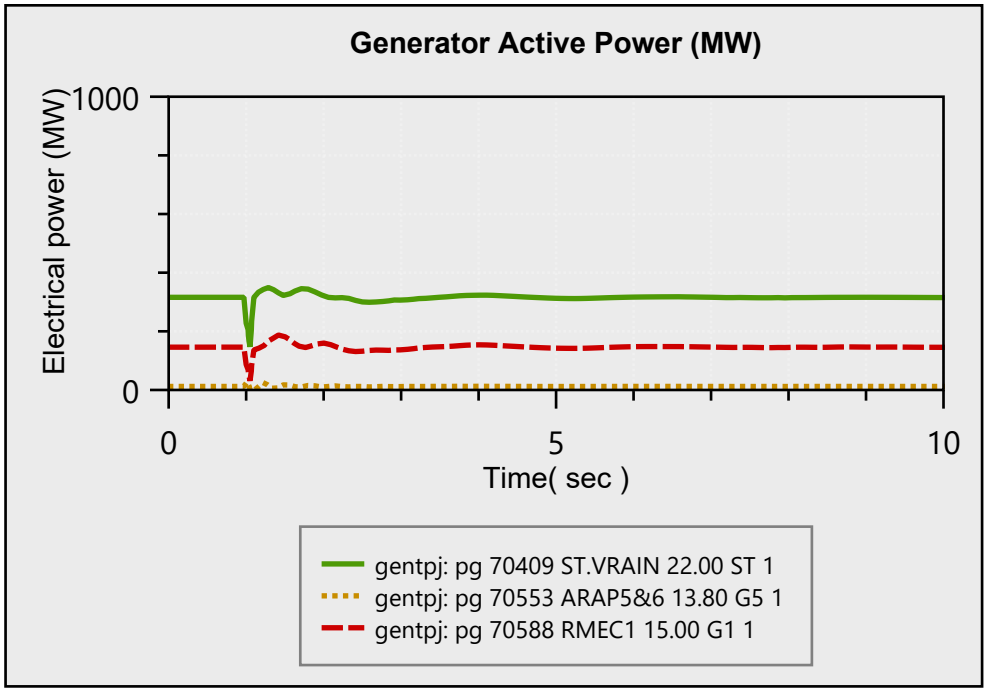

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

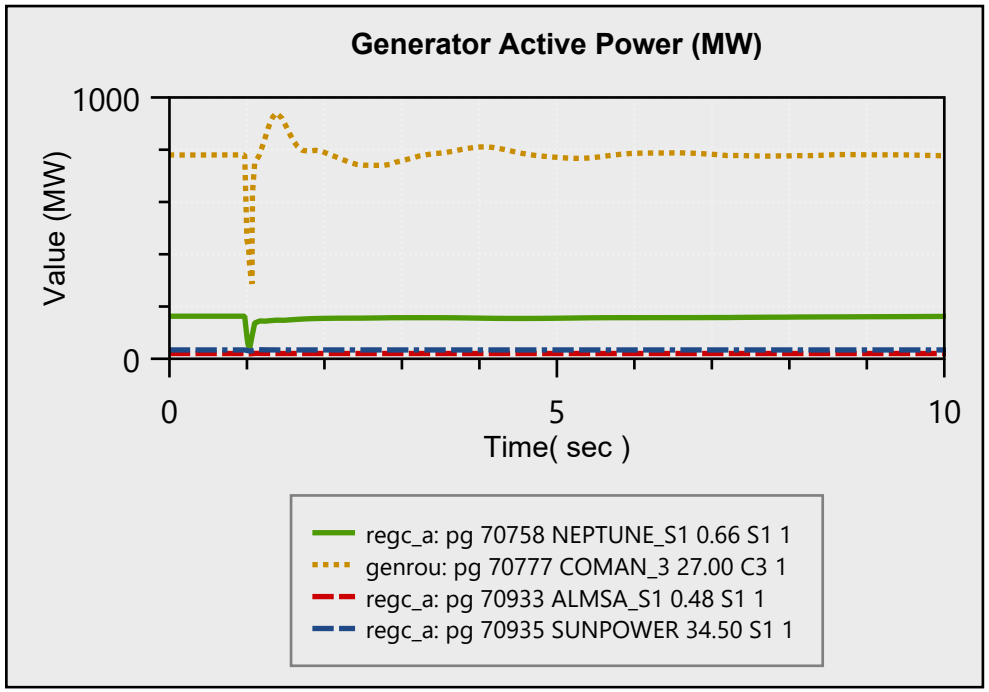

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

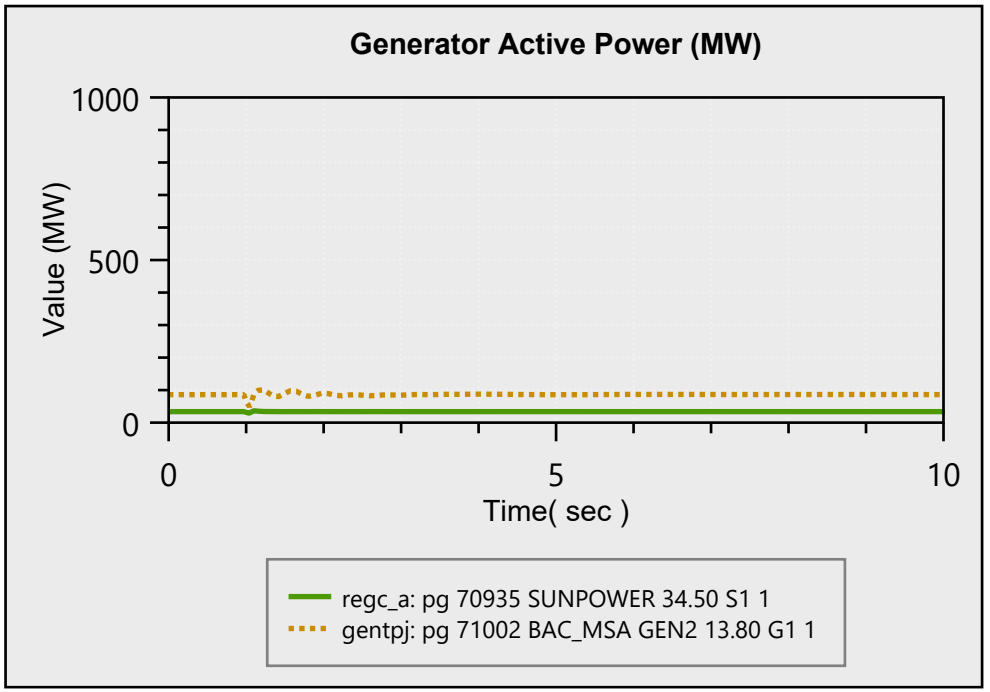

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

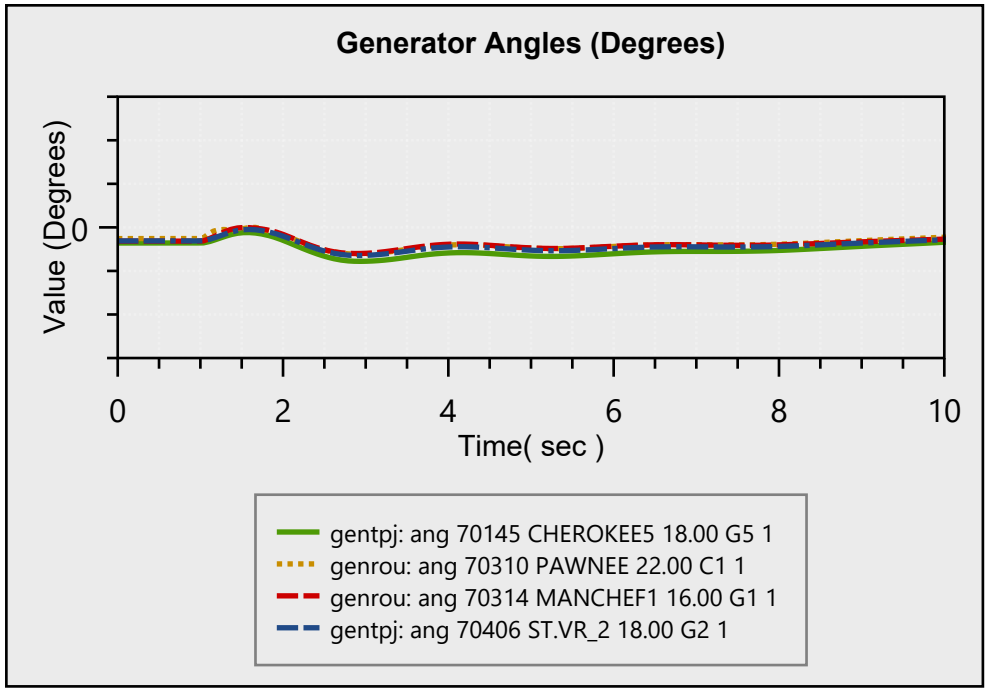

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

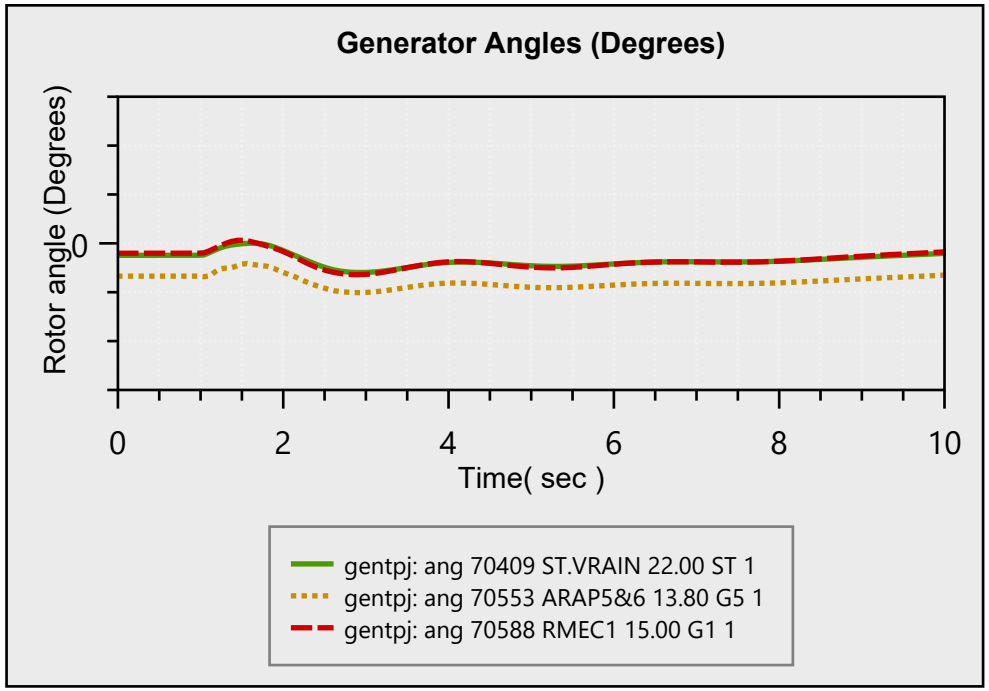

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

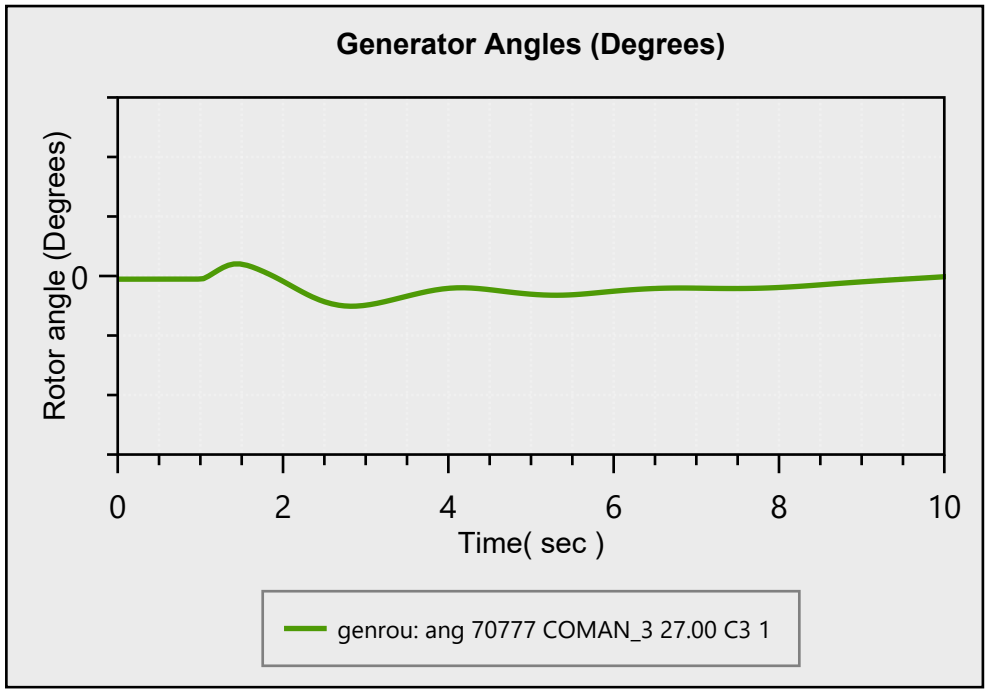

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

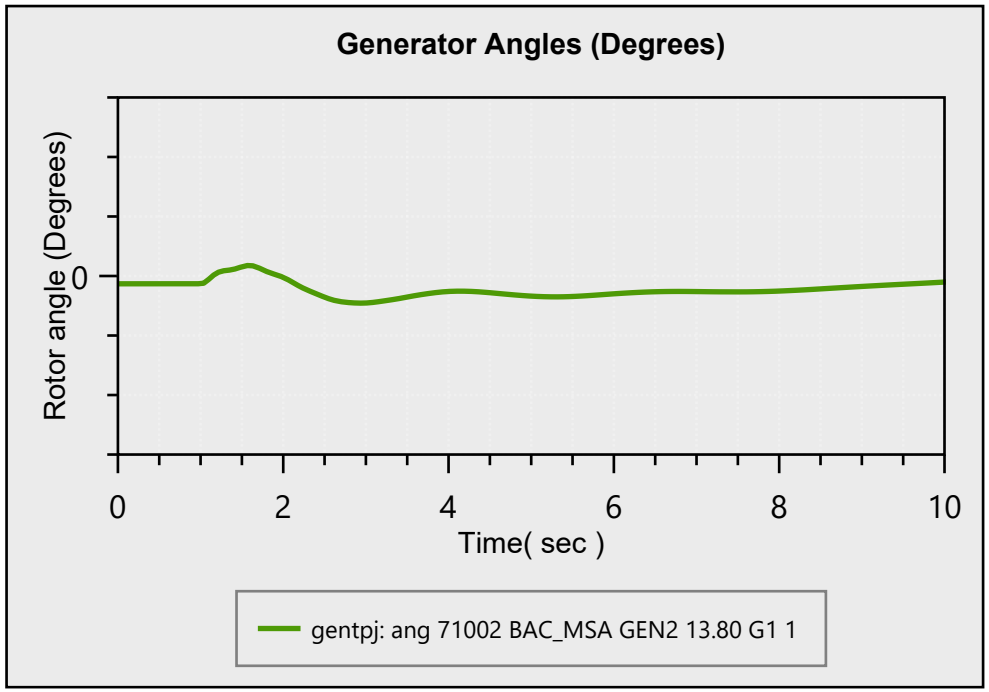

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

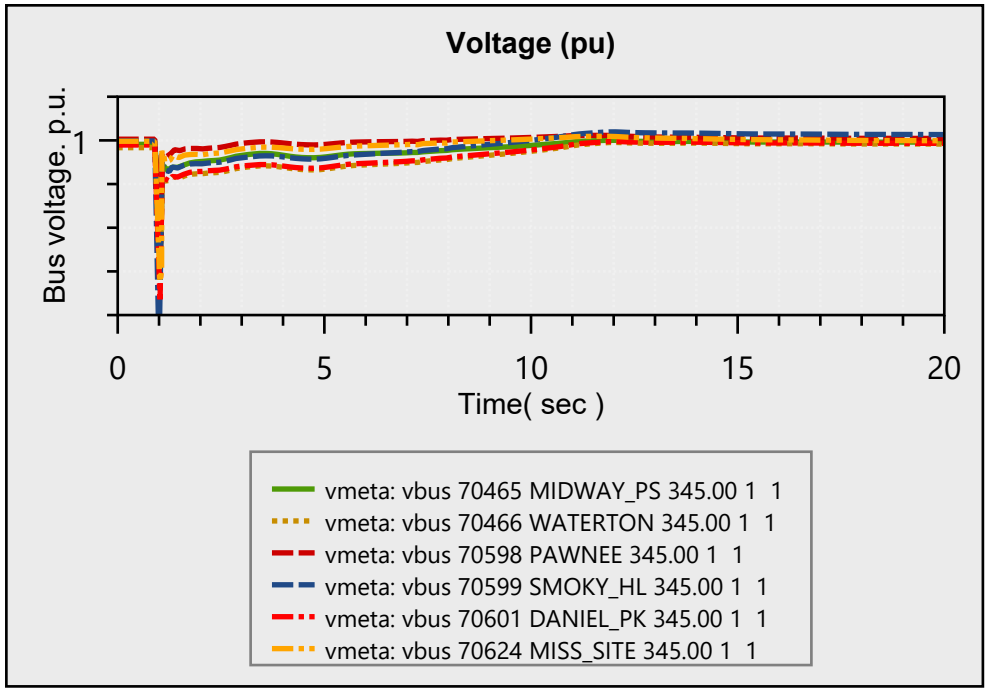

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

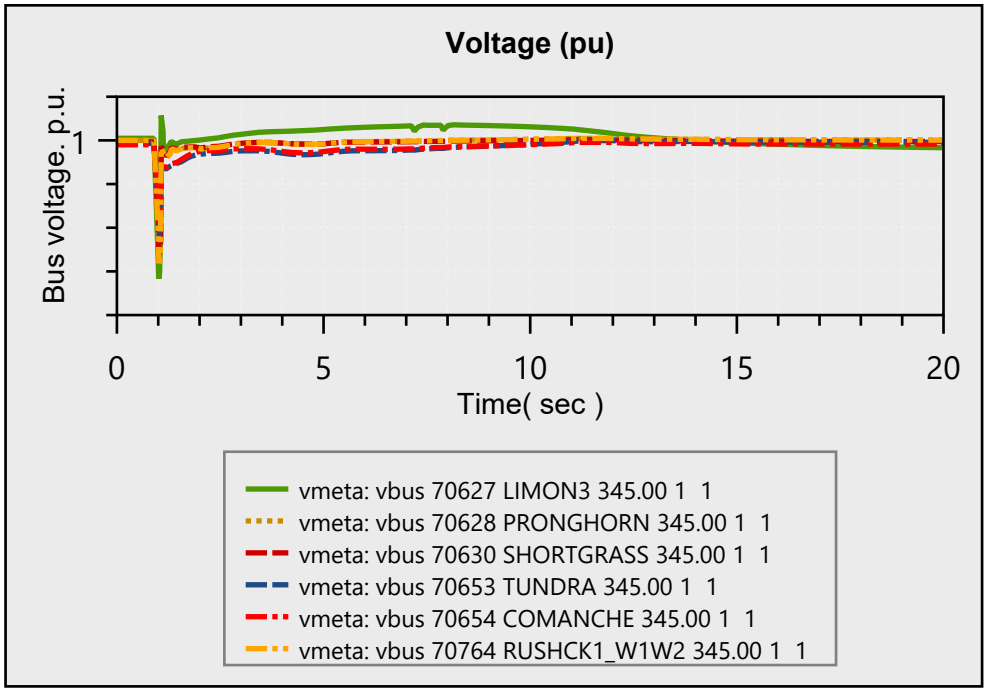

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

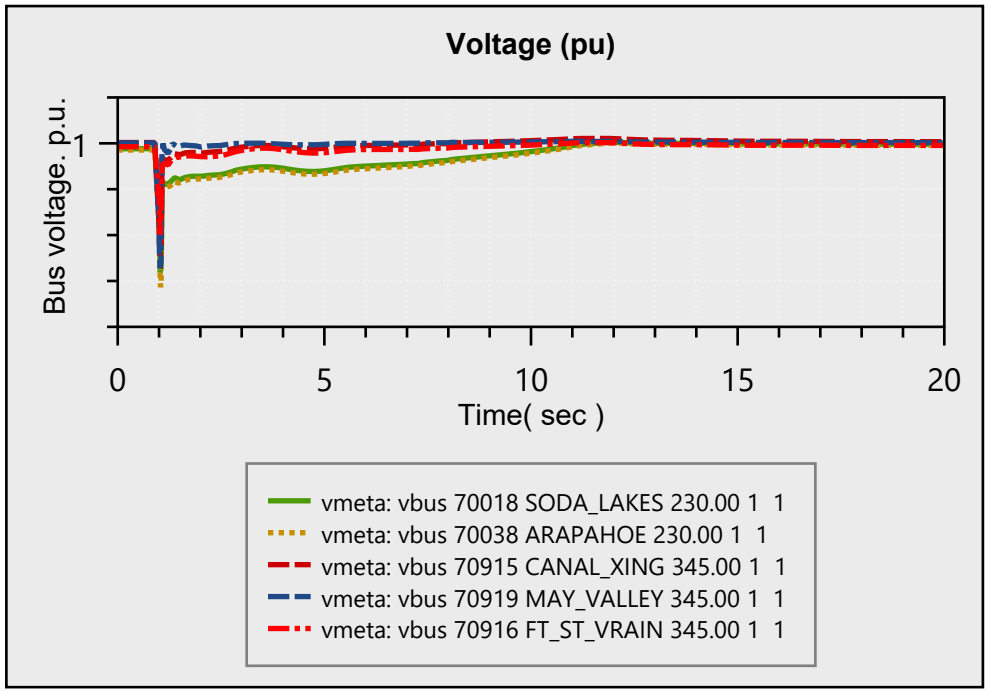

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

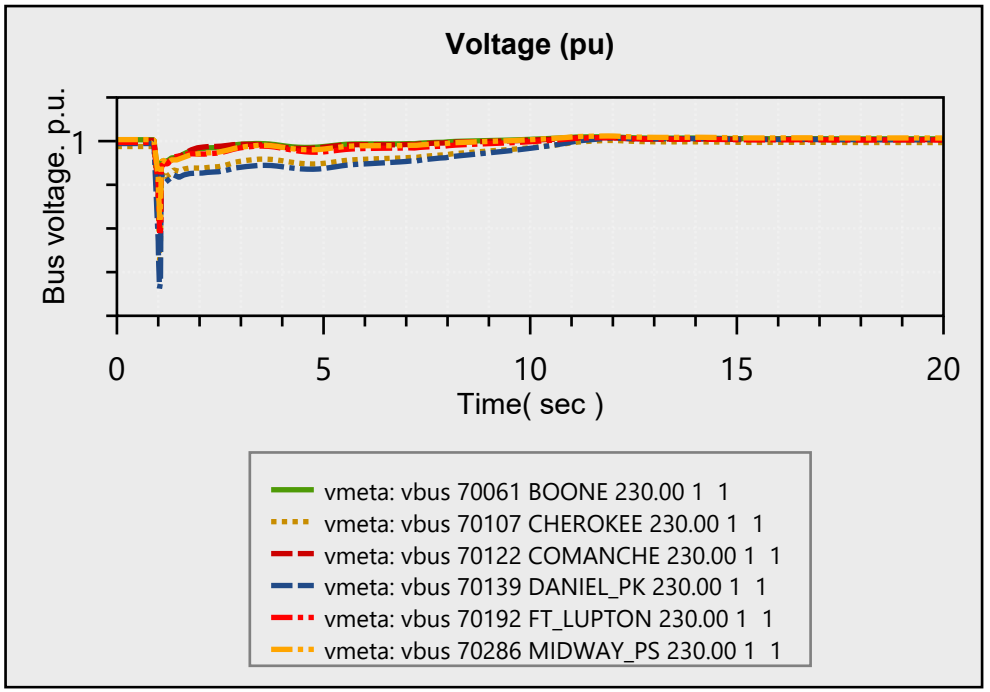

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

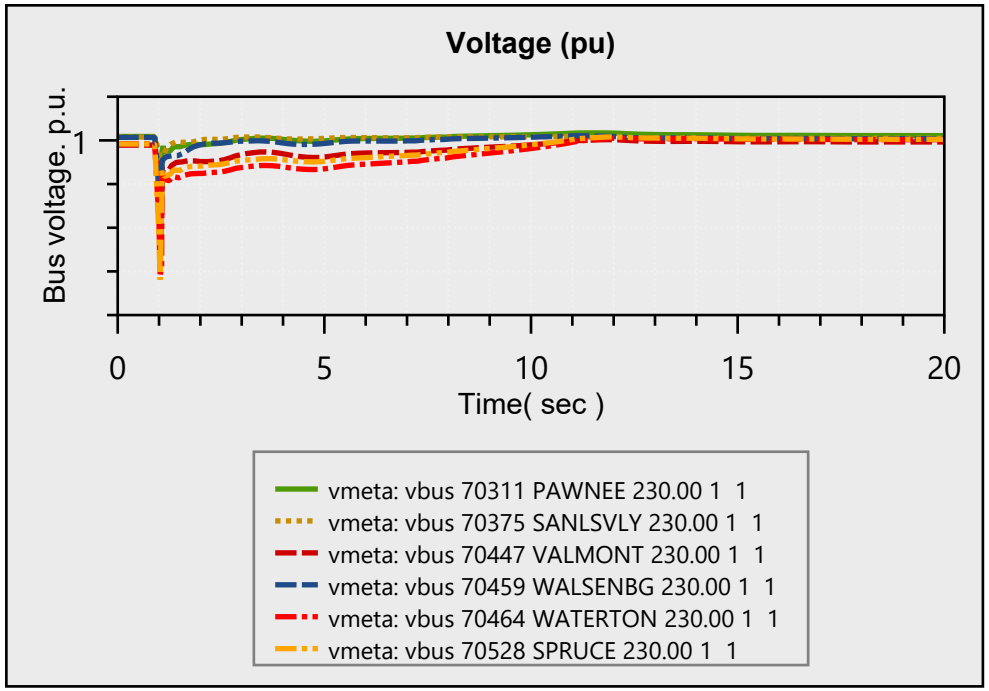

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

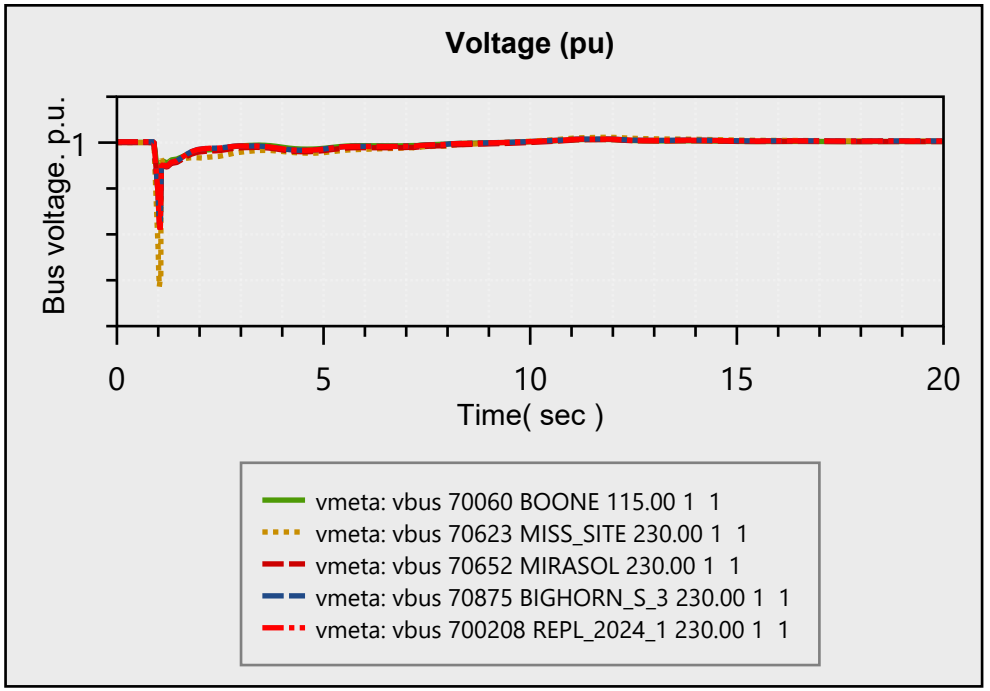

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

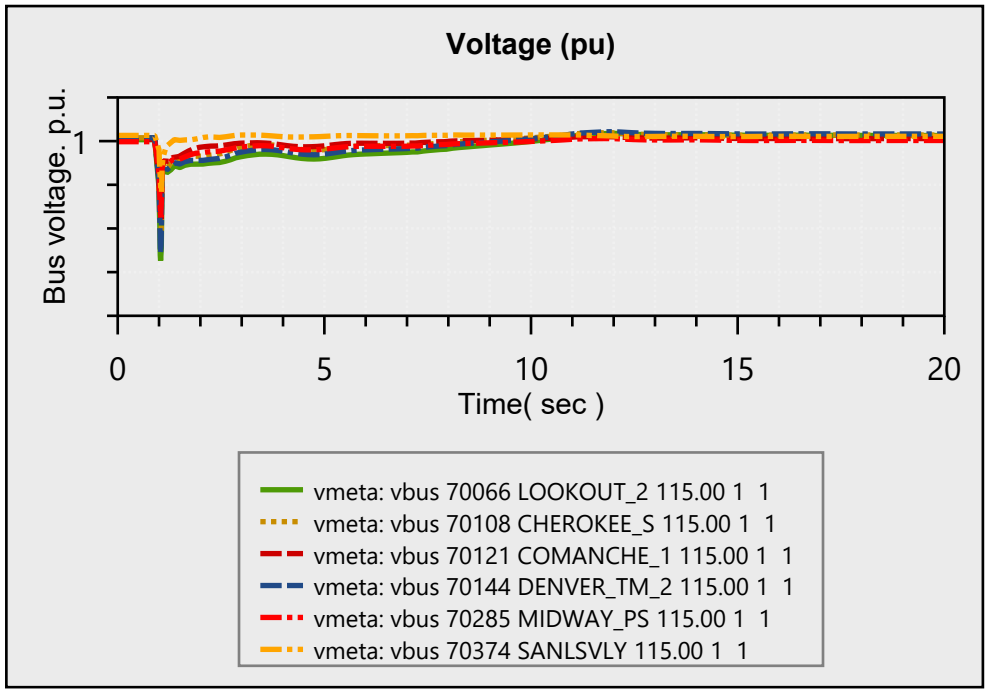

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

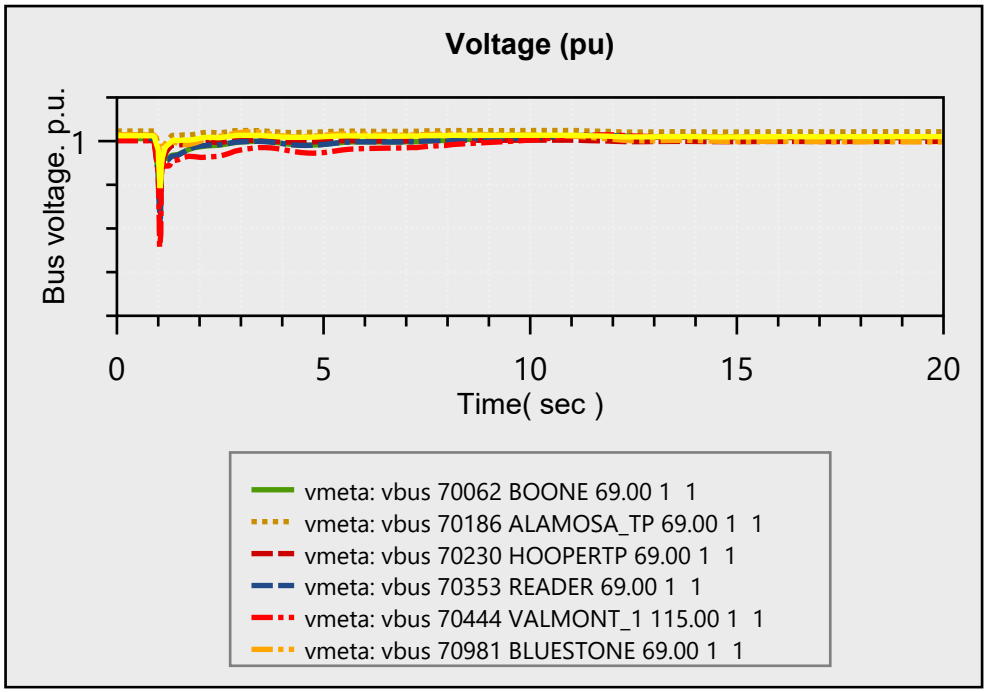

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

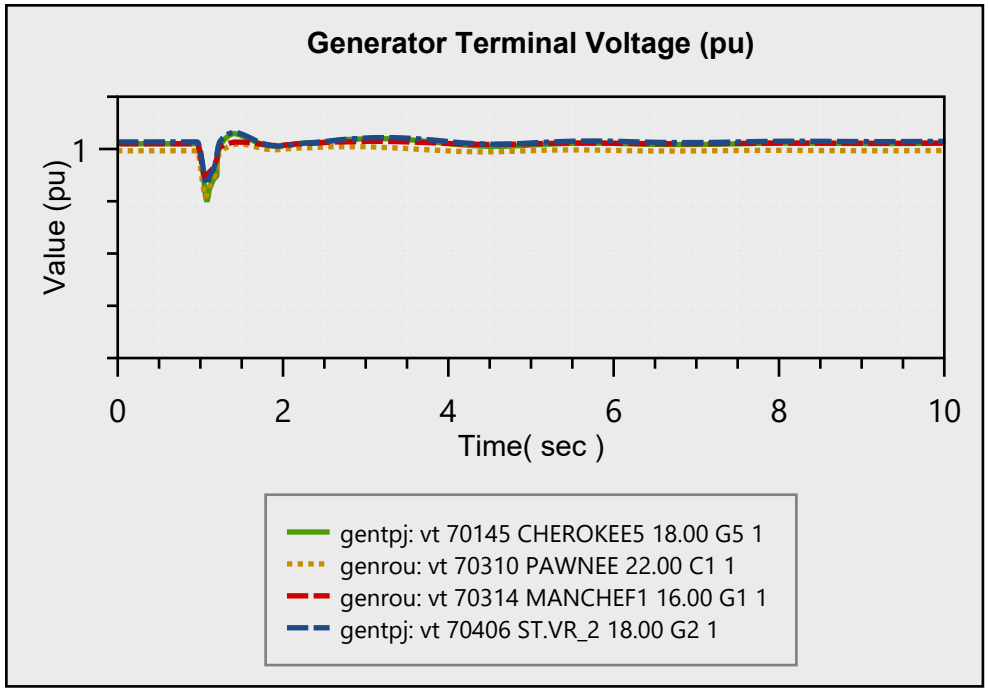

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

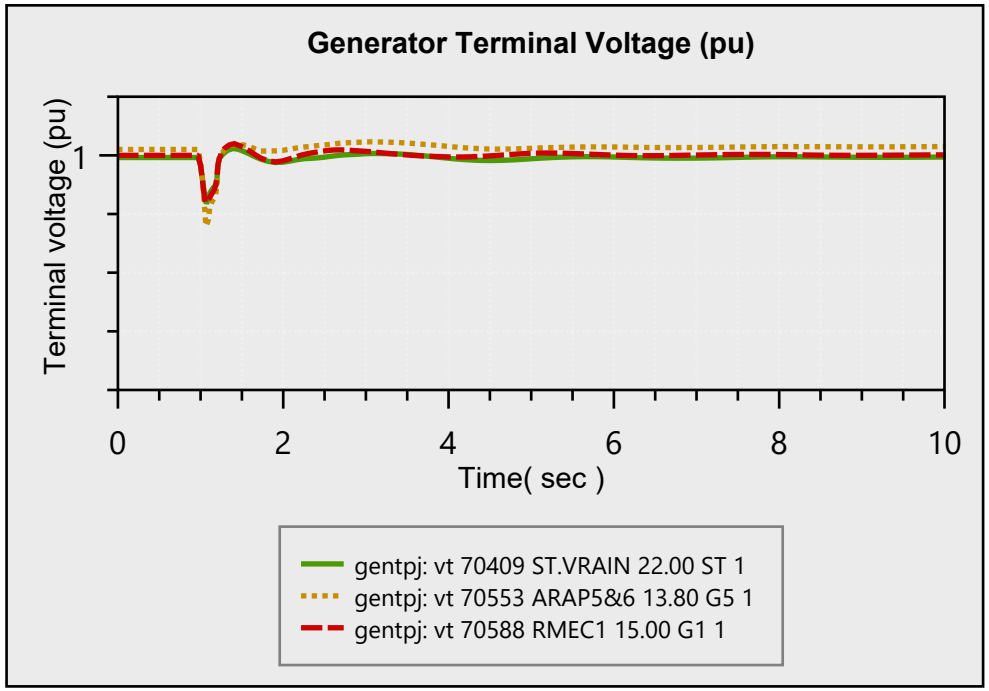

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

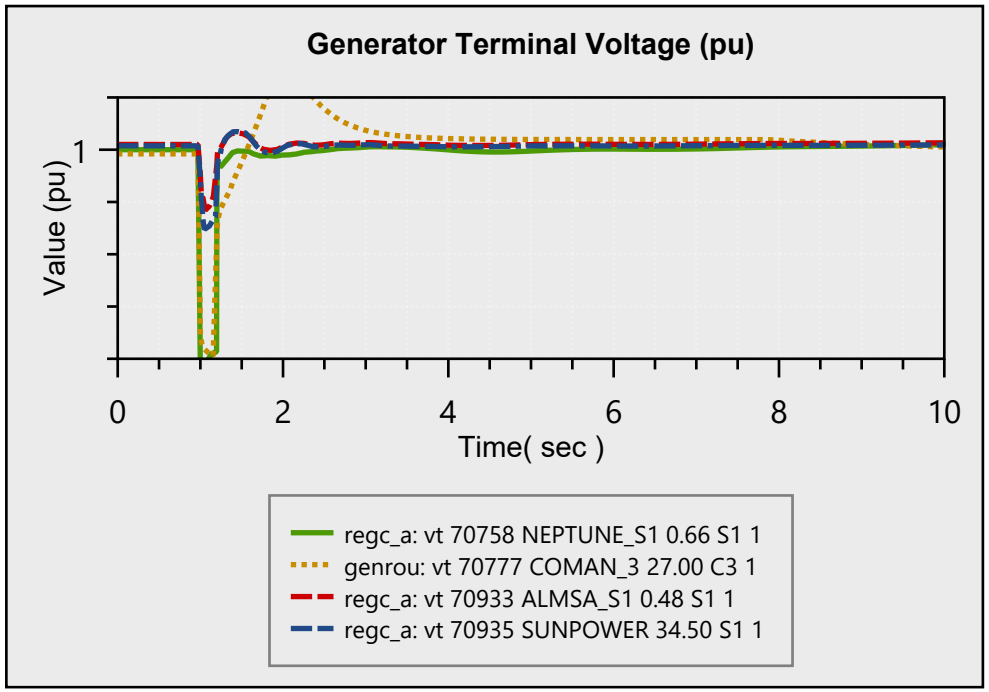

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

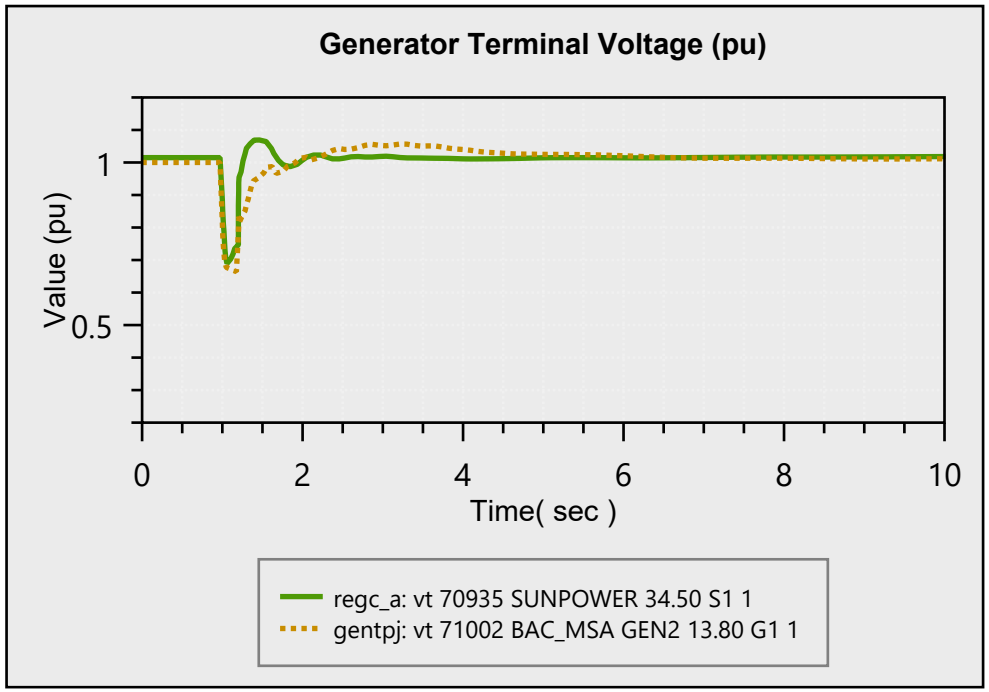

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

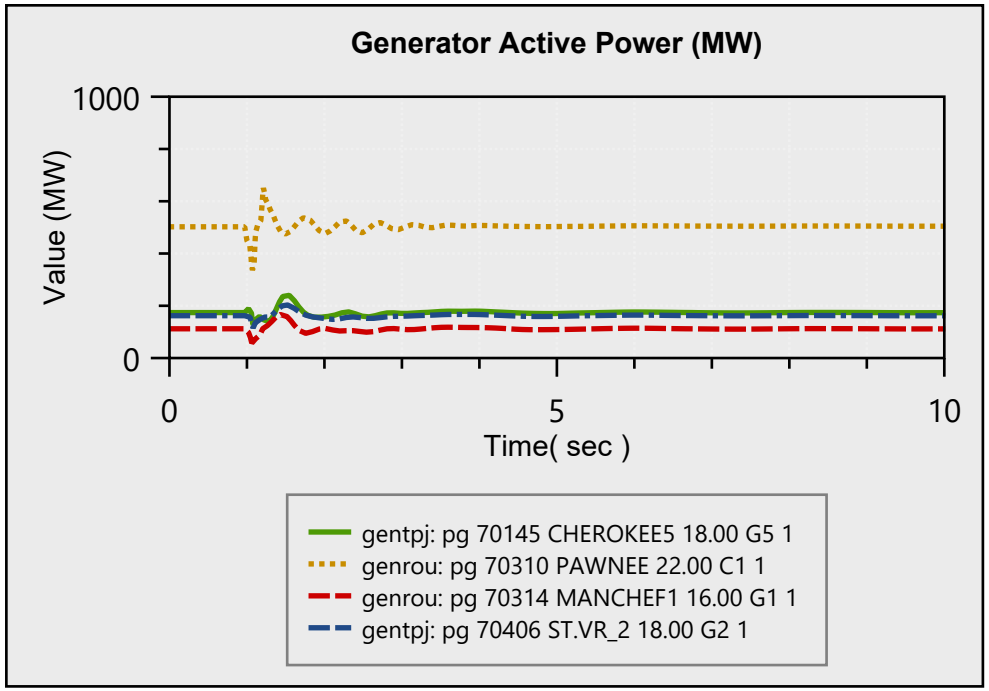

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

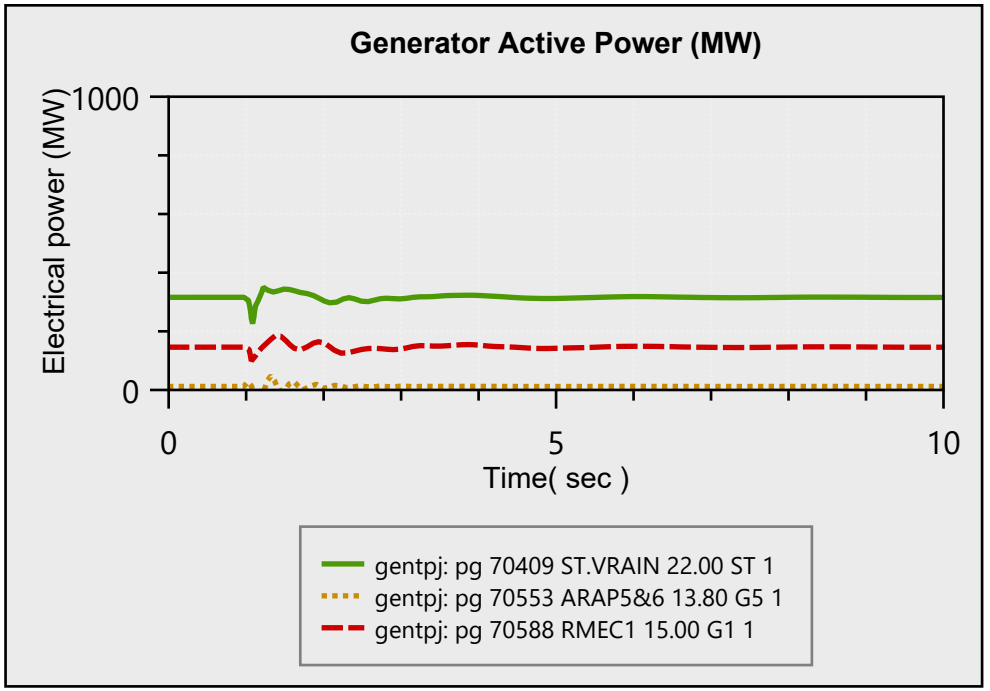

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

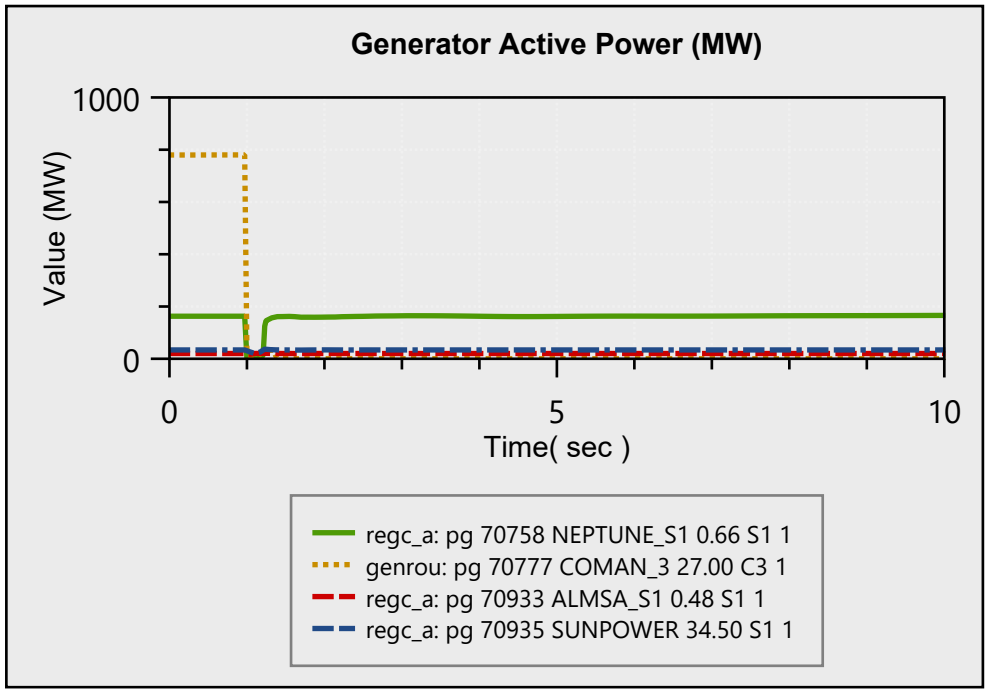

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

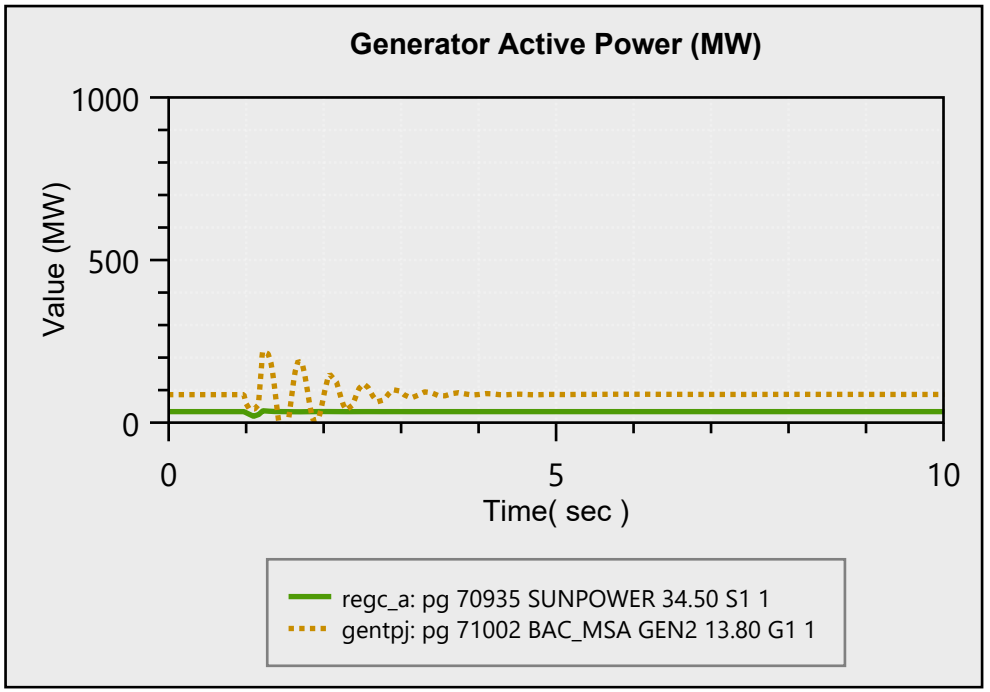

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

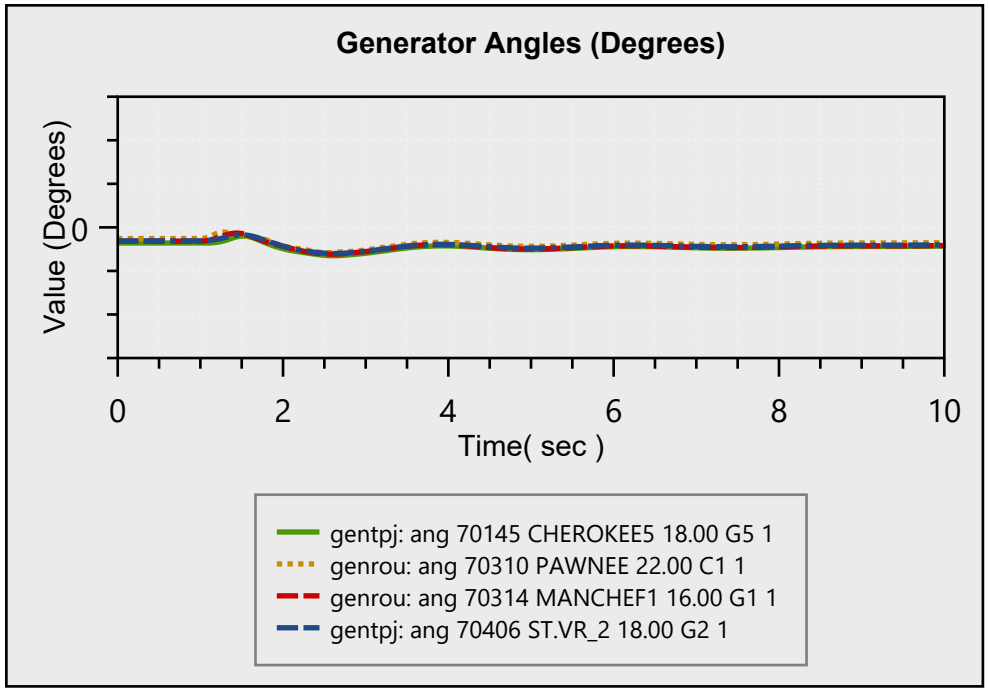

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

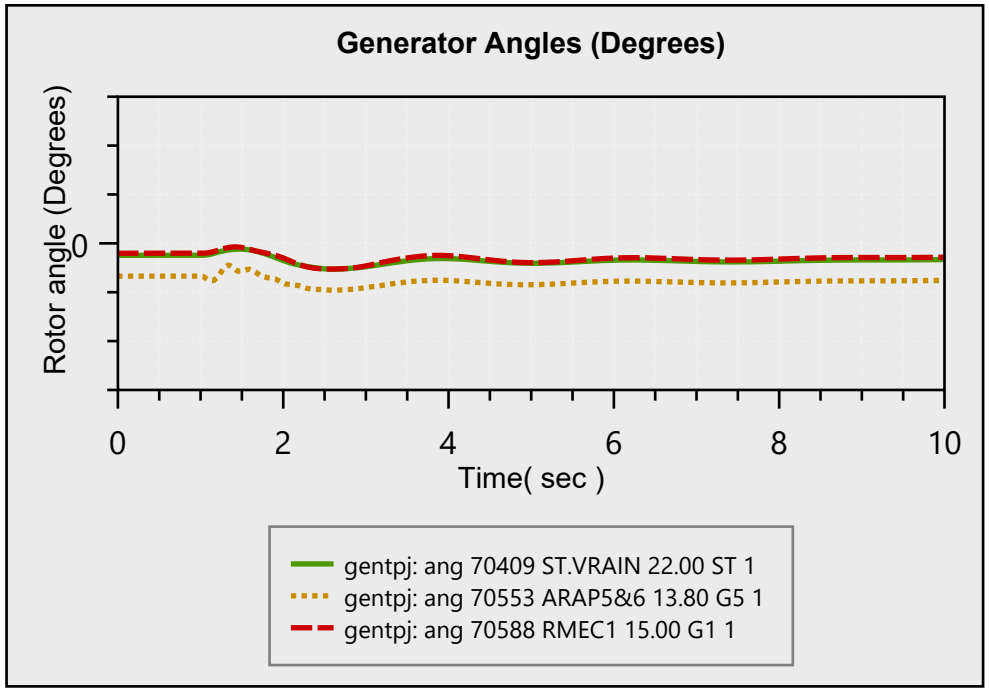

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

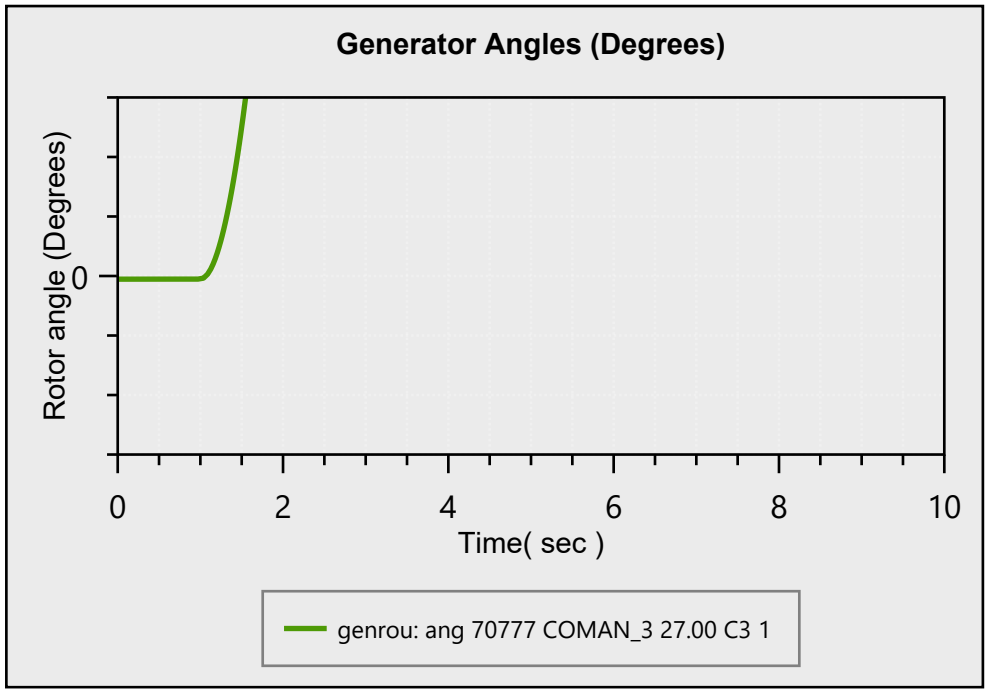

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

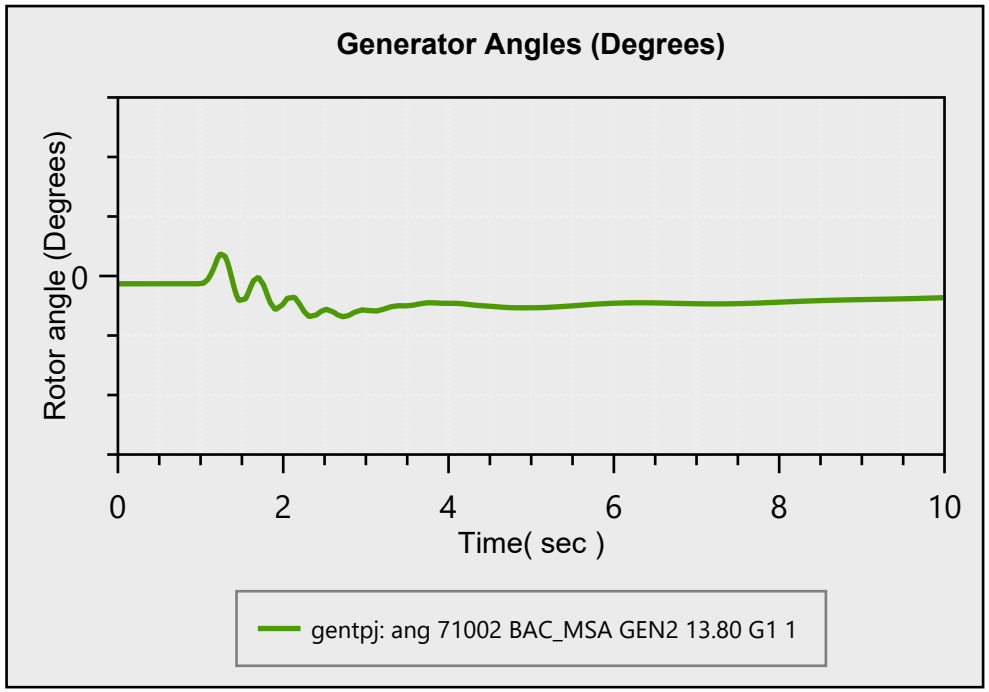

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

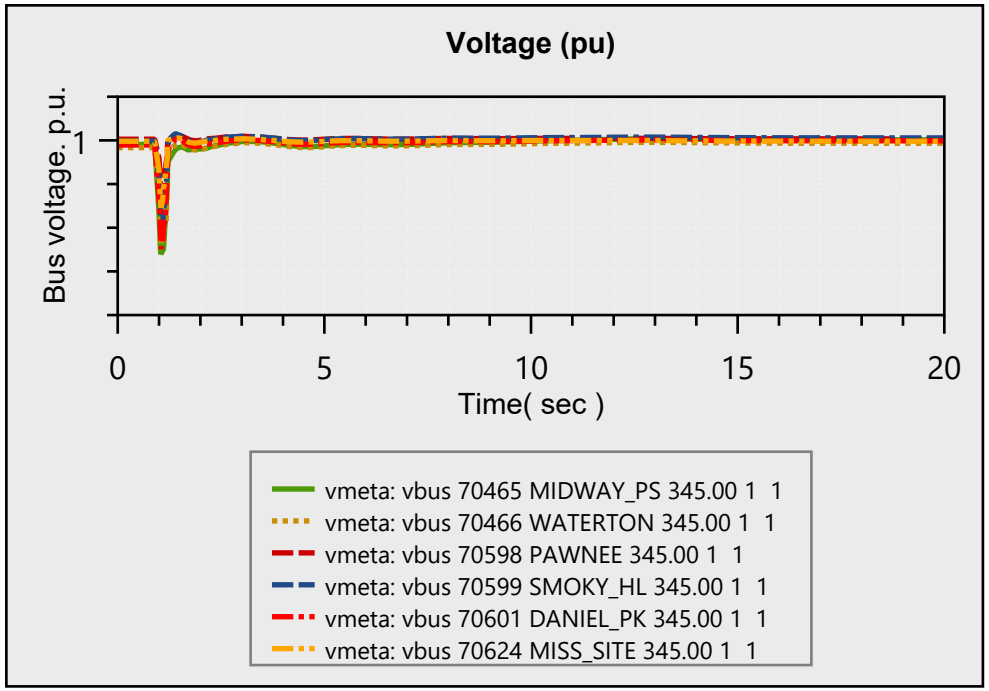

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

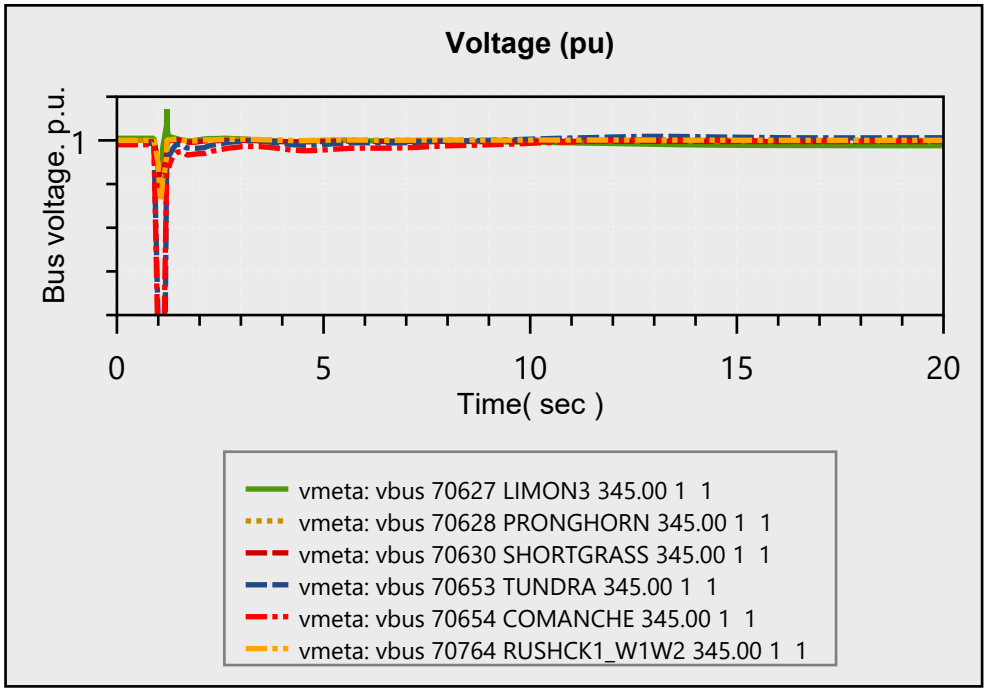

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

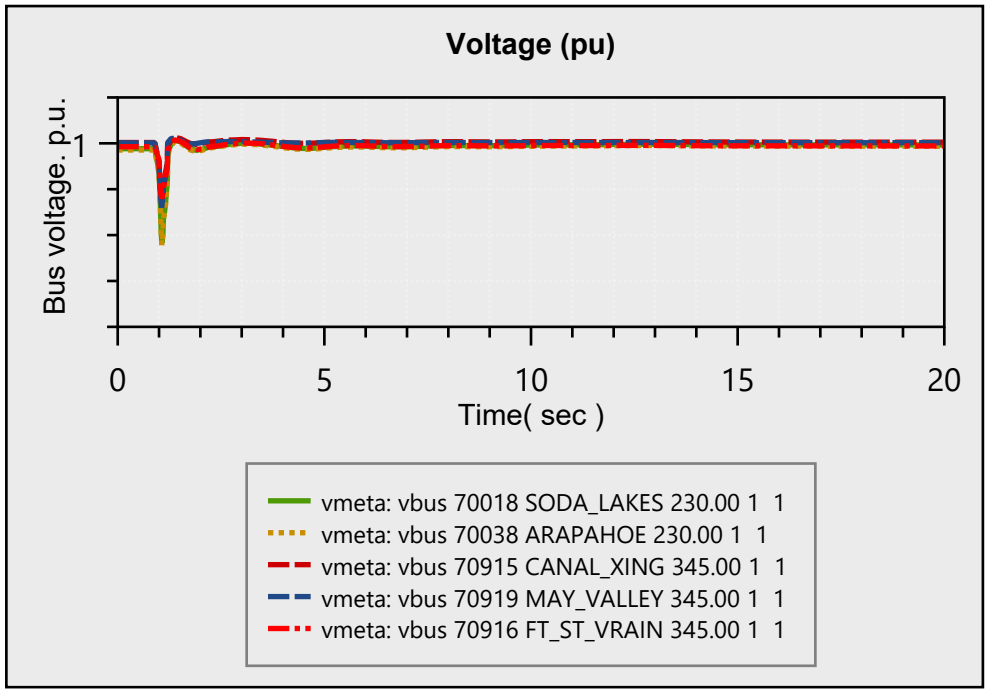

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

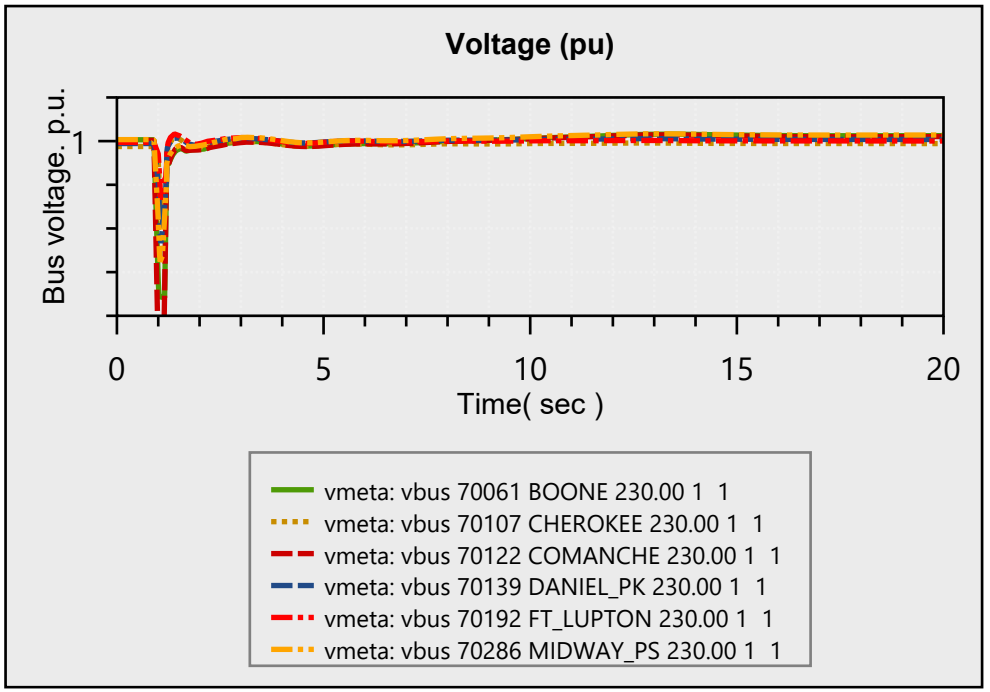

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

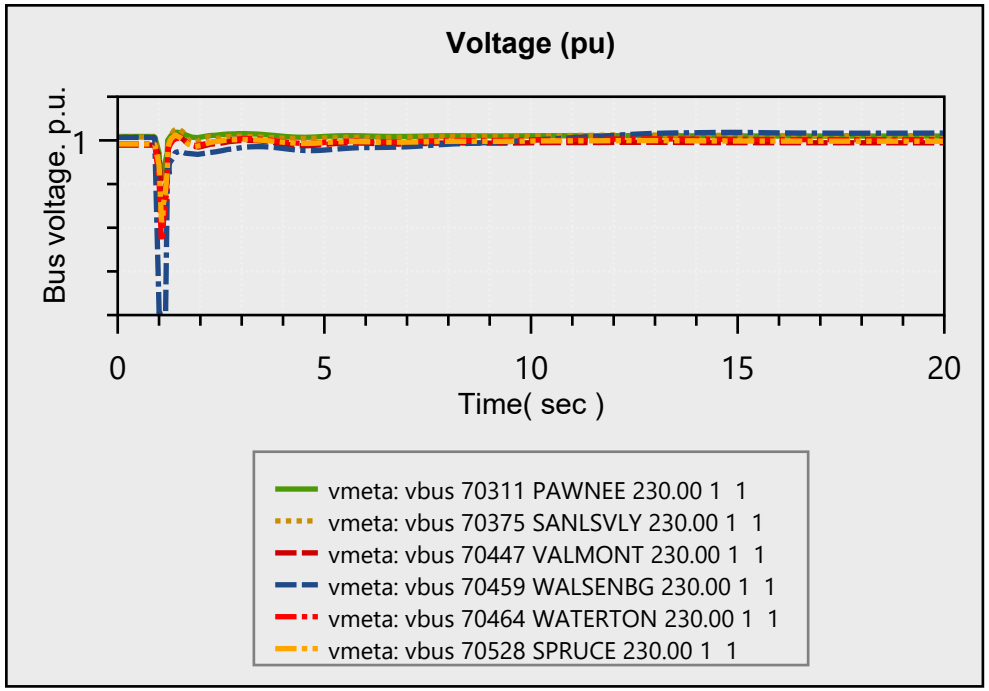

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

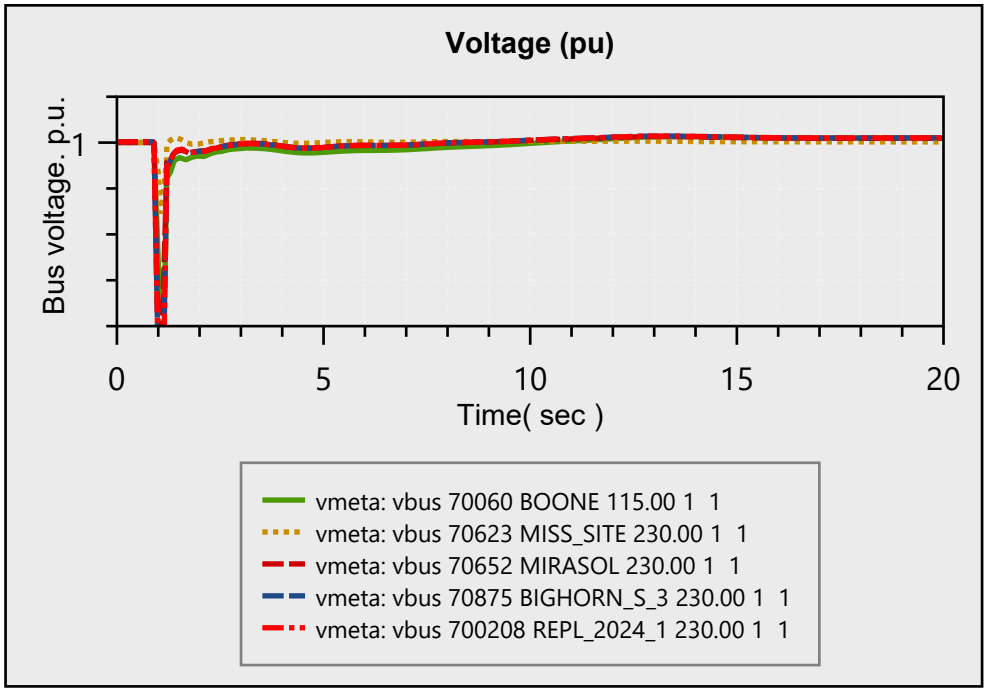

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

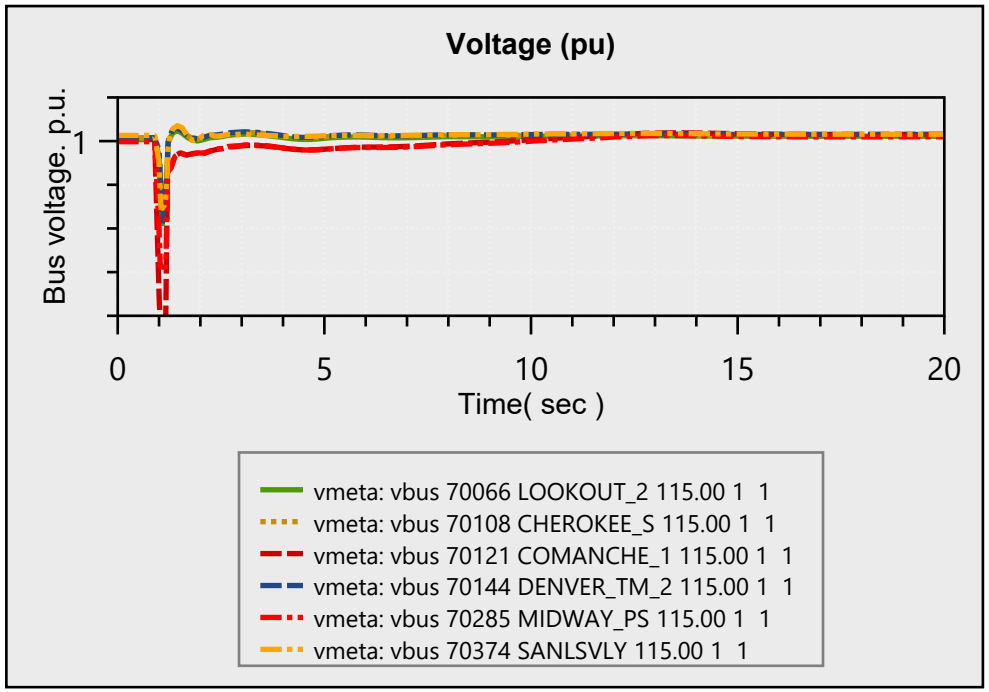

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

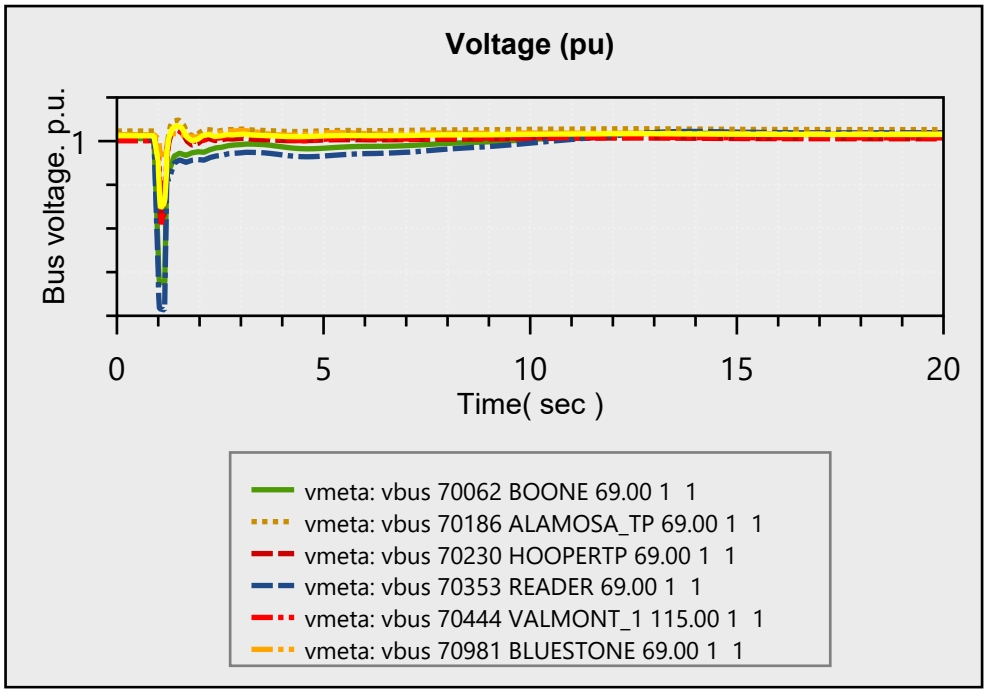

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

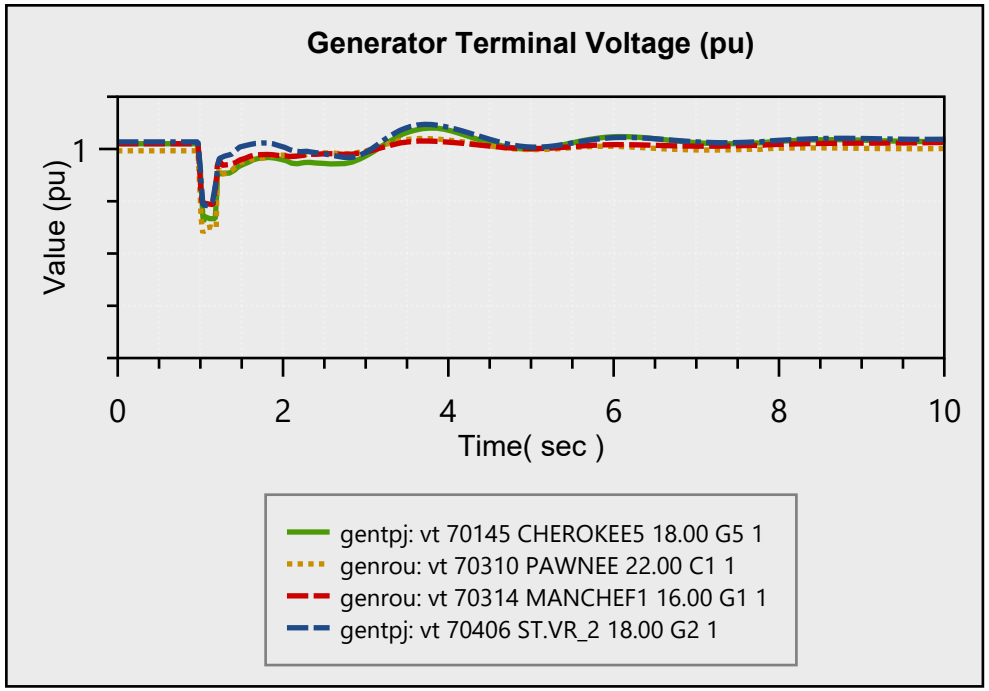

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

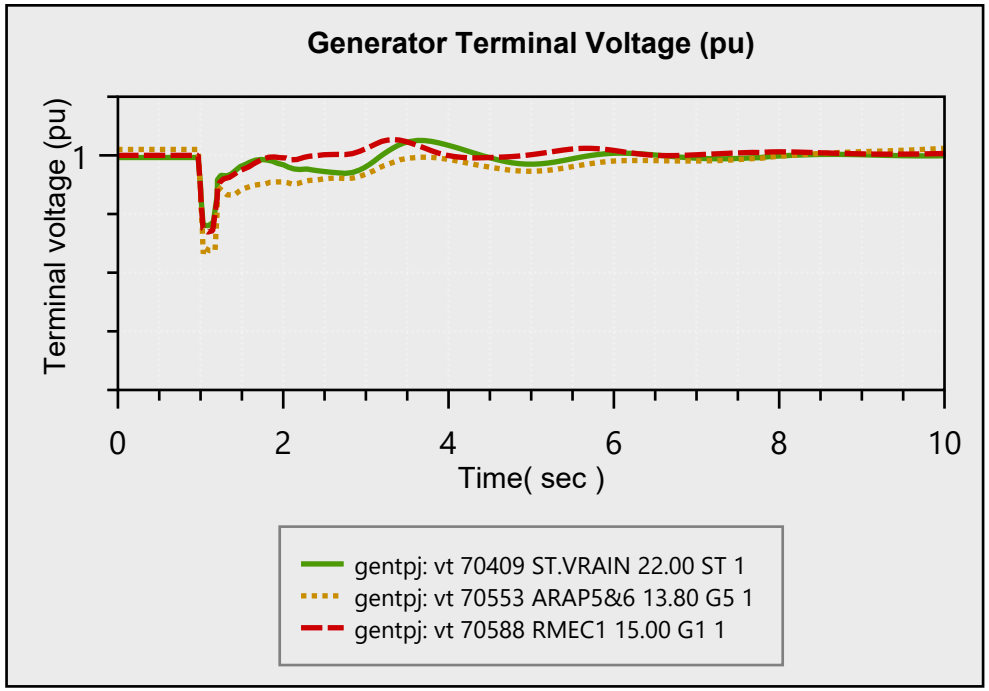

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

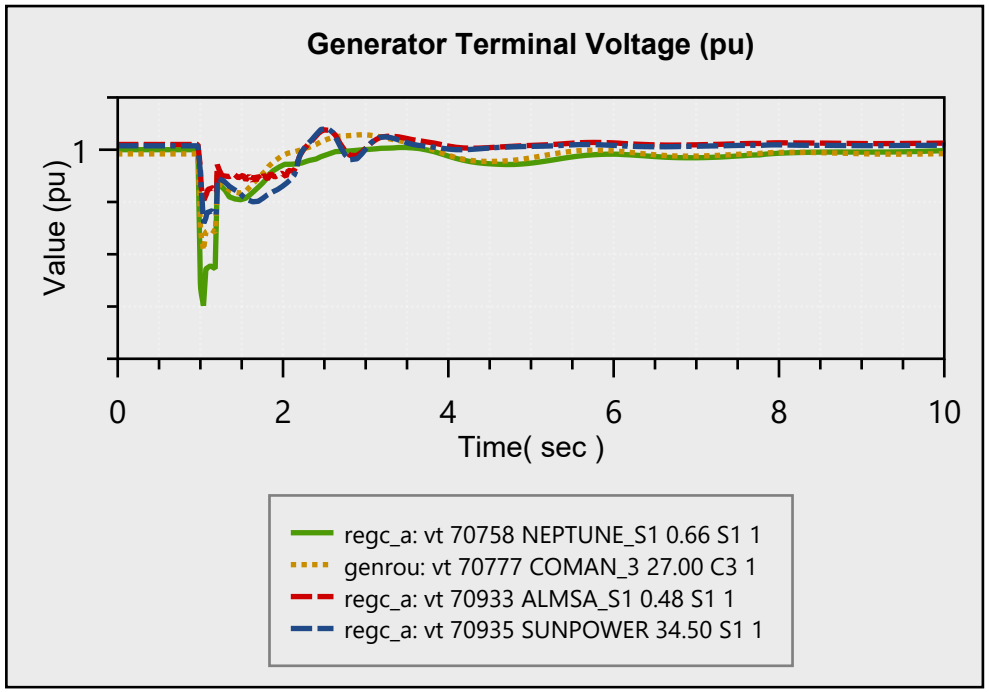

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

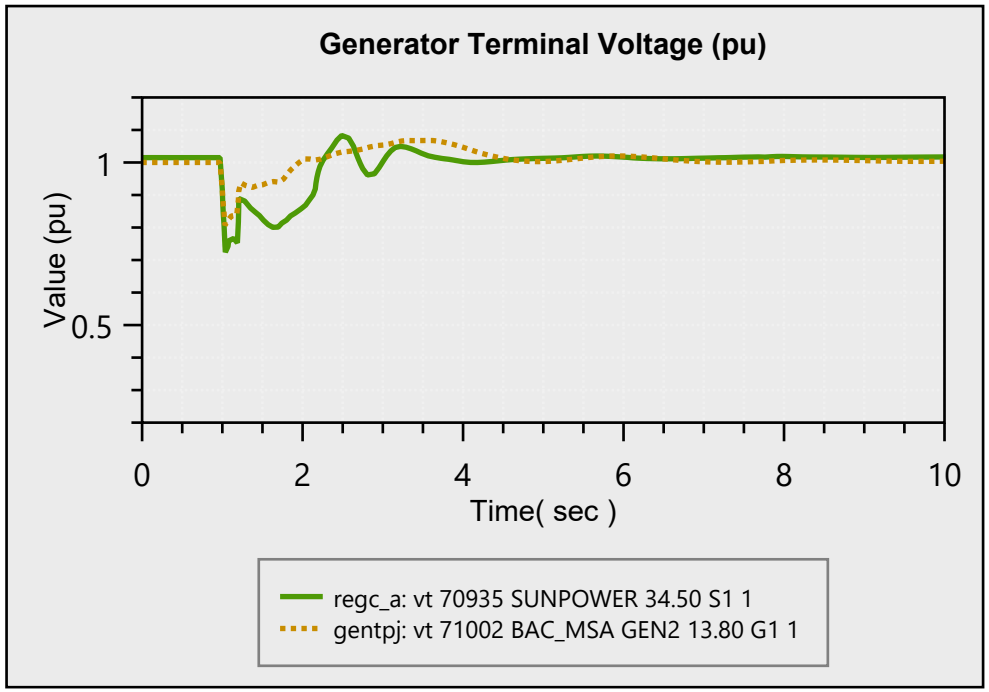

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

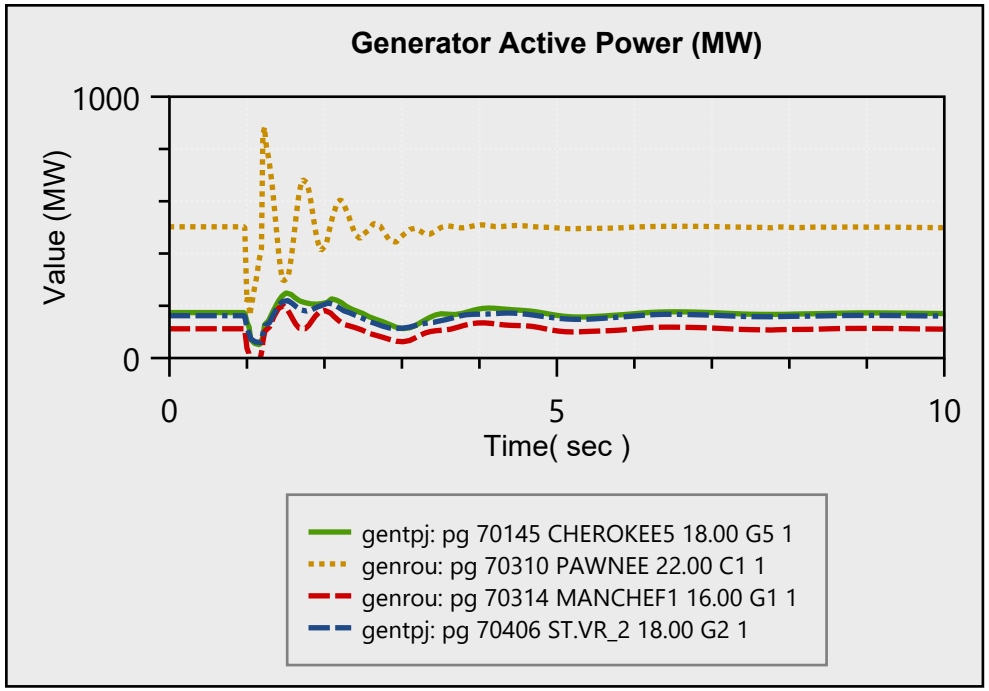

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

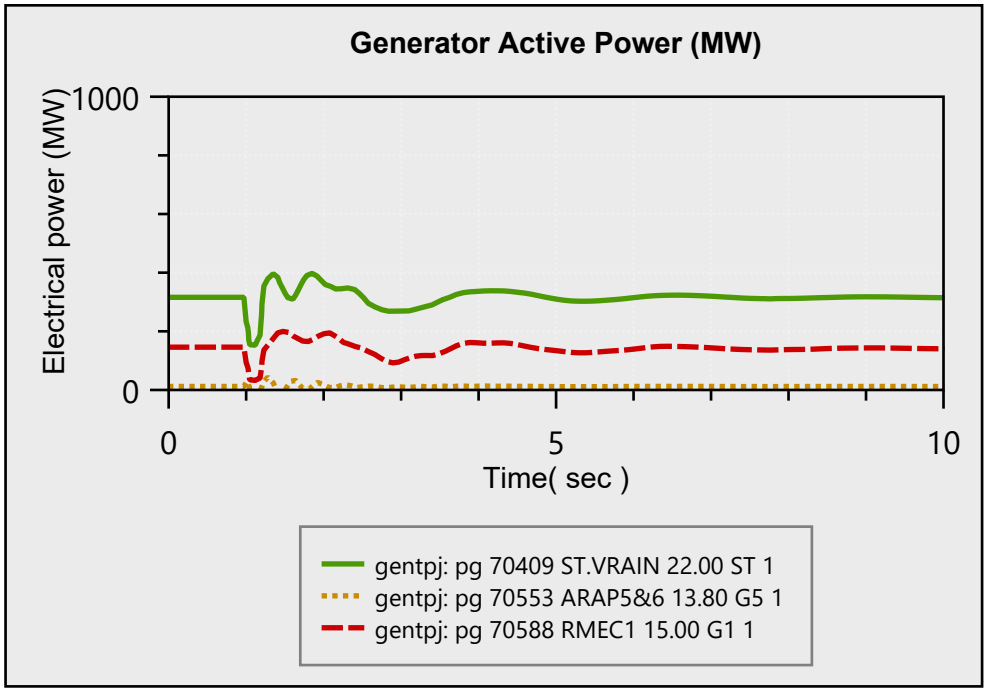

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

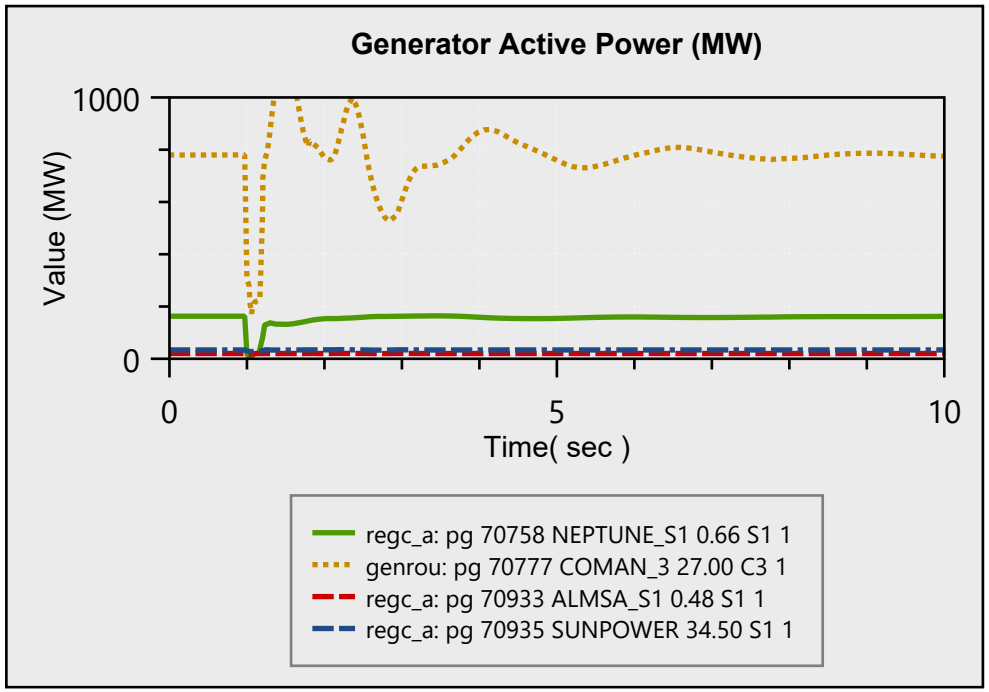

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

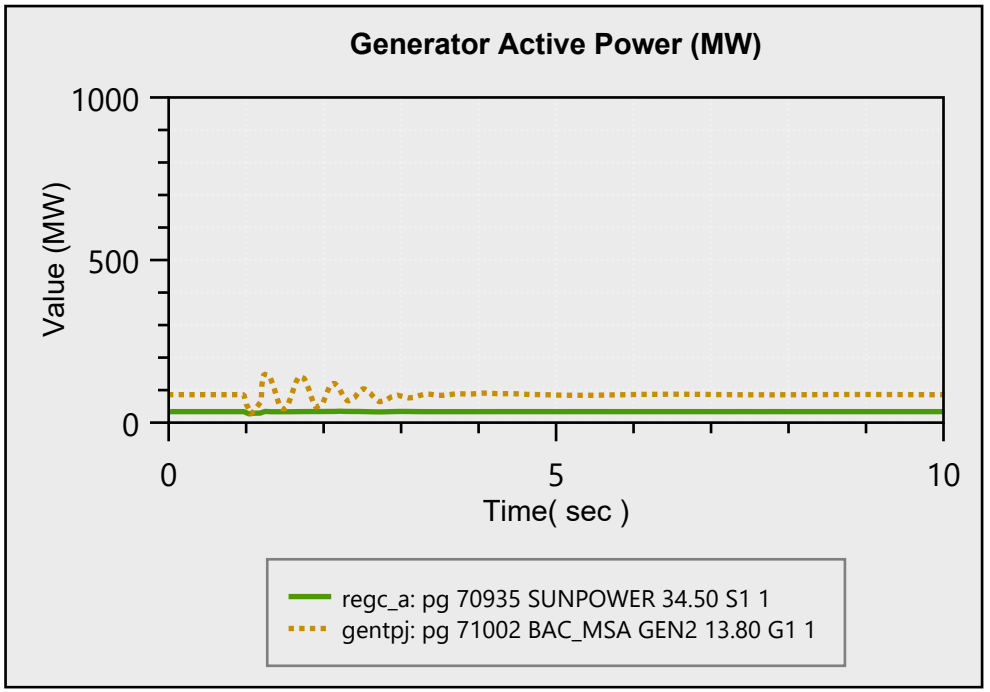

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

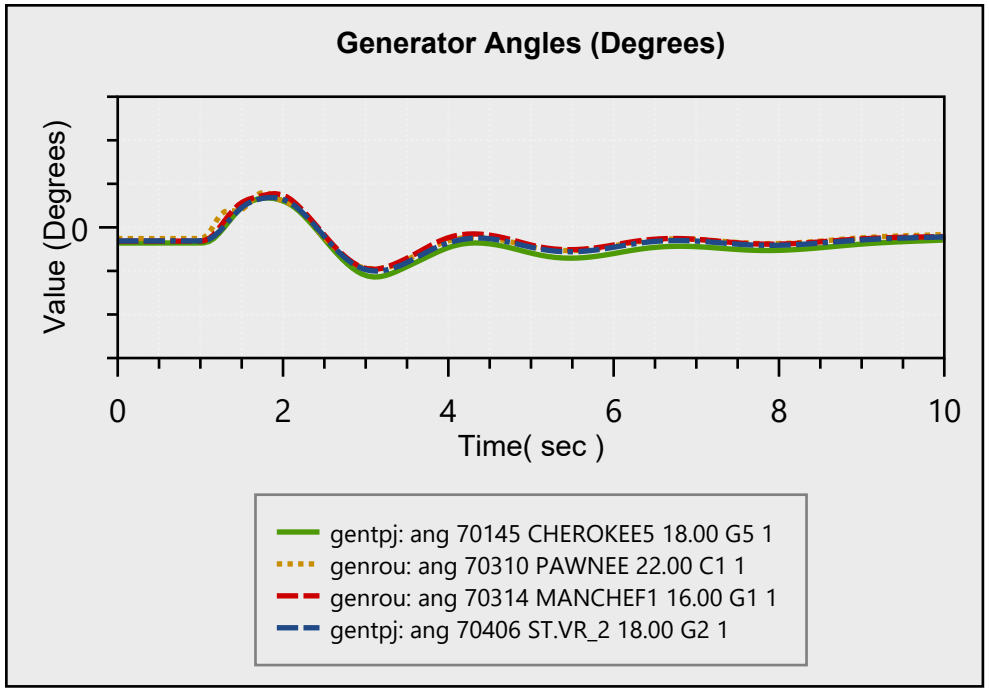

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

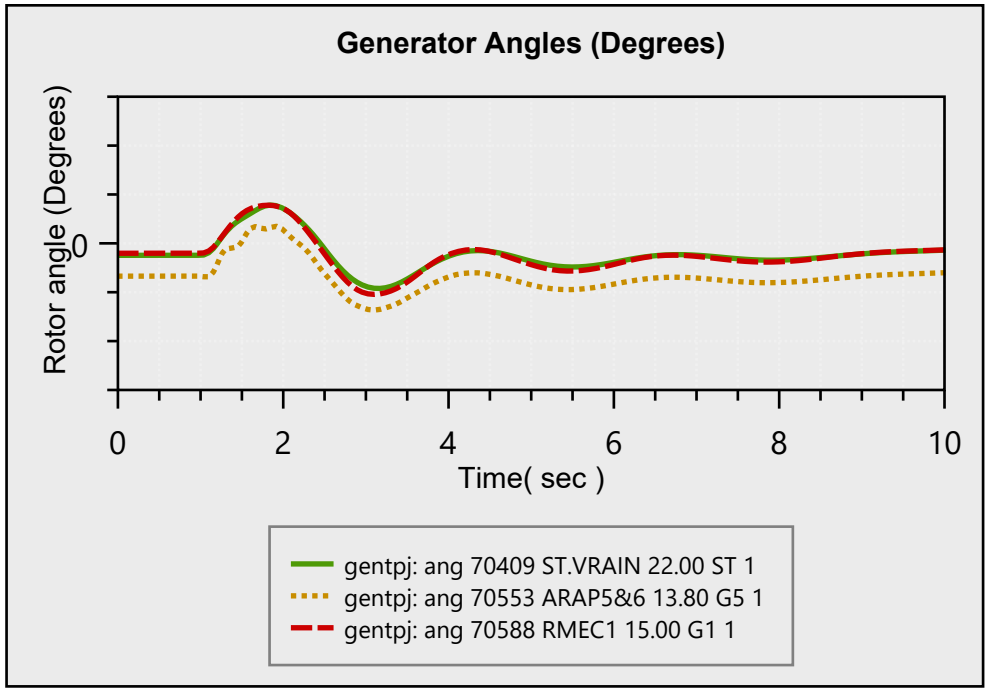

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

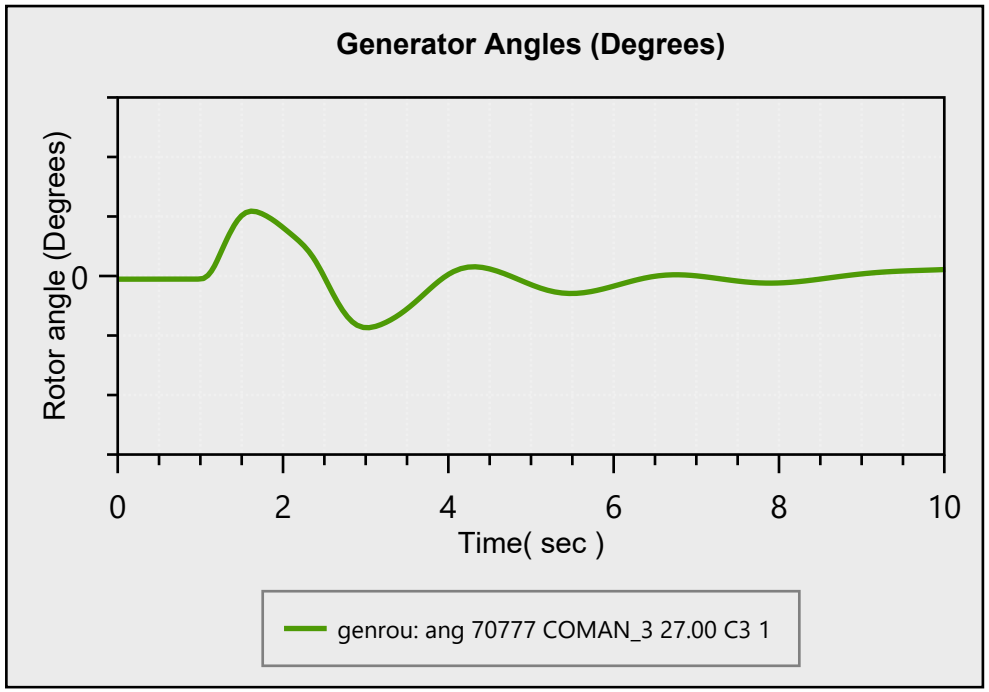

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

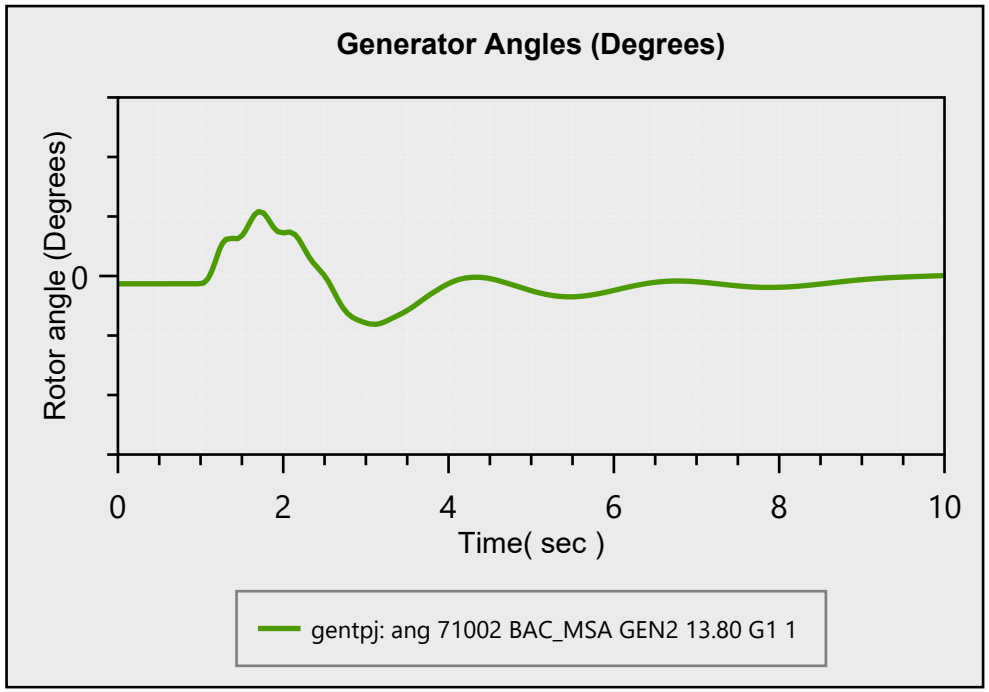

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

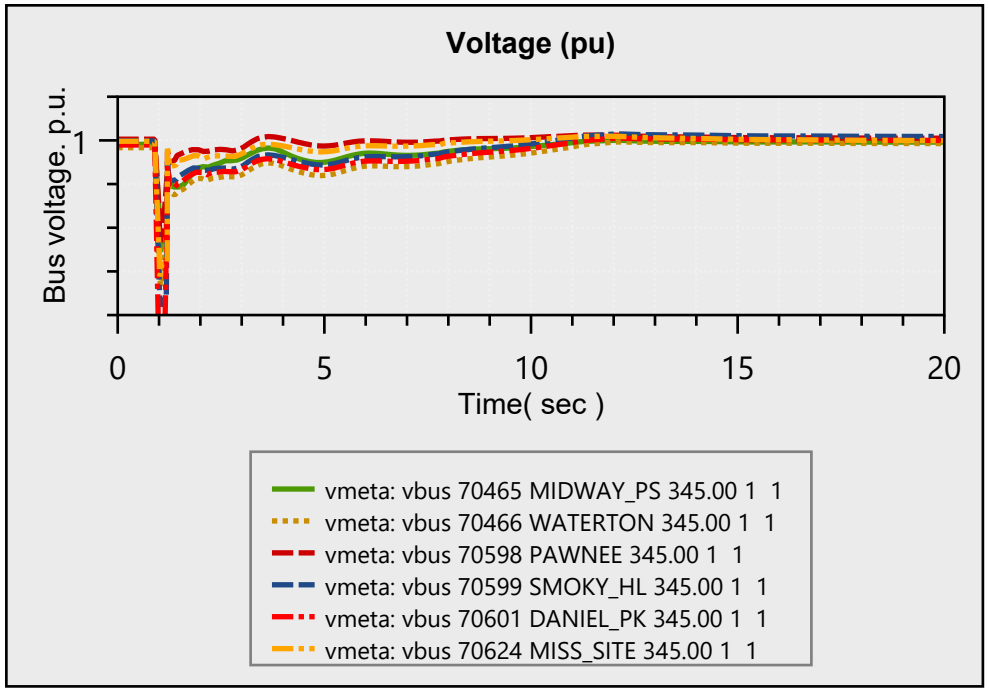

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

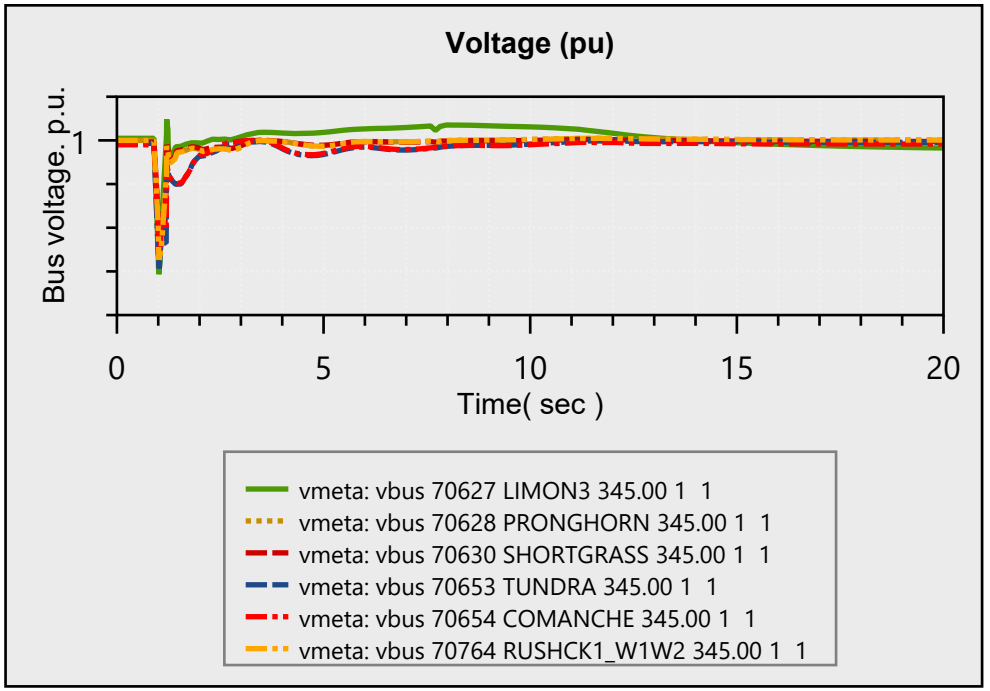

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

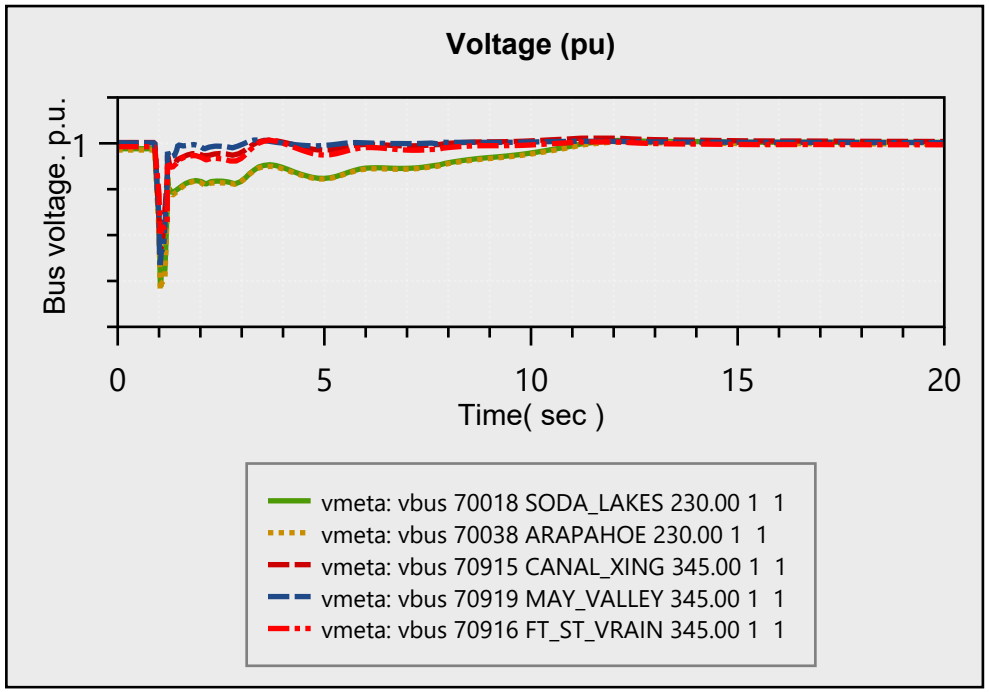

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

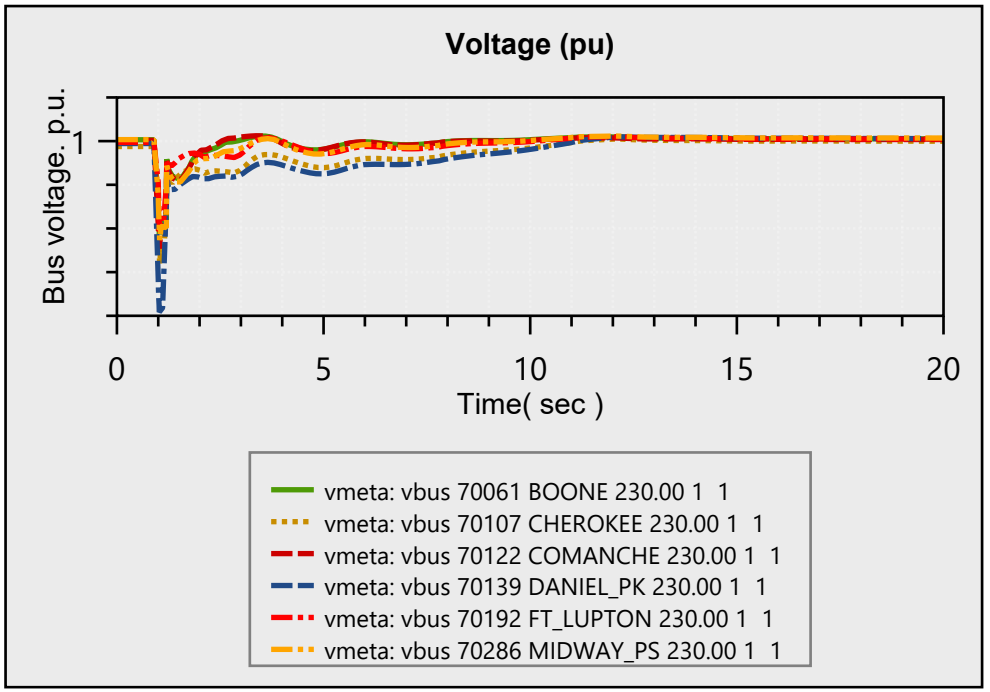

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

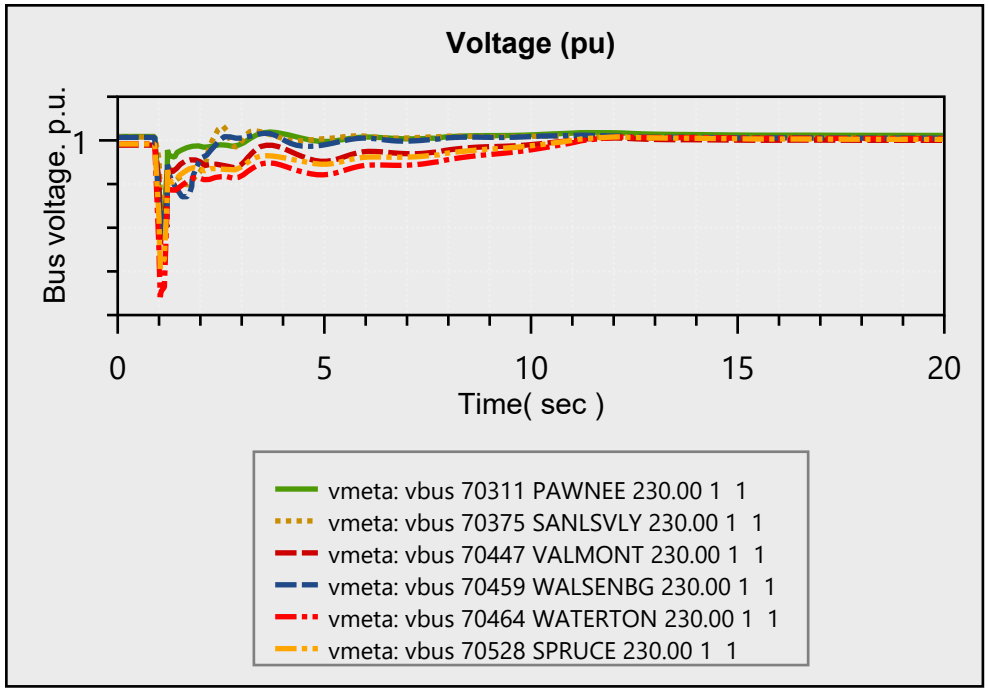

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

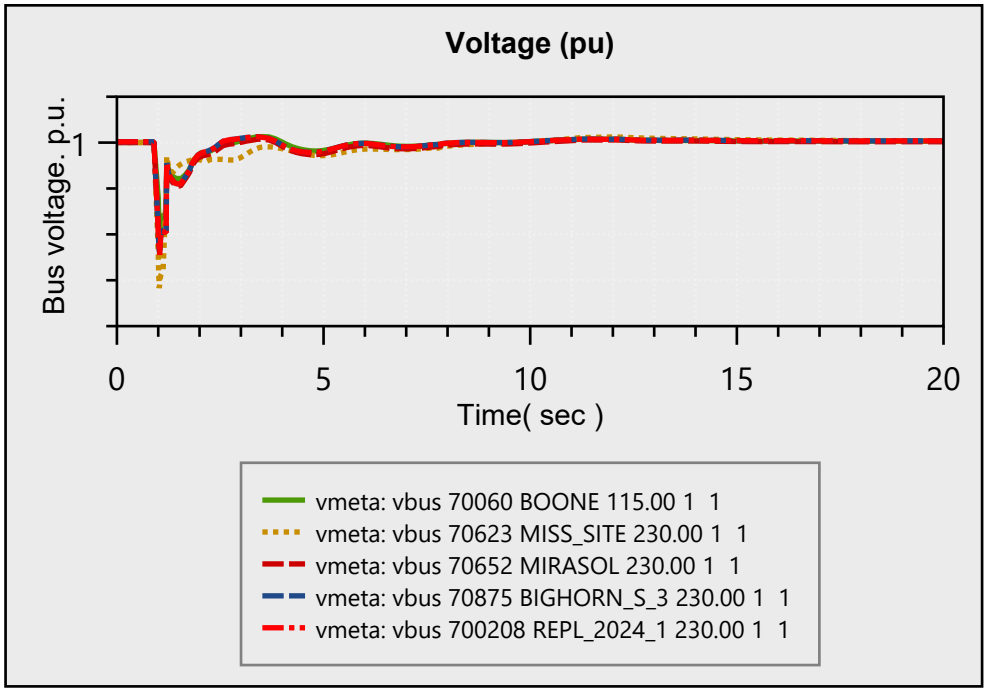

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

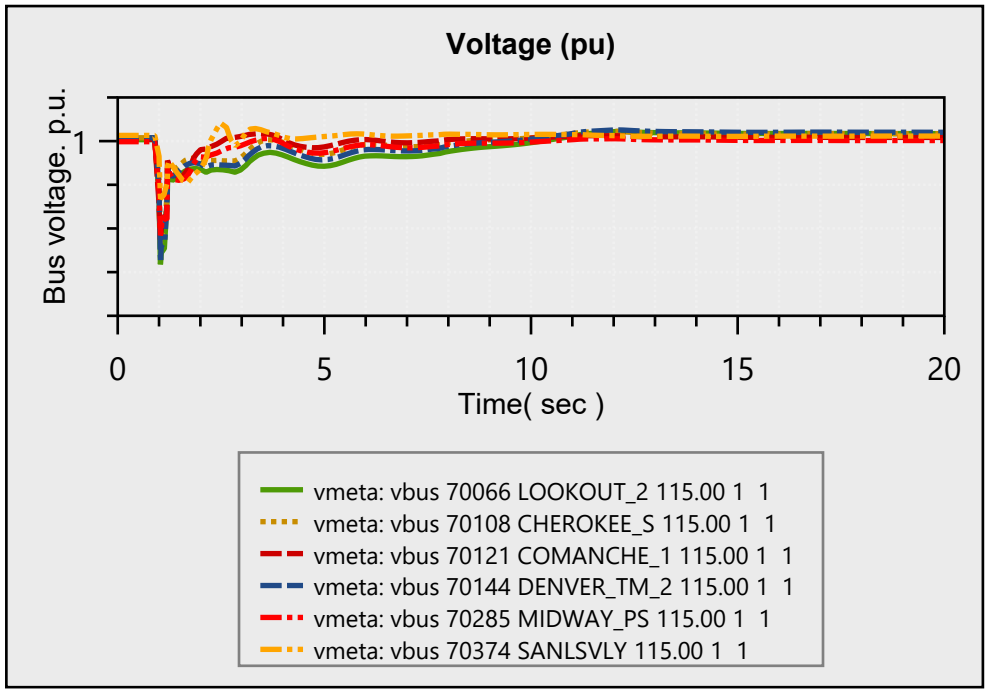

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

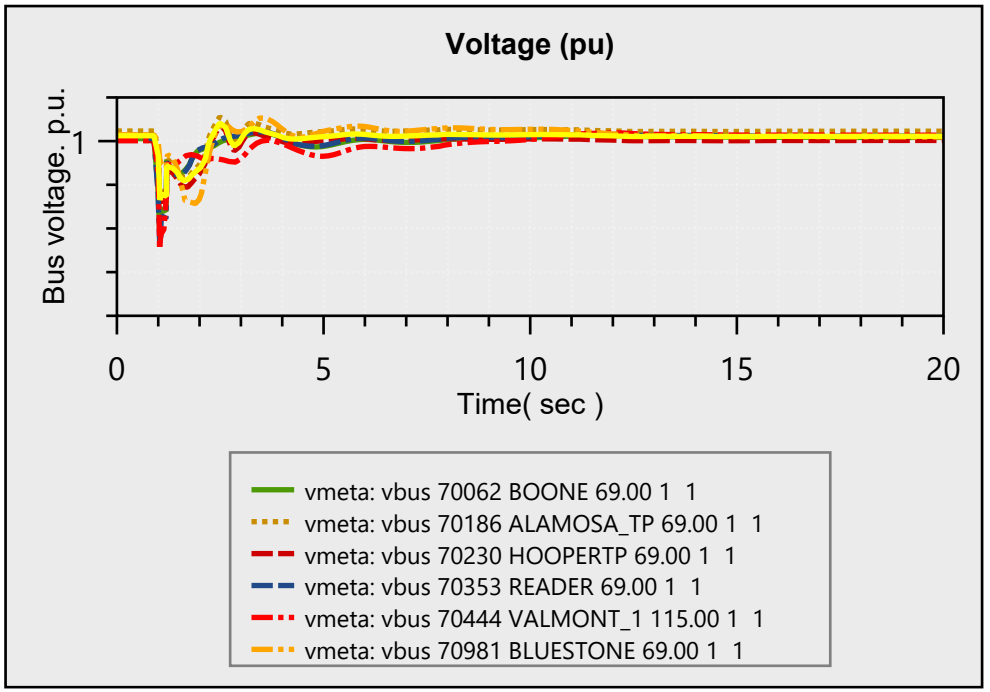

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

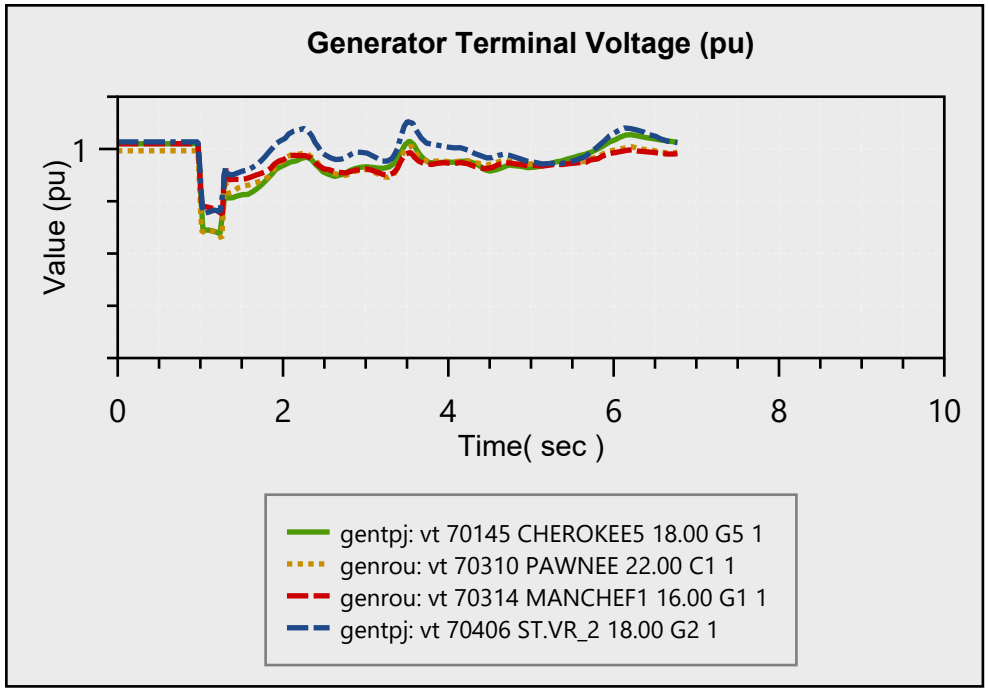

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

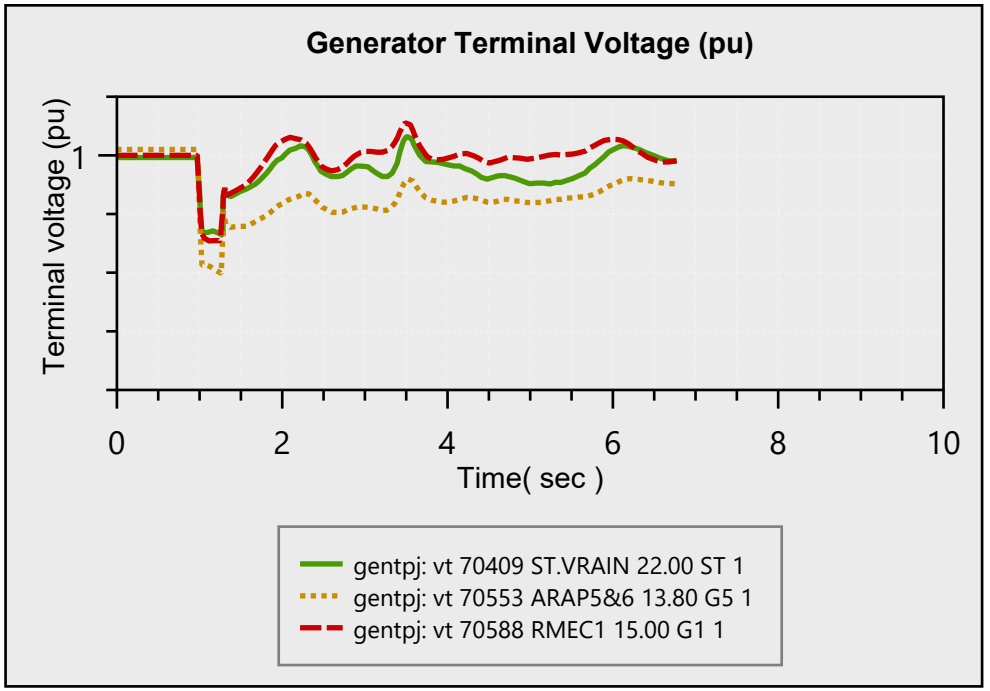

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

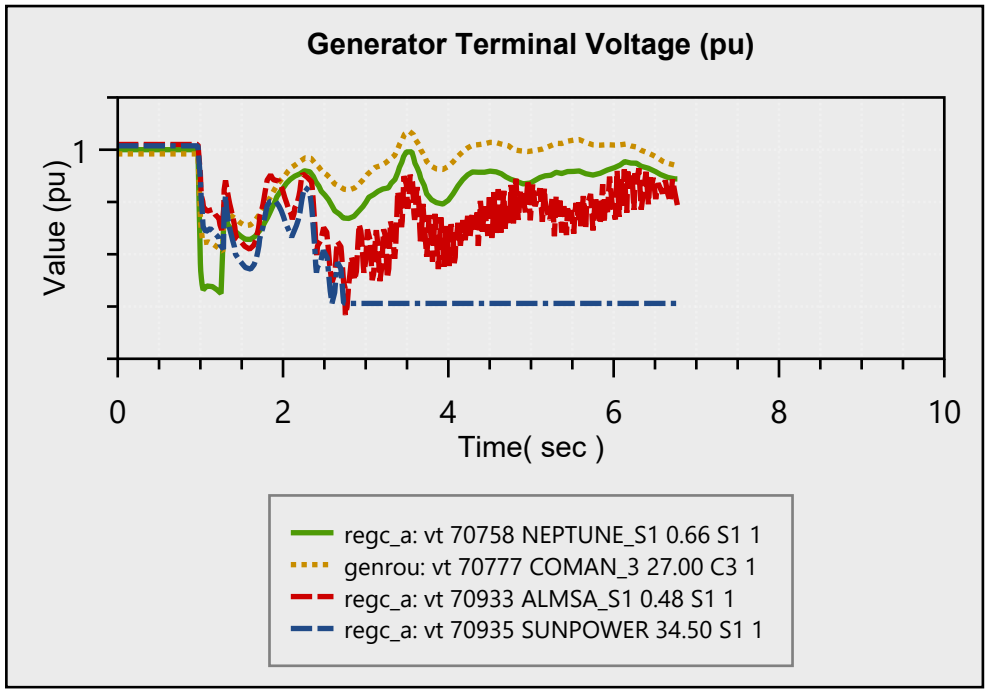

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

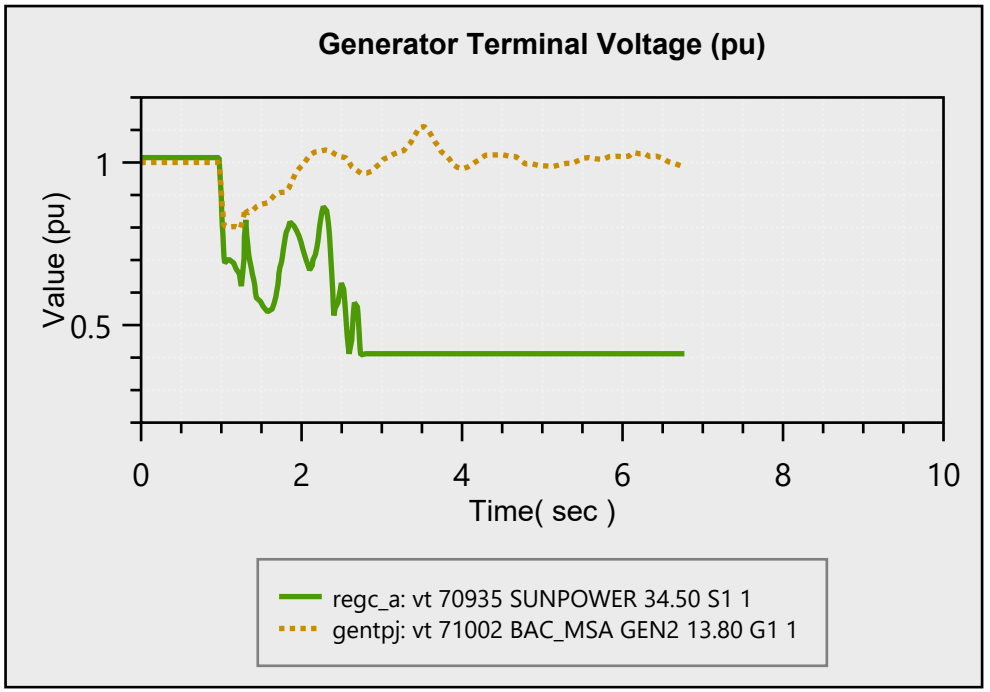

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

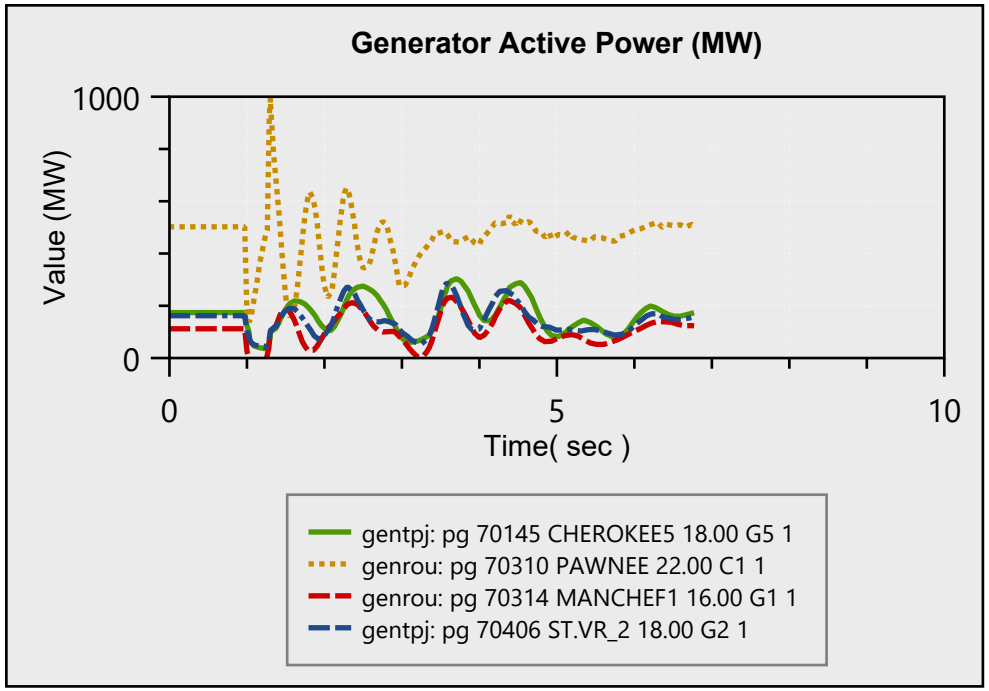

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

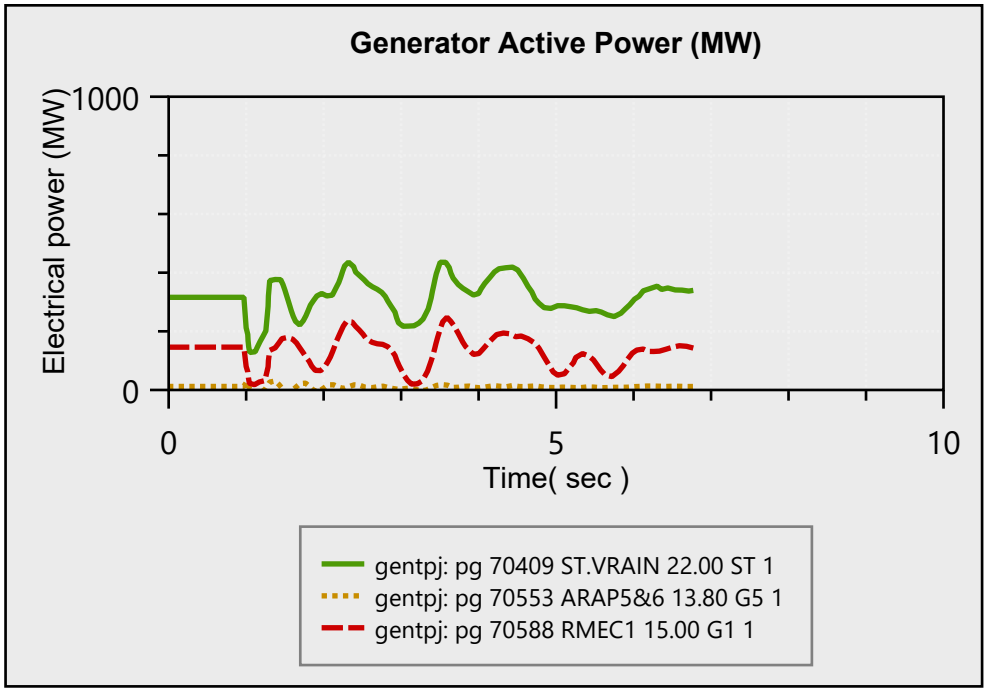

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

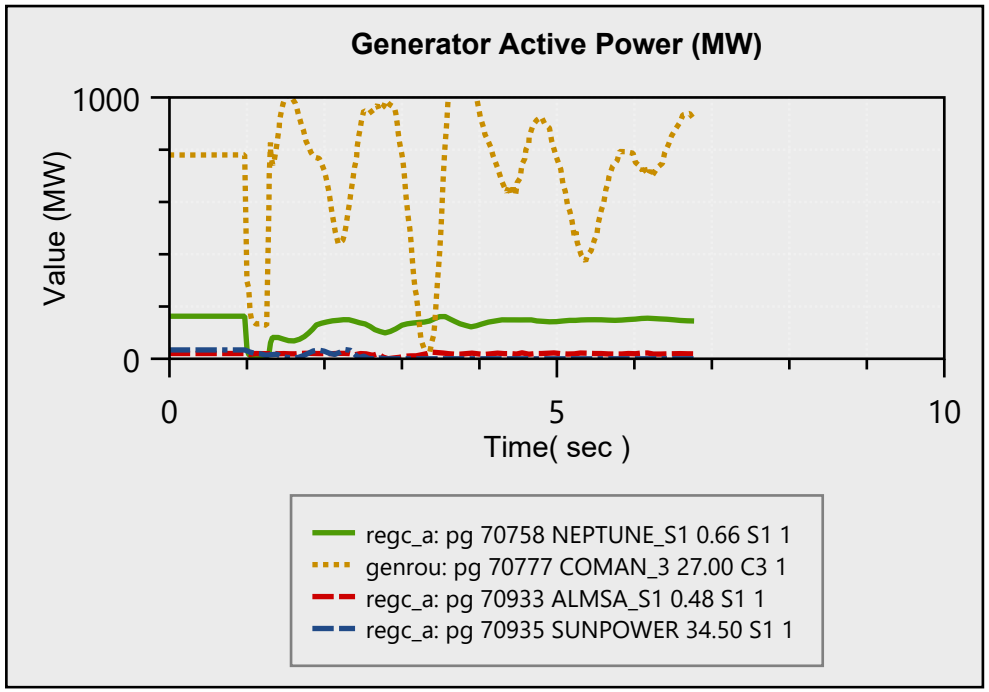

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

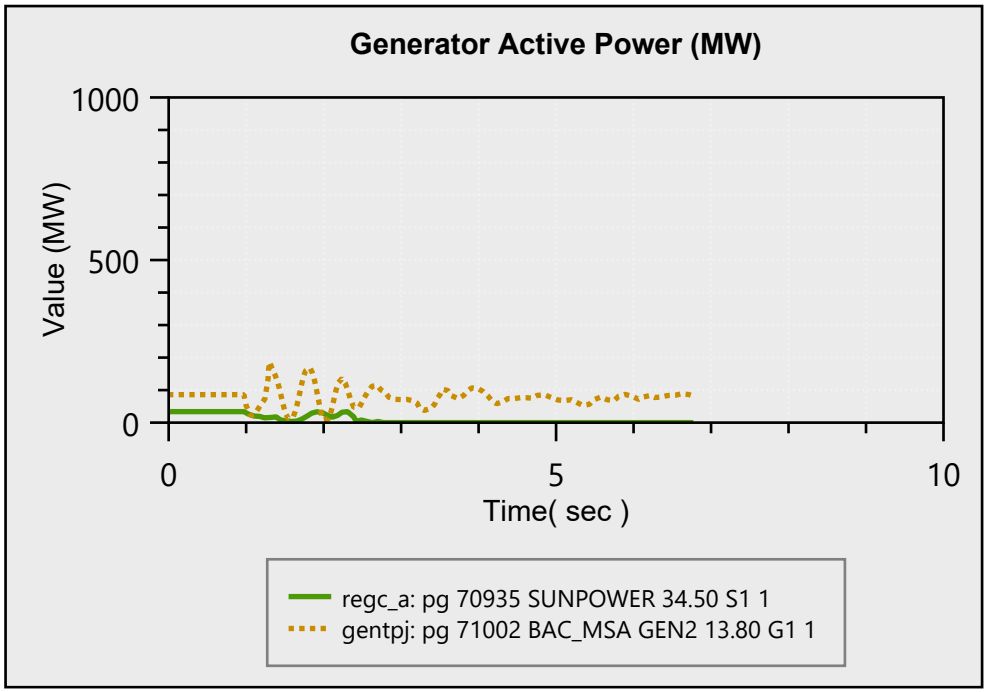

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

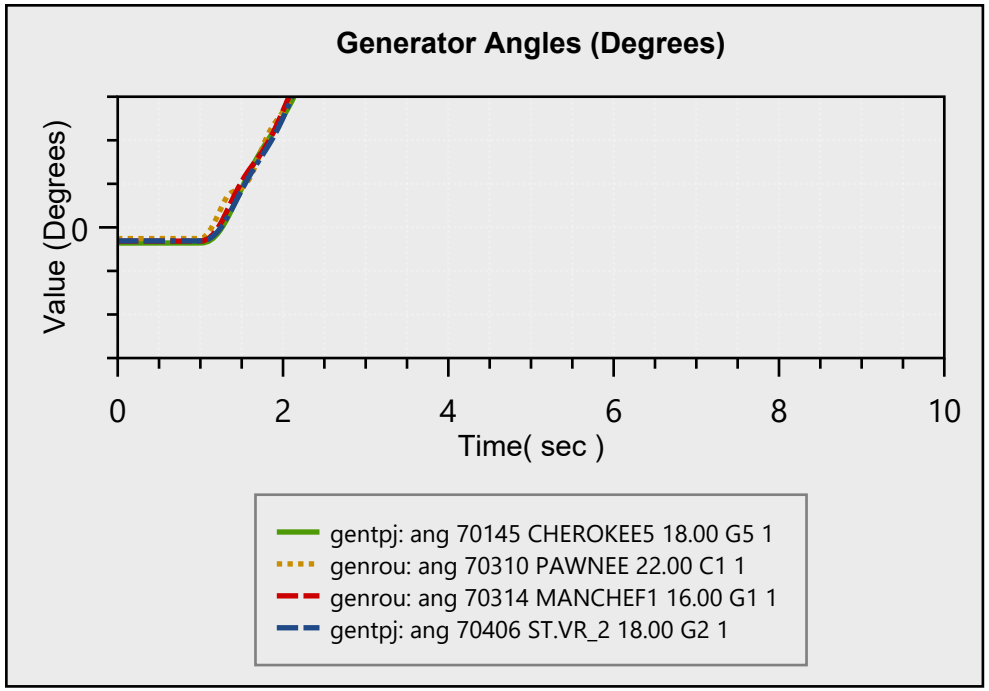

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

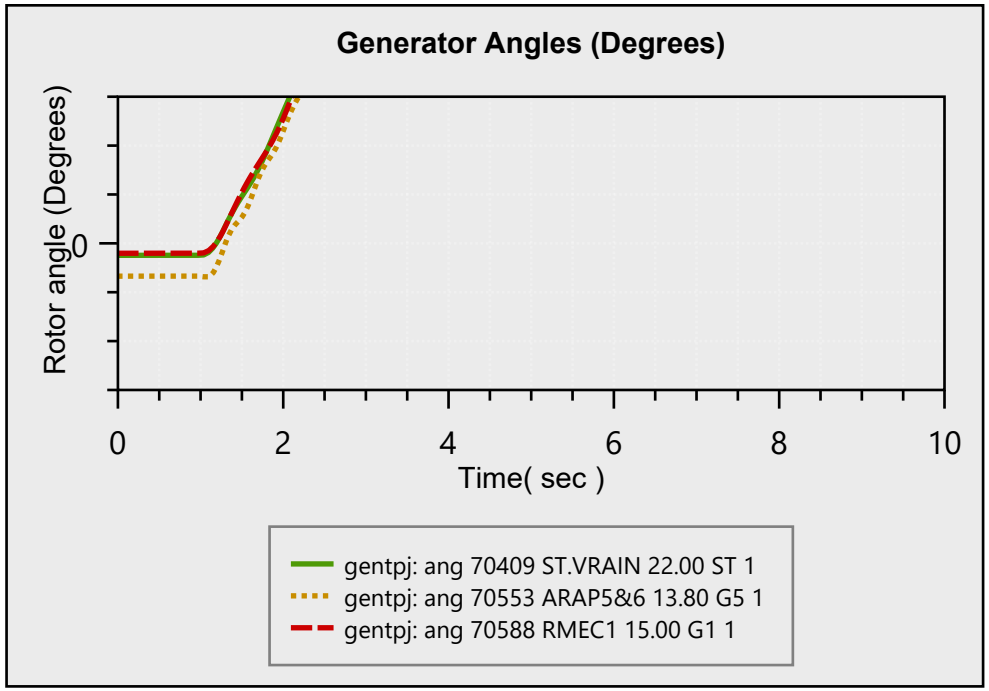

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

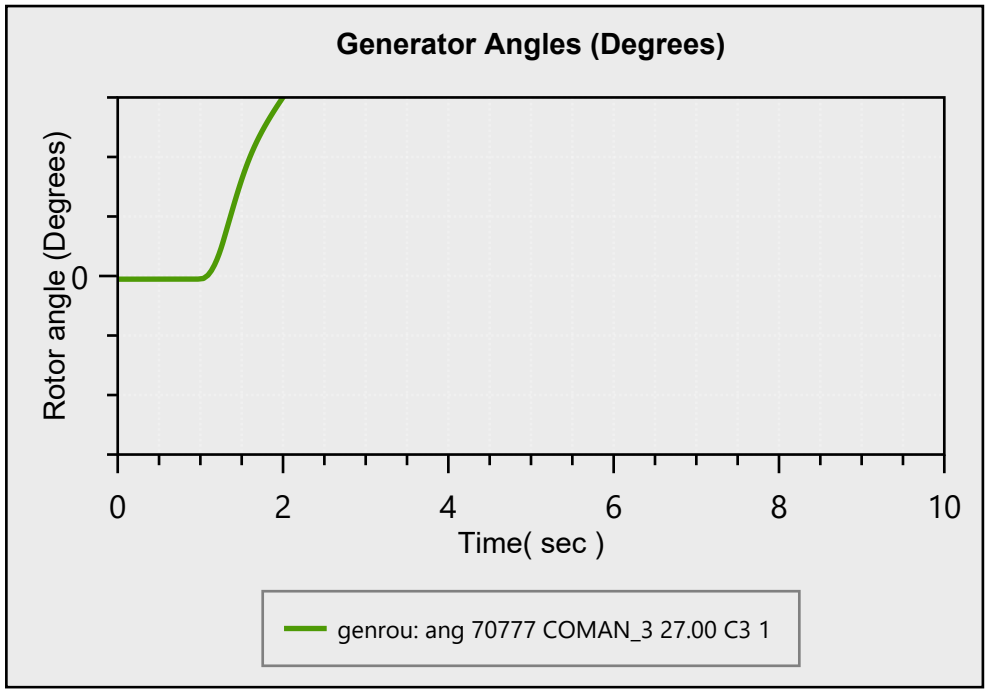

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

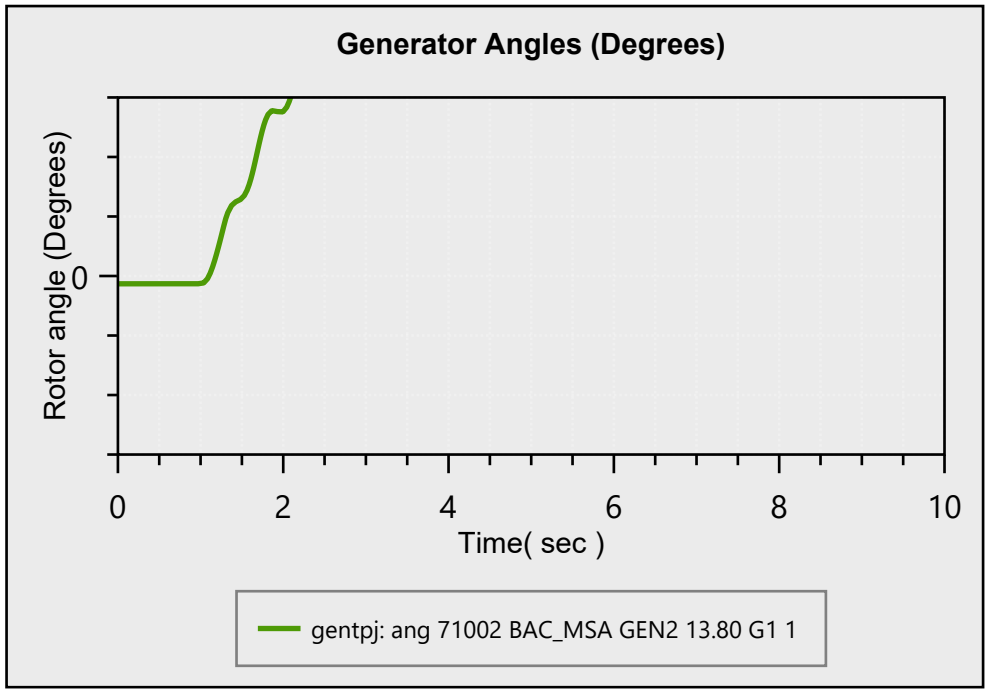

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

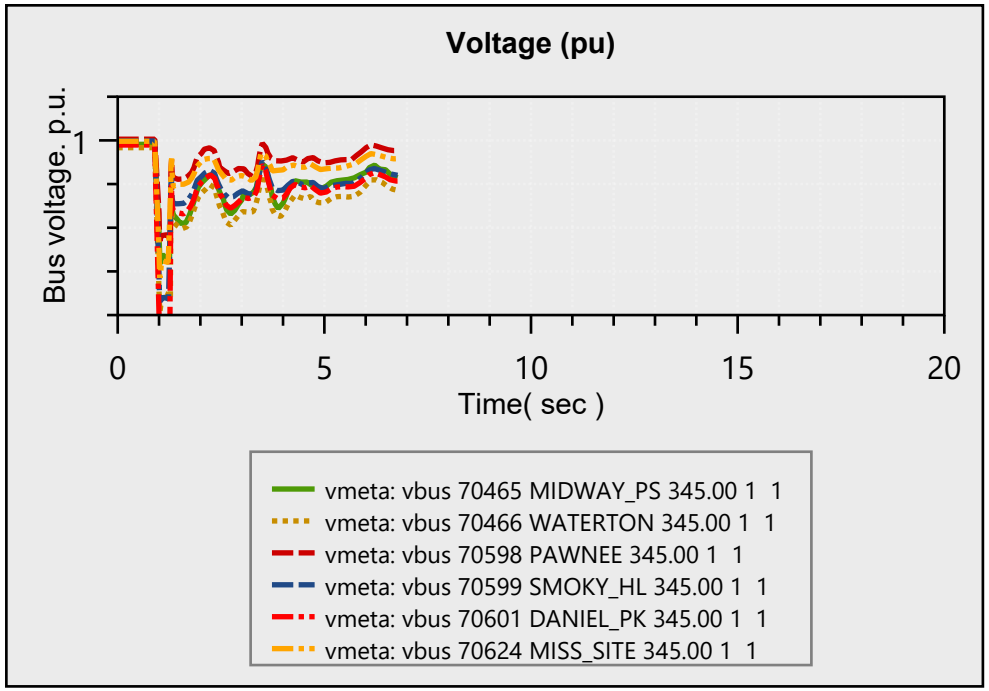

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

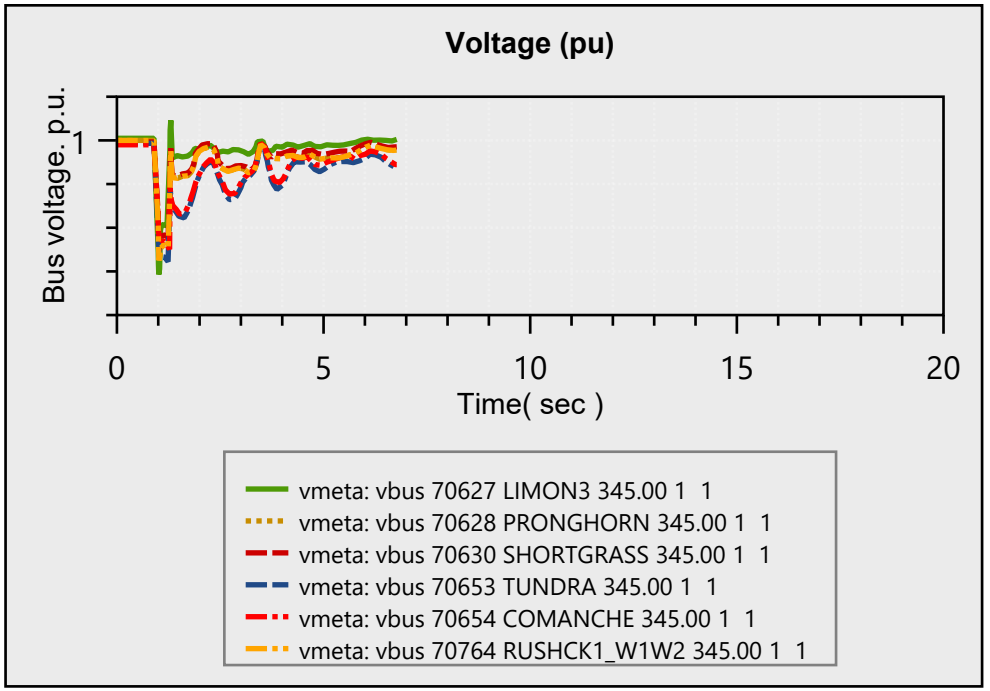

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

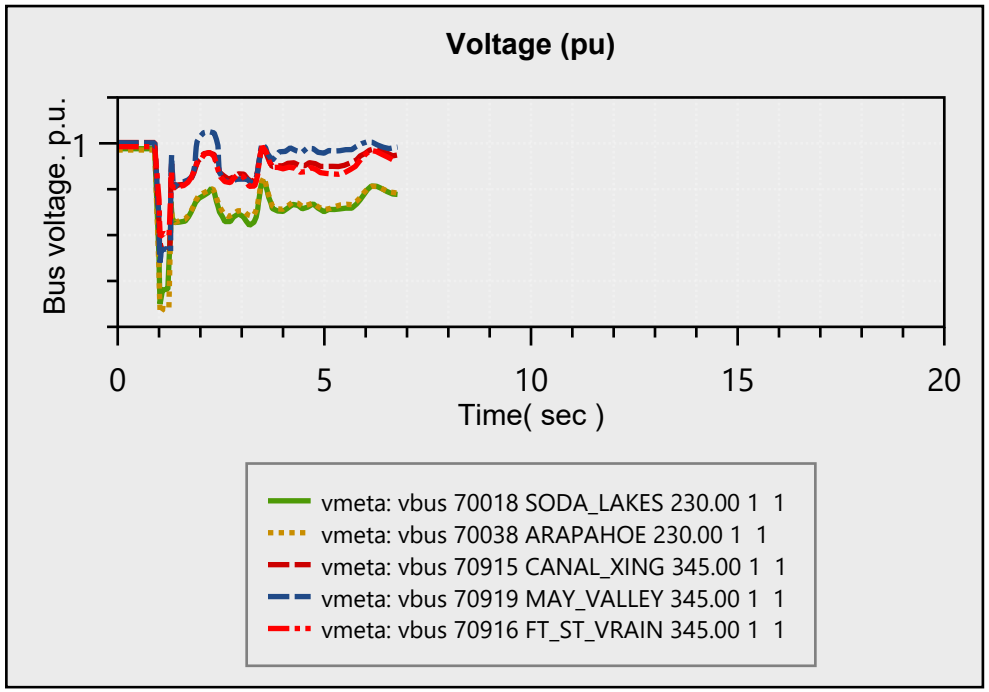

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

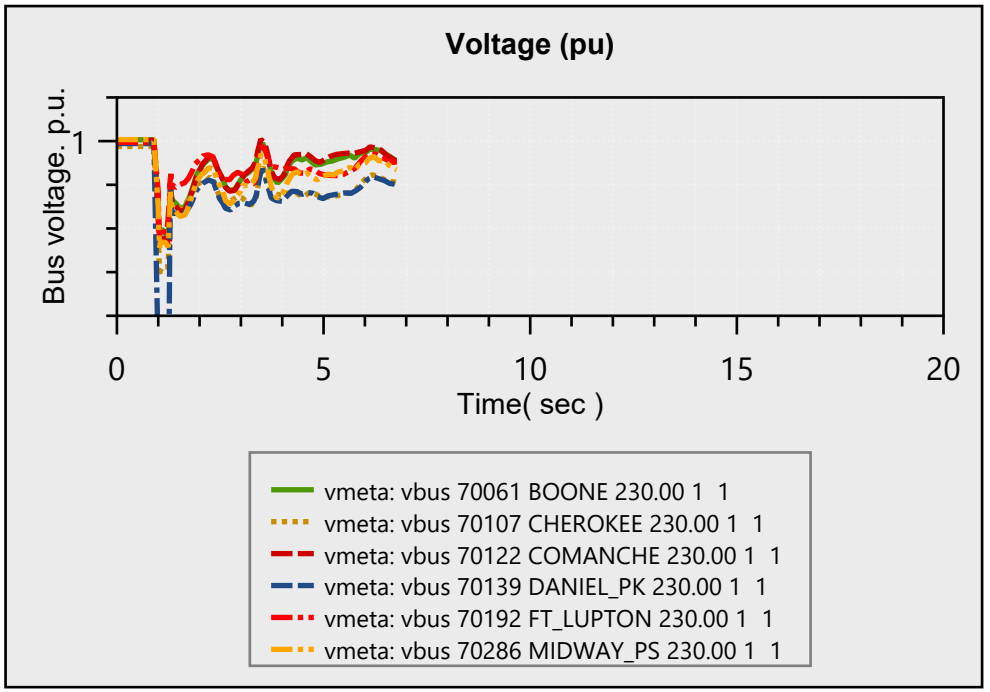

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

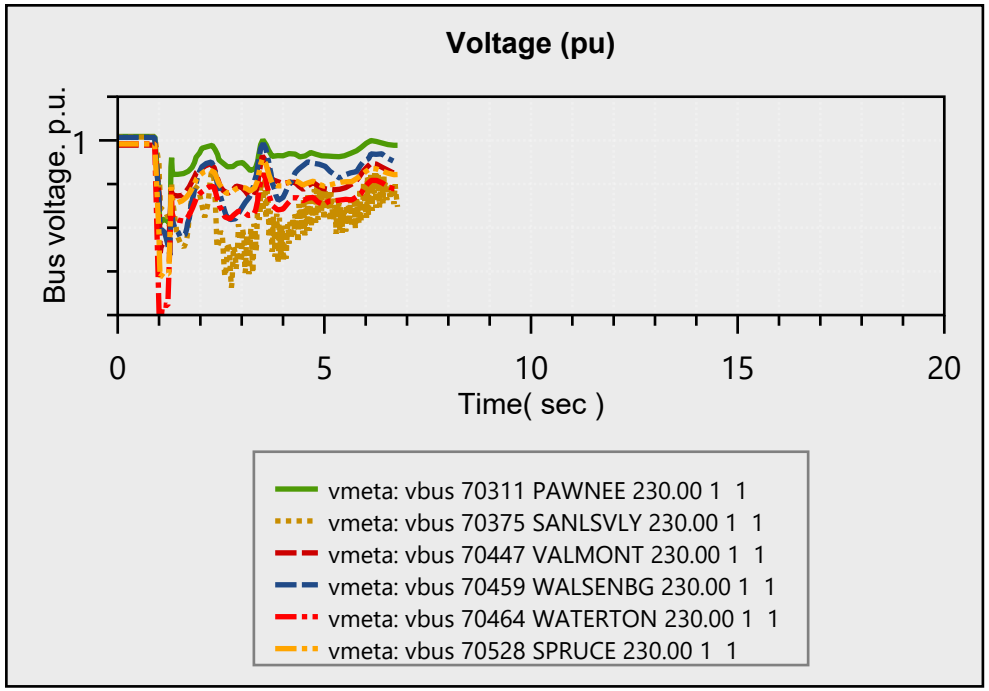

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

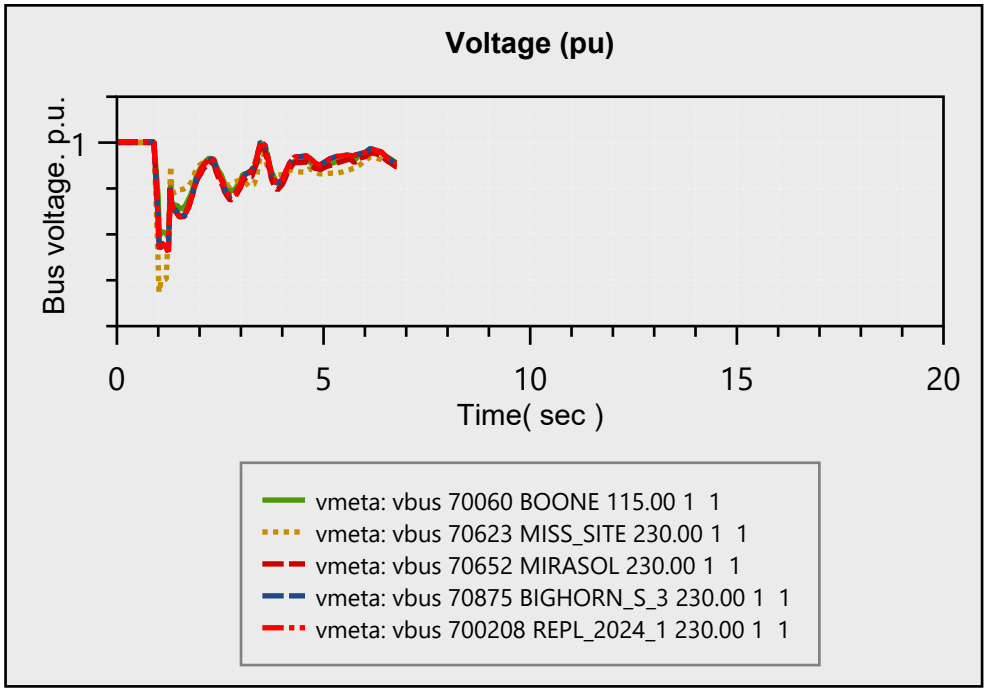

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

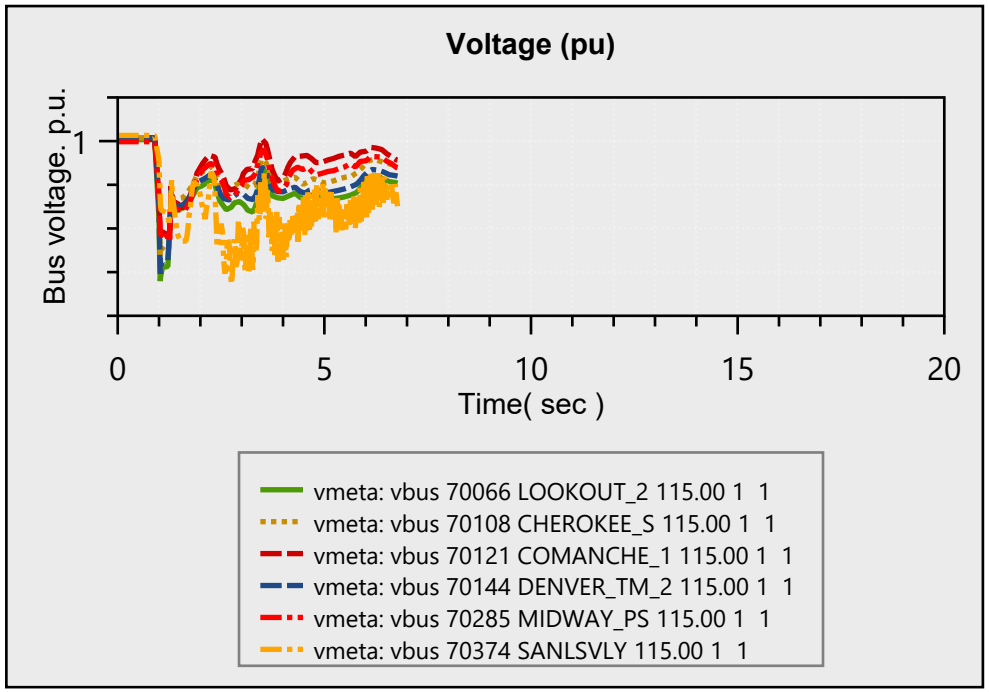

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

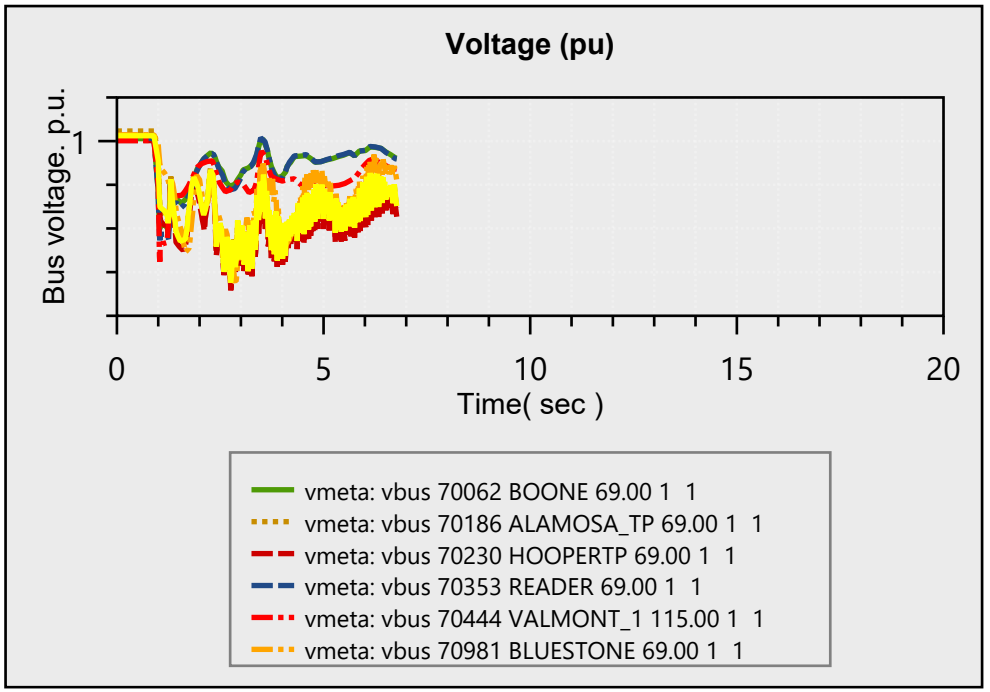

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

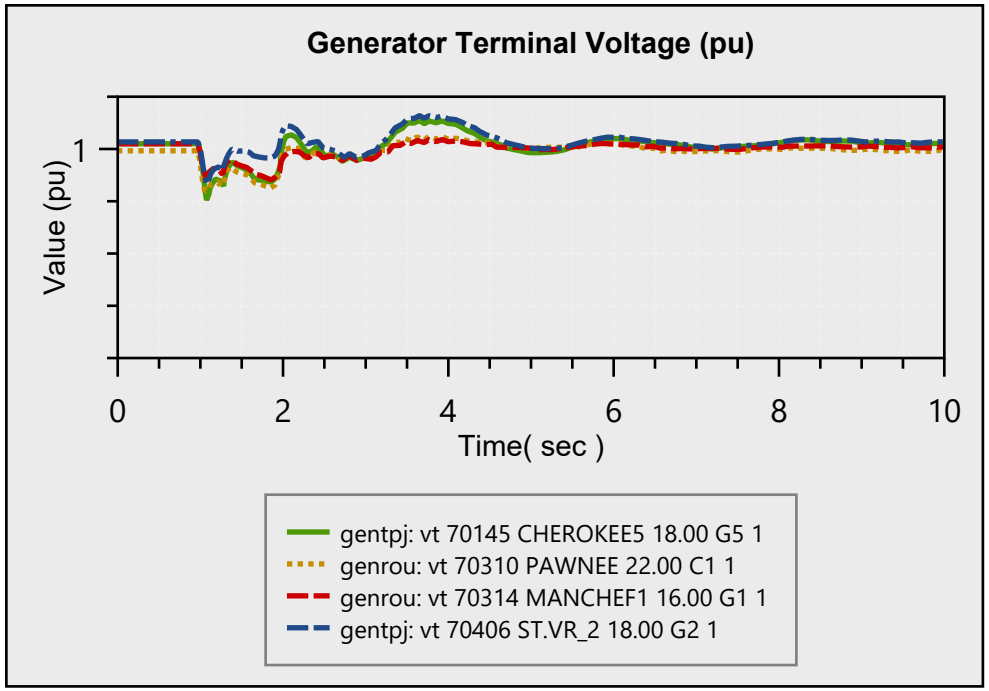

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

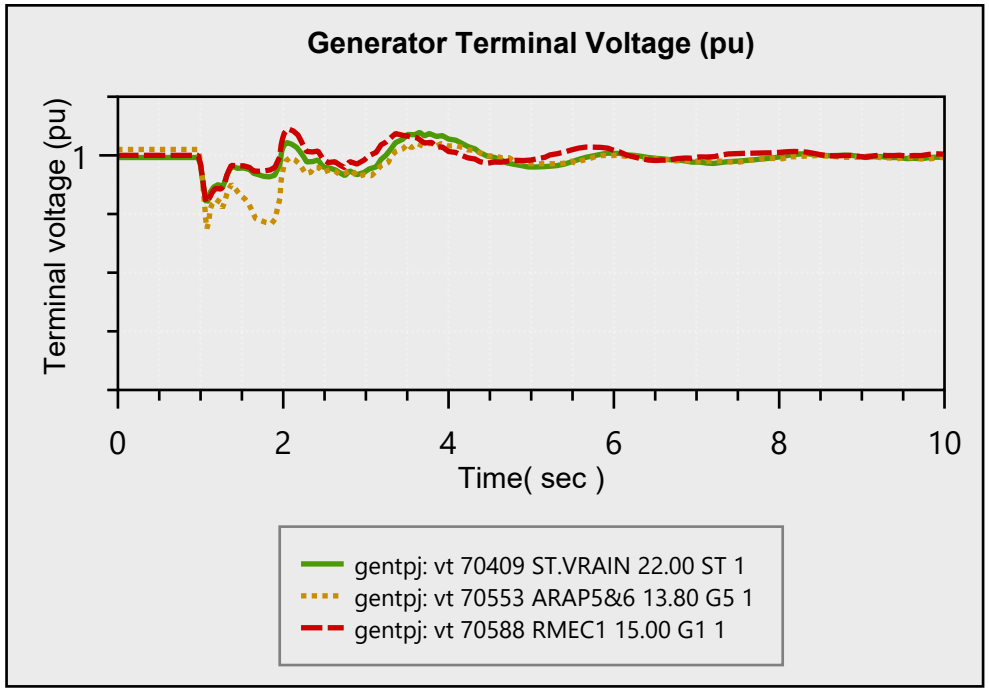

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

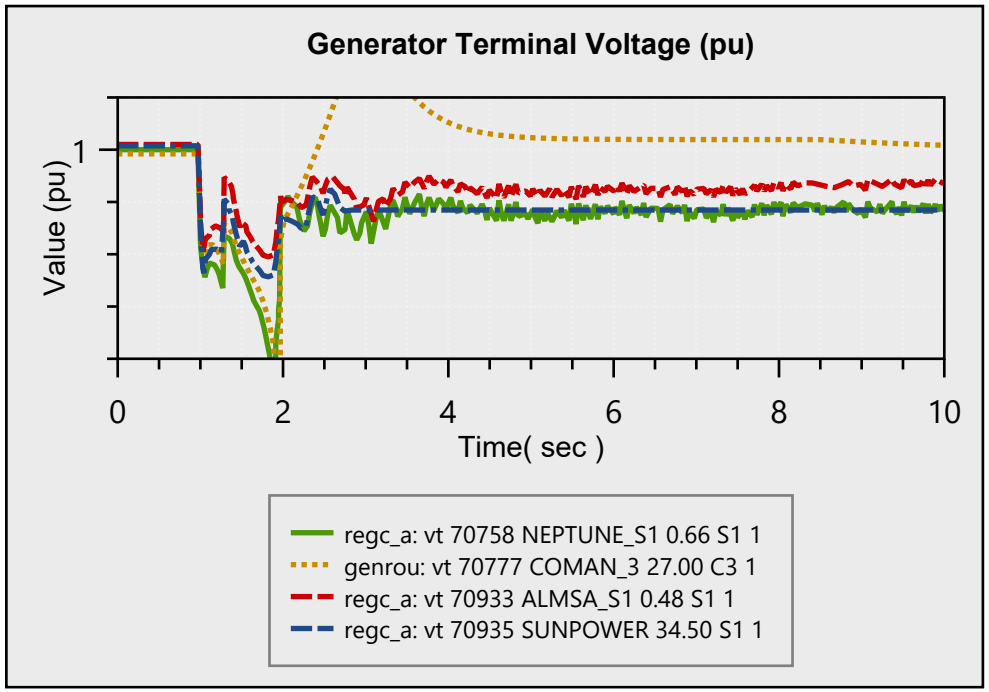

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

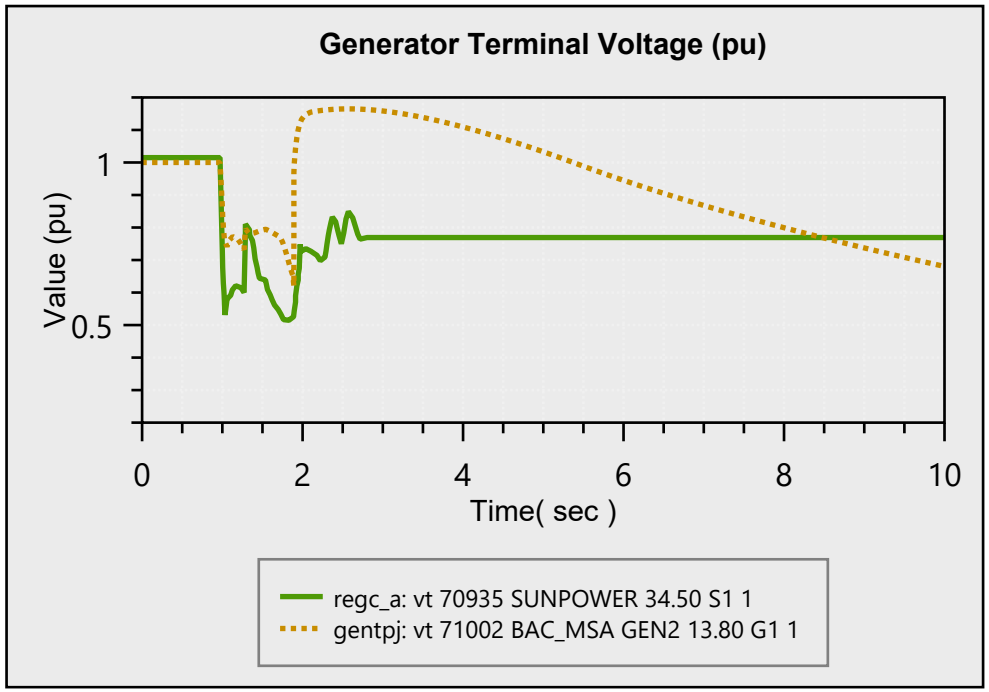

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

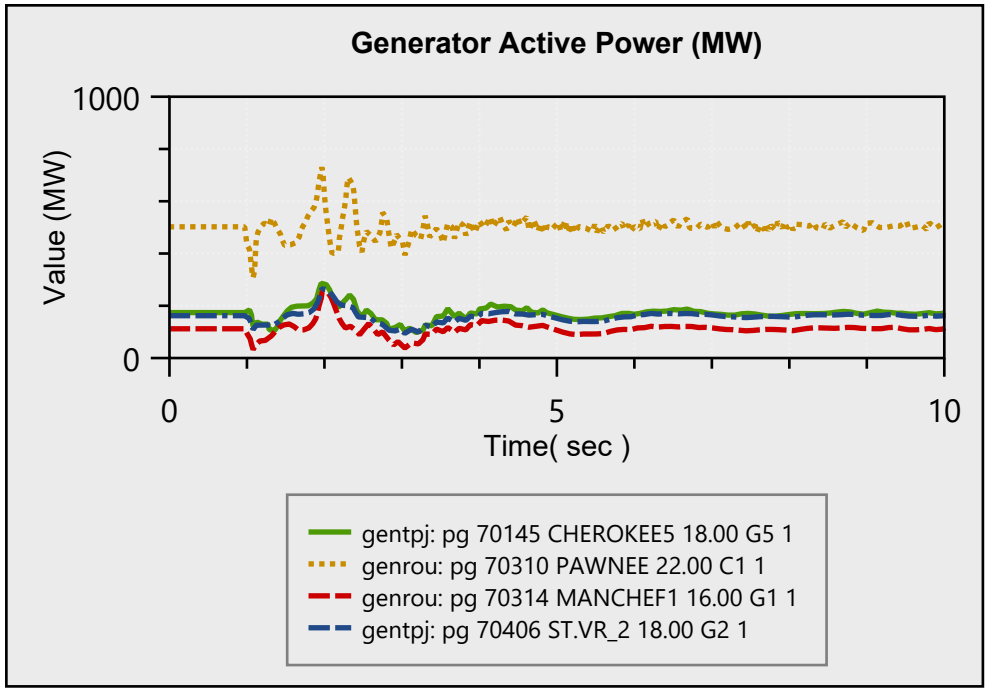

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

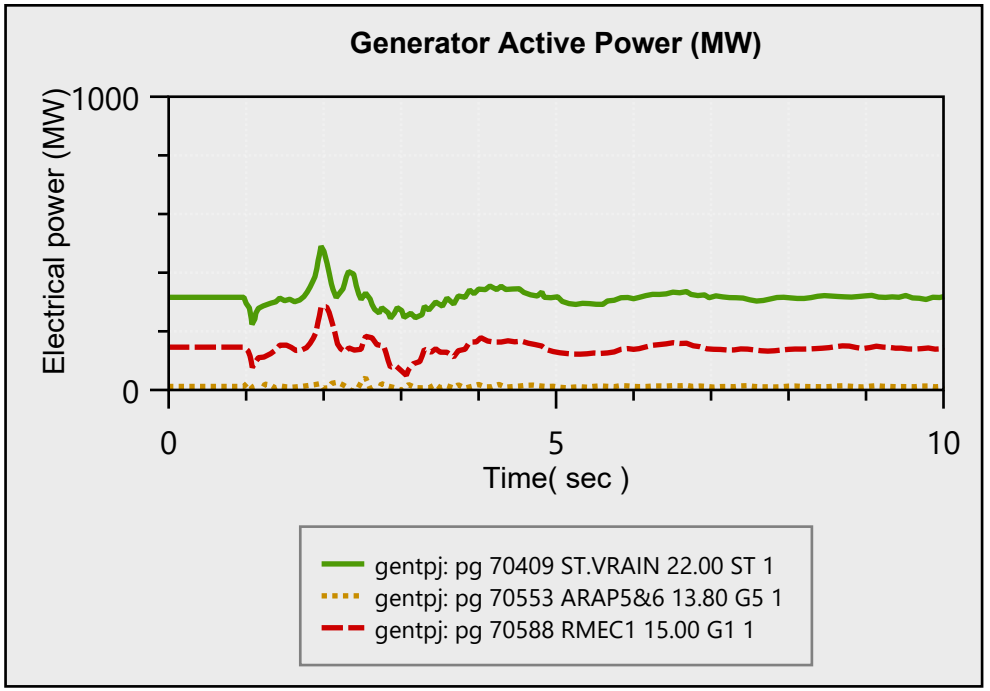

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

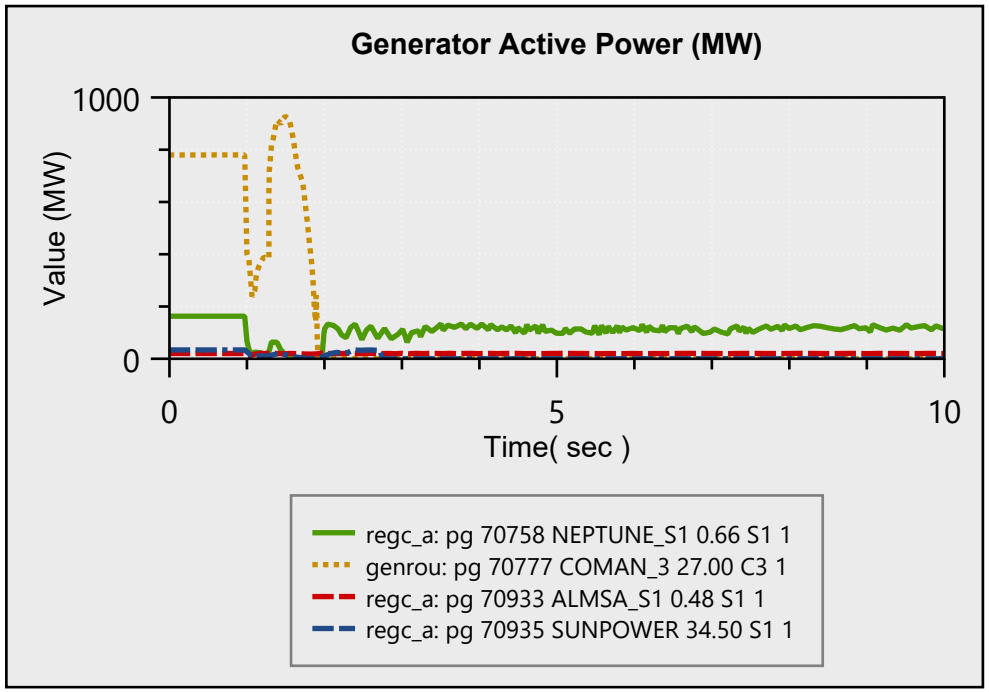

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

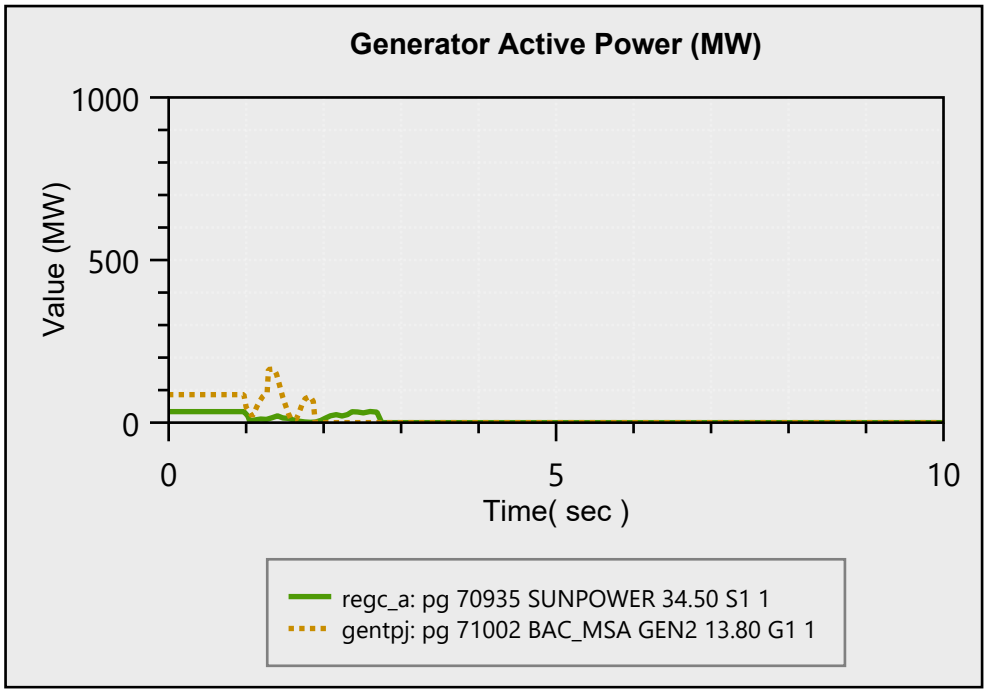

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

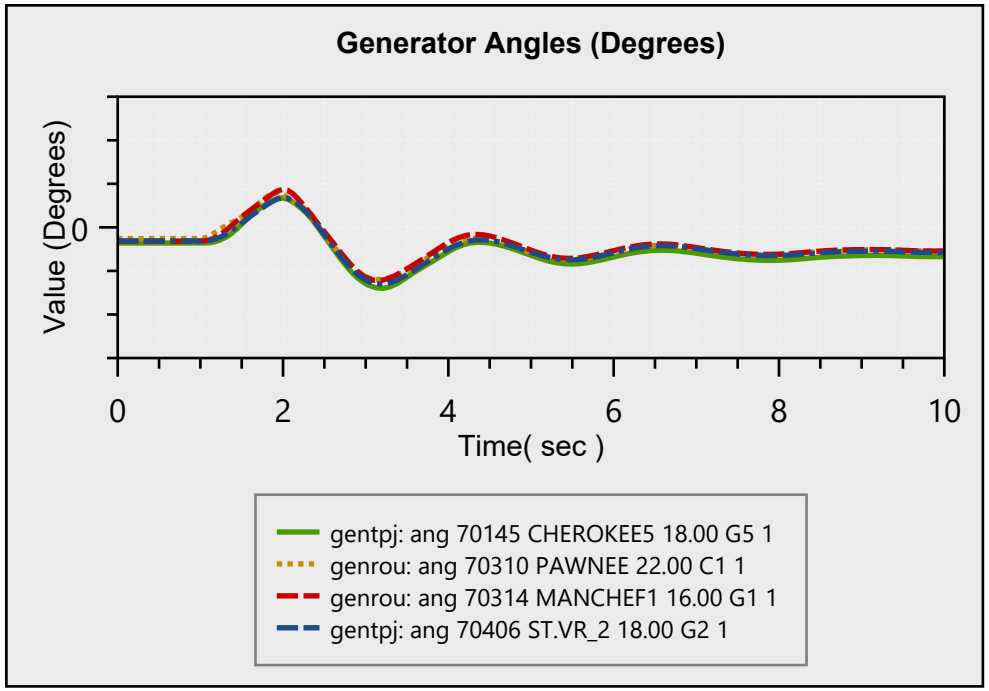

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

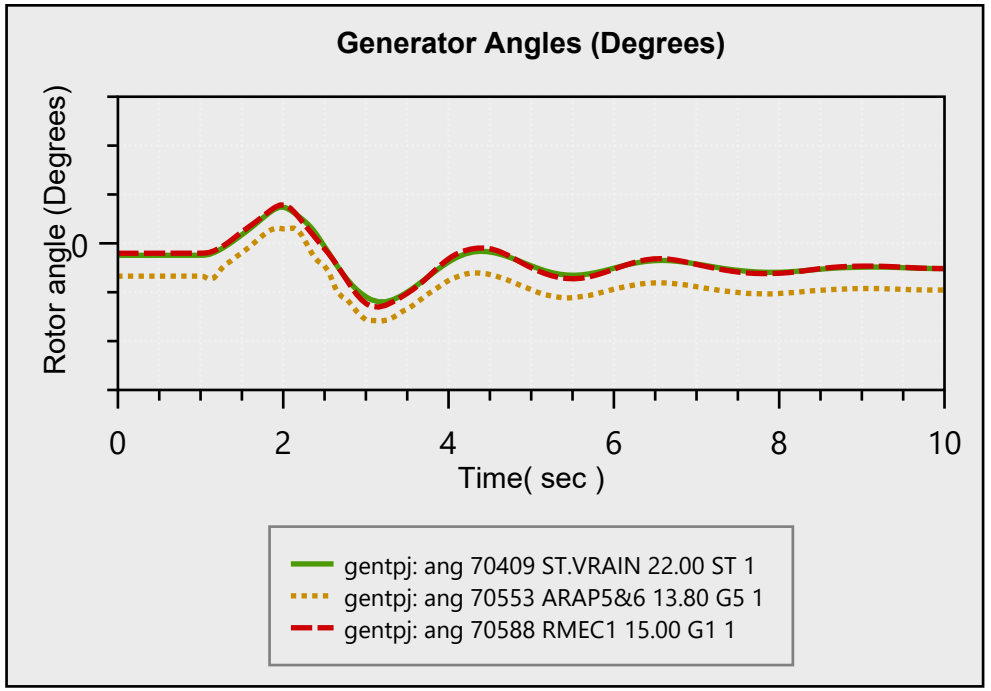

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

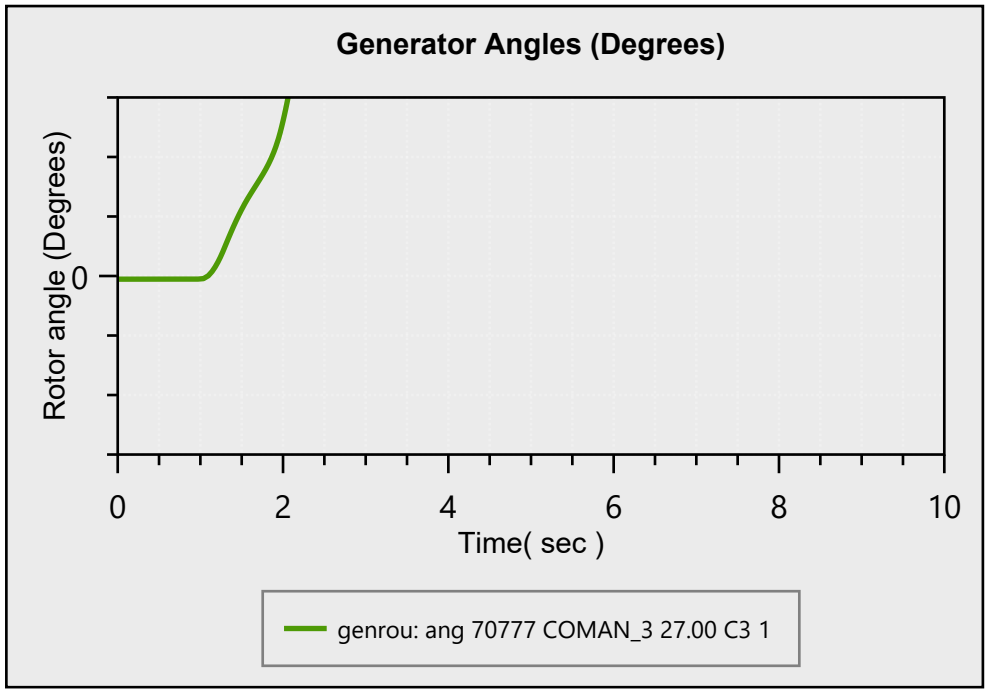

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

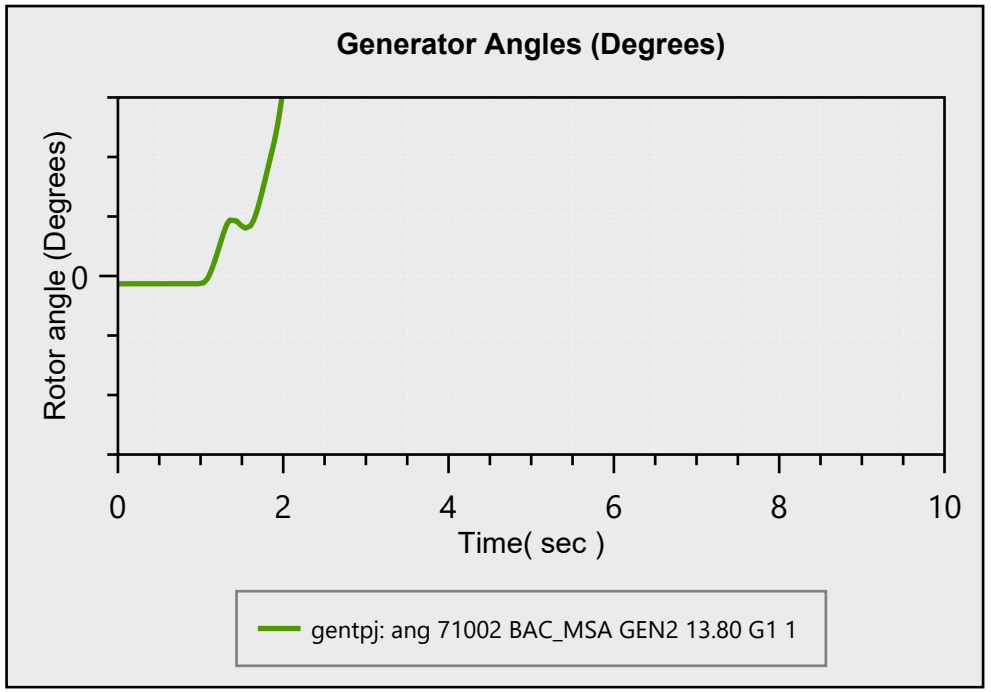

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

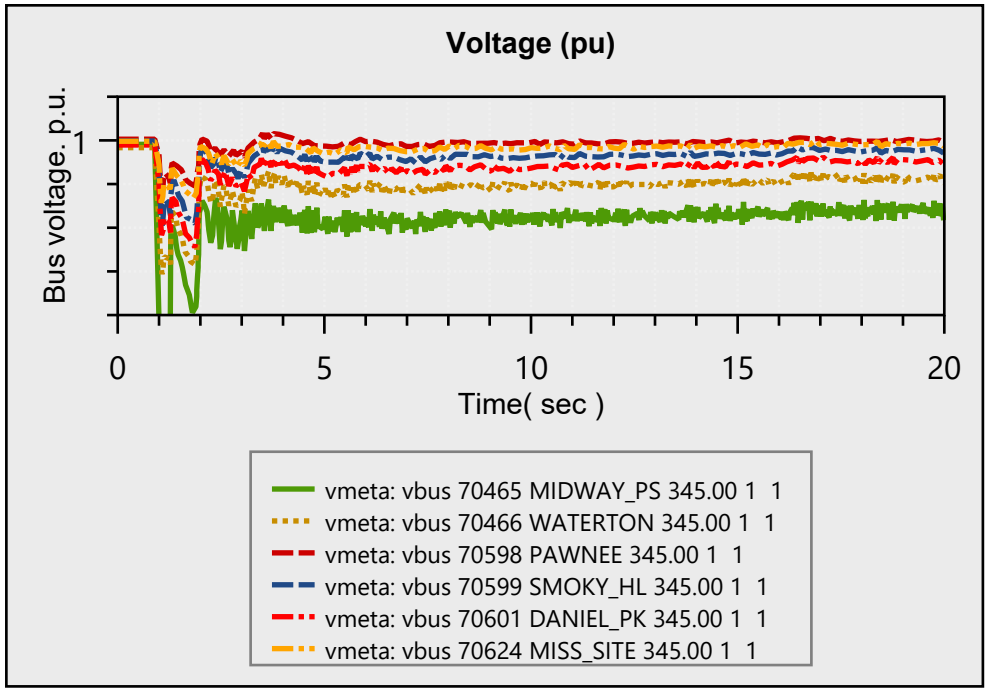

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

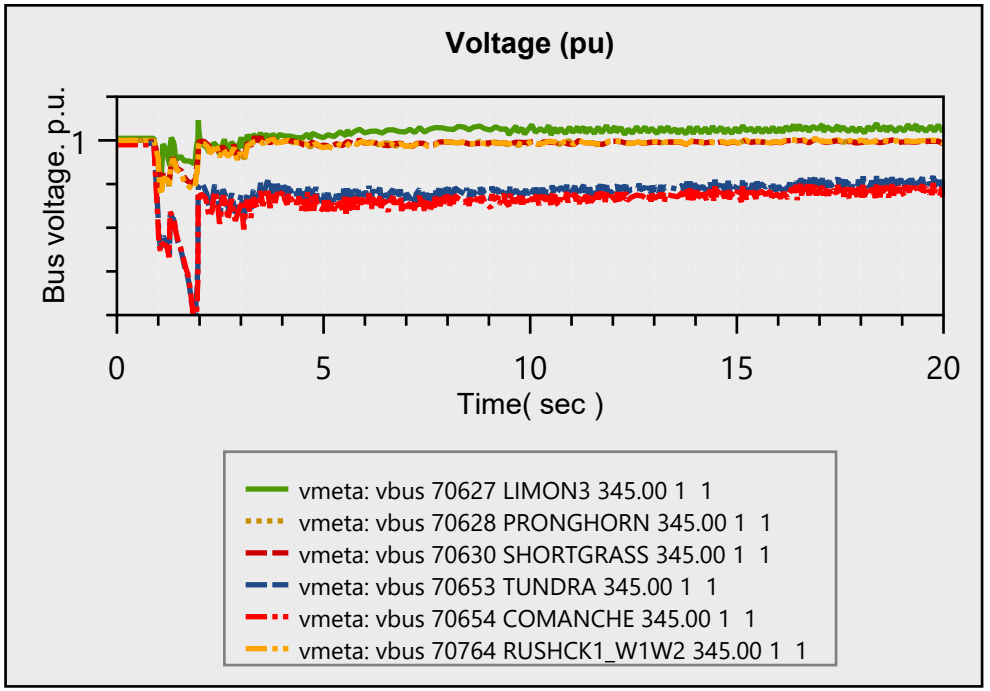

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

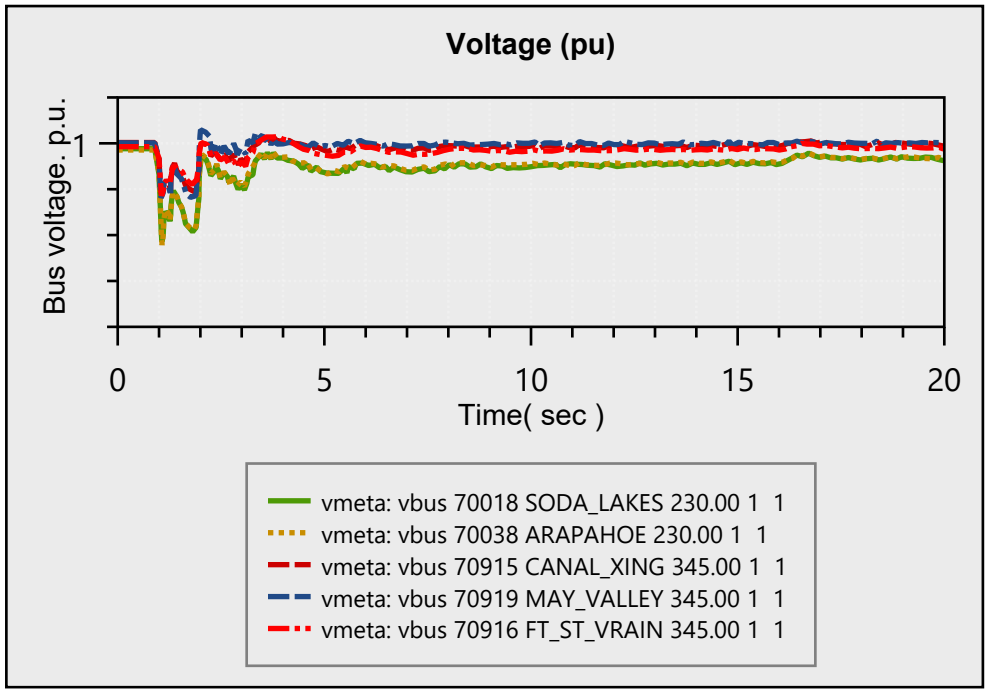

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

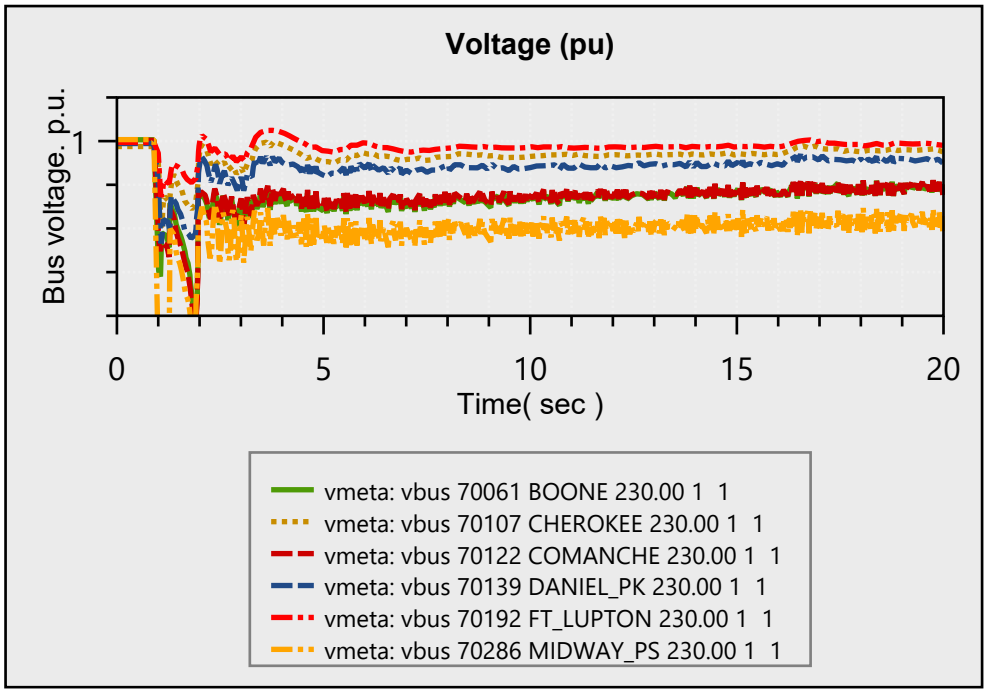

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

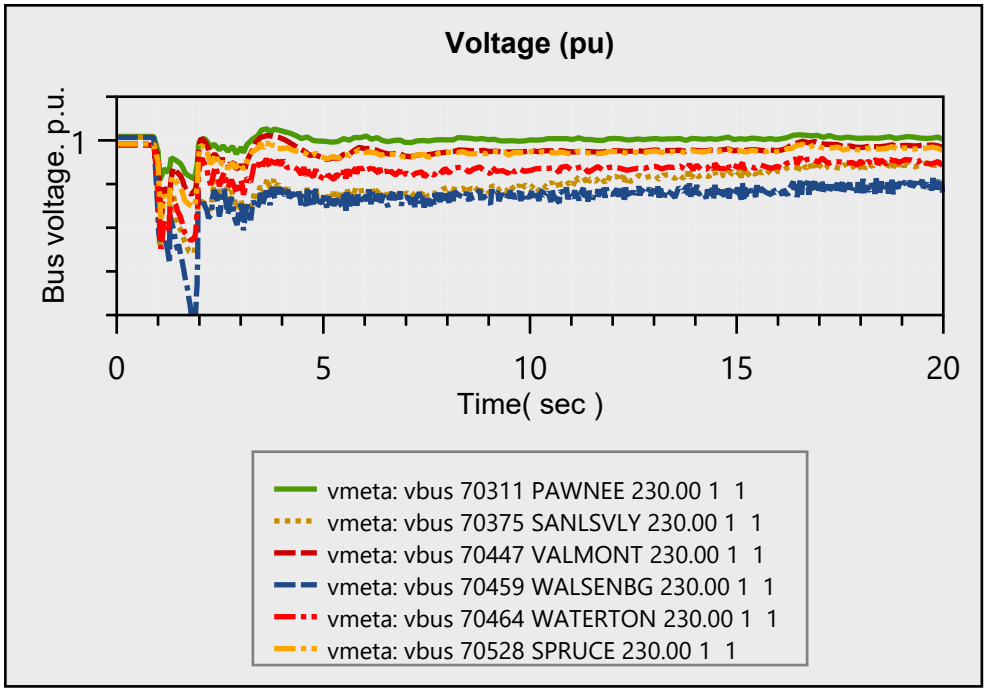

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

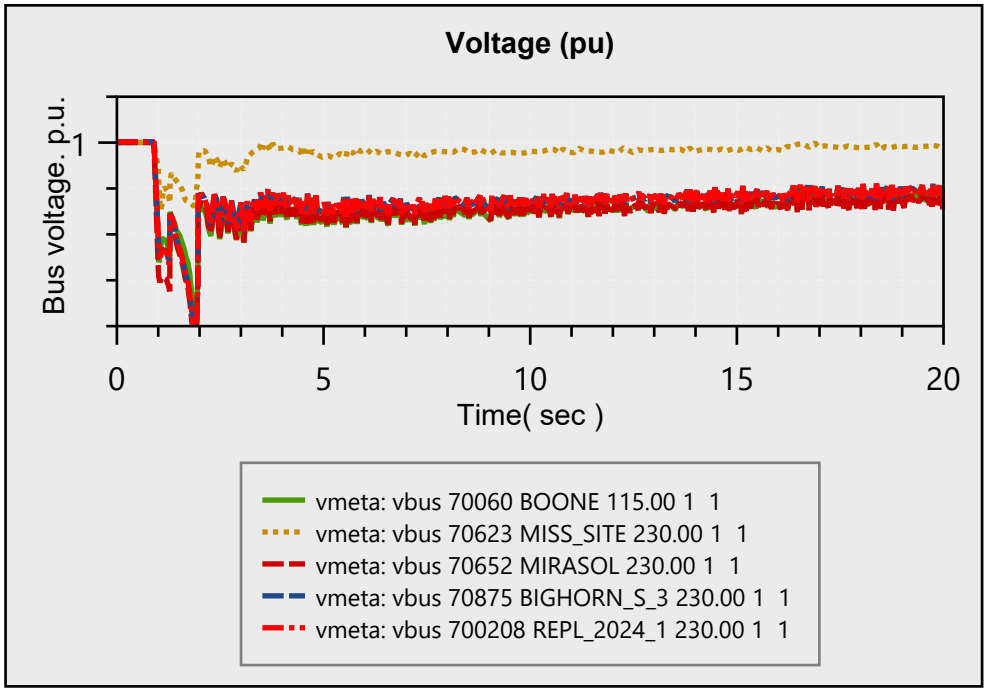

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

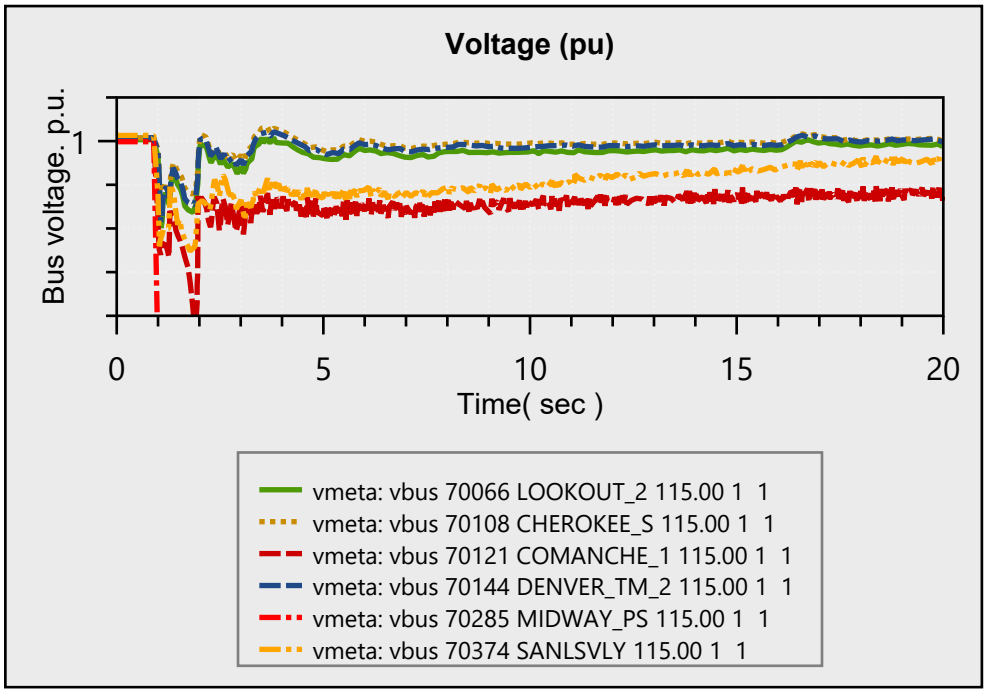

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

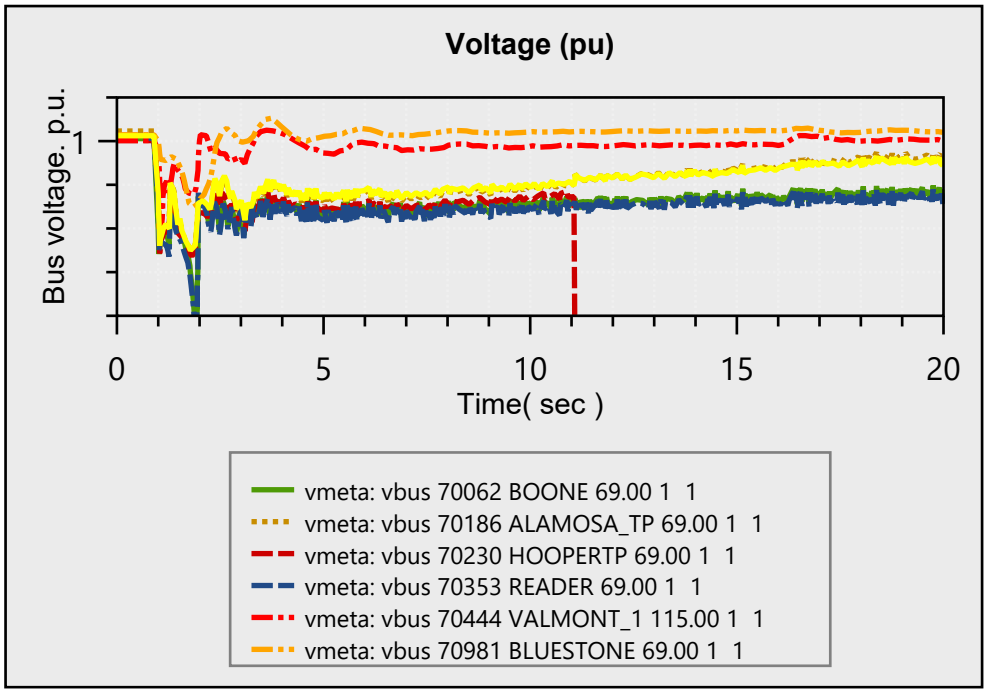

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

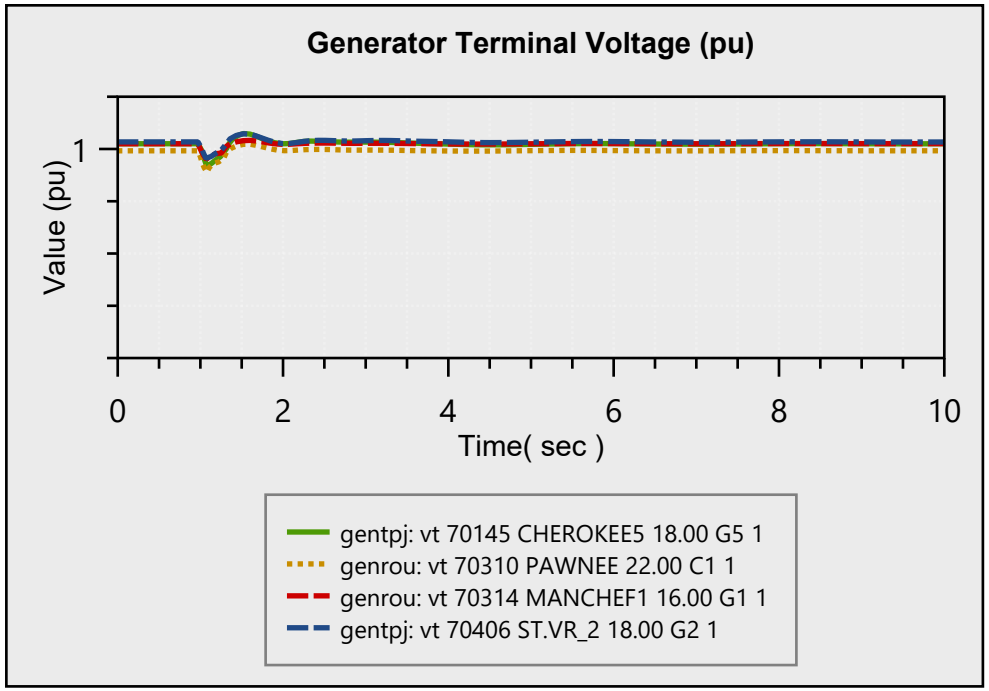

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

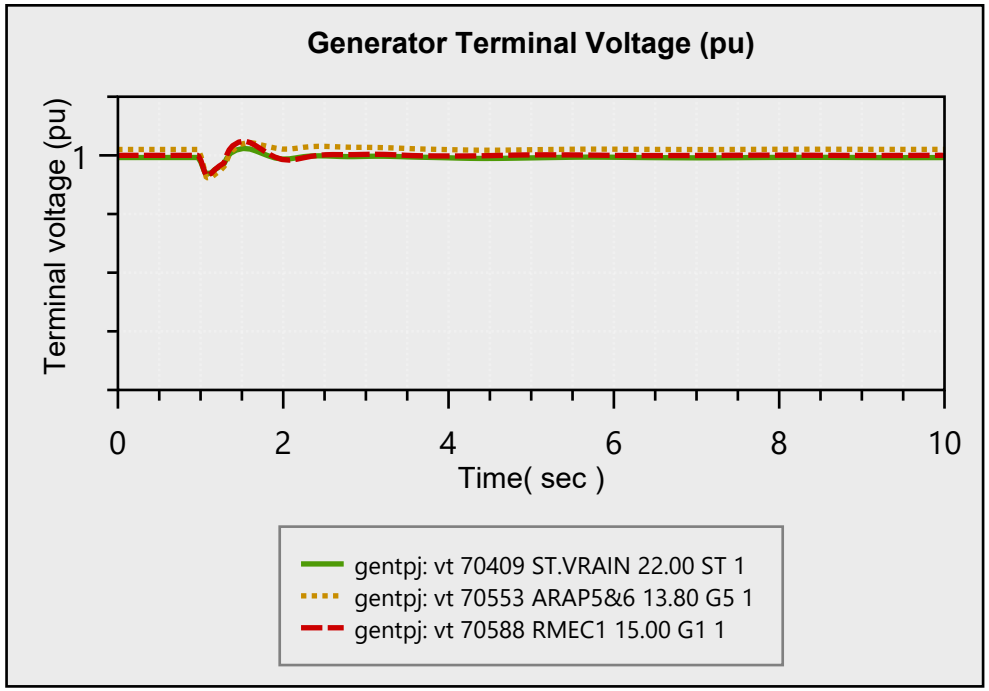

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

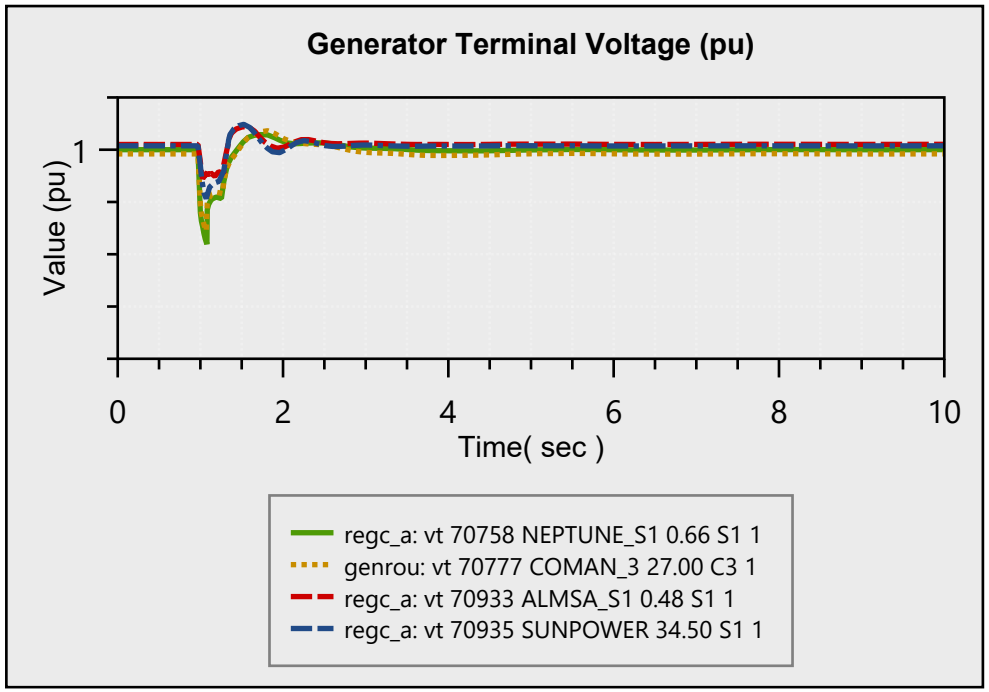

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

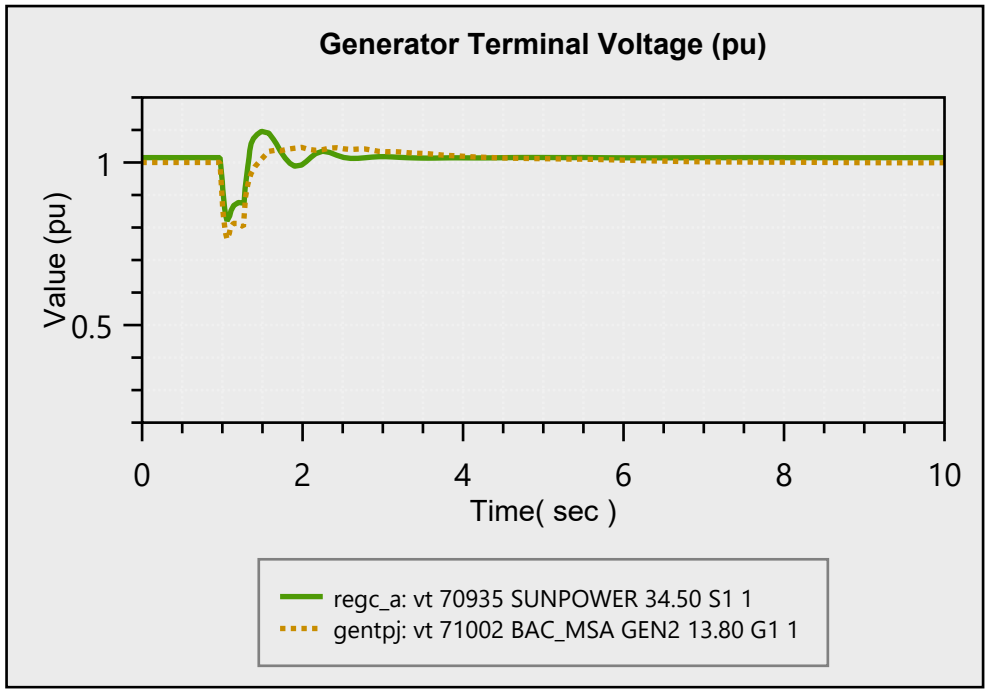

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

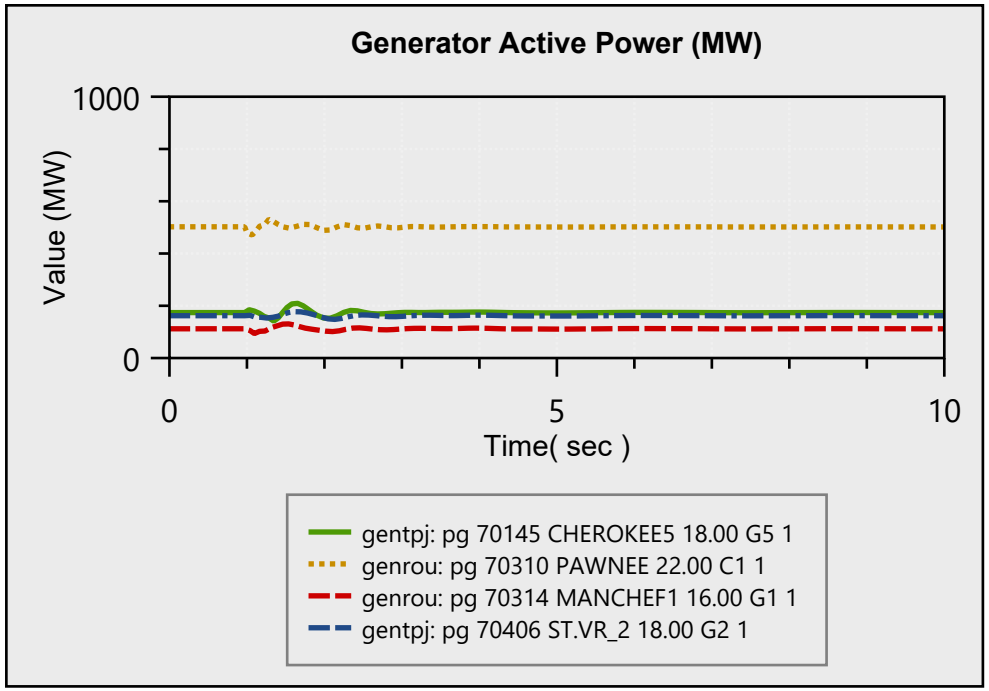

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

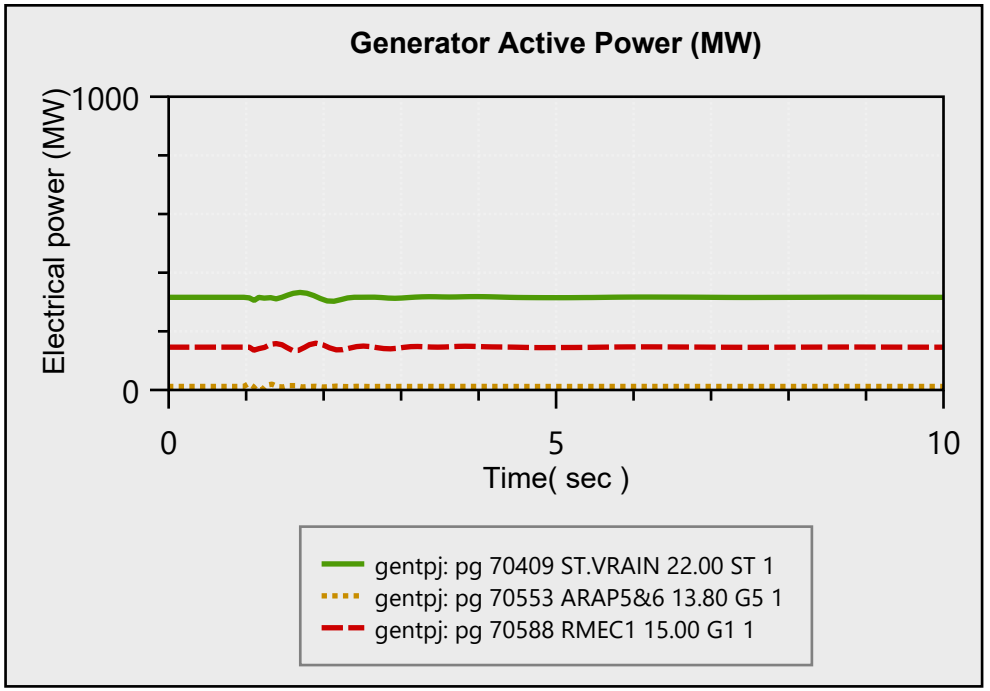

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

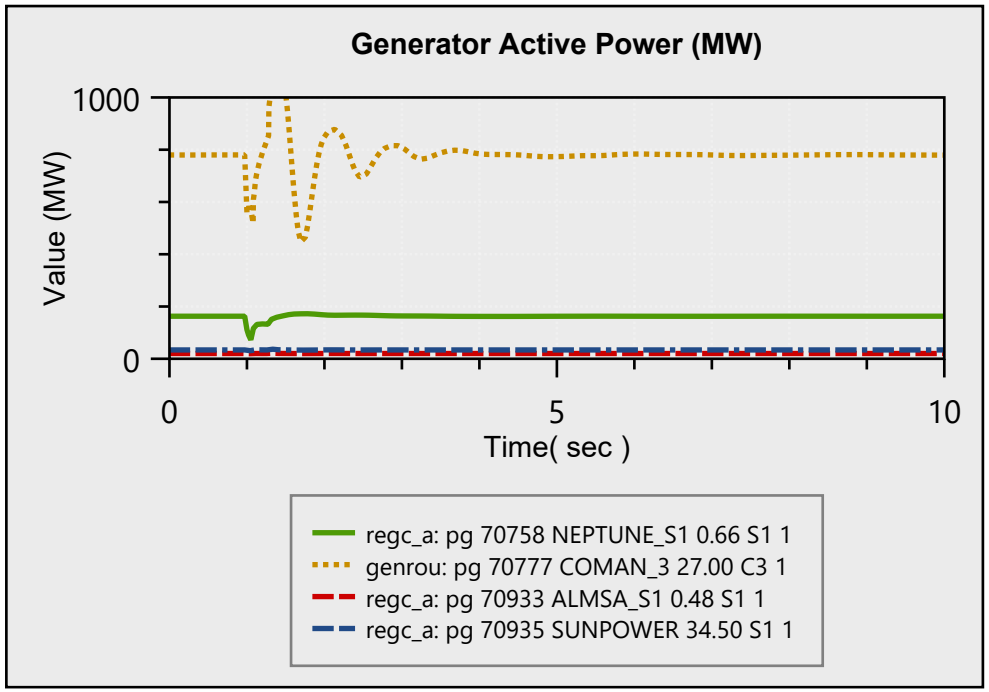

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

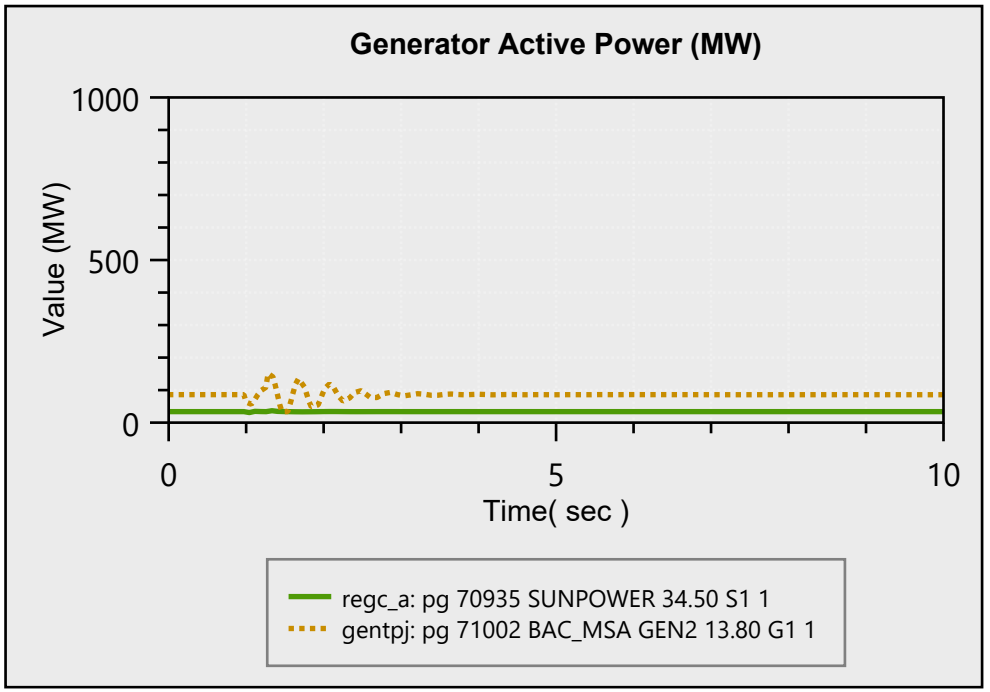

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

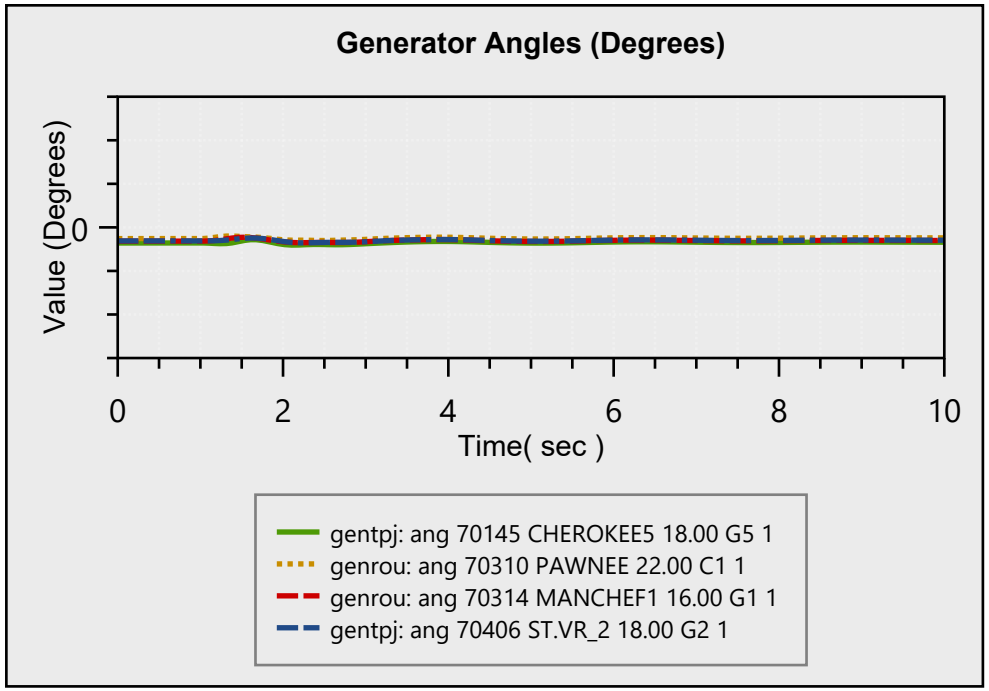

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

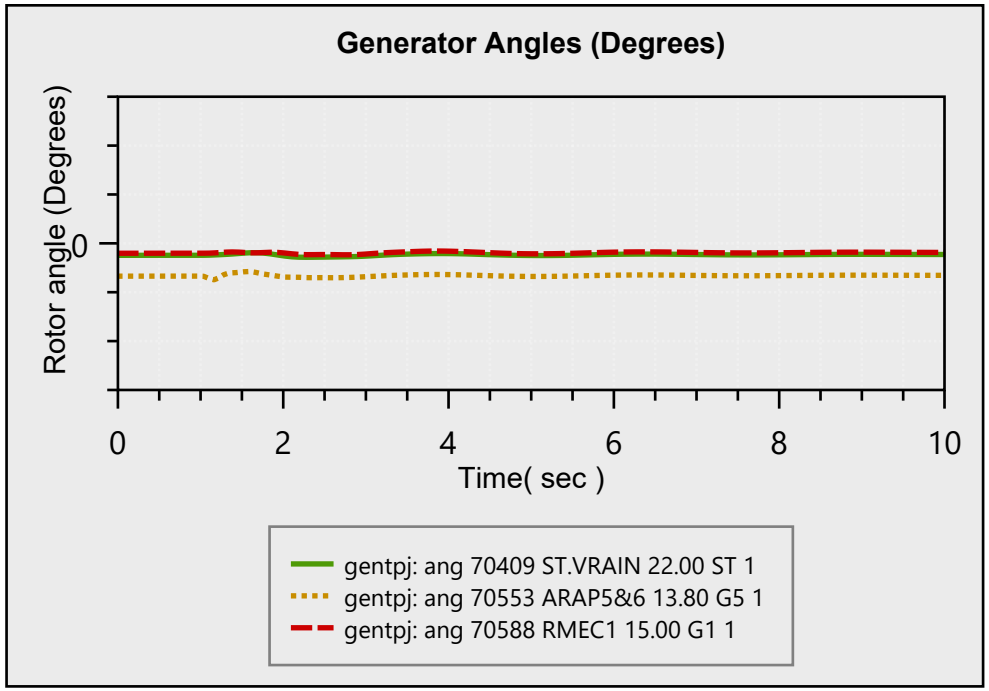

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

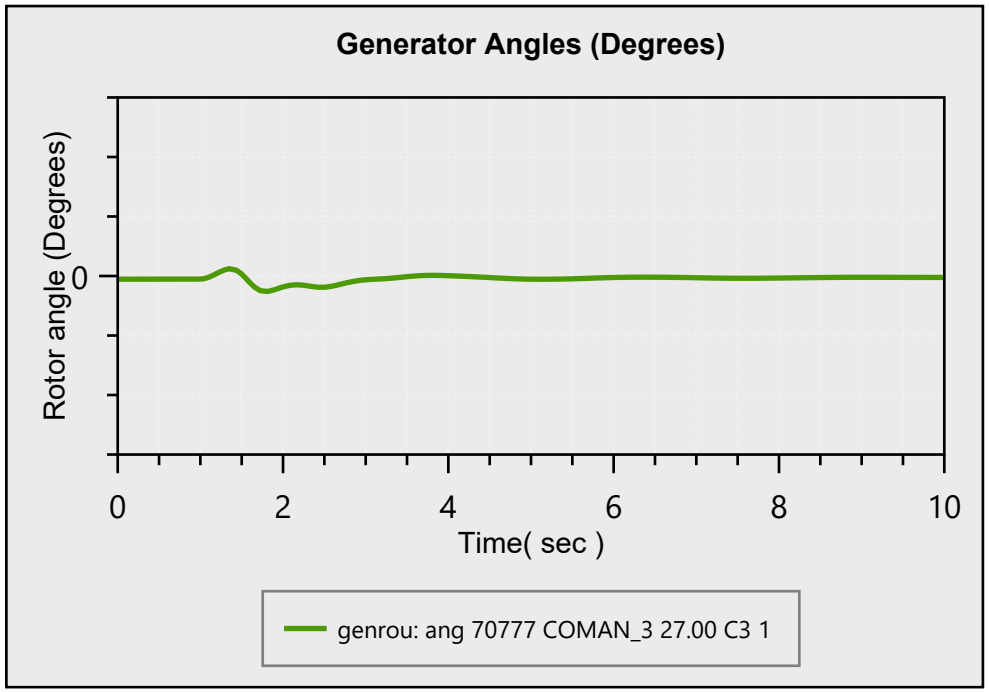

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

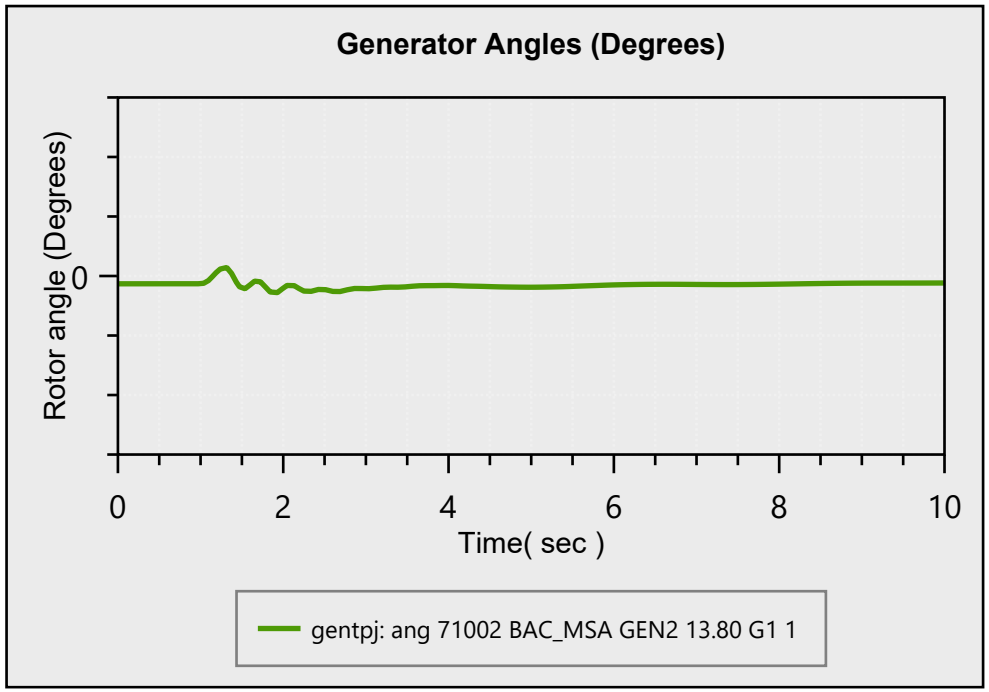

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

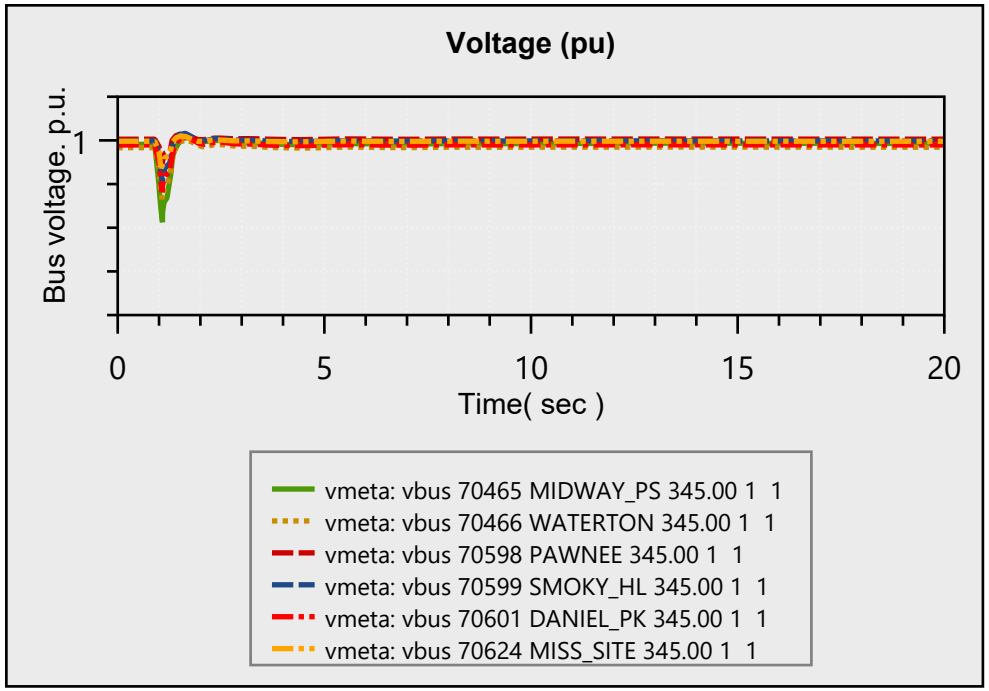

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

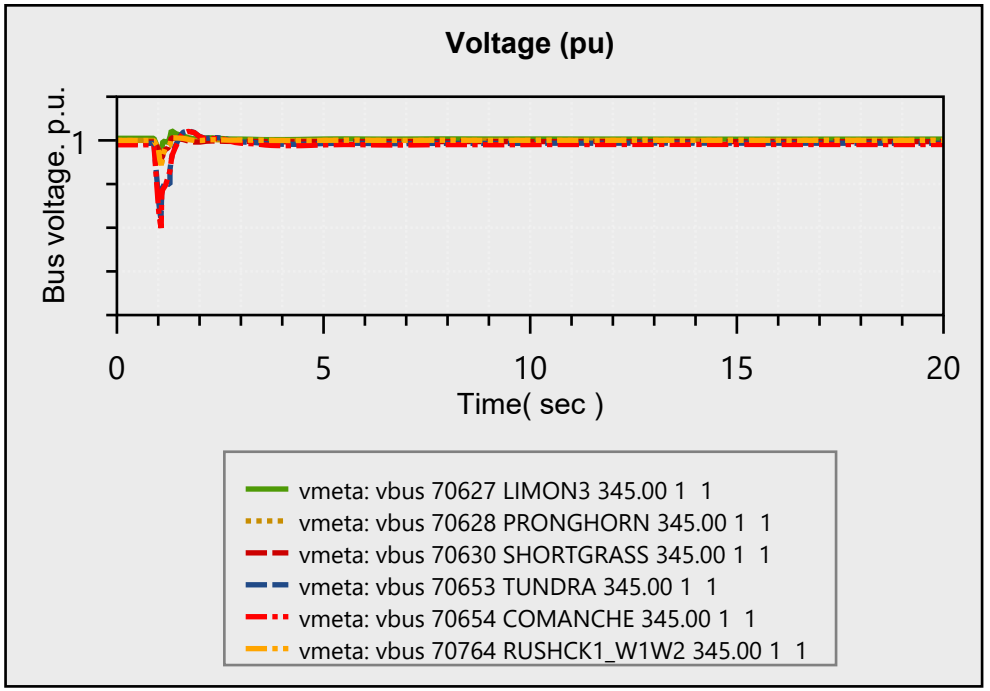

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

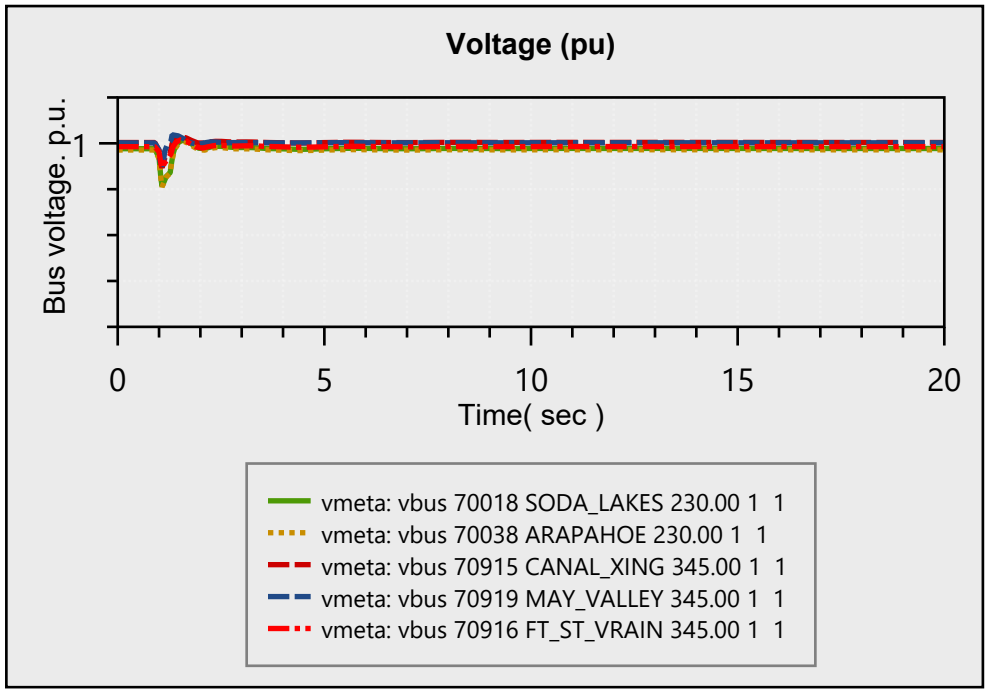

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

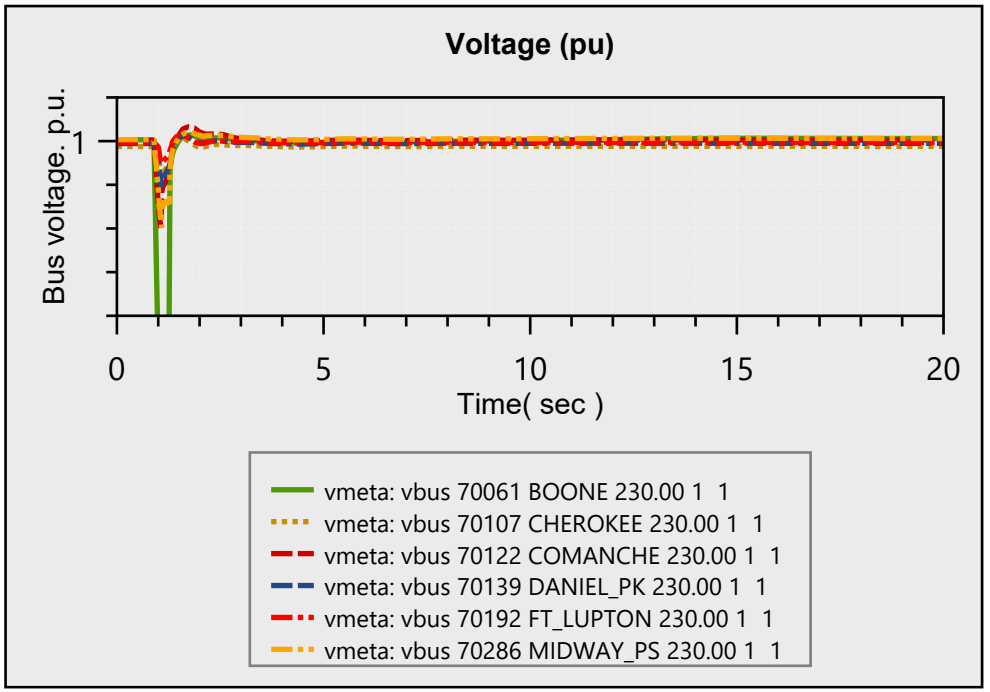

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

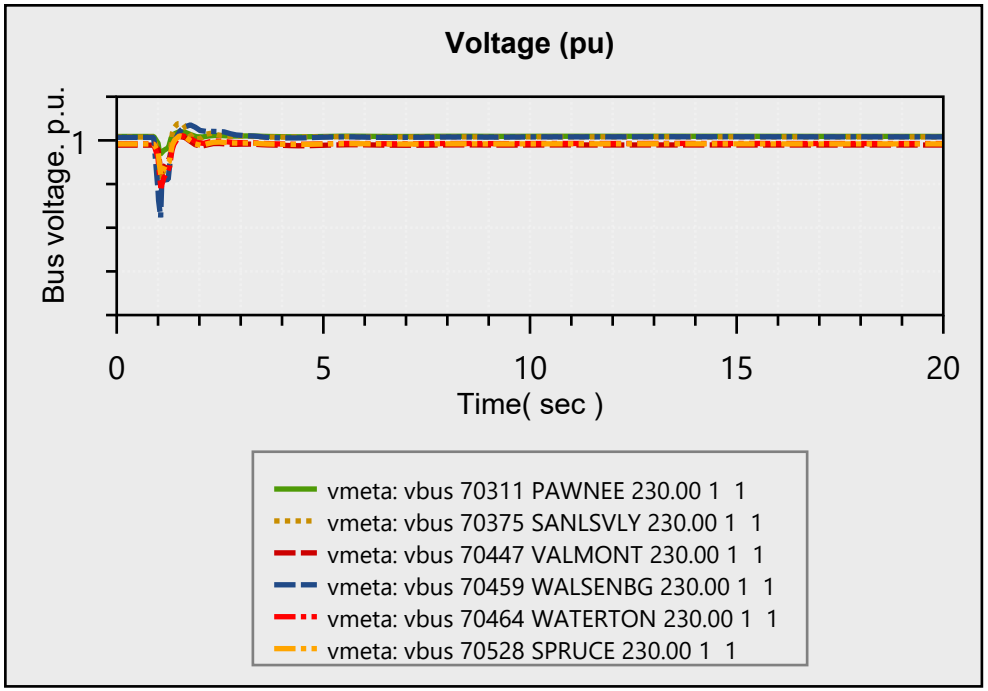

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

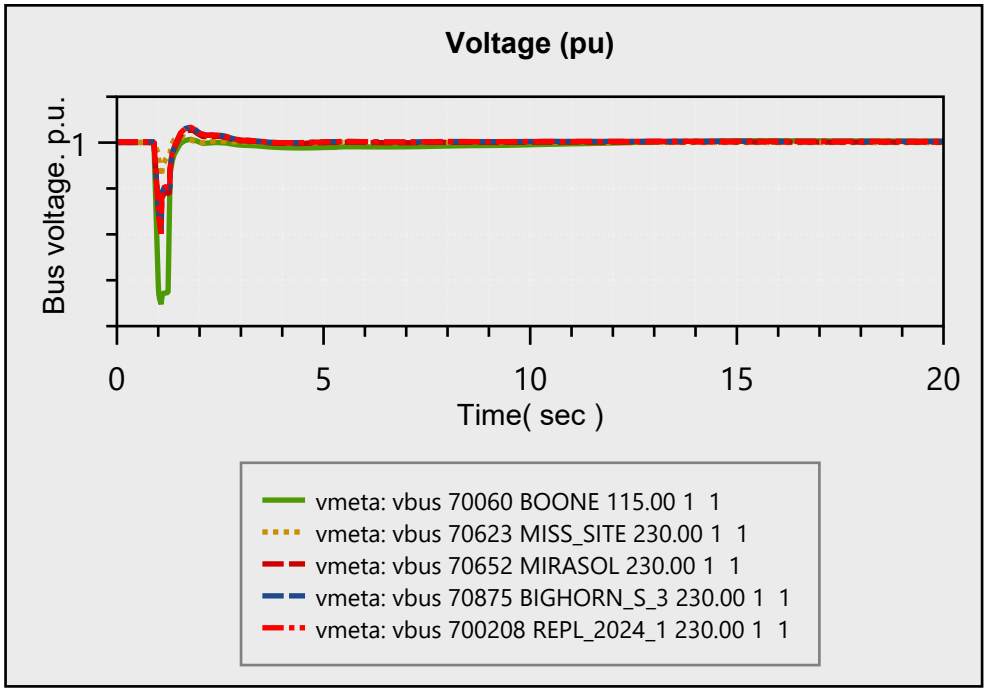

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

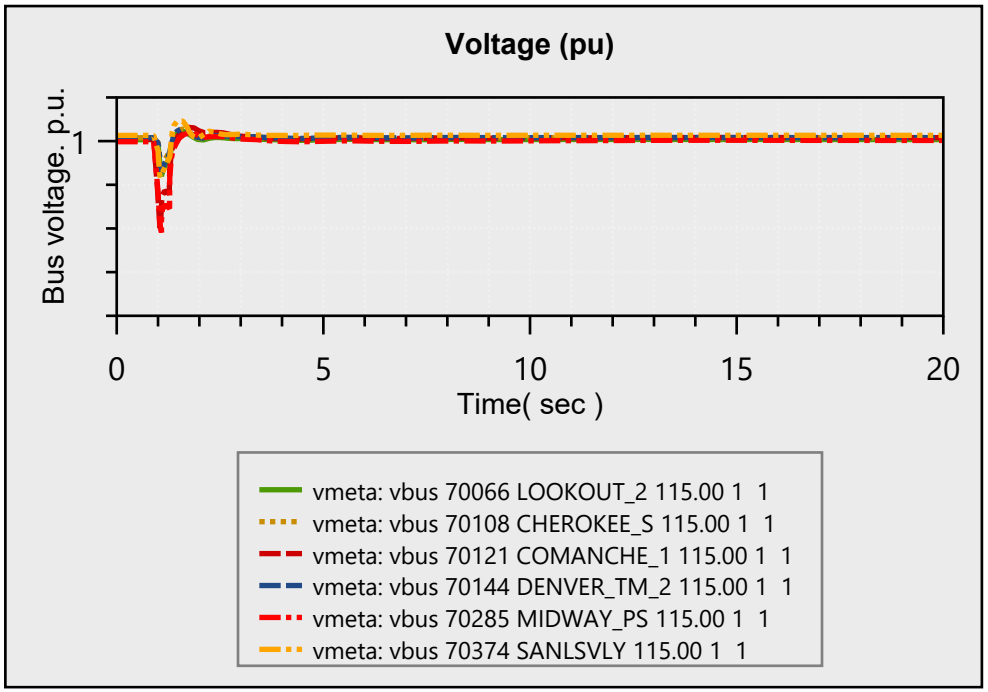

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

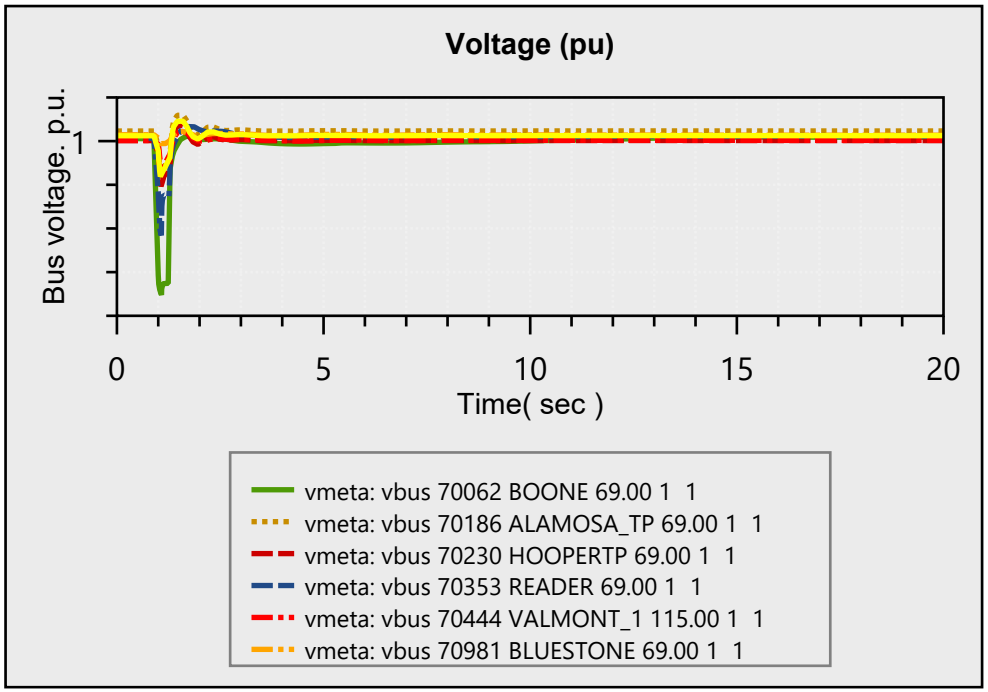

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

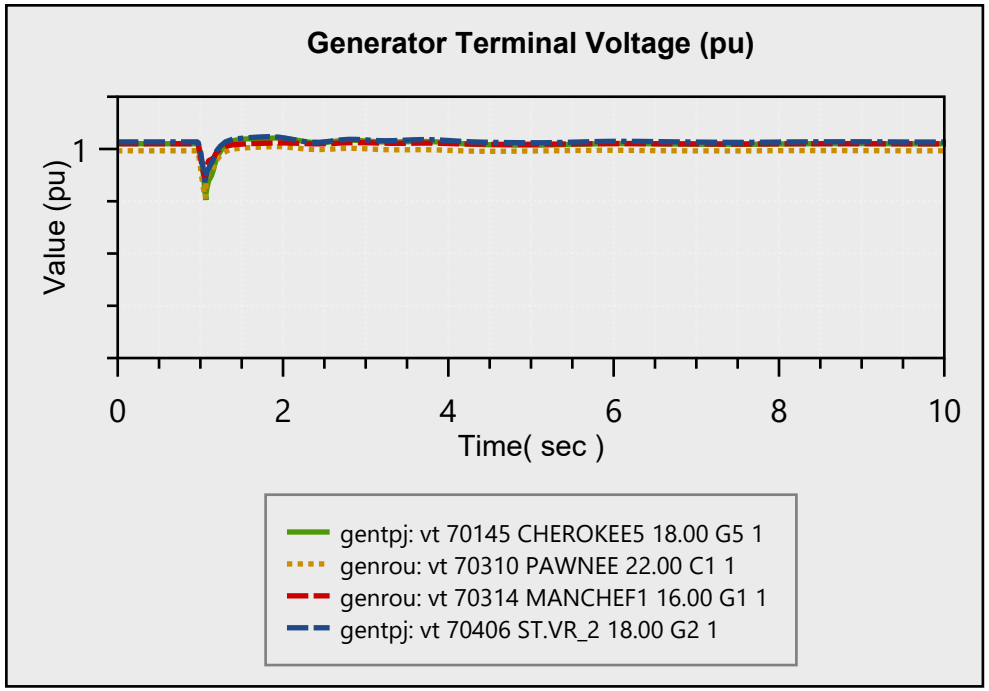

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

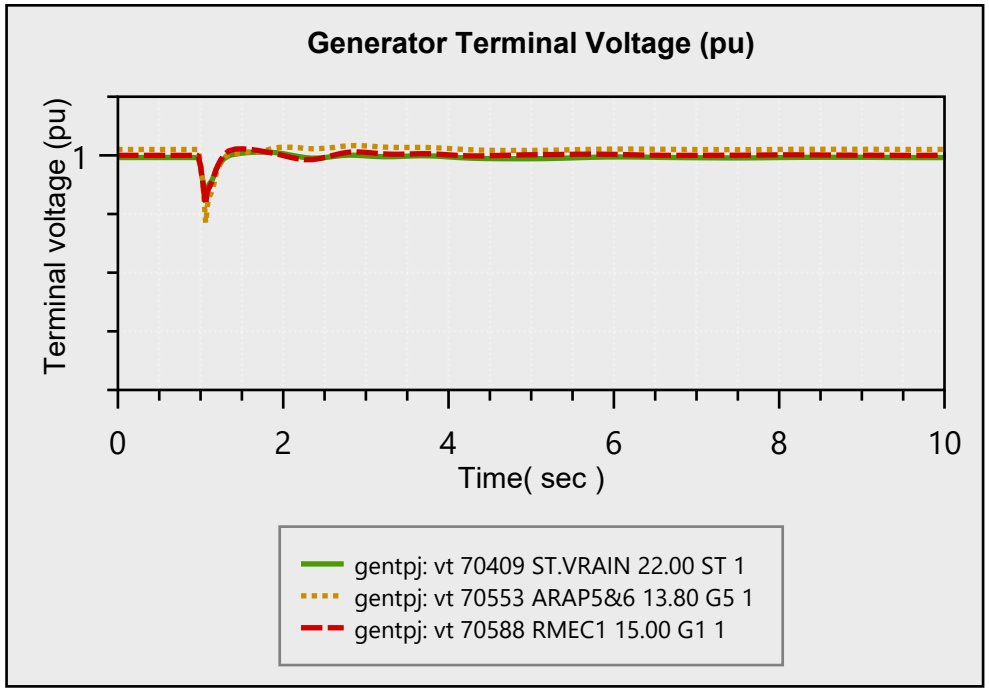

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

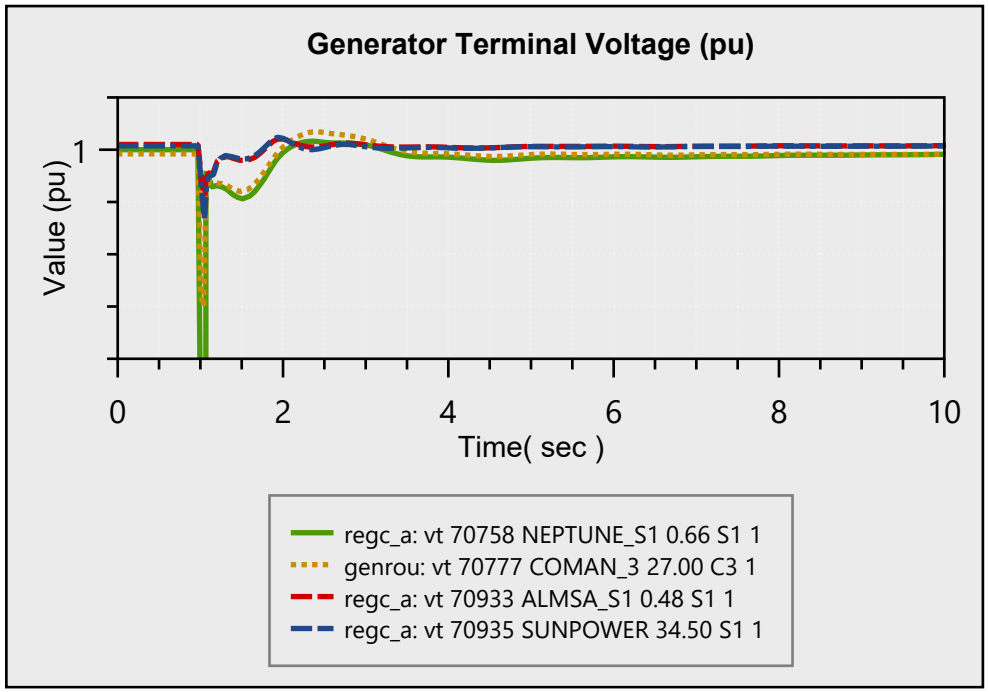

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

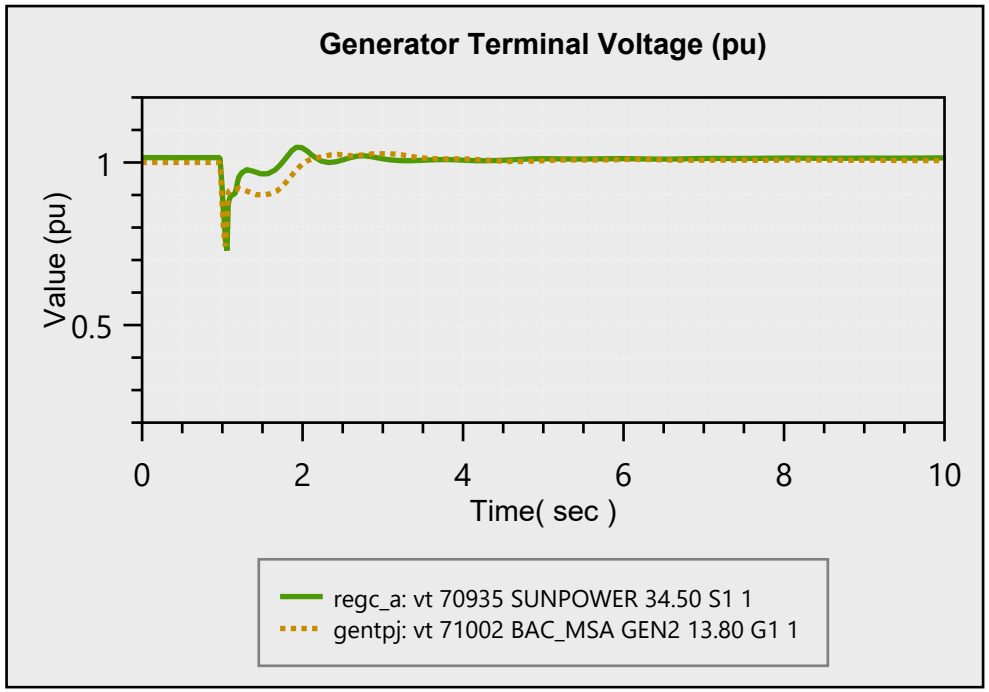

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

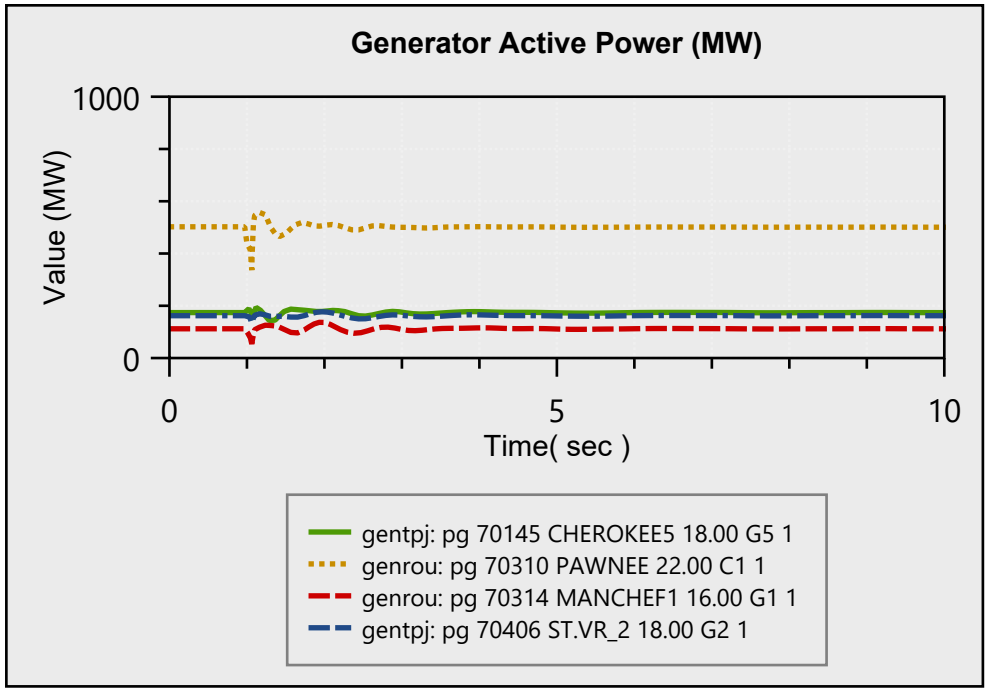

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

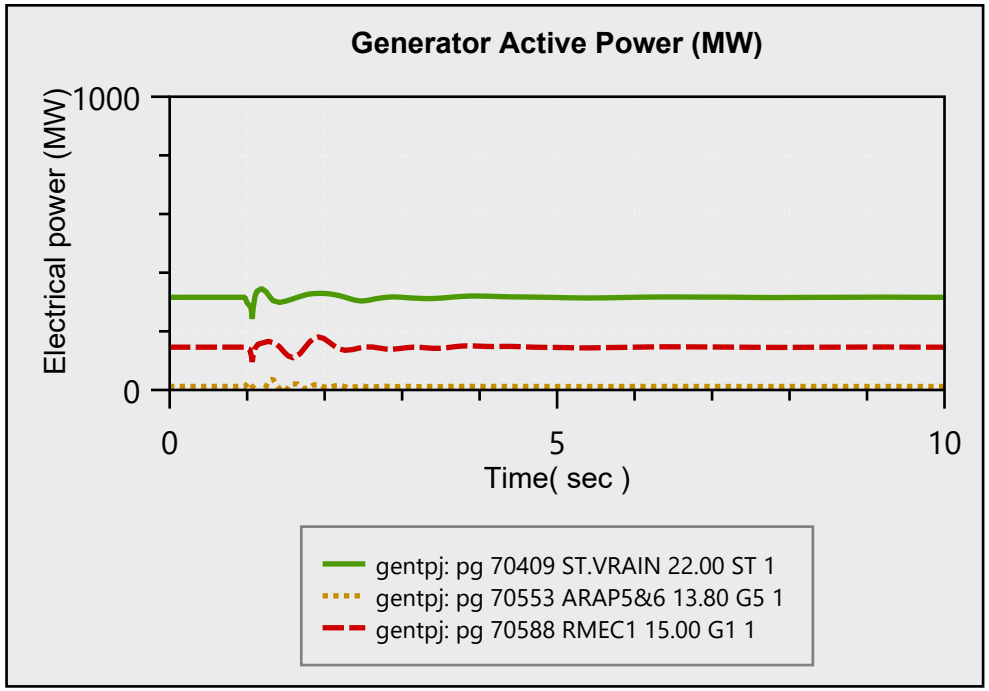

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

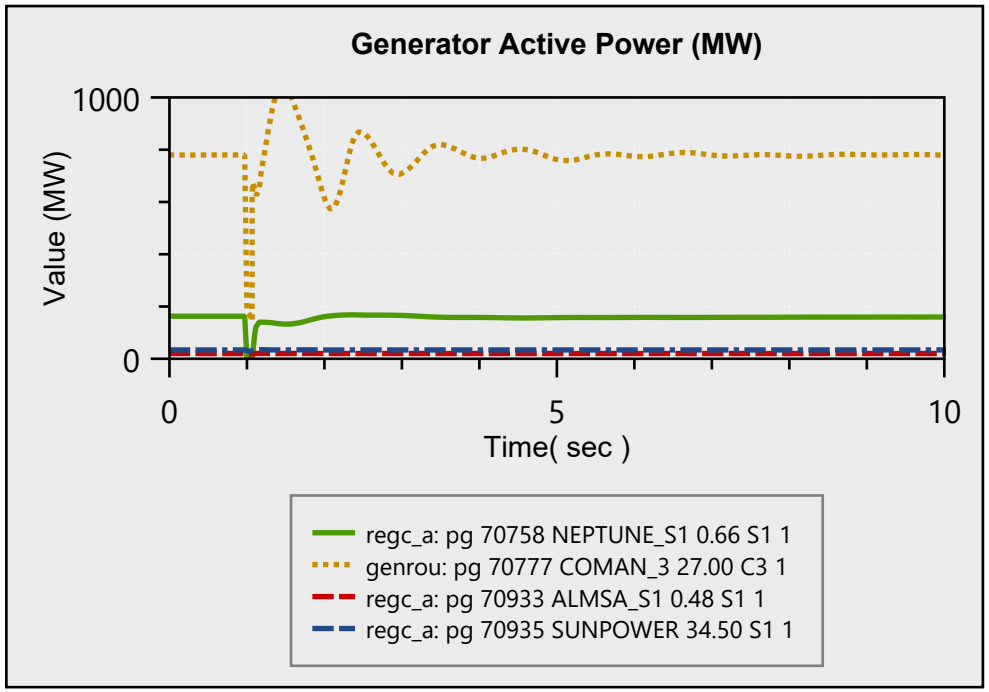

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

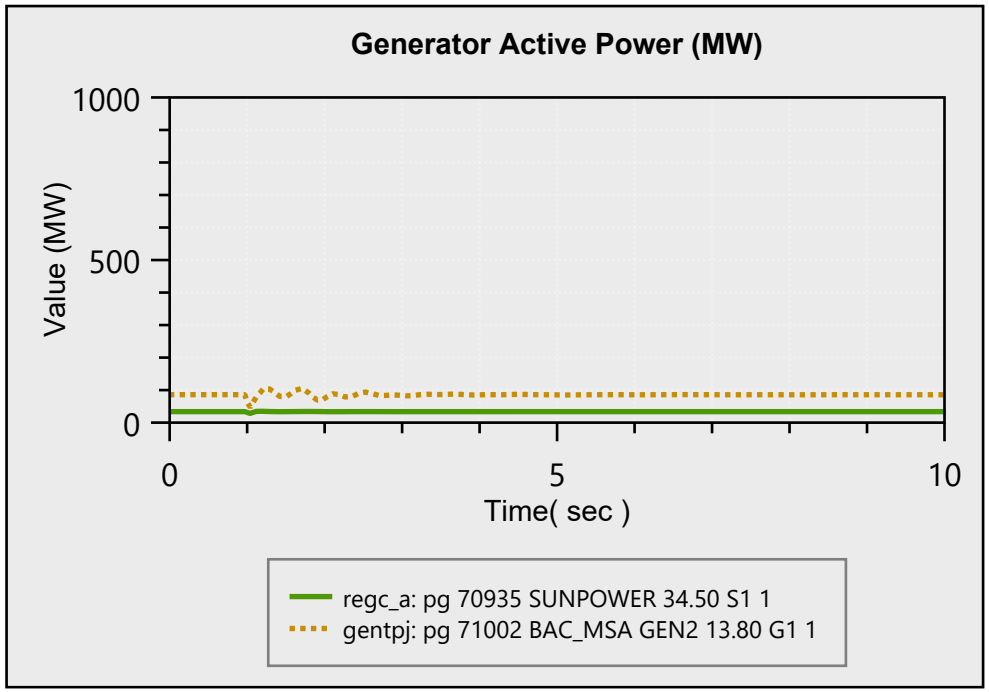

Generator Terminal Voltage (pu)
Value (pu)
1
0.5
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

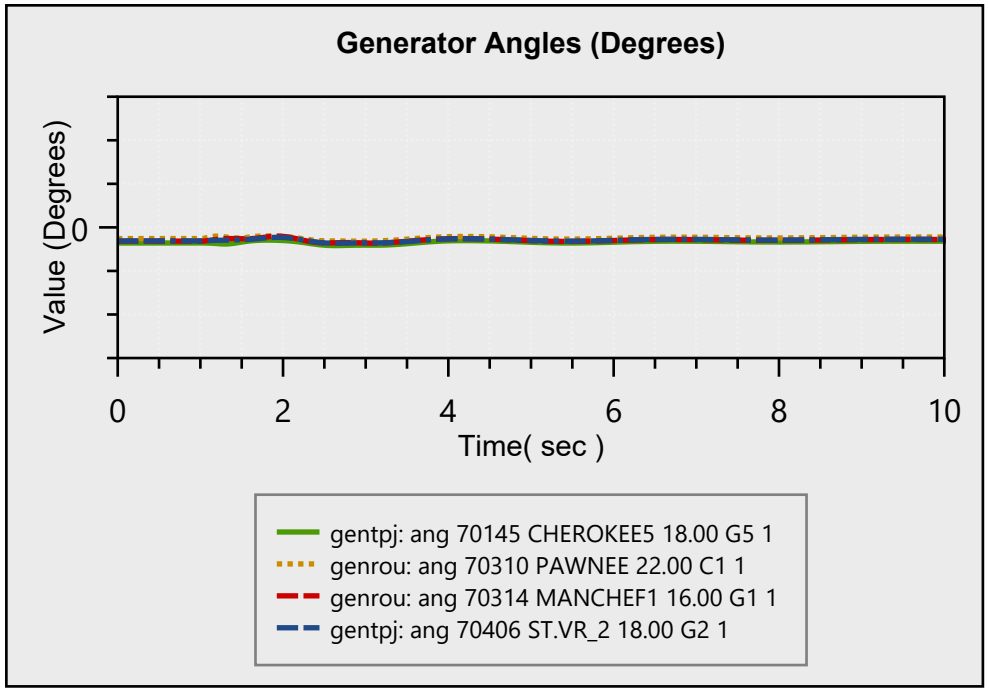

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

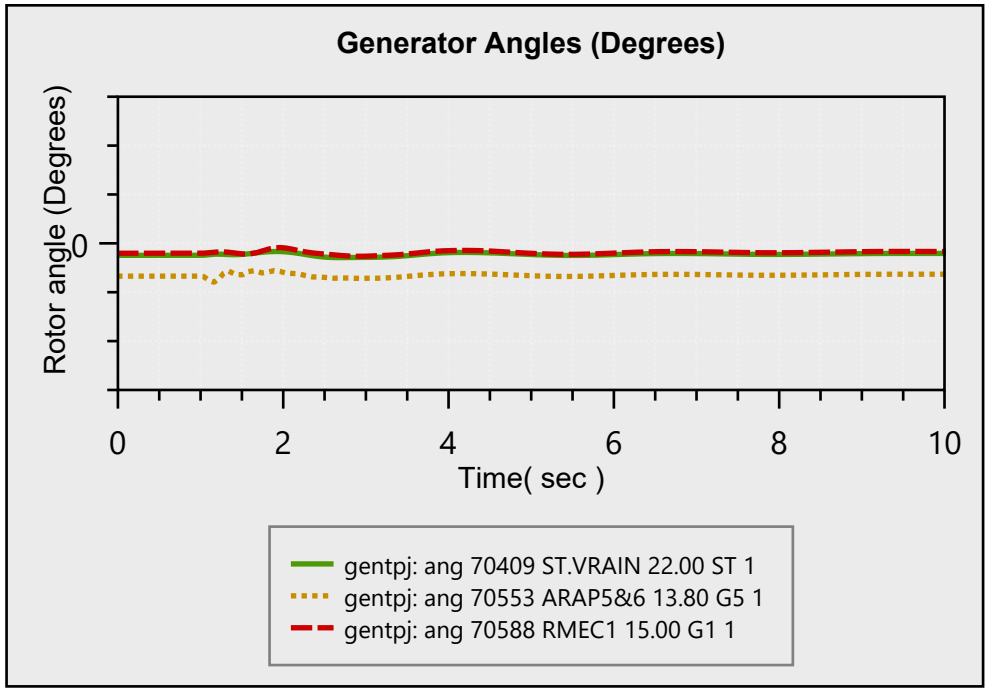

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

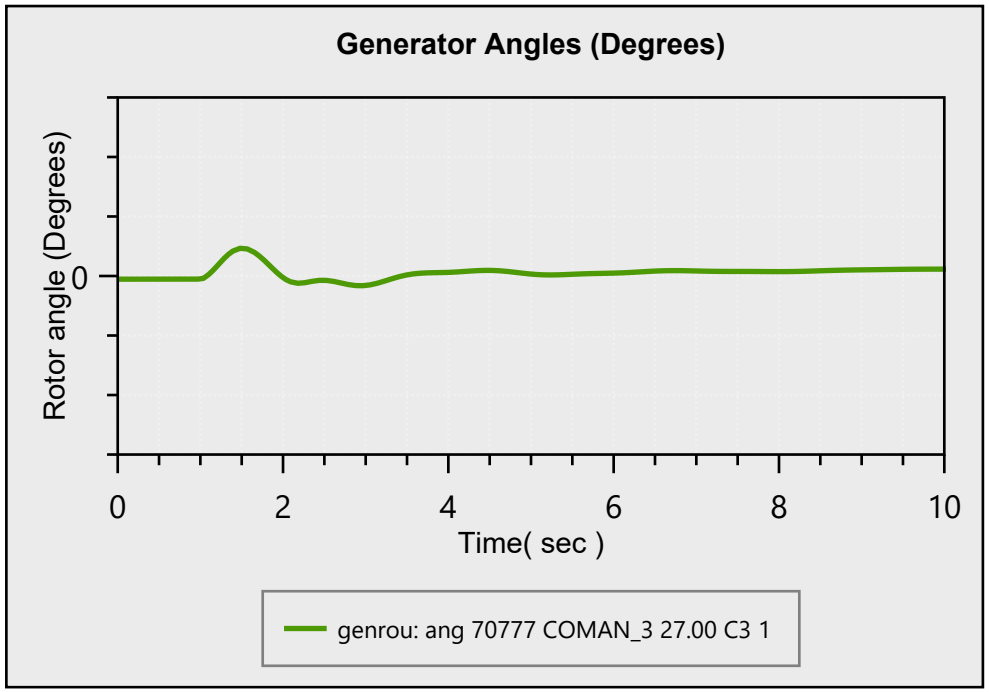

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

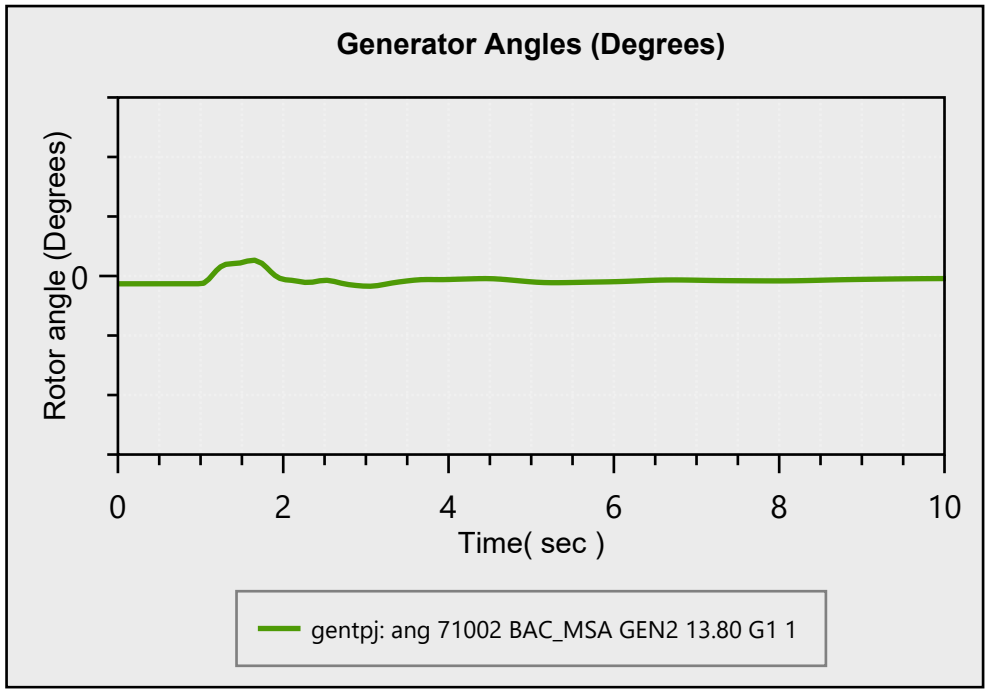

Generator Active Power (MW)
1000
500
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

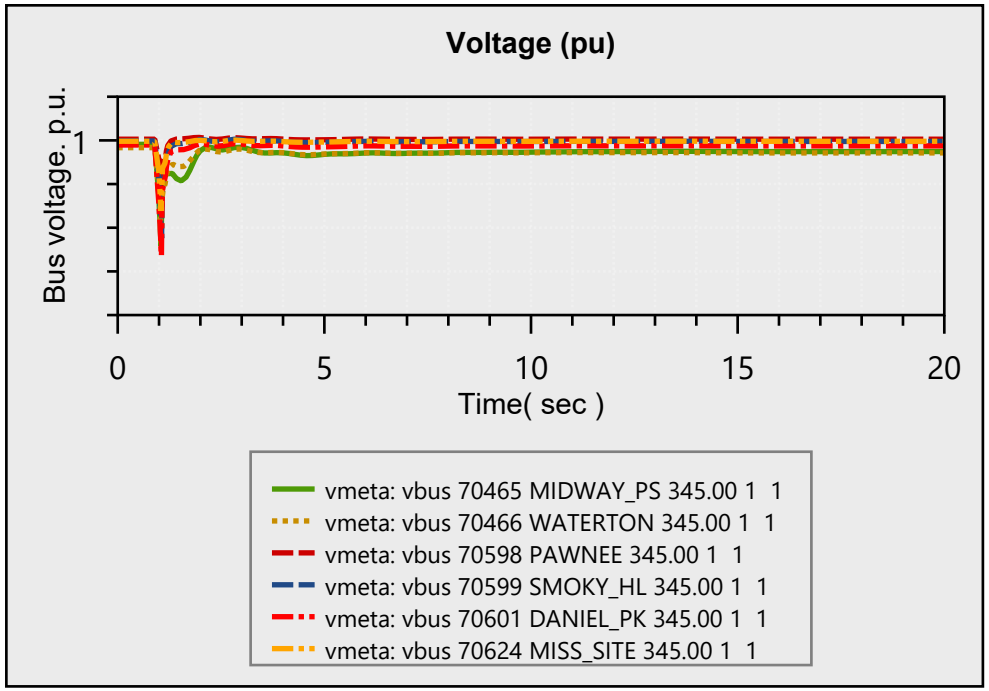

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

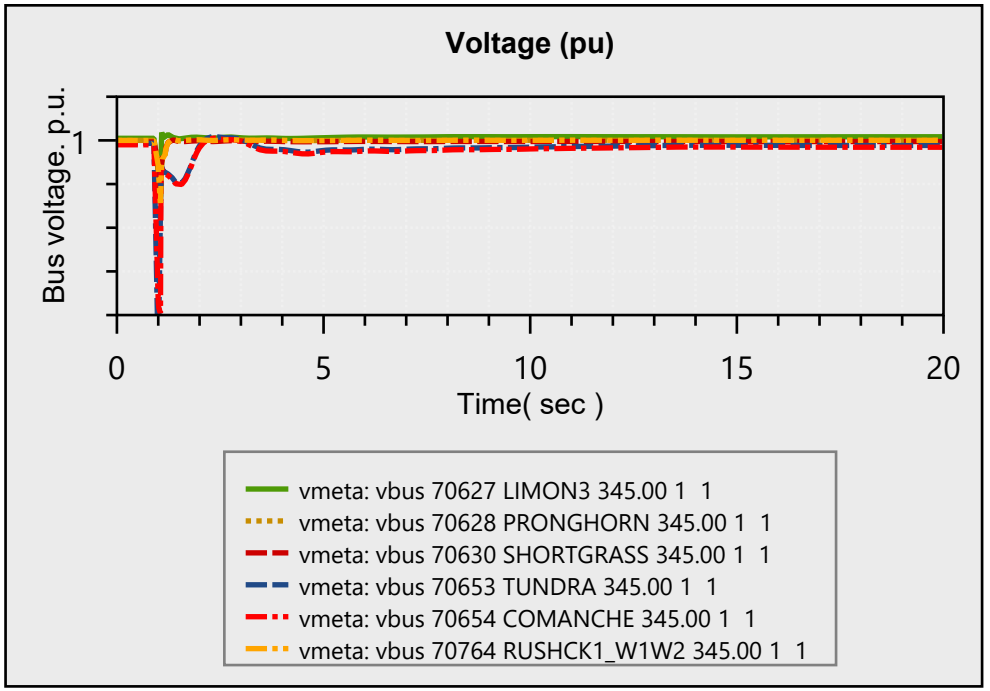

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

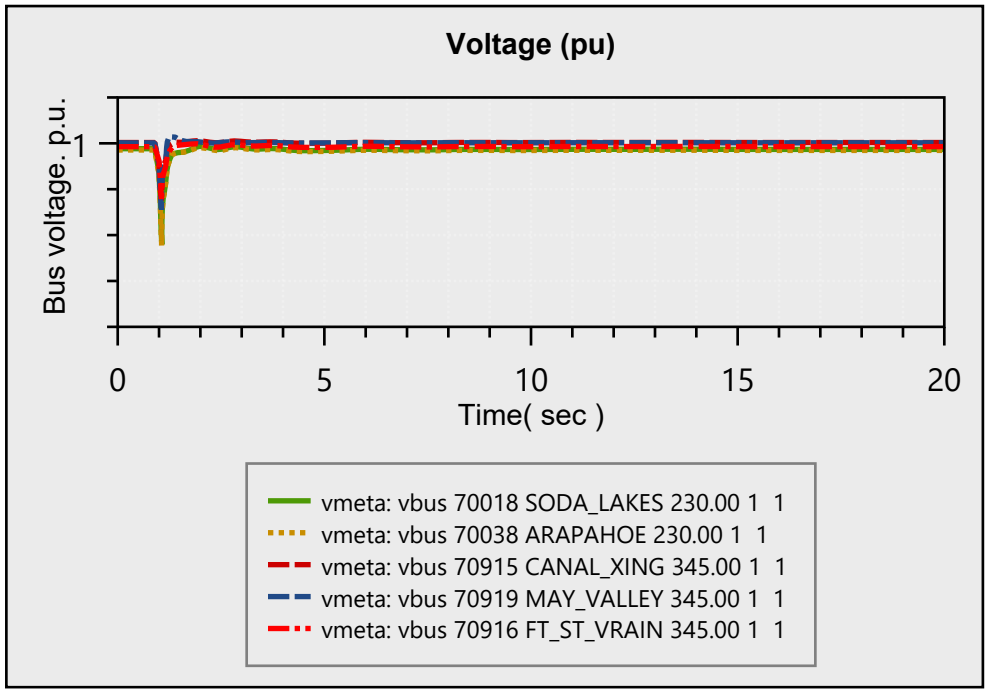

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

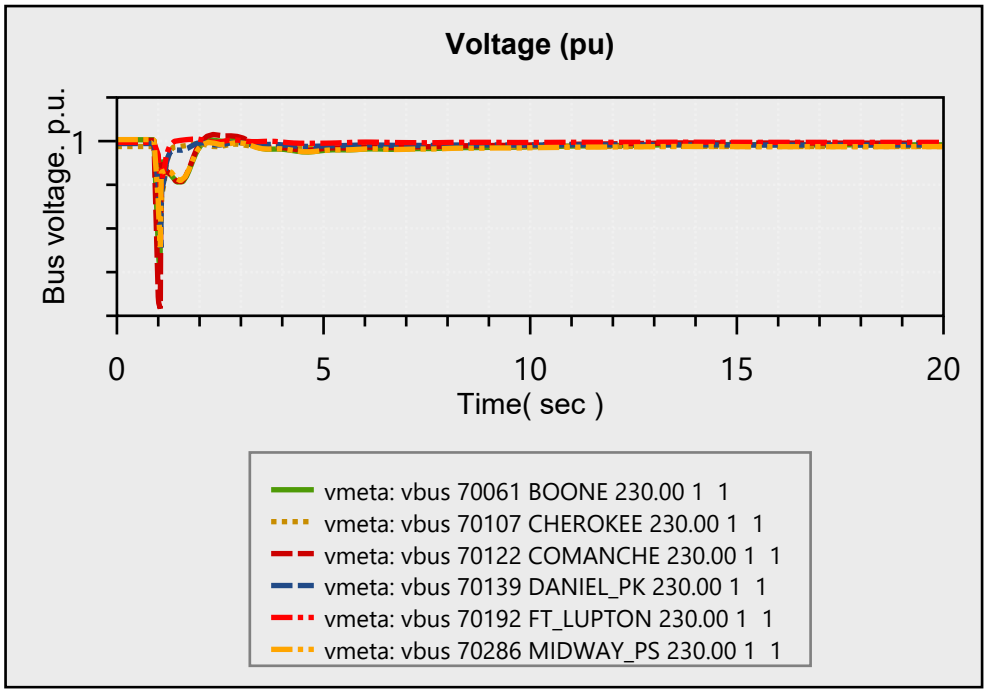

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

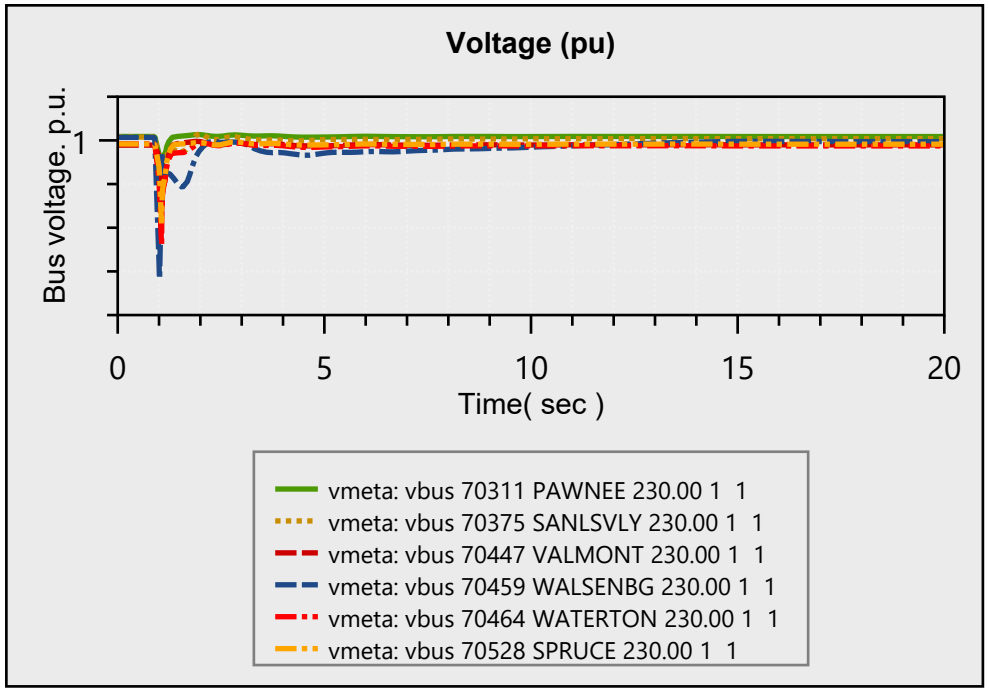

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

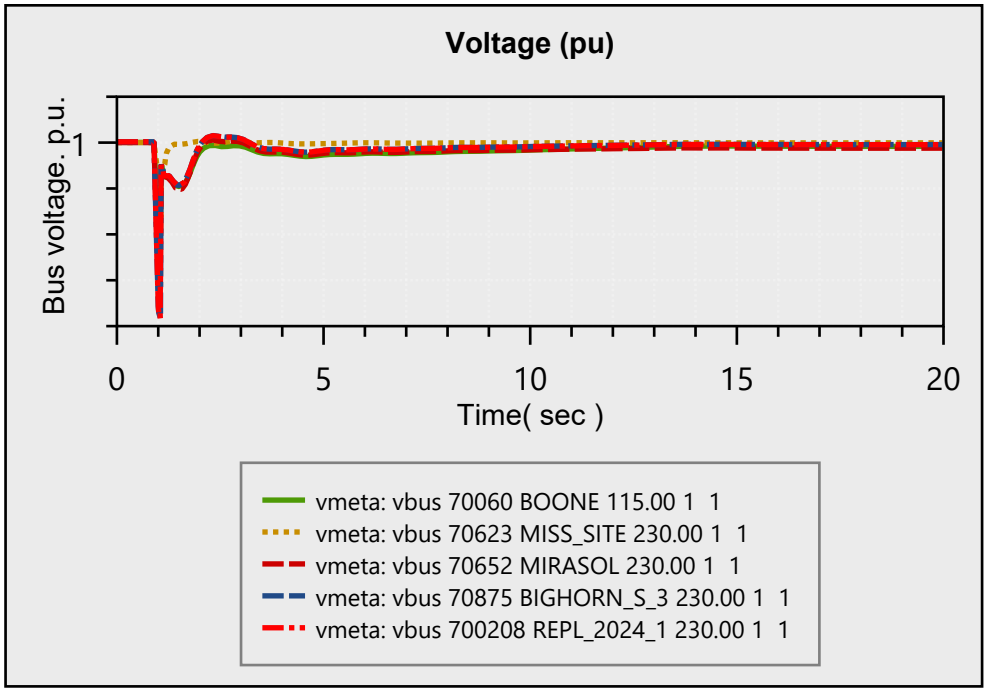

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

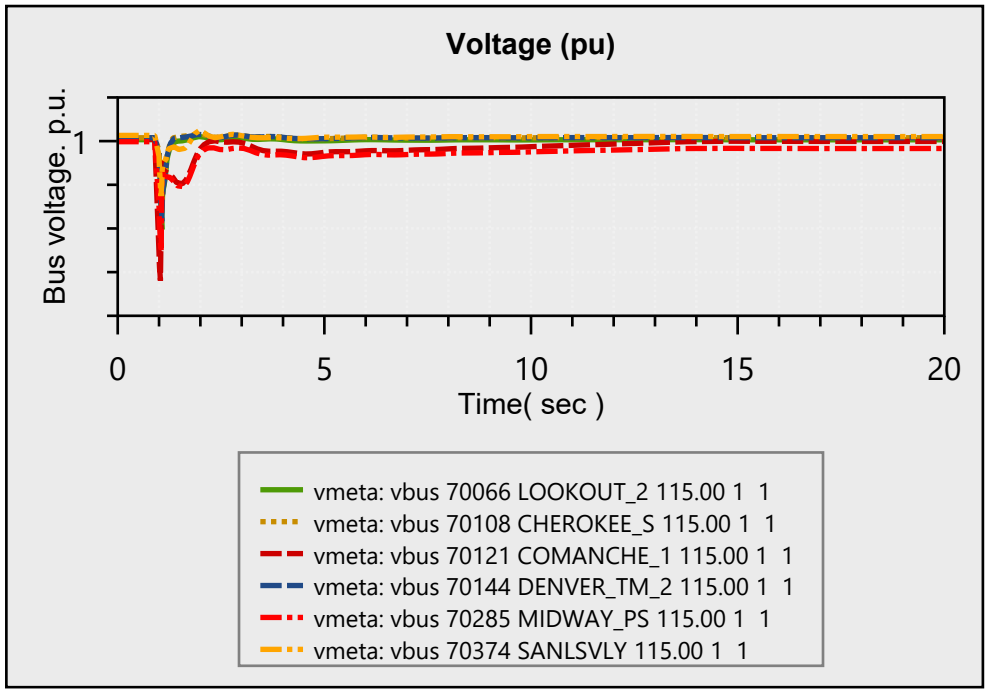

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1

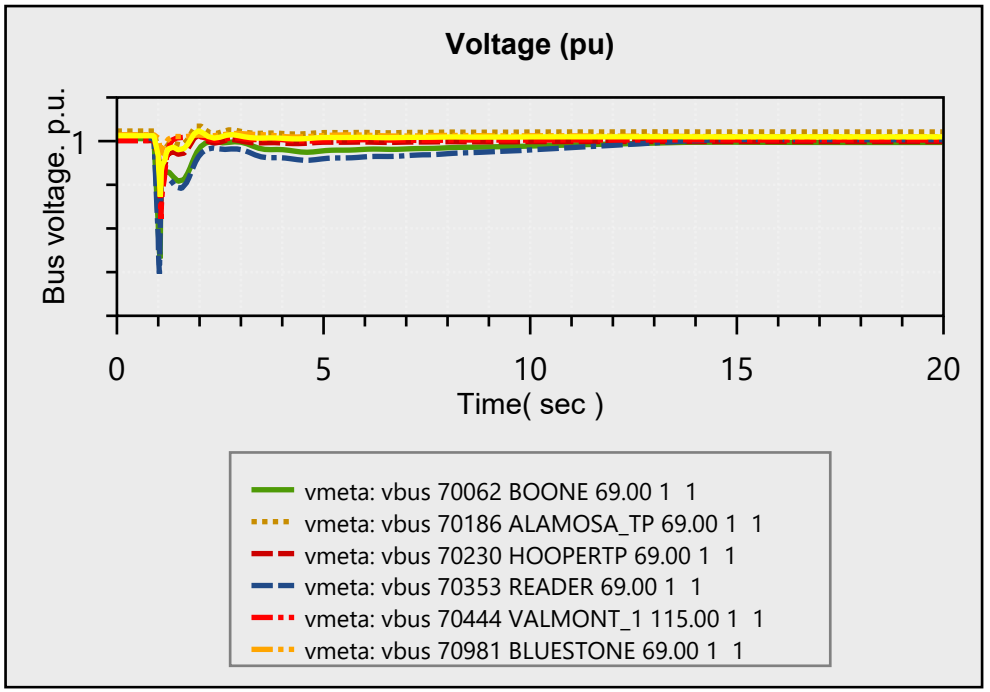

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

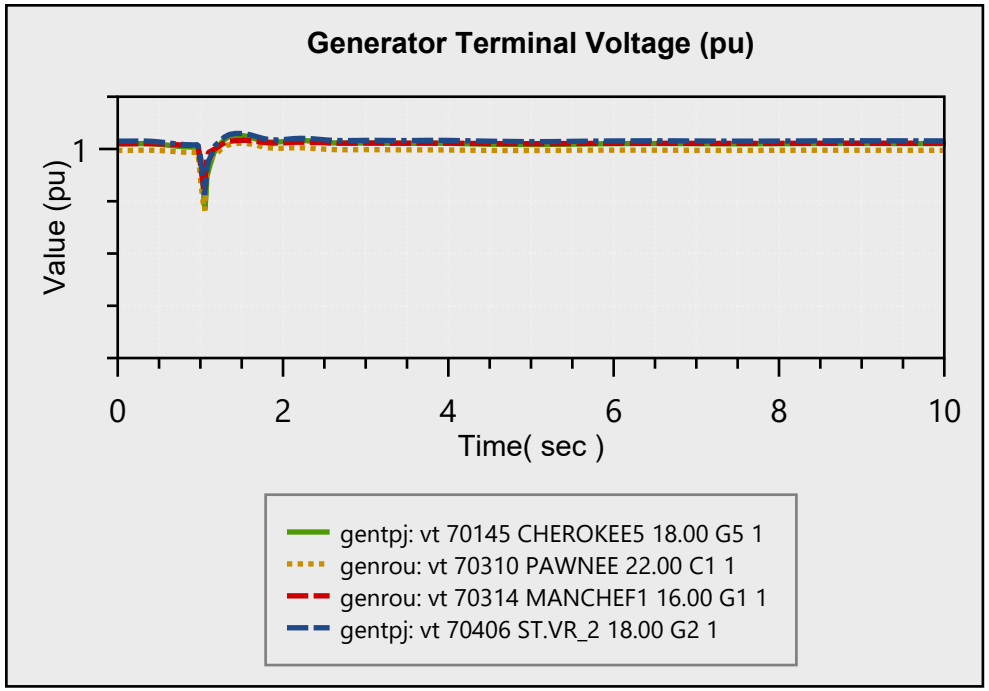

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

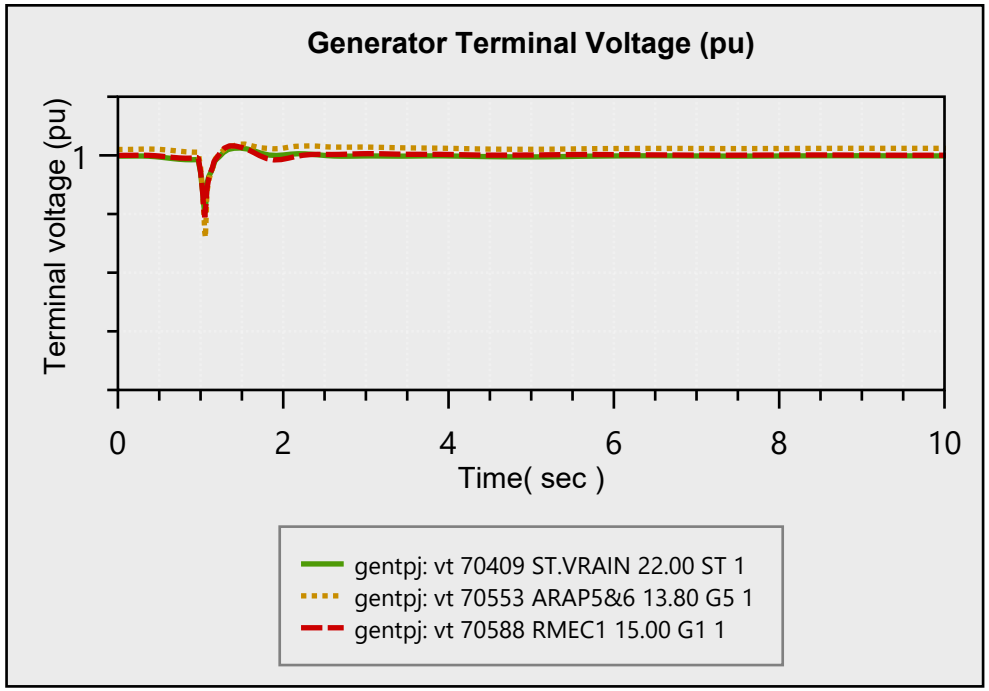

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1

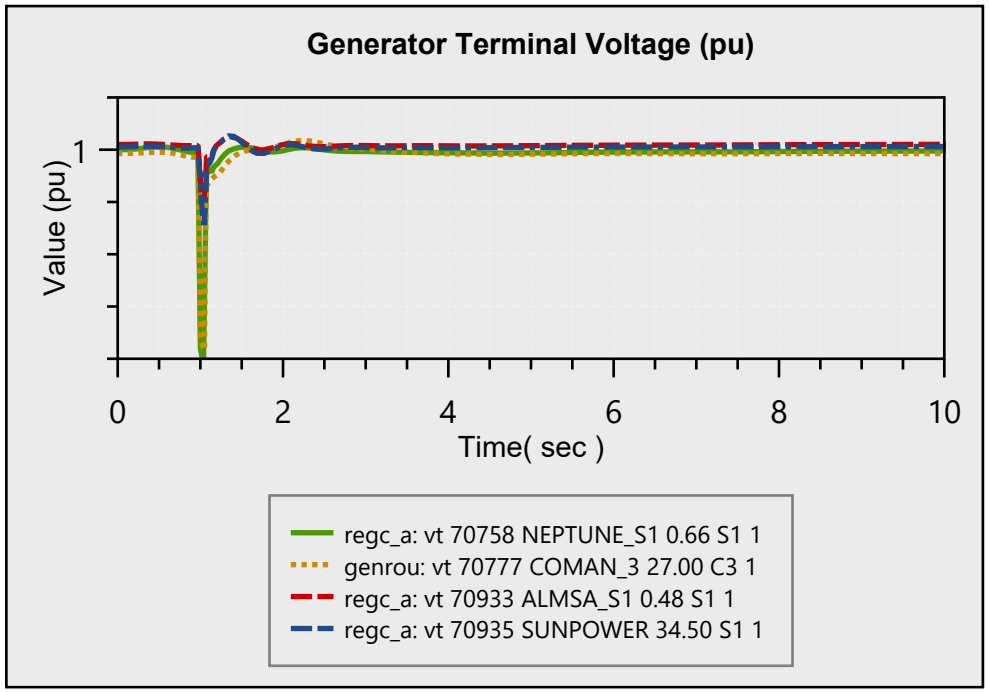

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

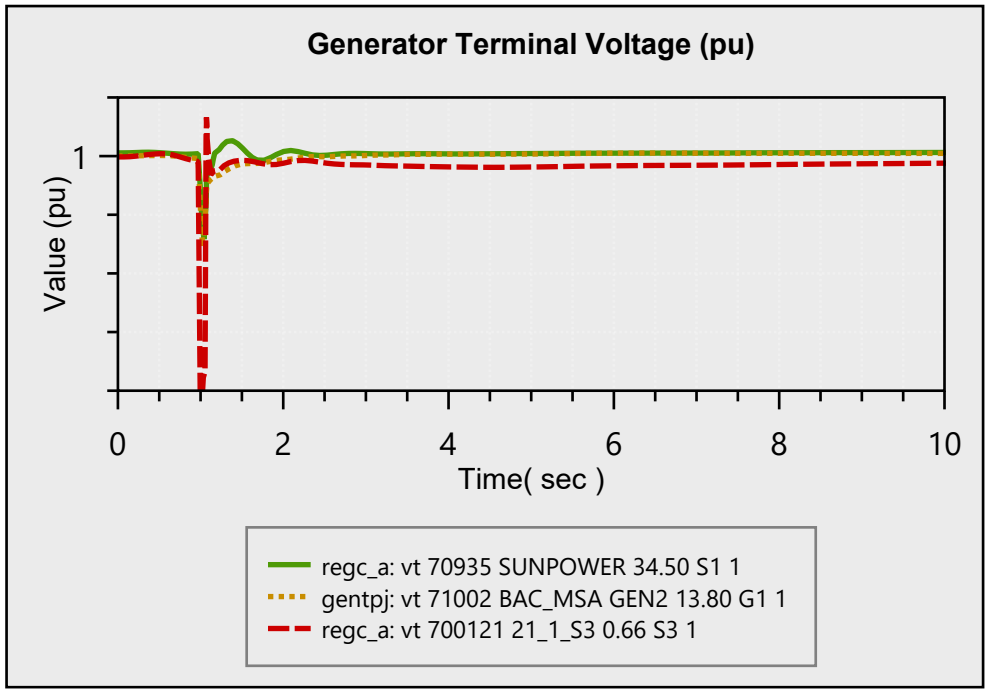

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

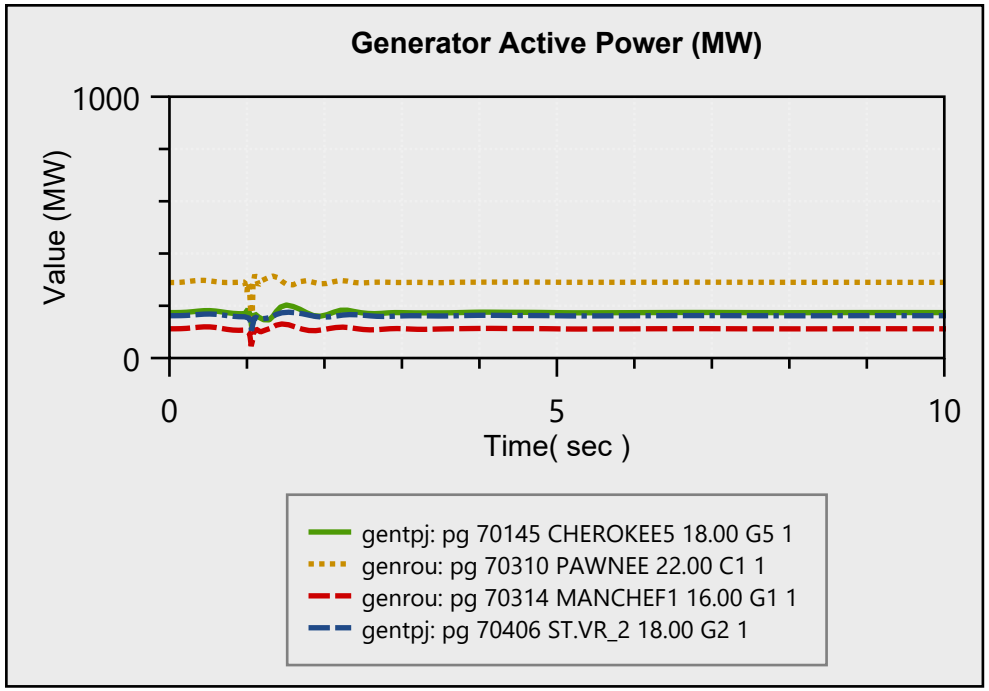

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

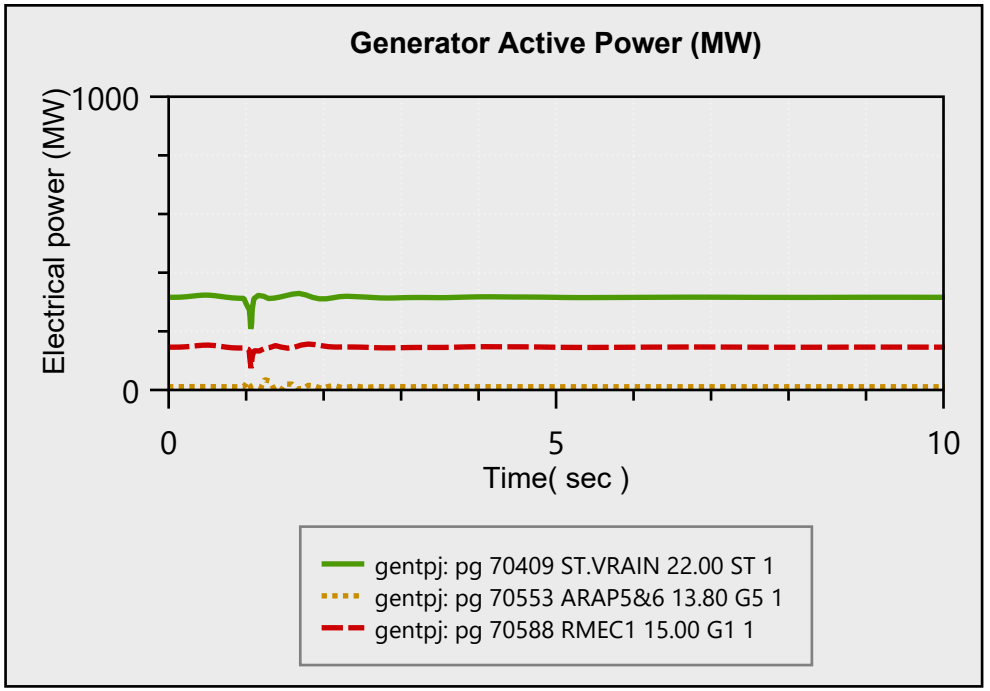

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

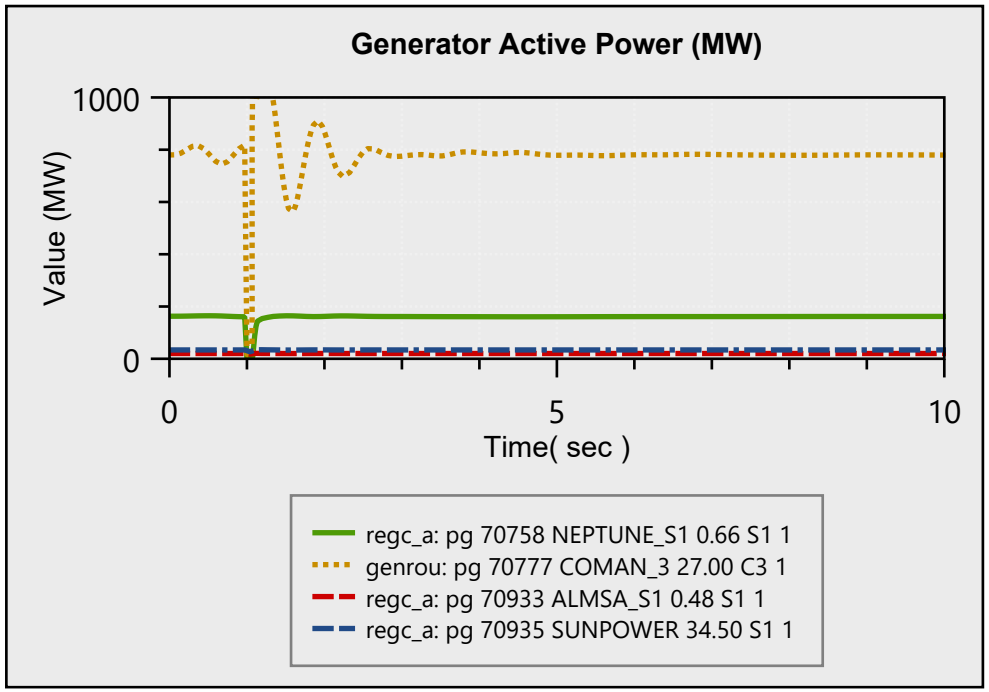

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

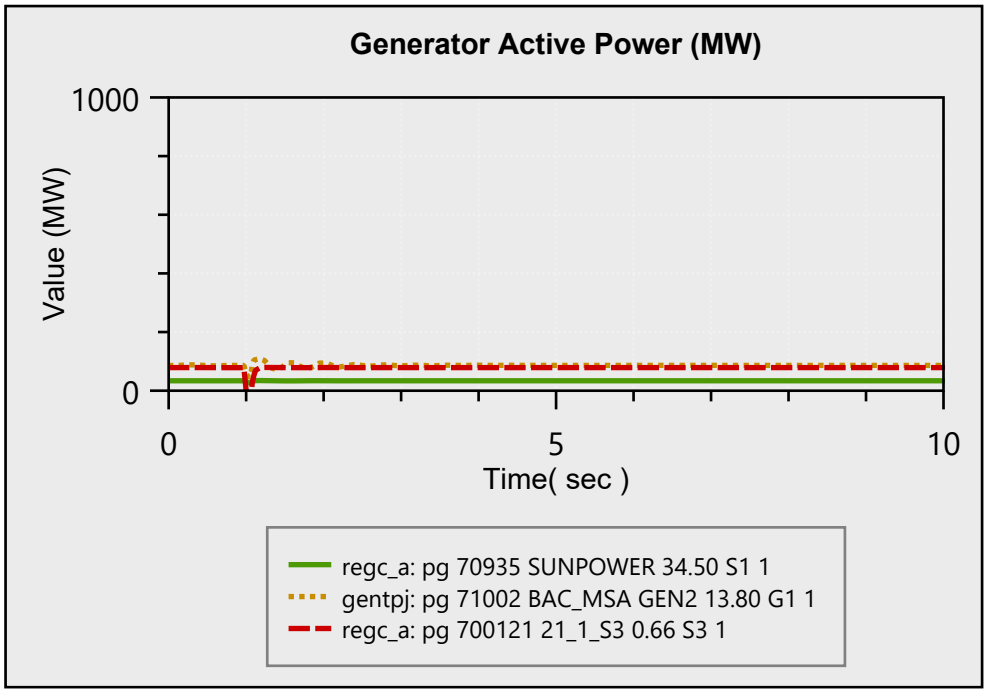

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

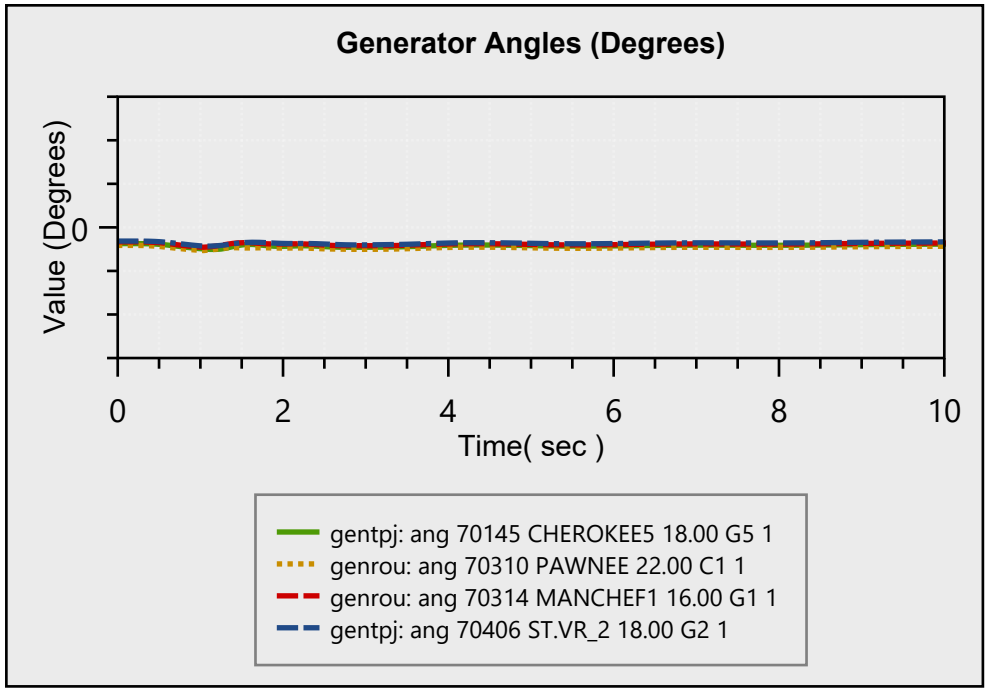

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

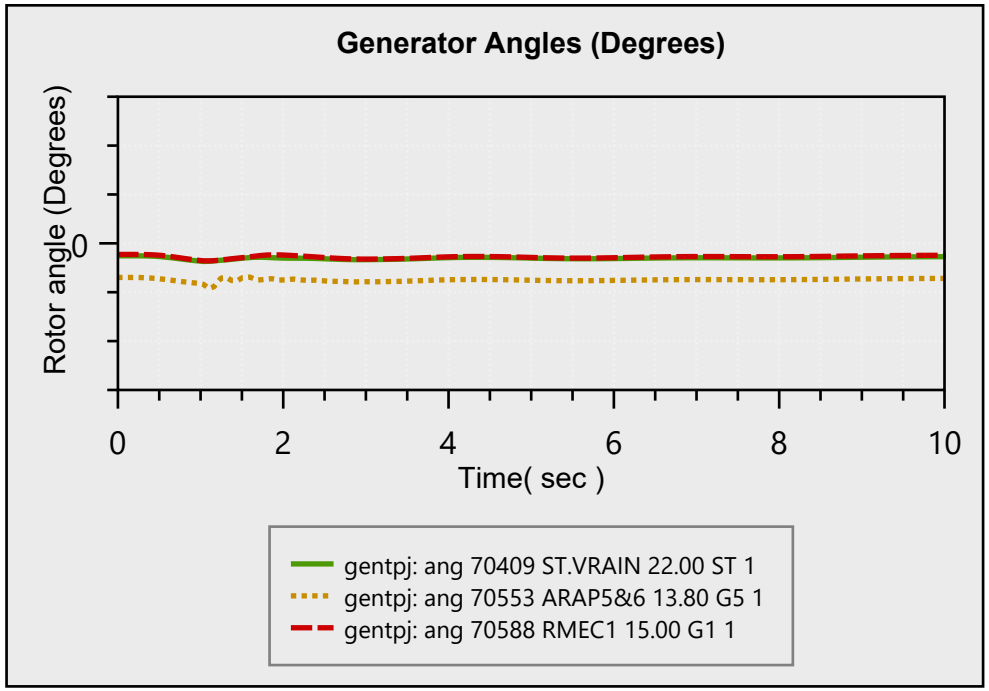

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

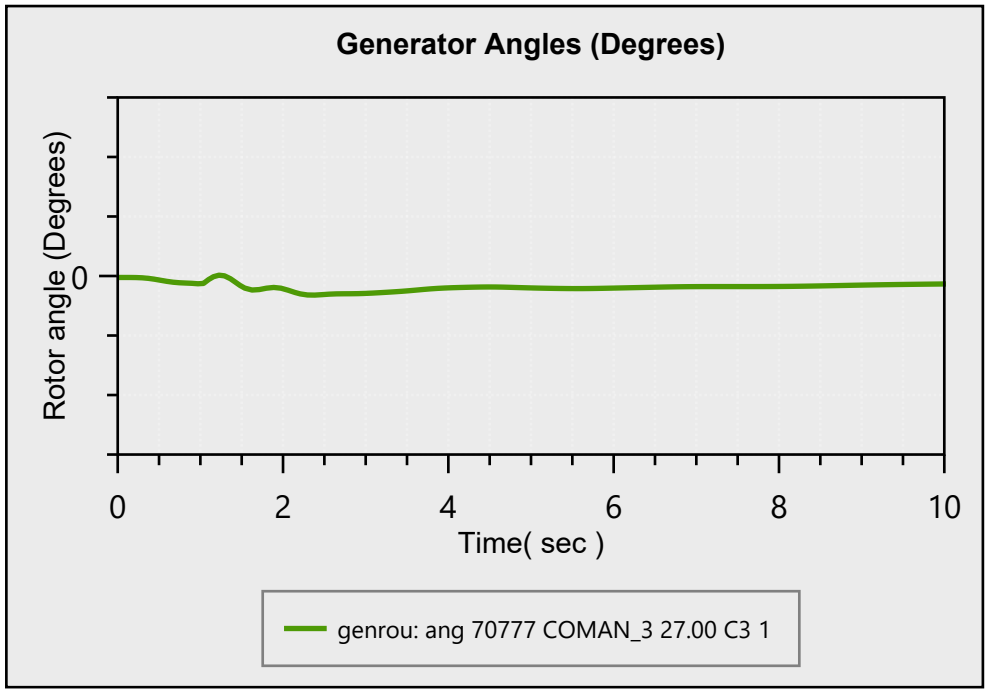

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

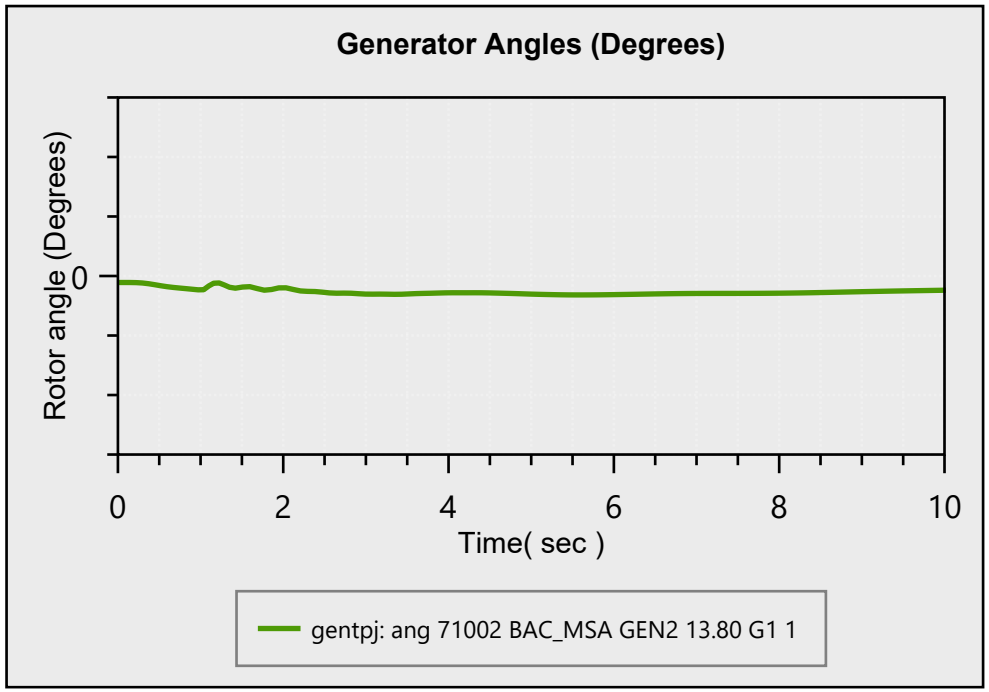

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

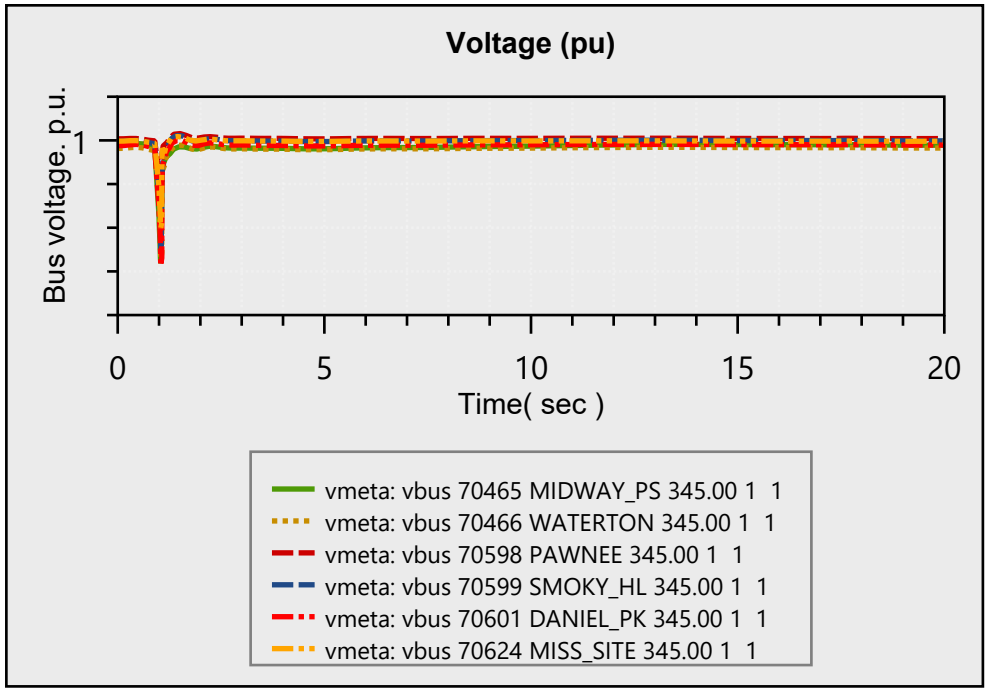

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

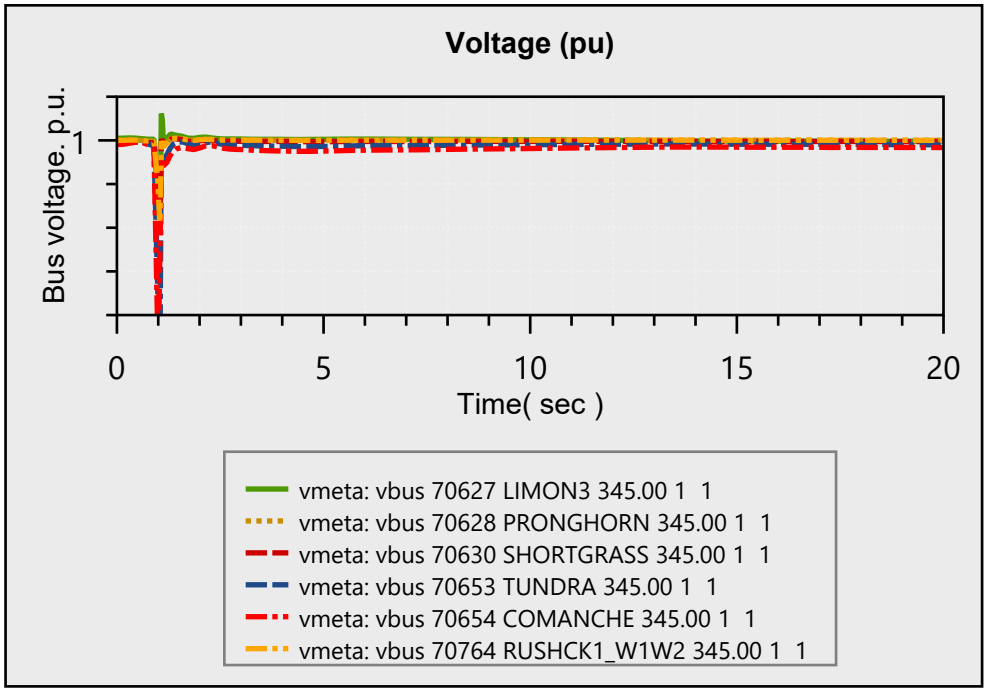

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

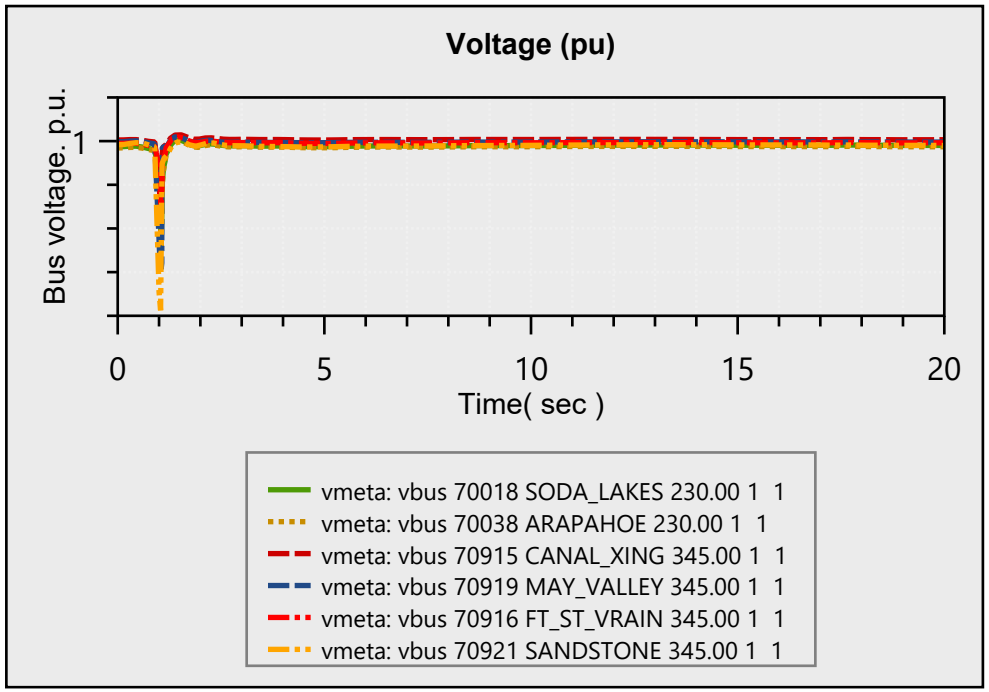

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

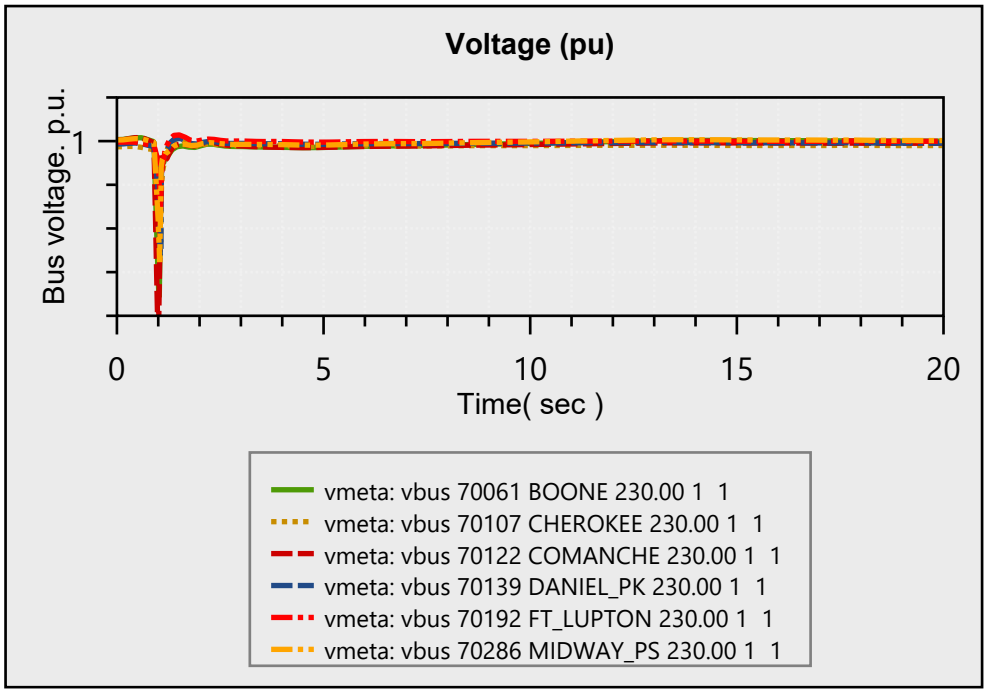

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

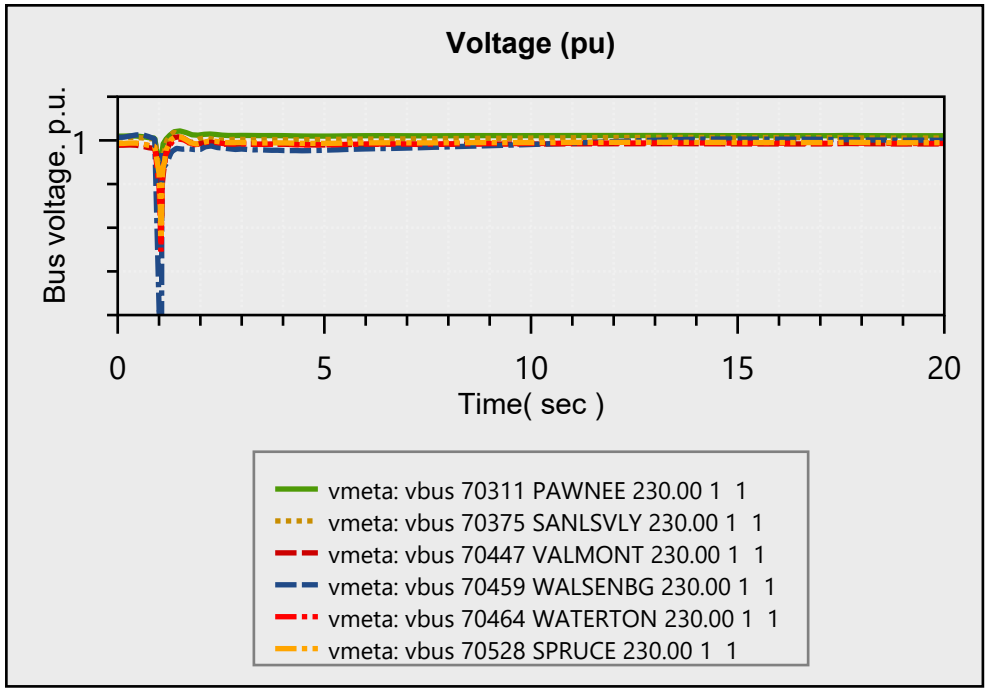

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

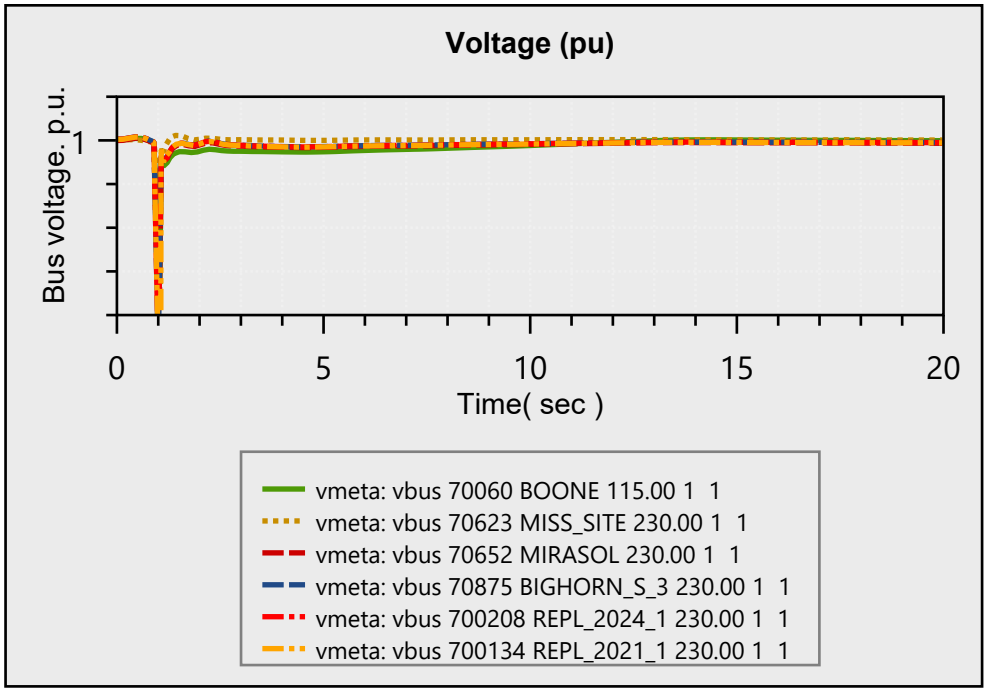

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

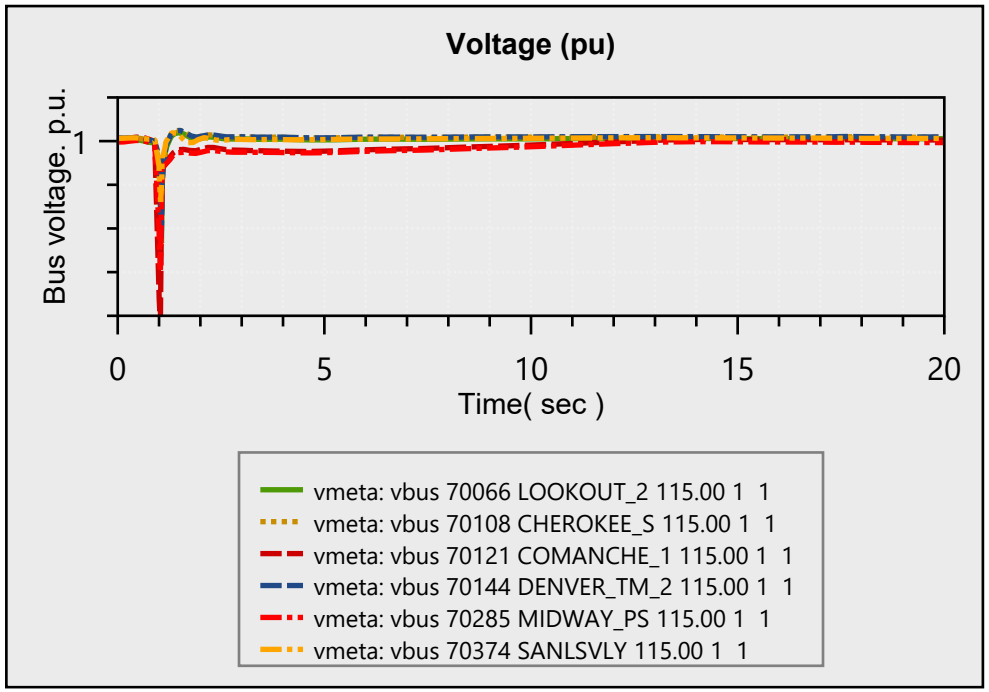

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

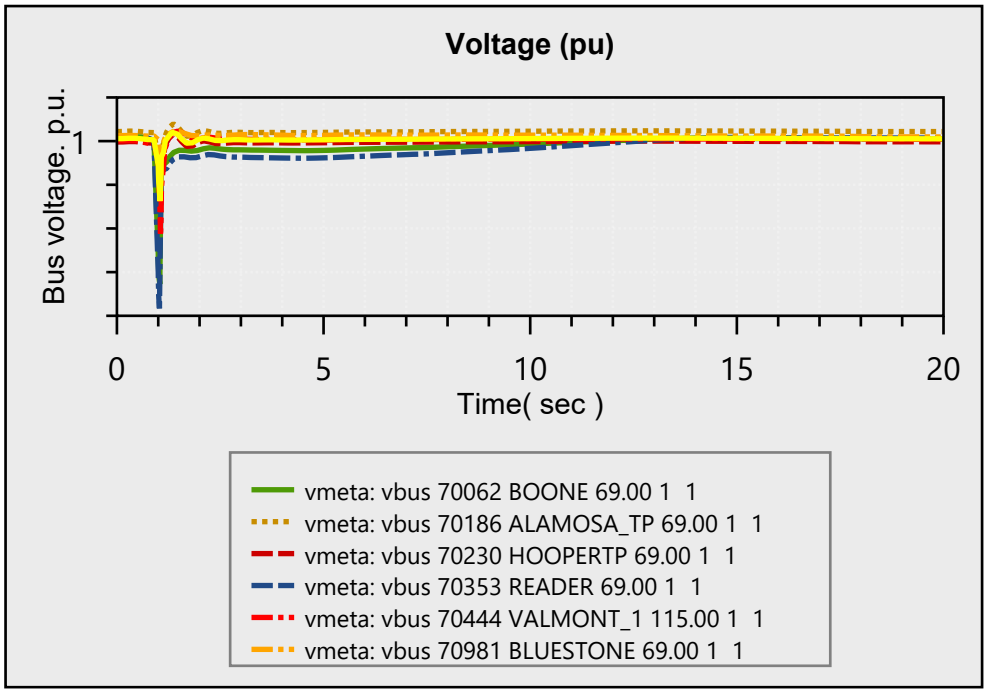

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

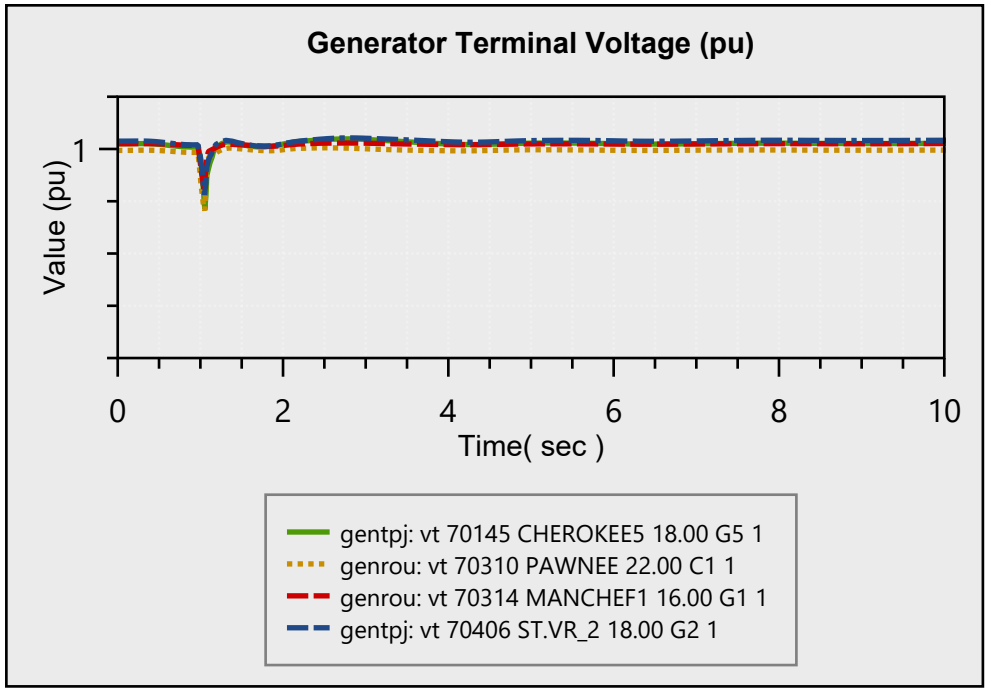

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

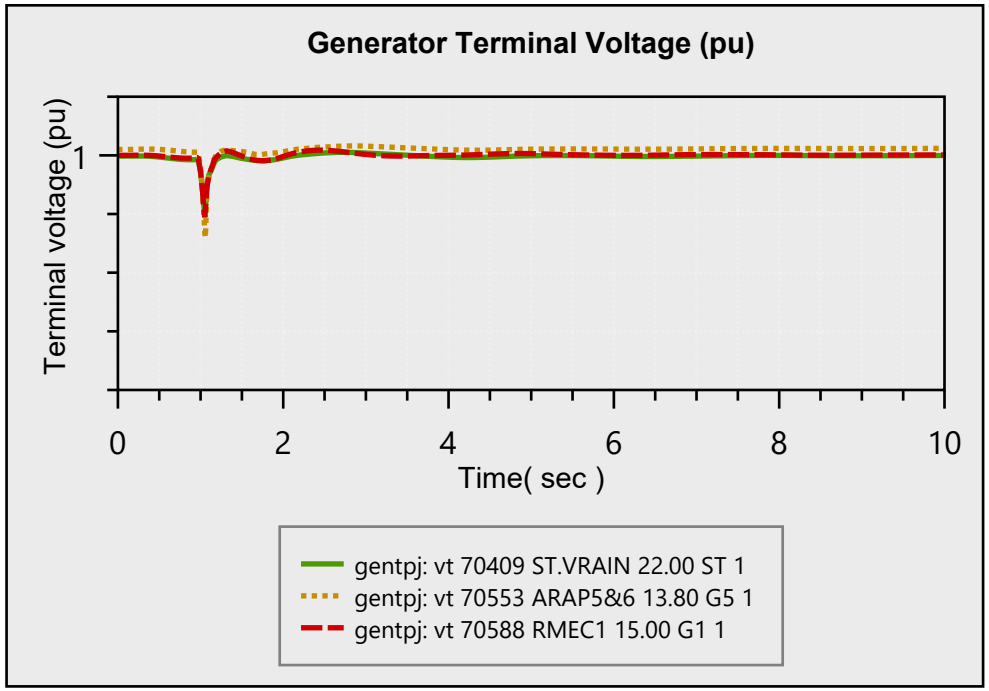

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

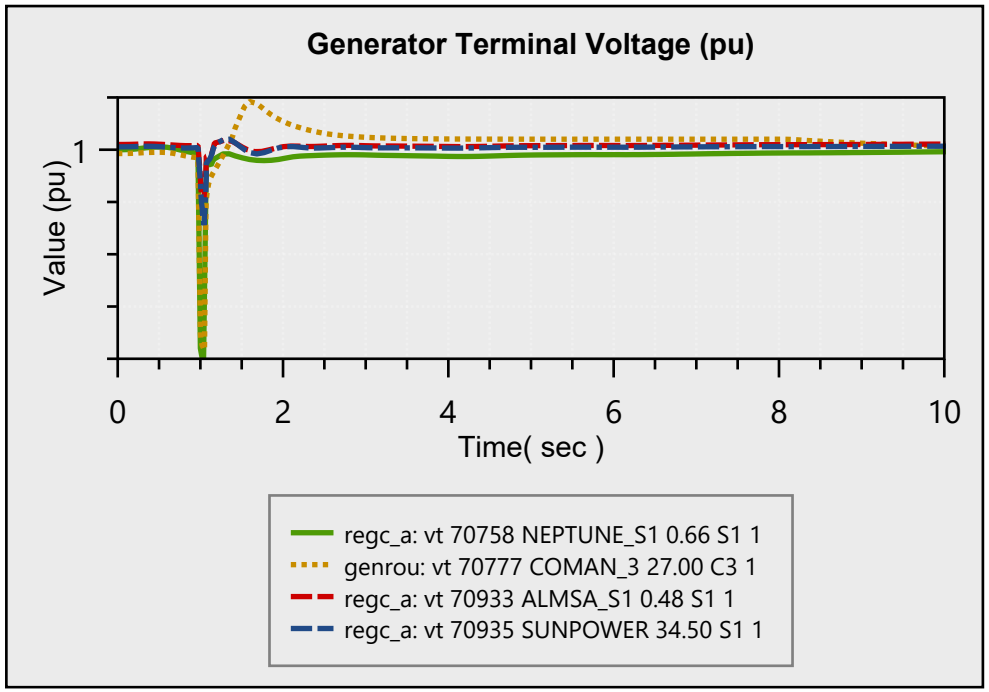

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

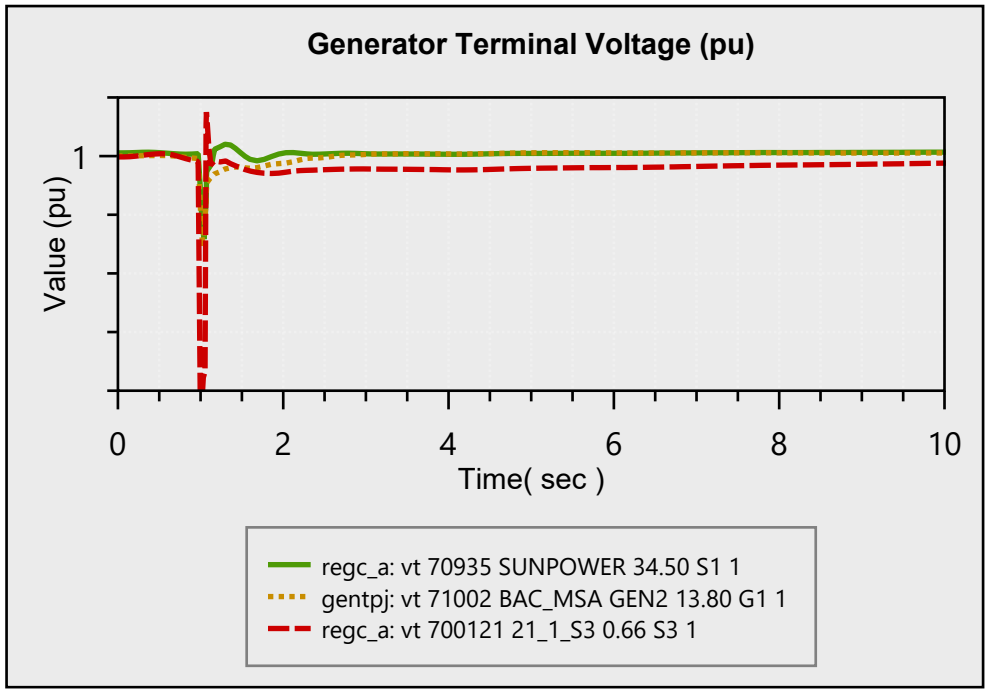

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

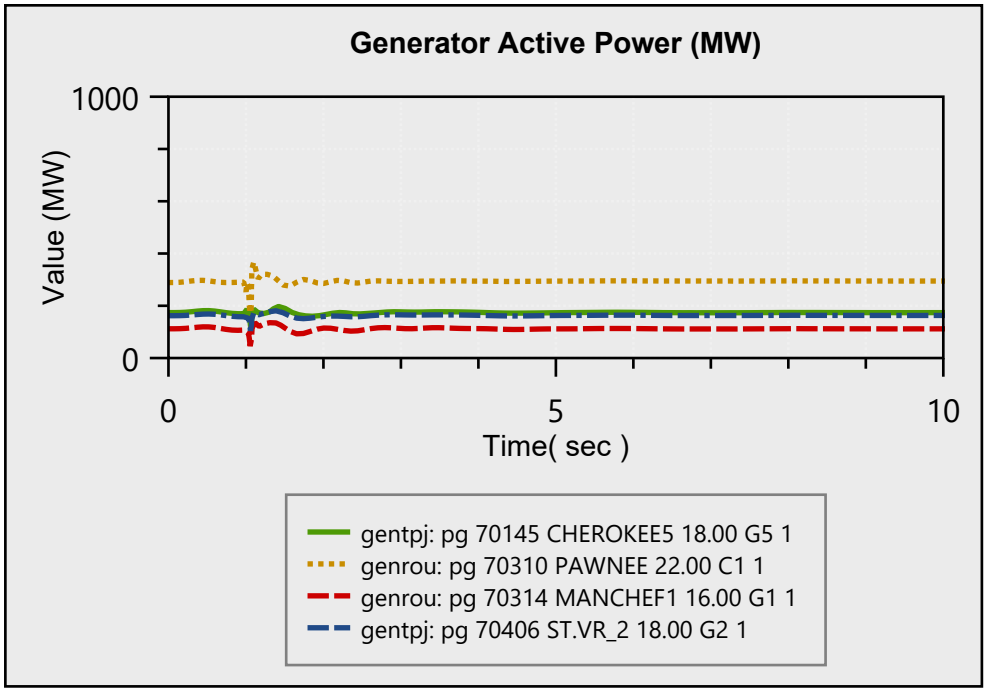

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

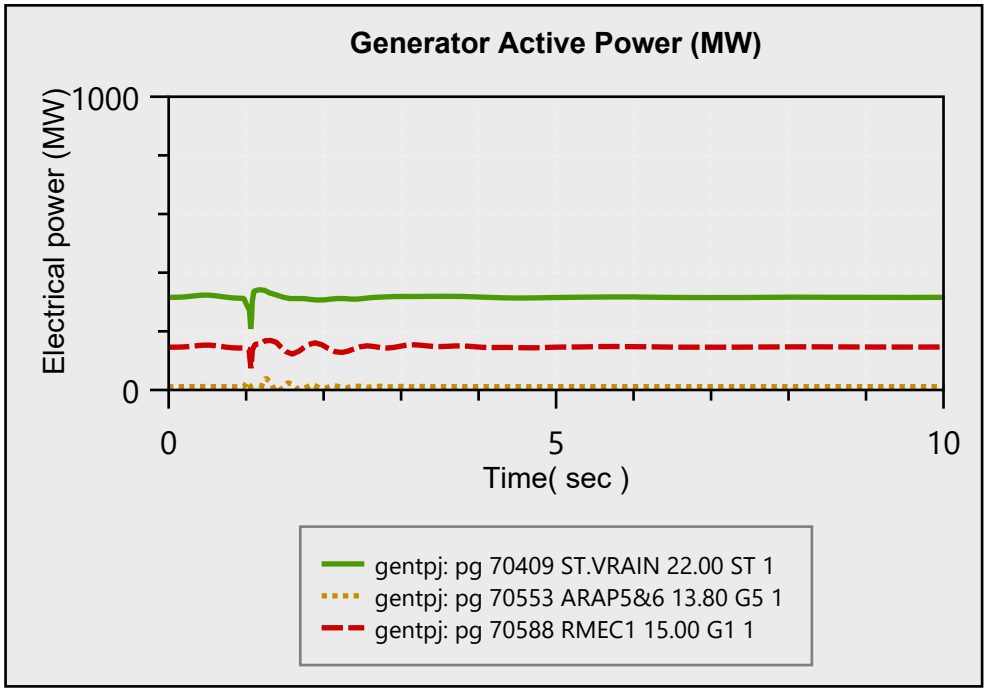

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

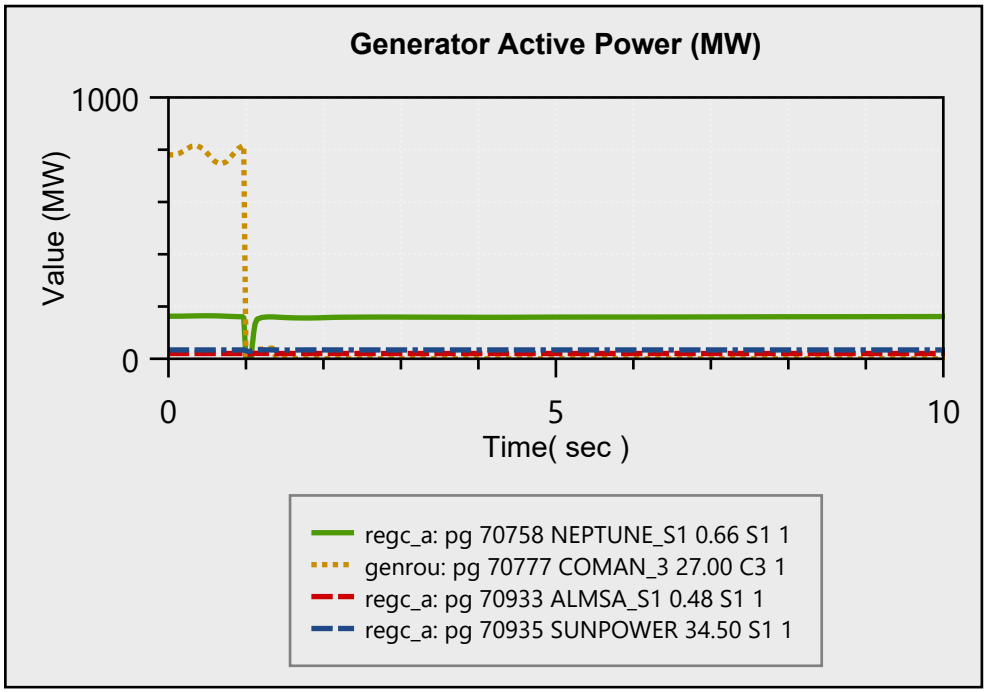

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

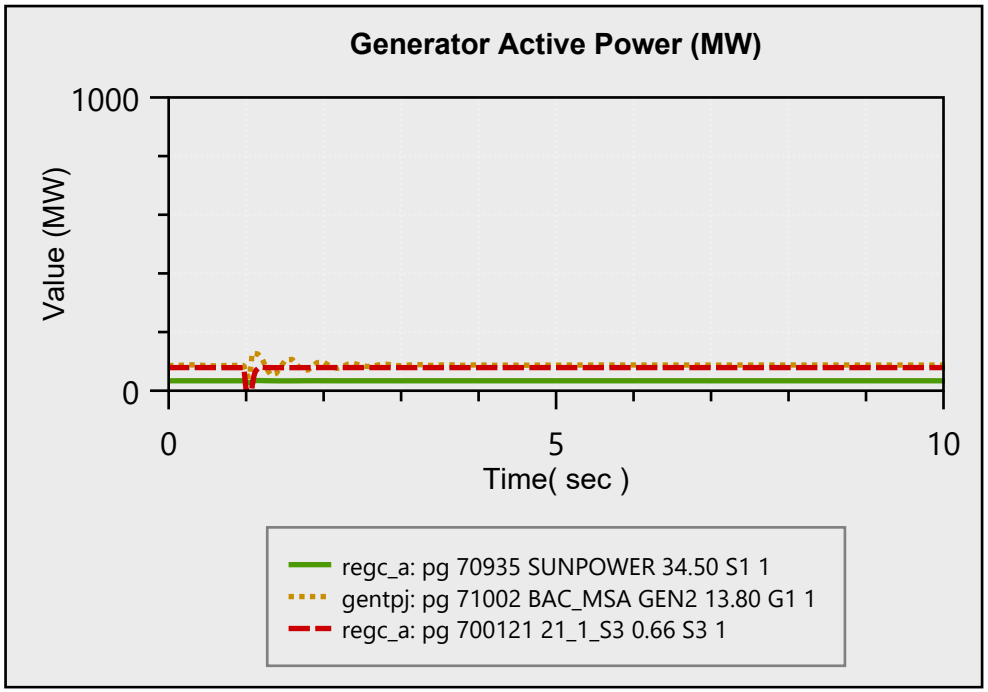

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

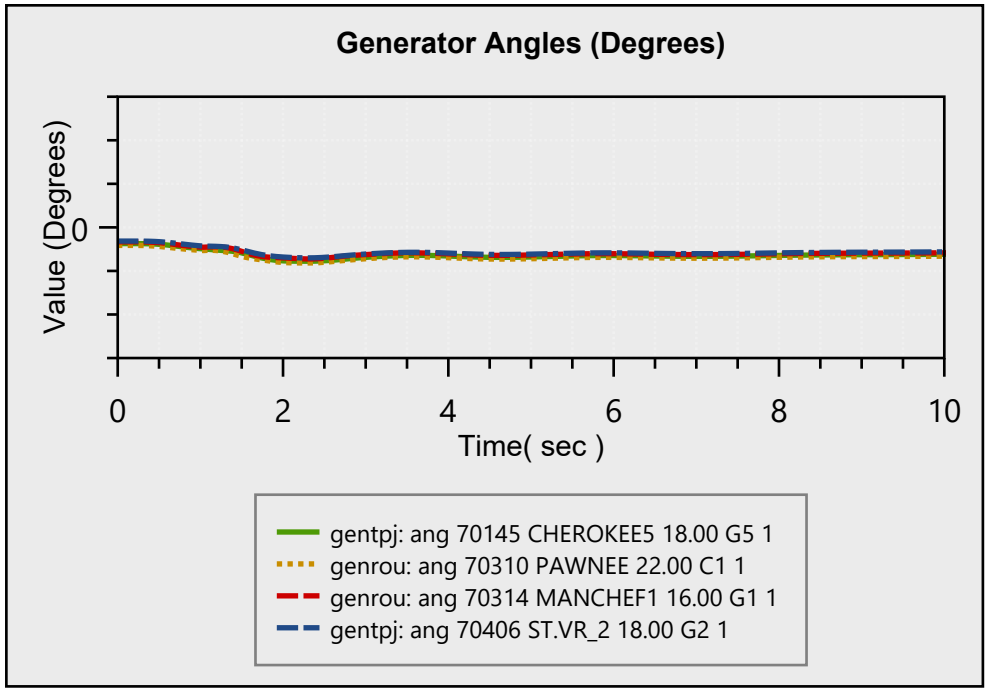

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

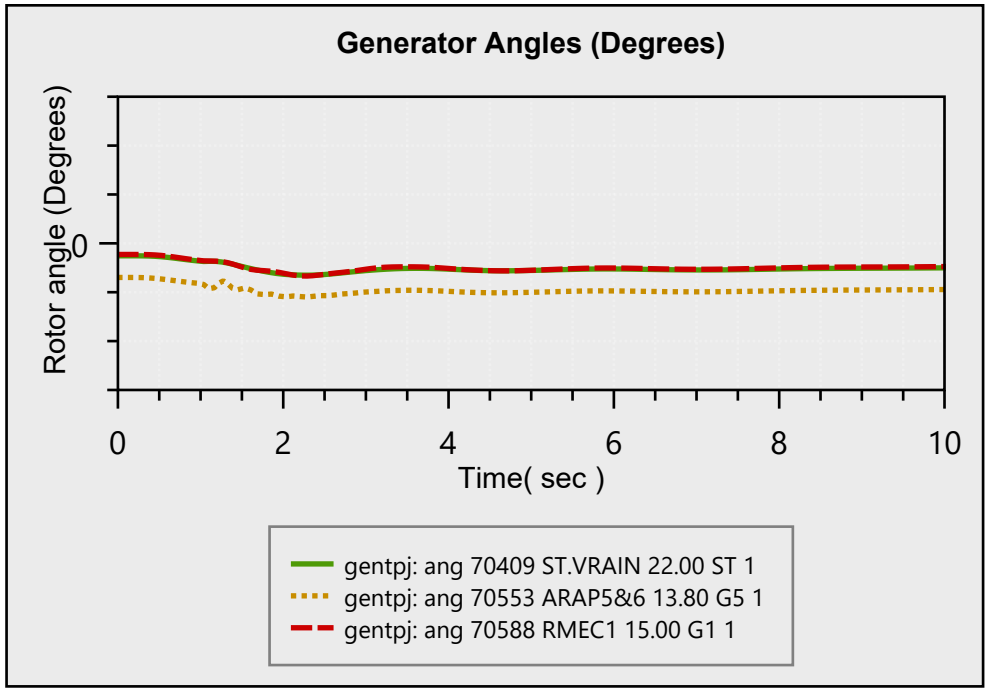

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

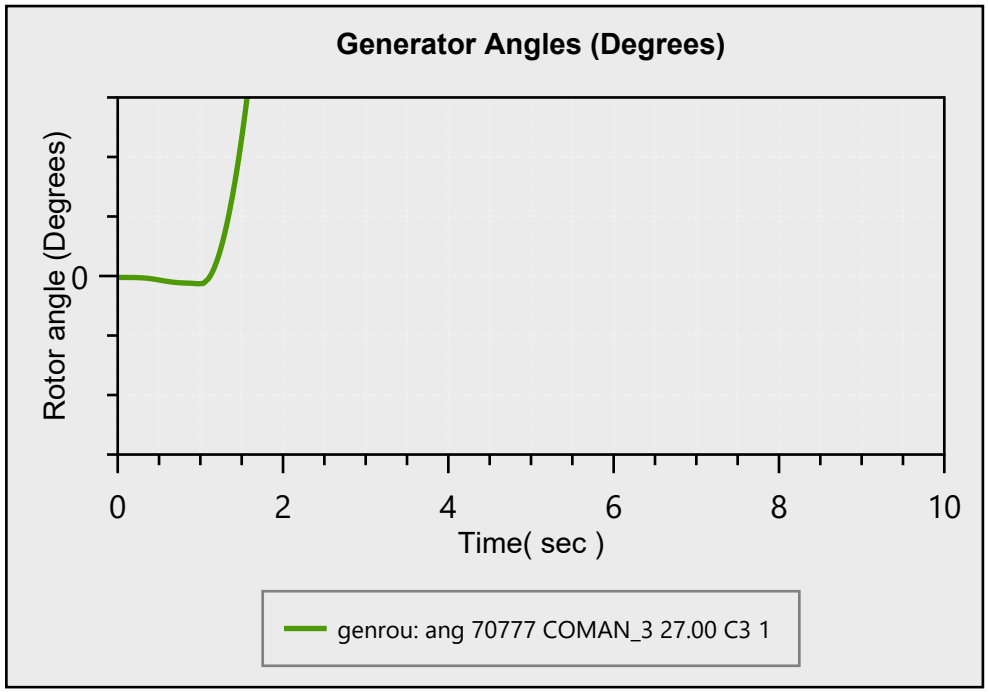

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

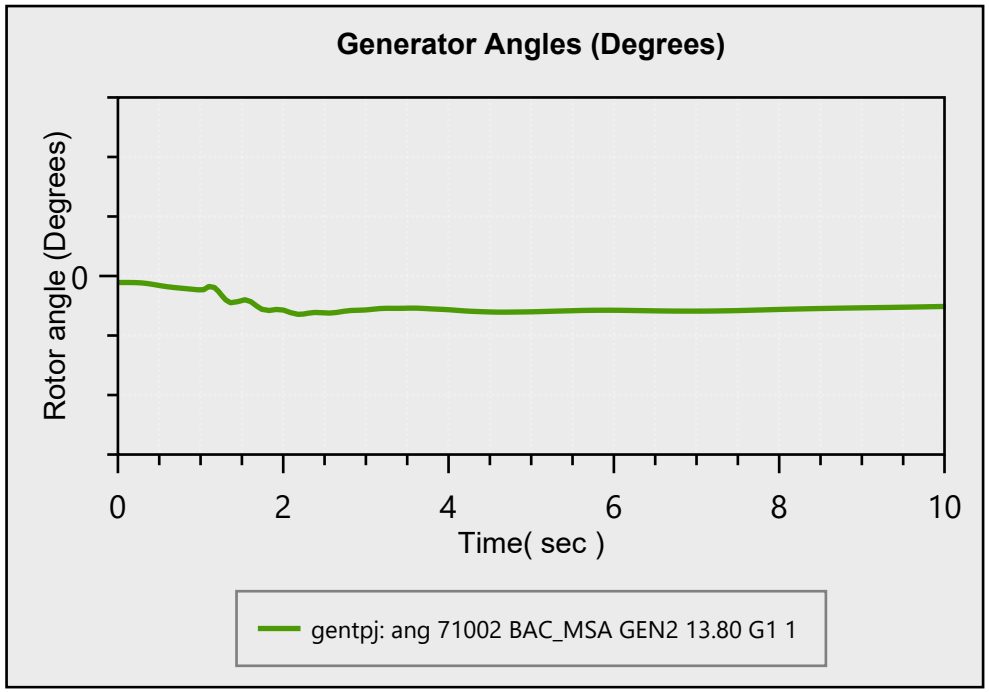

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

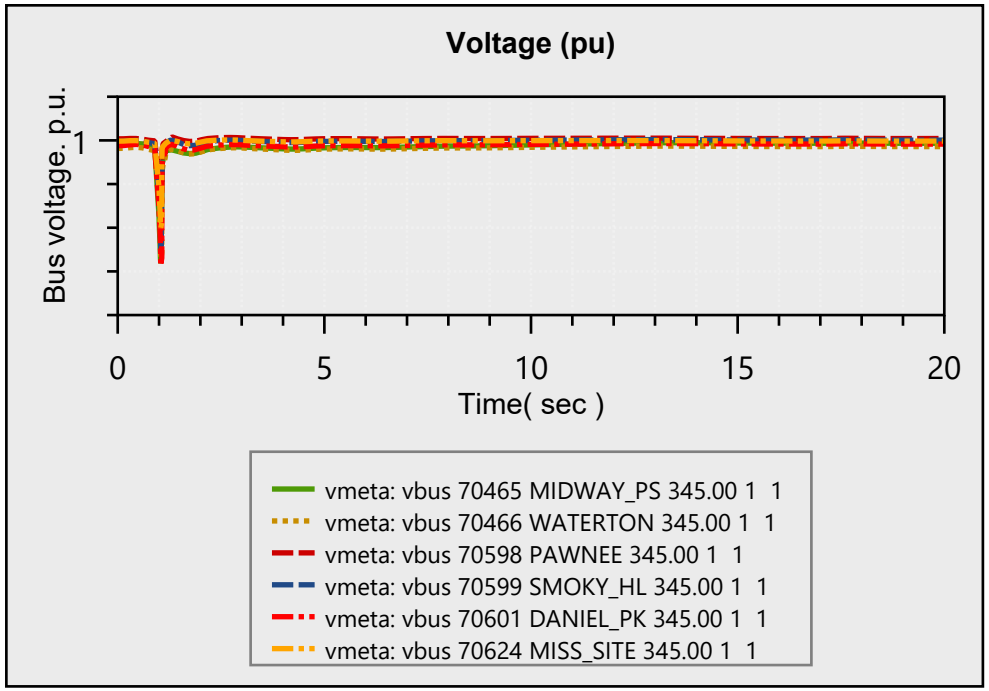

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

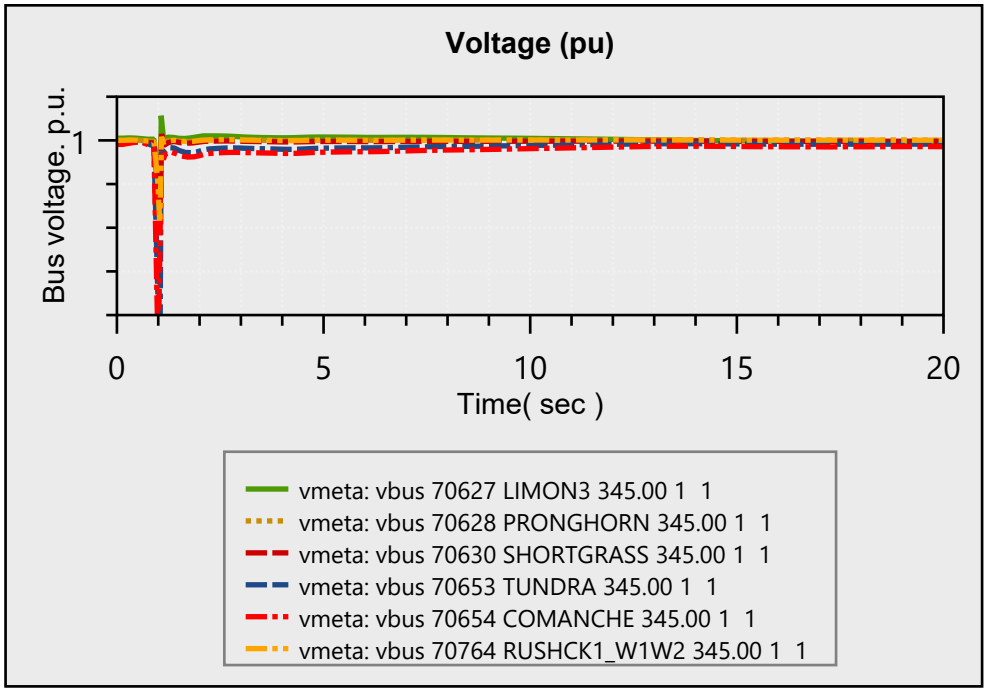

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

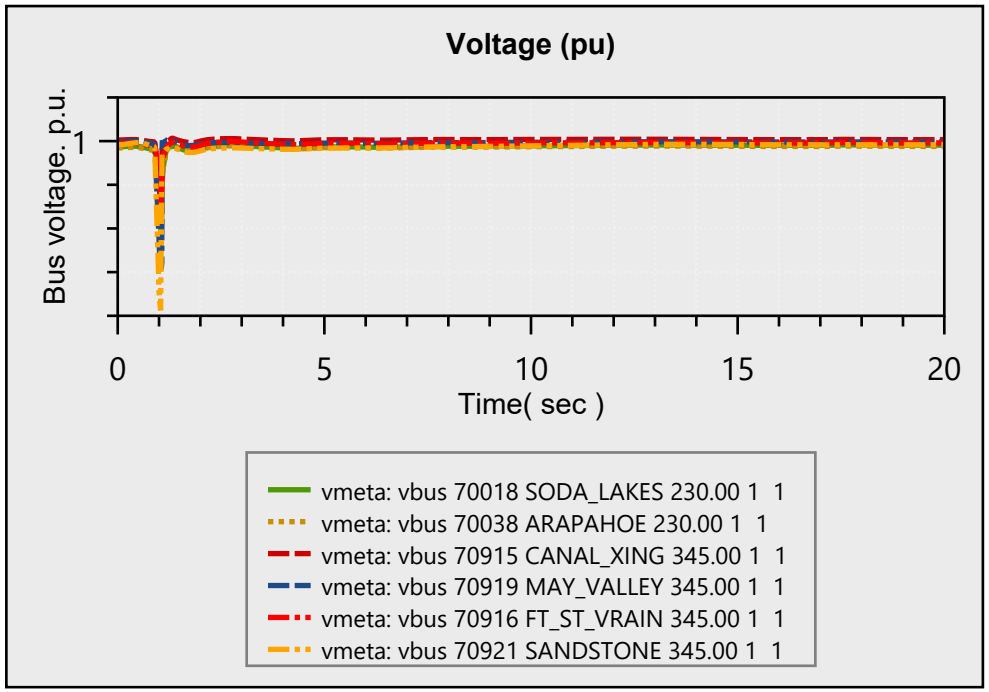

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

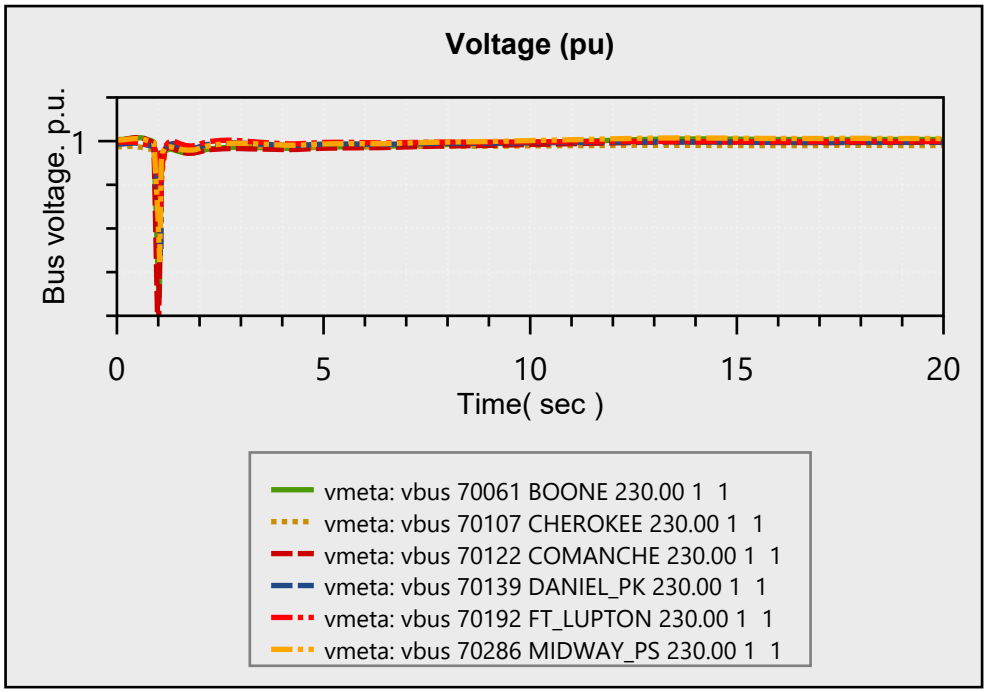

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

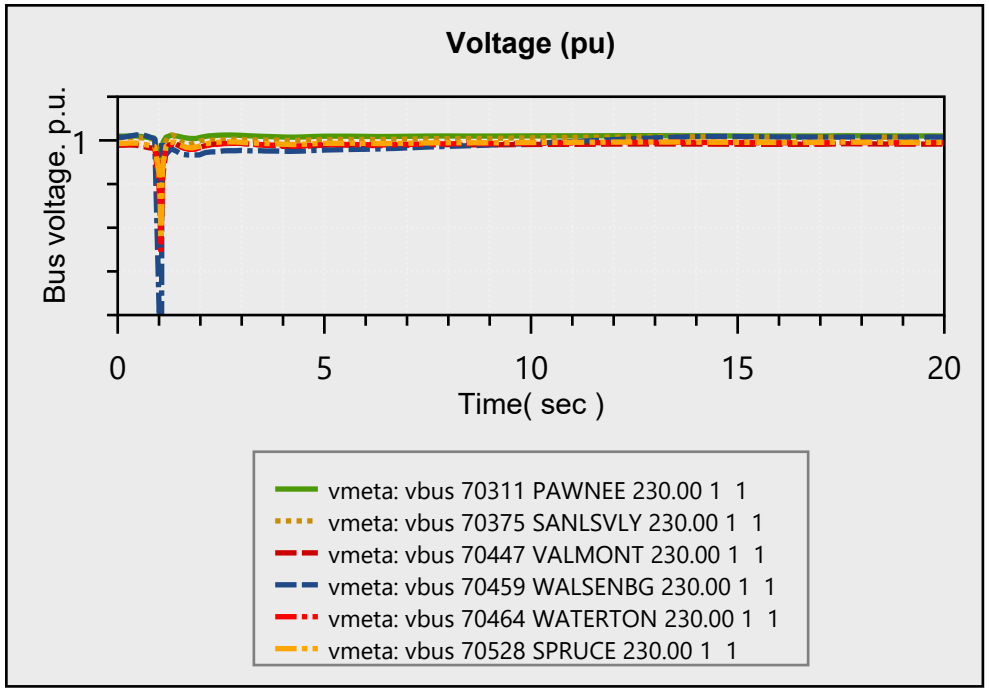

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

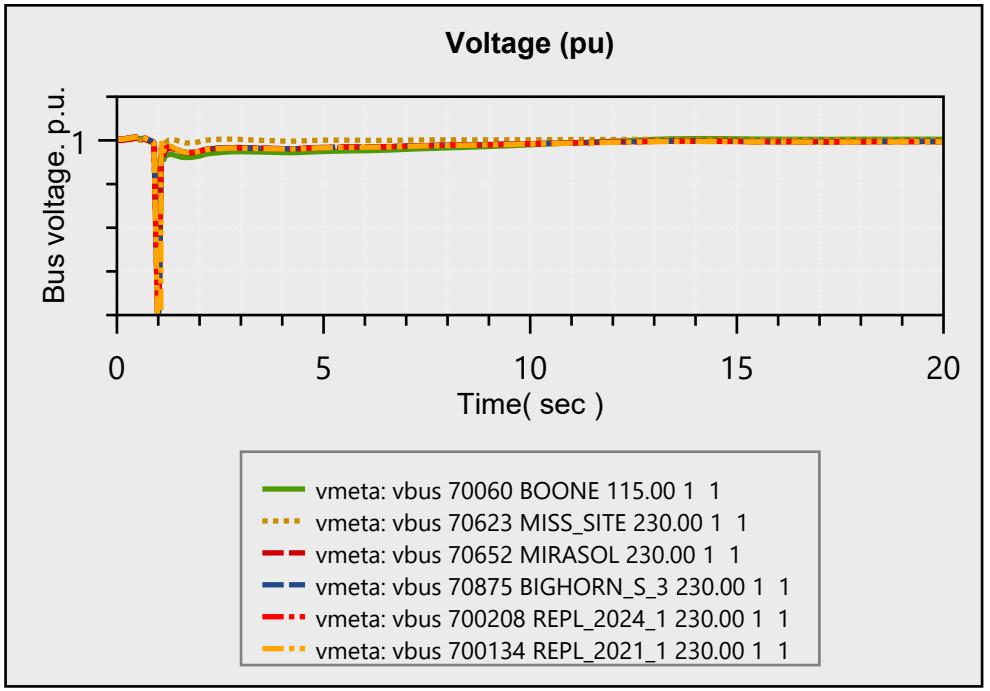

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

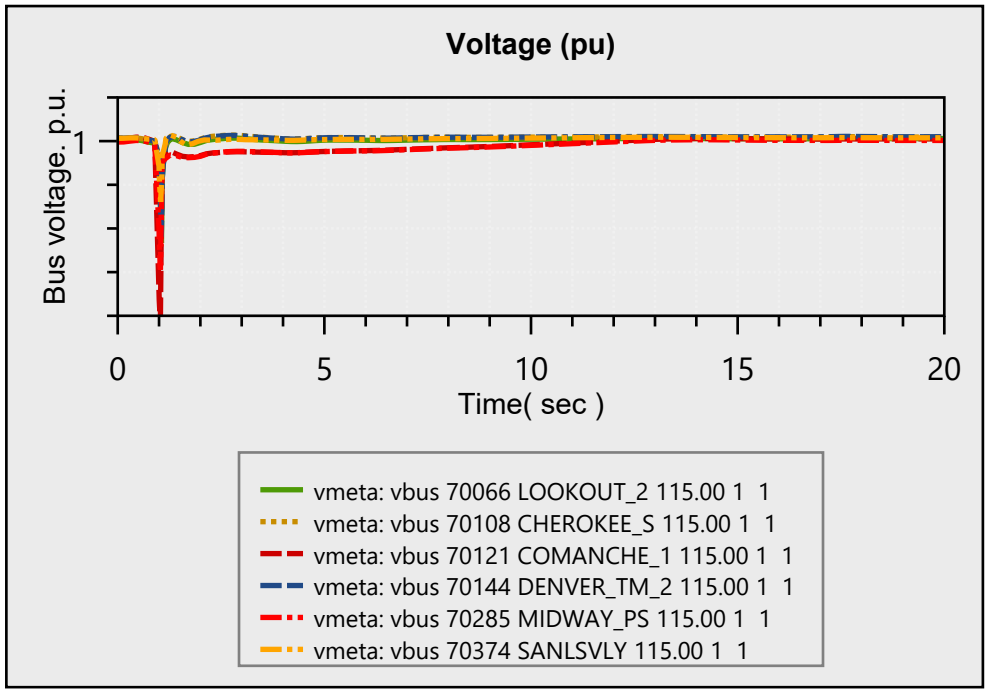

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

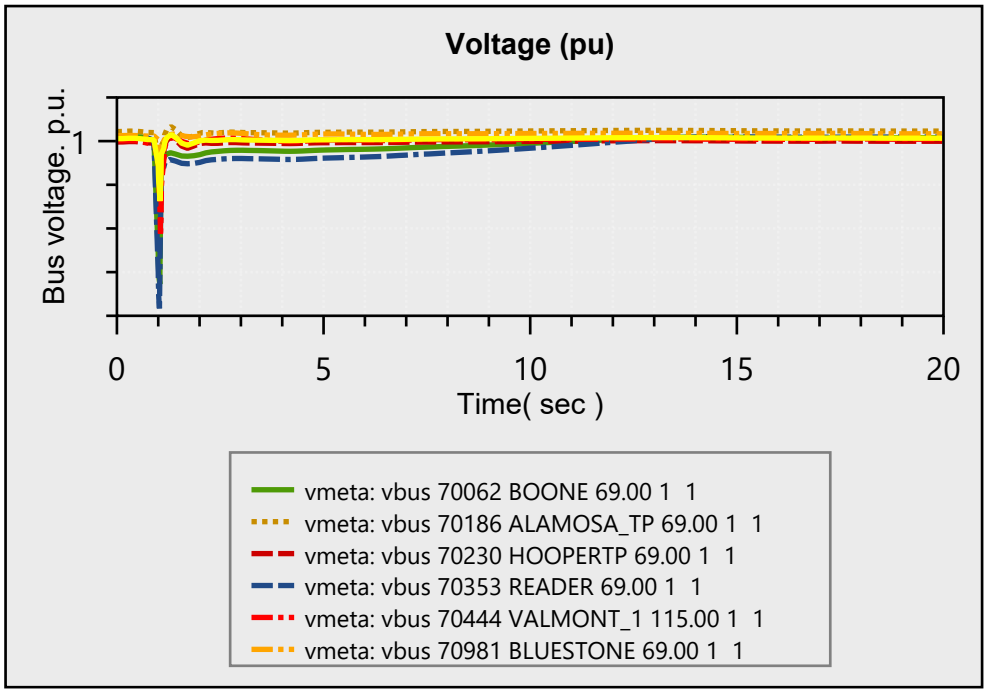

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

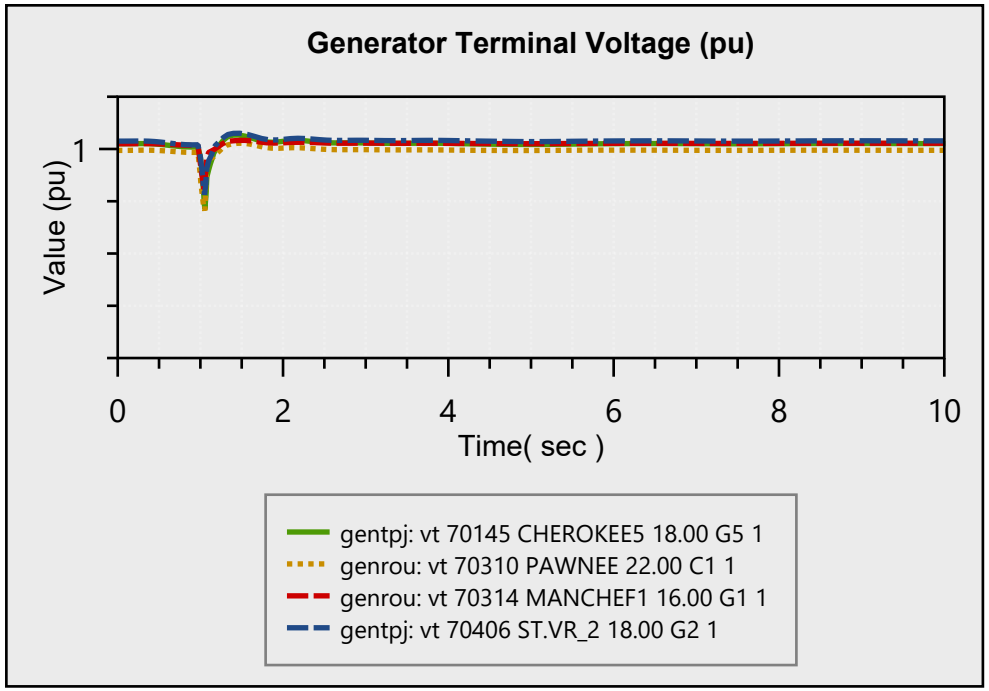

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

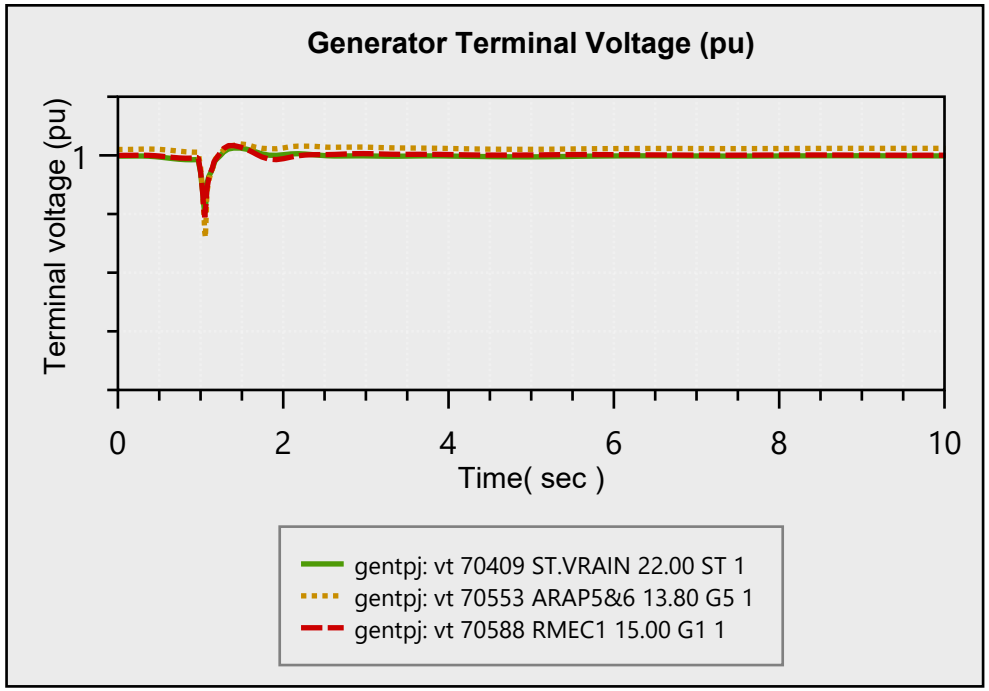

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

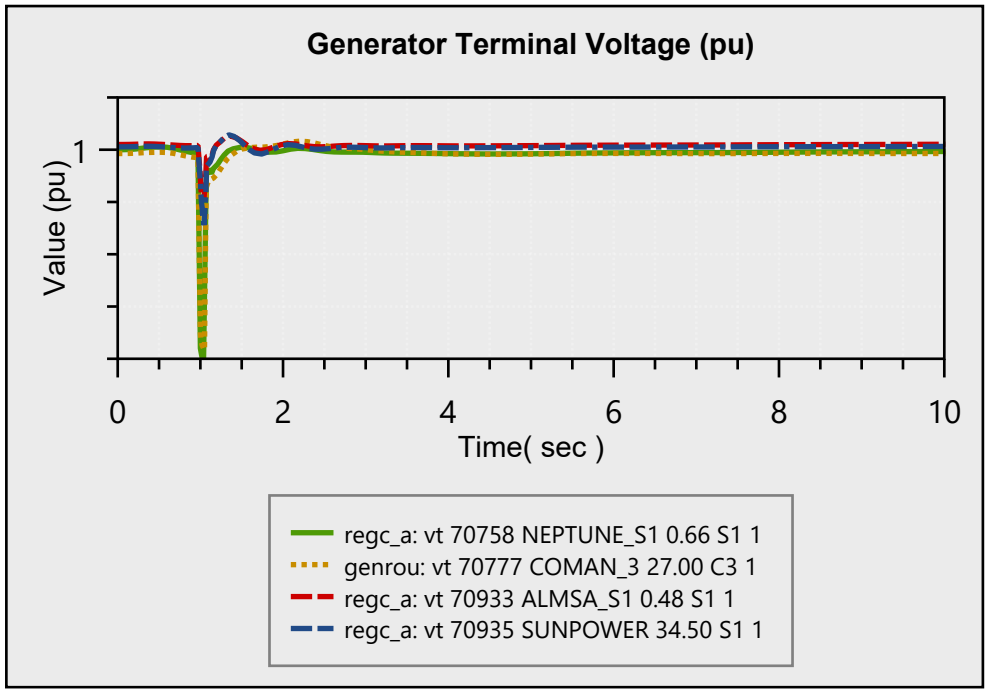

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

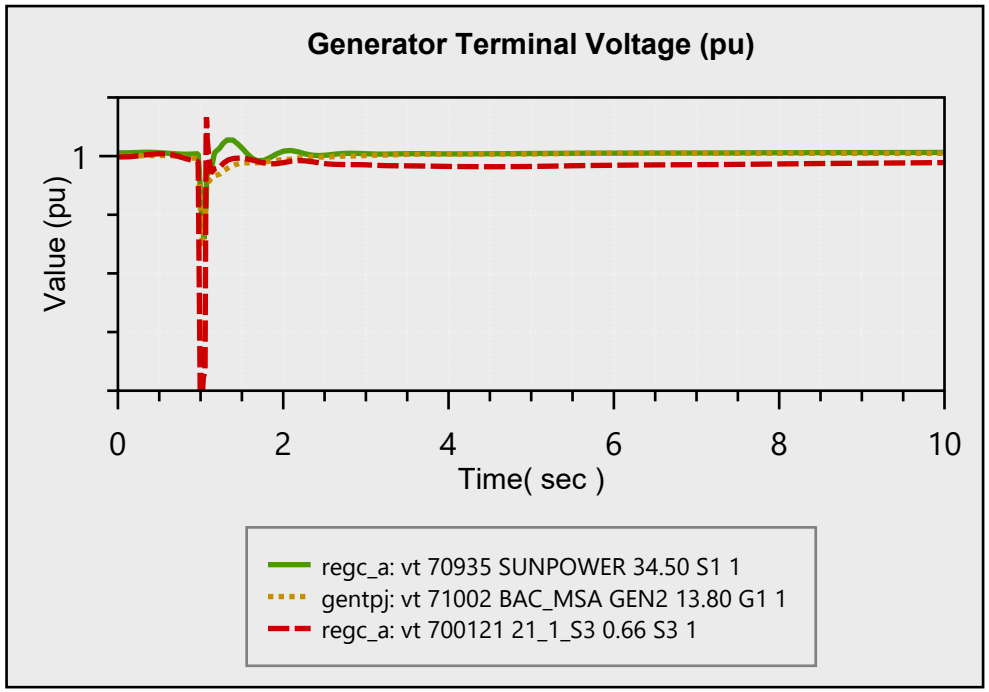

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

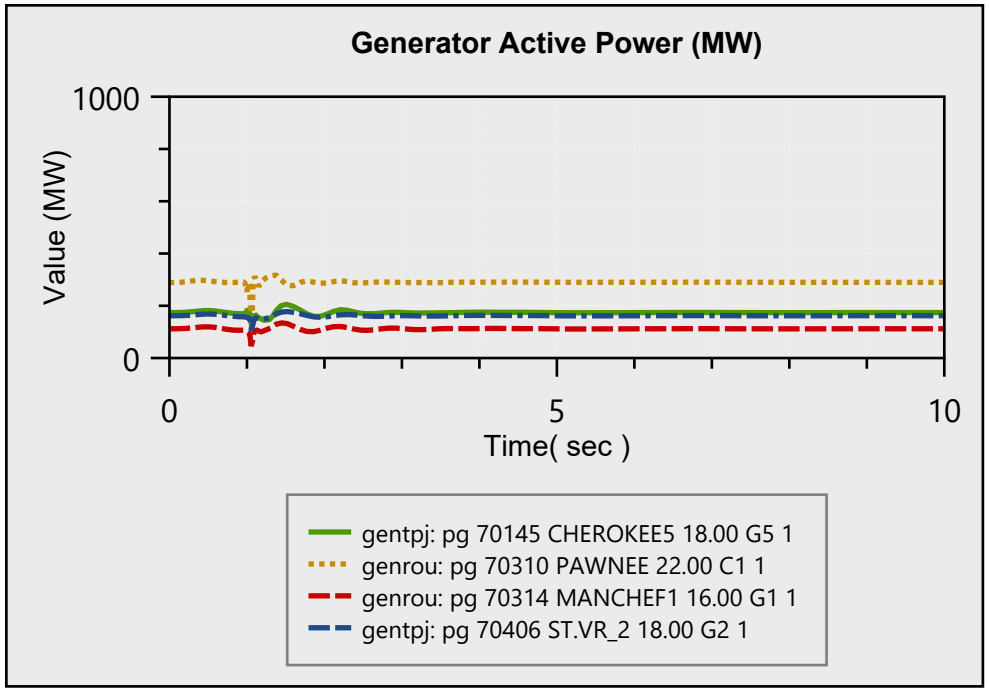

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

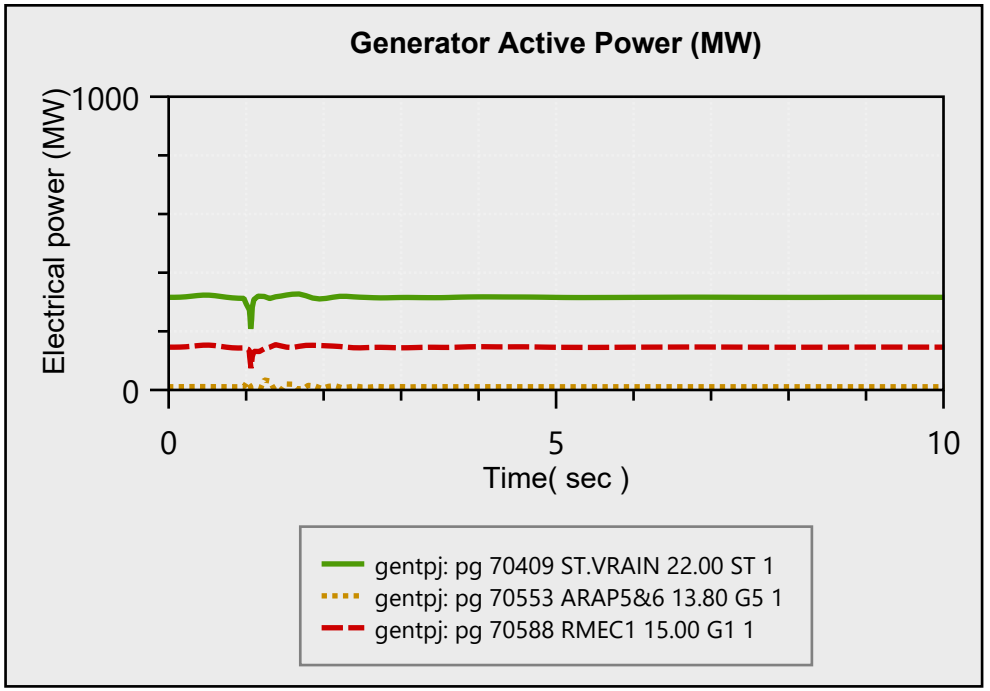

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

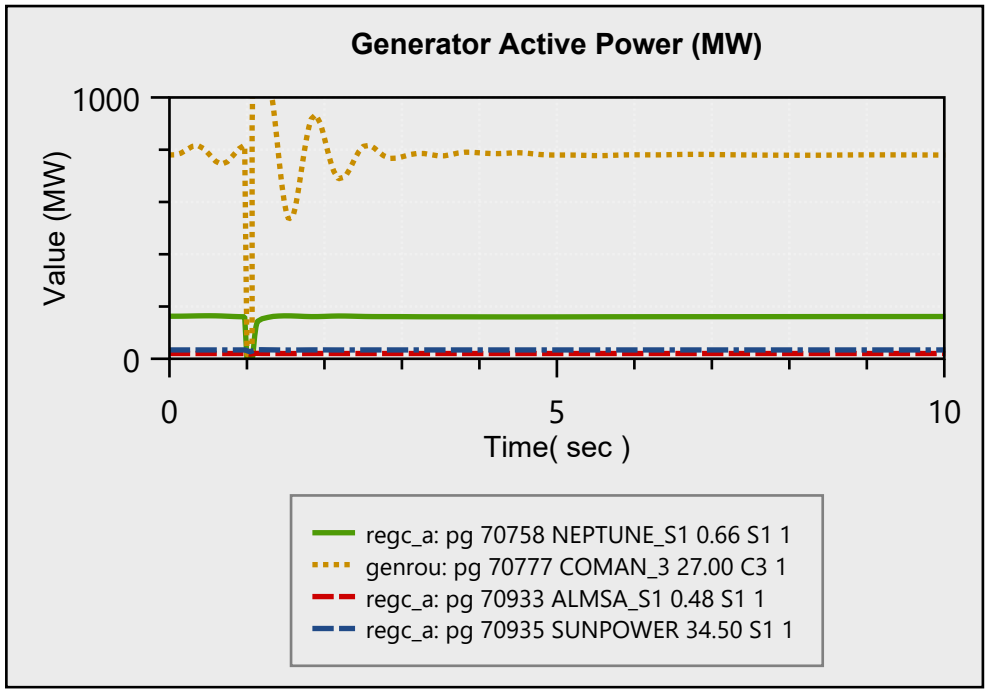

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

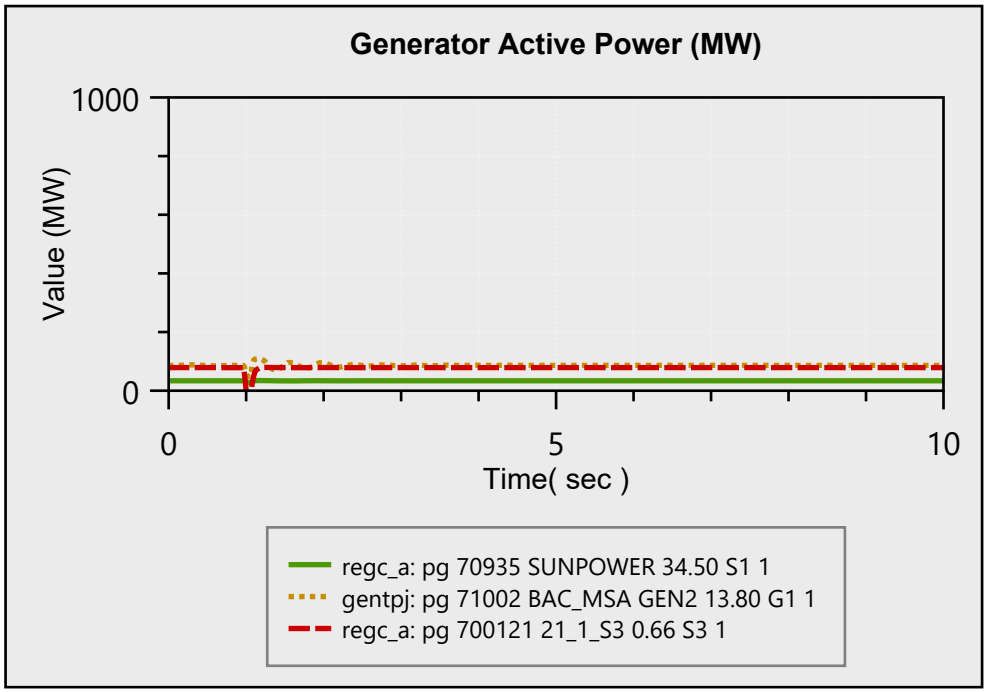

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

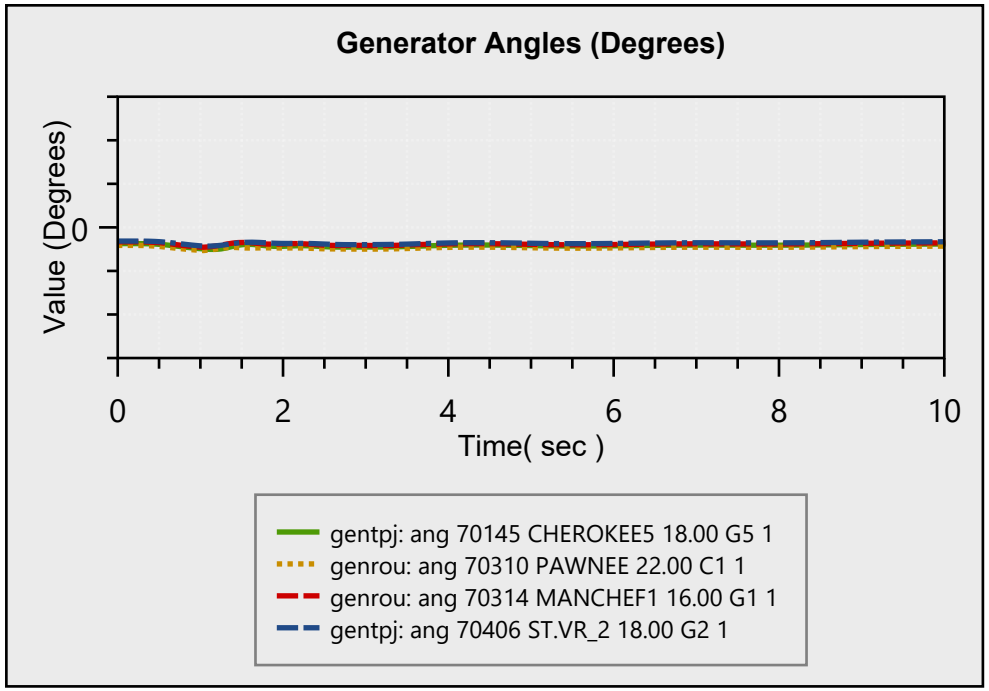

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

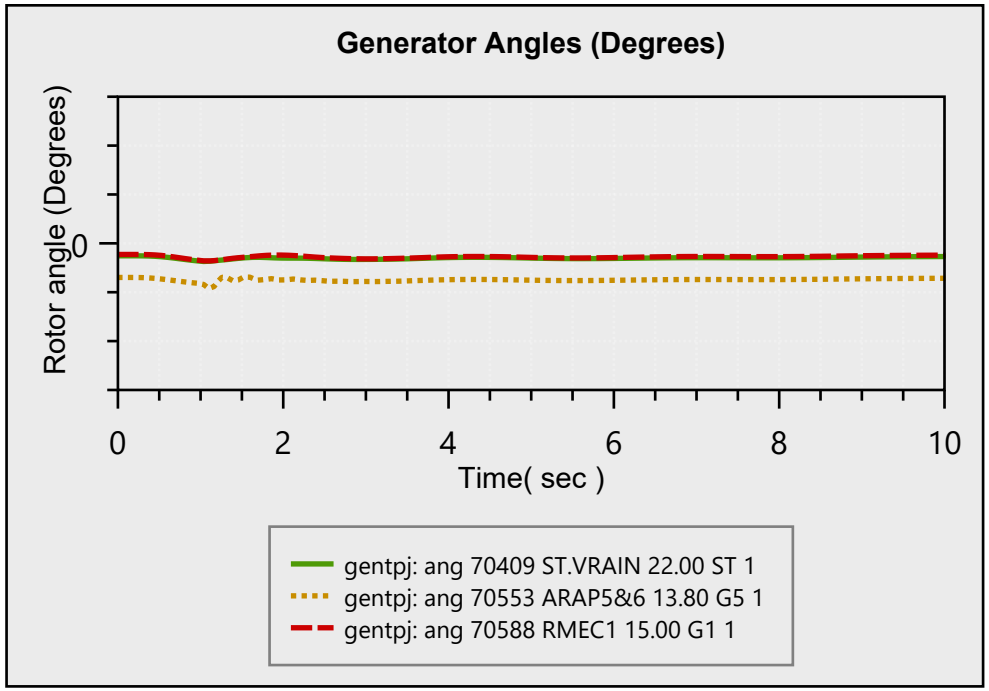

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

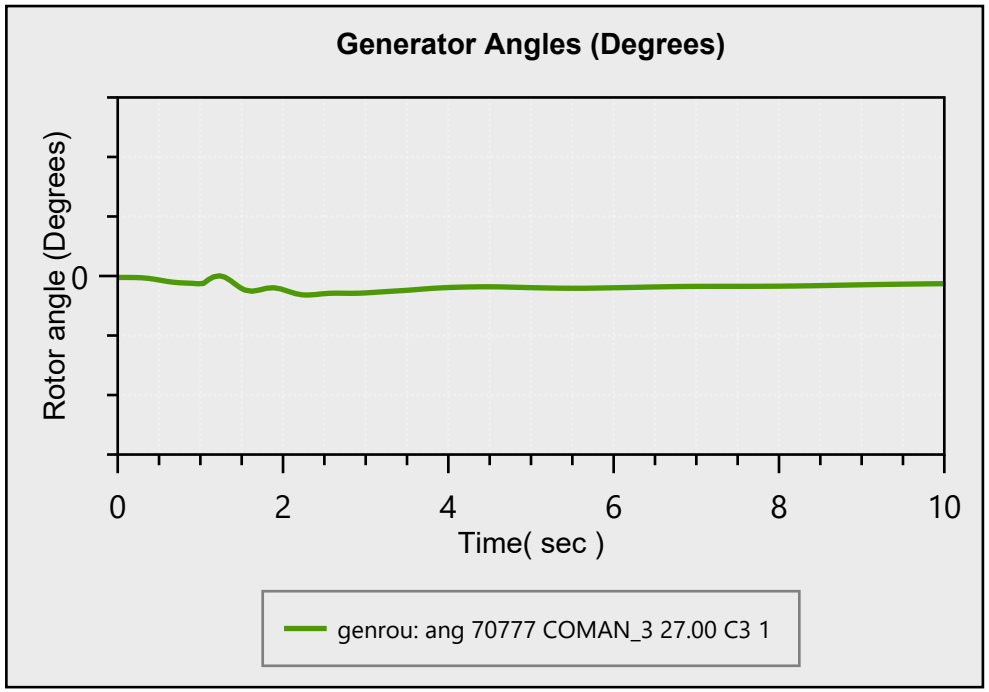

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

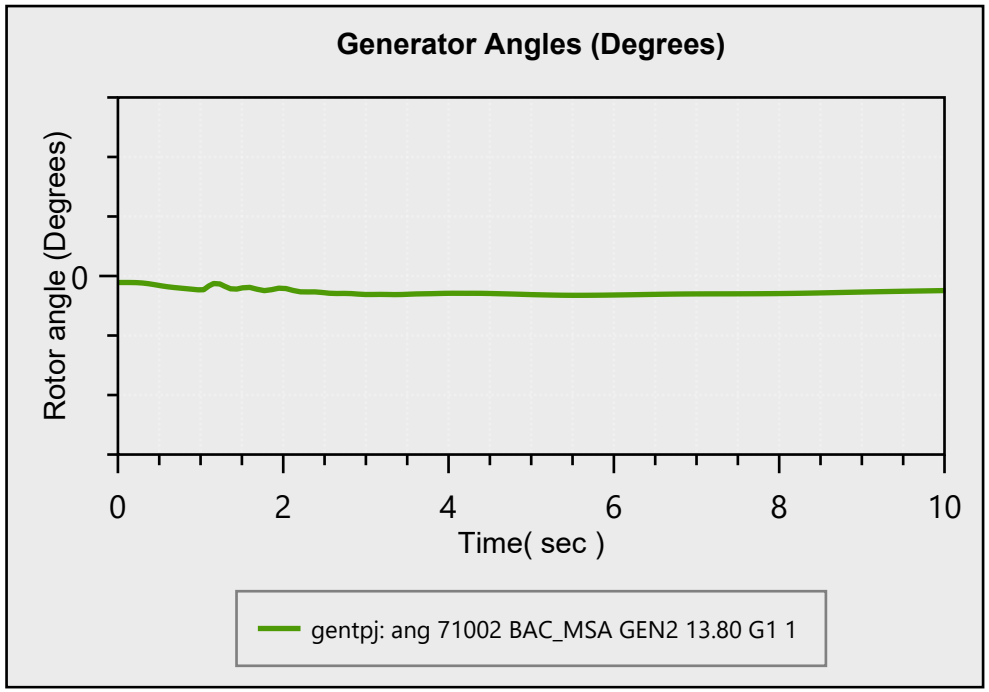

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

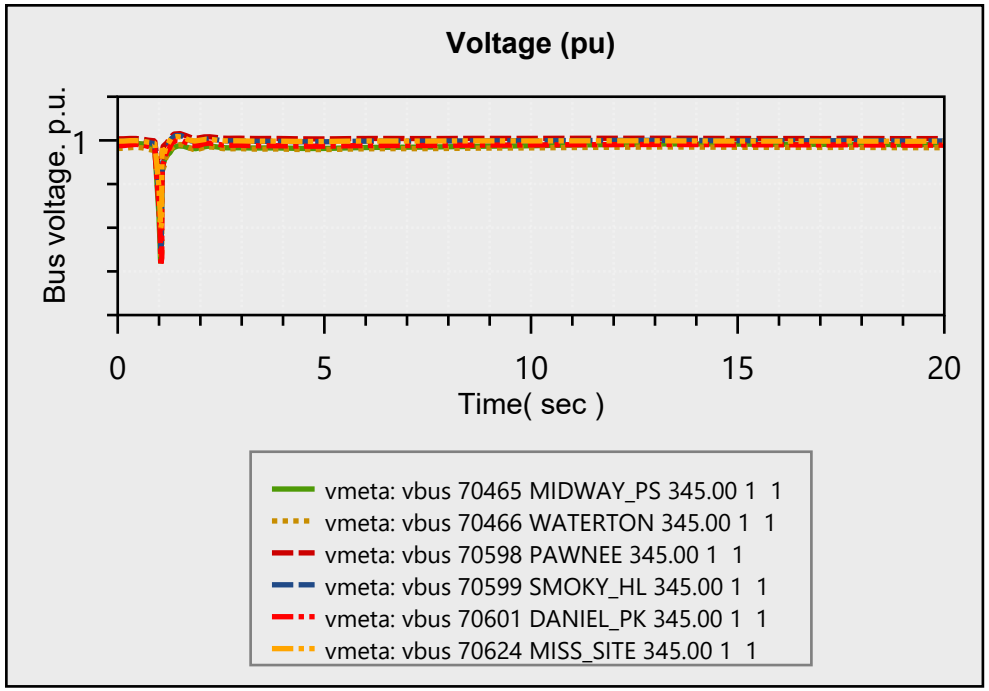

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

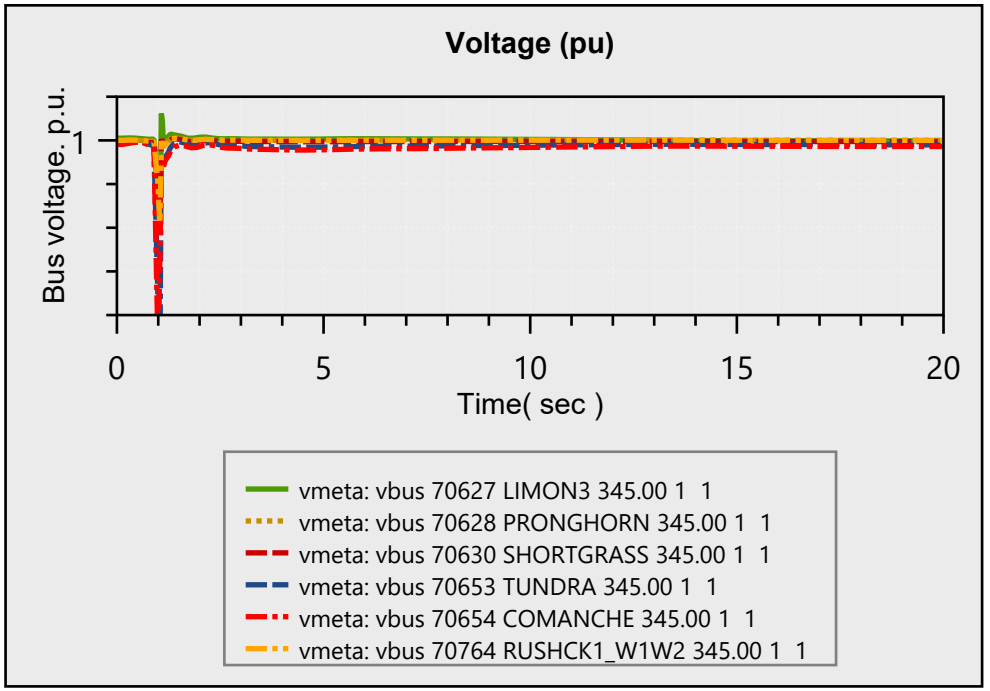

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

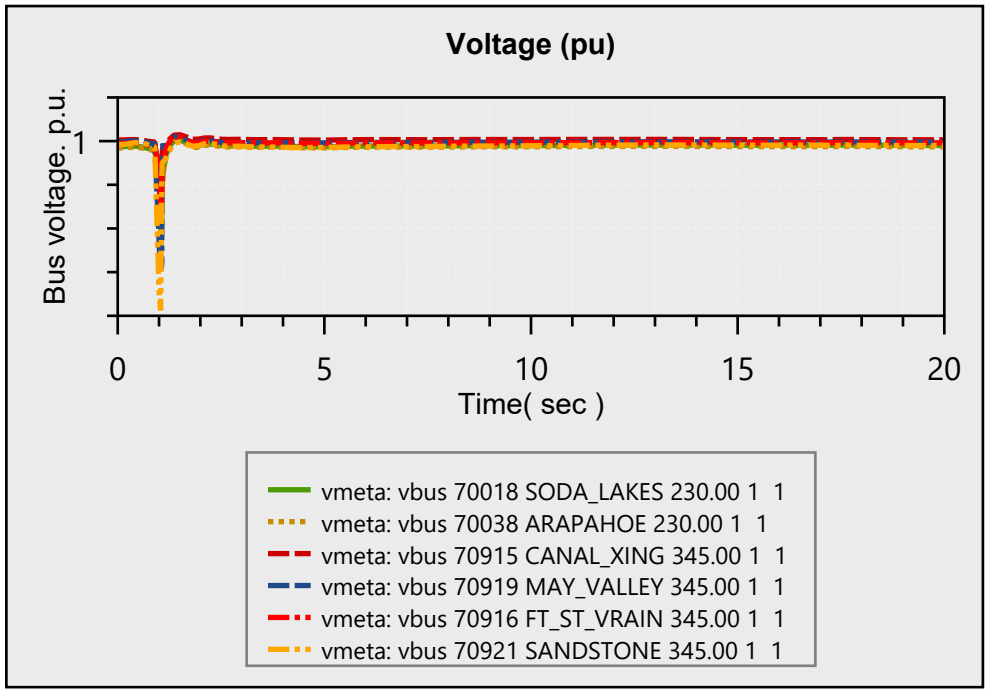

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

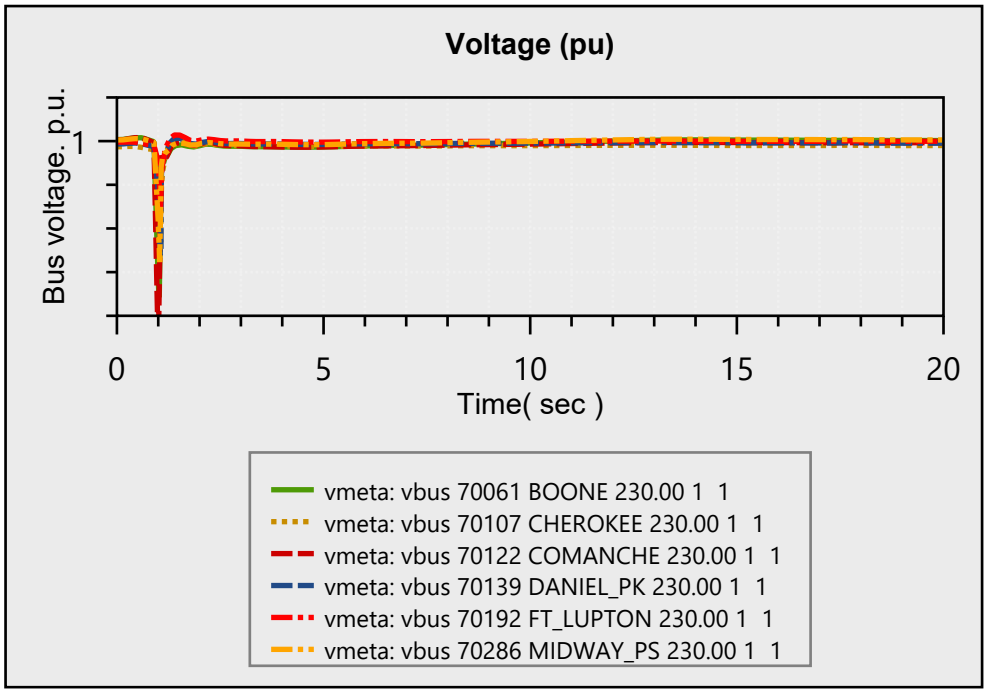

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

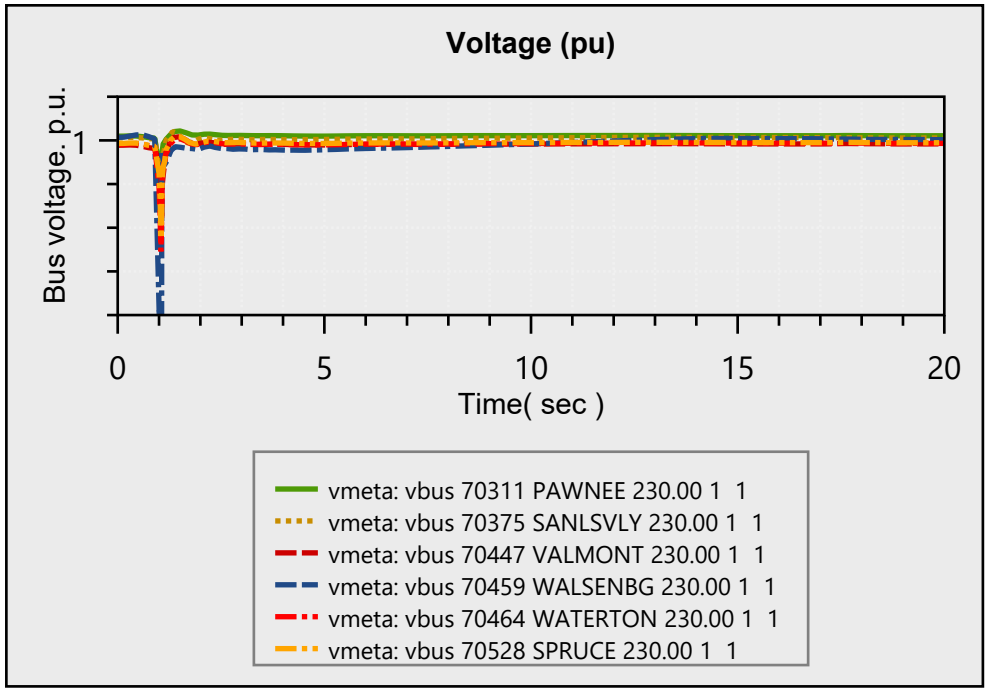

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

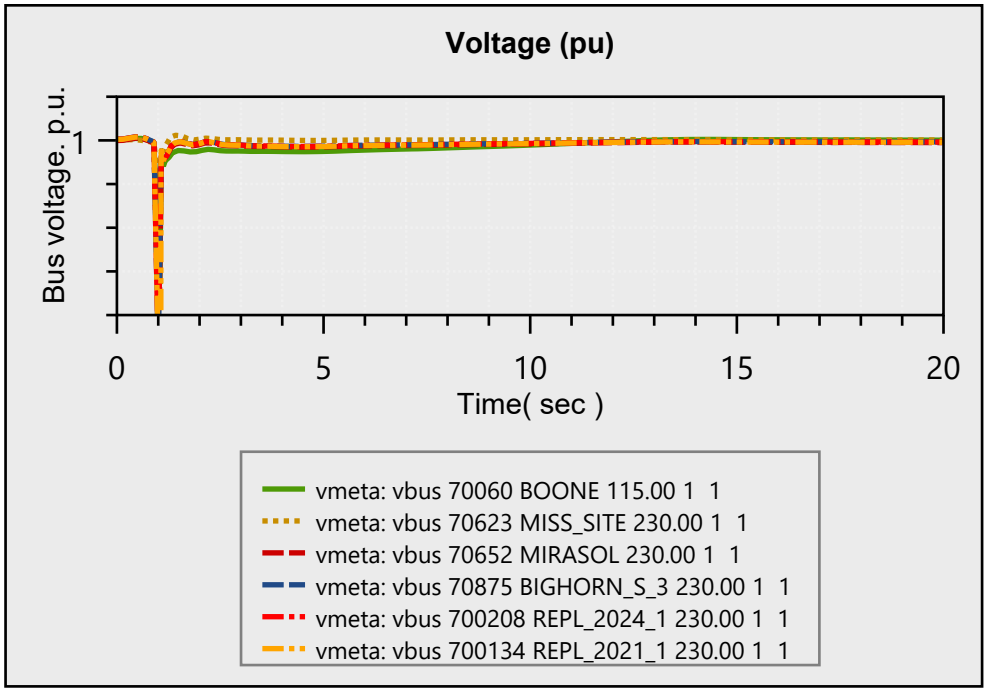

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

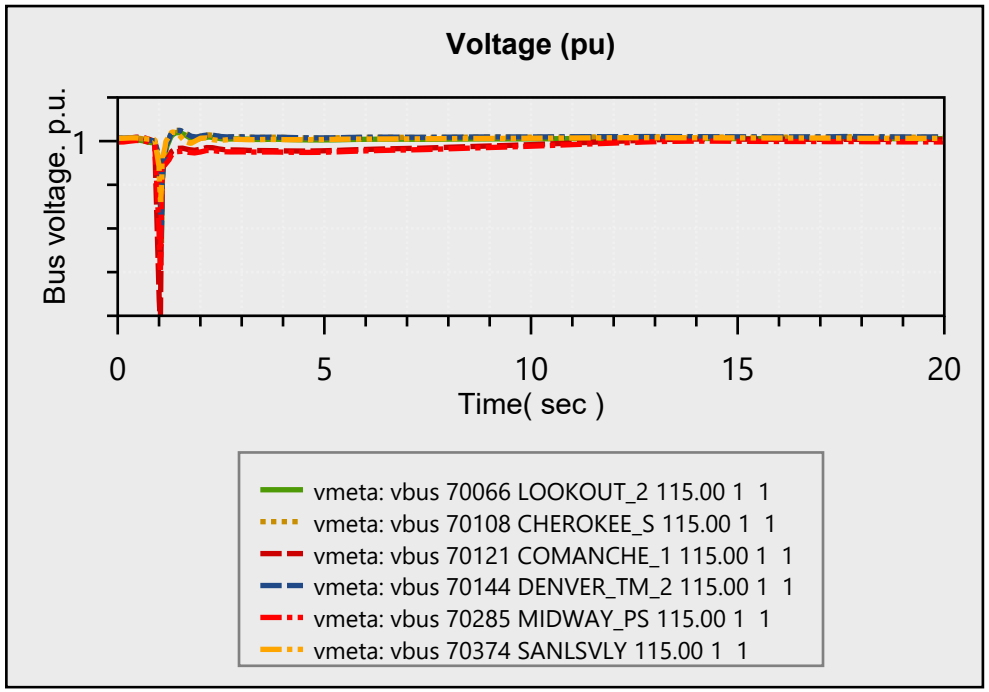

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

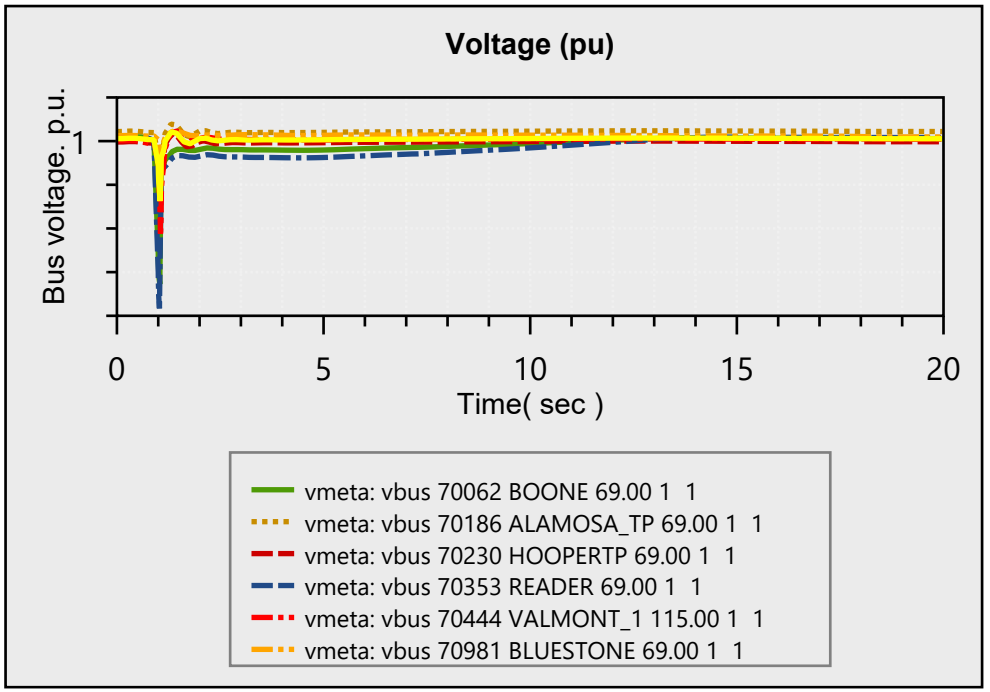

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

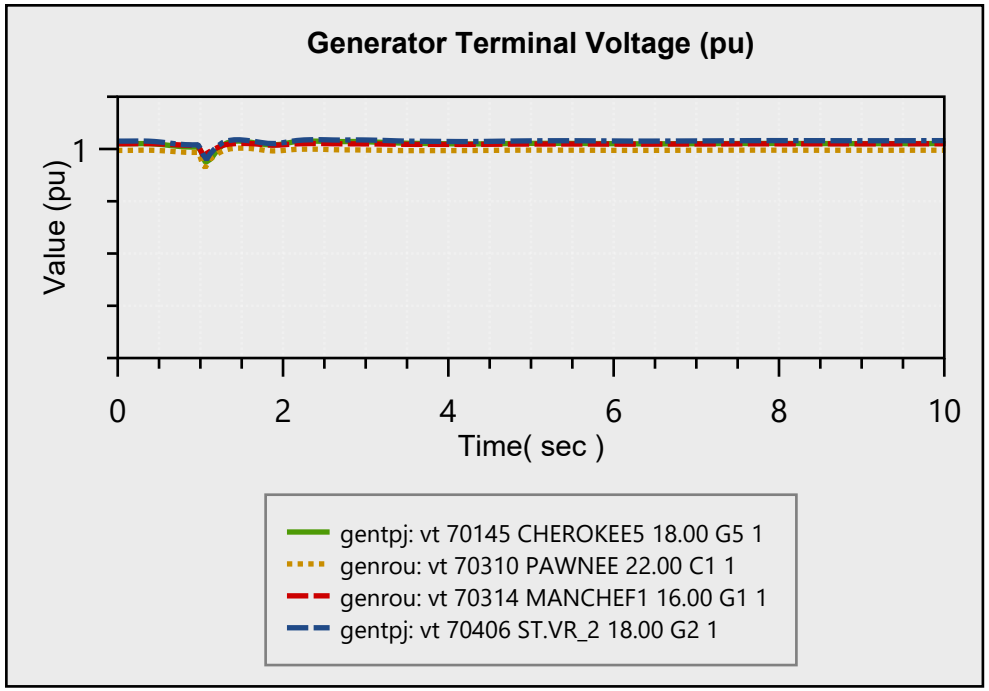

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

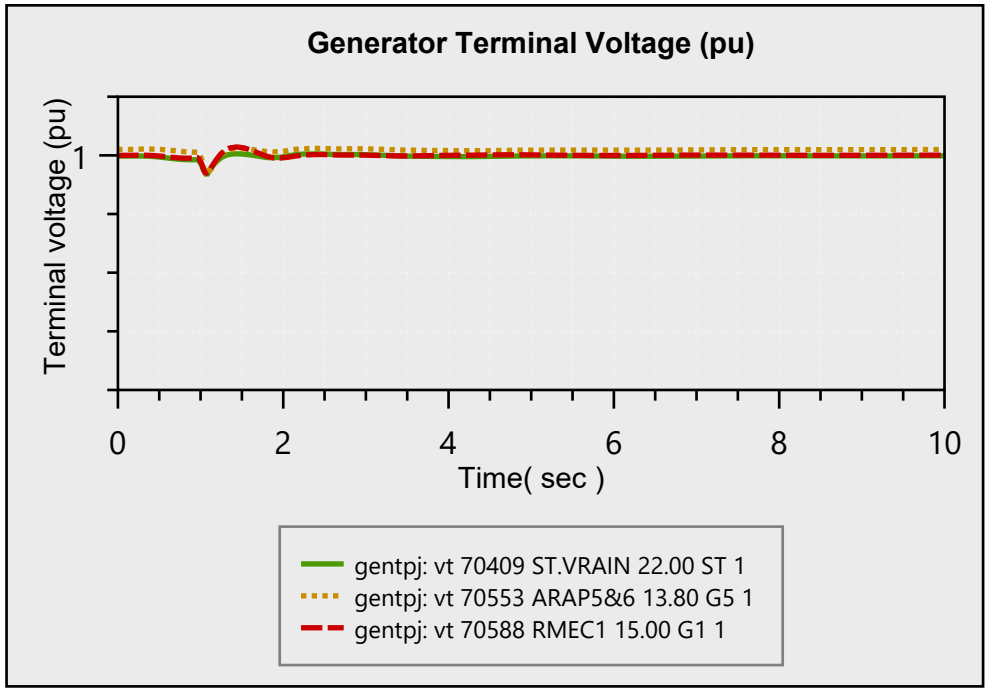

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

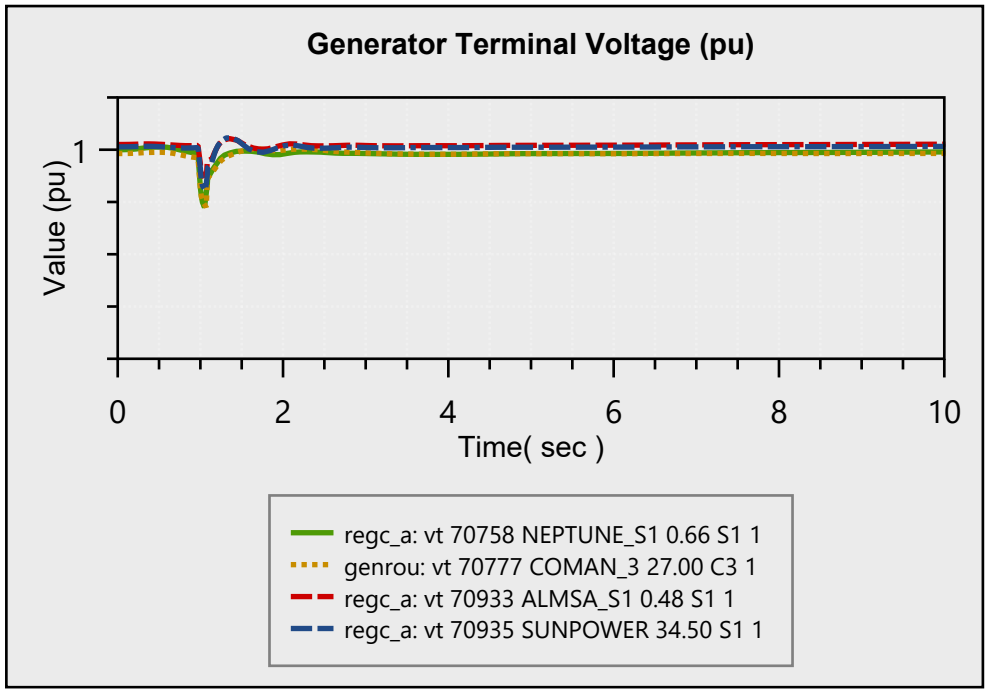

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

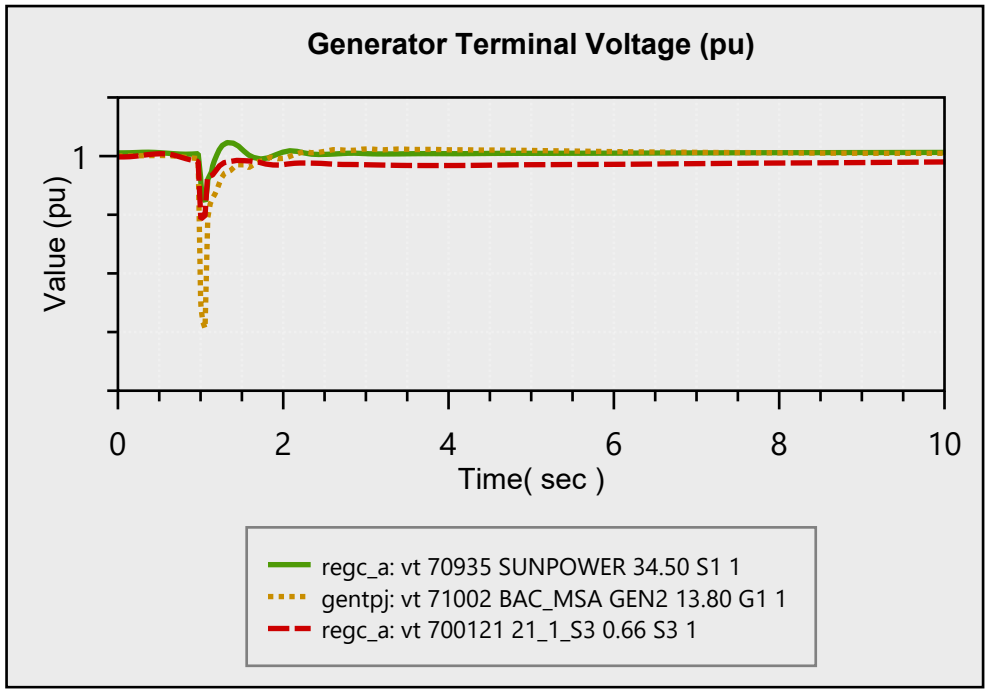

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

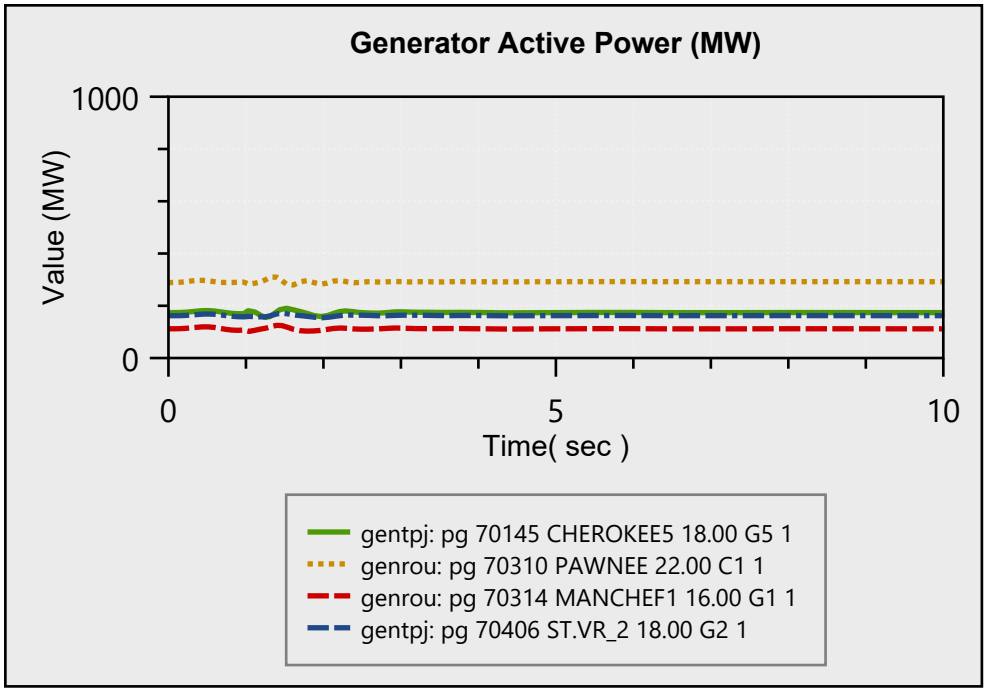

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

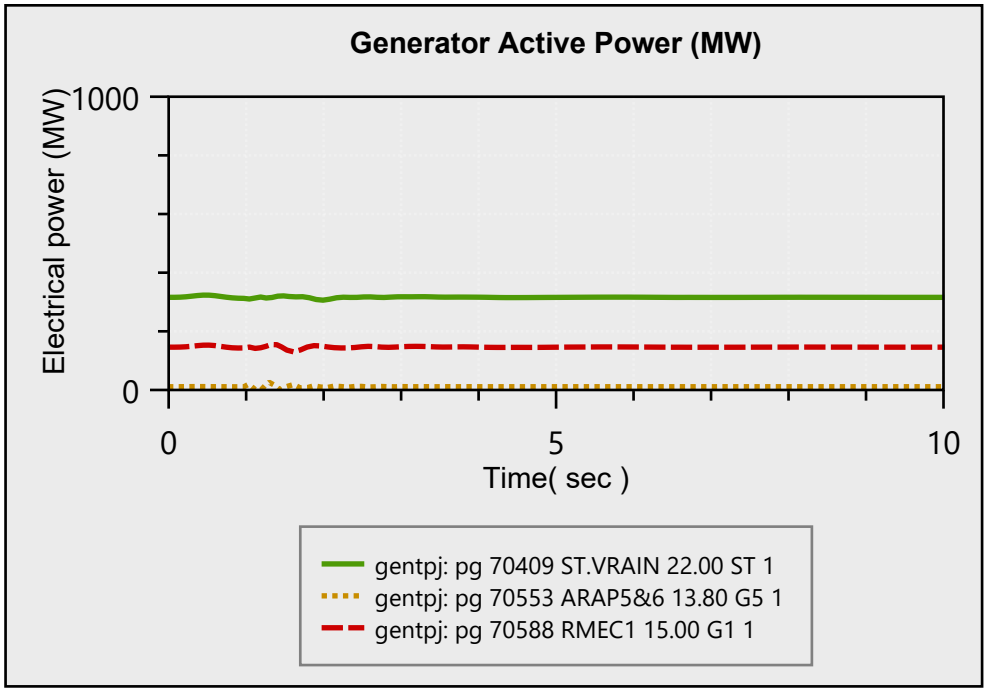

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

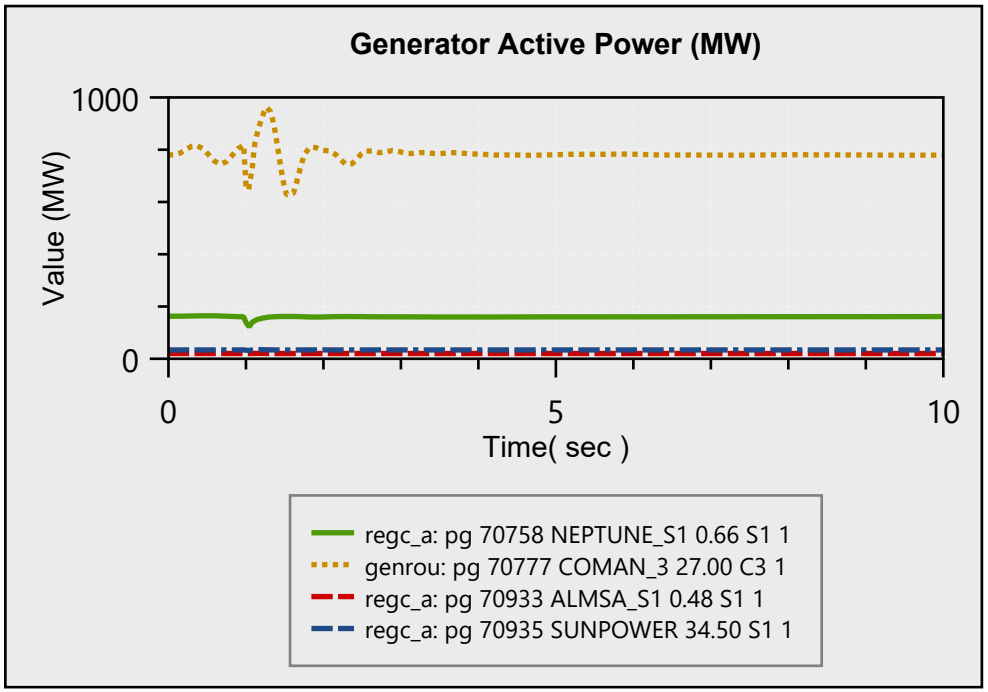

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

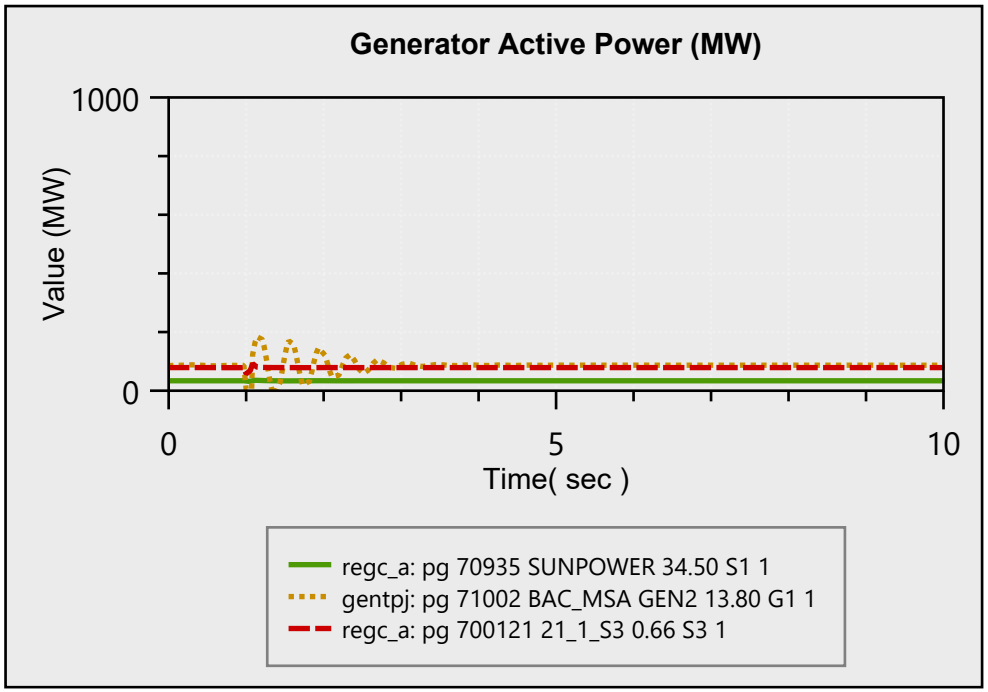

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

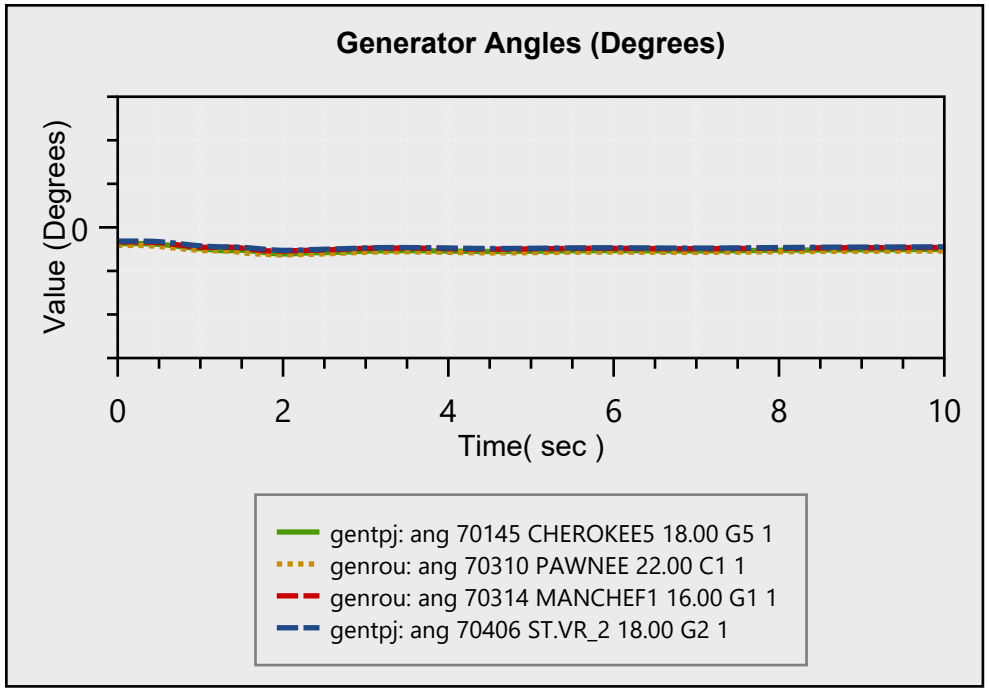

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

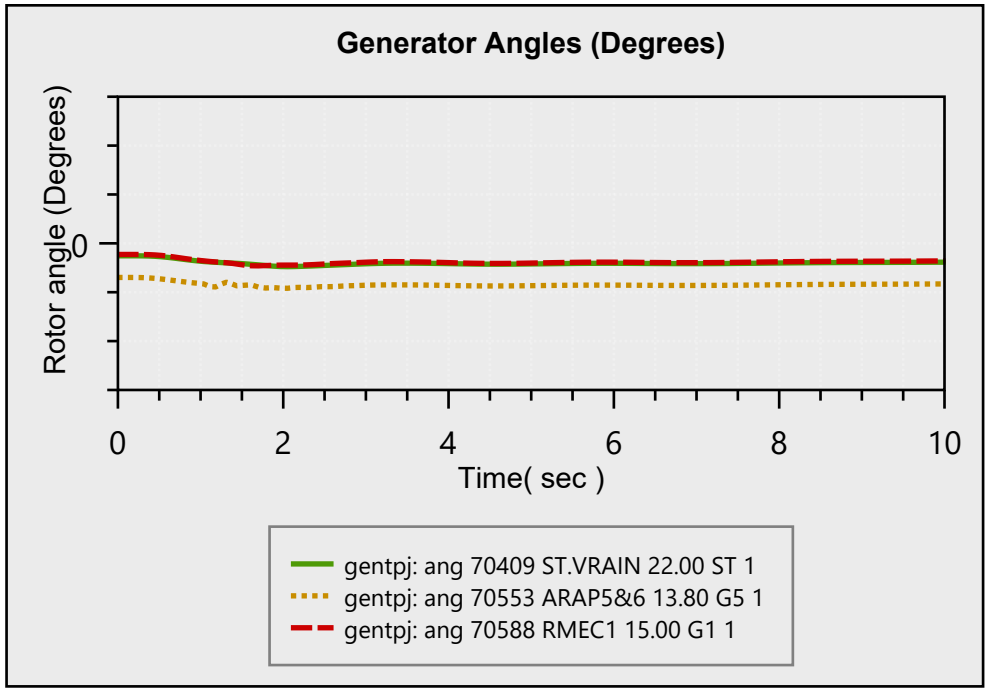

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

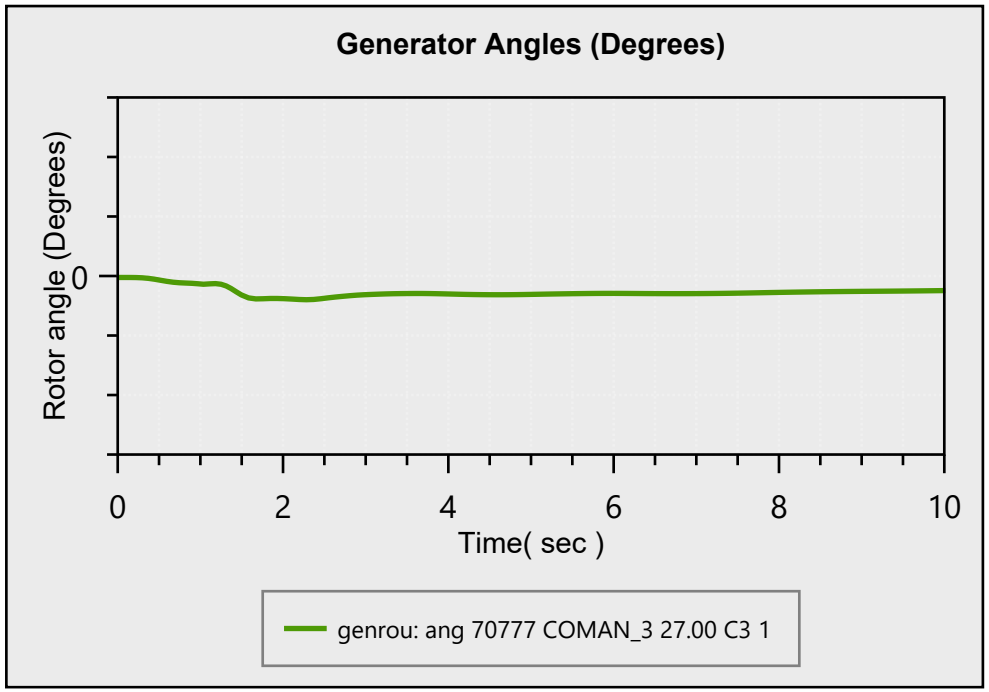

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

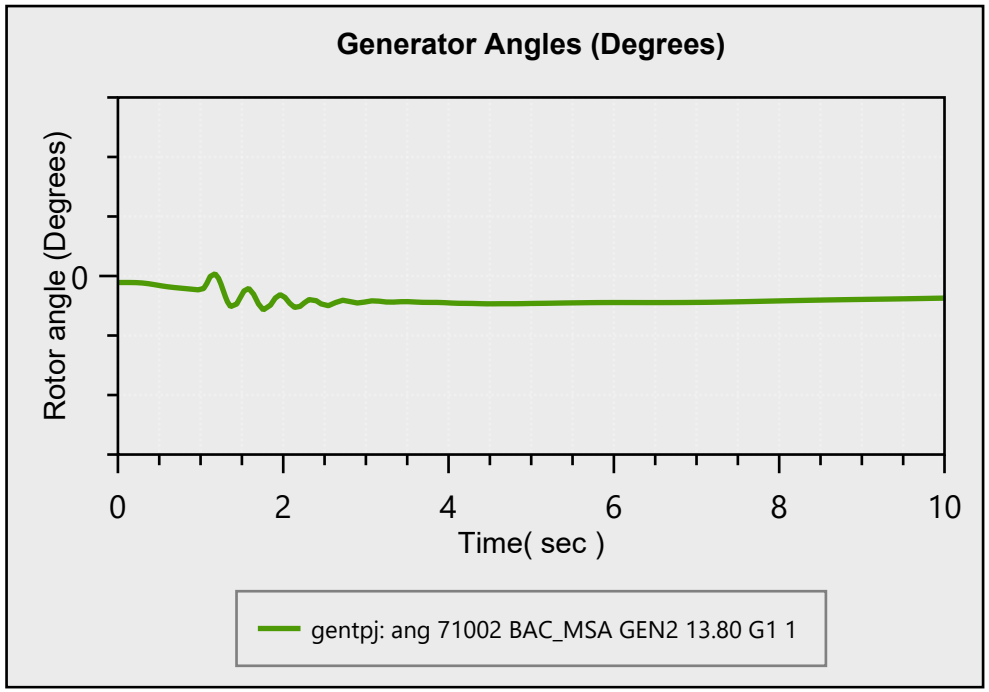

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

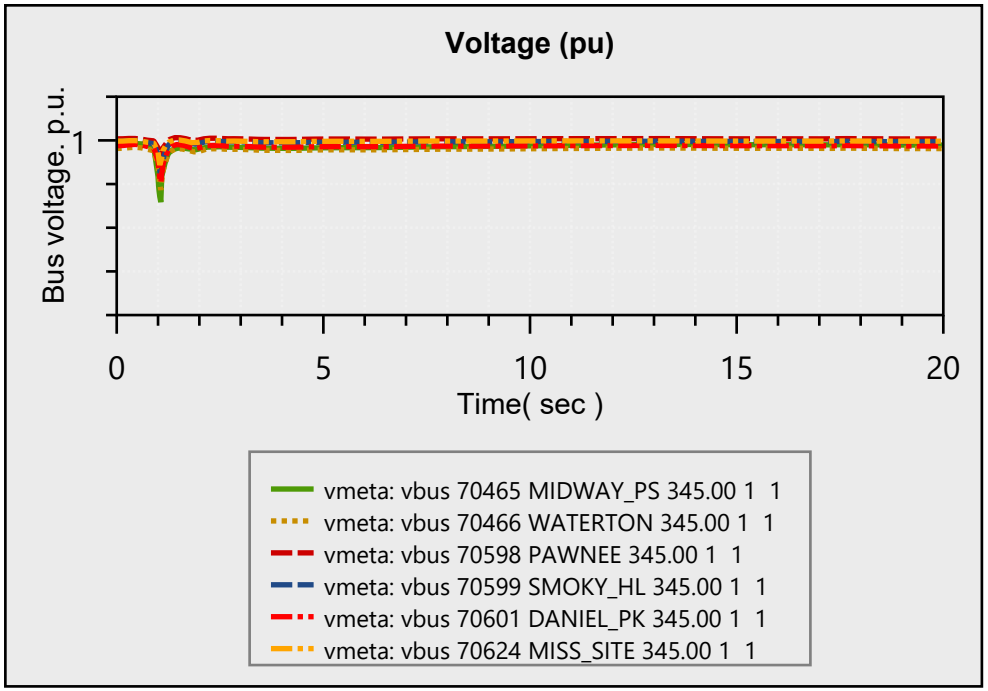

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

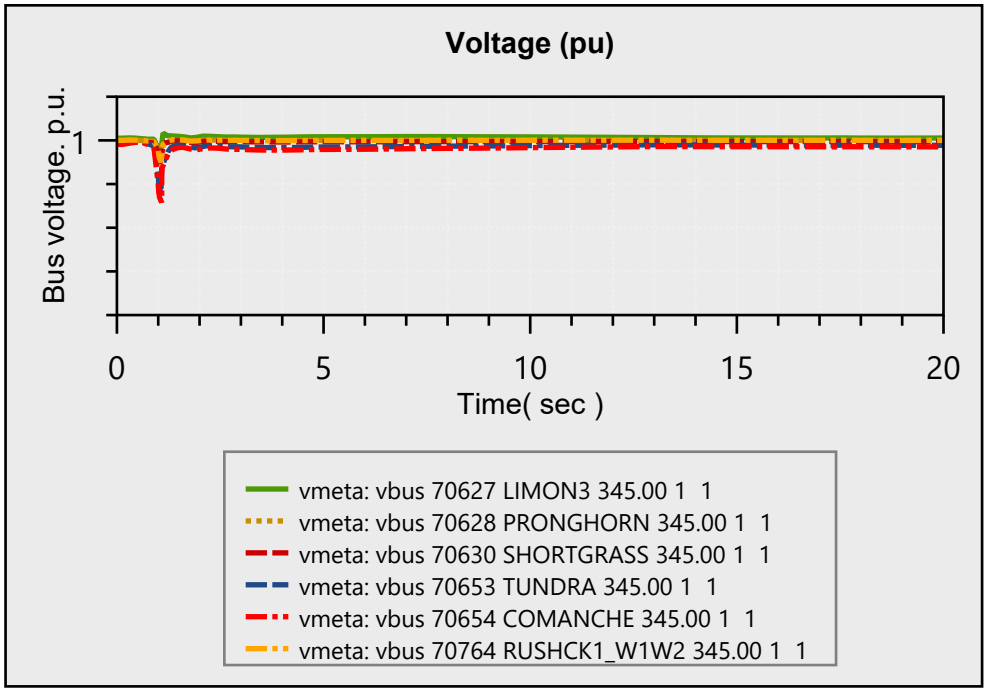

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

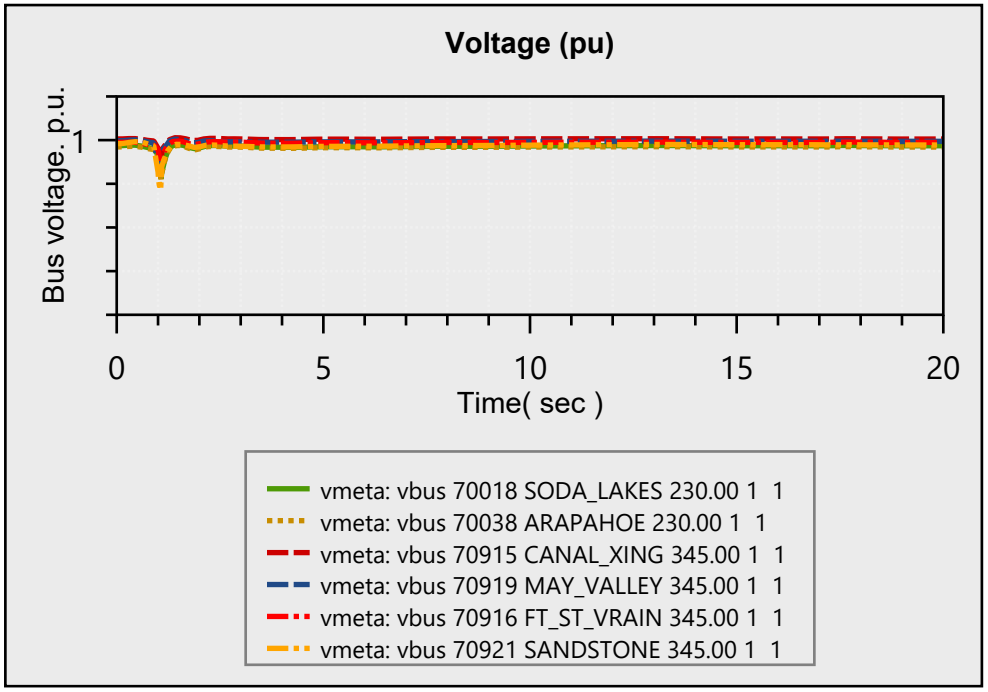

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

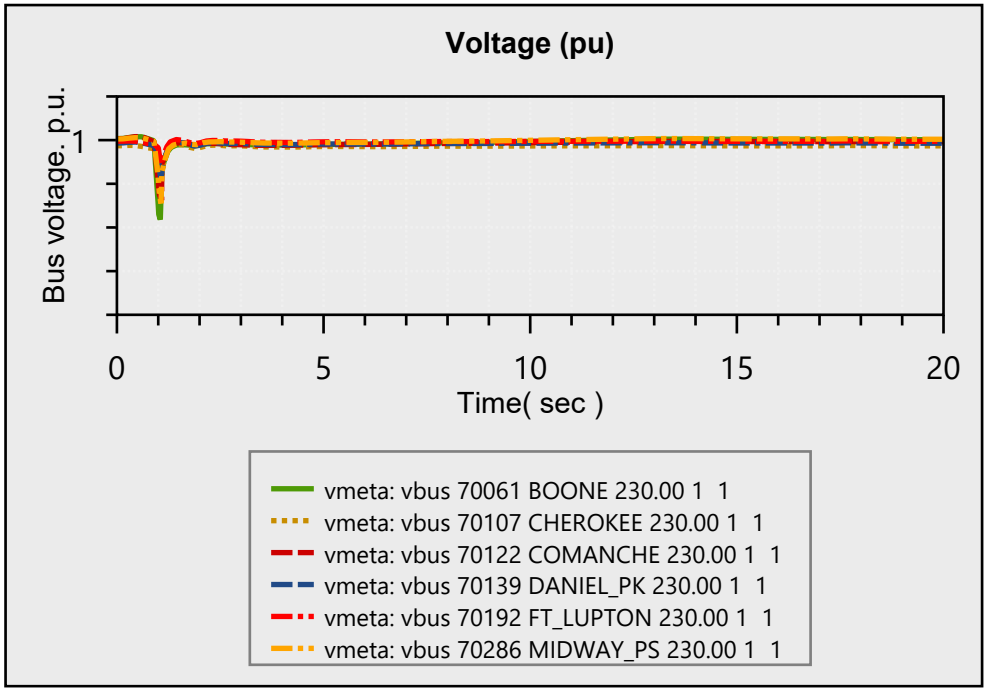

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

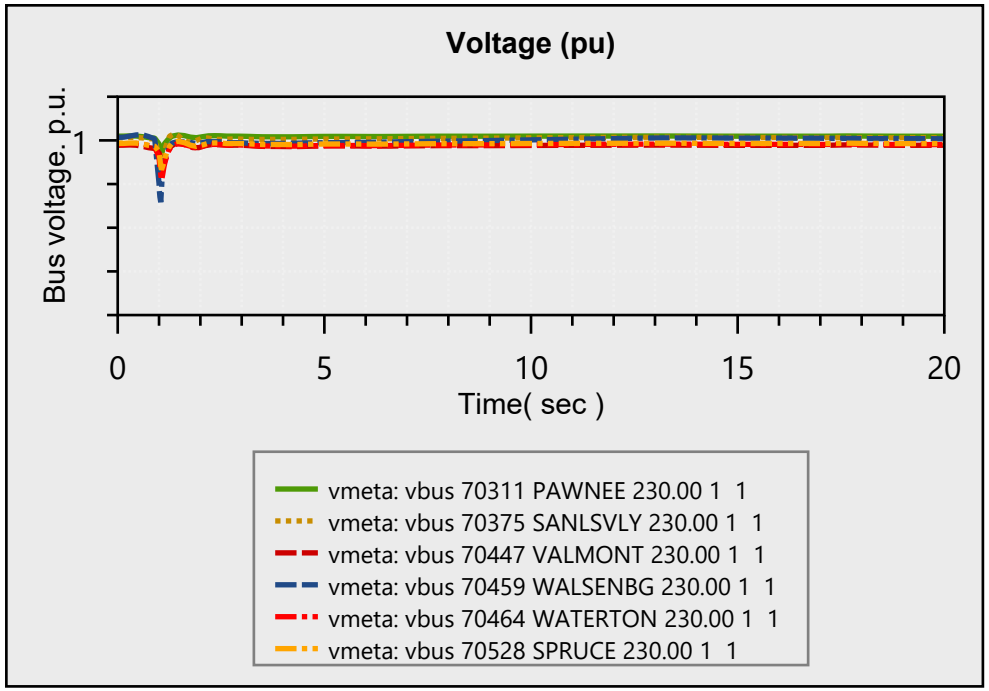

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

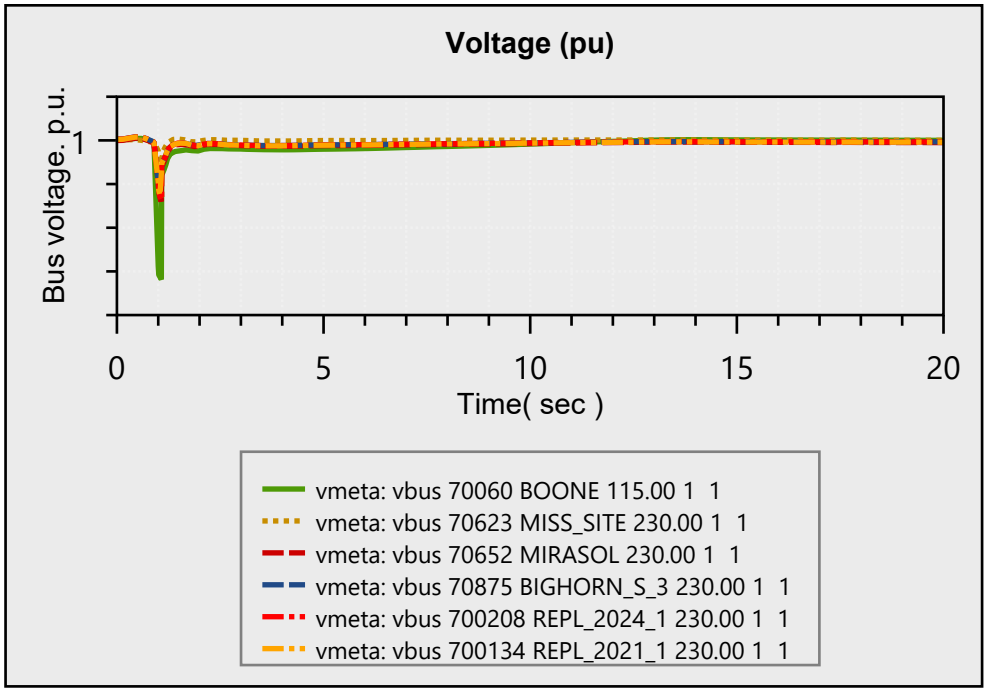

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

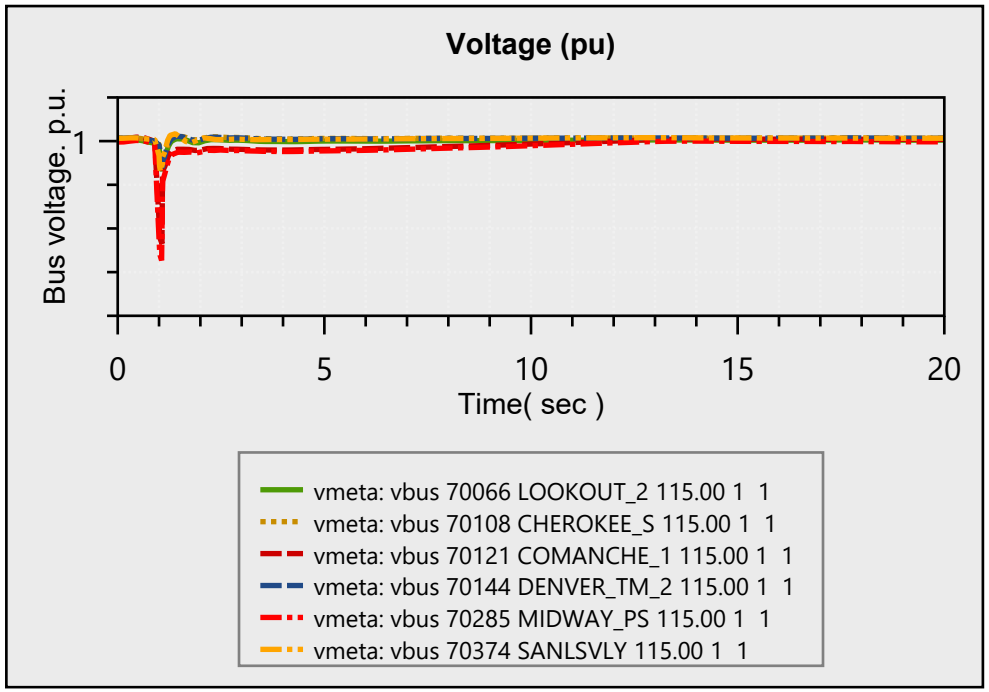

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

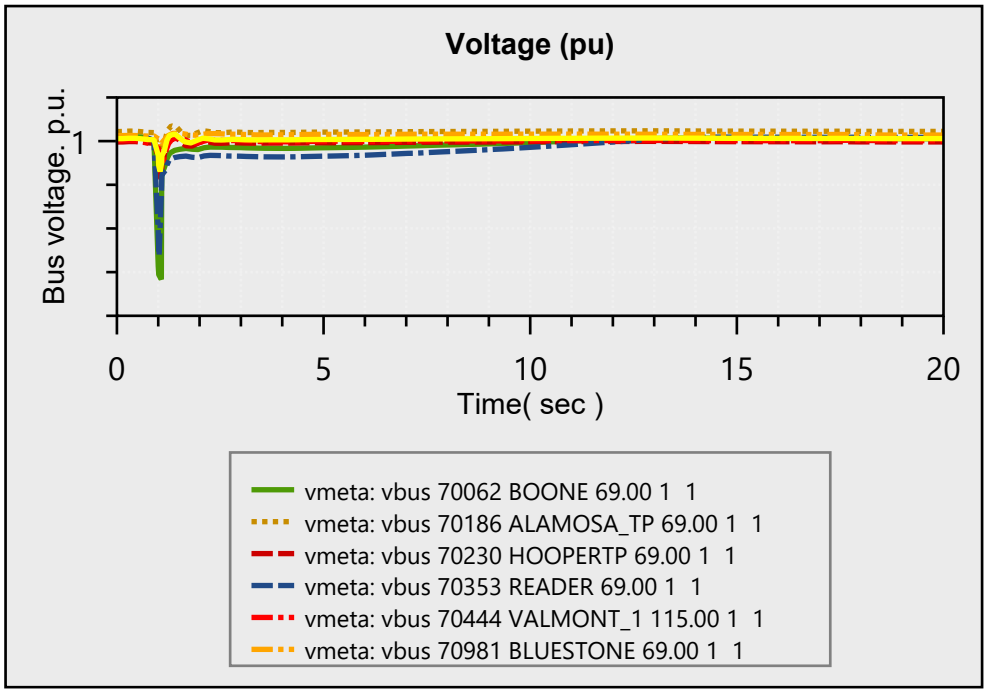

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

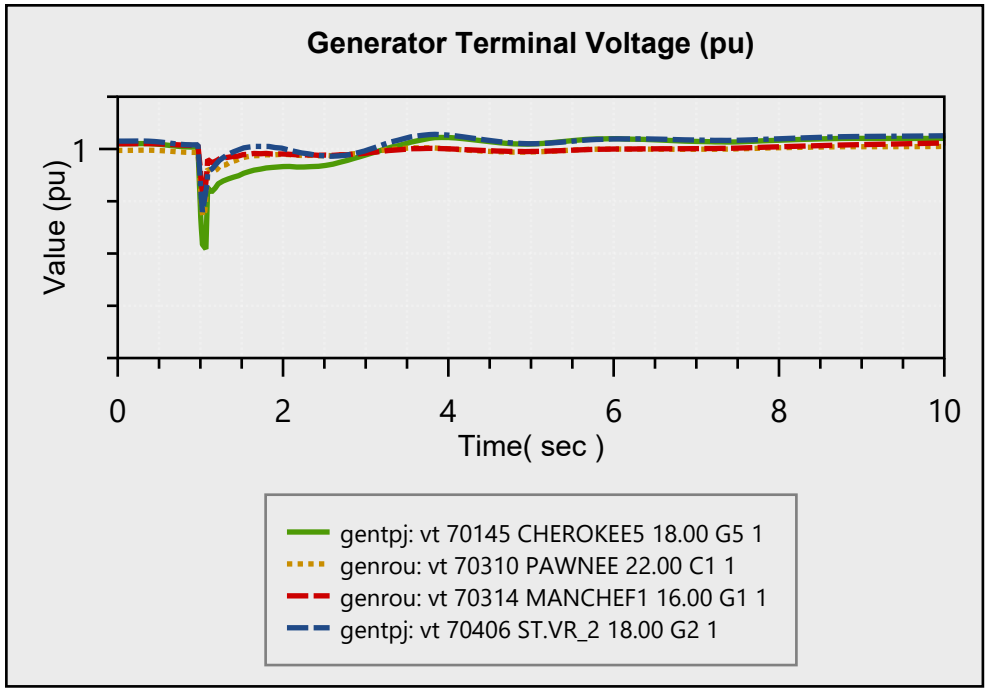

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

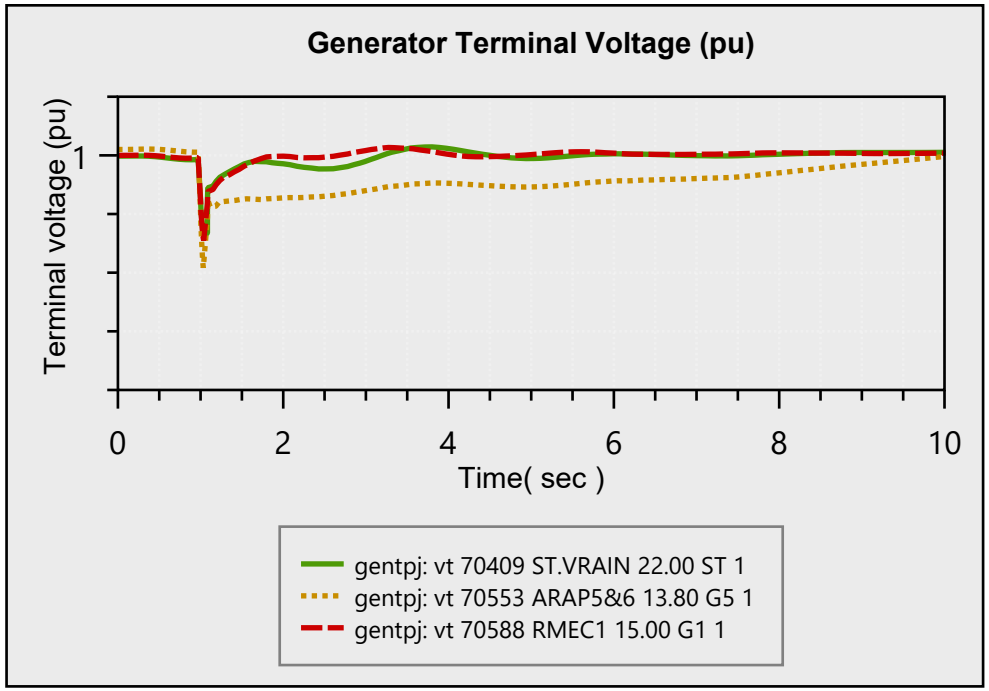

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

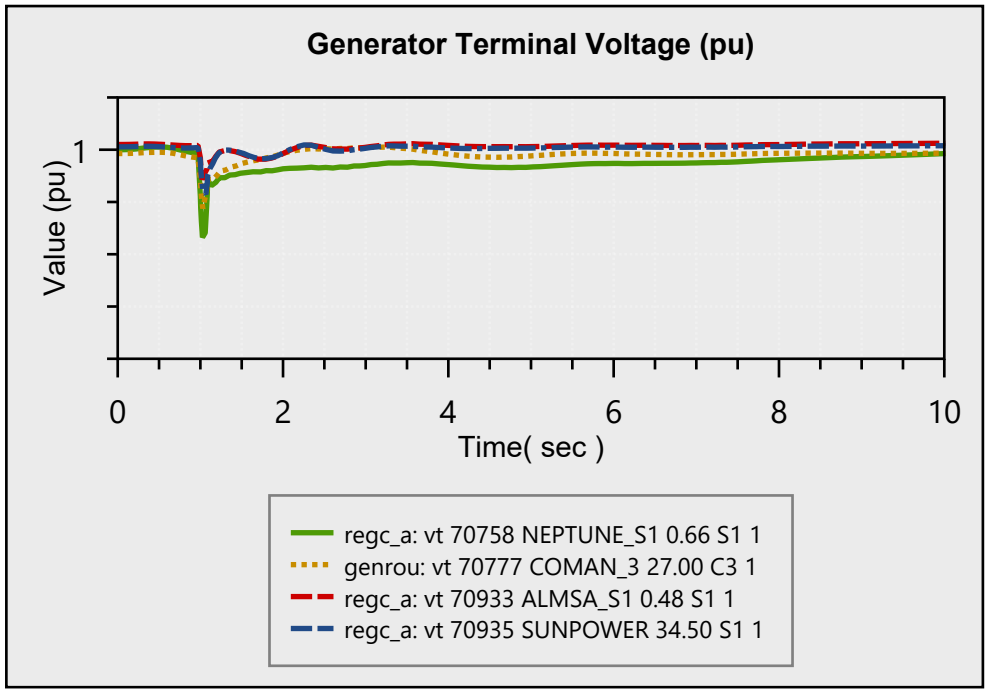

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

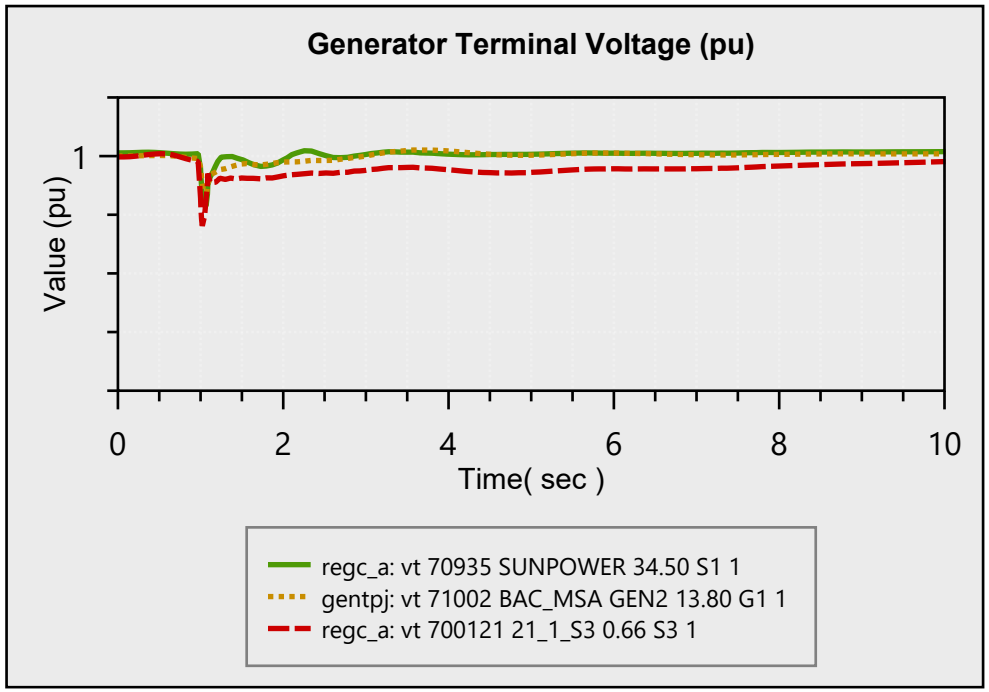

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

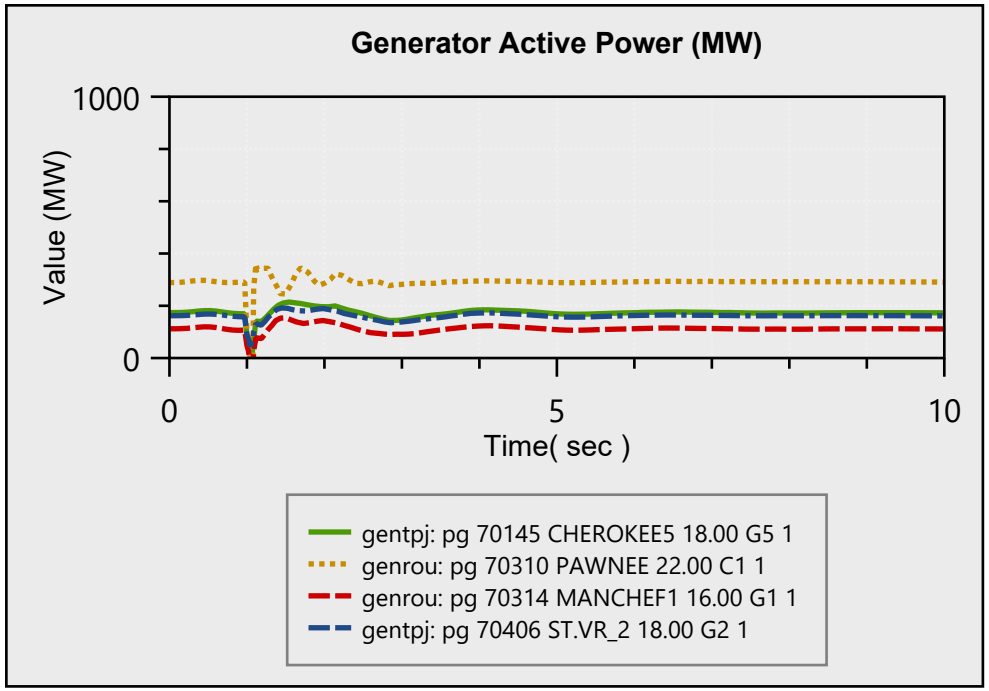

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

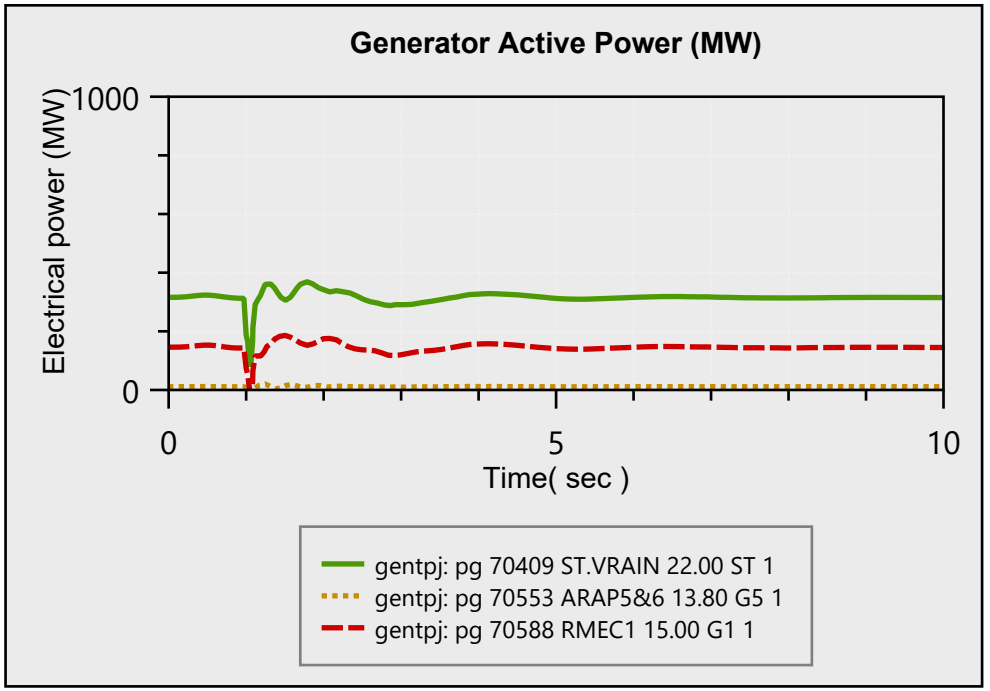

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

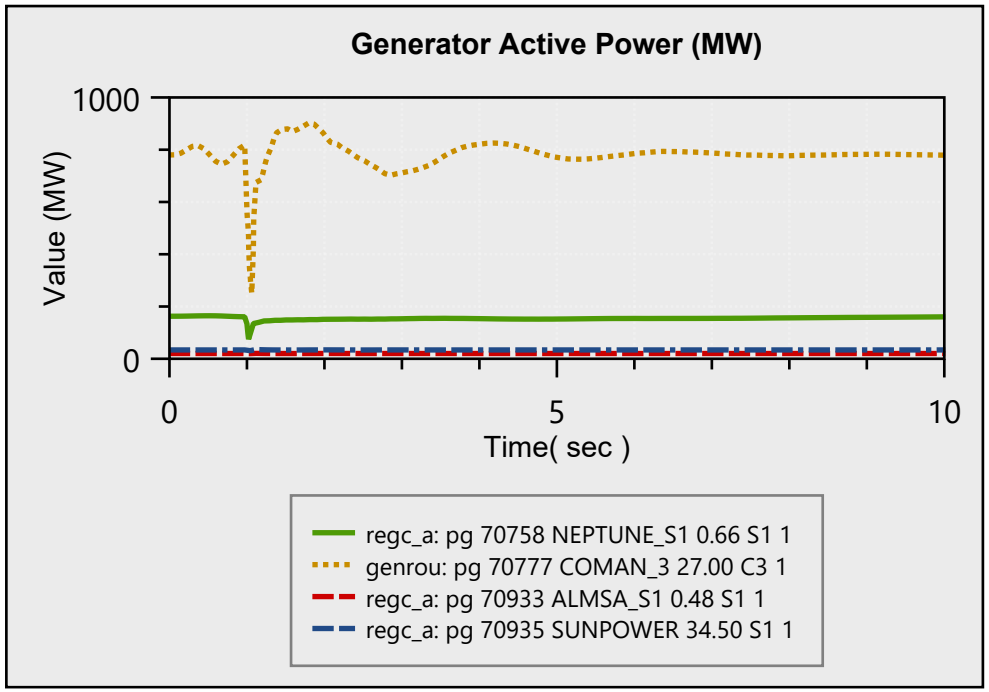

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

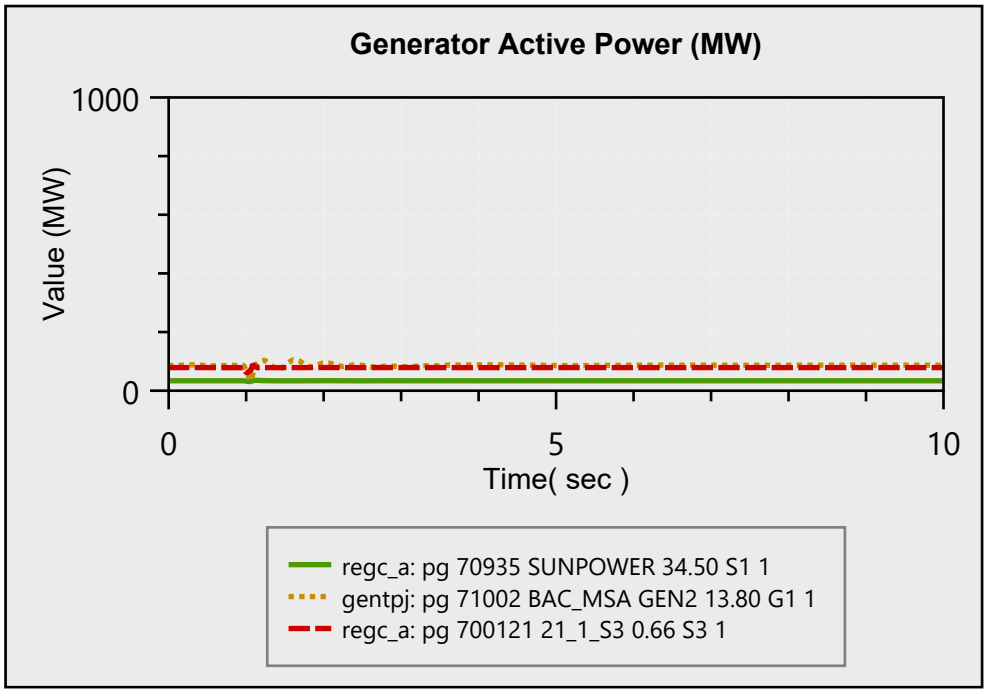

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

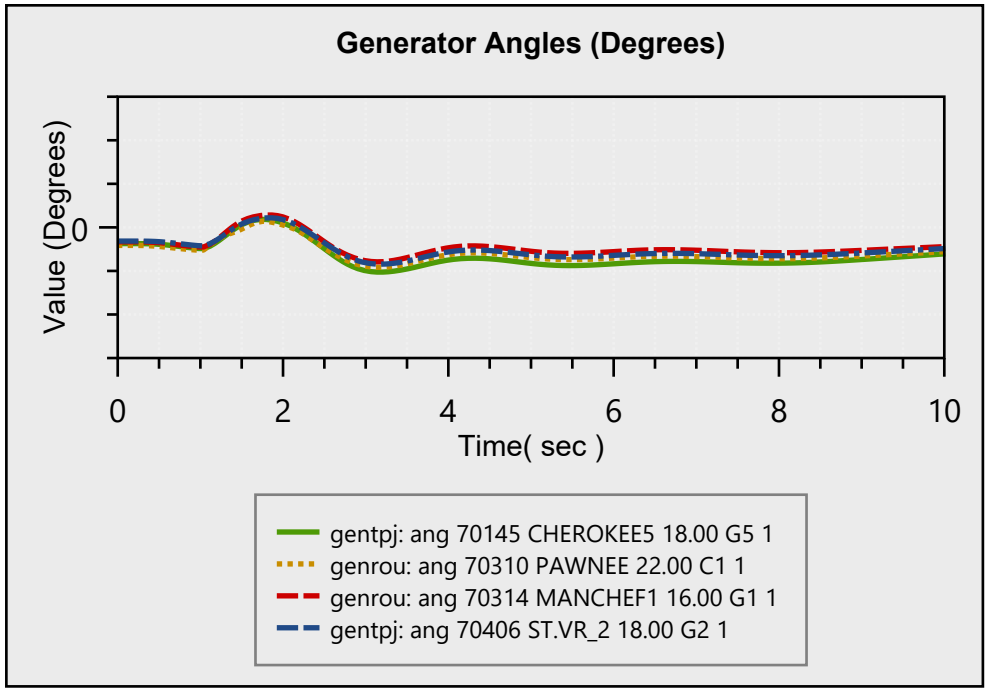

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

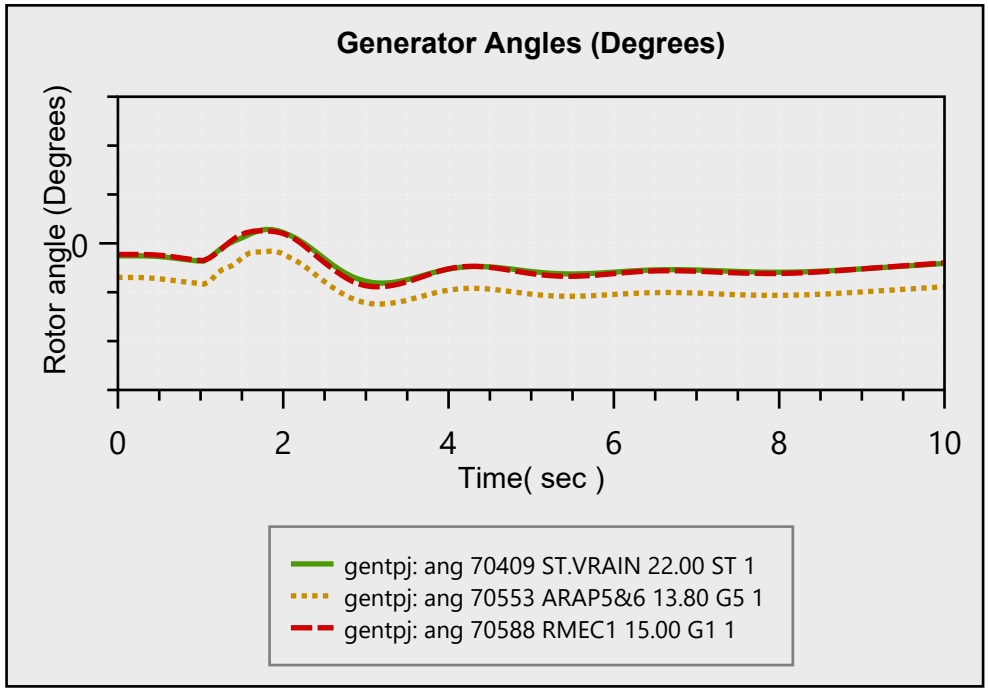

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

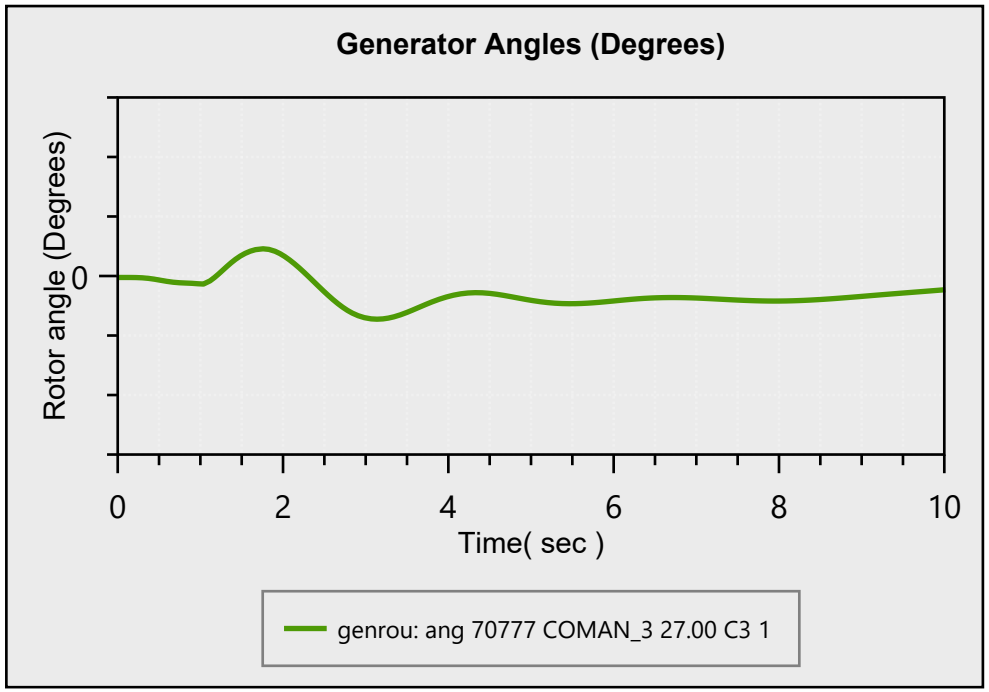

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

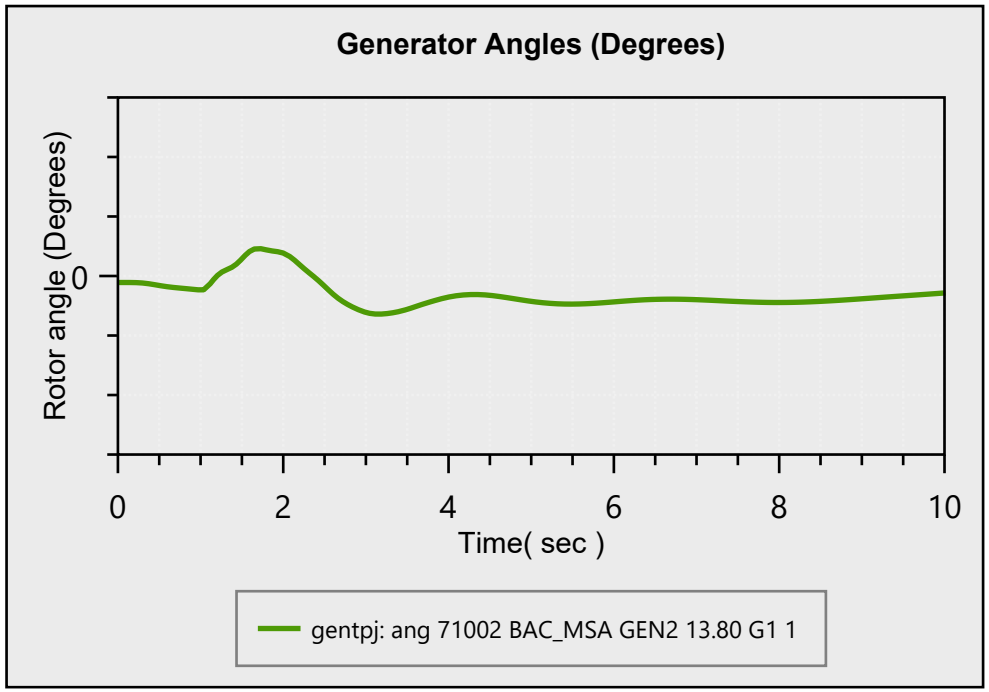

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

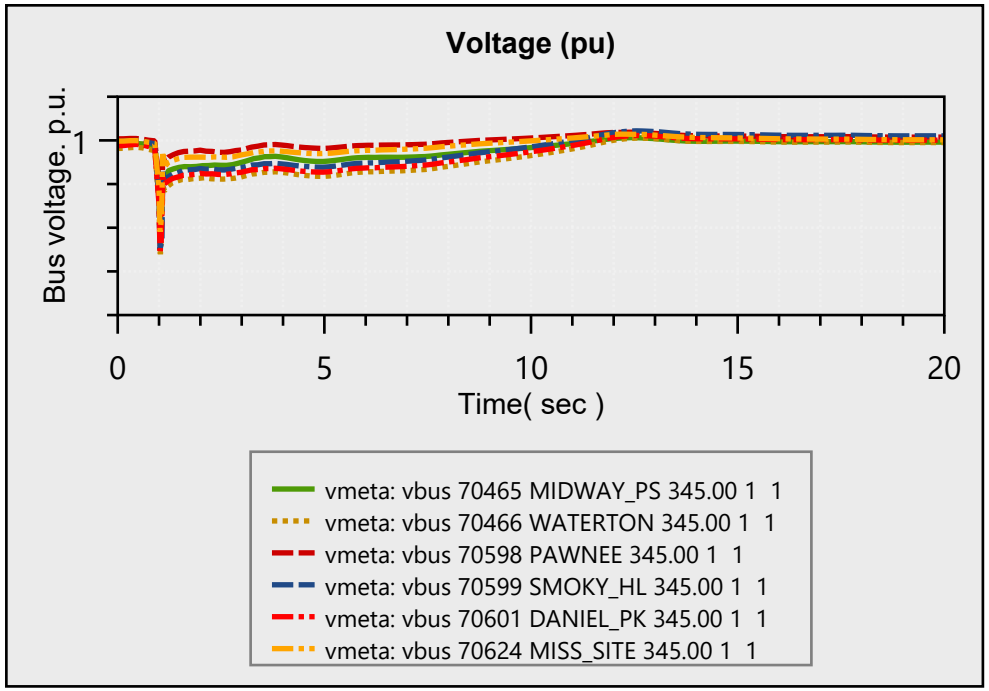

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

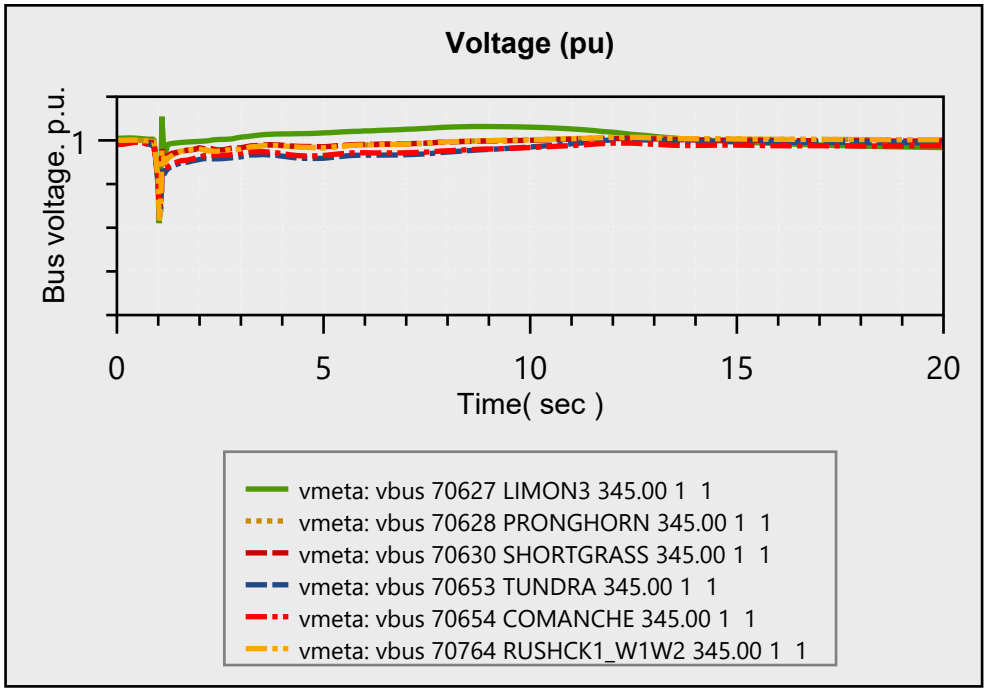

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

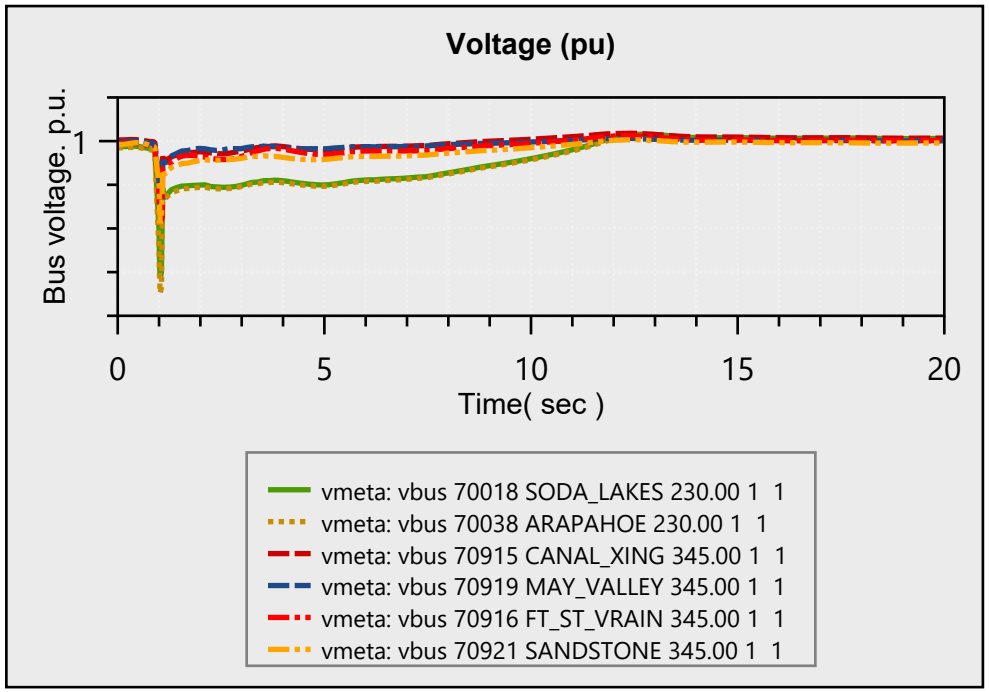

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

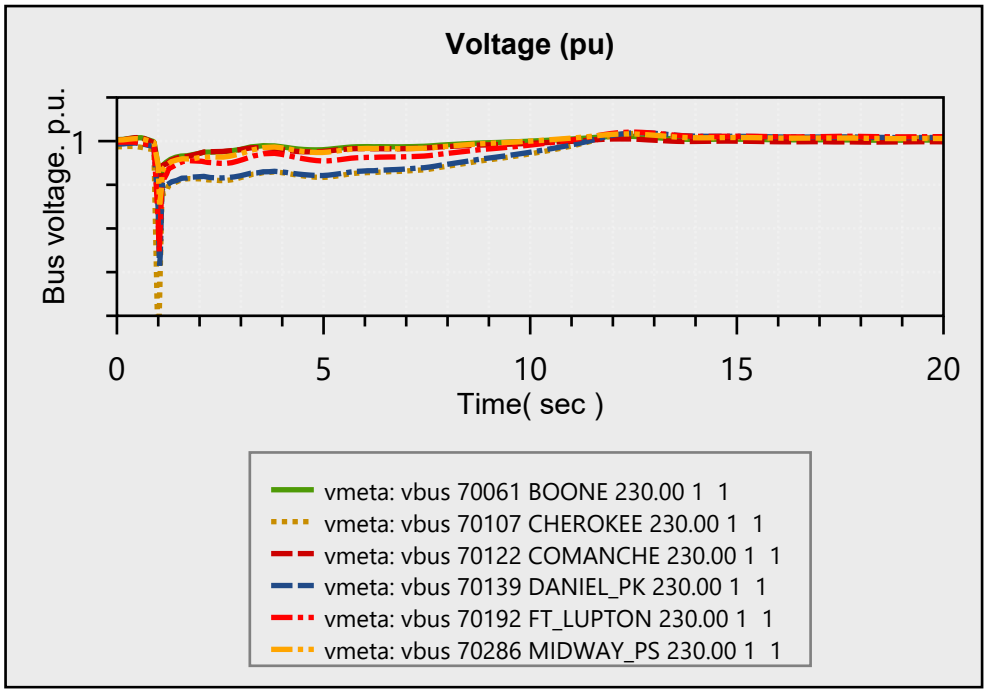

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

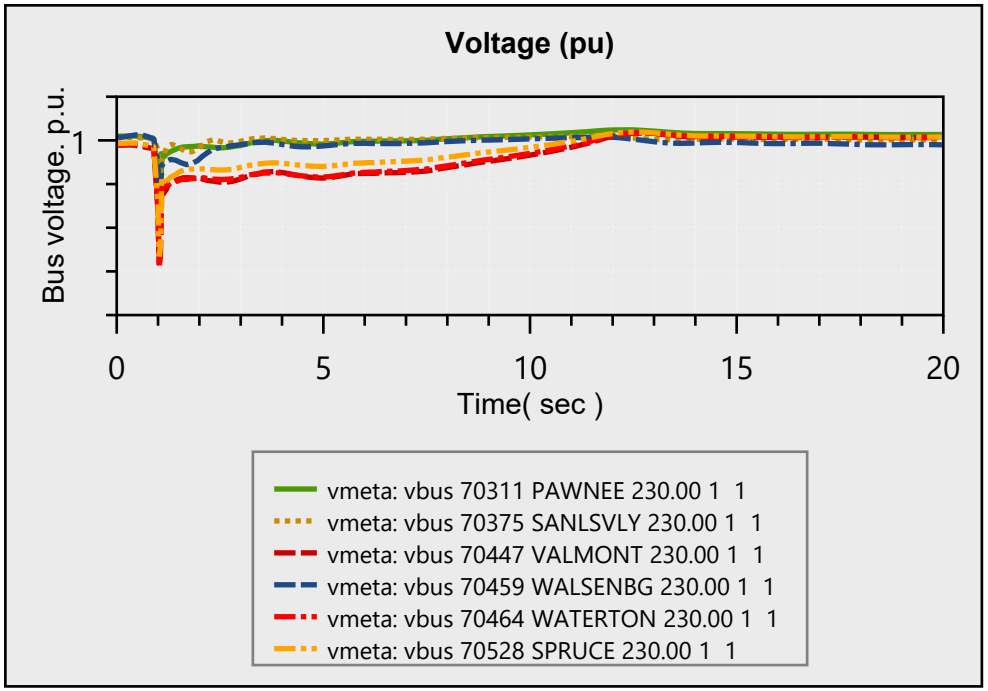

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

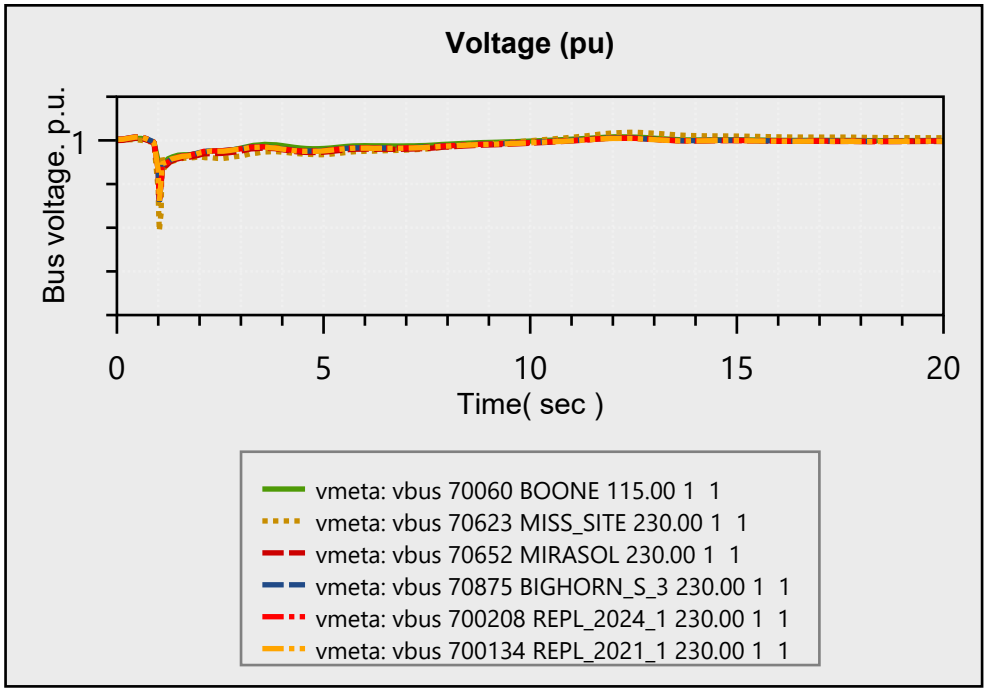

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

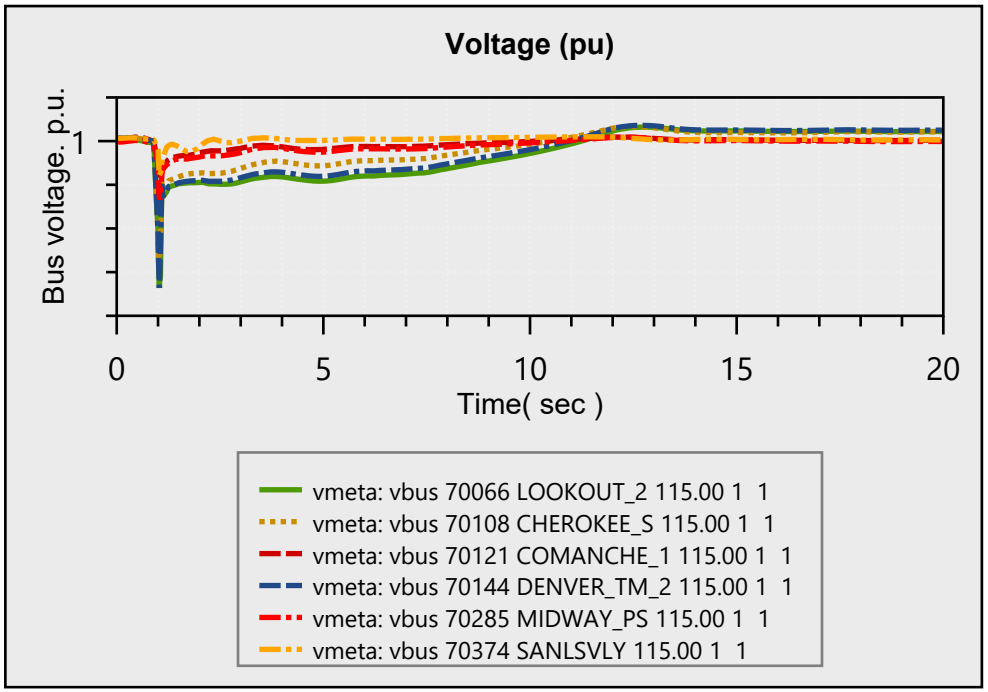

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

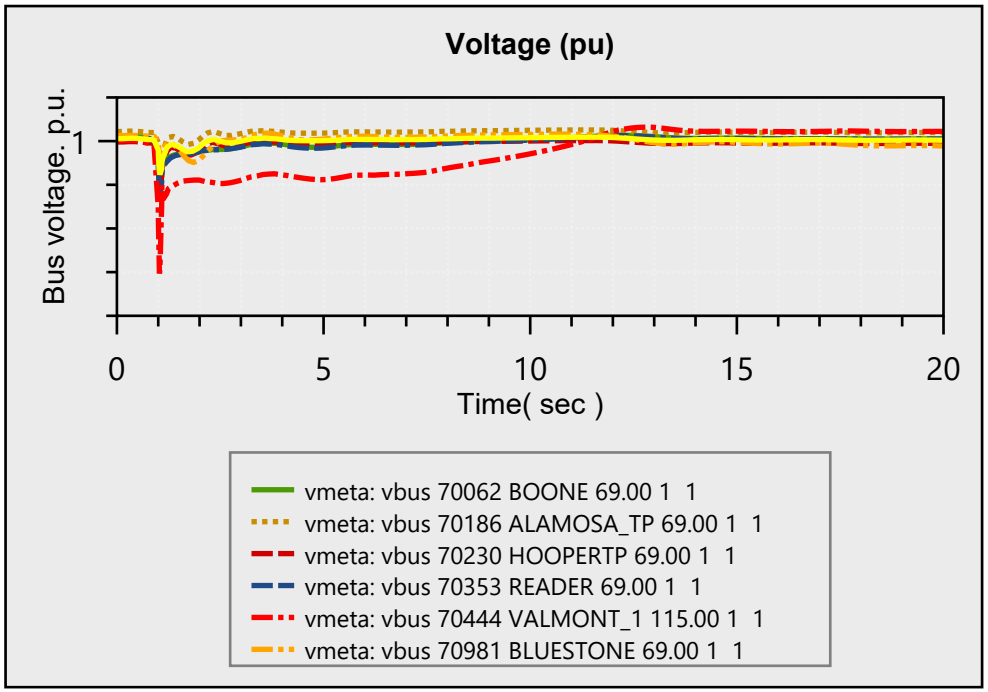

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

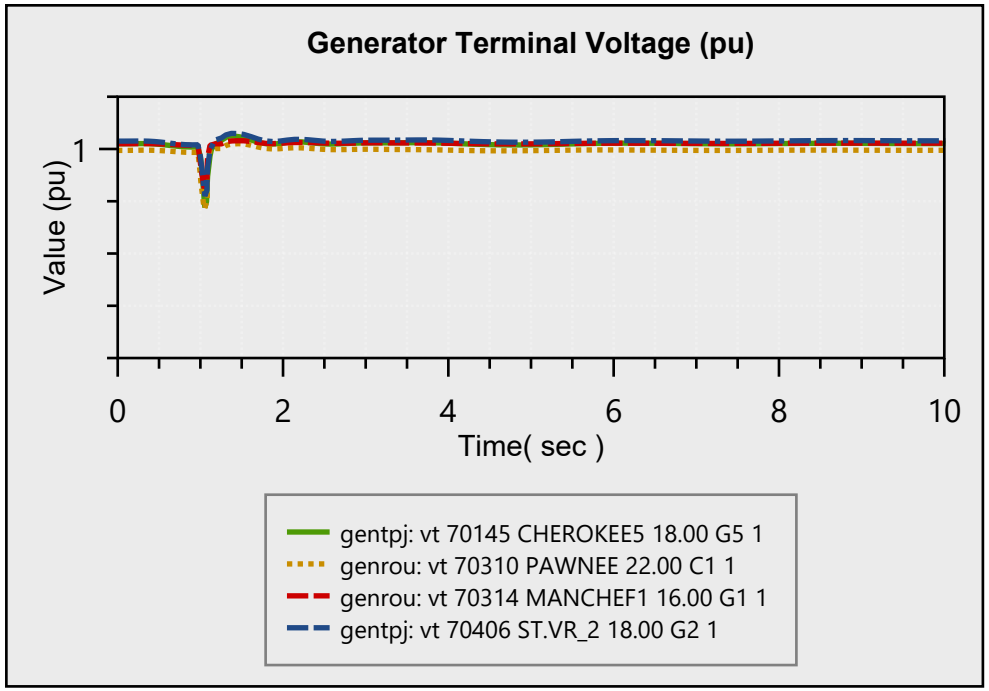

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

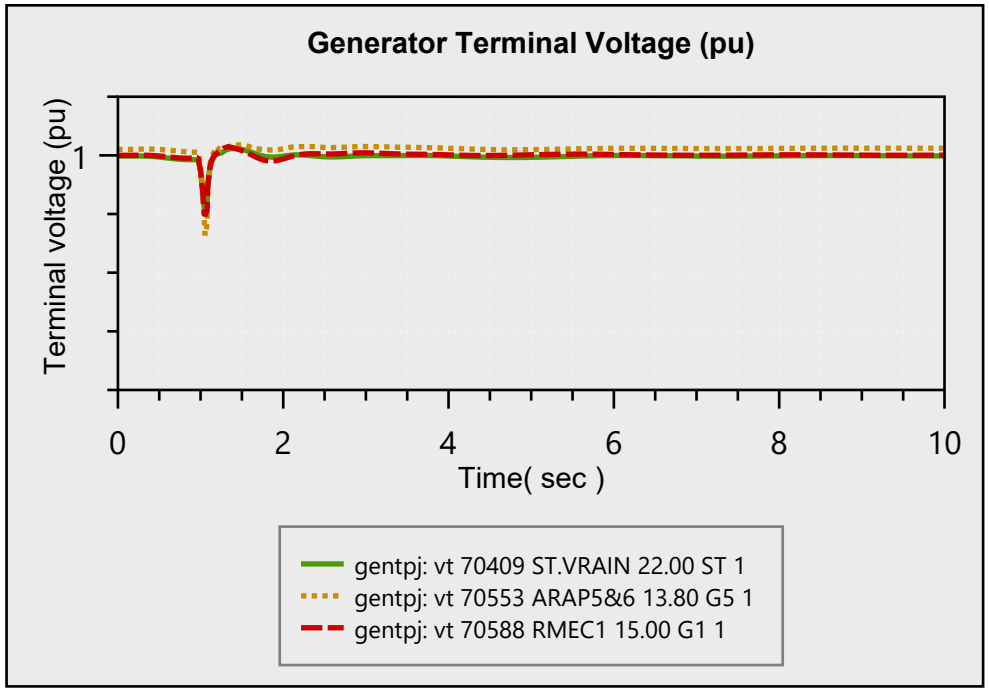

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

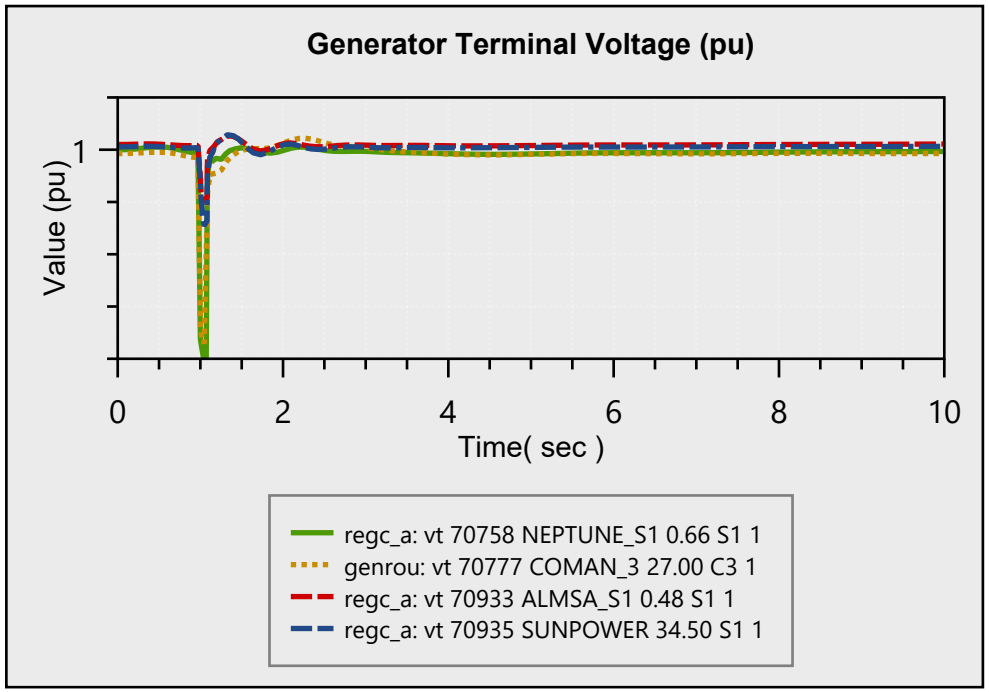

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

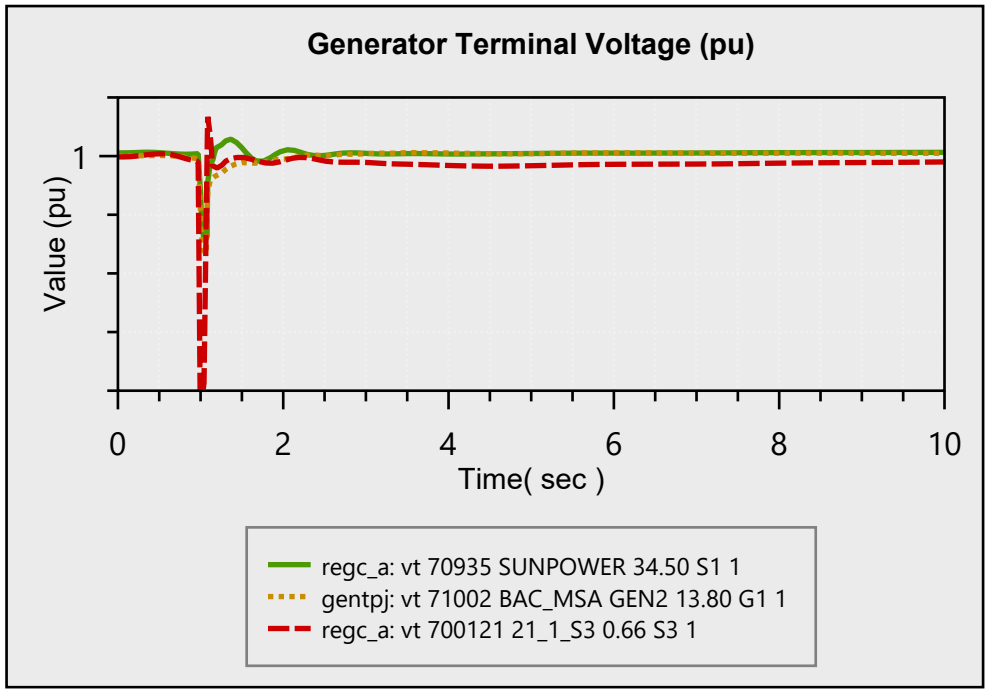

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

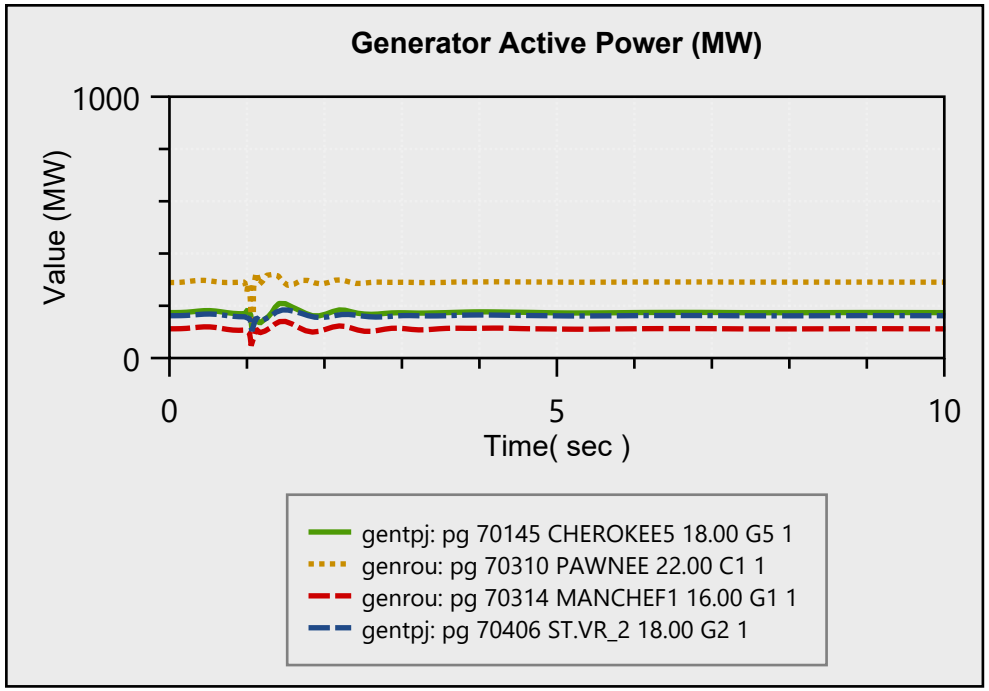

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

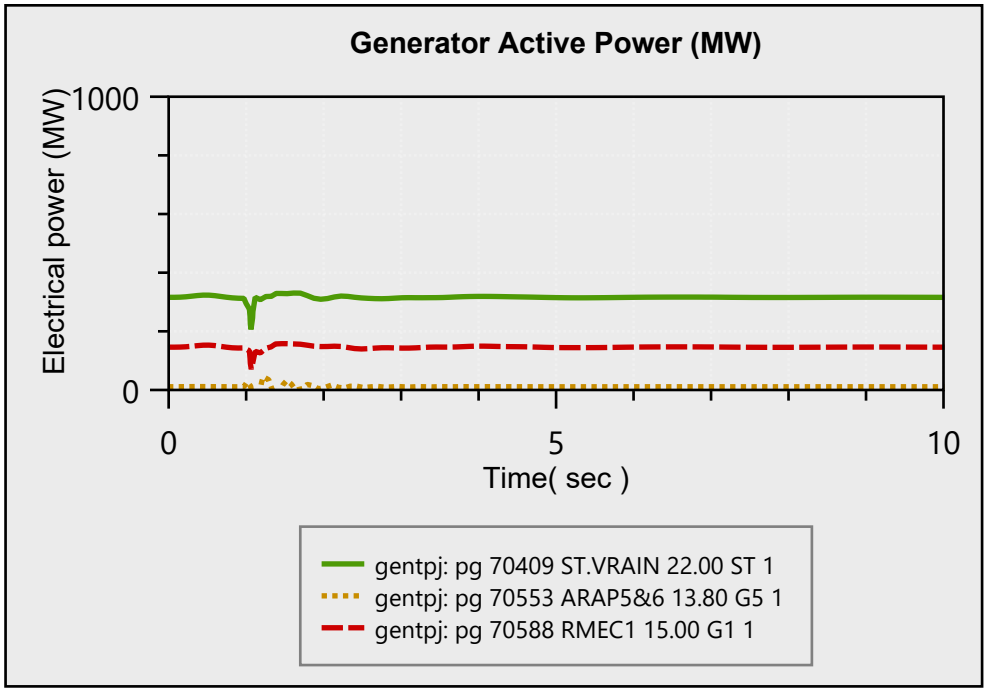

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

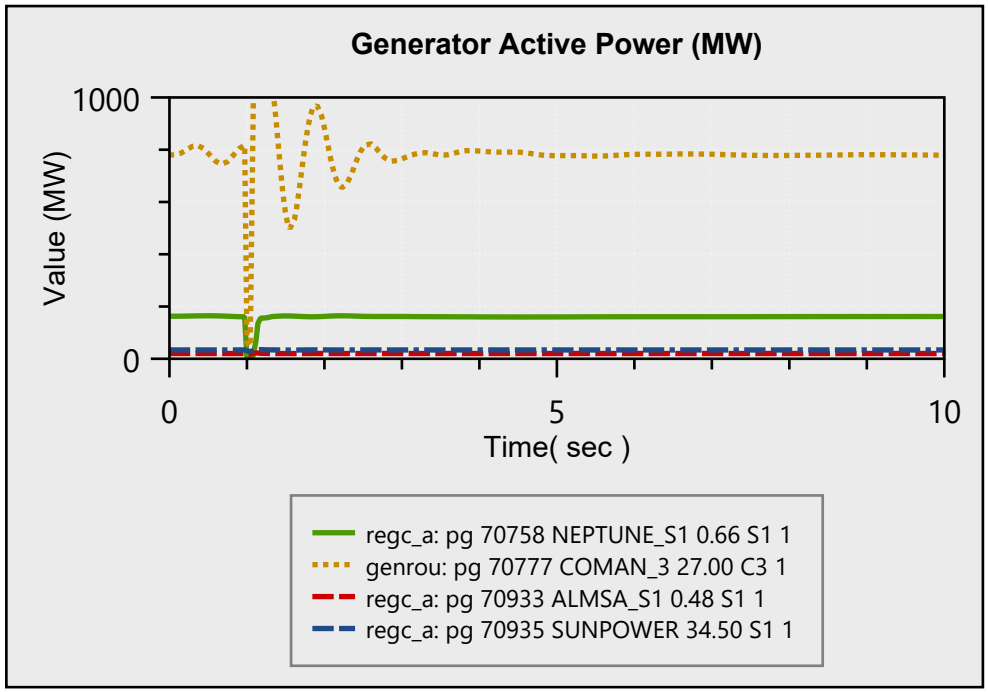

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

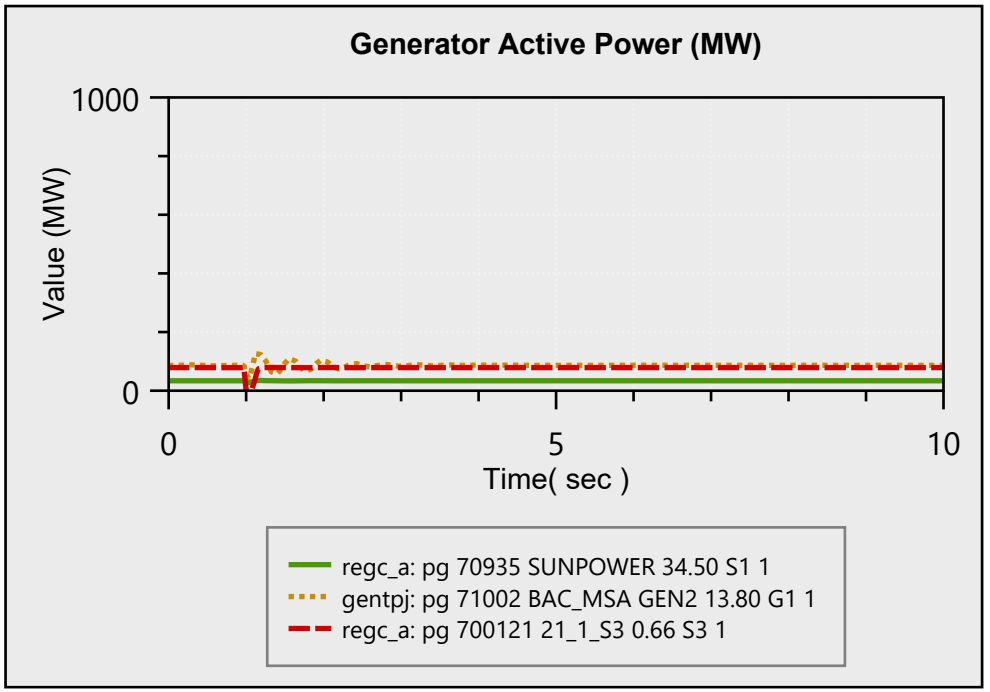

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

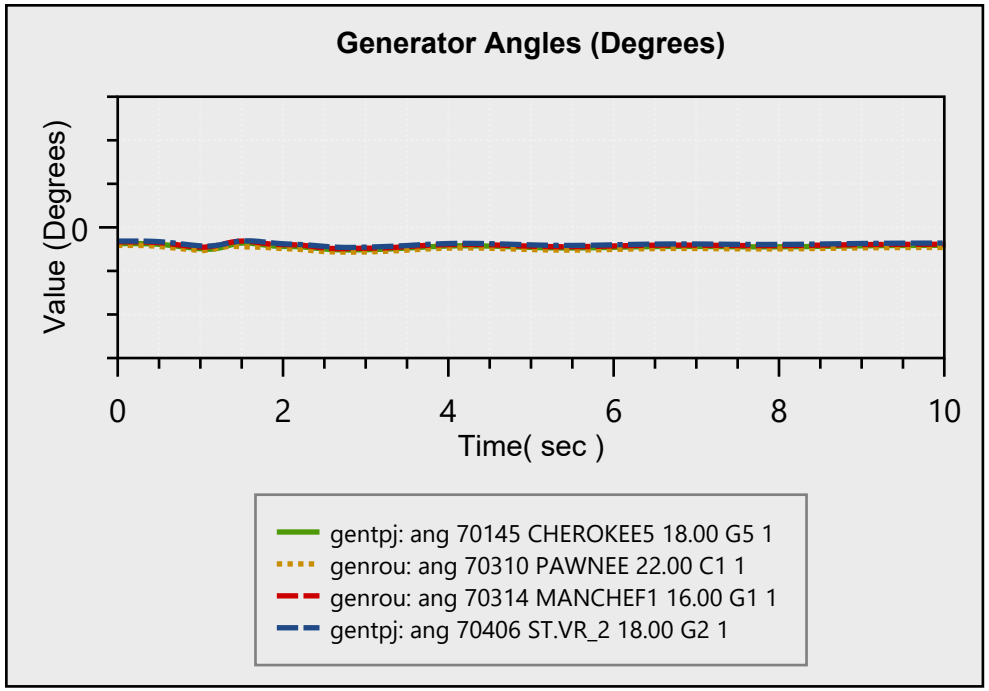

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

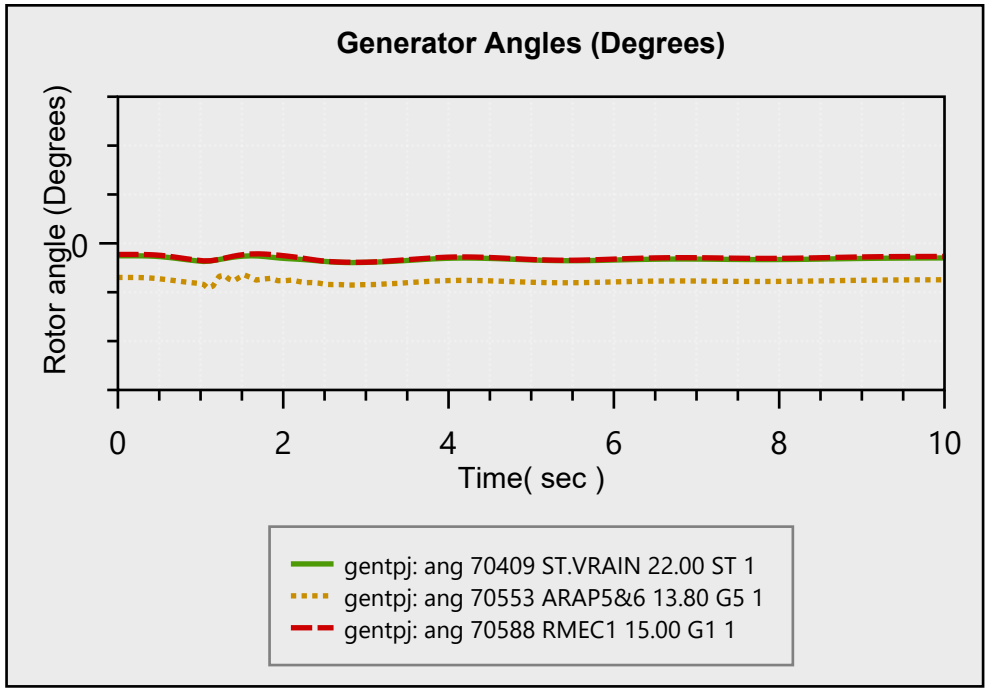

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

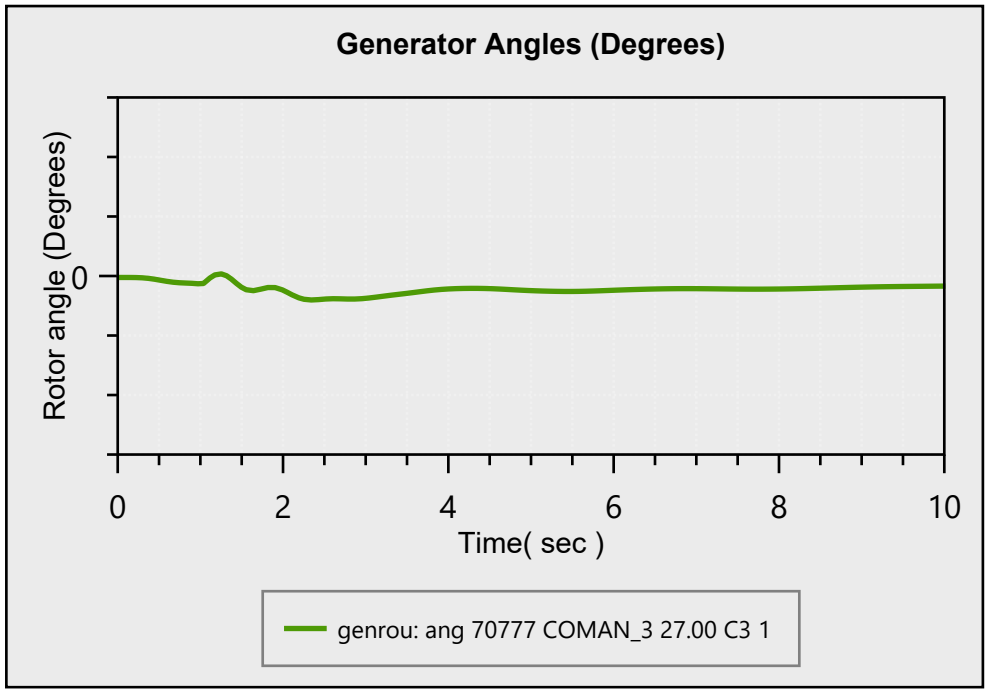

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

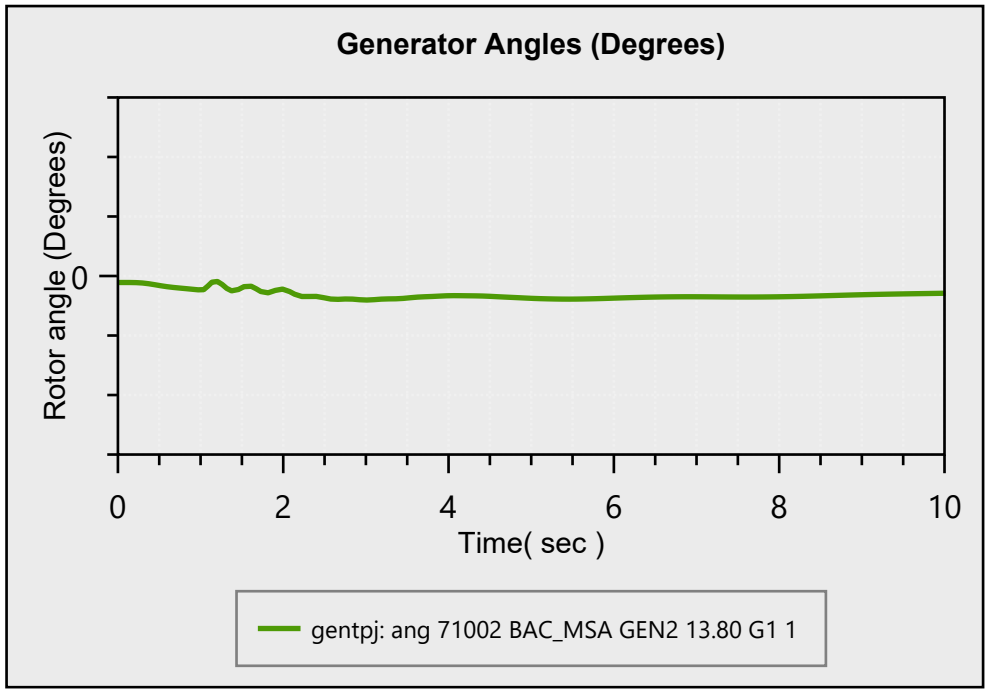

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

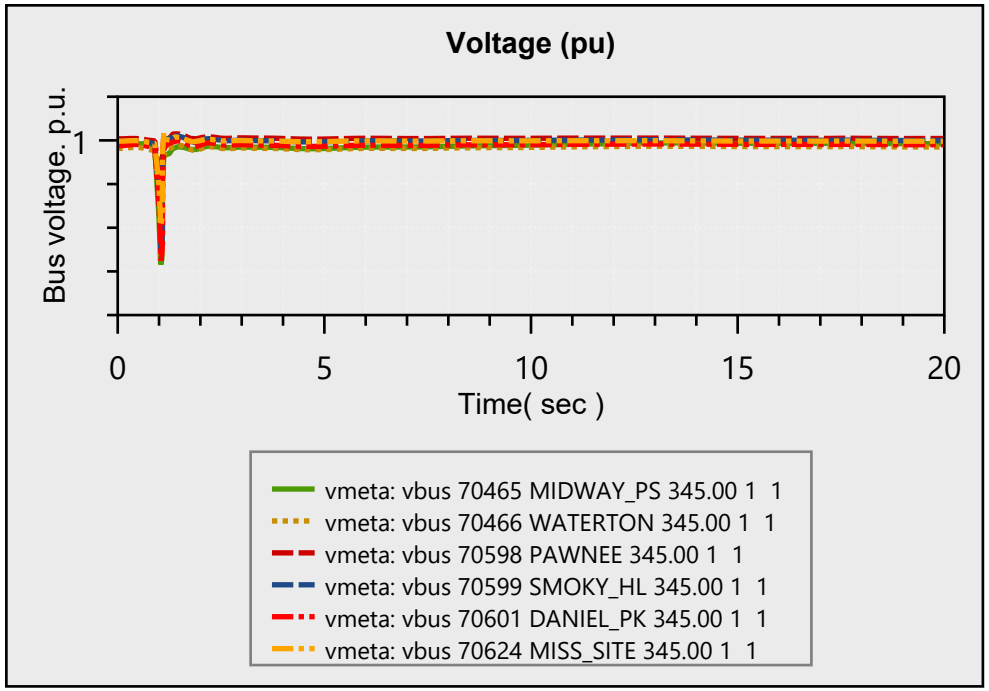

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

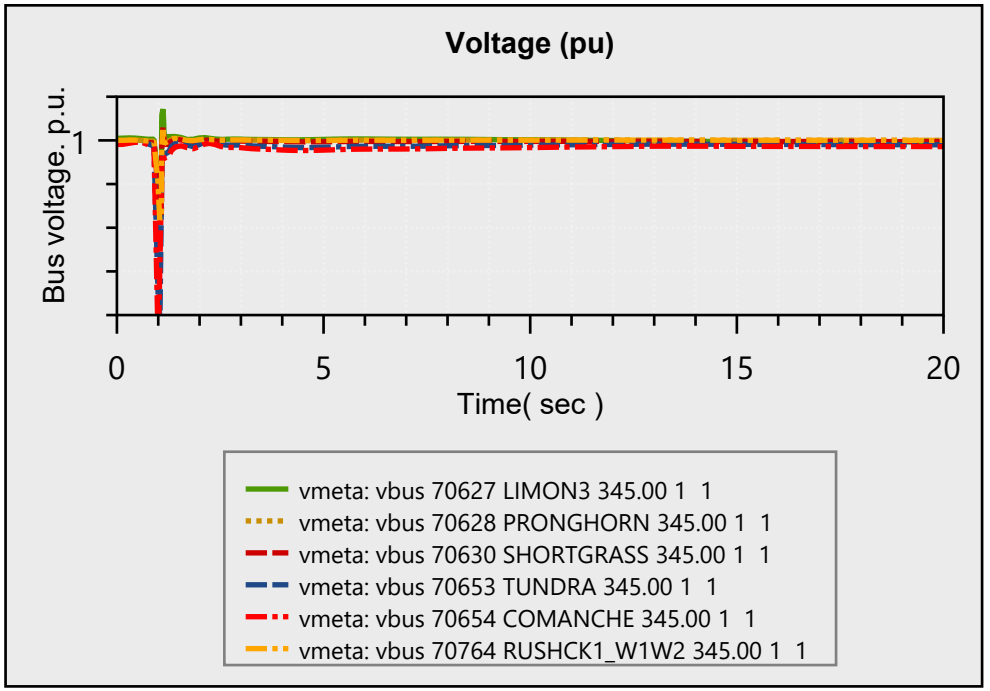

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

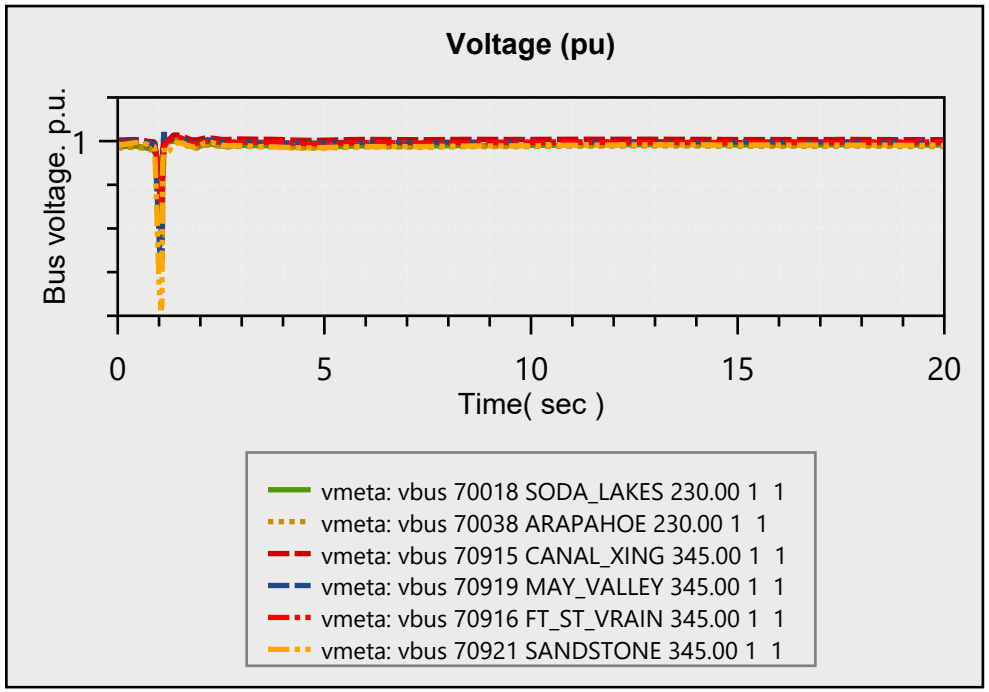

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

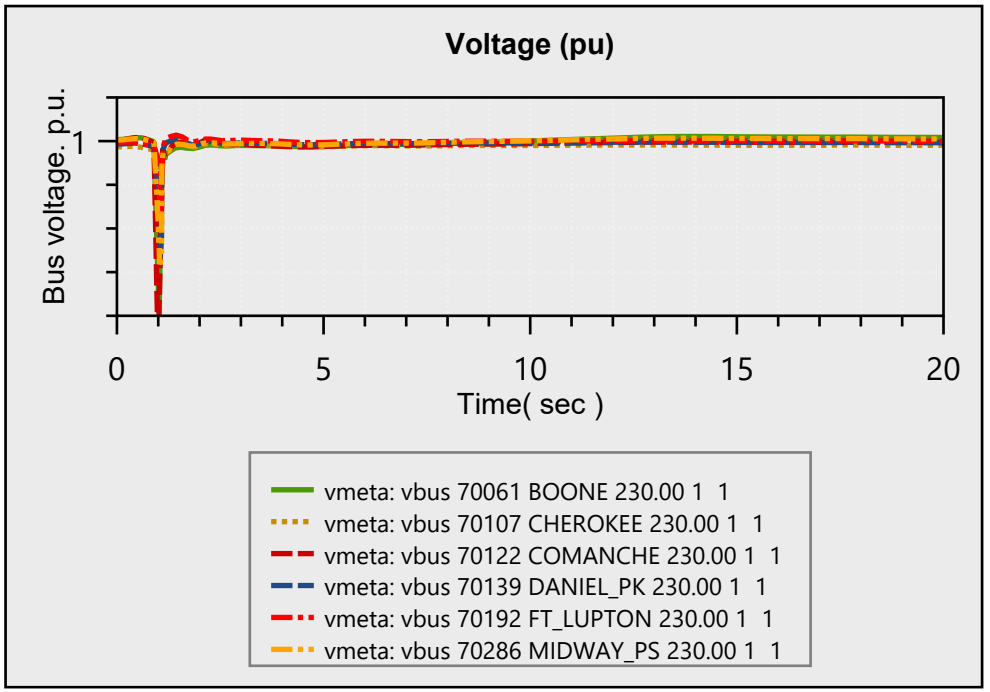

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

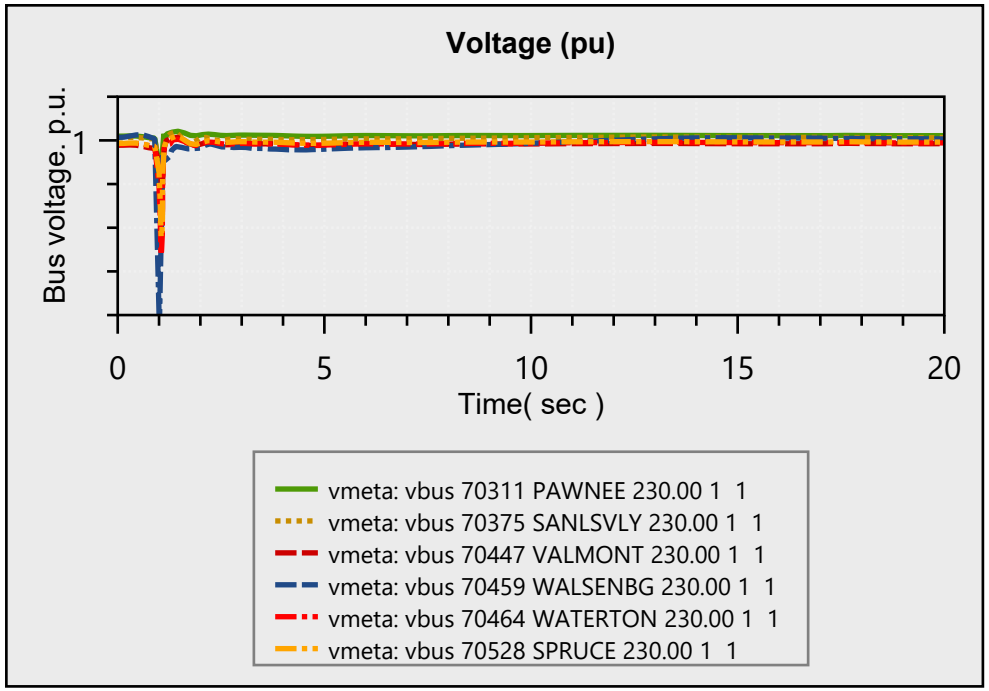

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

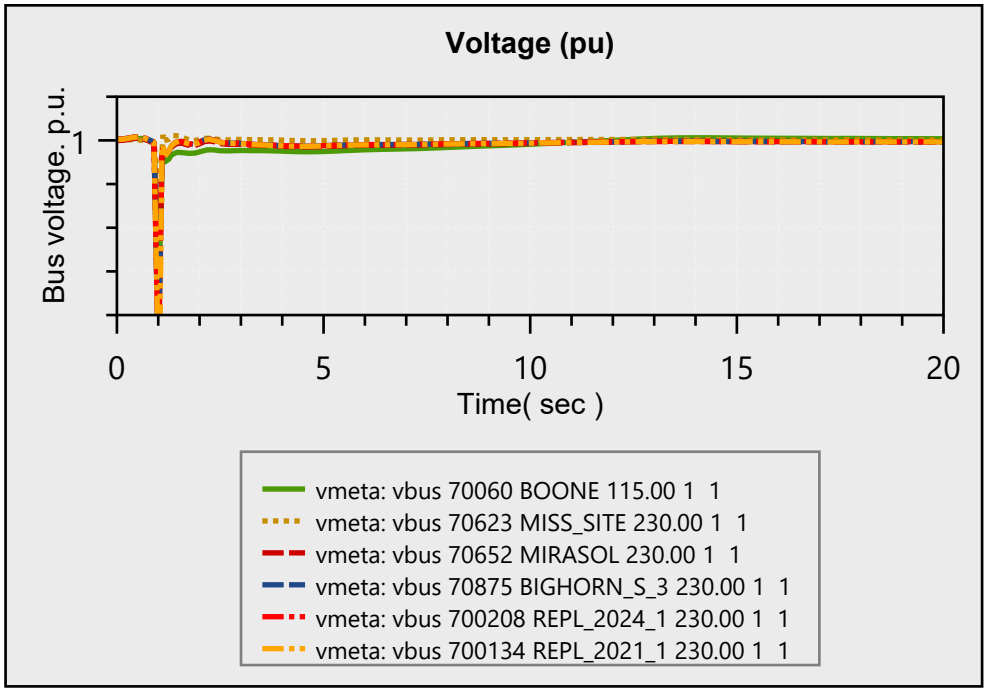

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

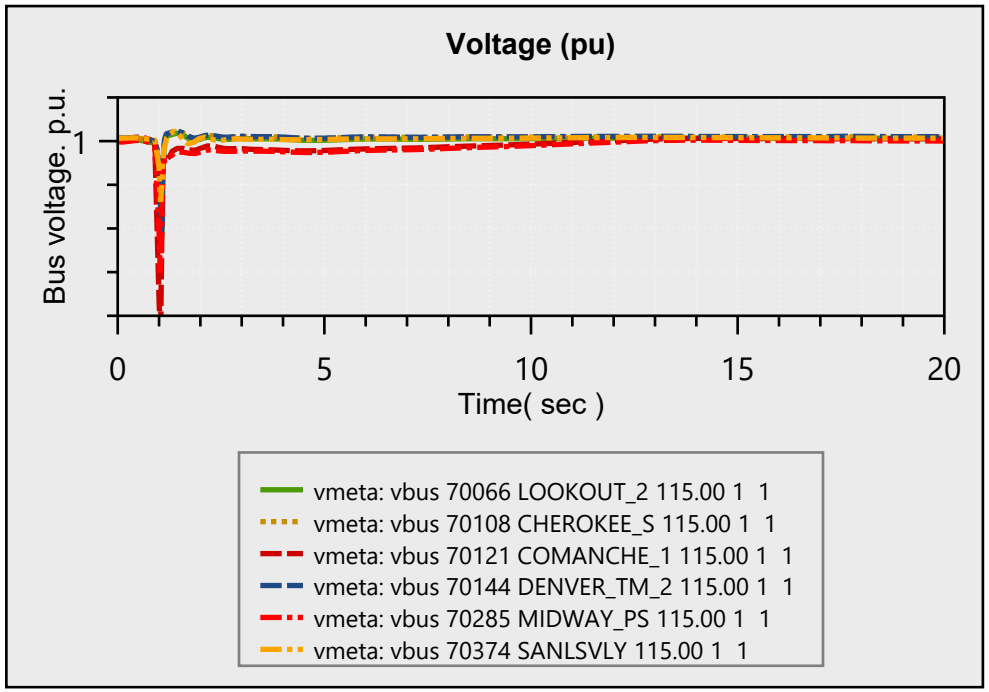

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

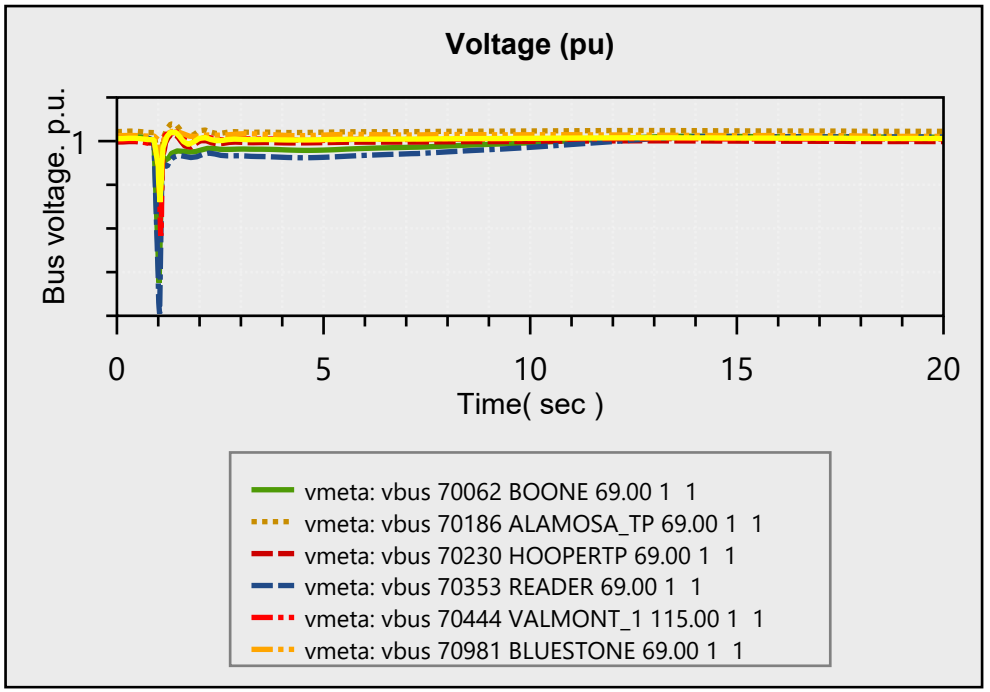

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

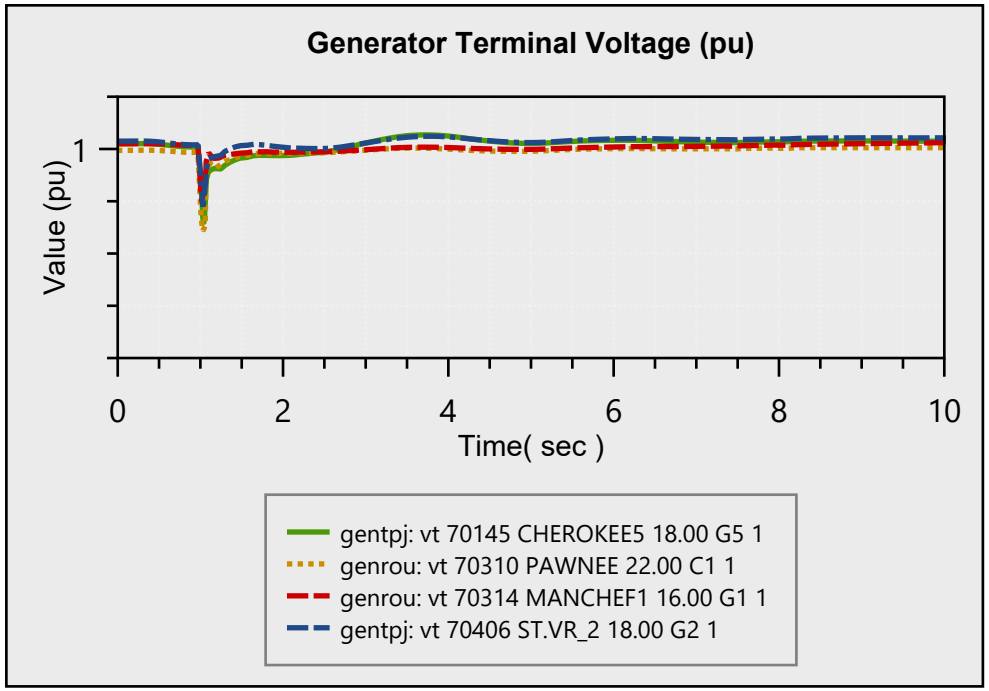

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

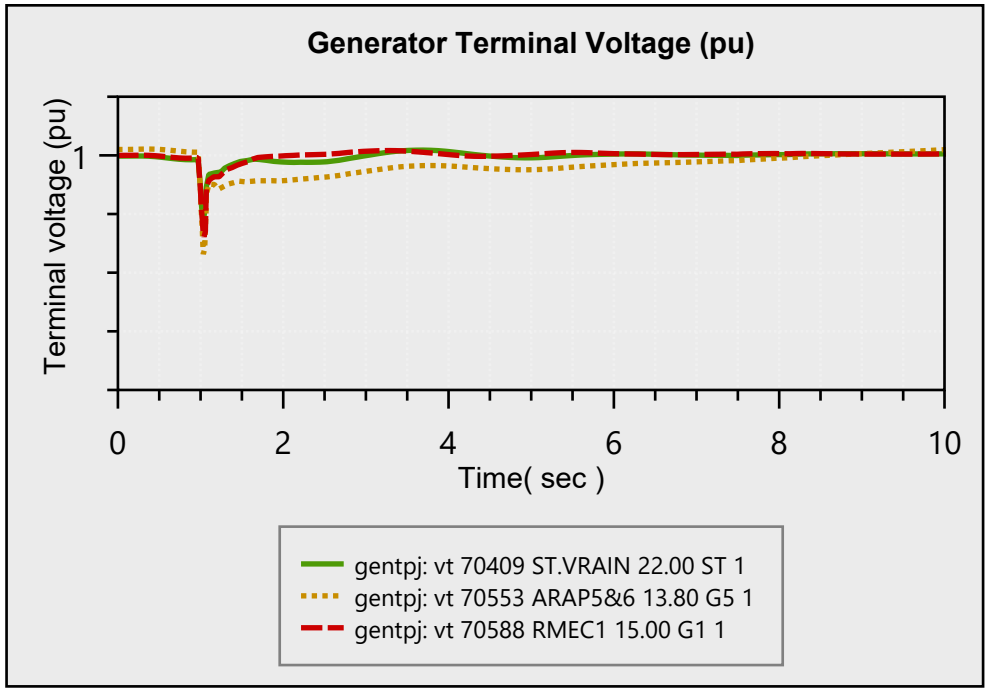

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

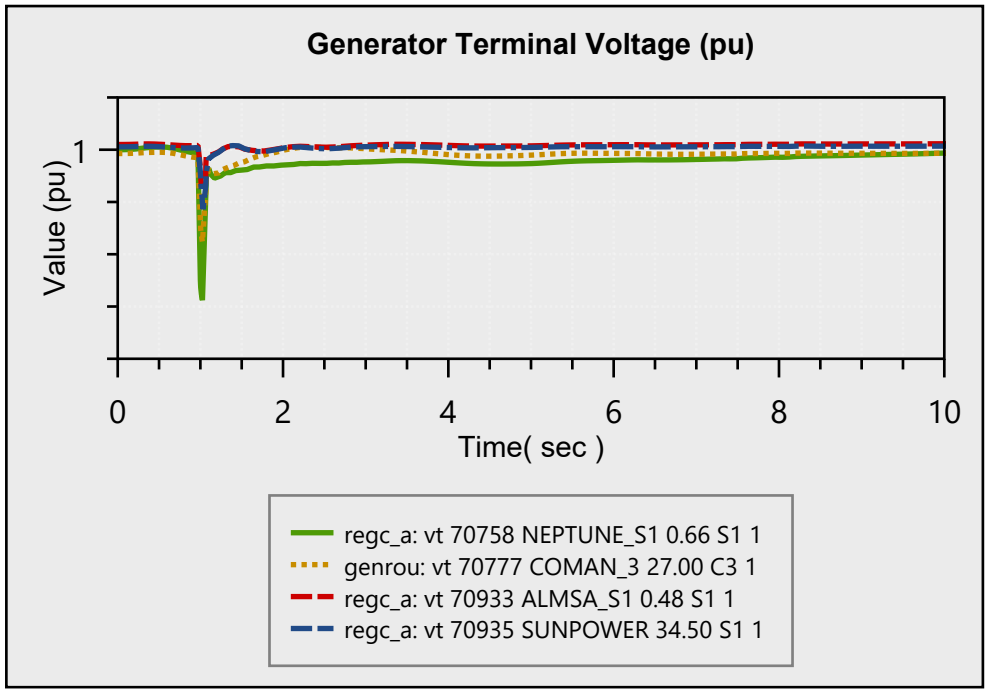

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

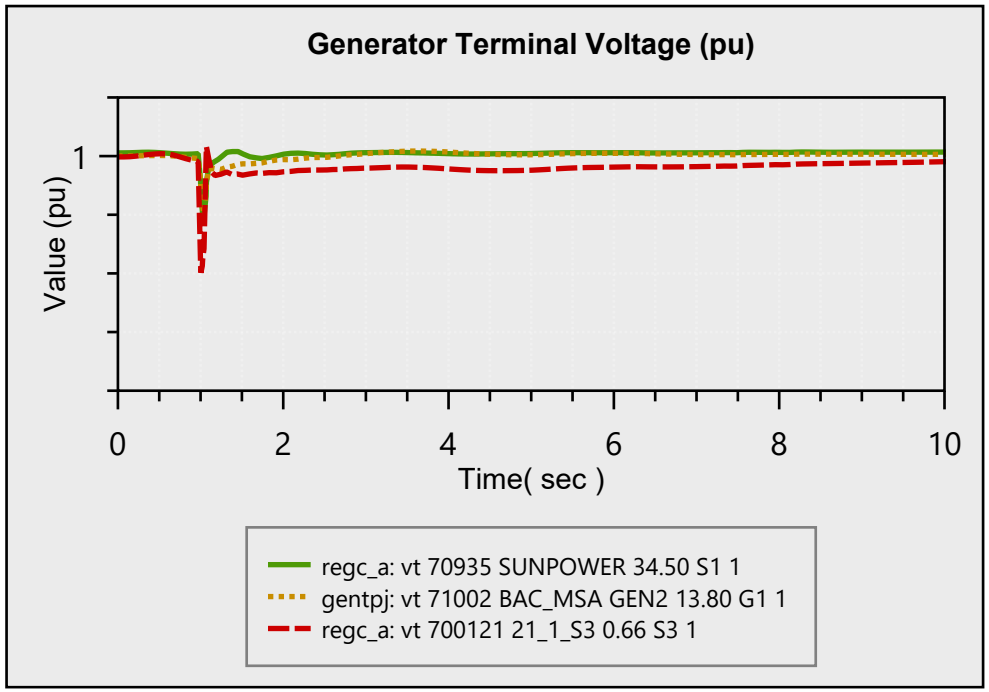

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

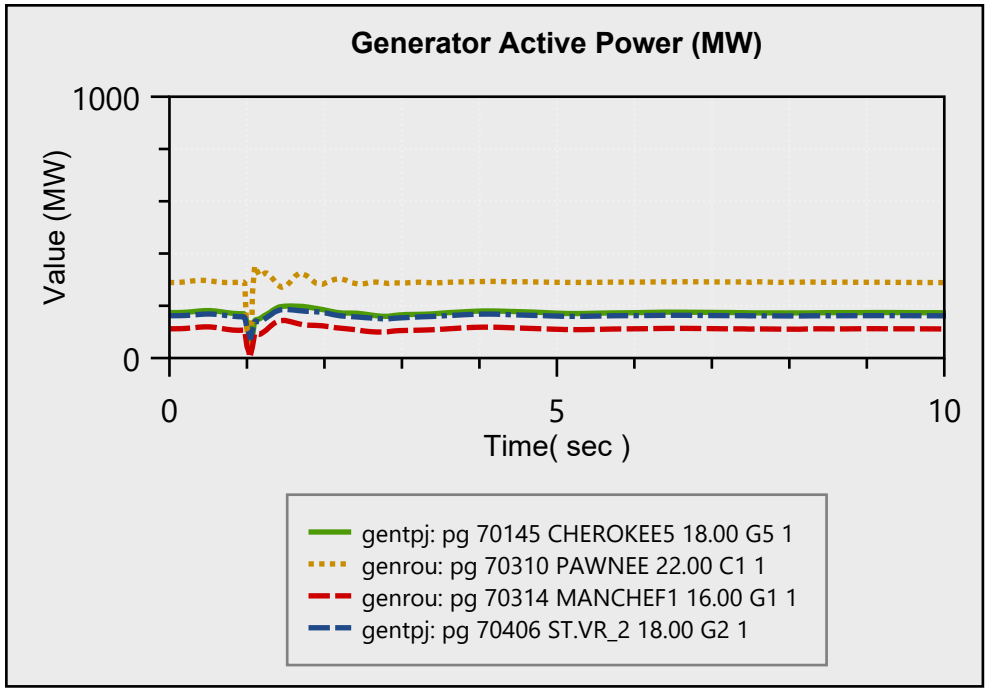

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

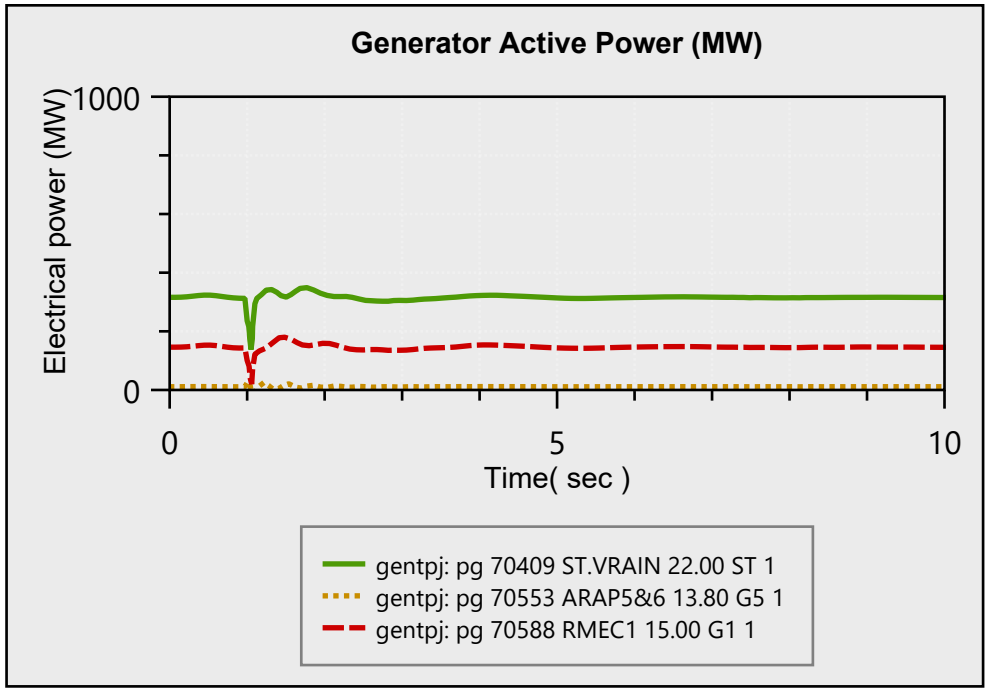

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

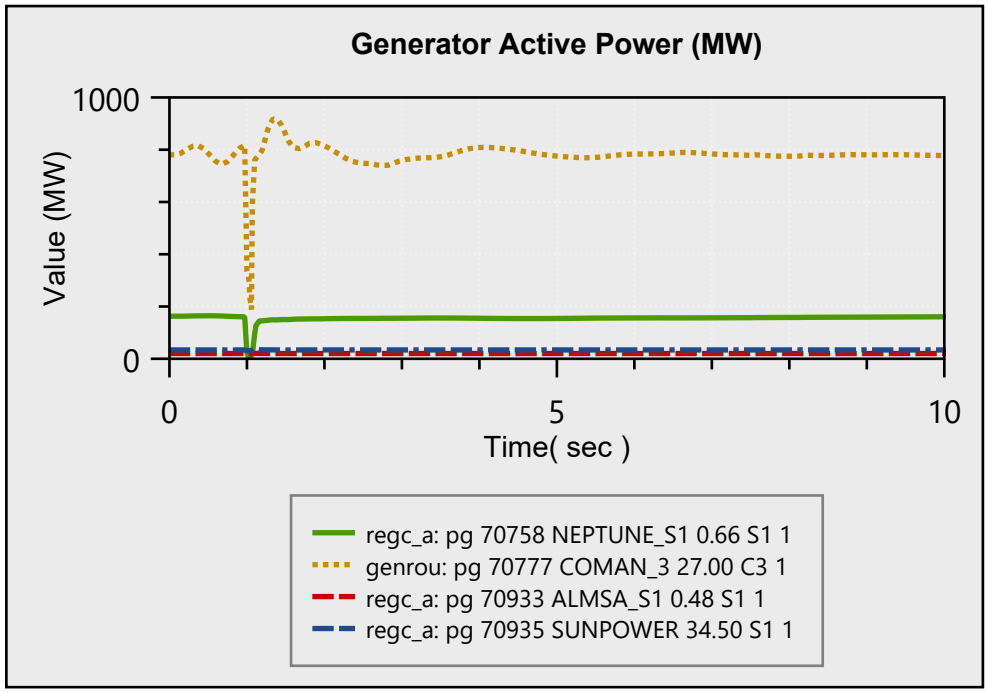

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

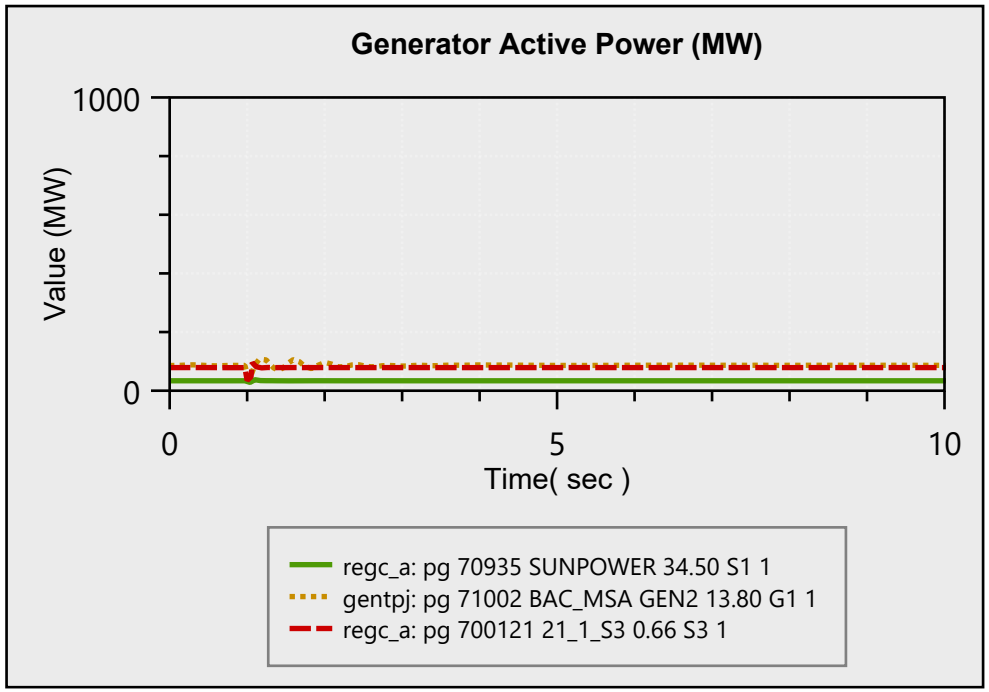

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

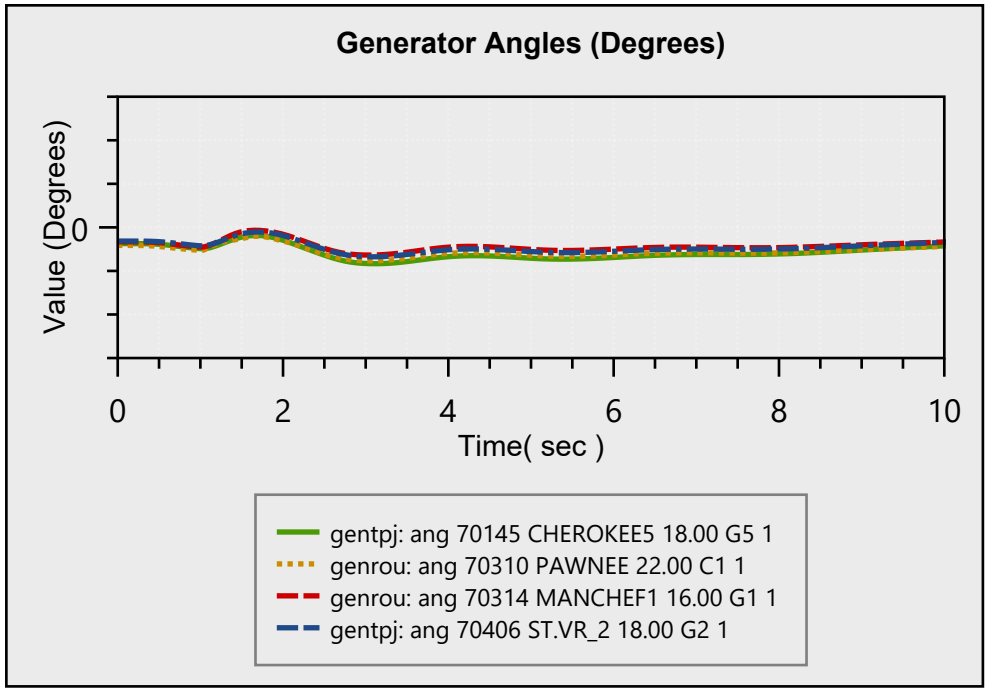

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

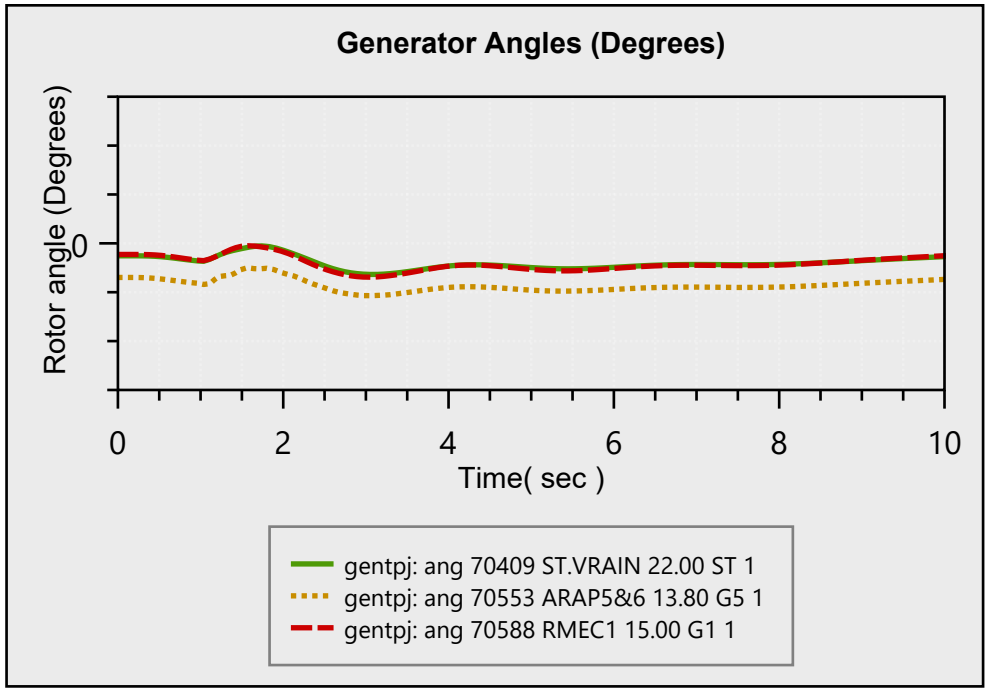

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

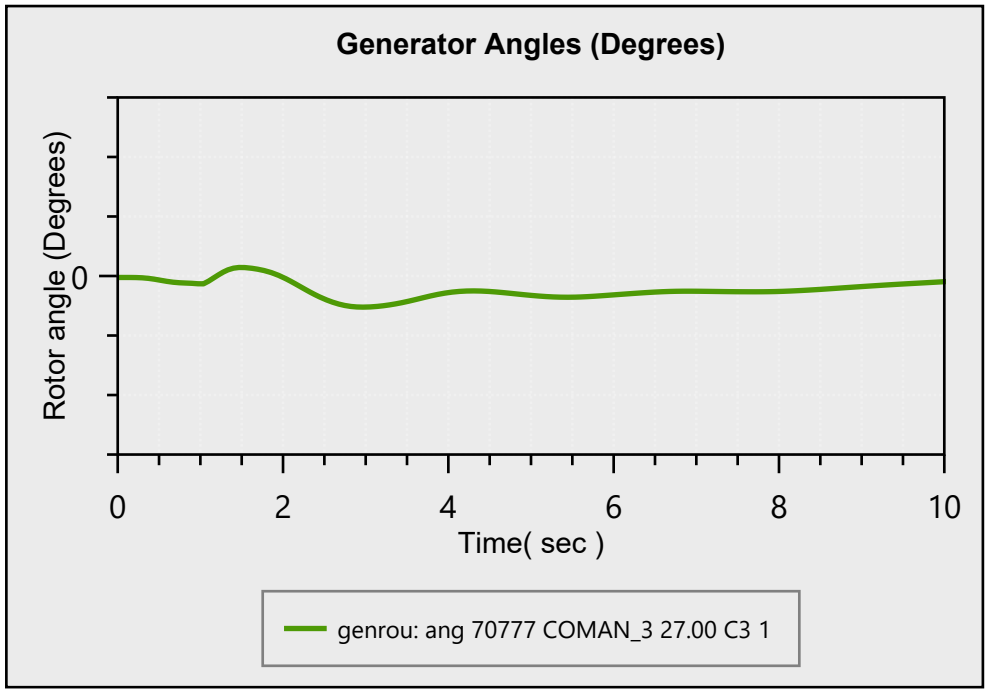

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

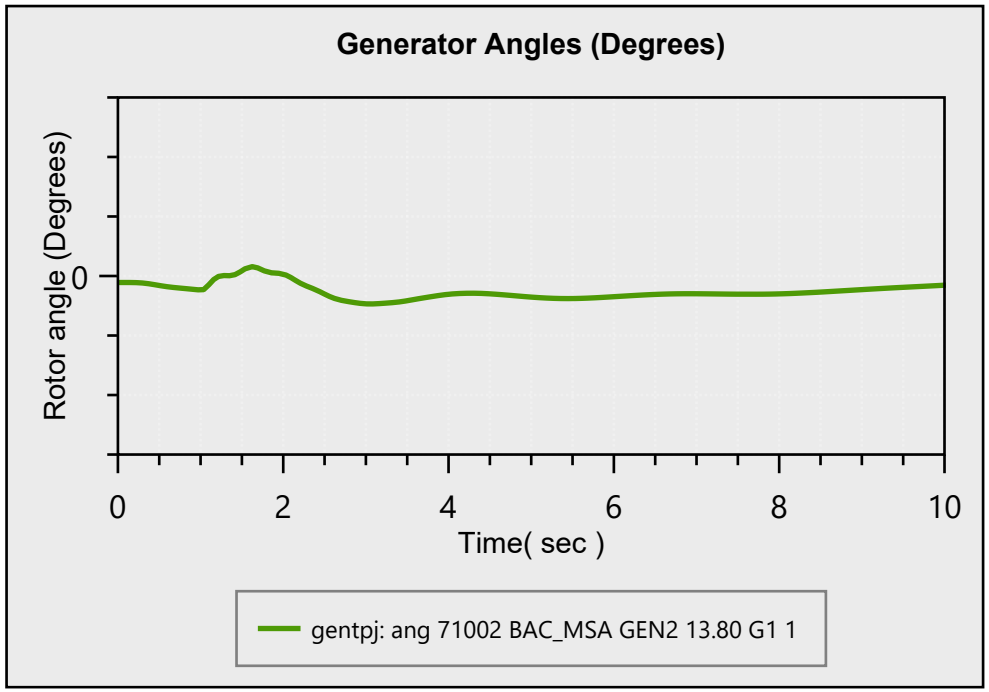

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

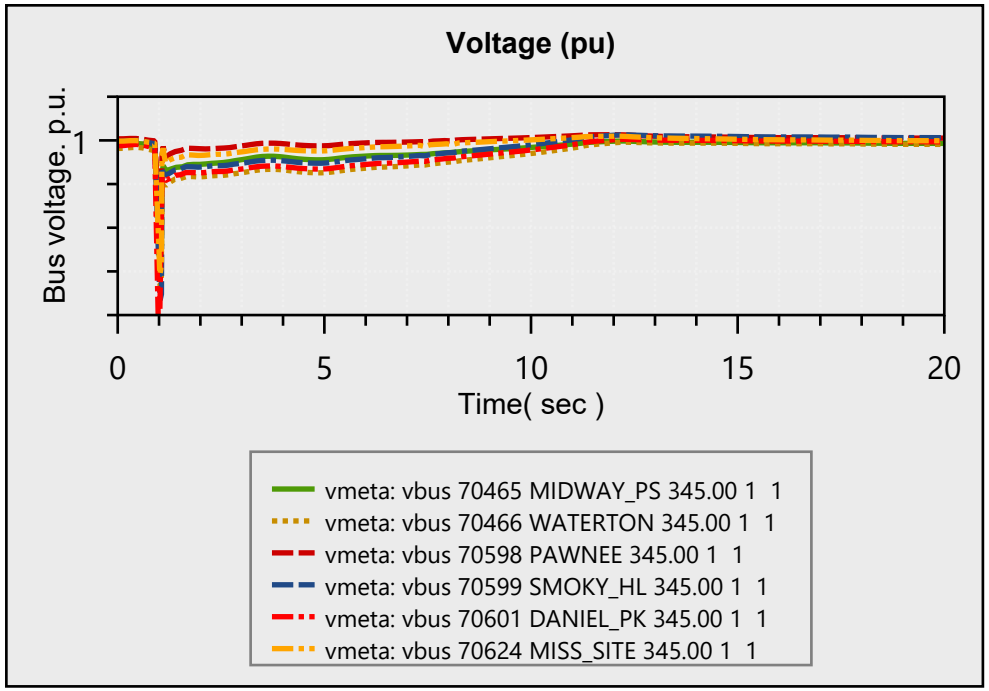

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

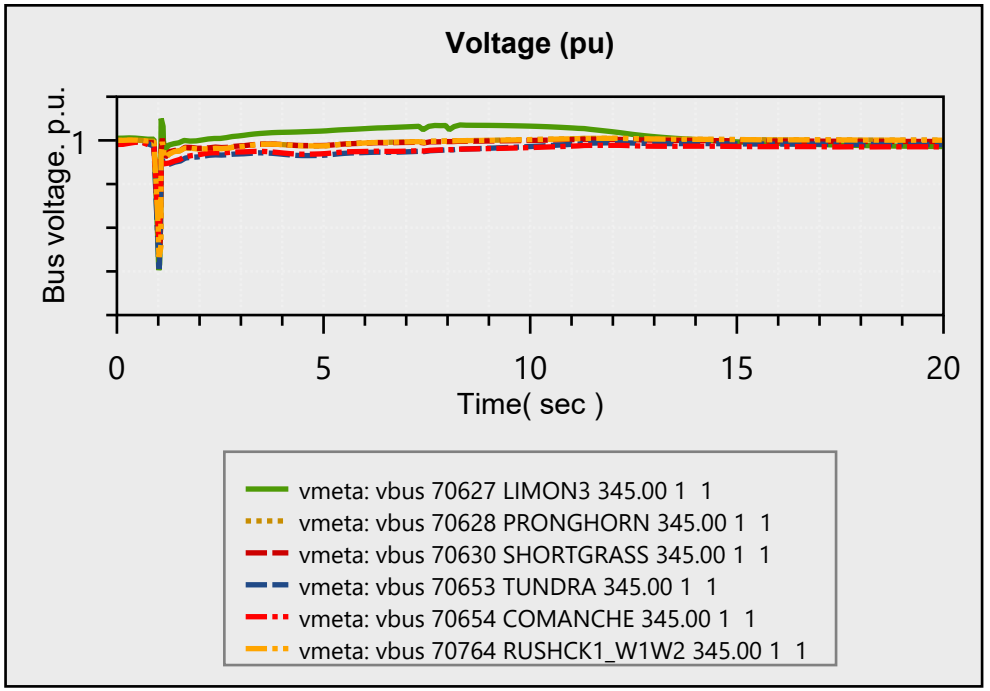

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

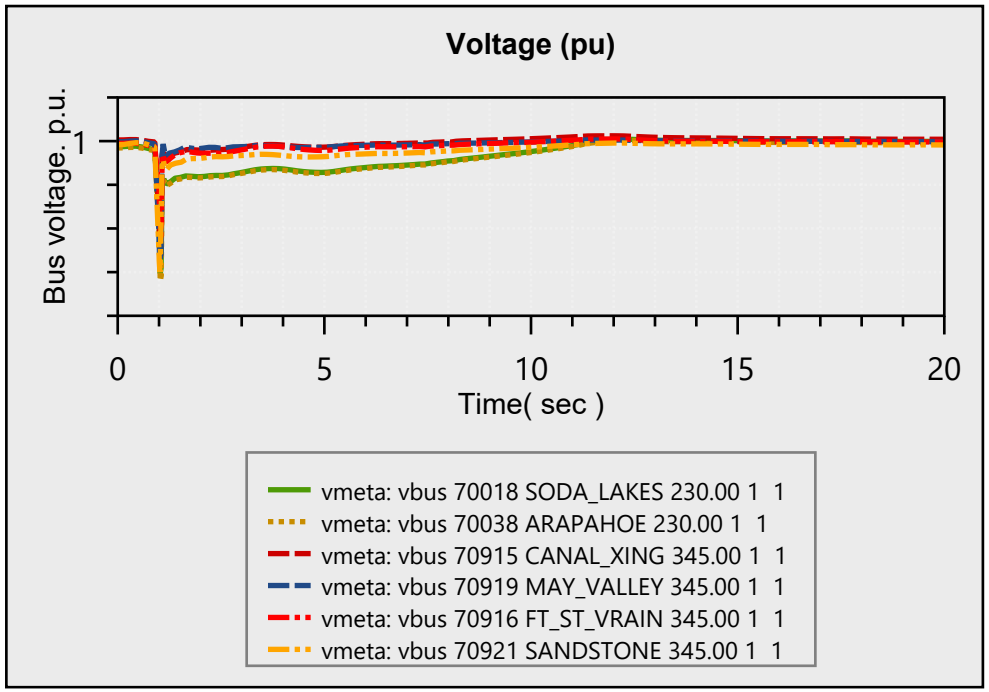

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

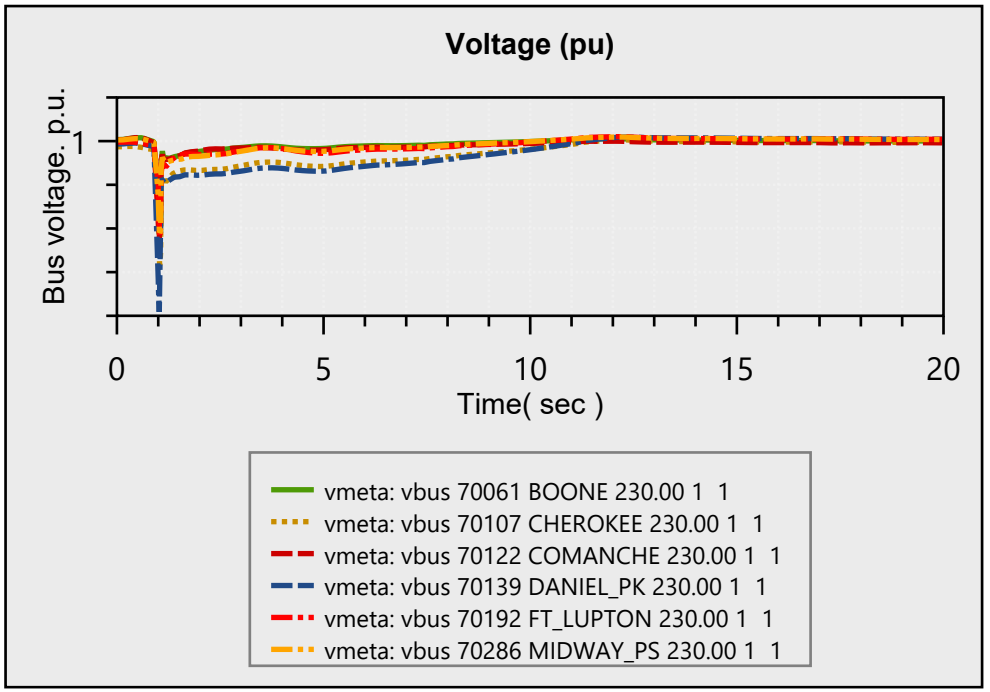

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

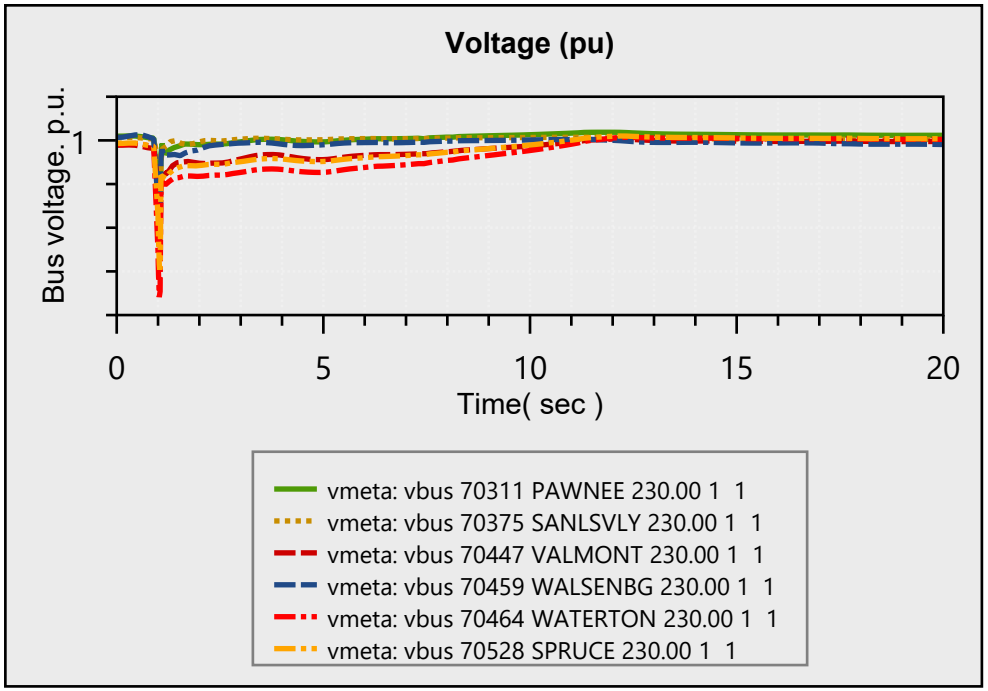

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

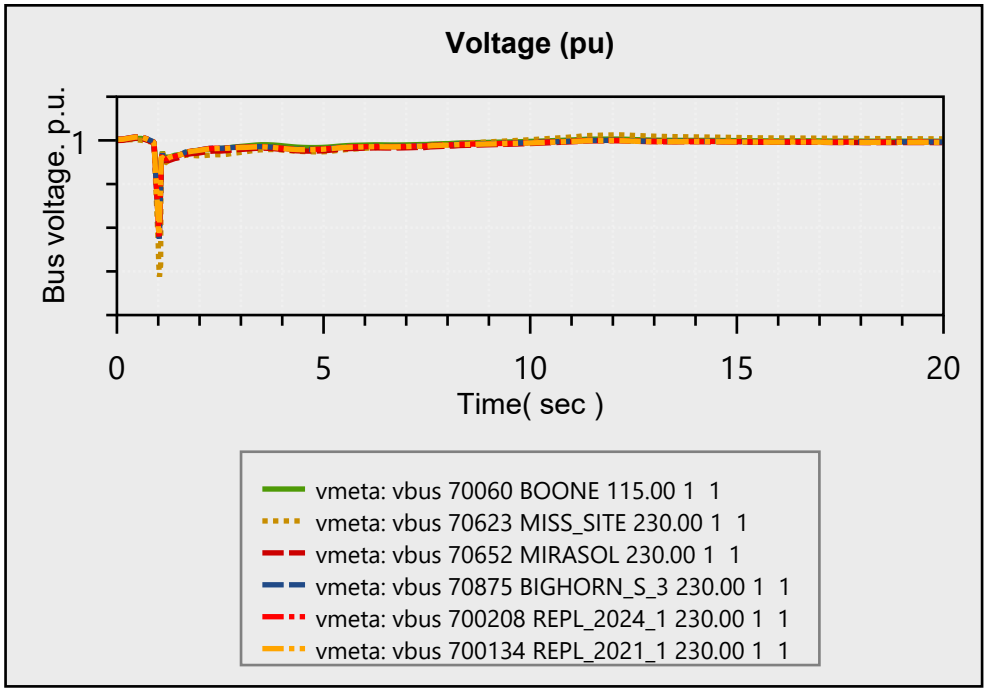

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

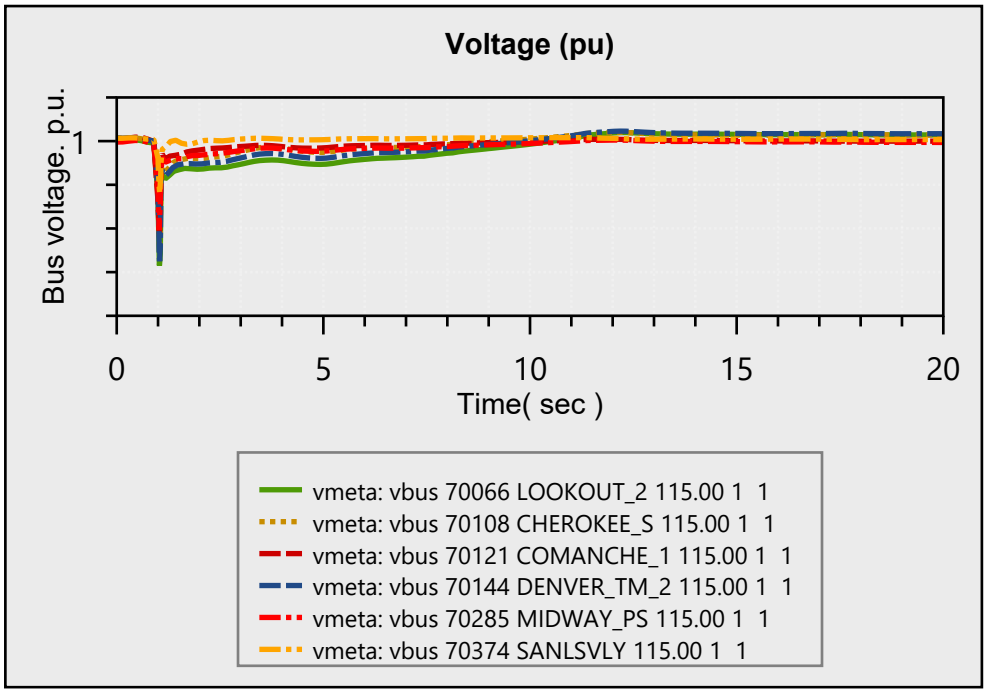

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

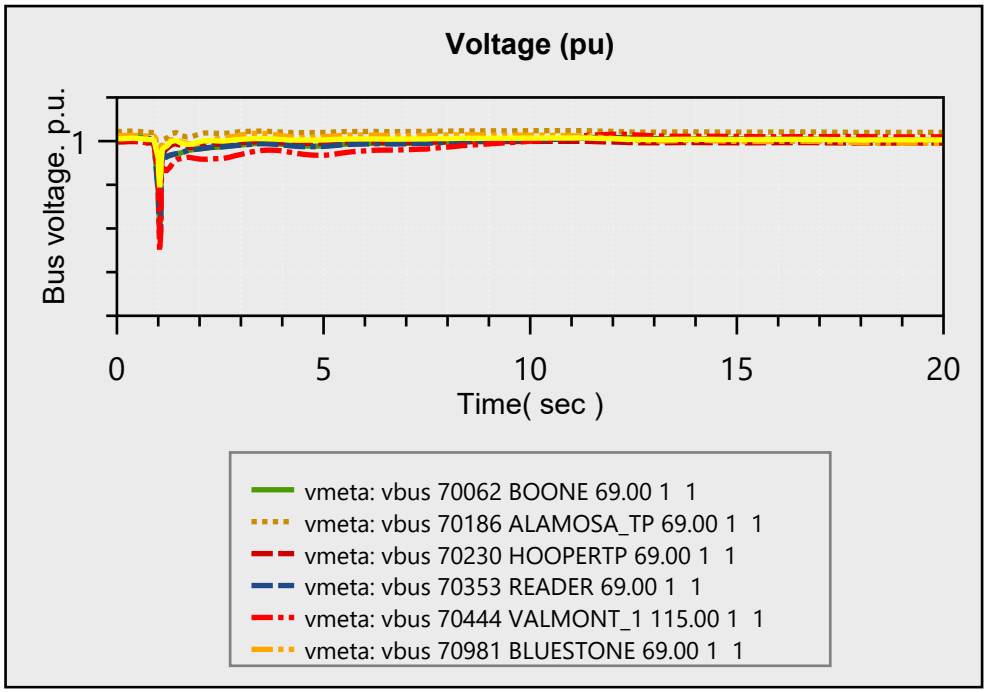

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

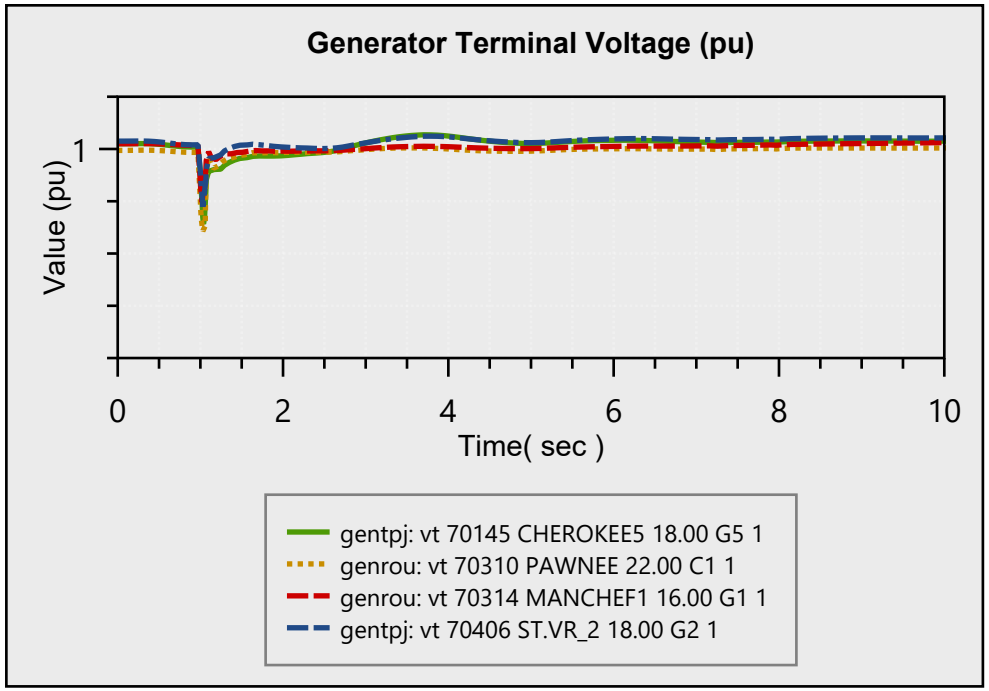

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

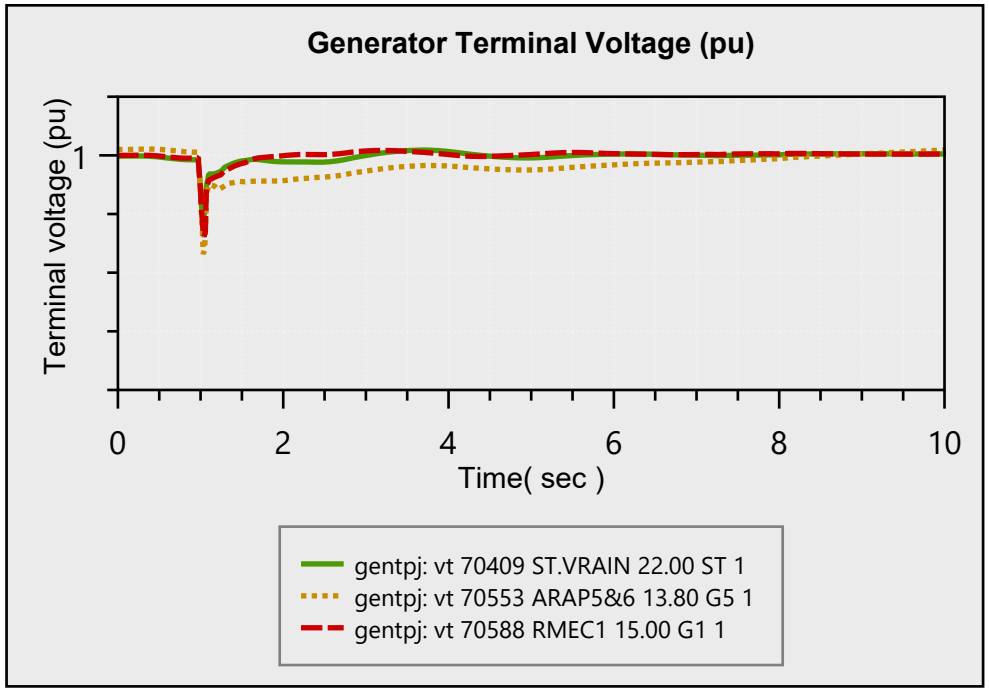

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

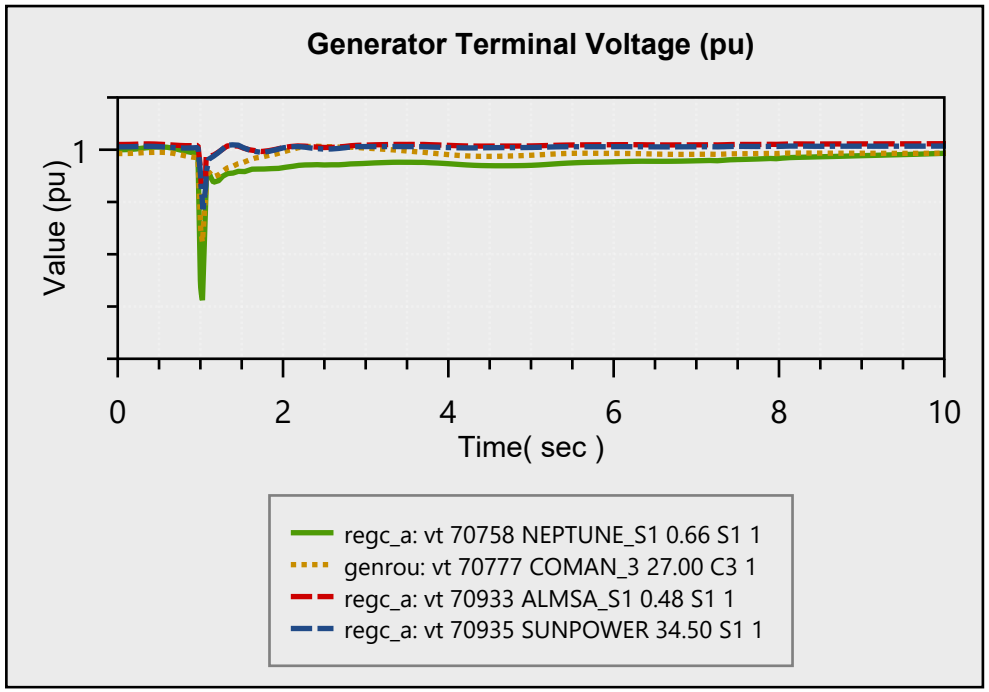

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

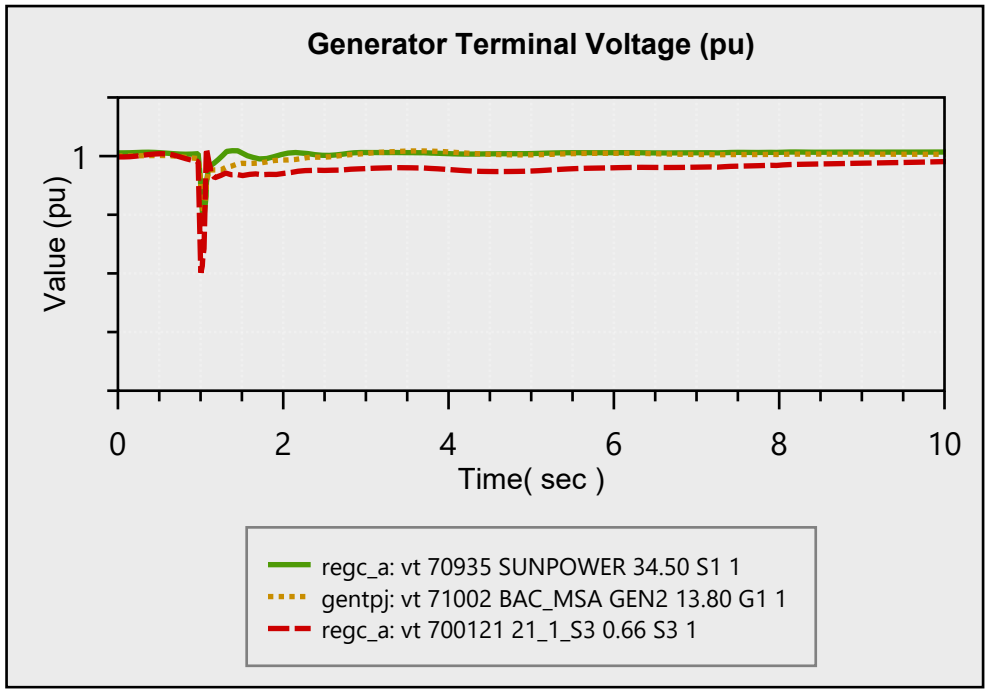

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

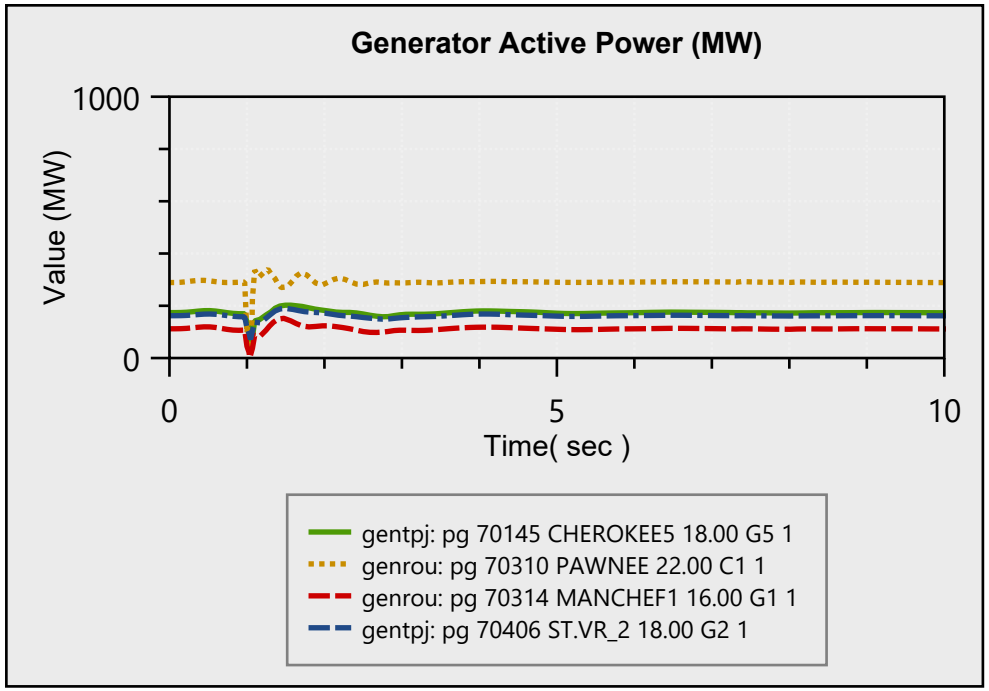

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

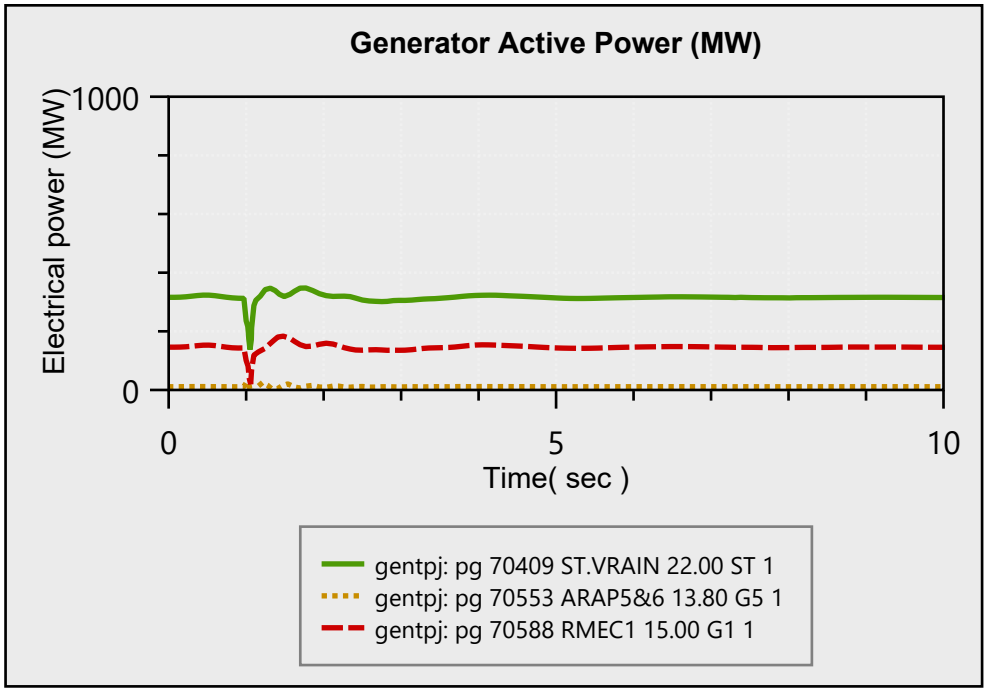

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

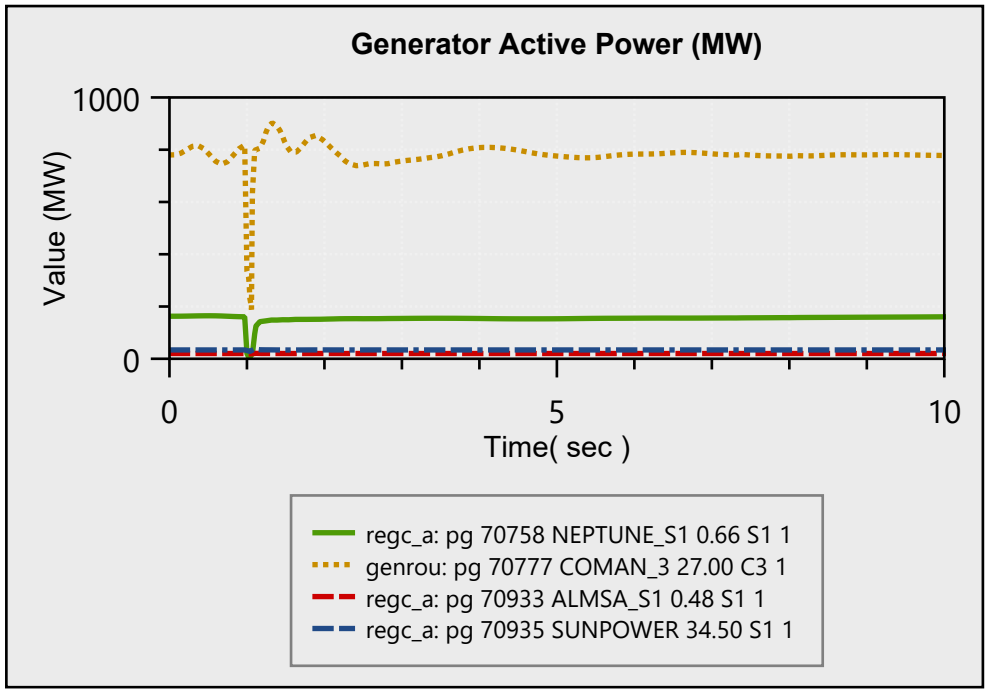

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

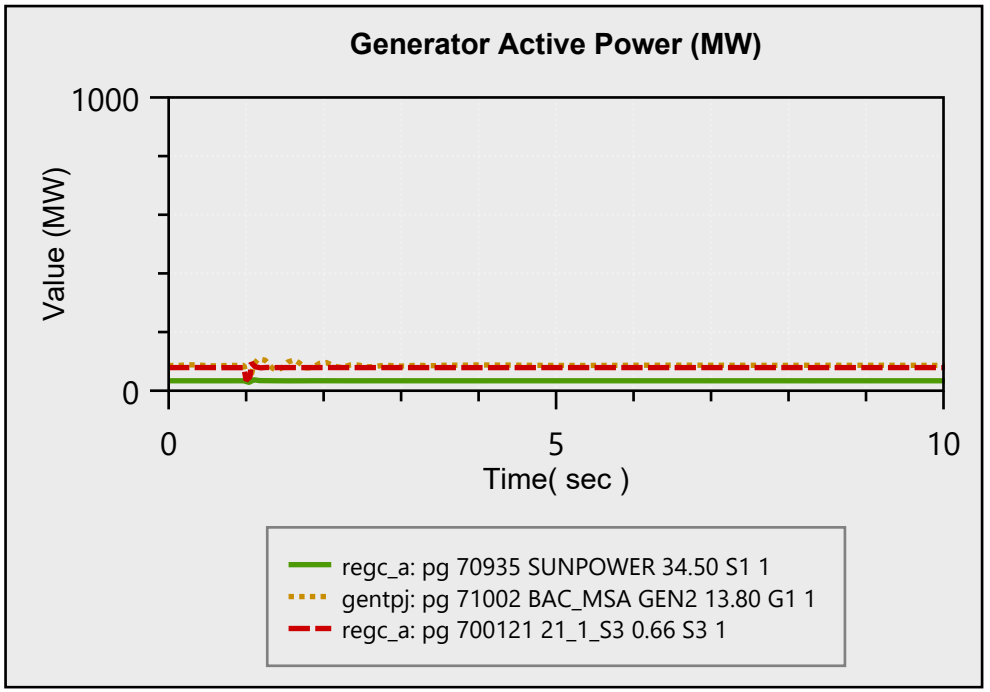

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

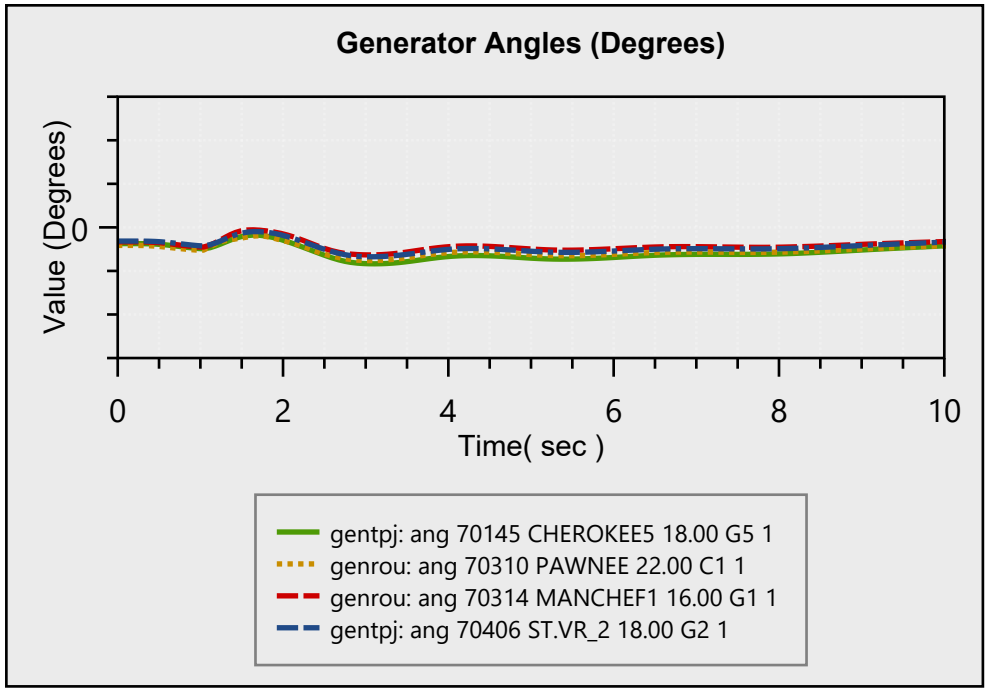

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

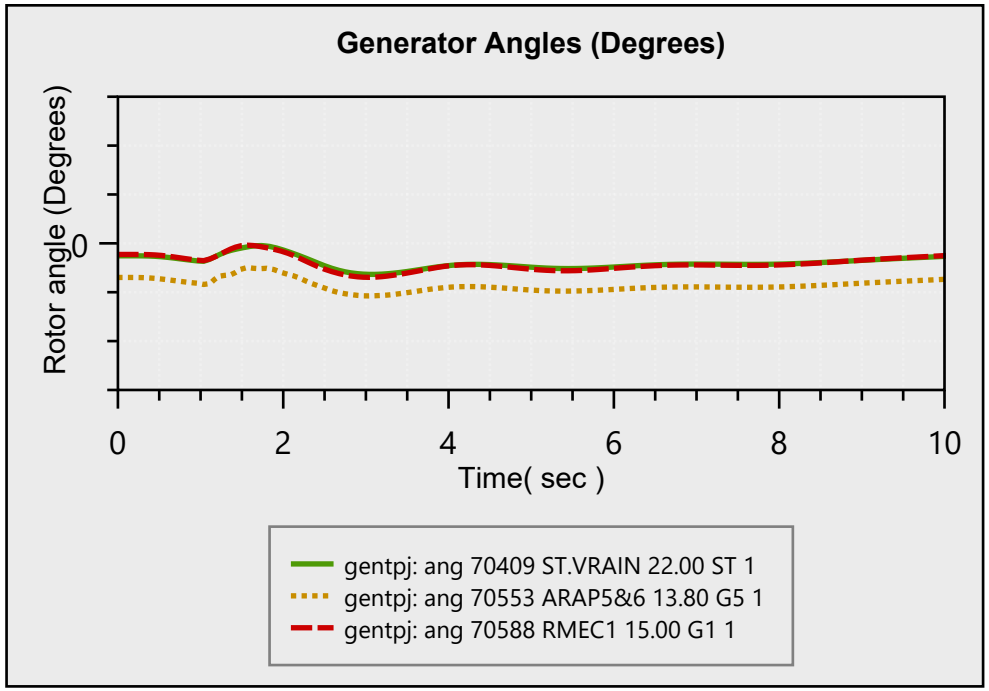

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

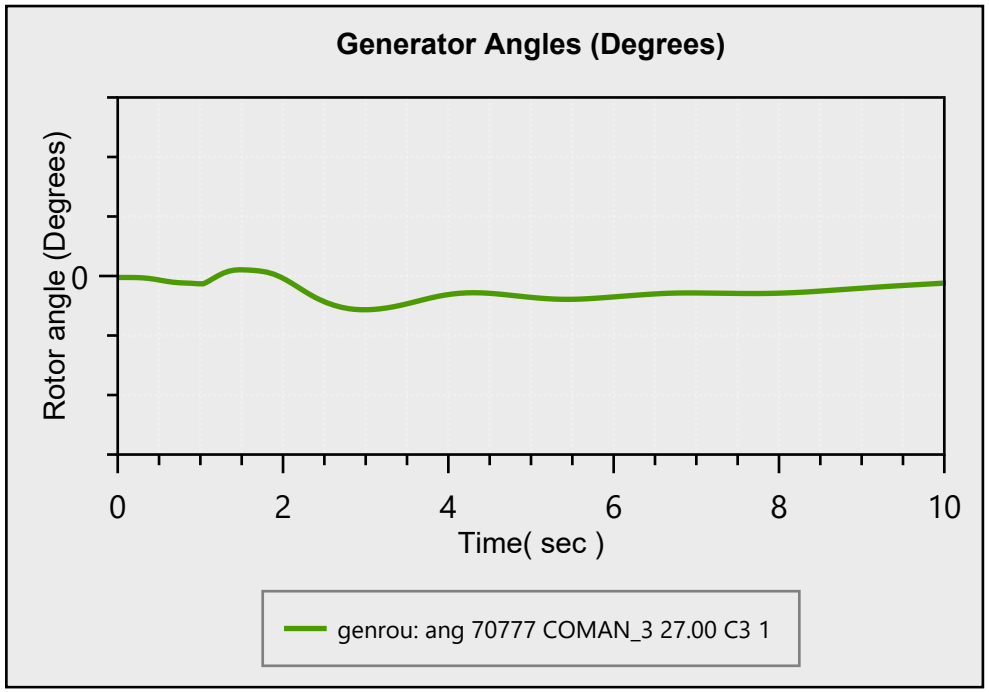

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

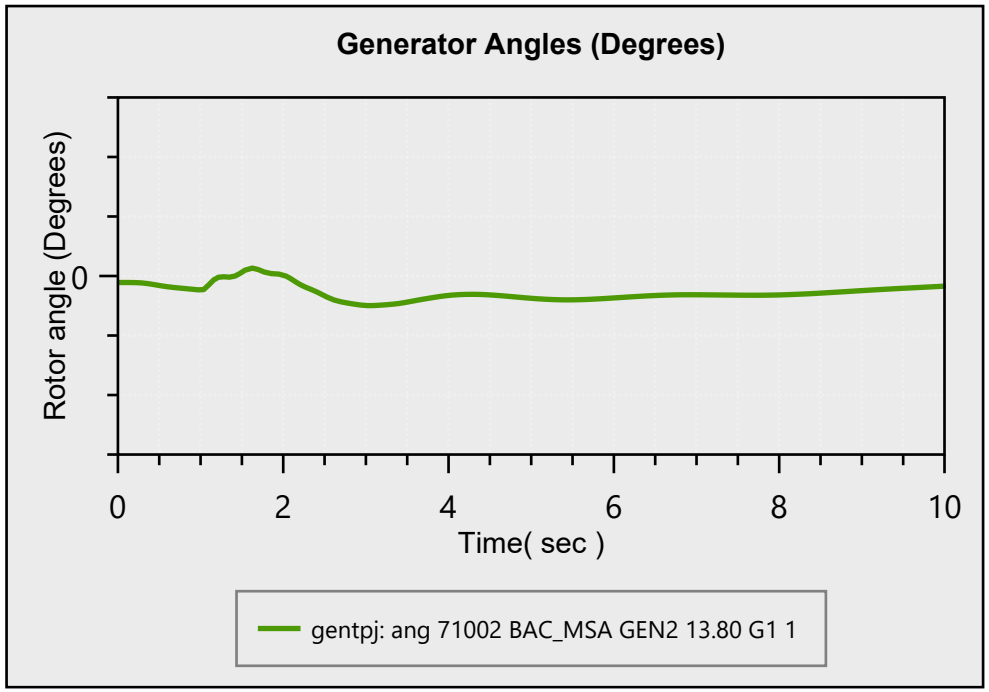

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

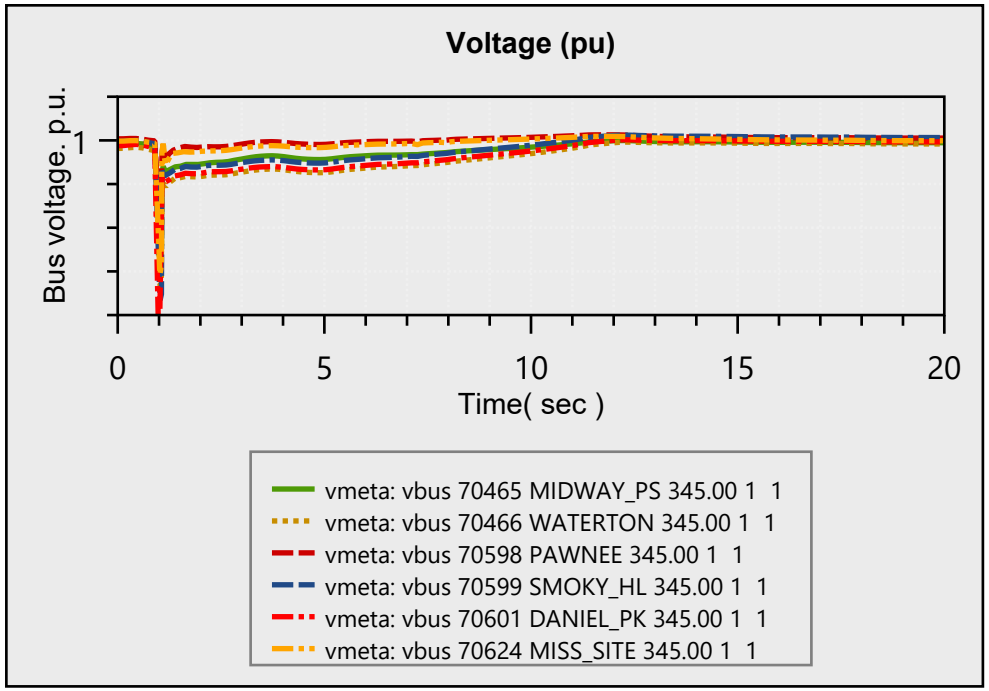

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

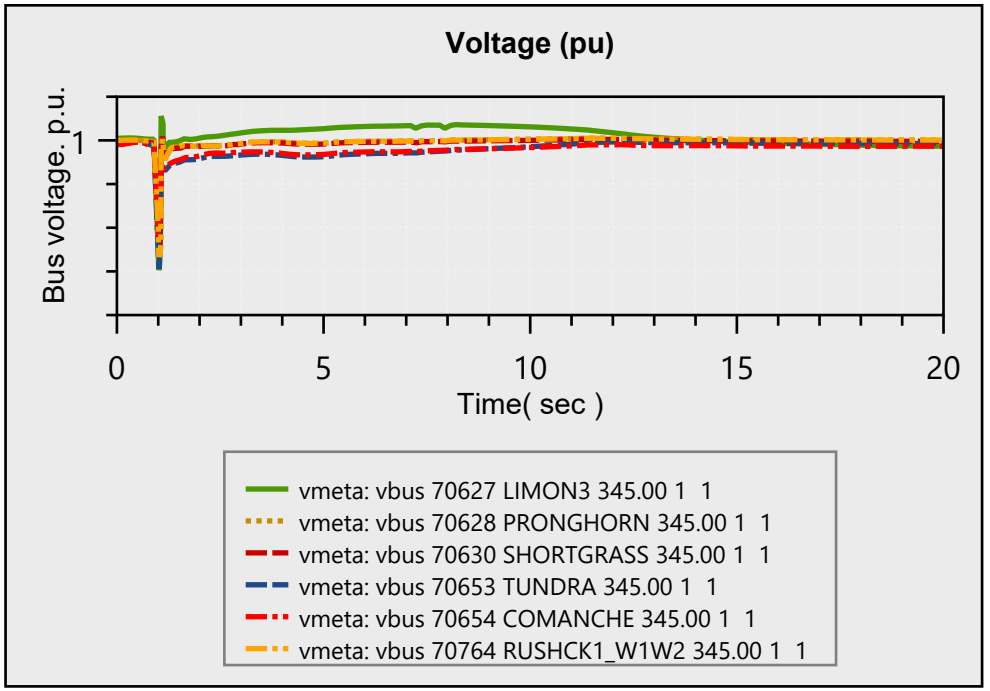

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

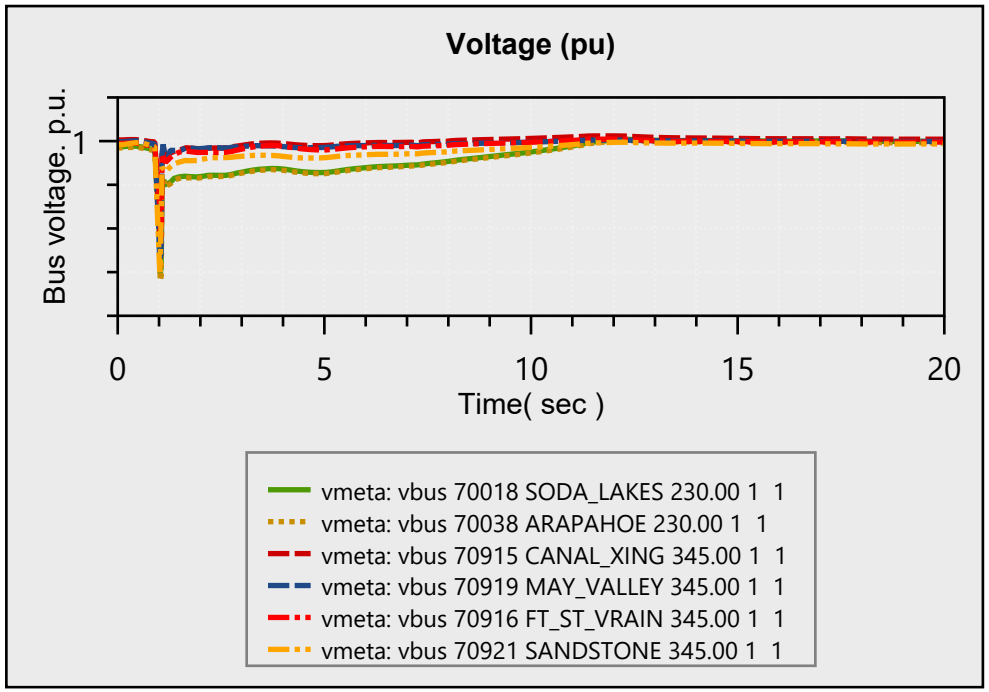

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

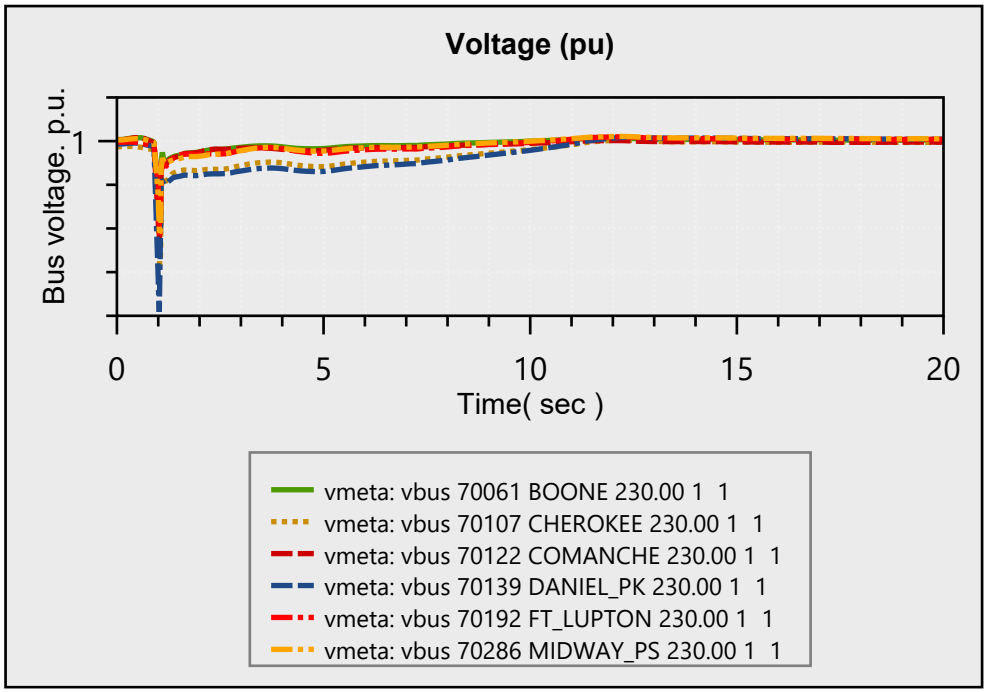

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

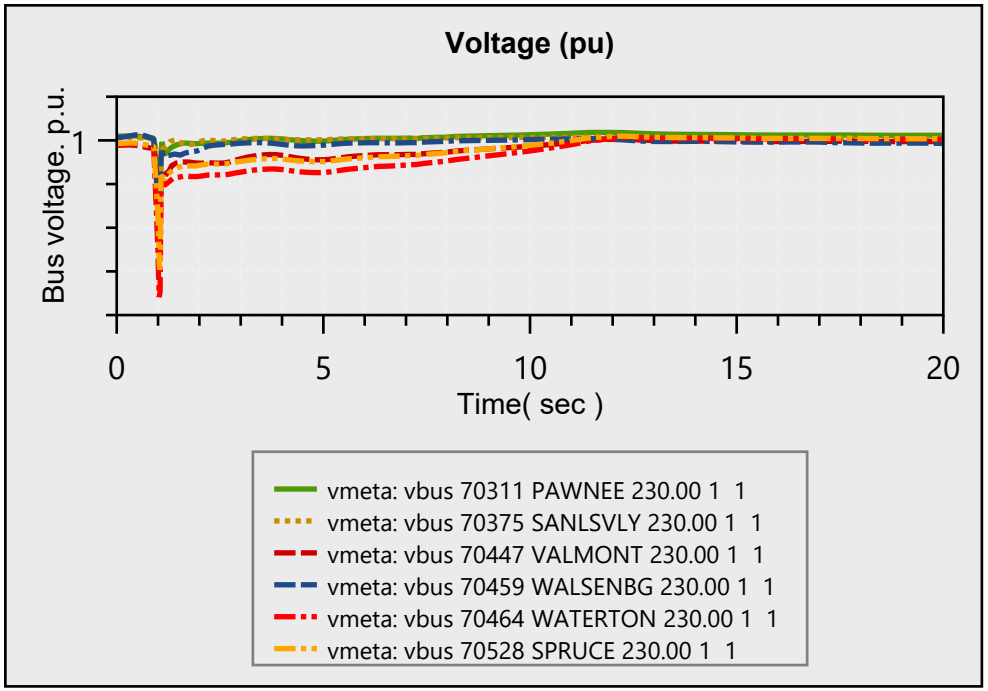

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

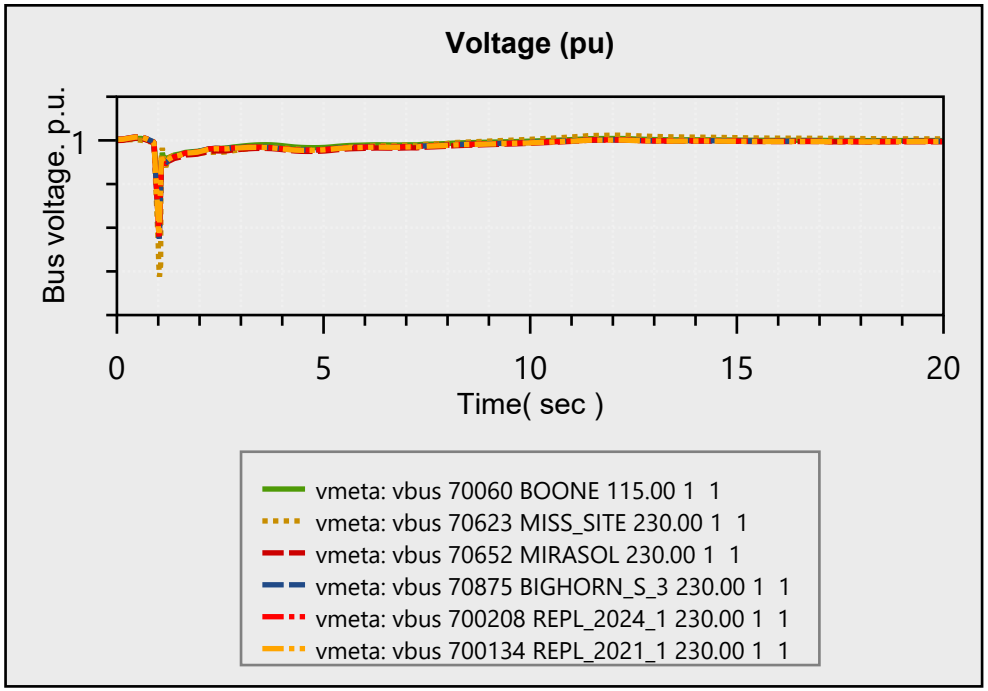

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

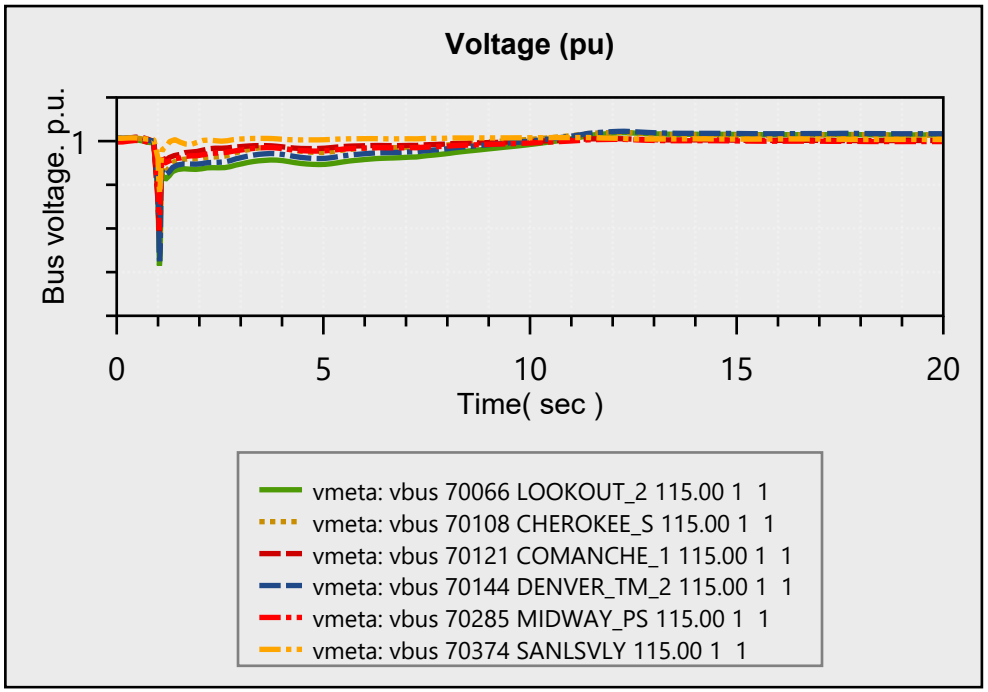

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

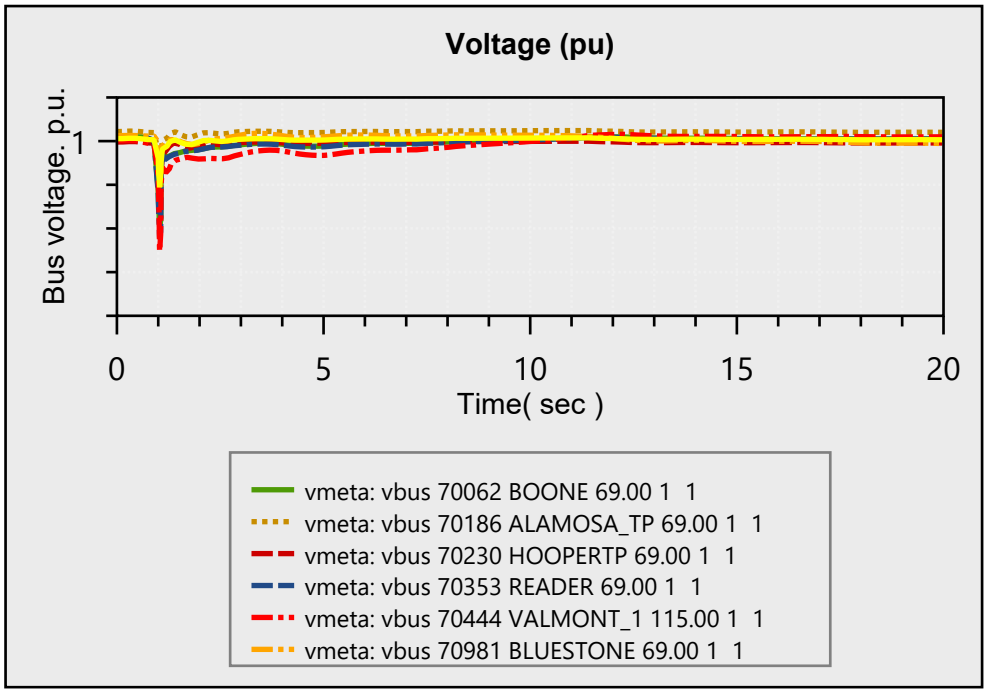

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

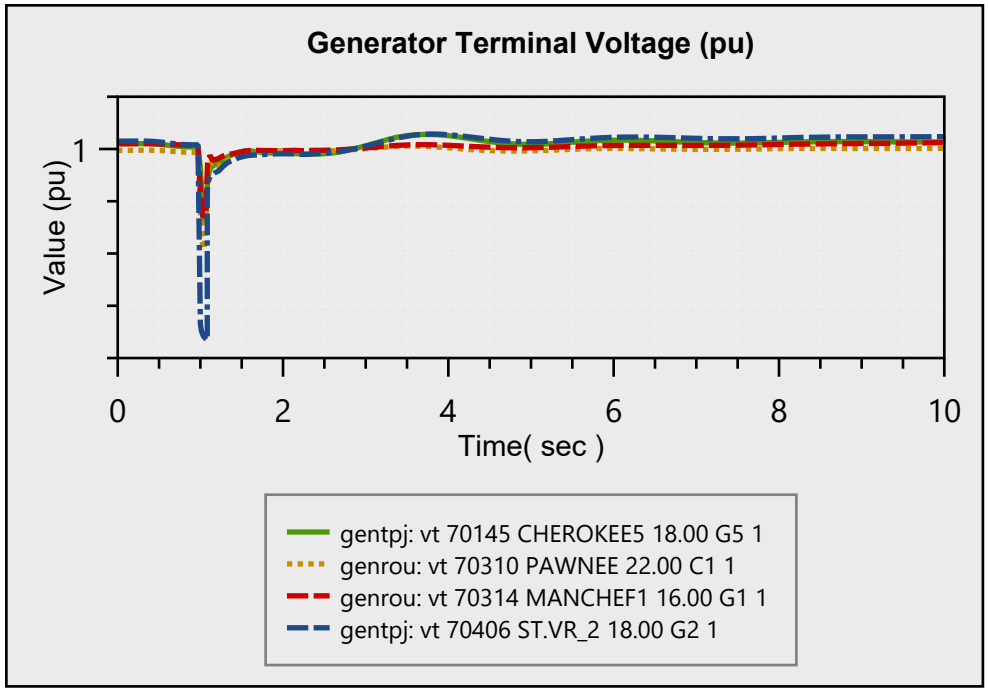

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

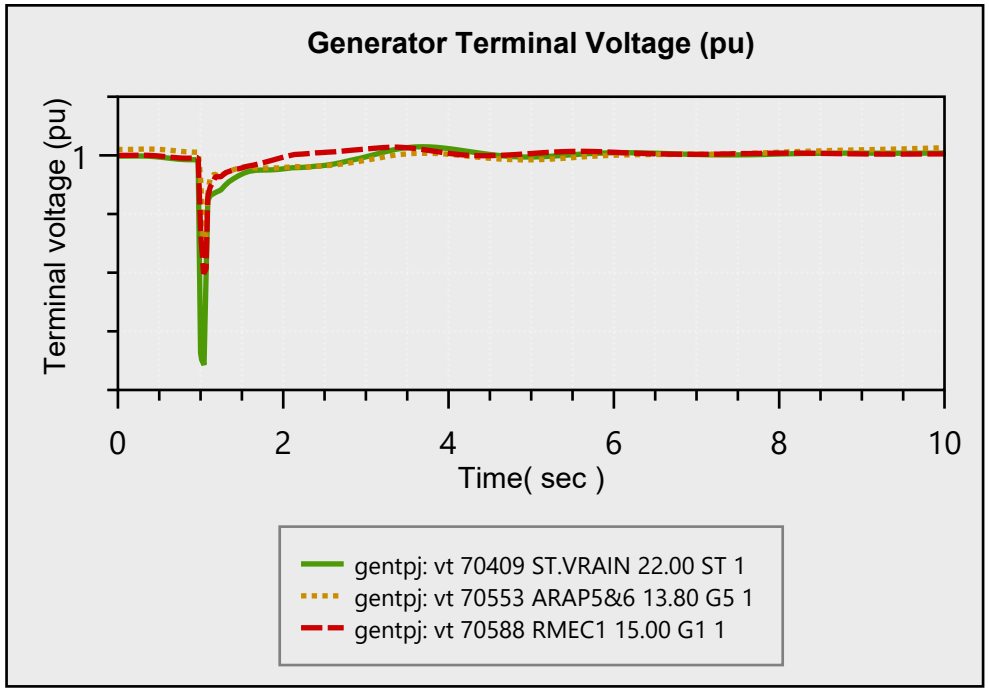

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

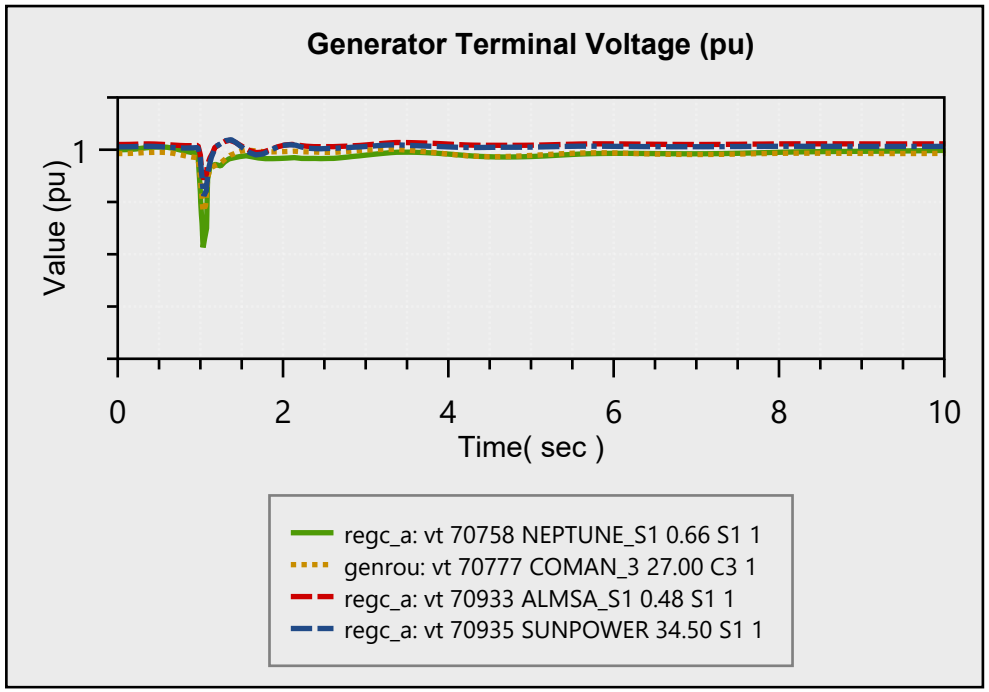

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

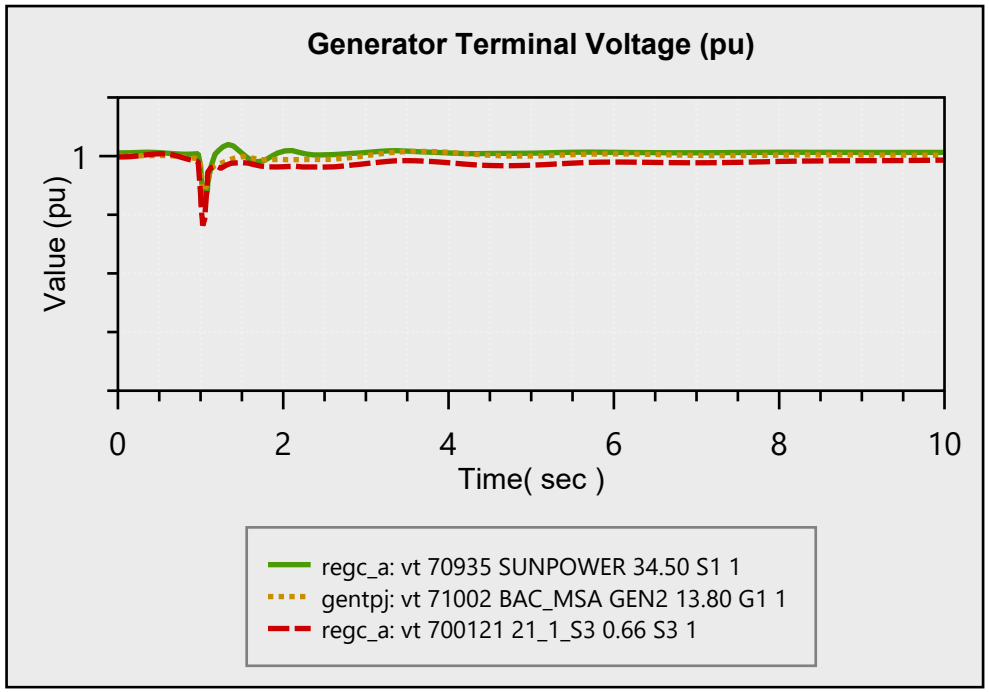

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

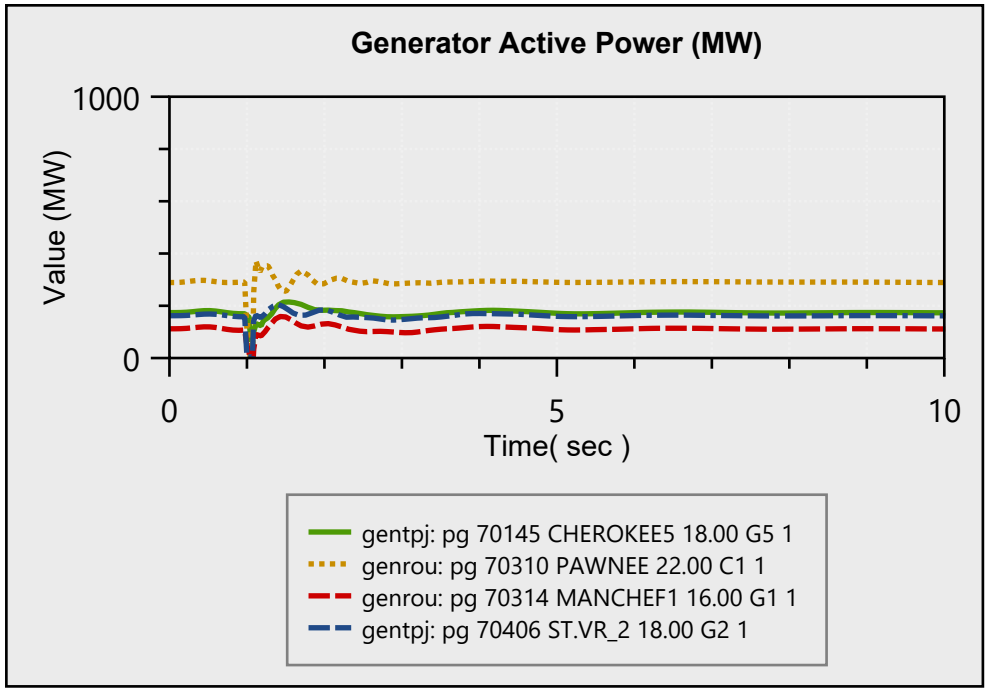

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

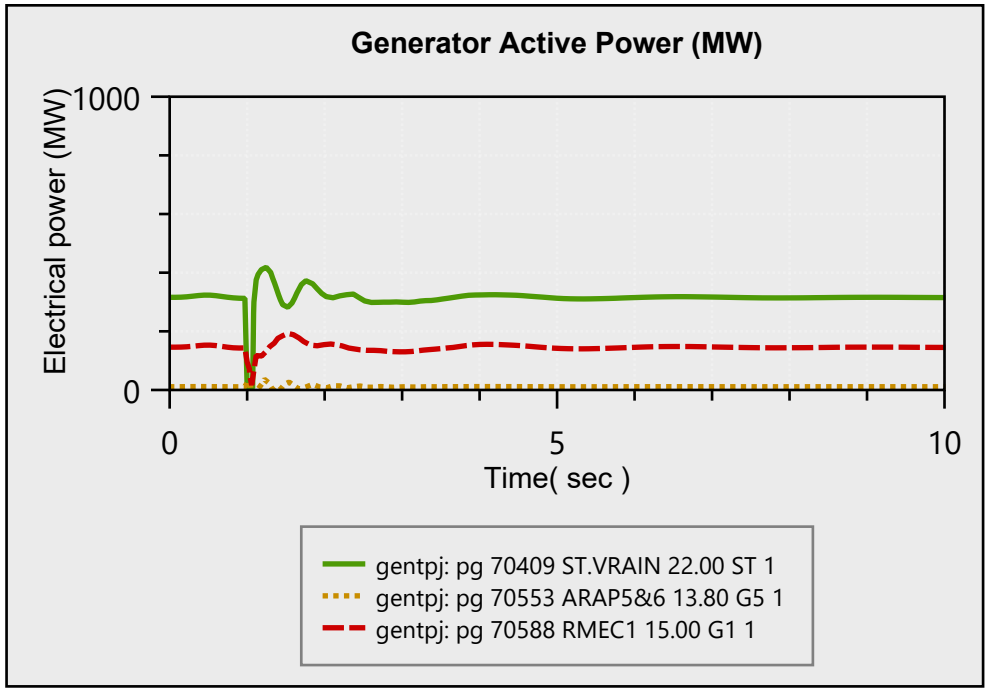

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

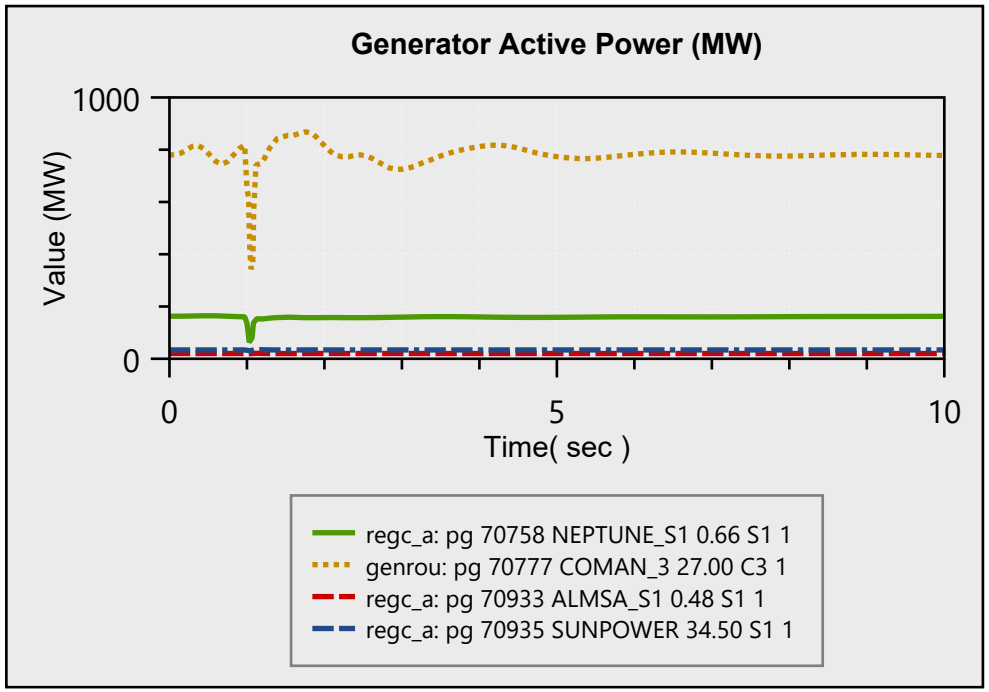

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

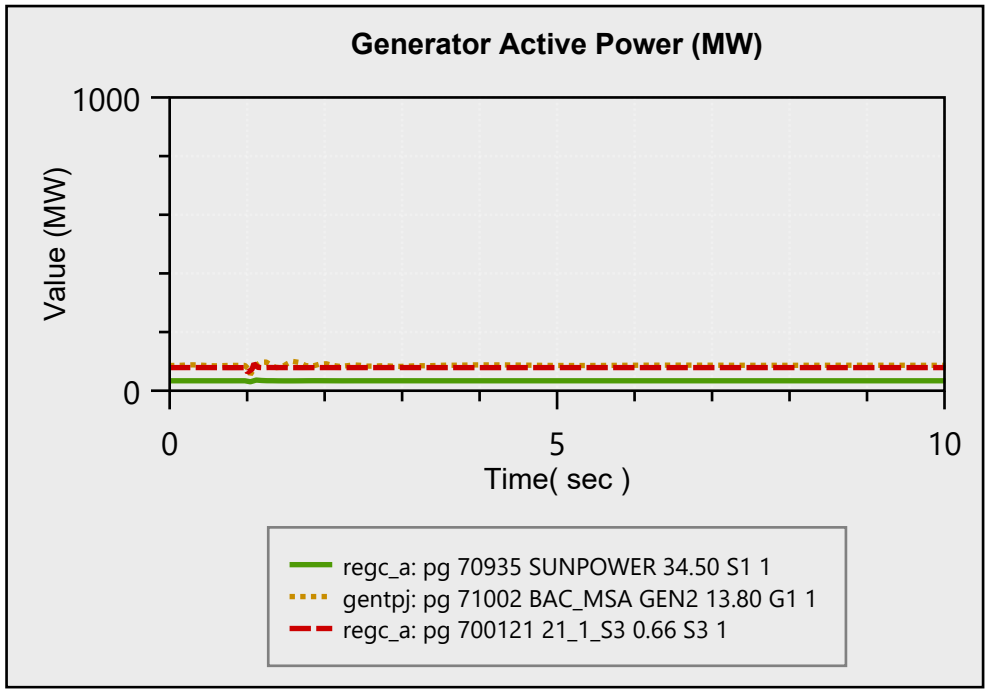

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

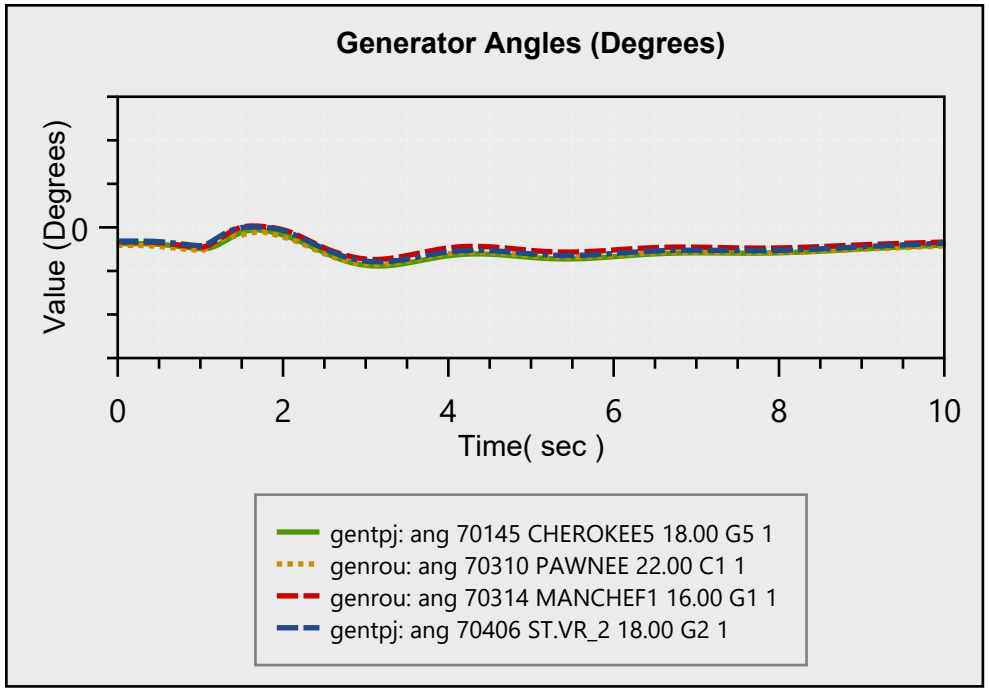

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

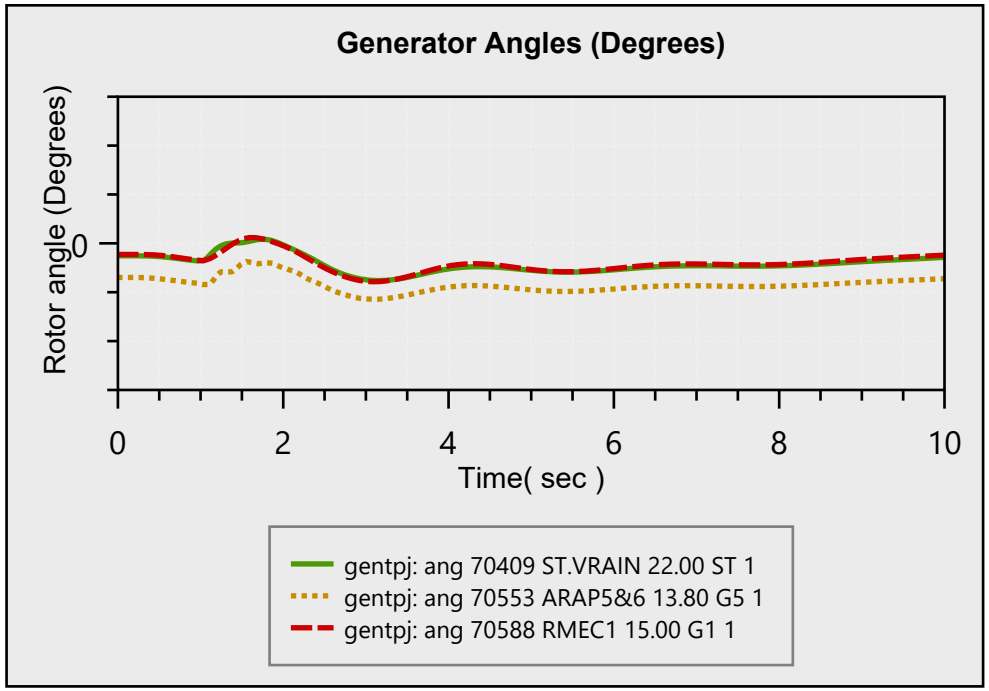

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

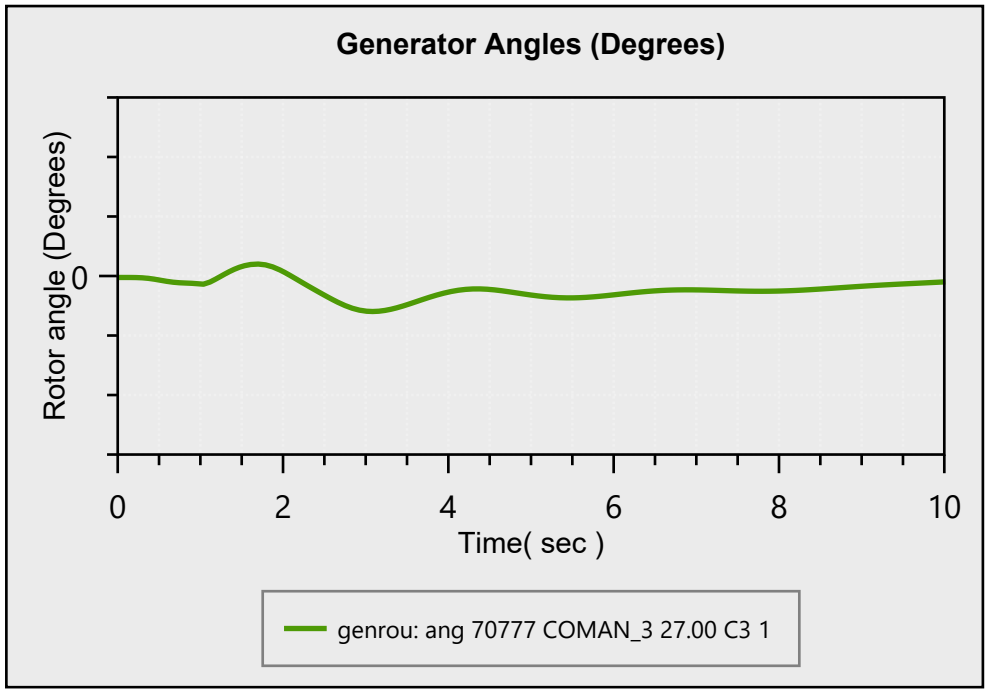

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

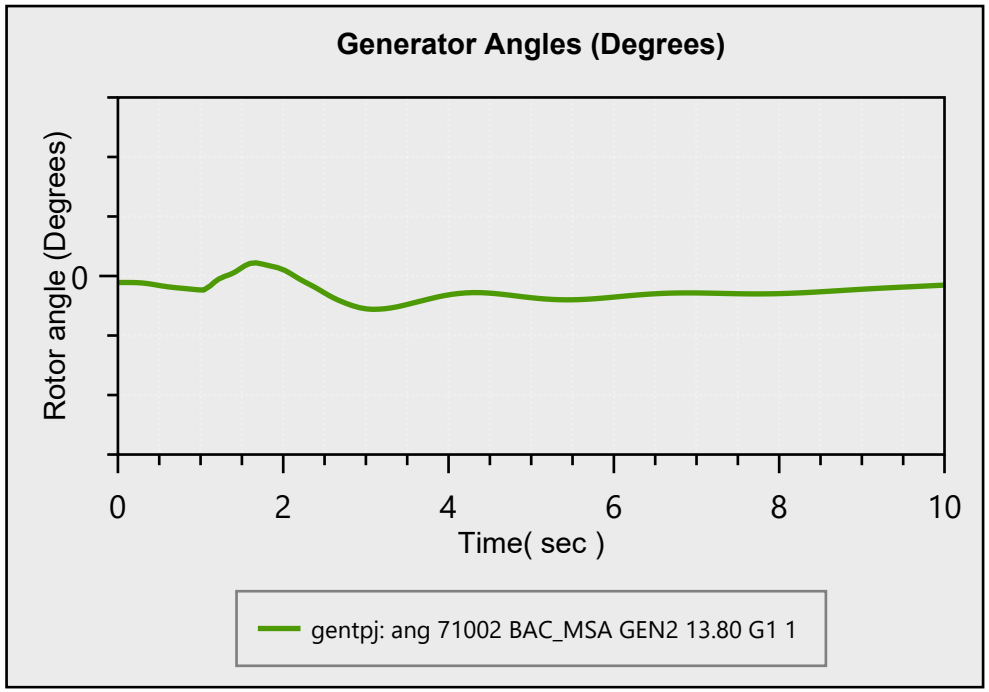

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

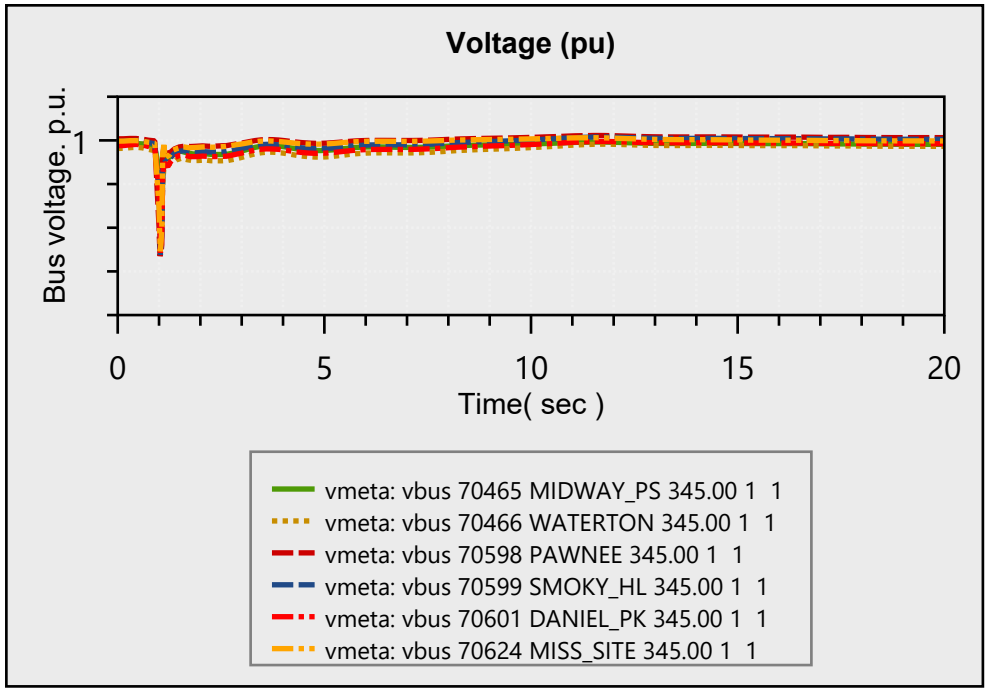

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

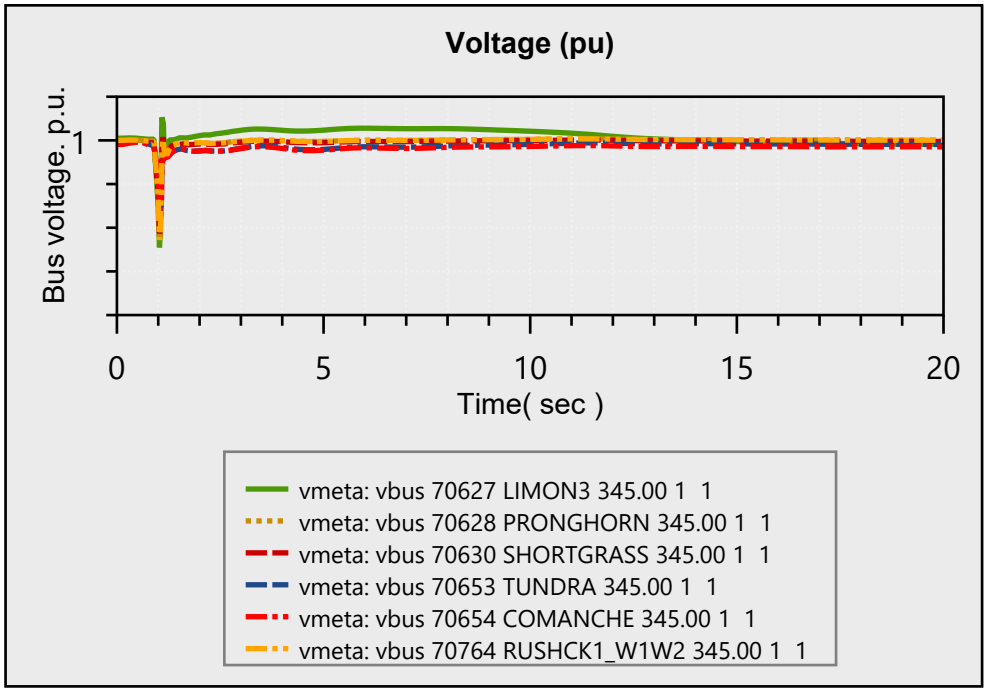

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

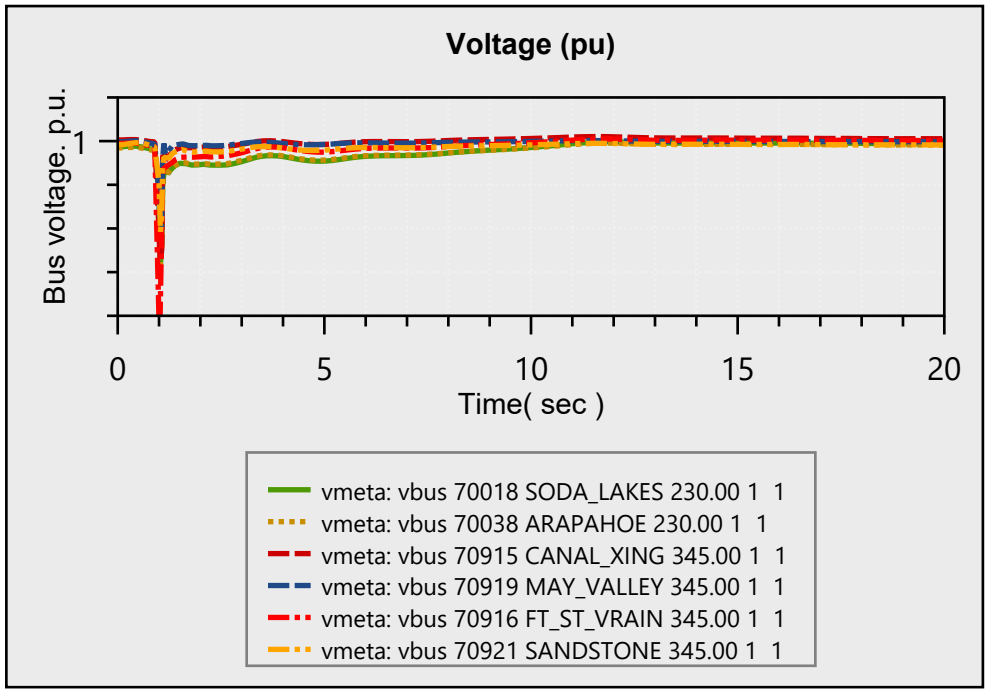

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

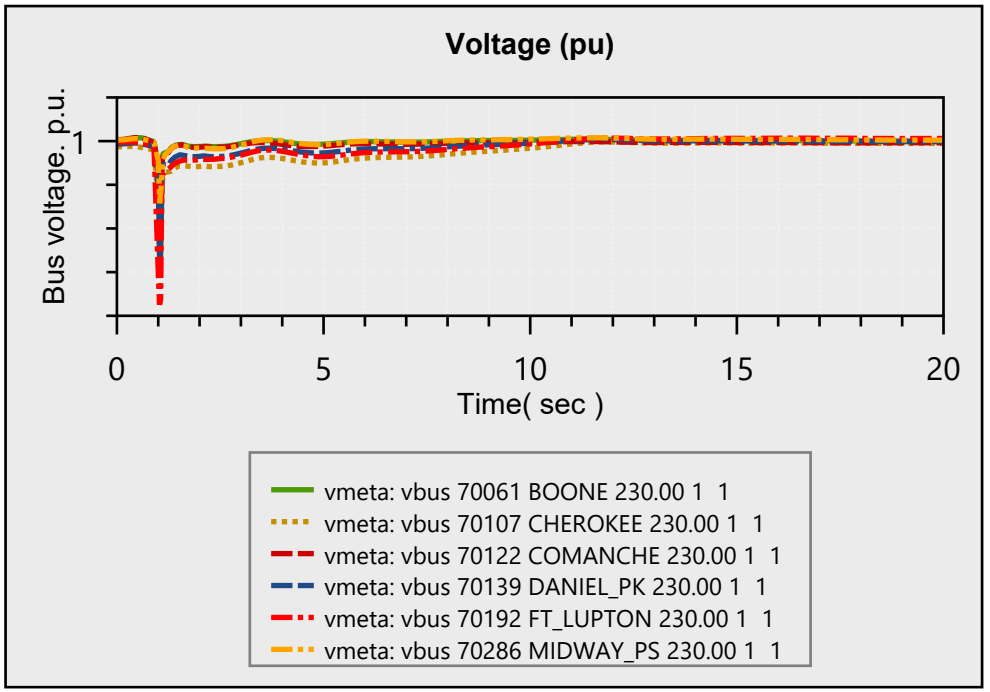

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

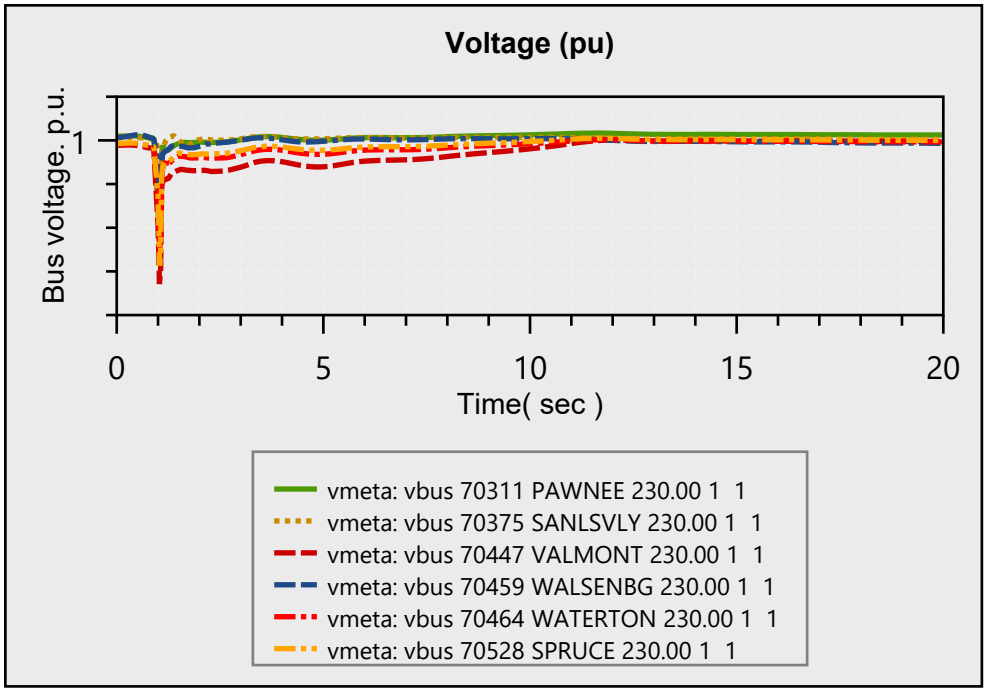

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

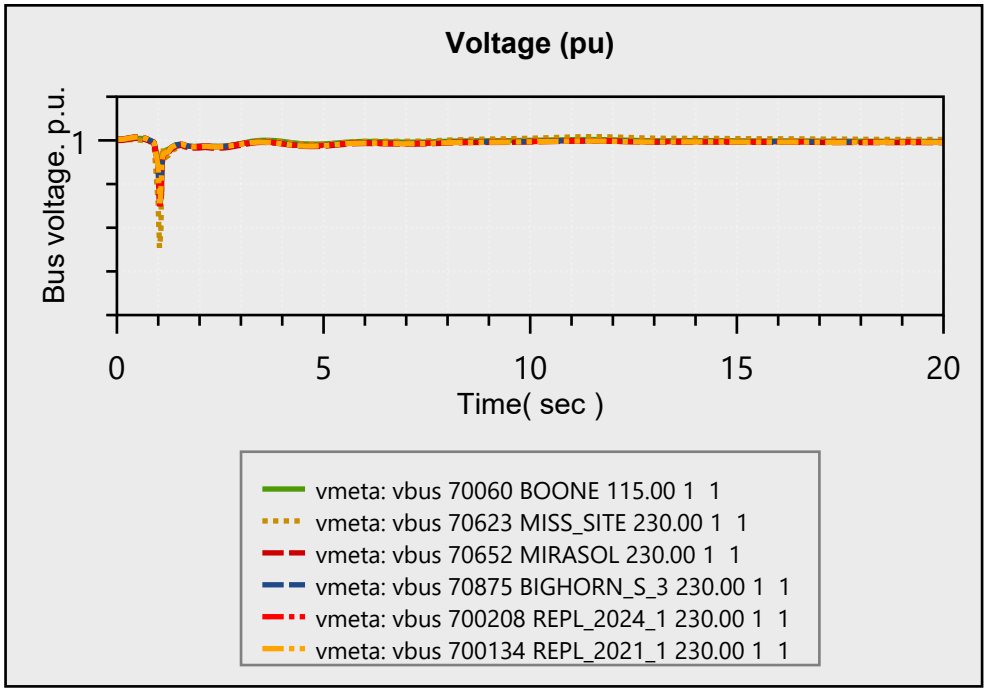

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

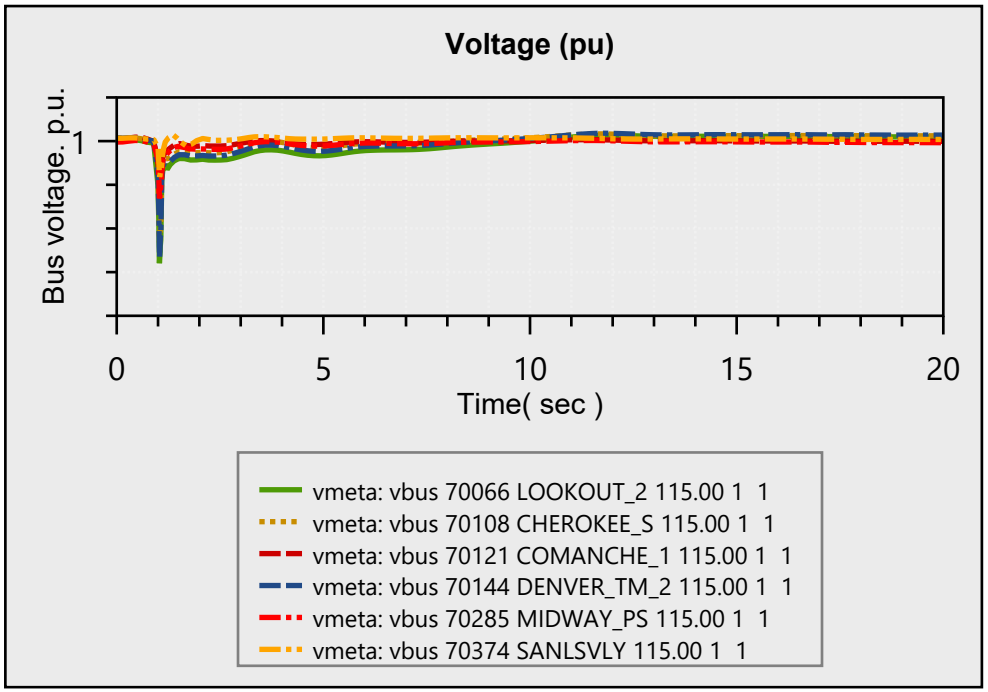

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

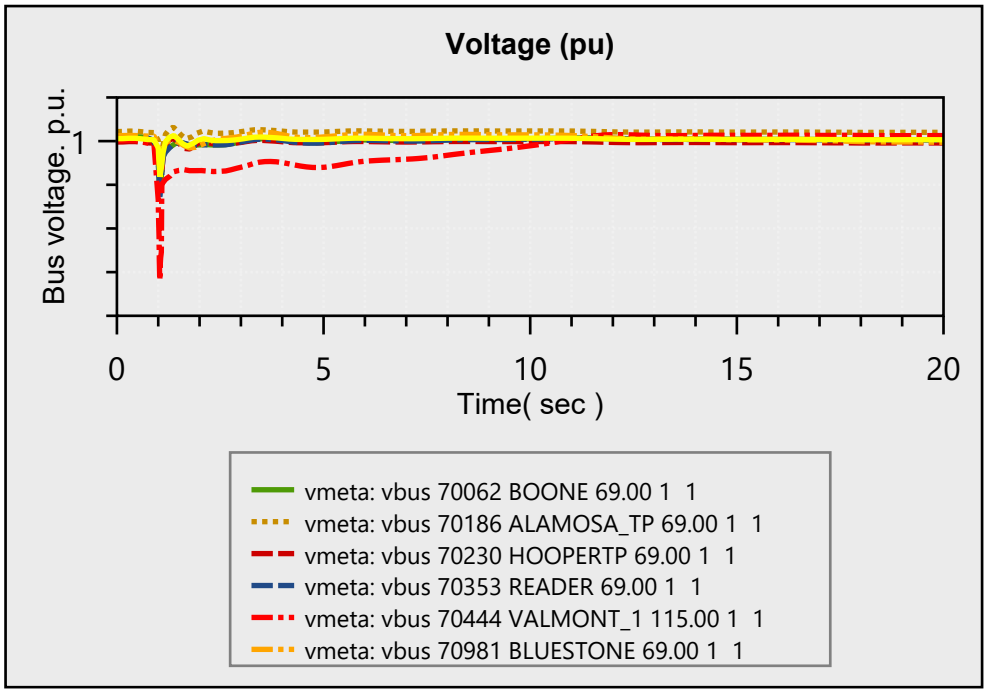

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

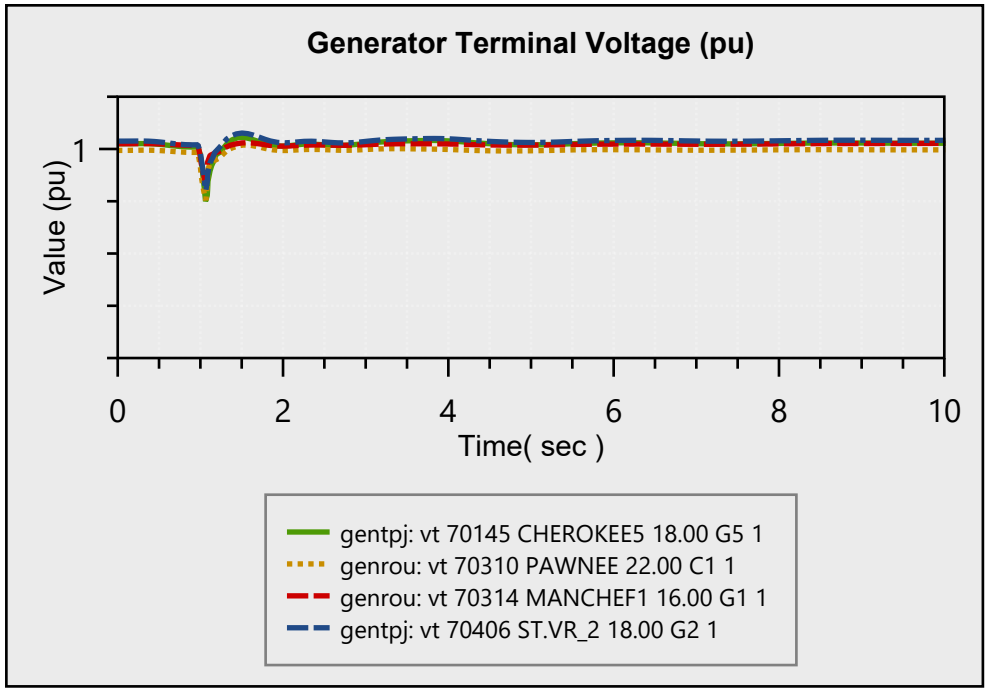

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

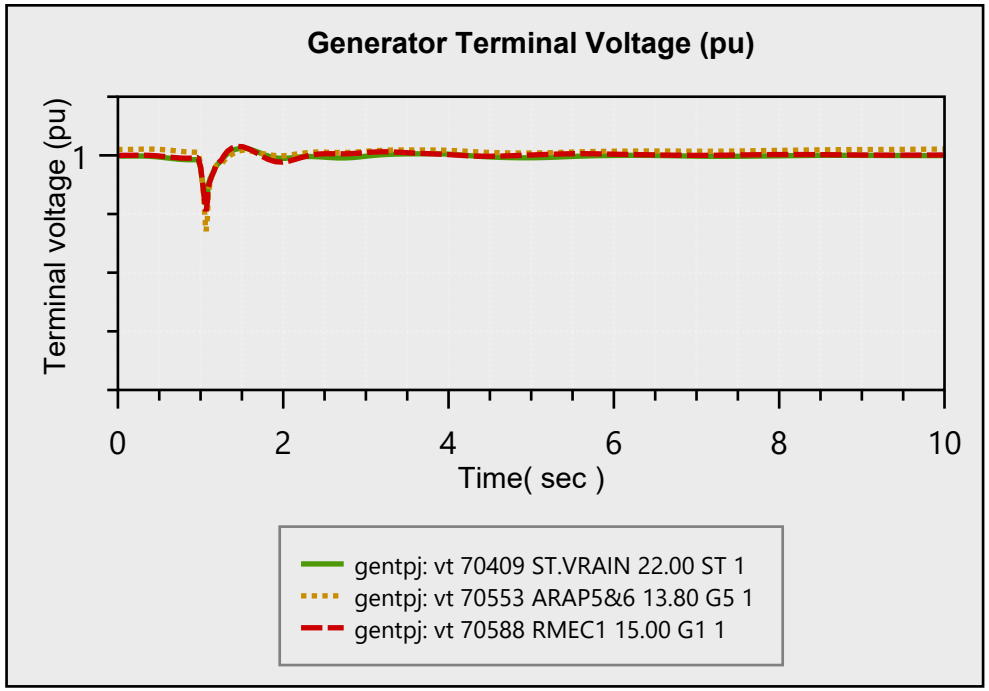

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

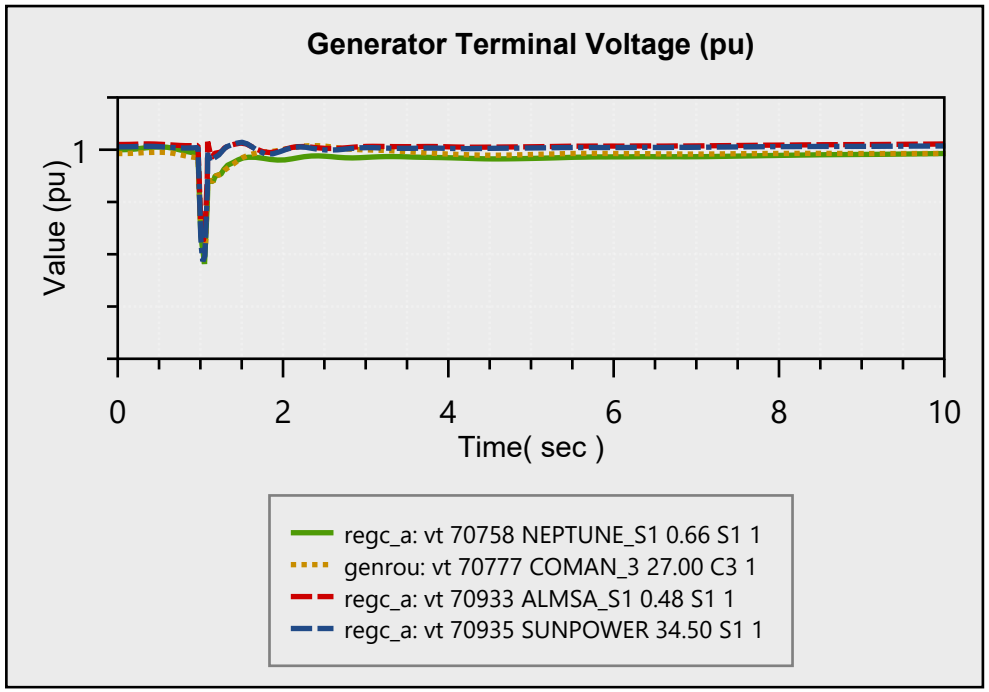

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

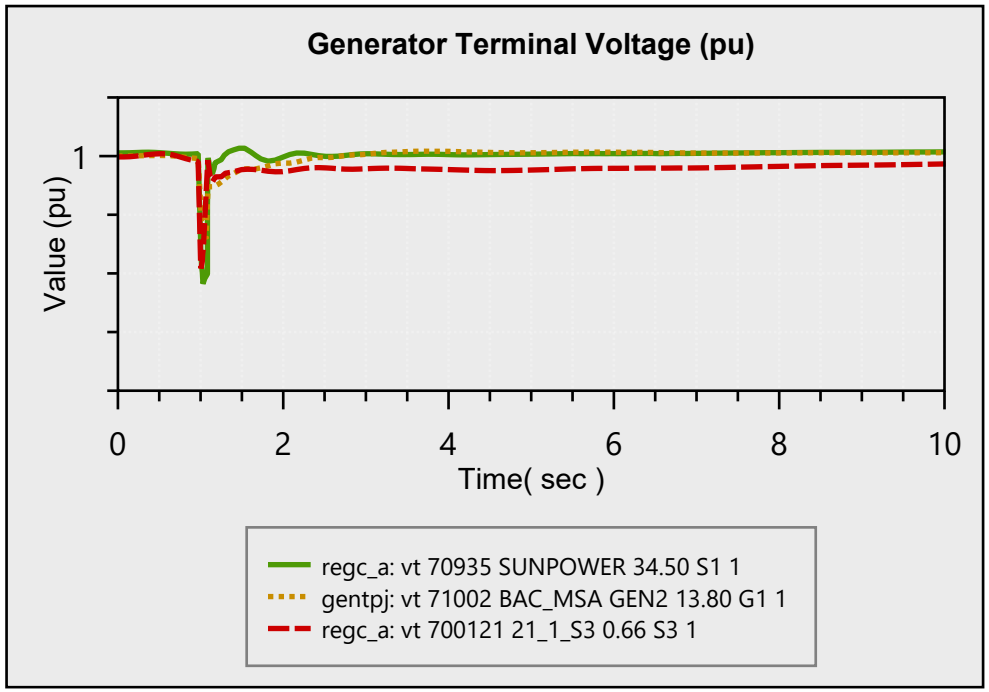

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

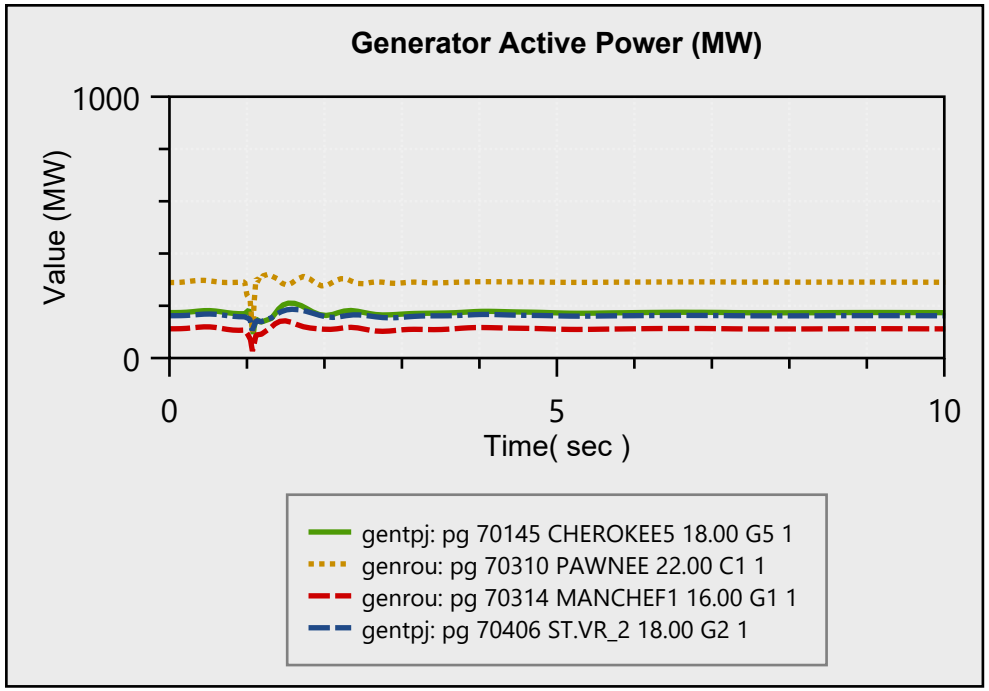

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

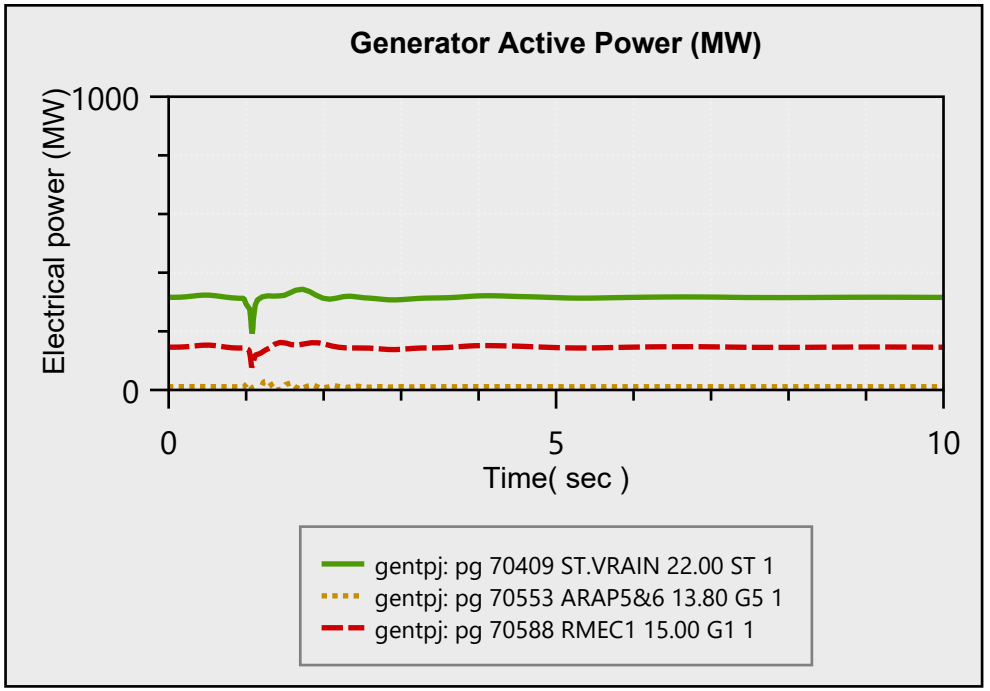

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

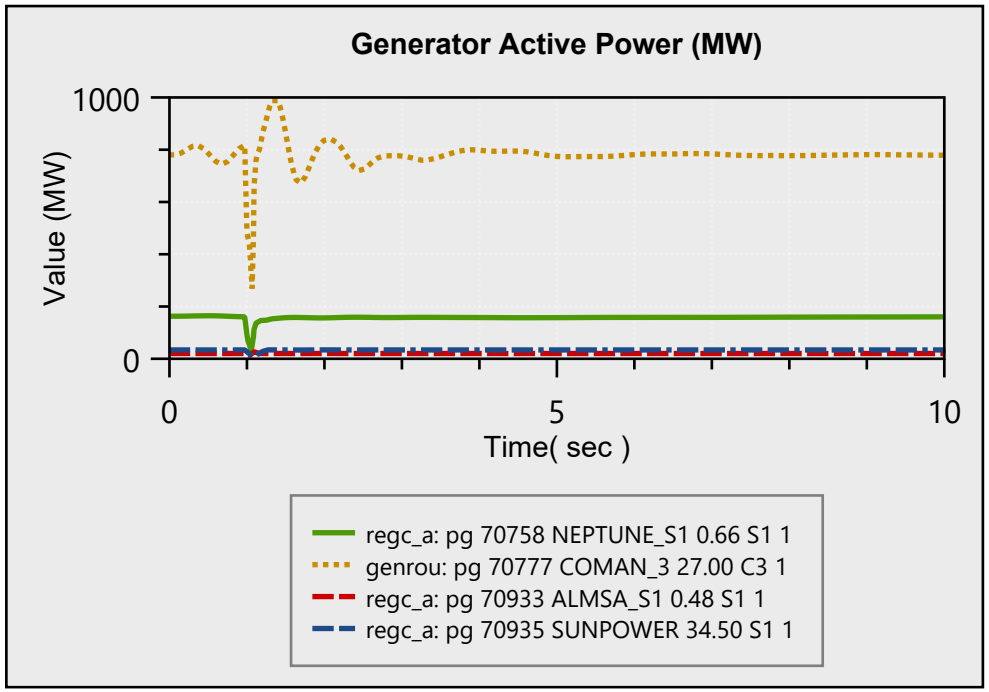

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

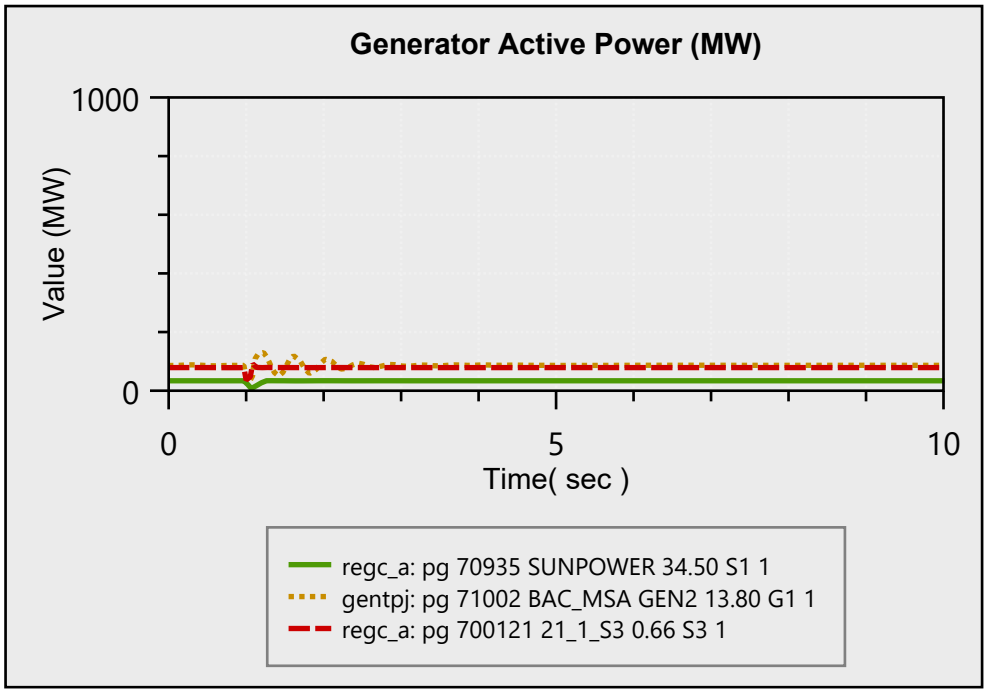

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

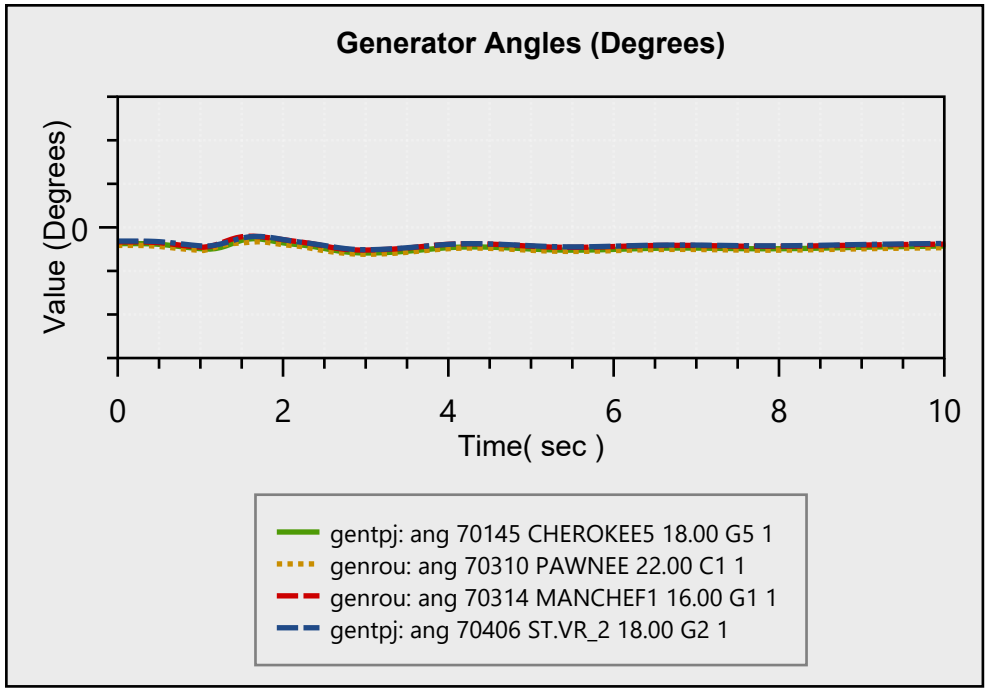

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

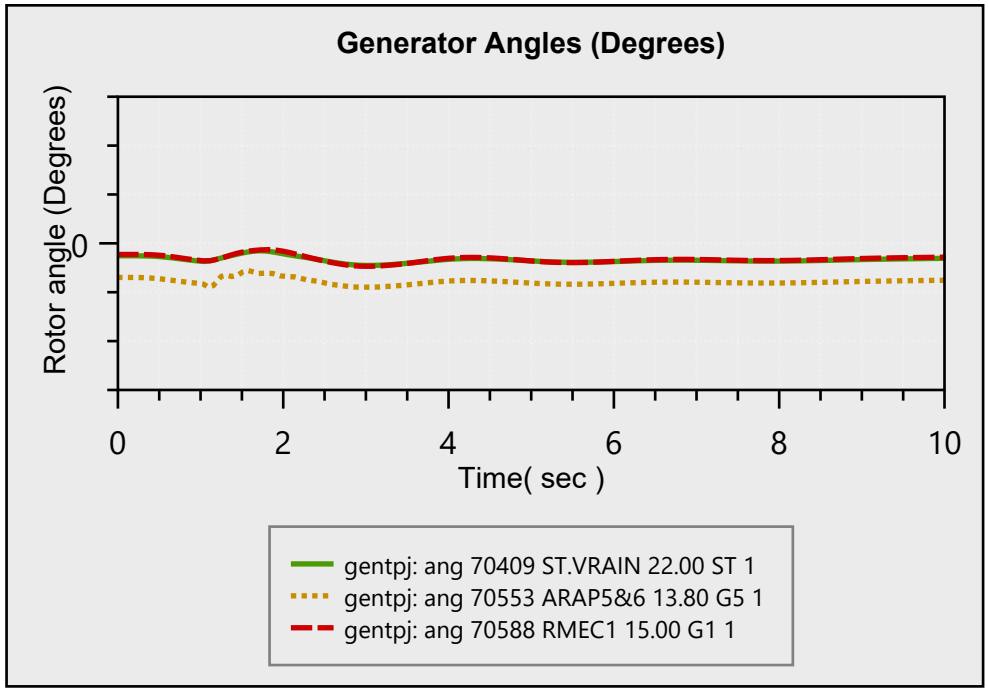

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

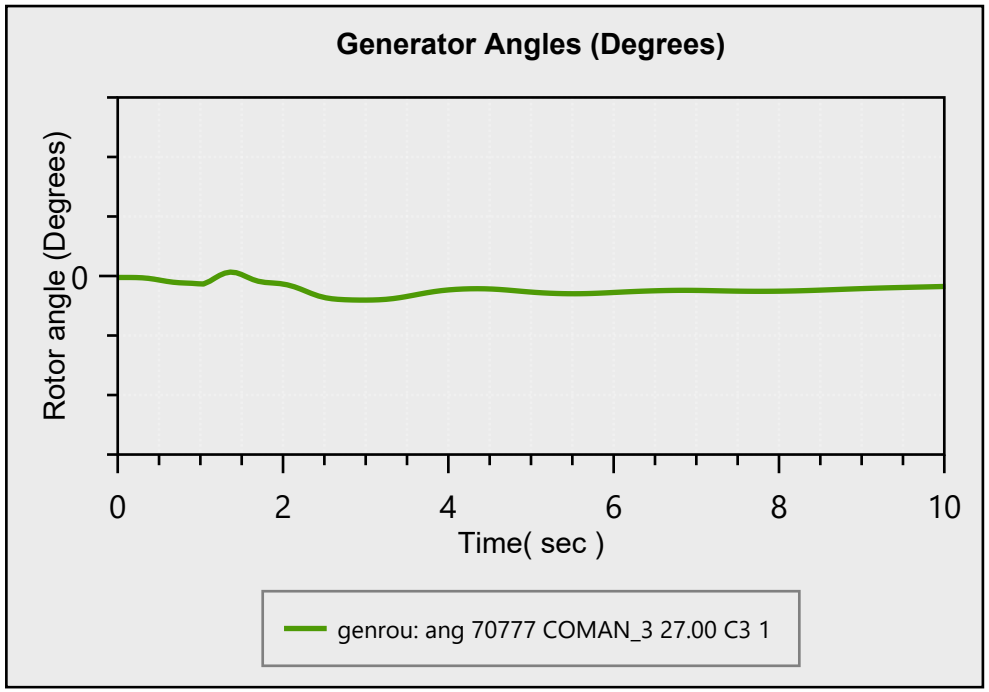

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

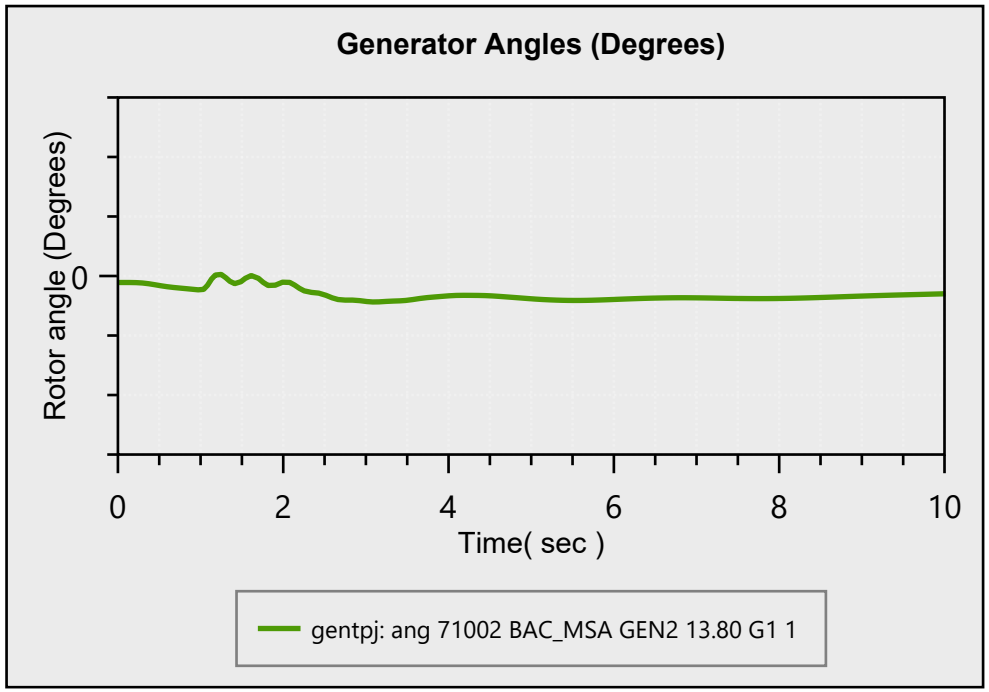

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

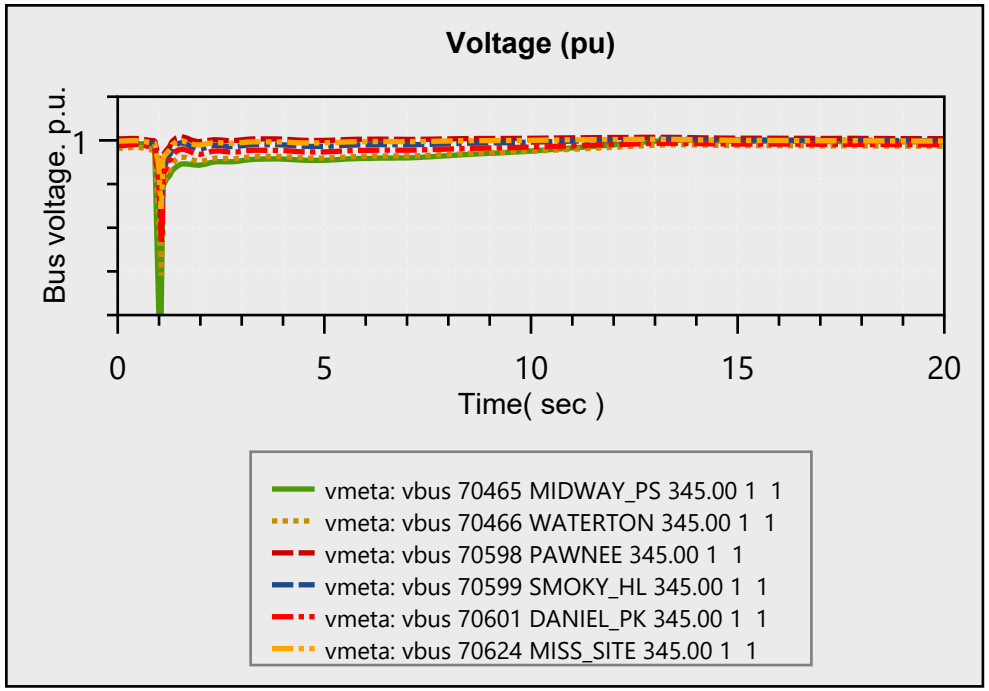

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

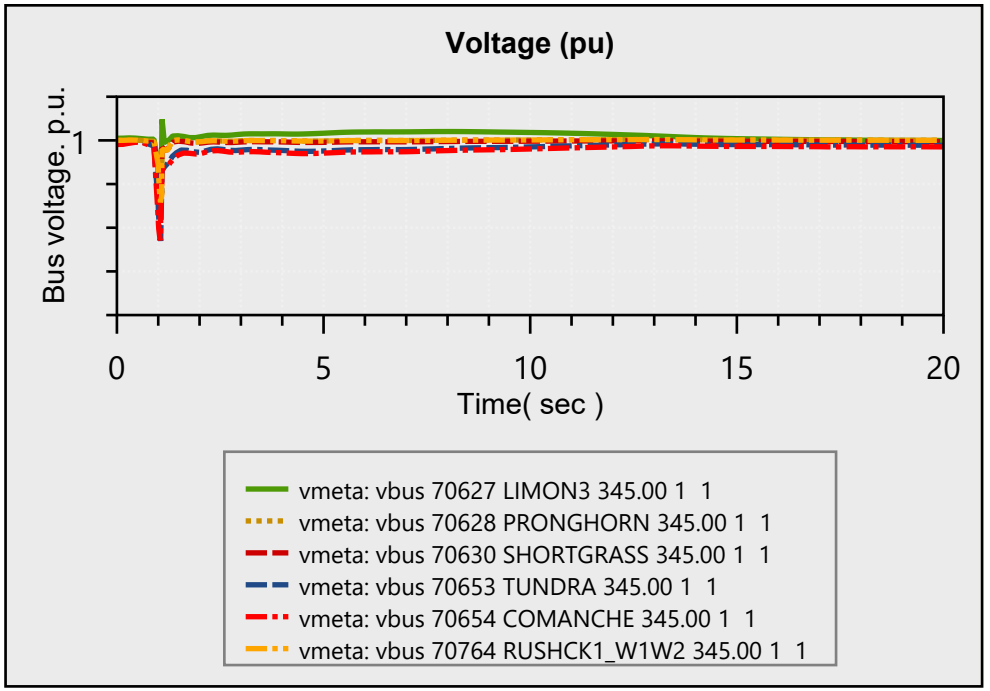

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

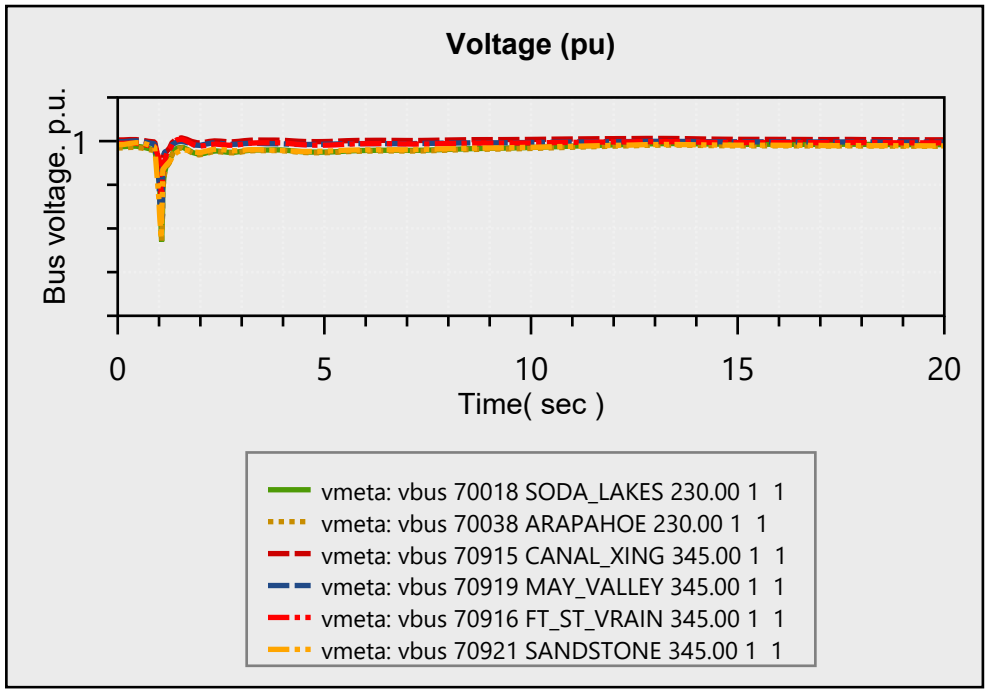

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

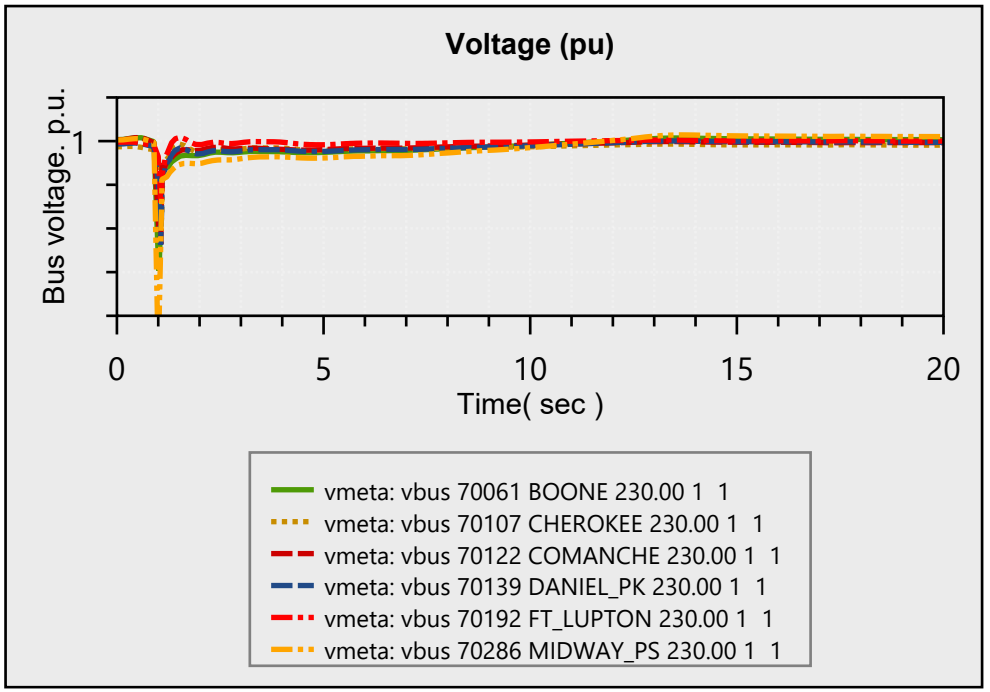

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

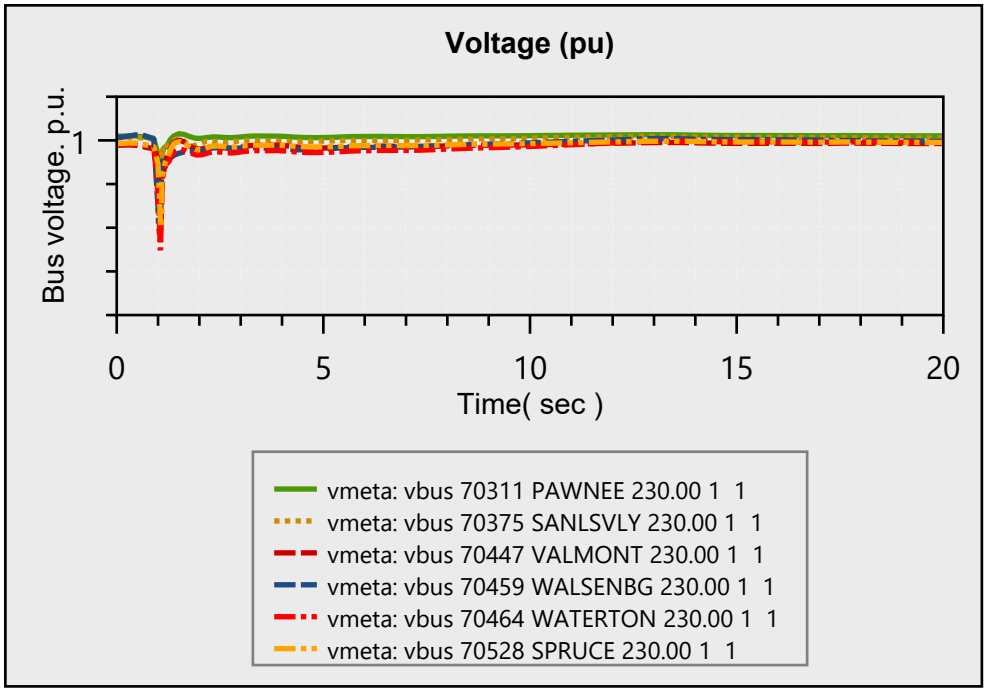

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

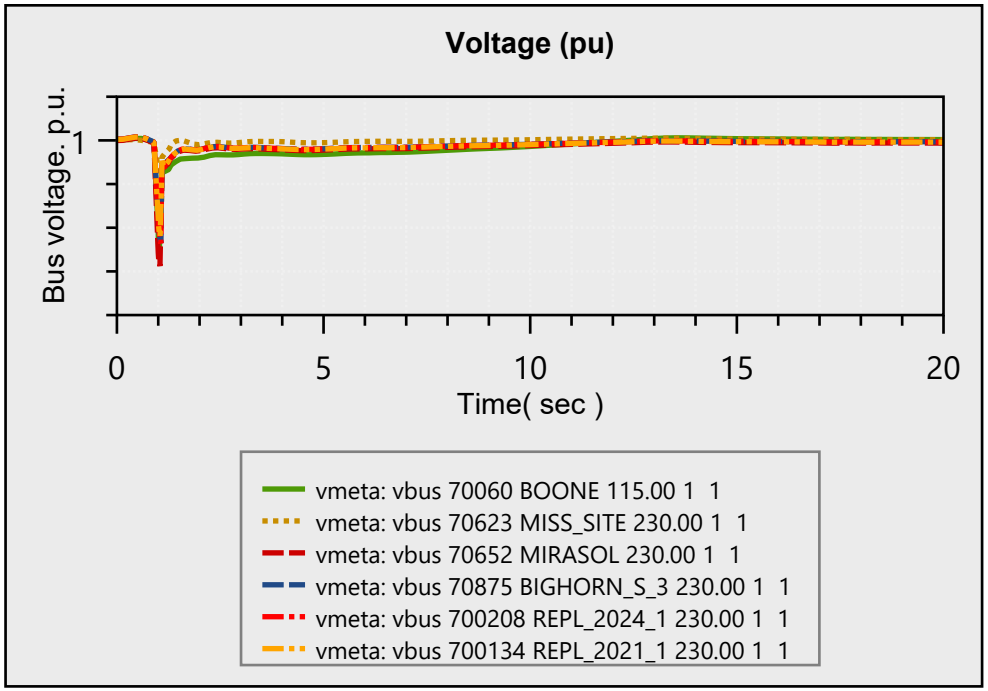

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

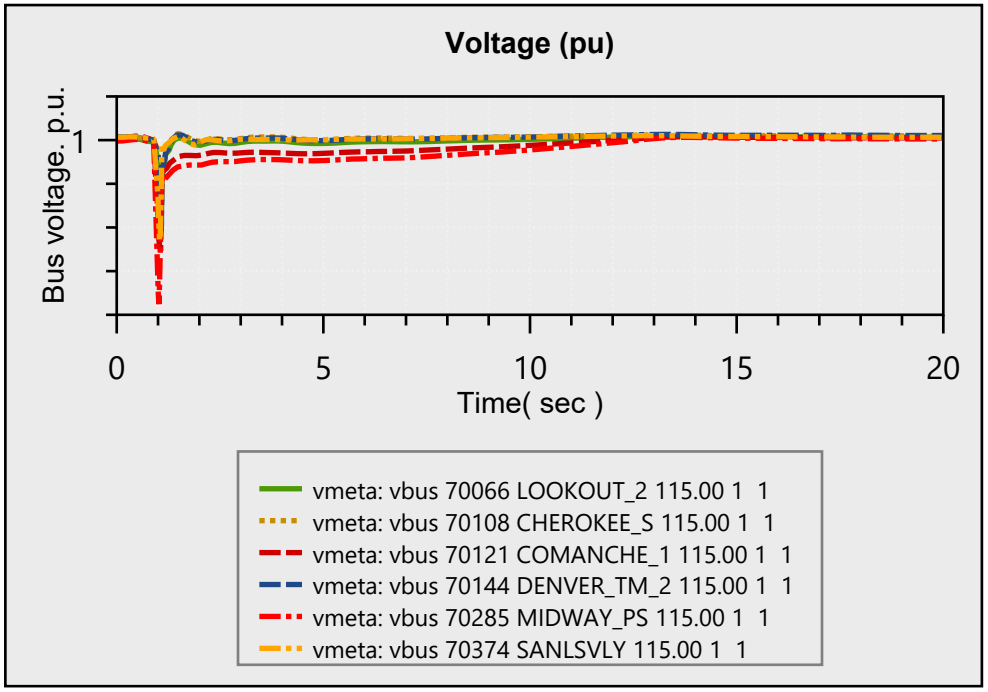

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

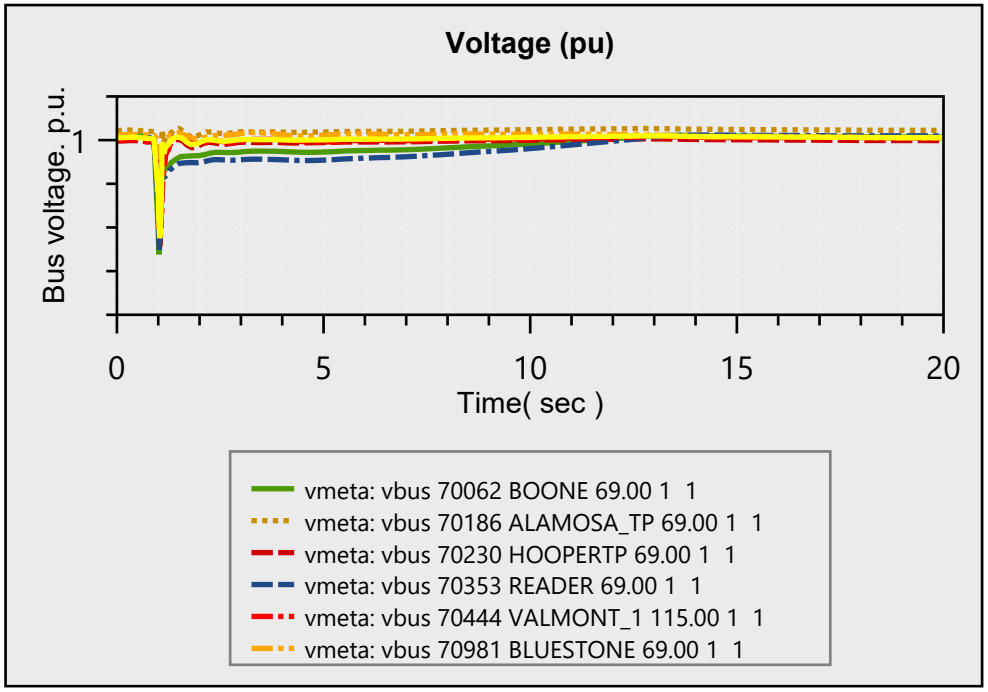

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

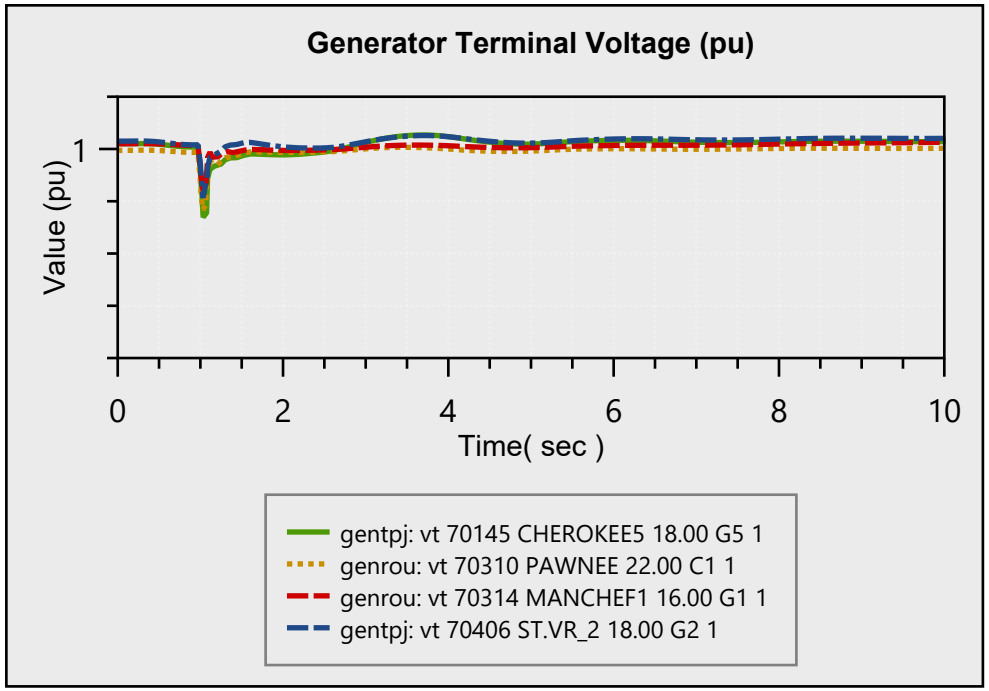

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

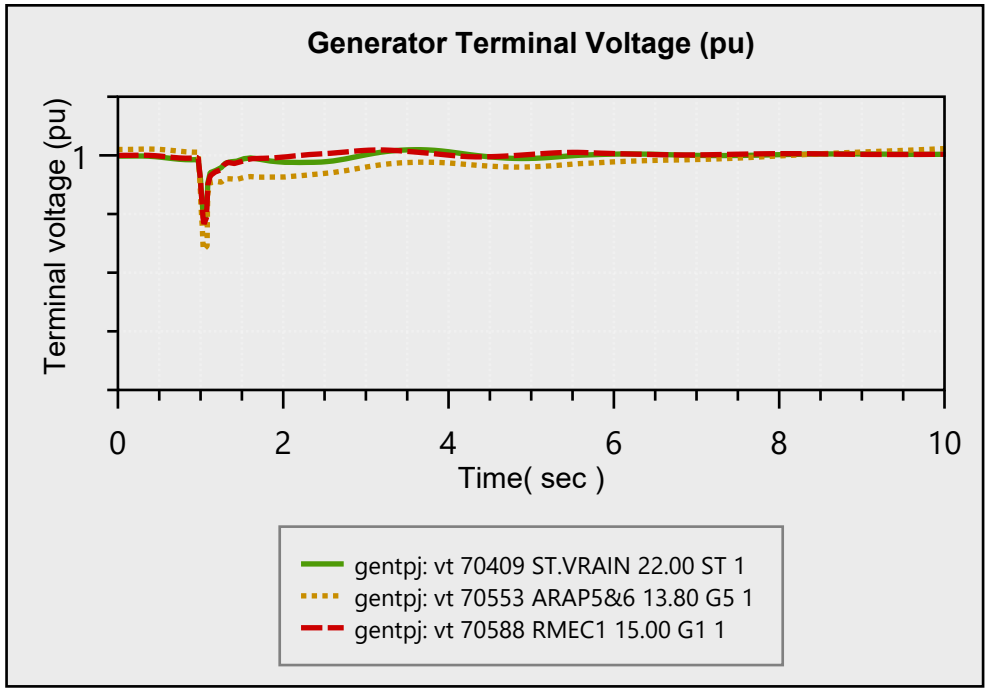

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

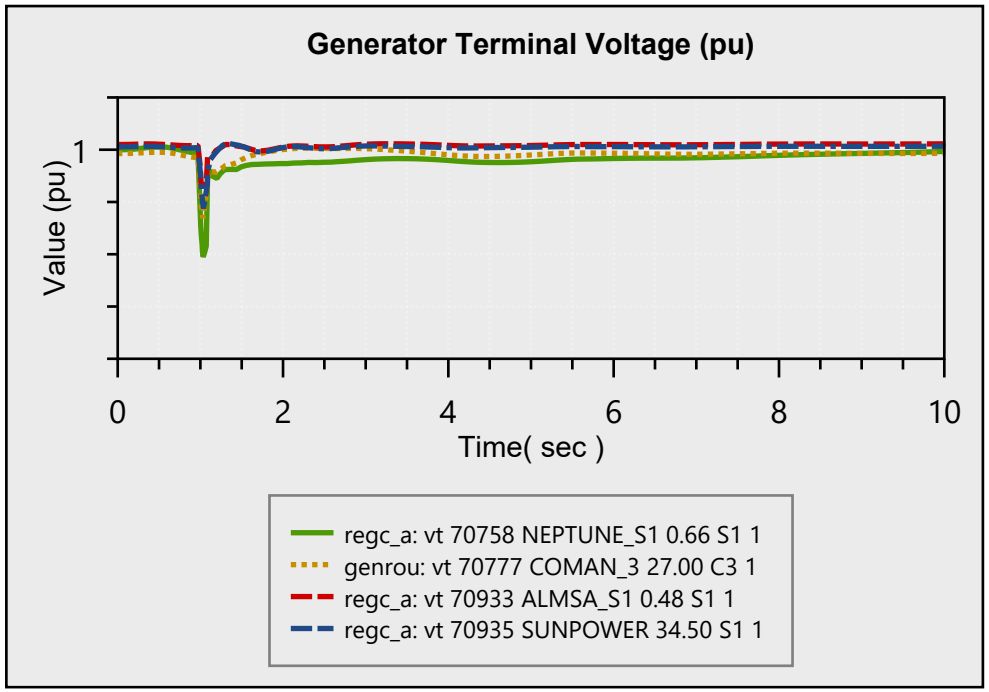

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

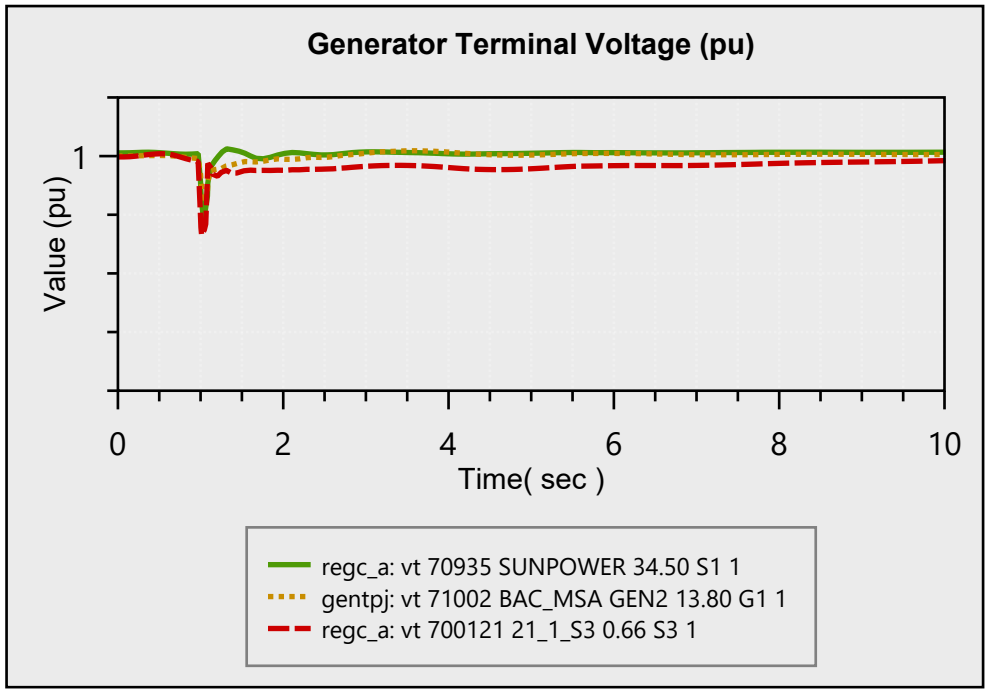

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

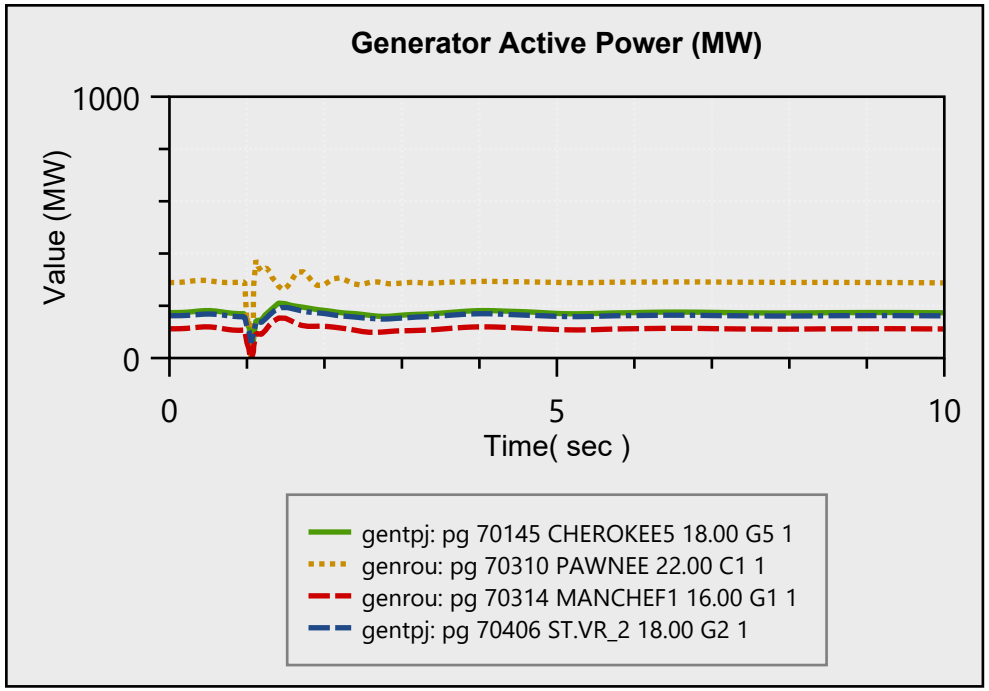

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

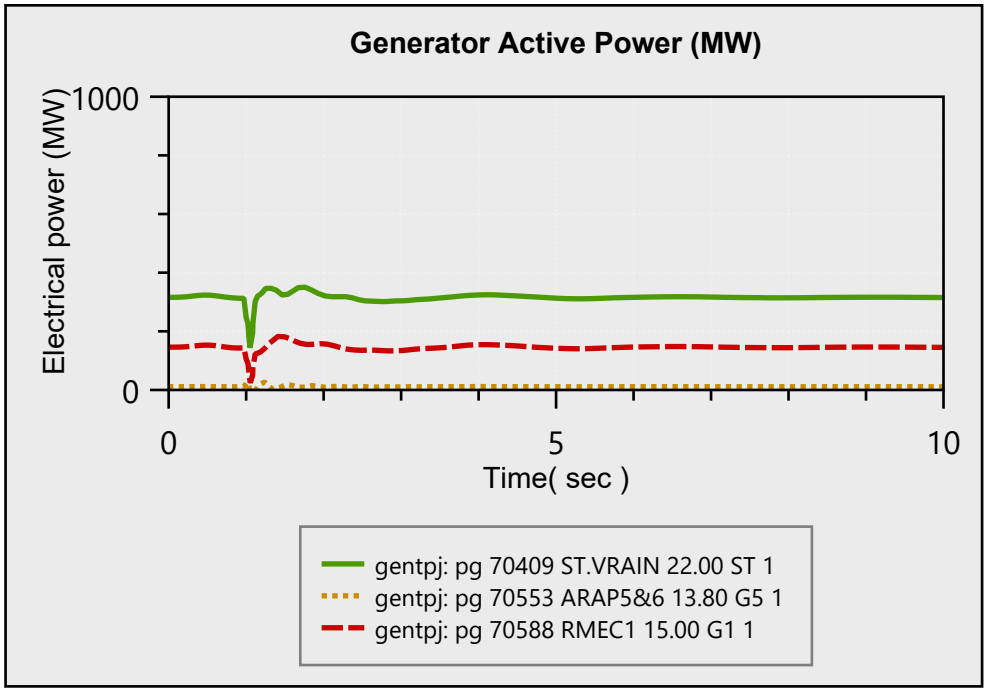

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

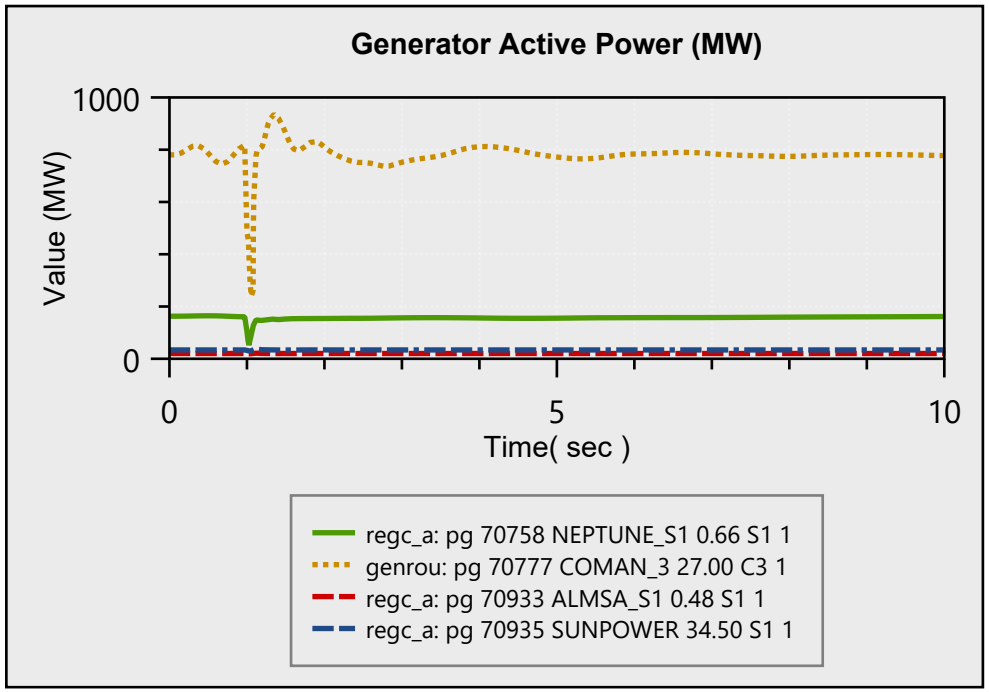

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

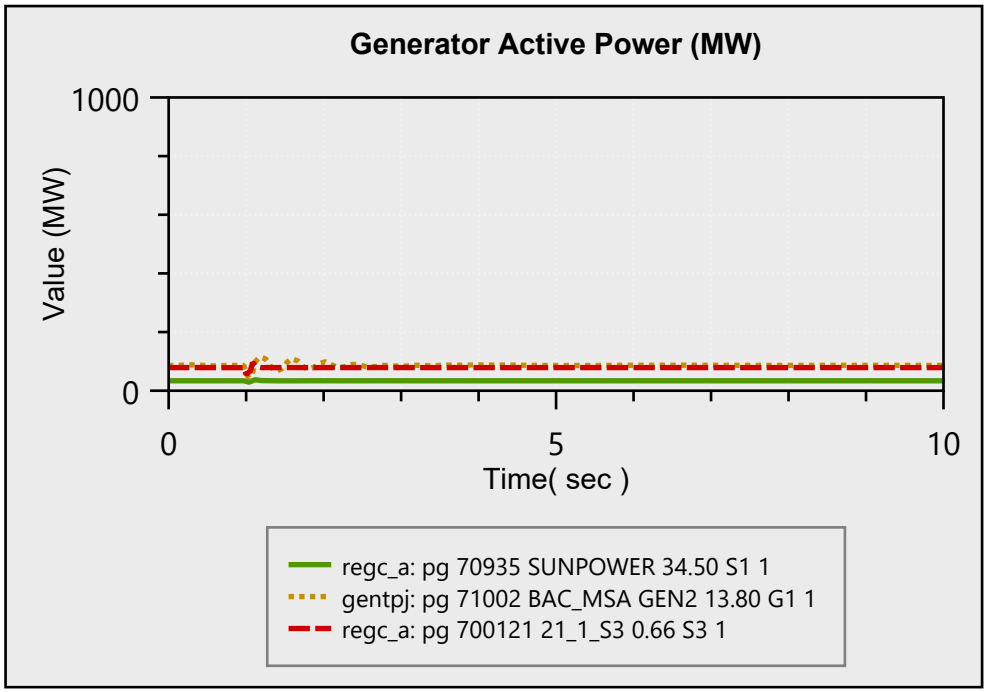

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

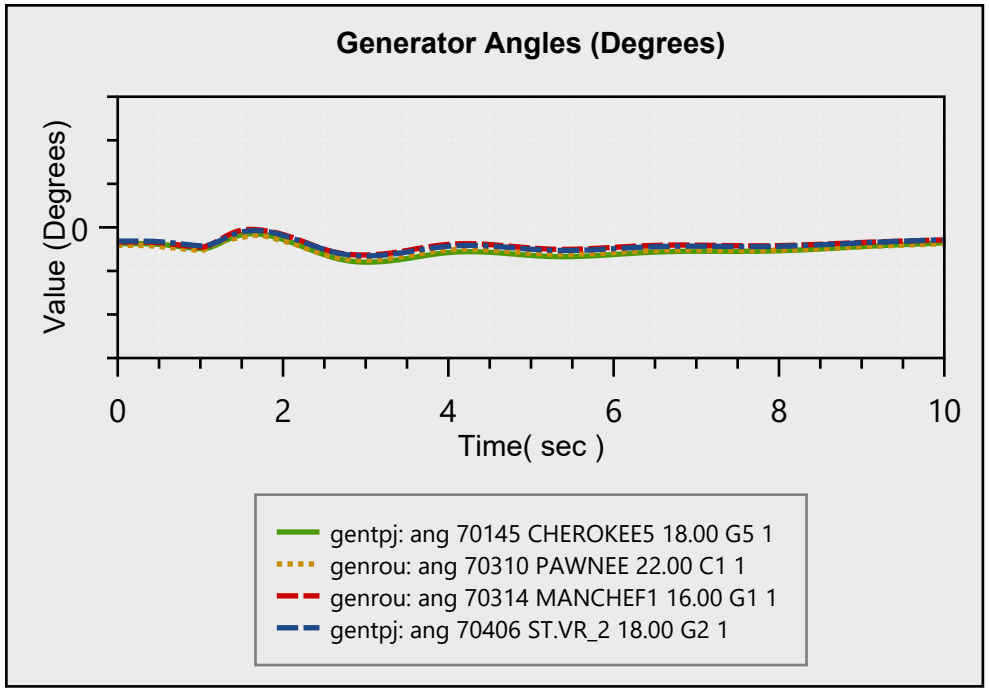

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

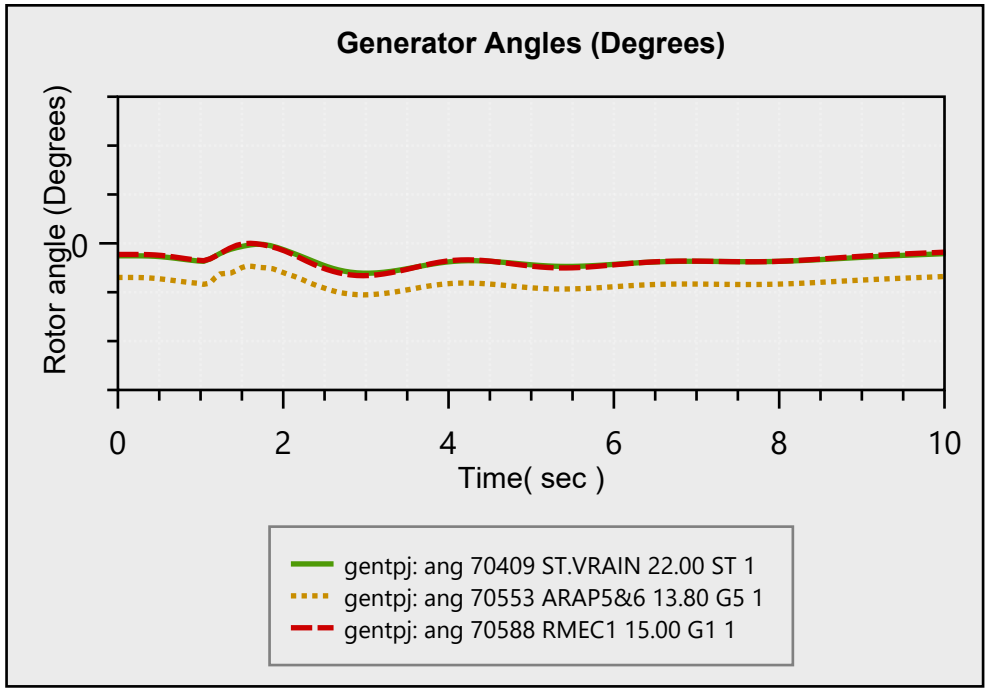

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

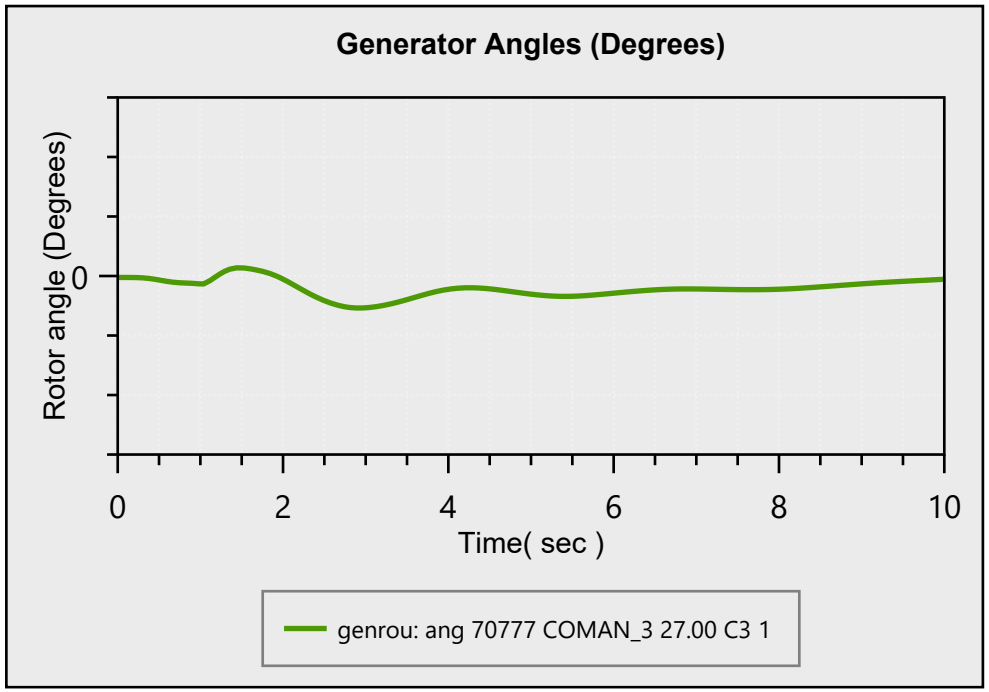

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

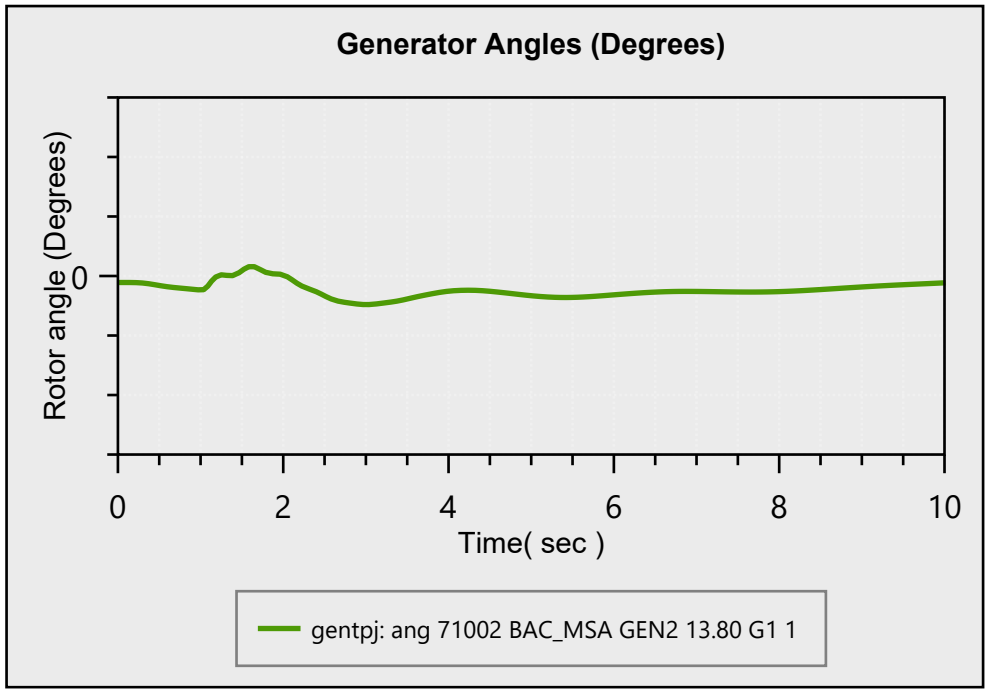

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

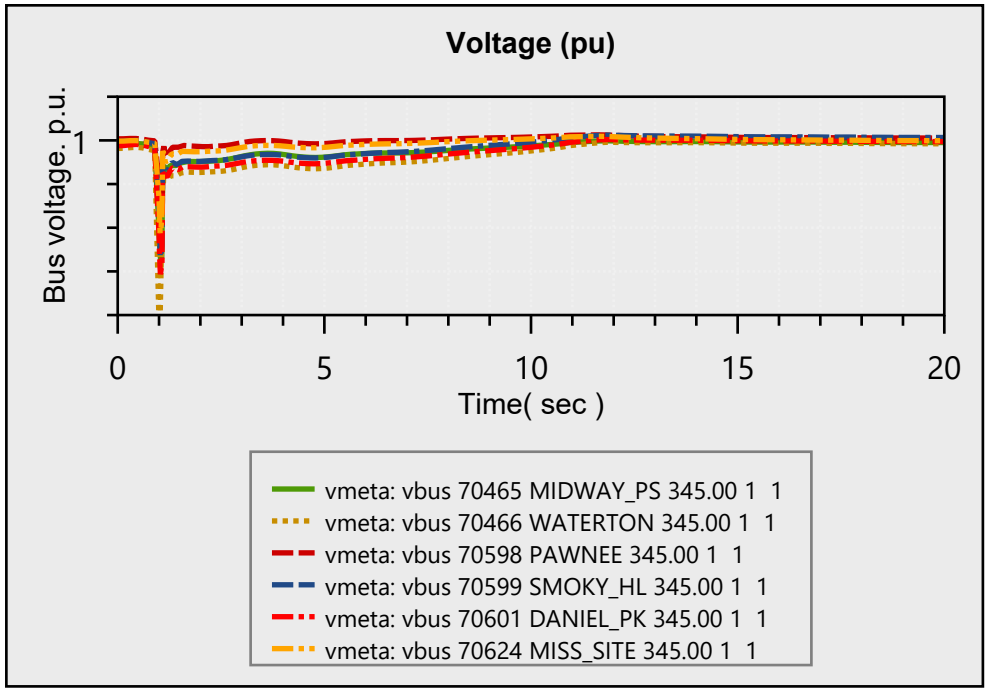

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

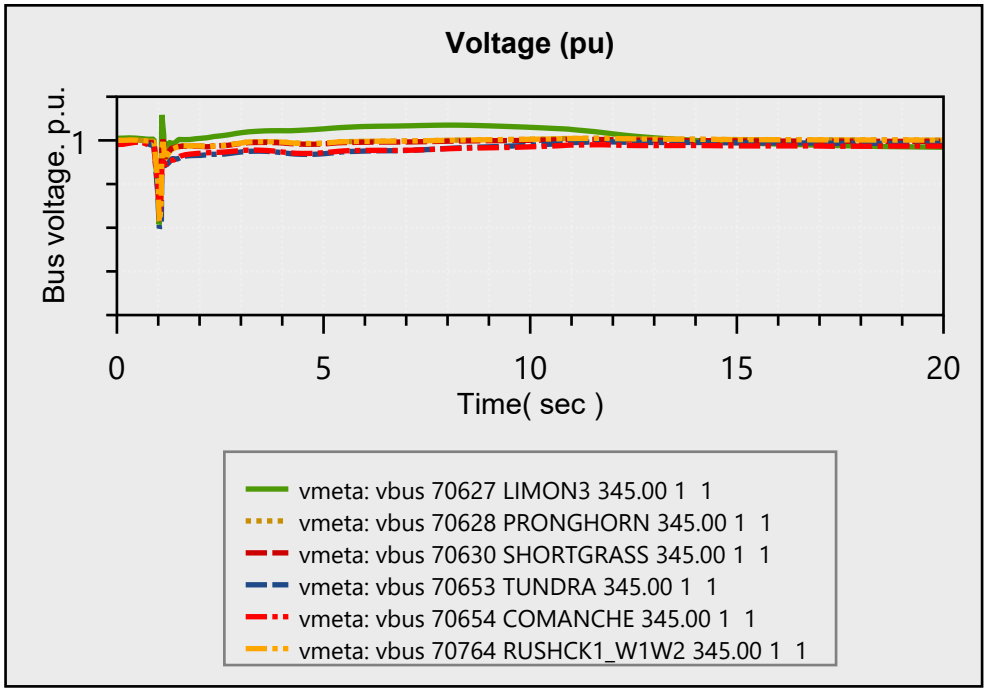

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

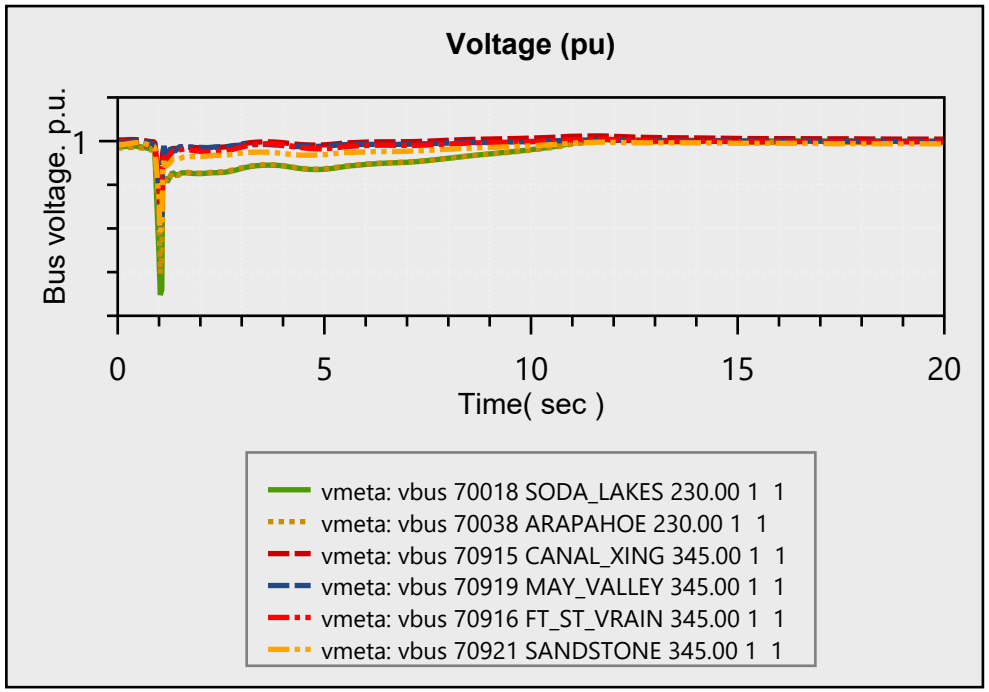

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

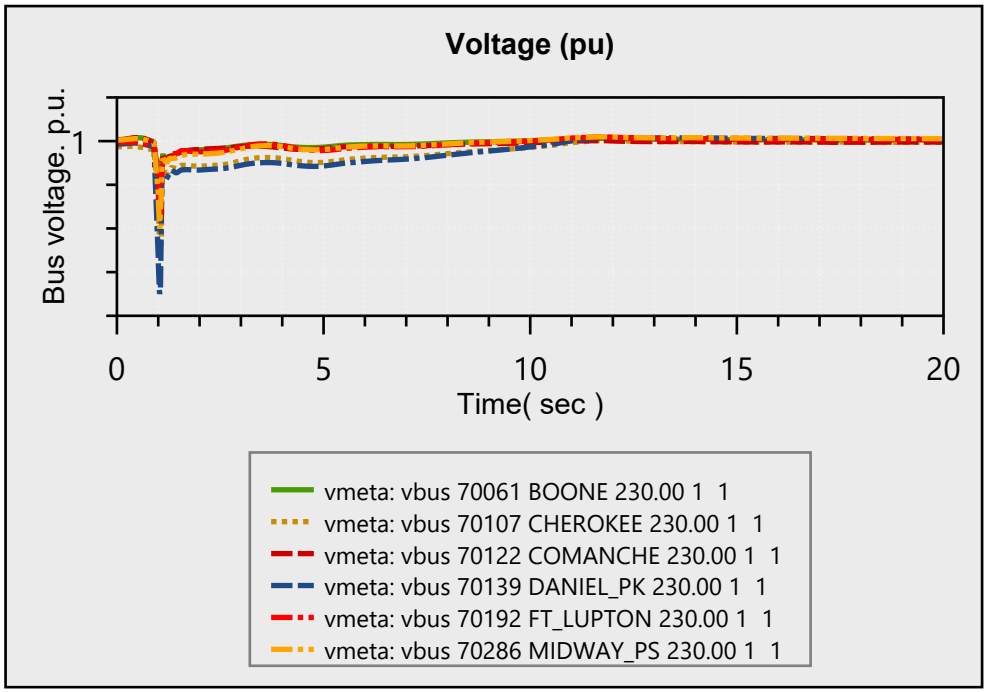

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

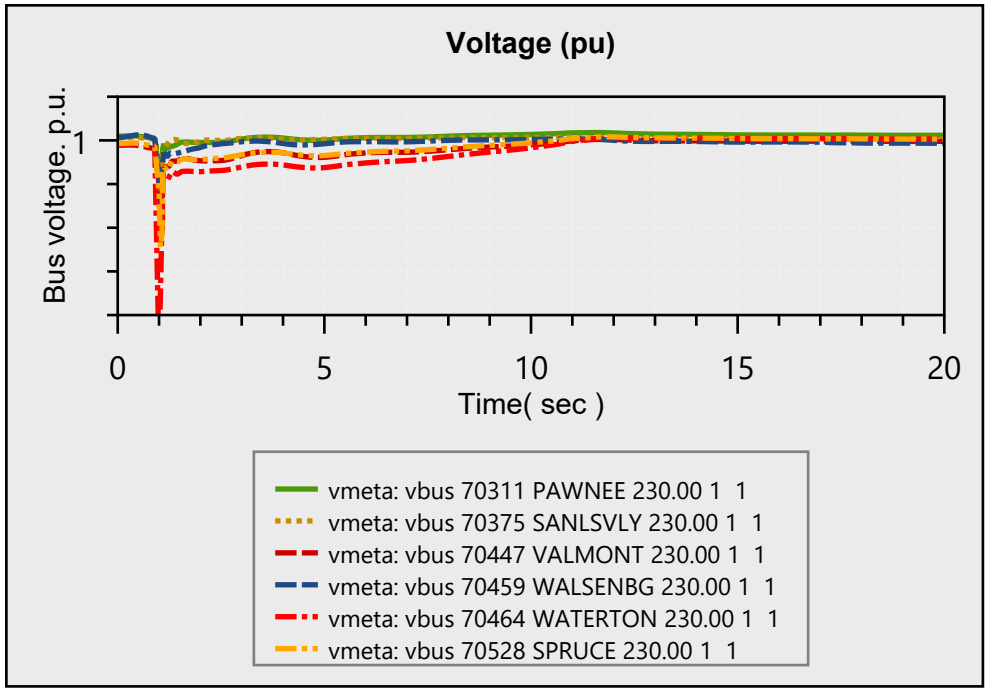

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

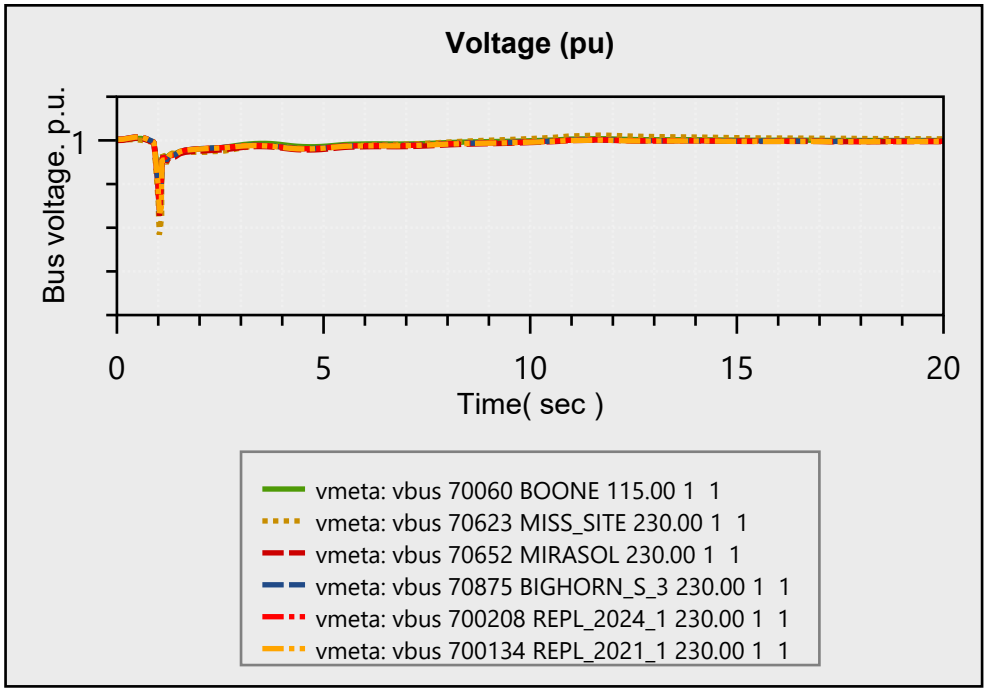

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

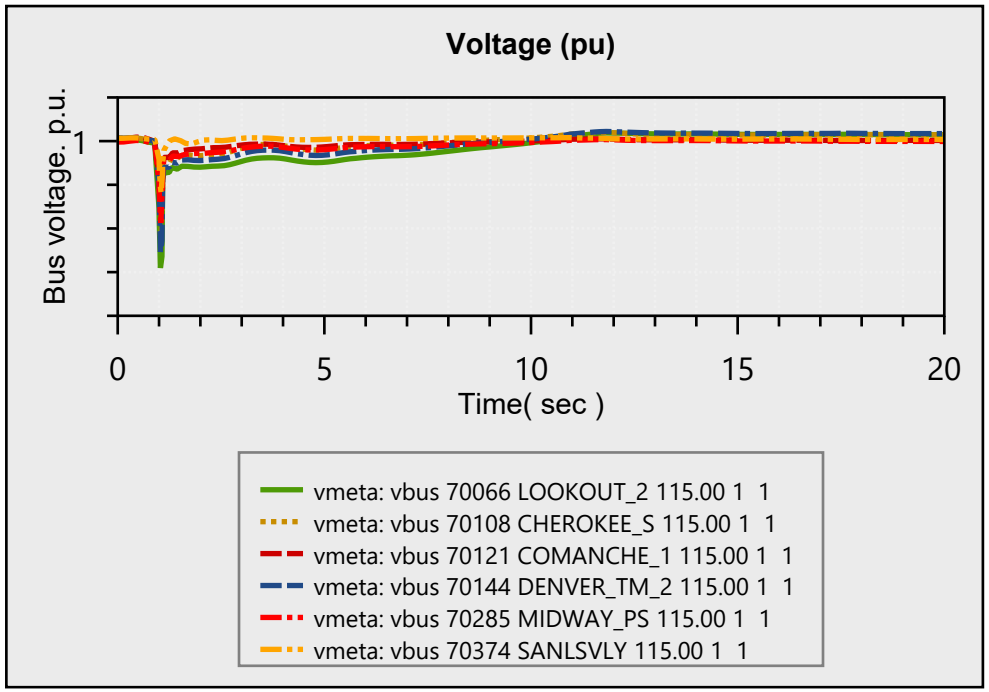

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

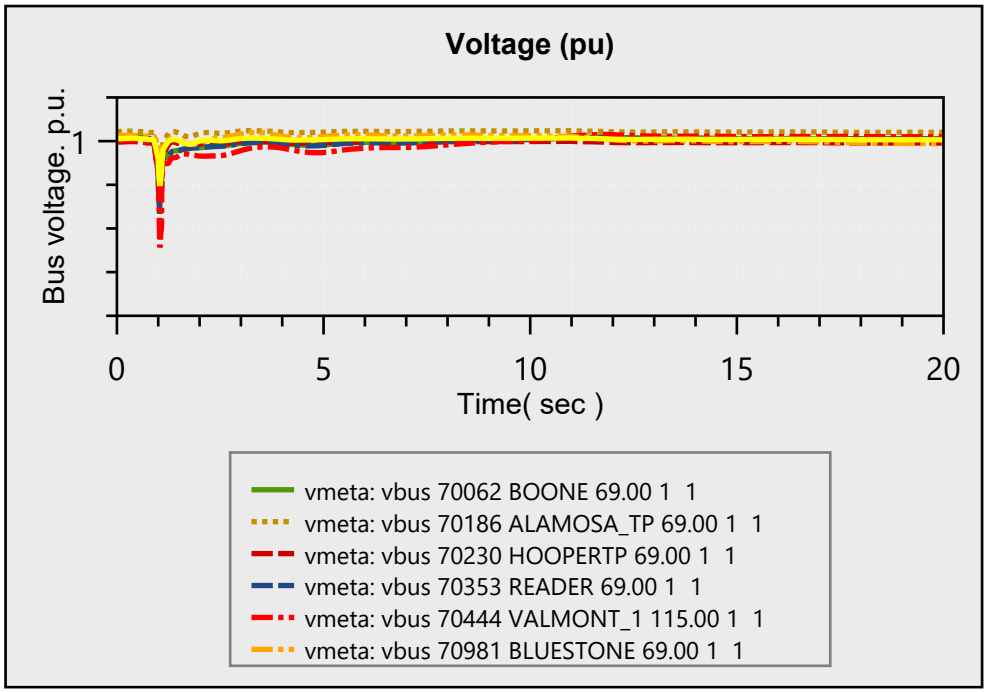

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

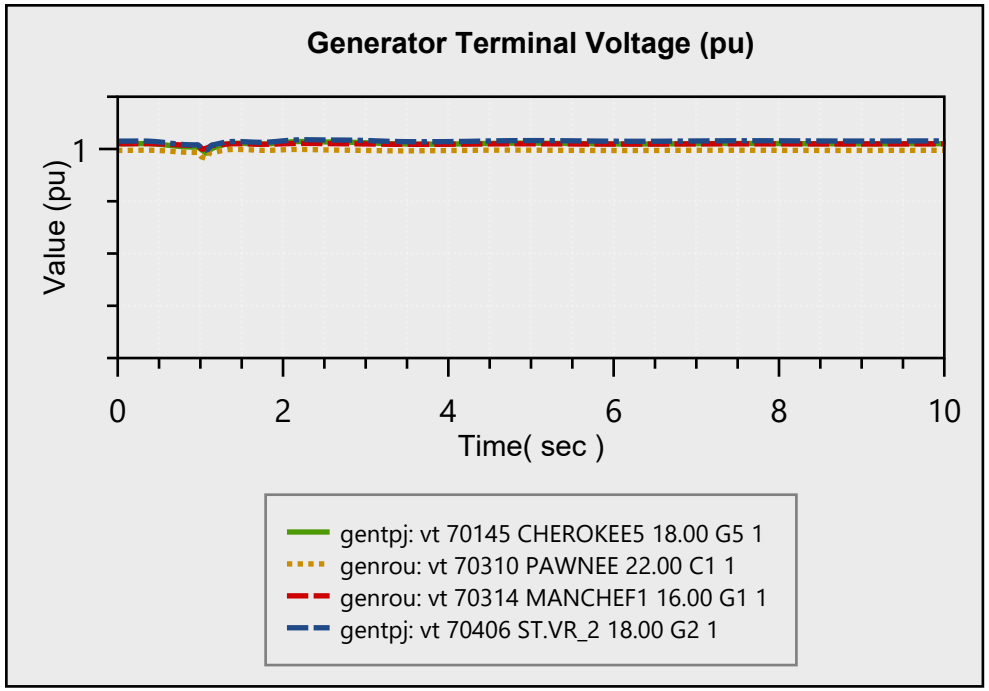

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

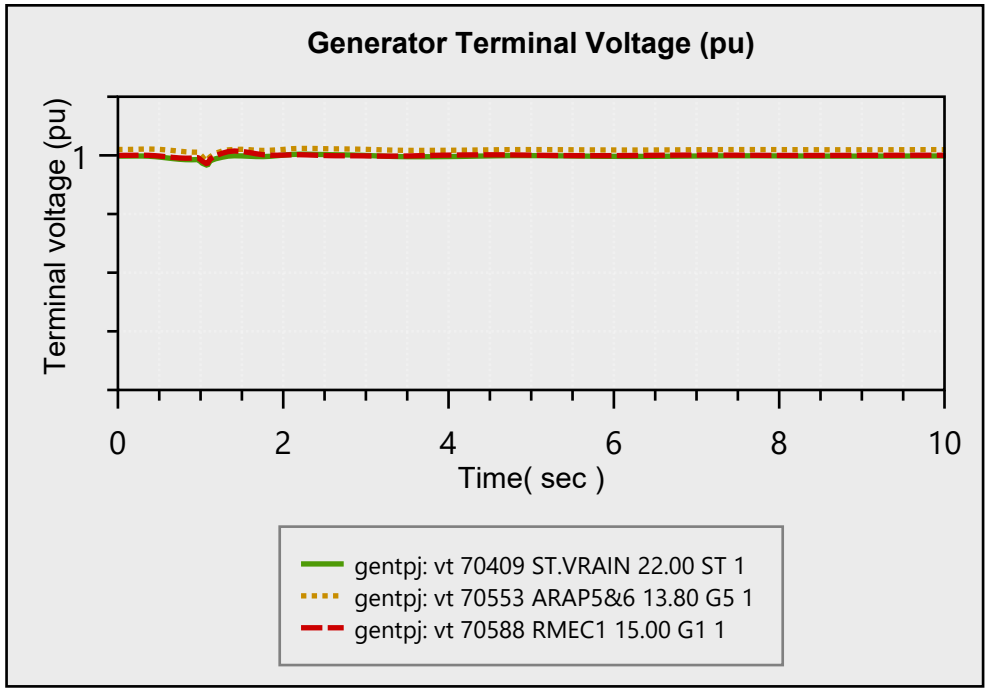

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

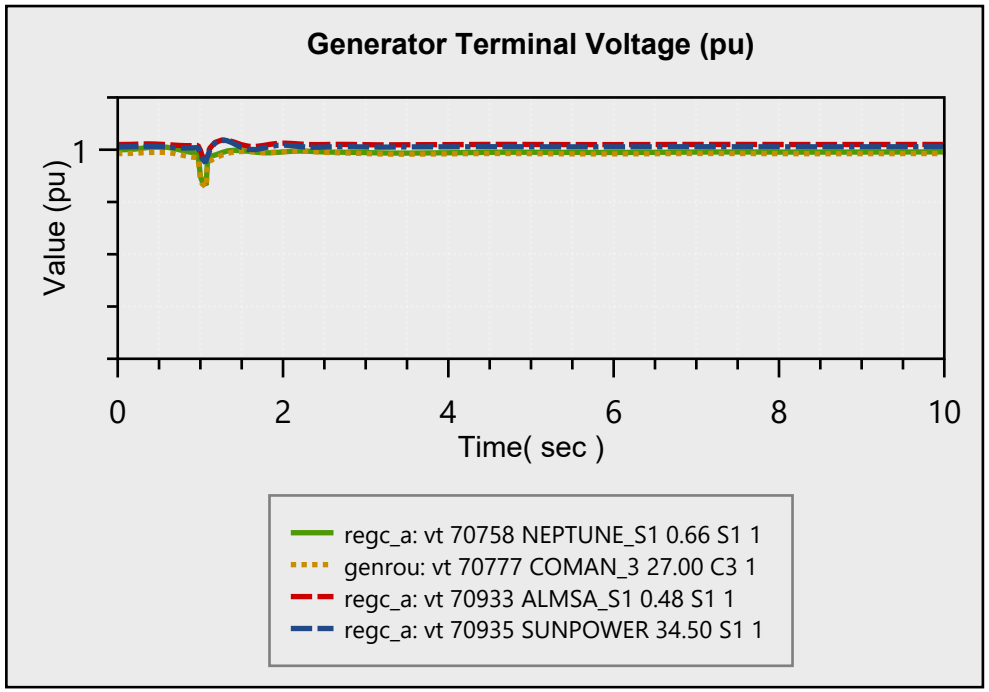

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

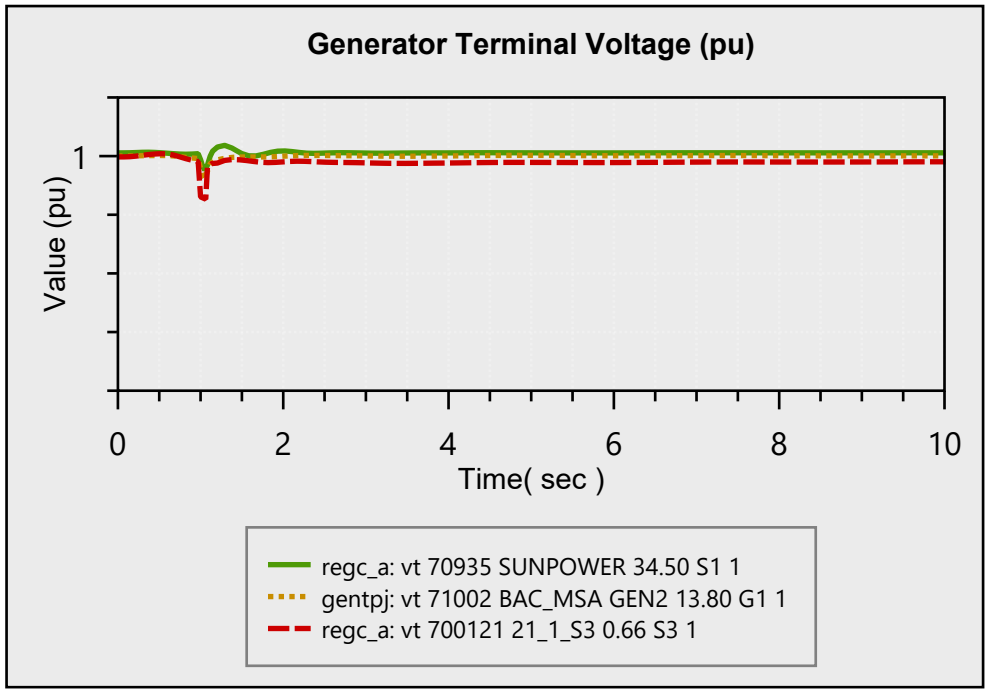

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

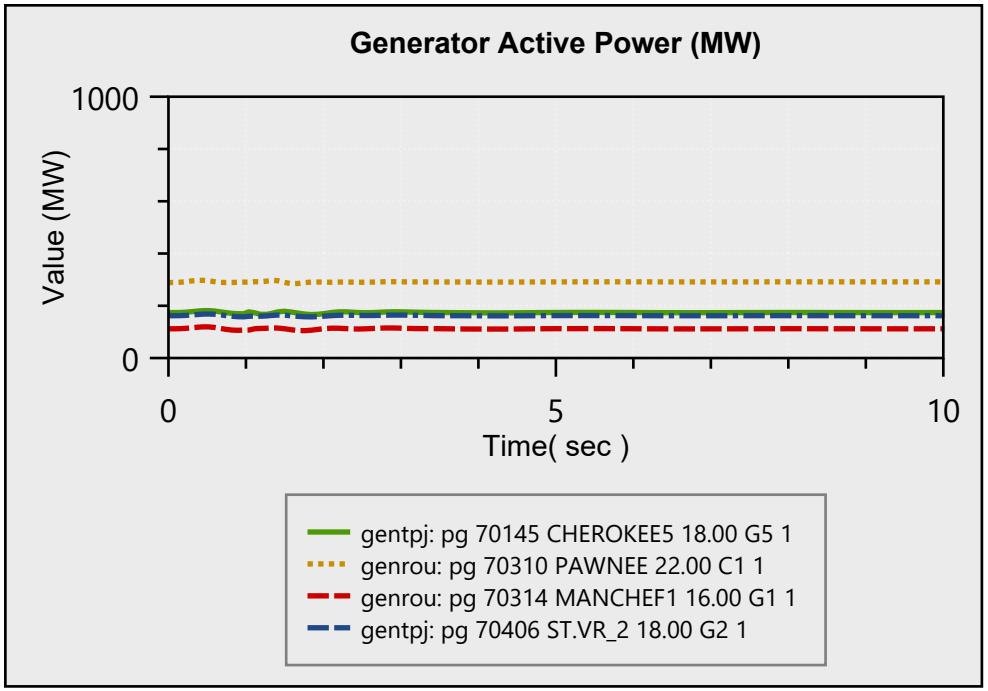

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

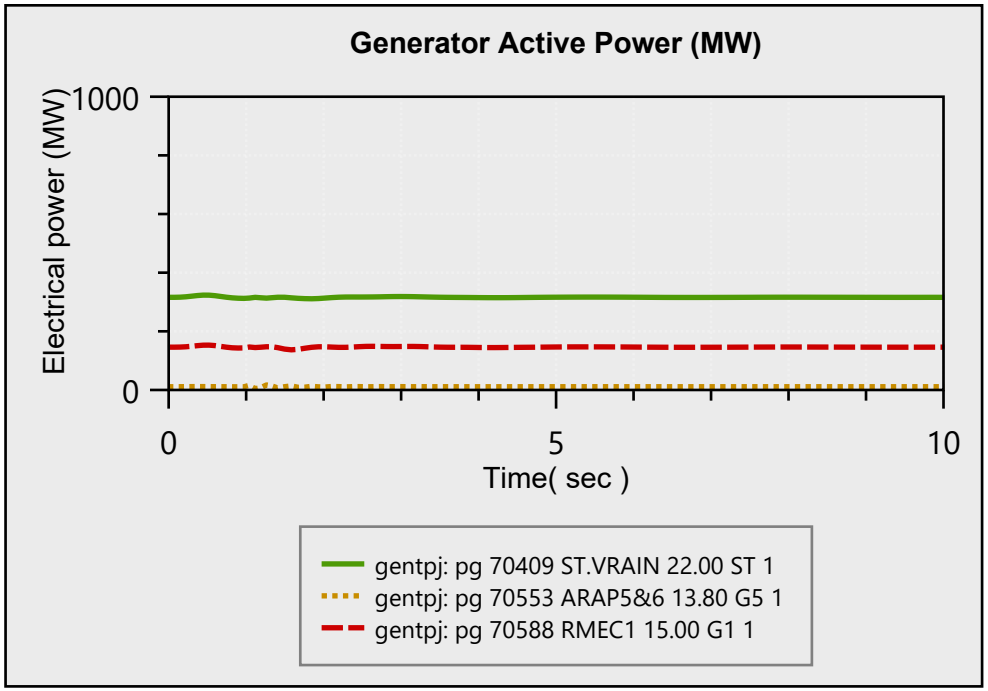

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

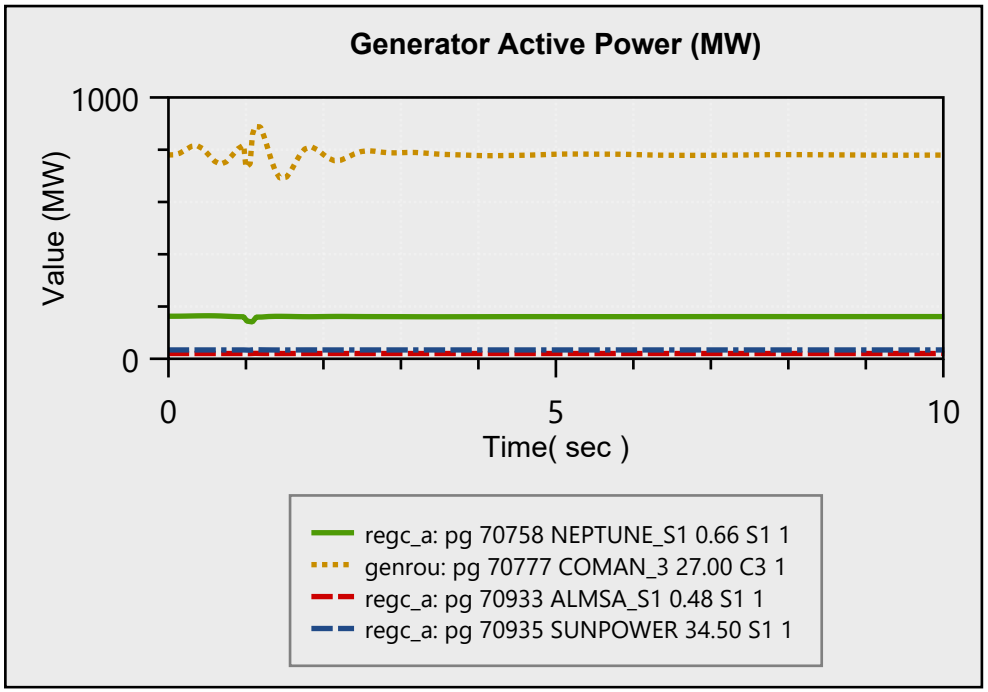

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

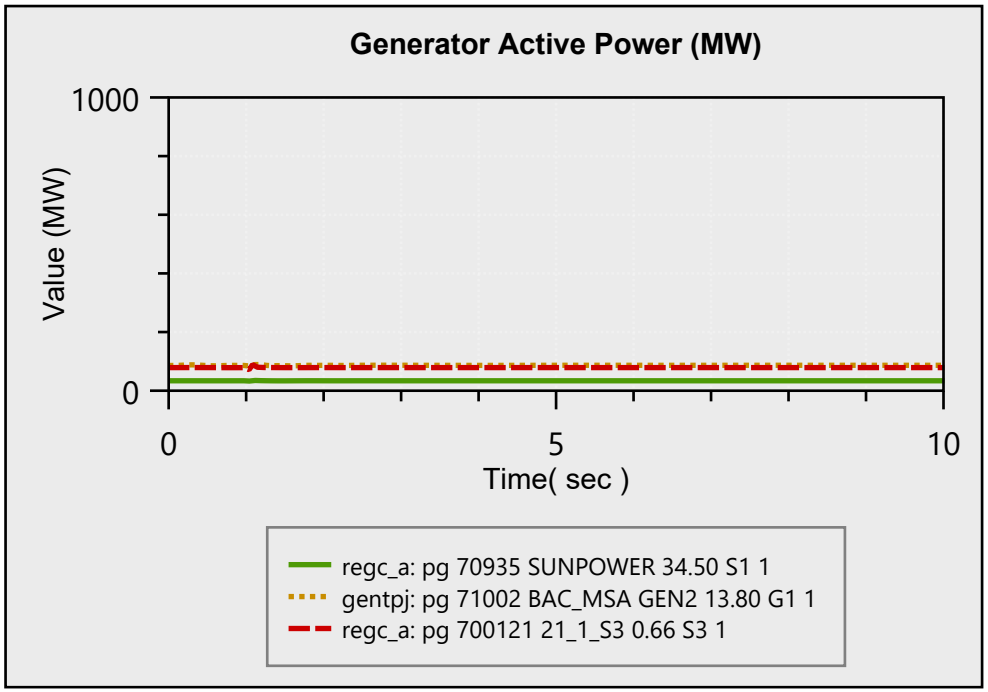

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

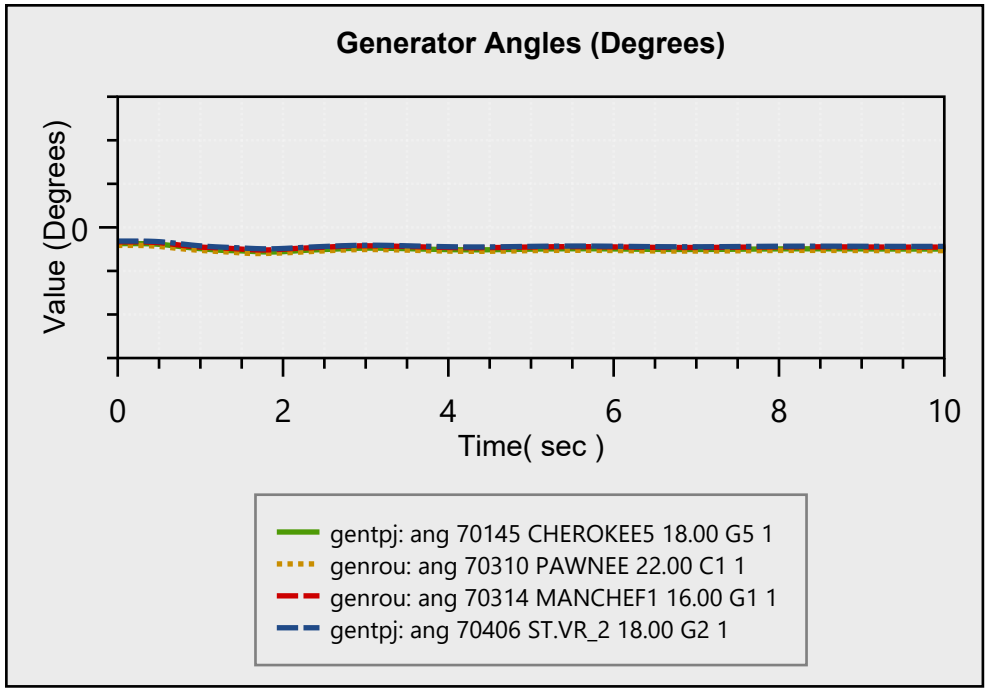

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

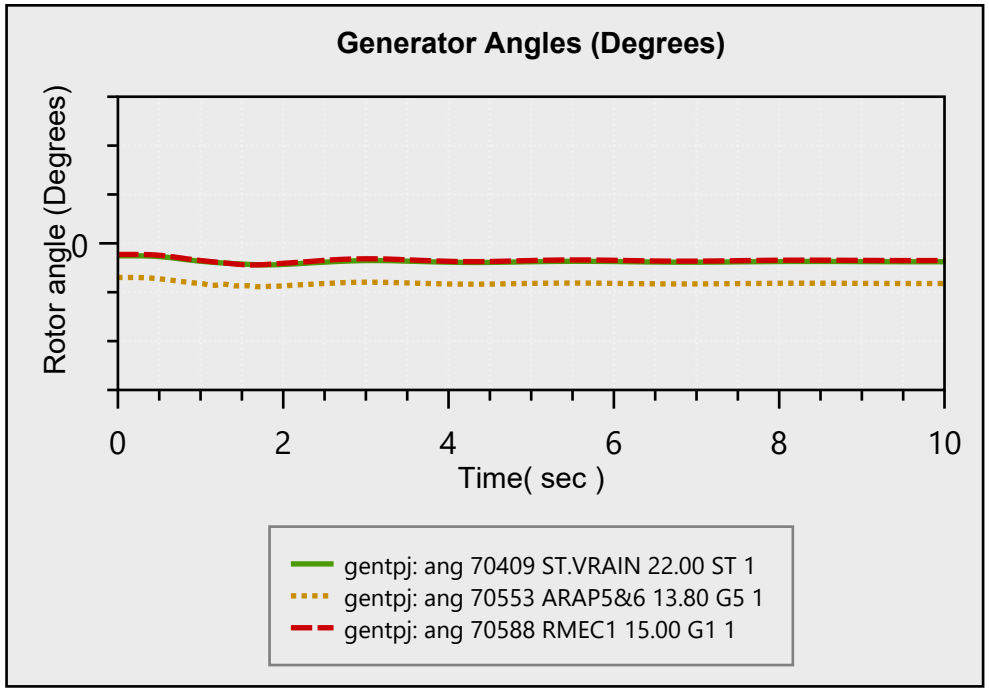

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

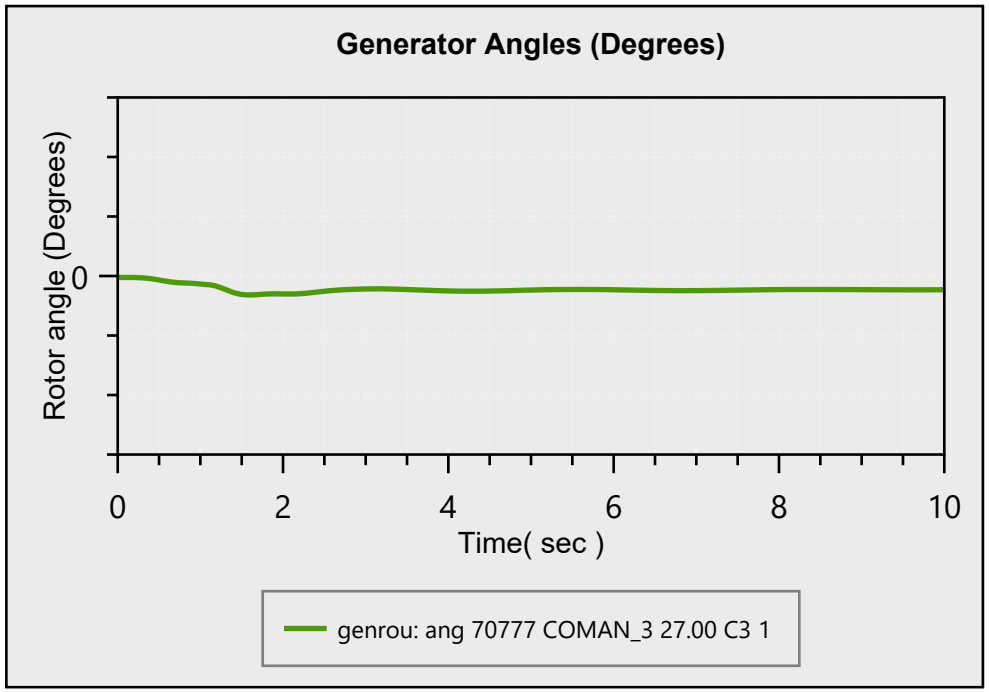

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

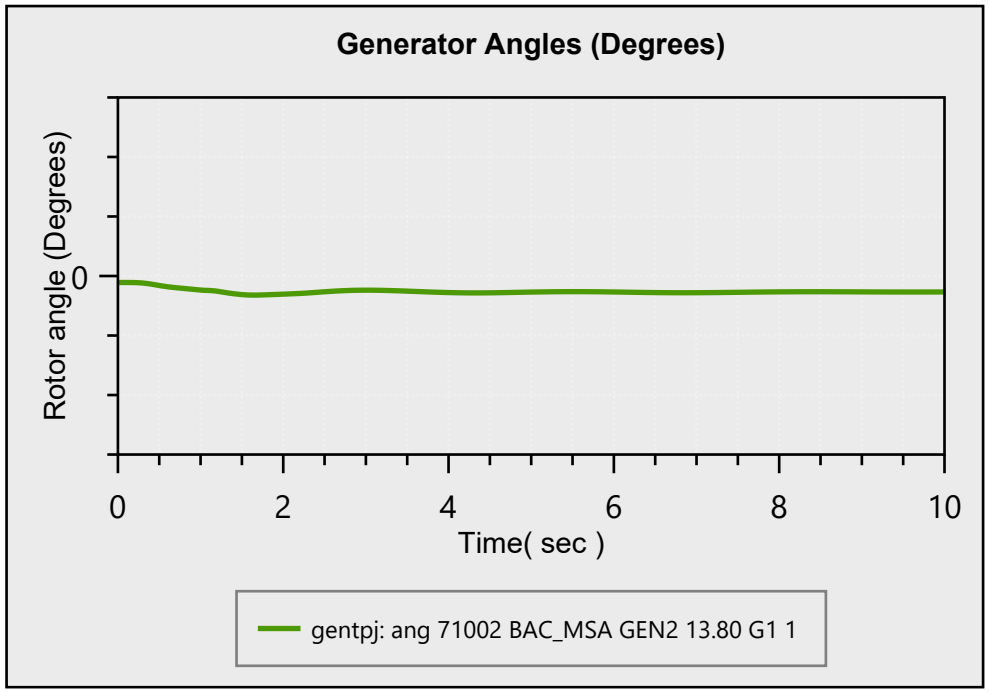

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

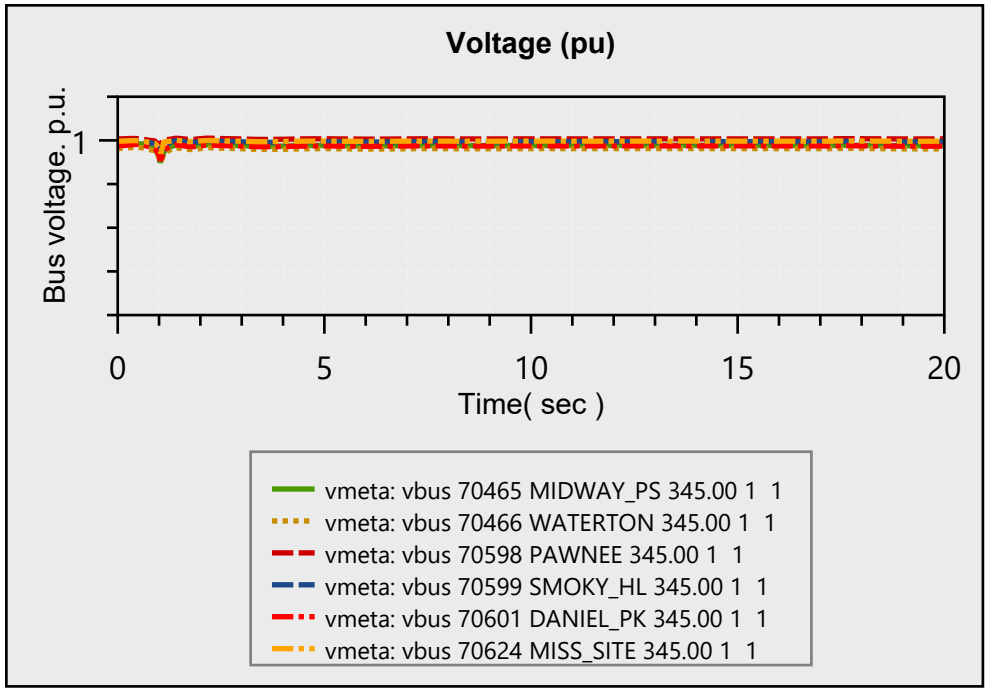

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

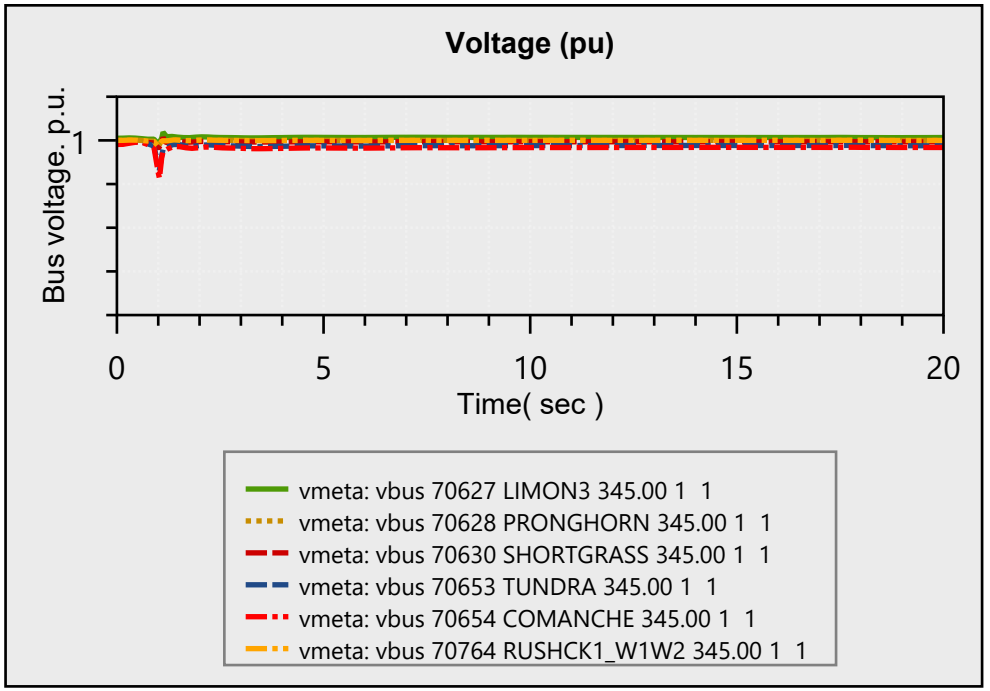

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

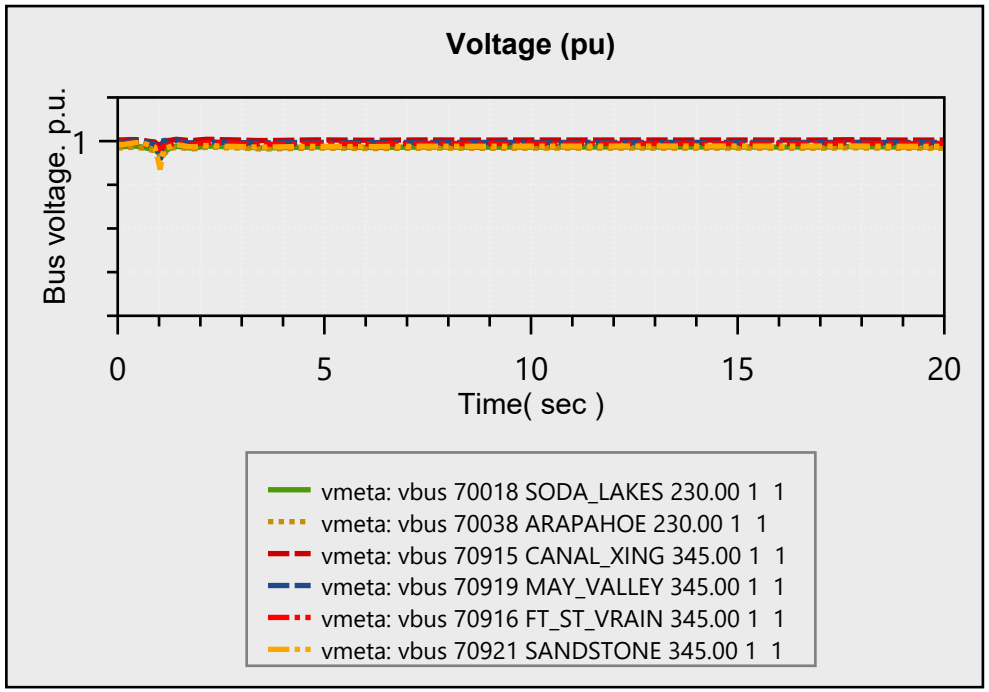

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

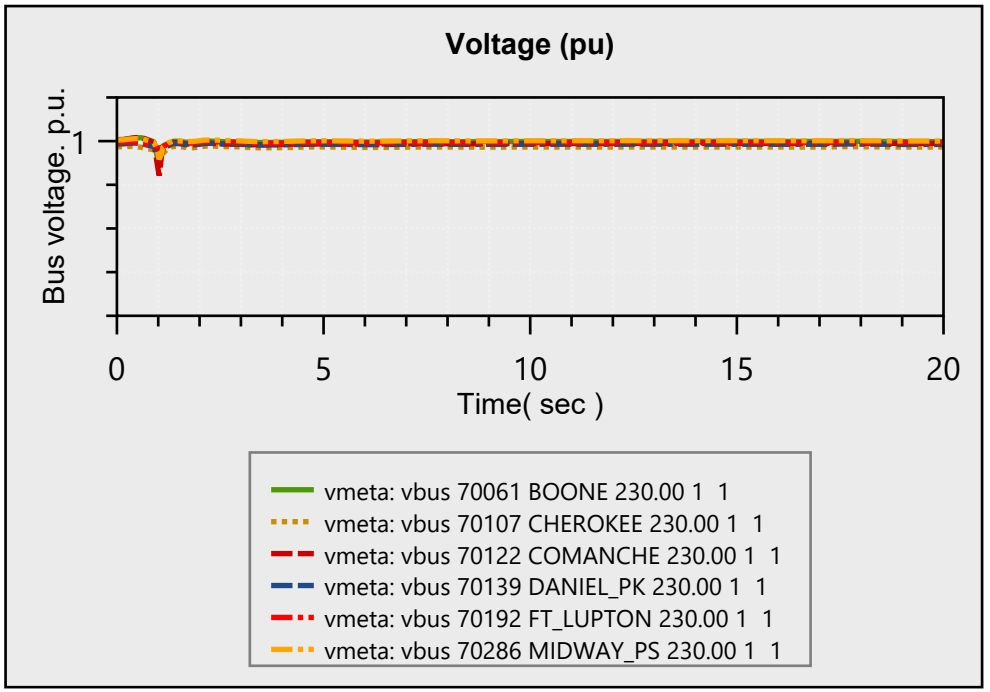

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

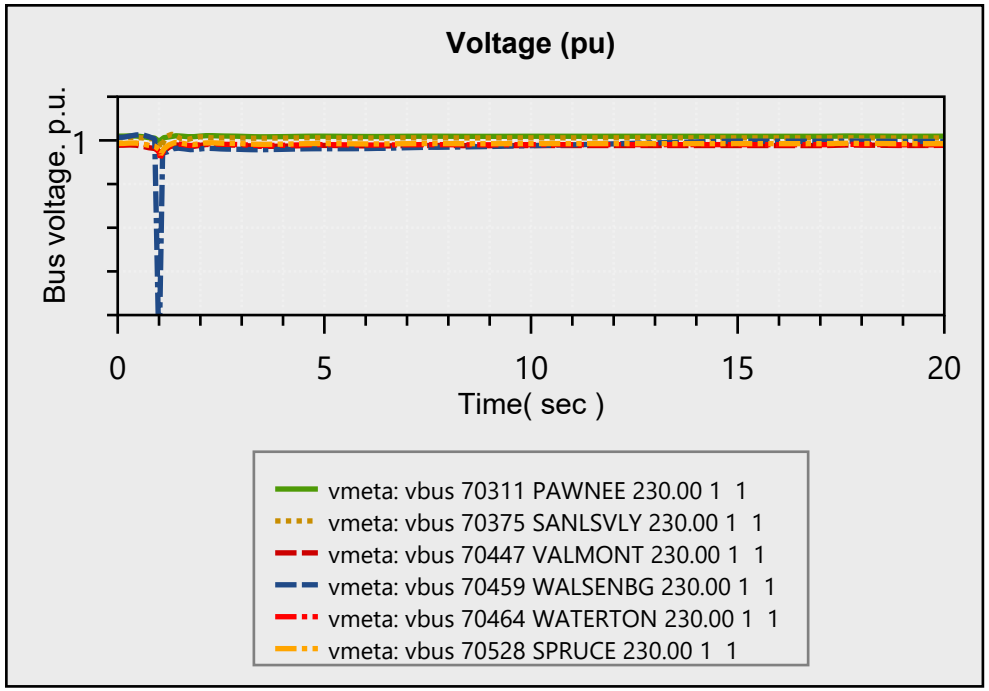

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

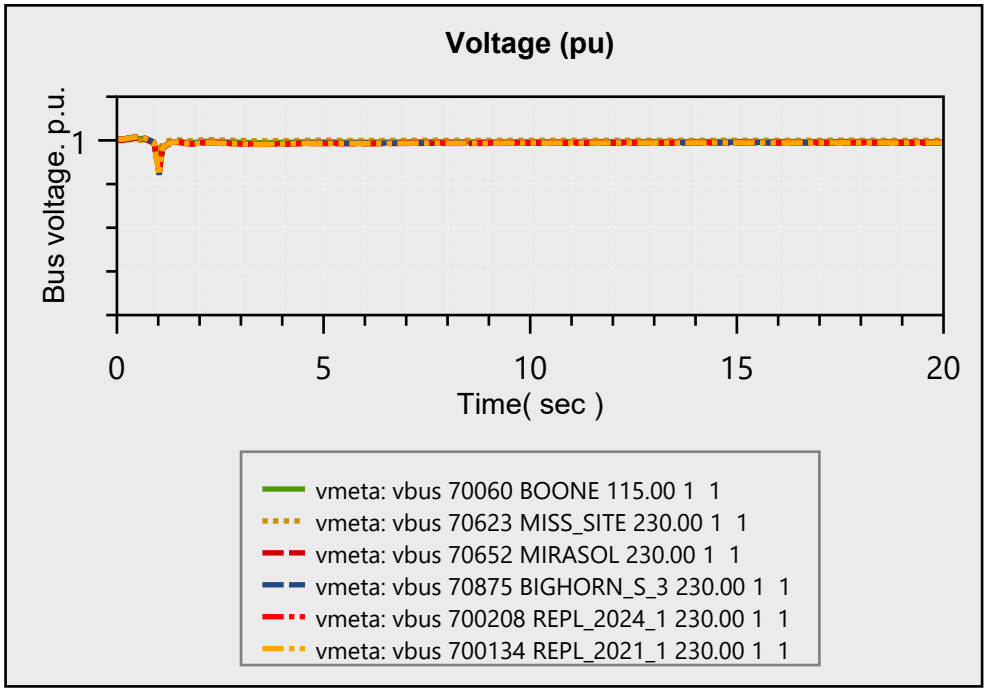

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

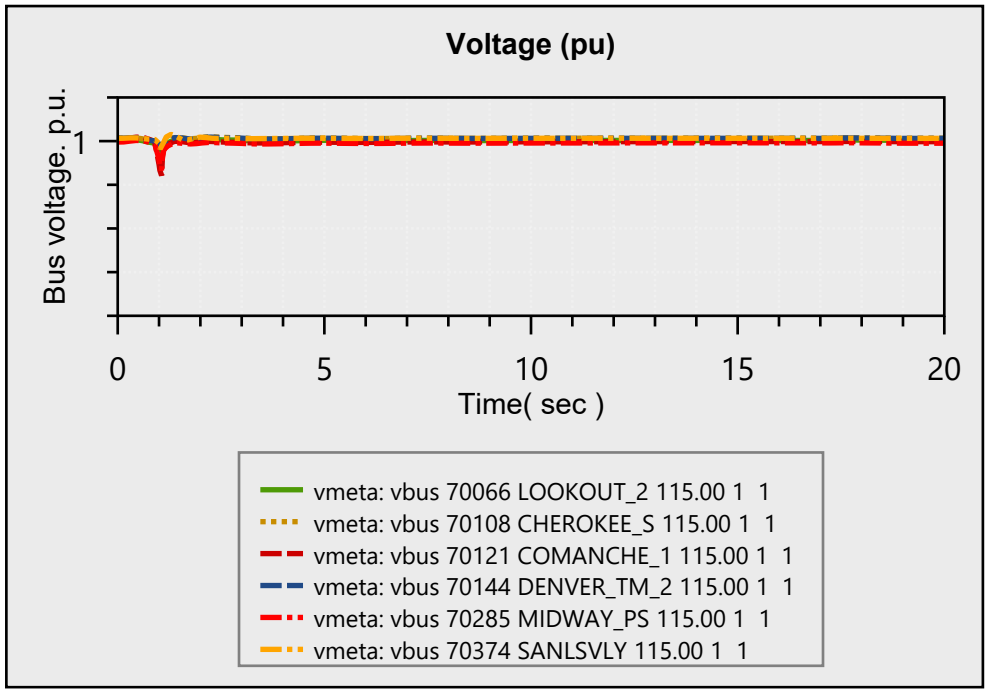

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

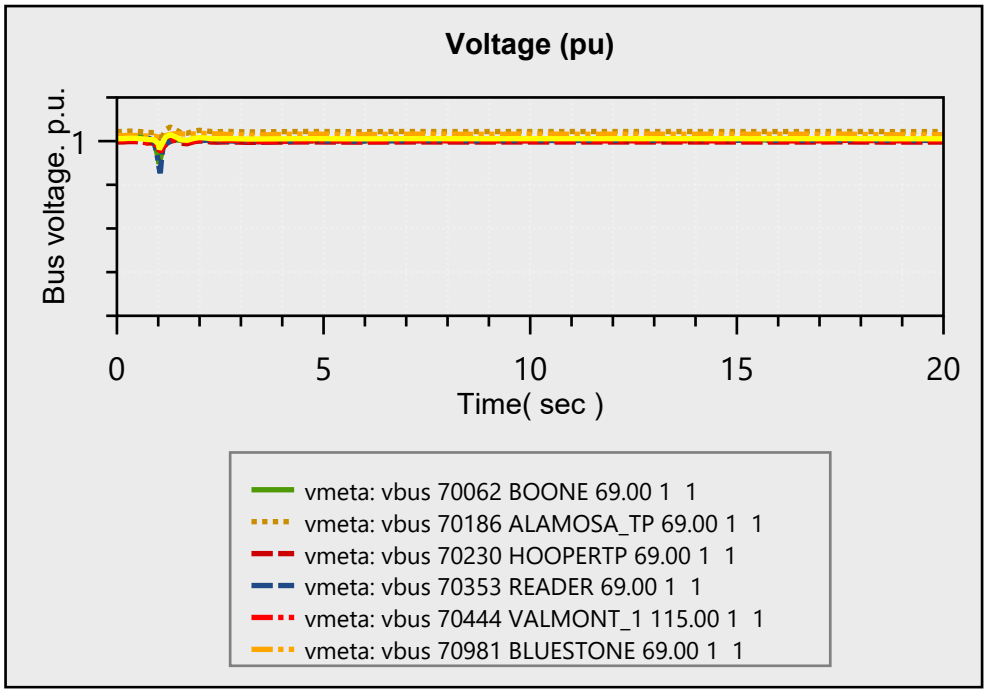

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

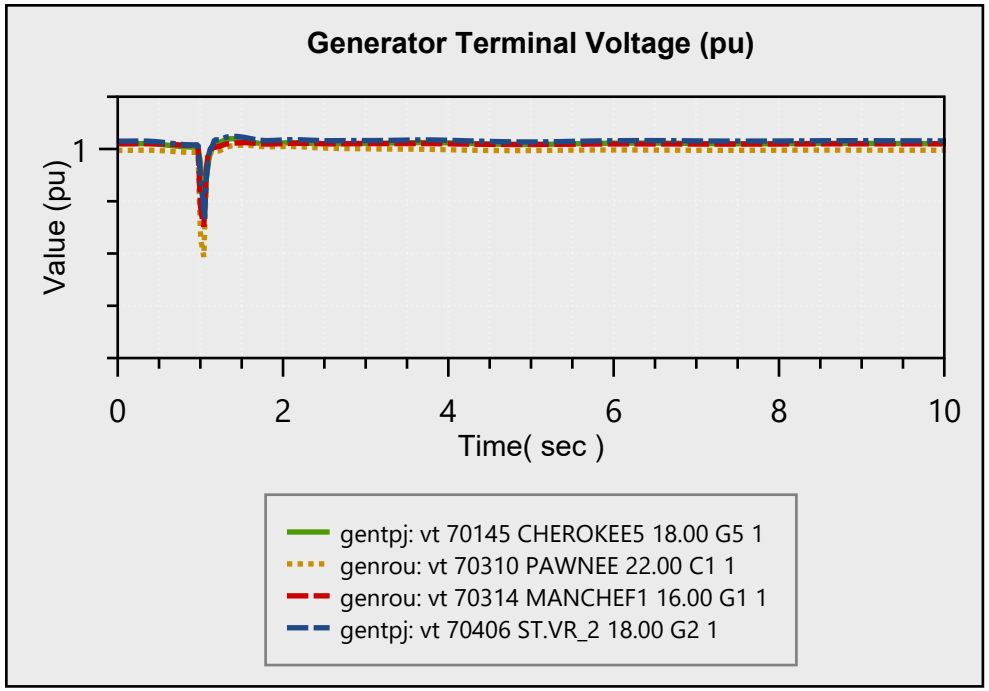

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

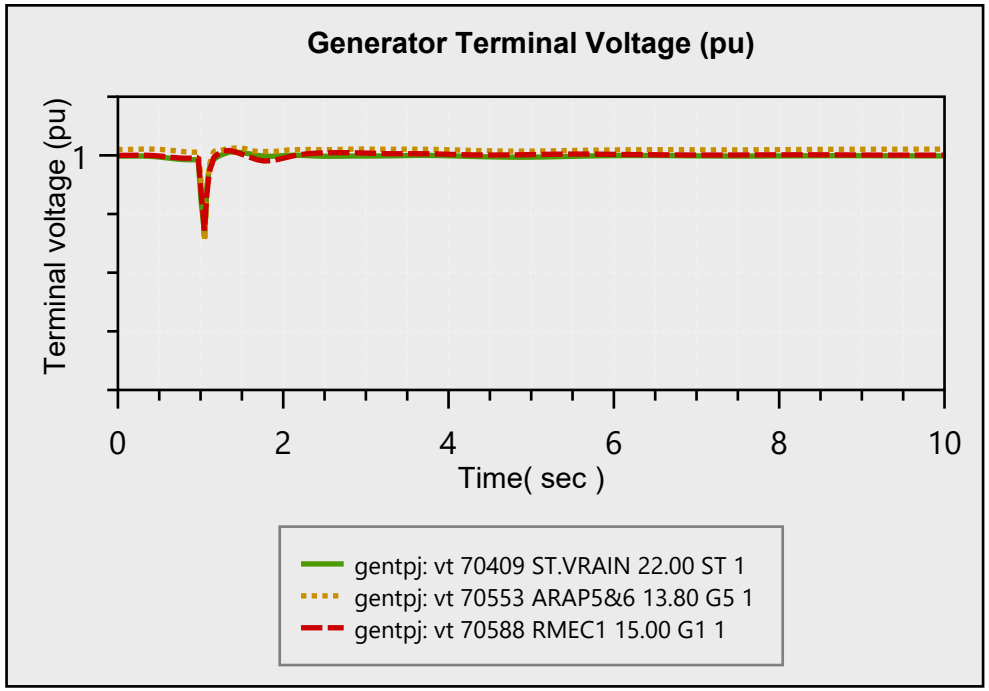

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

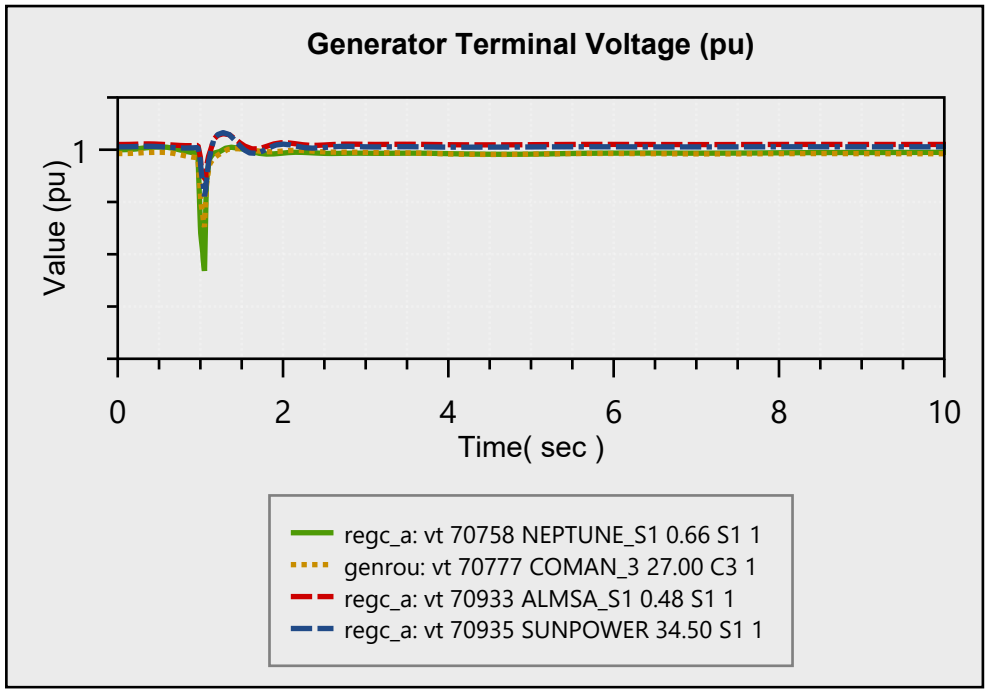

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

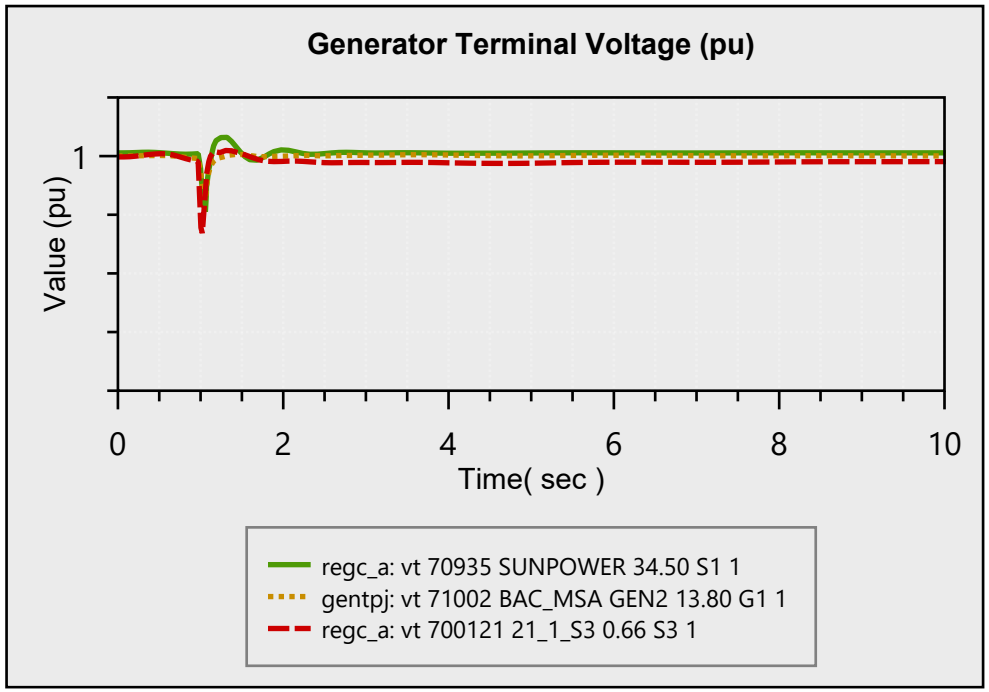

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

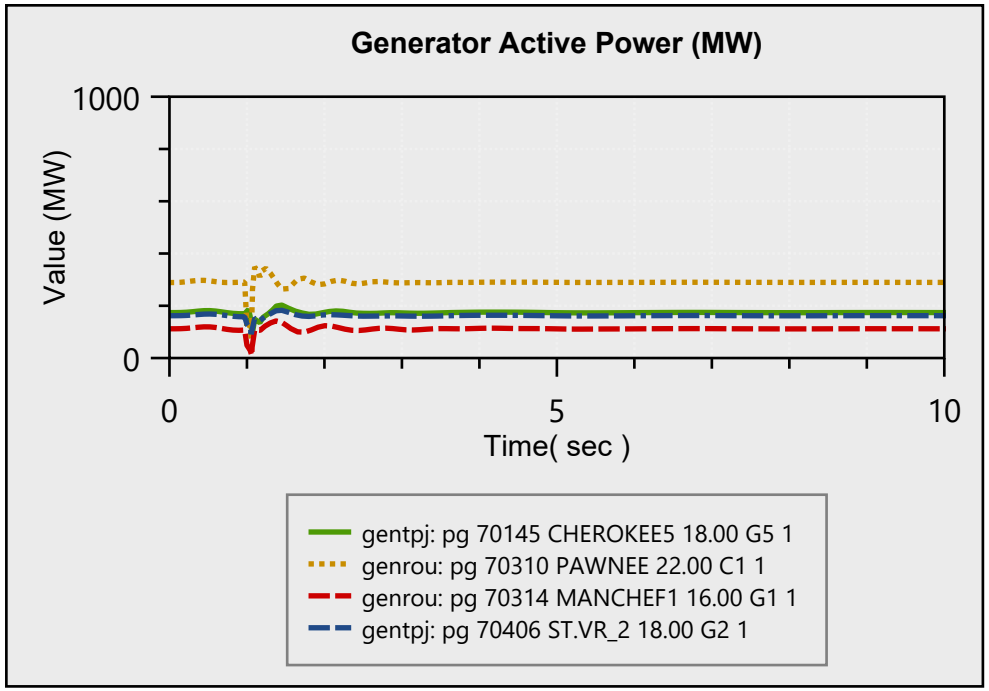

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

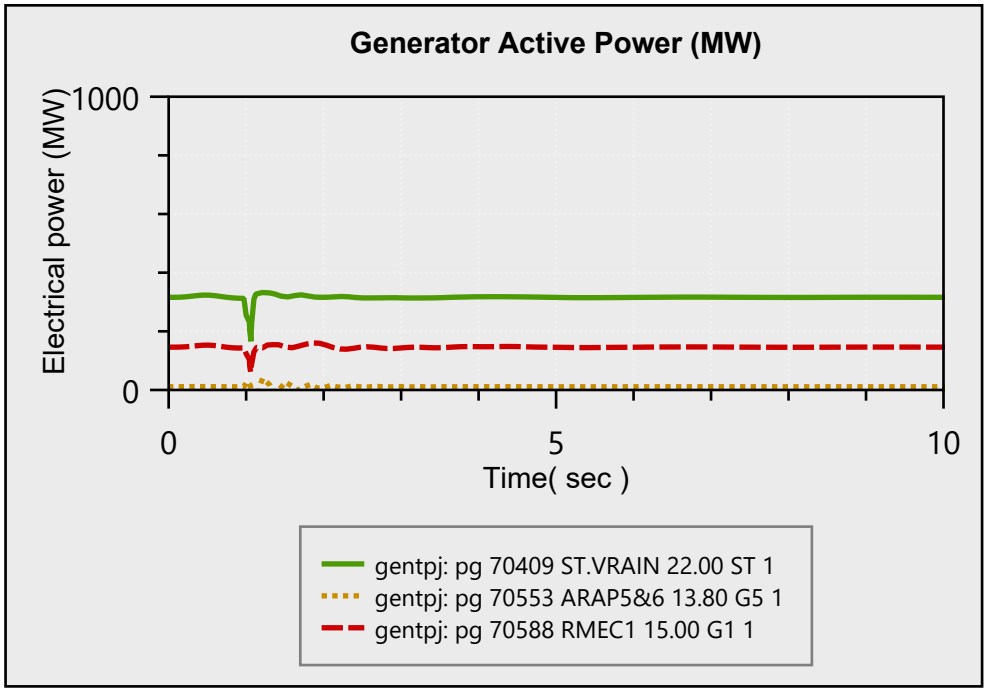

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

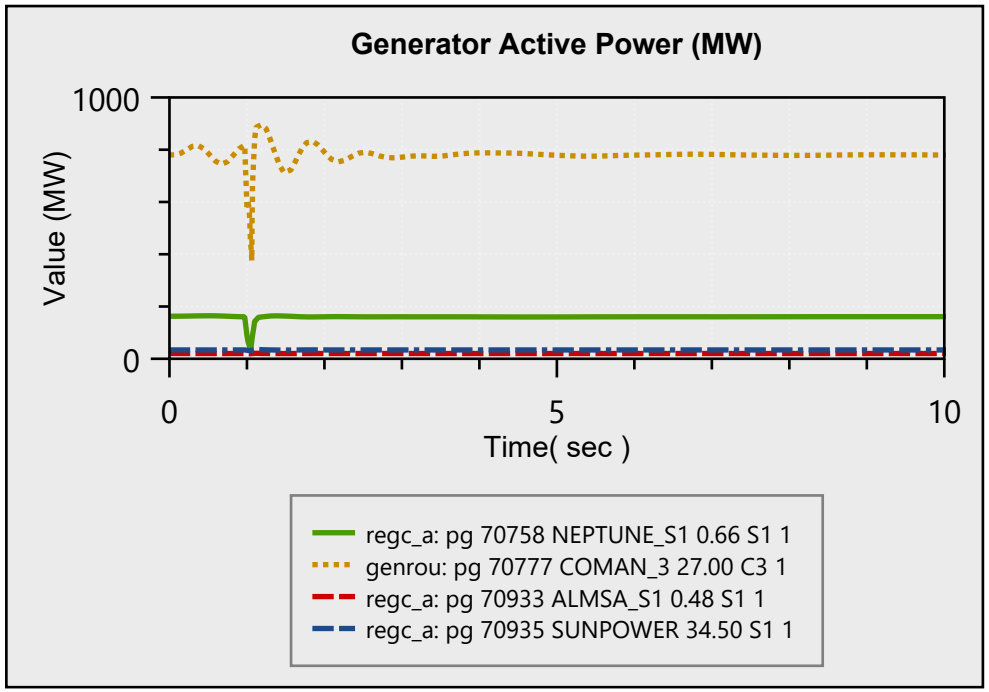

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

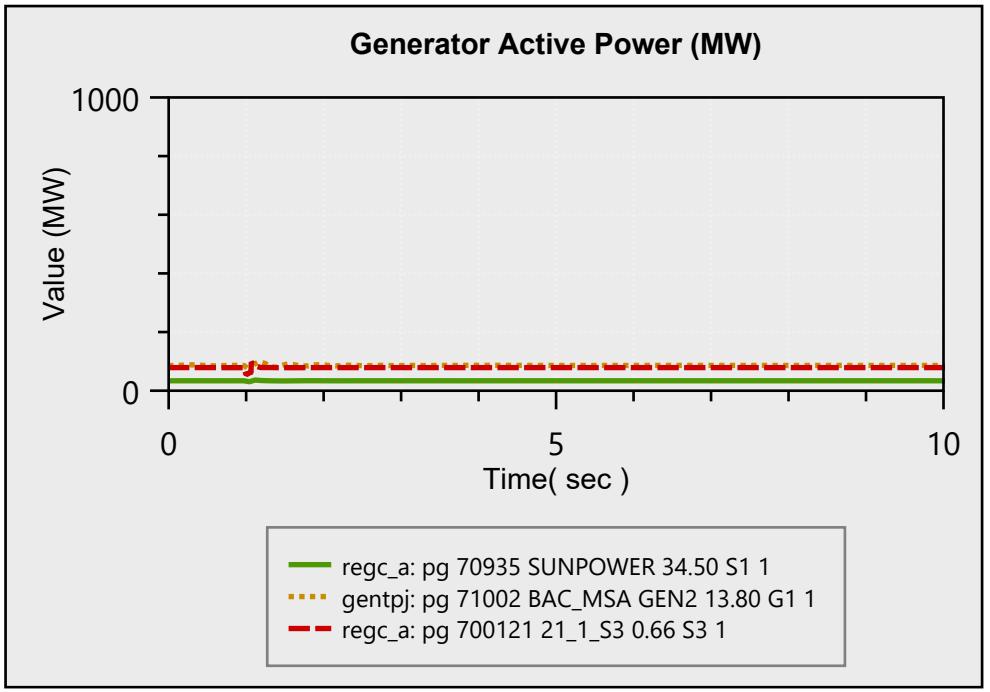

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

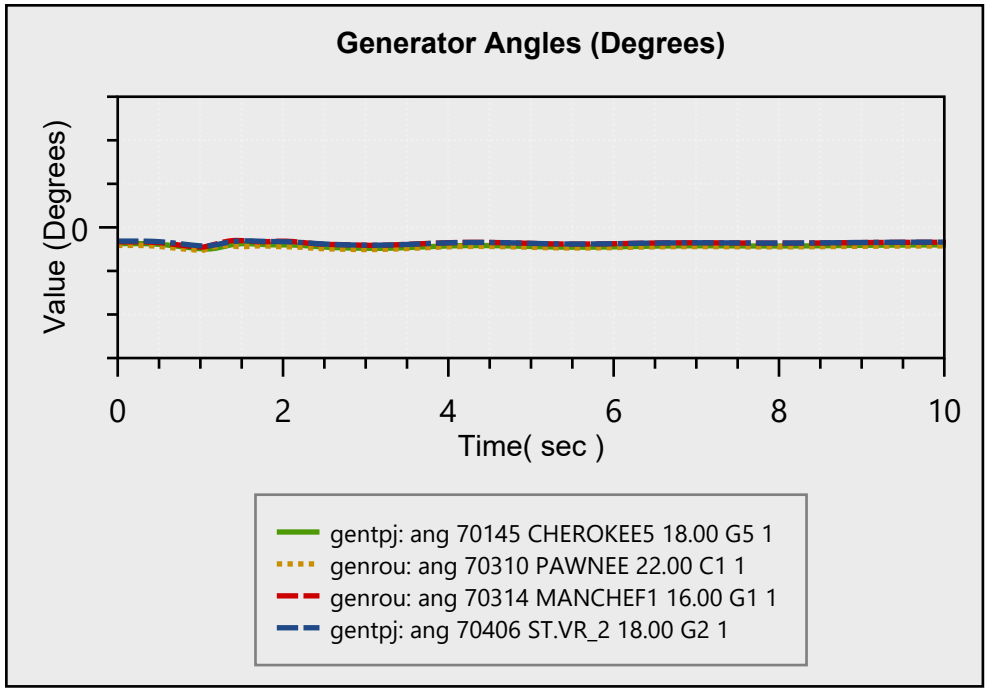

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

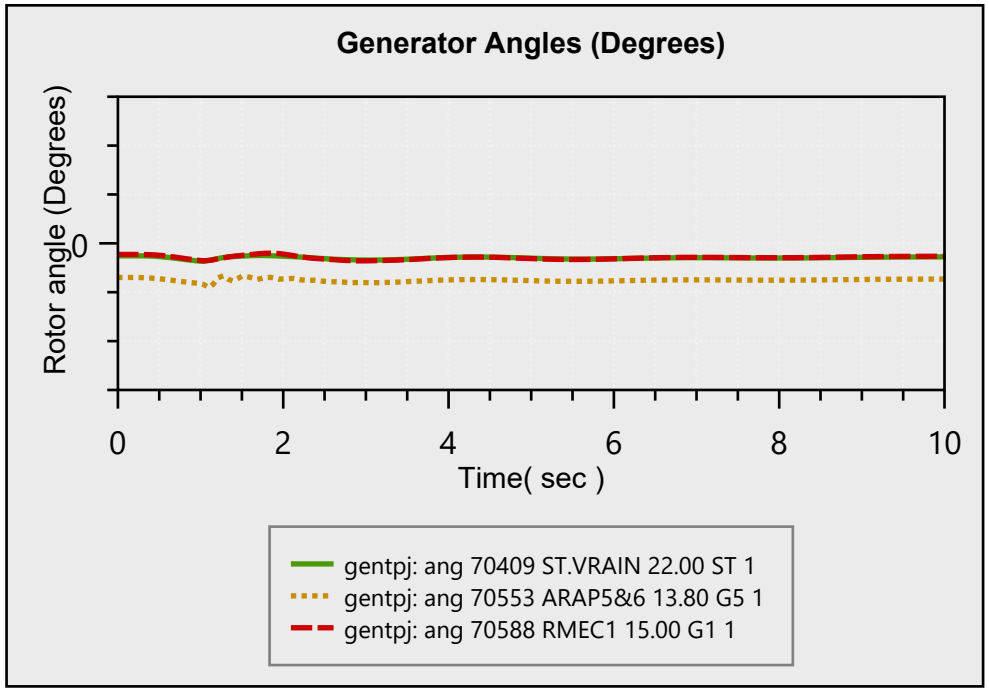

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

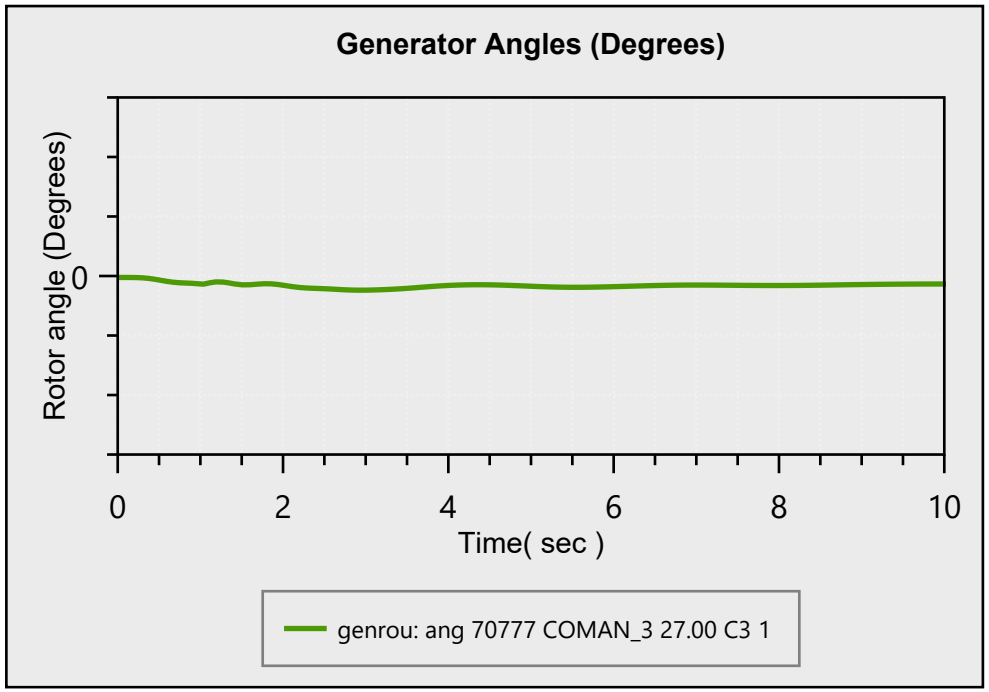

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

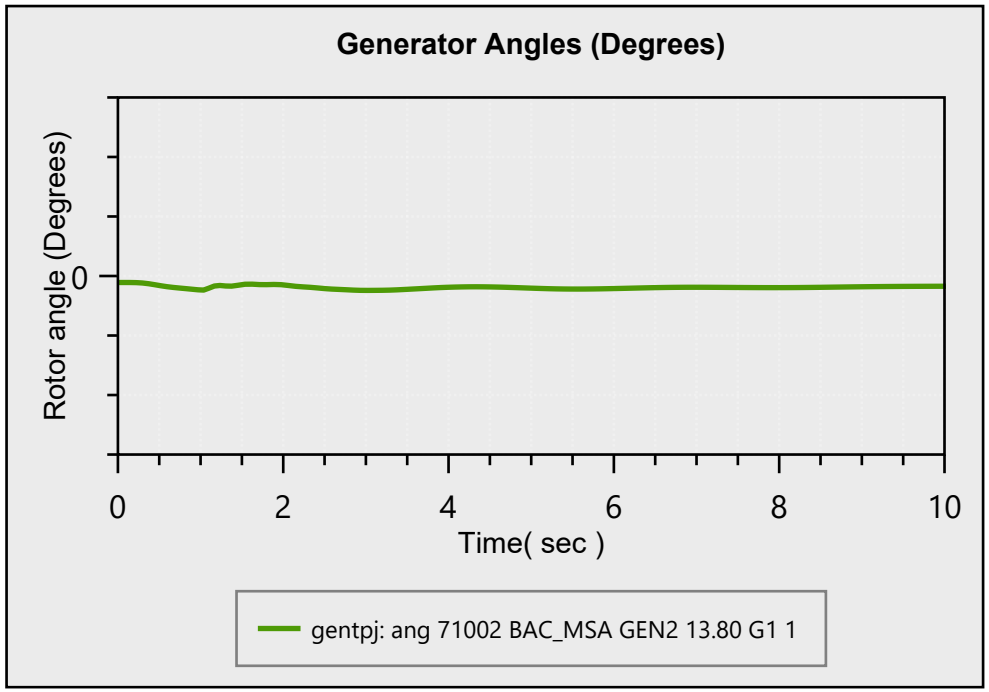

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

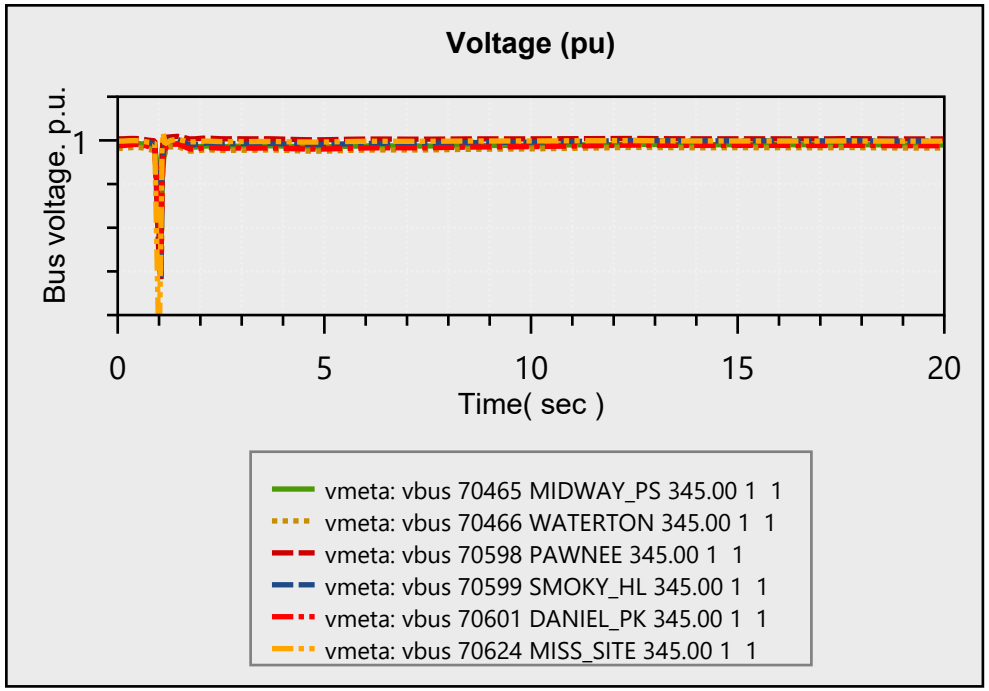

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

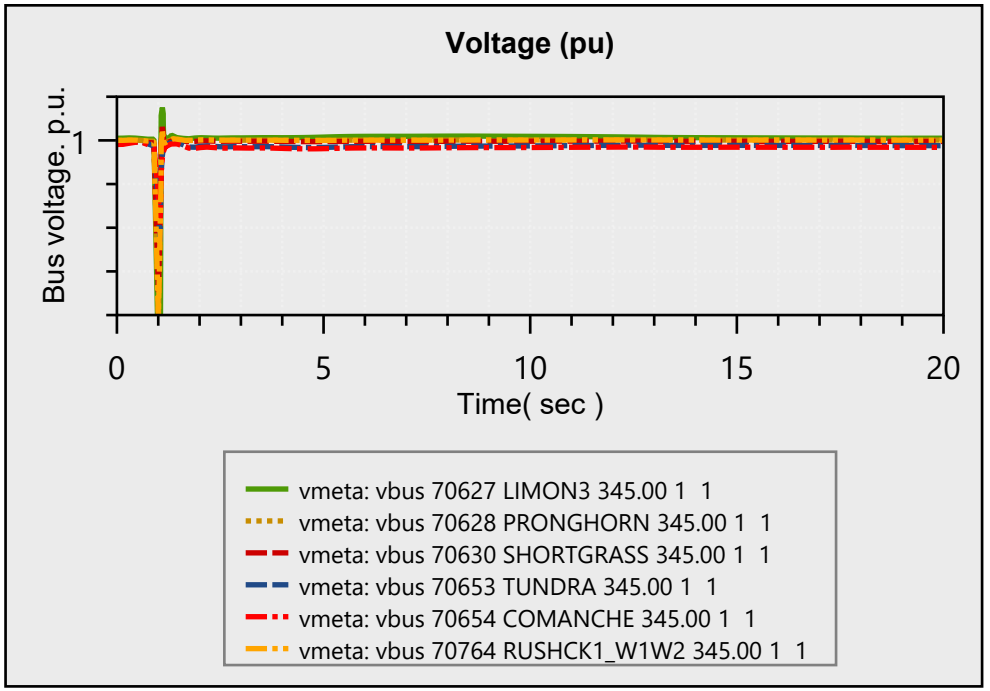

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

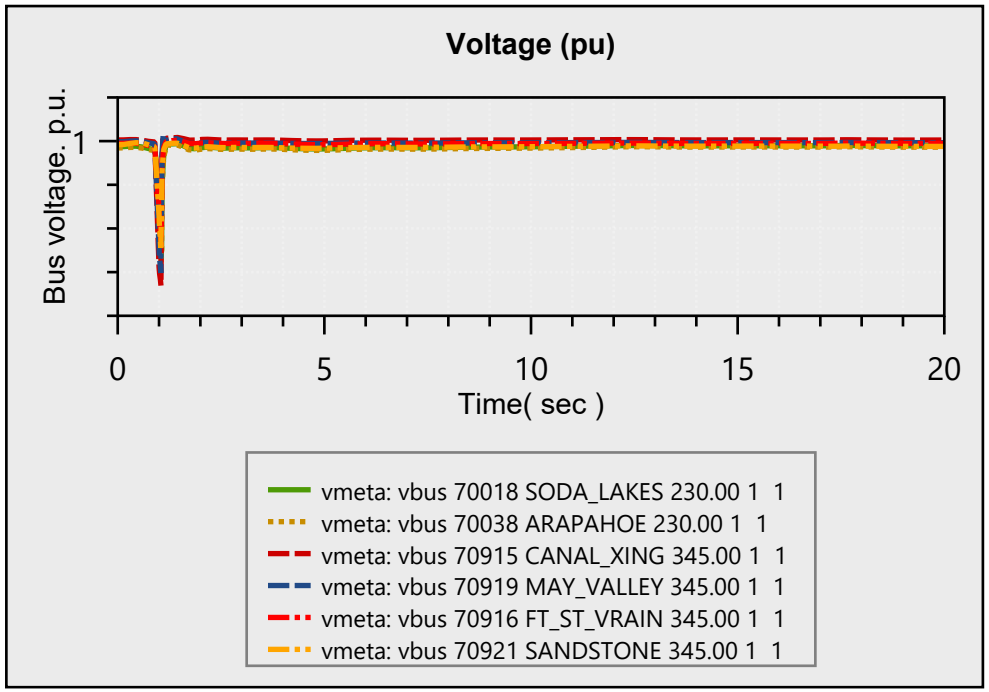

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

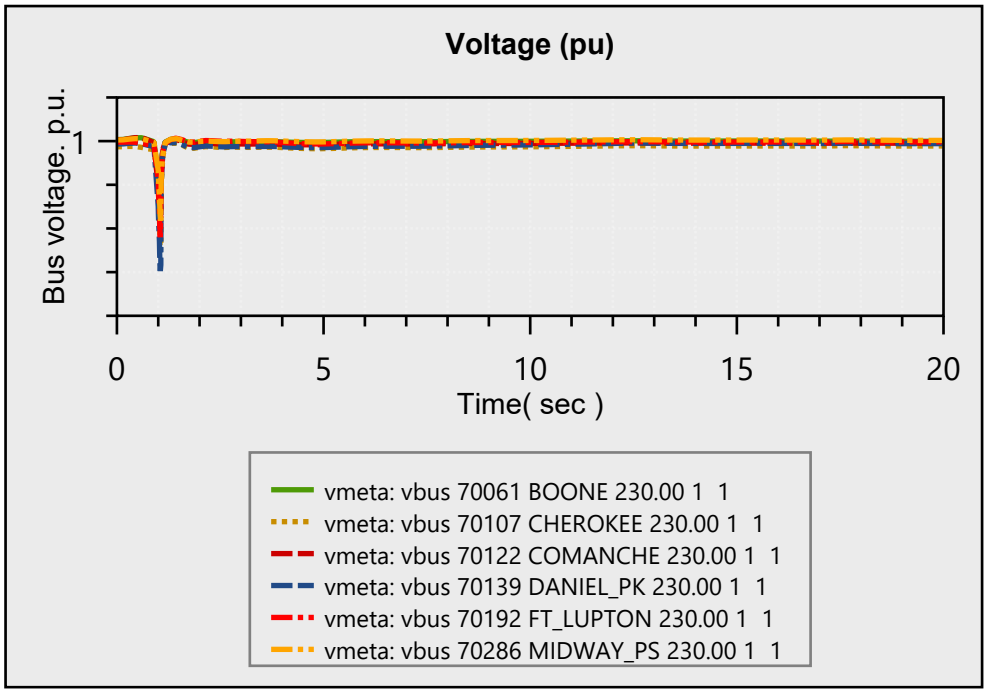

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

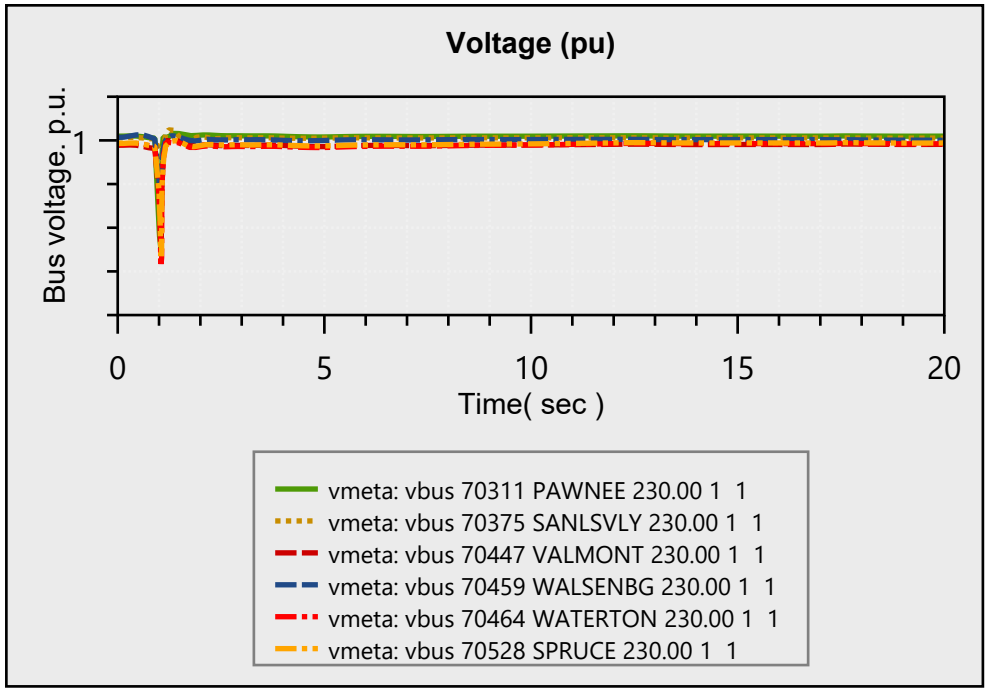

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

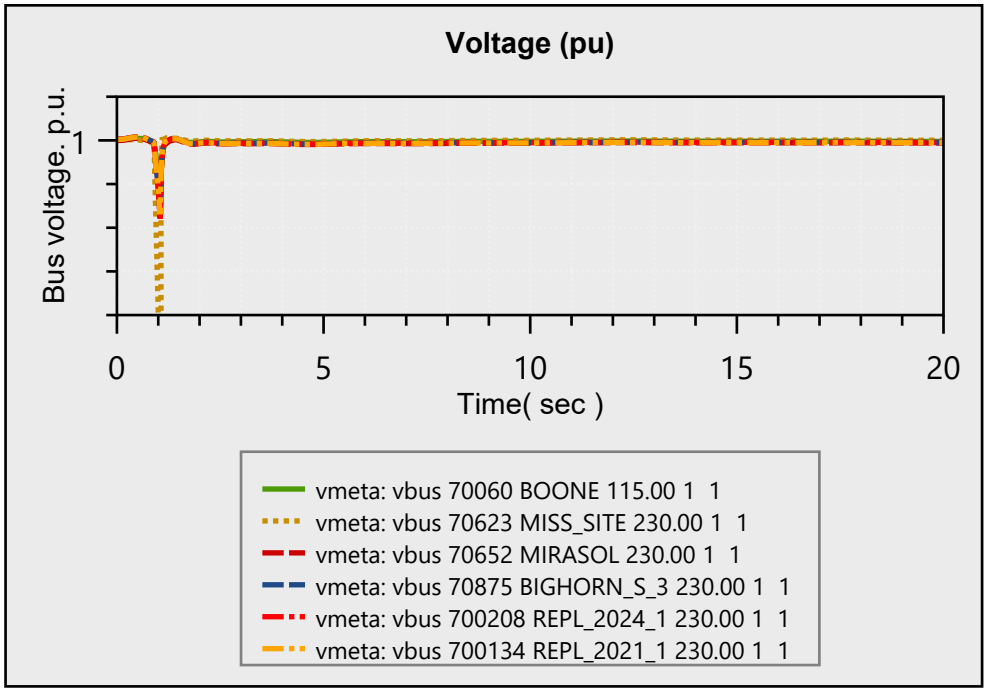

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

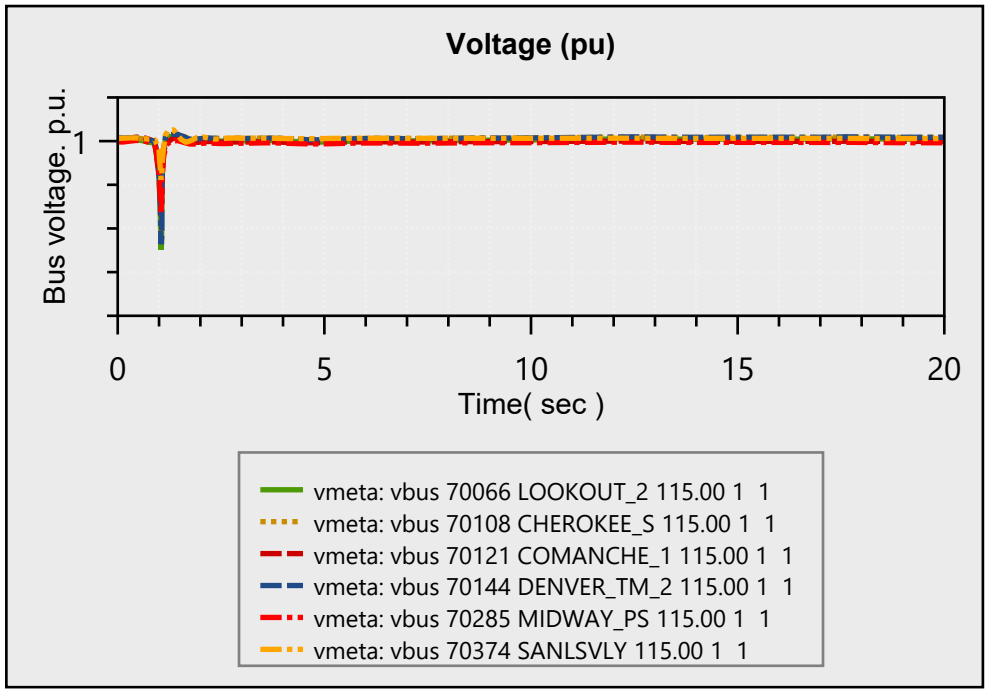

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

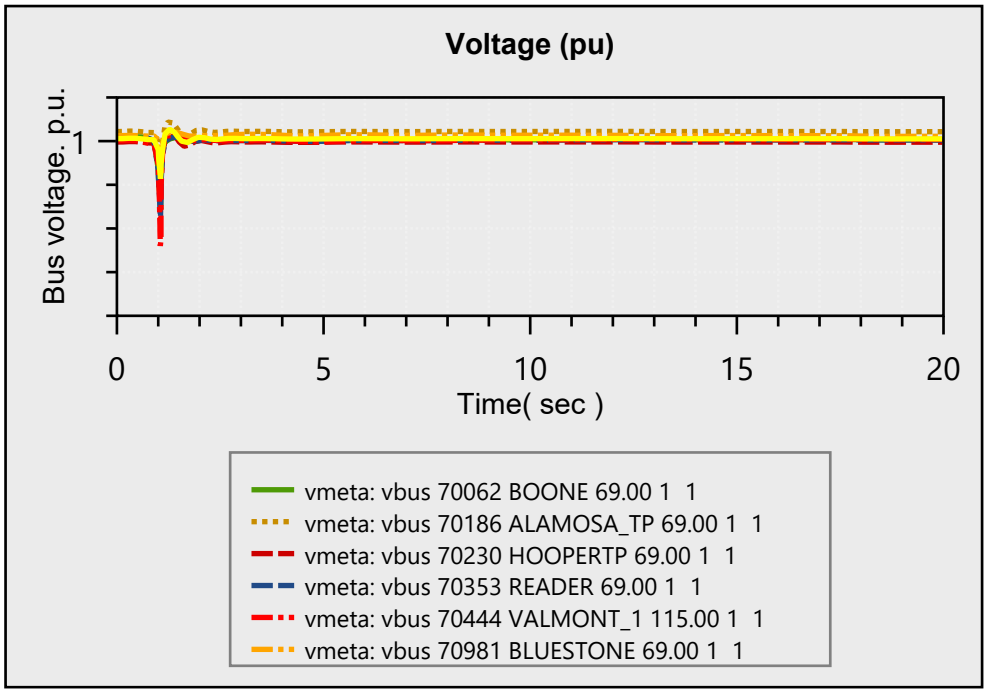

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

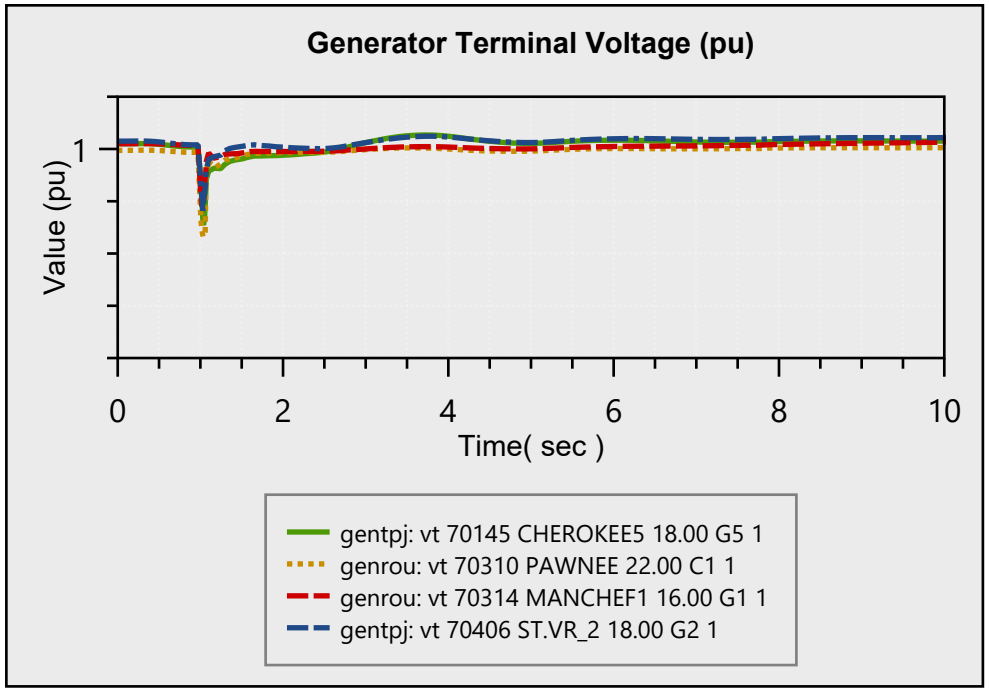

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

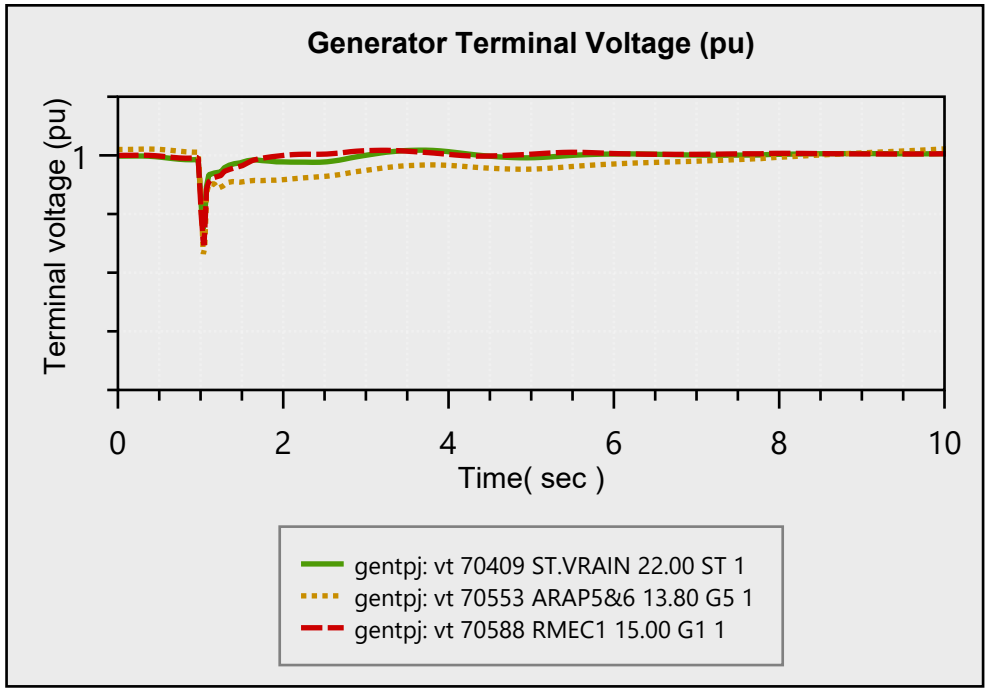

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

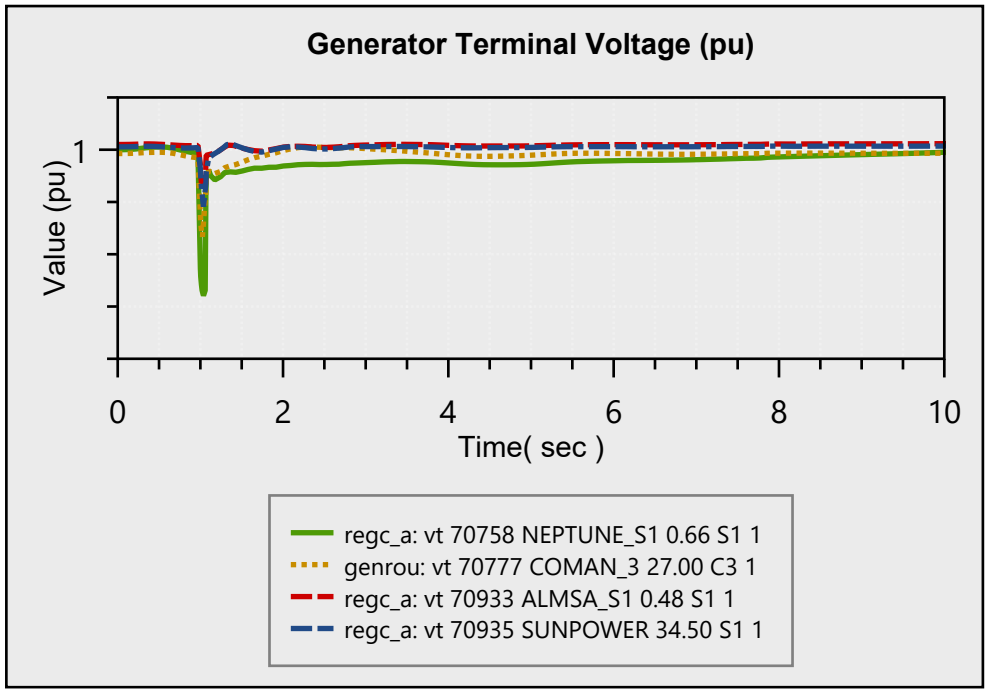

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

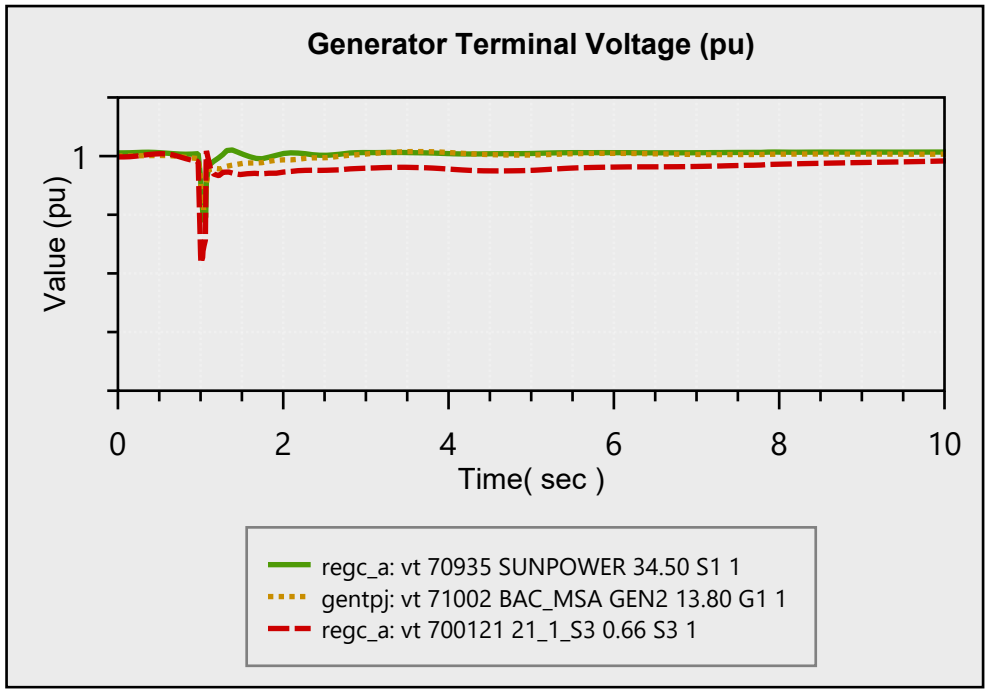

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

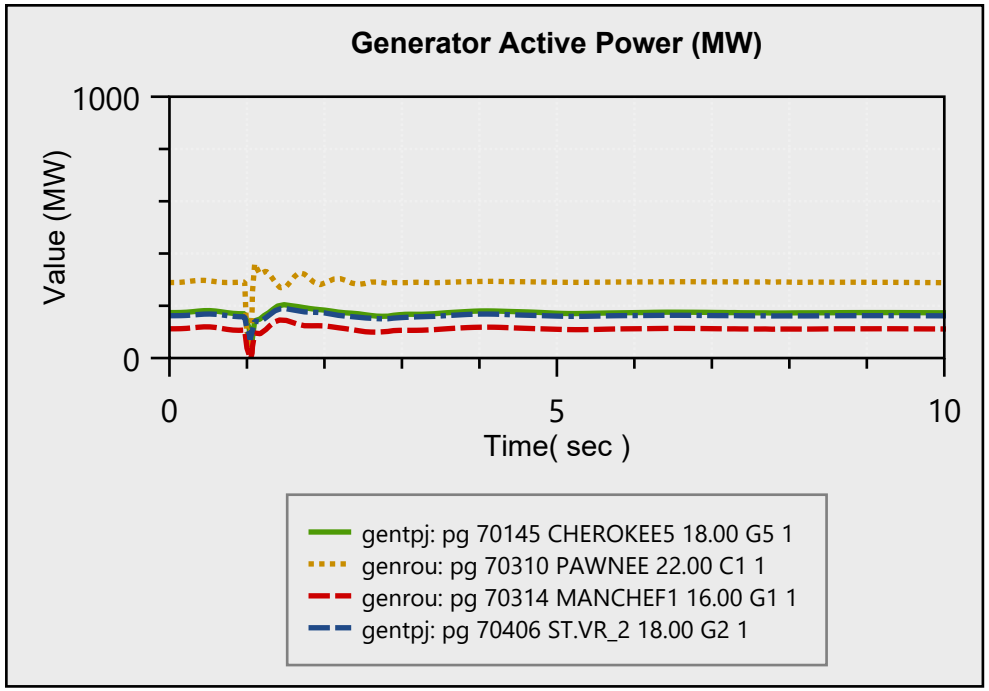

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

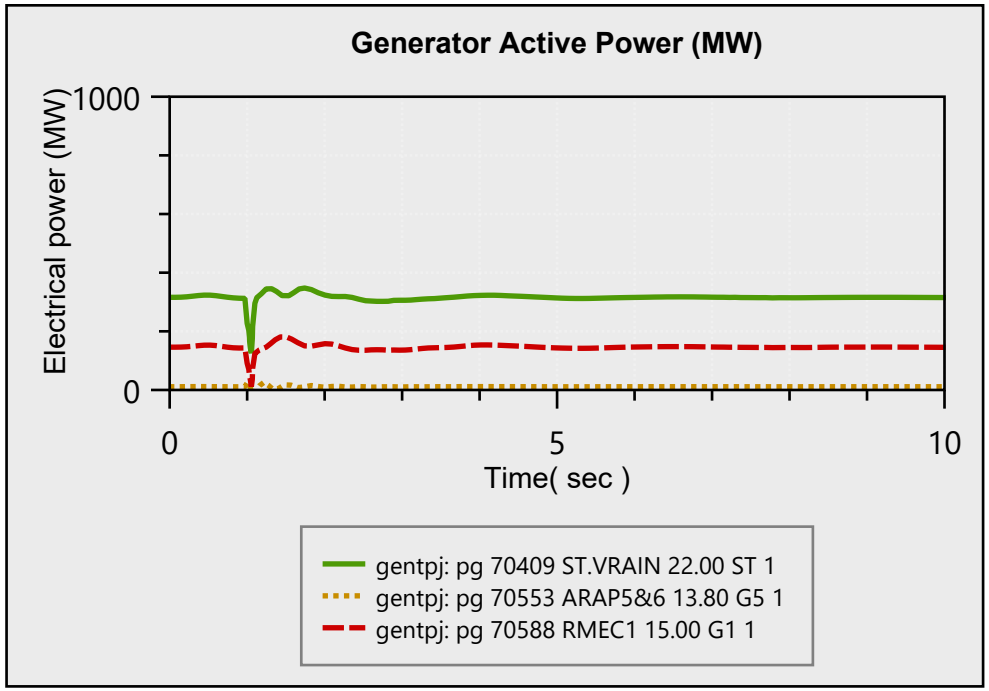

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

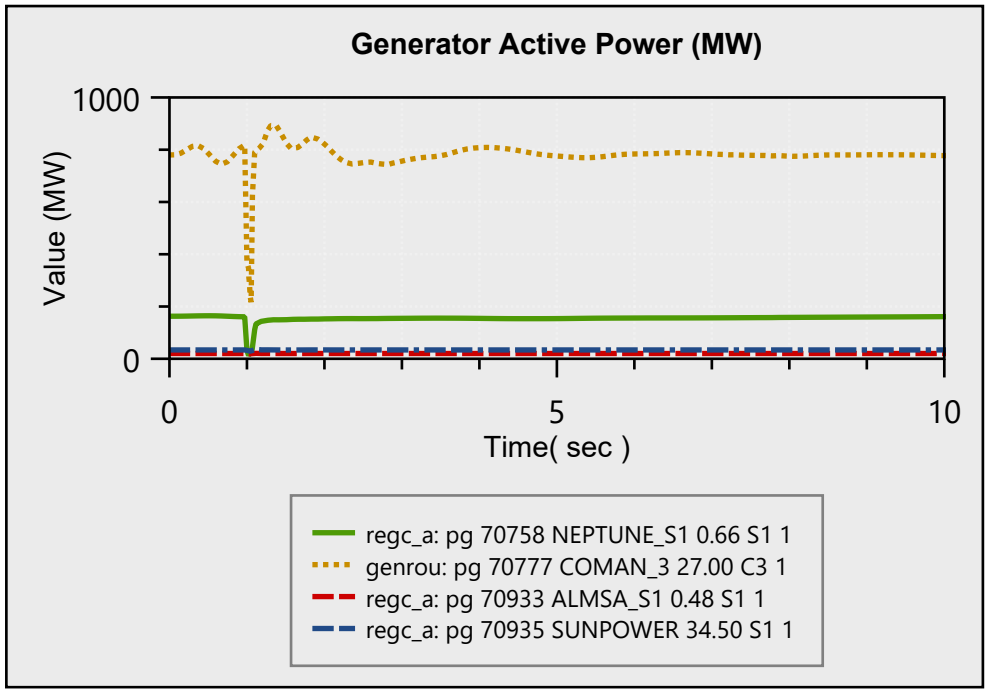

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

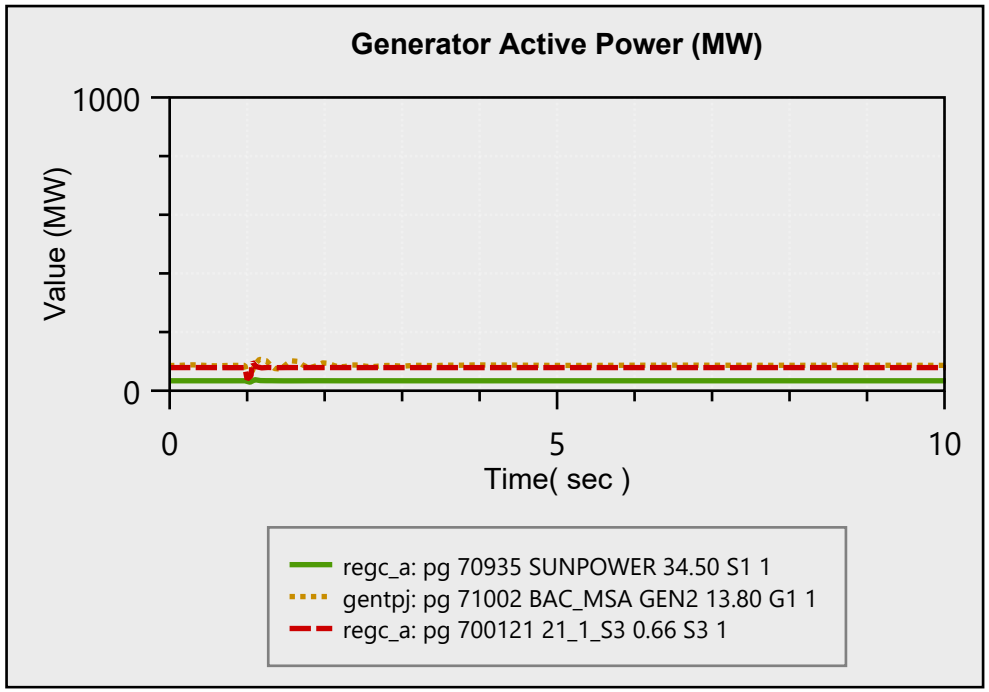

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

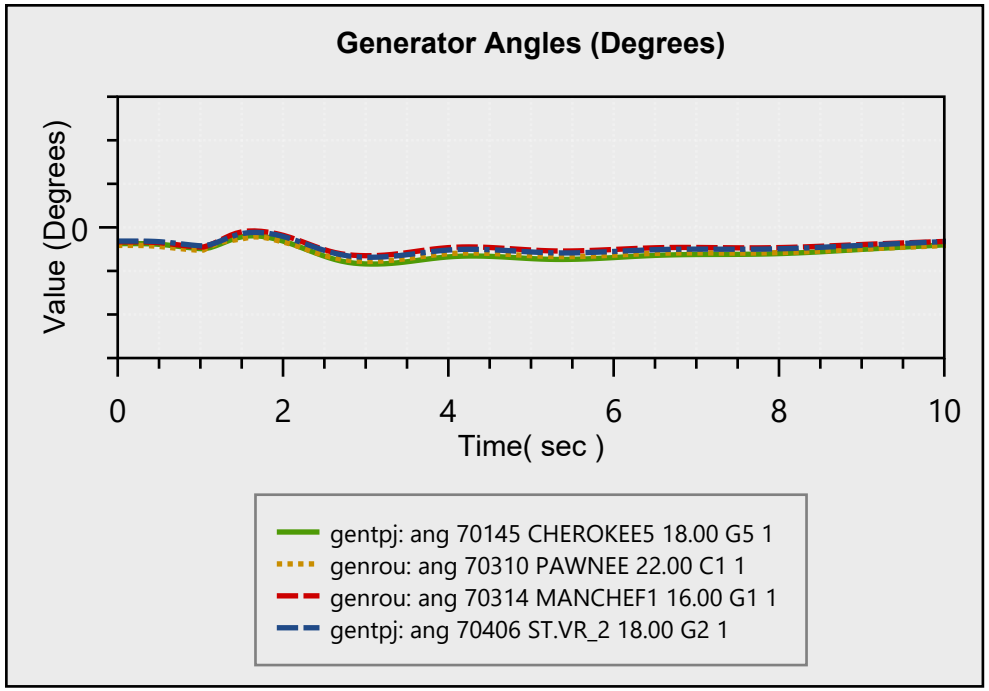

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

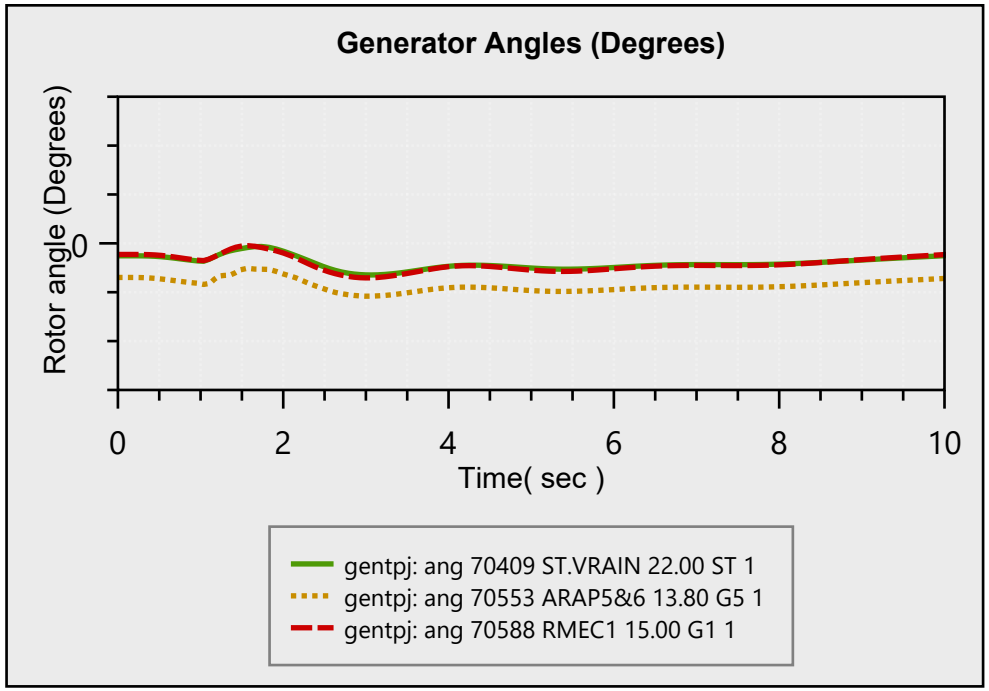

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

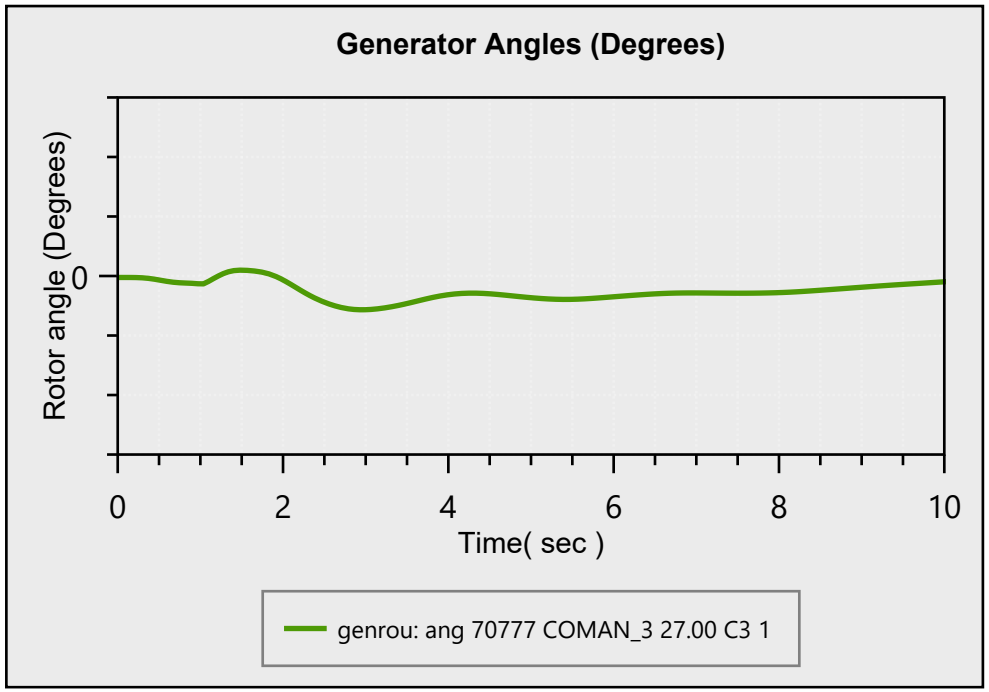

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

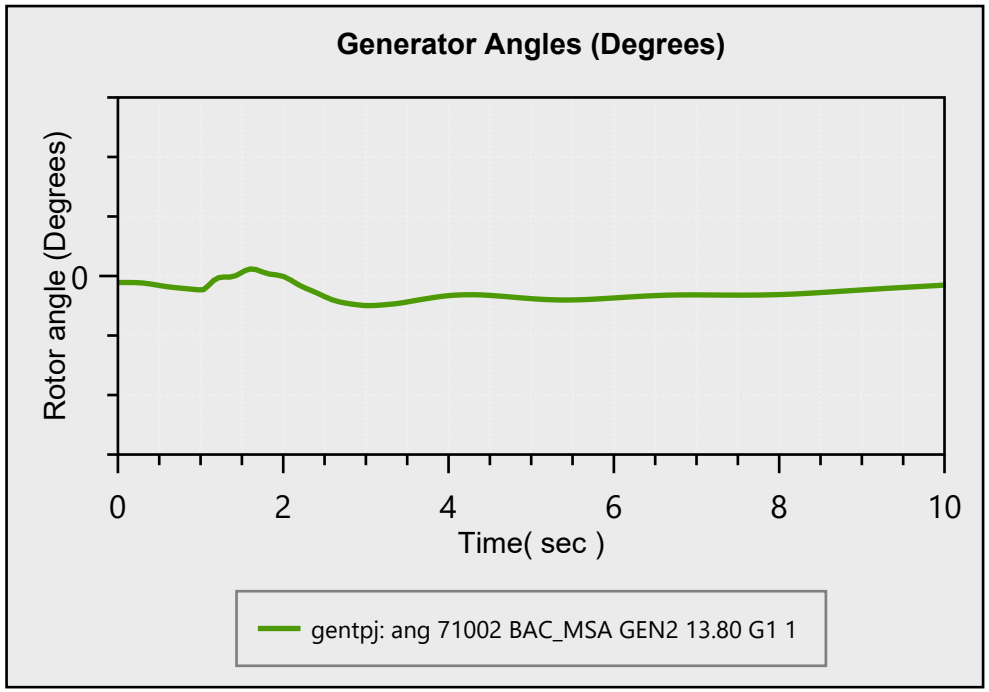

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

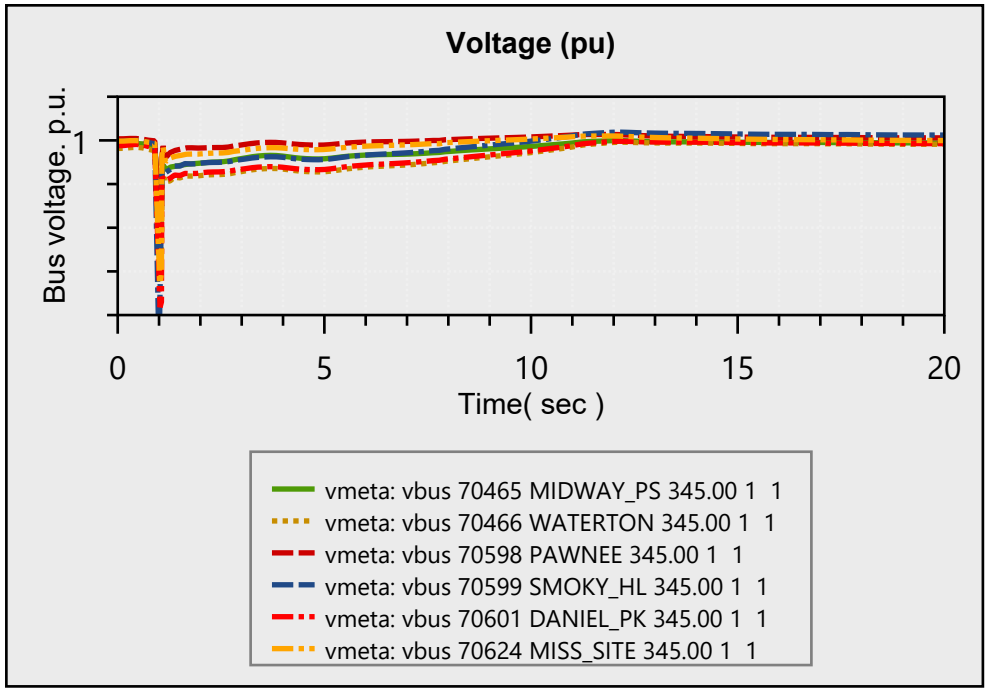

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

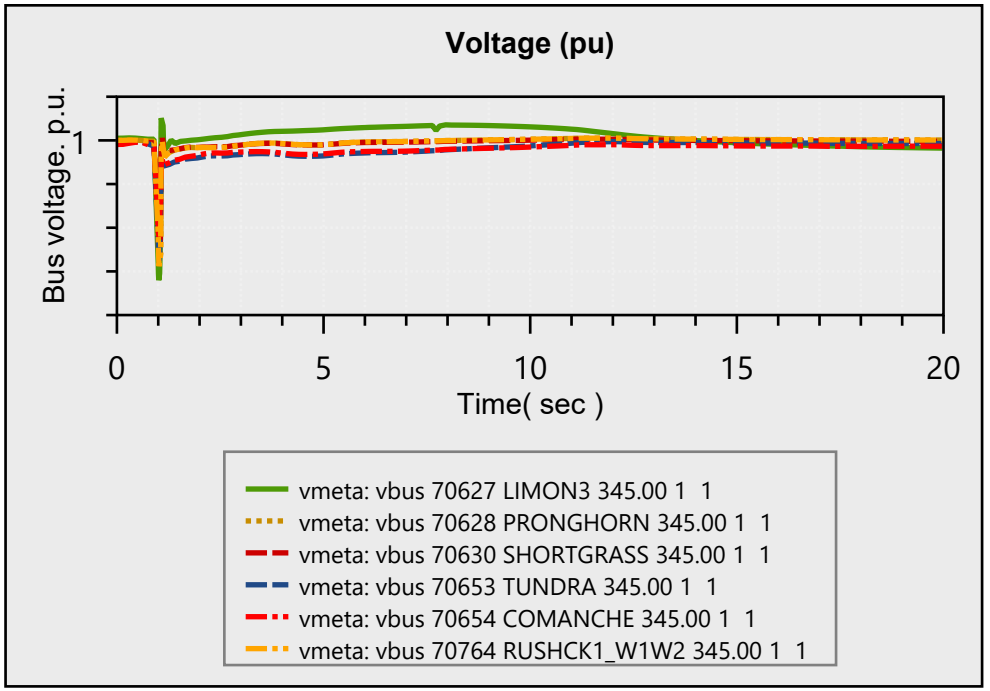

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

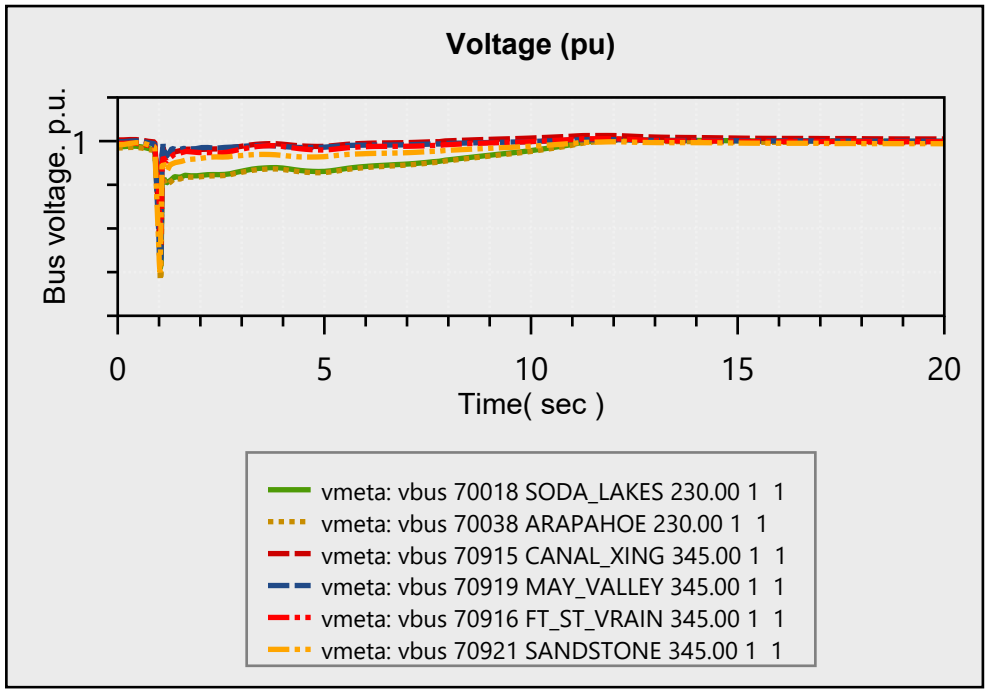

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

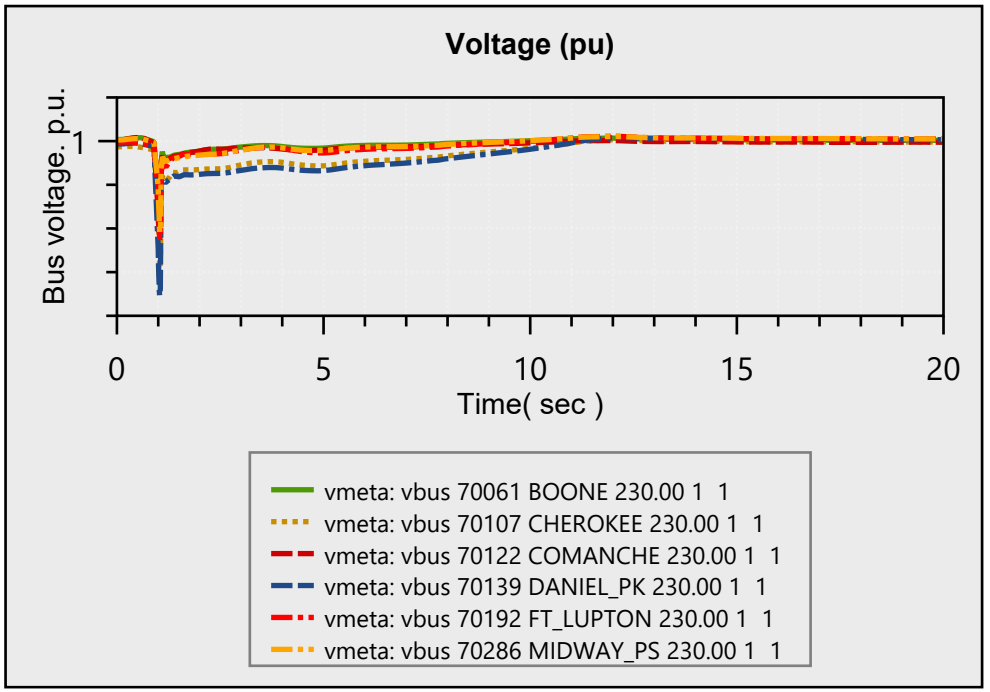

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

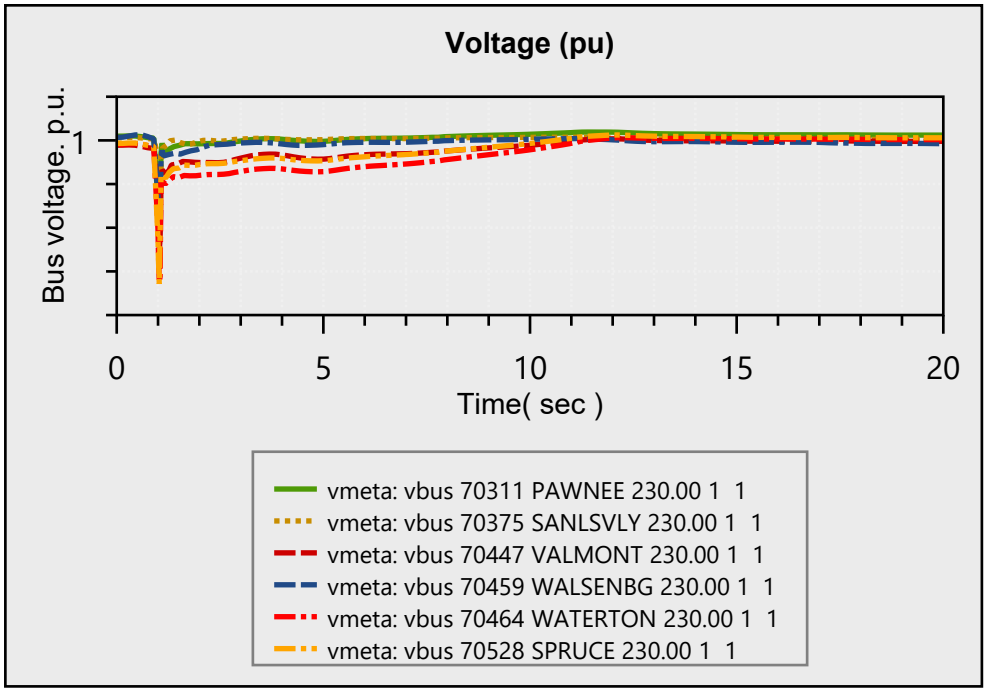

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

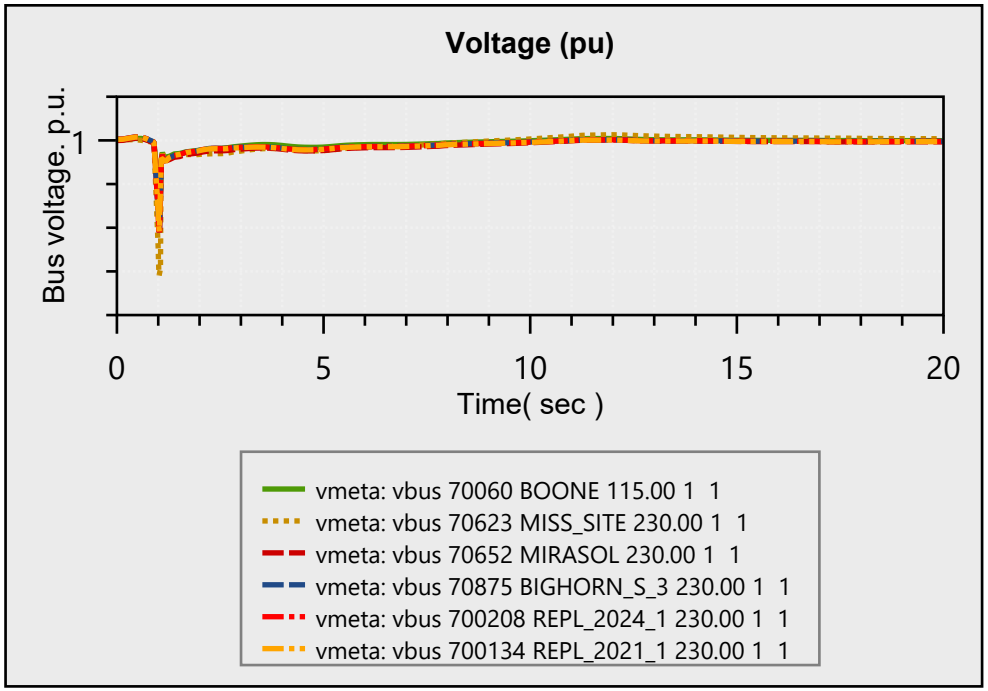

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

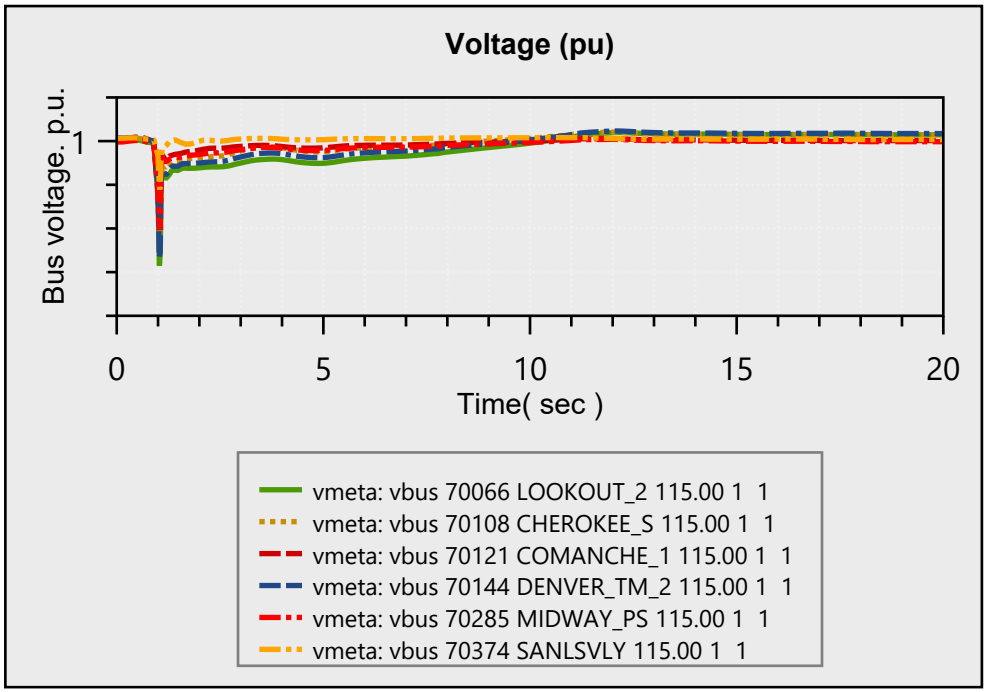

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

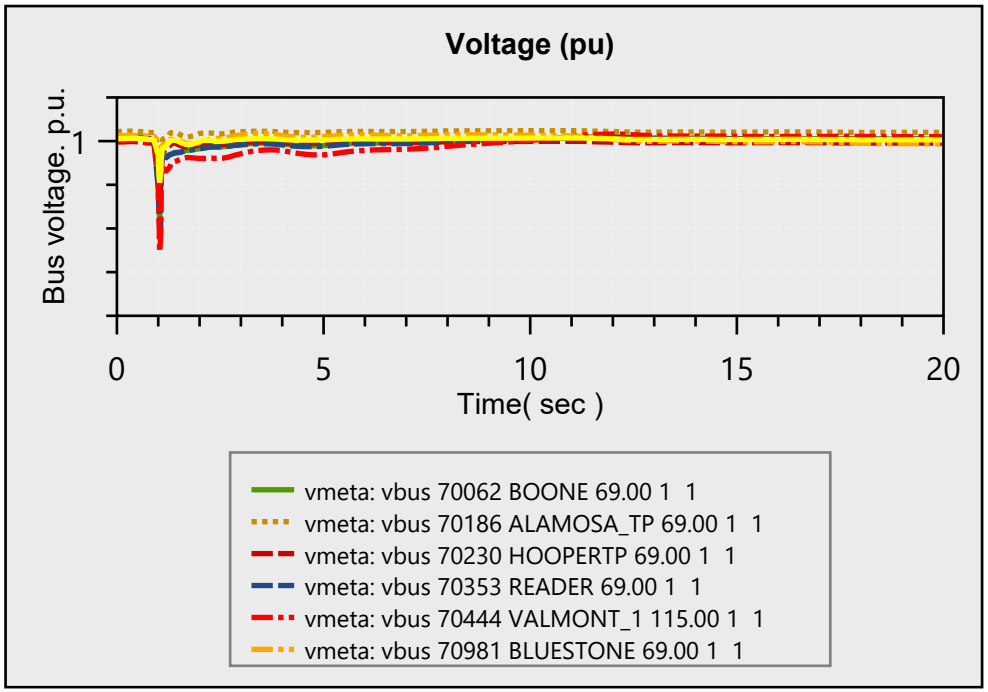

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

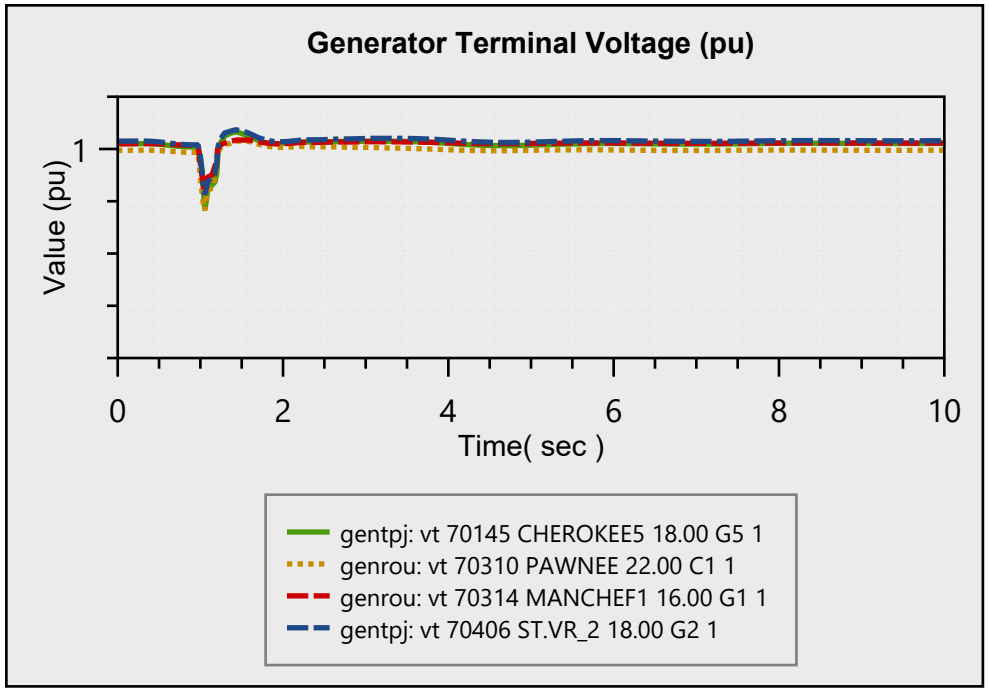

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

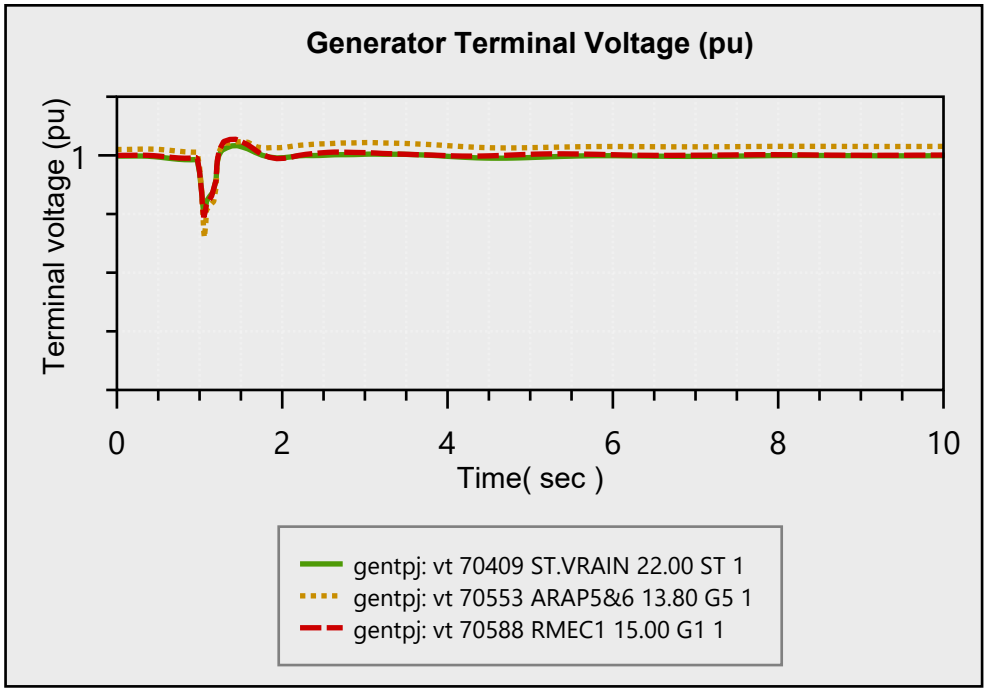

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

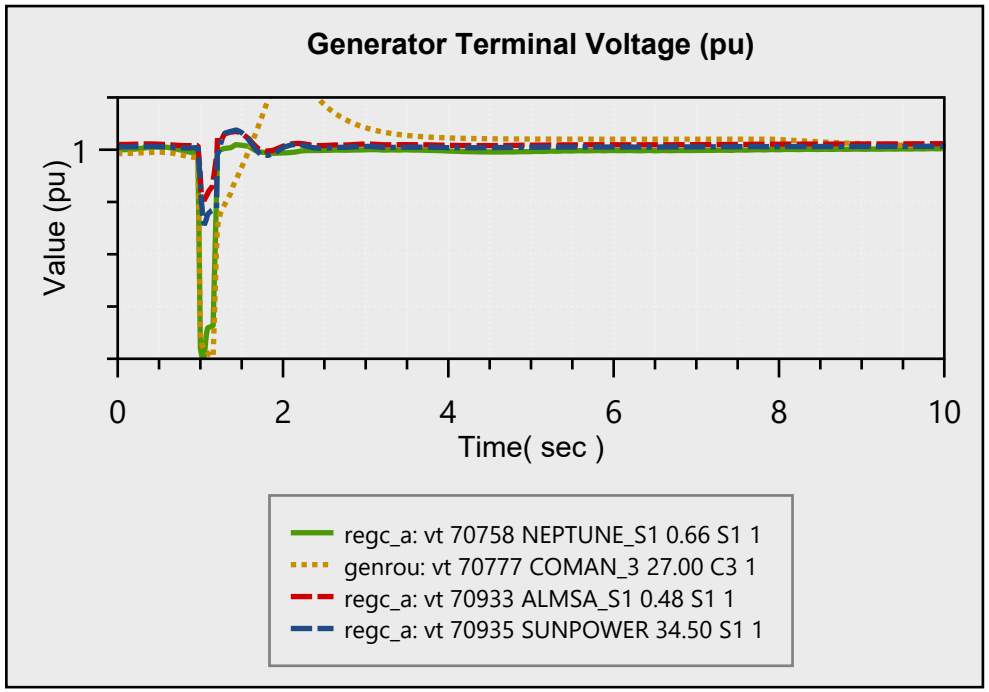

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

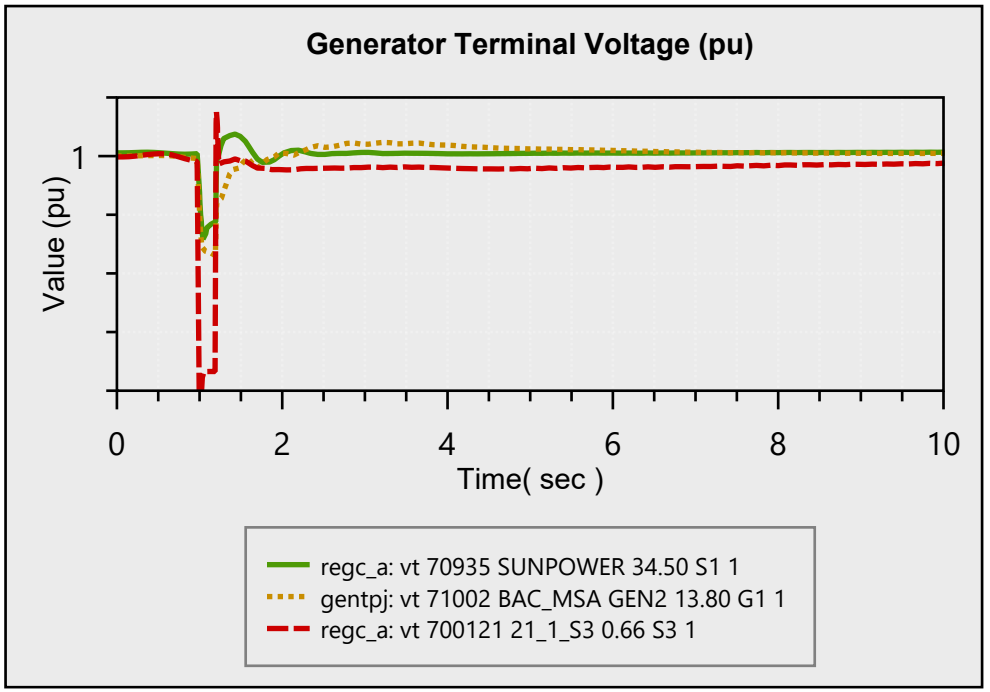

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

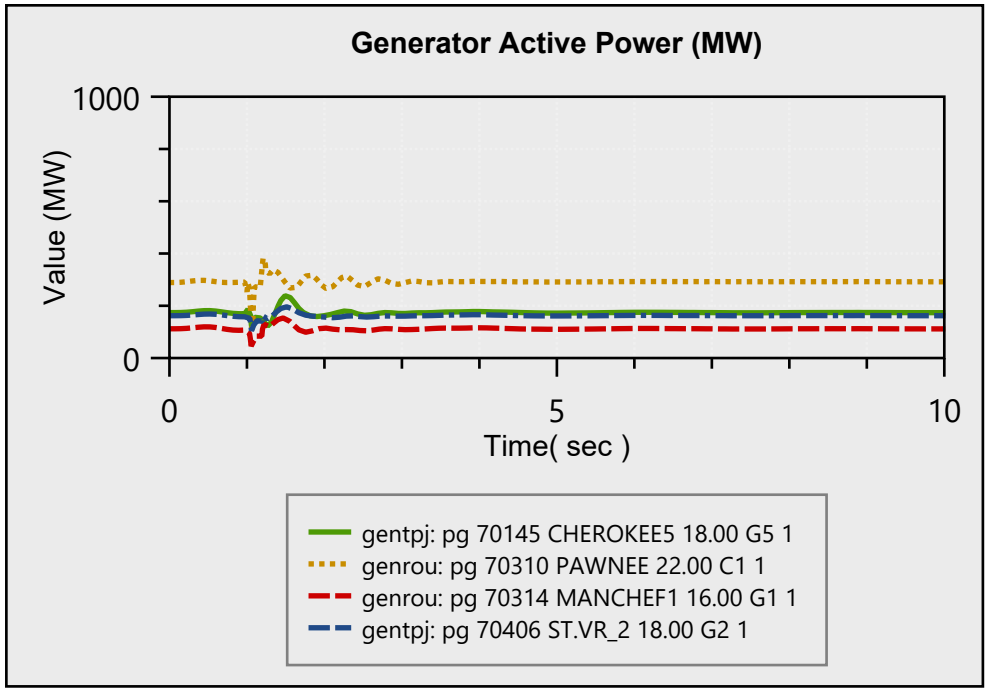

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

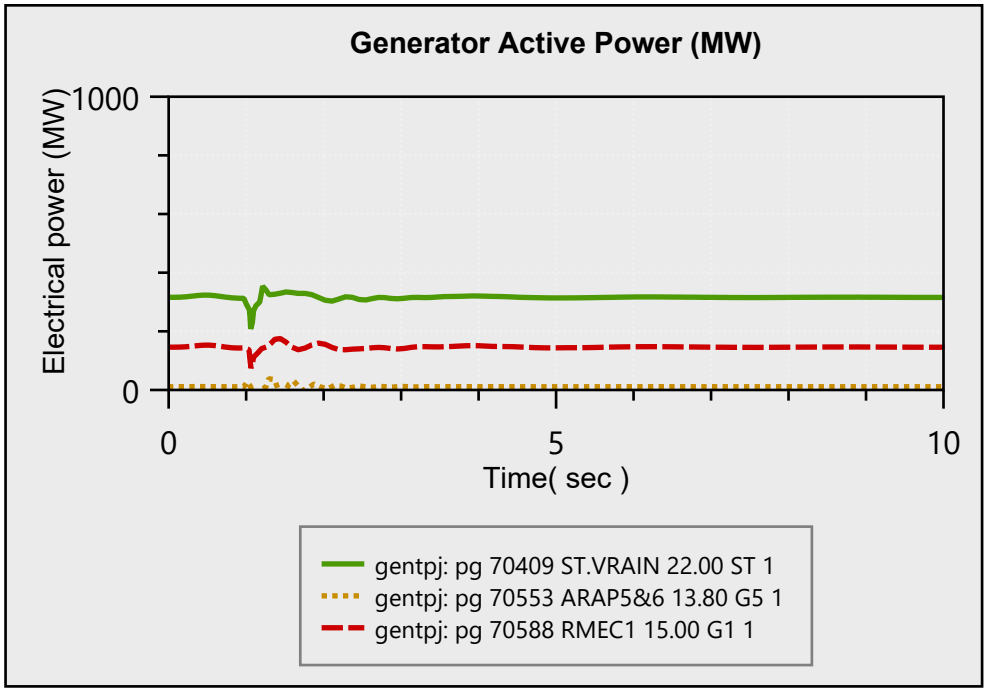

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

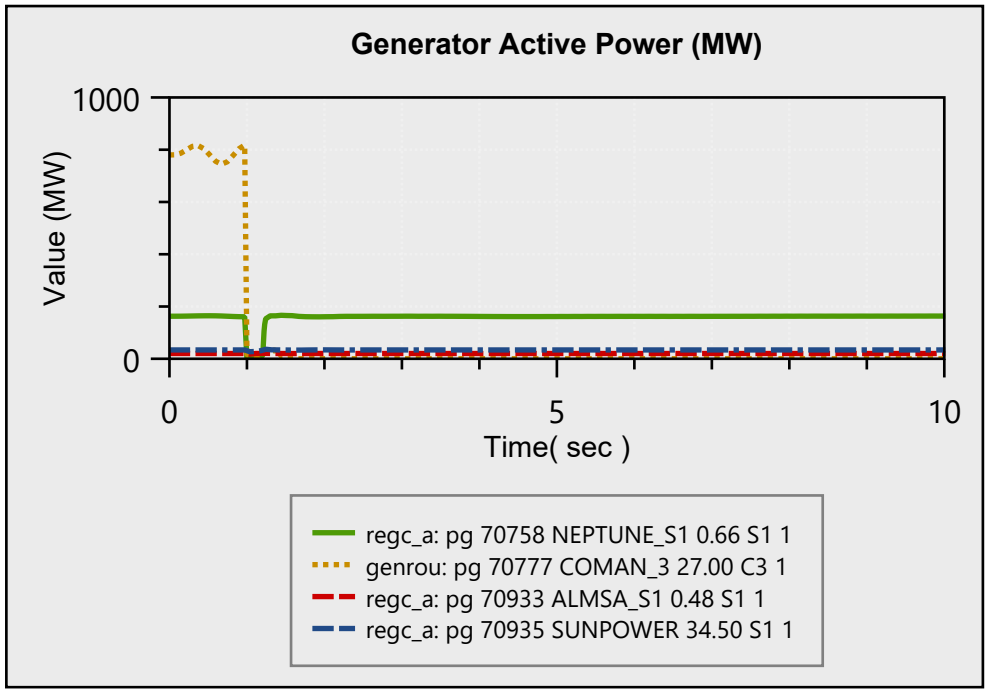

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

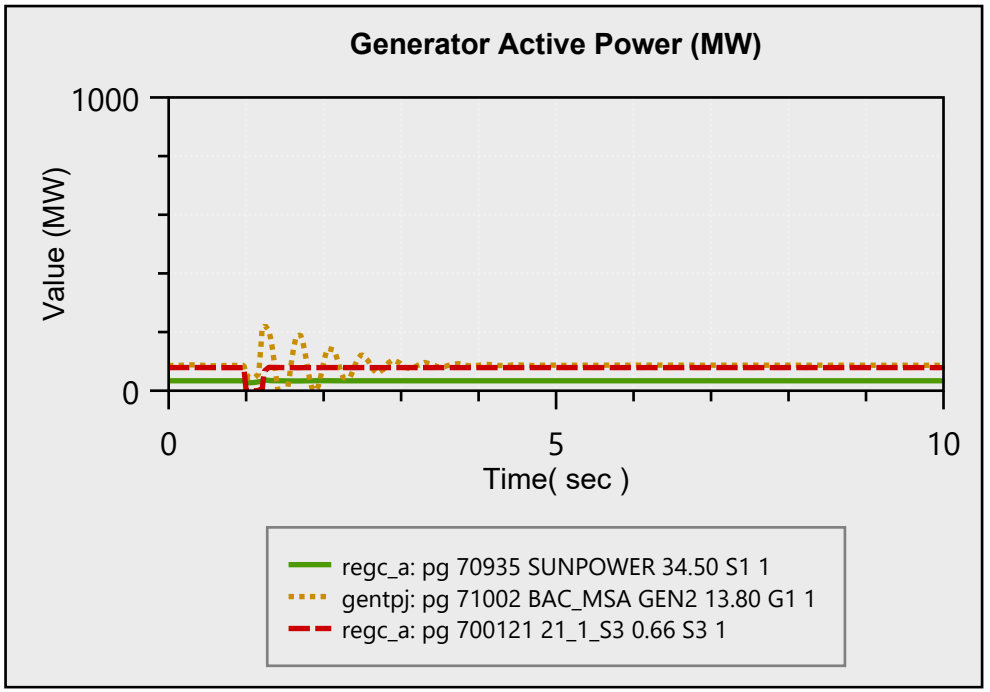

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

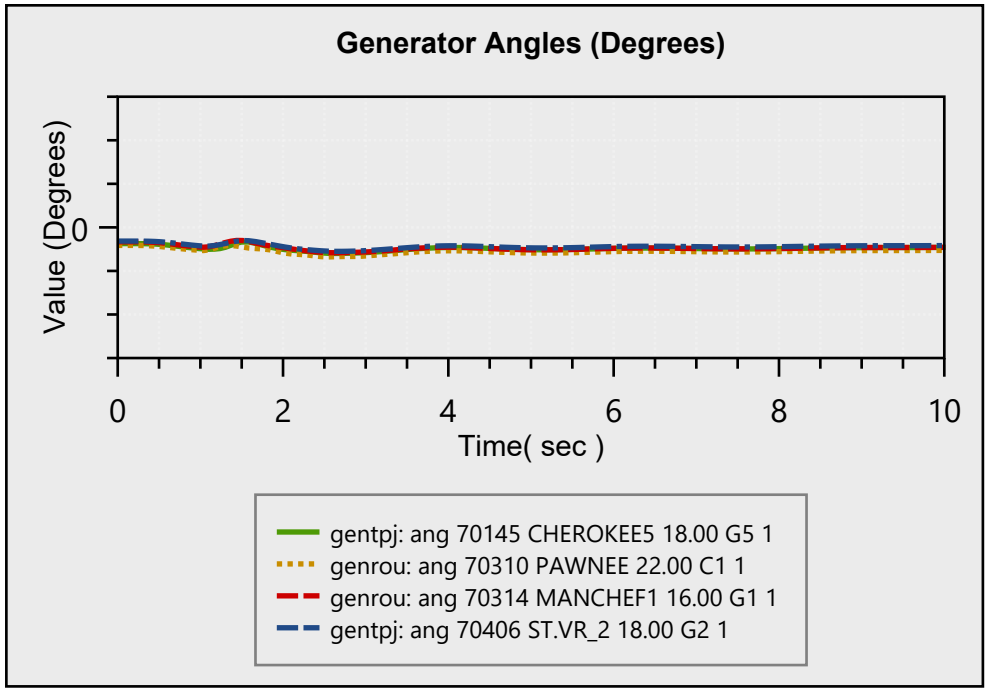

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

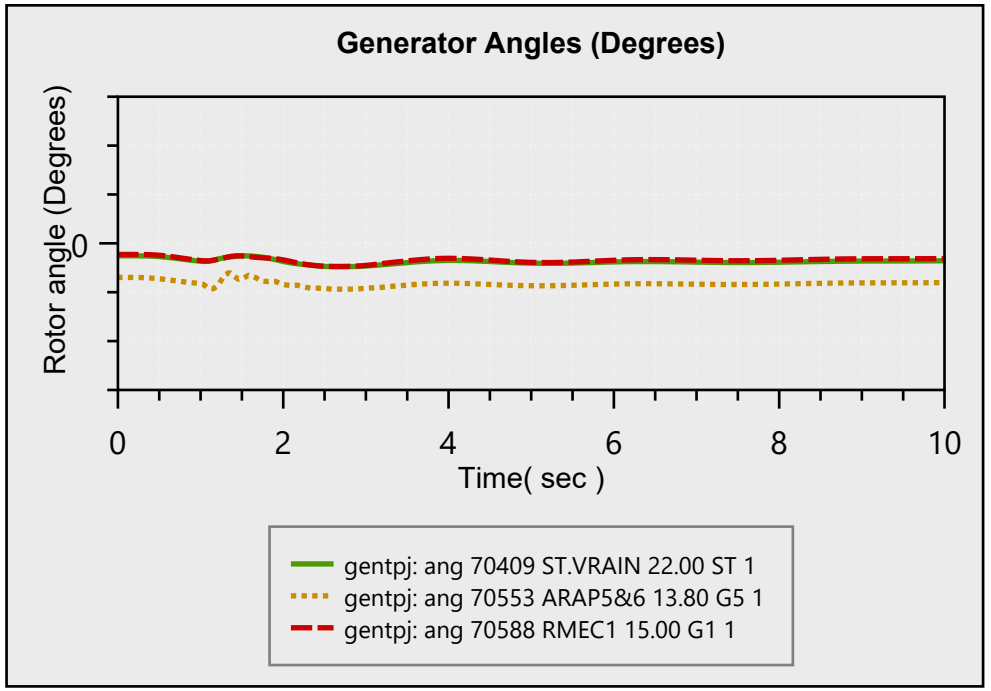

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

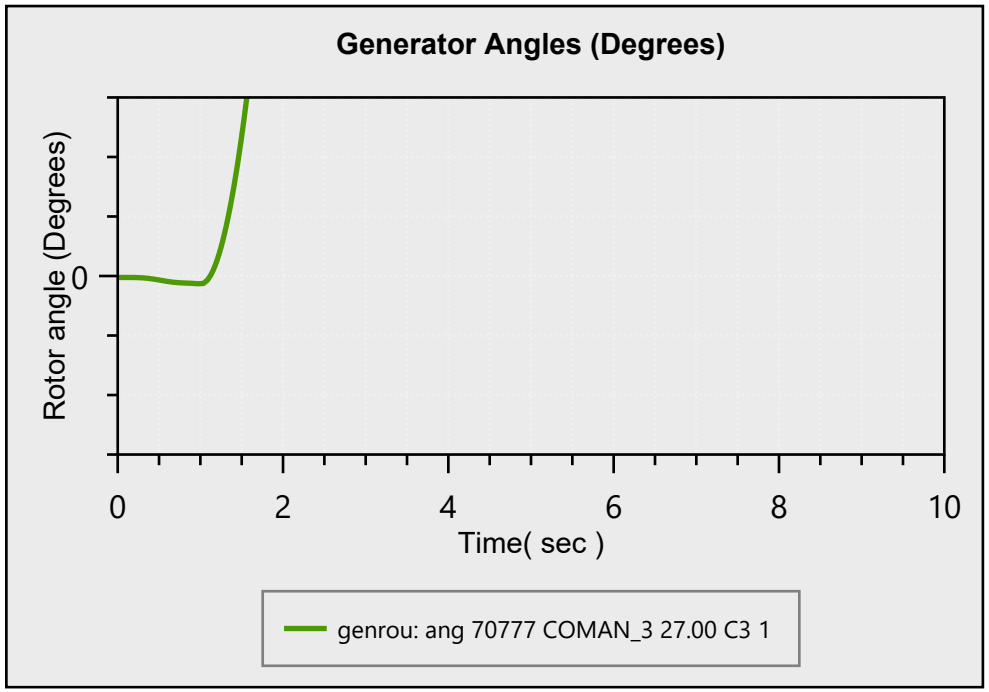

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

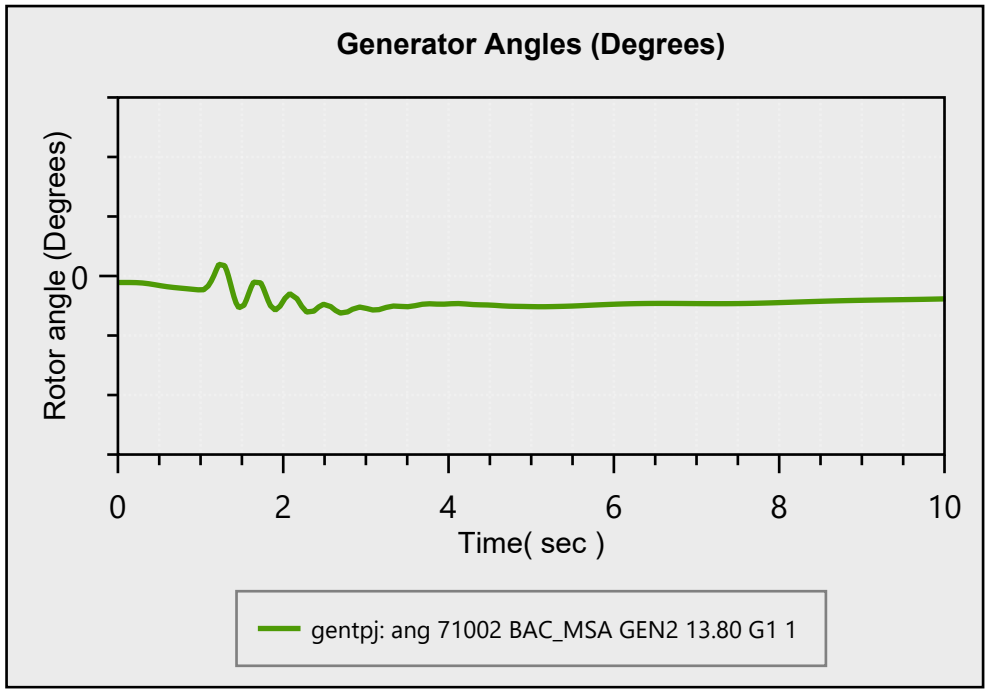

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

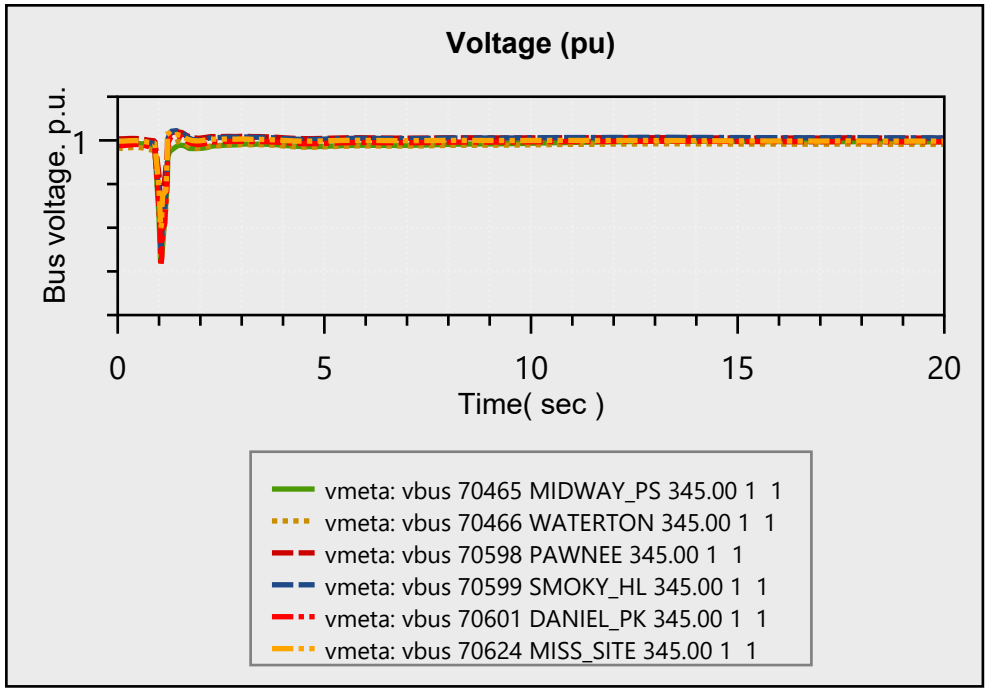

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

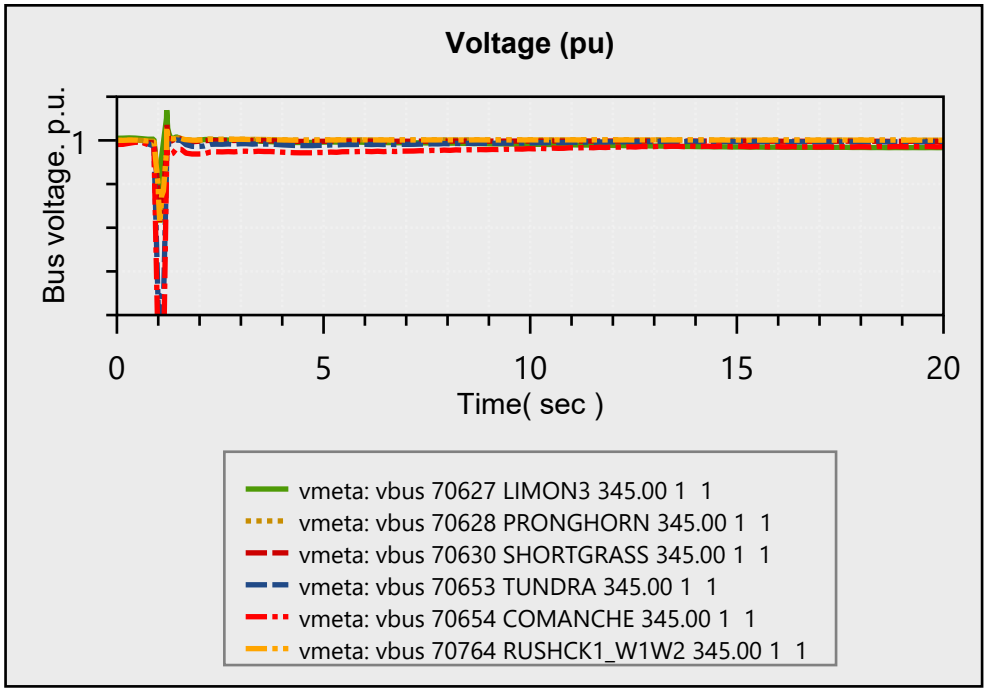

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

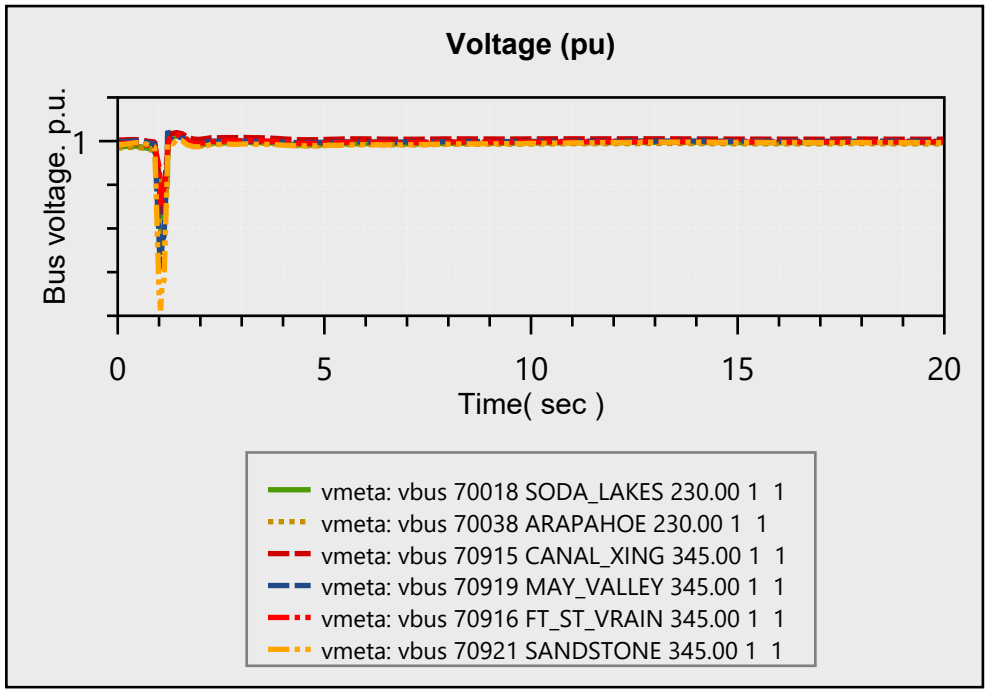

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

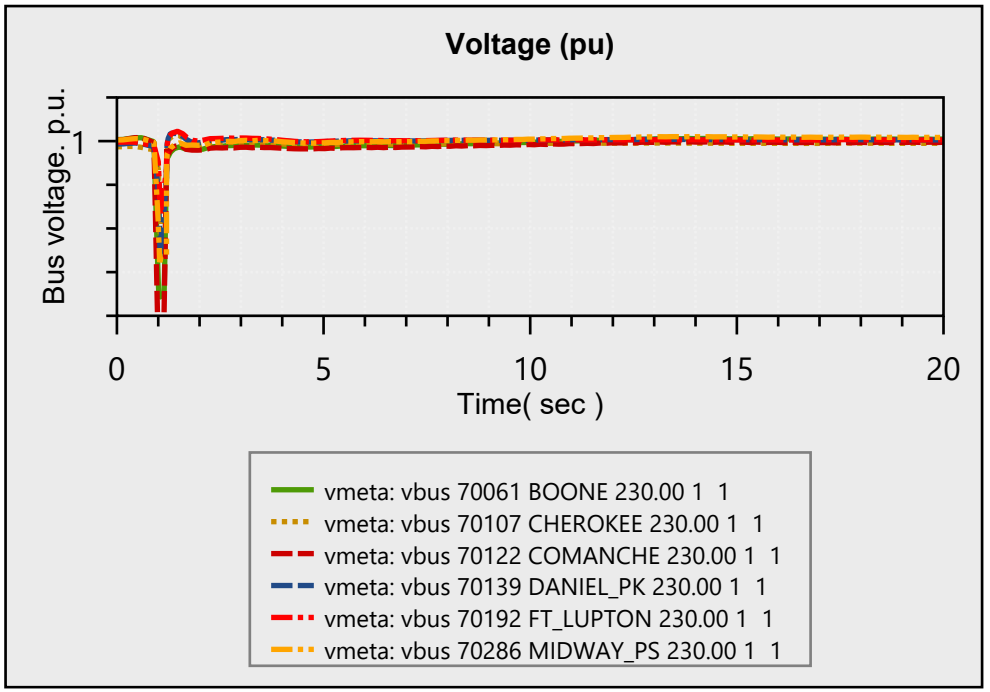

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

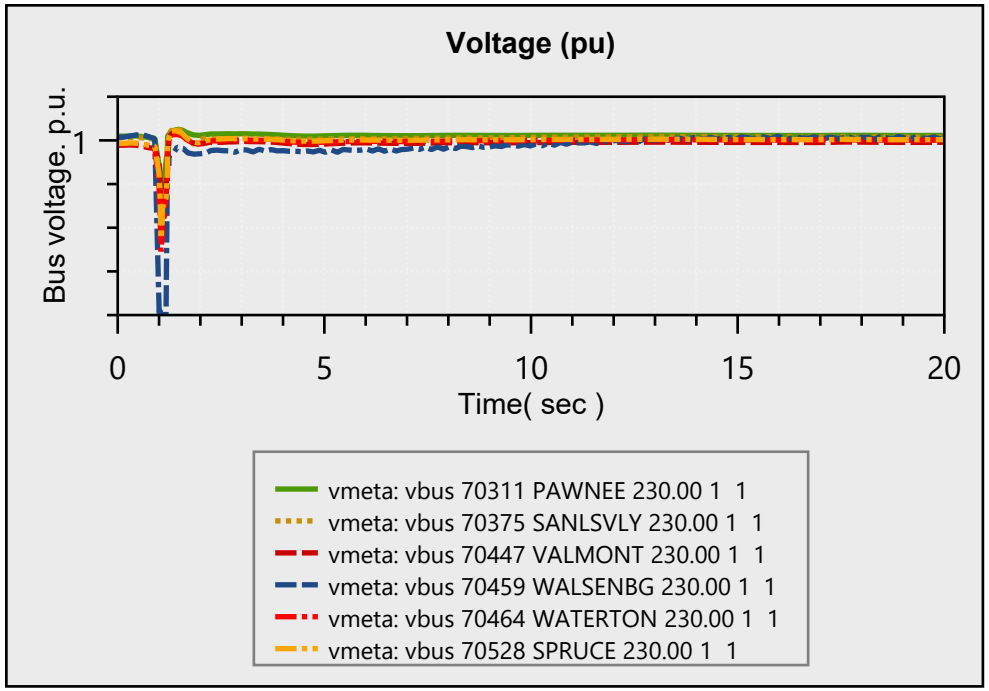

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

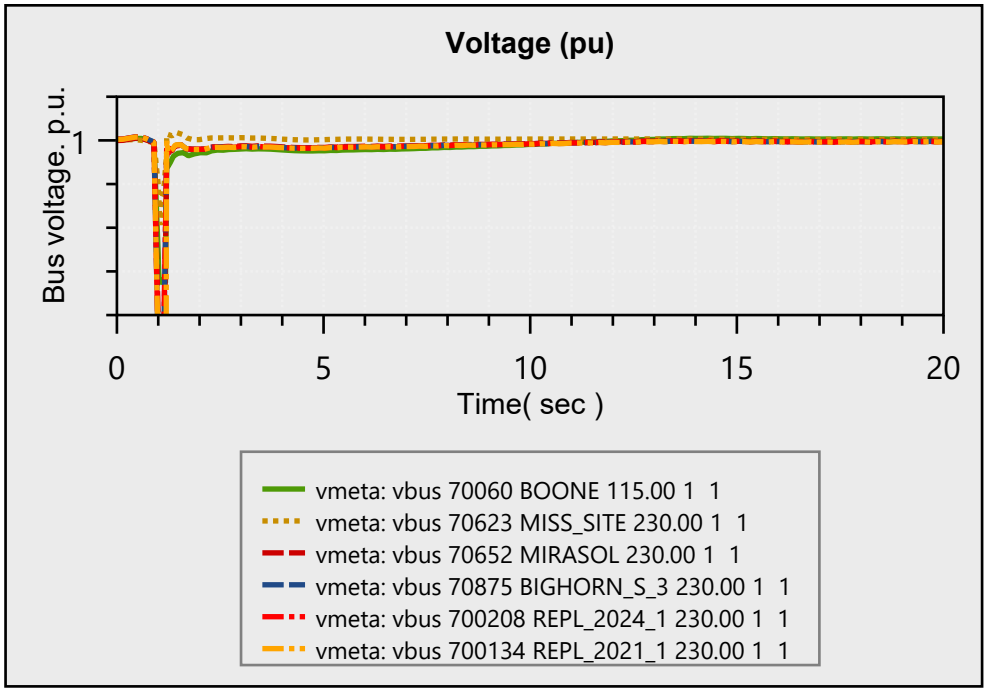

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

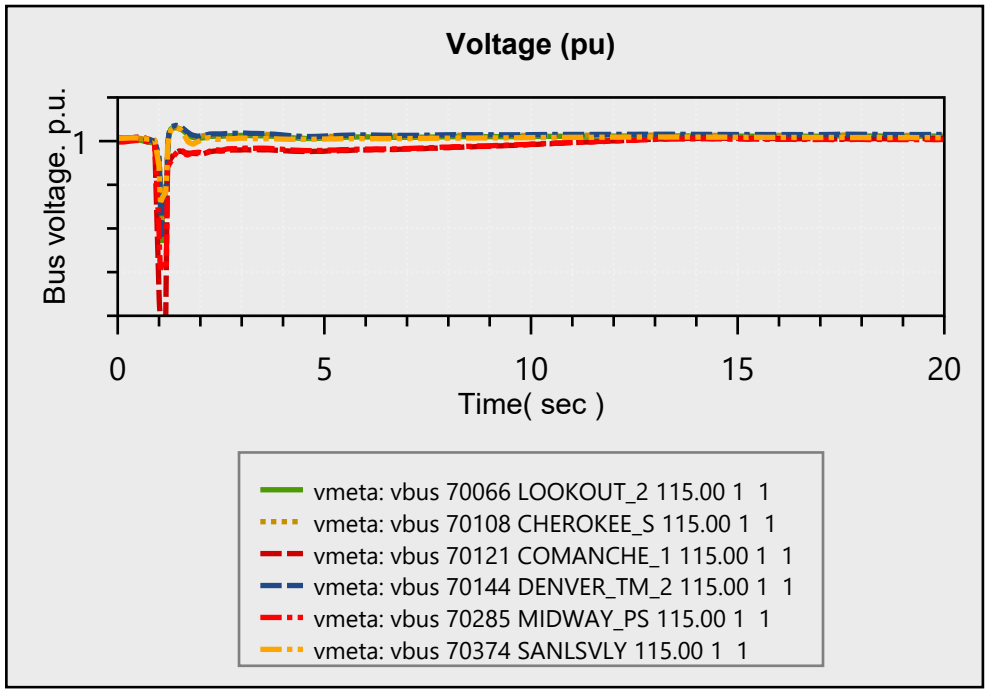

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

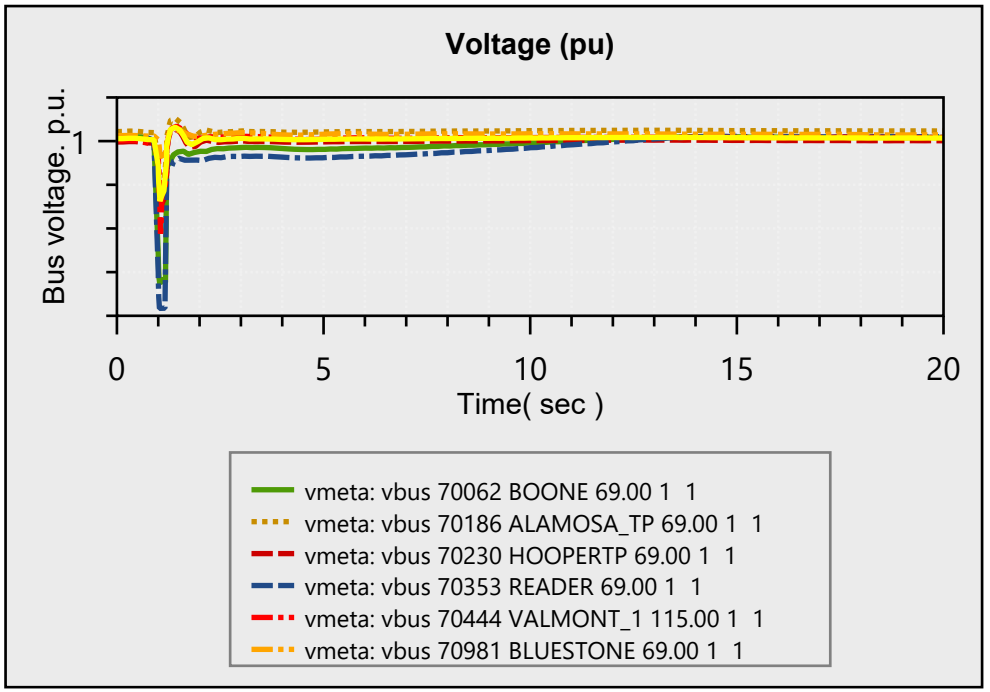

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

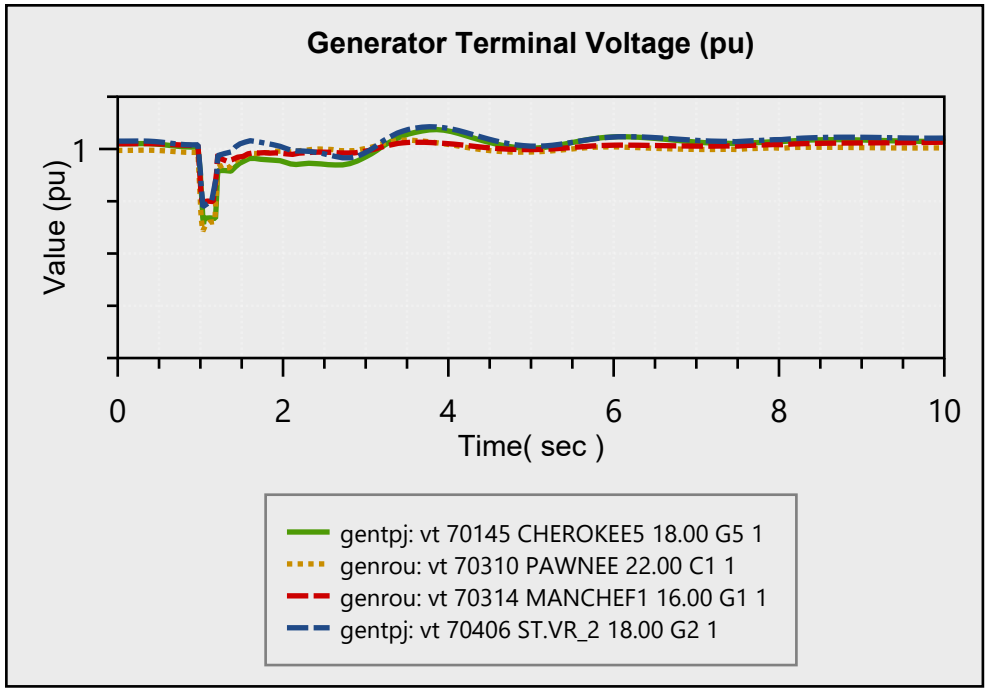

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

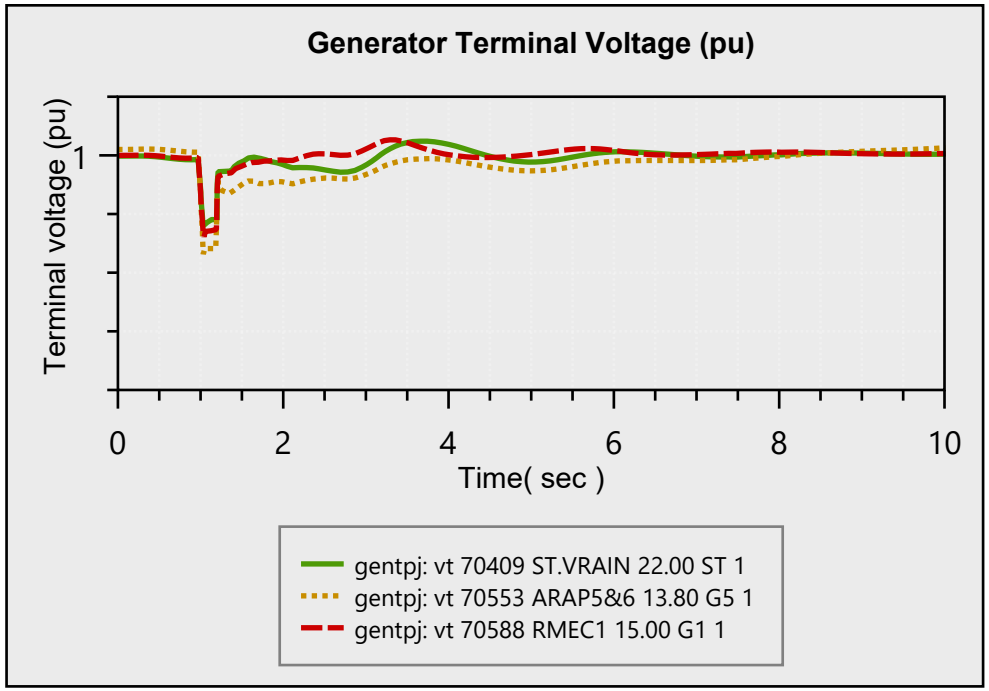

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

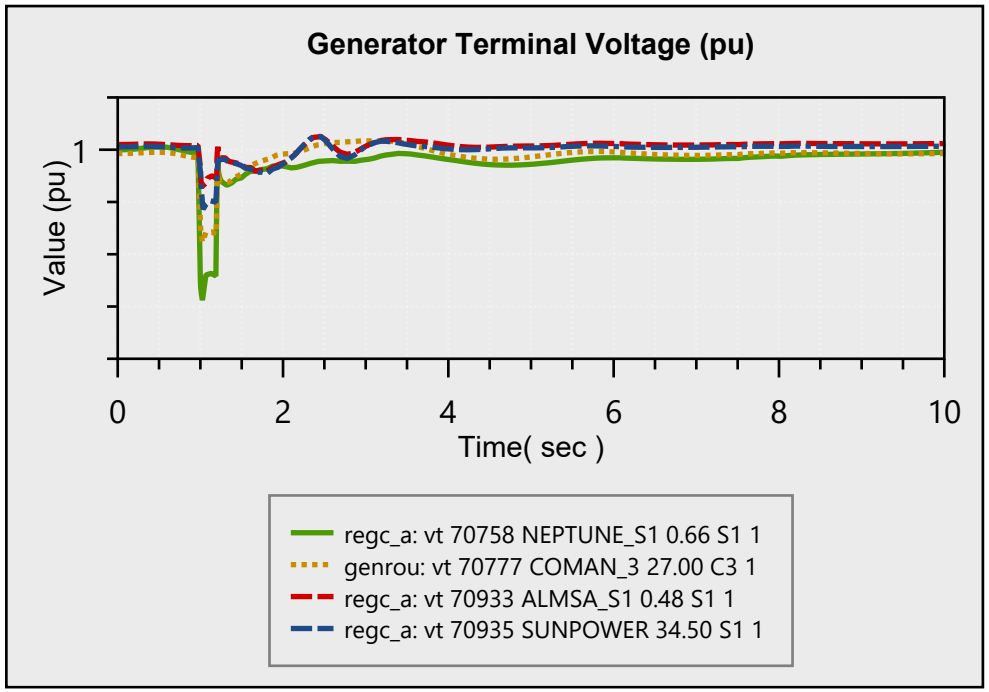

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

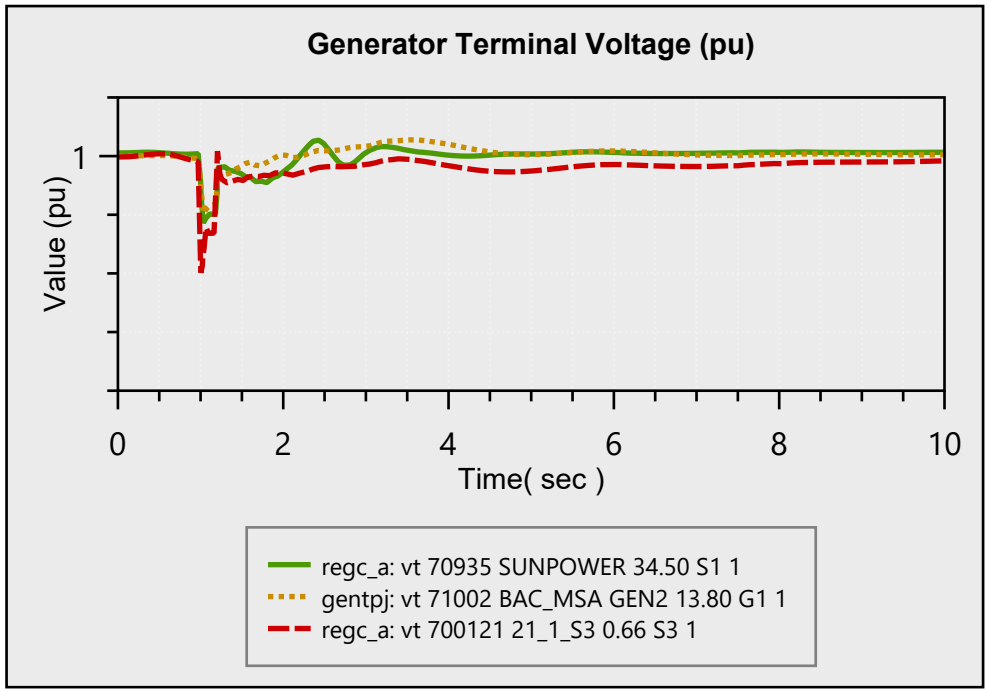

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

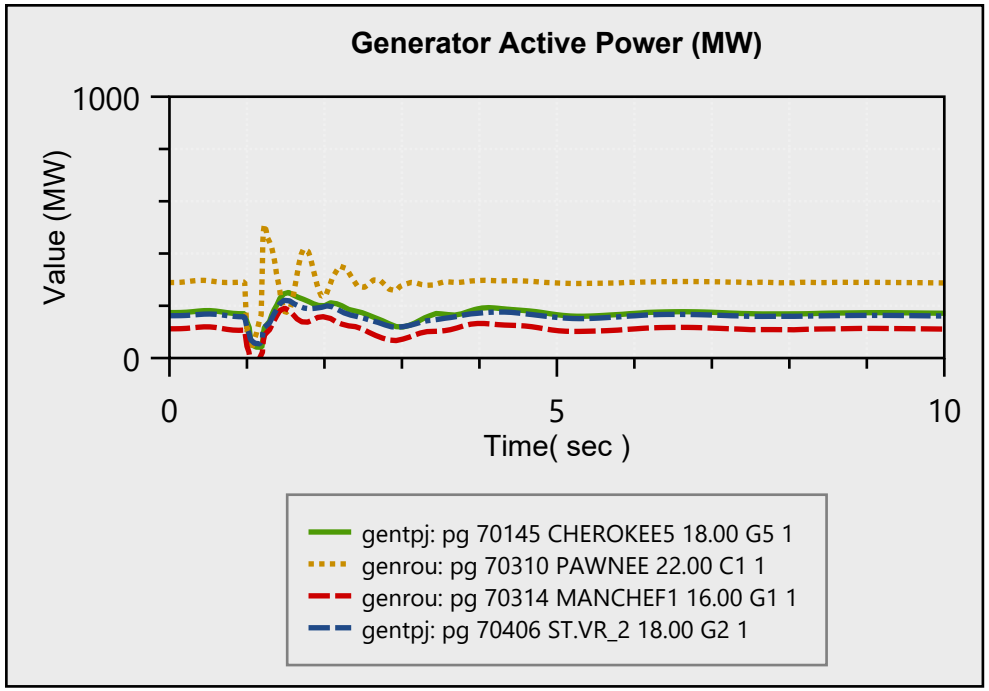

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

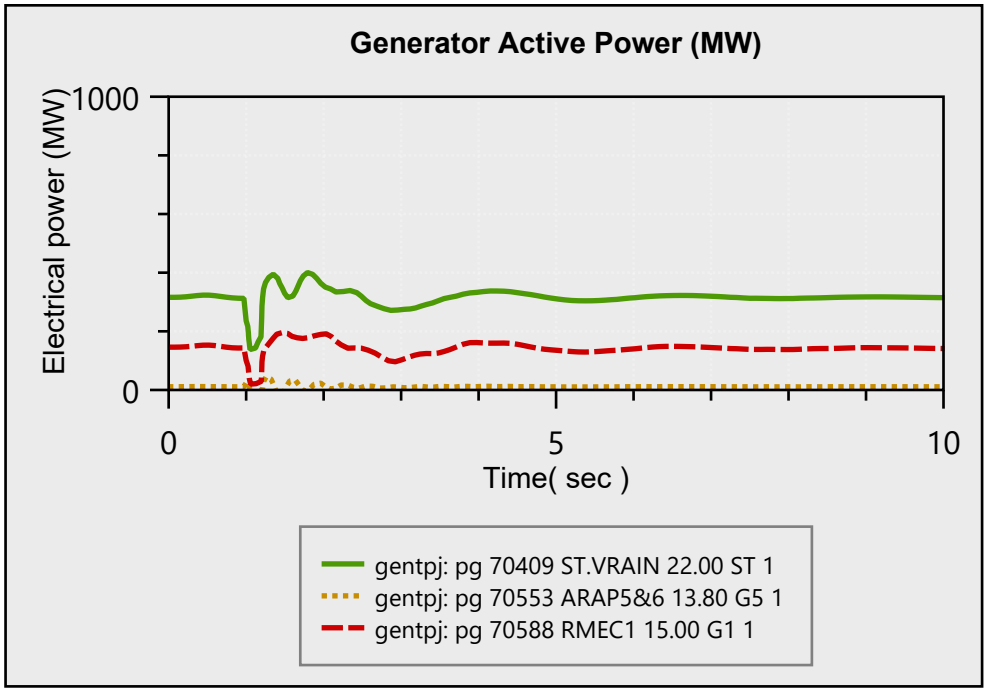

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

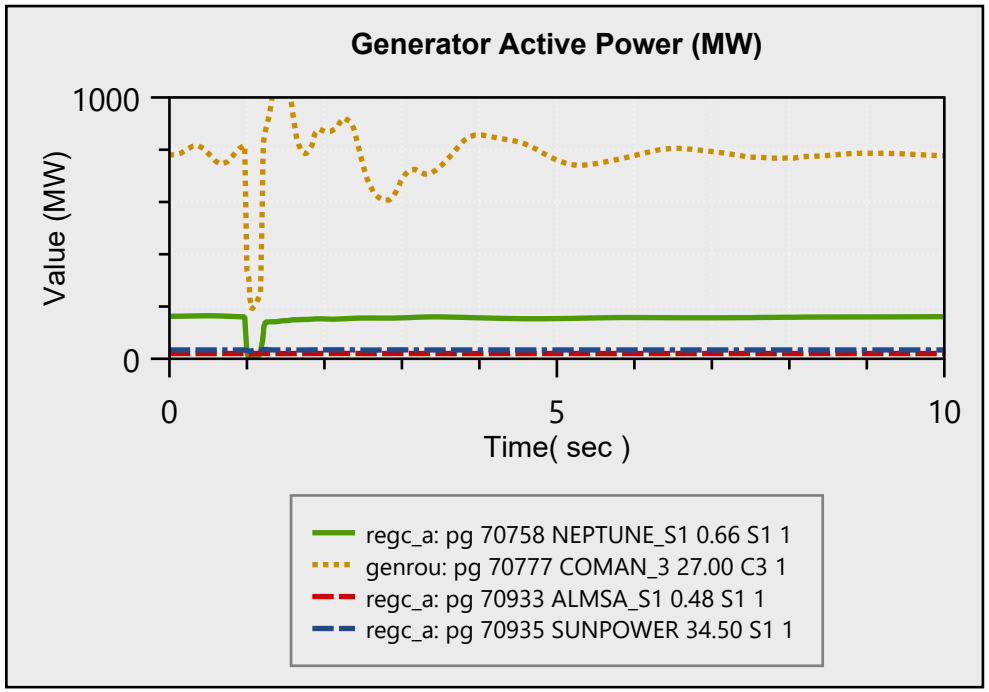

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

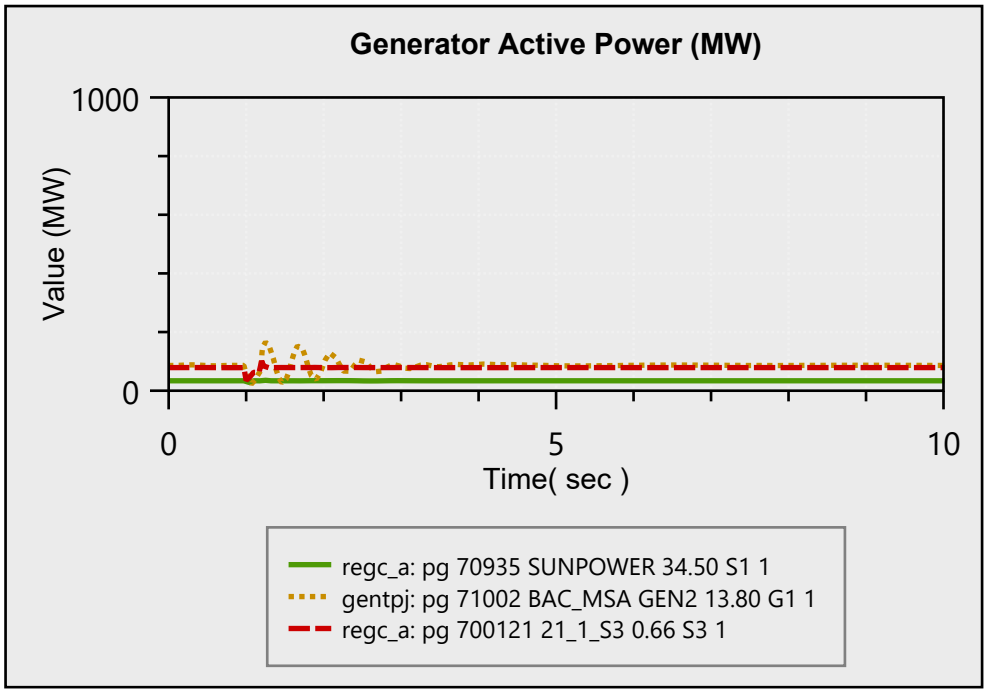

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

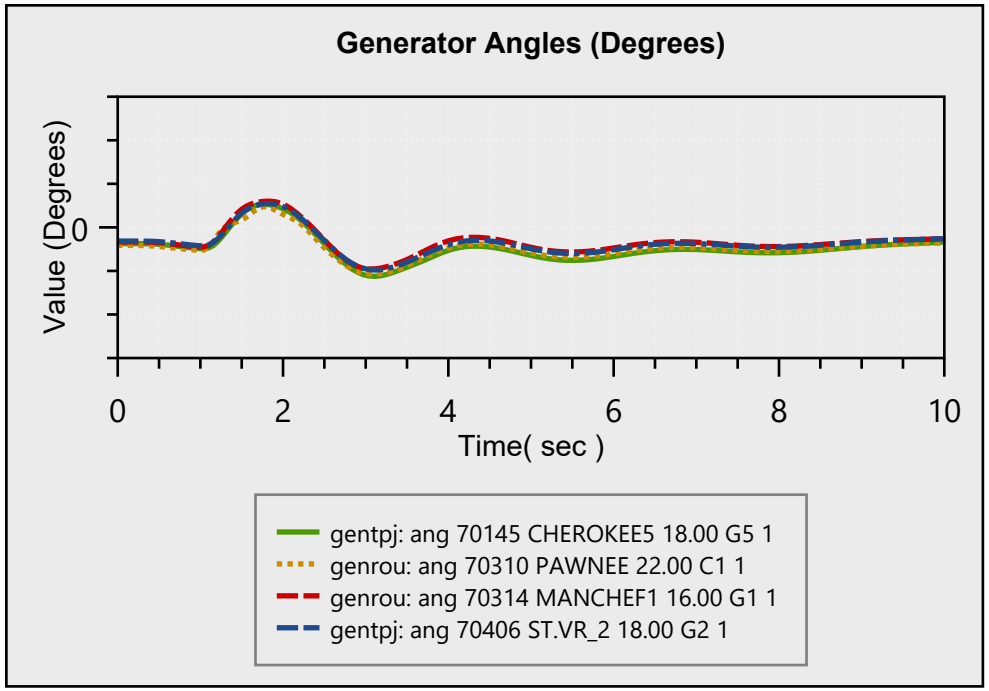

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

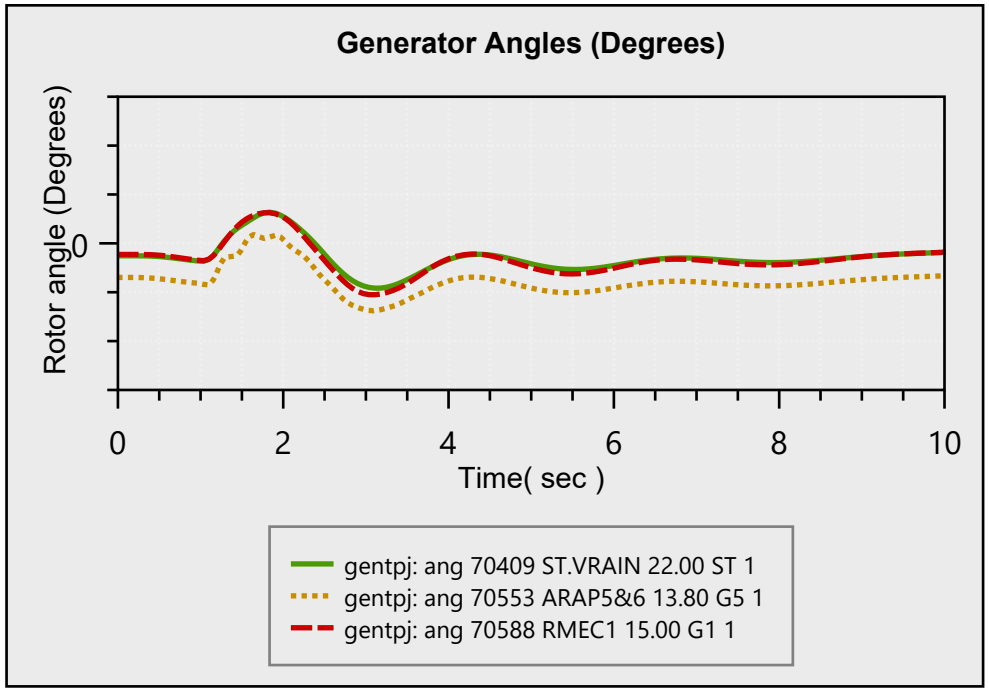

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

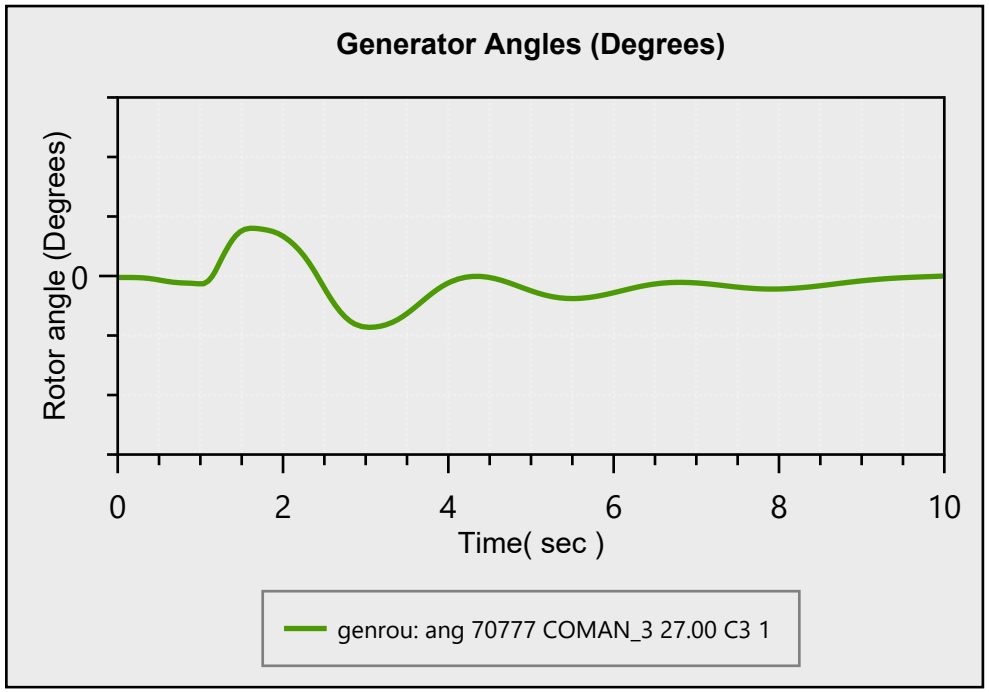

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

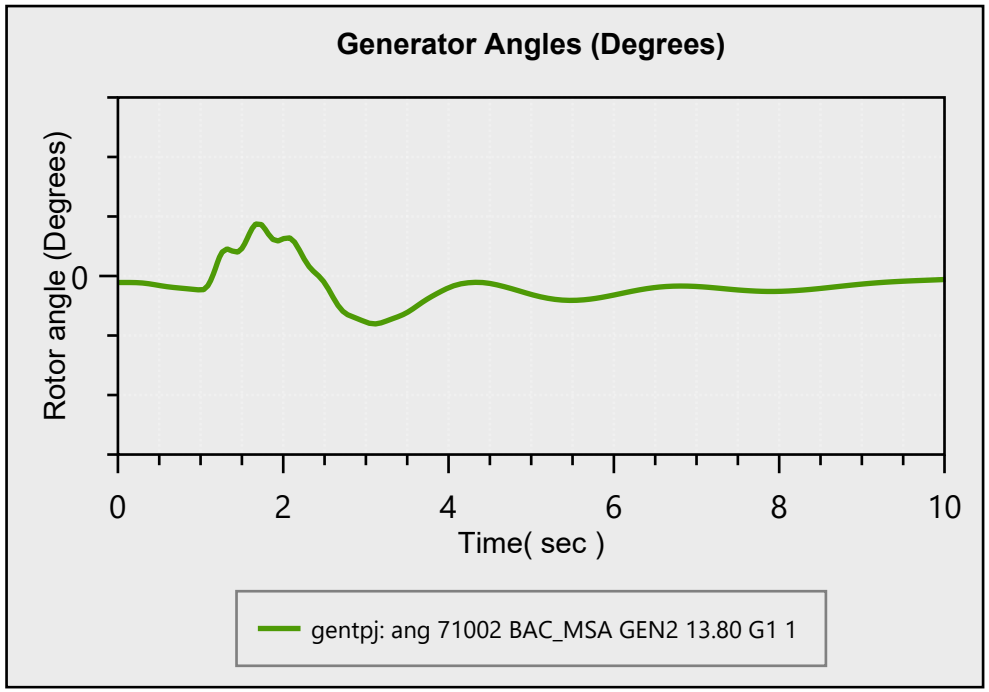

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

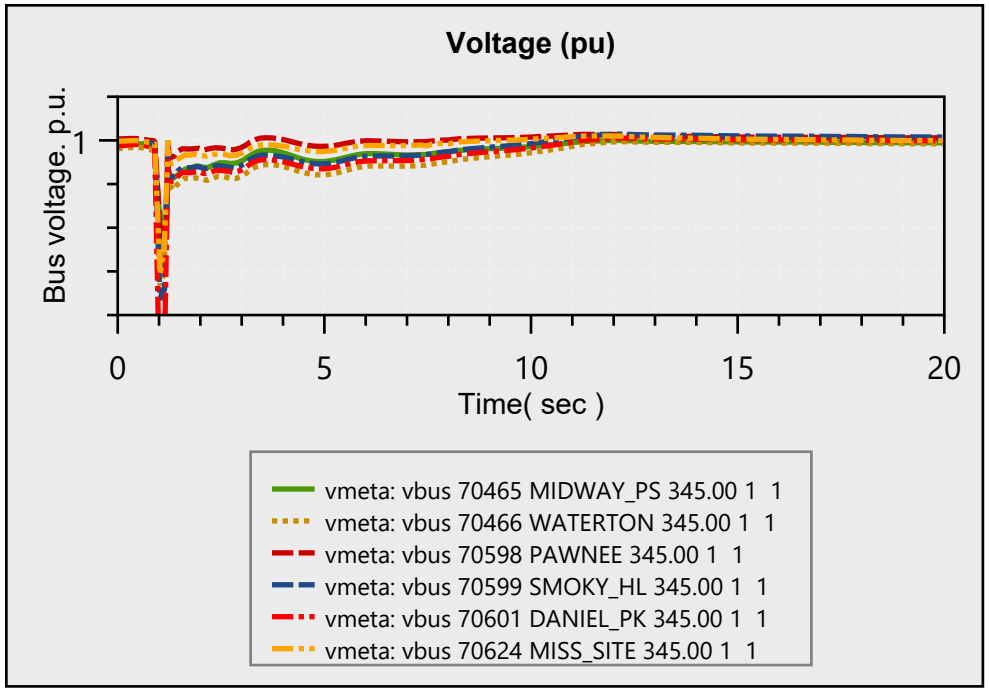

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

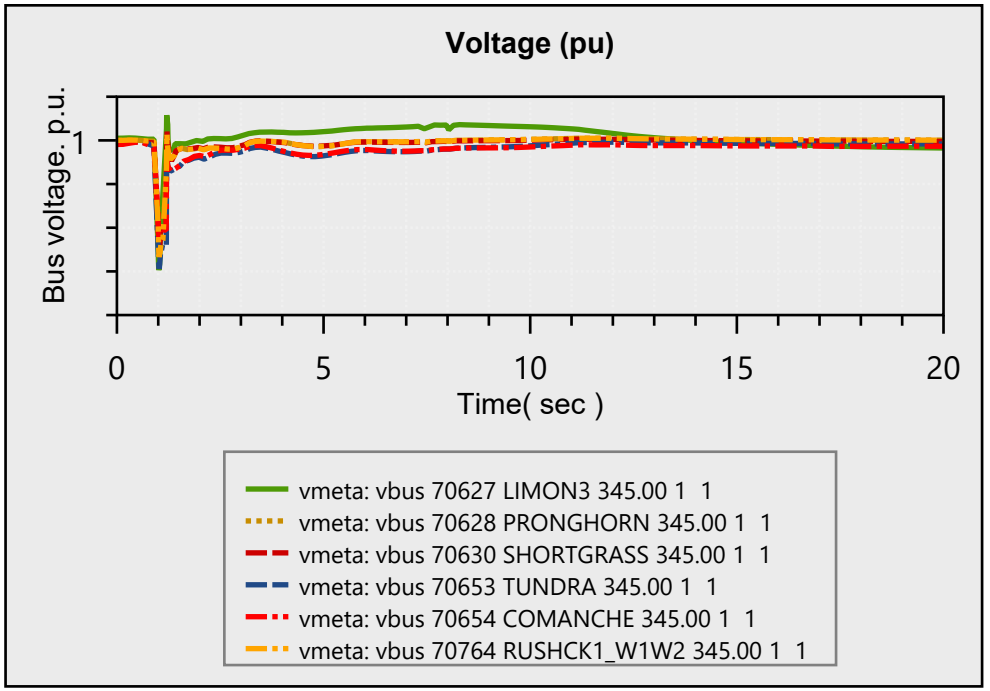

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

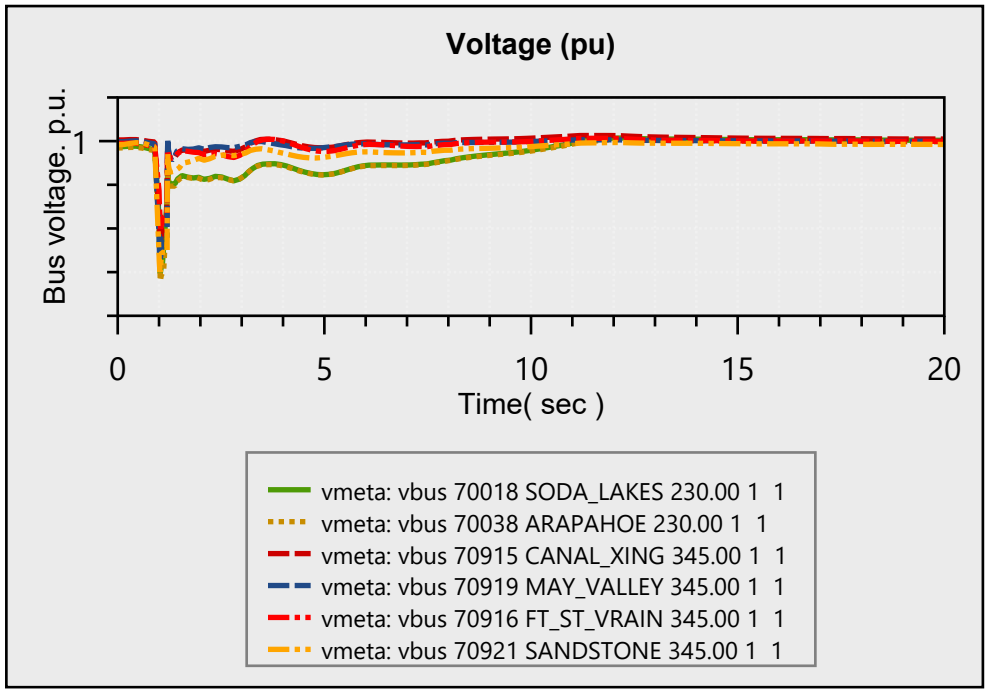

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

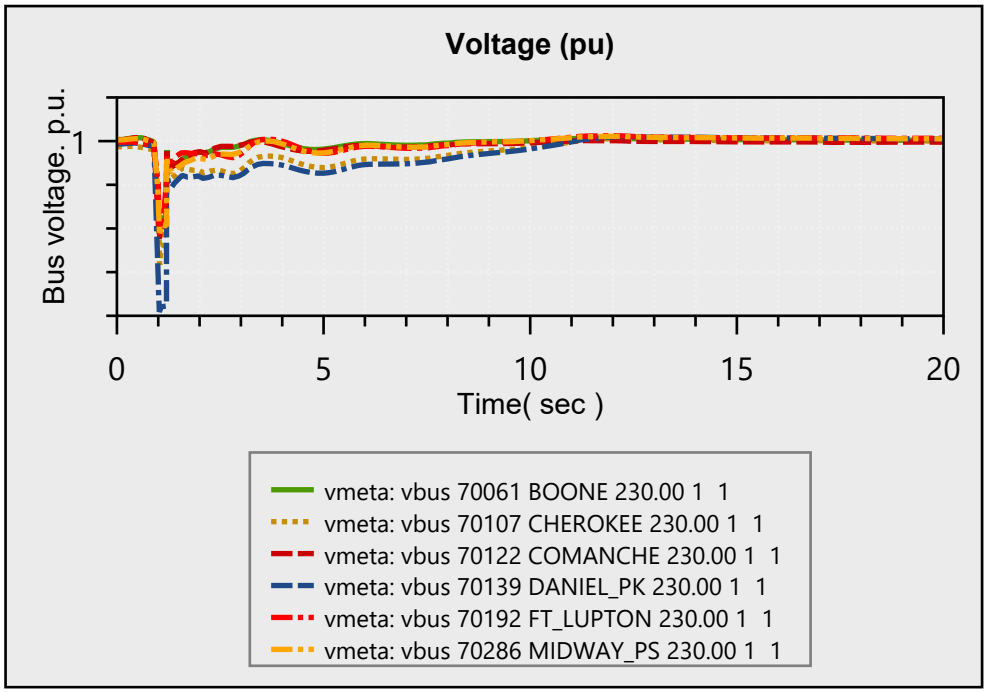

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

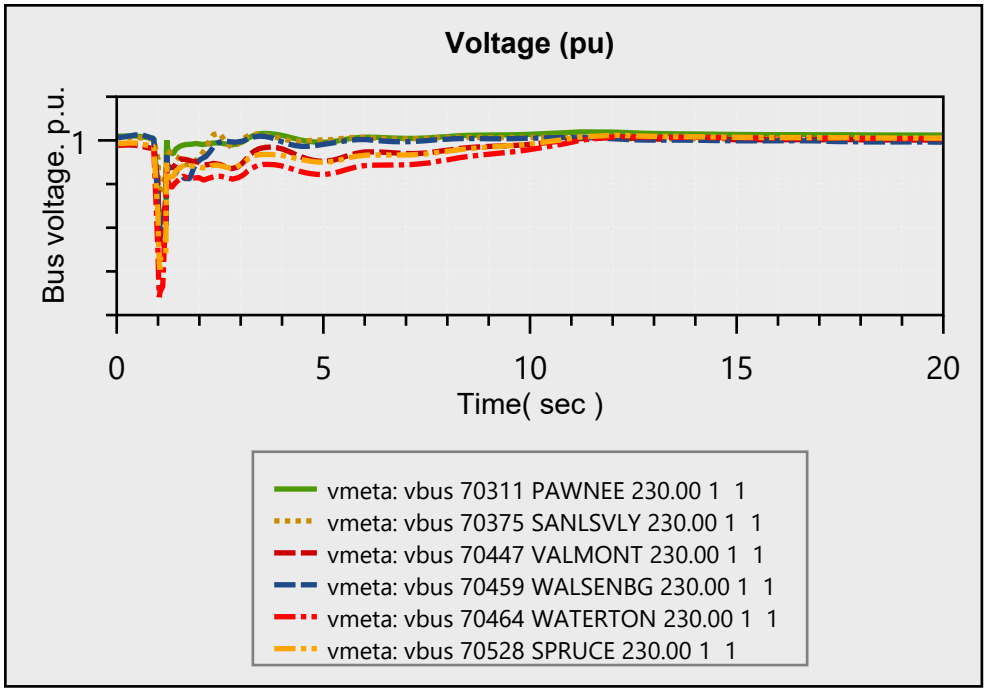

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

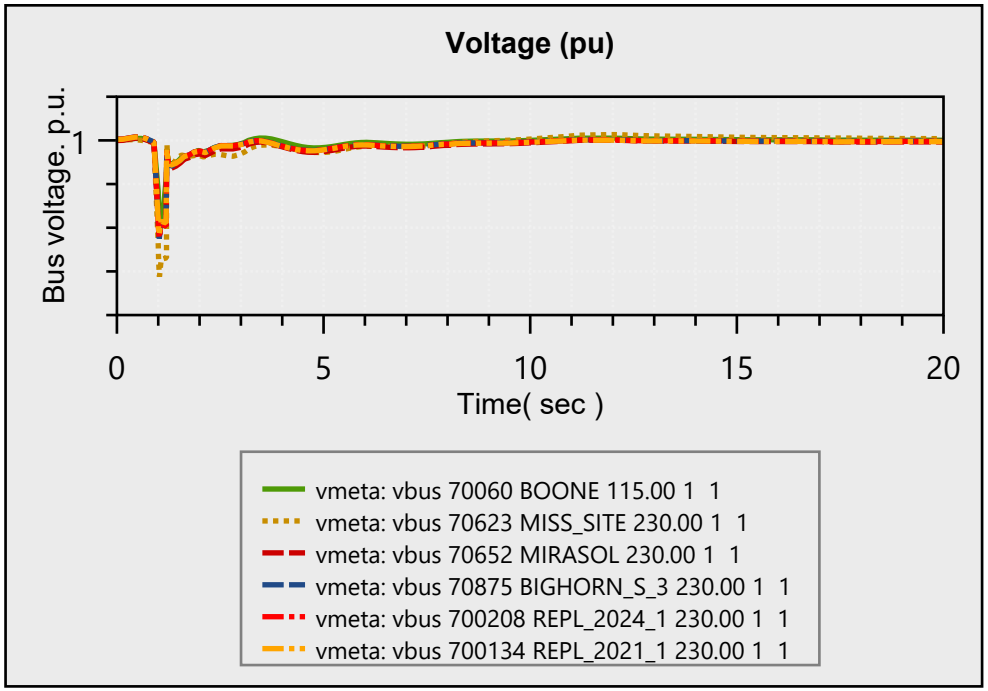

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

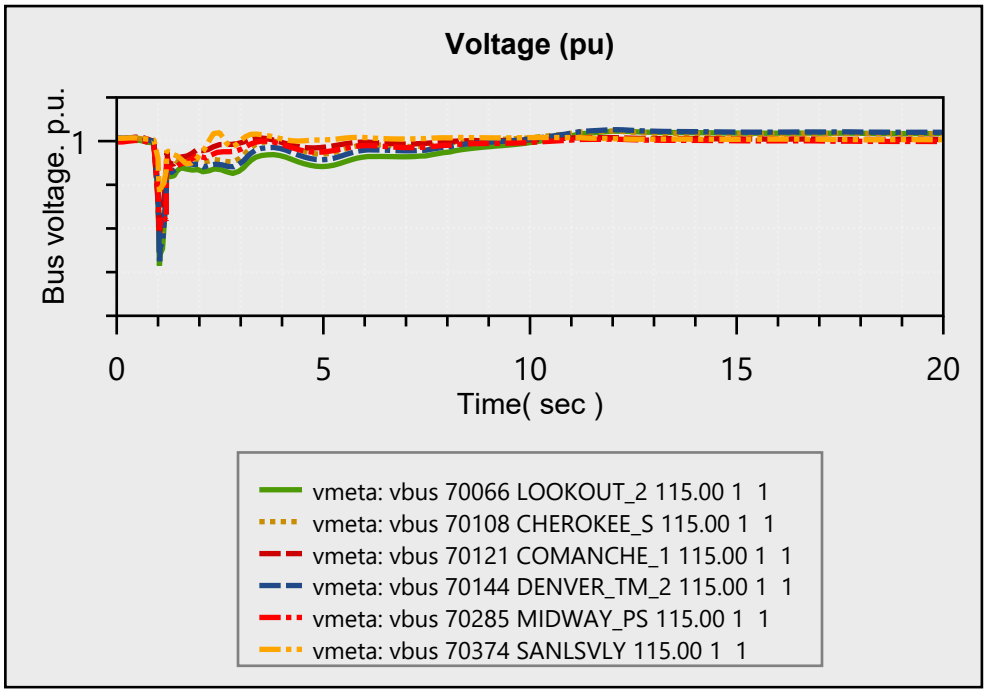

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

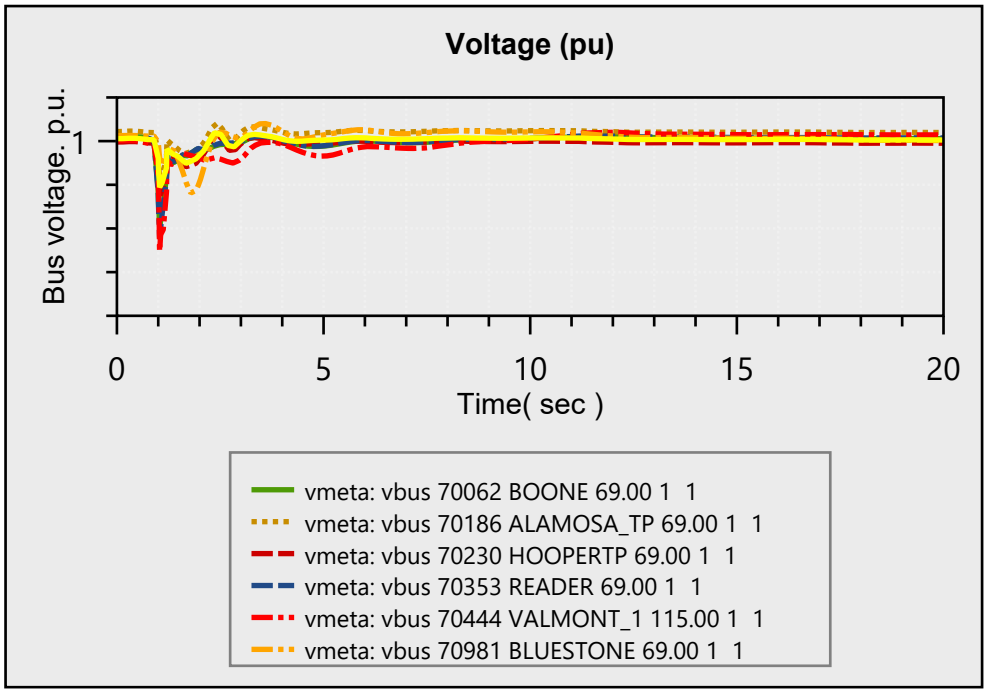

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

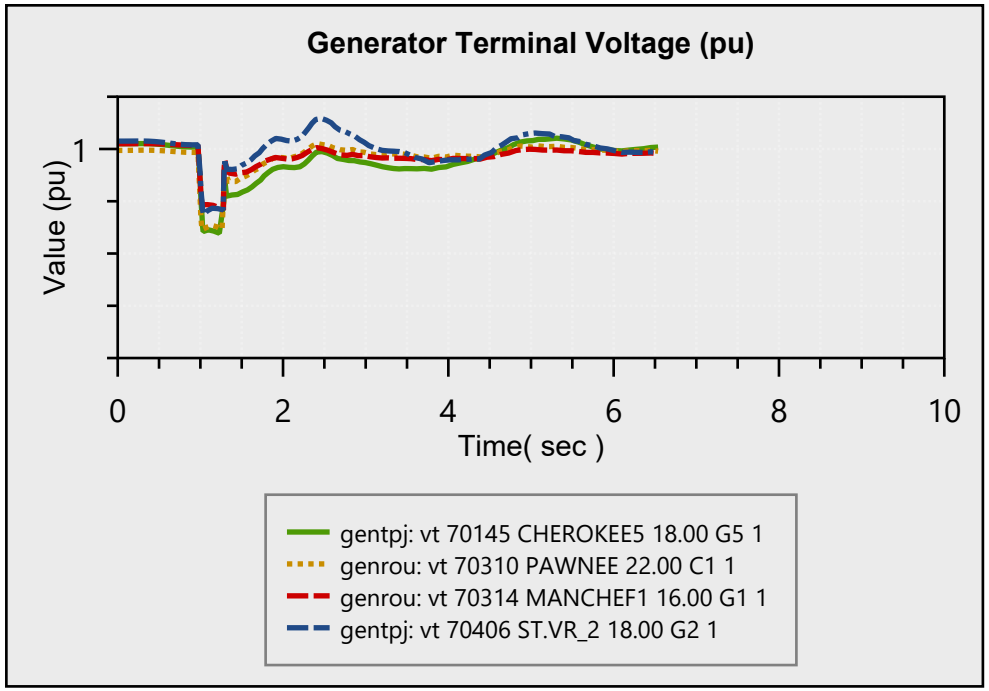

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

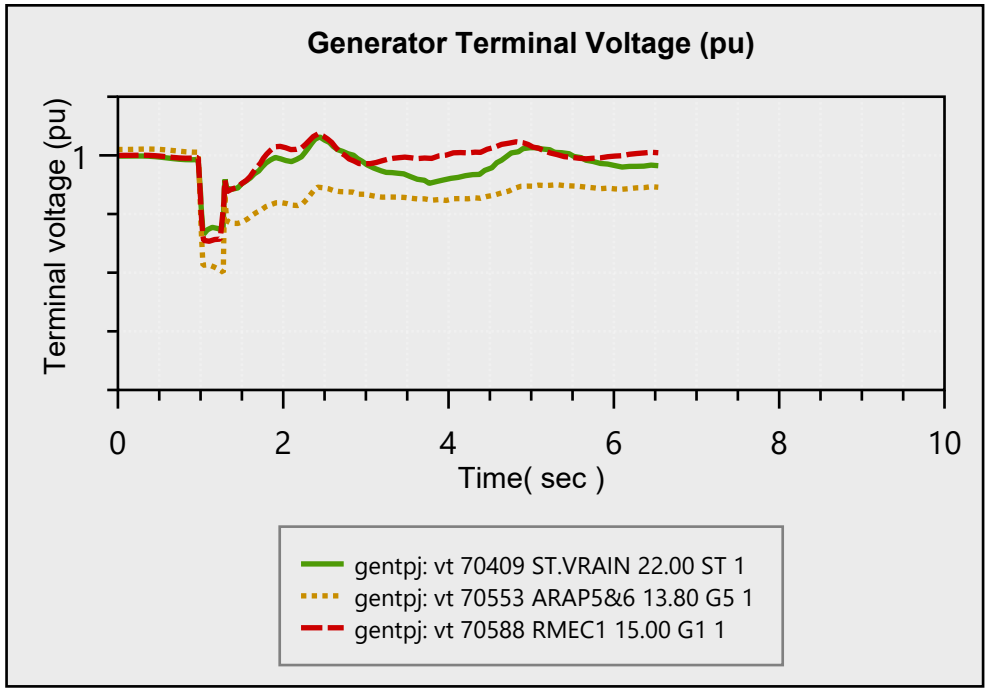

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

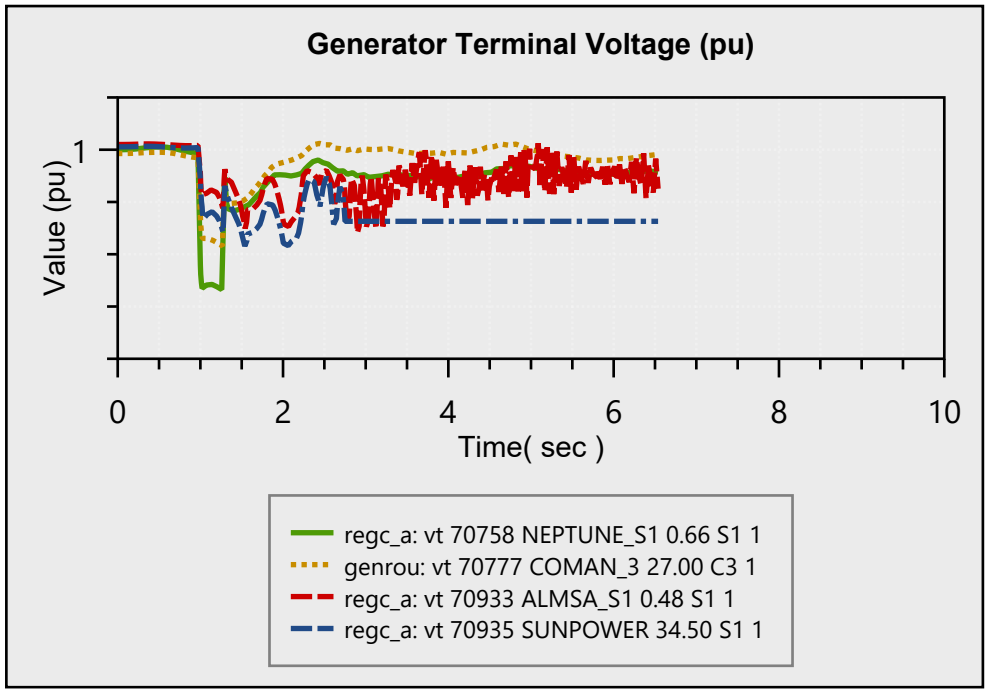

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

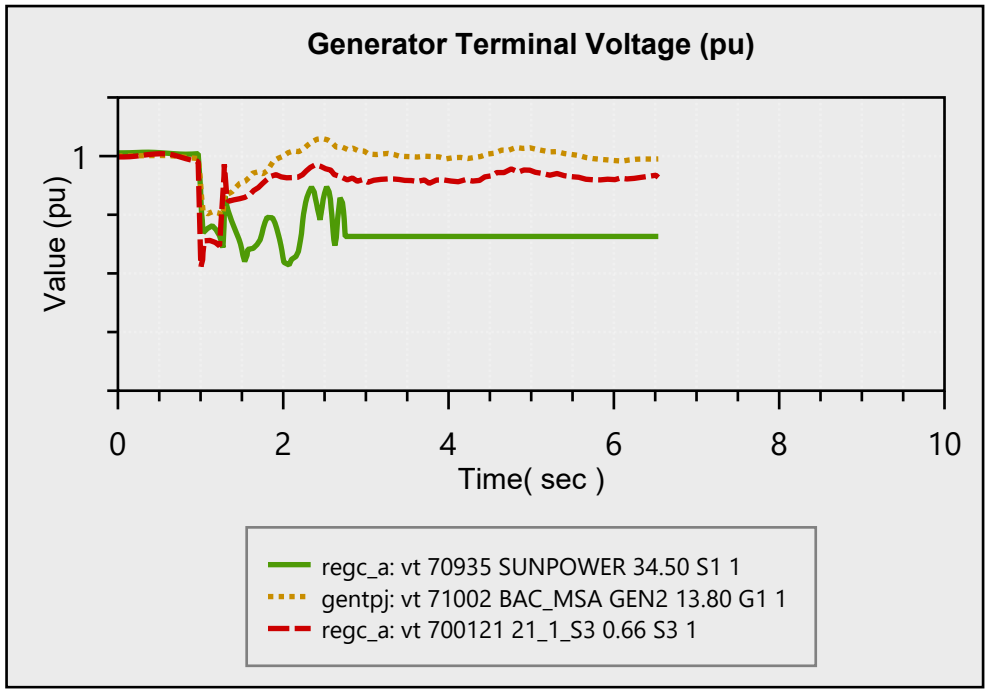

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

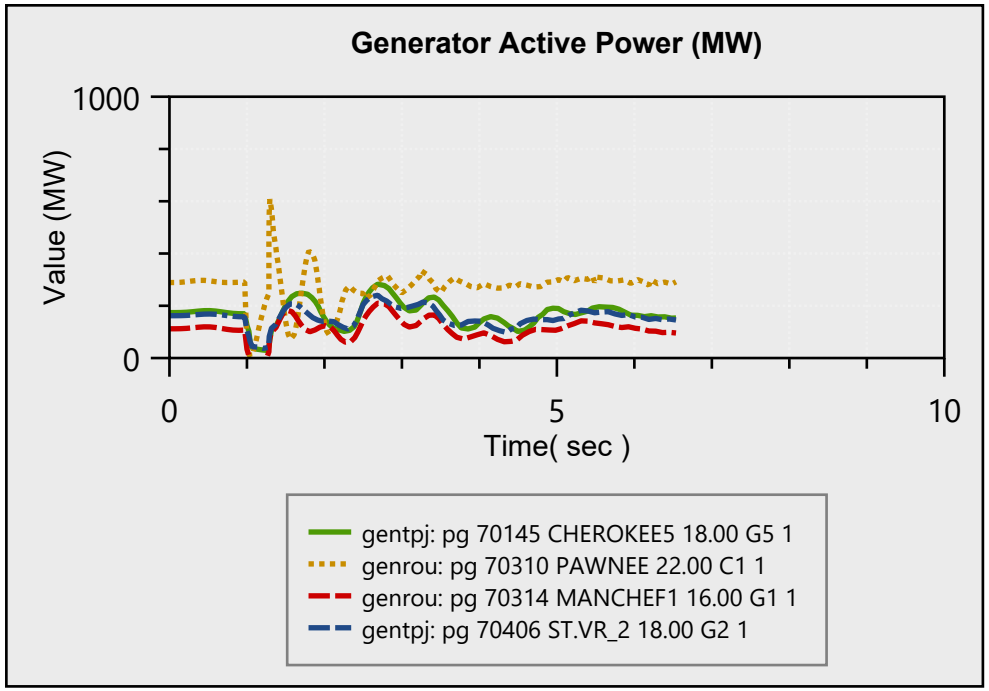

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

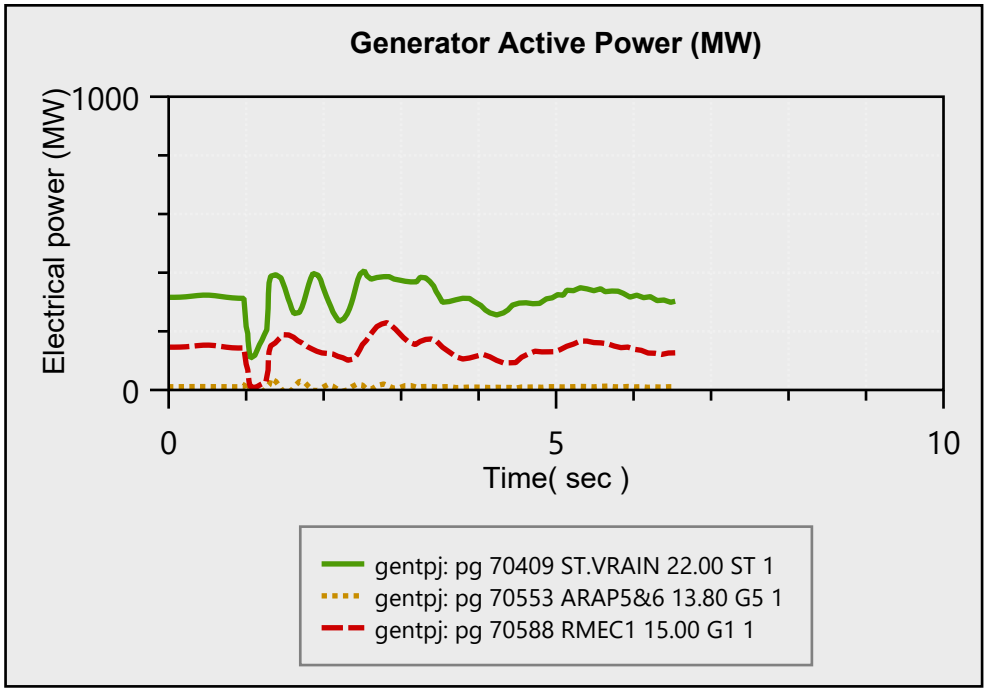

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

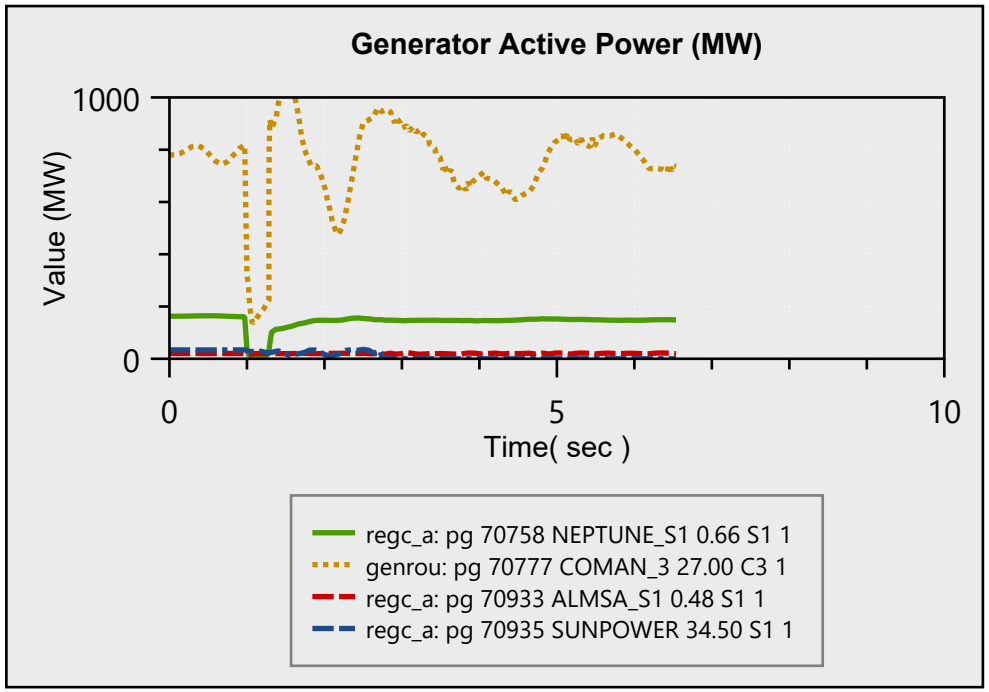

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

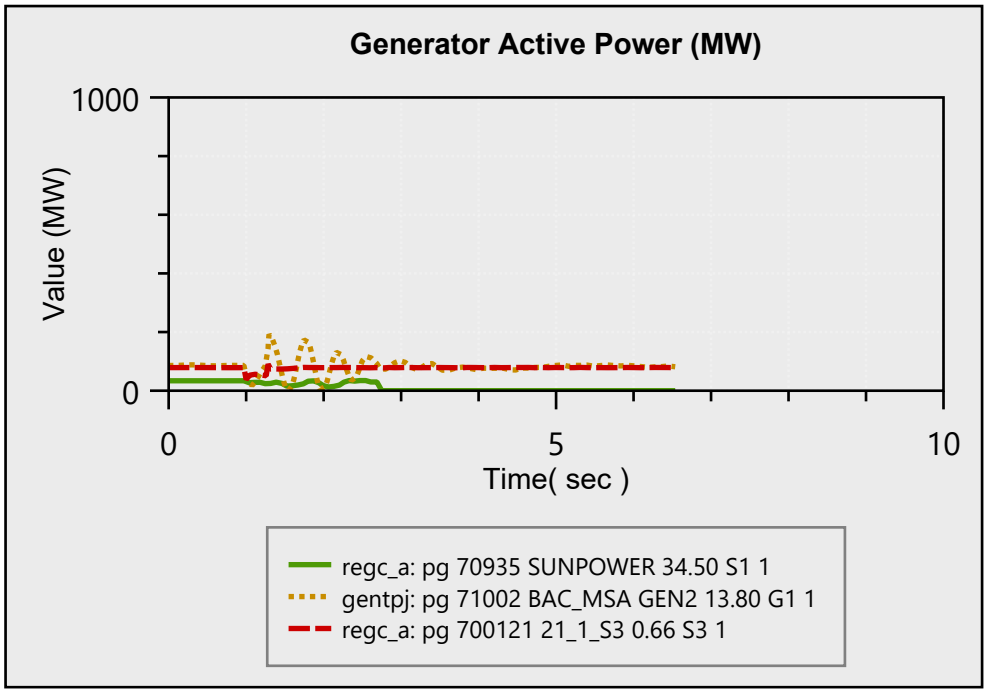

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

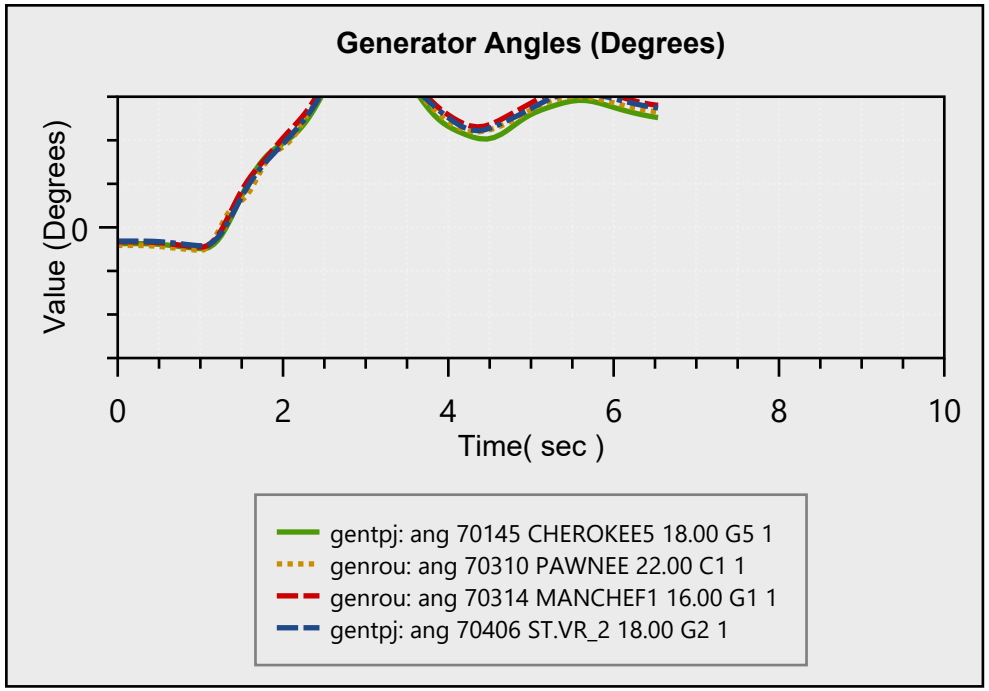

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

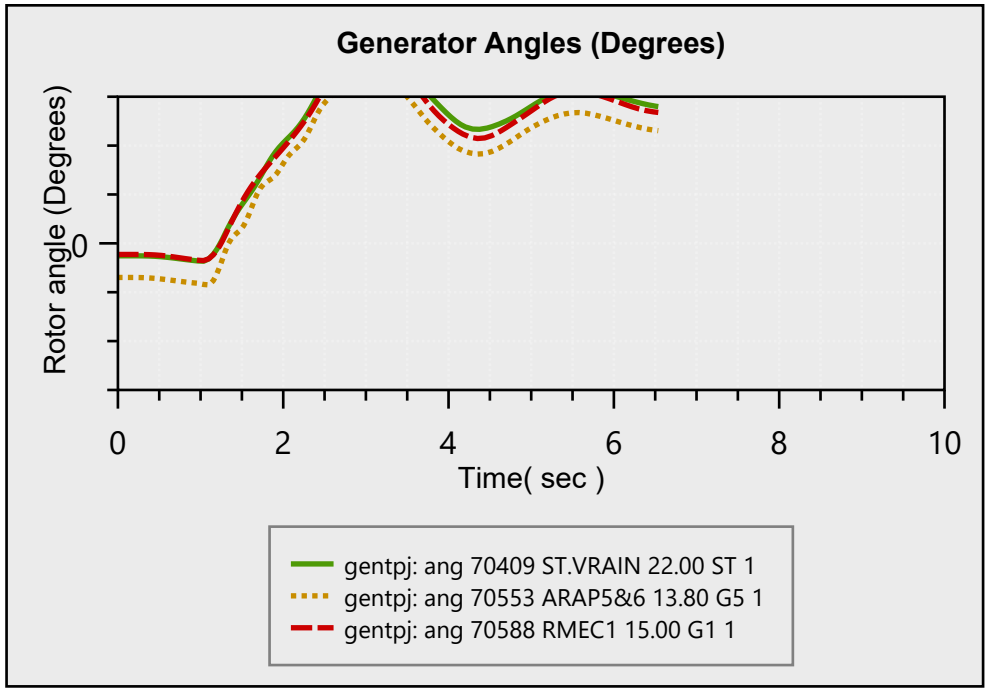

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

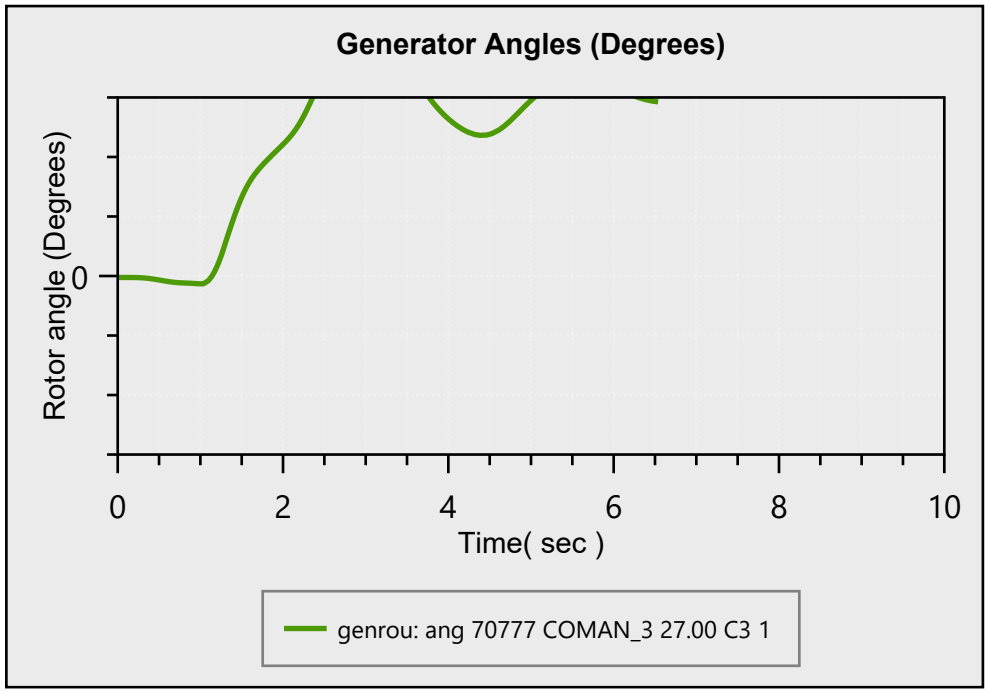

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

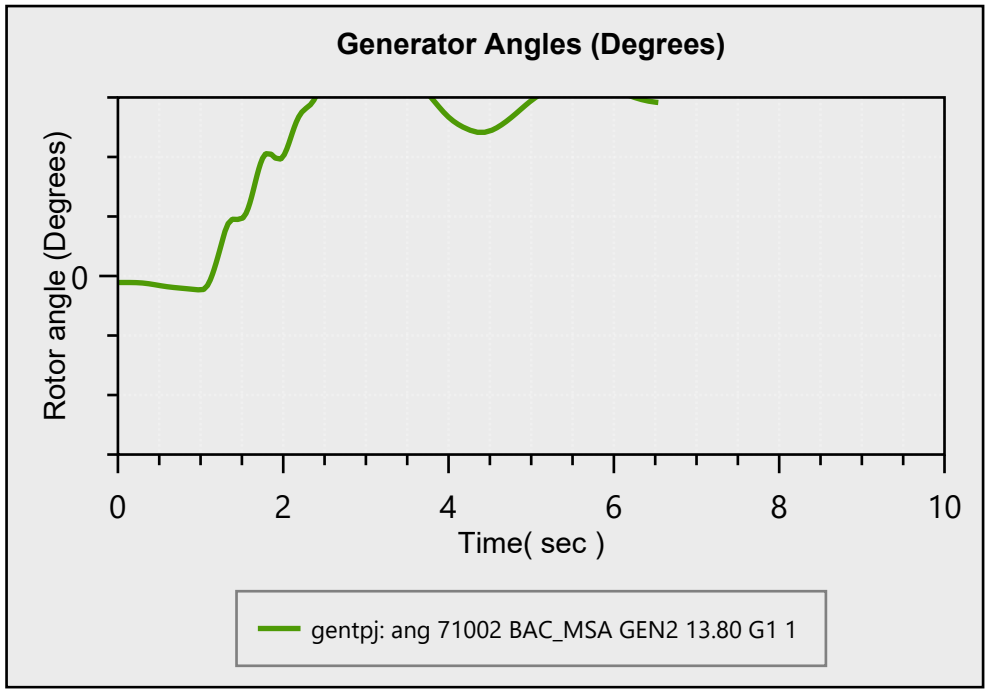

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

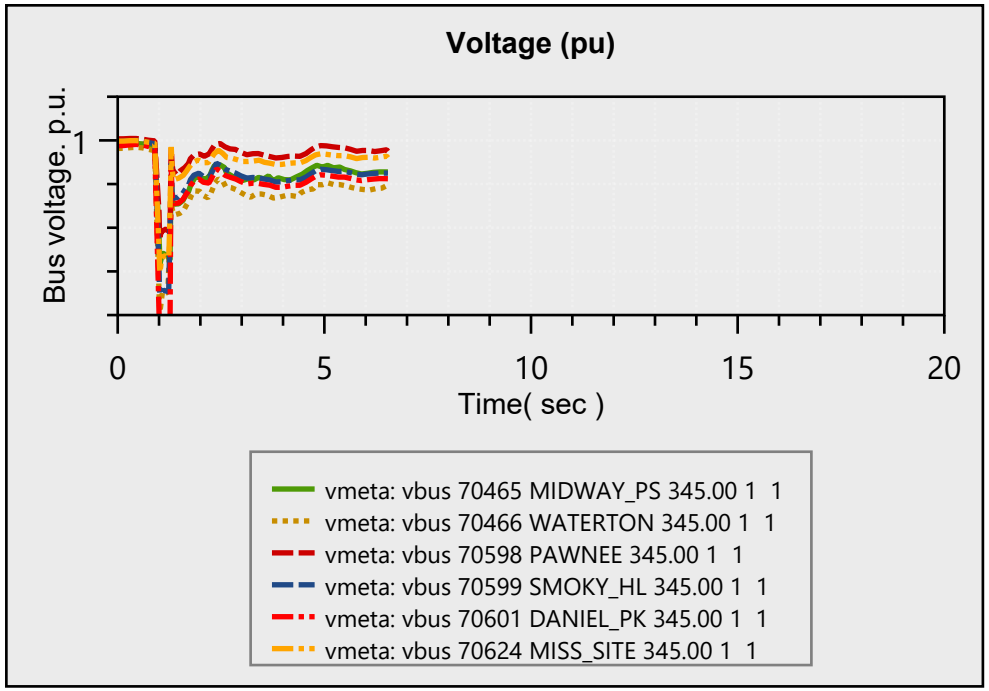

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

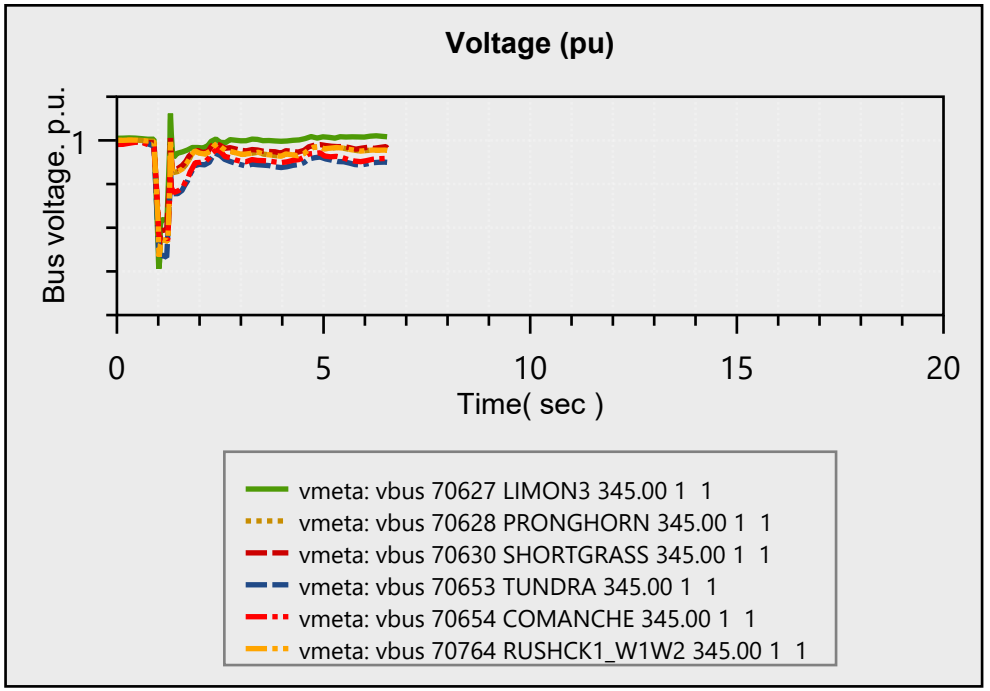

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

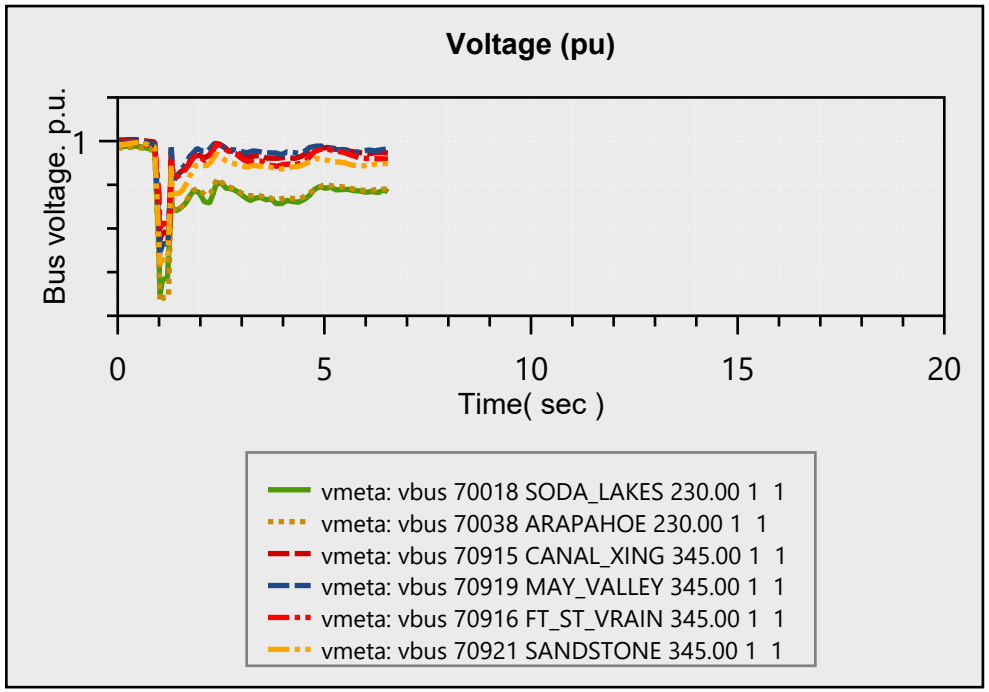

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

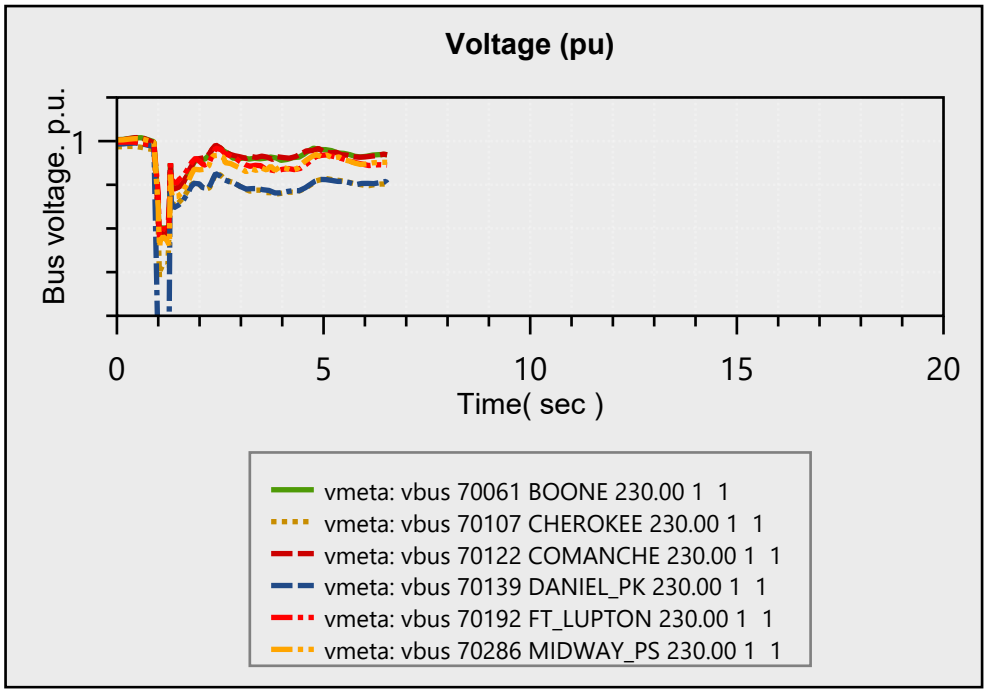

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

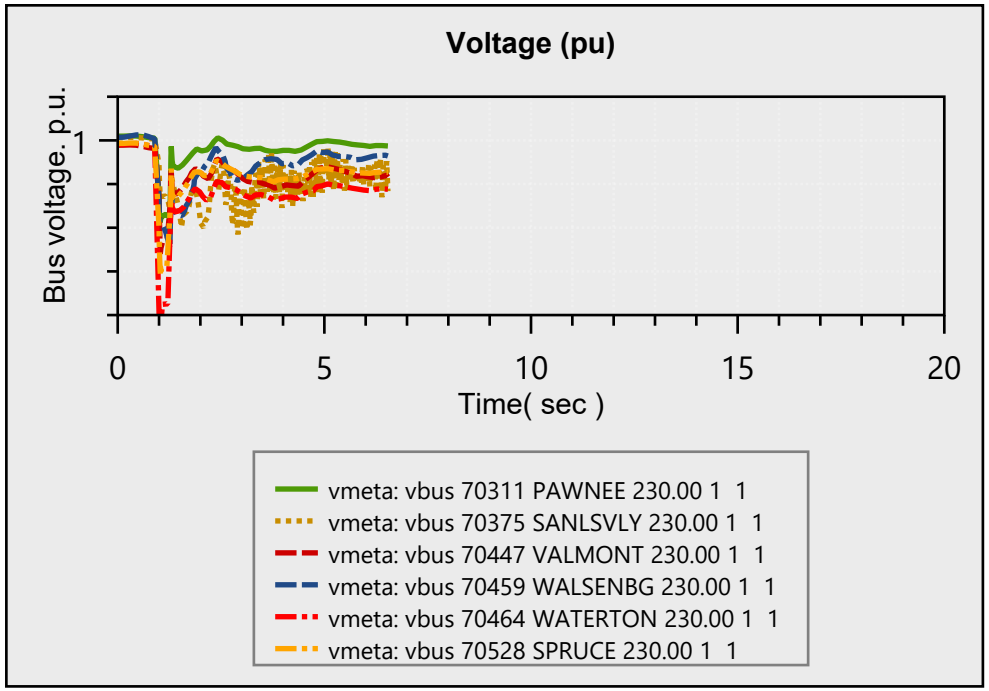

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

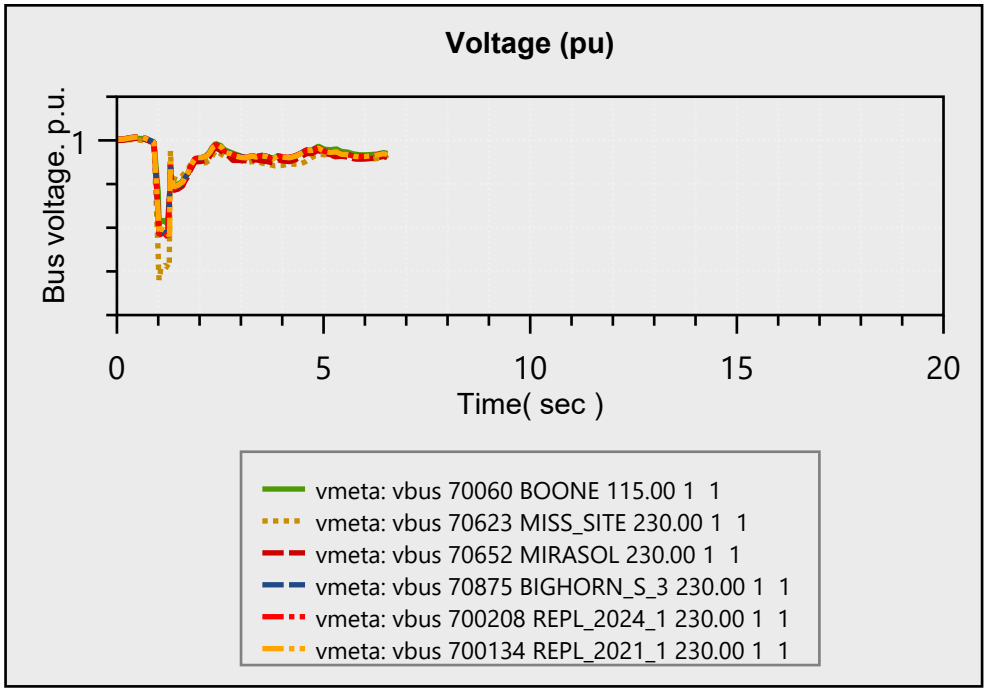

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

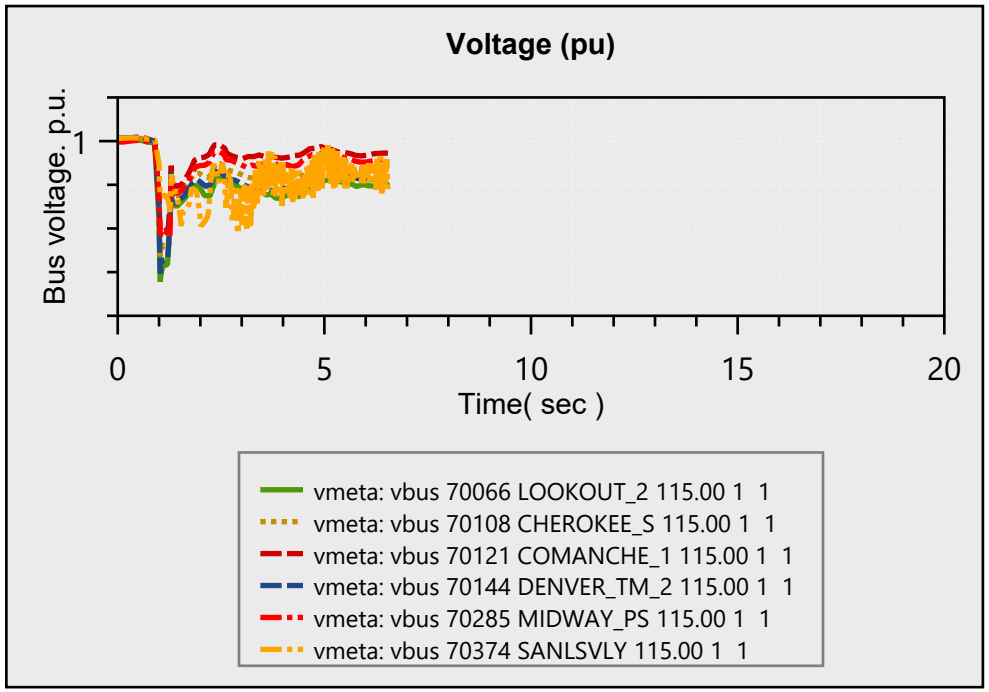

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

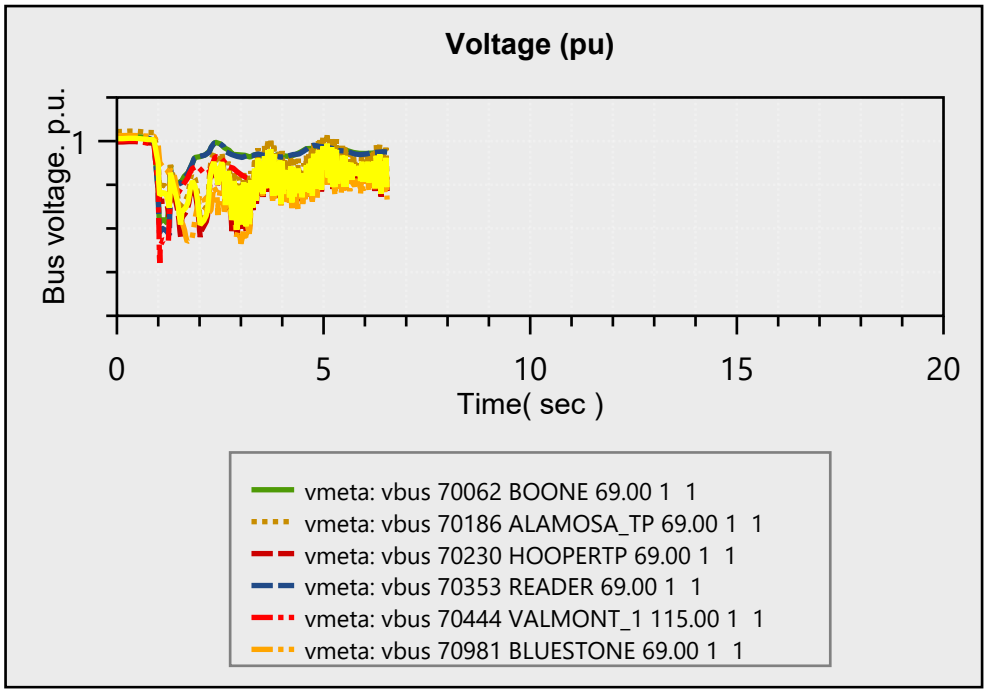

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

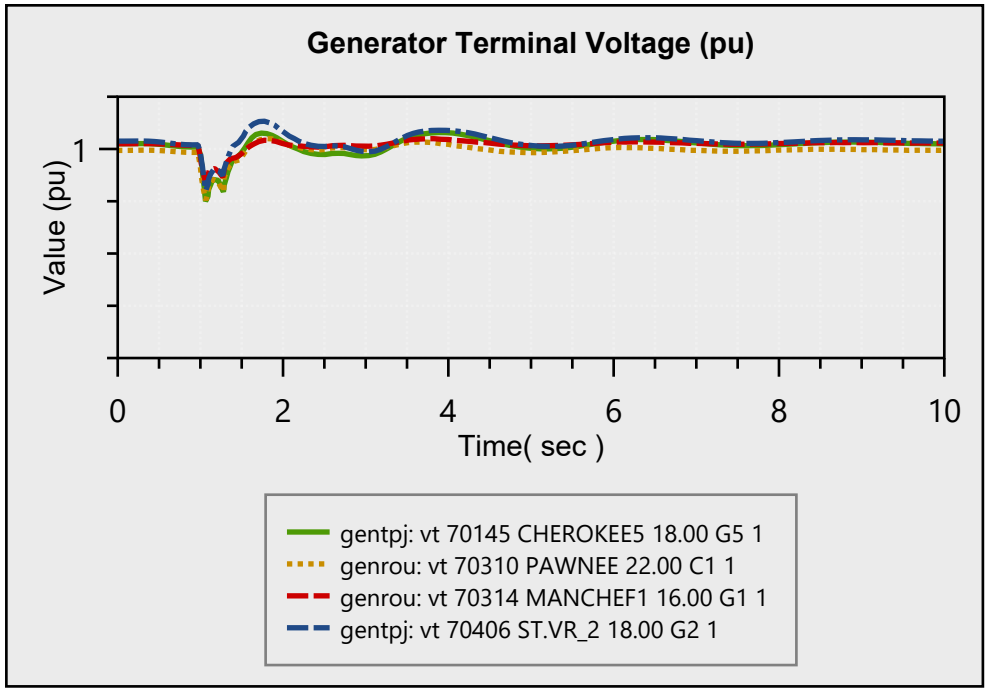

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

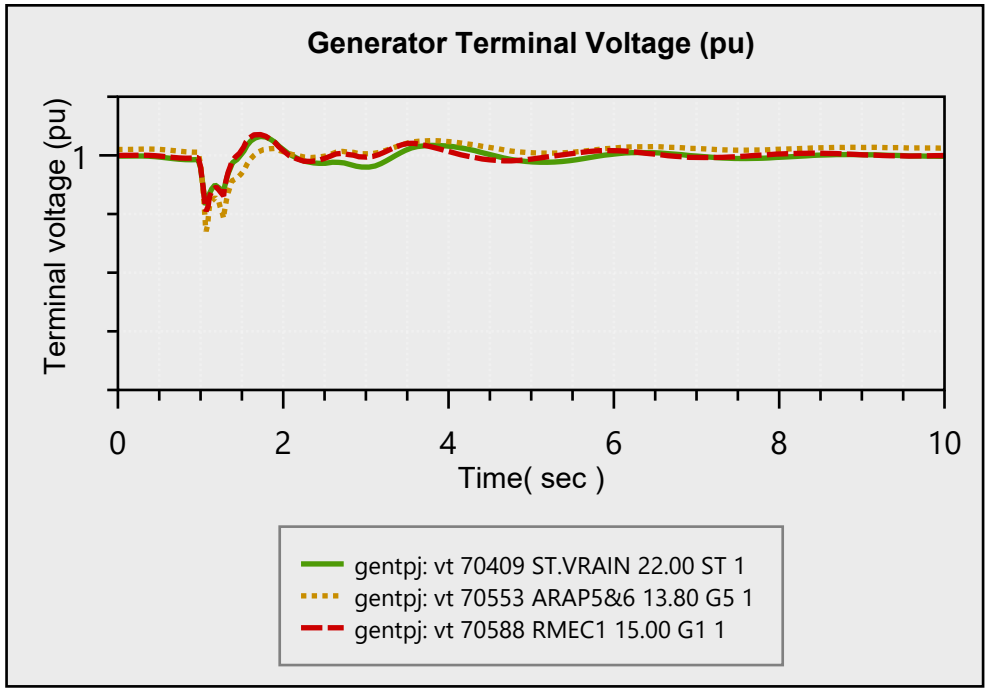

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

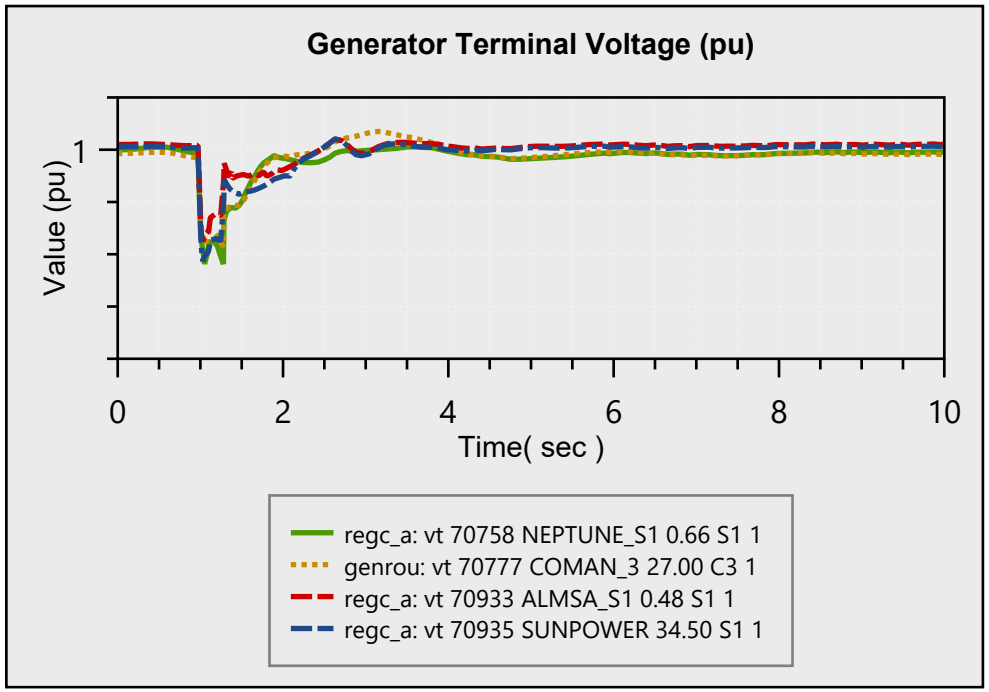

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

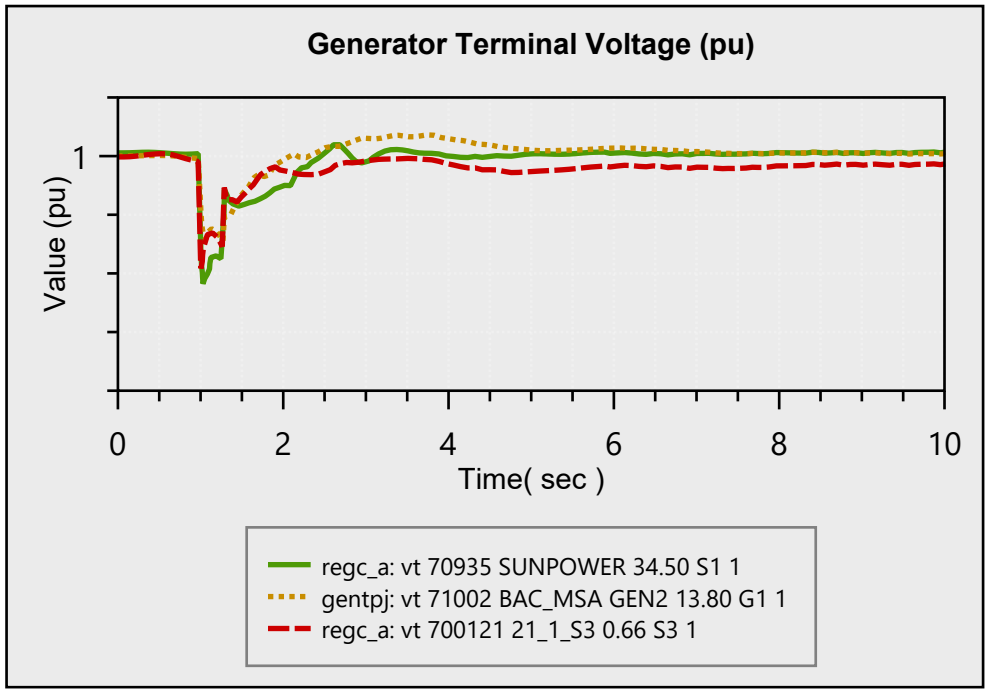

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

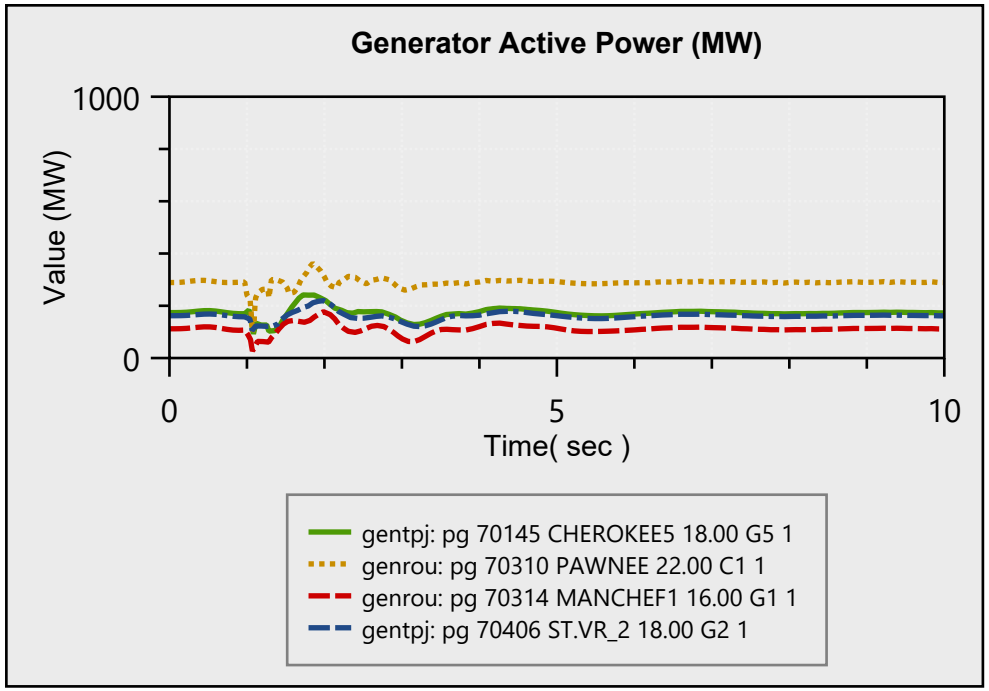

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

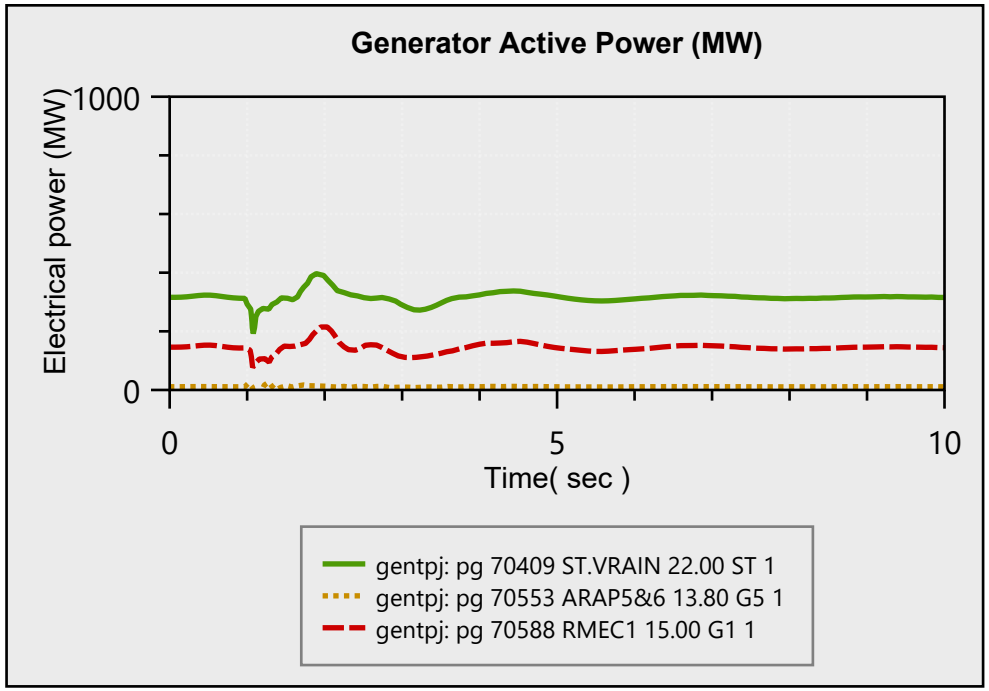

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

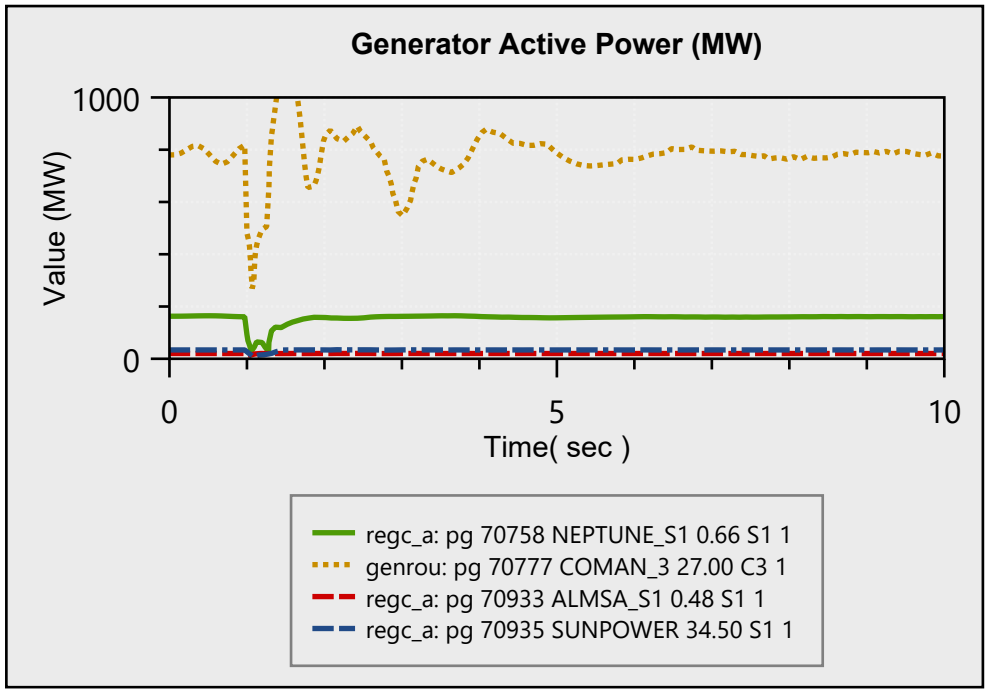

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

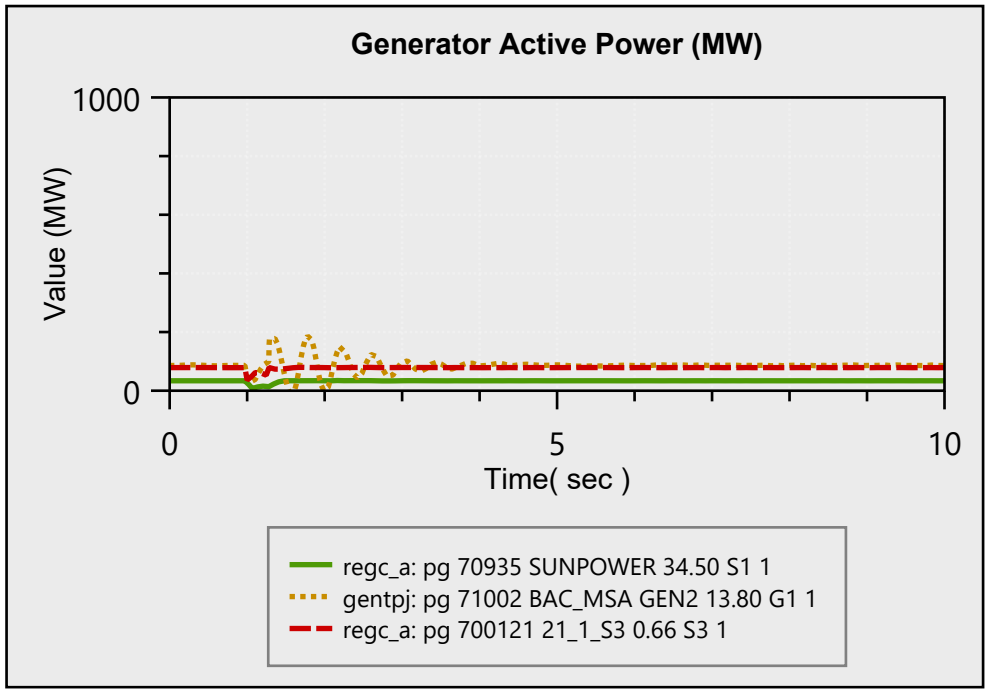

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

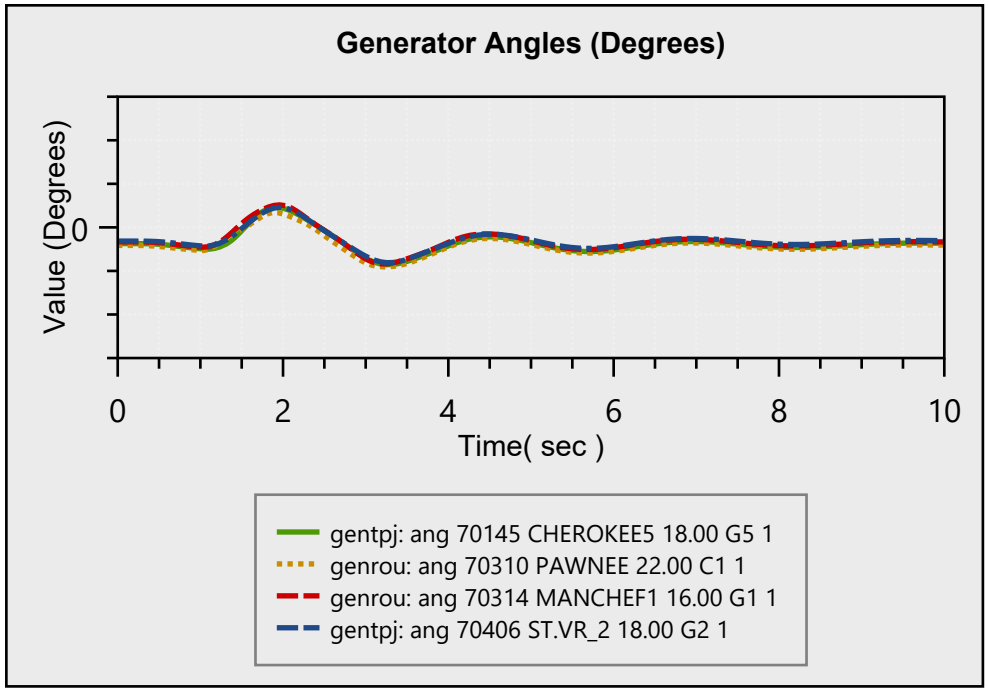

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

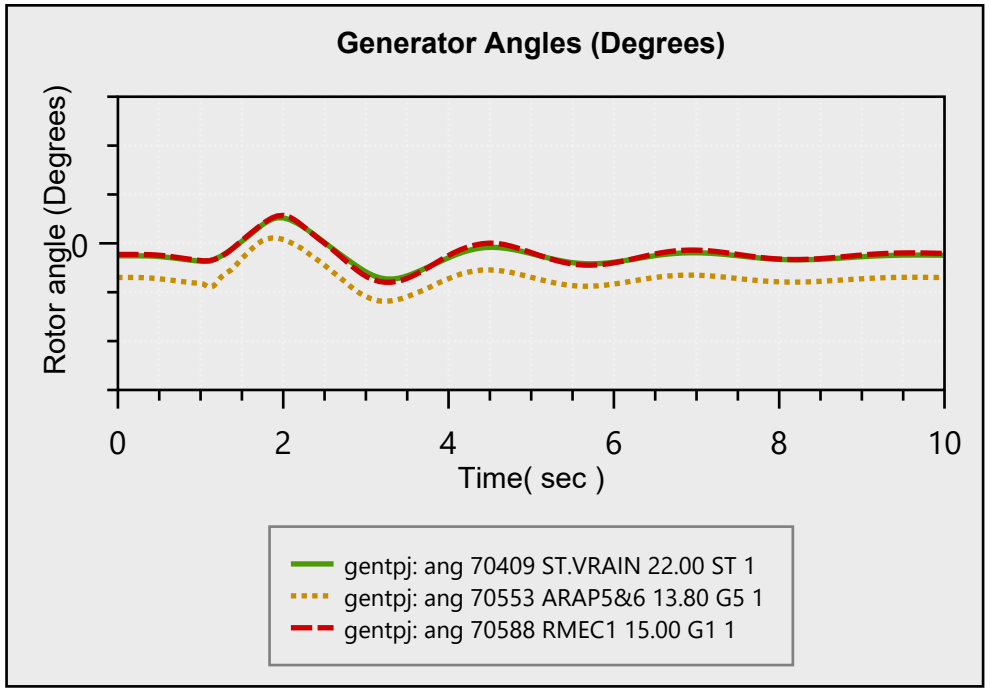

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

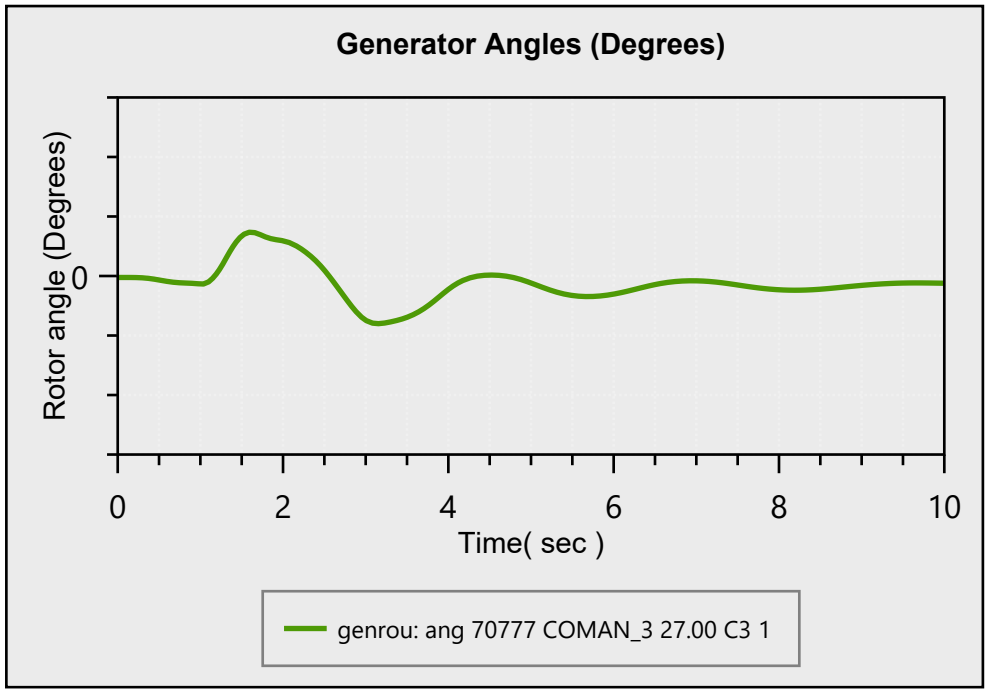

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

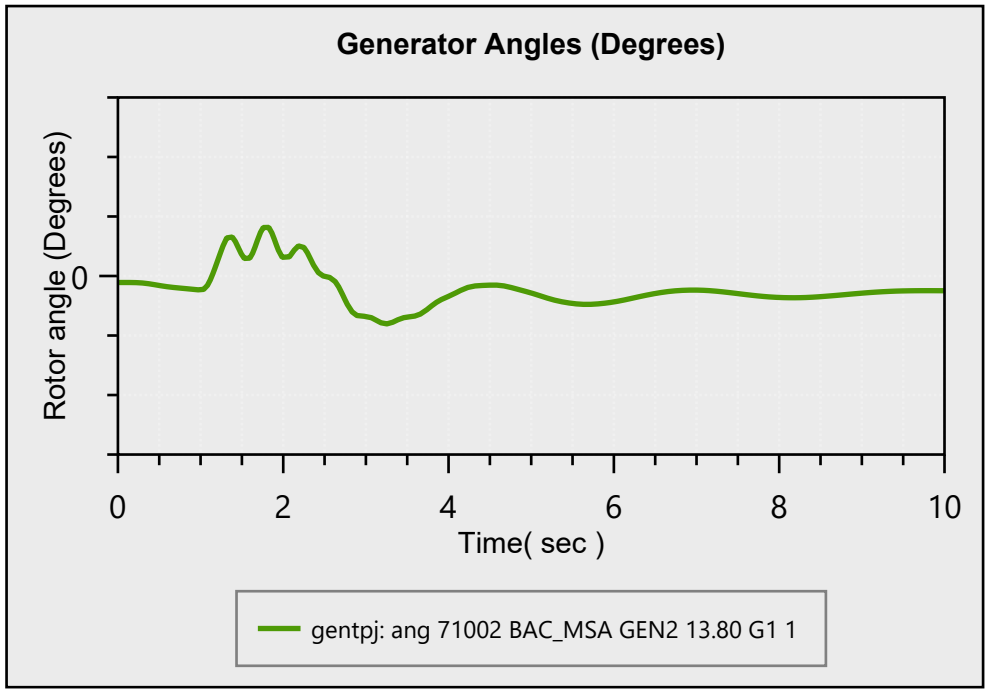

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

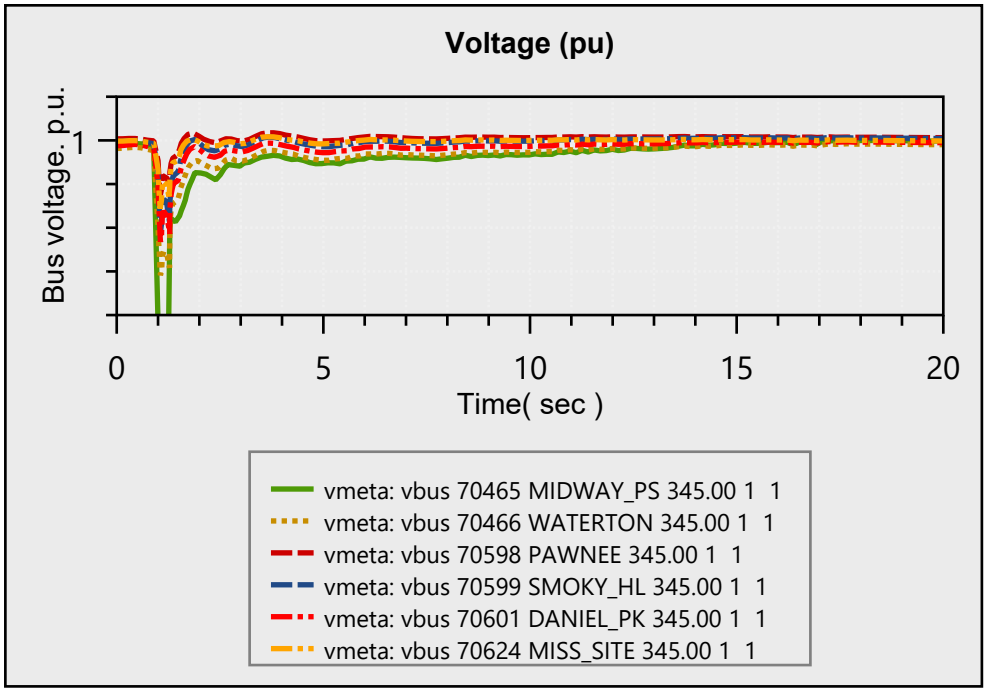

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

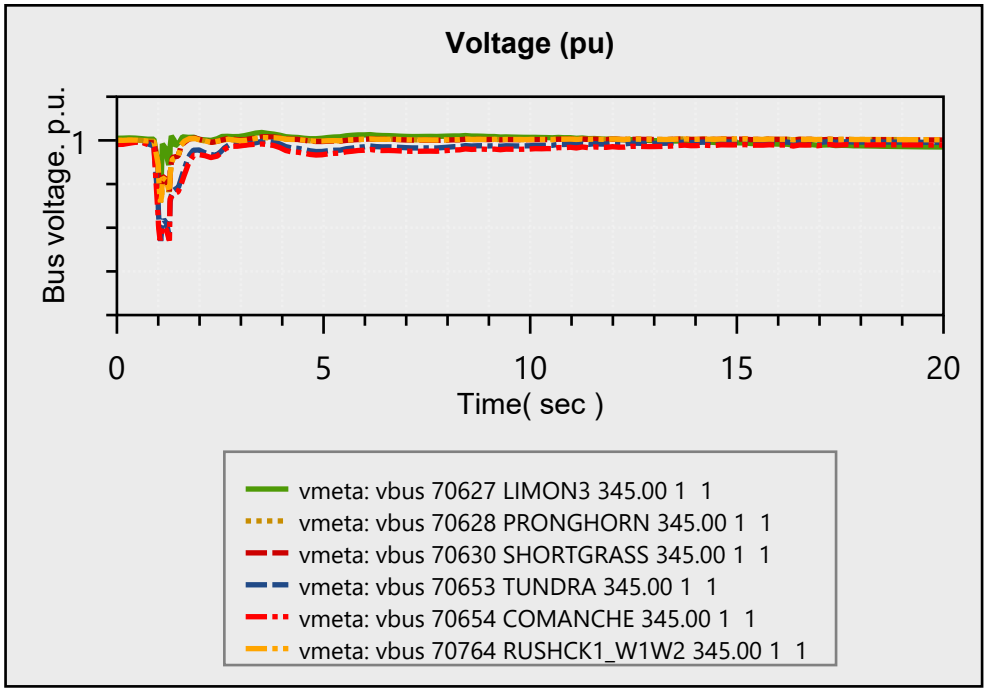

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

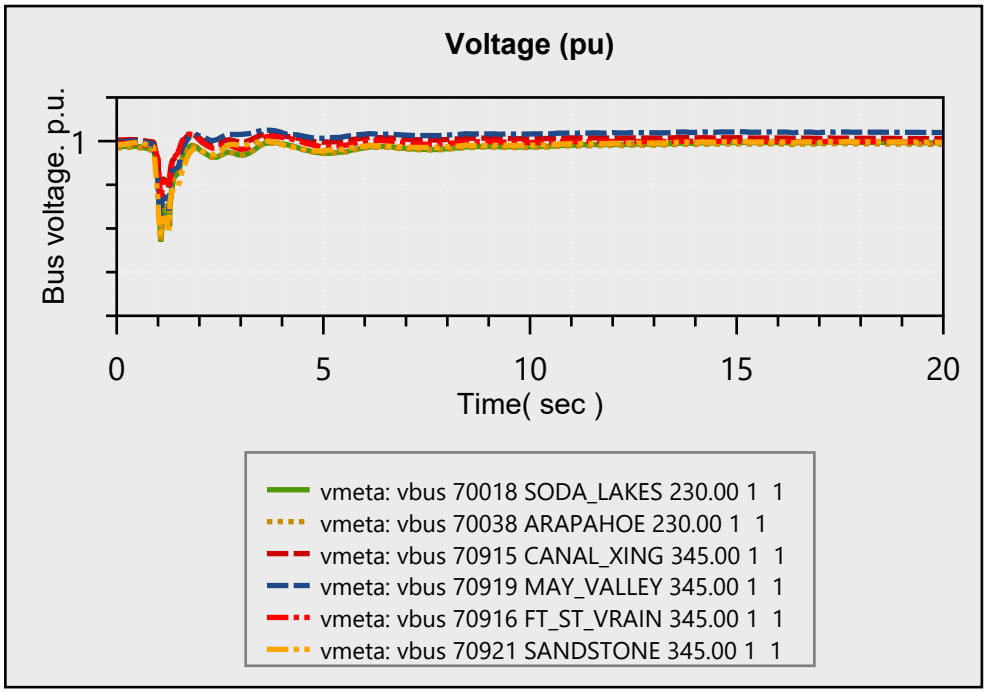

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

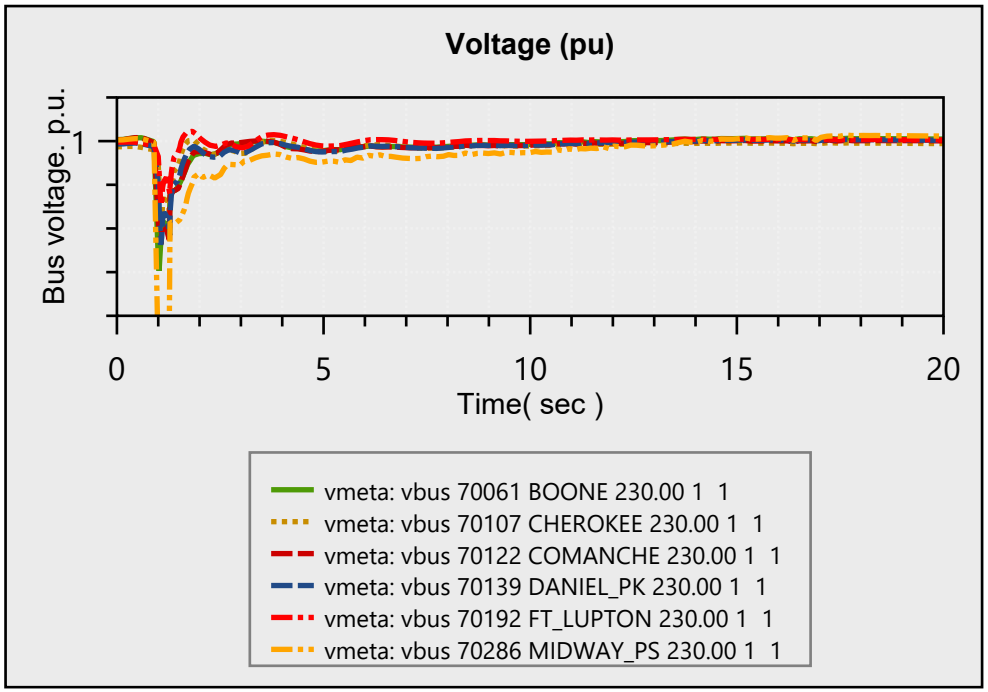

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

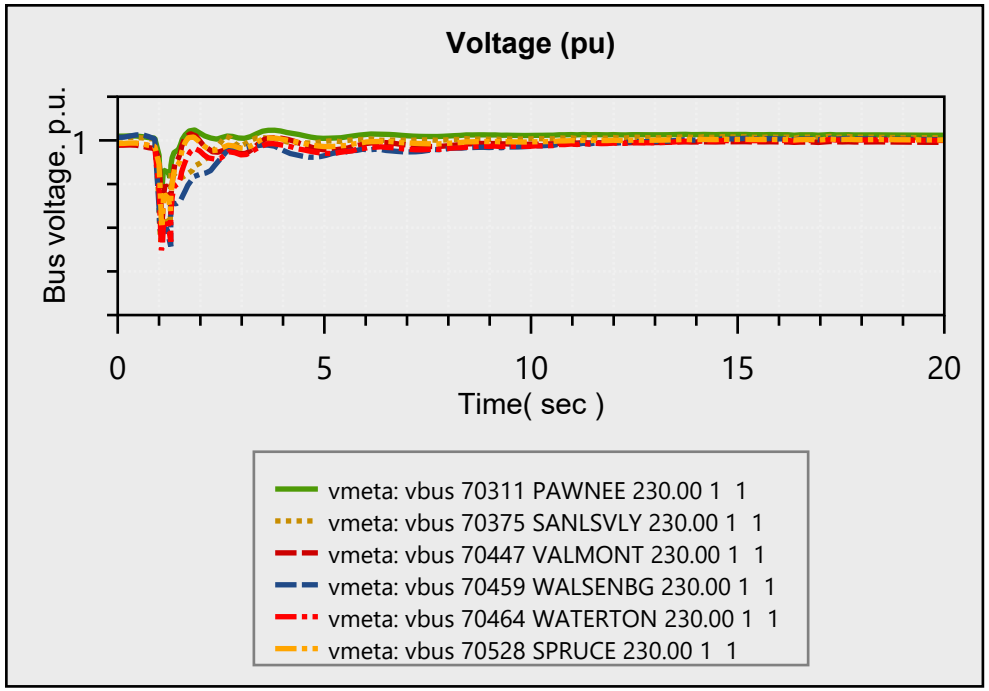

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

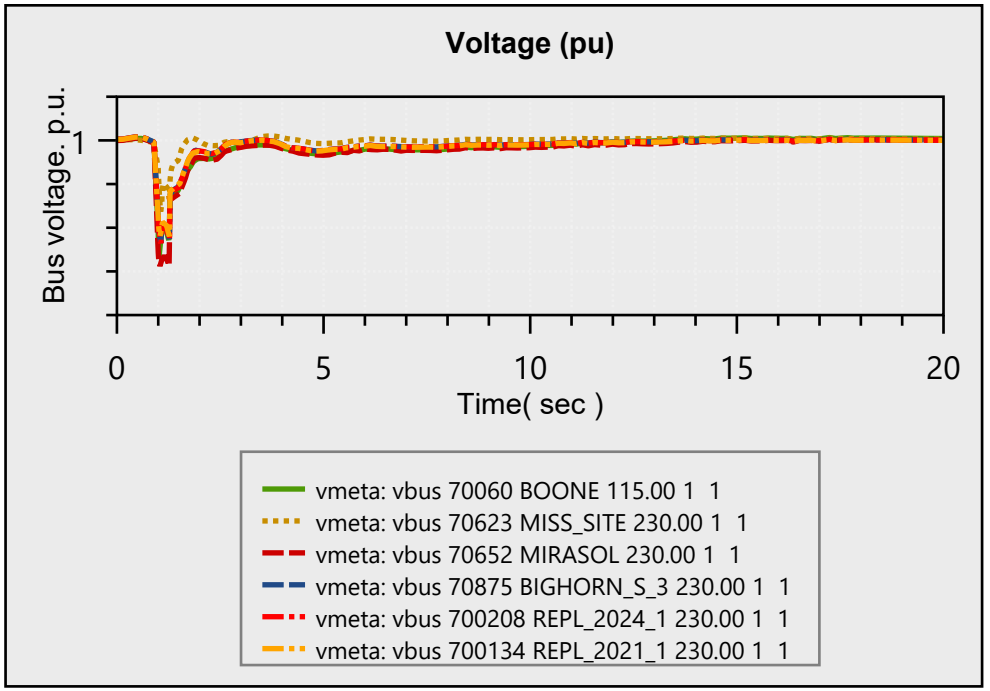

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

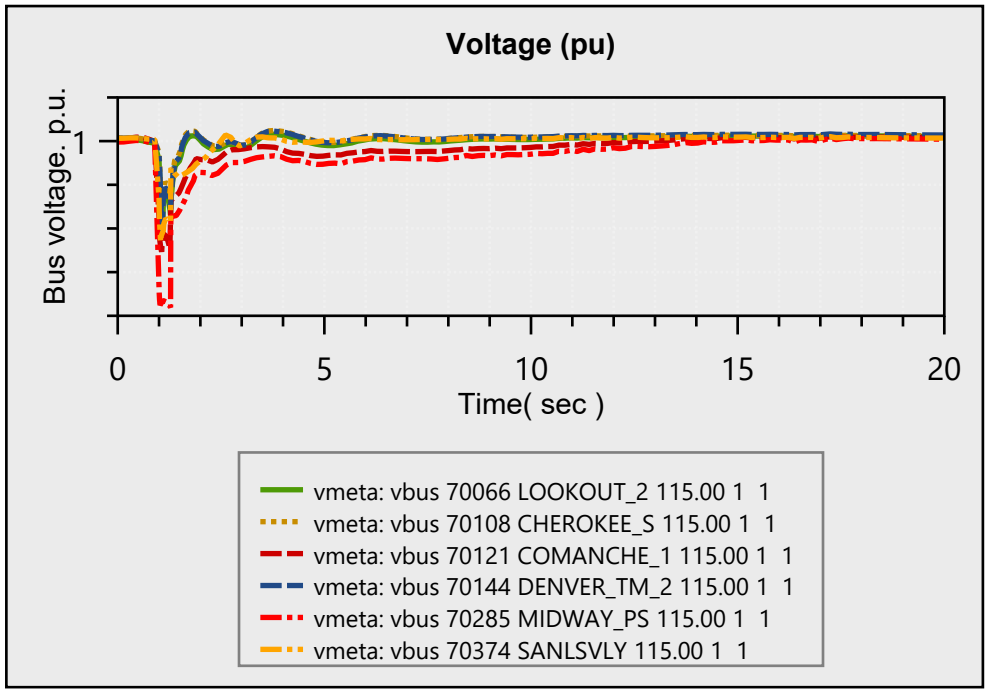

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

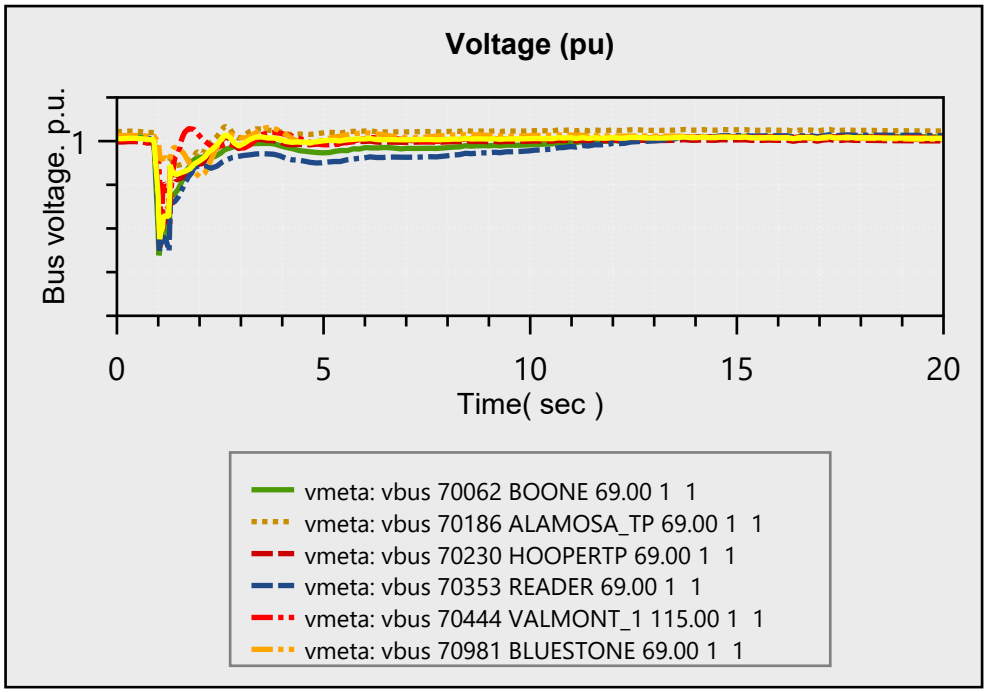

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

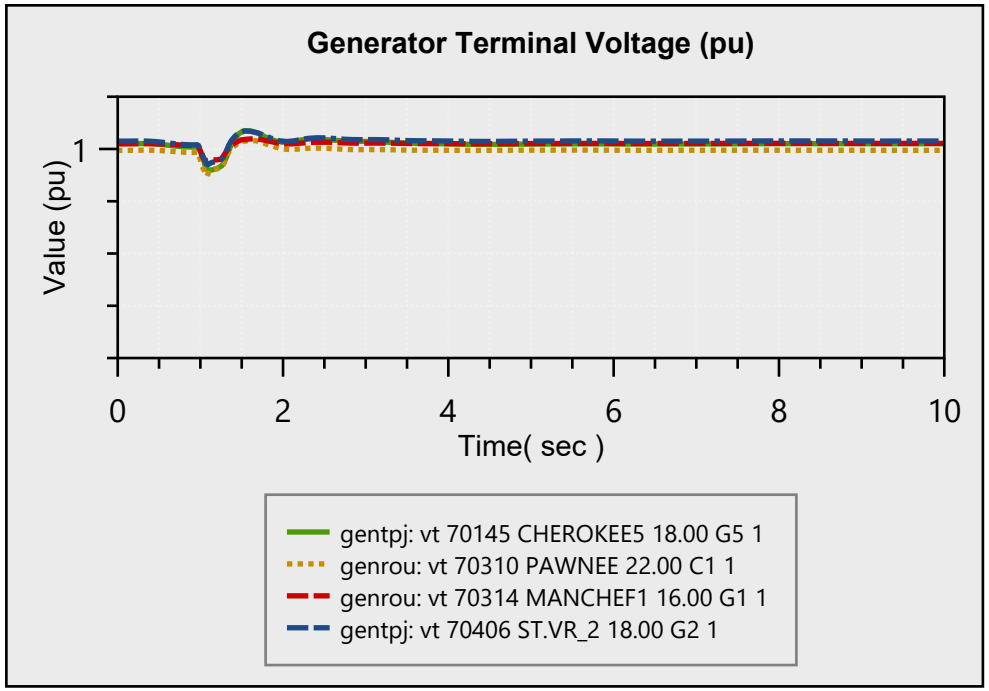

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

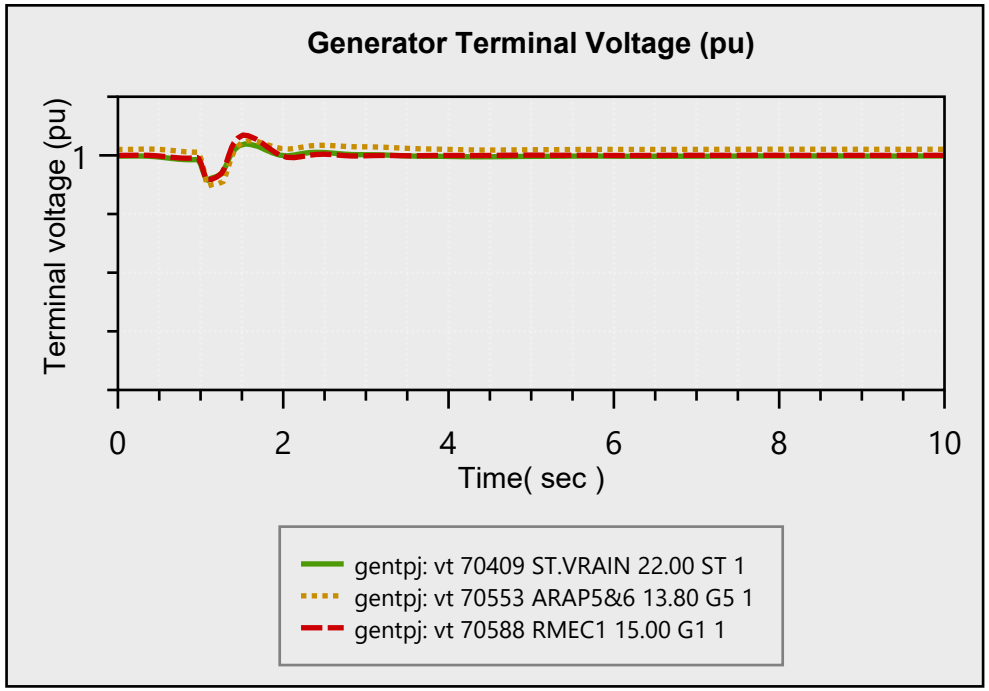

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

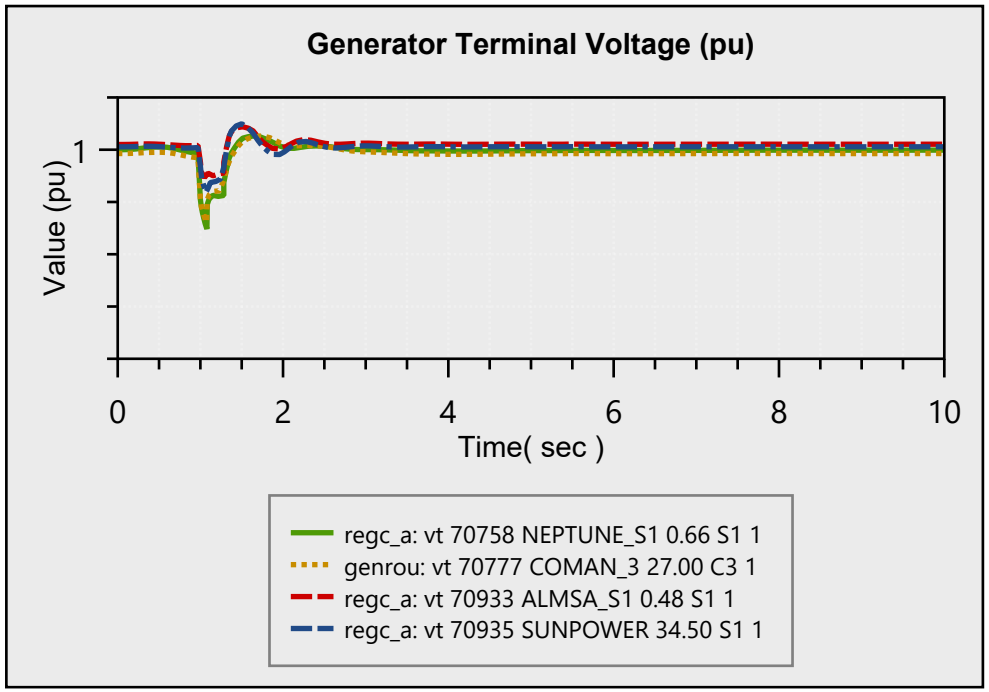

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

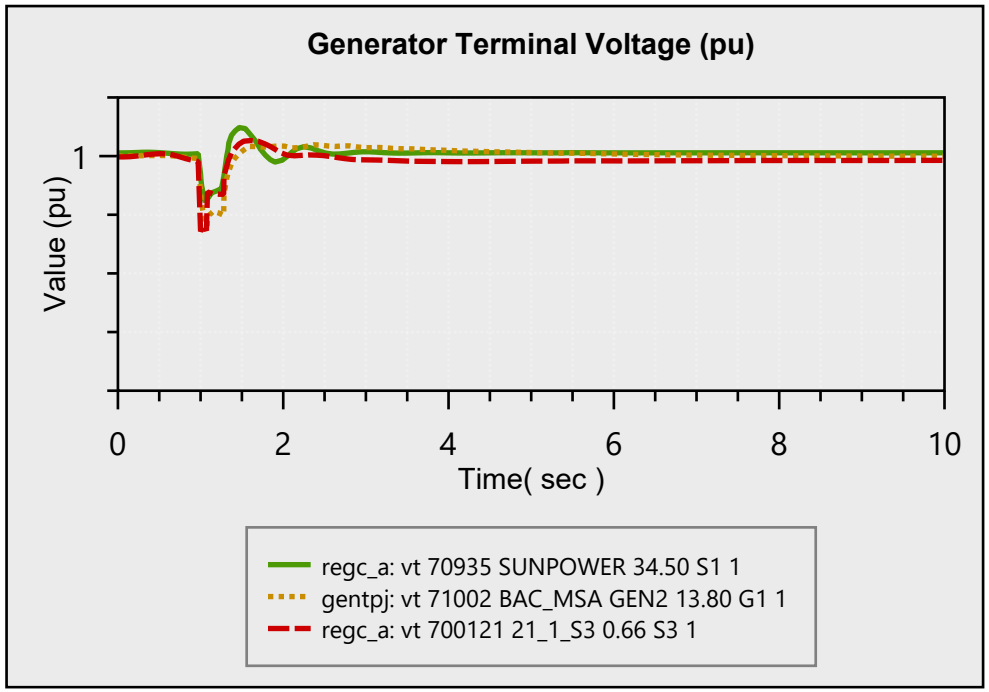

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

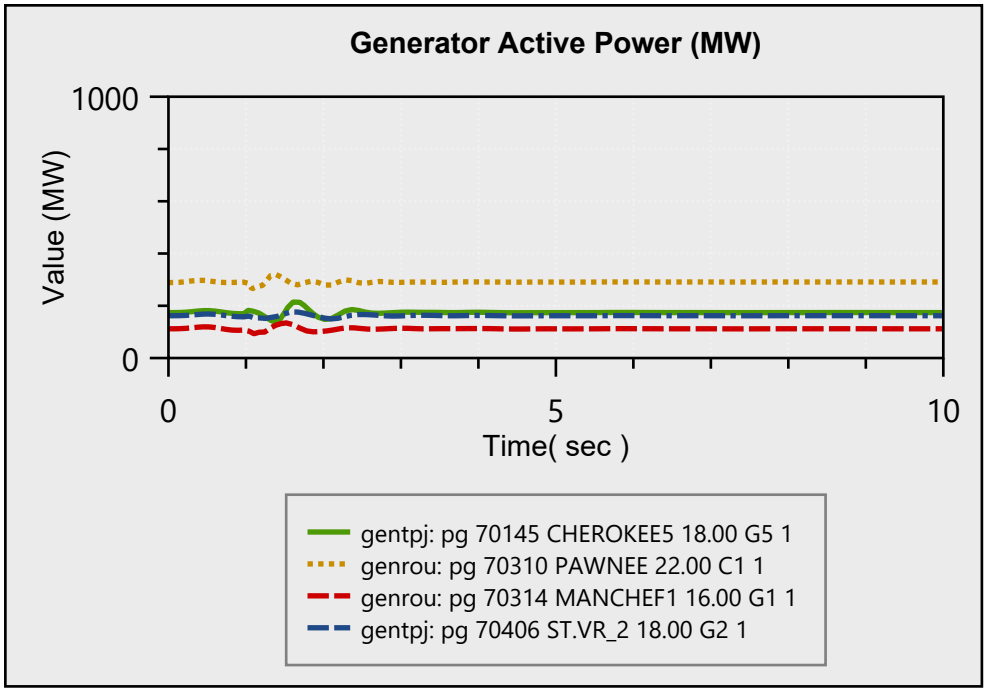

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

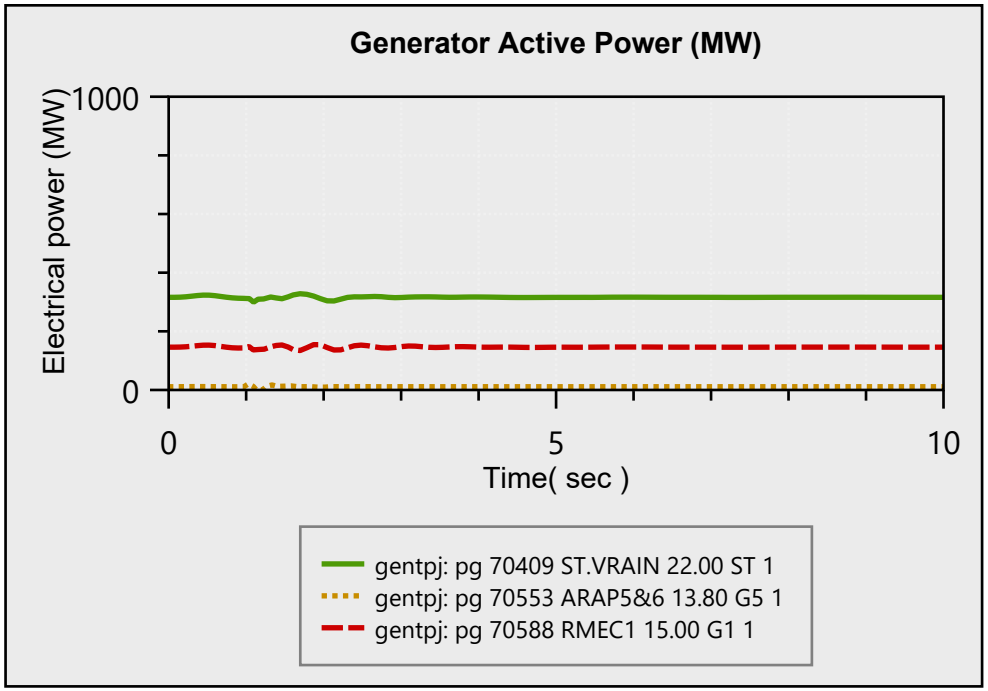

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

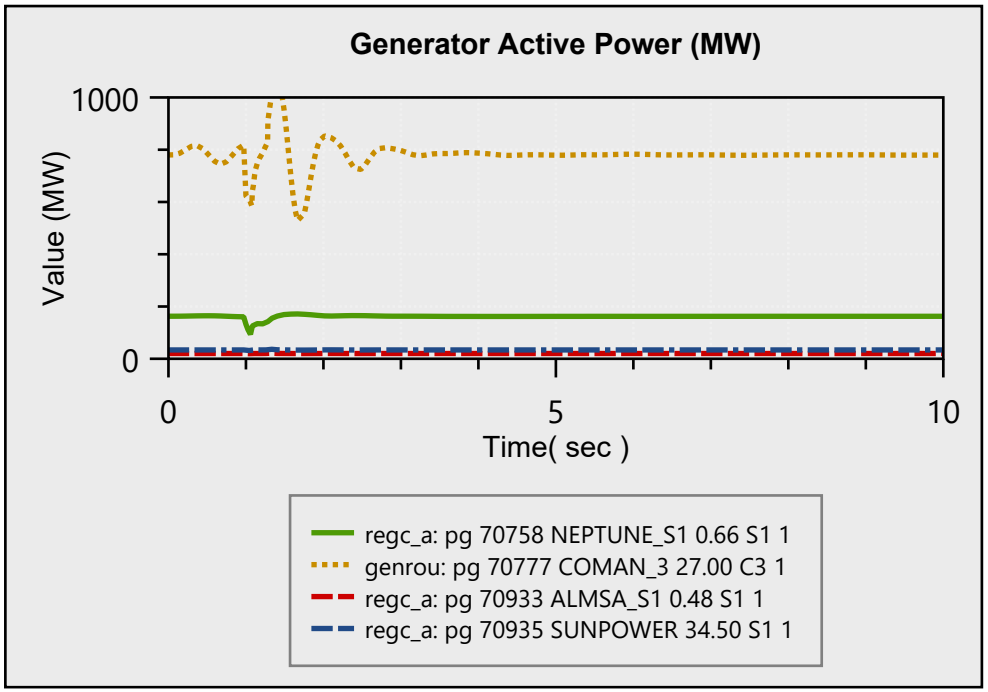

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

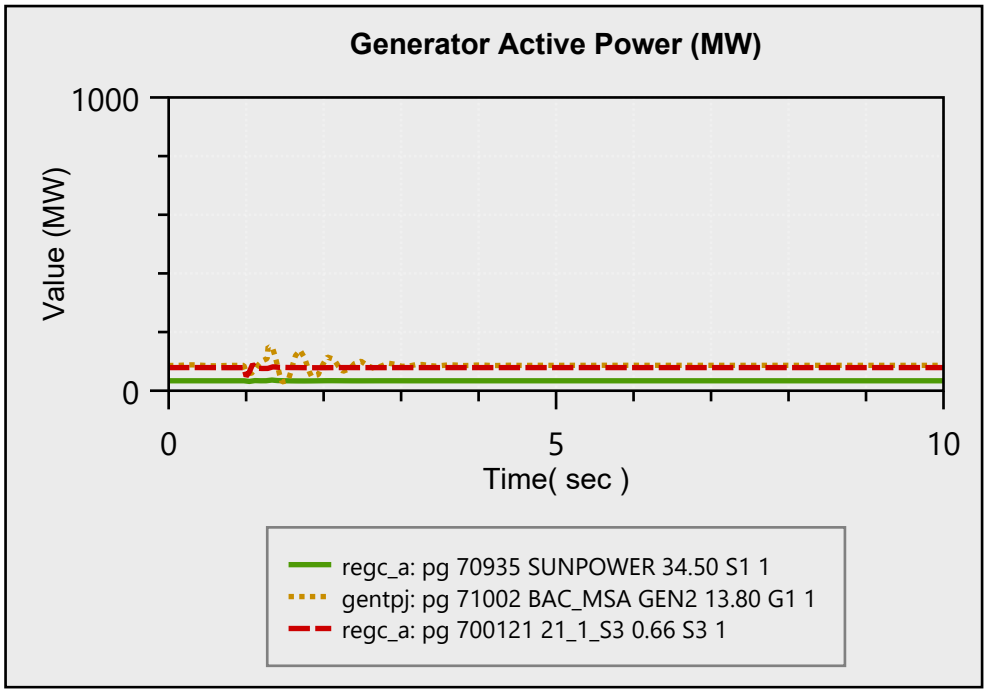

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

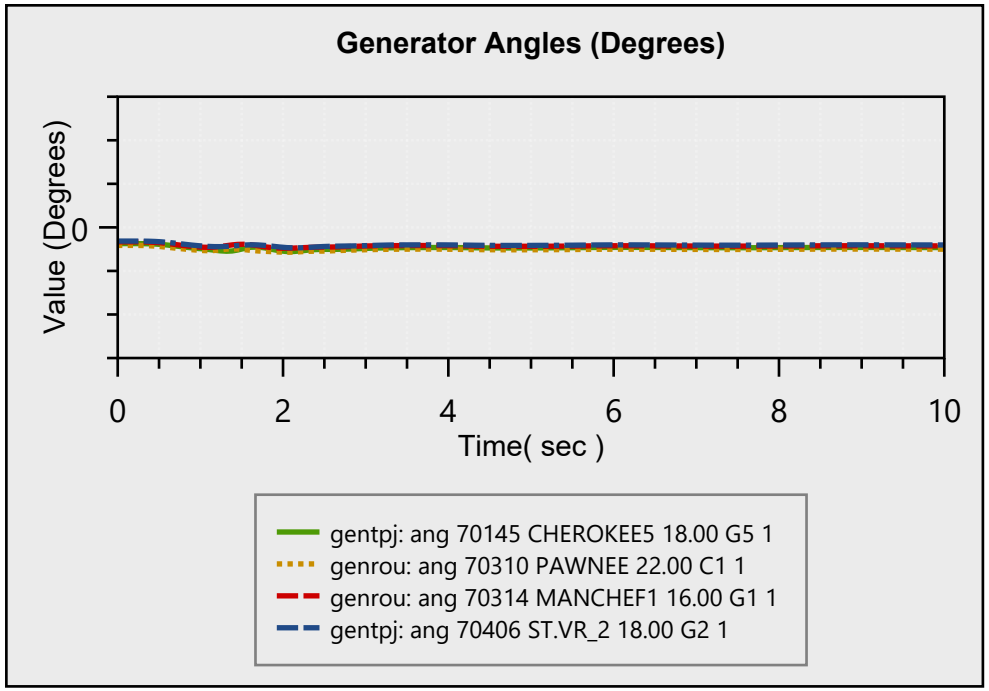

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

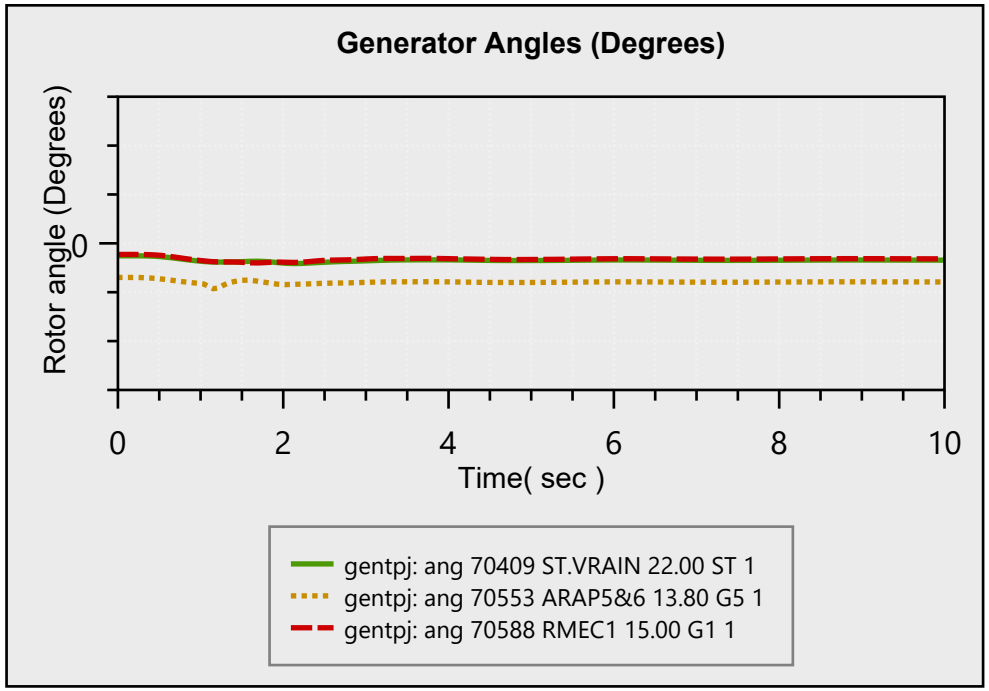

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

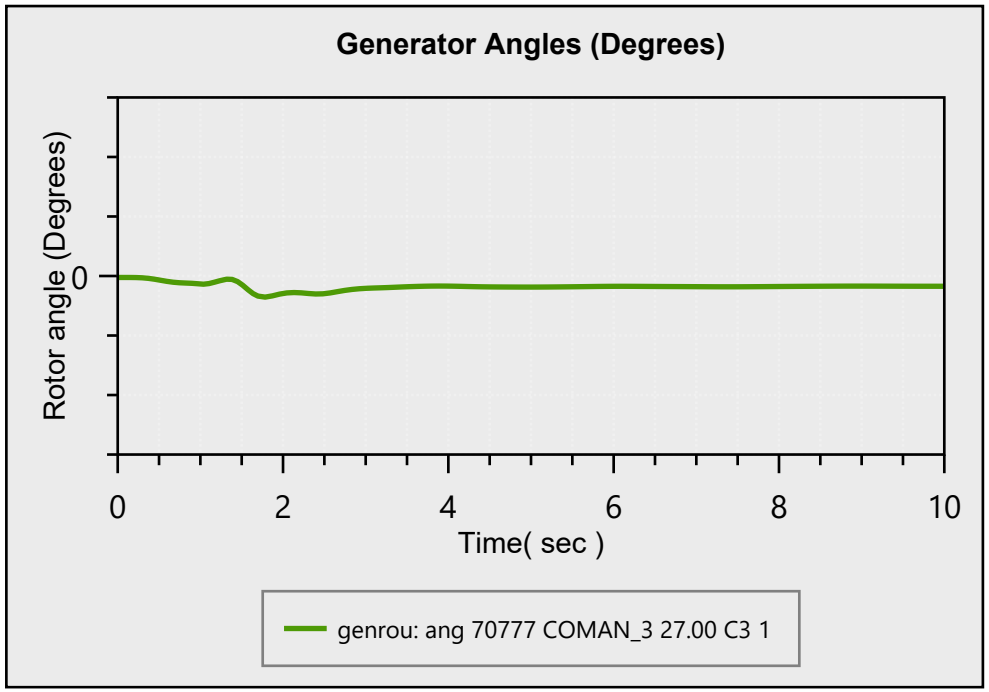

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

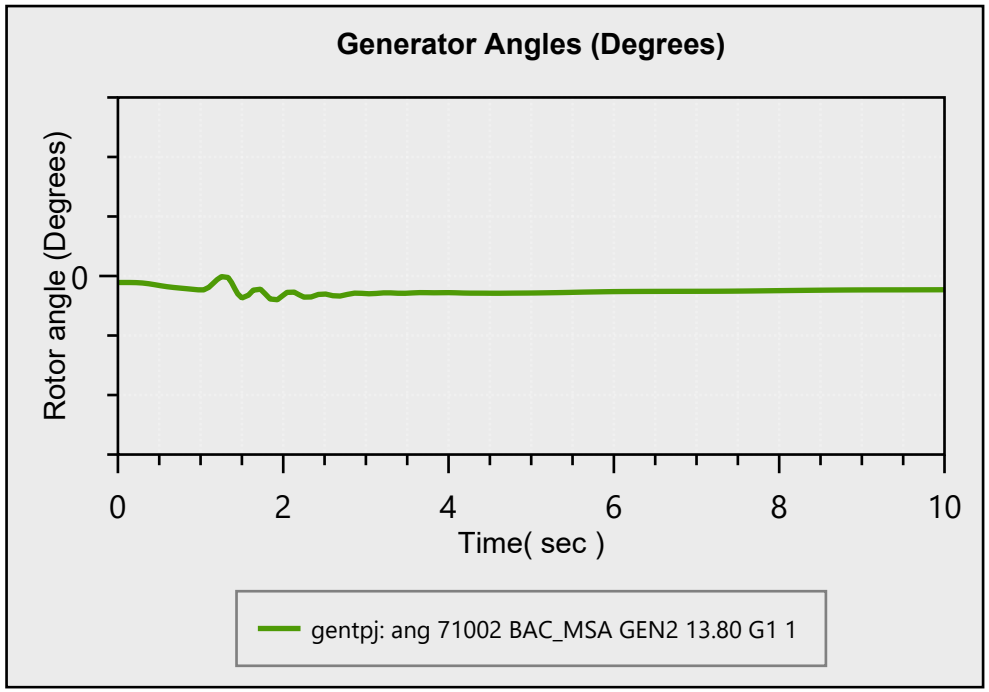

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

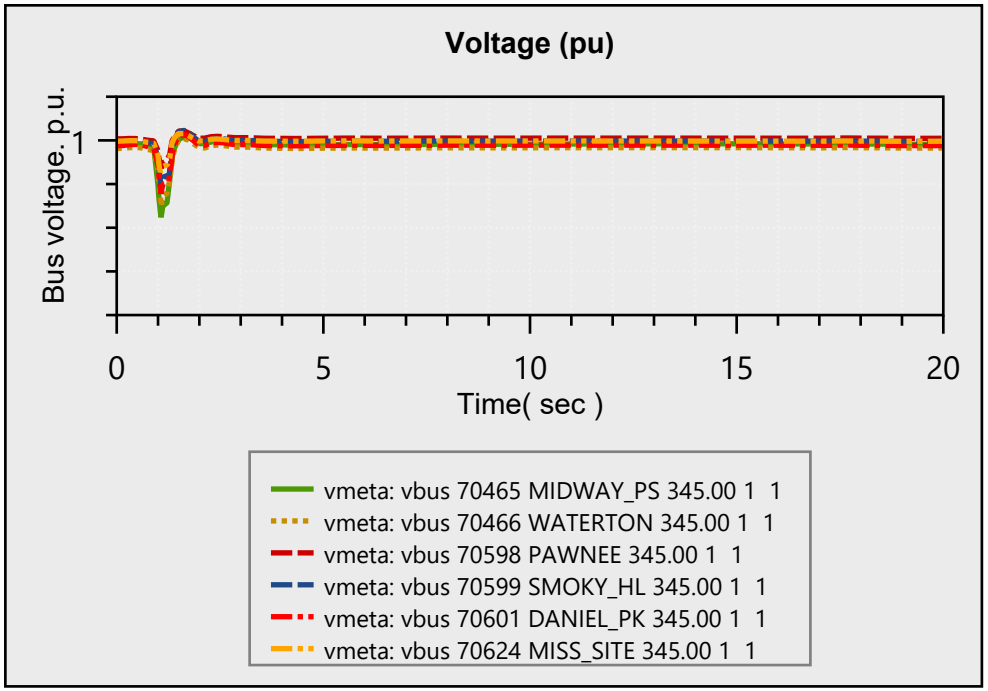

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

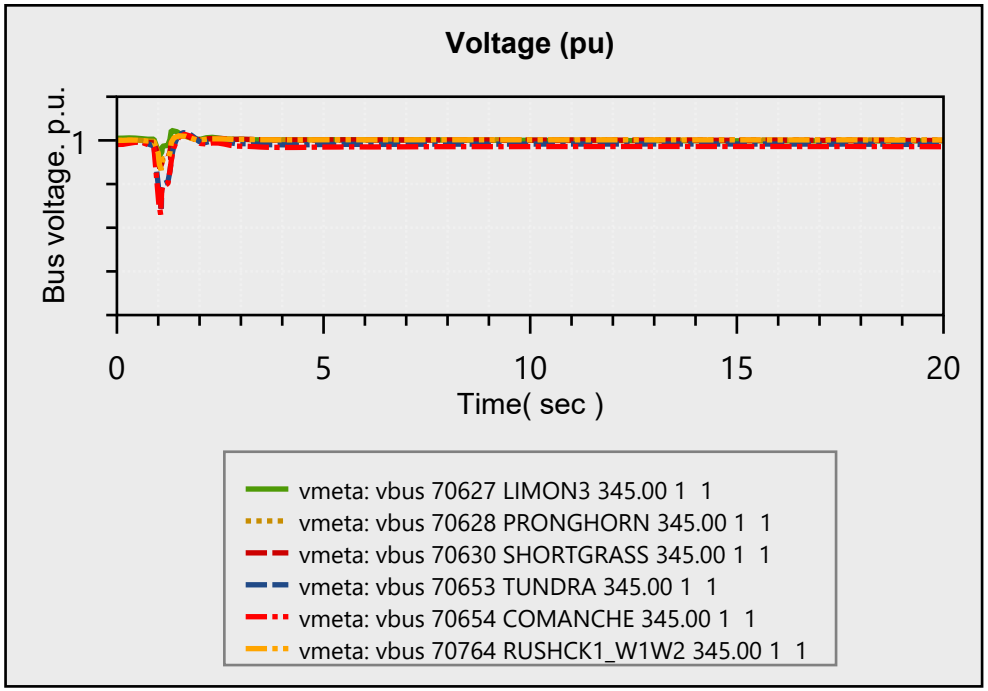

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

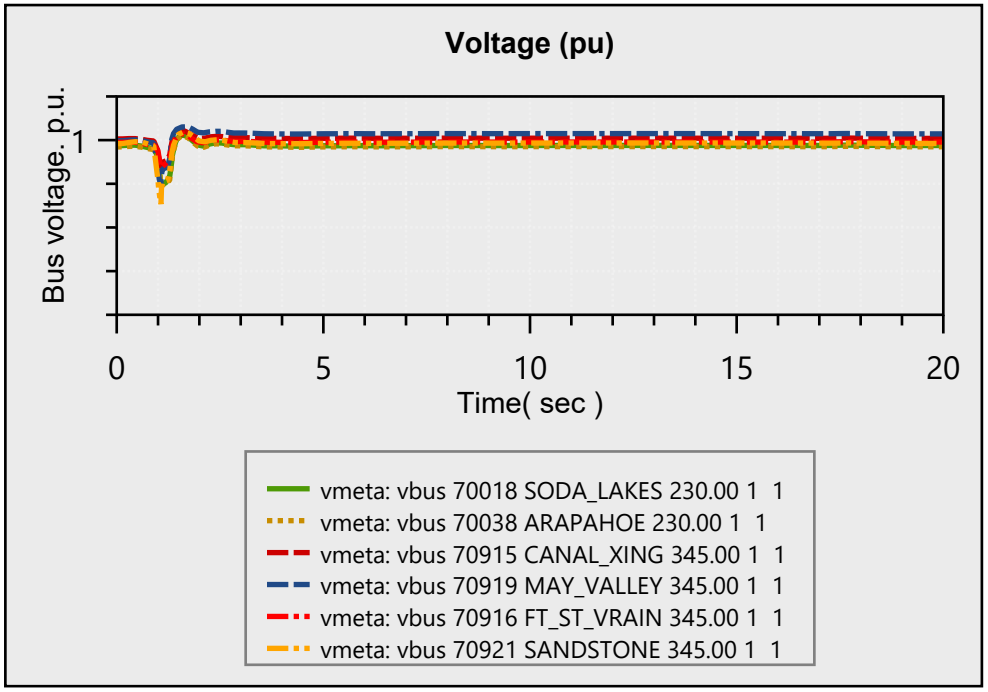

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

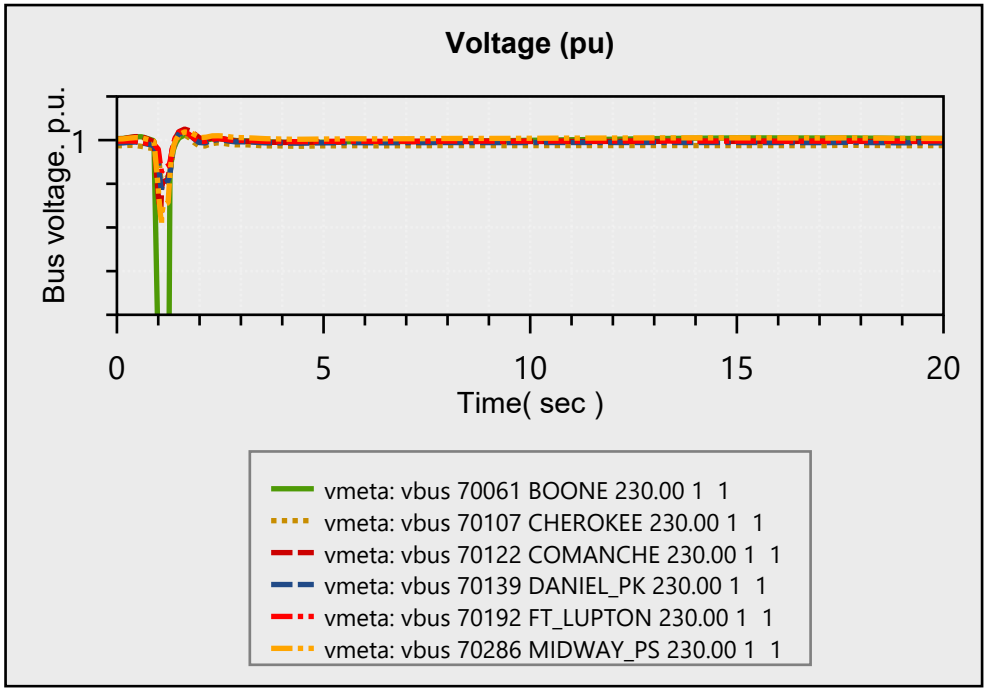

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

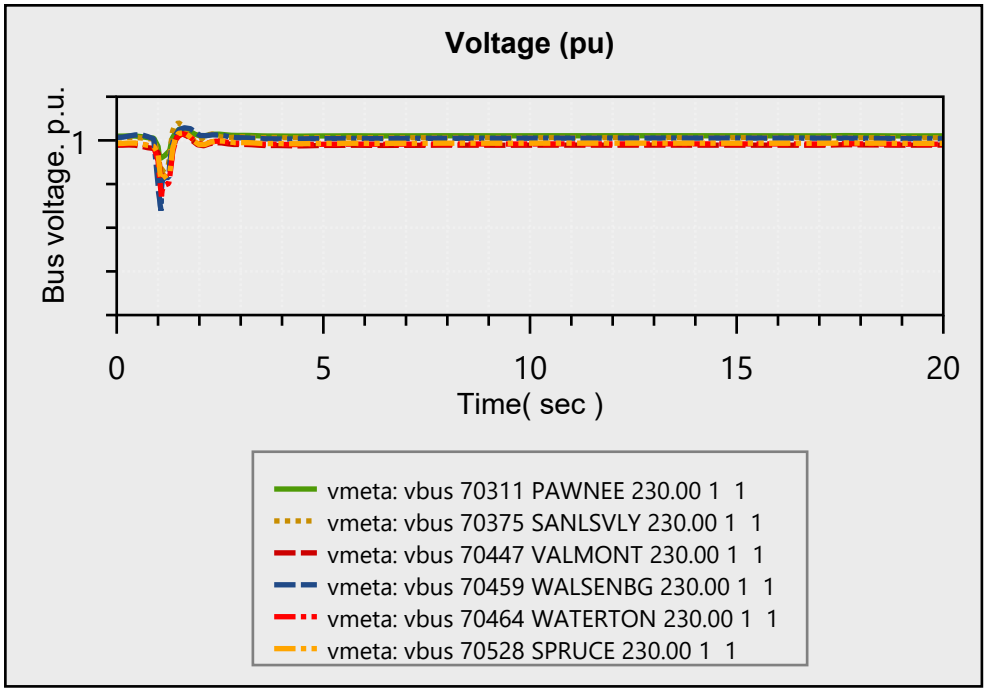

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

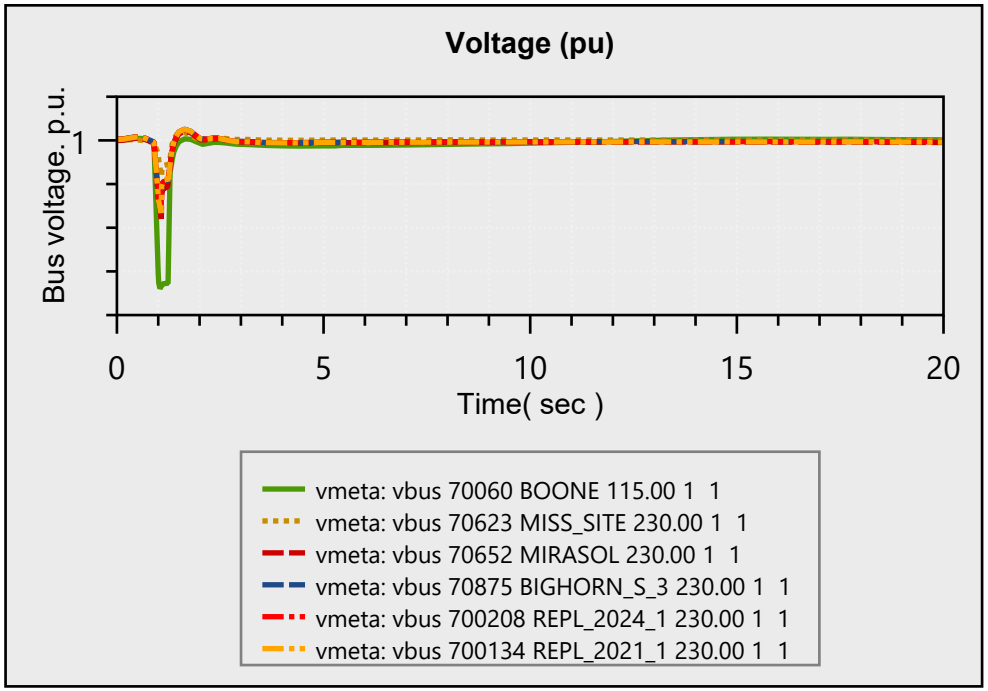

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

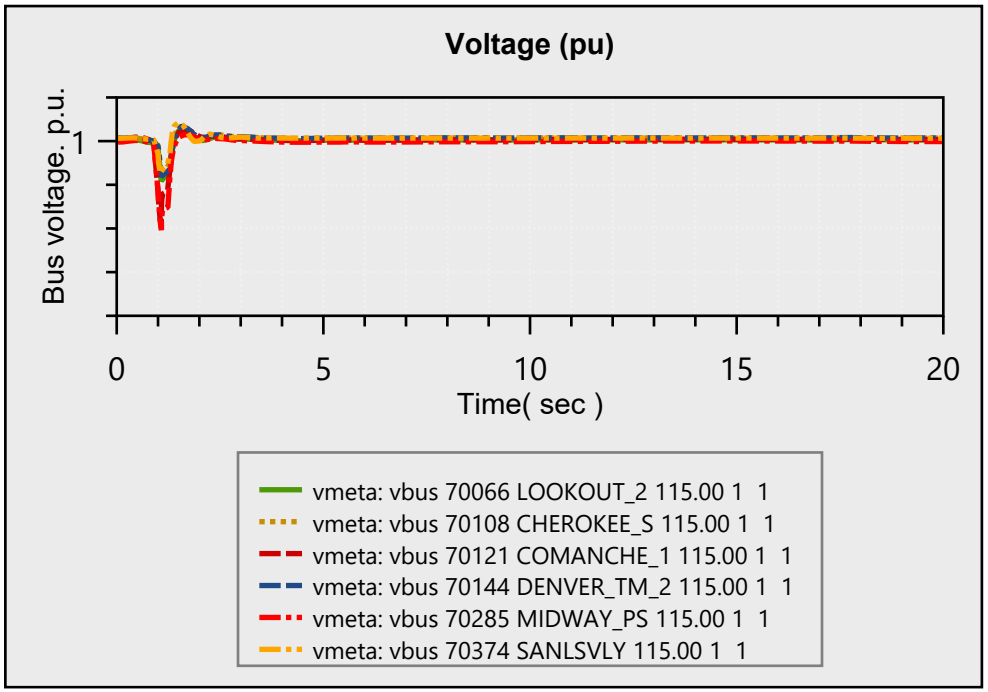

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

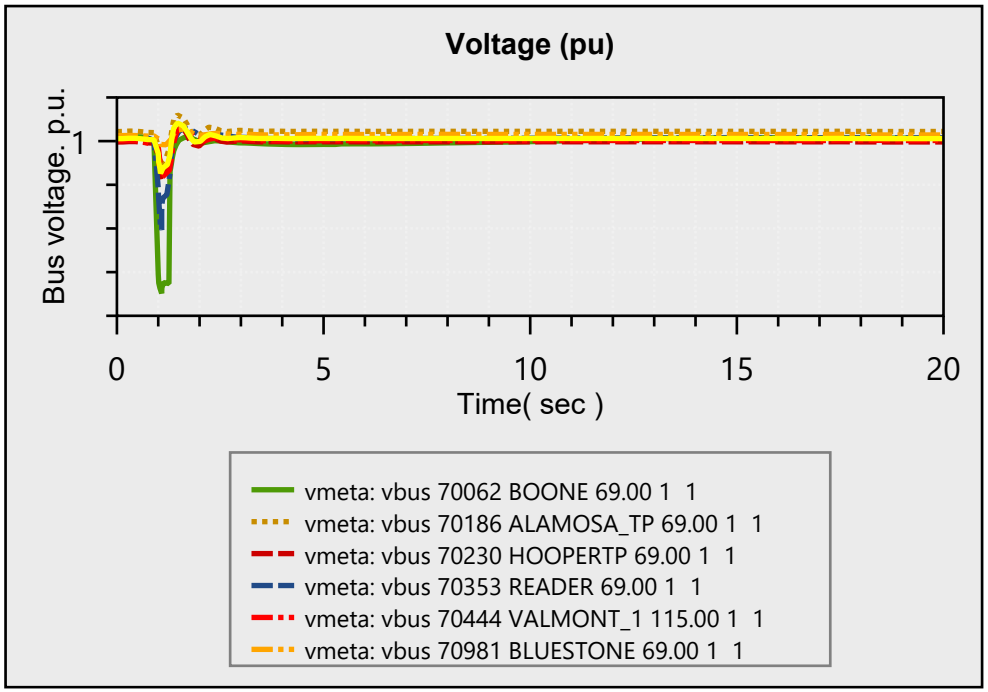

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

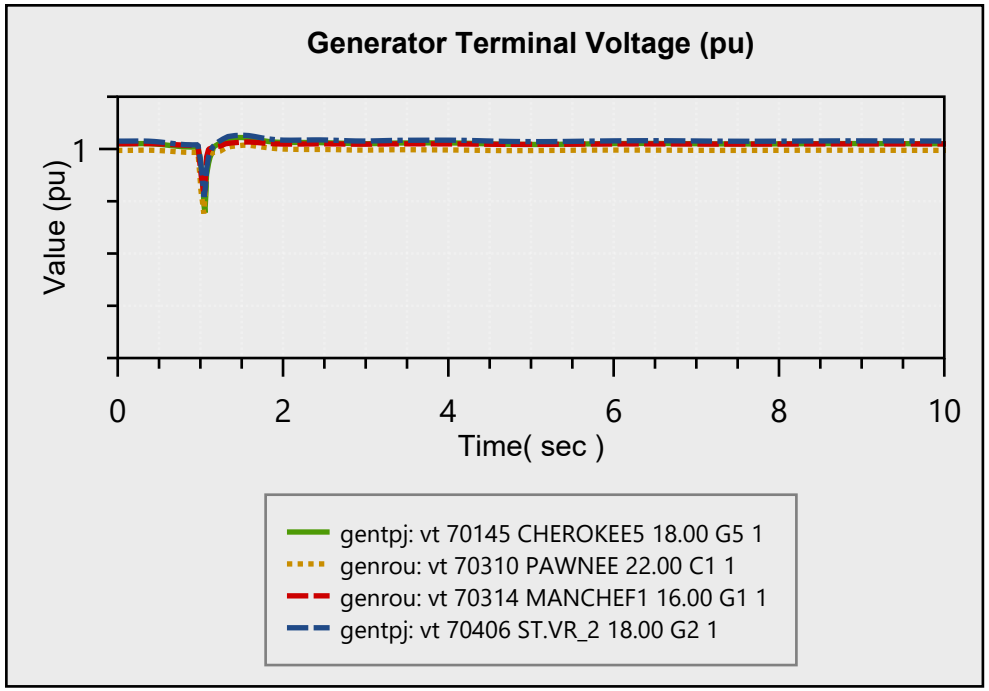

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

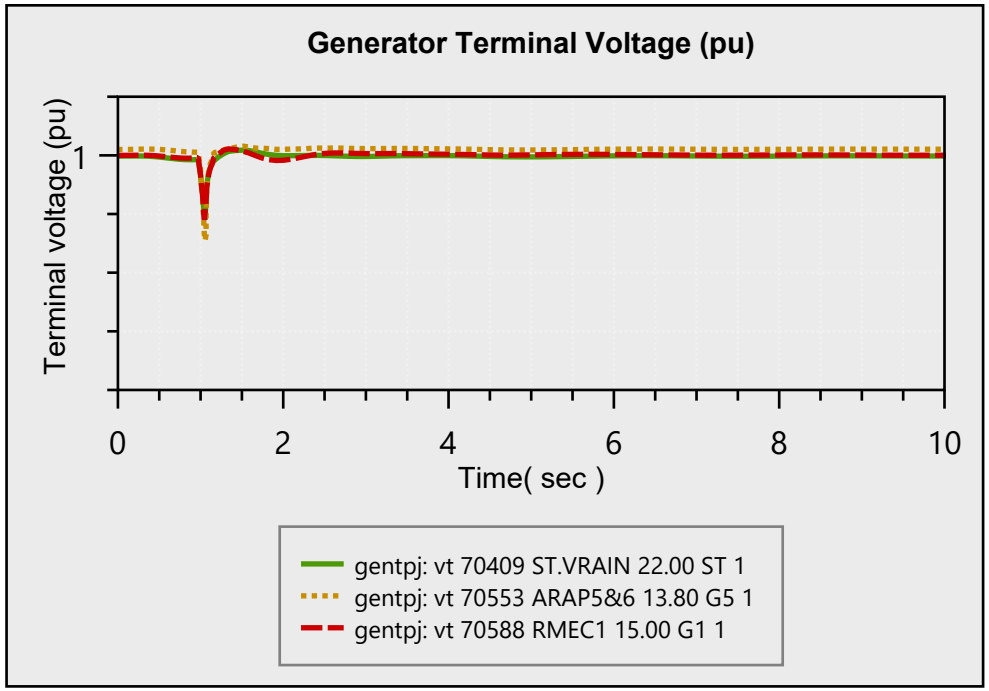

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

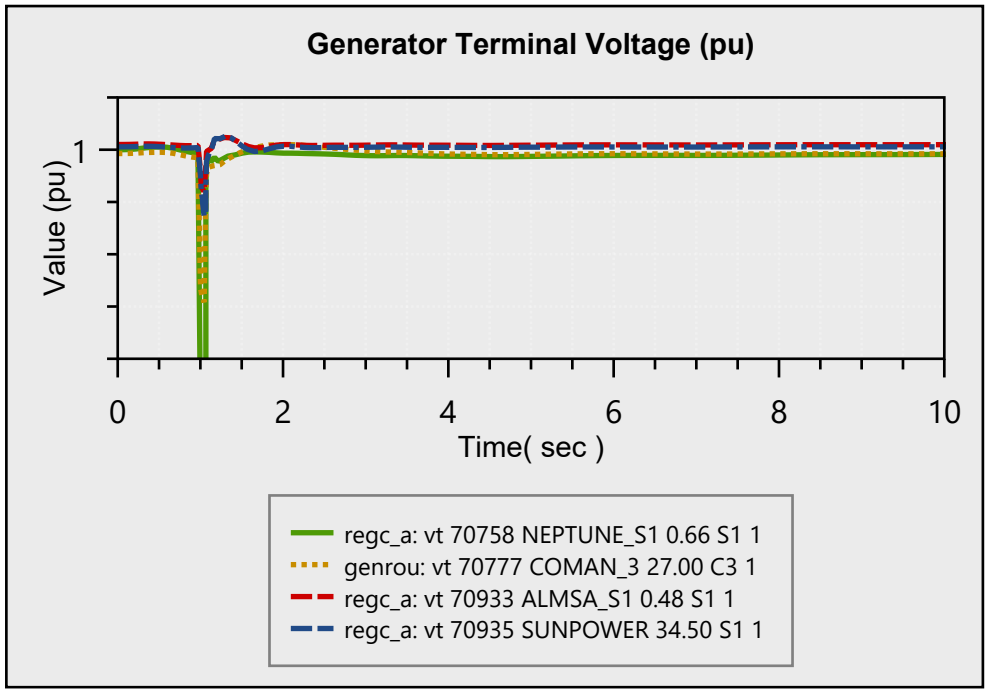

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

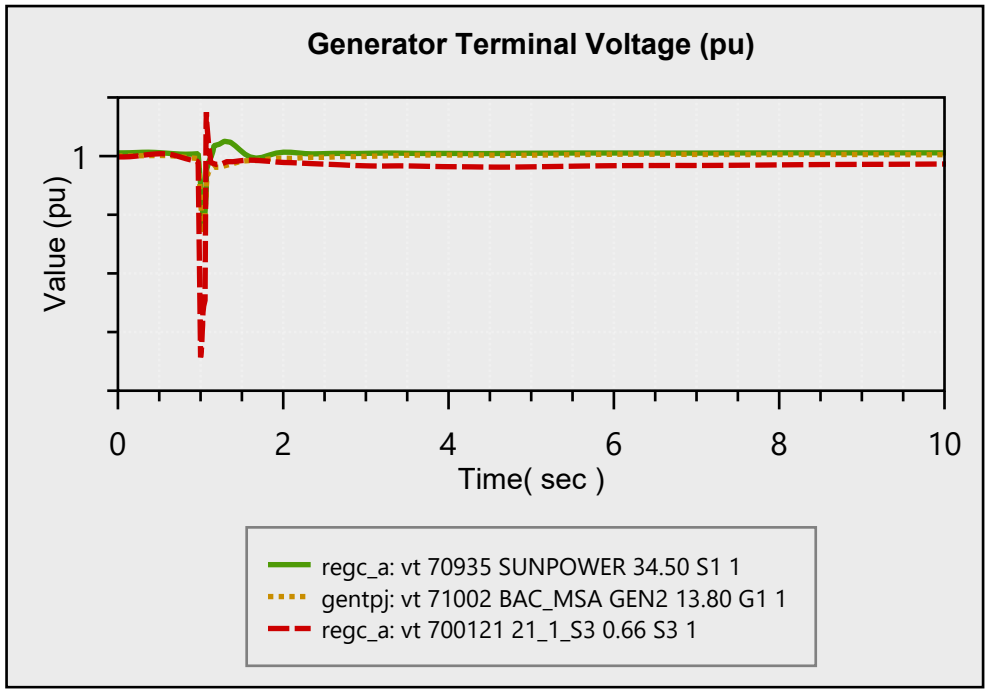

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

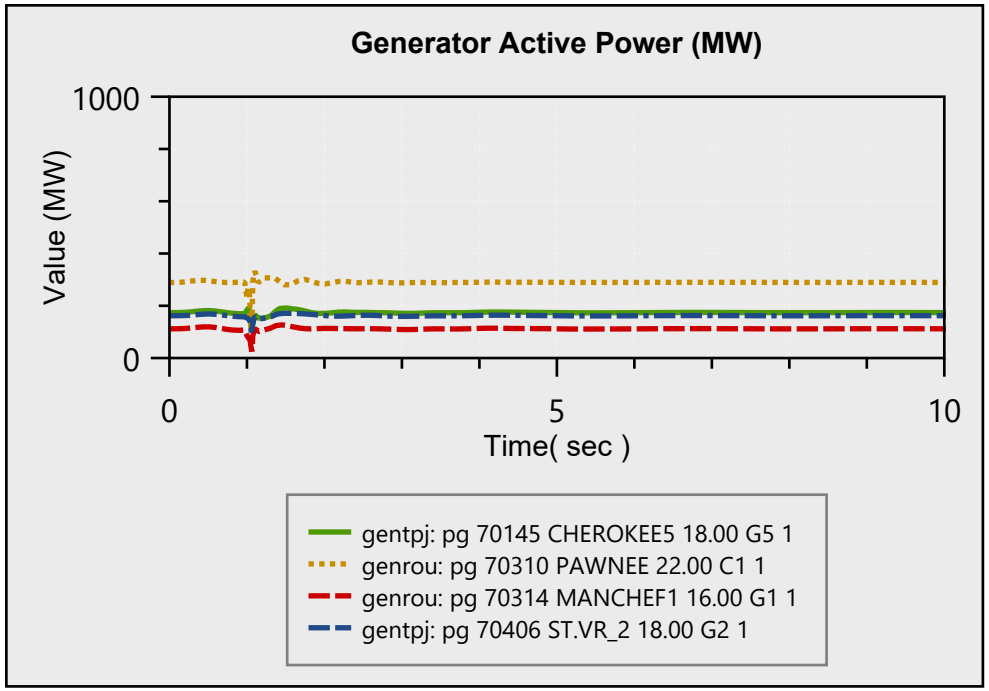

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

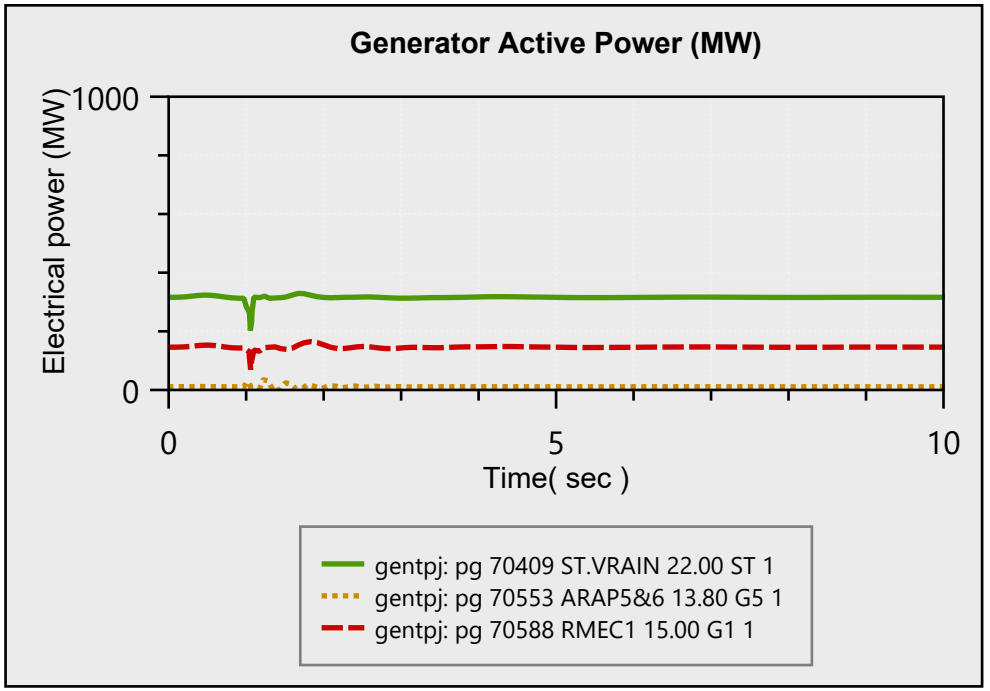

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

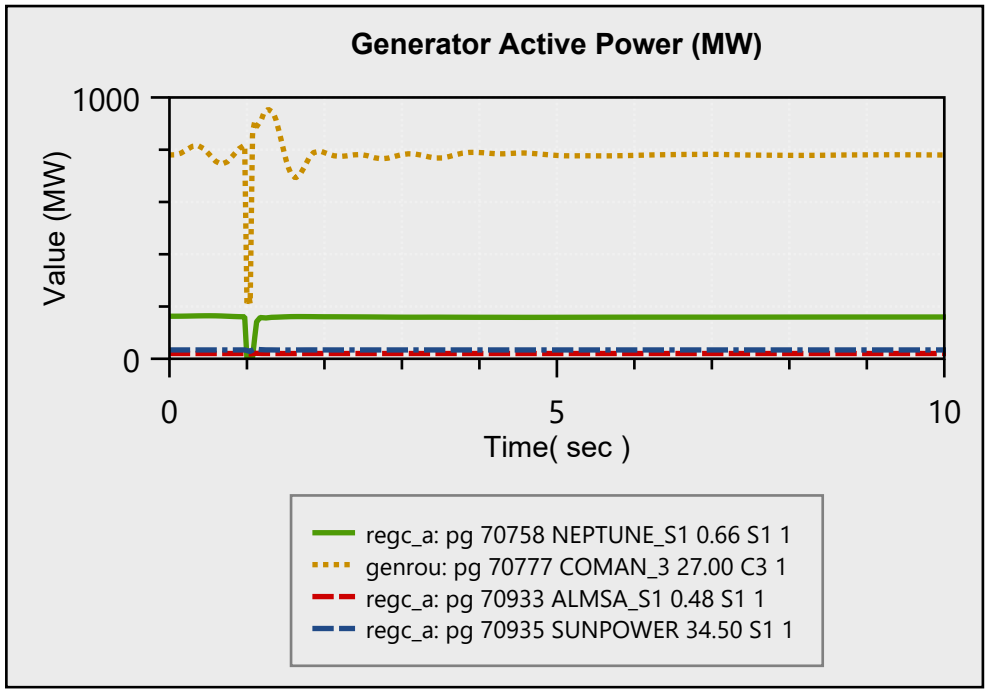

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

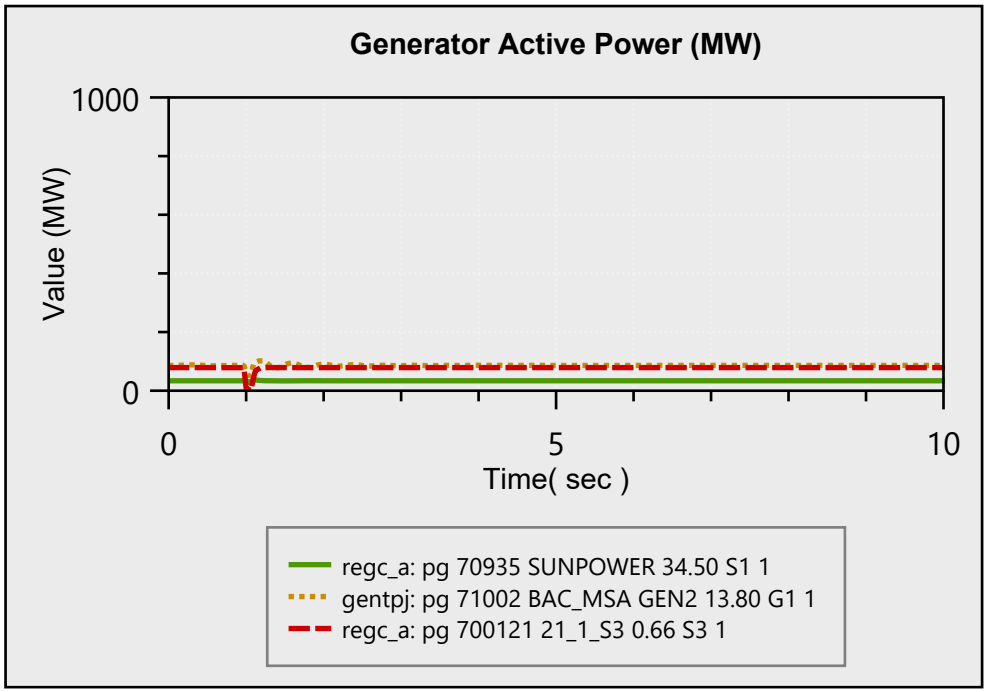

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

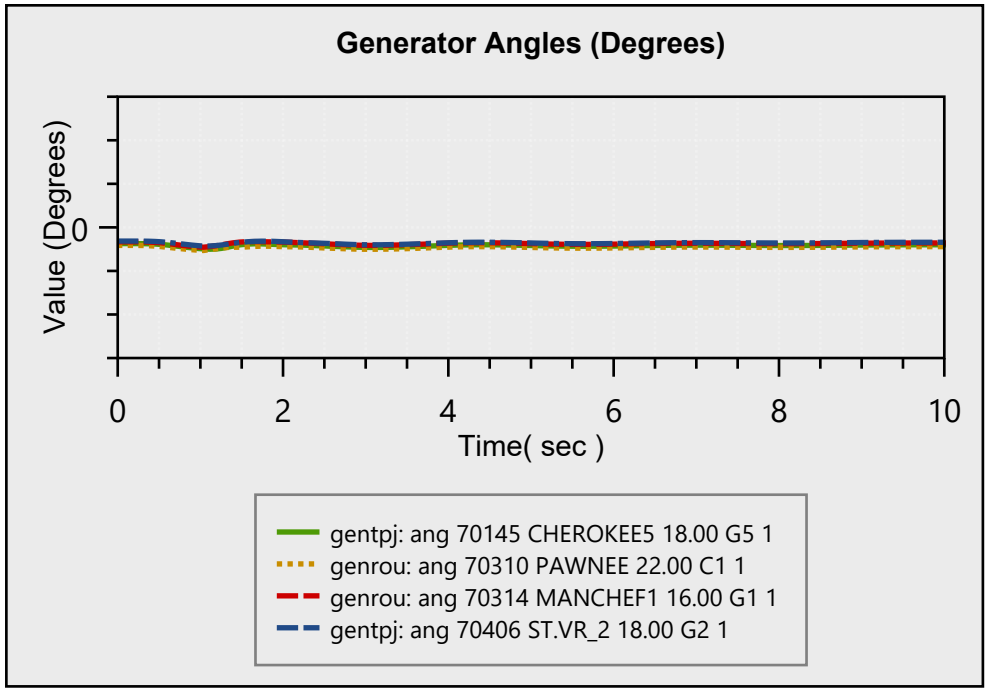

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

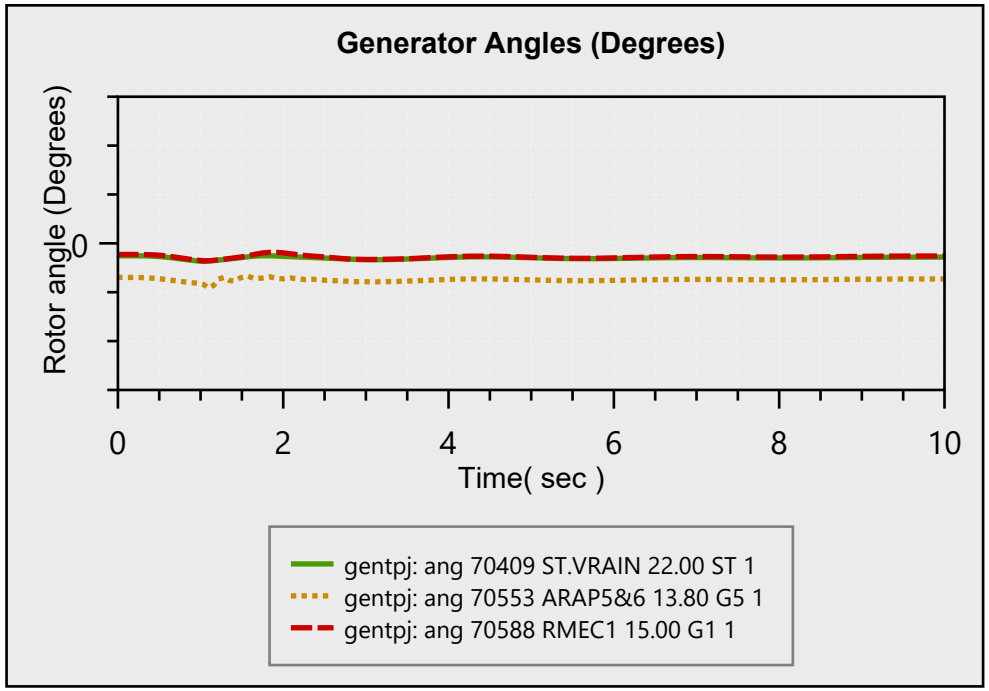

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

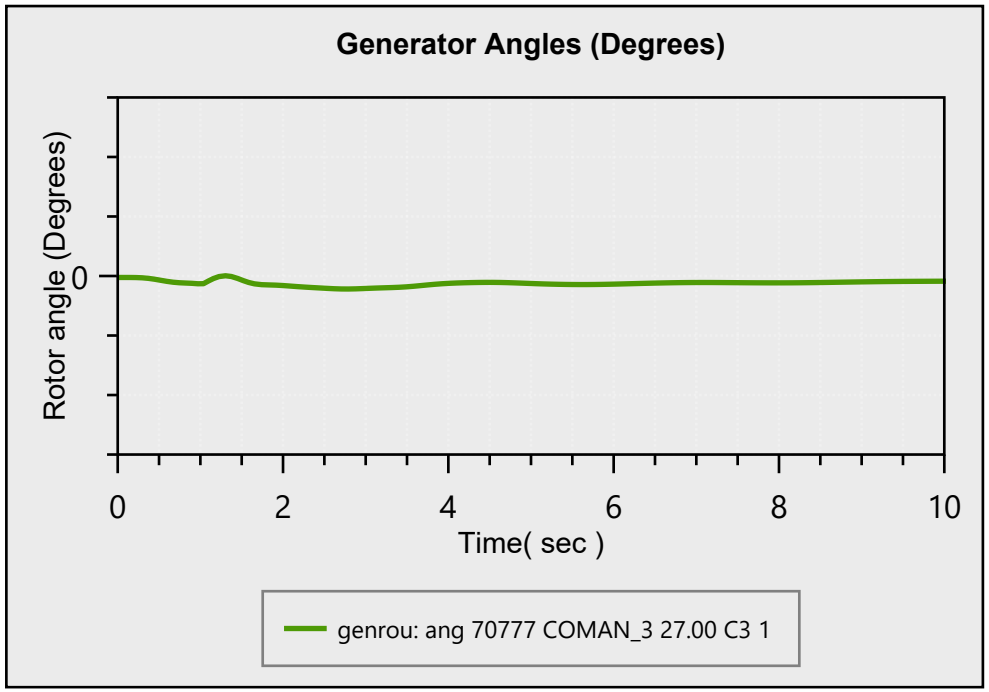

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

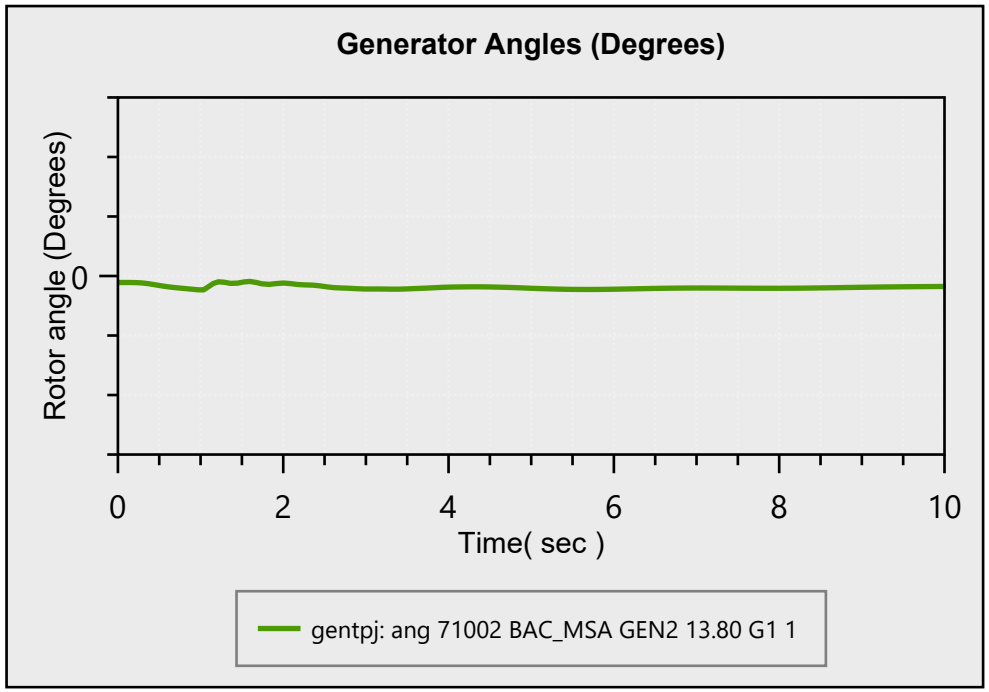

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

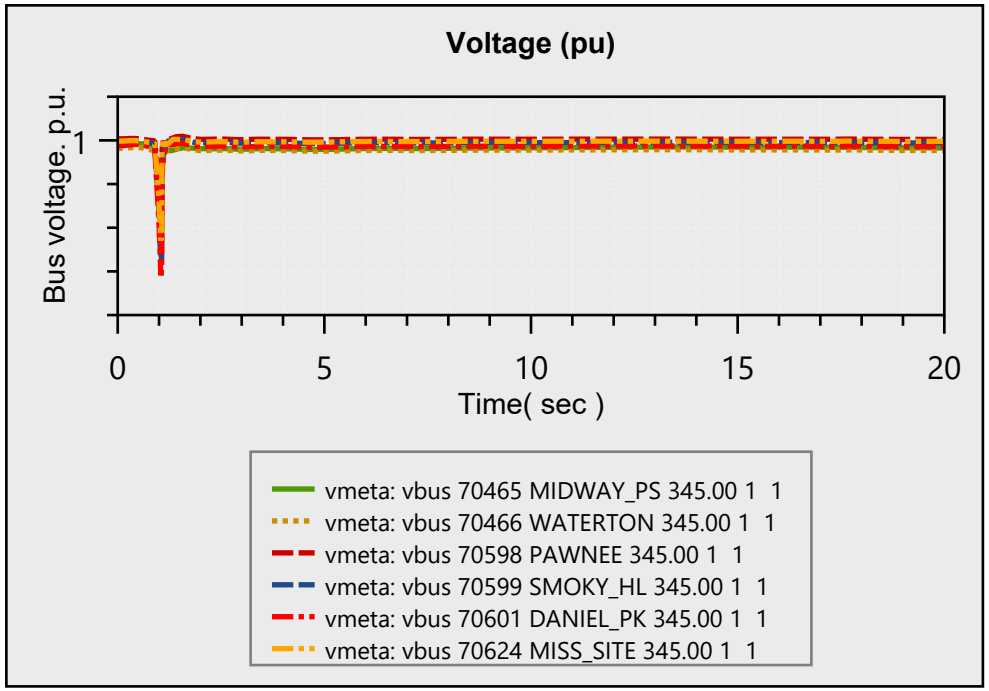

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

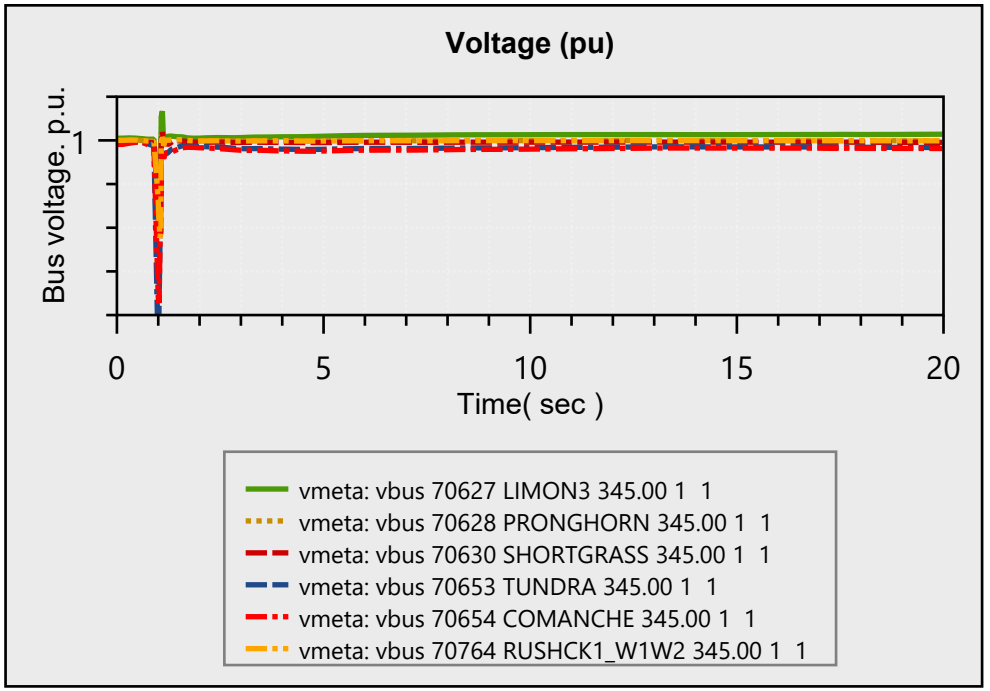

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

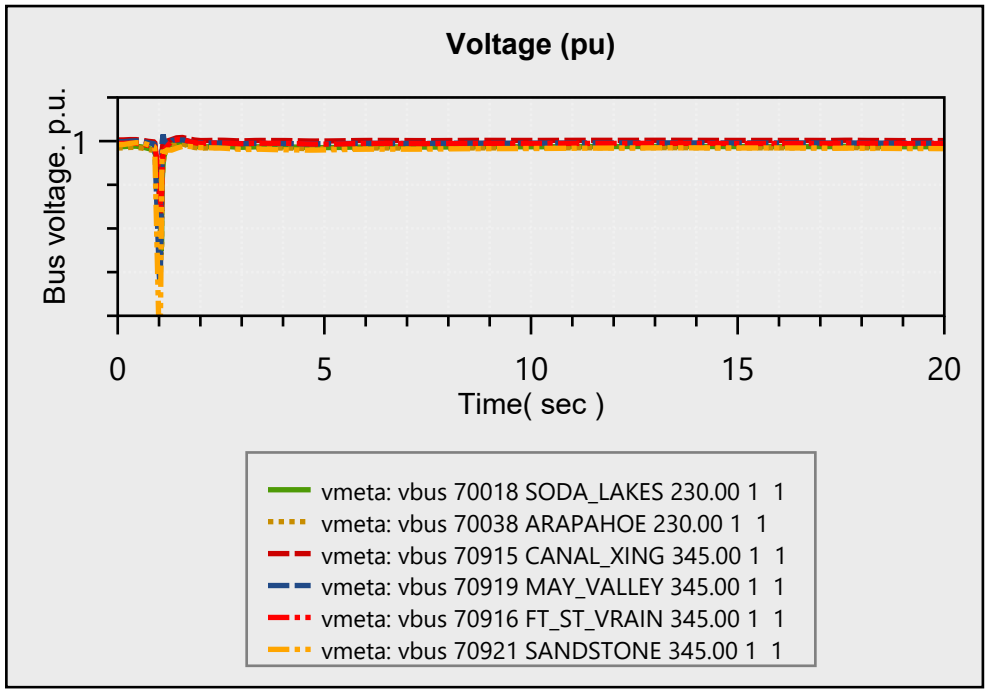

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

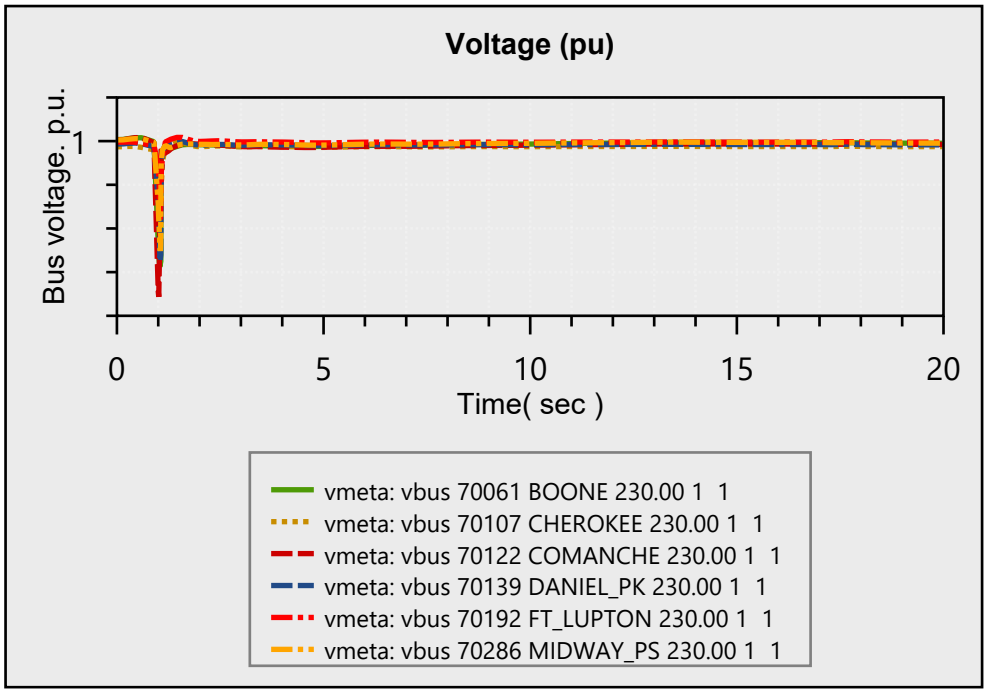

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

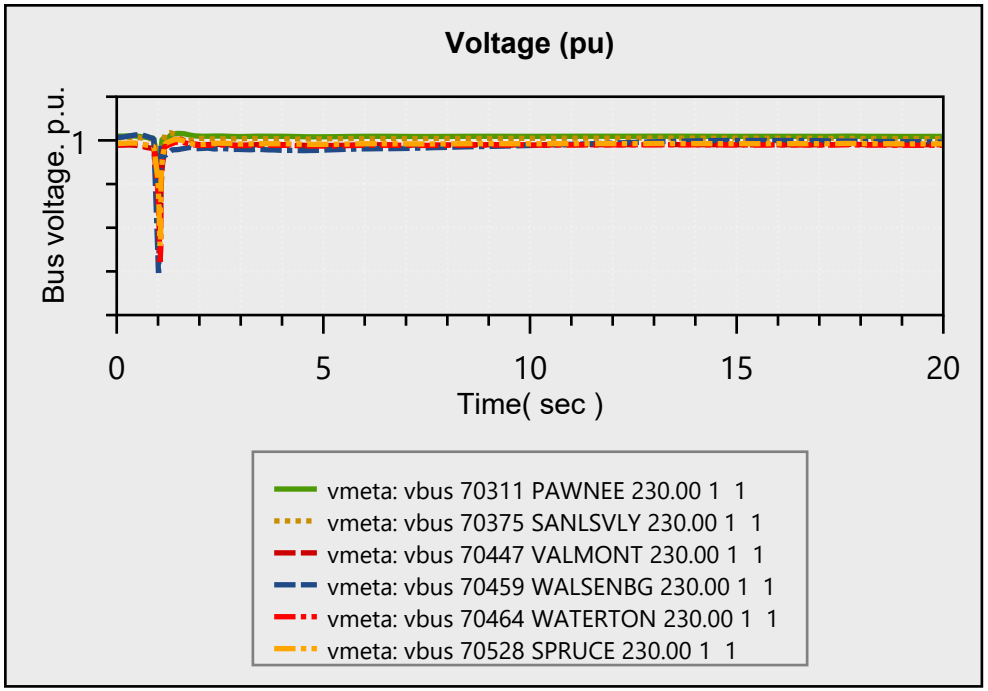

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

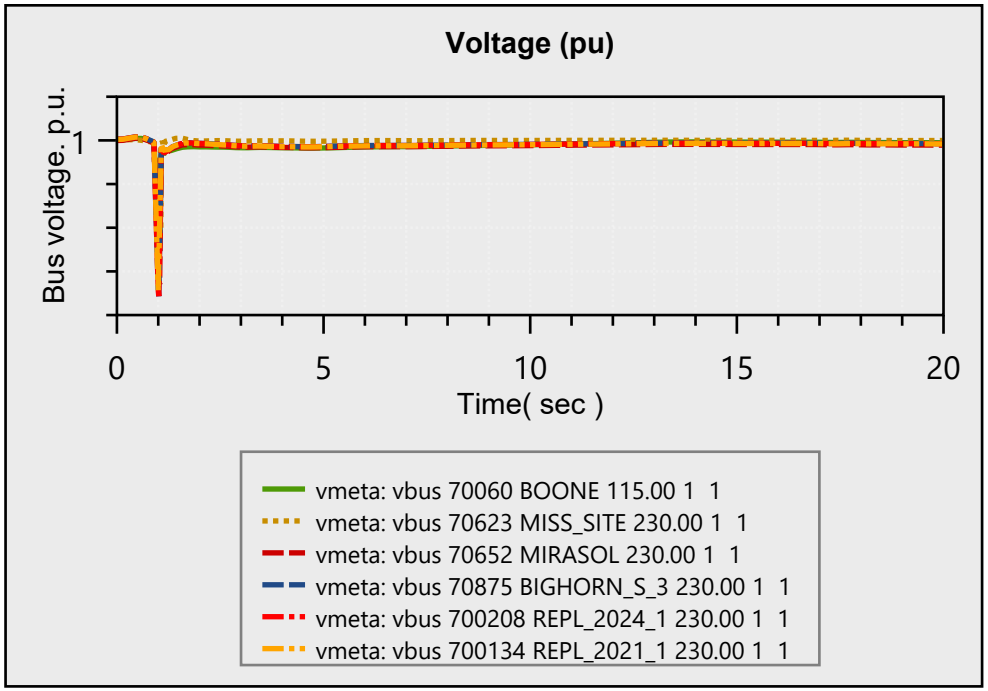

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

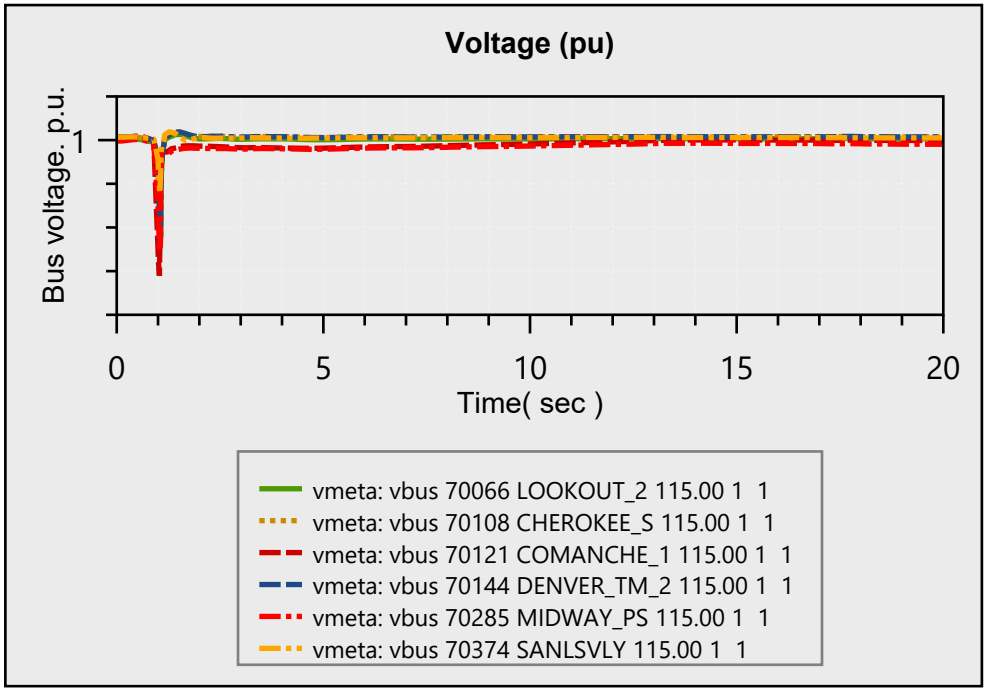

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

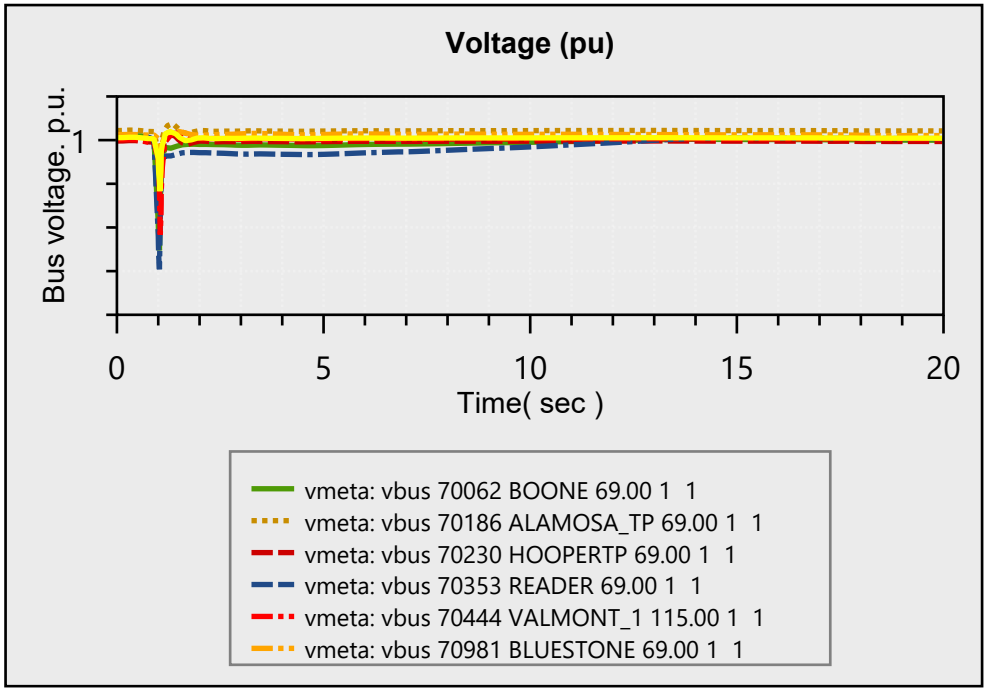

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

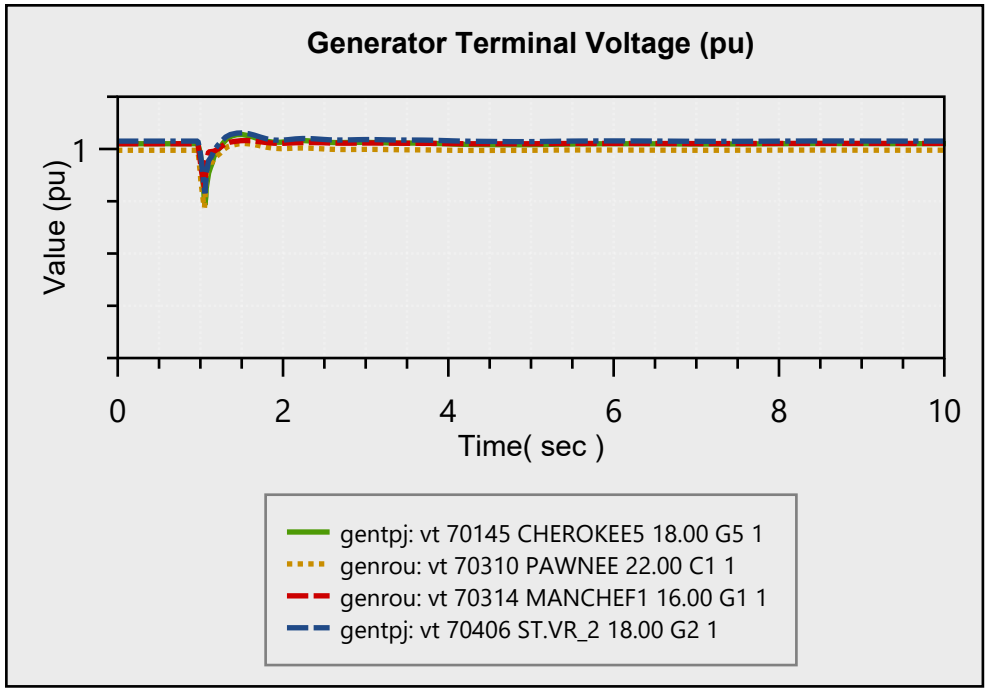

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

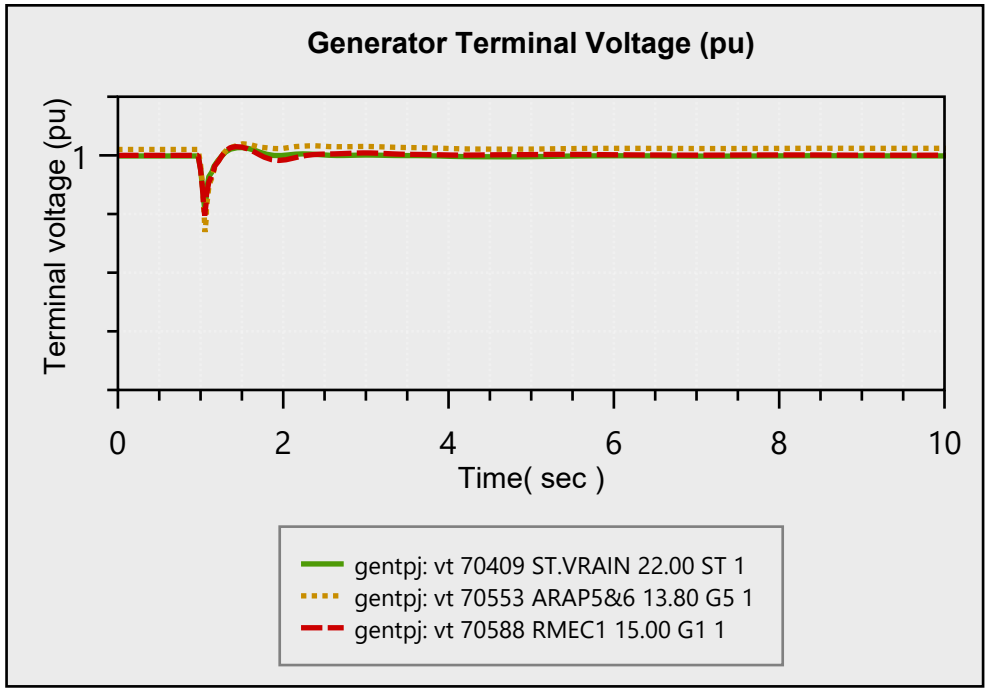

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

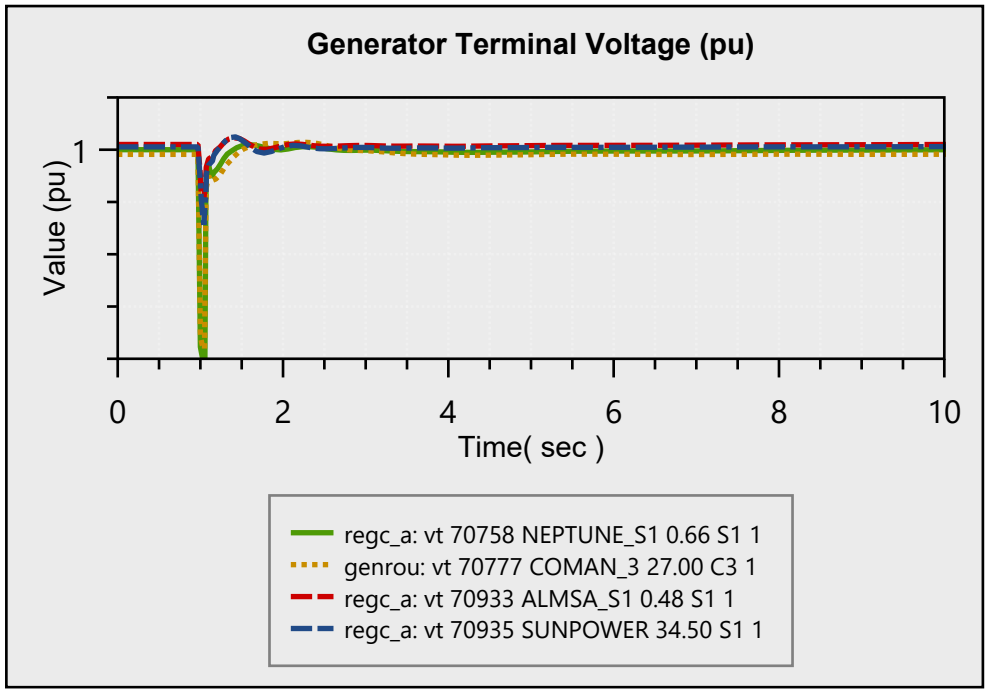

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

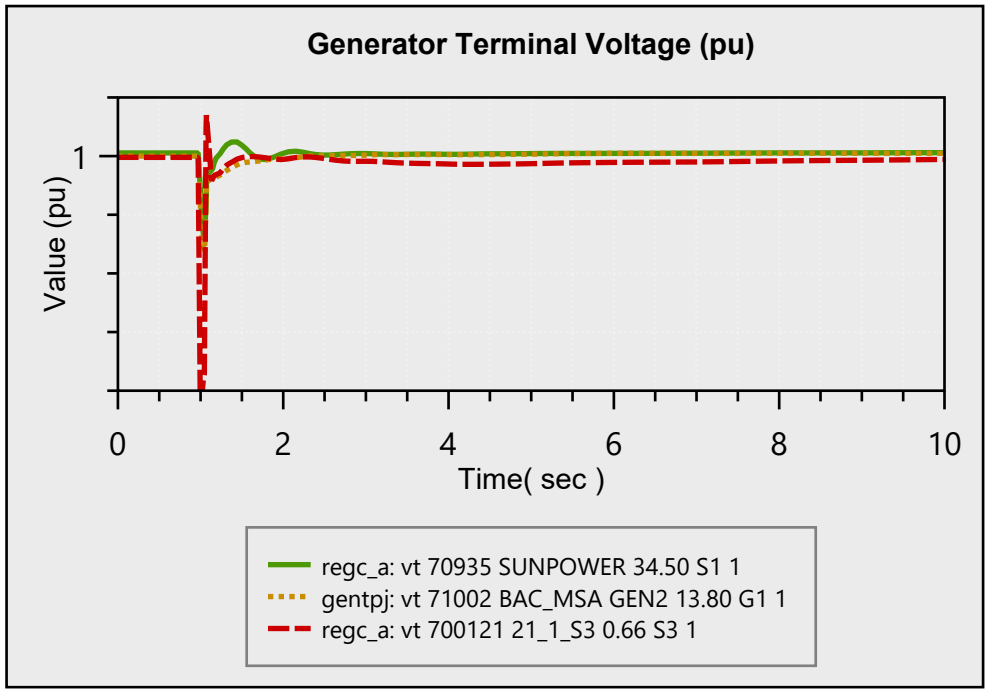

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

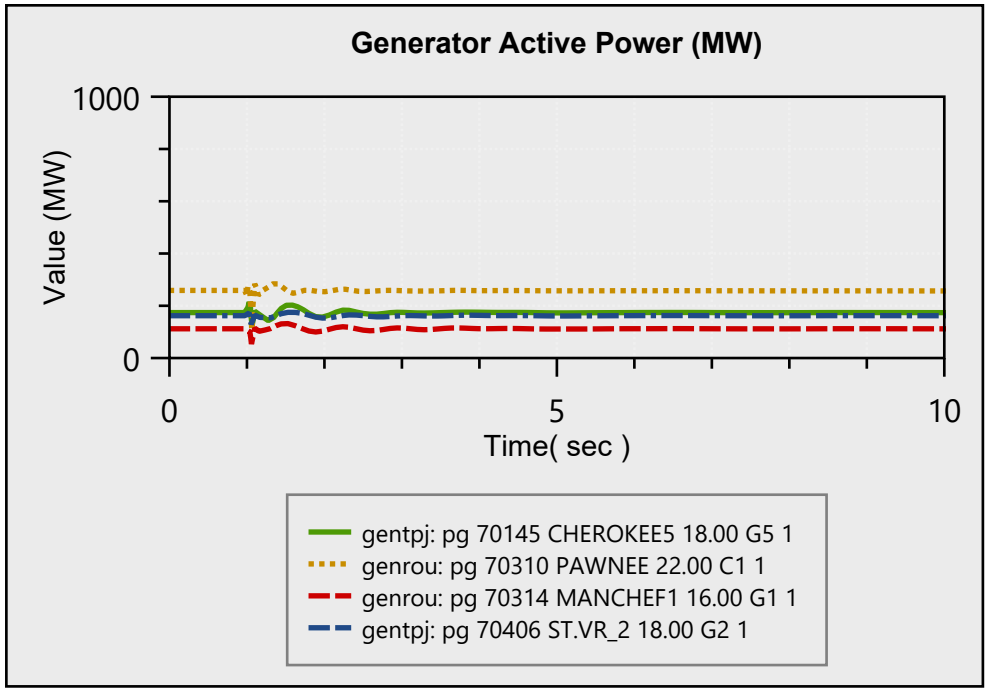

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

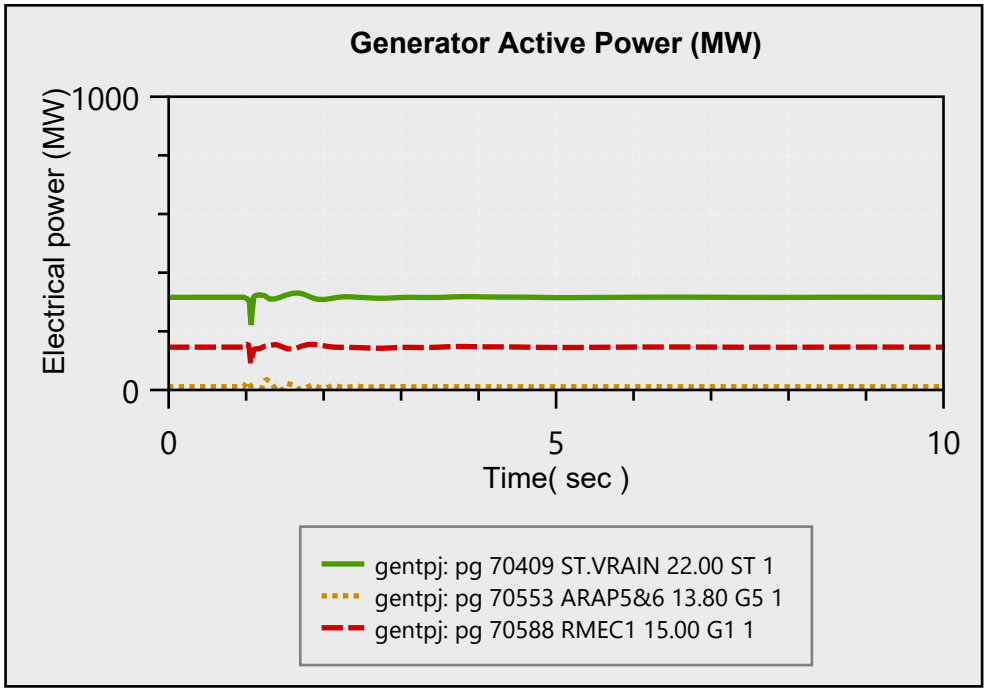

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

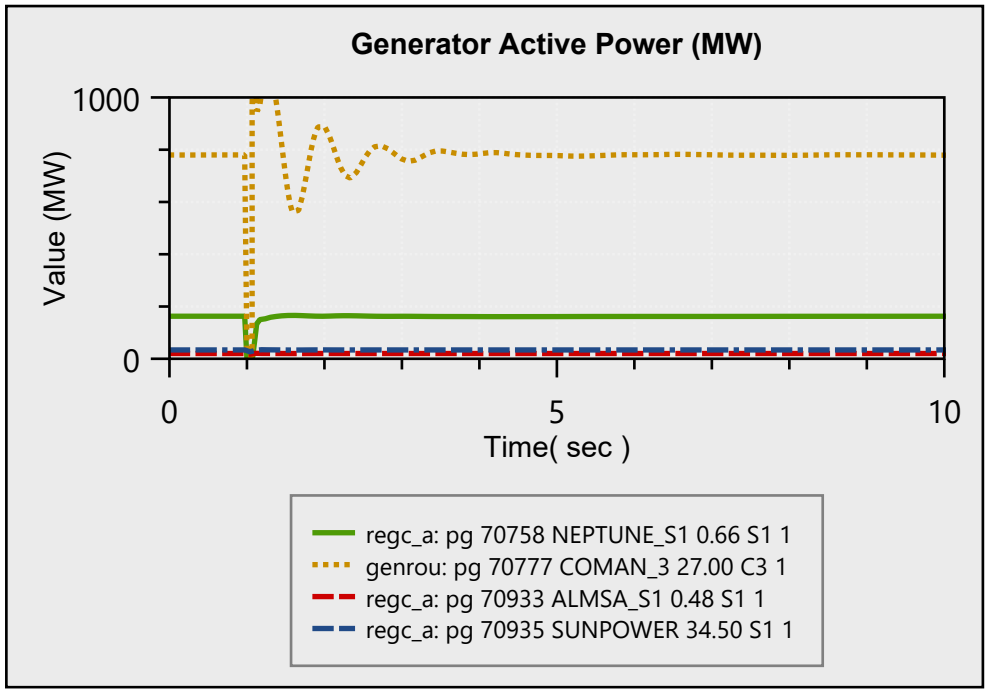

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

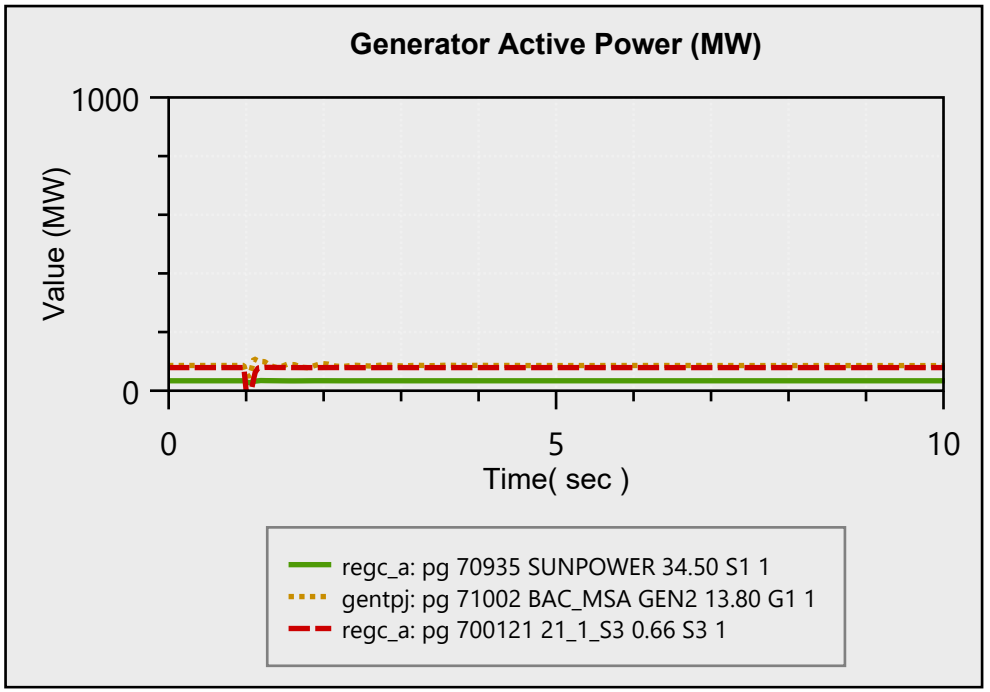

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

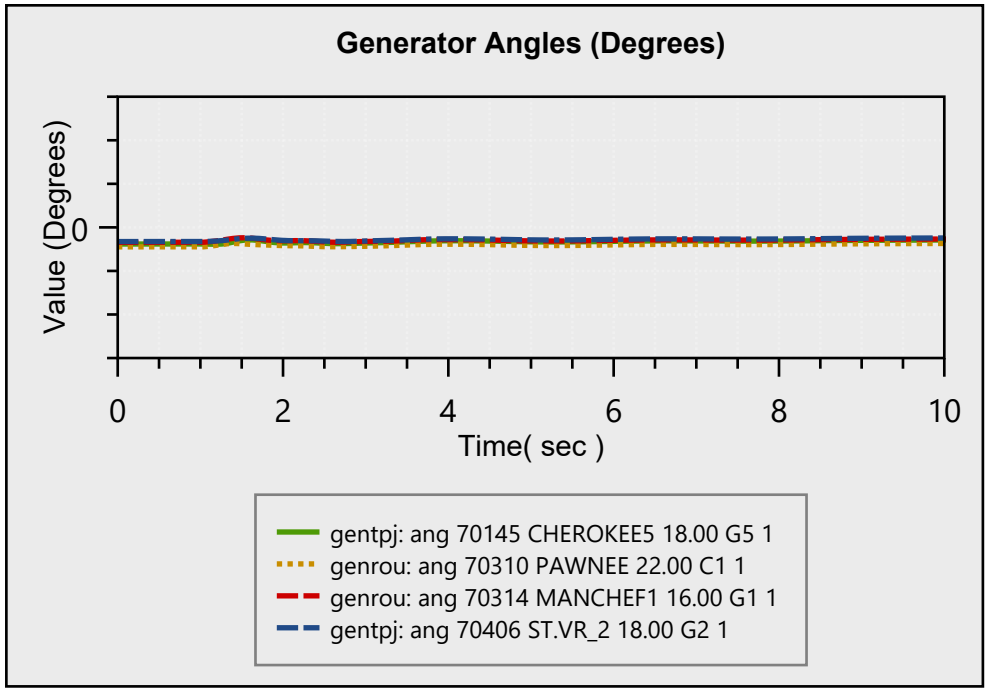

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

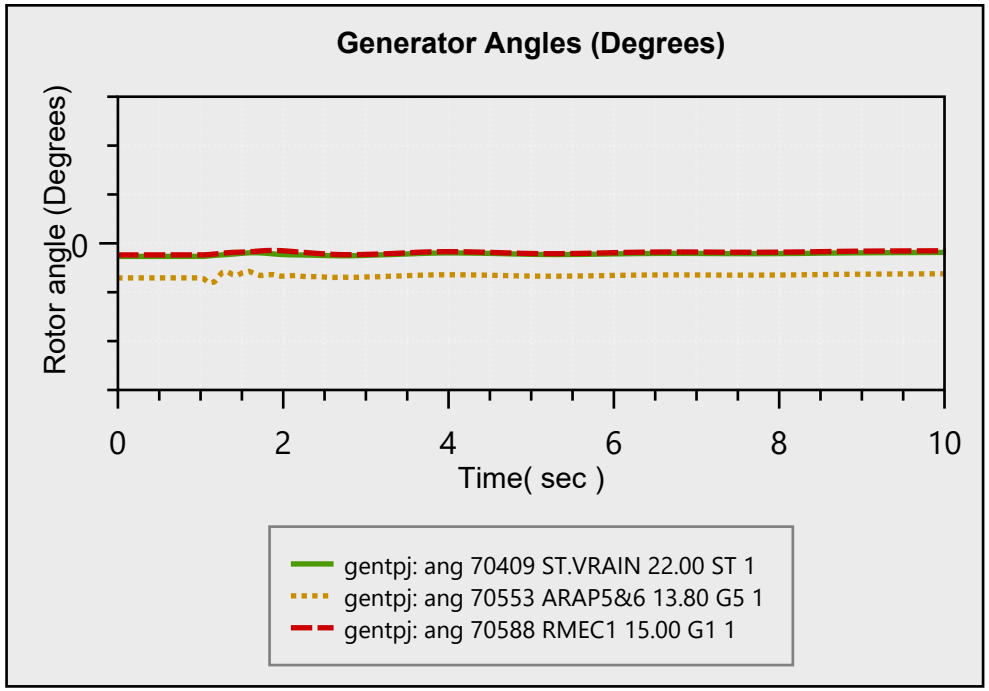

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

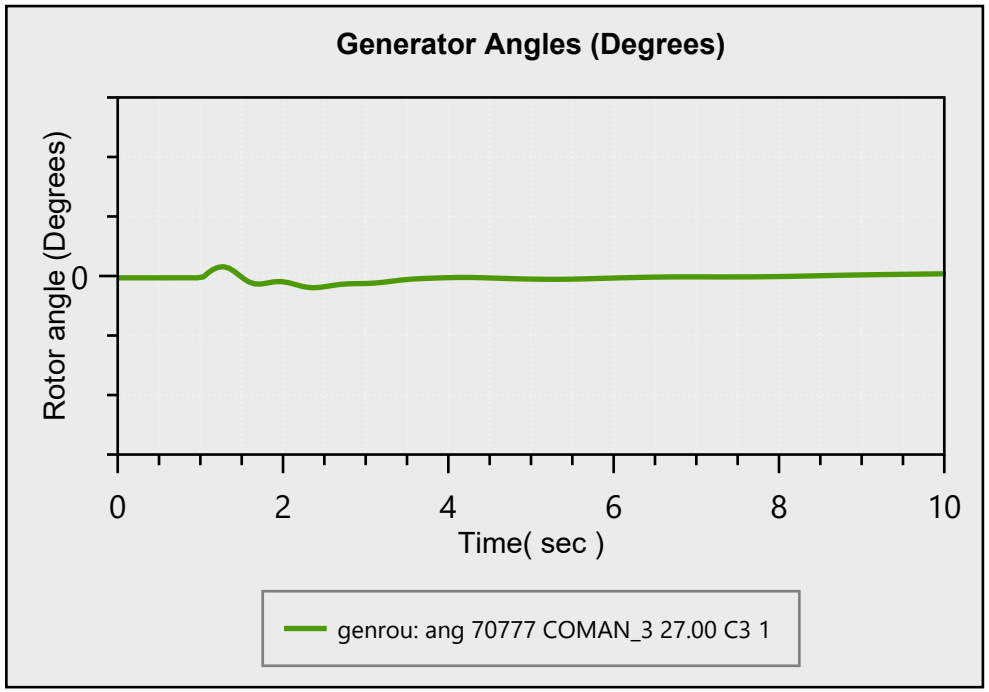

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

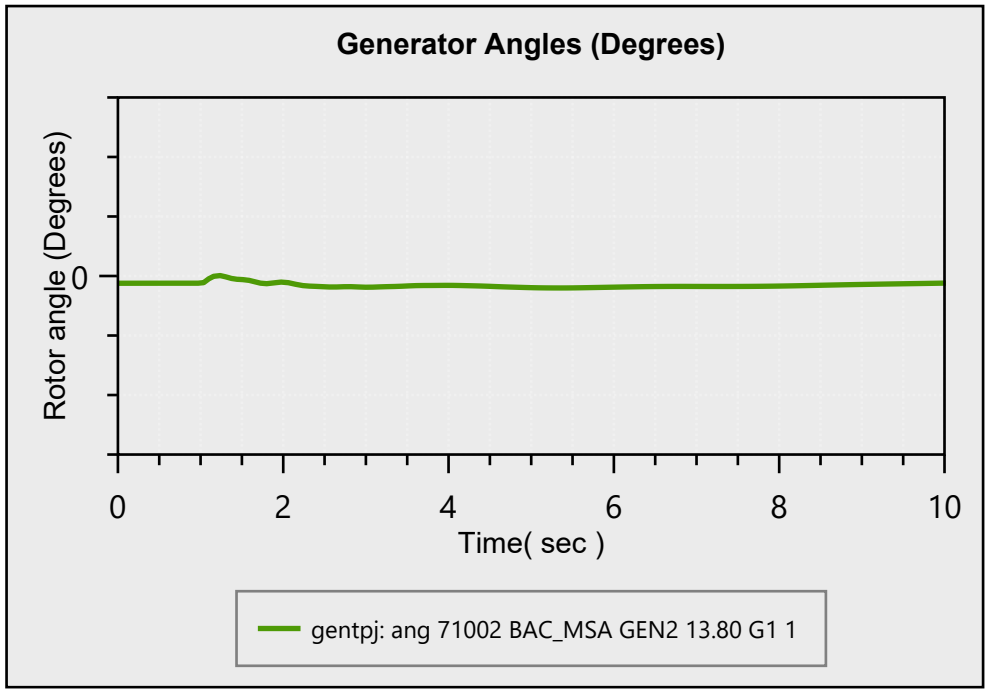

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

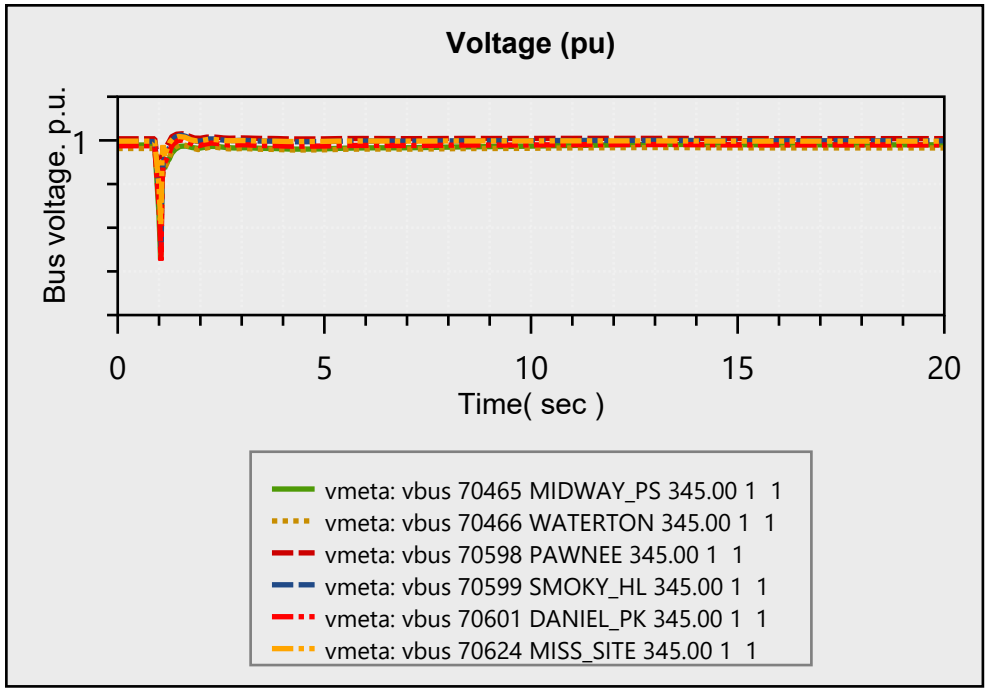

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

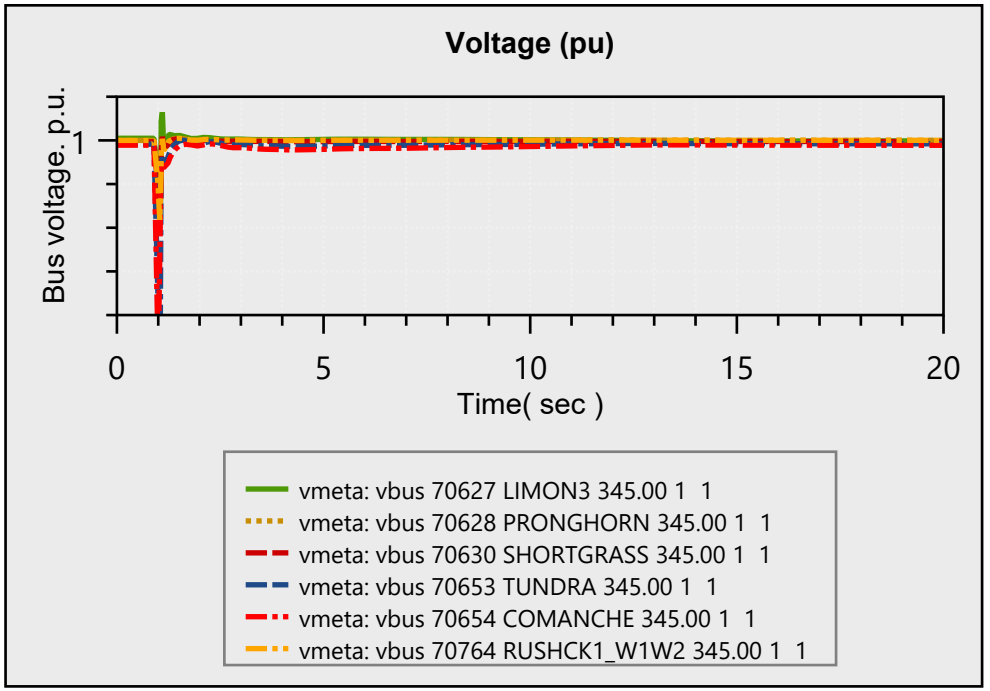

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

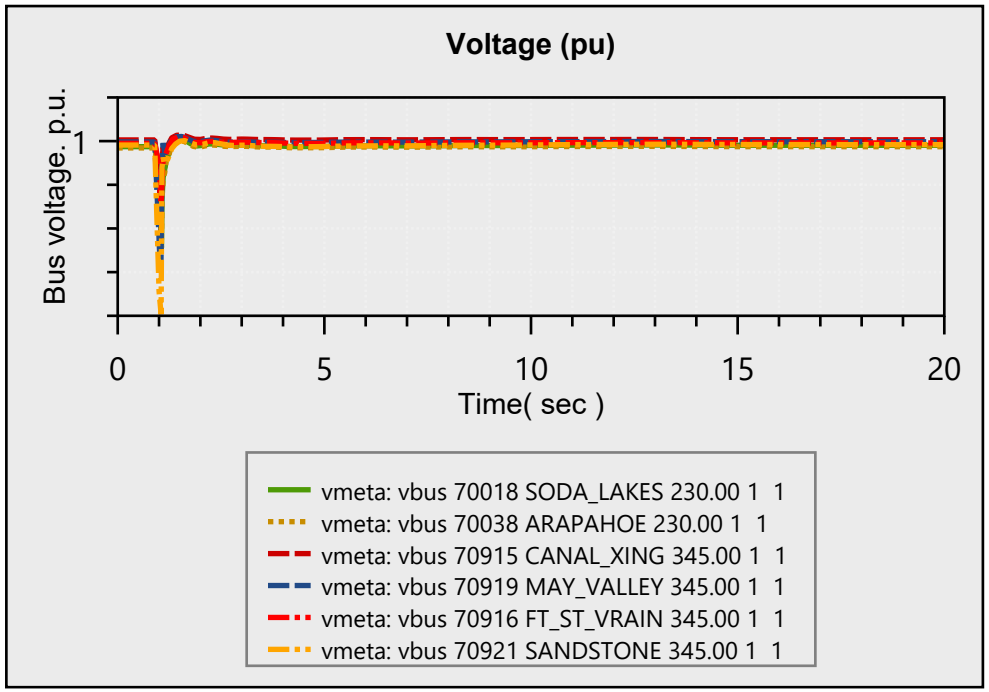

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

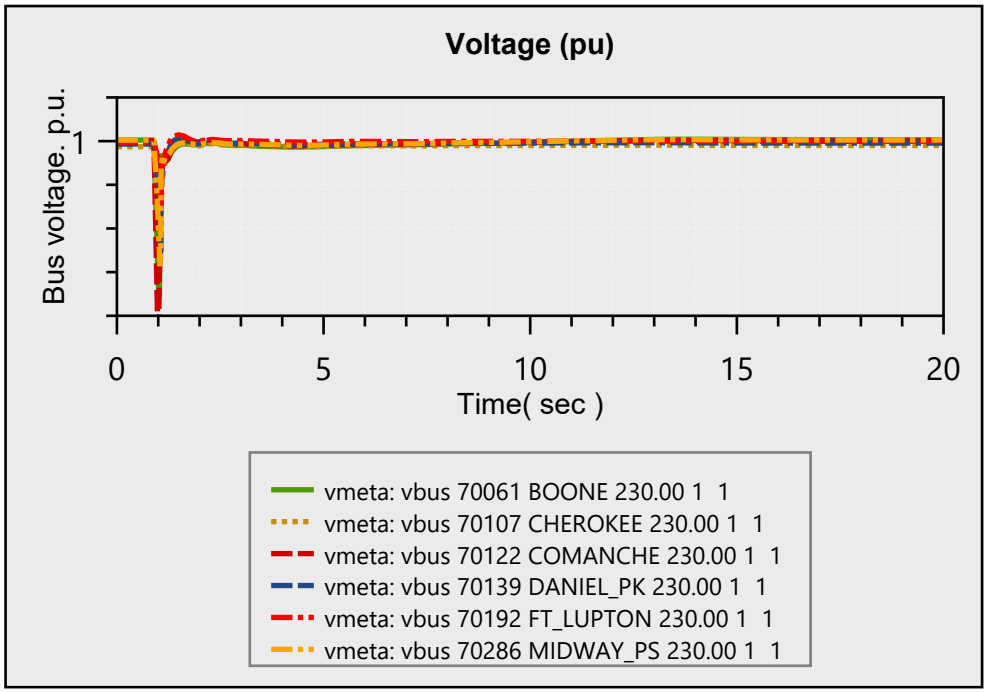

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

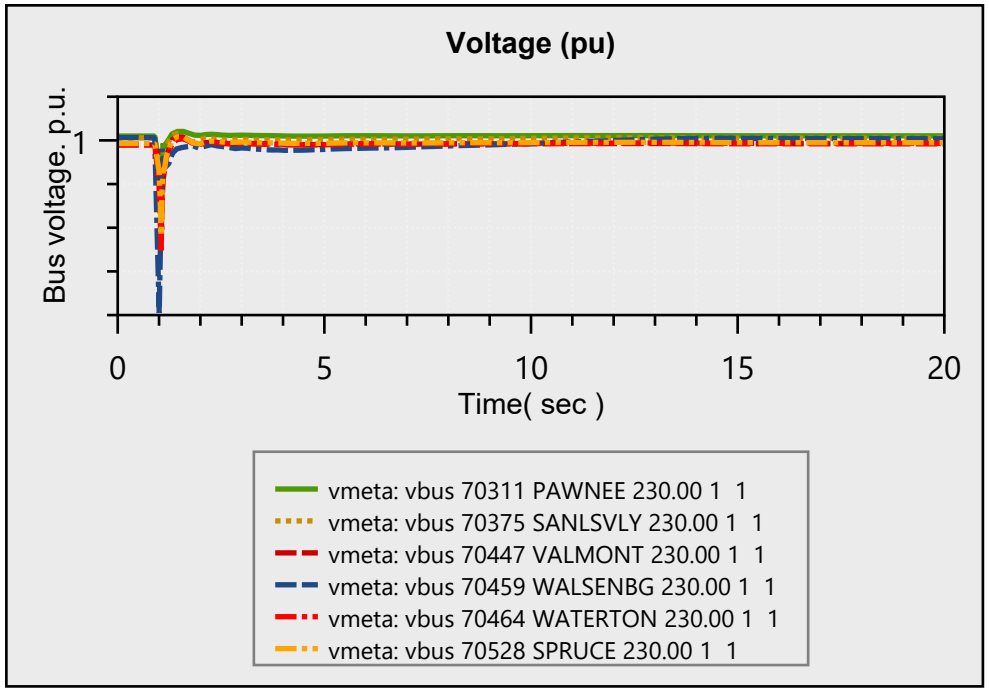

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

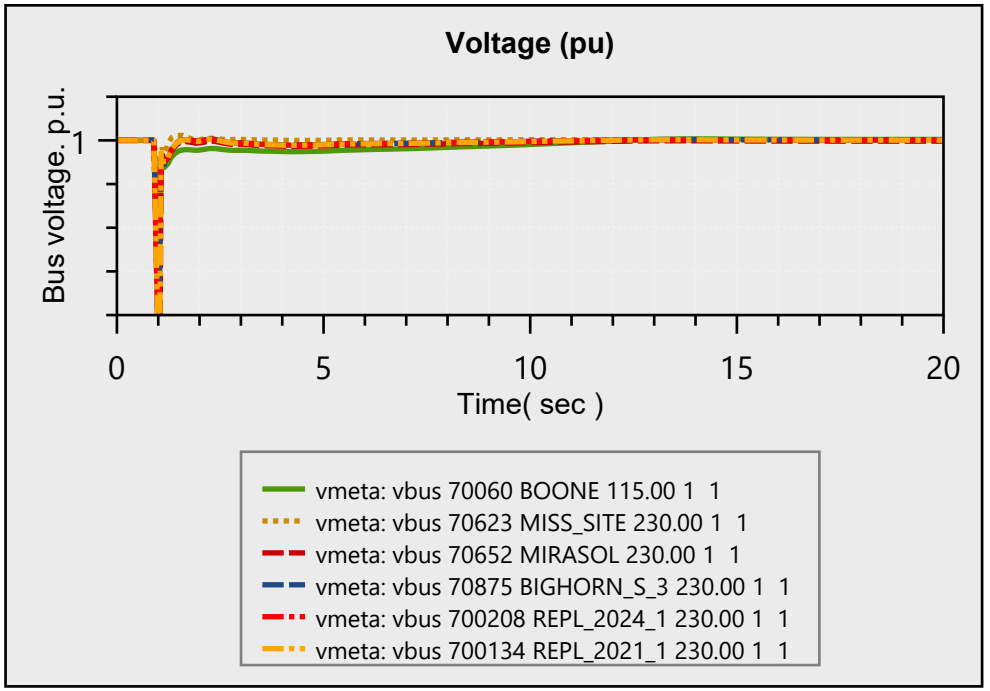

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

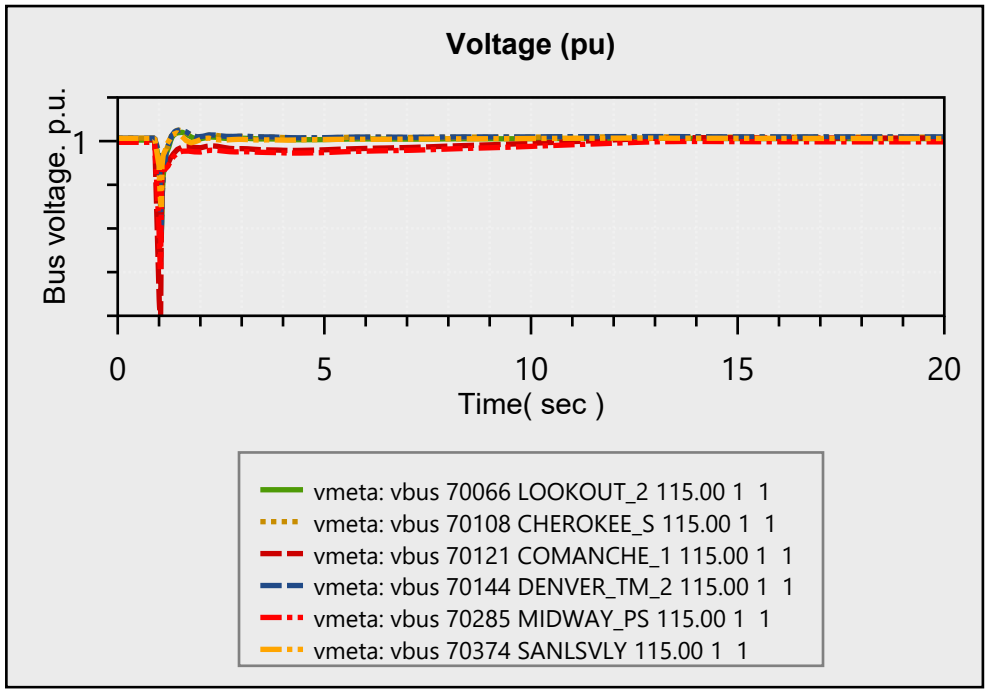

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

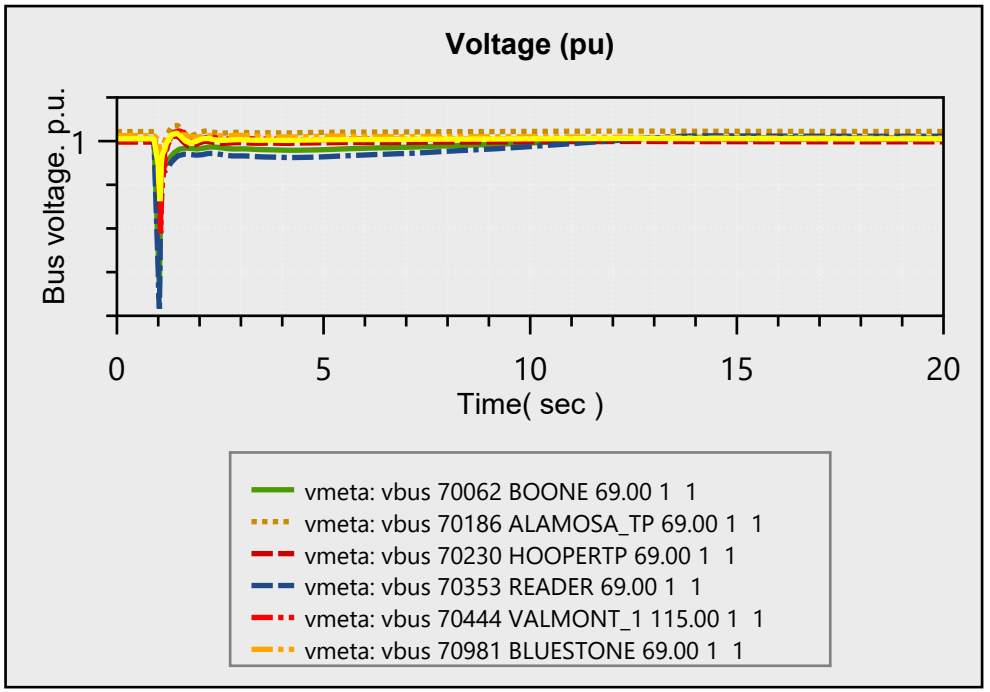

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

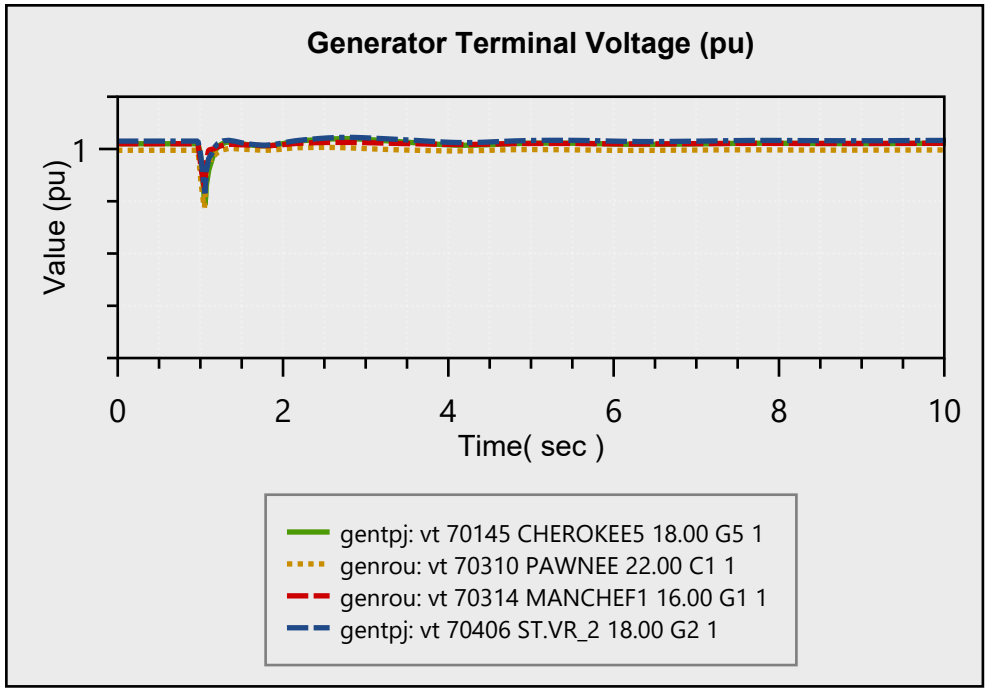

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

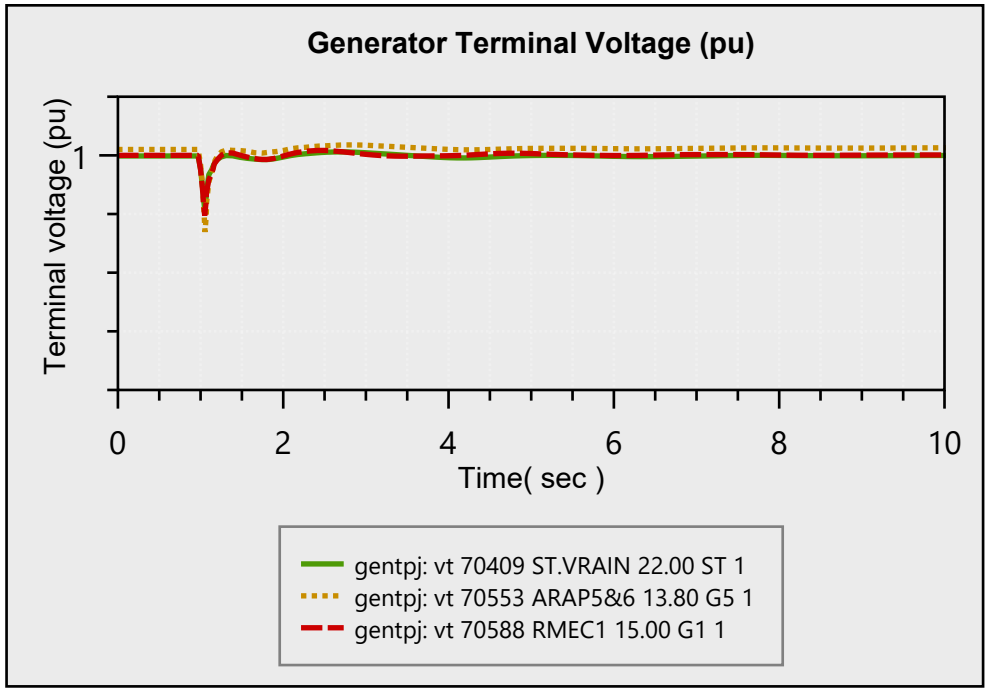

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

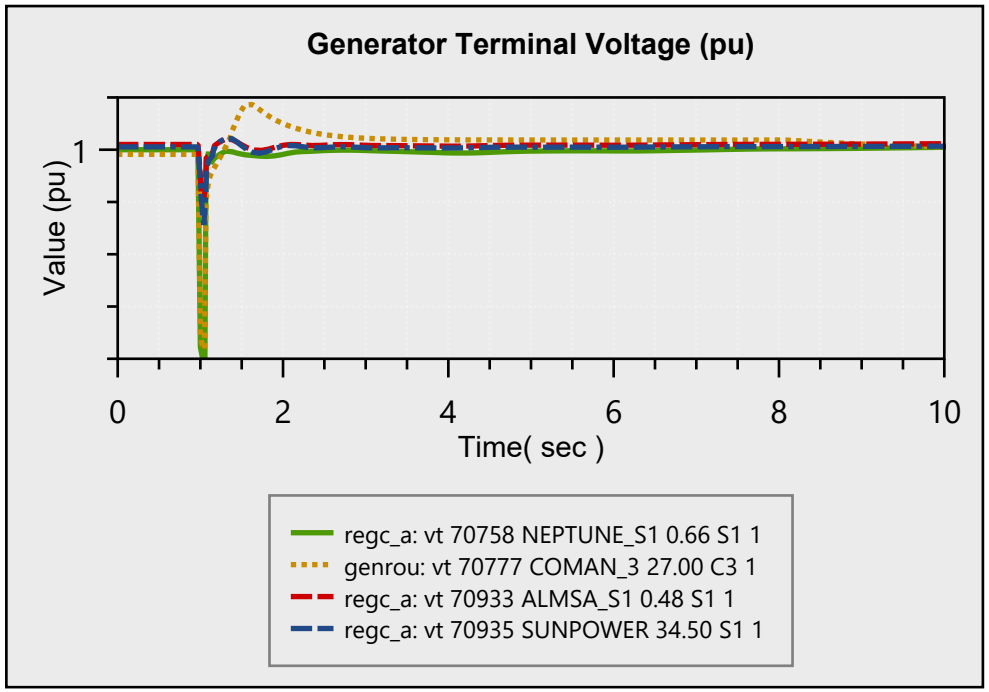

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

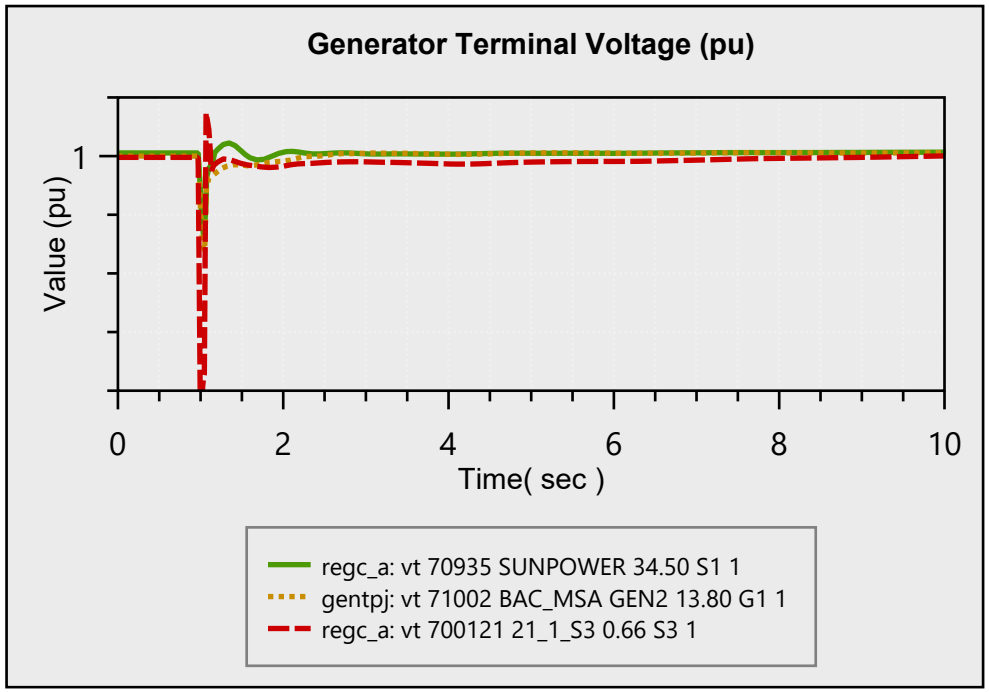

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

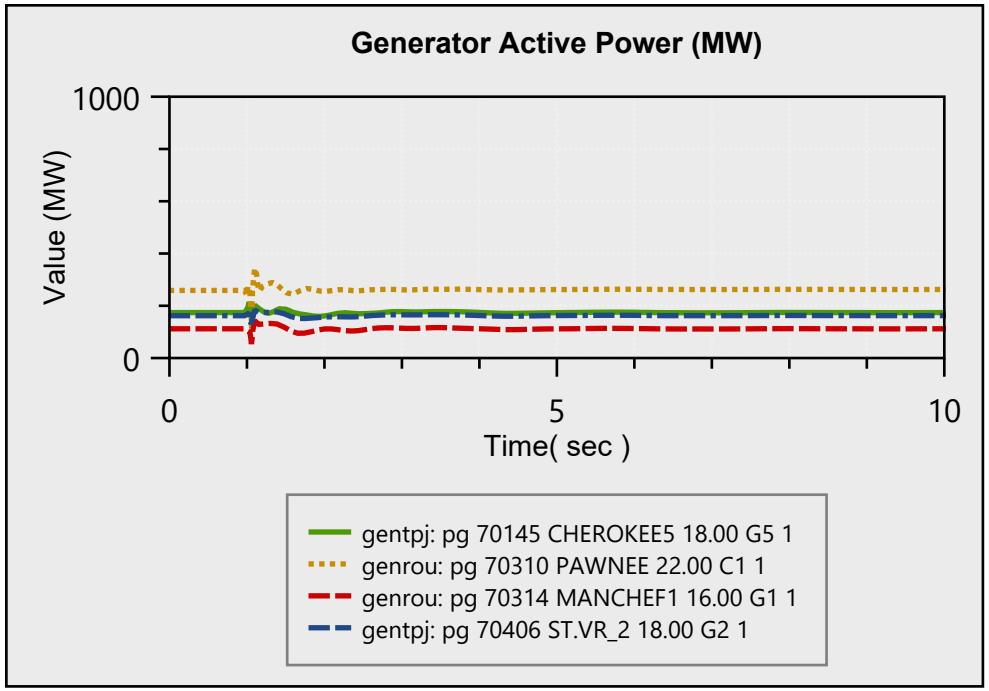

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

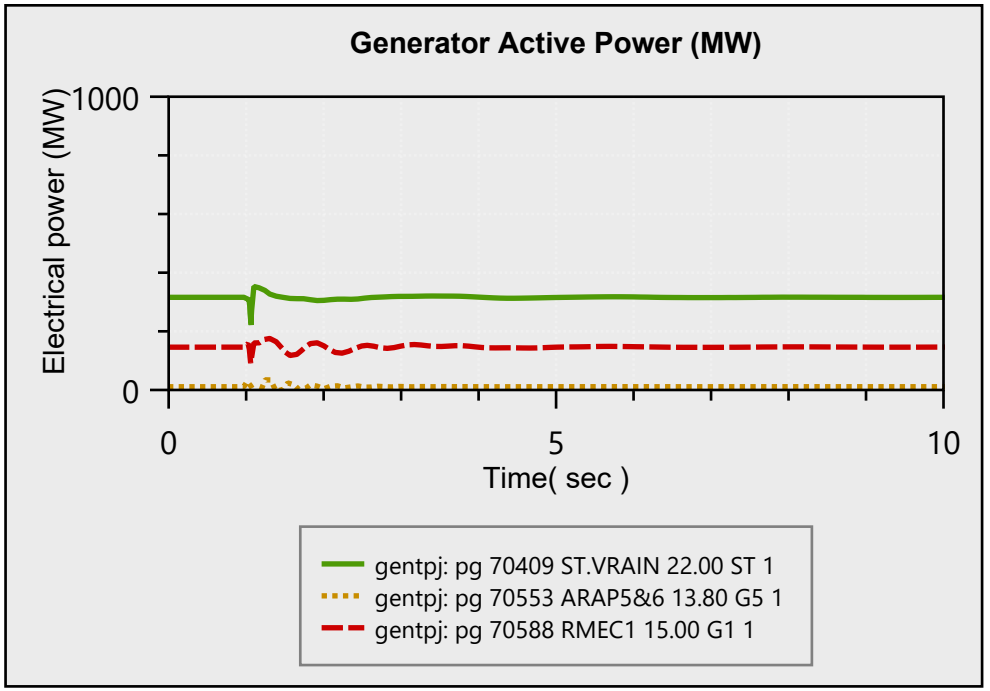

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

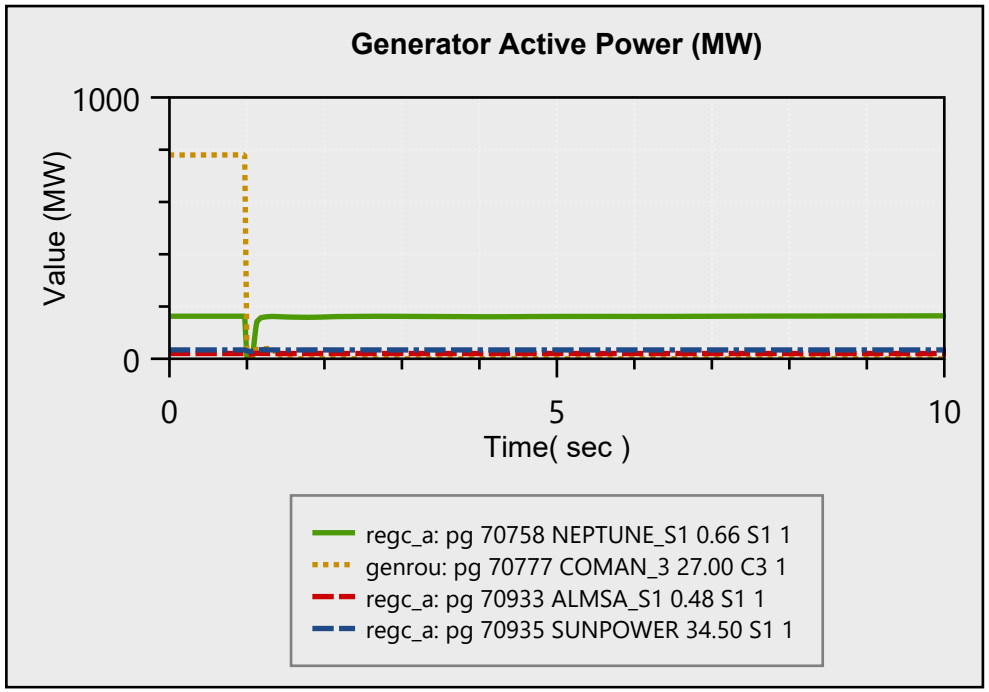

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

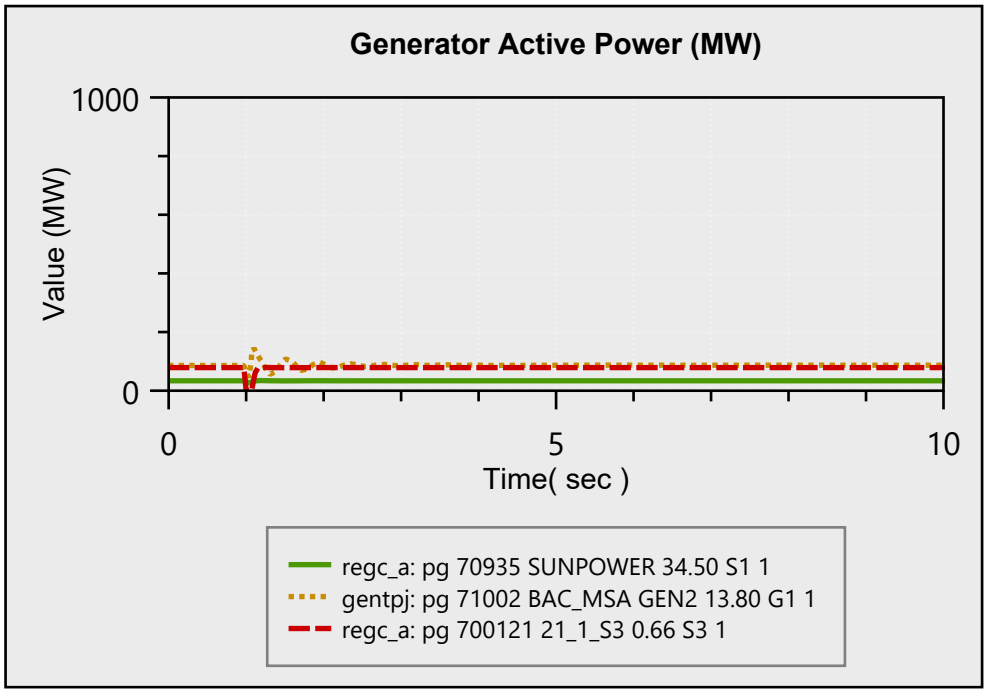

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

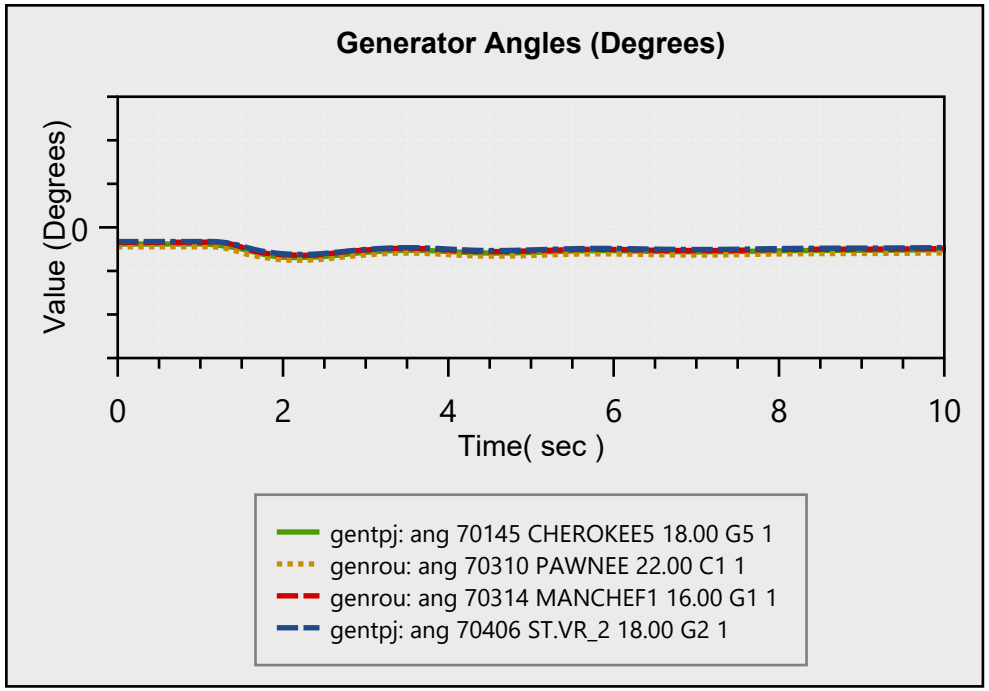

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

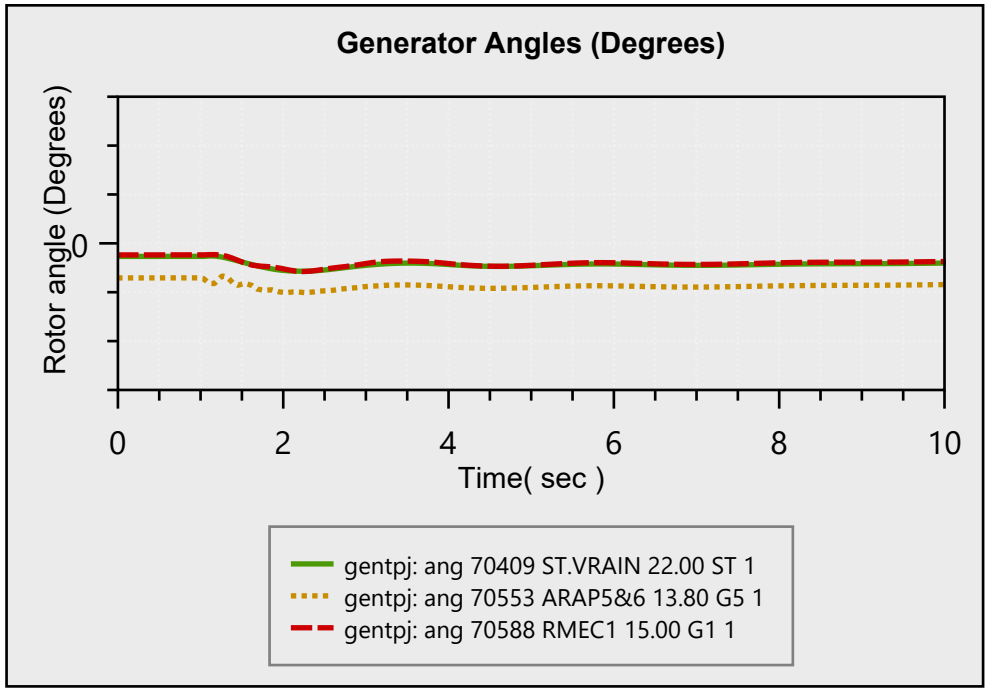

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

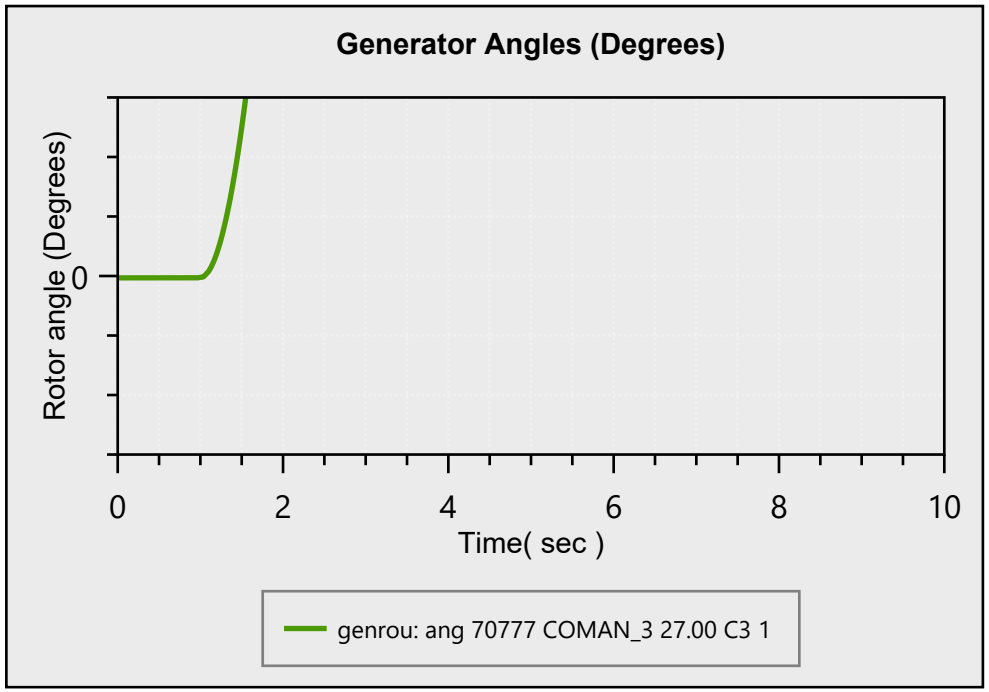

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

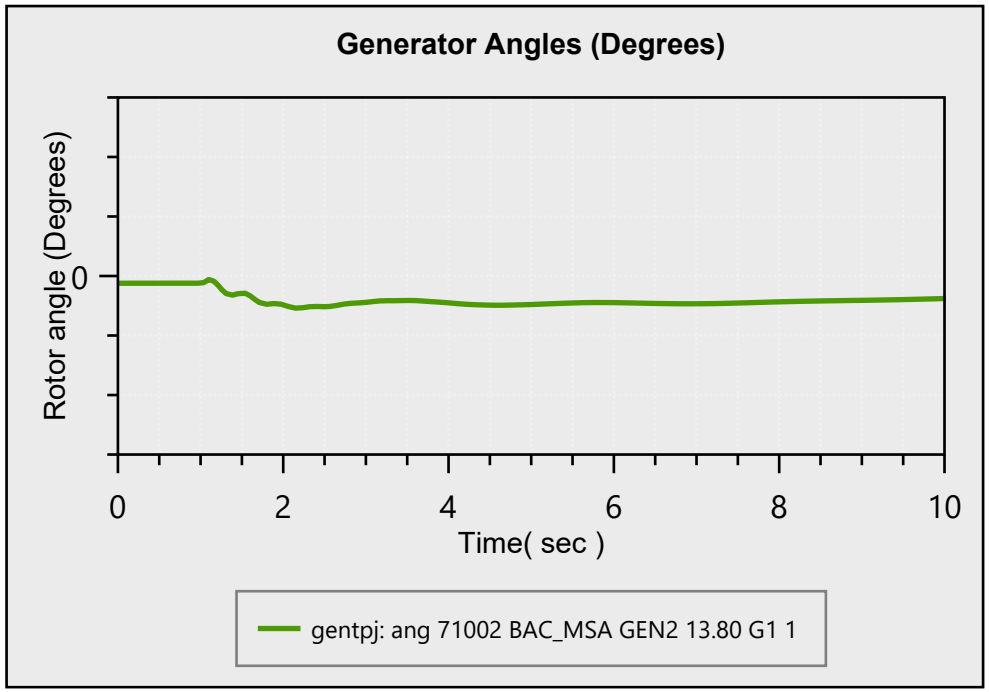

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

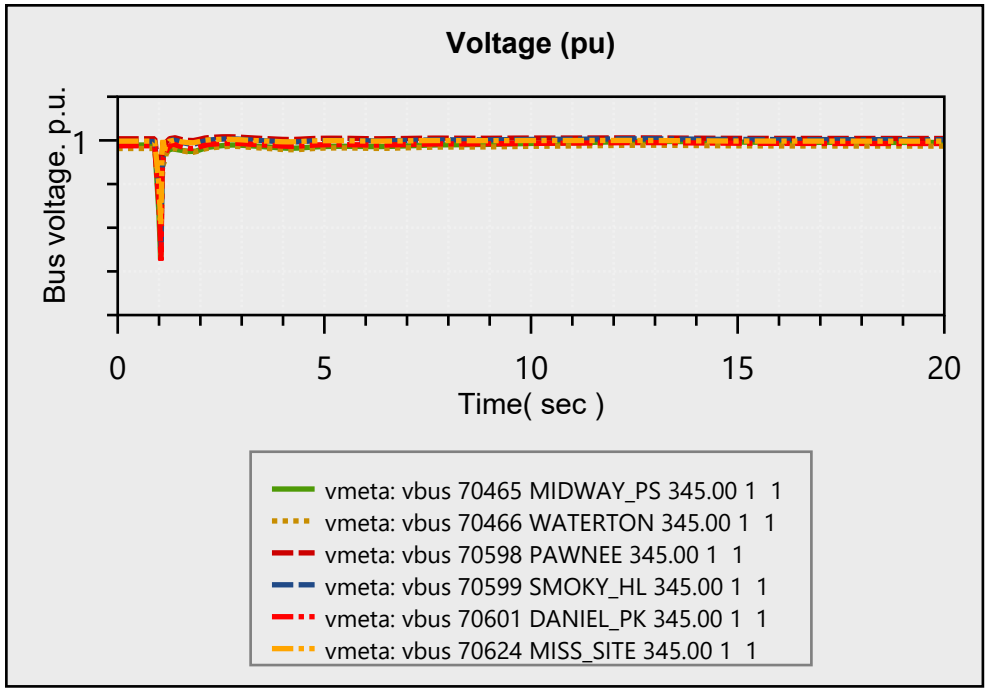

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

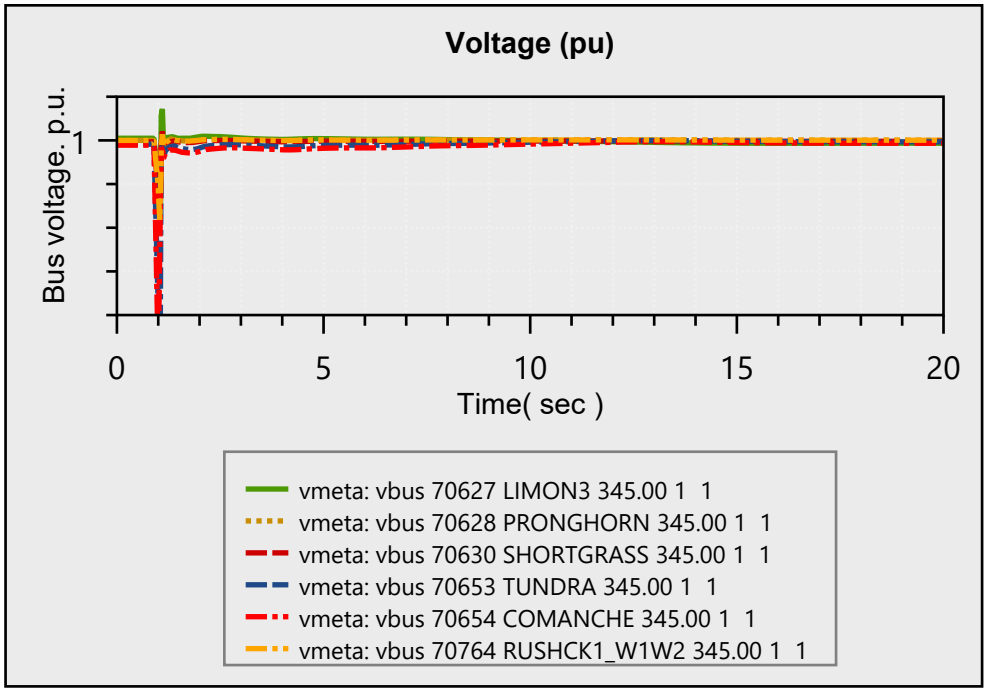

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

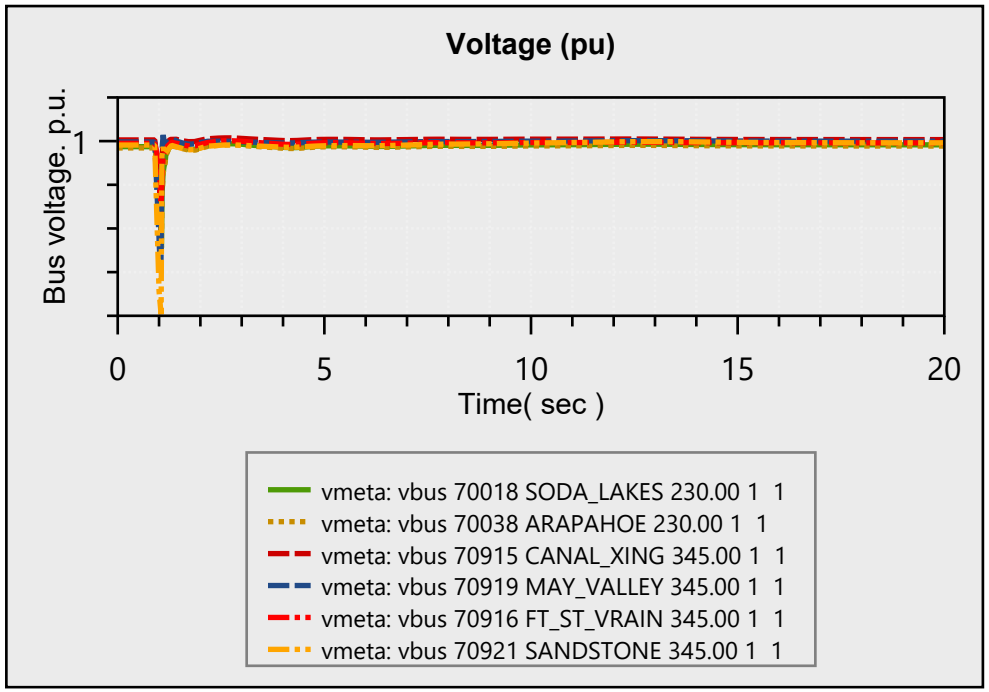

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

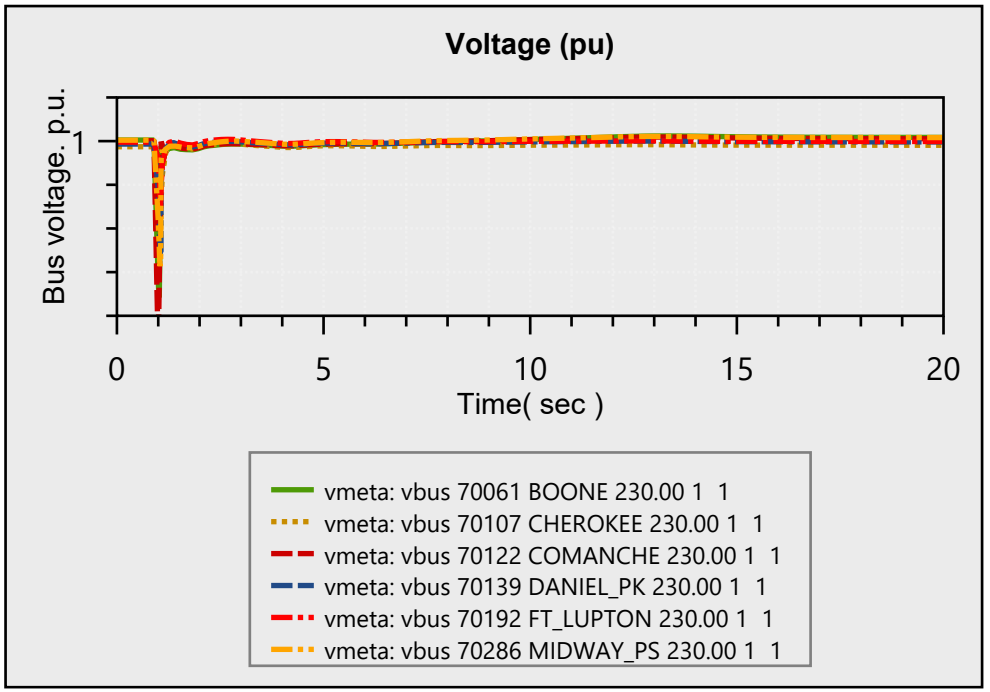

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

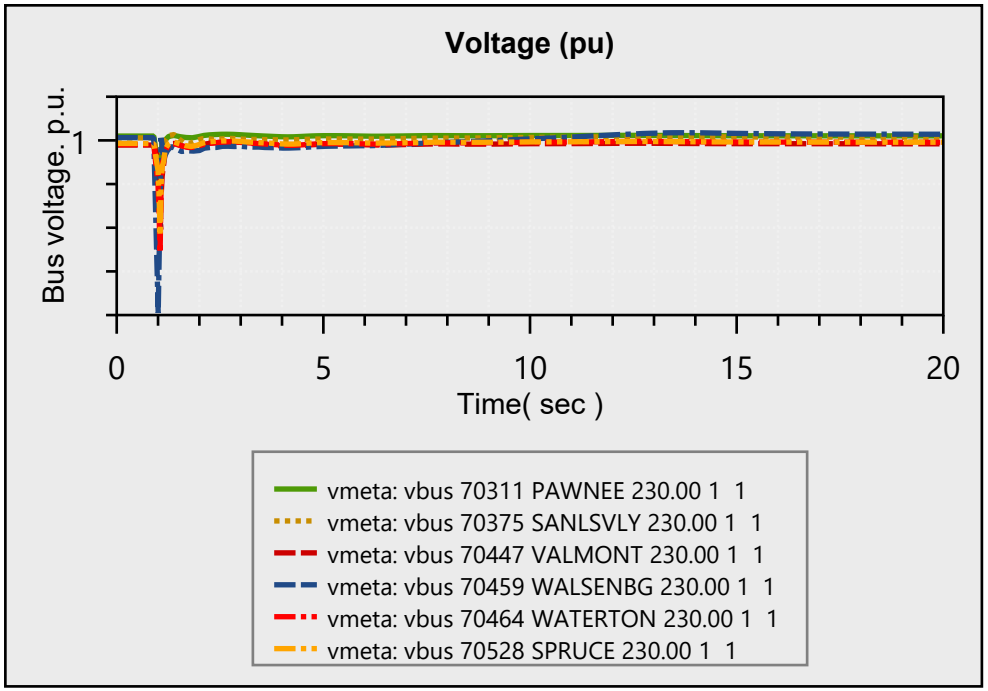

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

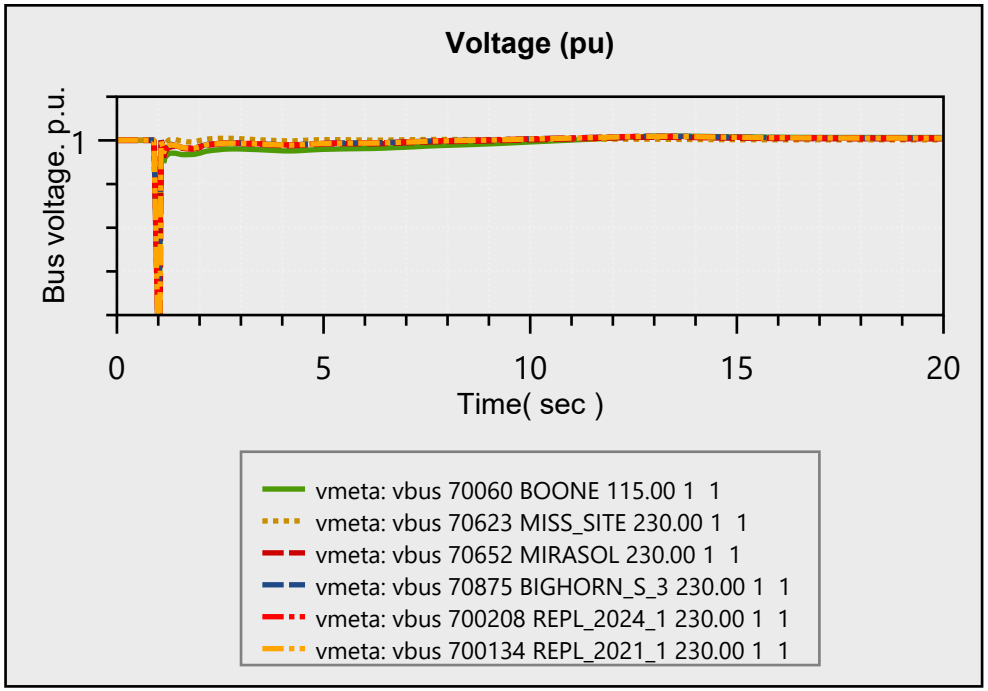

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

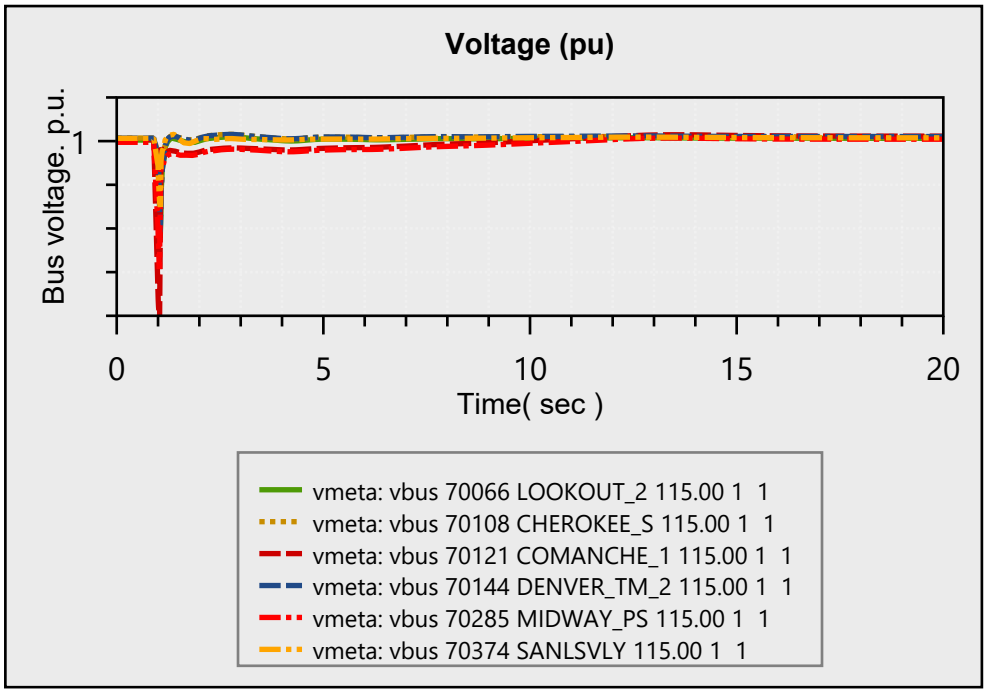

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

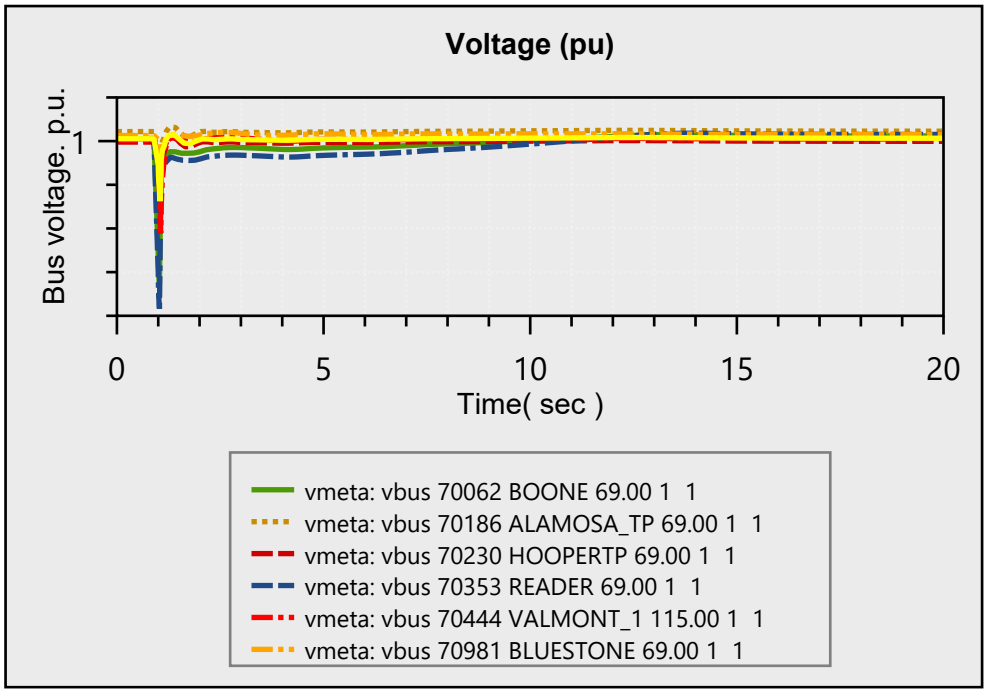

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

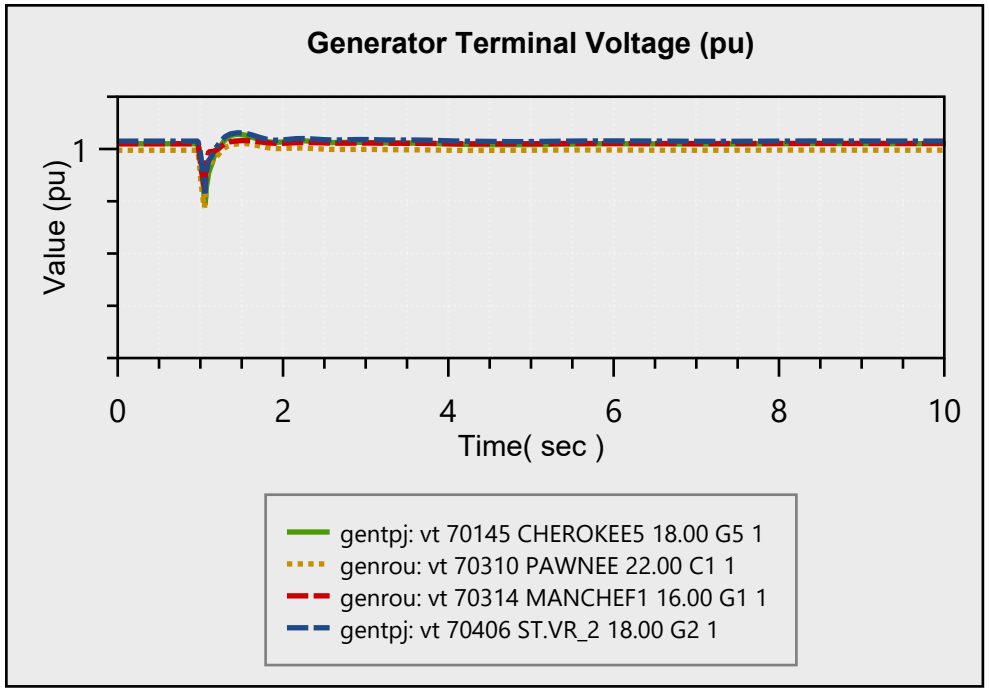

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

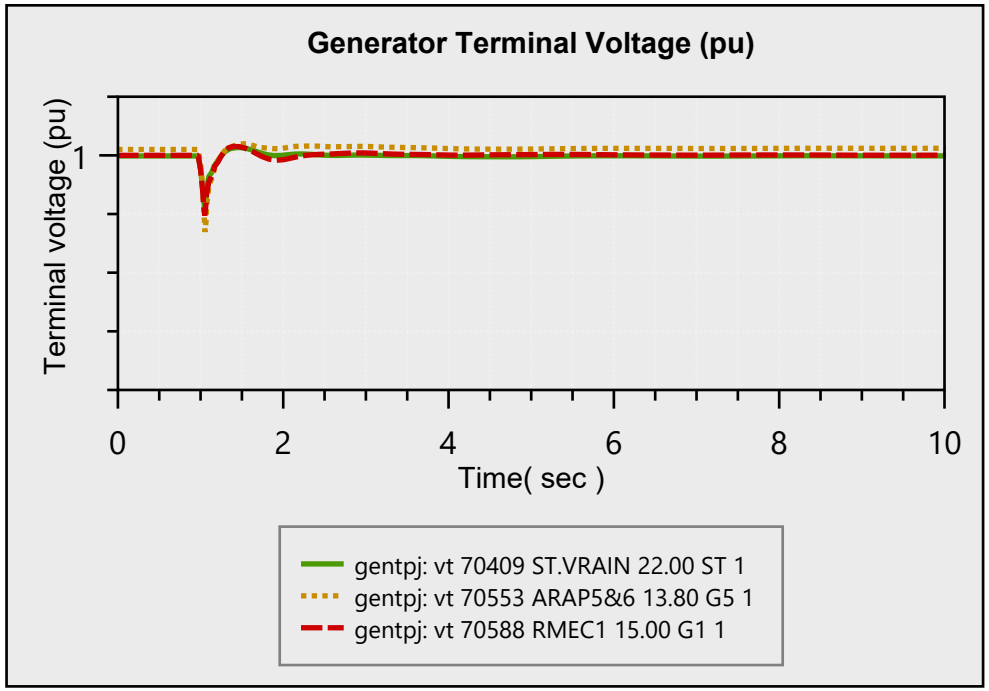

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

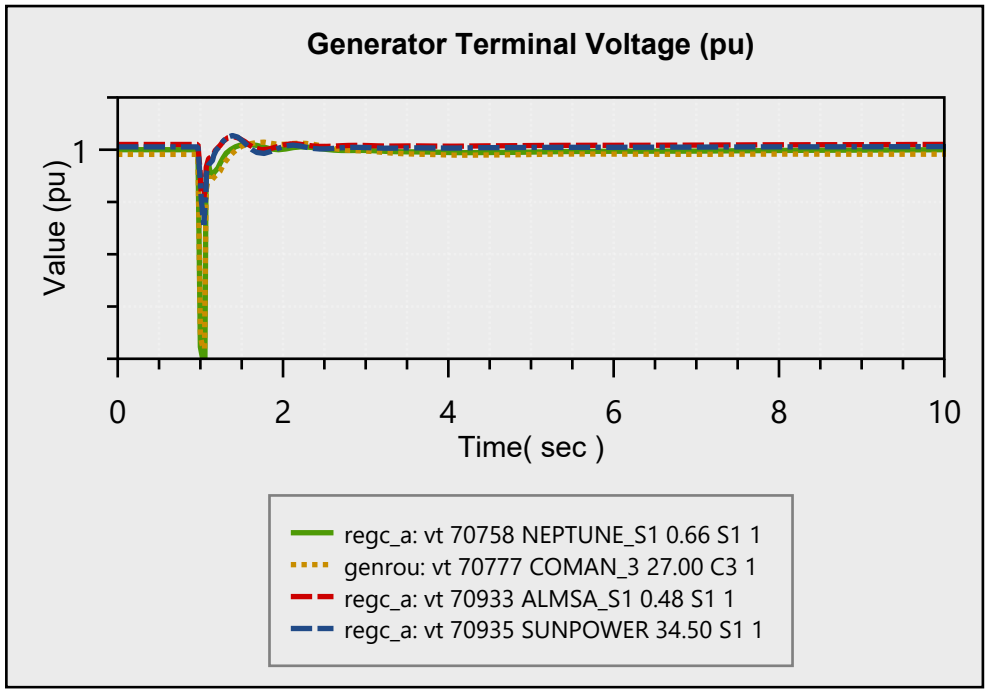

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

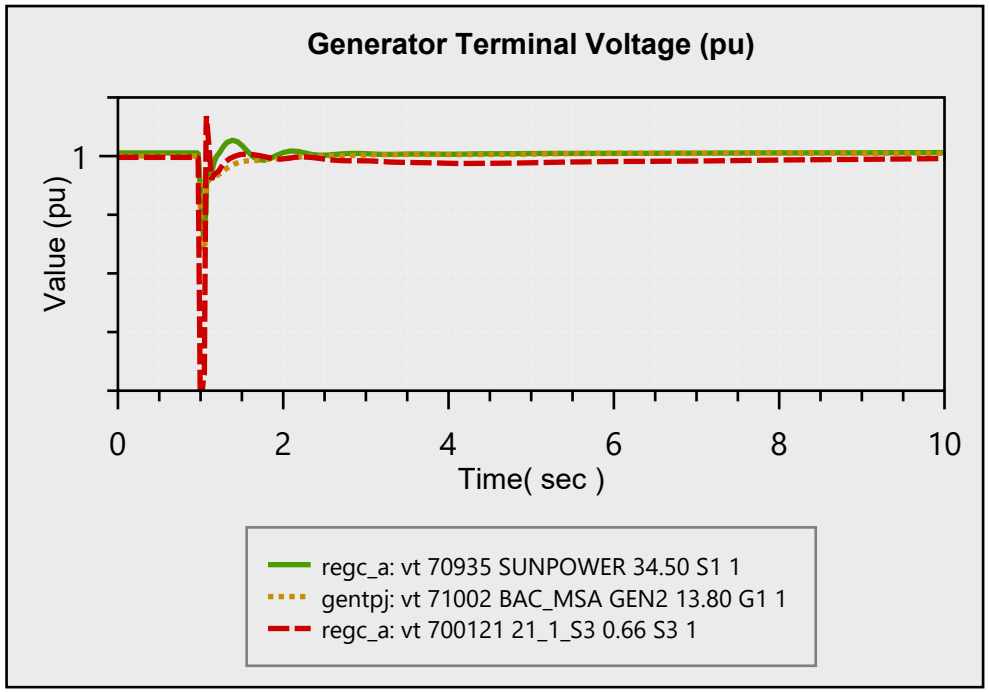

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

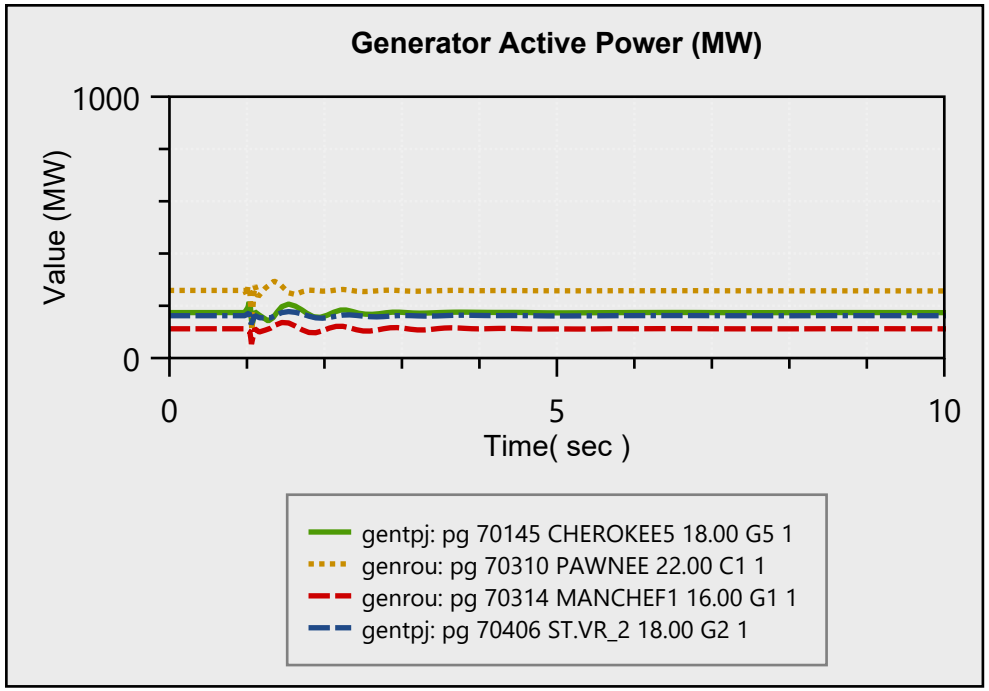

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

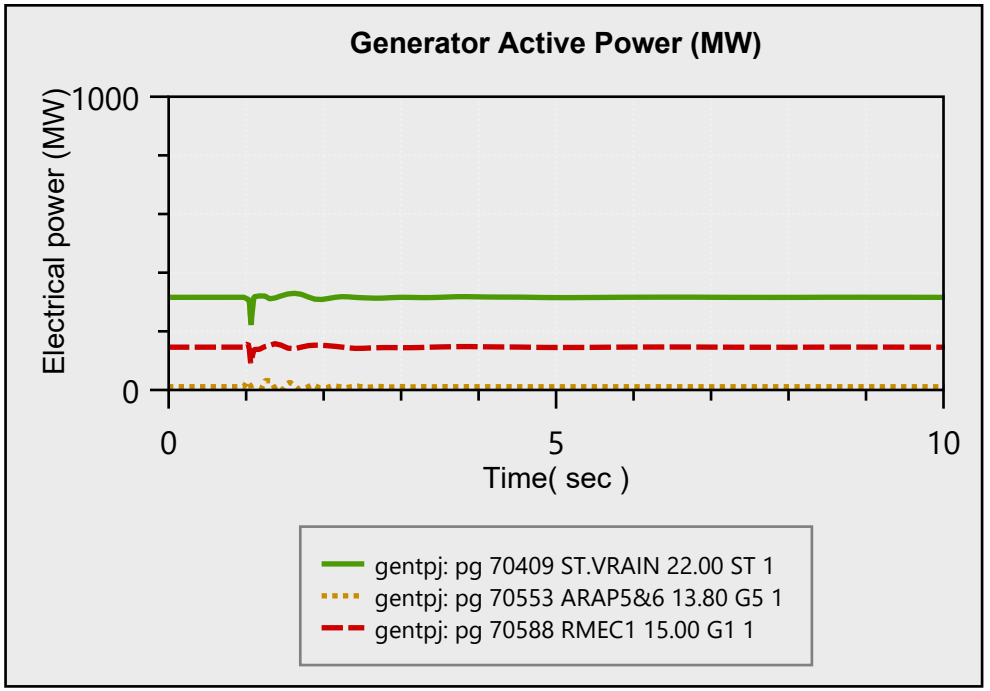

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

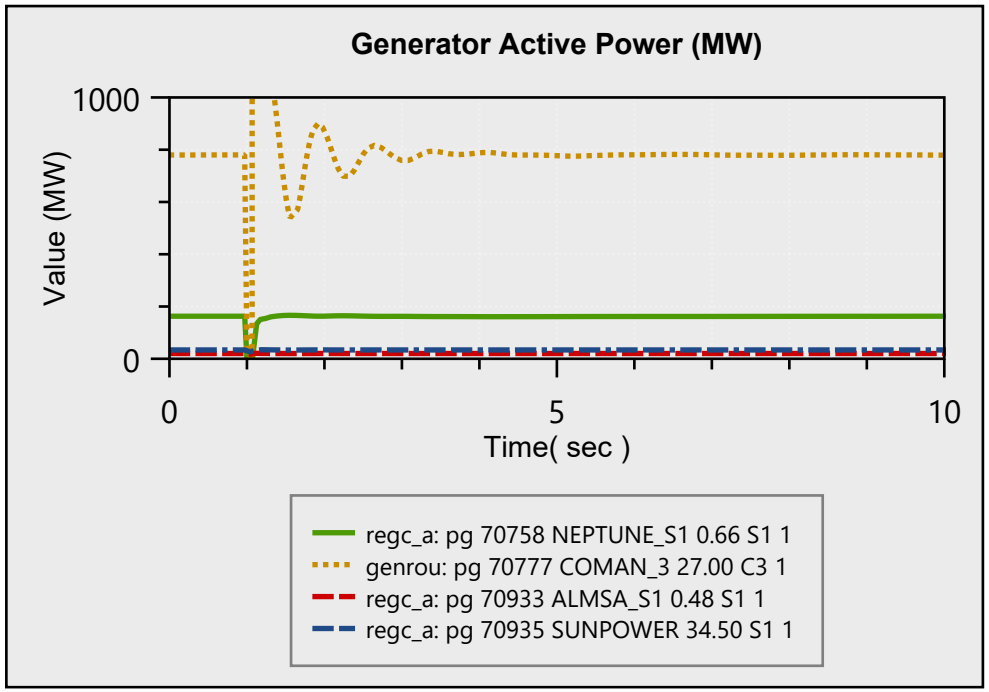

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

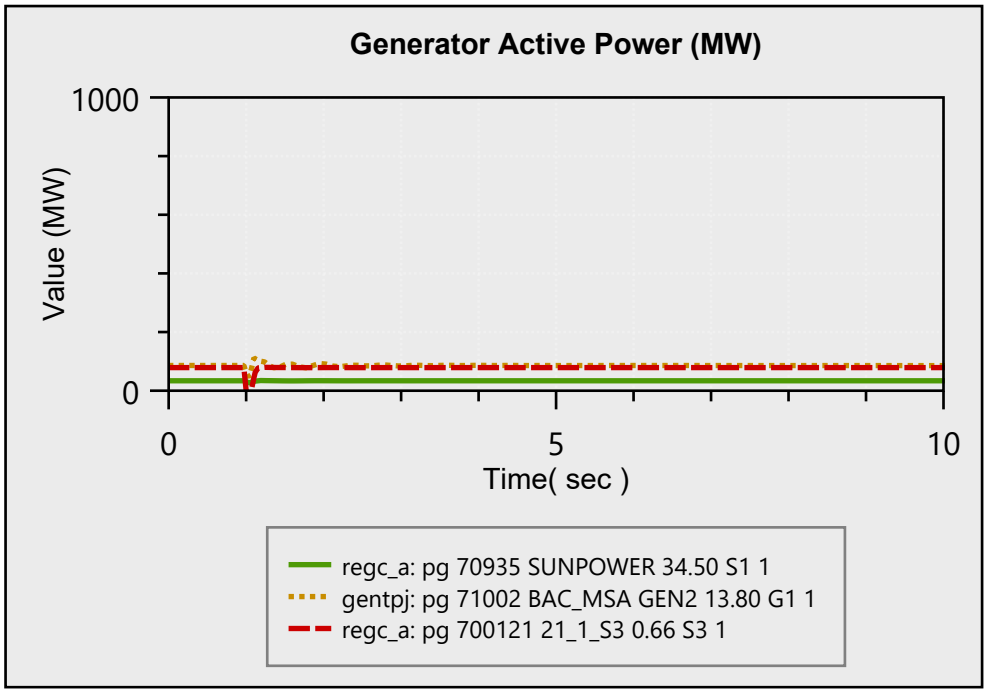

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

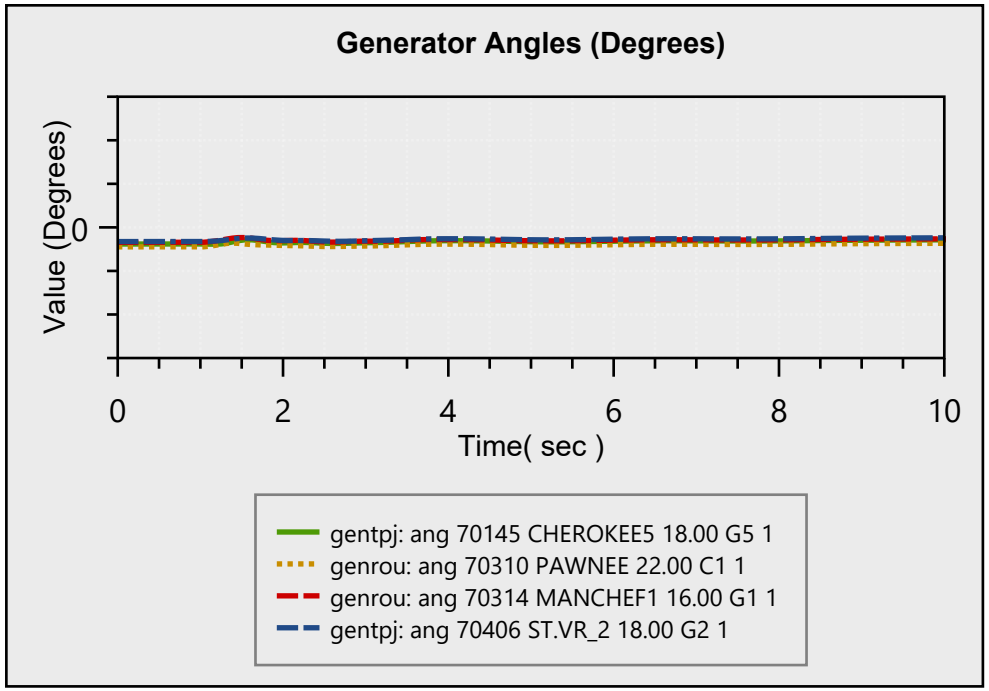

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

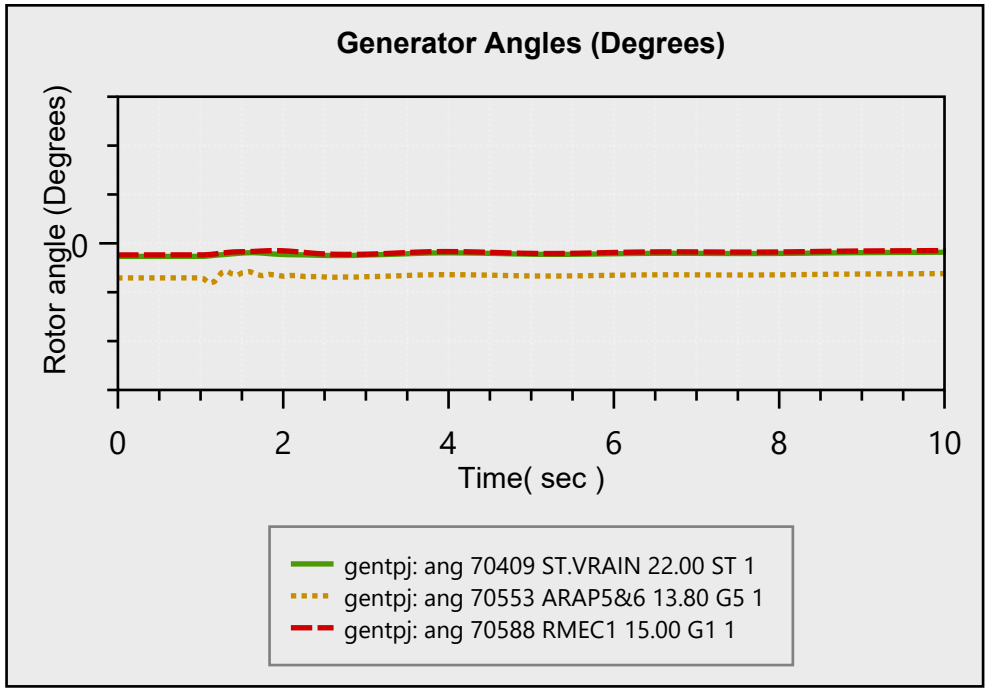

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

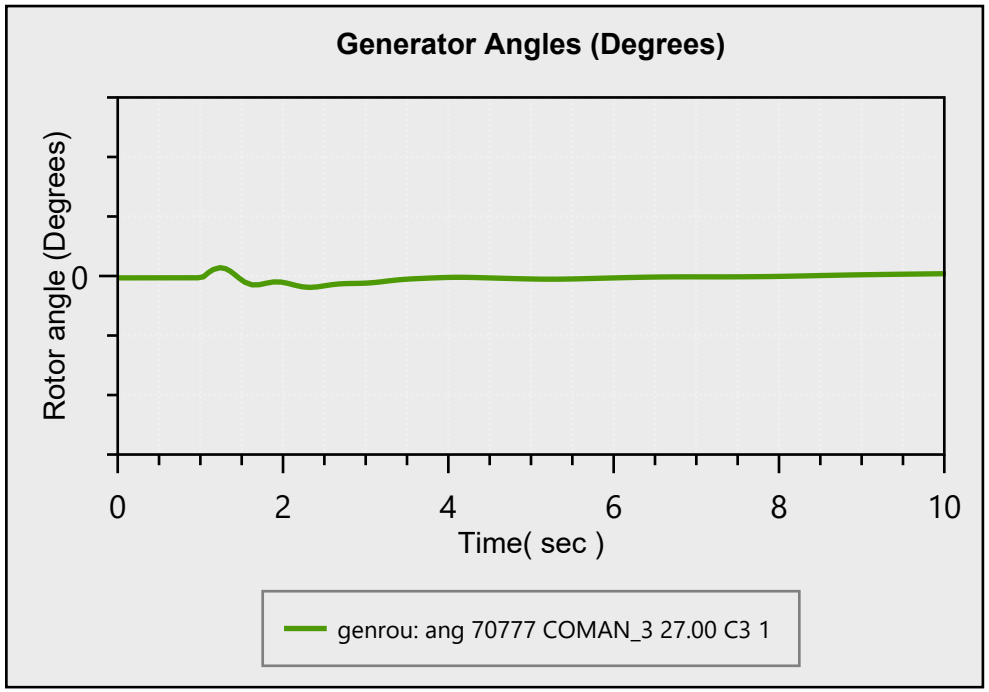

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

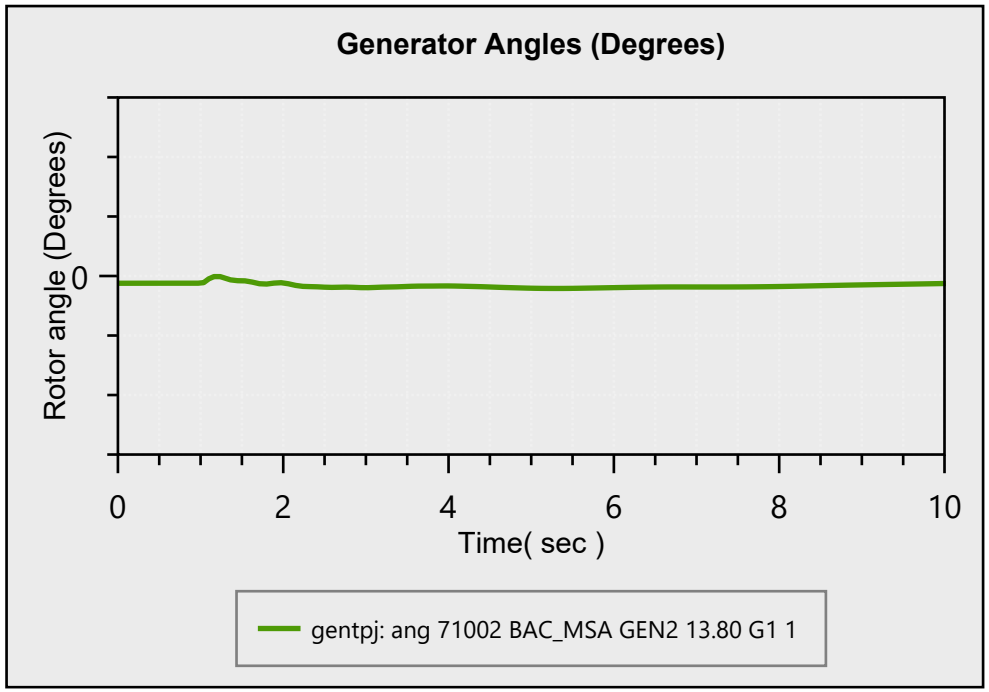

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

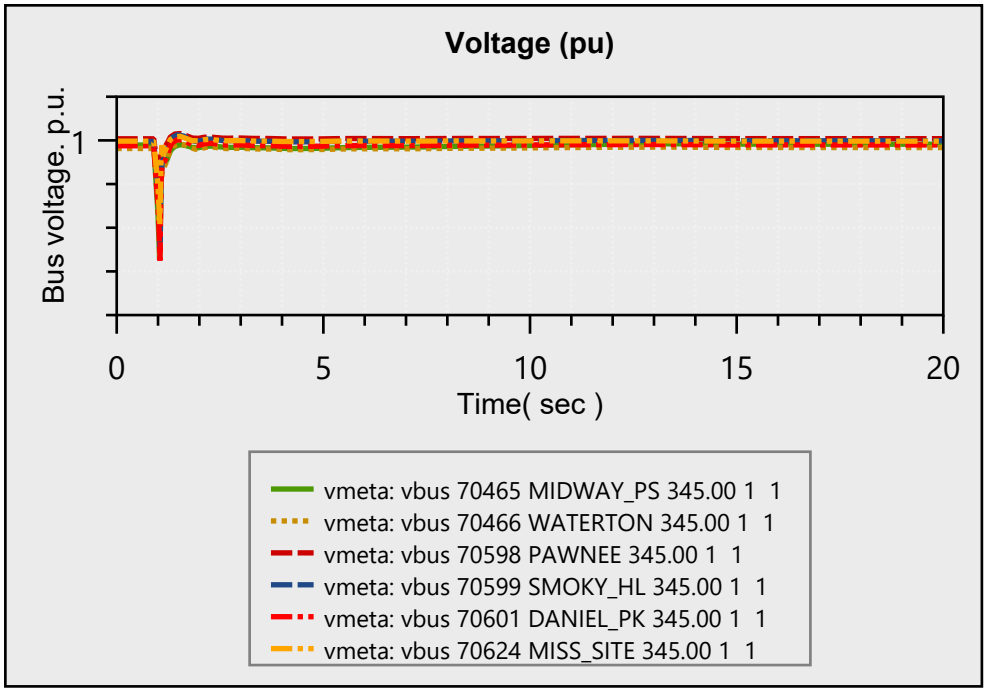

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

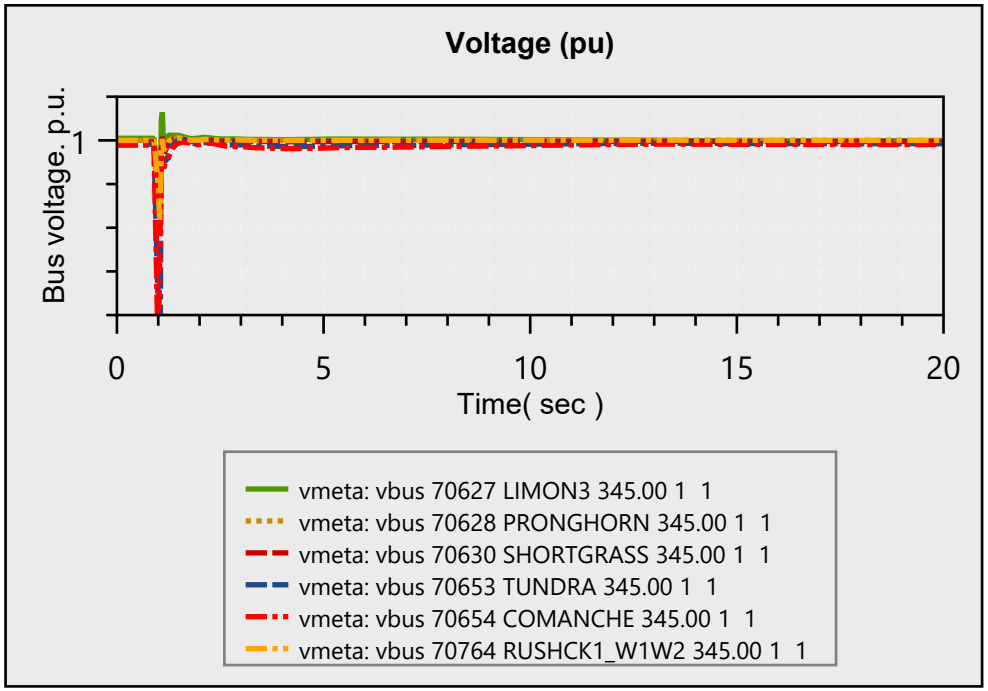

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

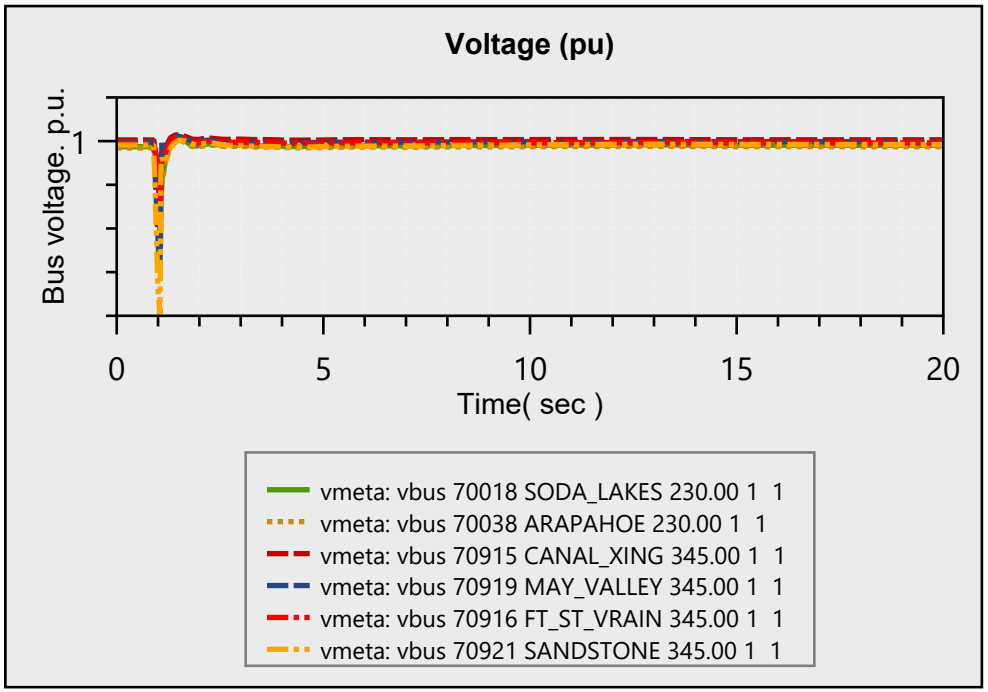

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

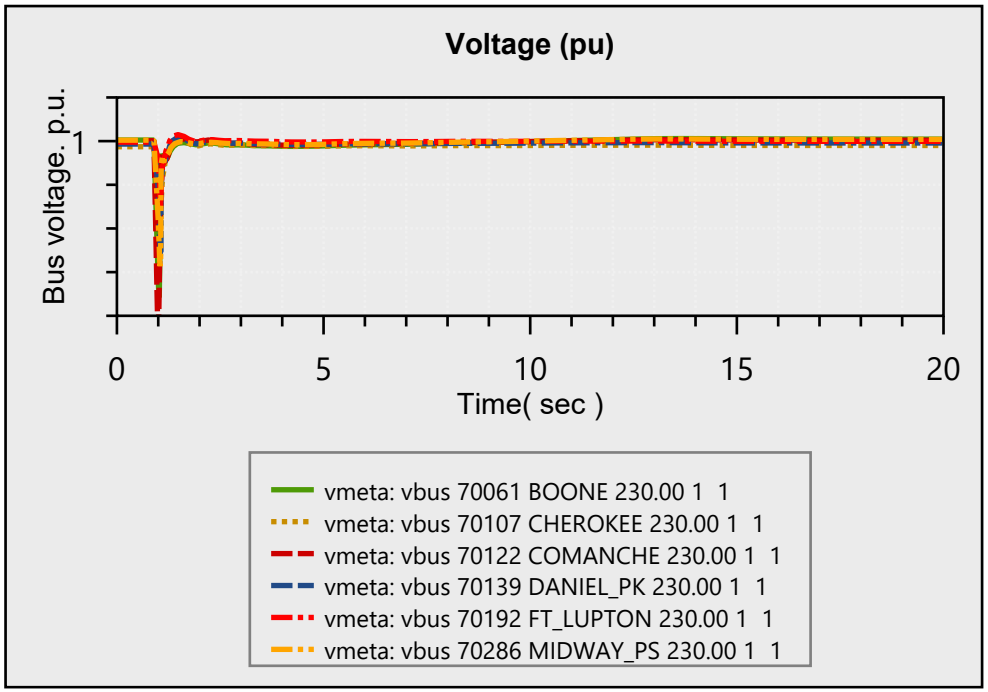

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

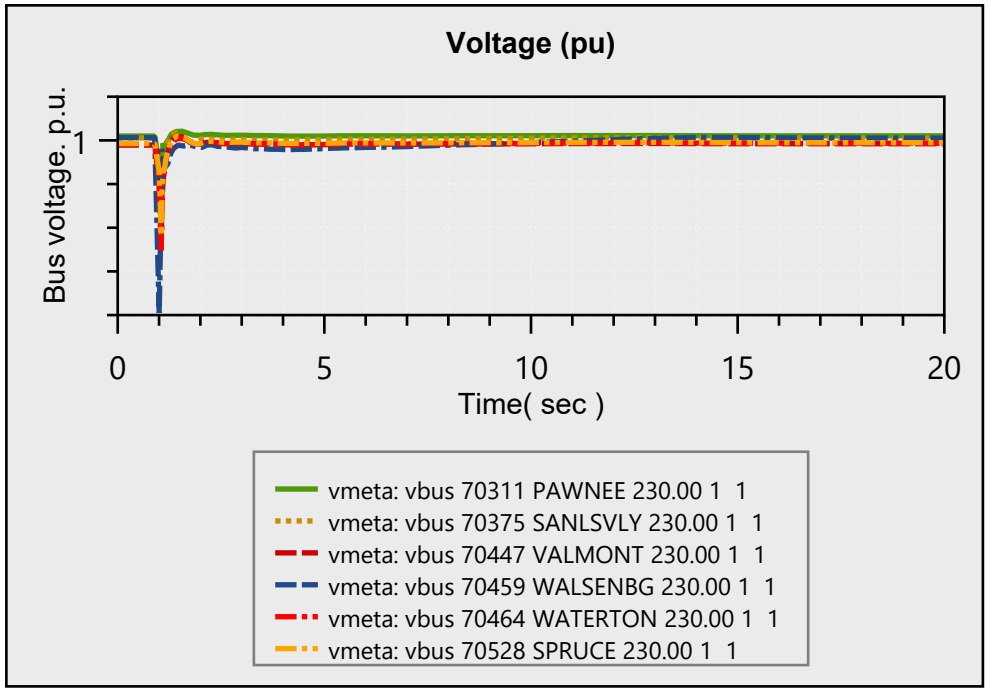

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

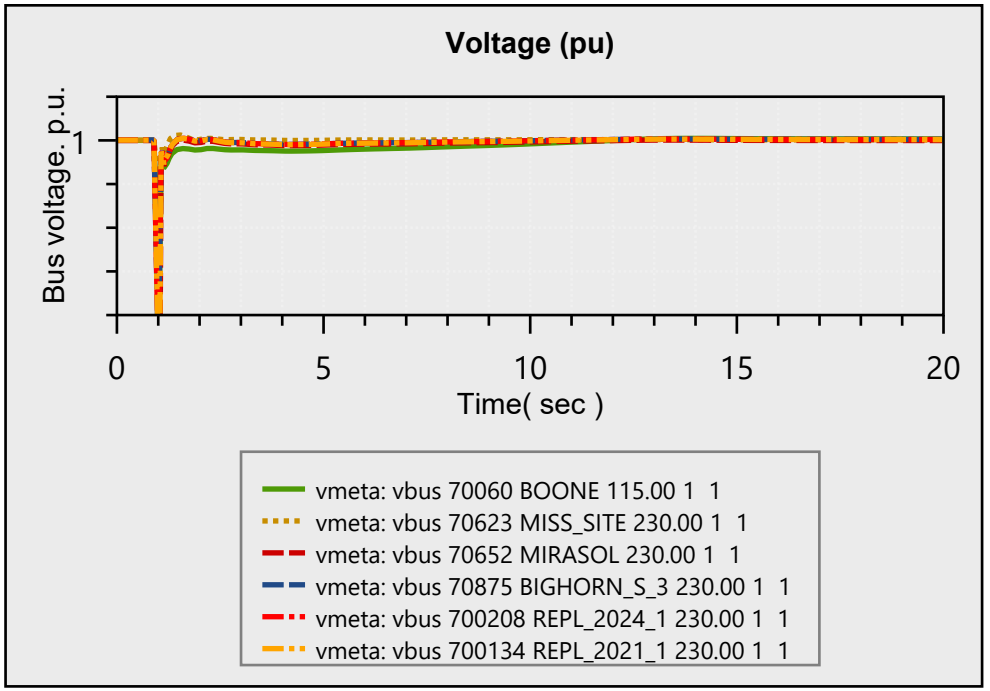

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

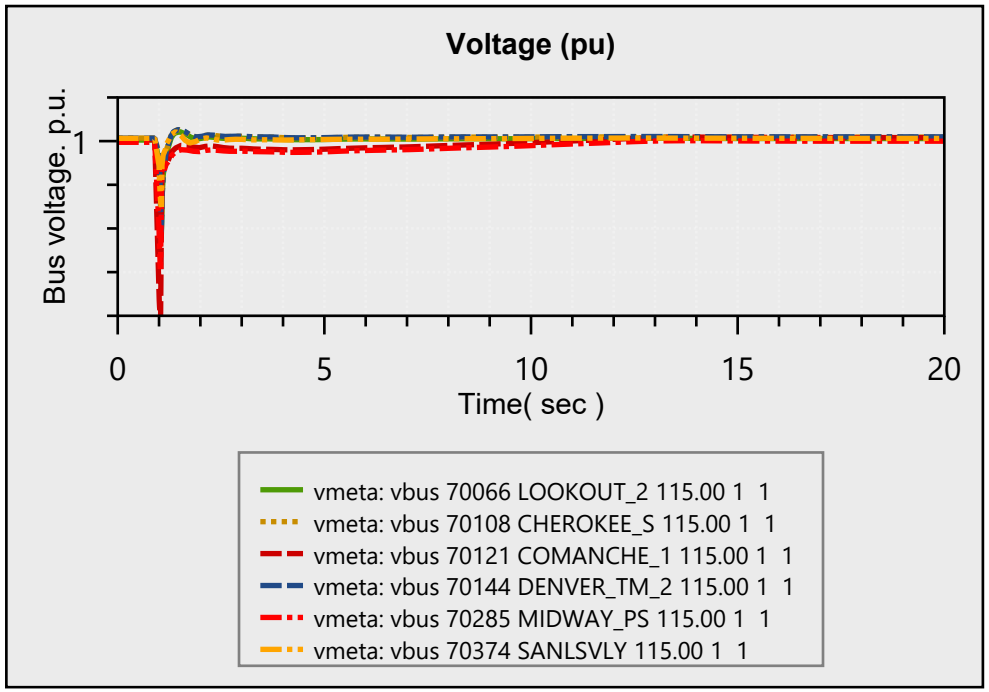

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

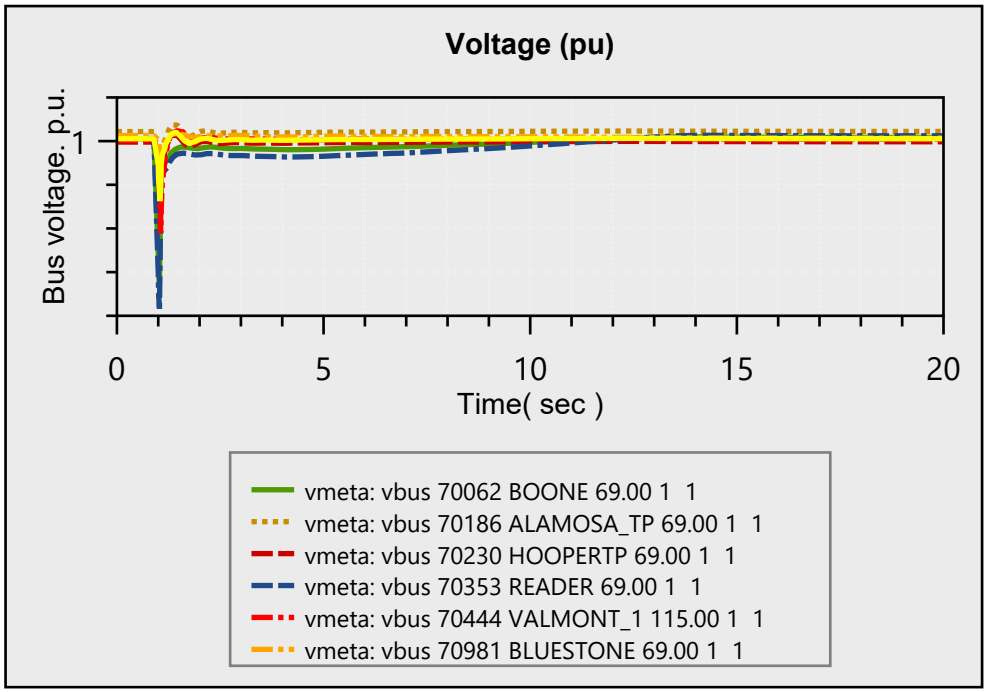

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

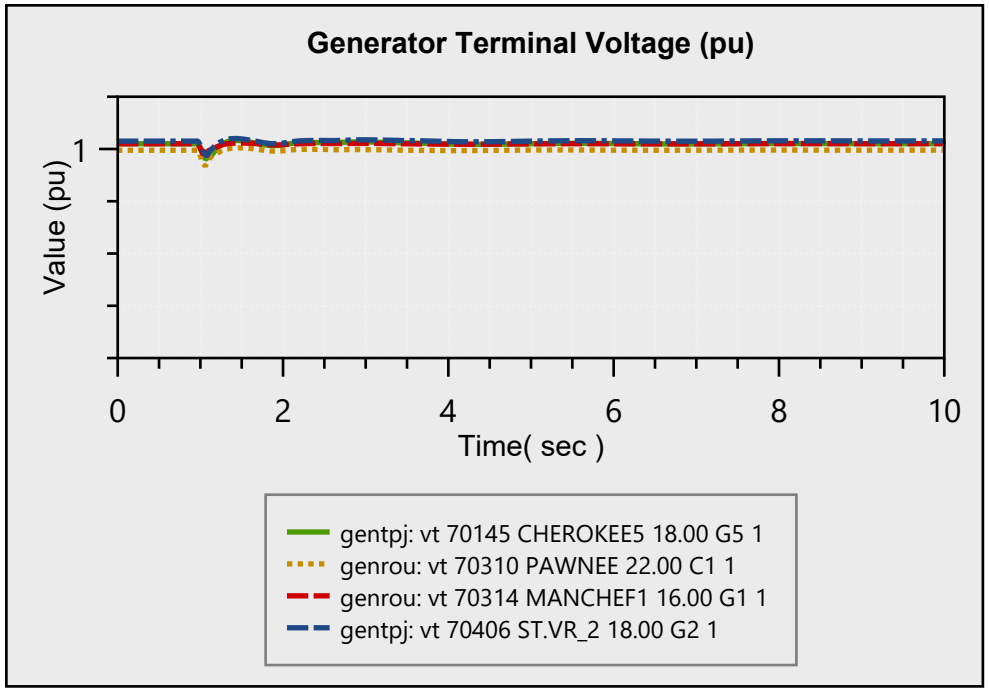

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

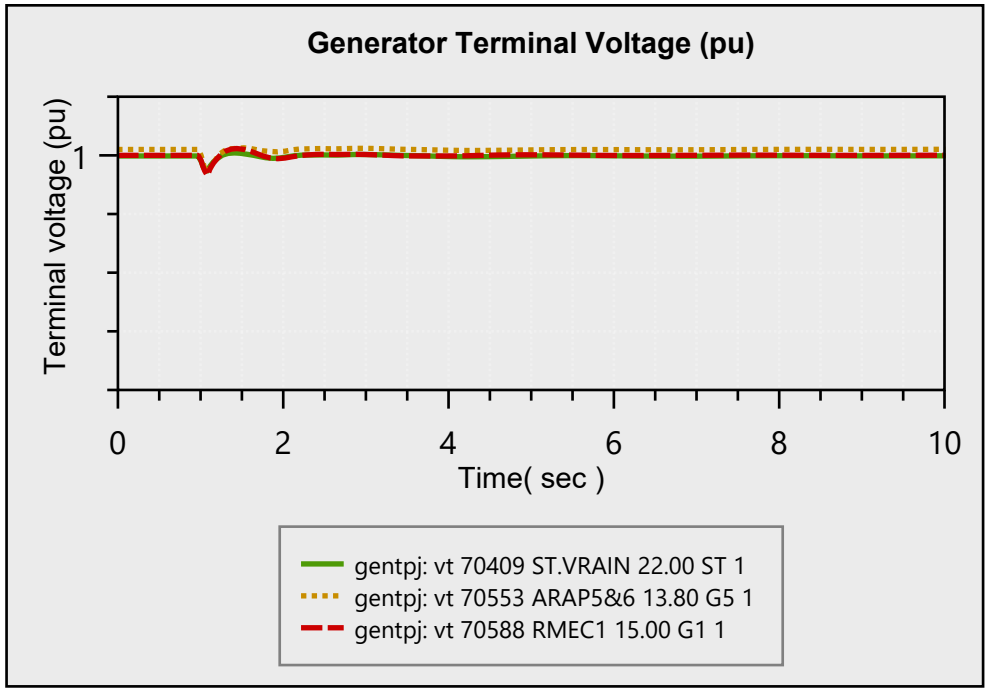

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

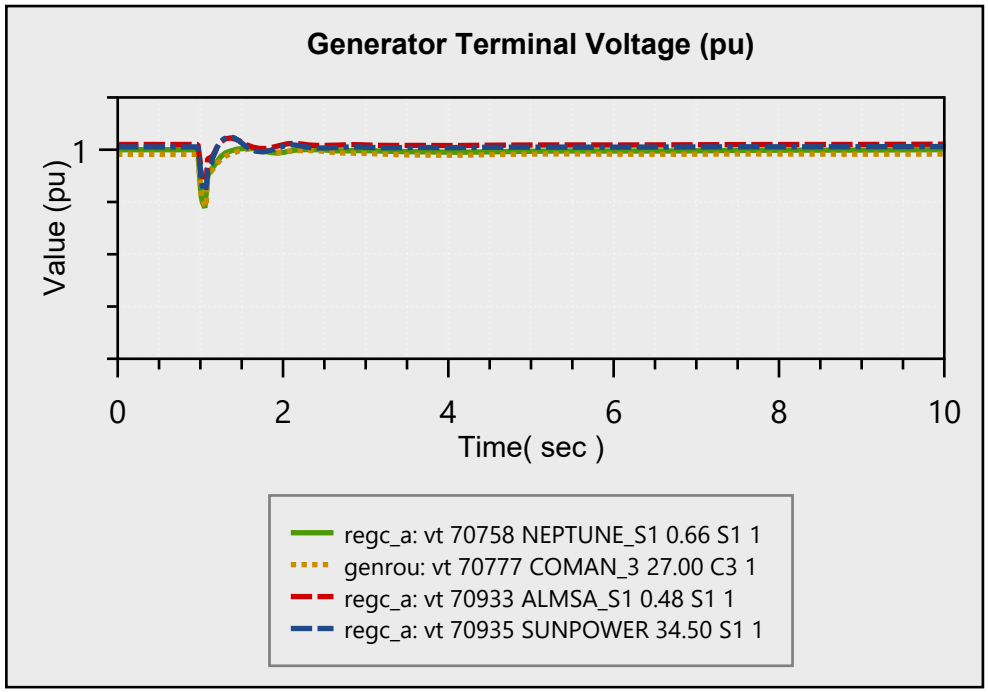

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

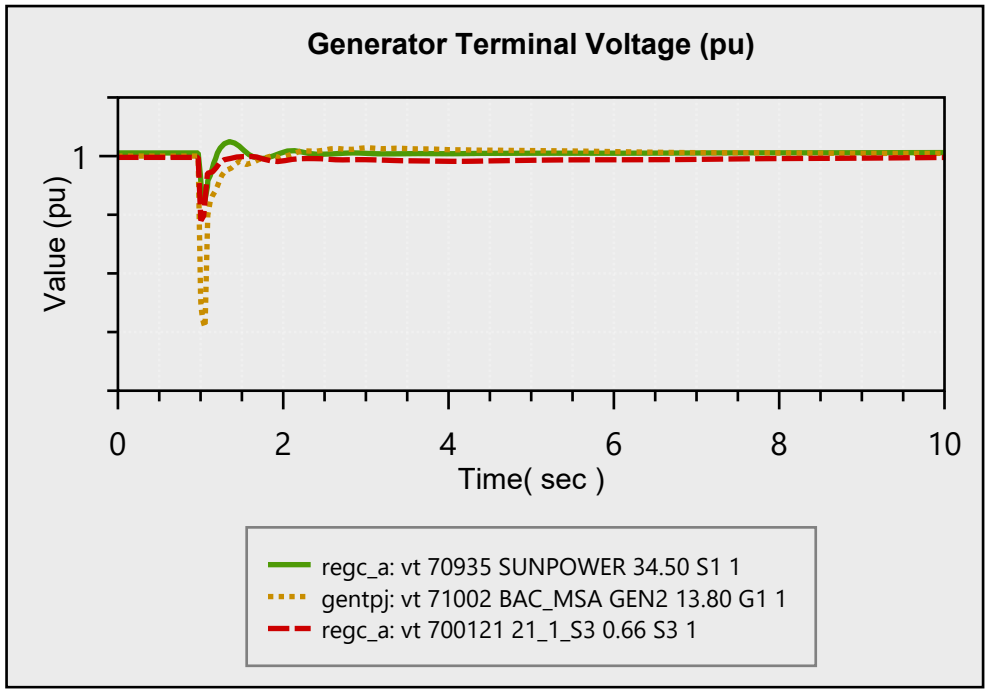

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

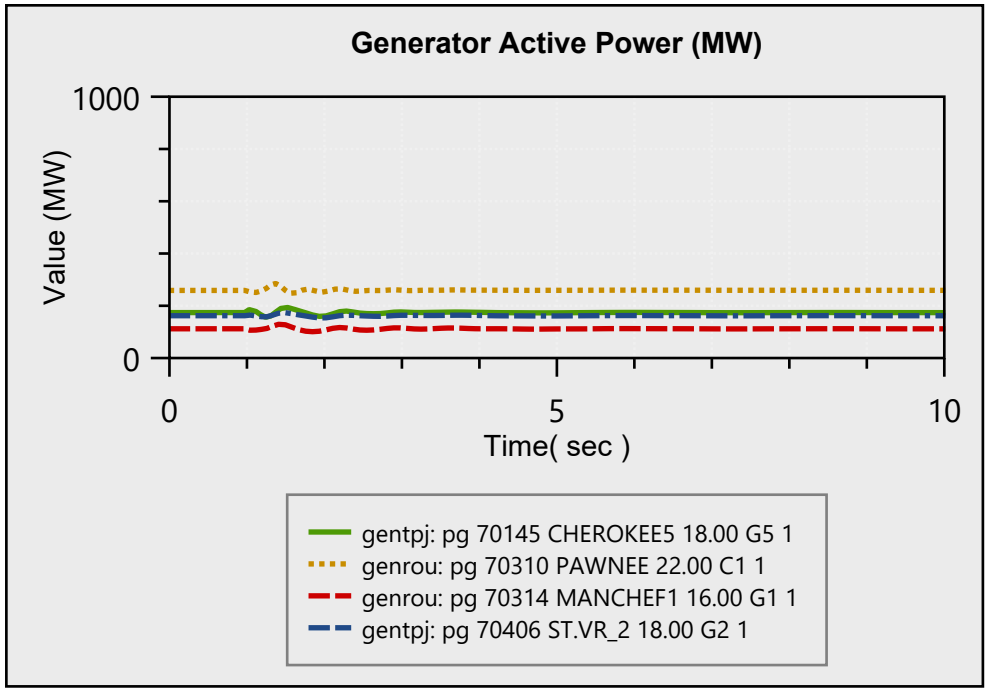

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

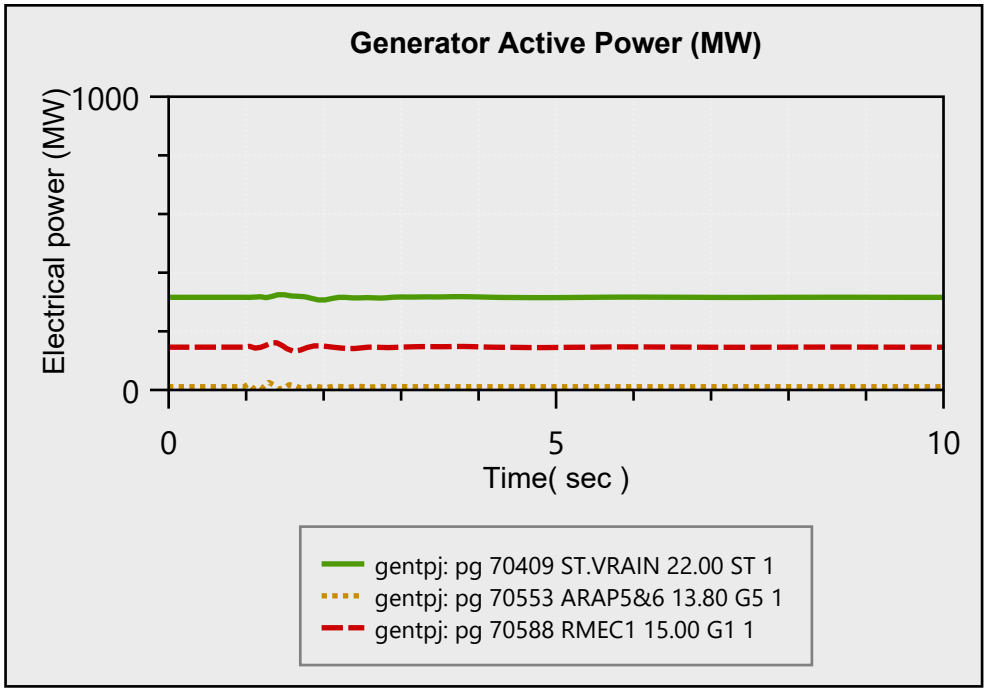

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

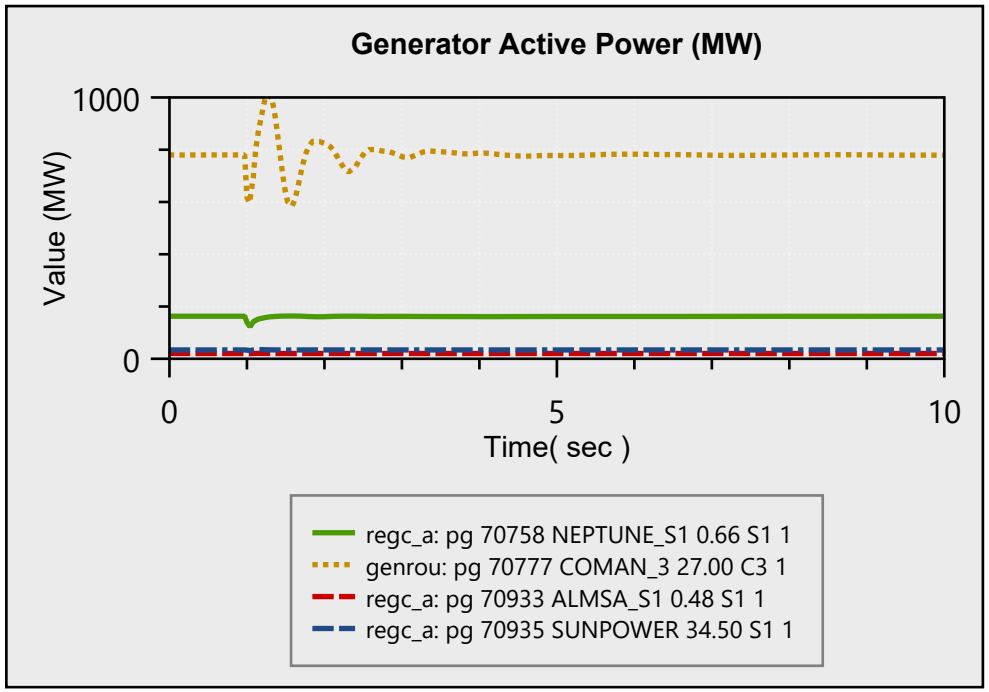

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

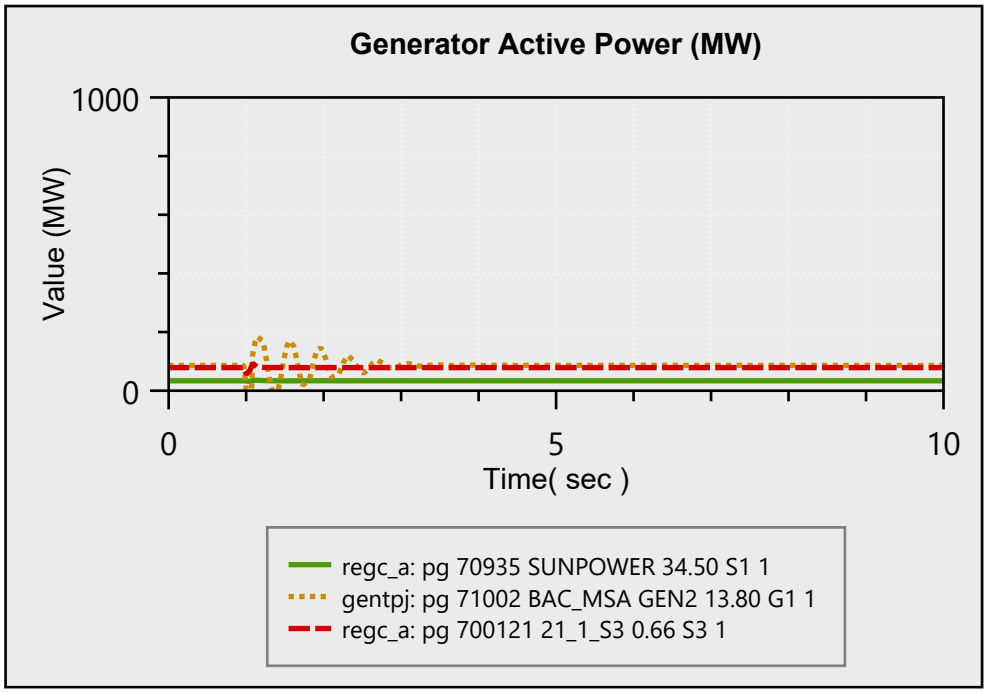

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

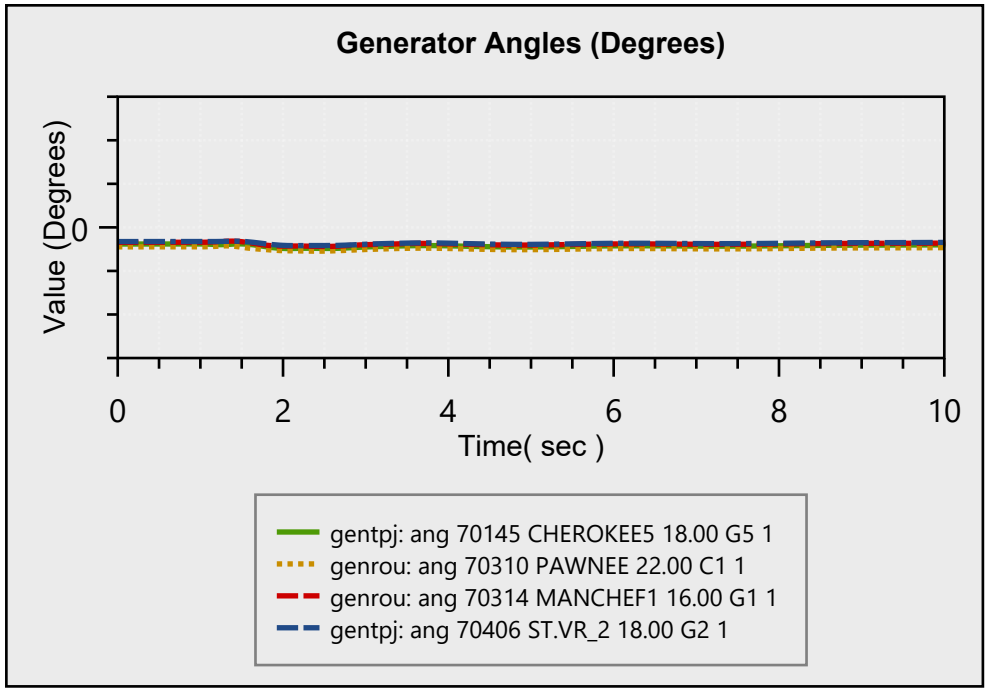

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

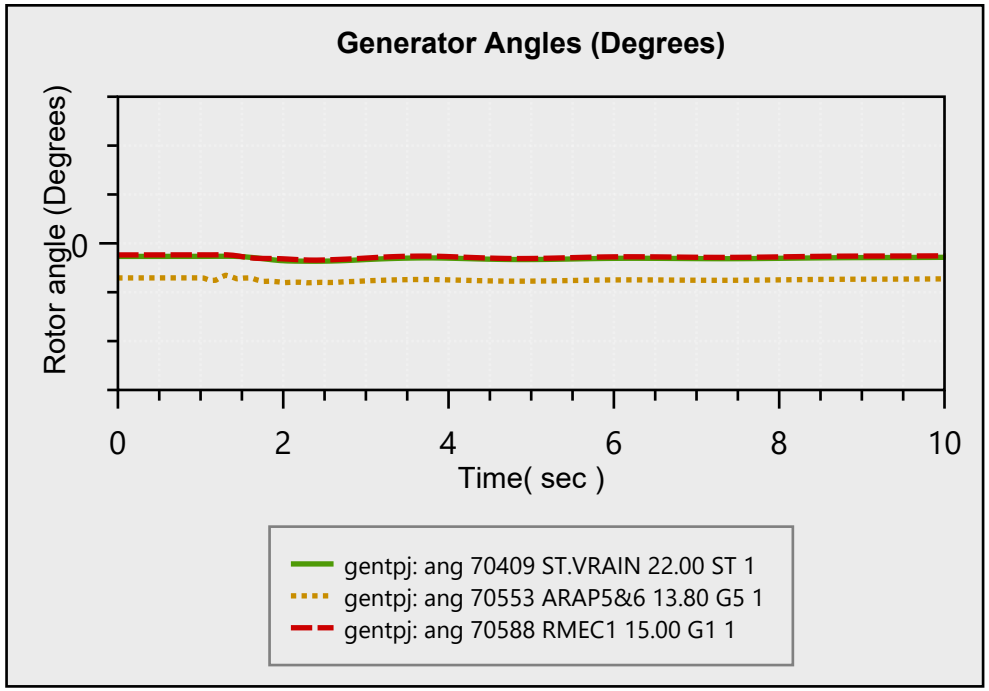

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

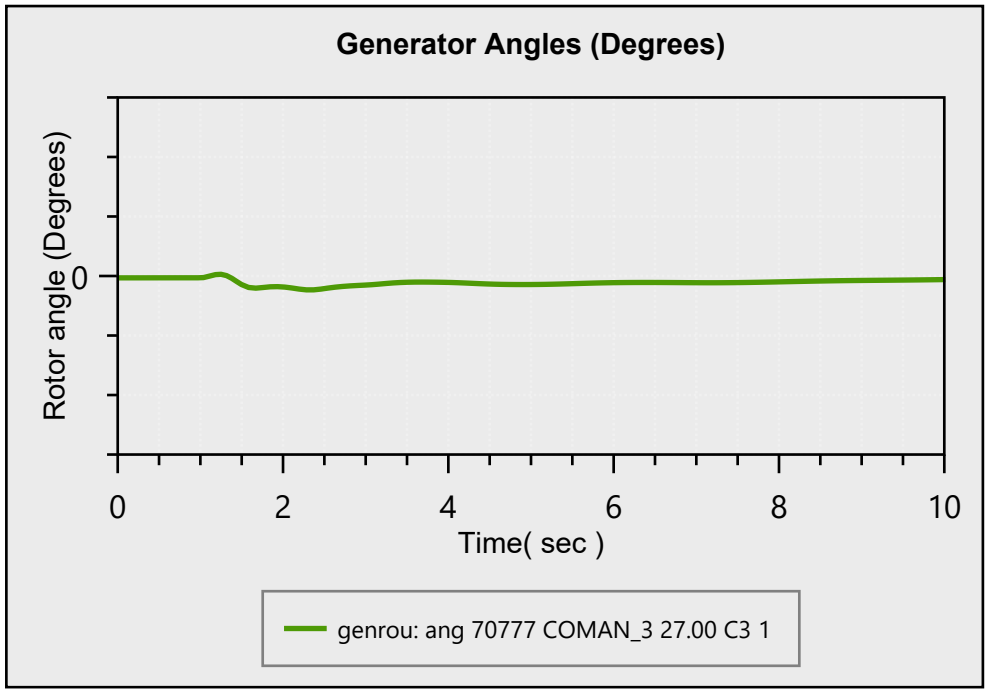

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

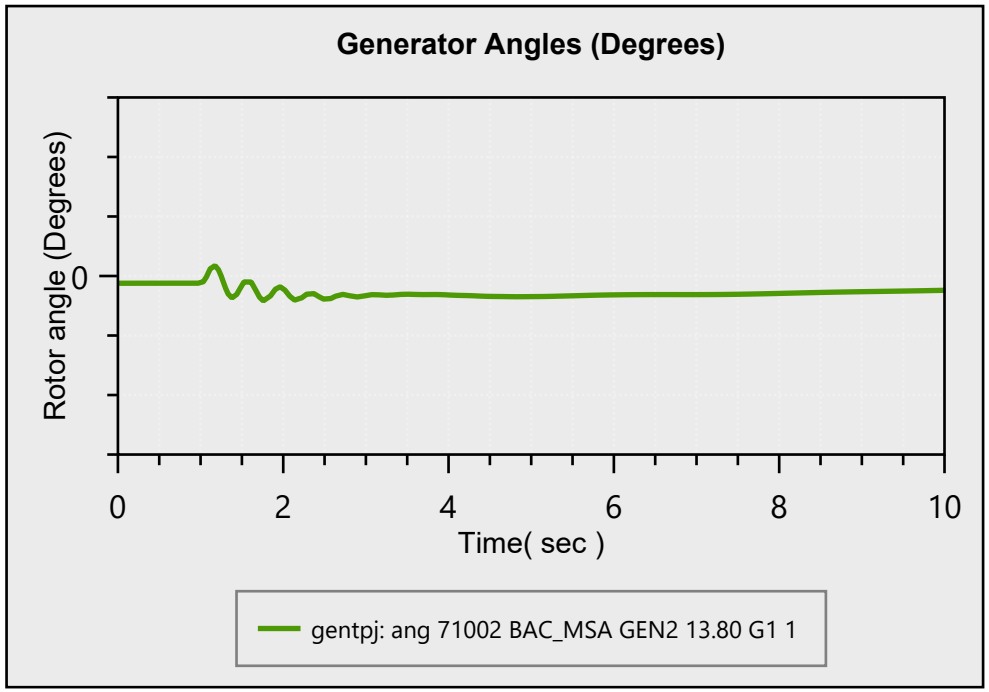

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

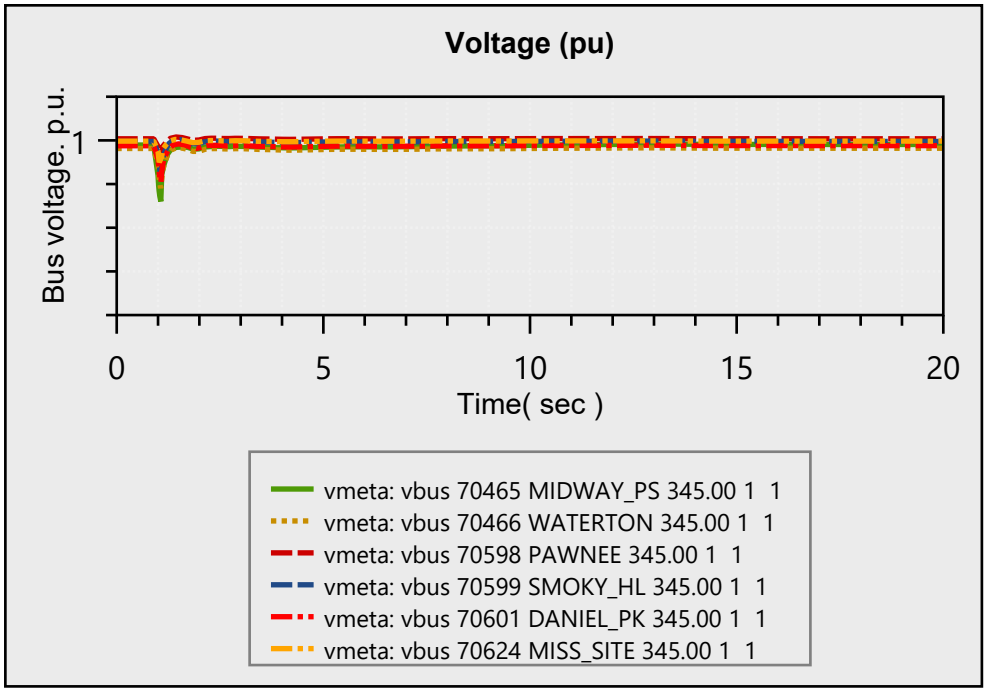

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

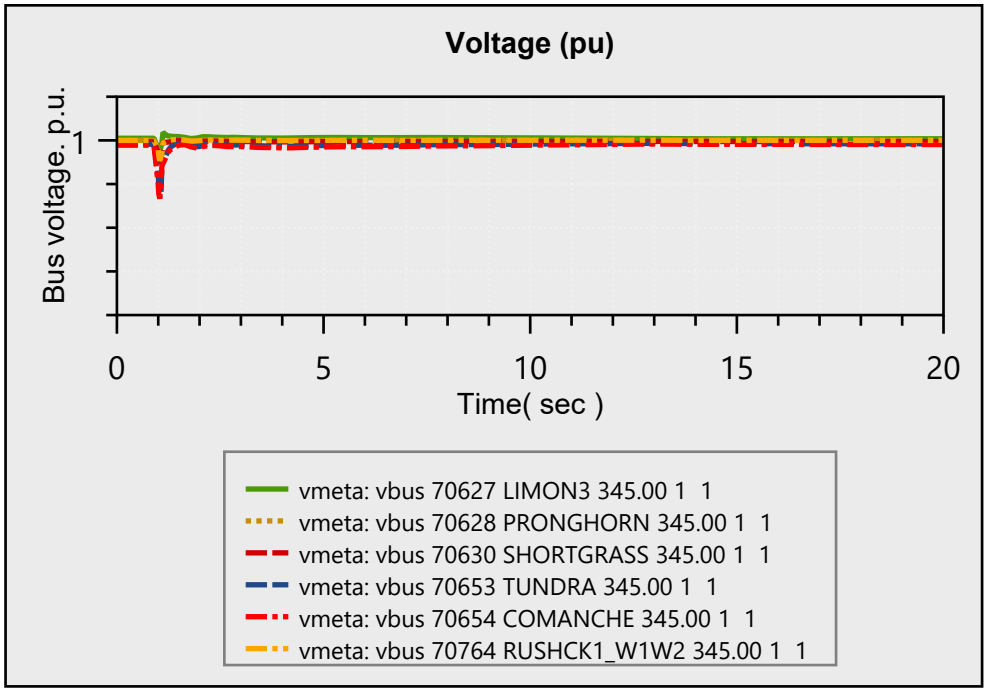

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

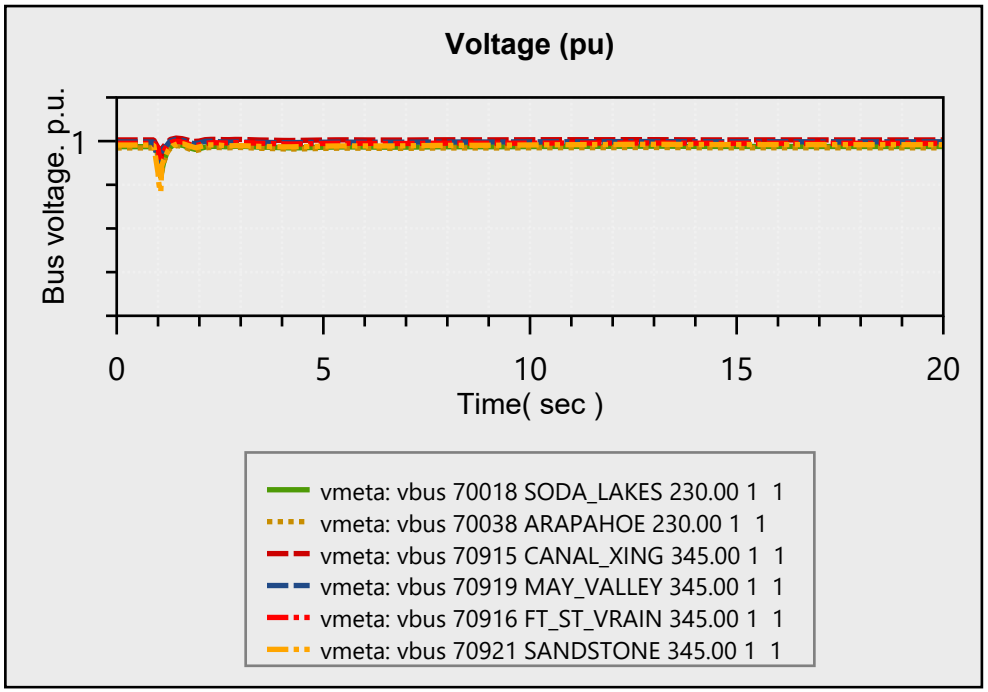

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

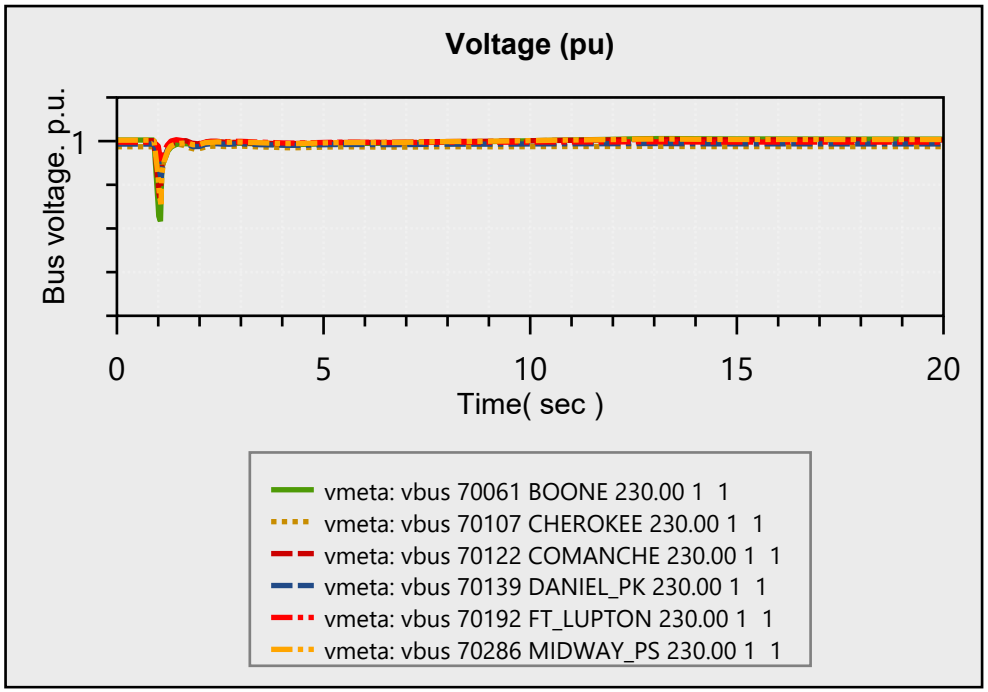

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

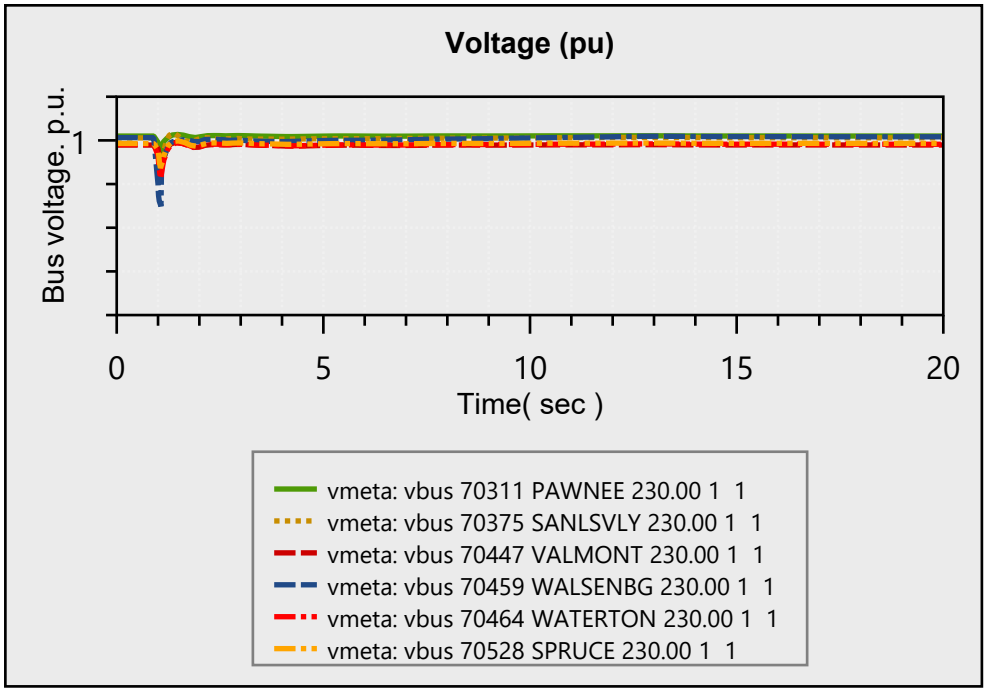

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

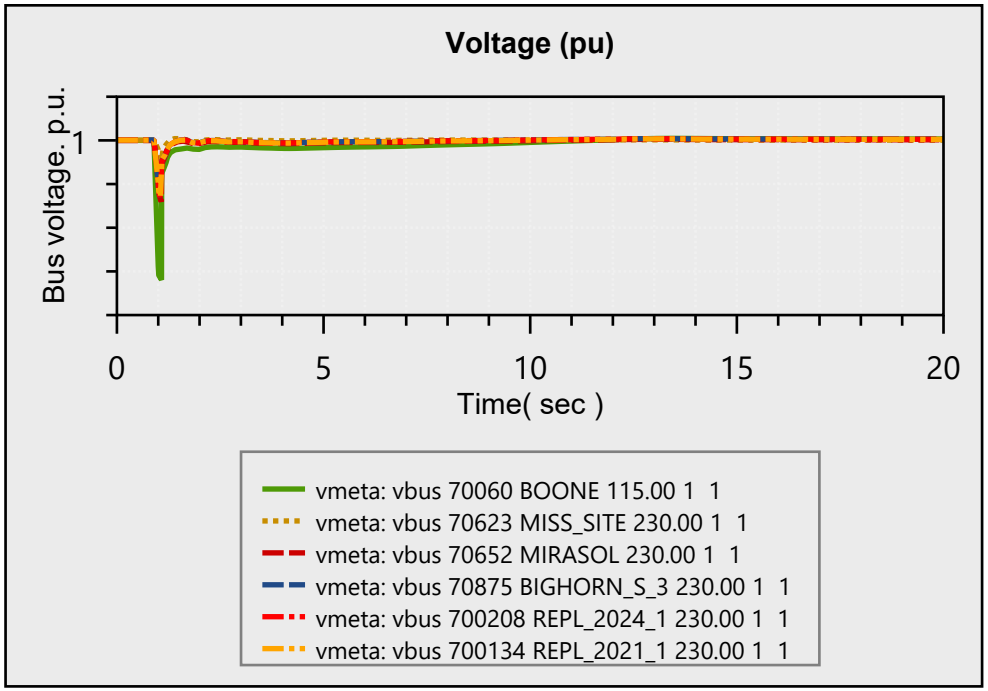

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

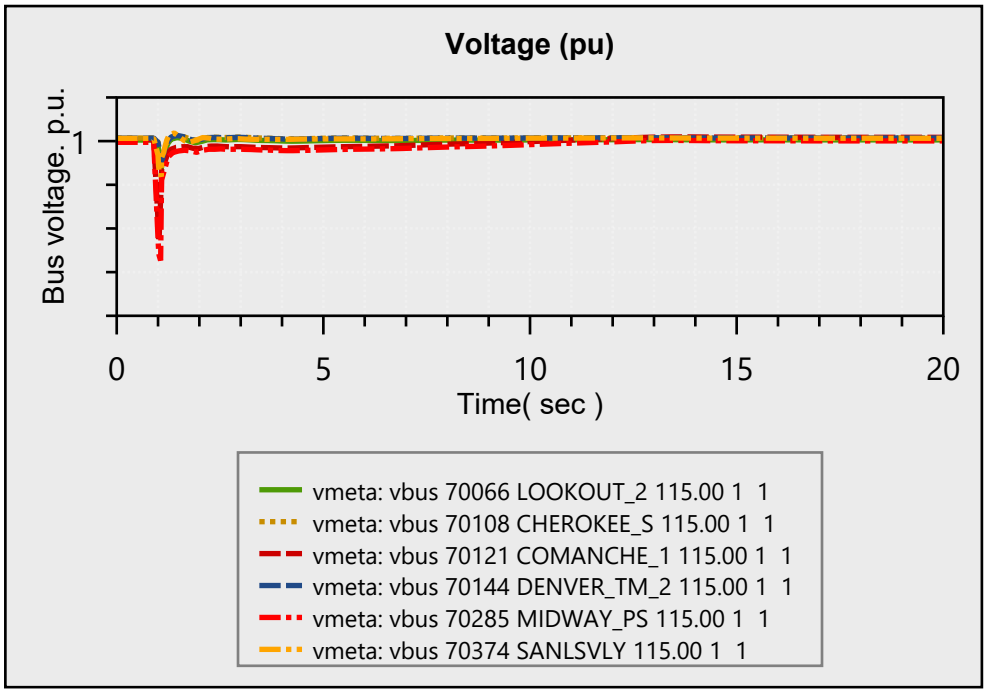

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

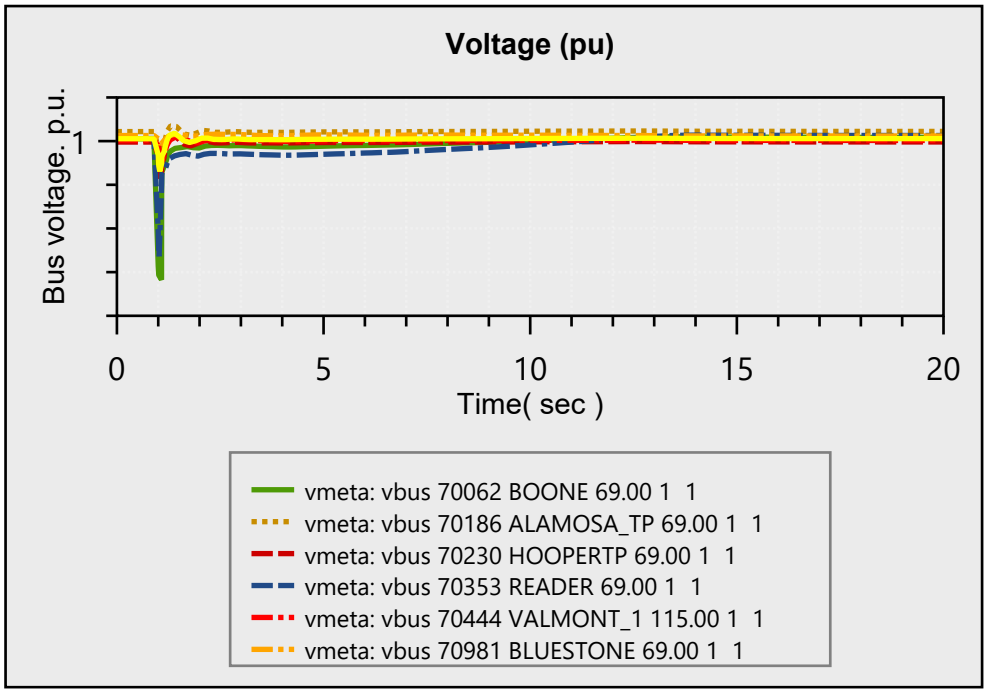

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

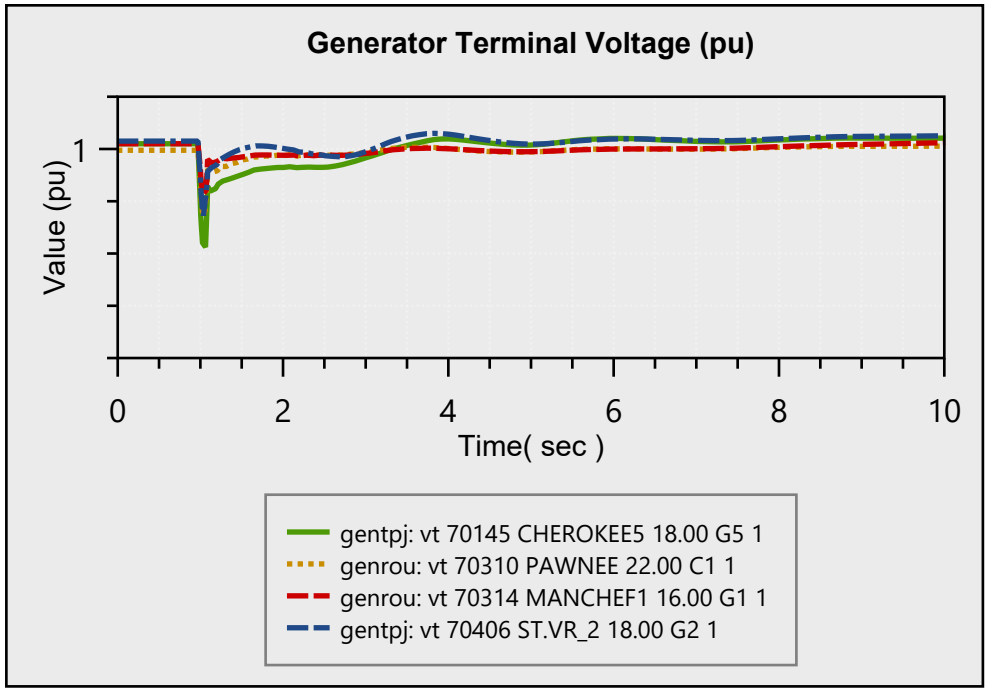

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

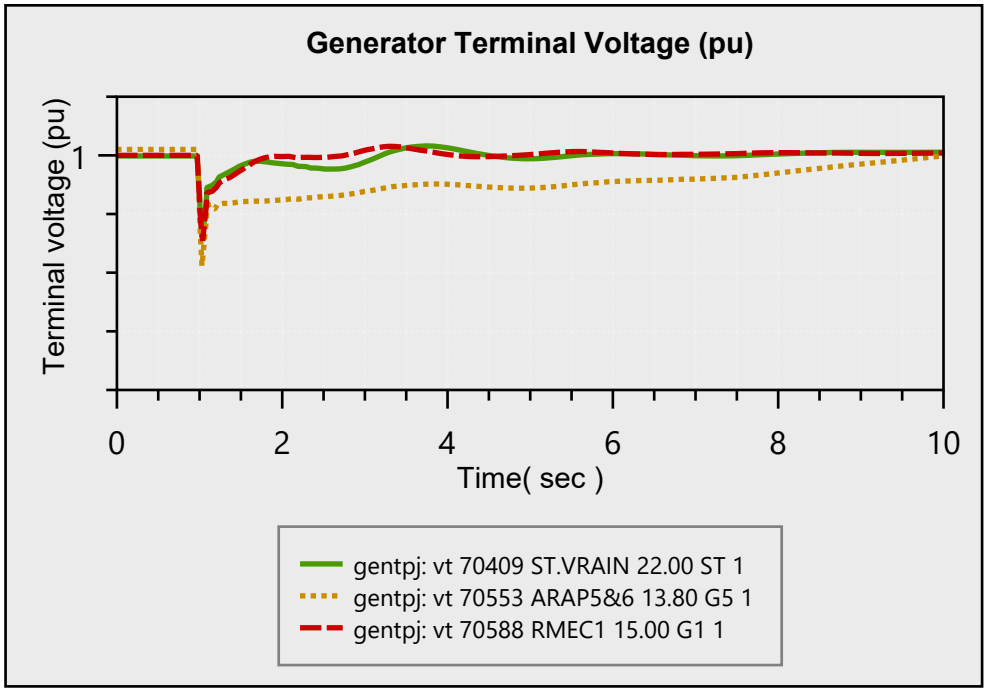

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

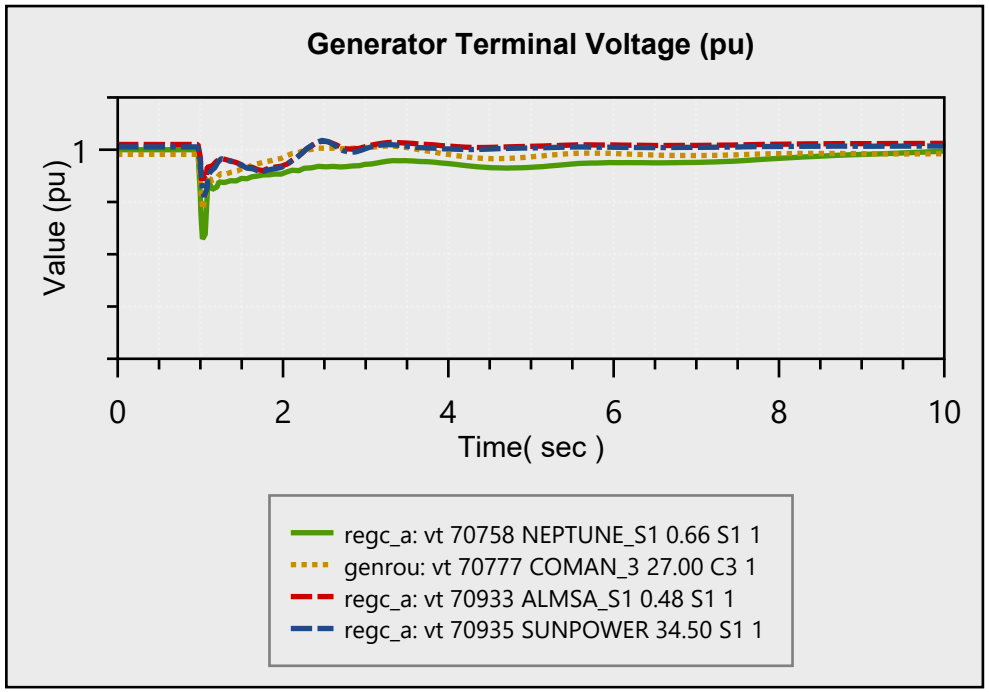

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

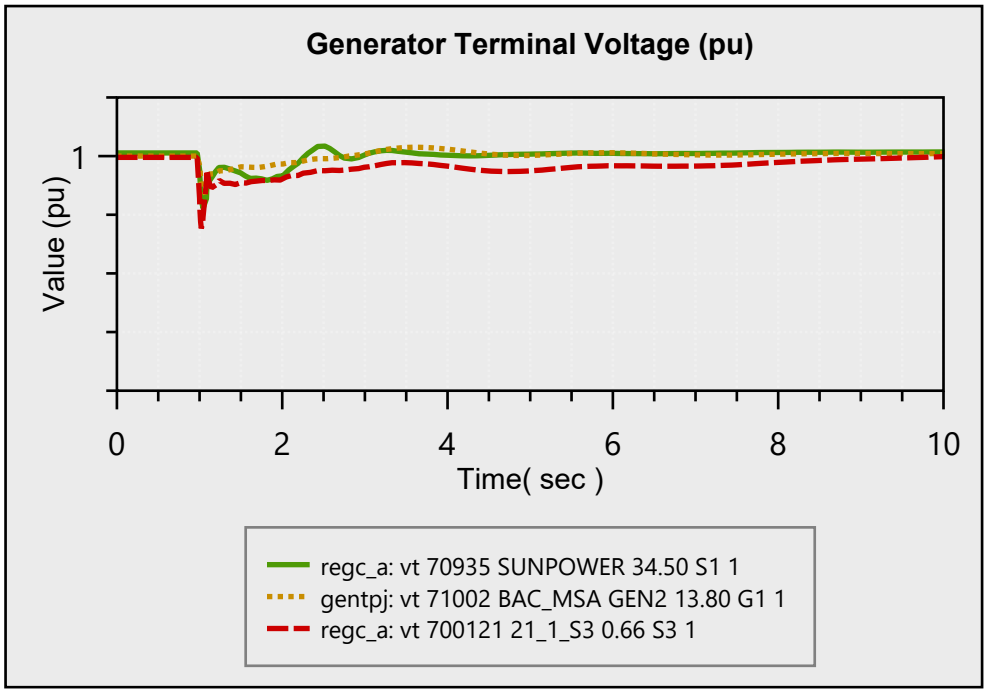

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

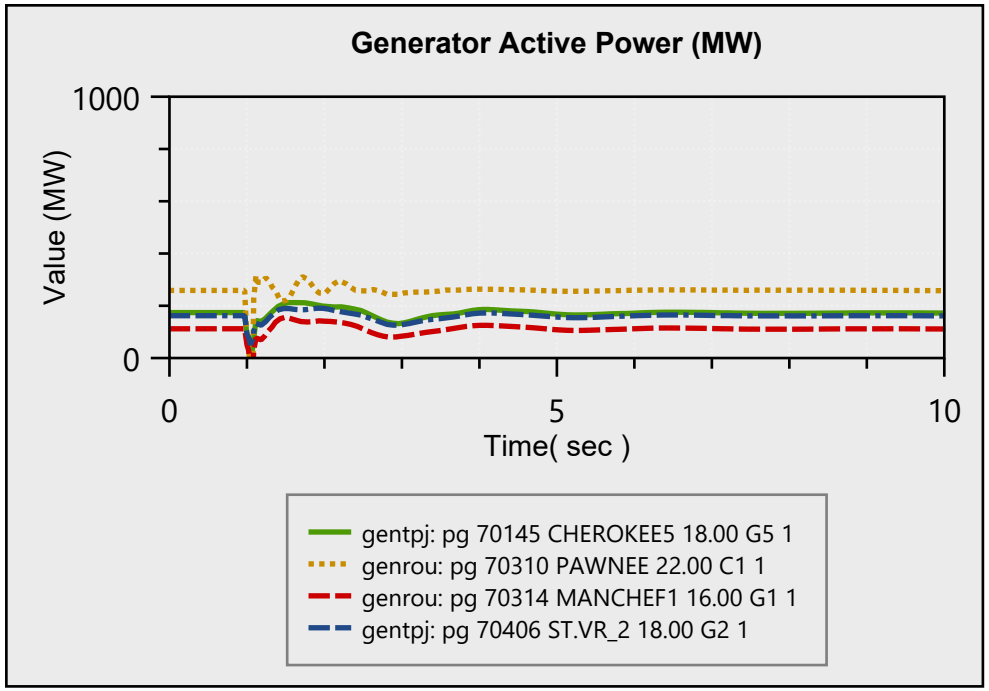

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

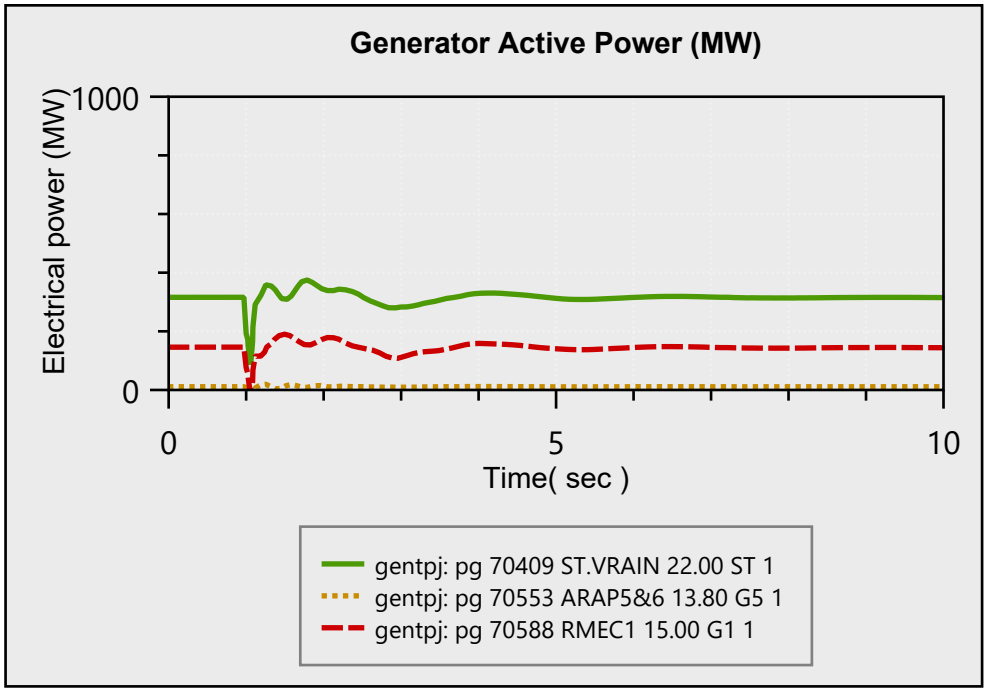

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

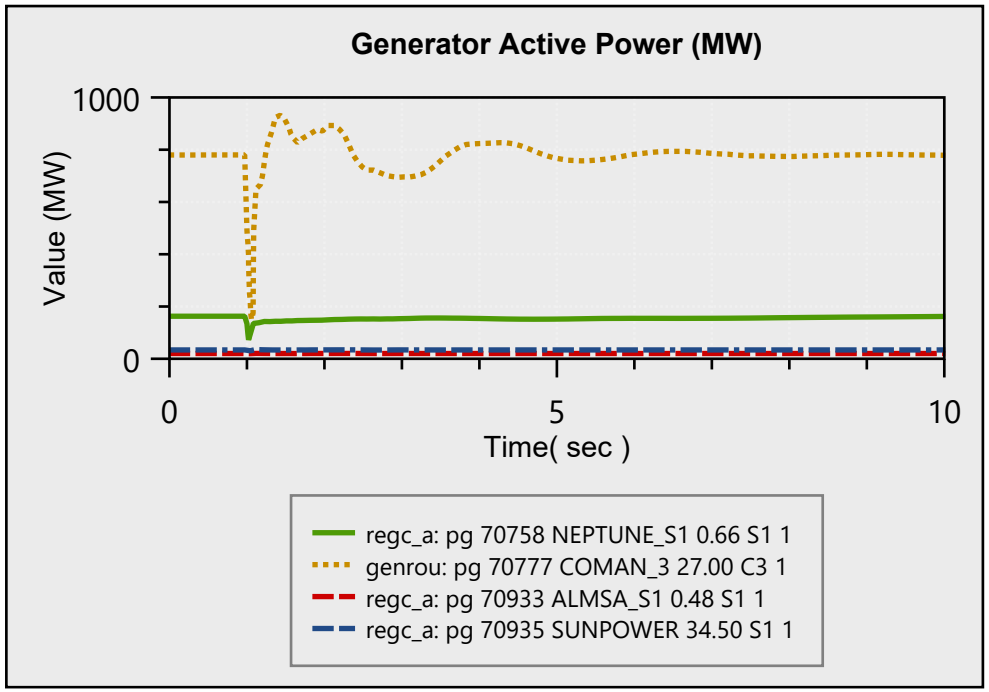

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

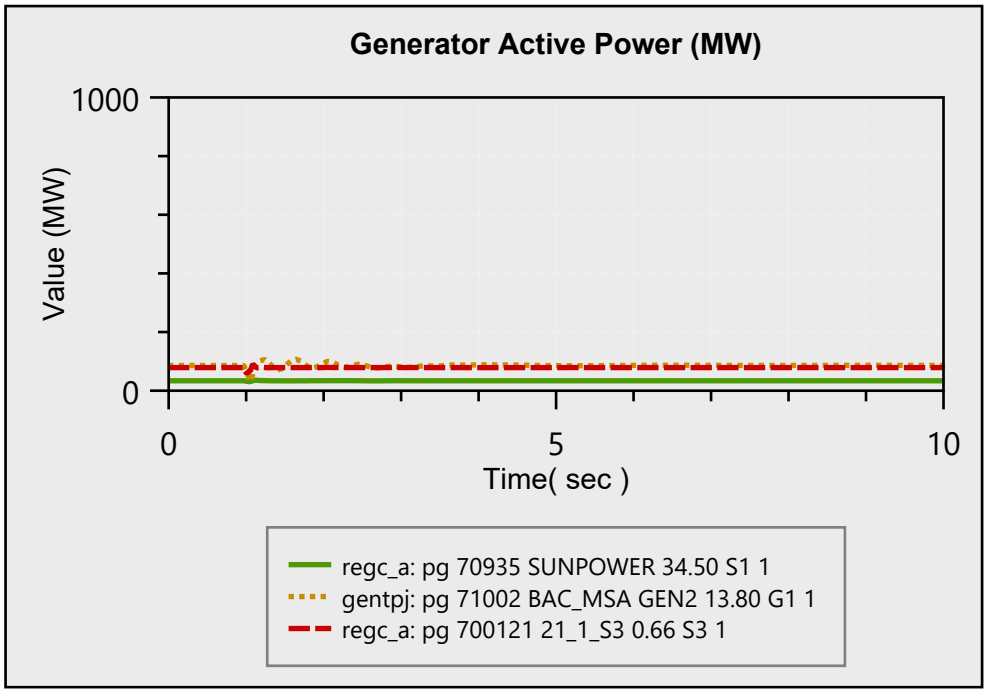

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

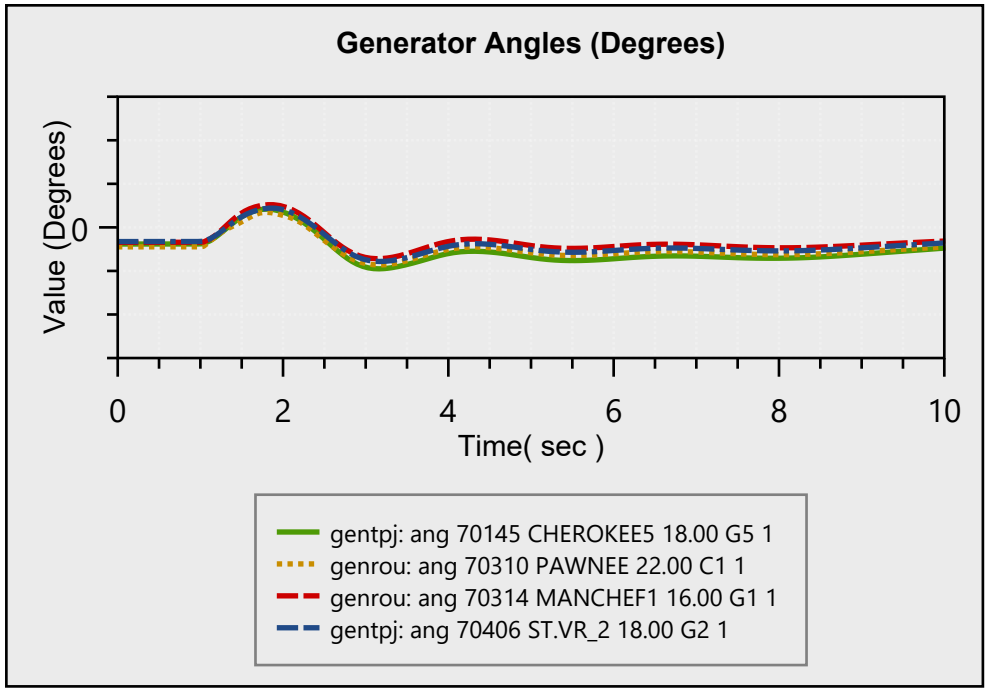

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

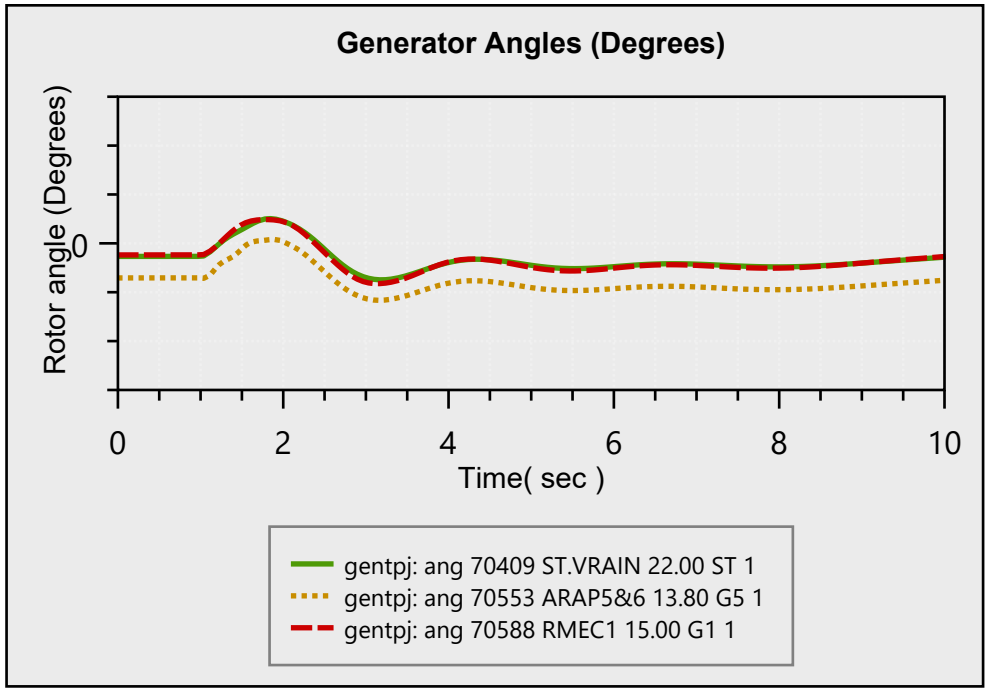

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

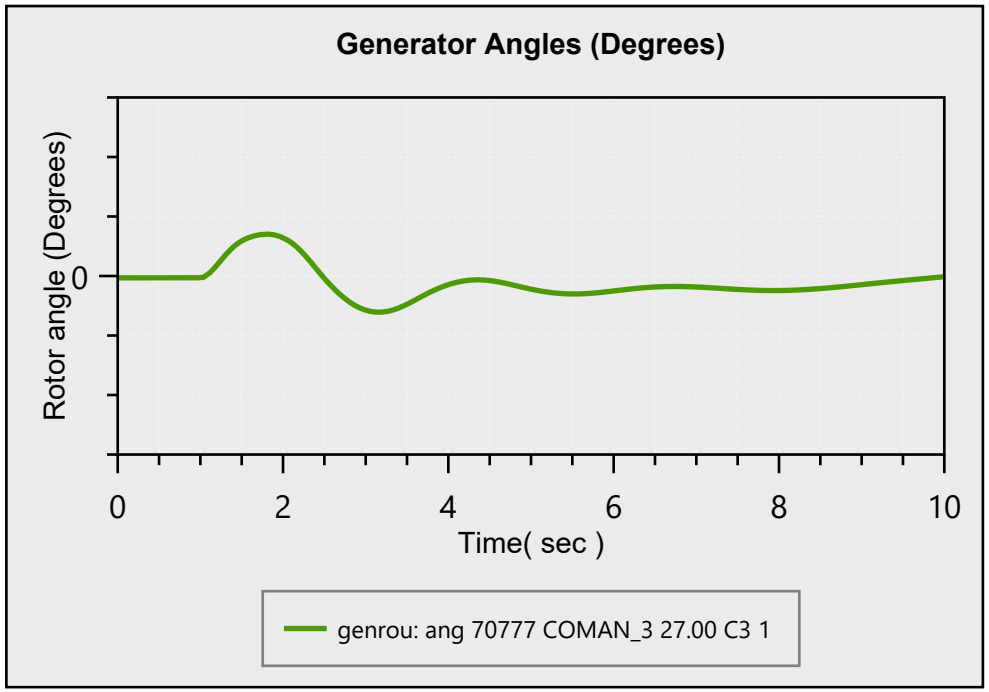

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

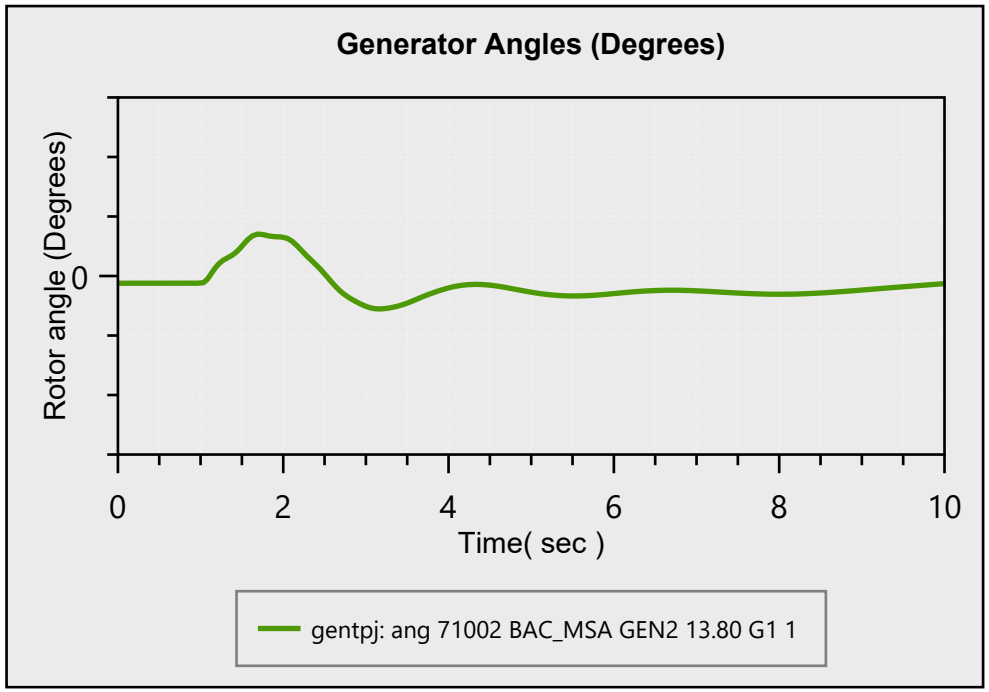

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

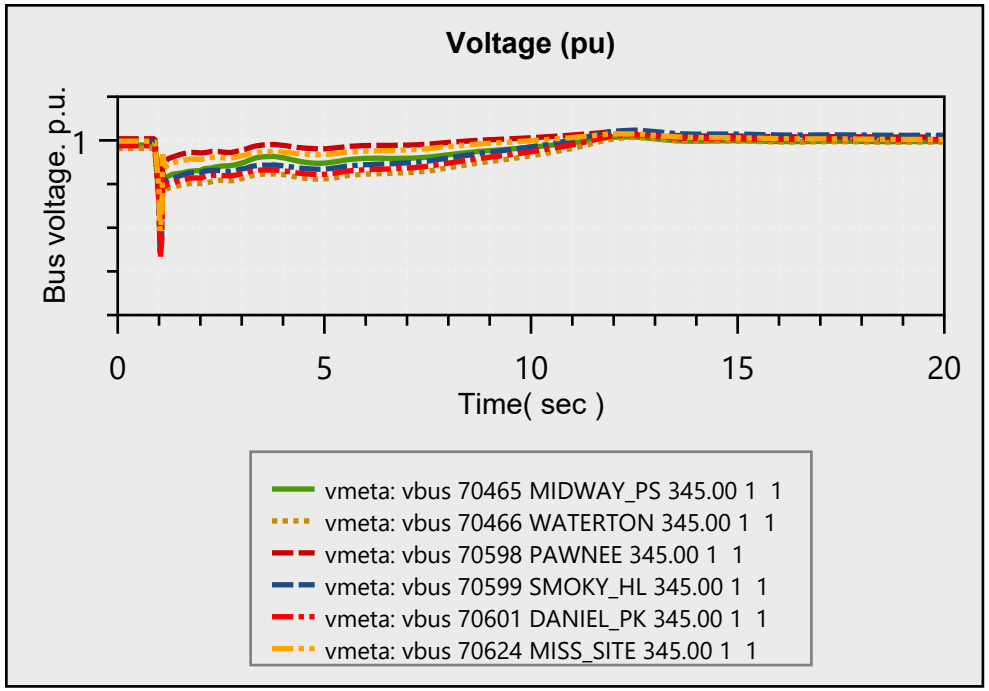

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

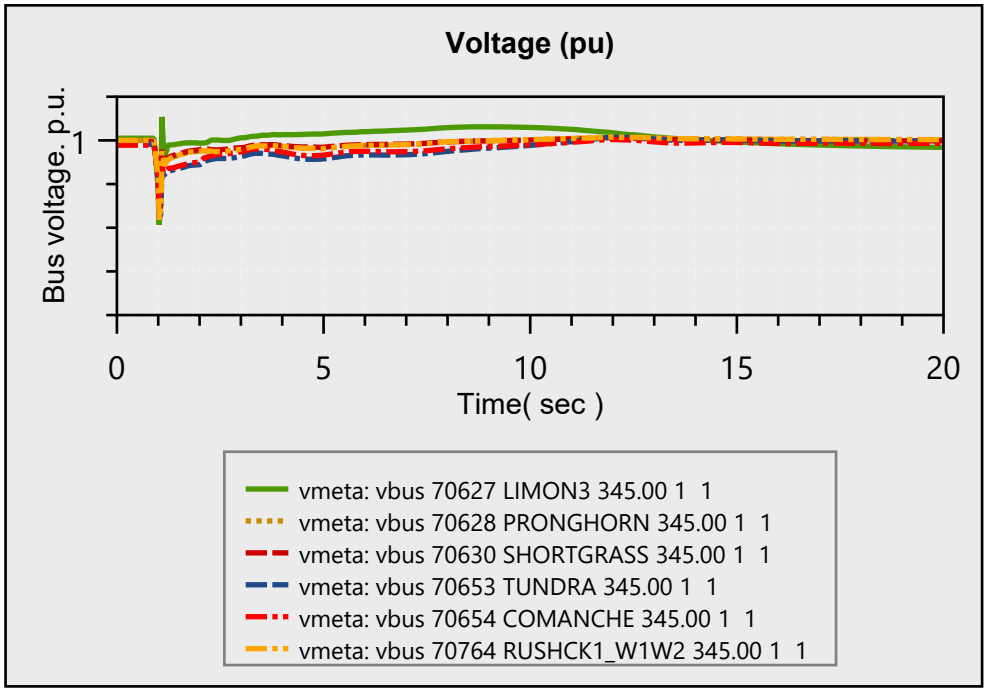

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

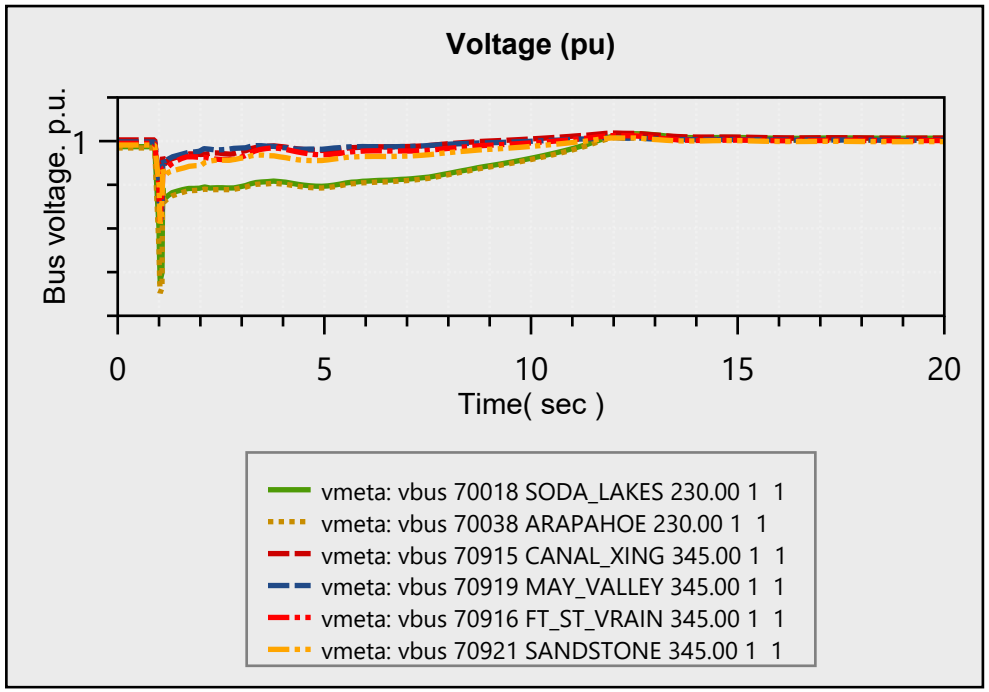

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

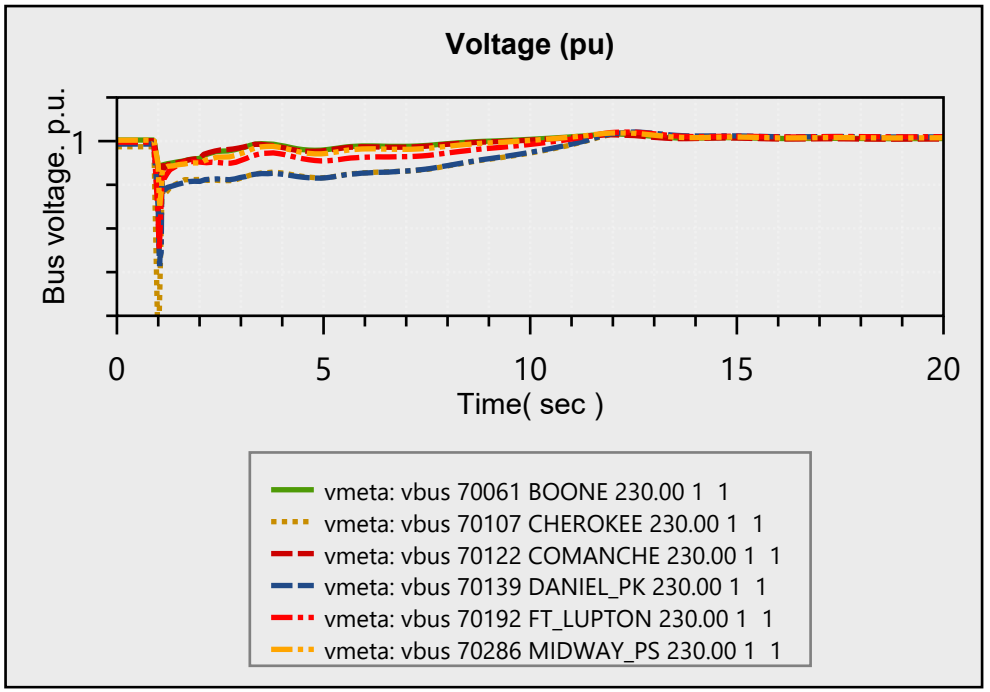

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

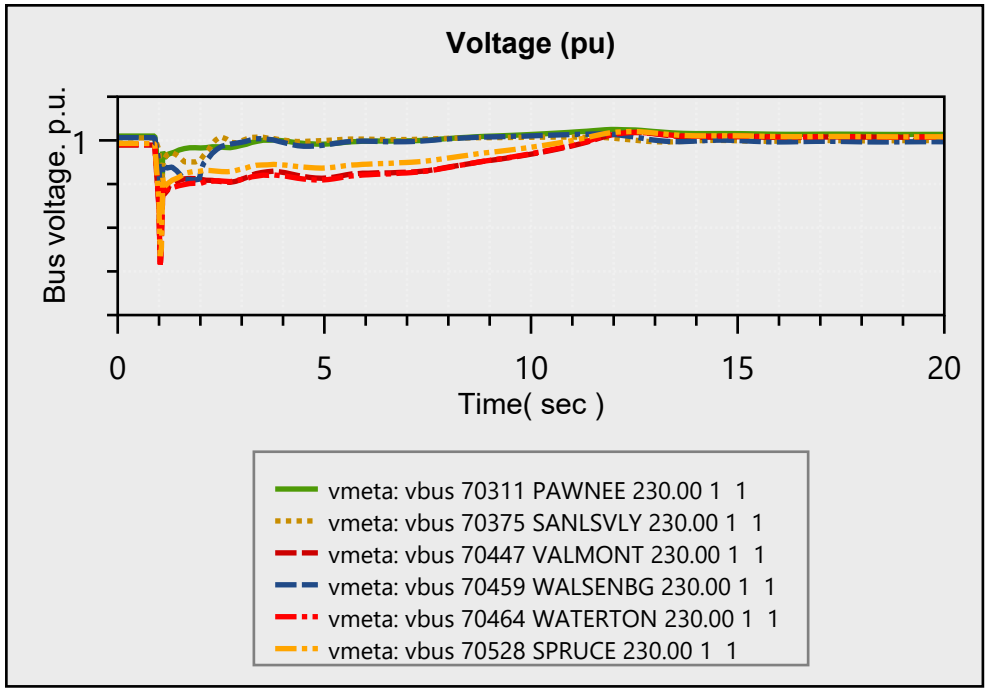

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

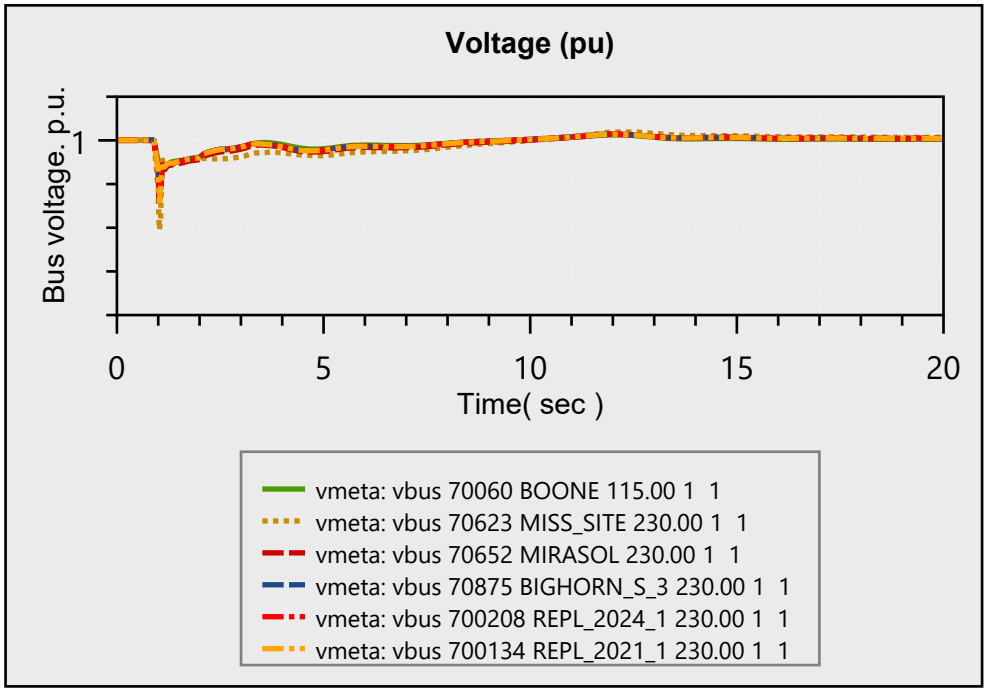

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

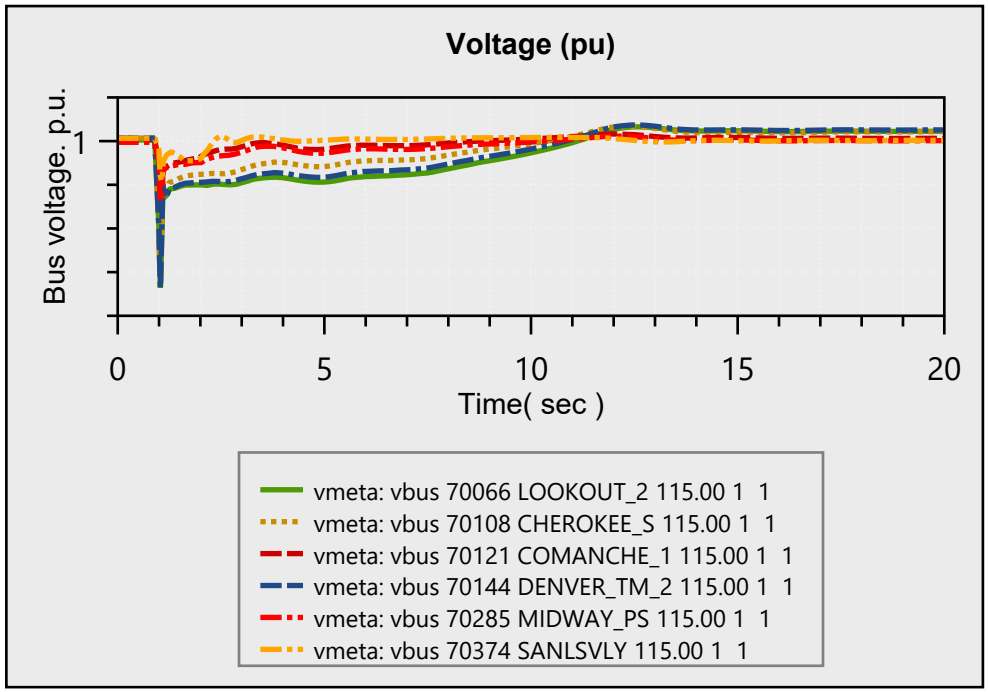

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

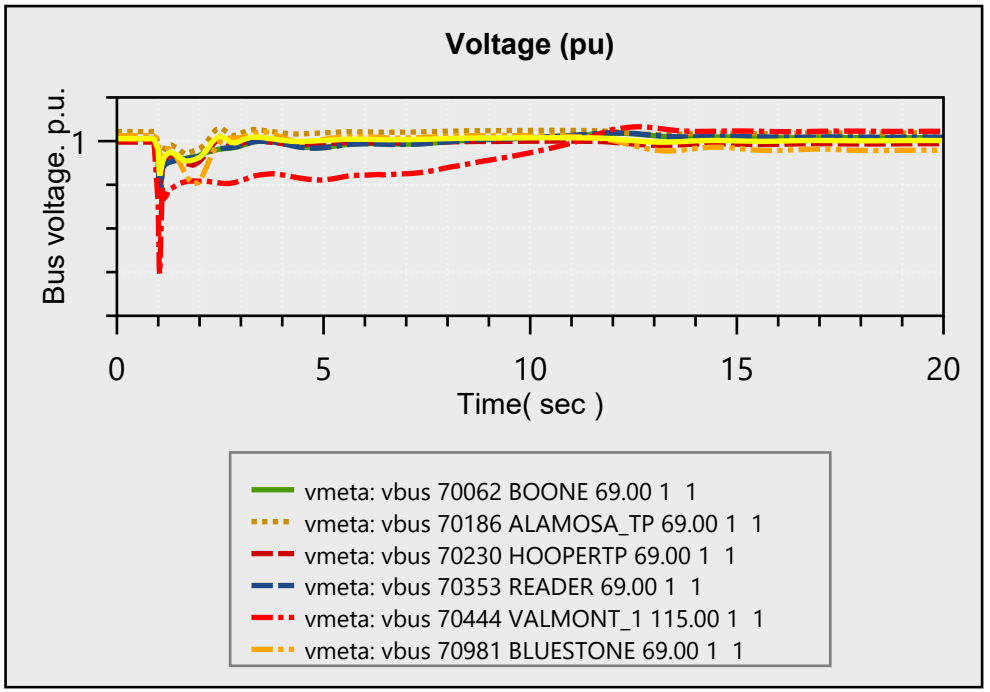

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

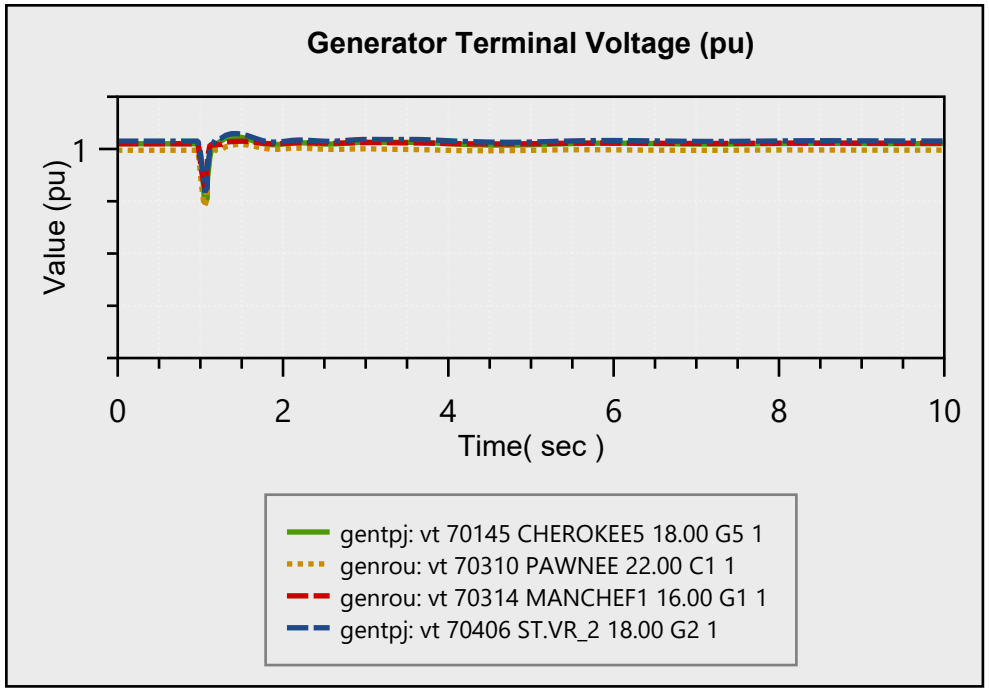

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

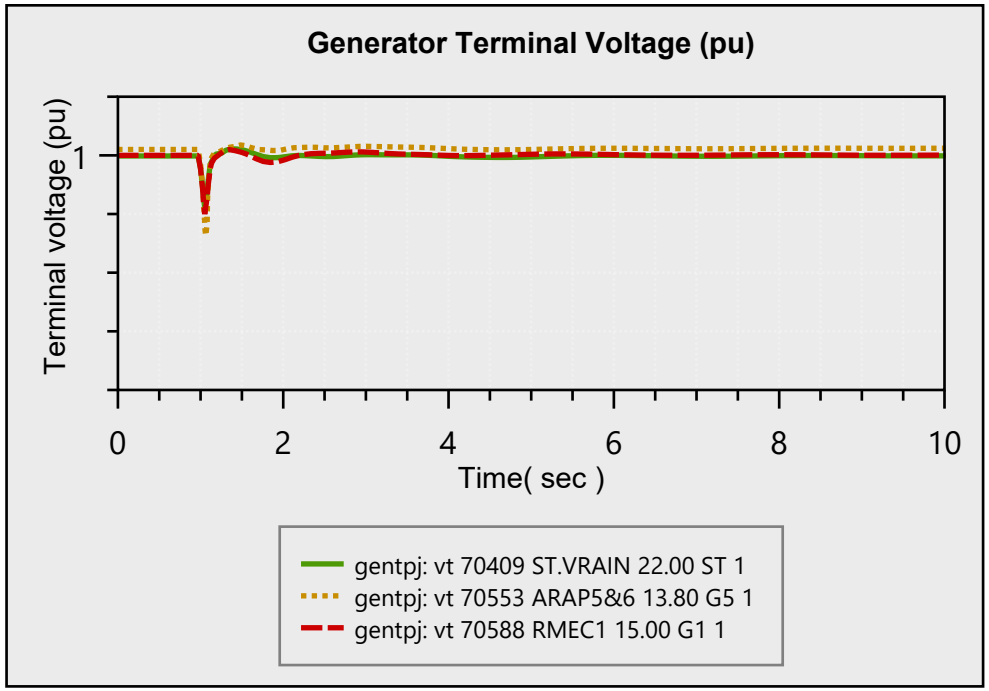

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

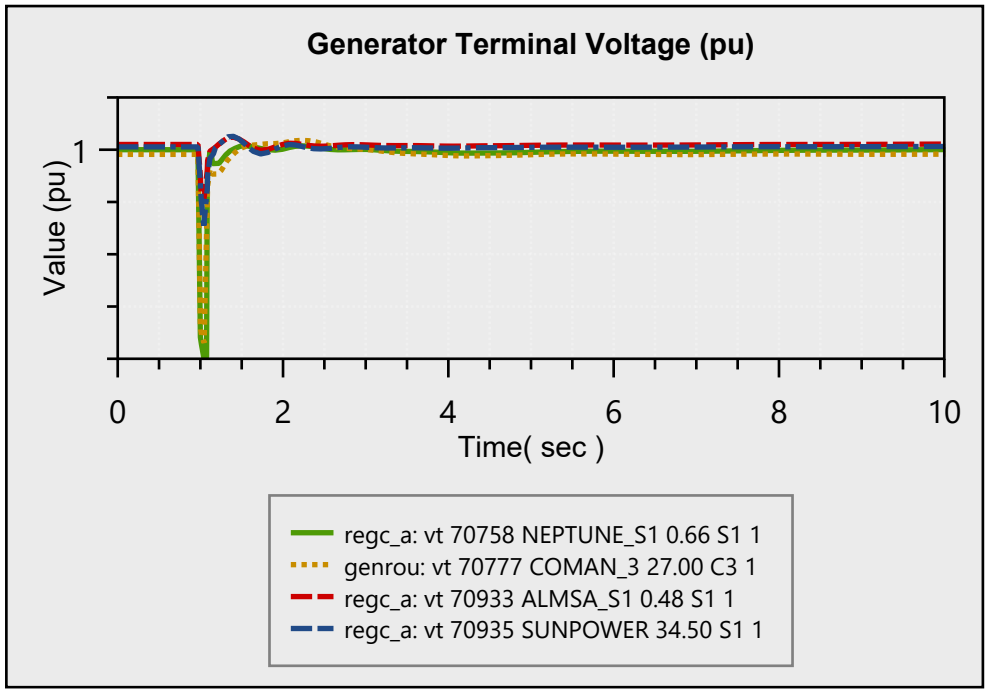

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

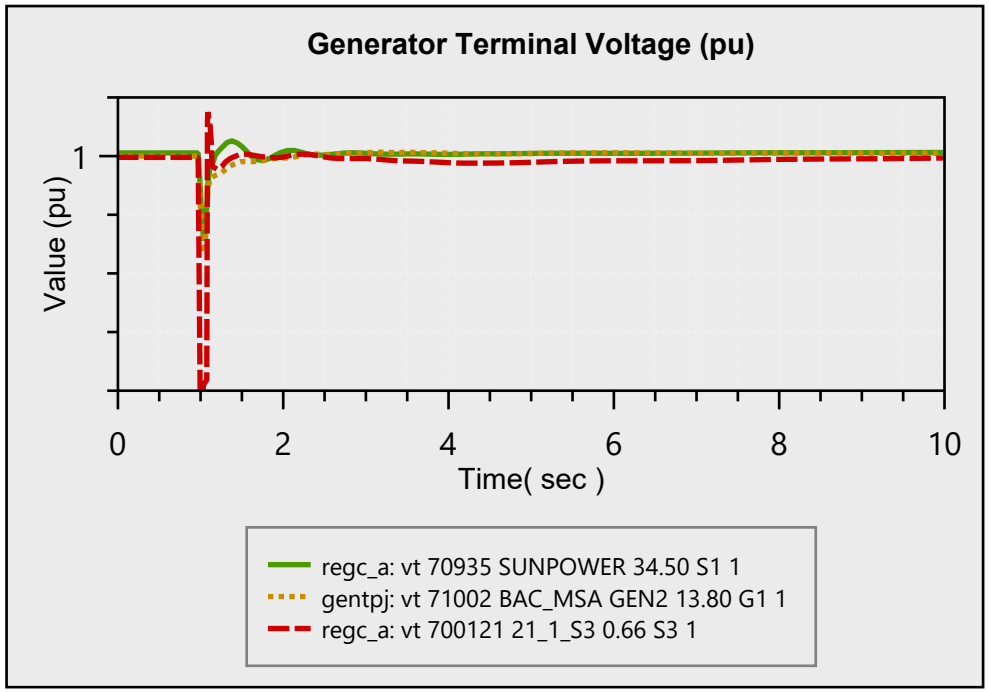

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

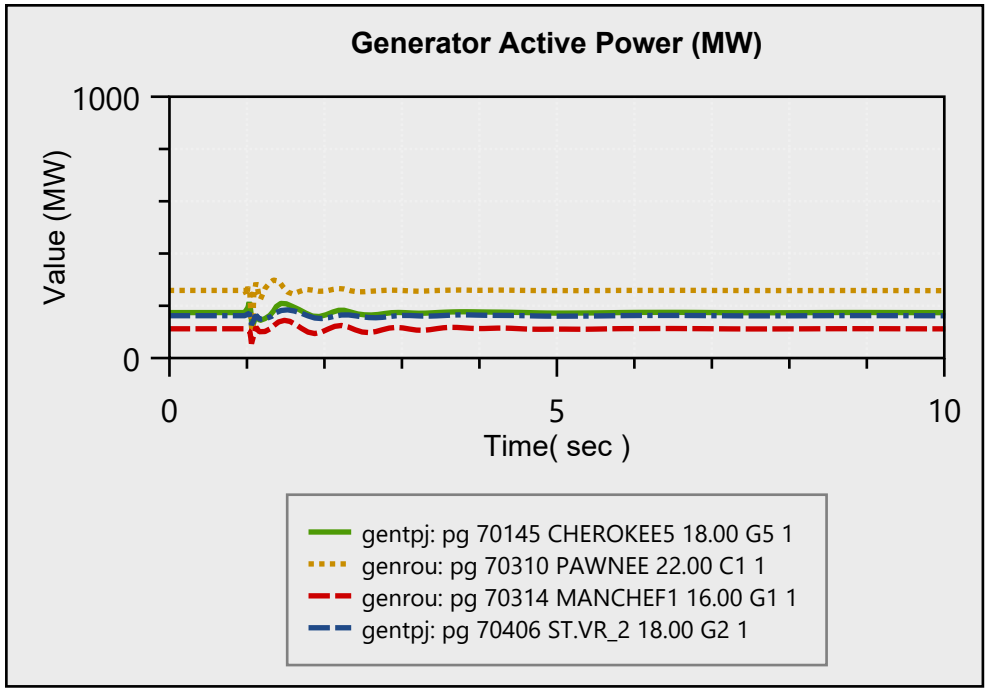

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

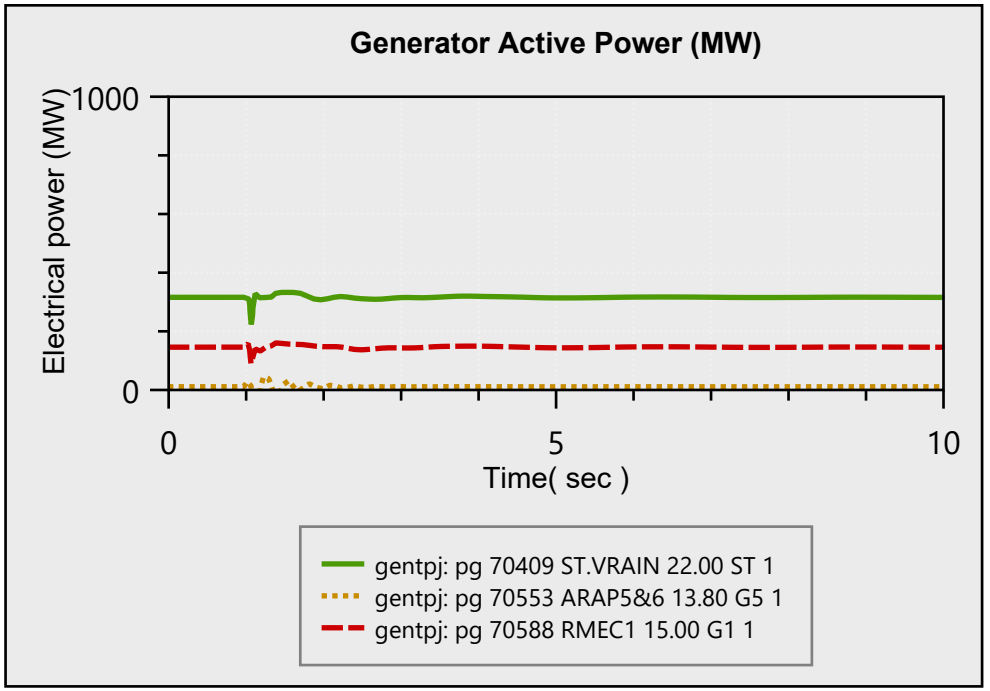

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

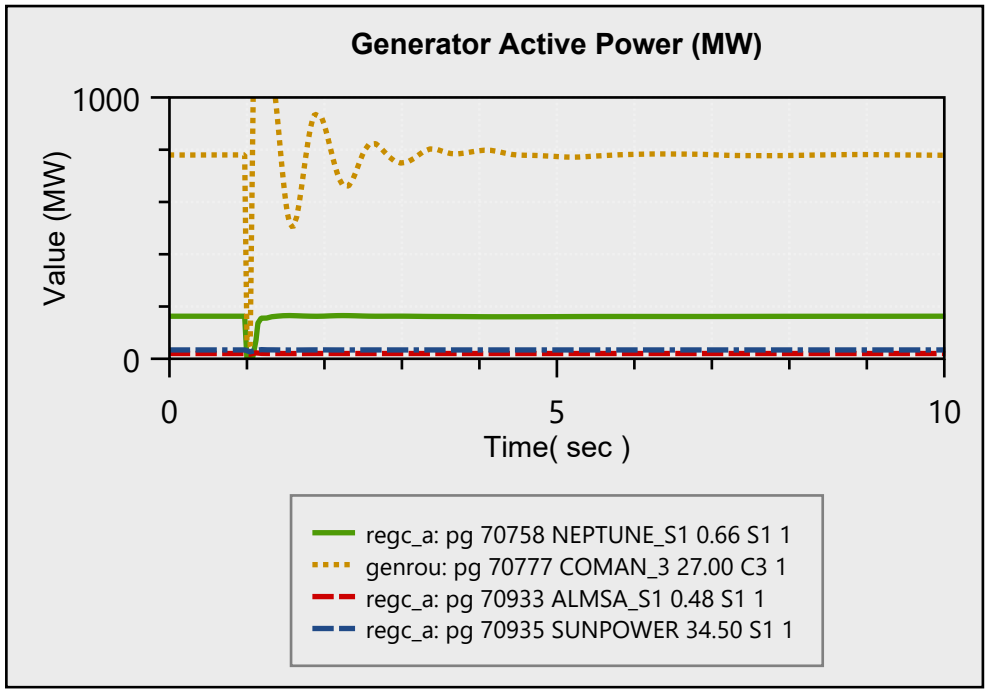

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

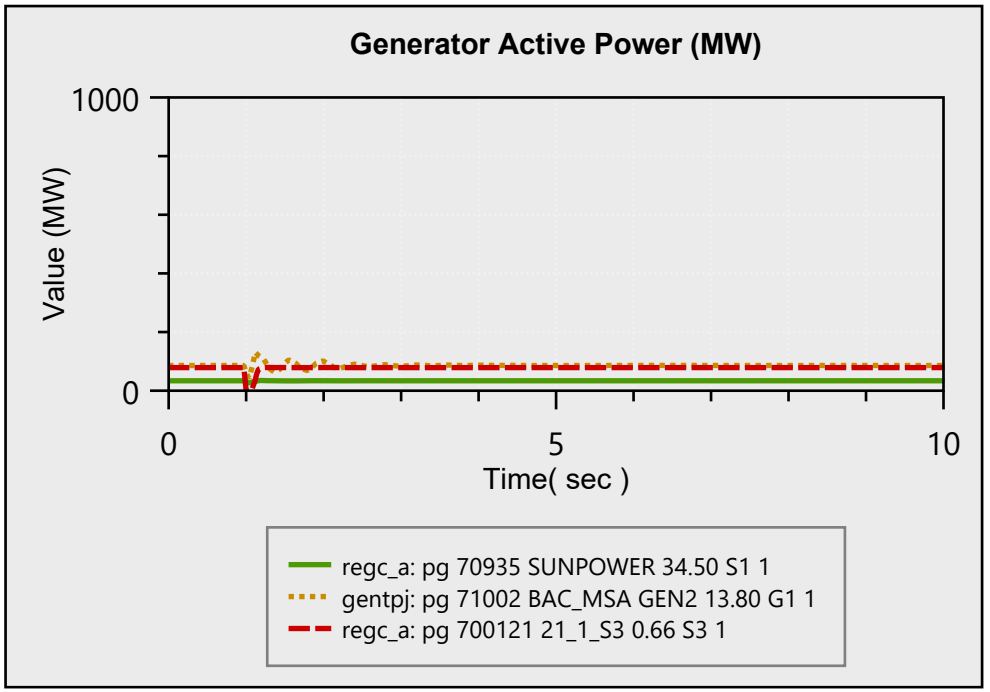

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

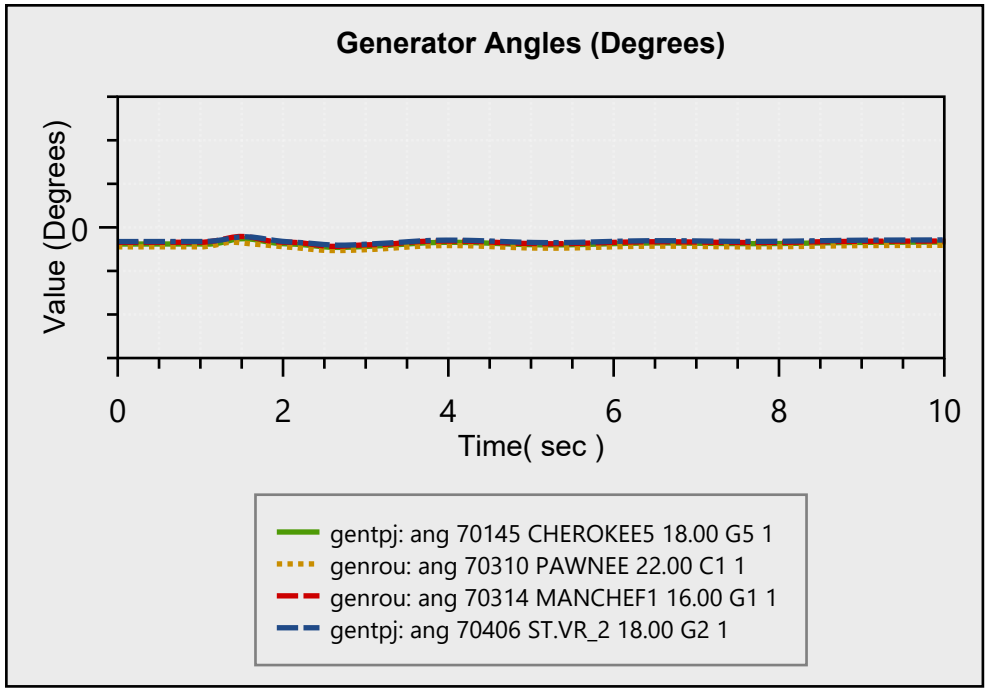

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

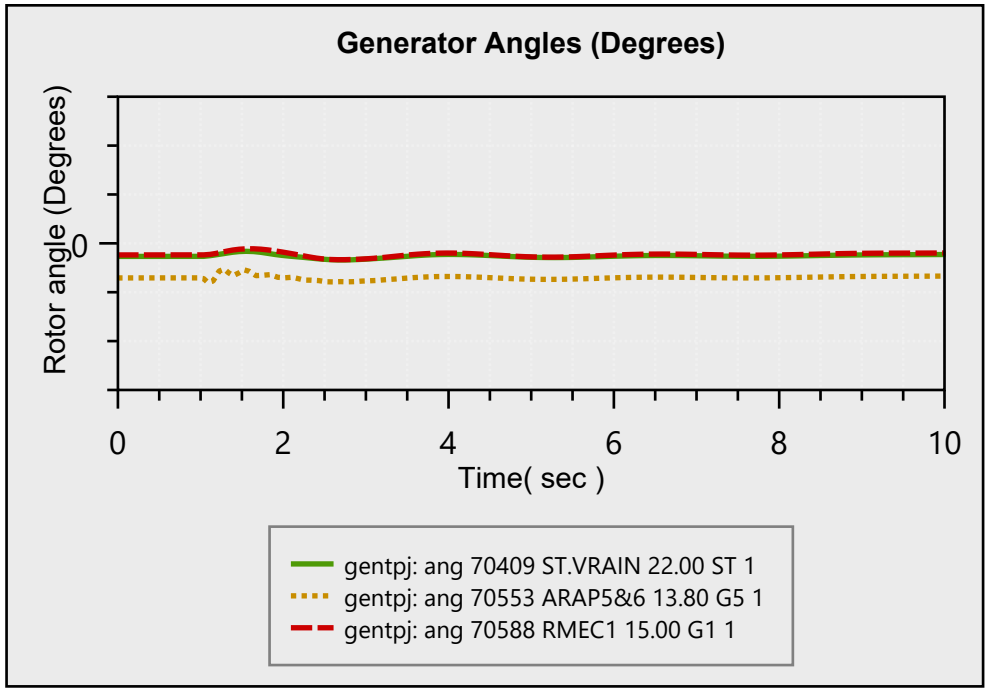

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

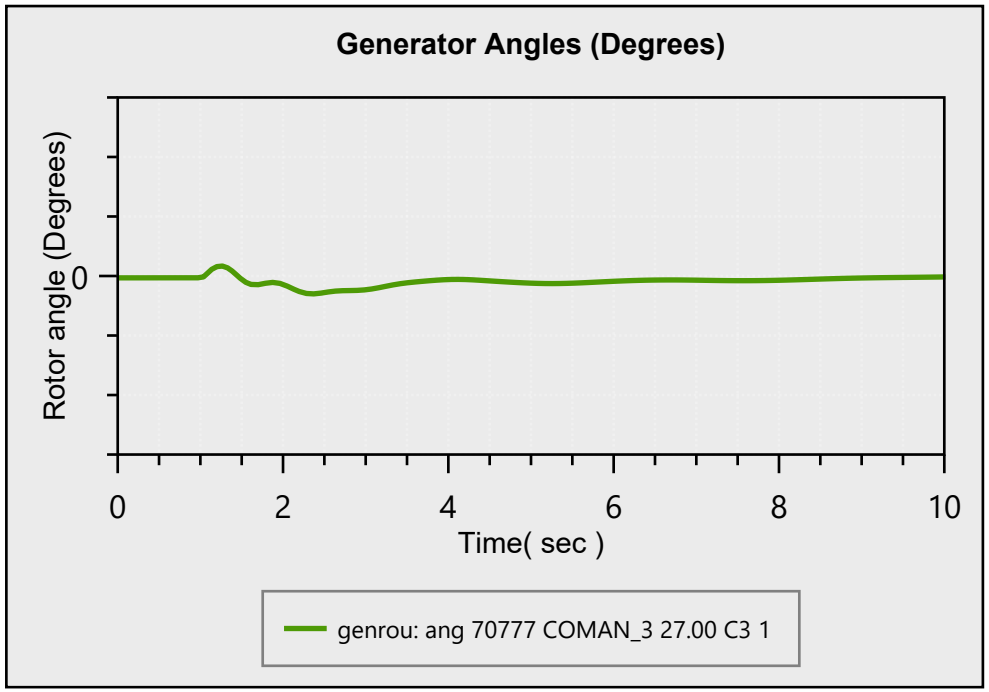

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

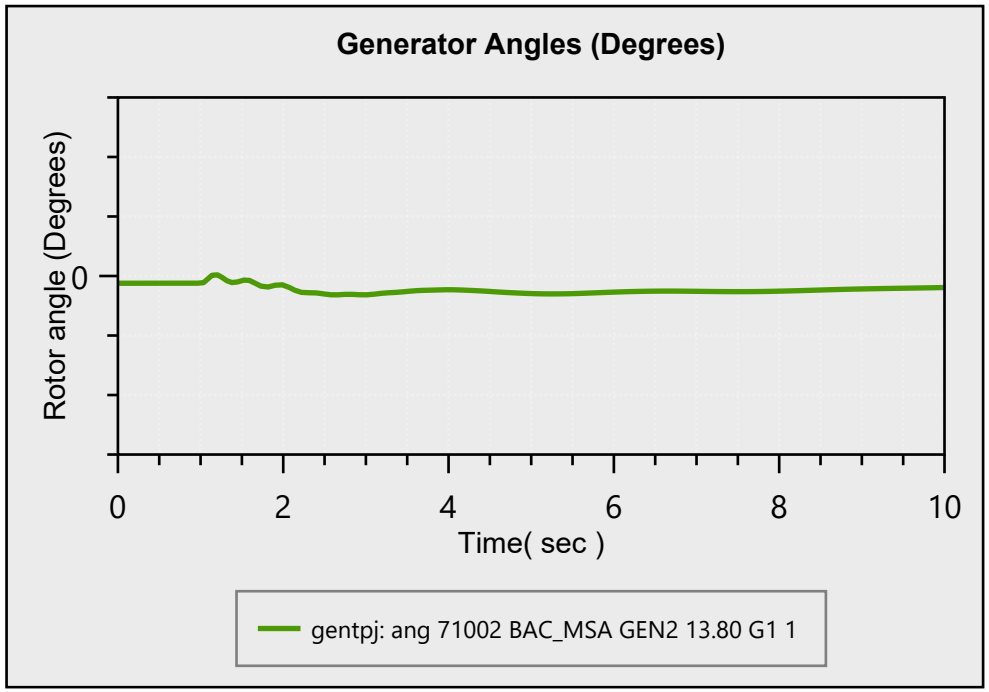

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

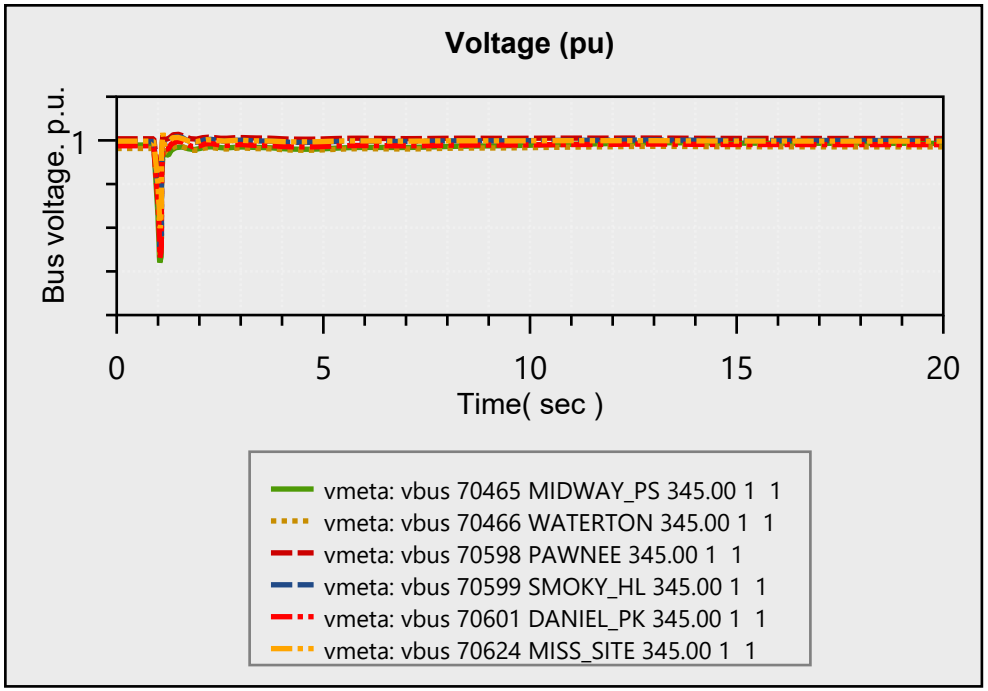

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

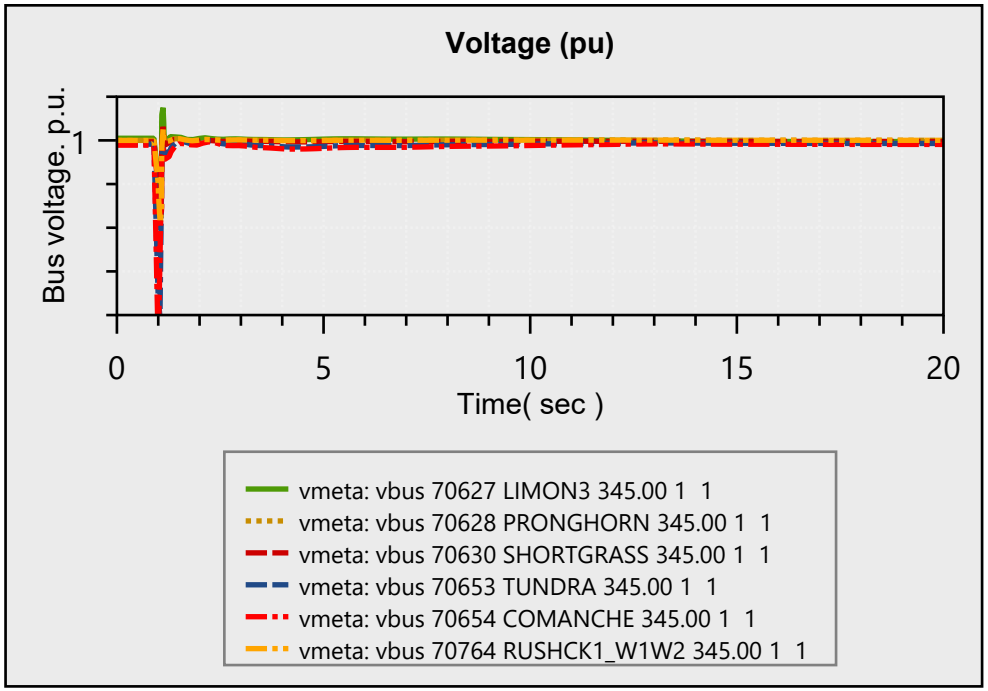

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

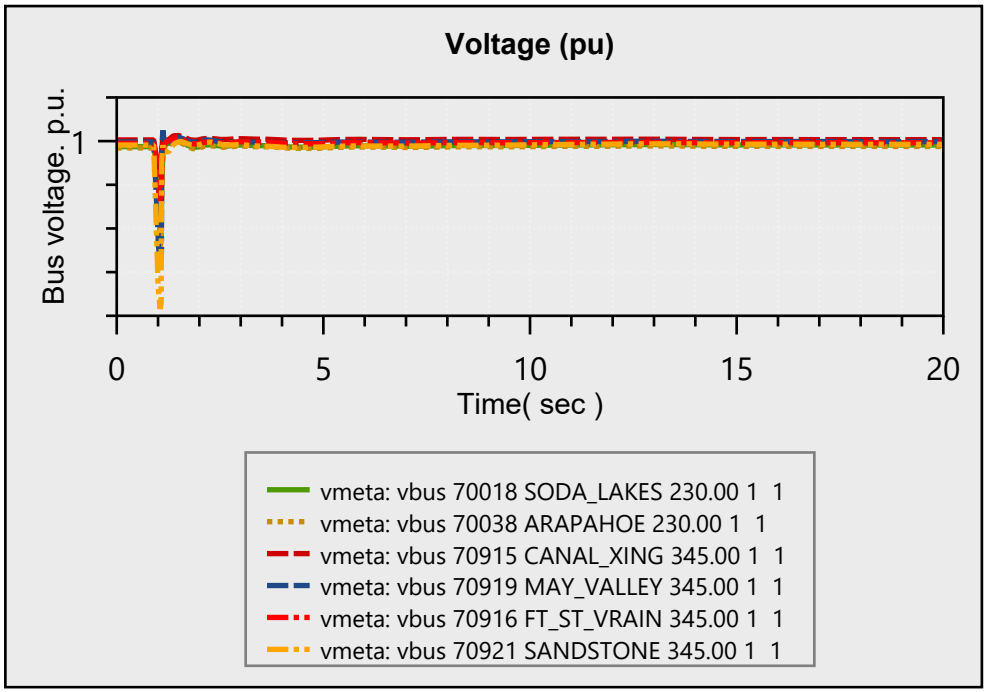

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

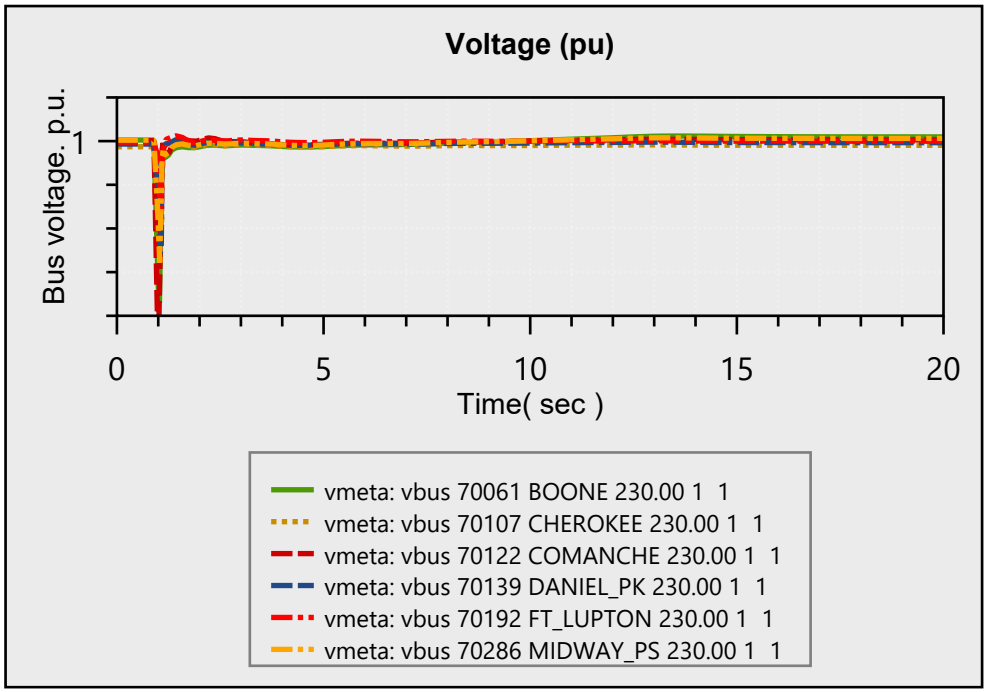

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

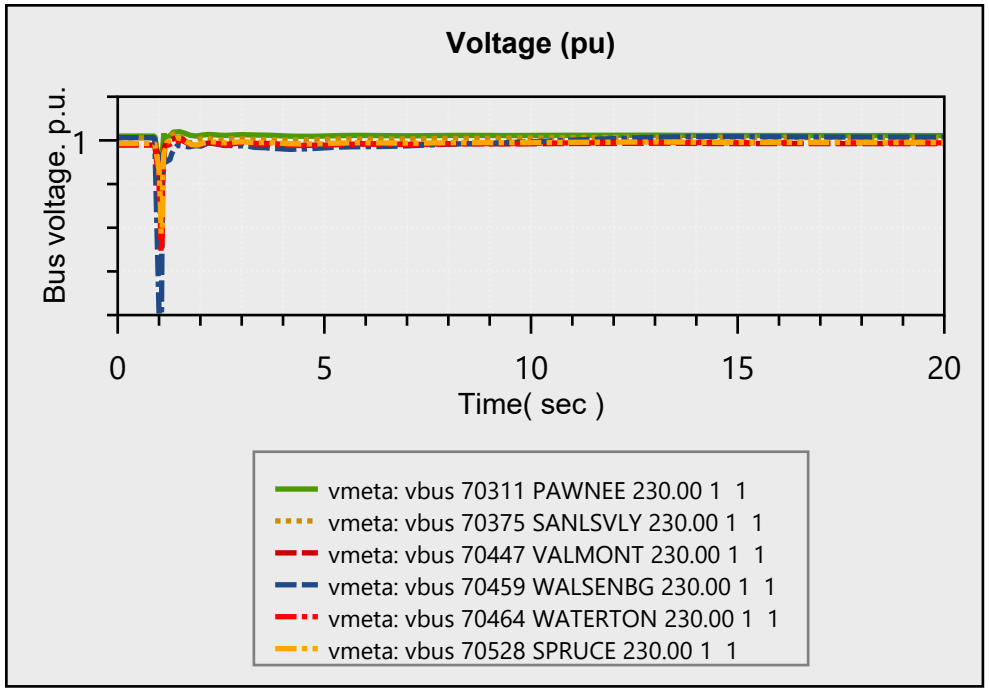

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

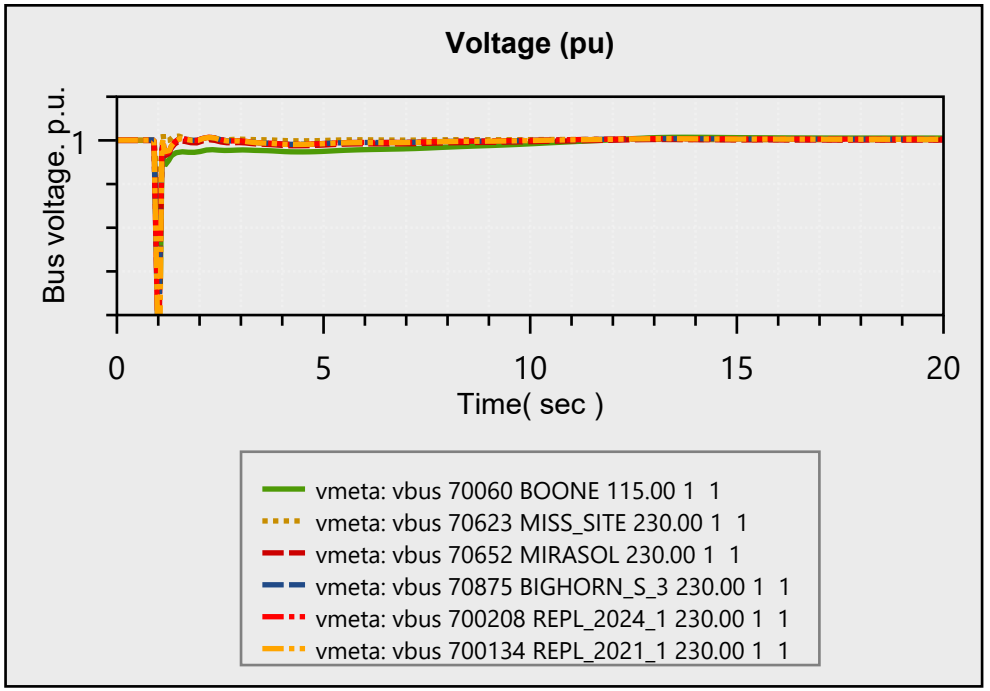

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

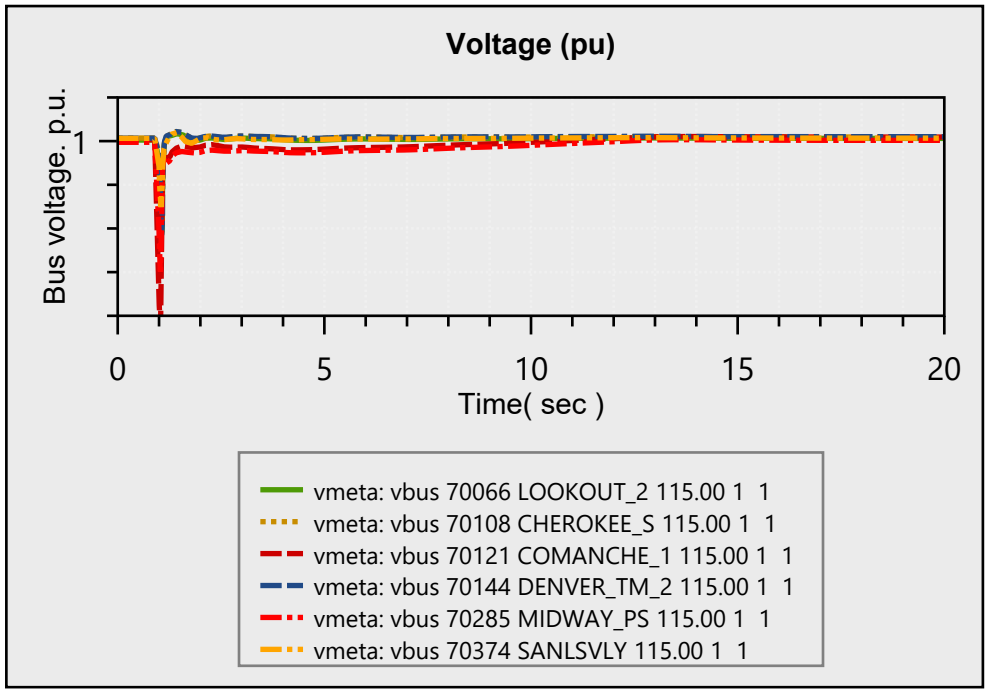

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

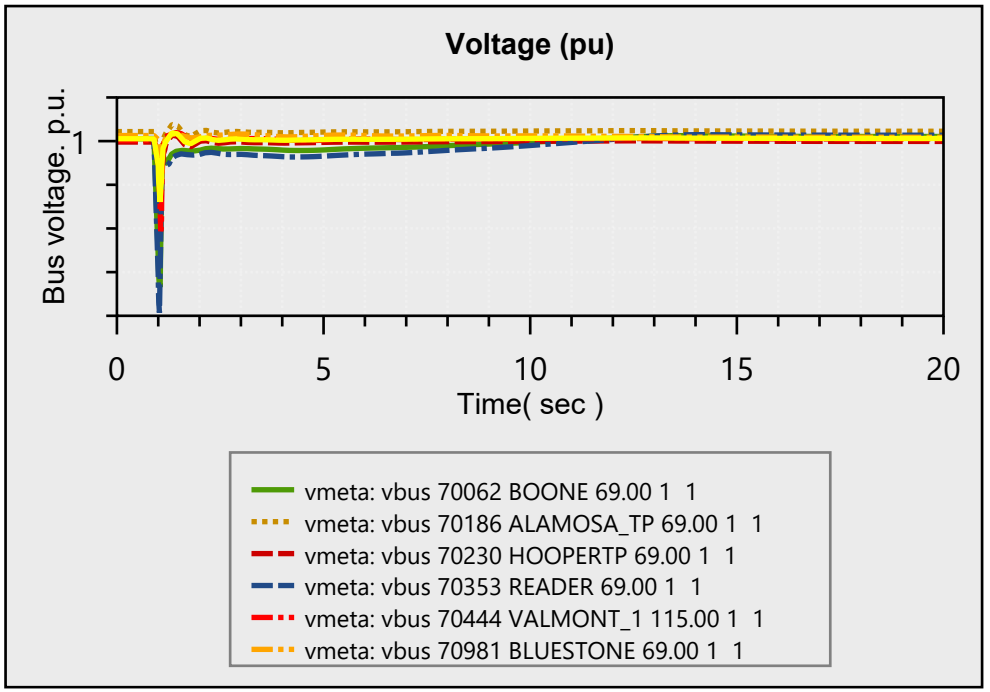

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

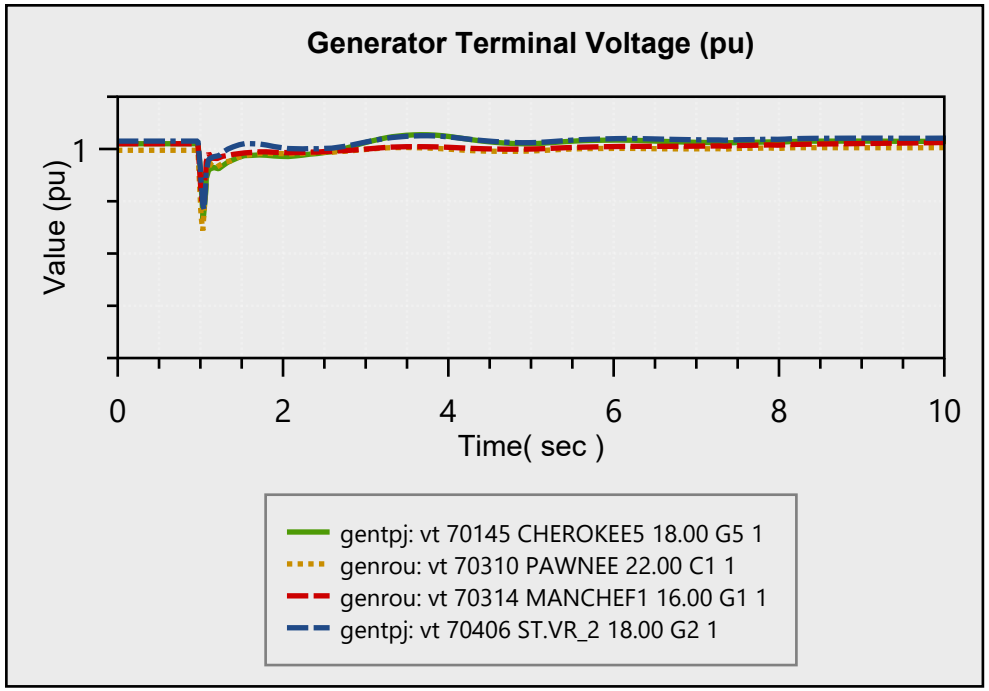

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

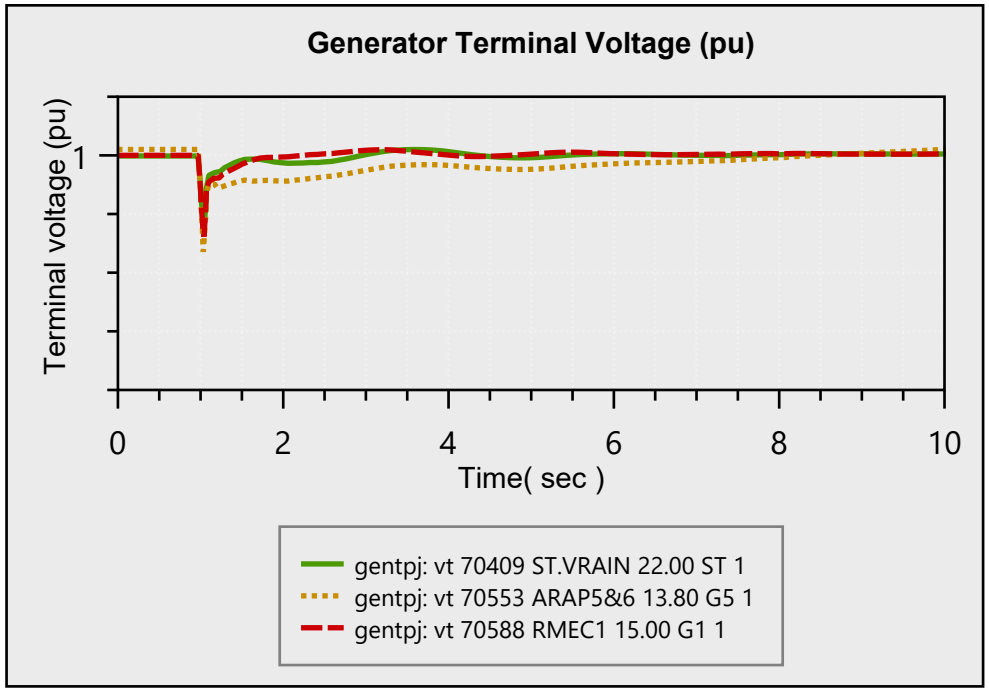

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

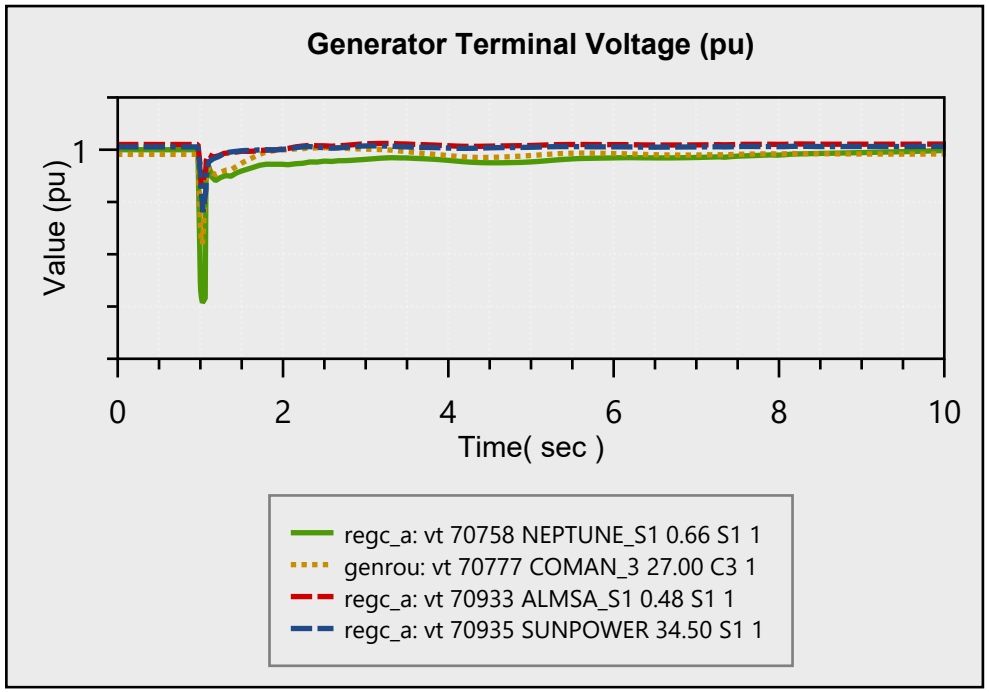

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

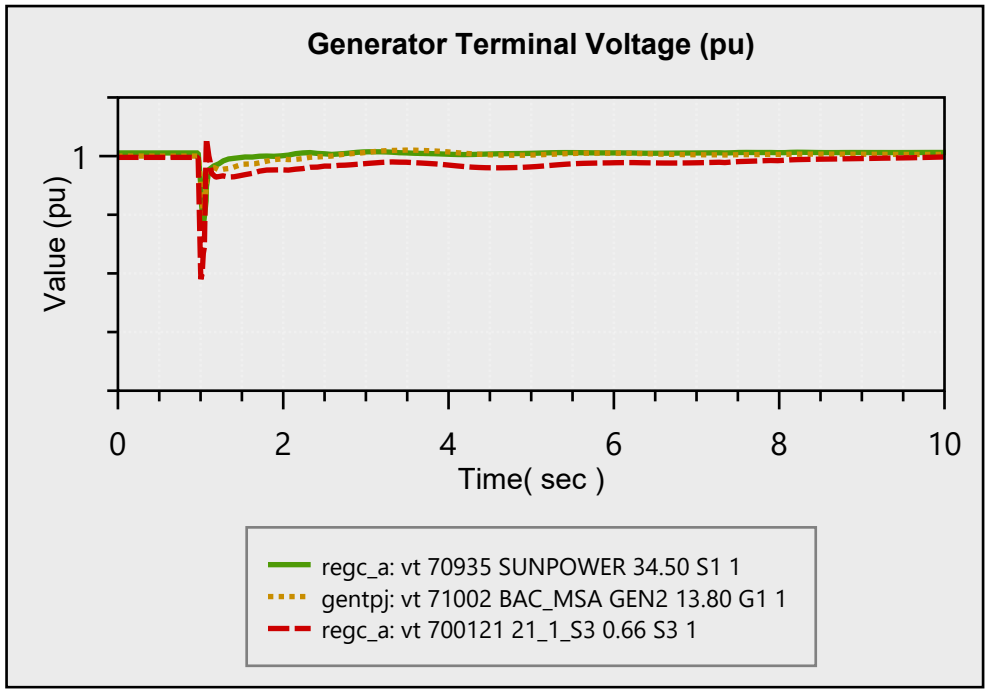

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

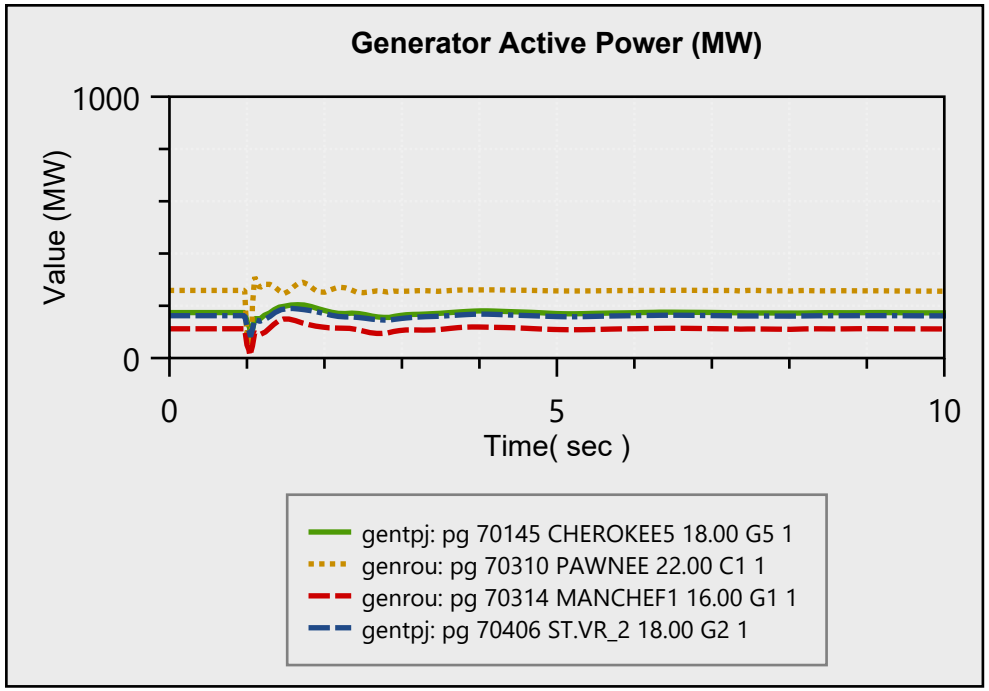

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

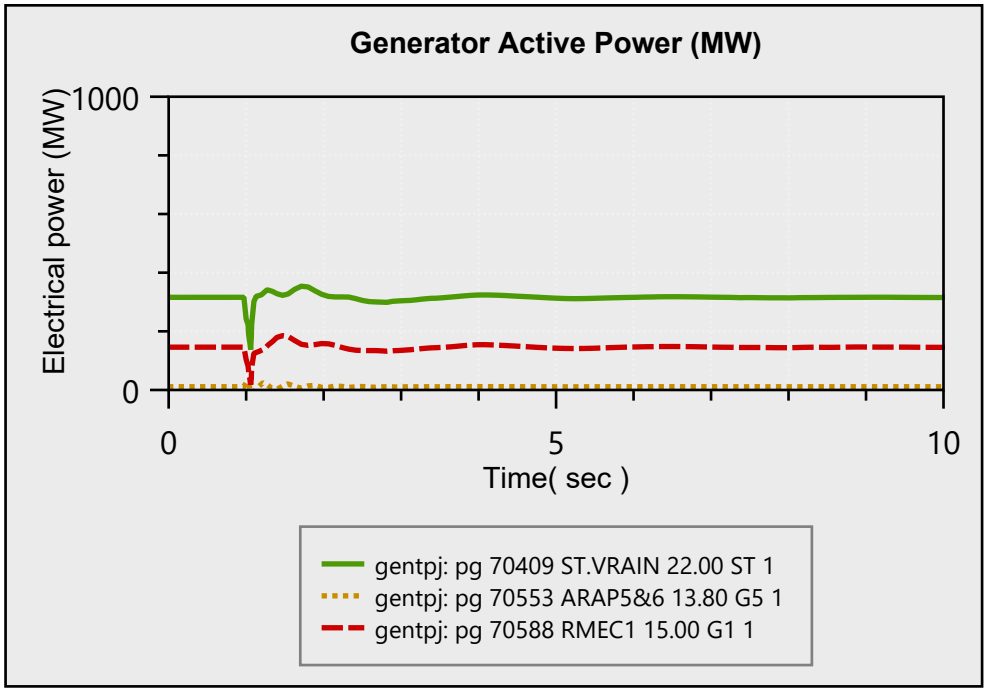

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

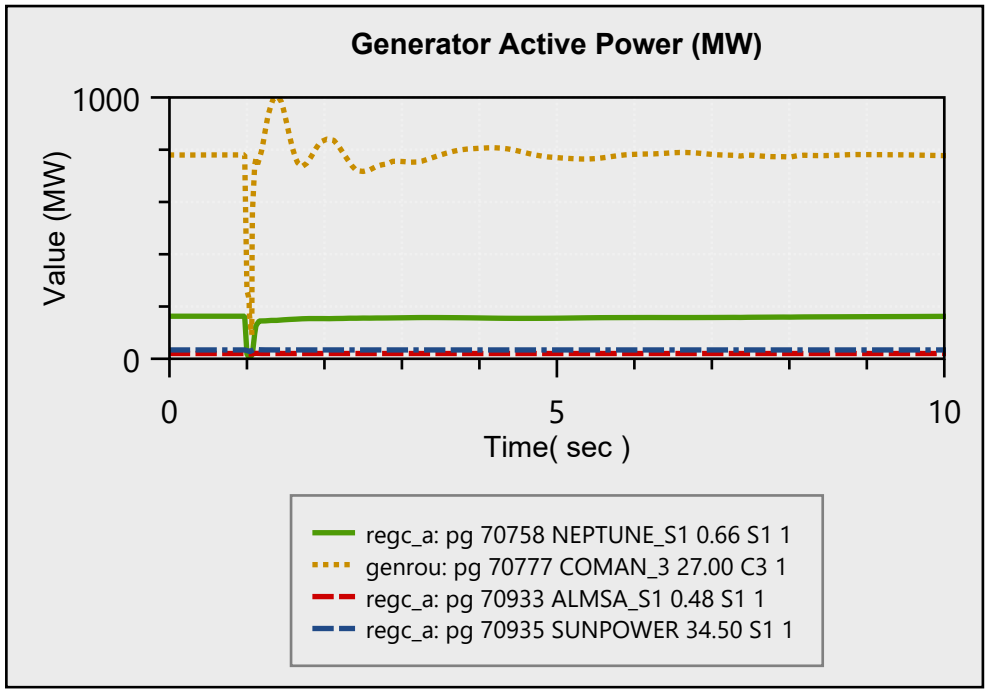

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

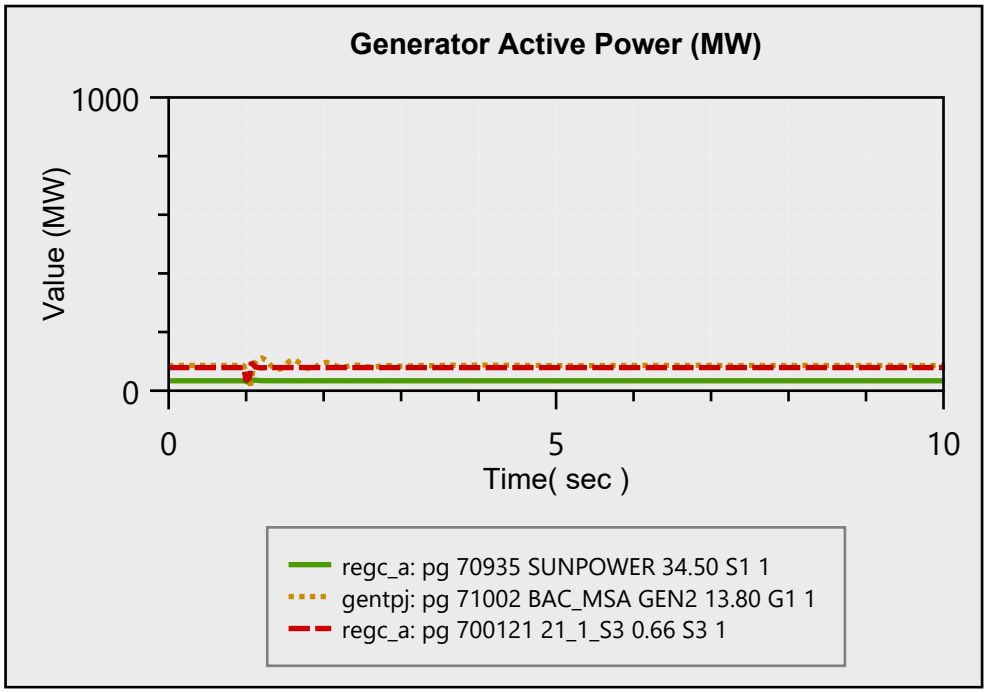

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

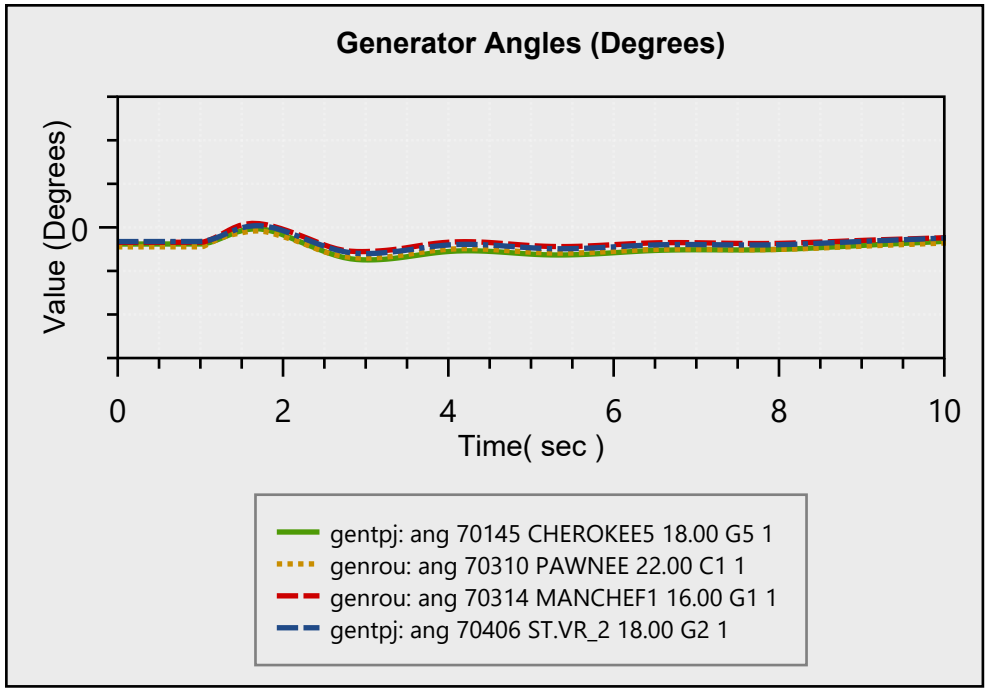

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

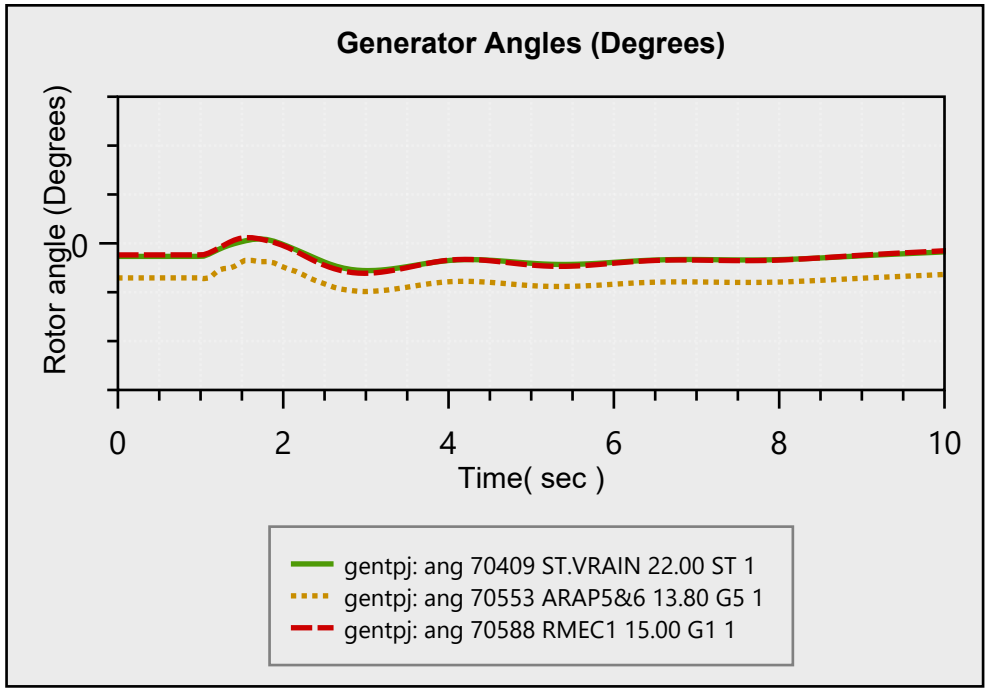

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

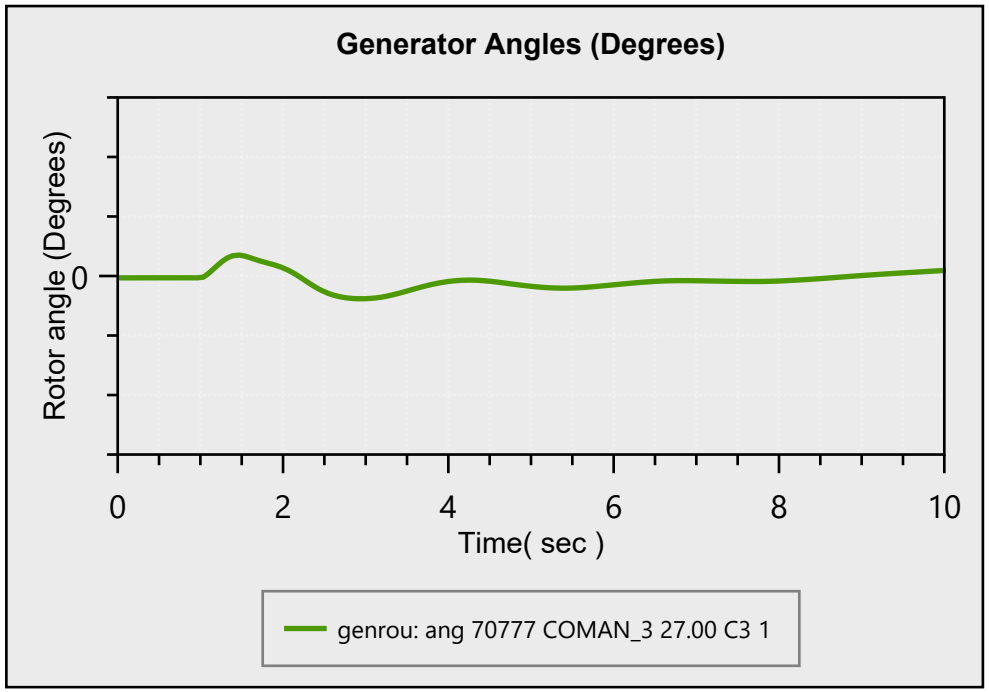

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

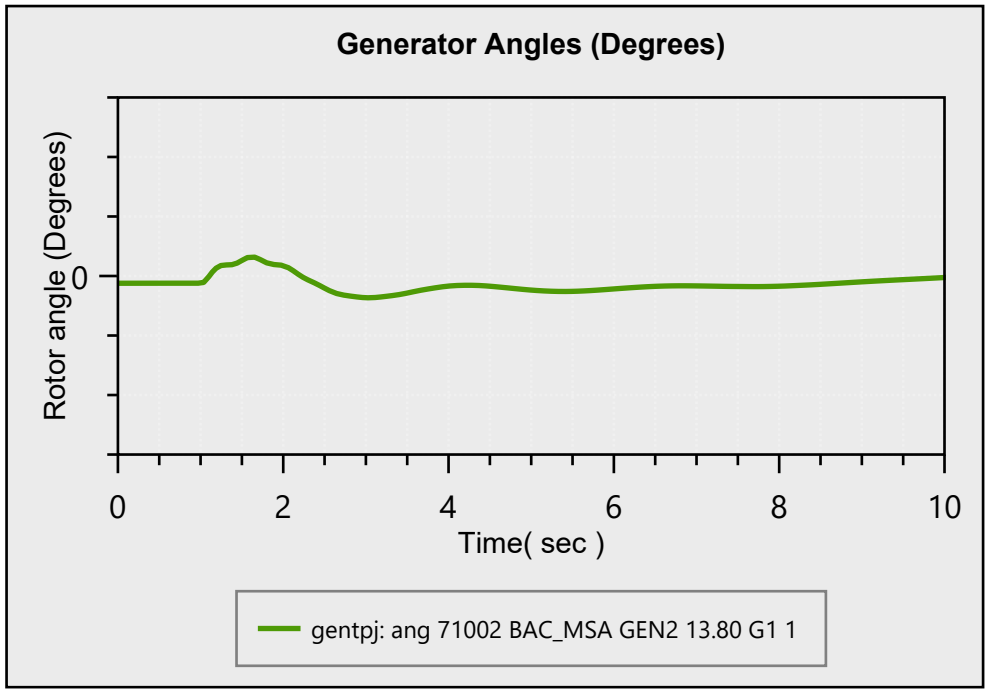

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

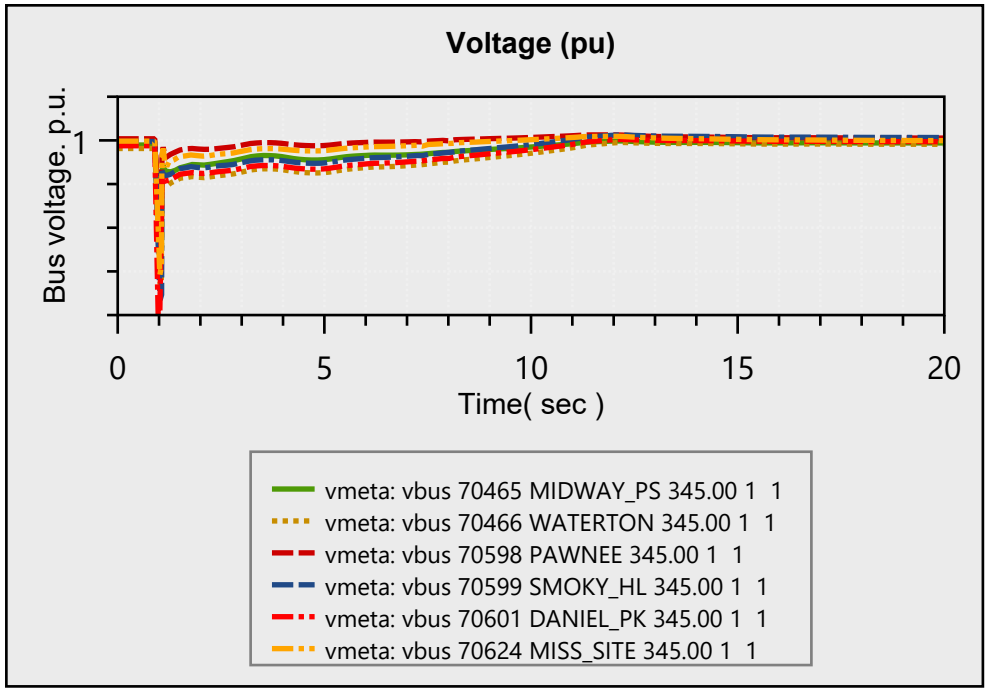

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

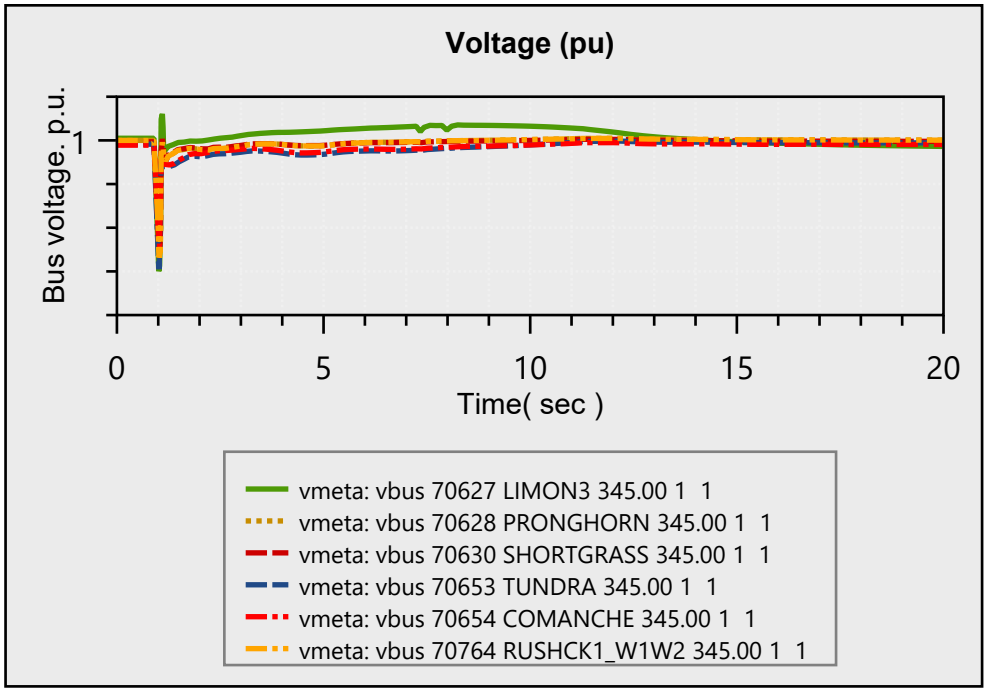

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

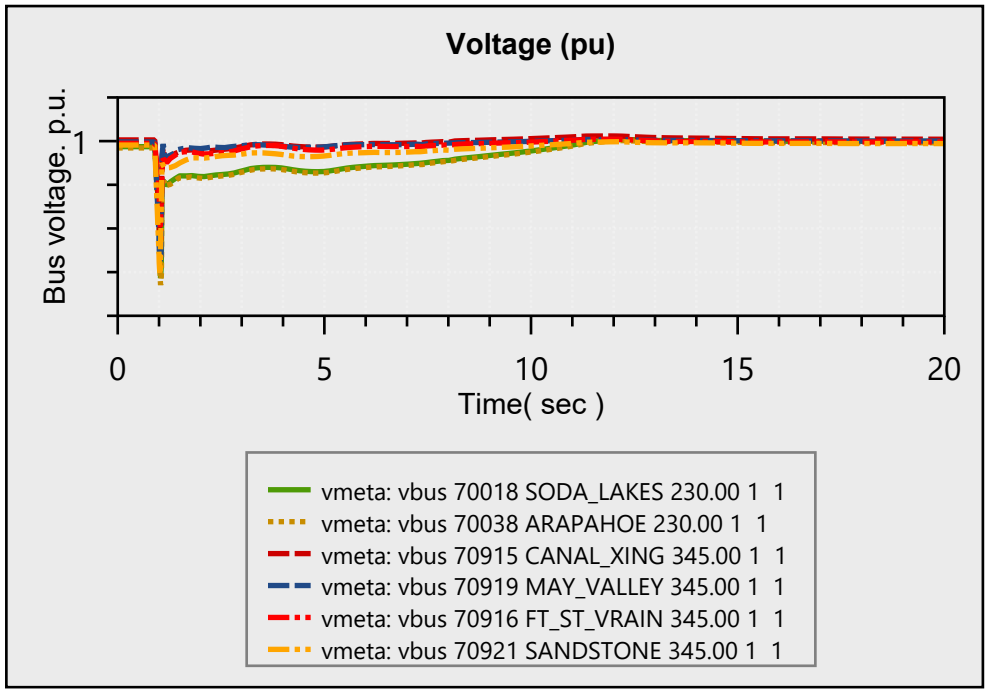

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

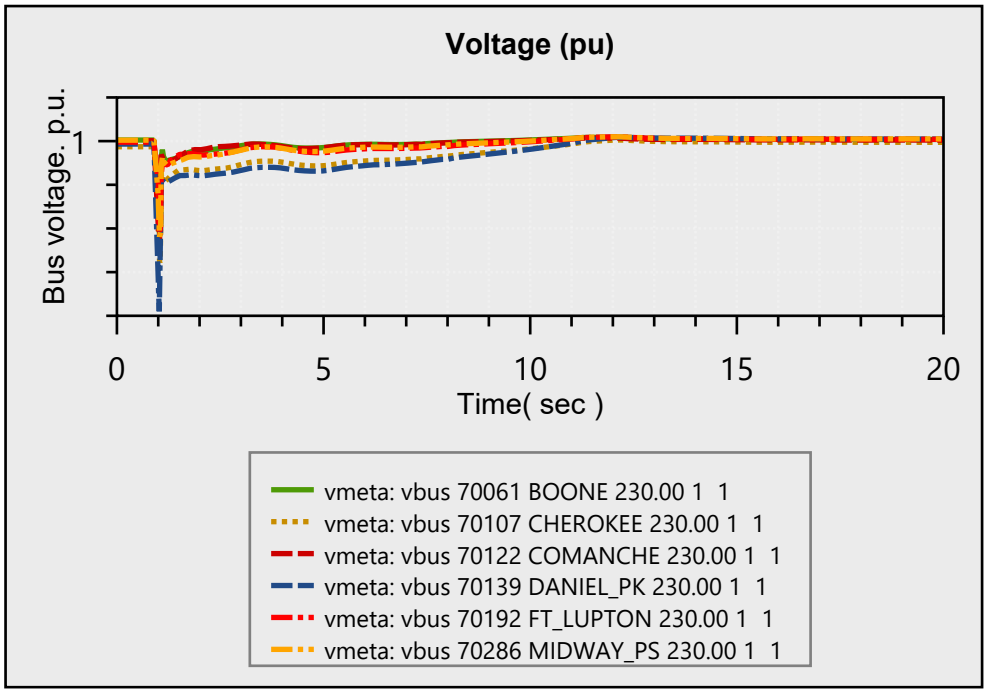

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

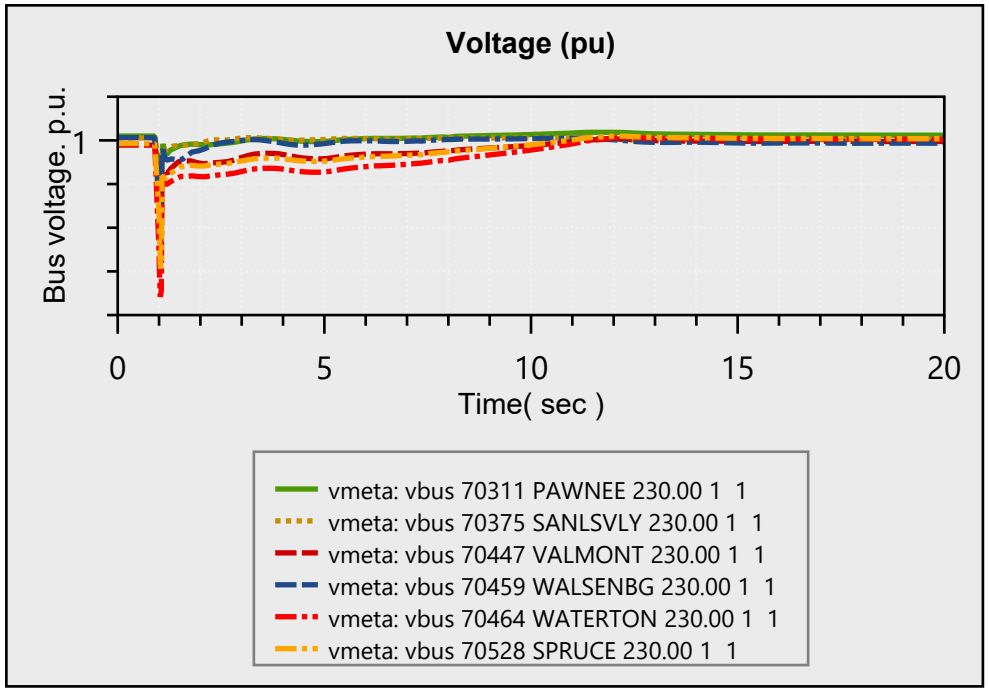

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

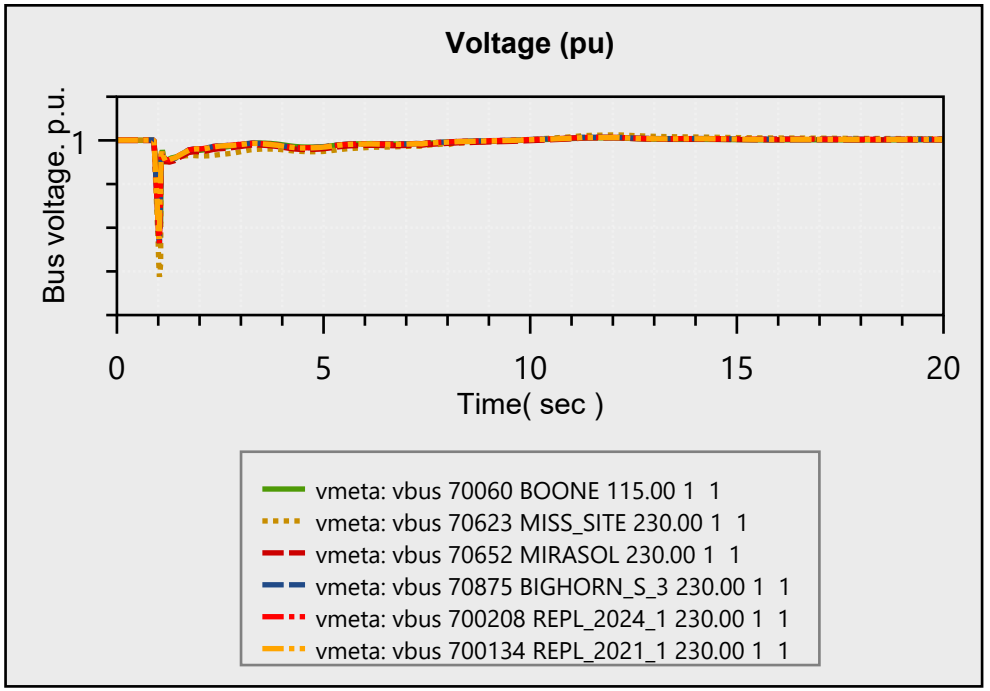

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

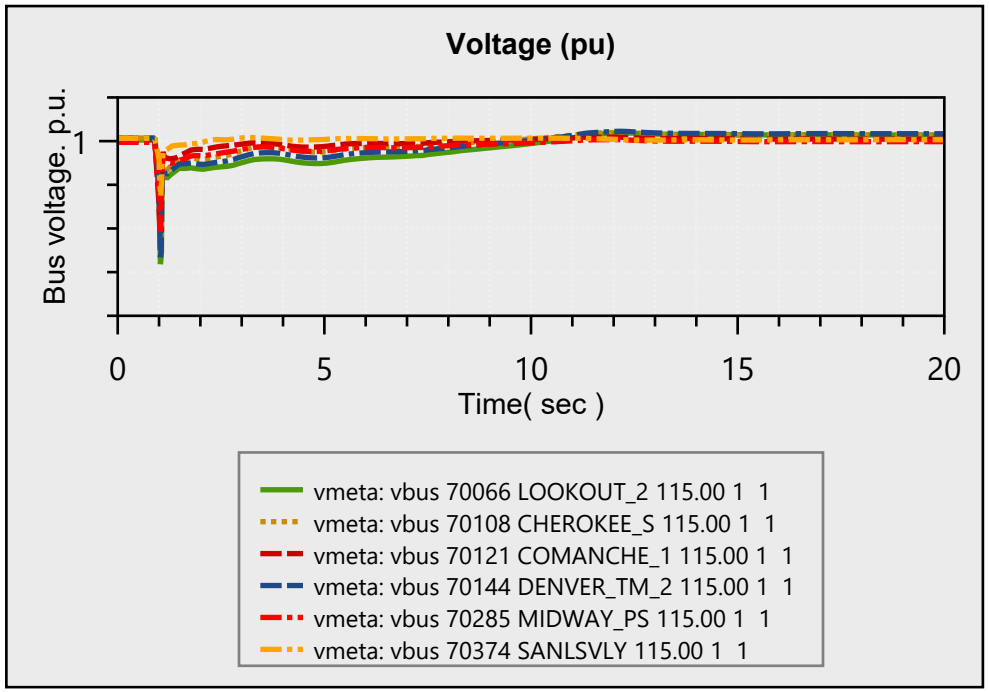

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

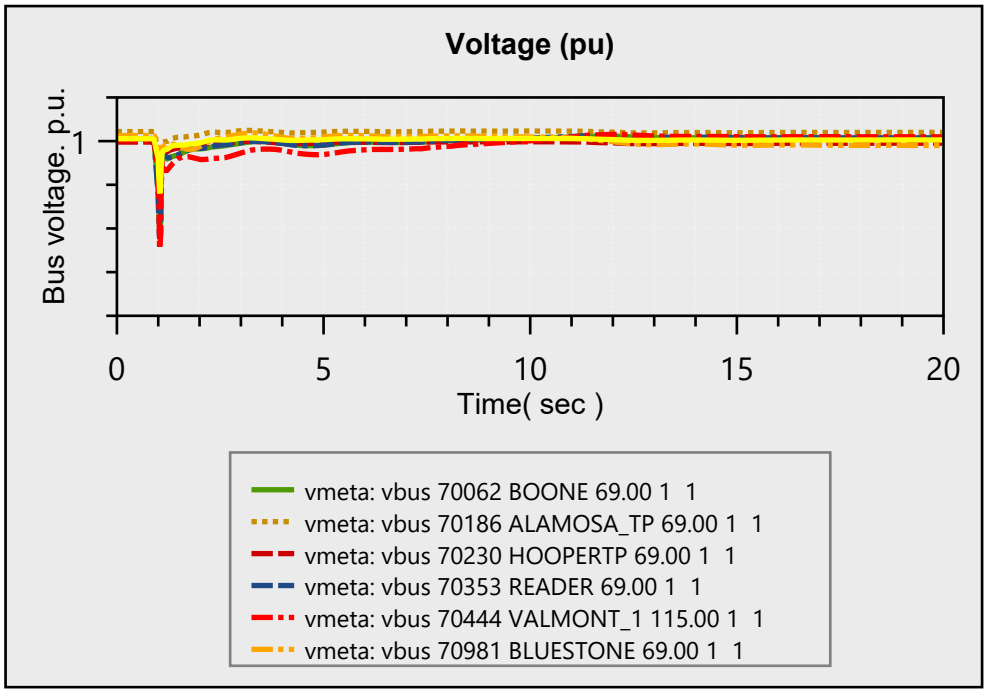

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

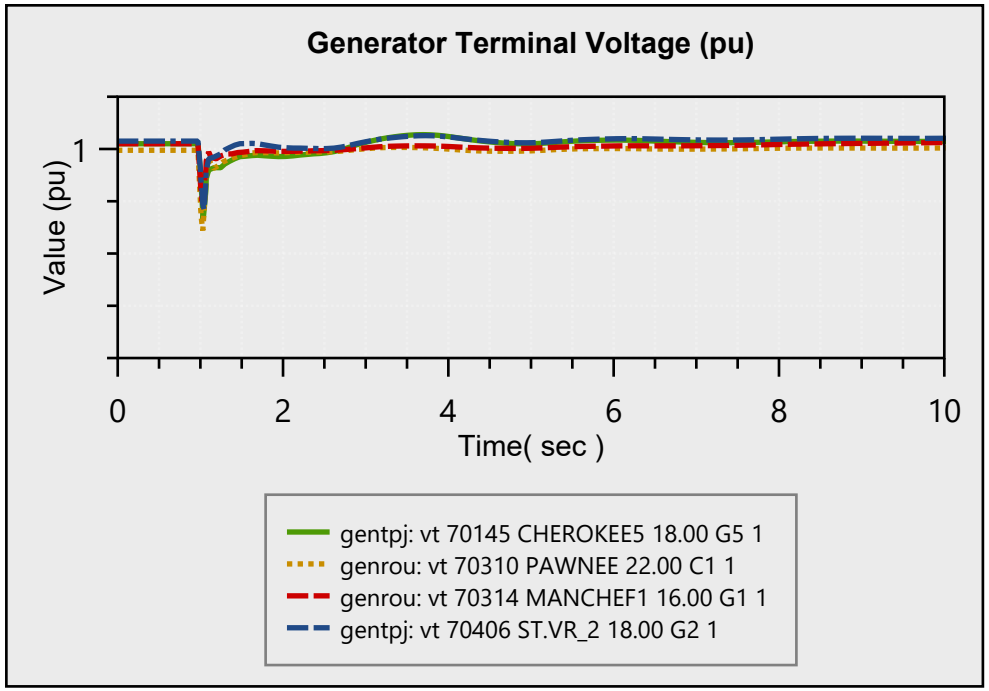

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

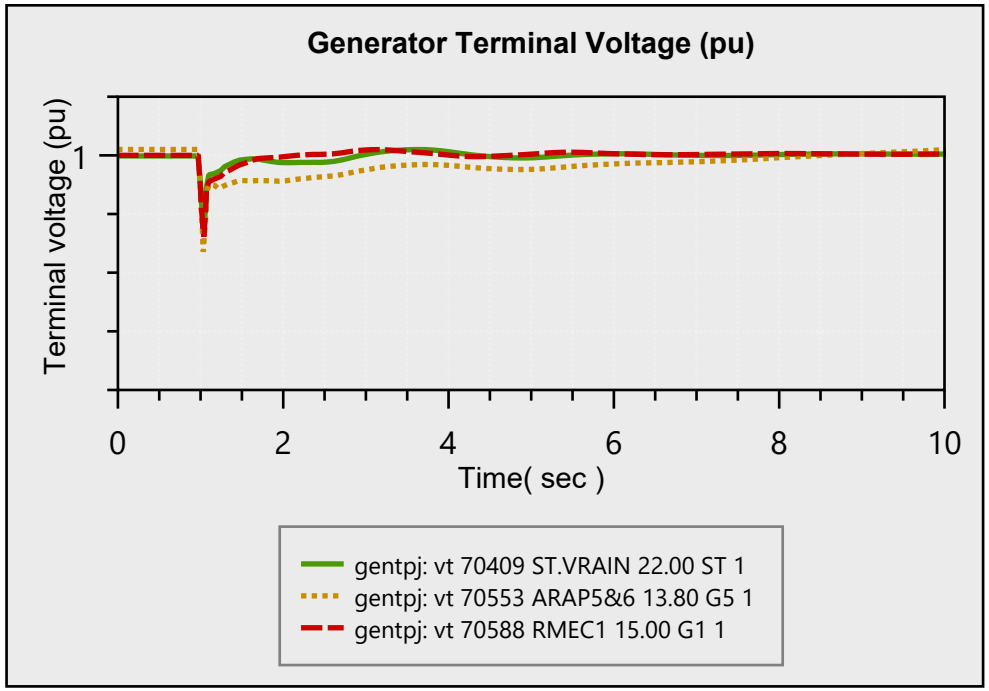

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

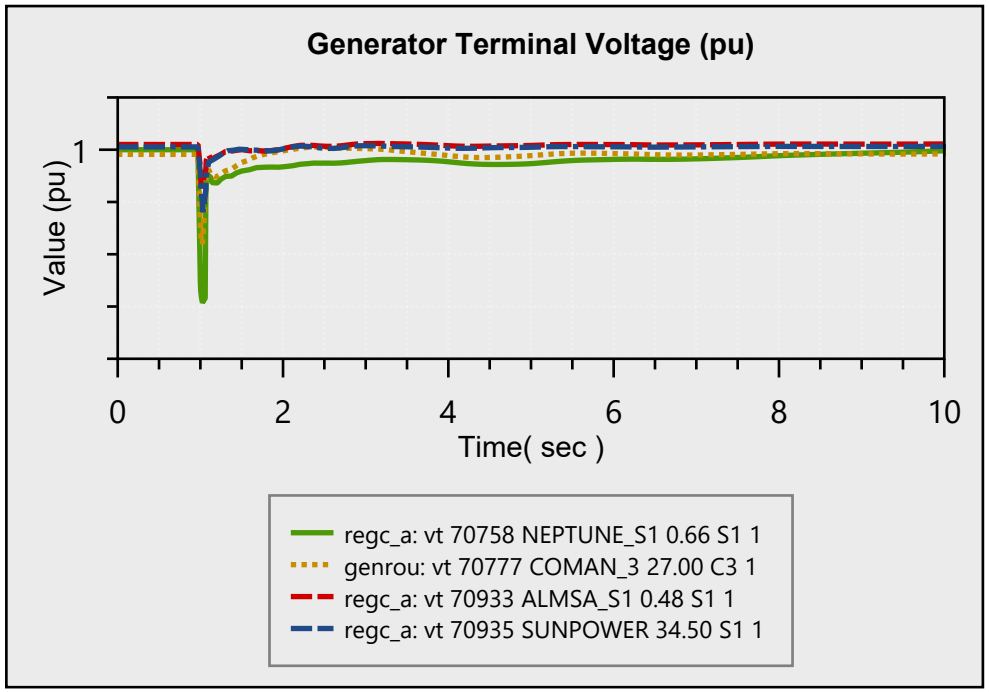

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

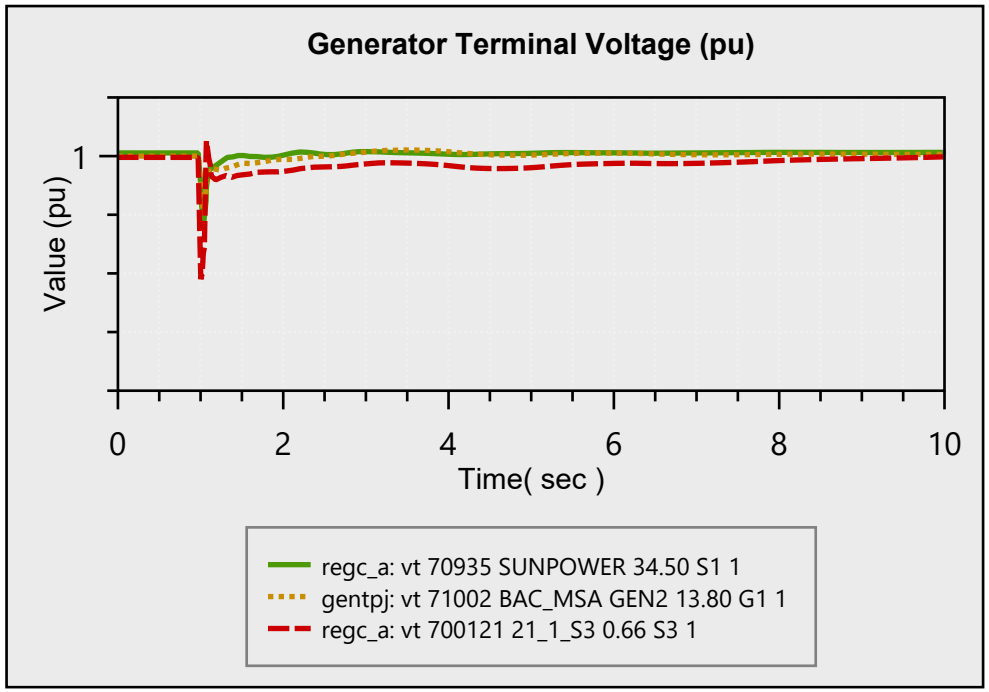

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

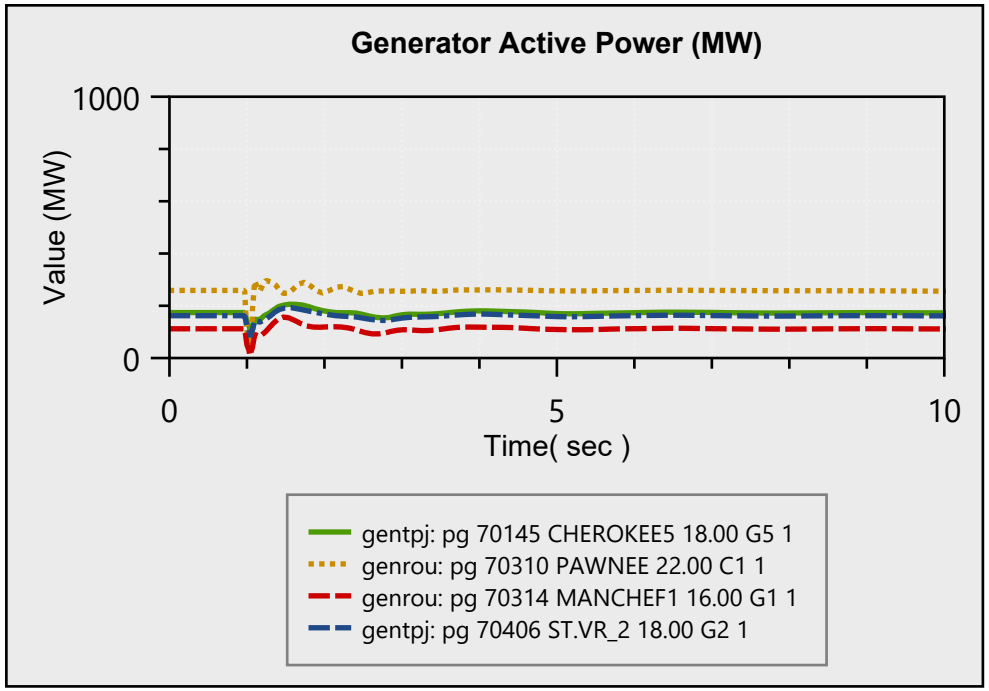

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

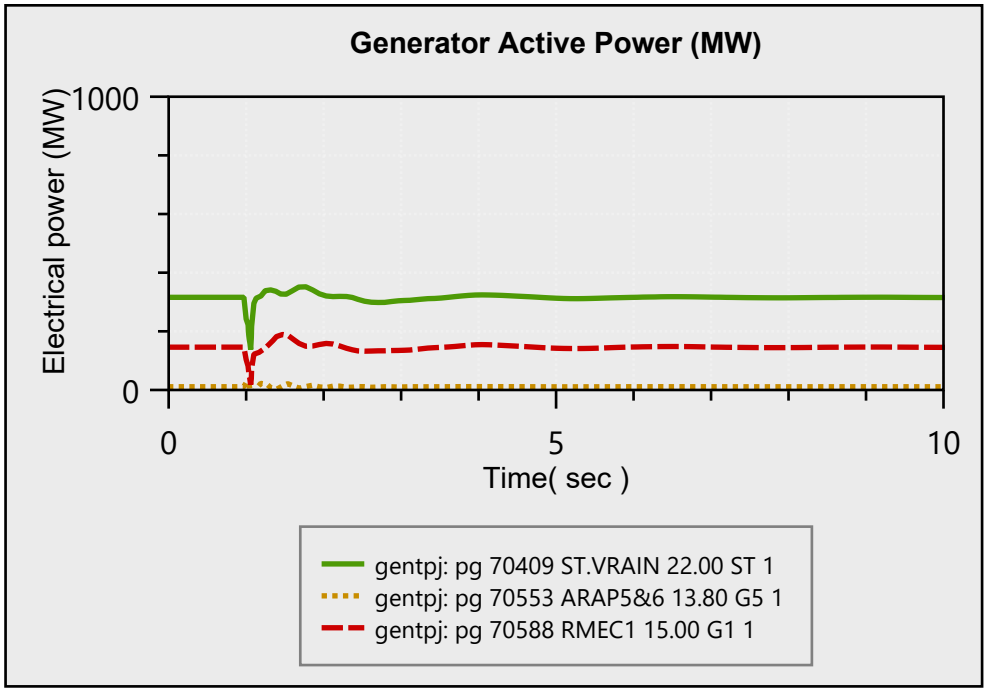

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

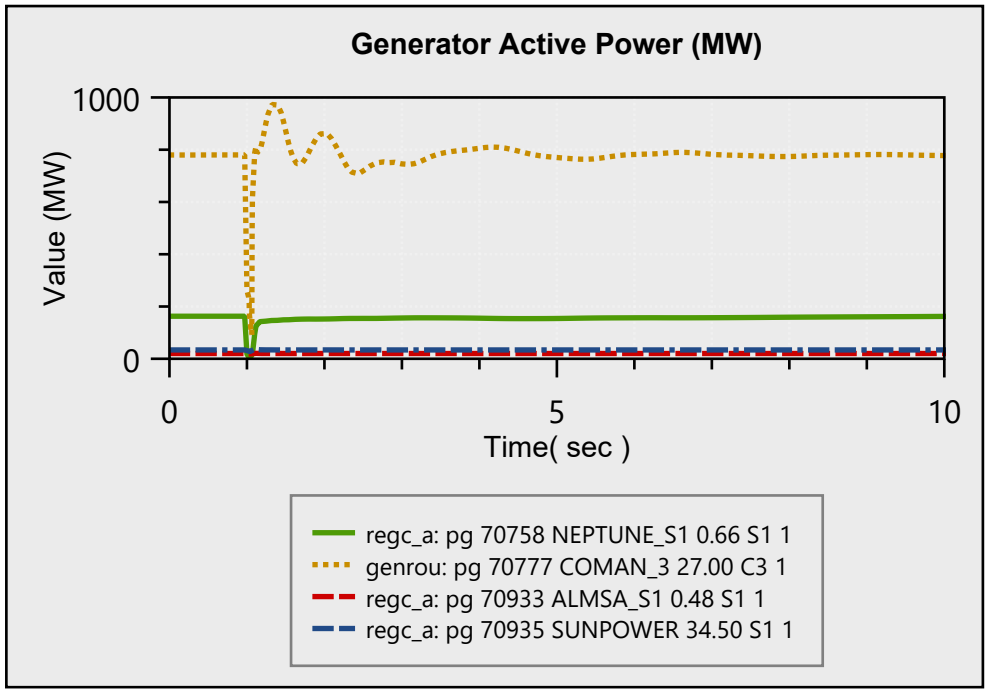

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

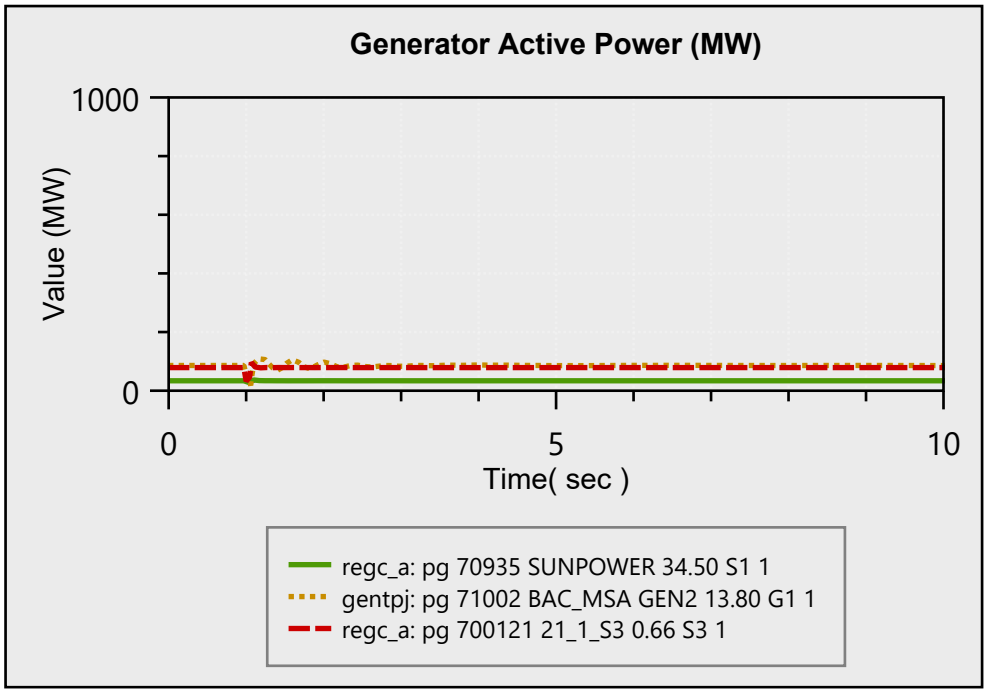

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

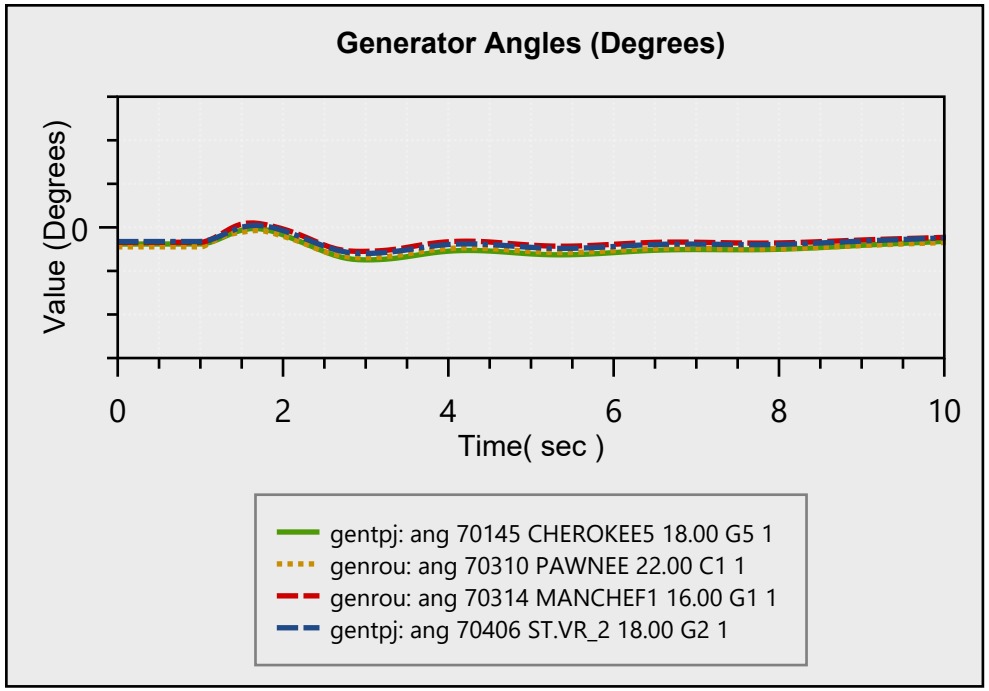

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

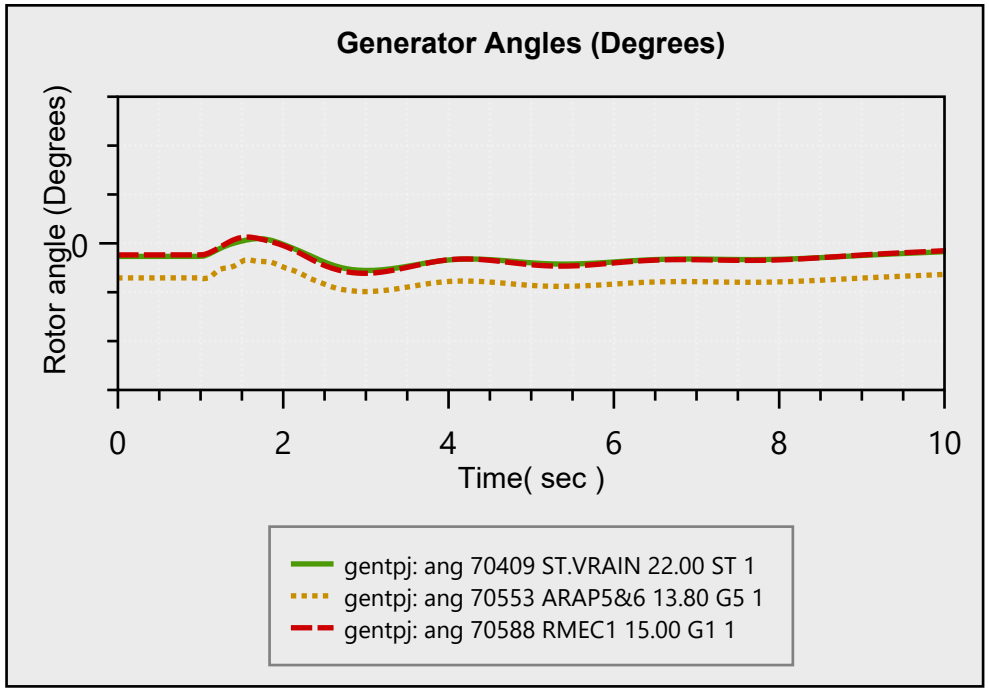

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

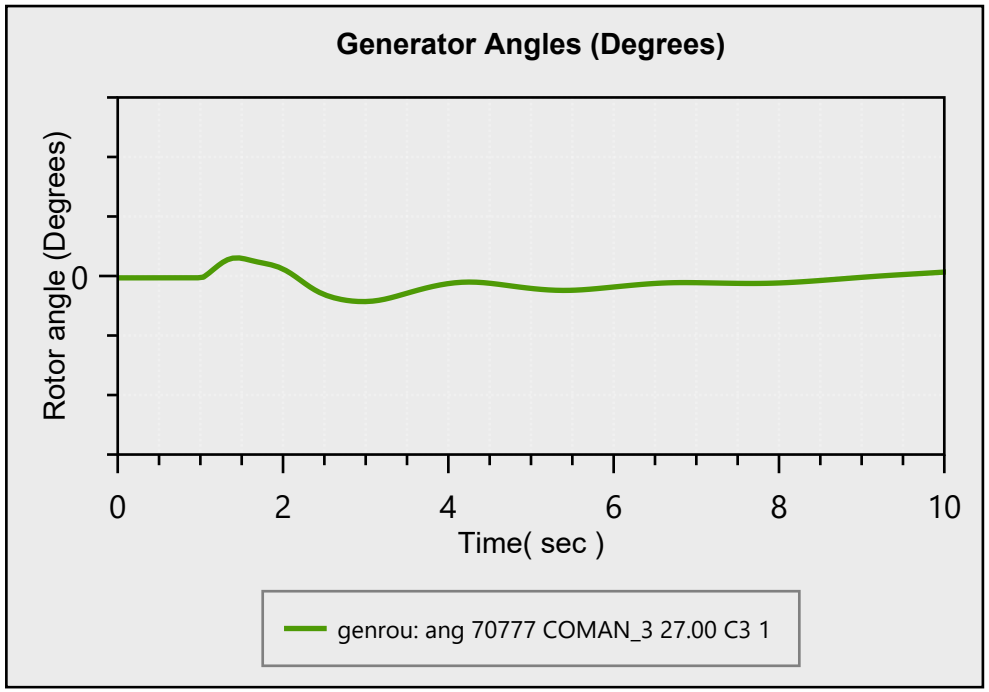

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

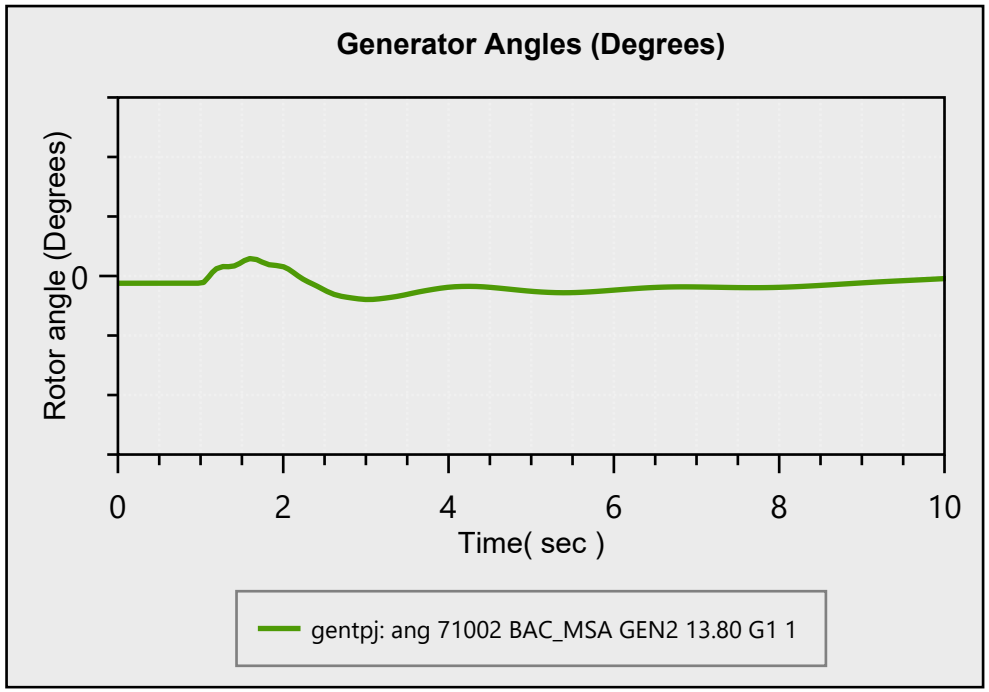

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

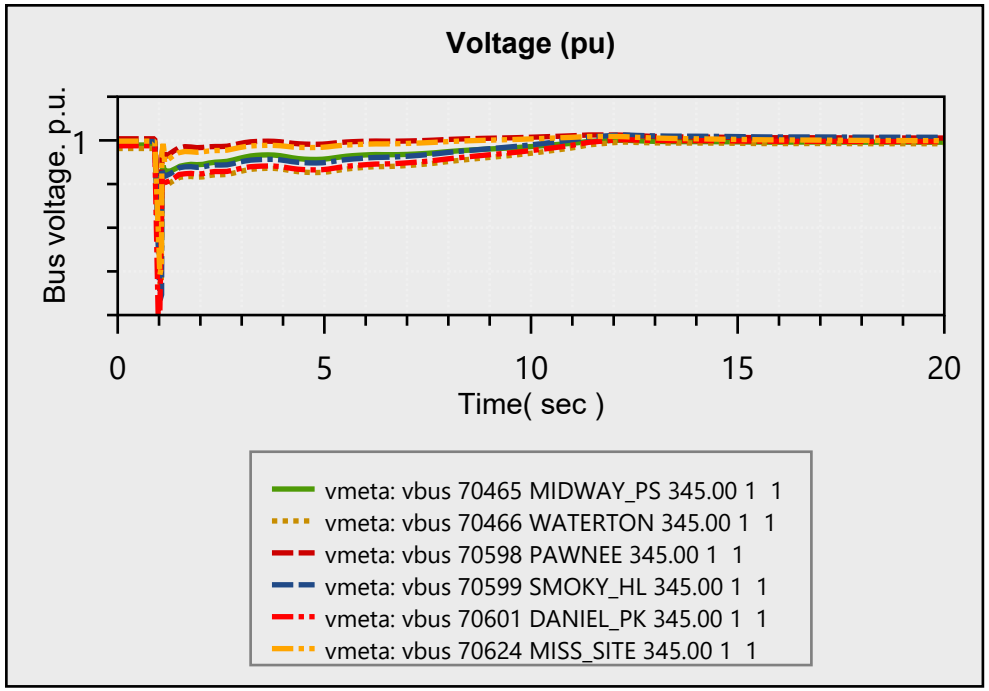

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

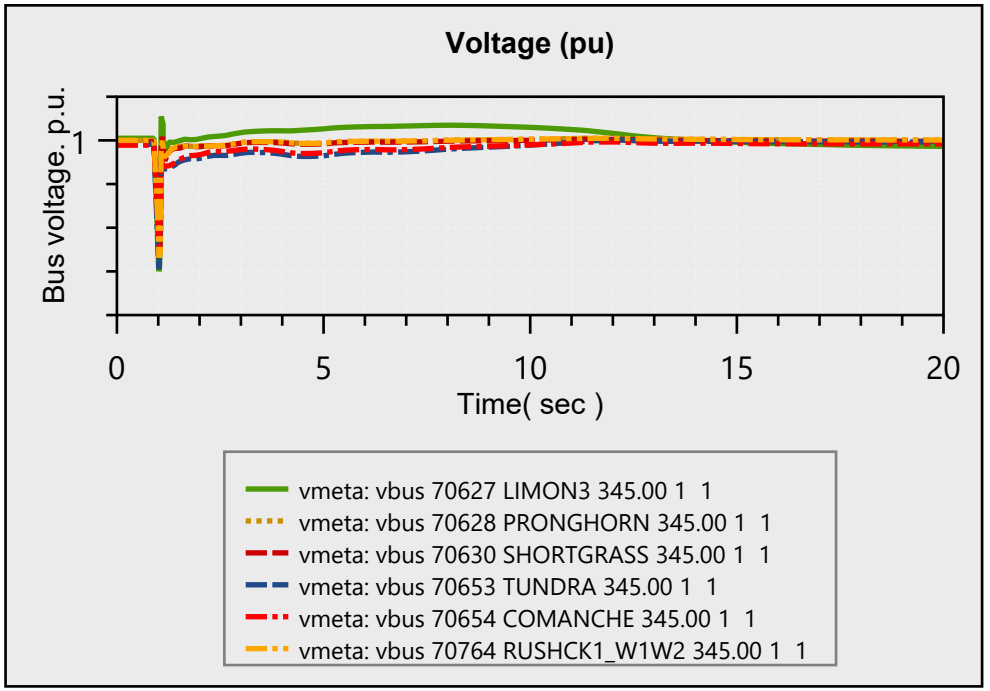

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

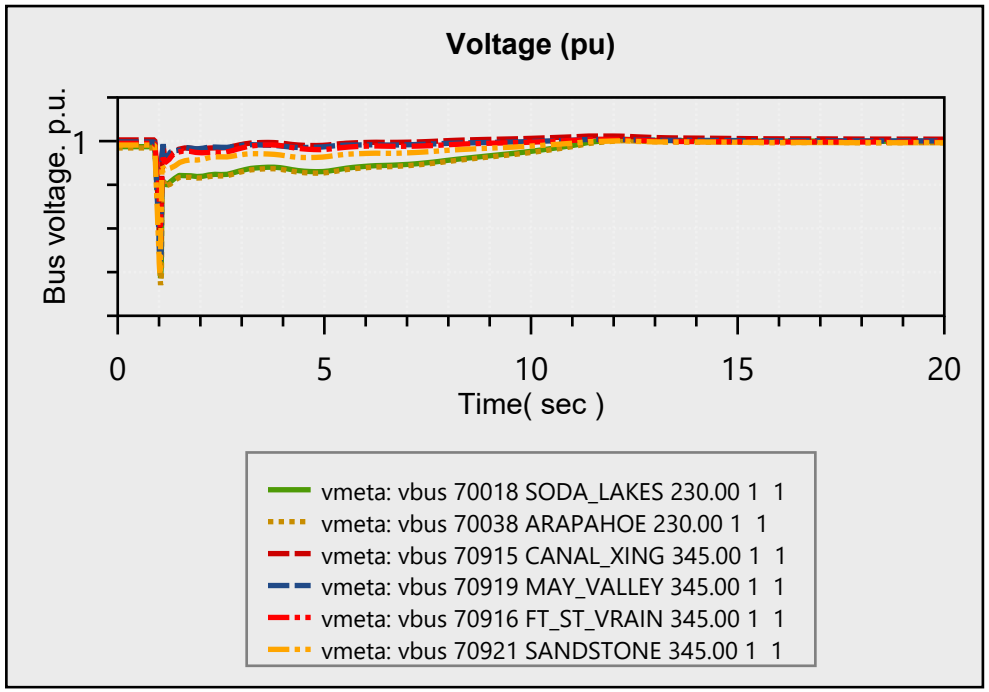

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

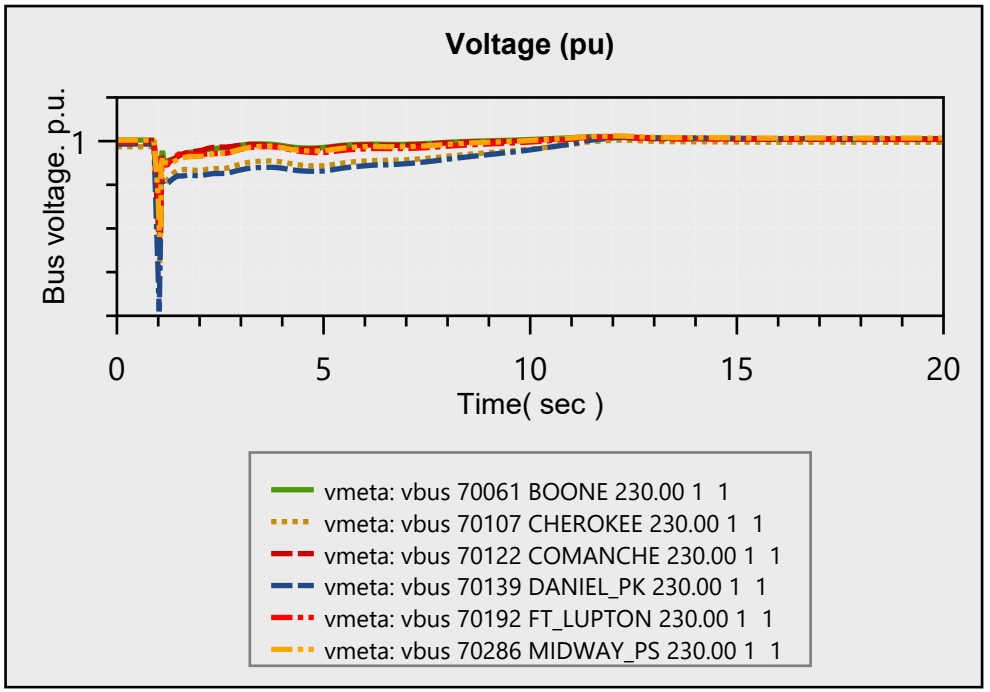

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

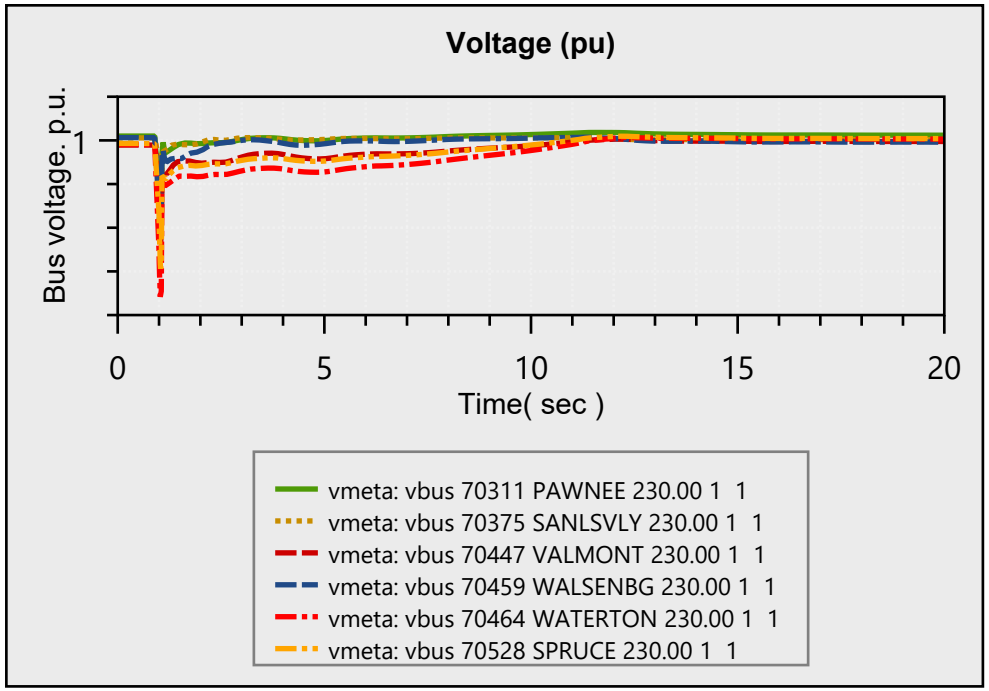

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

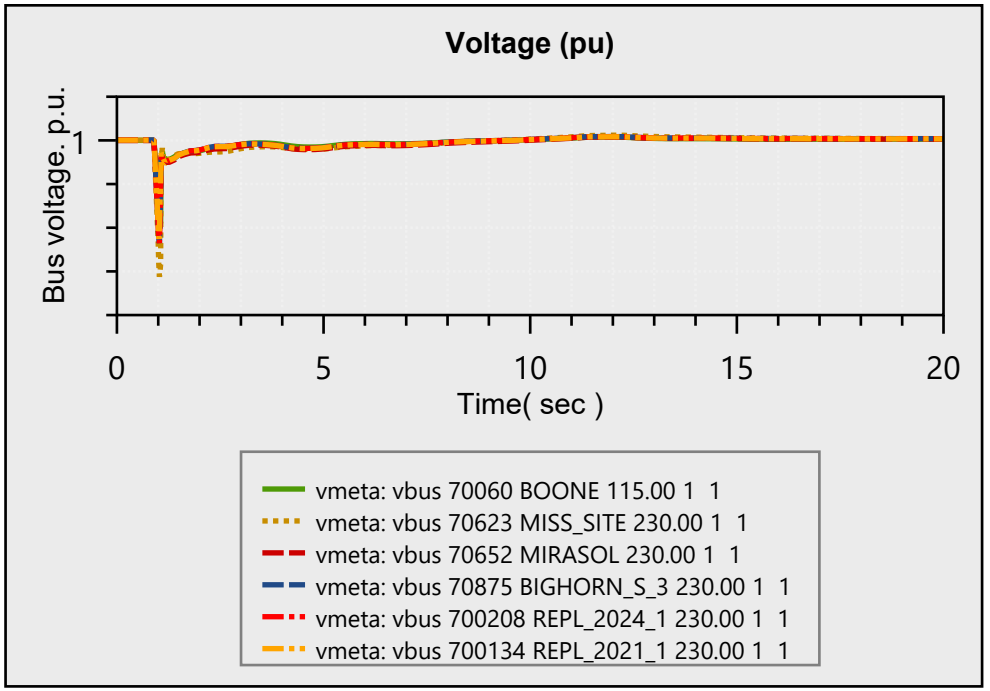

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

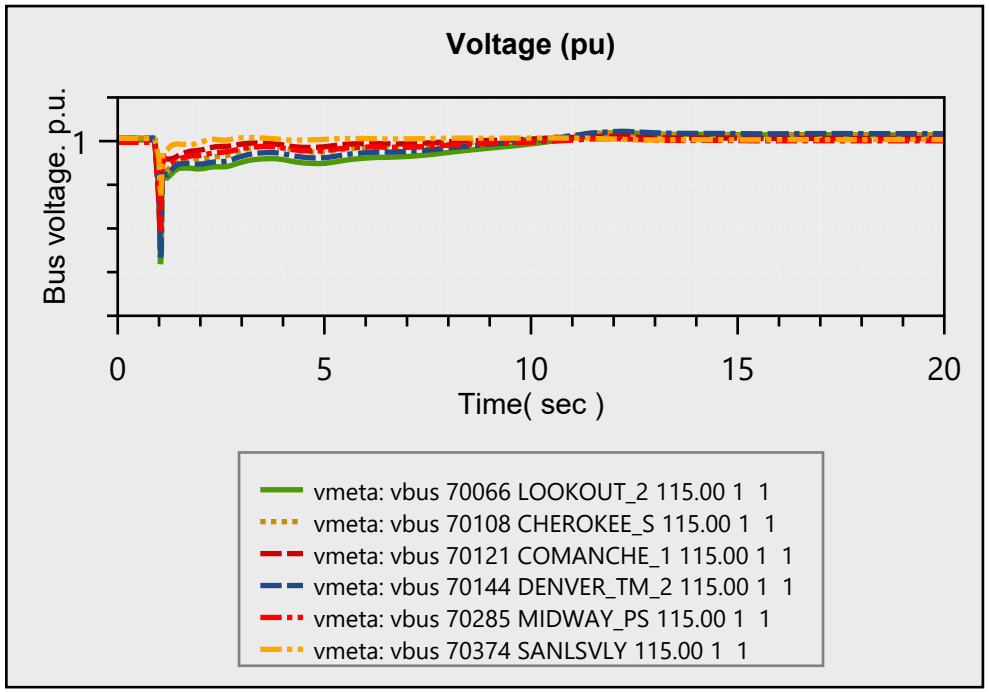

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

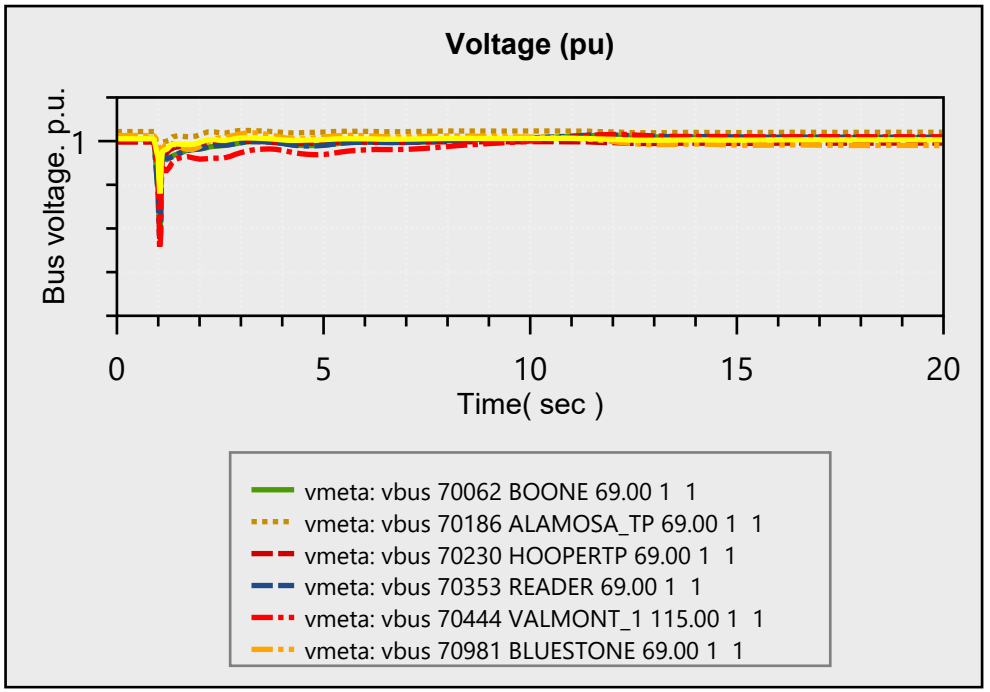

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

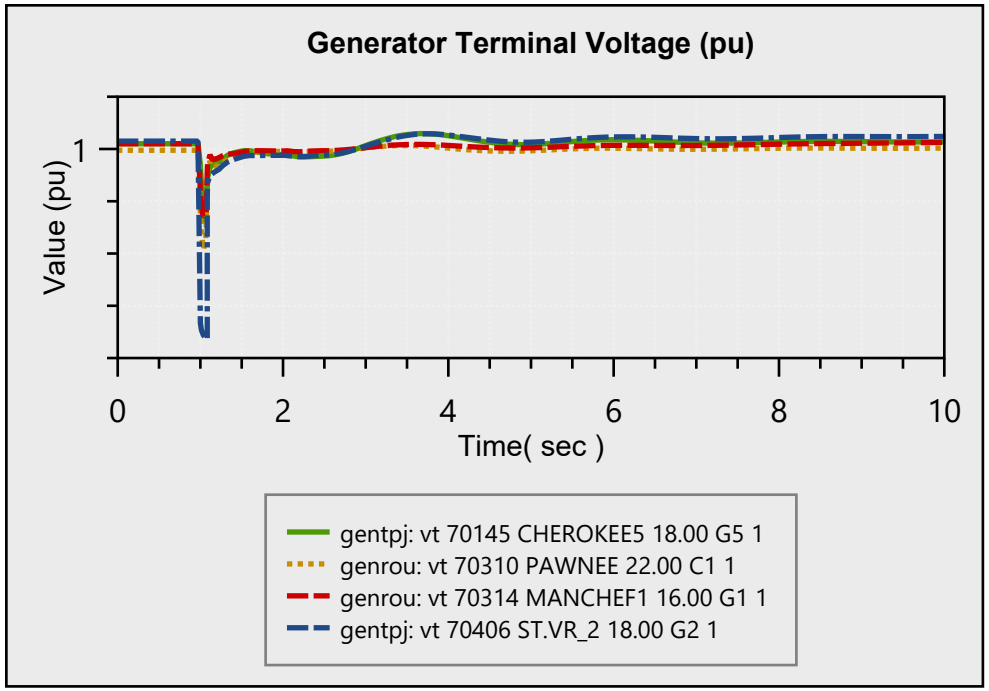

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

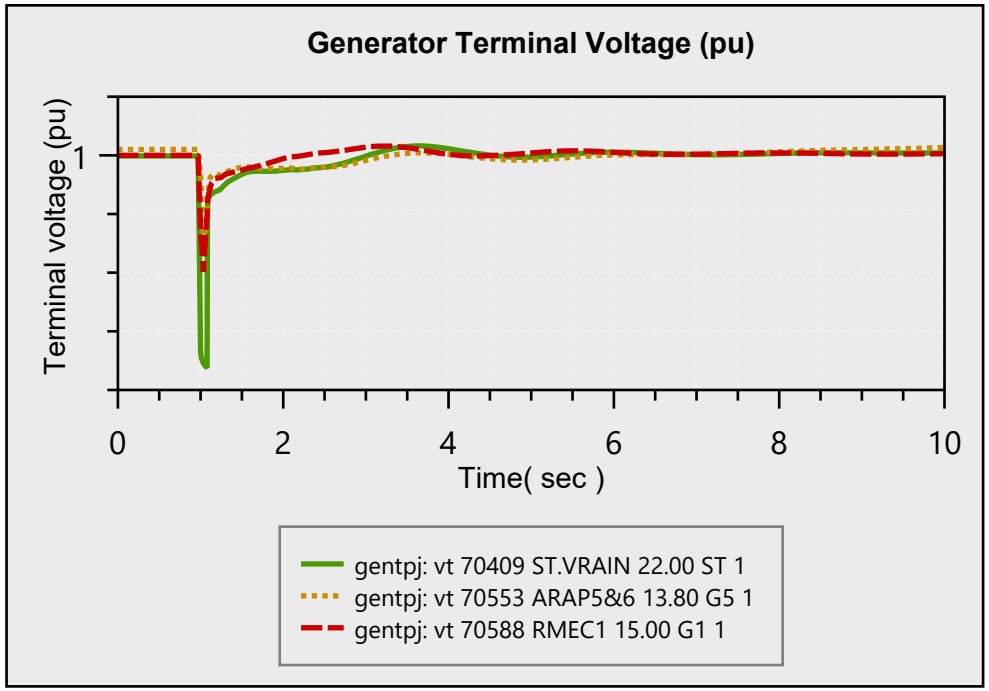

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

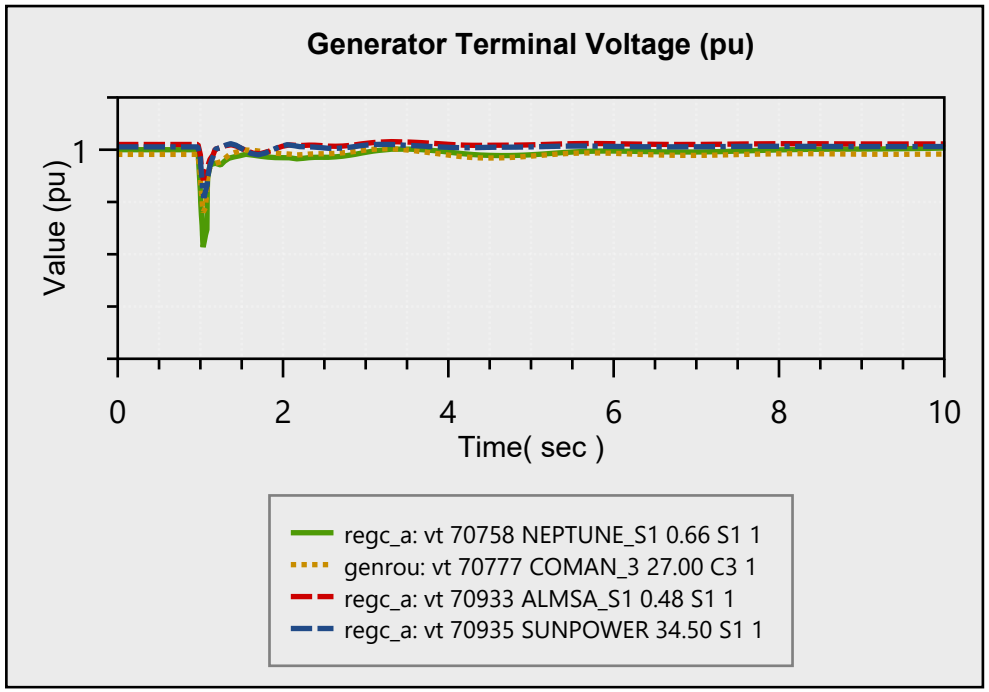

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

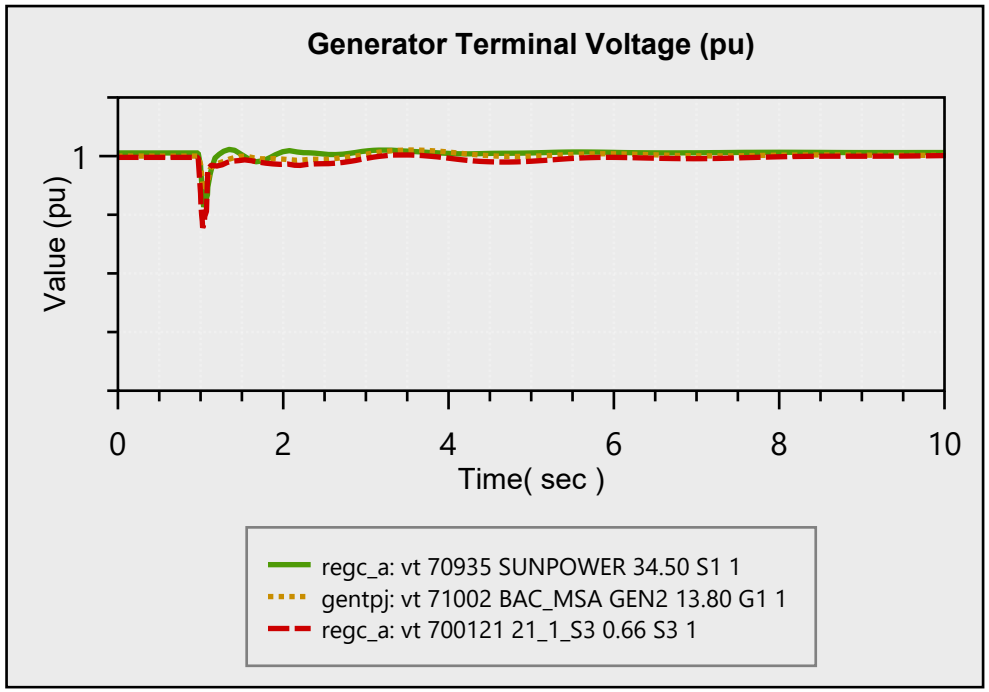

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

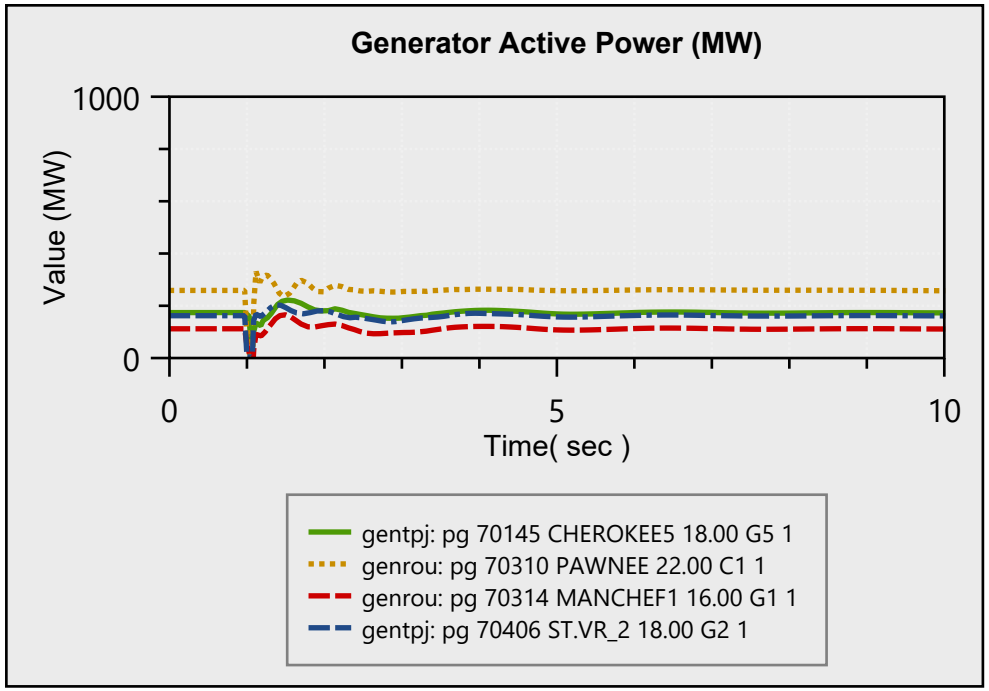

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

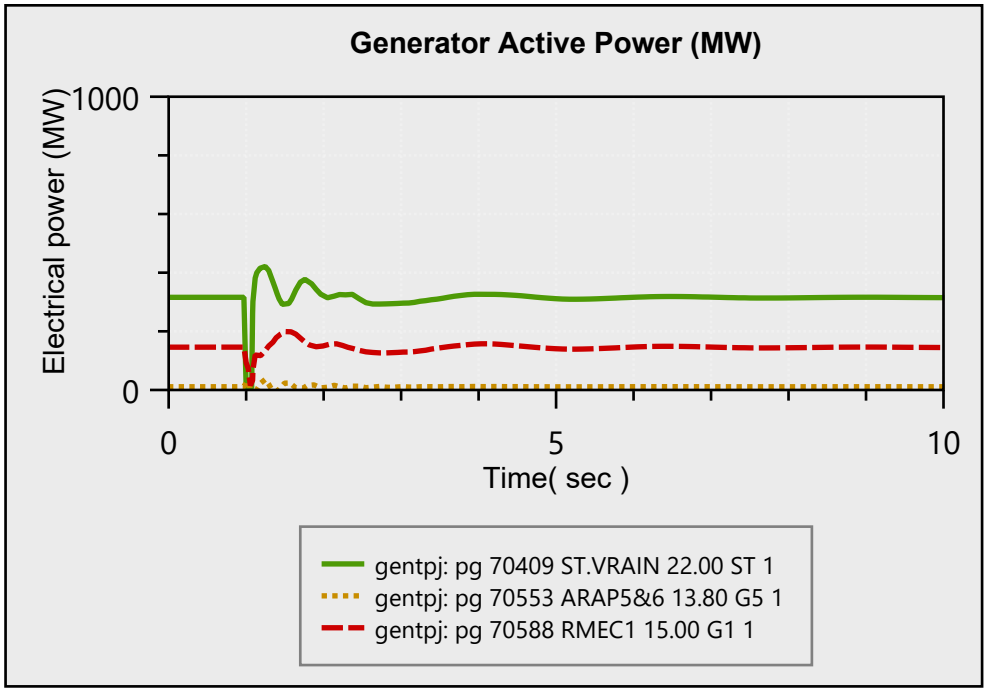

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

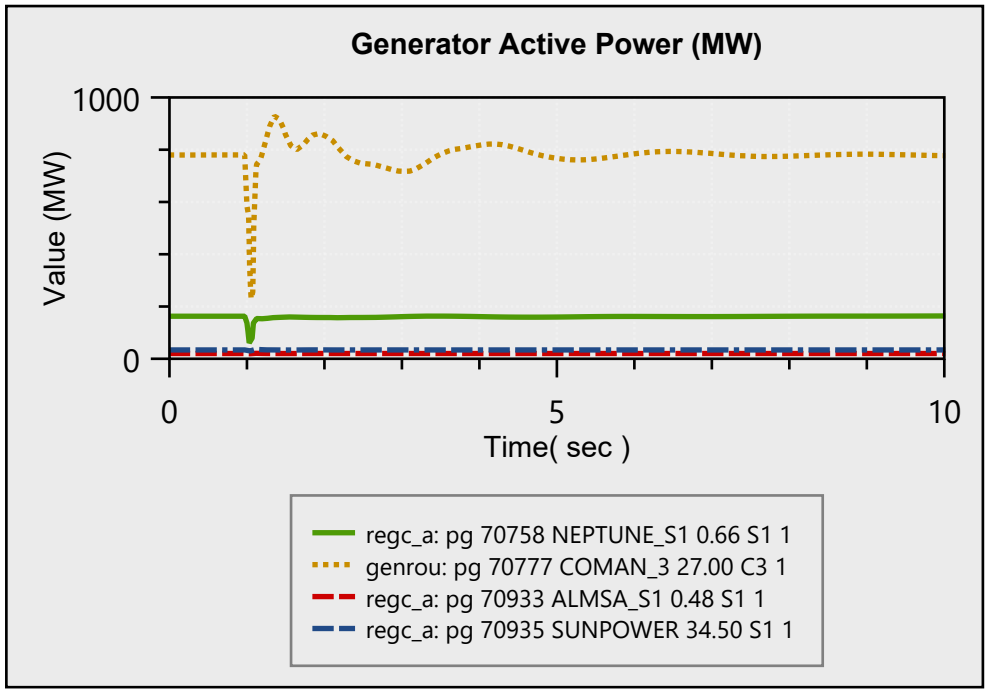

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

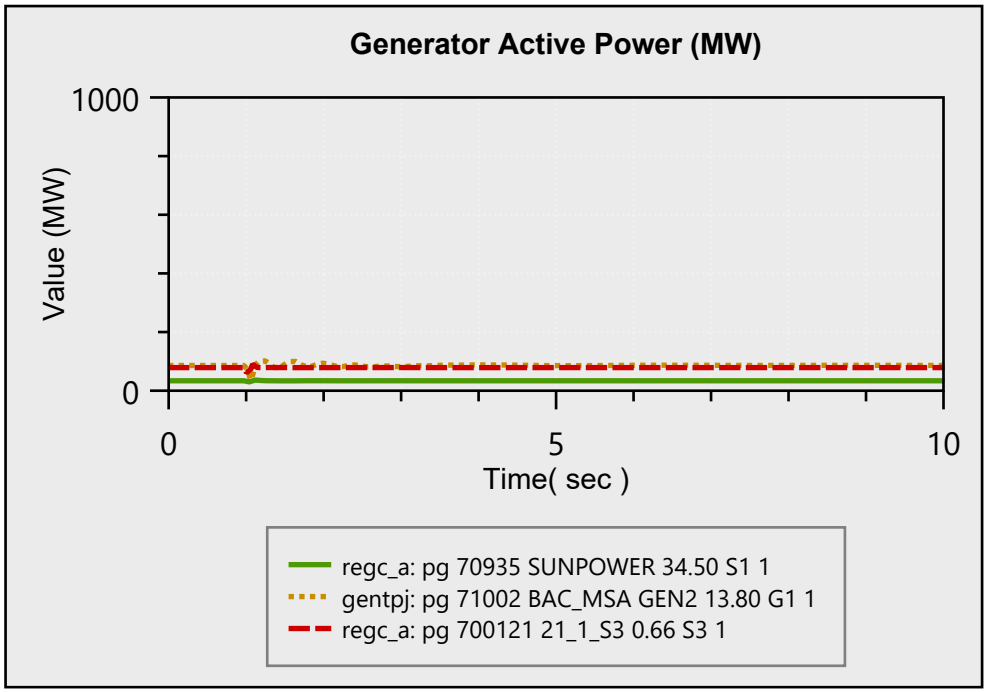

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

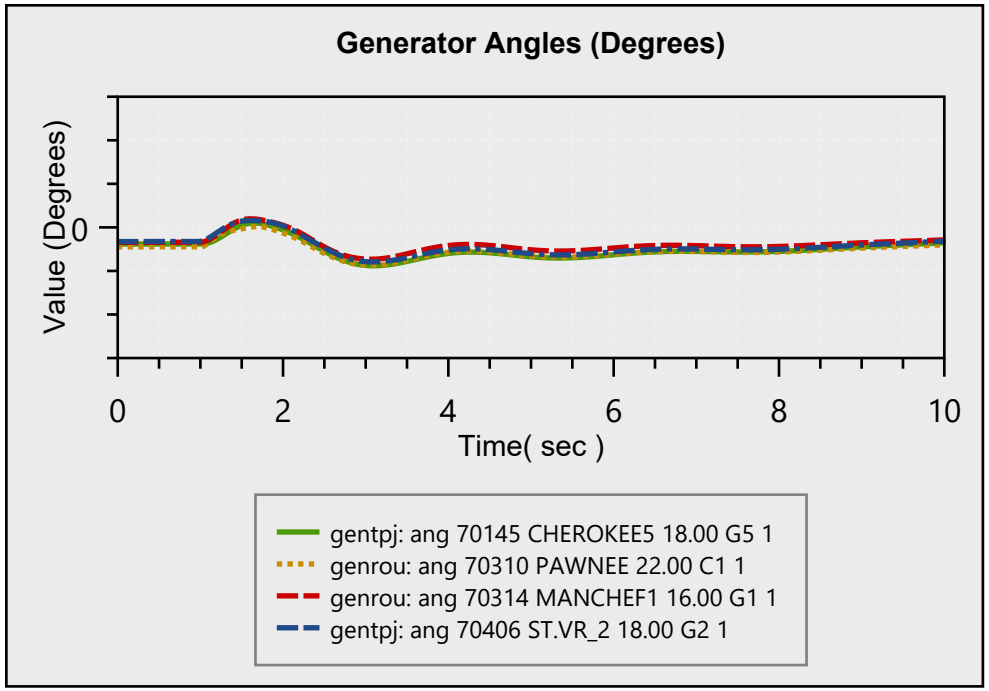

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

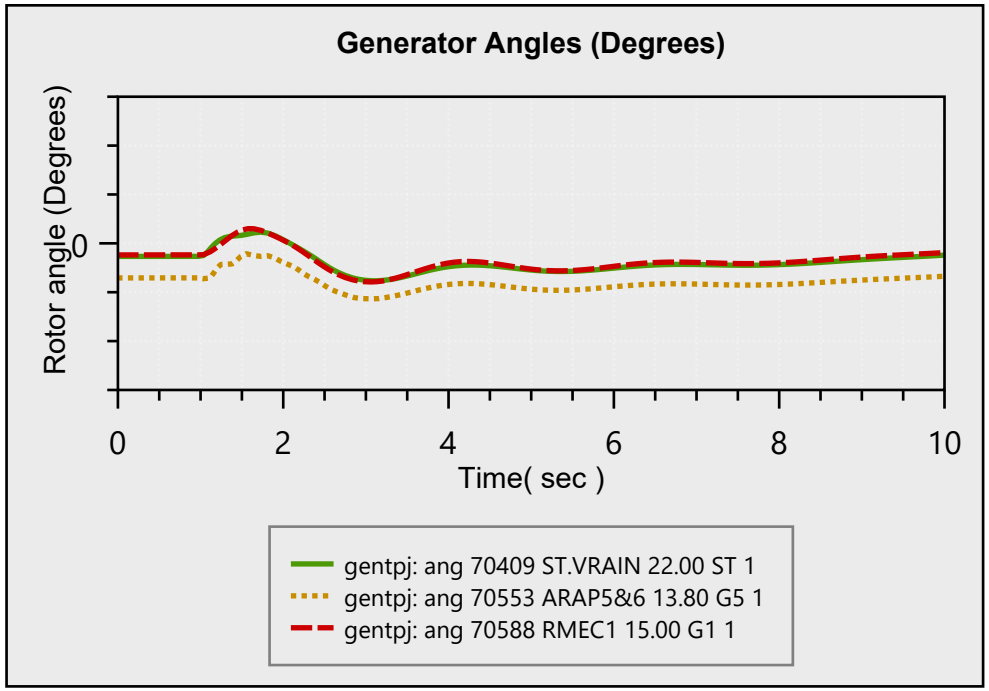

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

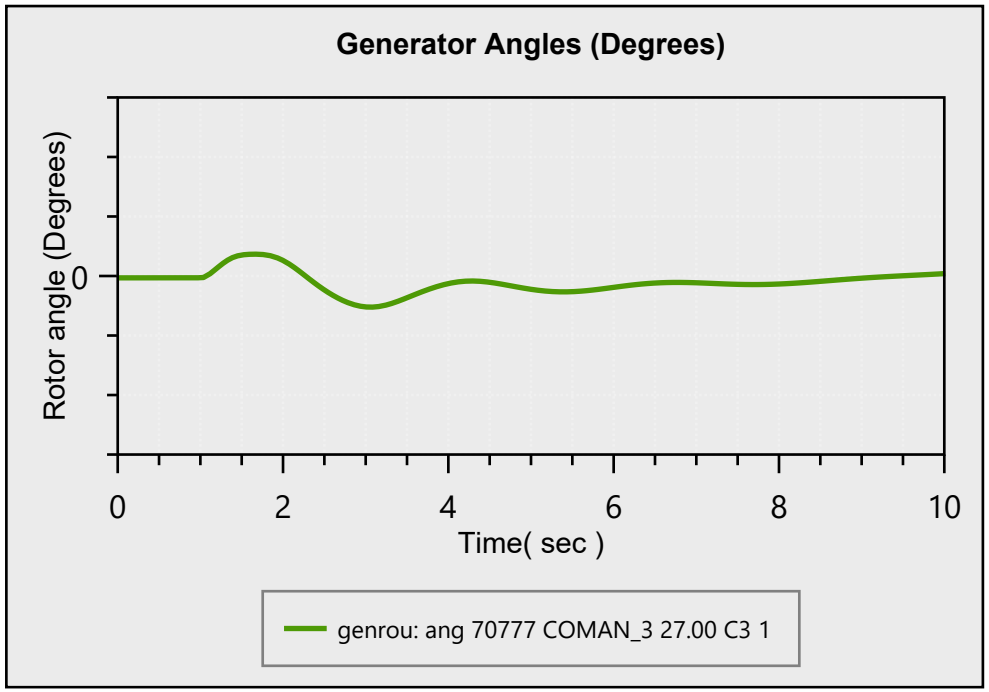

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

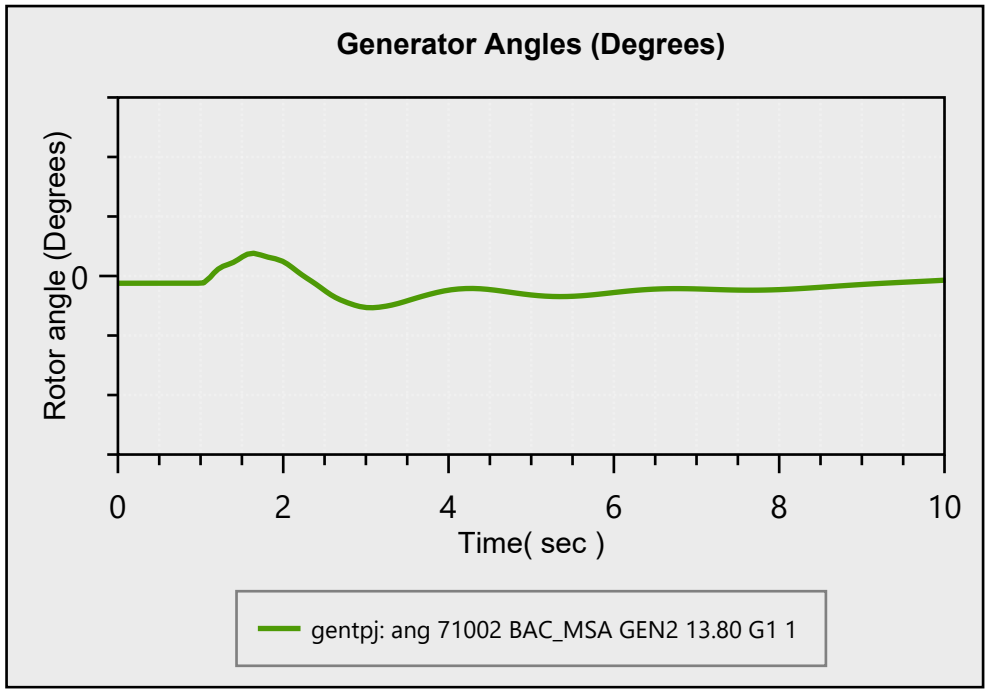

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

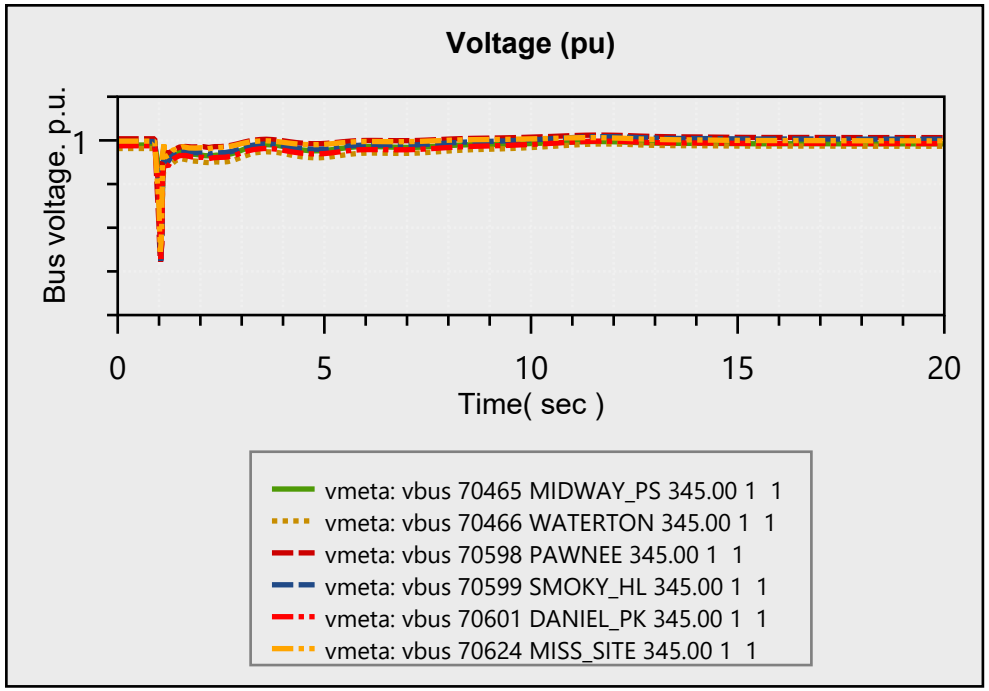

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

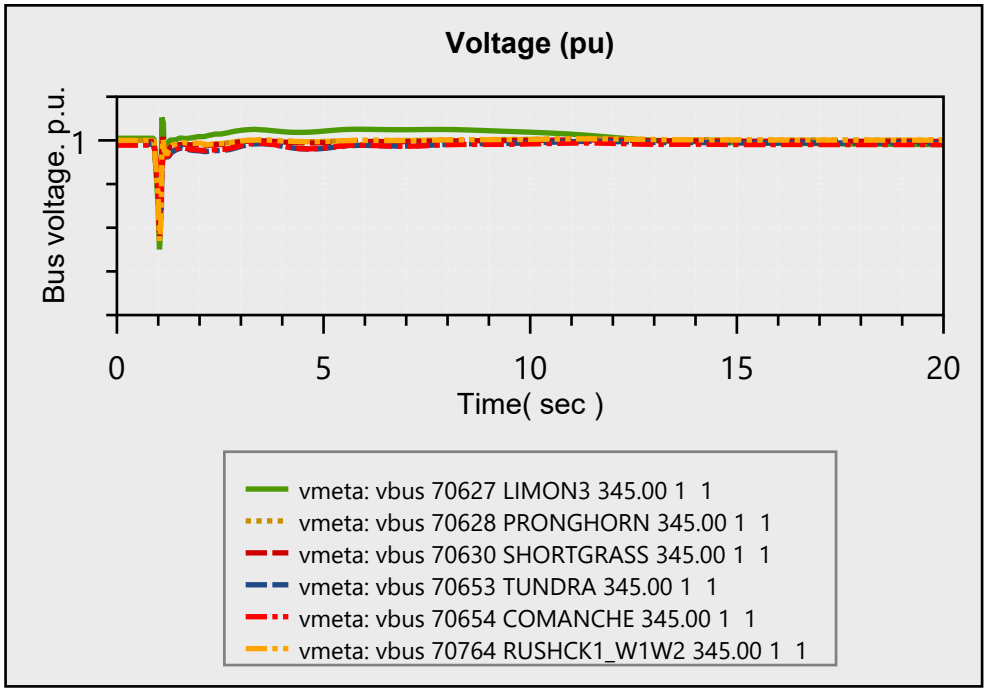

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

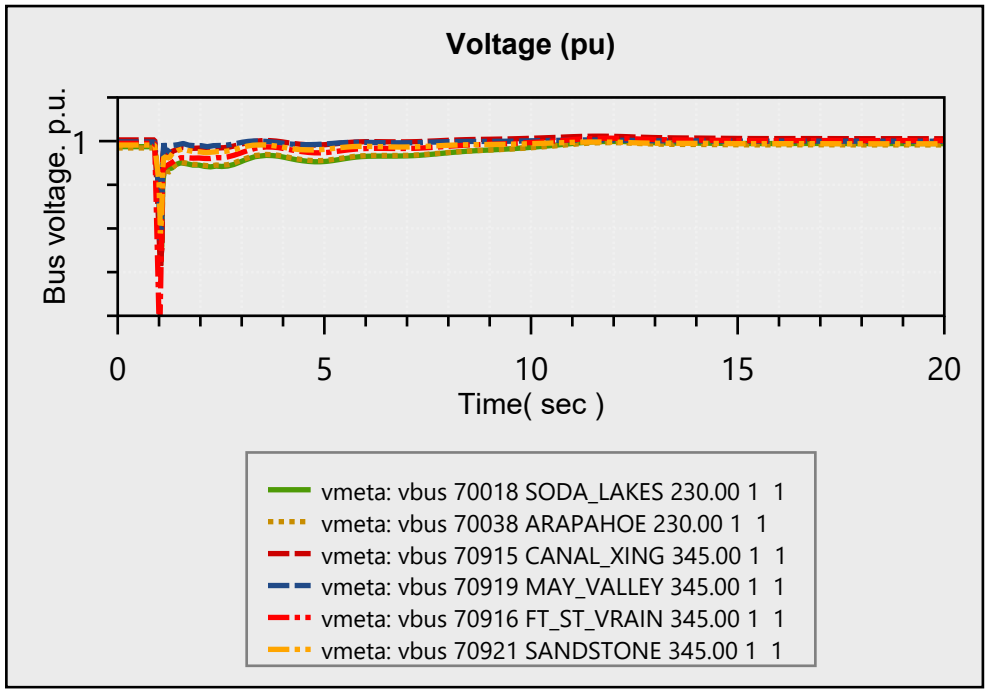

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

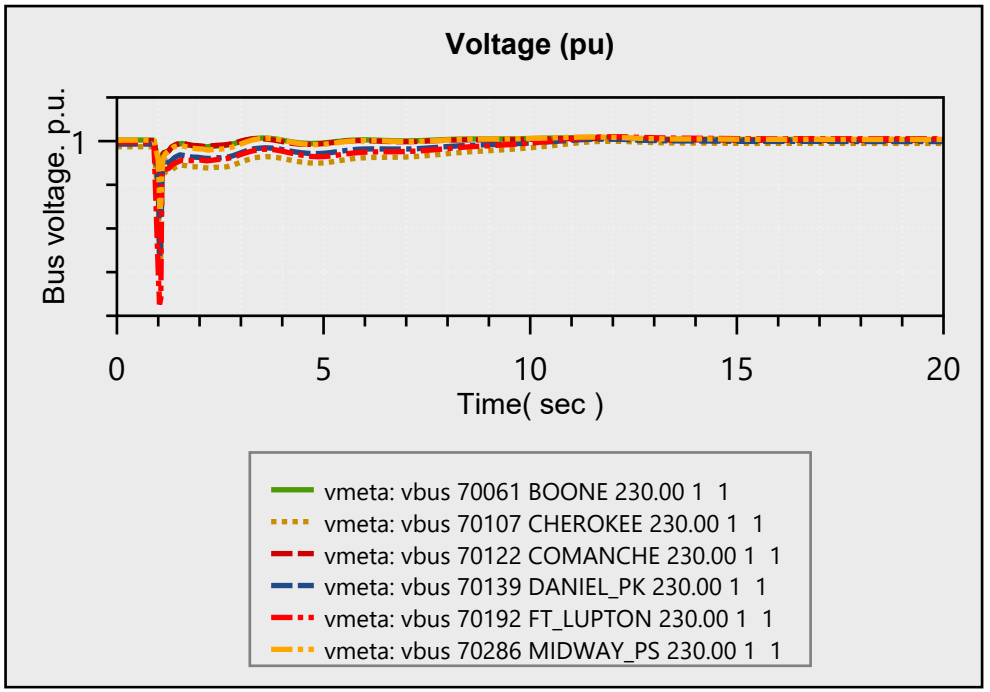

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

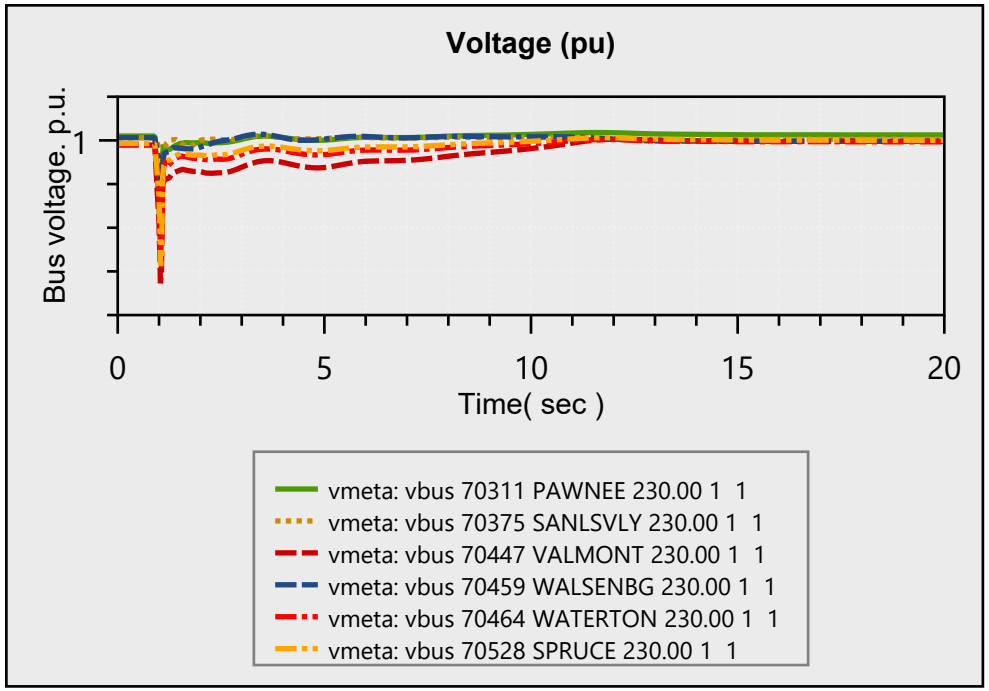

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

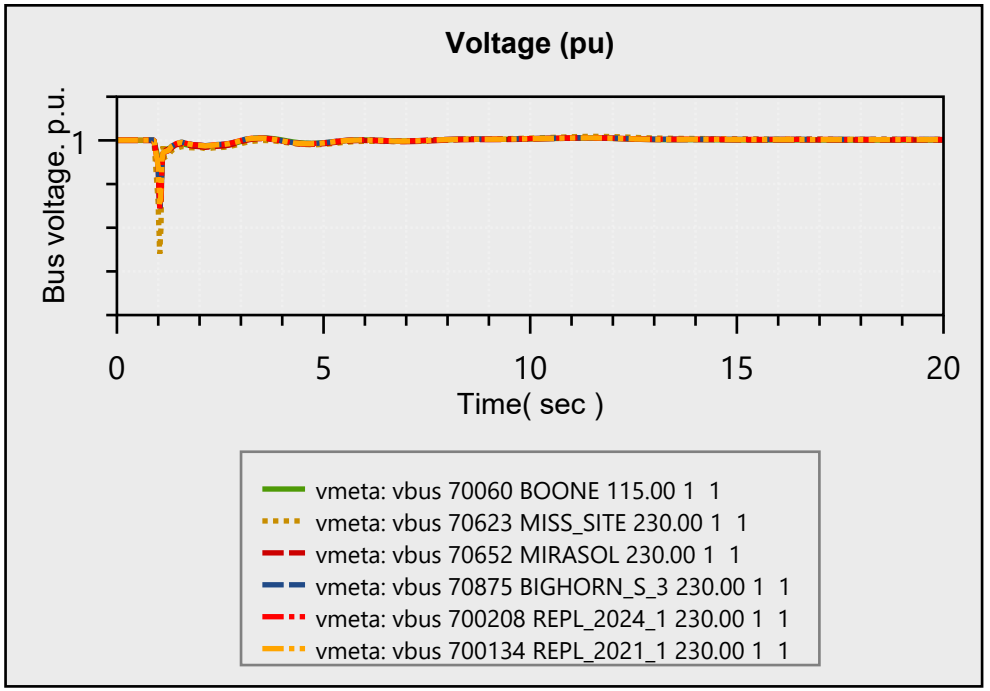

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

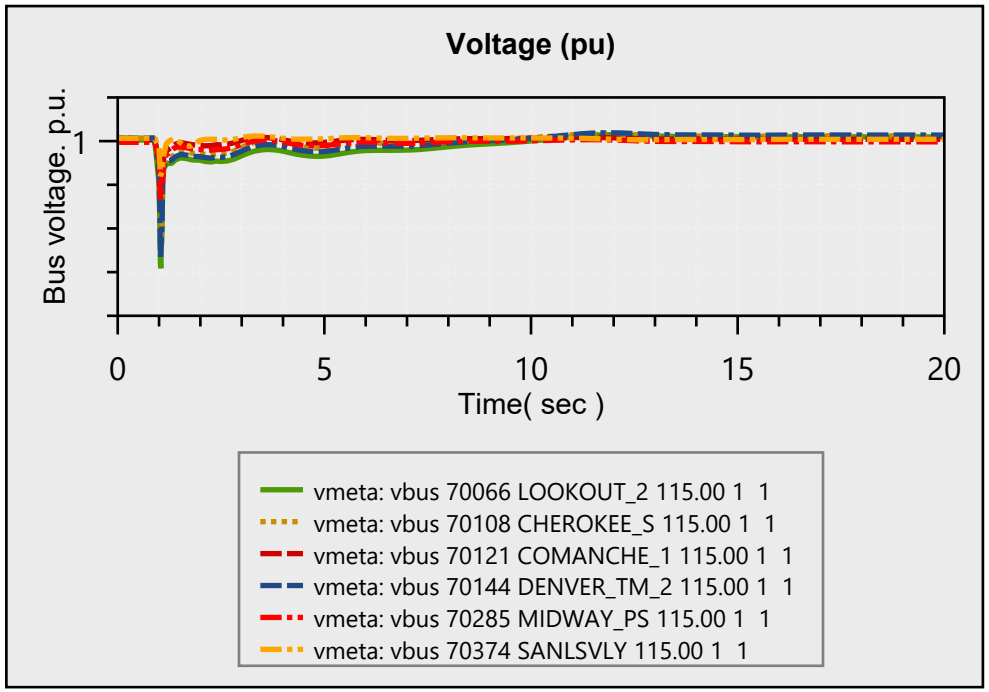

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

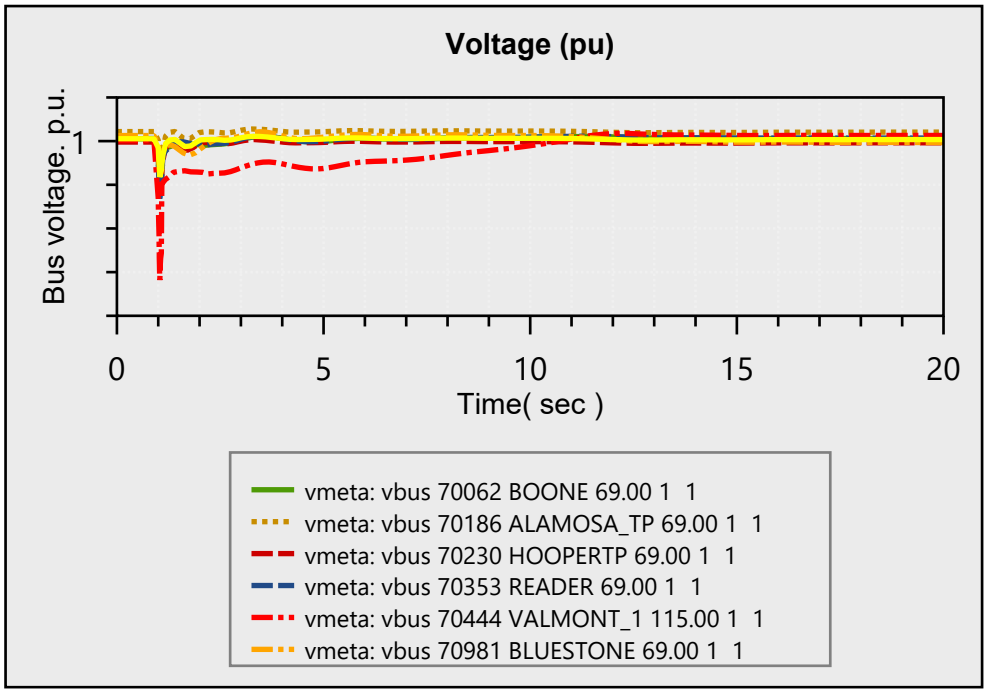

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

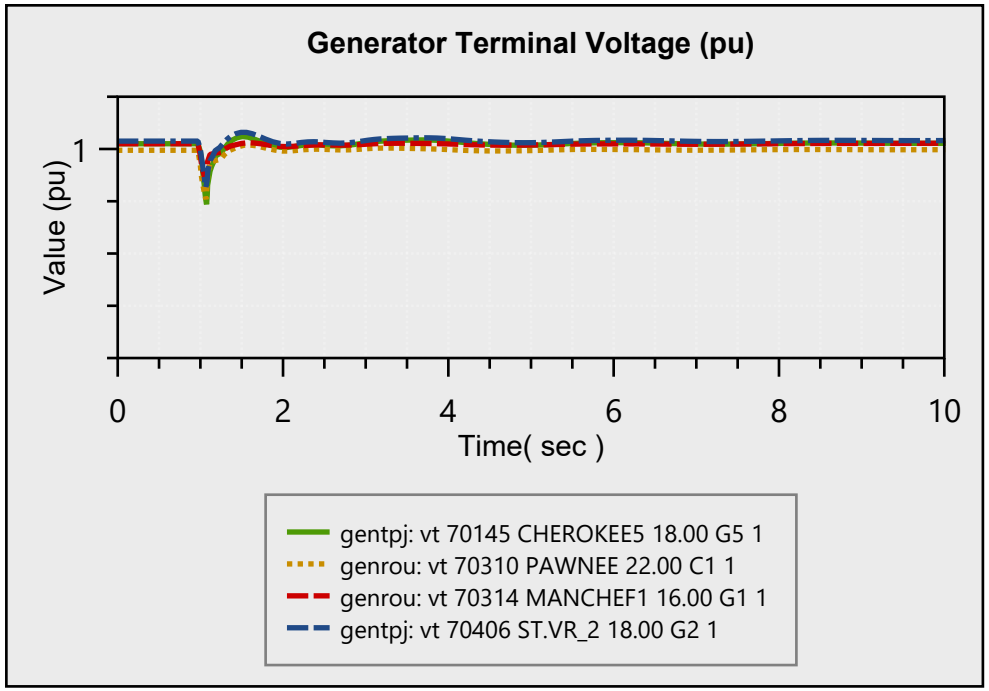

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

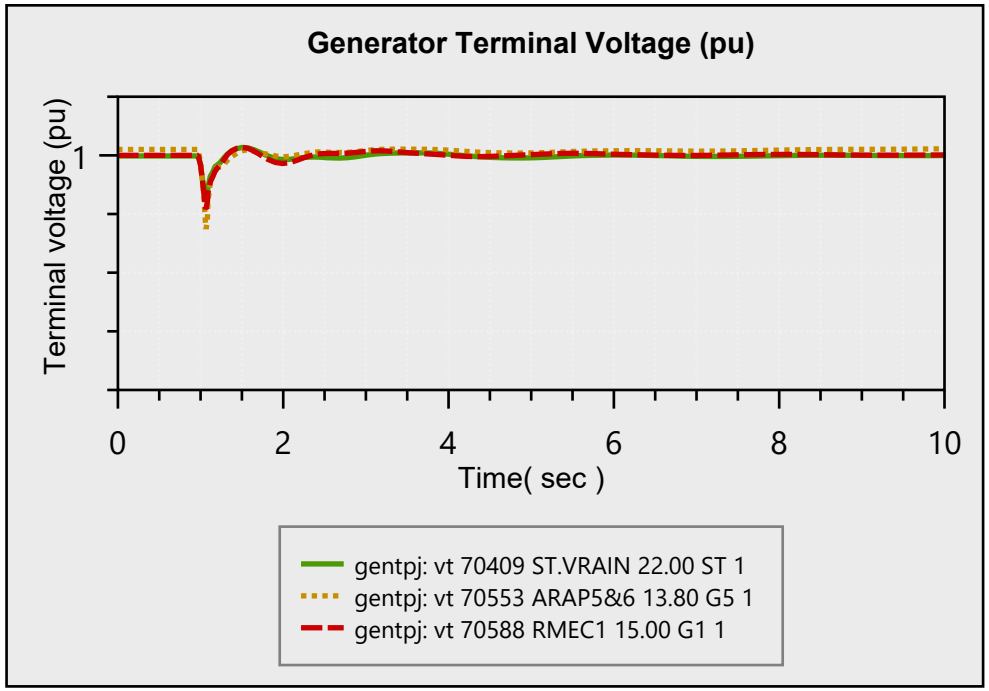

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

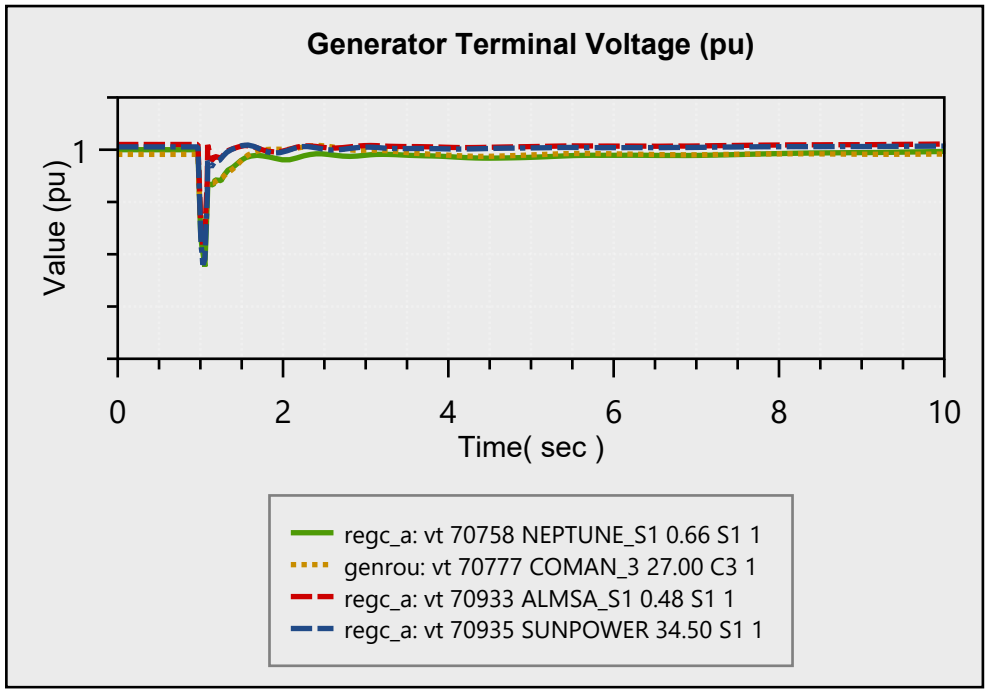

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

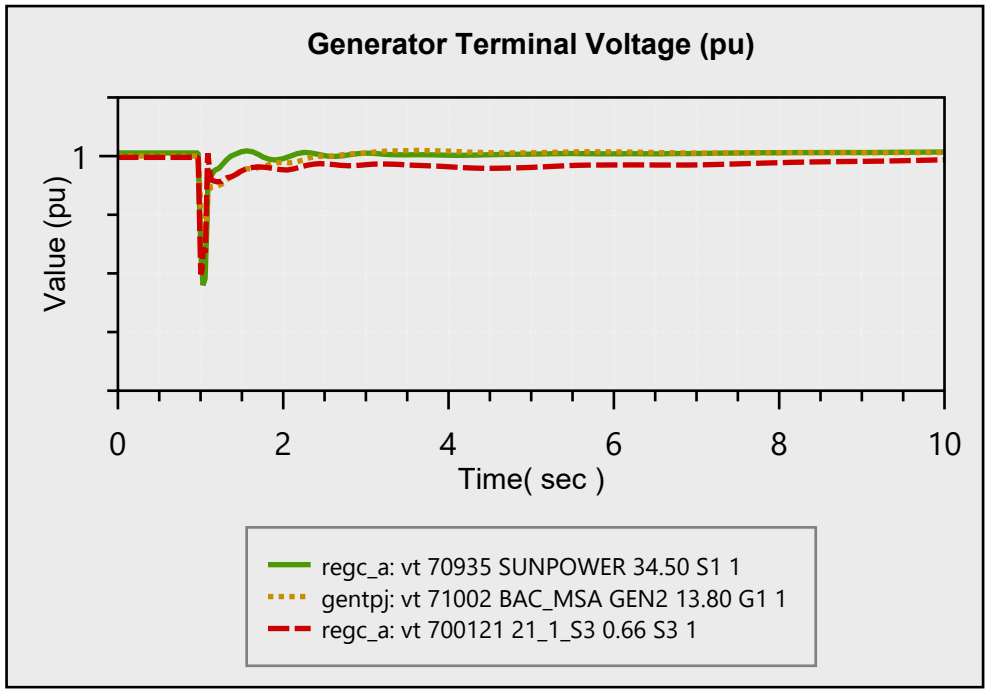

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

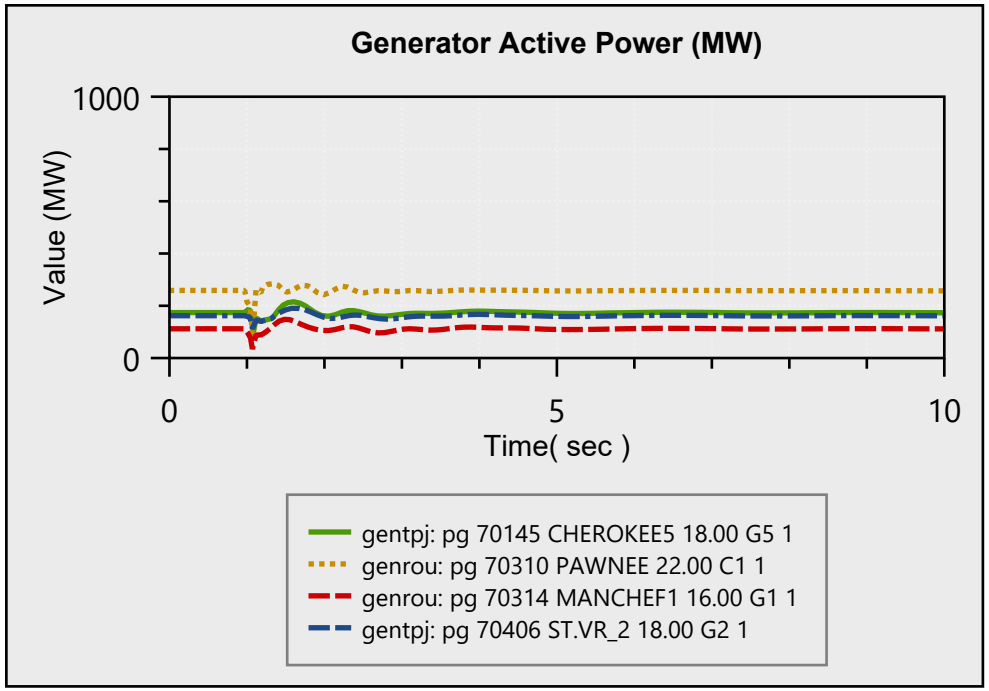

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

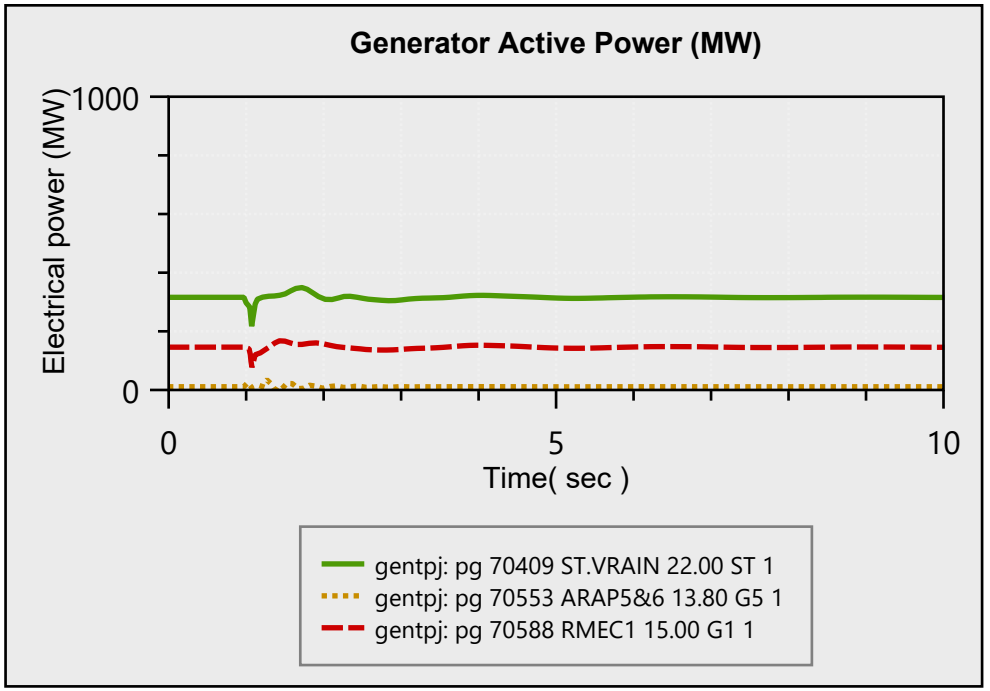

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

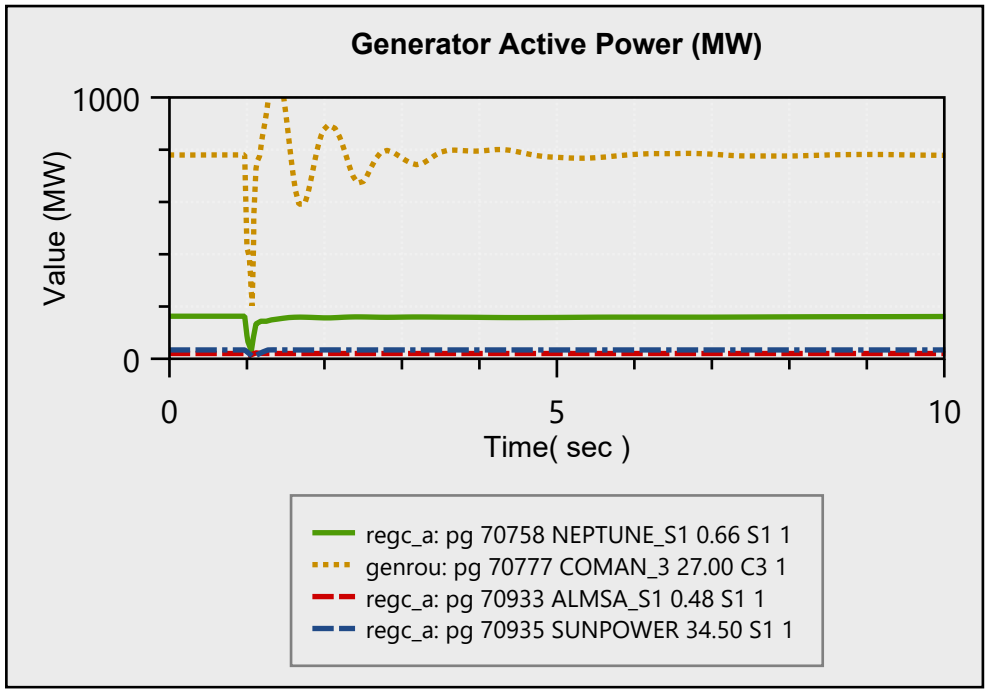

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

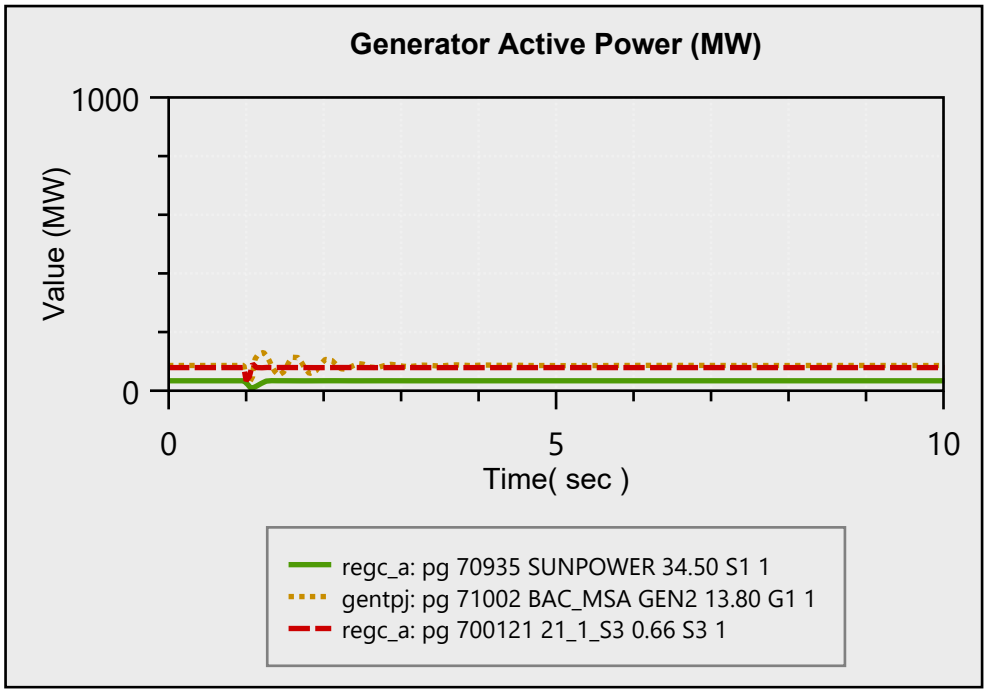

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

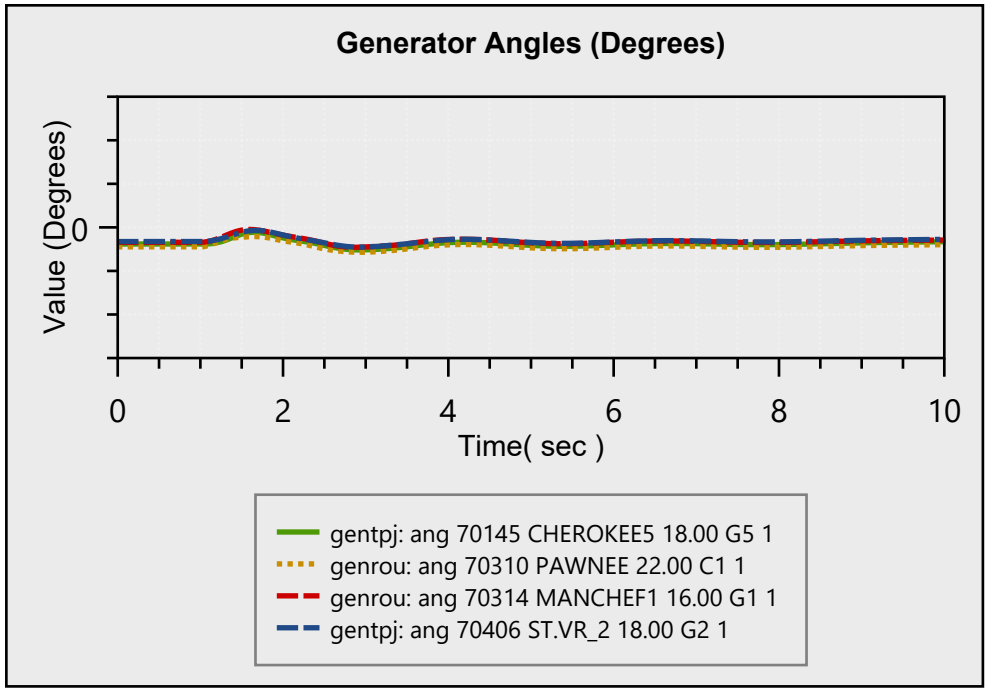

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

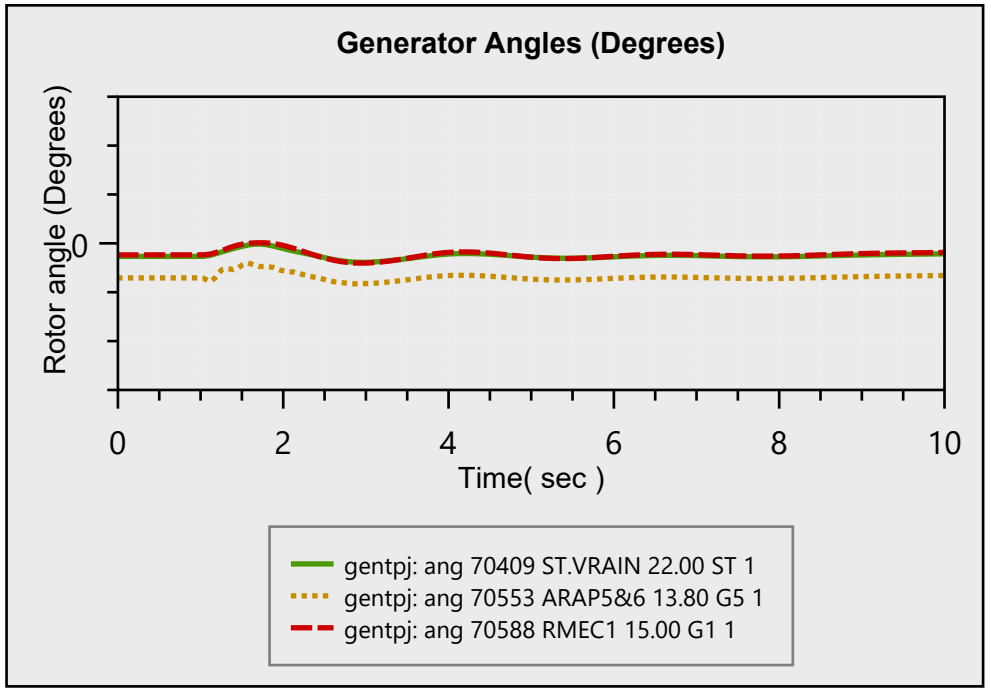

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

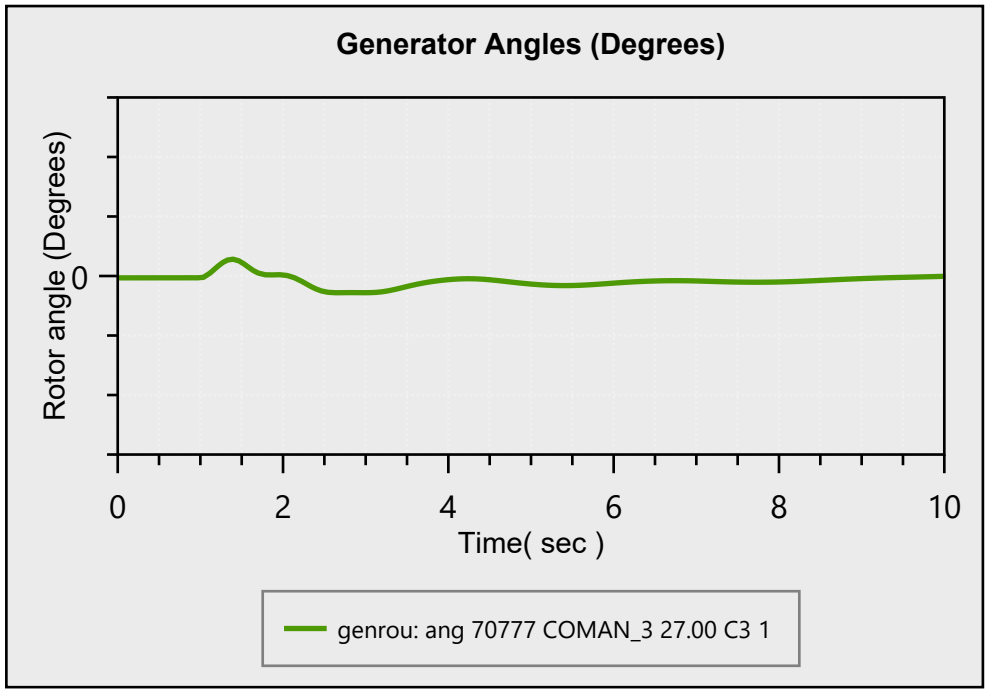

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

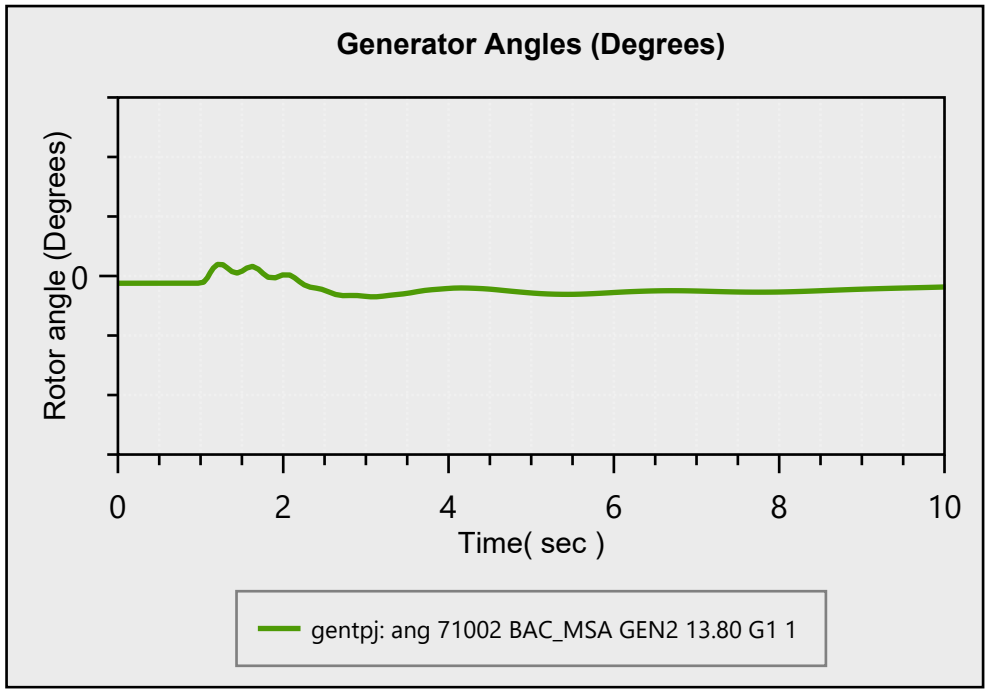

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

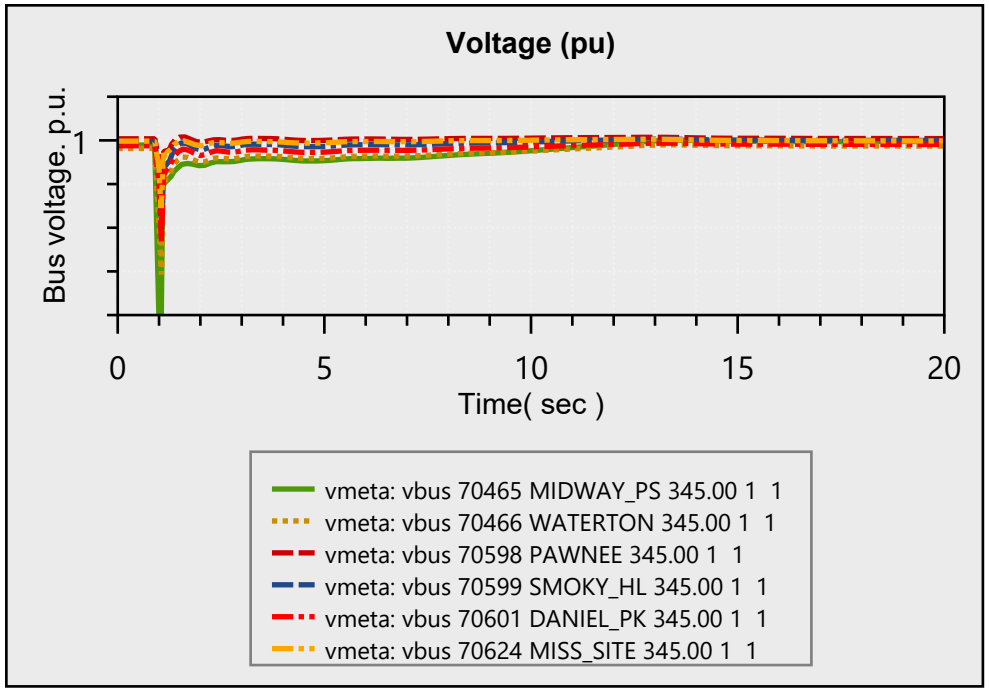

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

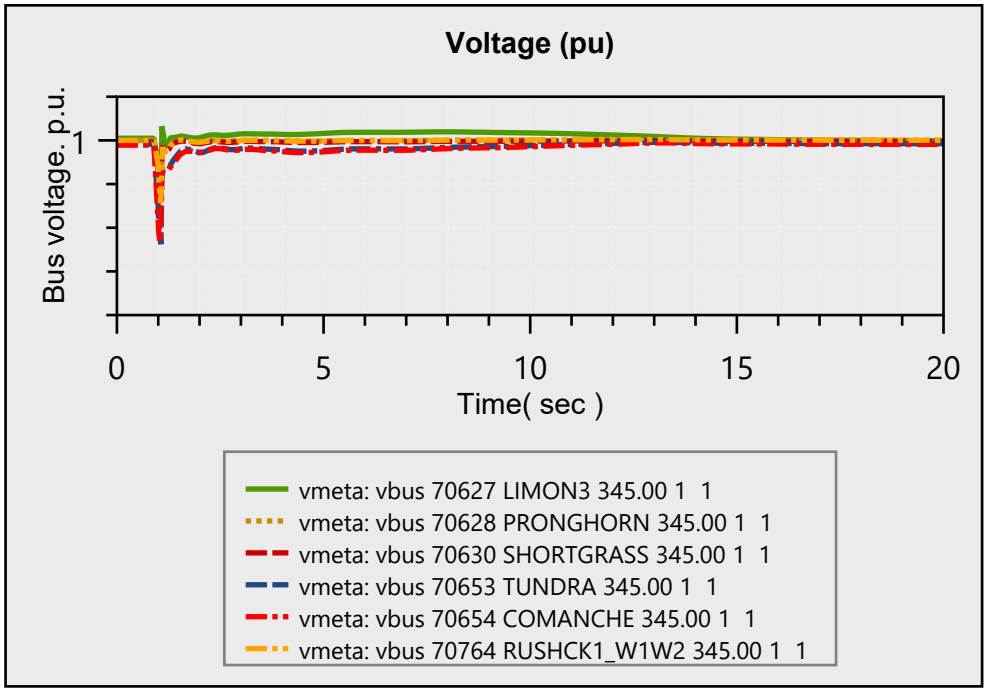

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

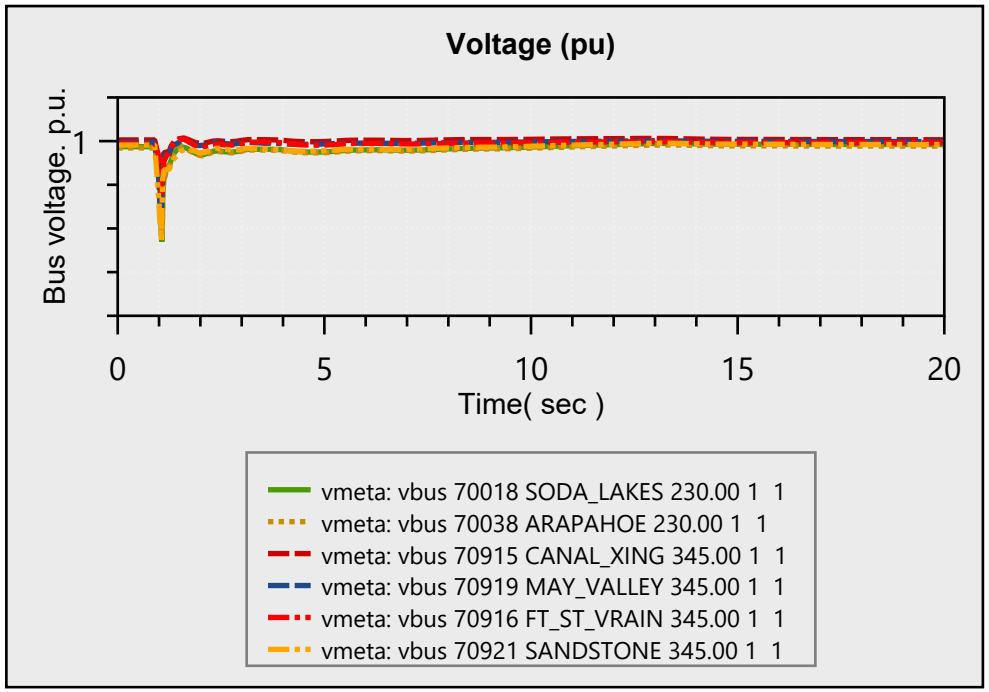

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

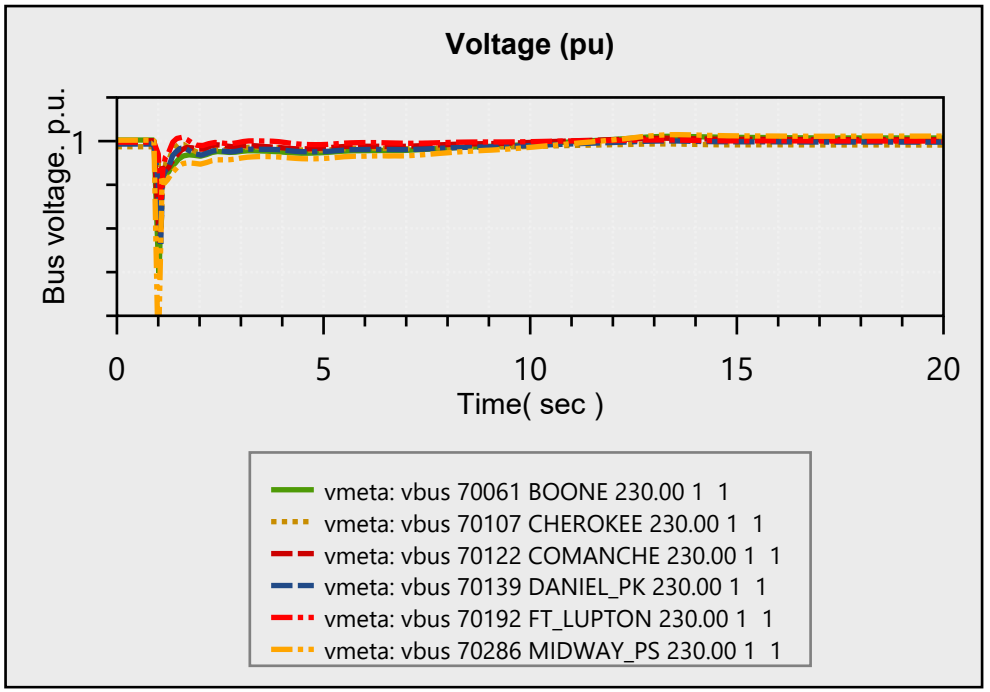

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

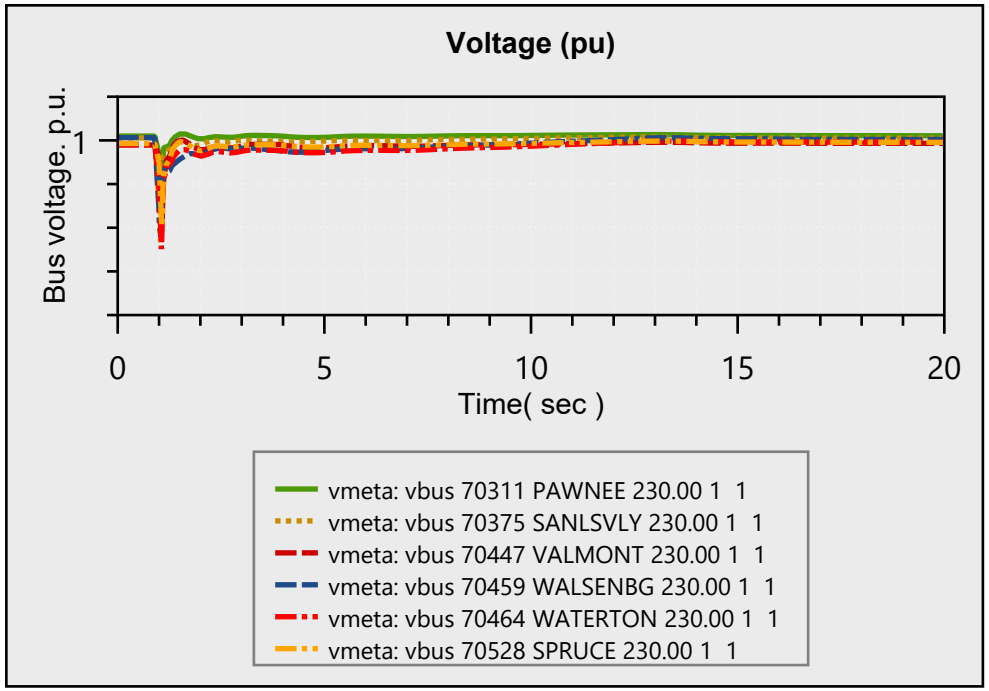

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

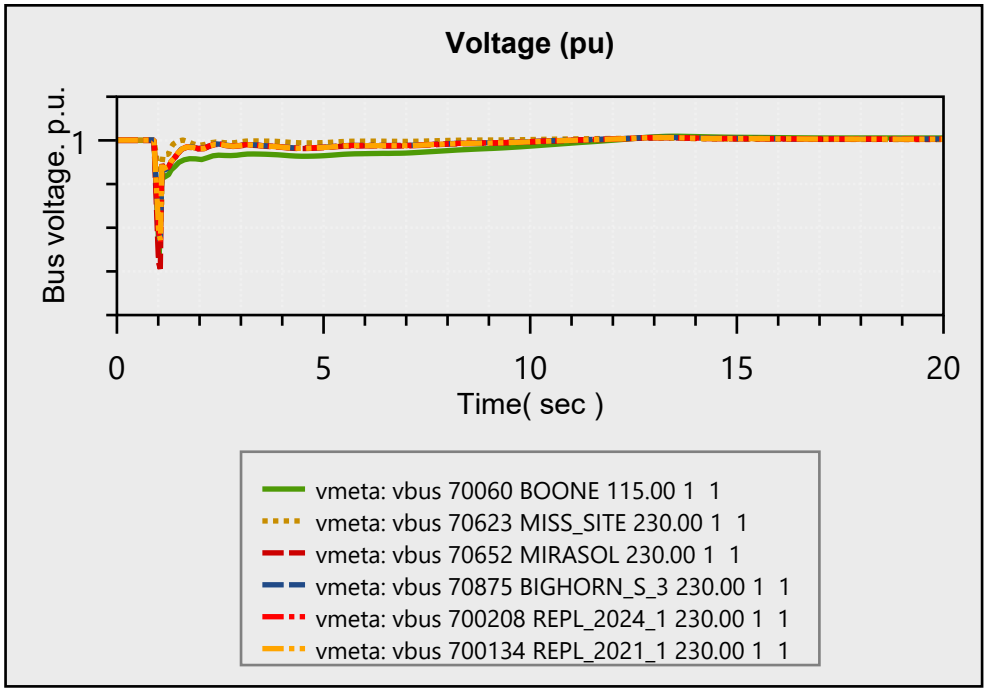

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

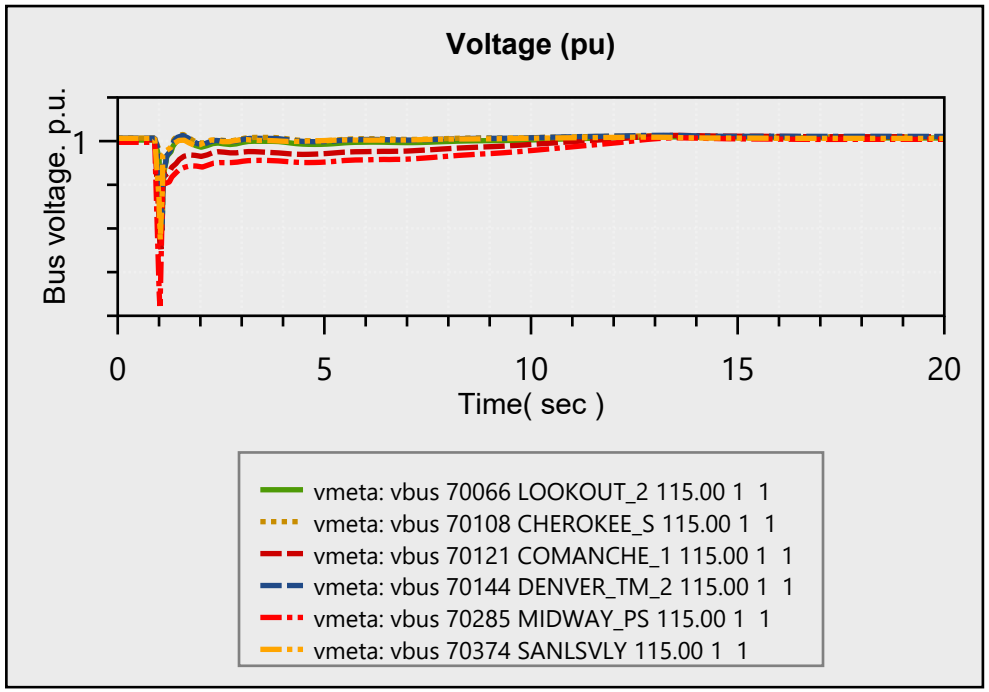

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

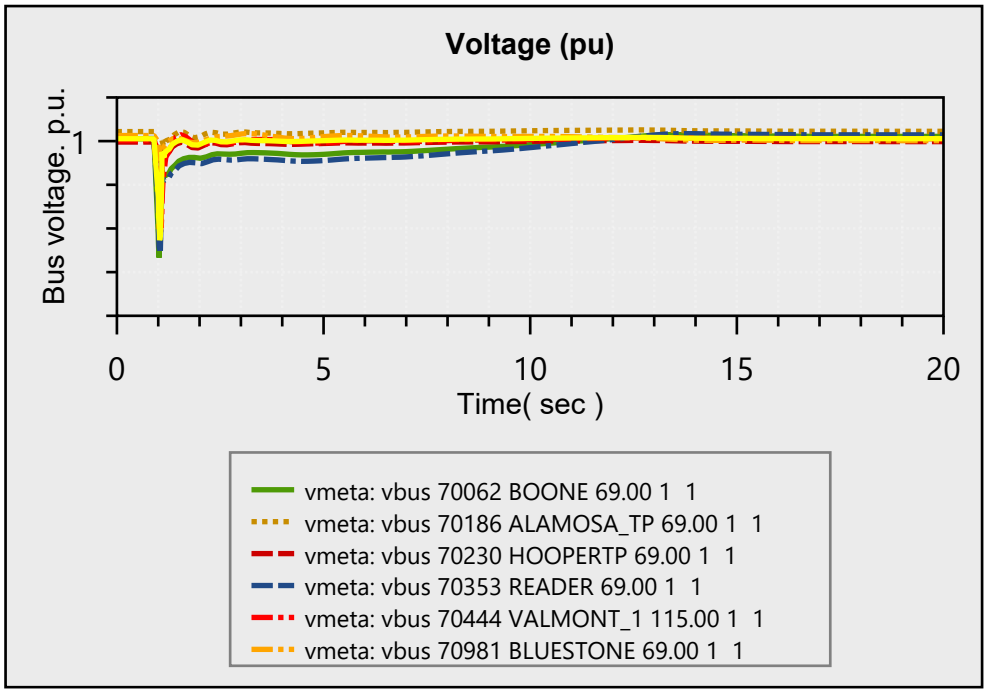

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

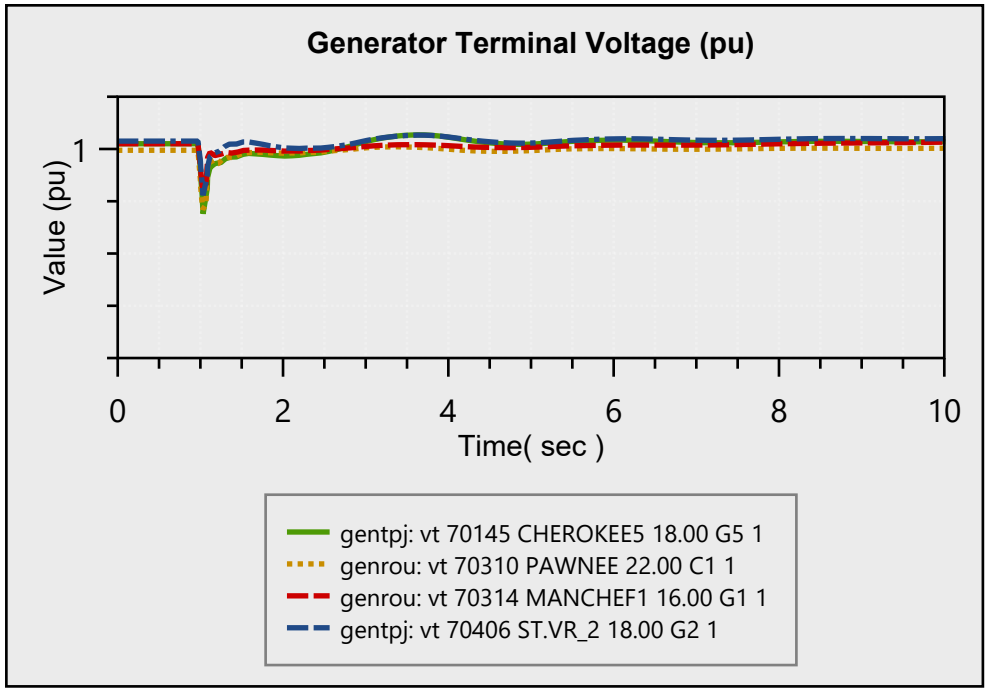

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

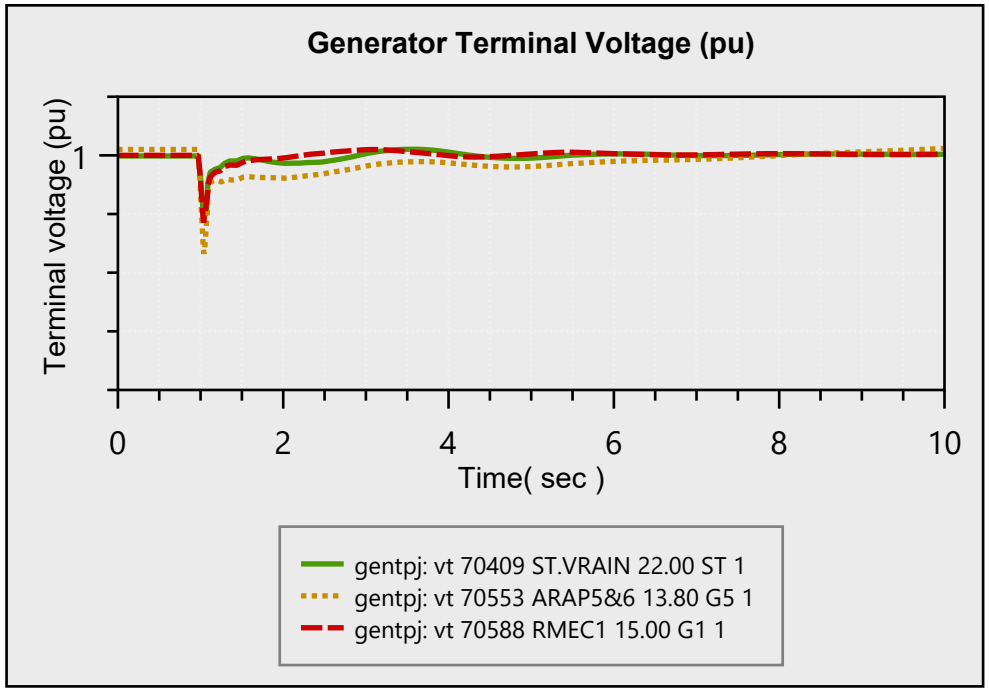

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

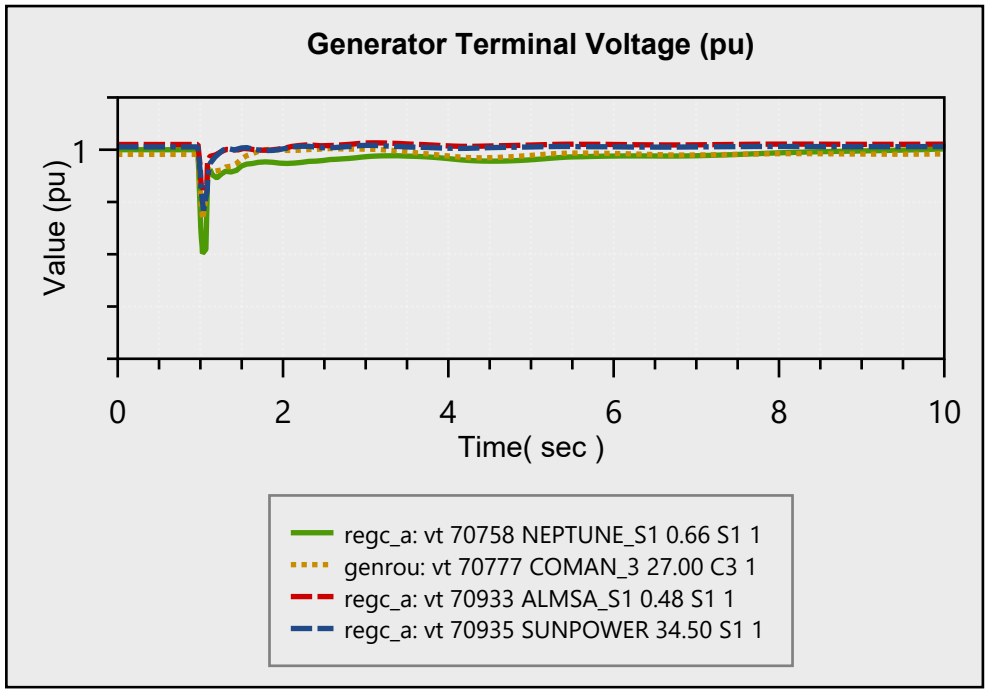

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

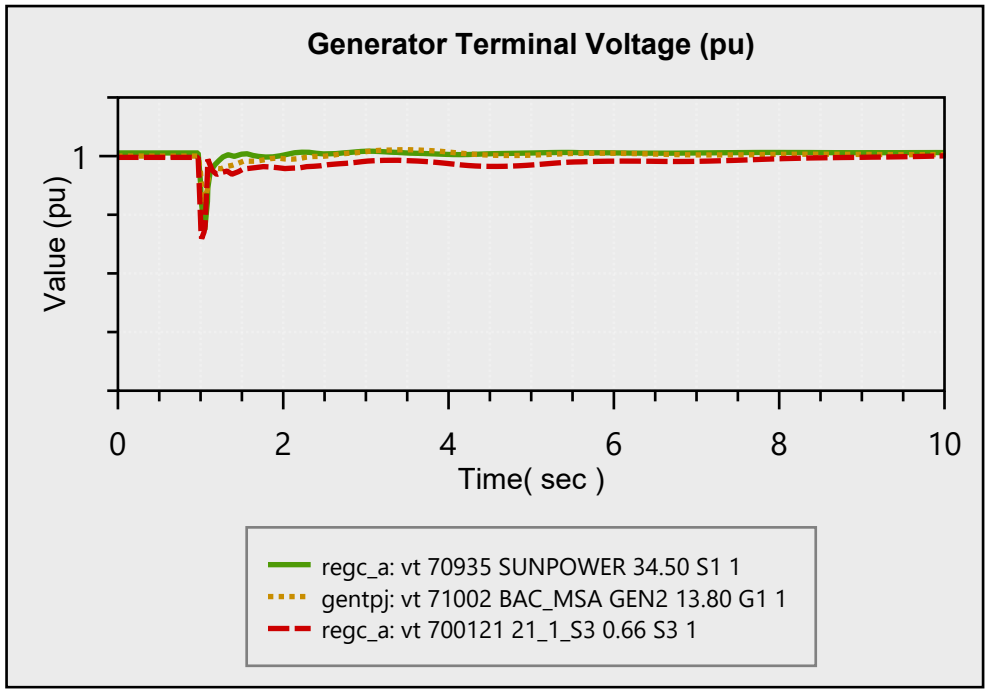

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

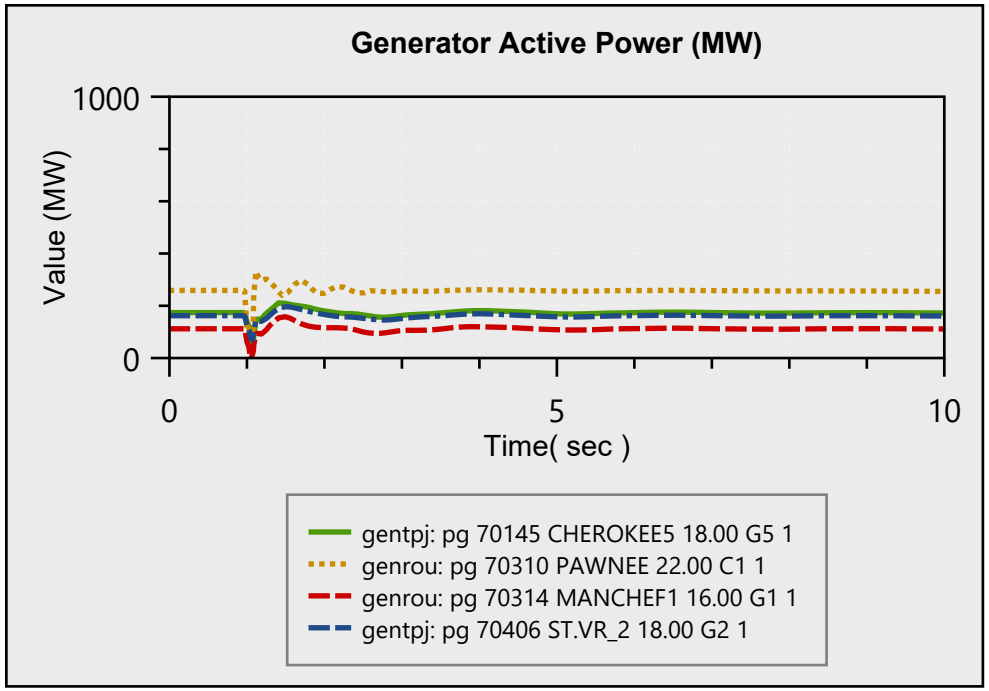

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

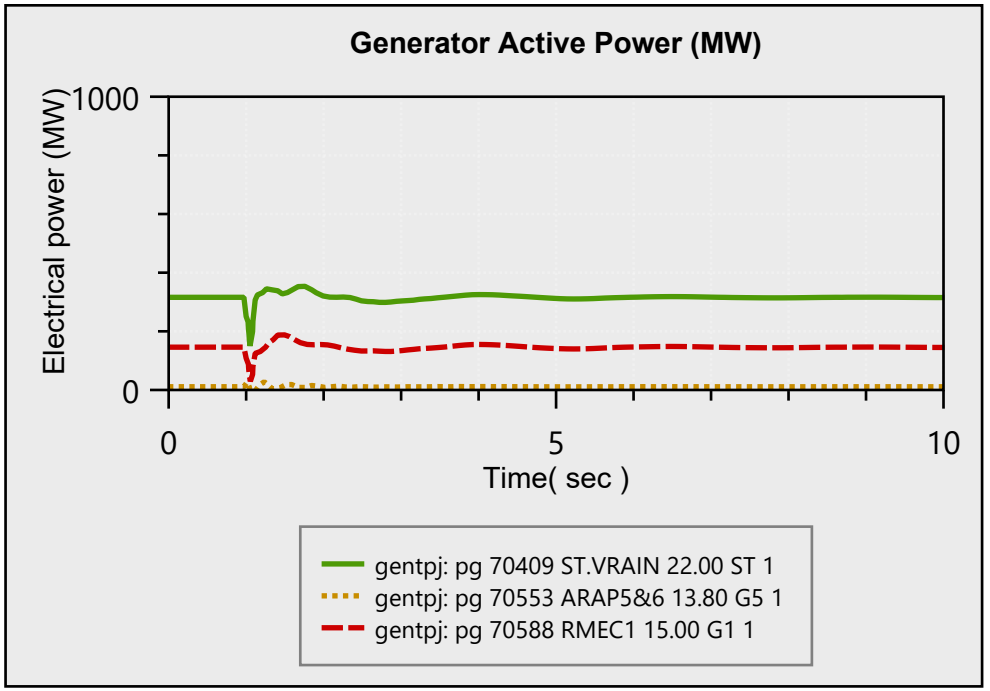

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

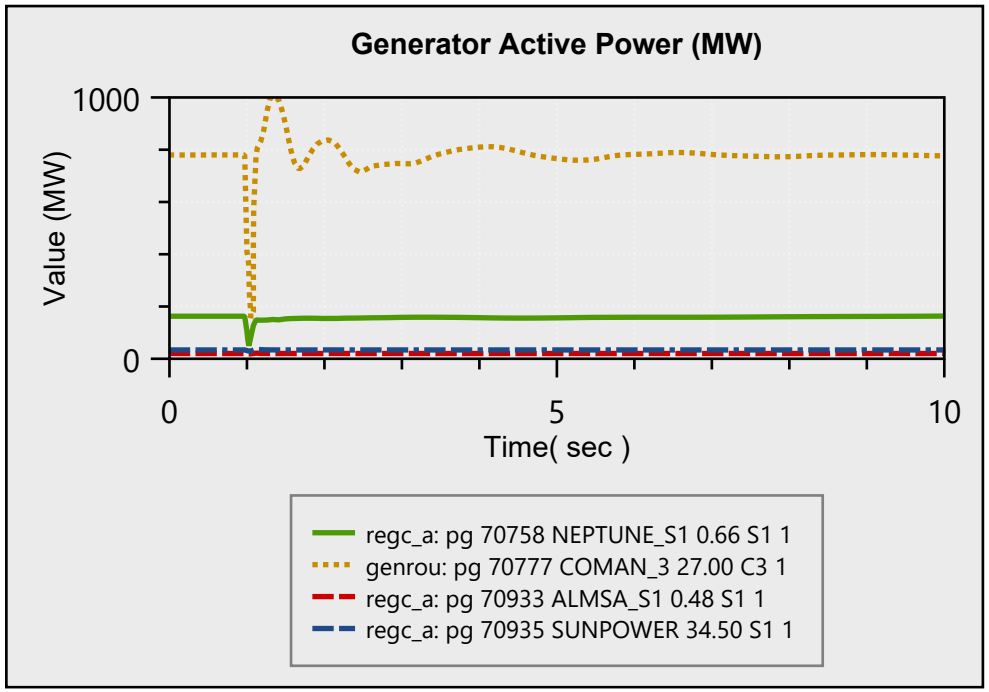

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

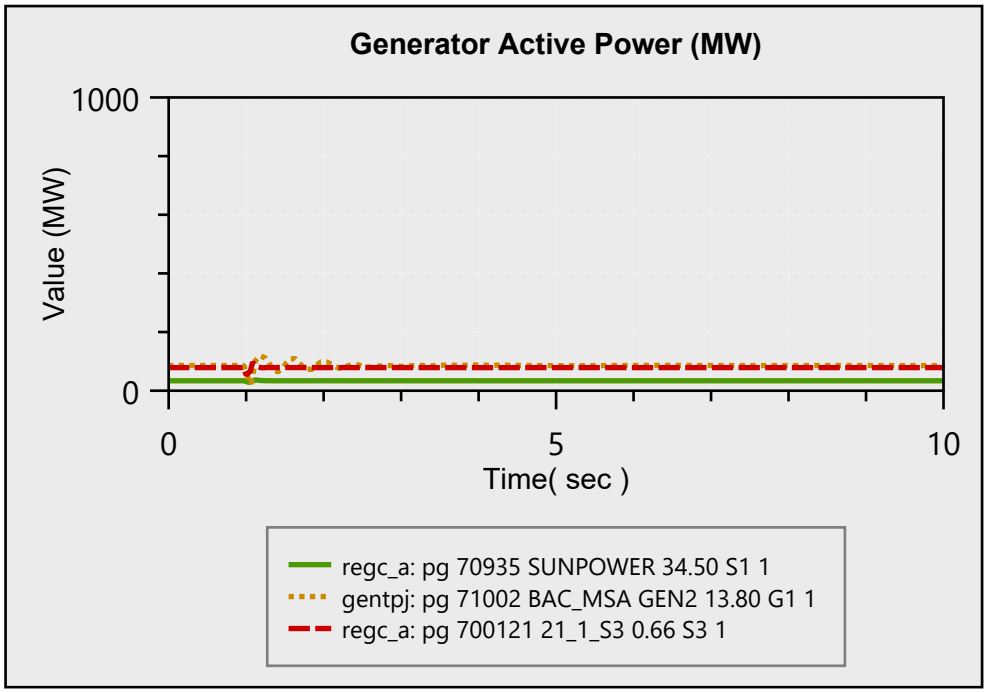

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

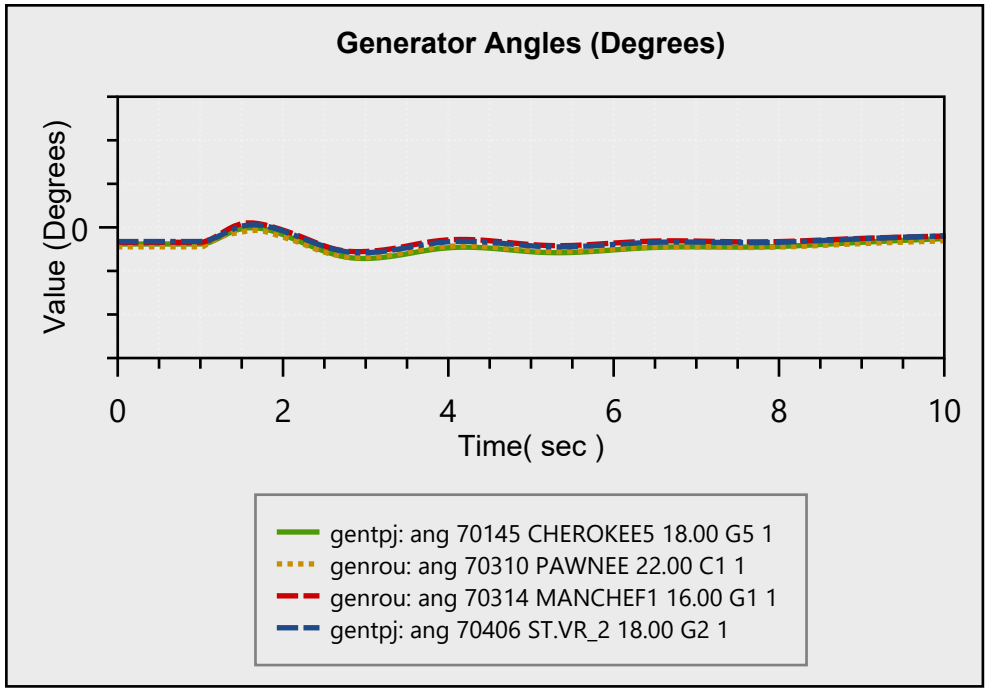

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

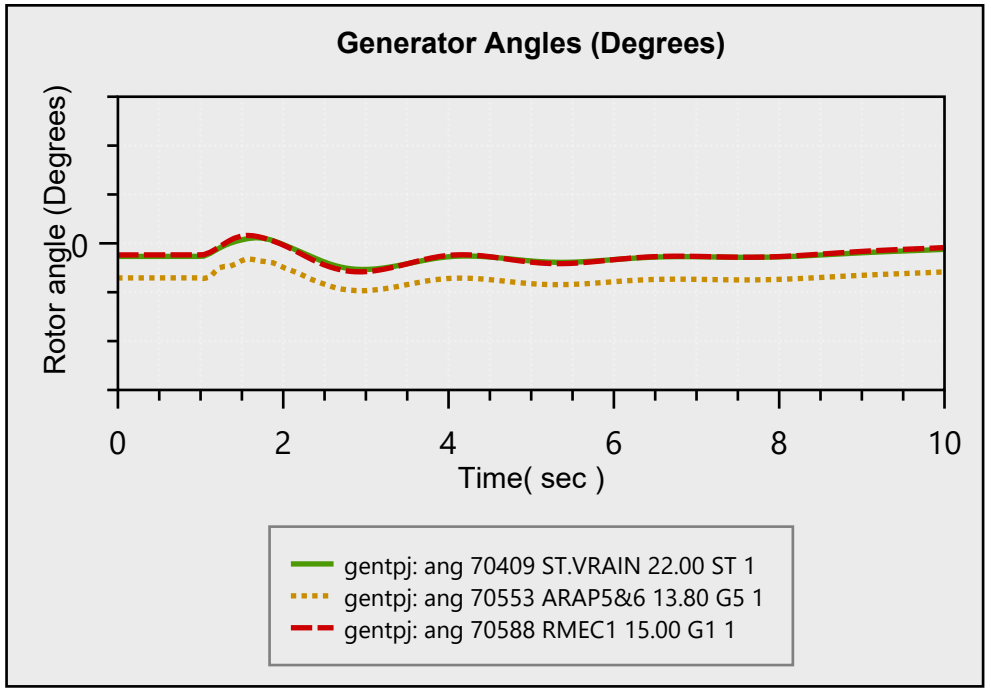

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

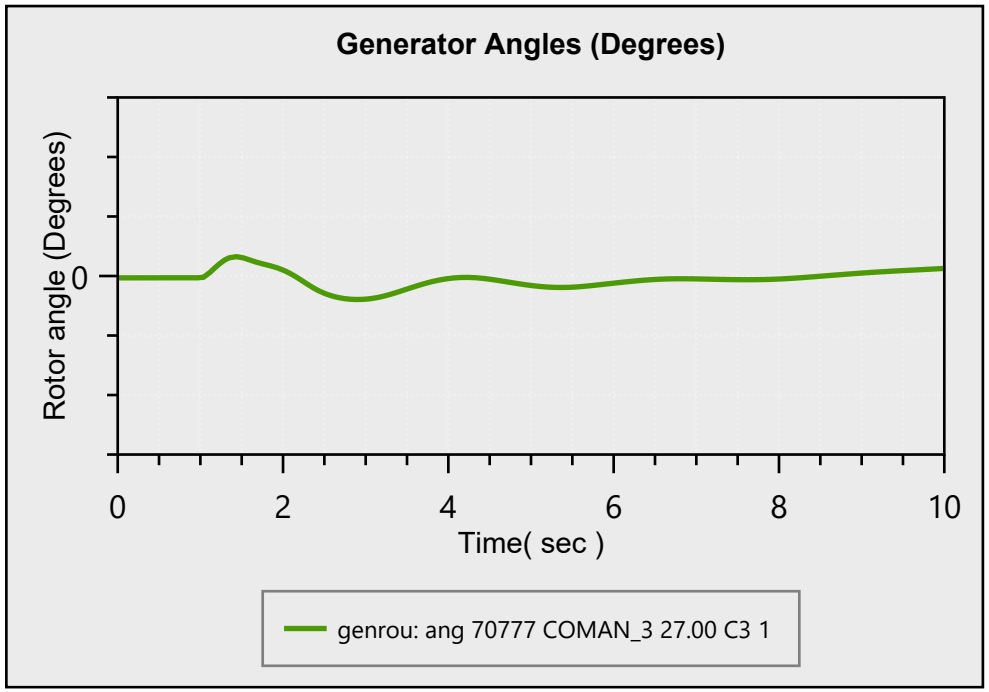

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

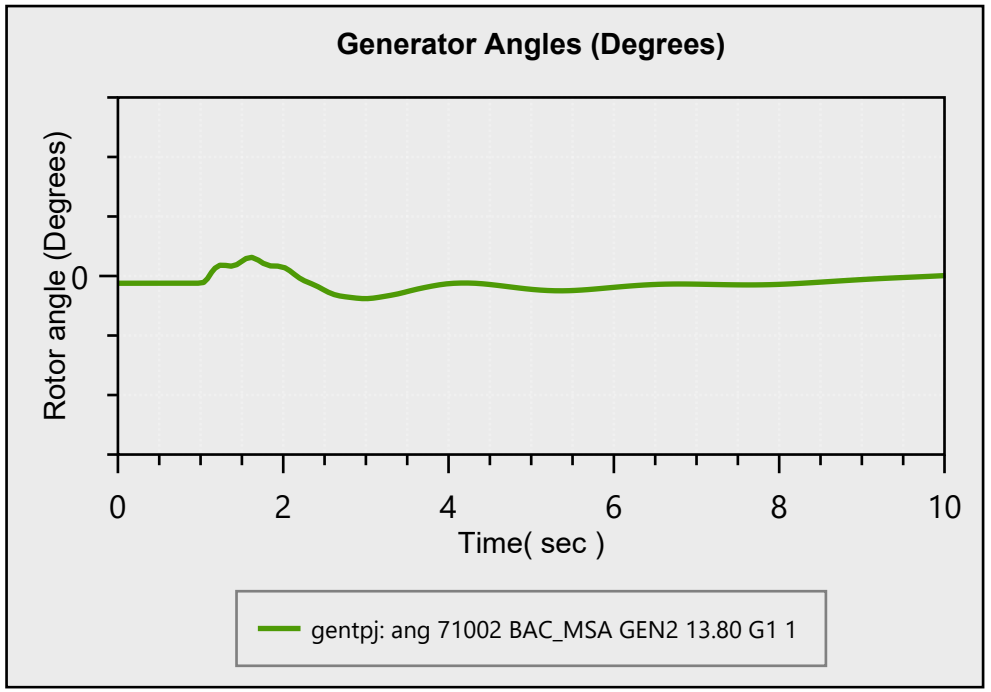

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

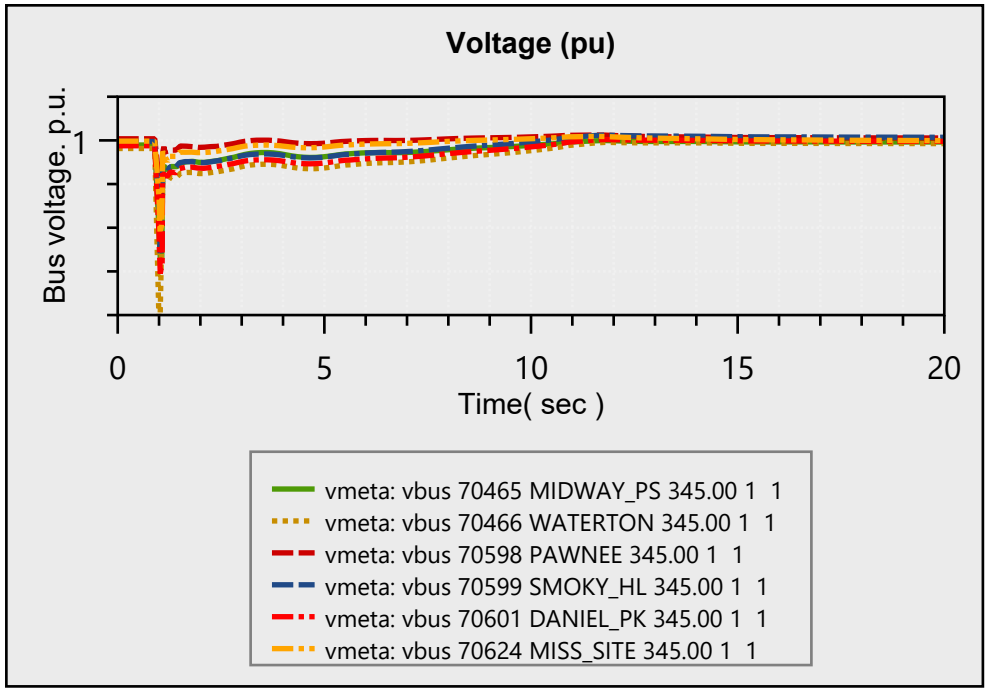

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

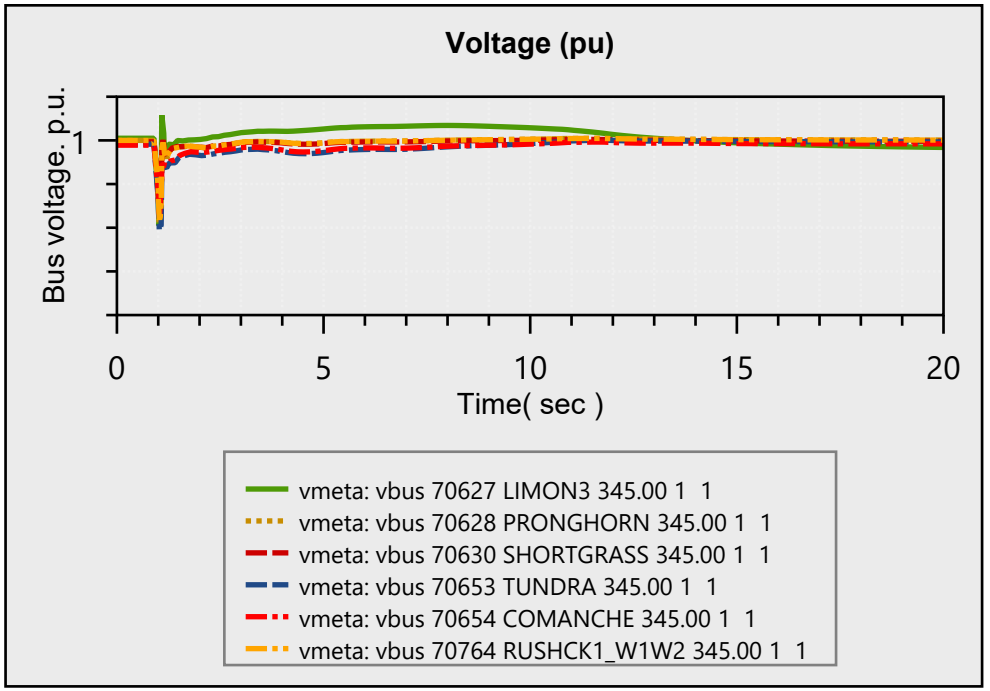

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

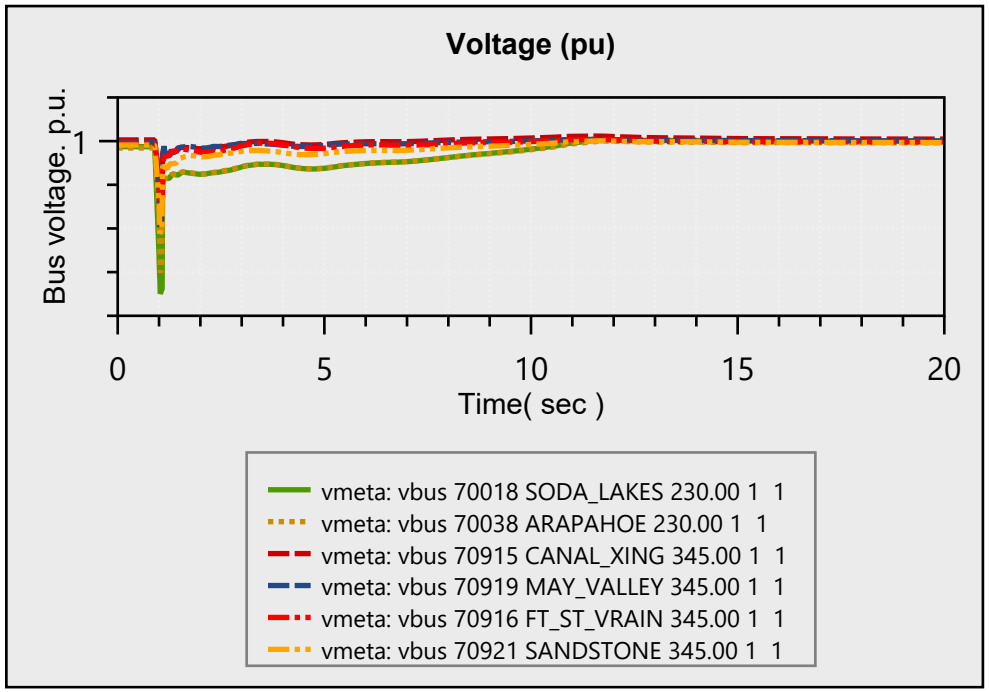

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

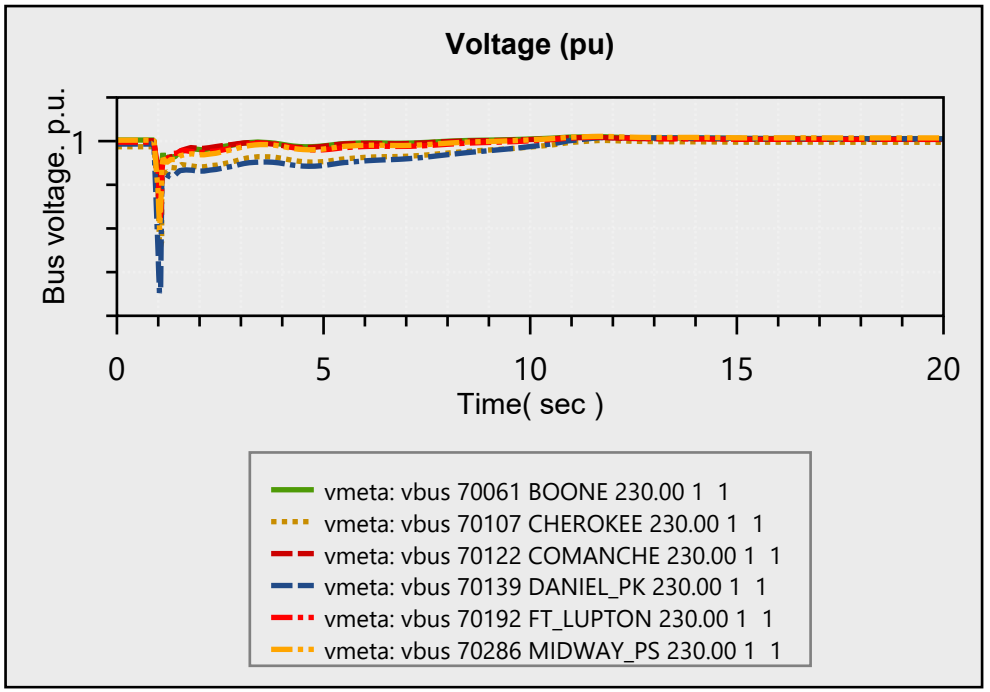

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

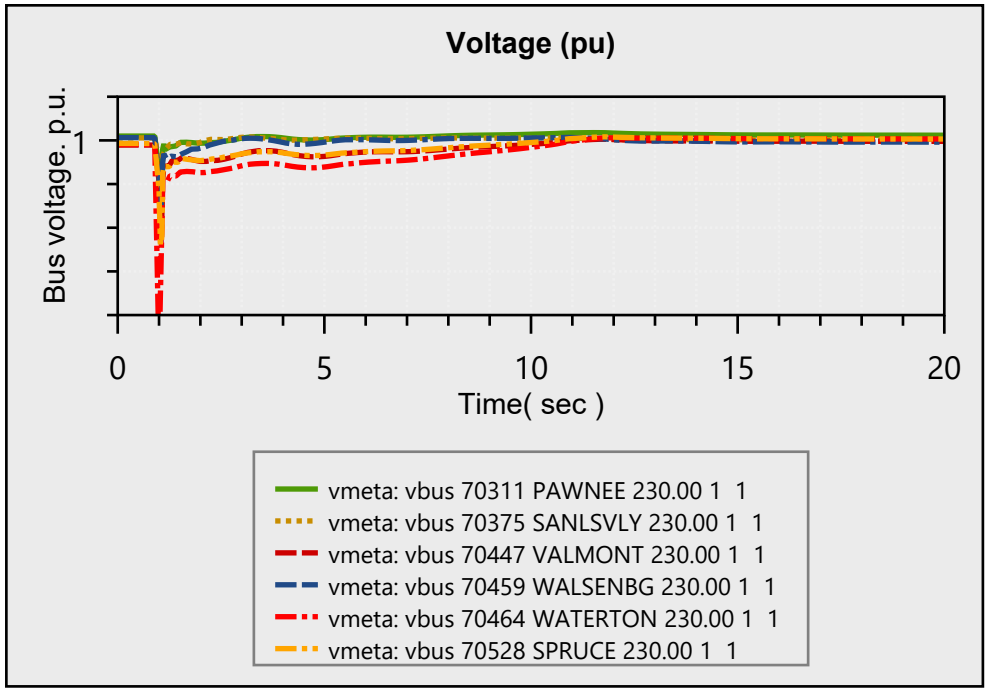

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

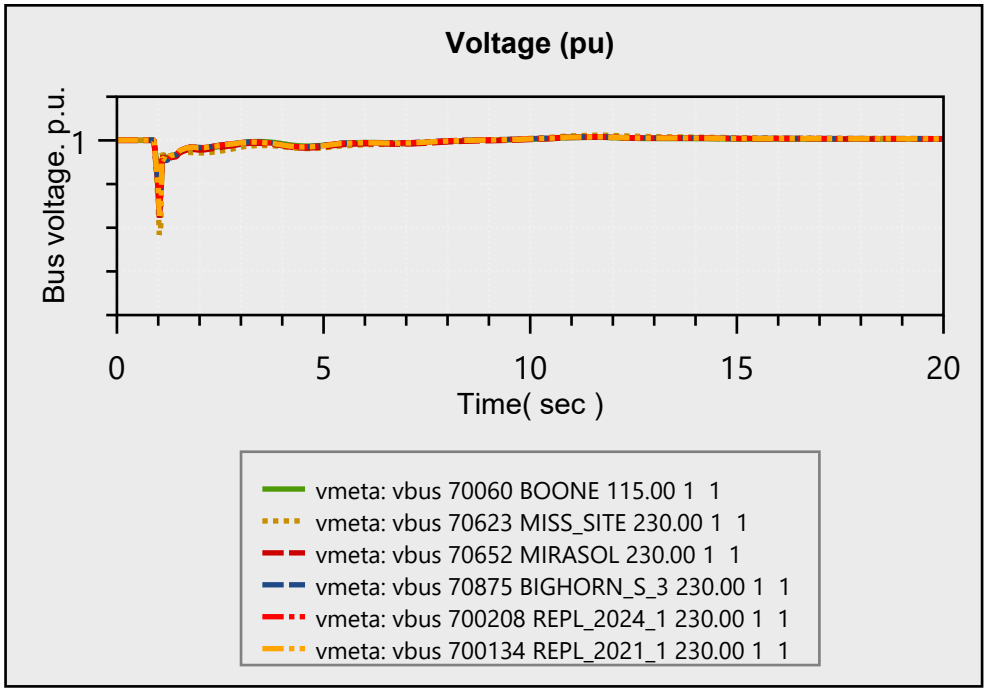

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

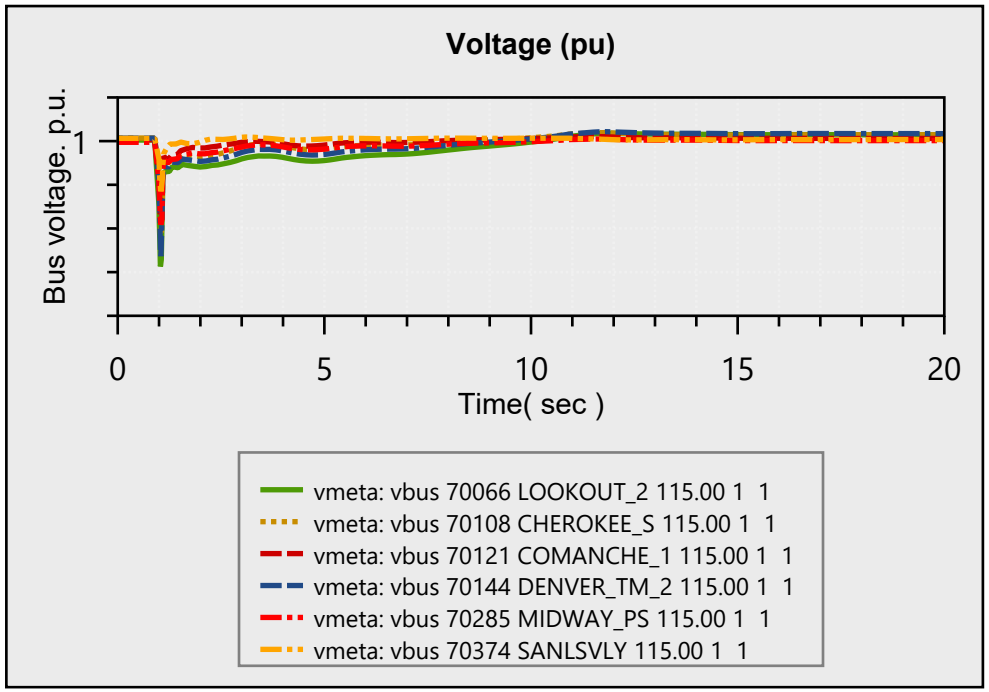

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

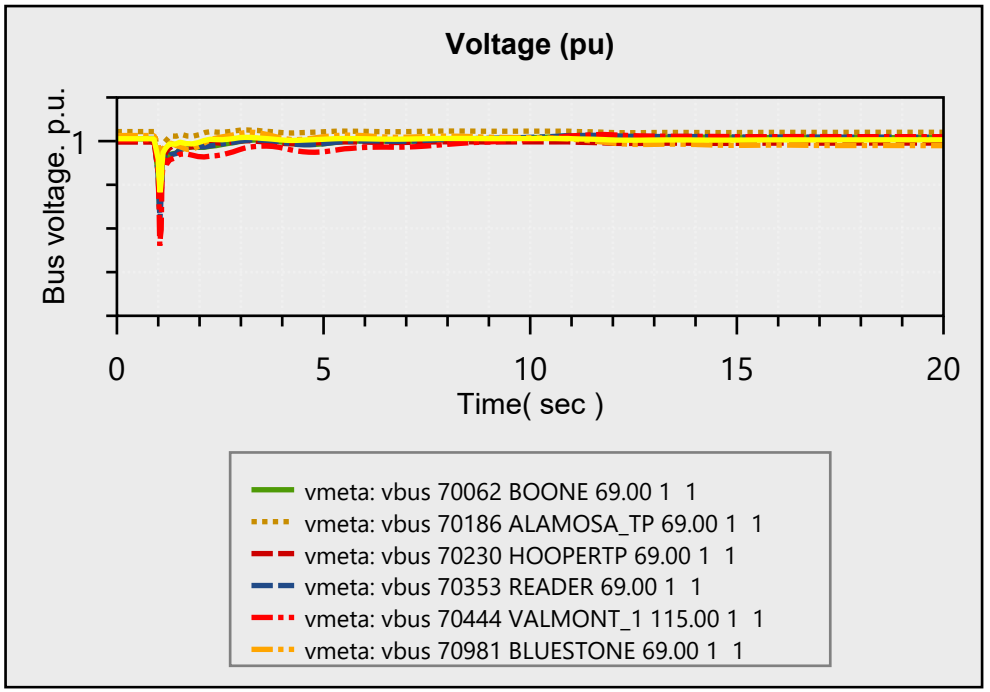

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

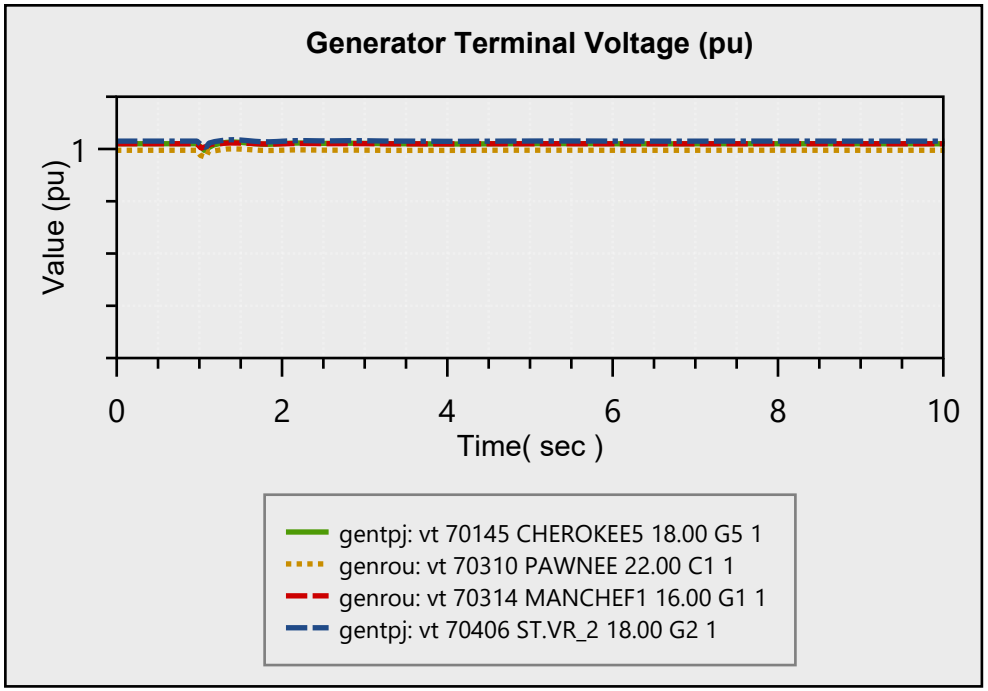

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

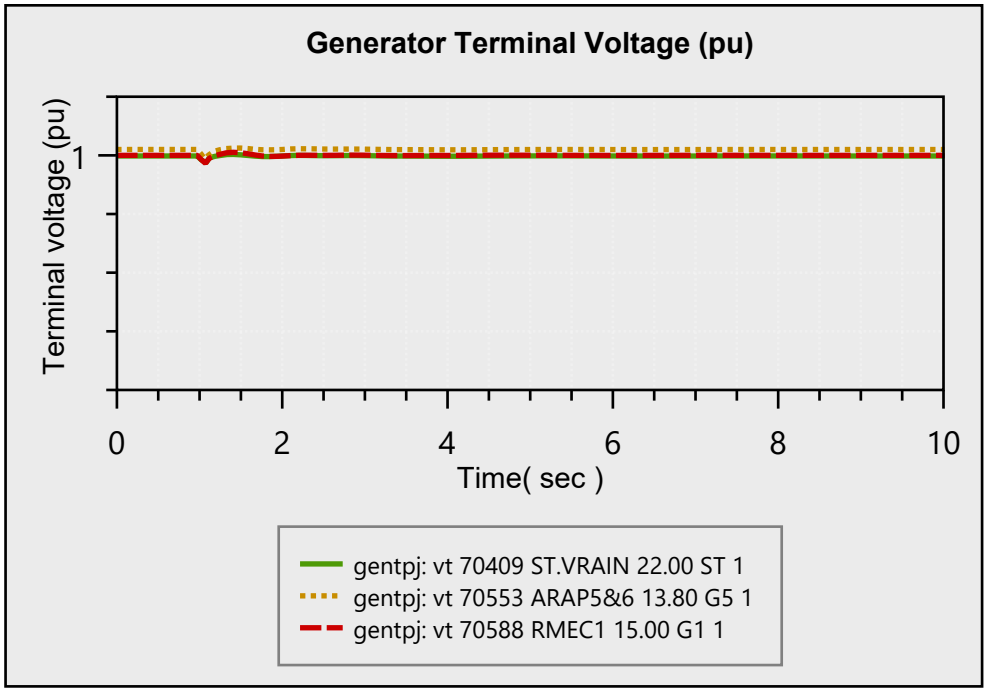

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

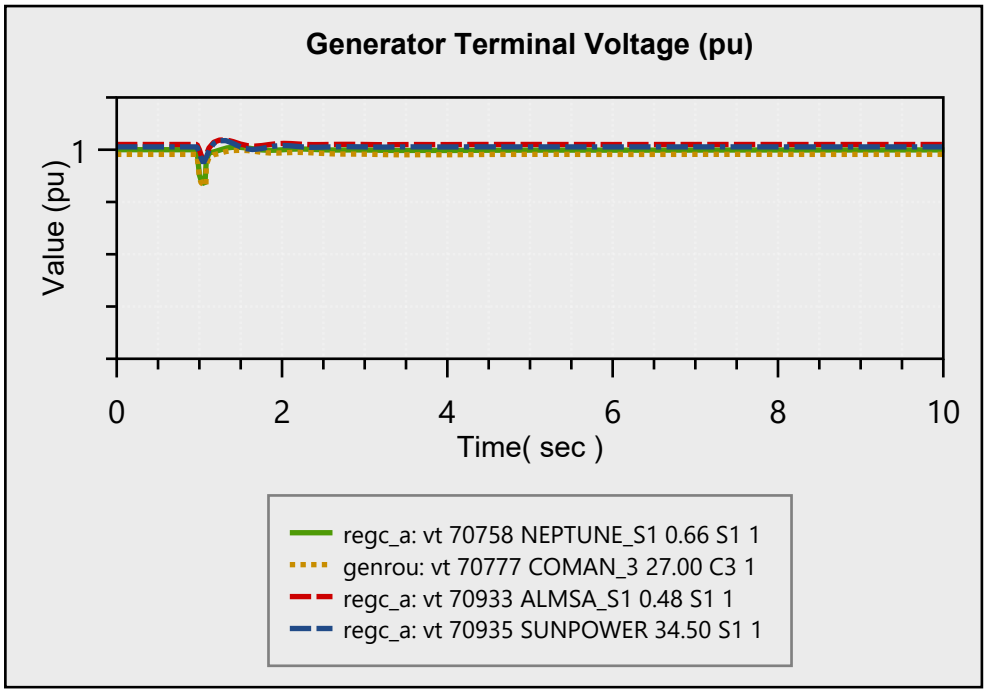

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

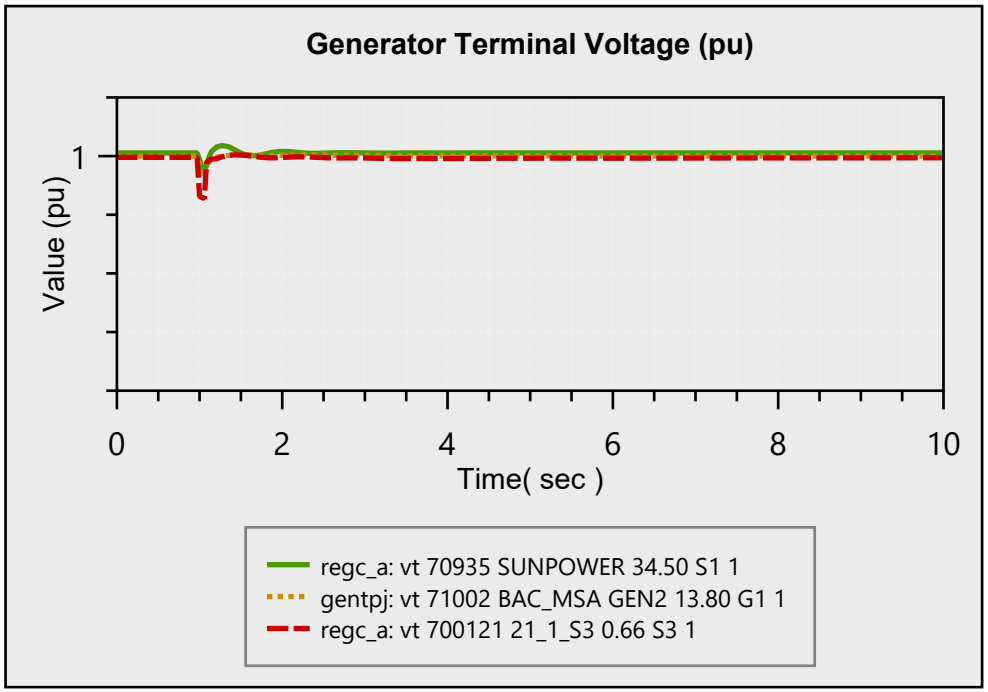

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

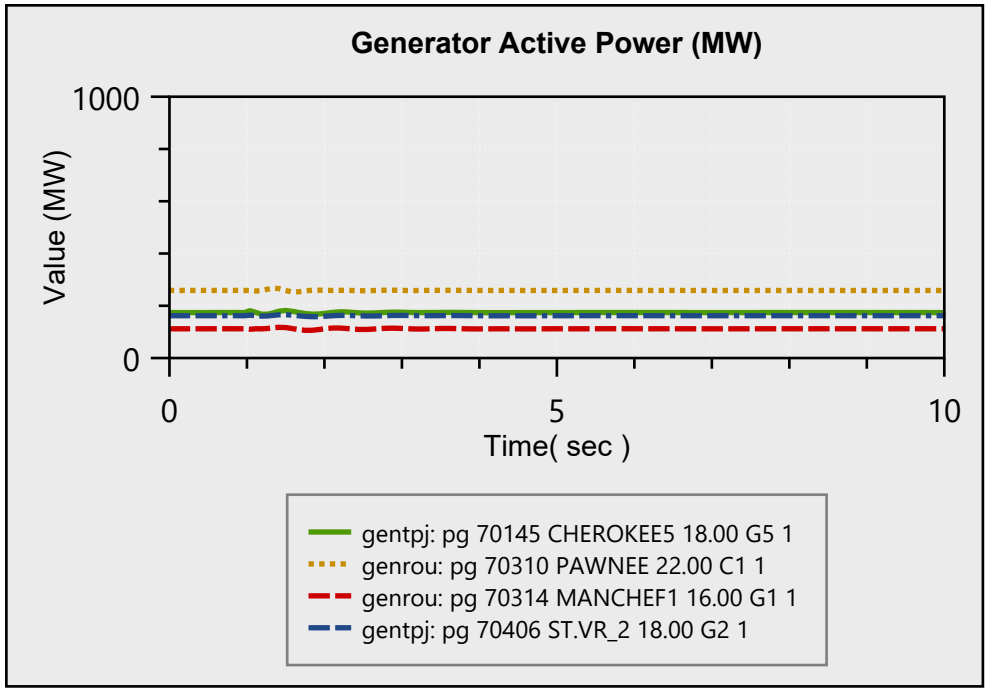

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

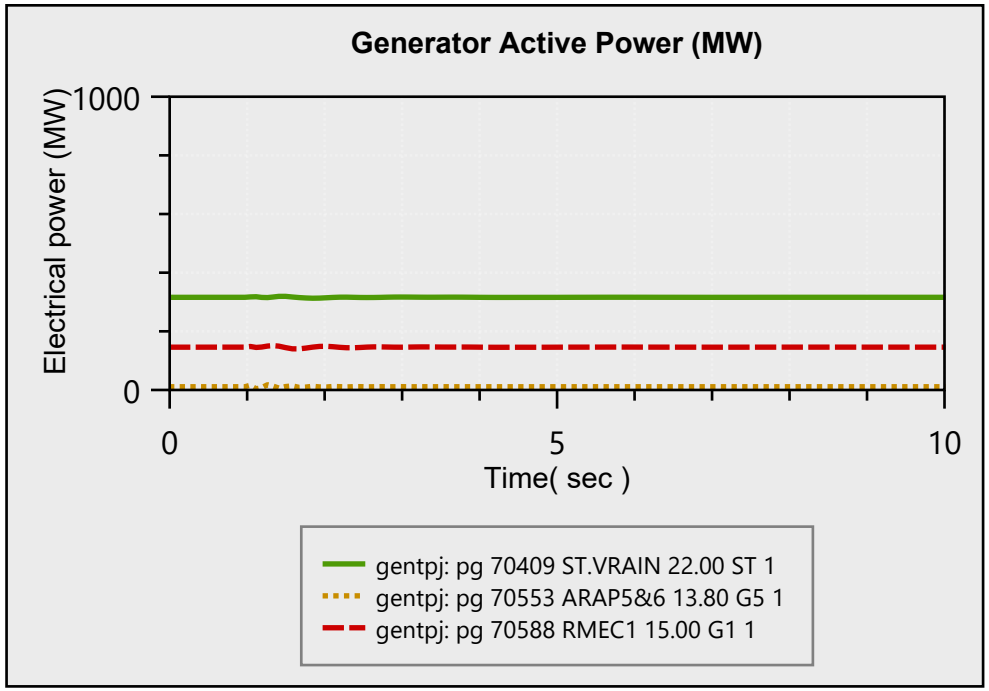

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

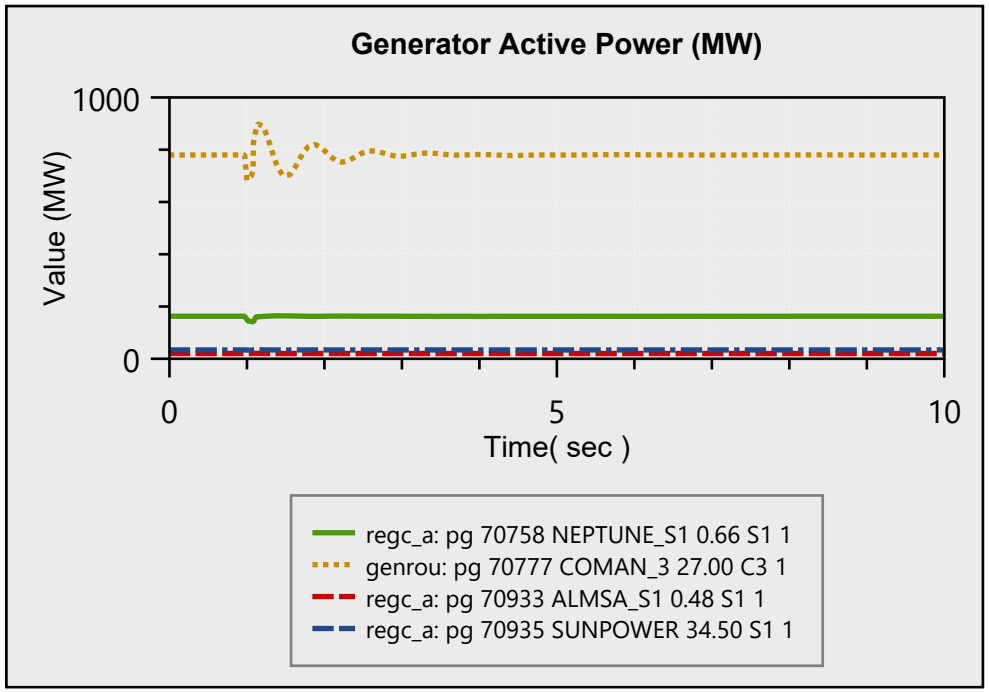

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

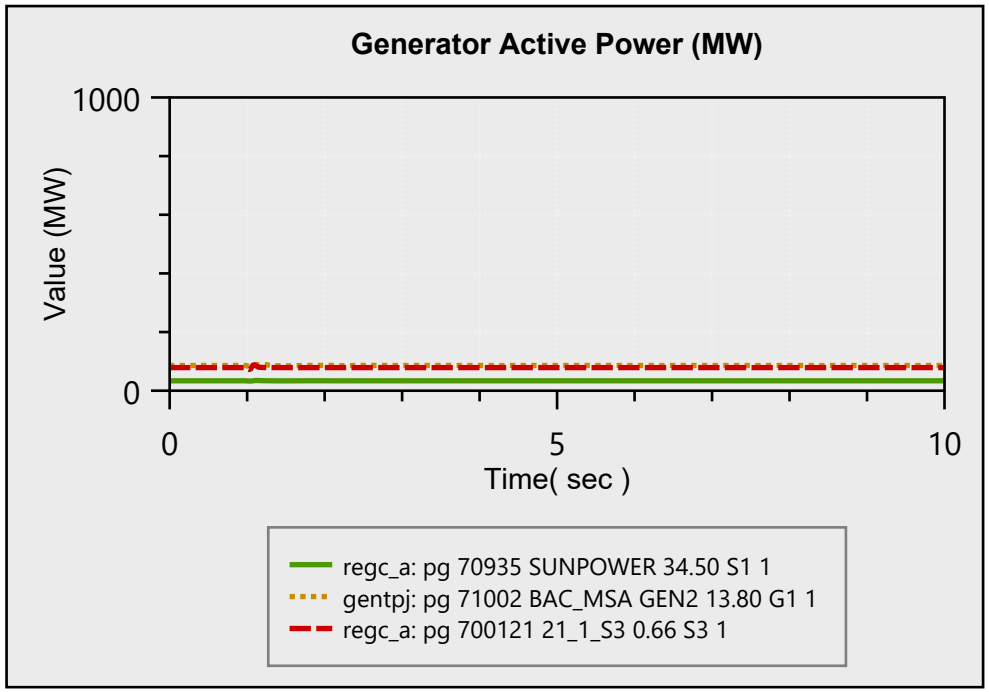

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

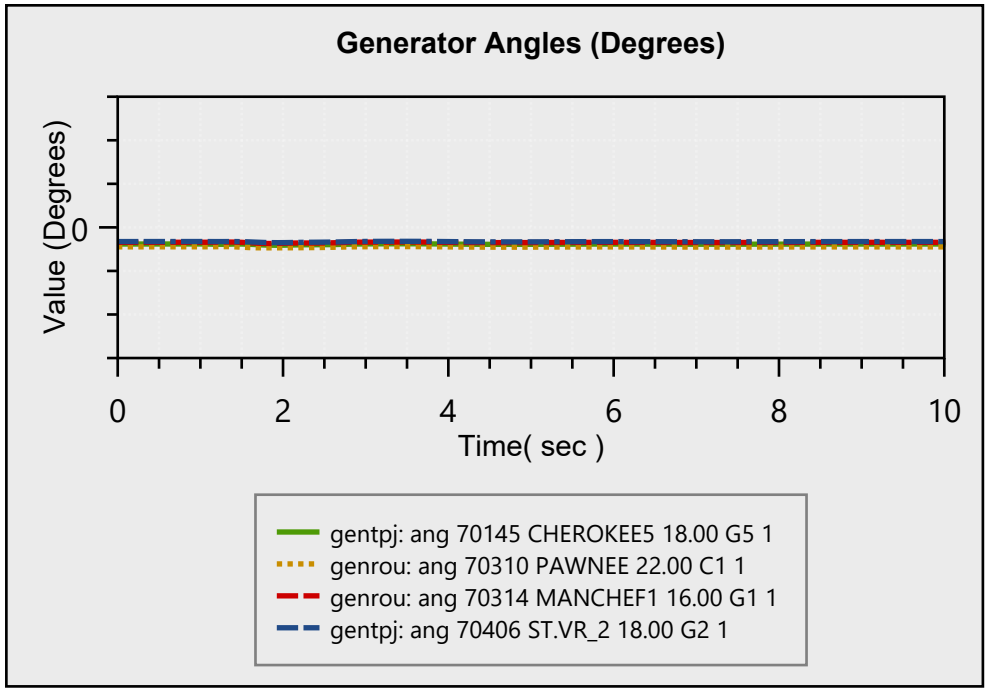

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

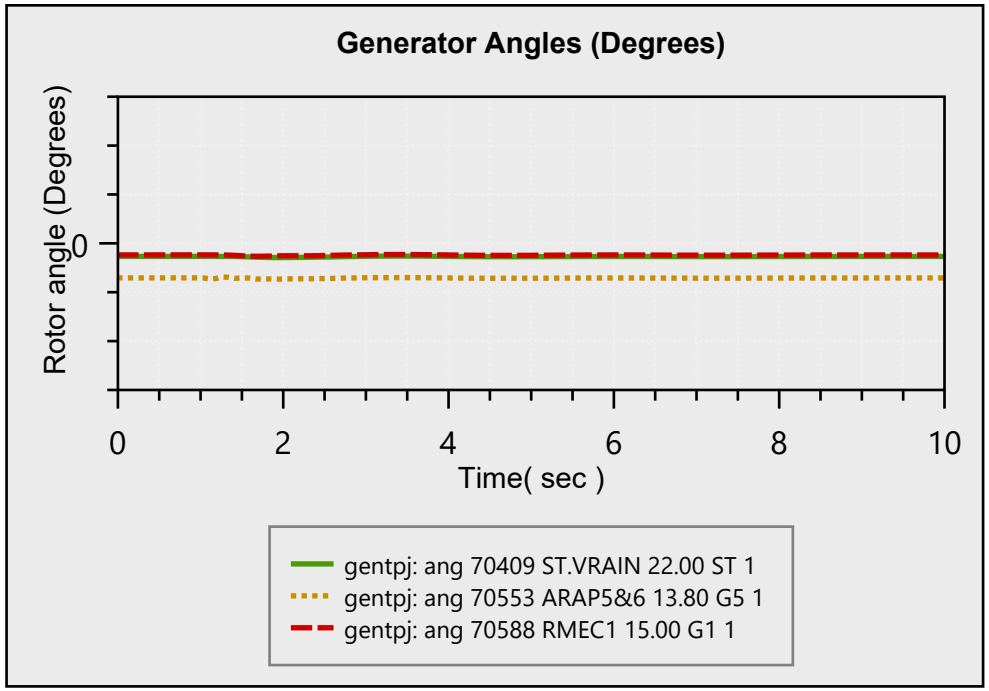

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

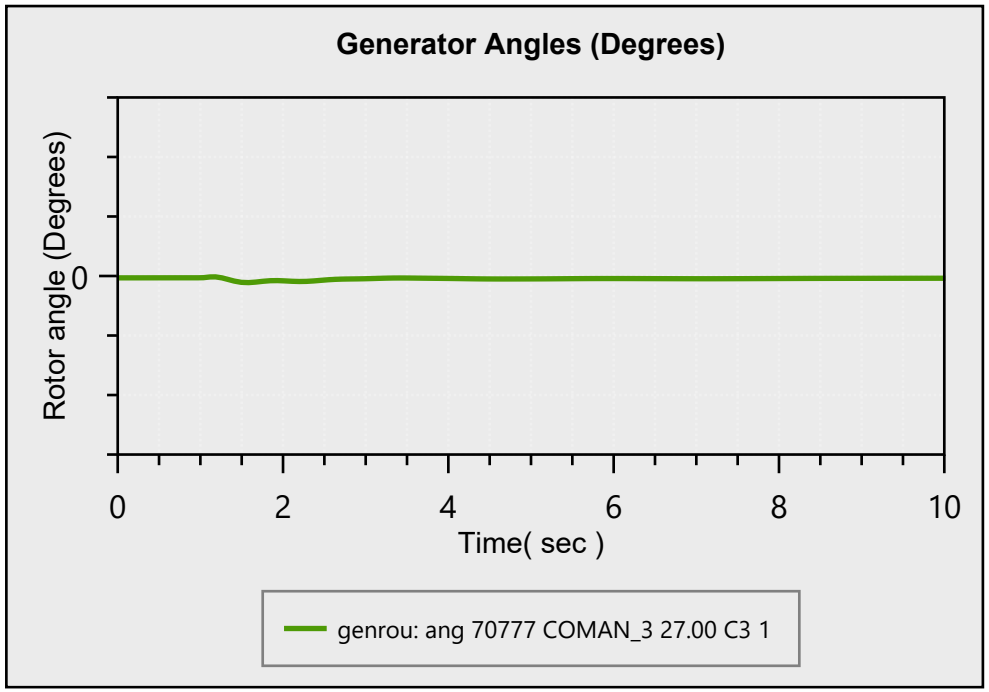

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

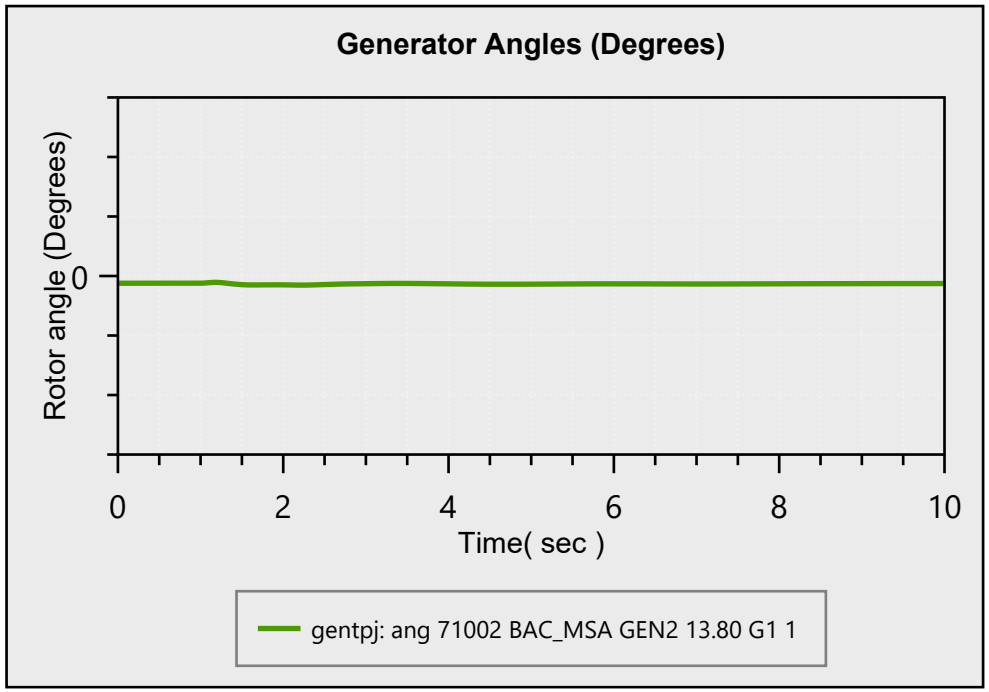

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

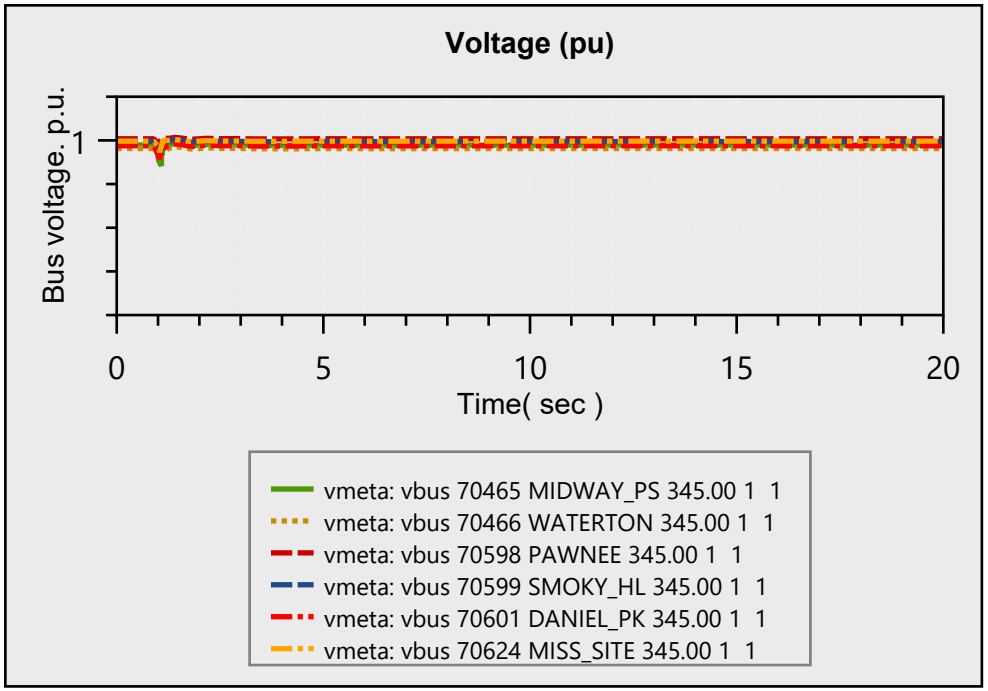

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

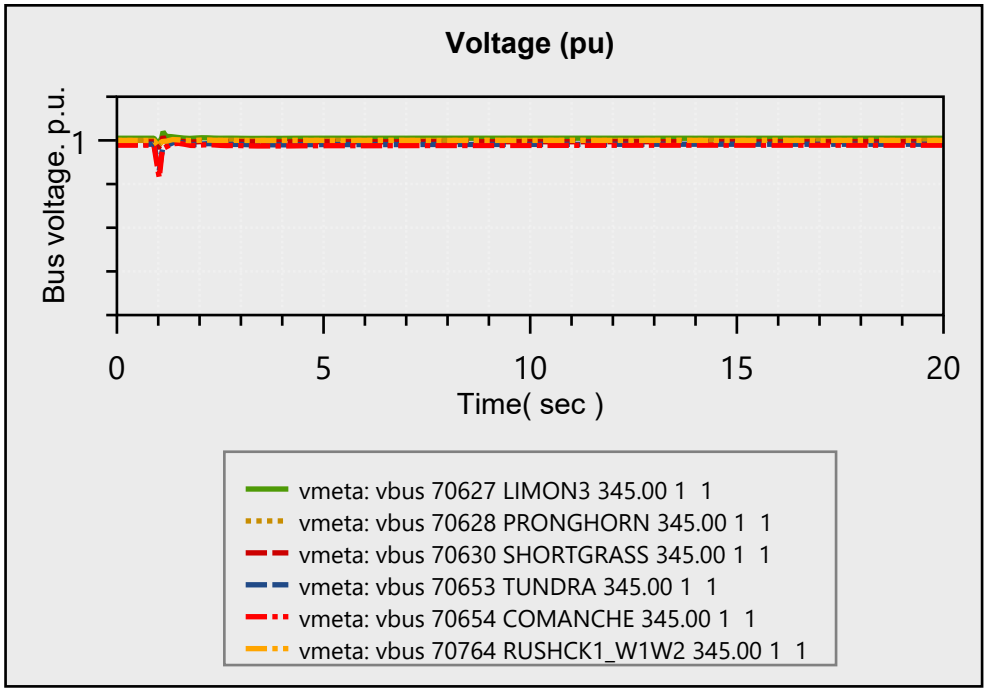

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

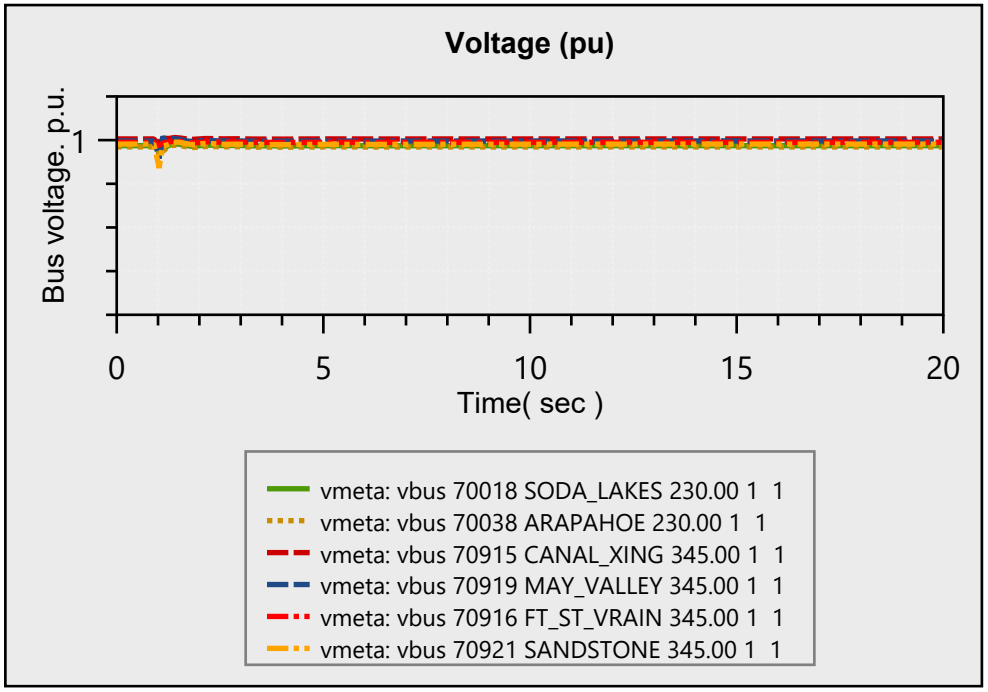

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

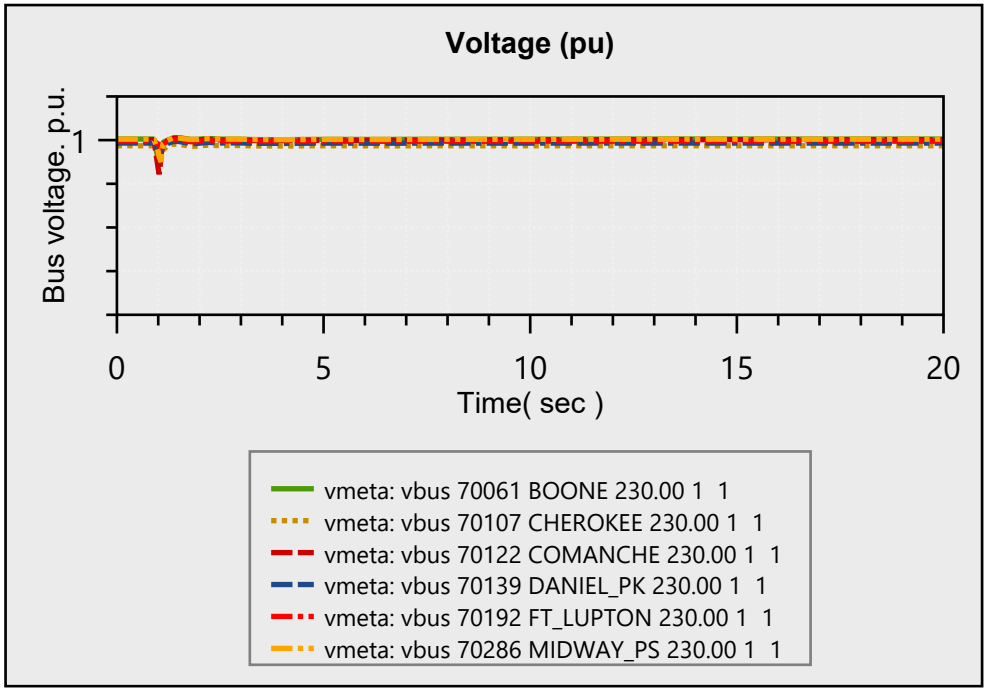

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

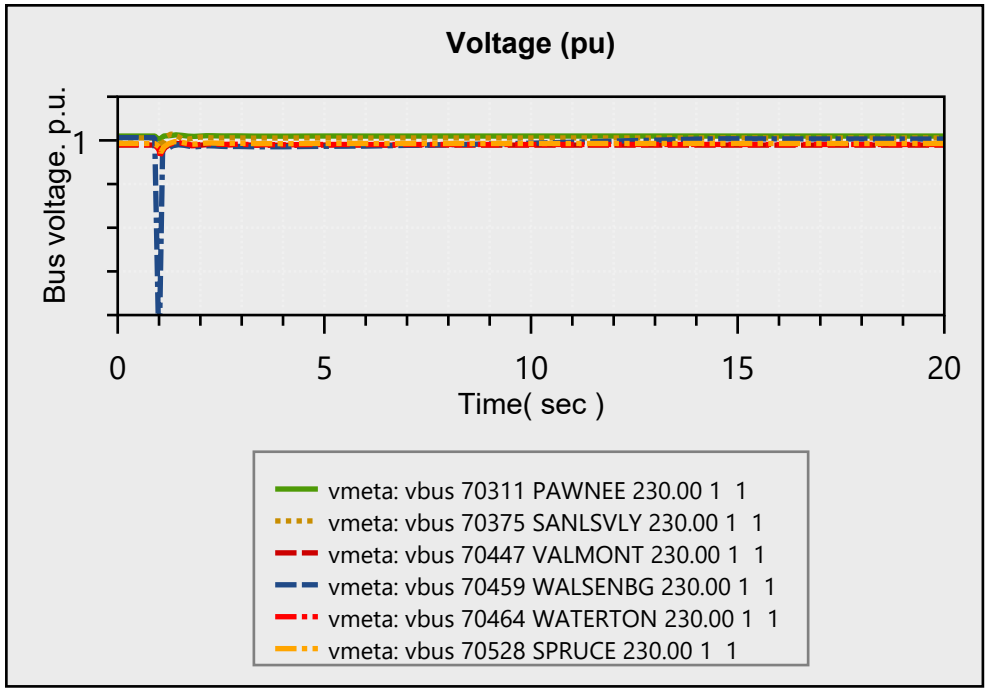

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

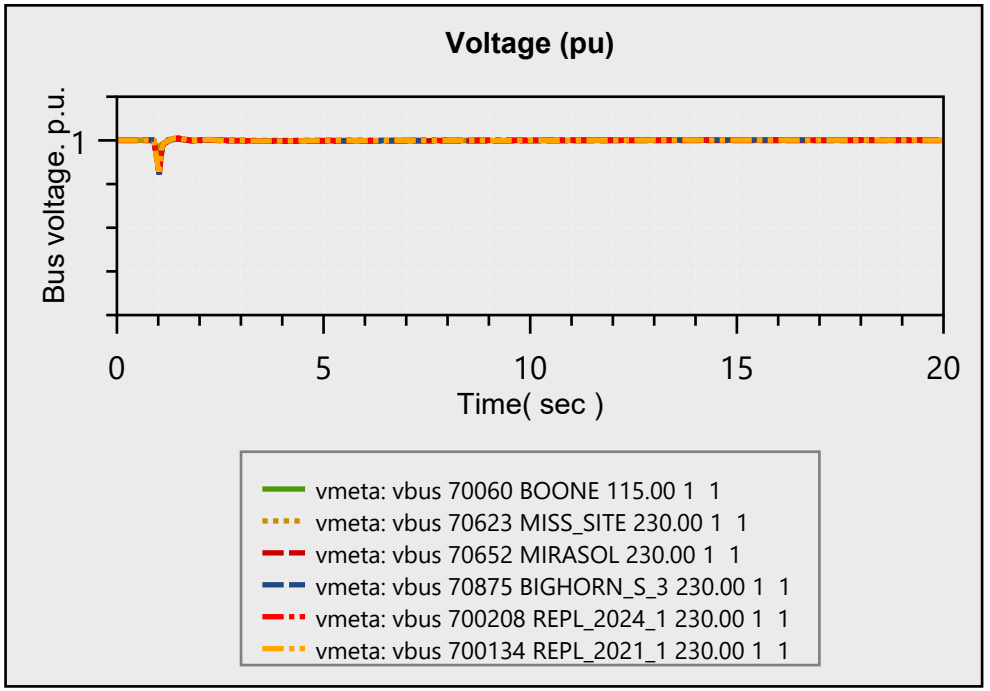

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

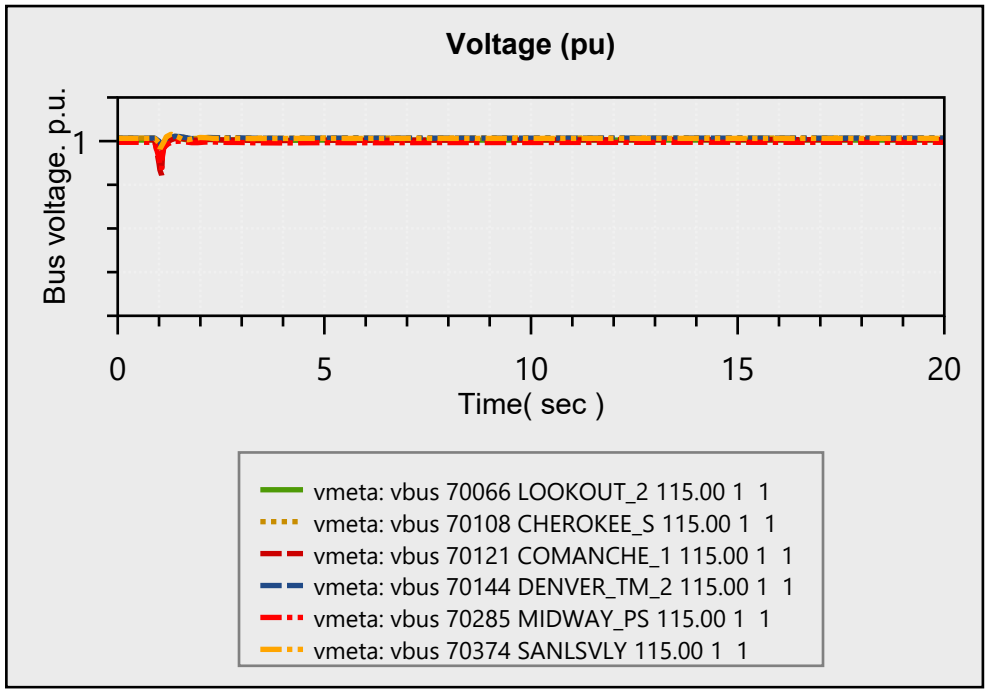

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

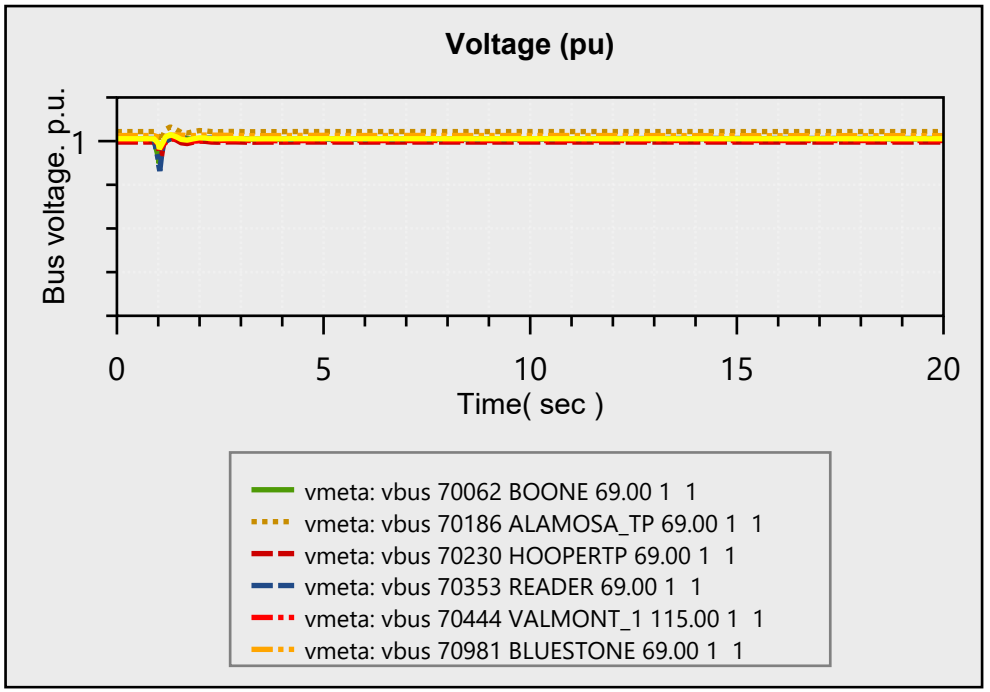

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

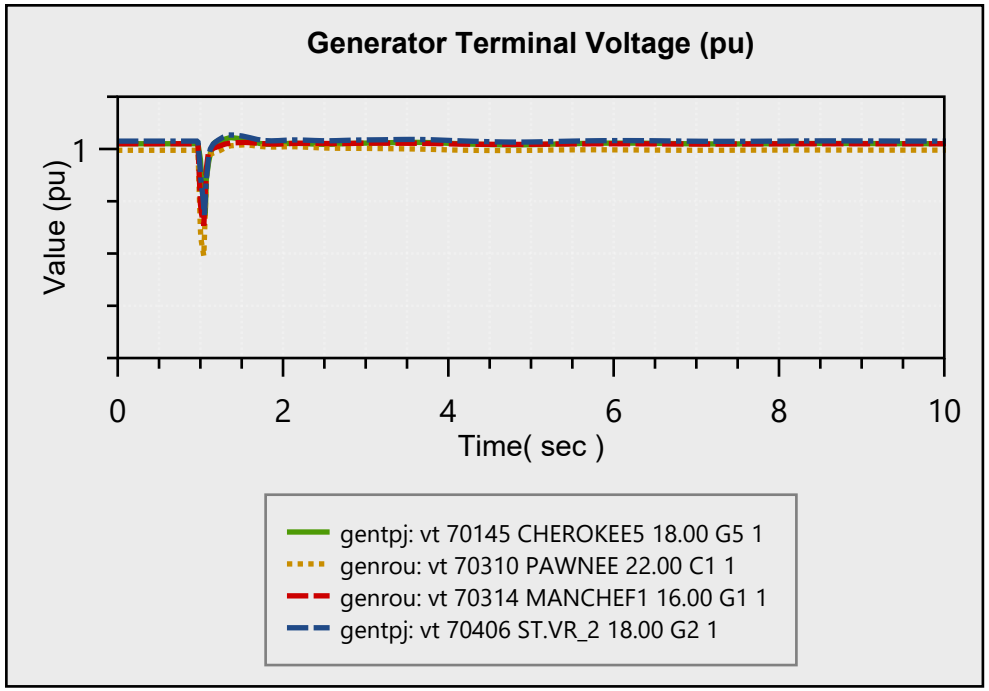

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

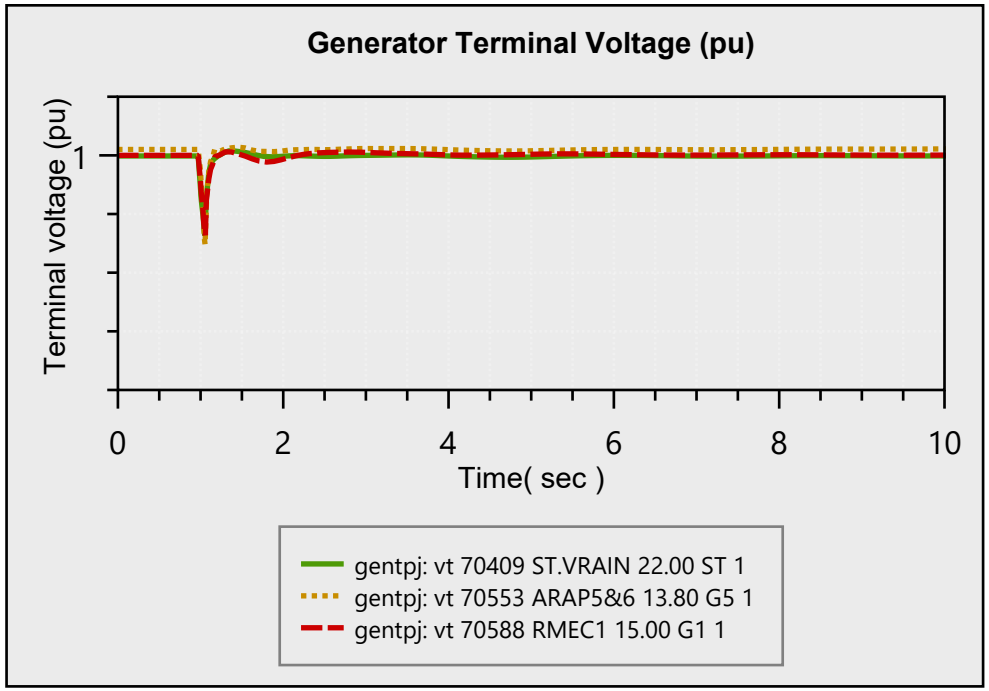

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

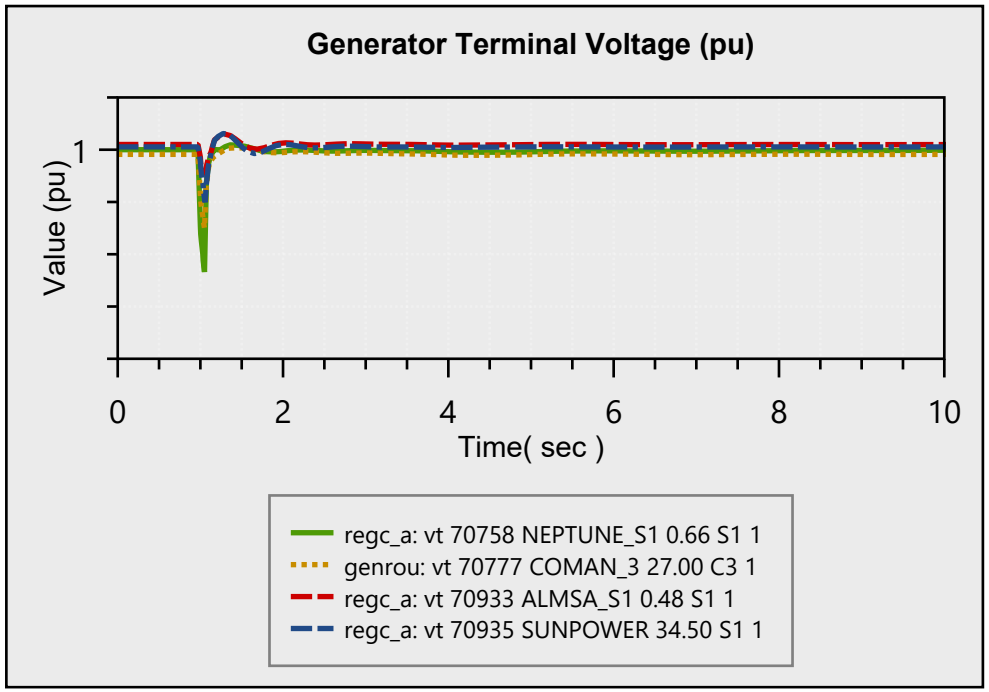

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

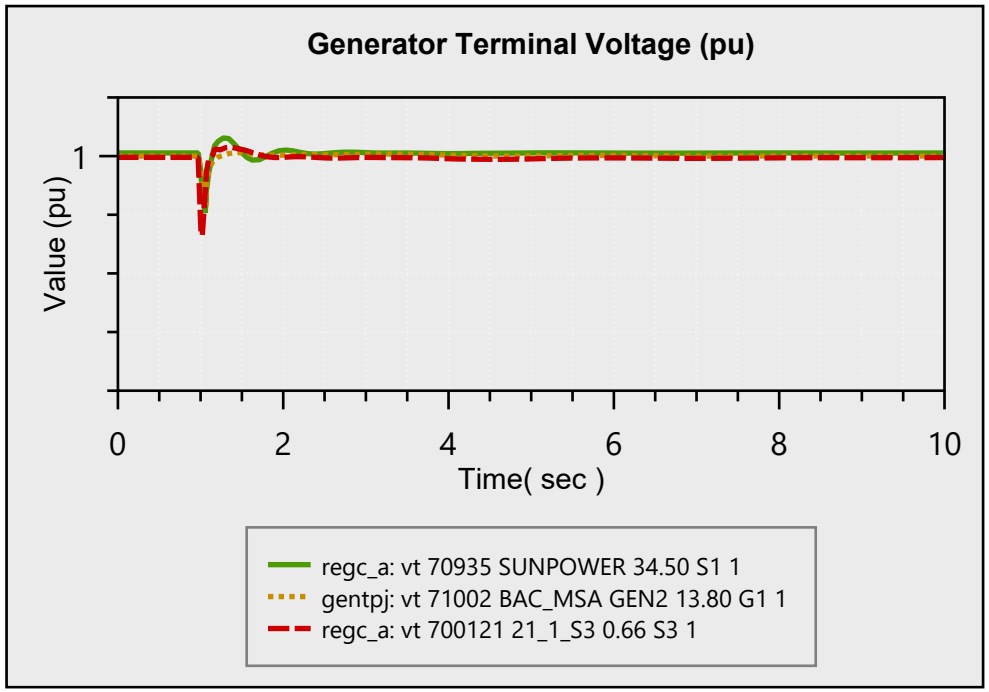

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

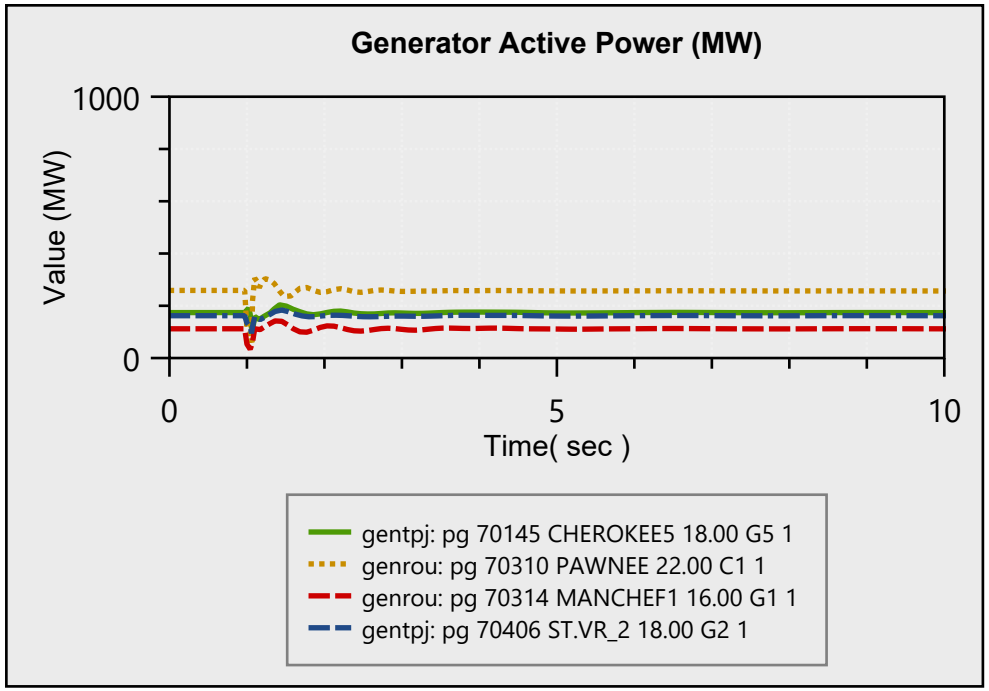

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

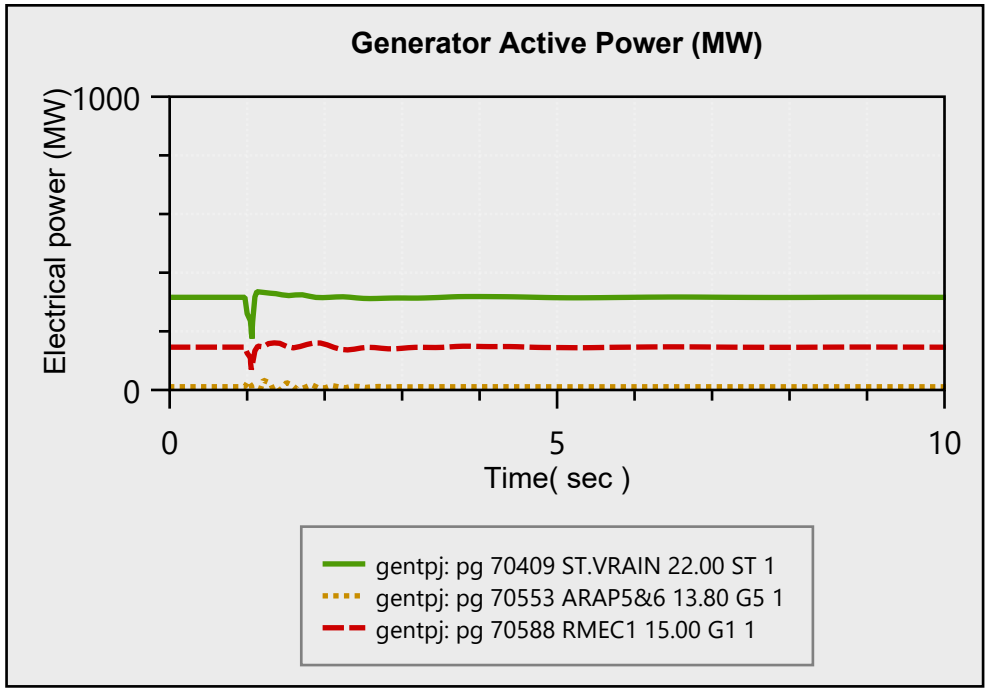

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

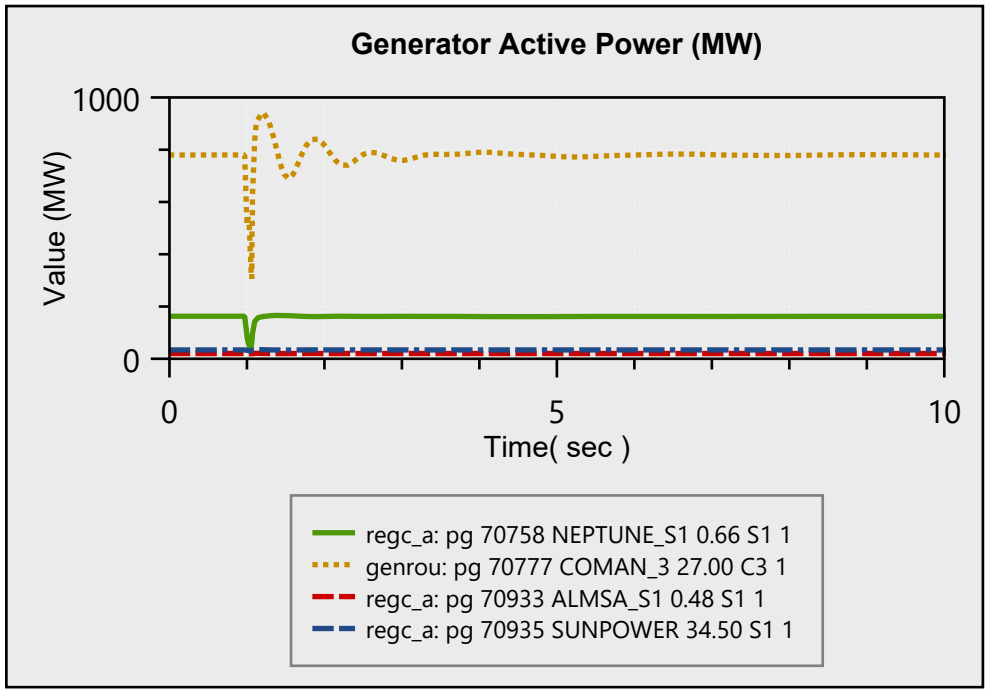

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

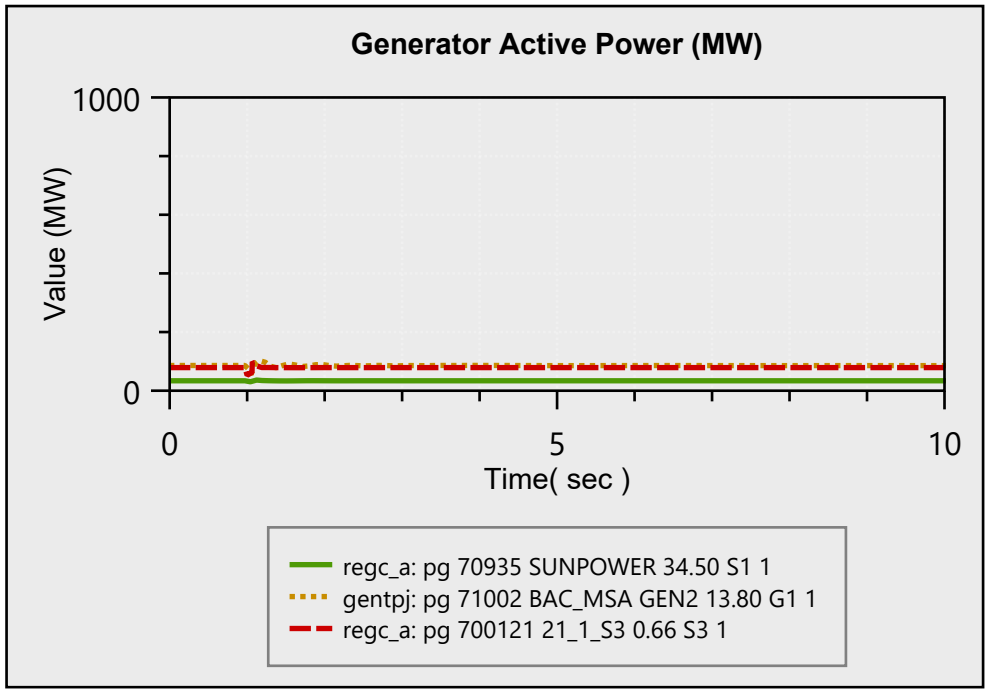

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

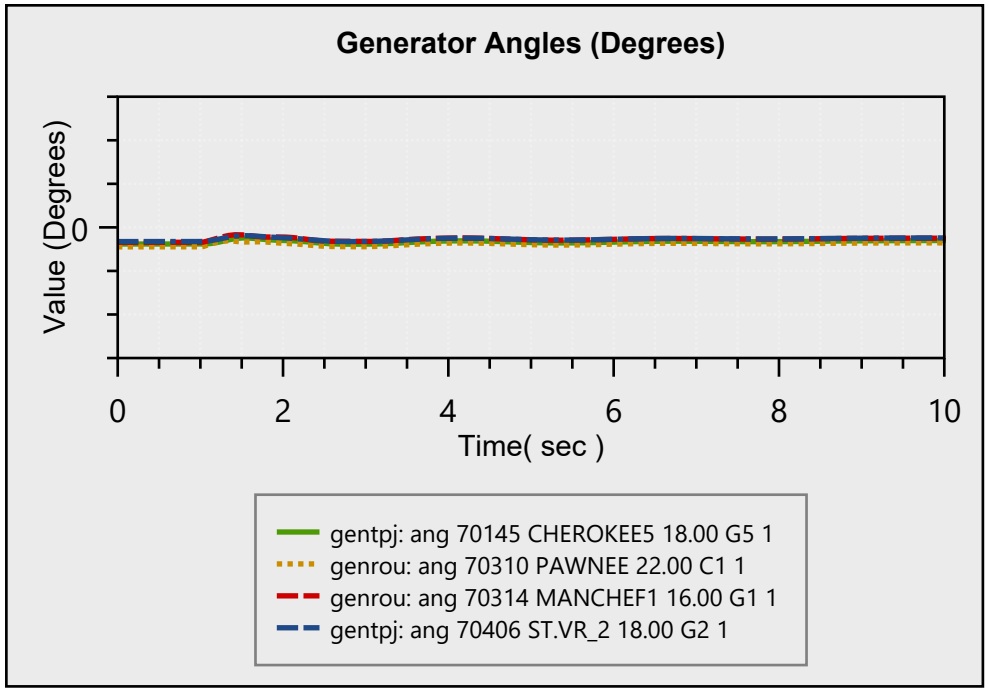

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

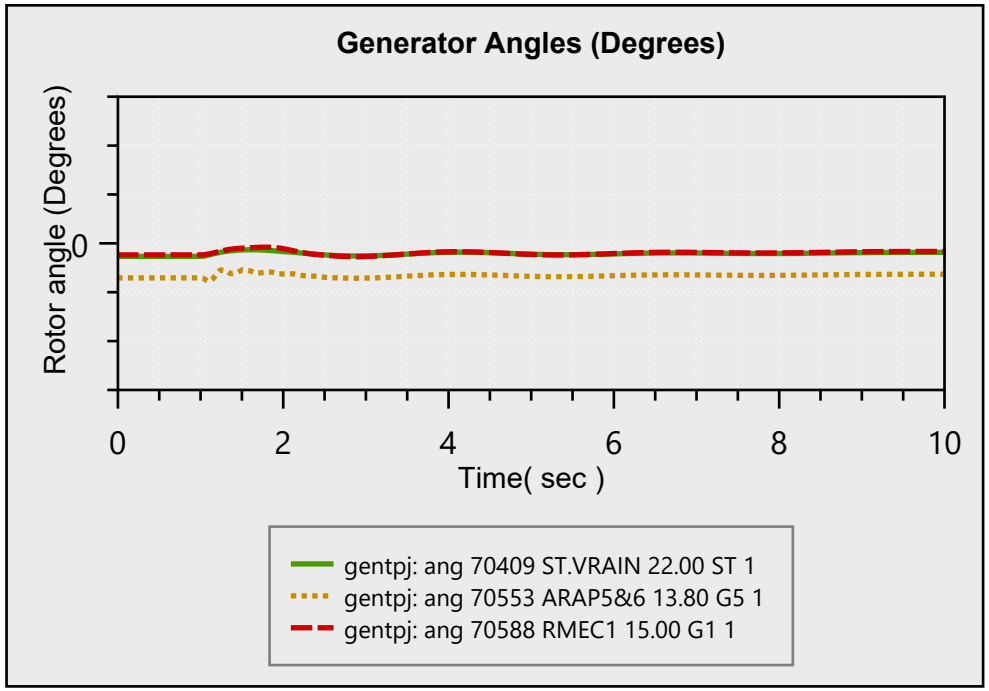

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

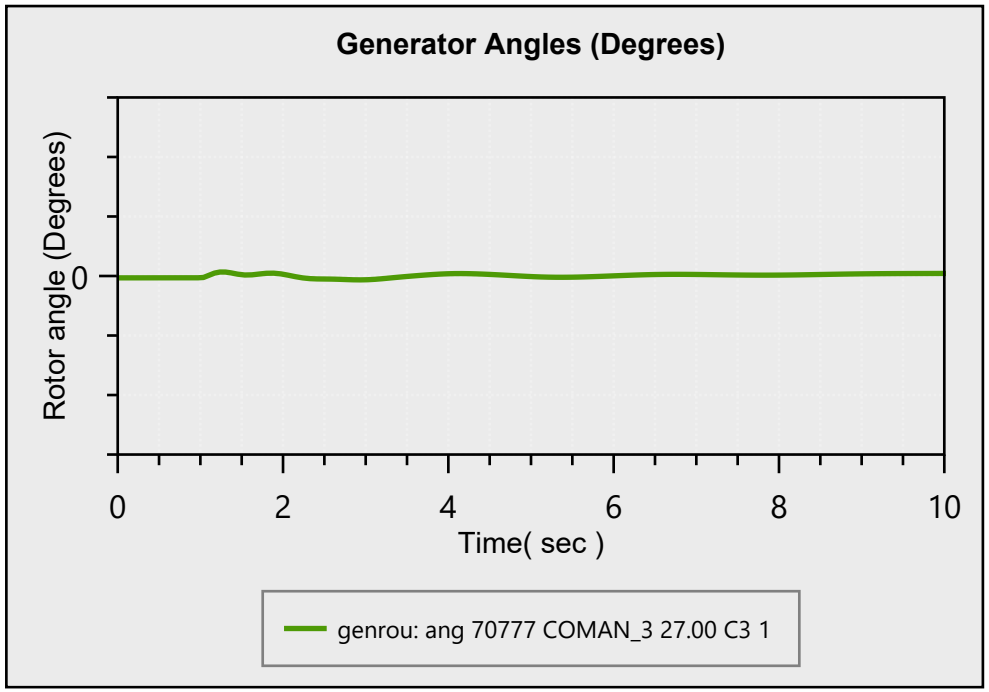

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

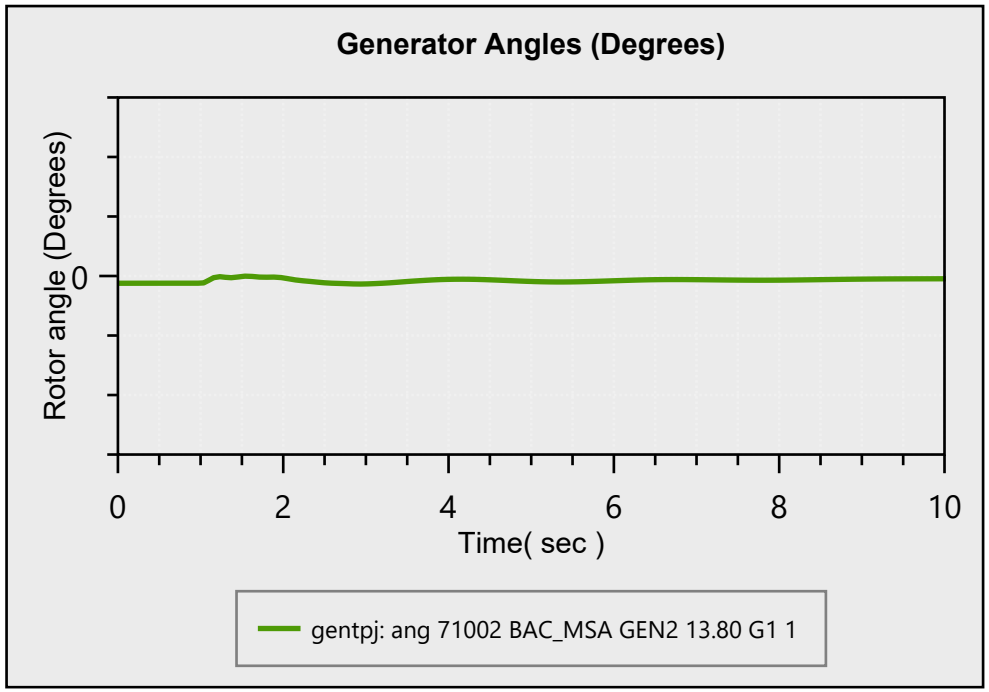

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

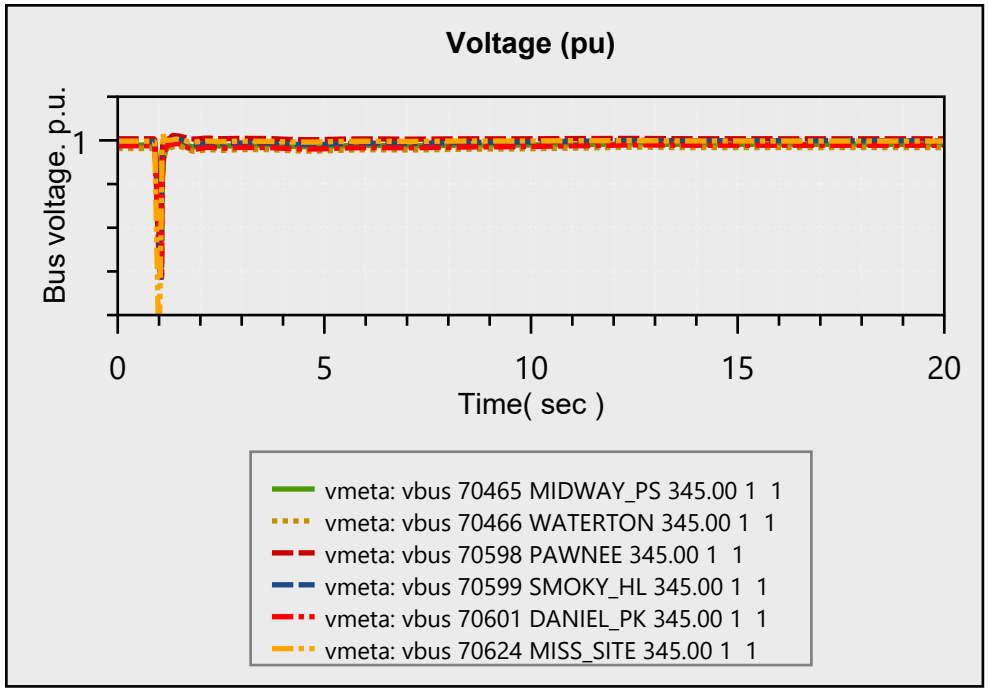

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

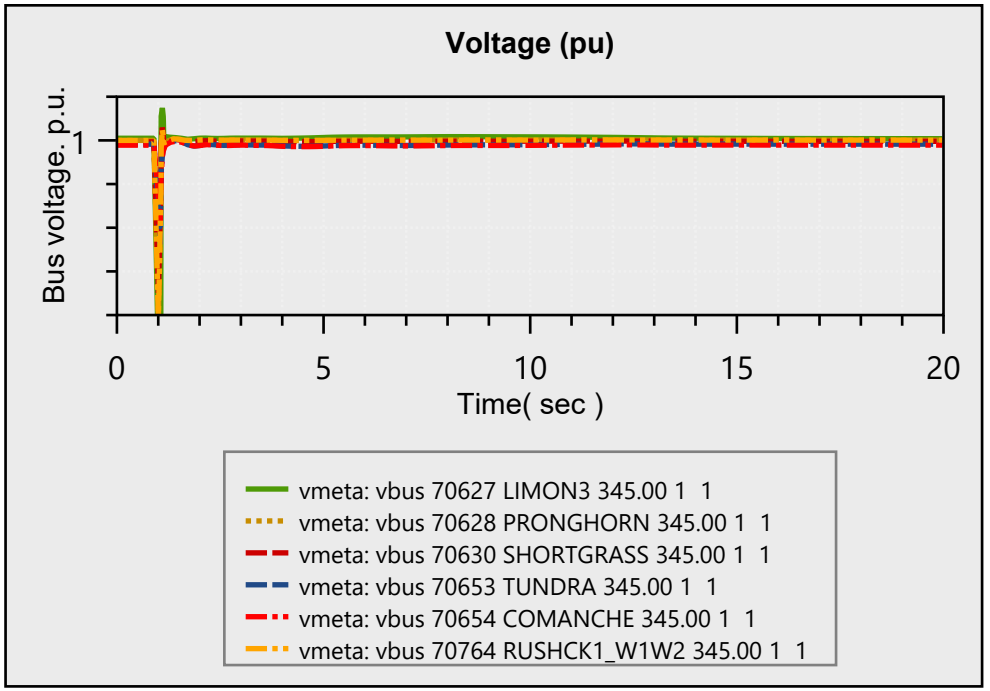

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

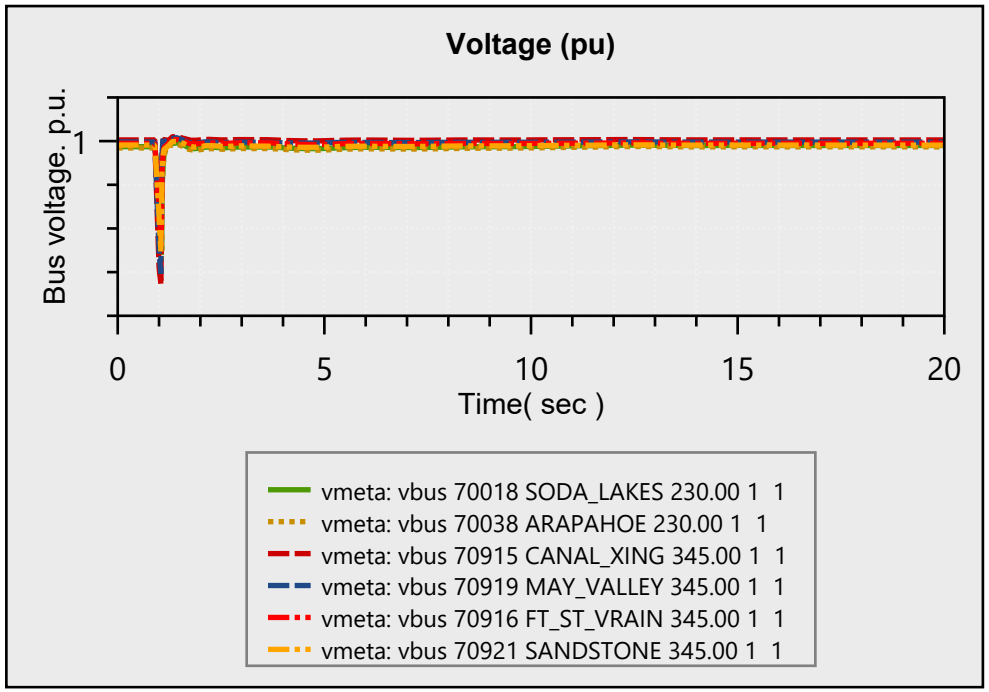

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

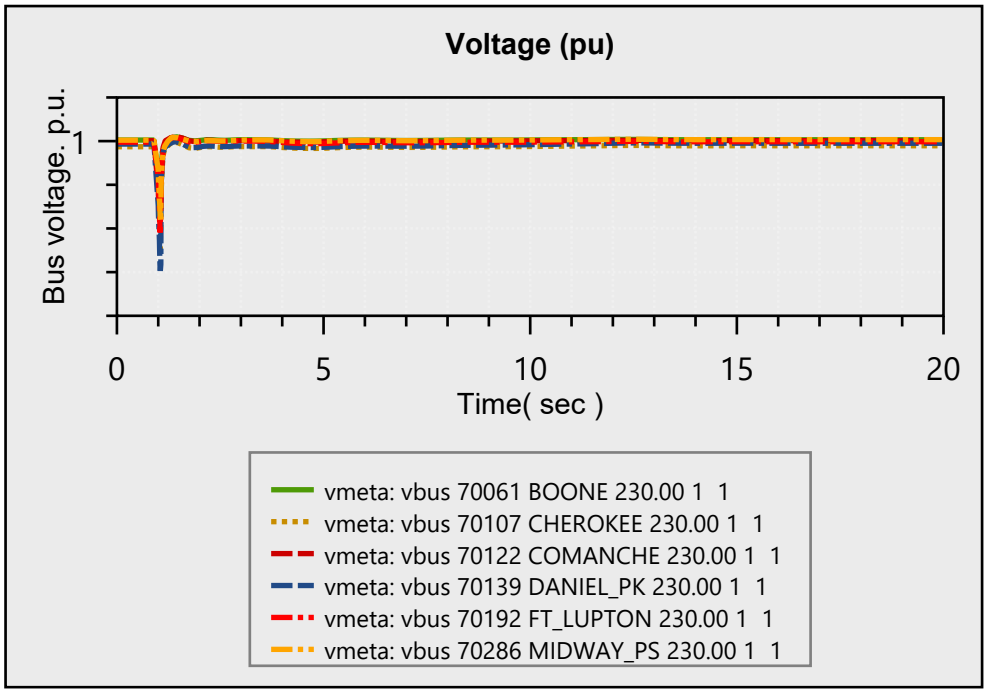

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

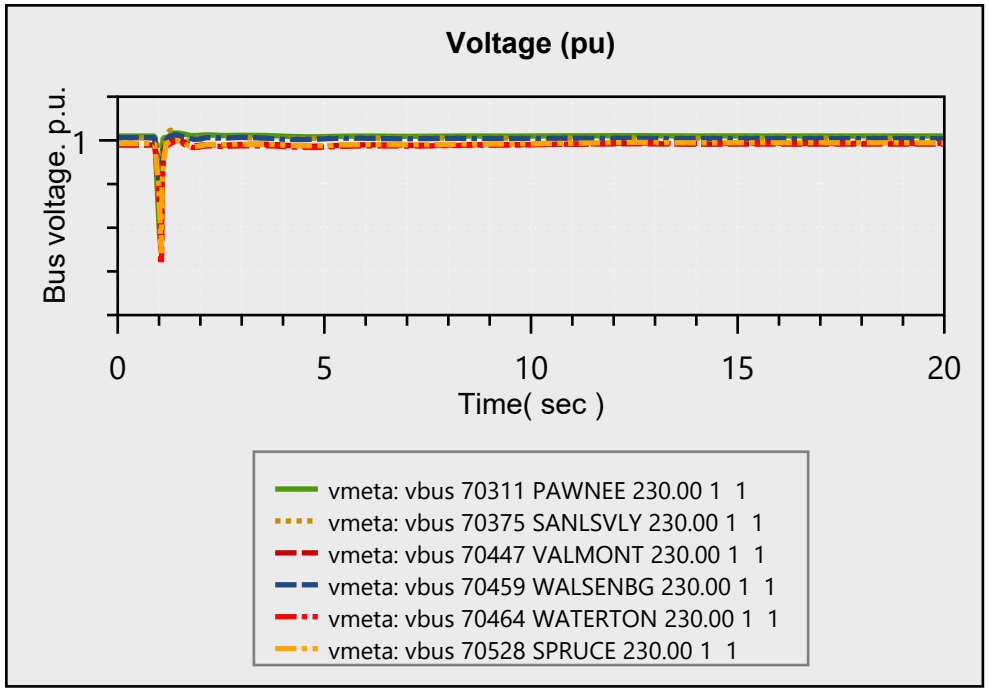

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

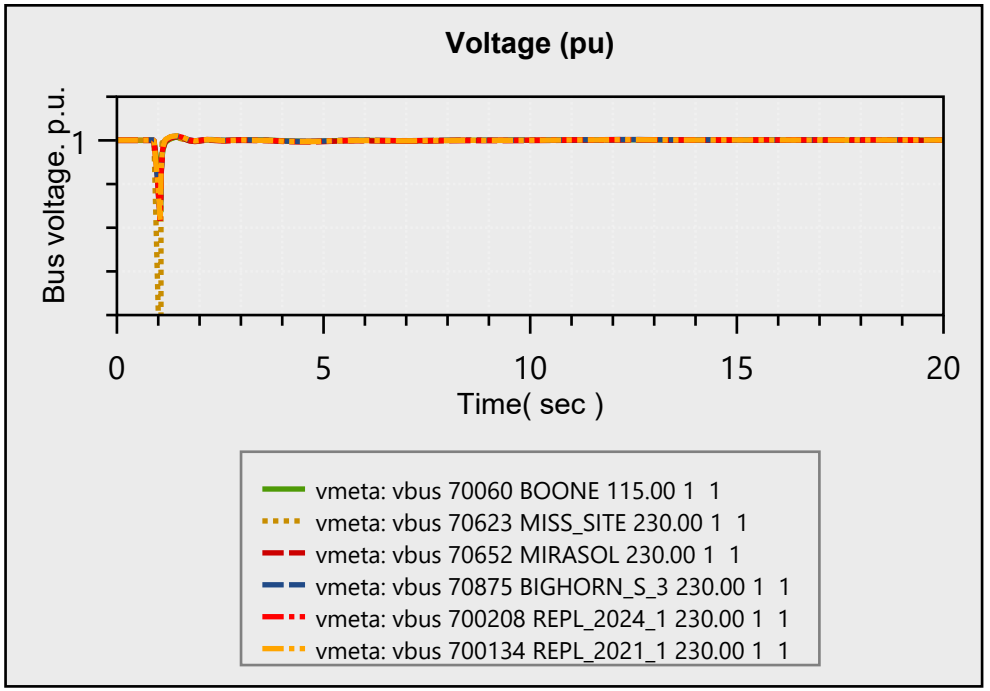

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

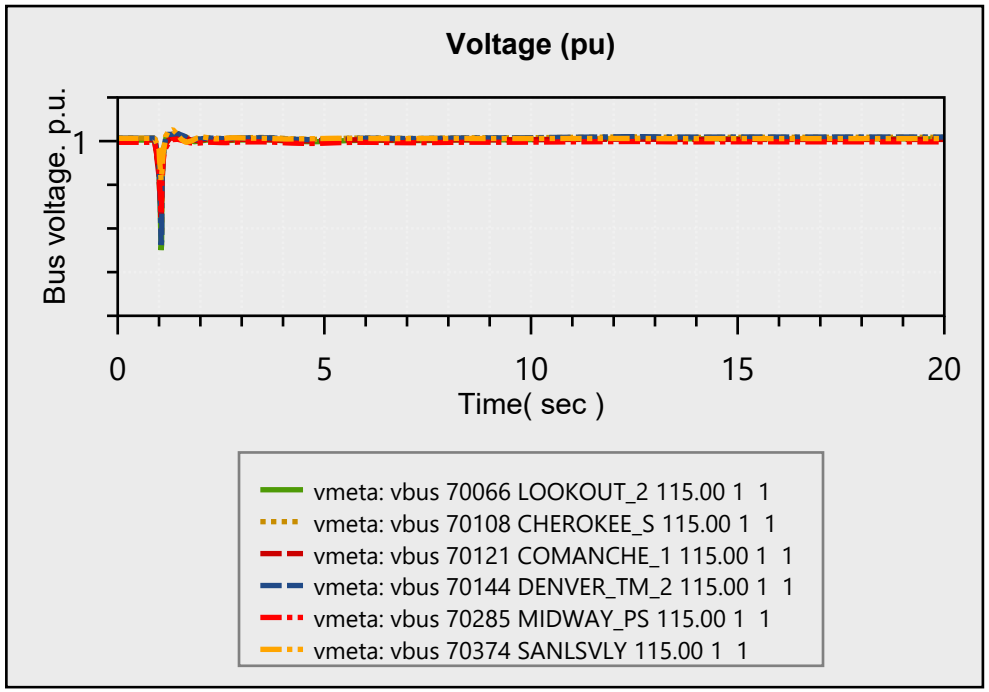

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

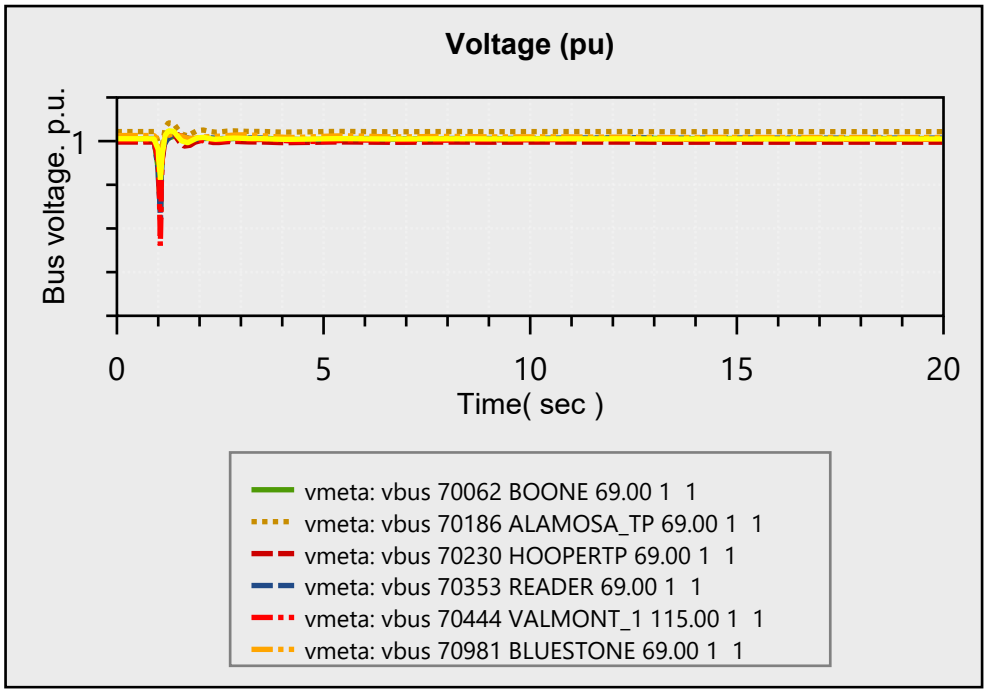

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

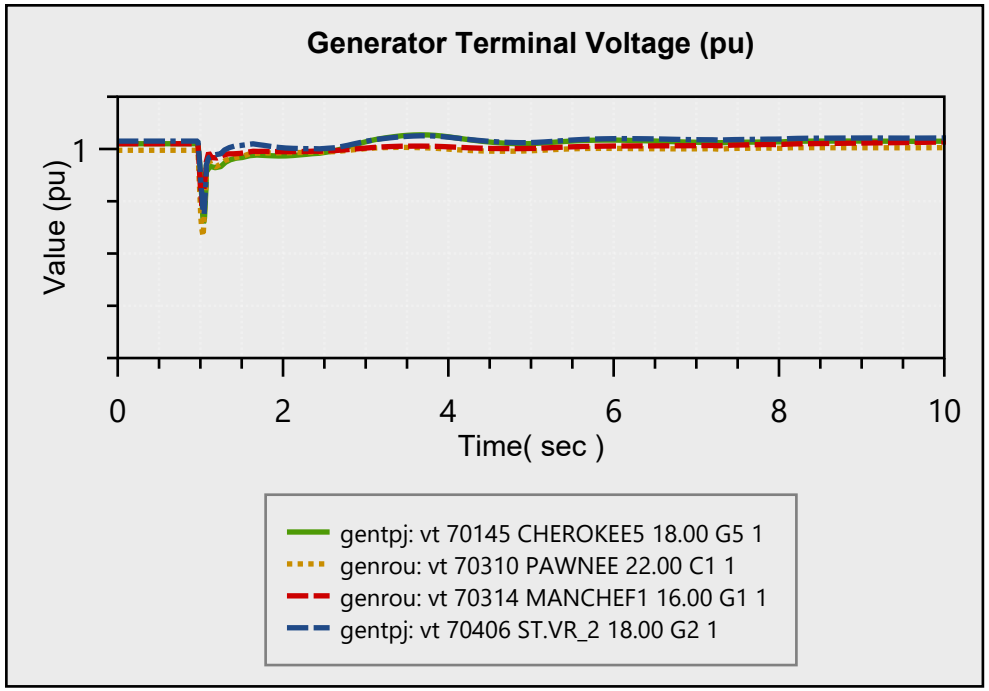

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

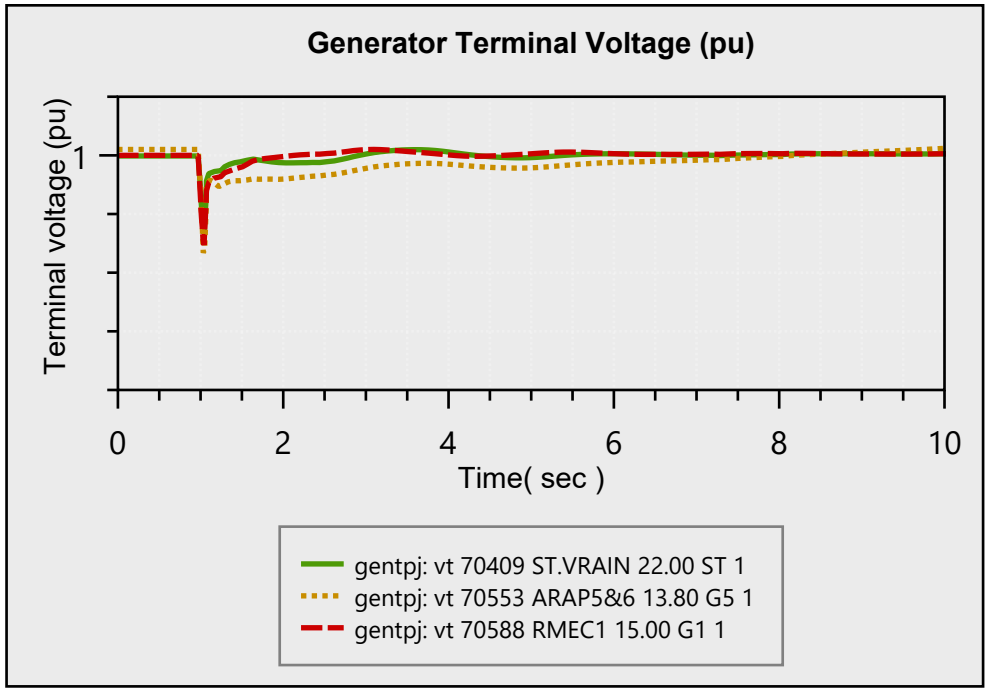

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

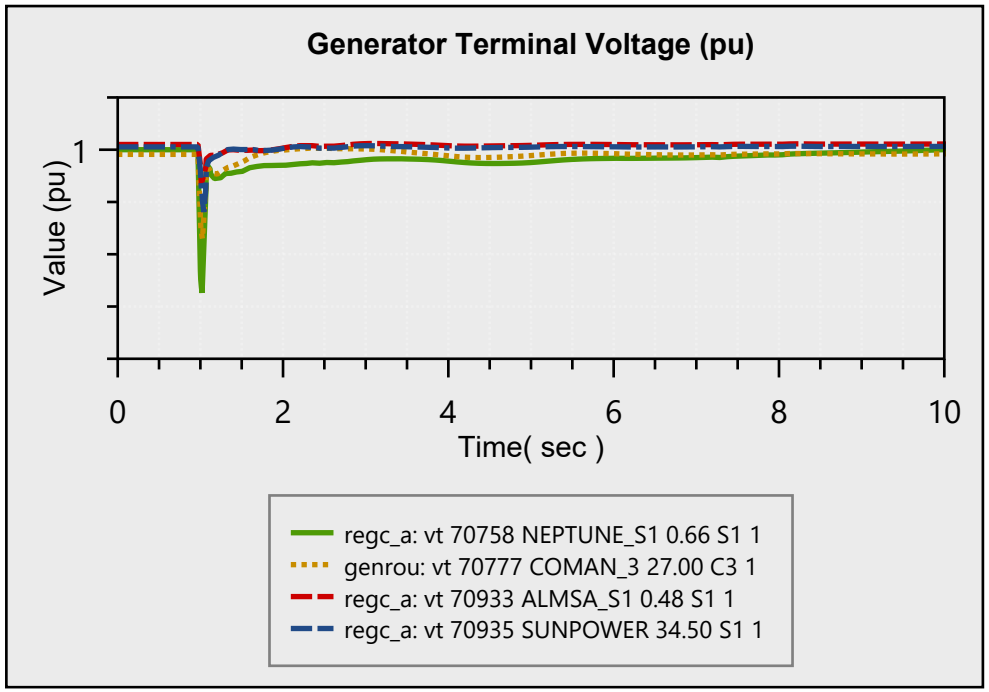

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

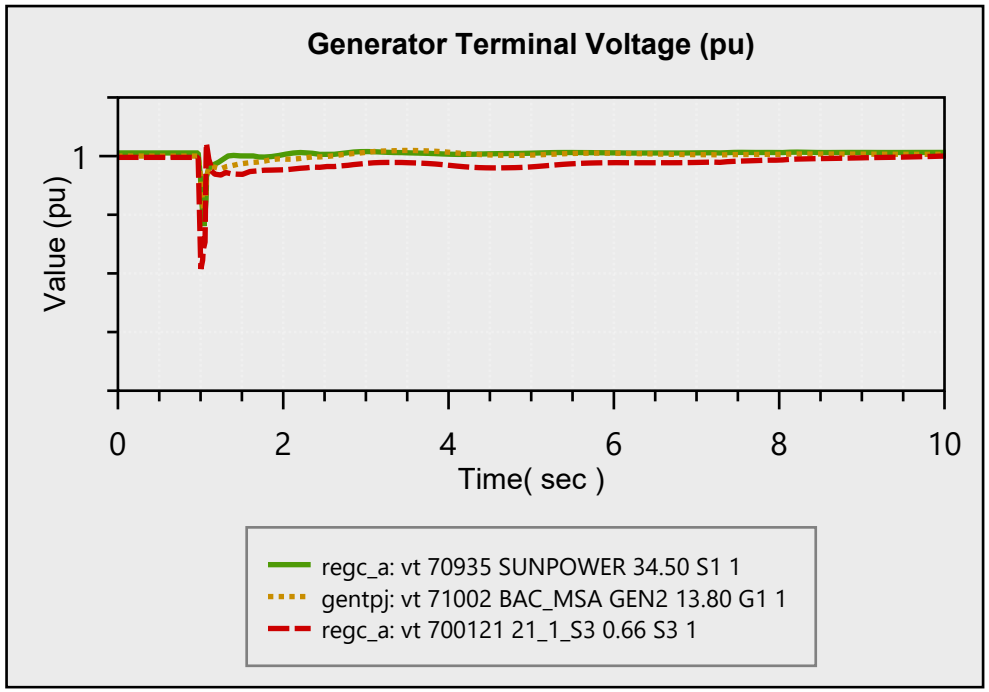

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

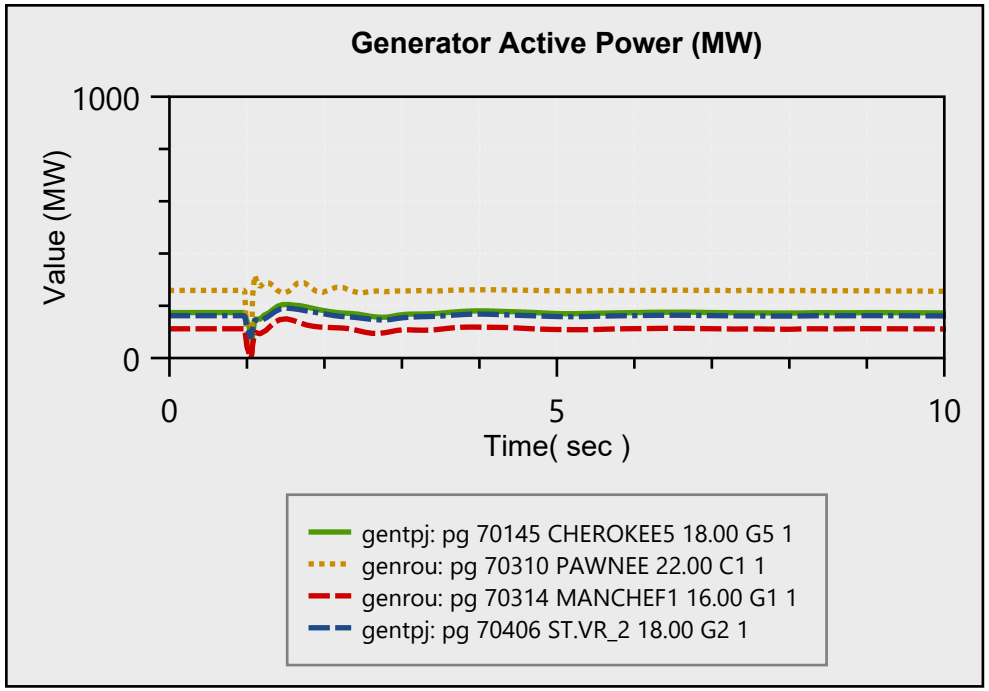

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

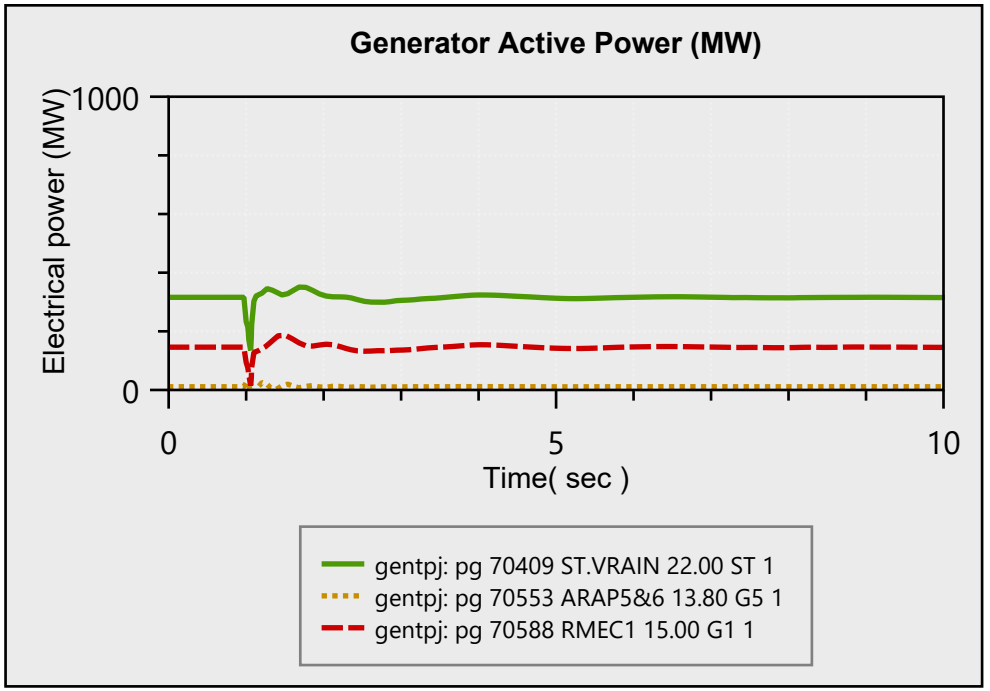

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

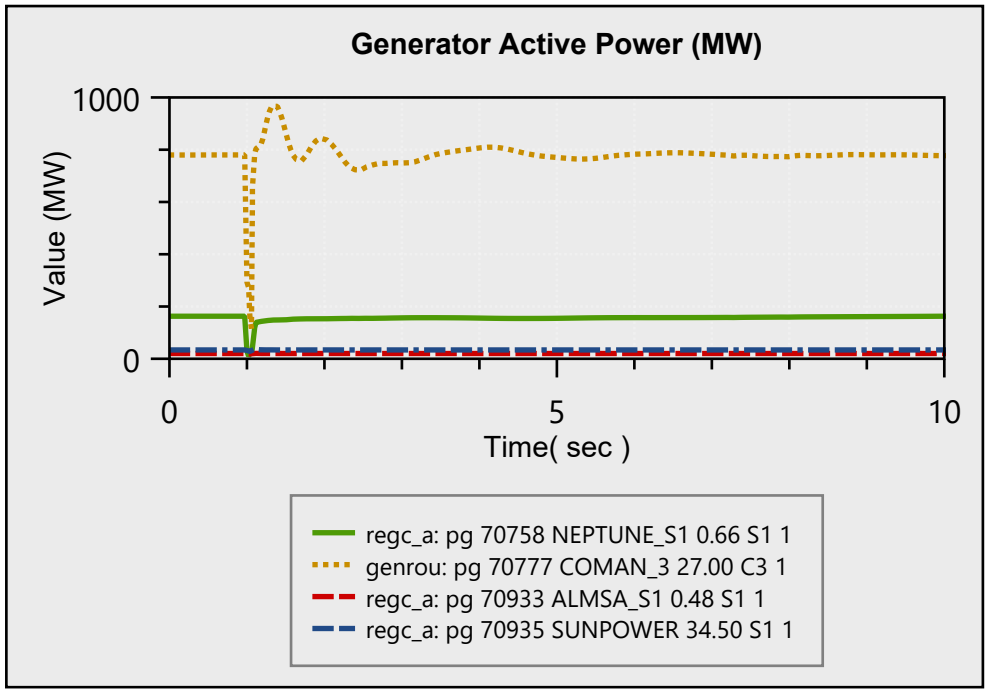

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

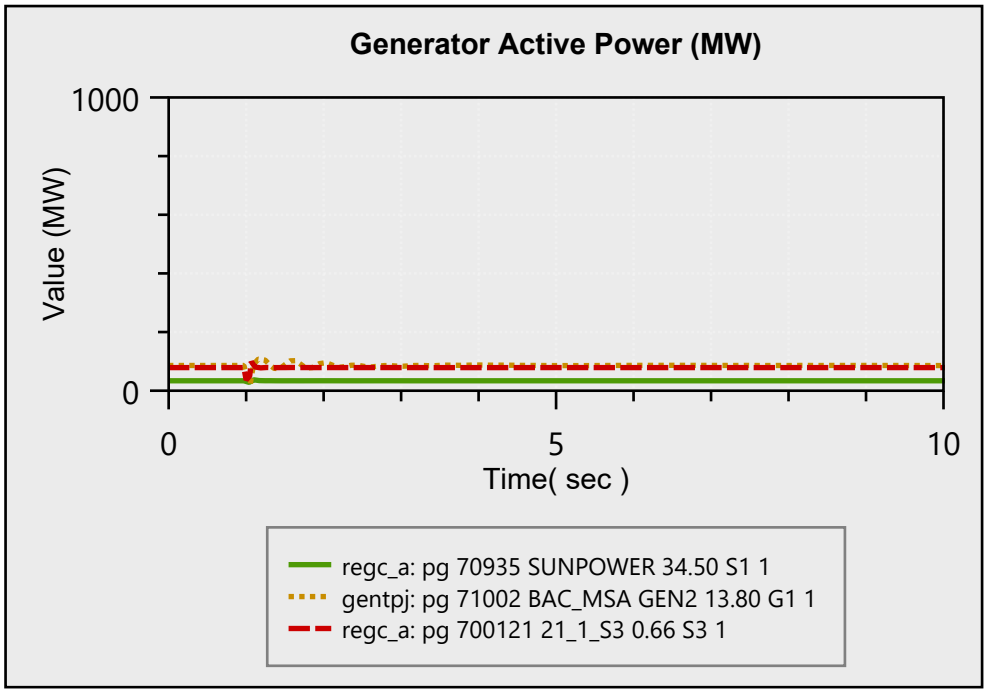

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

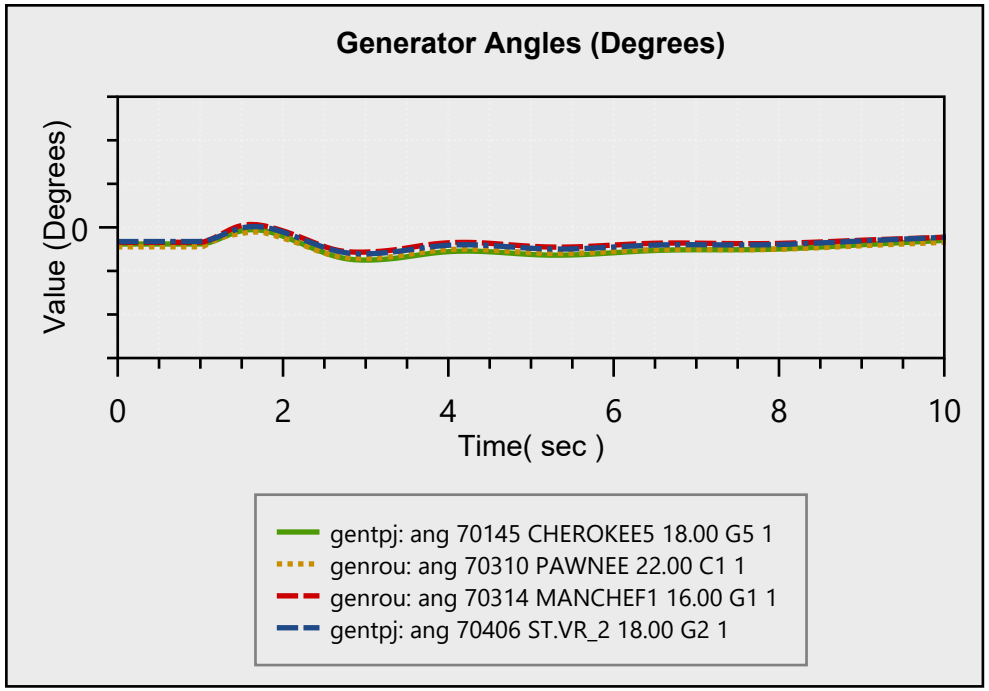

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

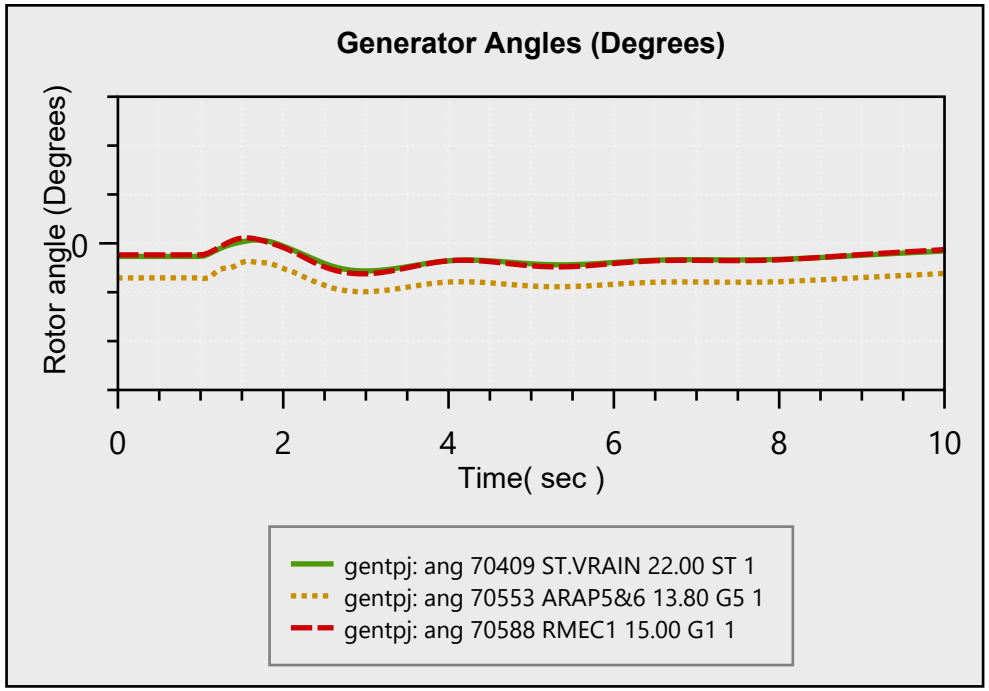

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

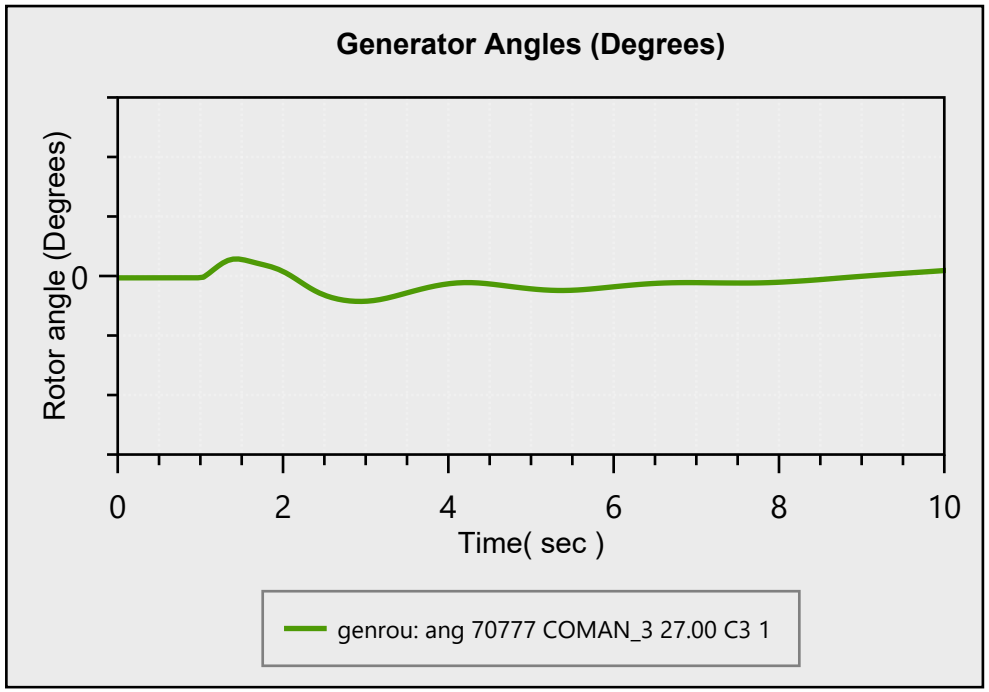

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

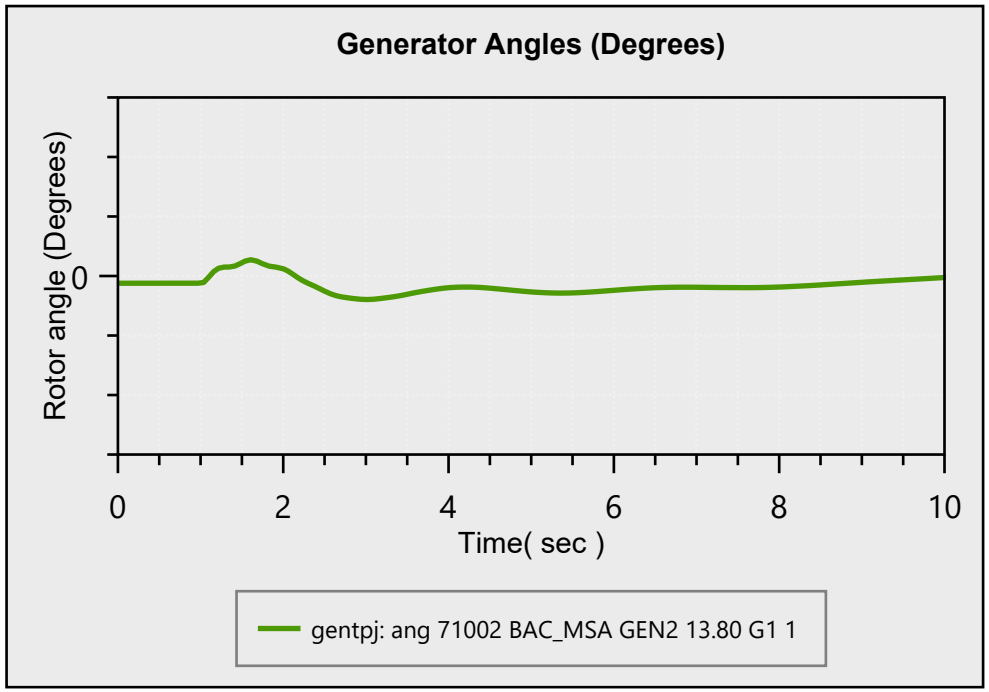

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

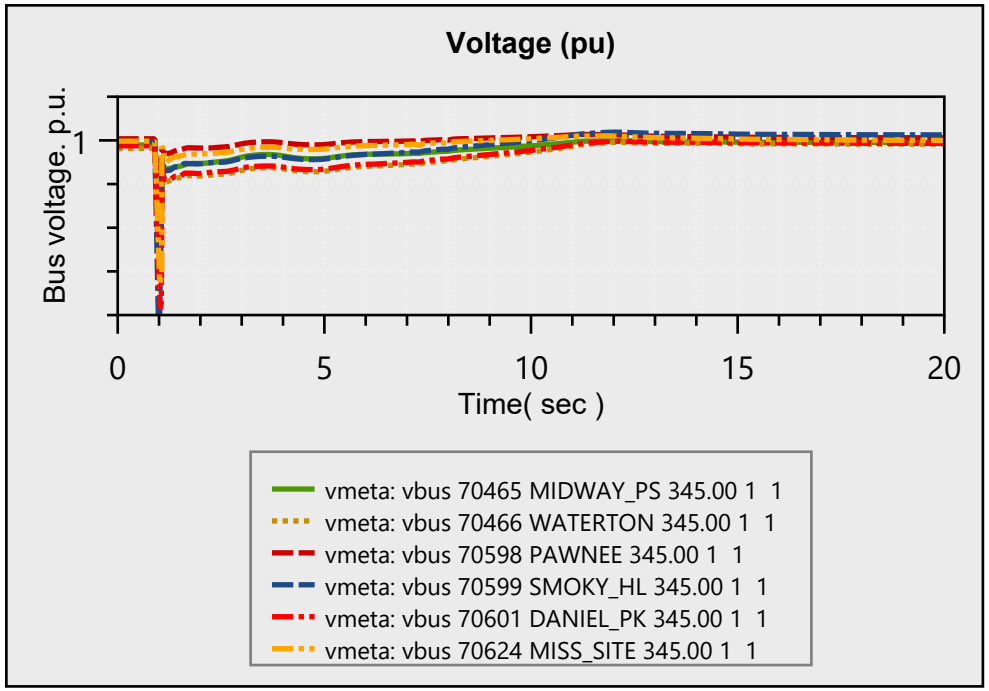

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

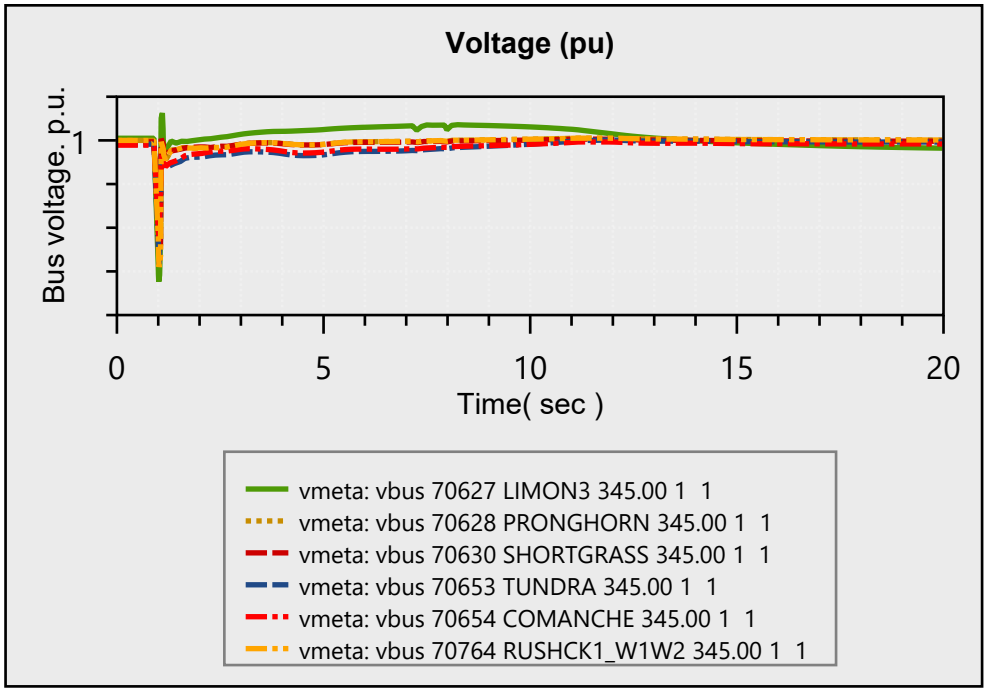

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

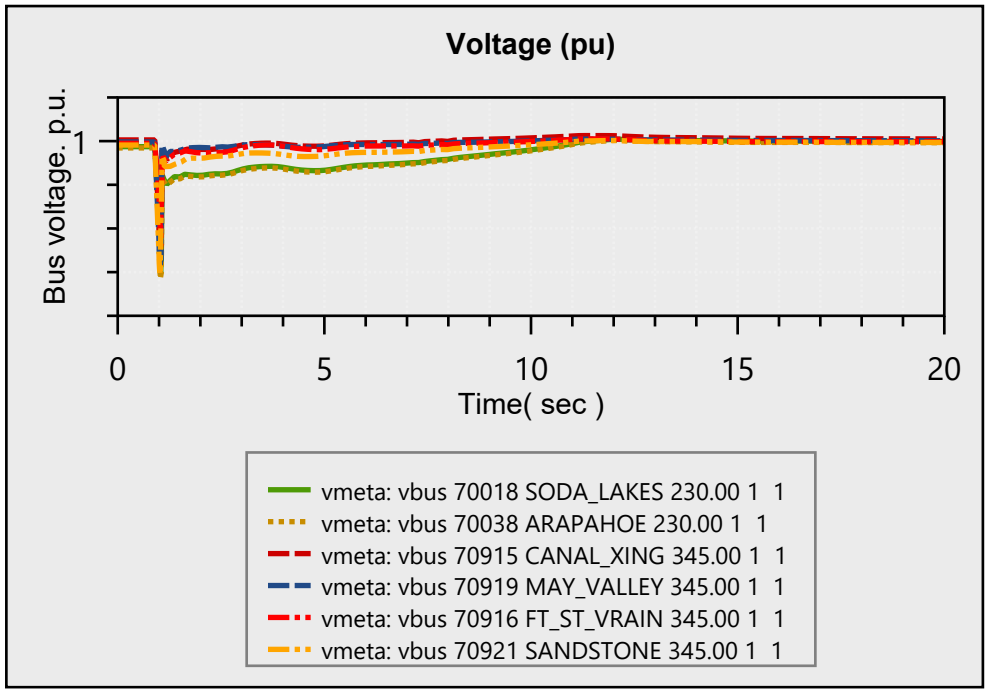

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

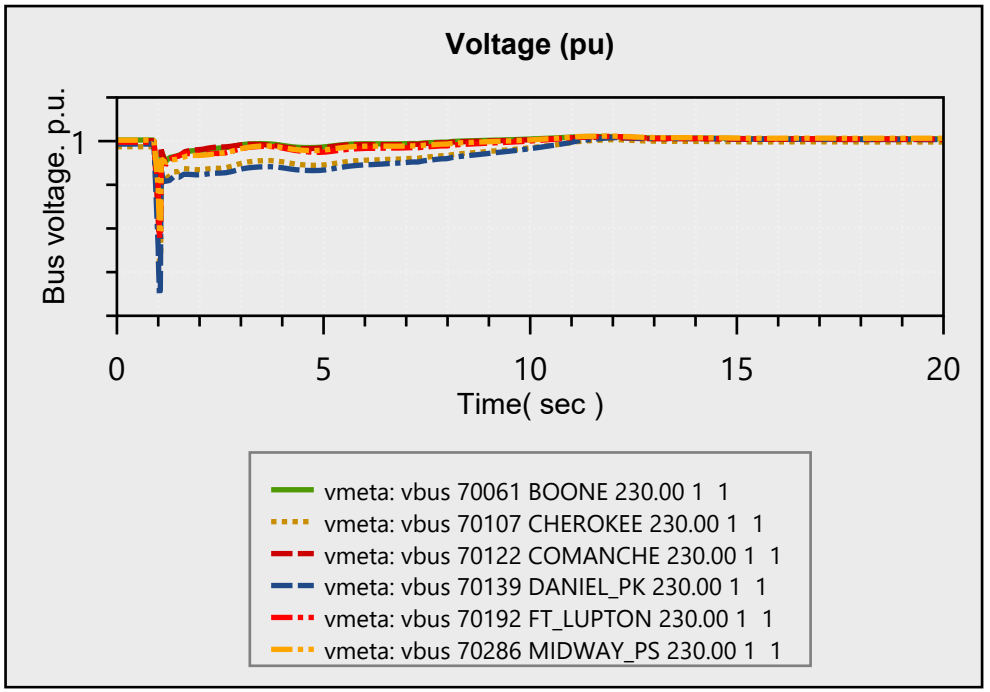

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

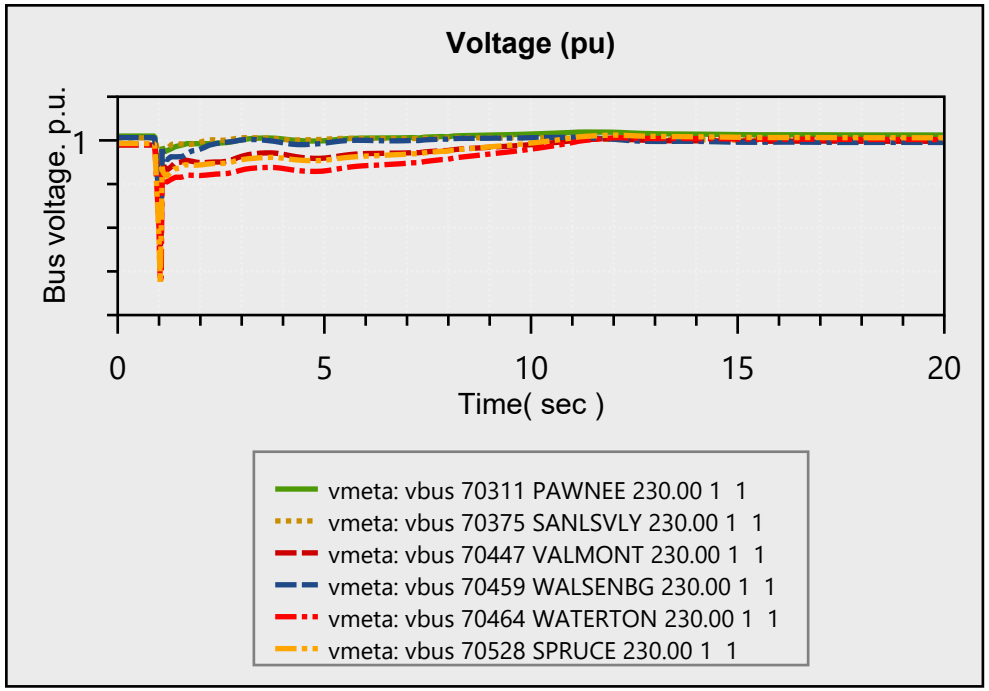

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

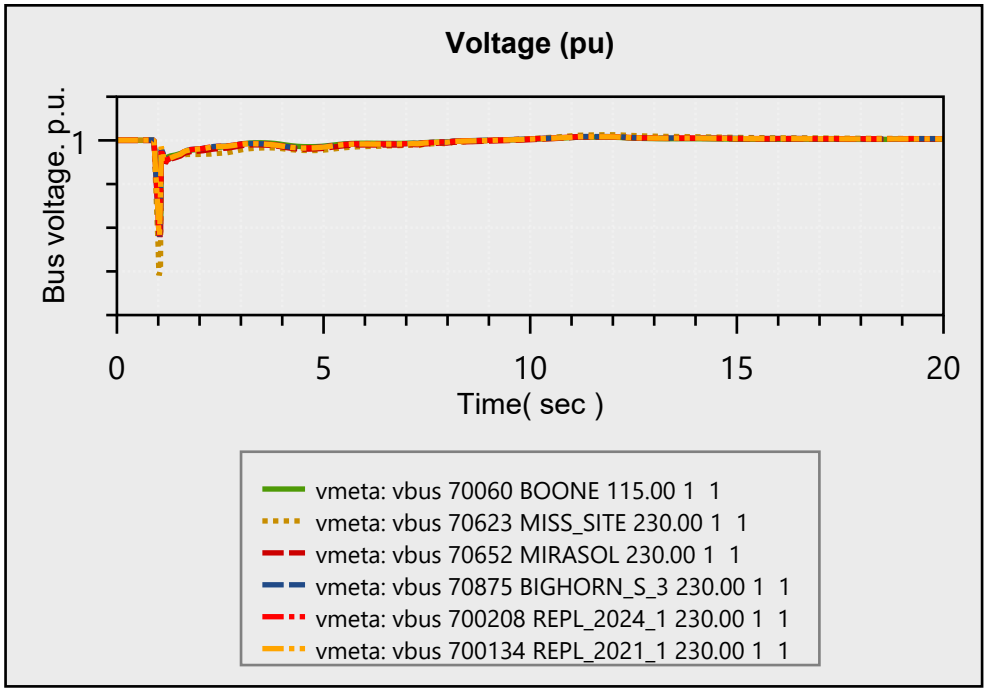

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

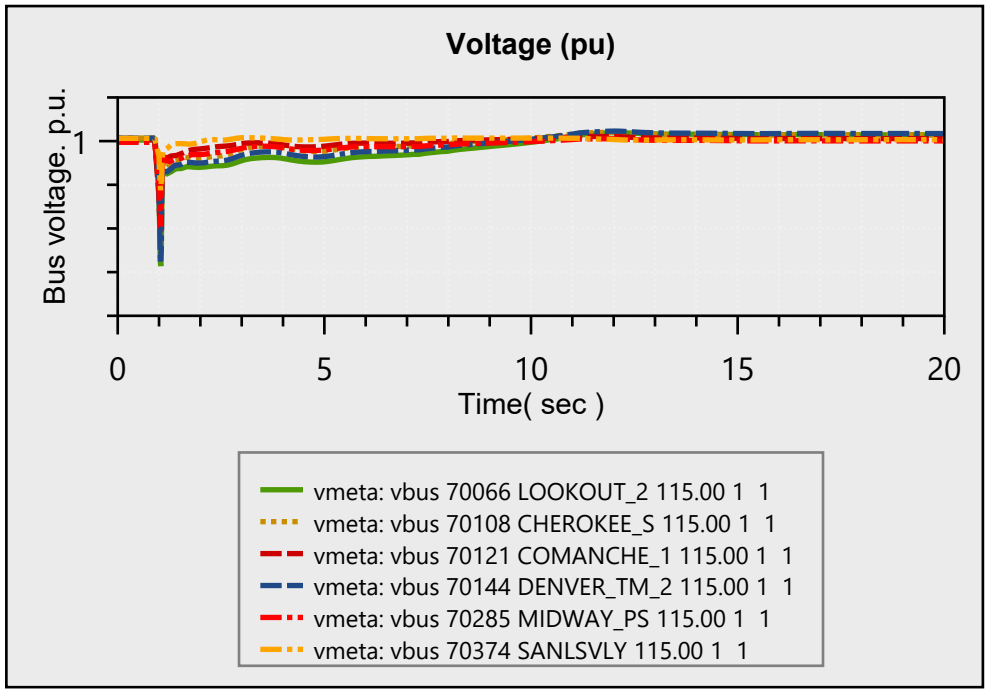

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

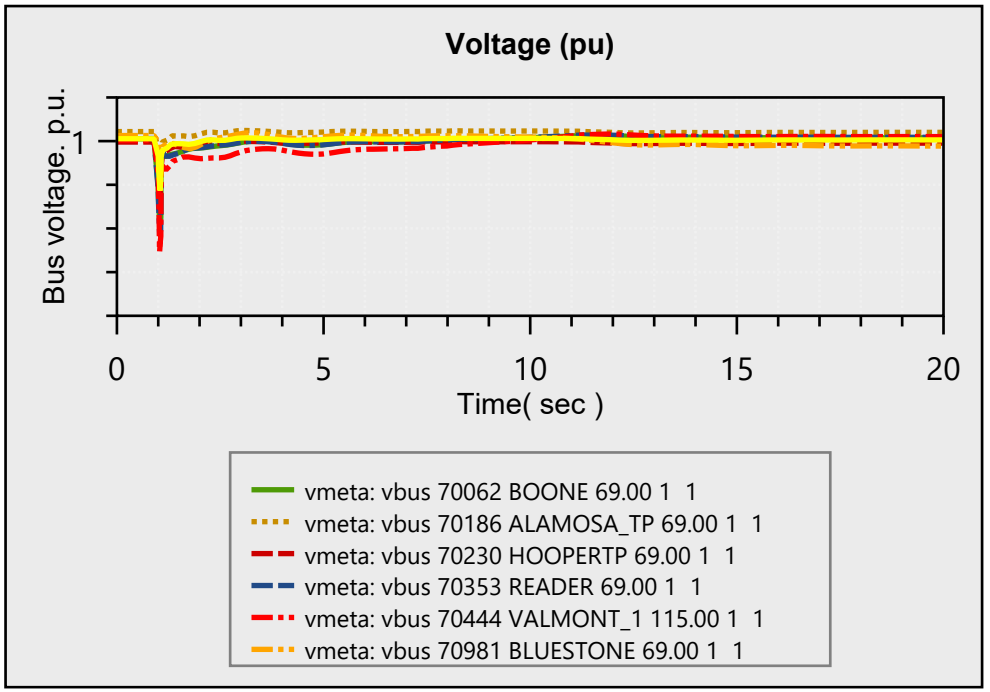

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

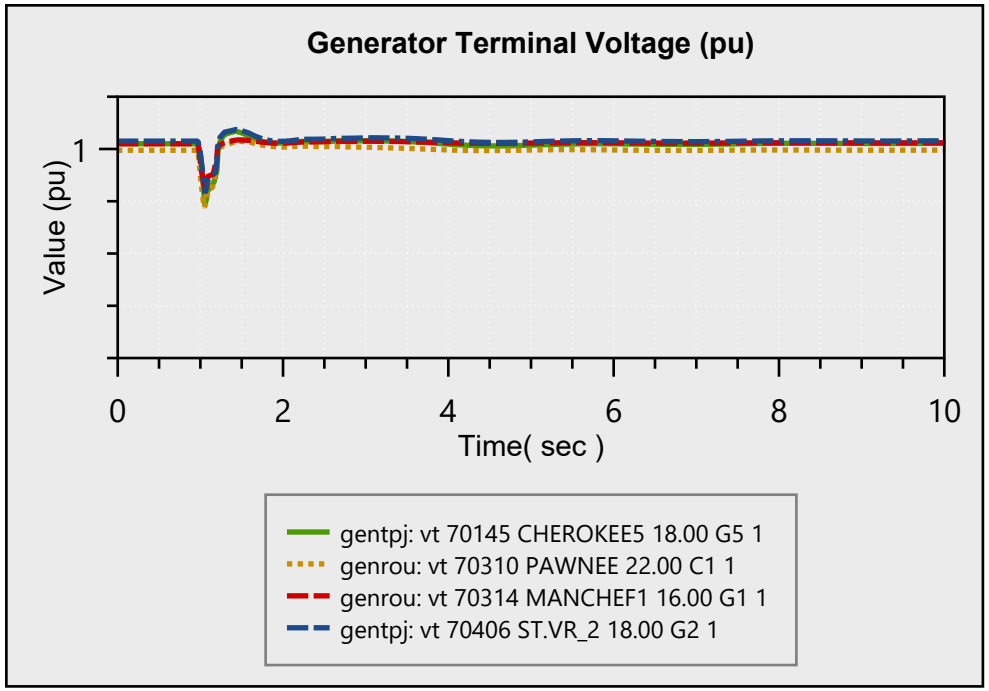

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

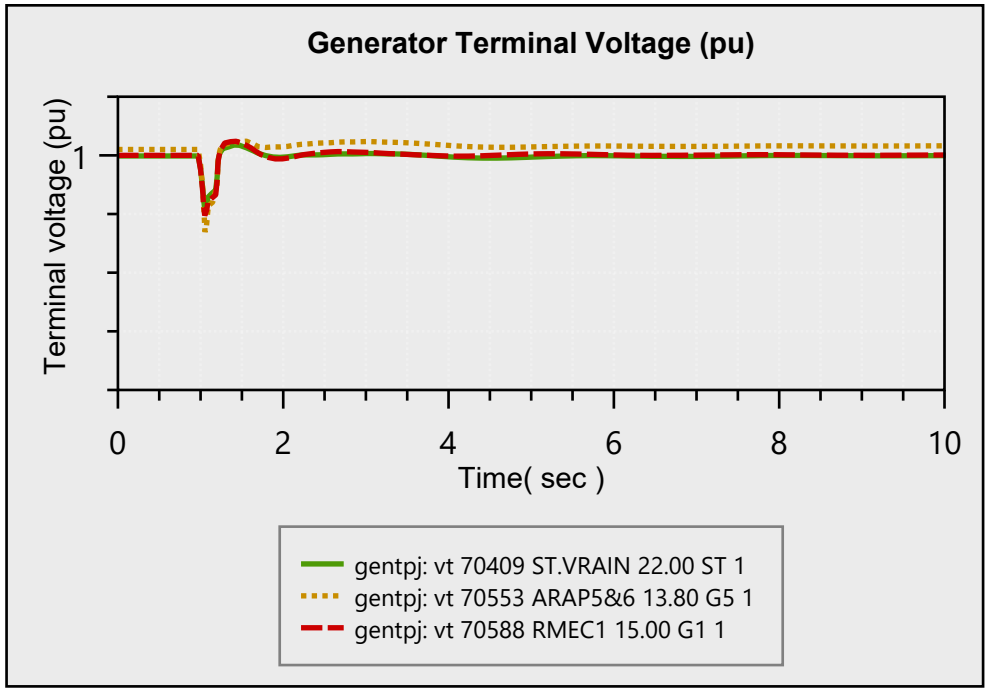

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

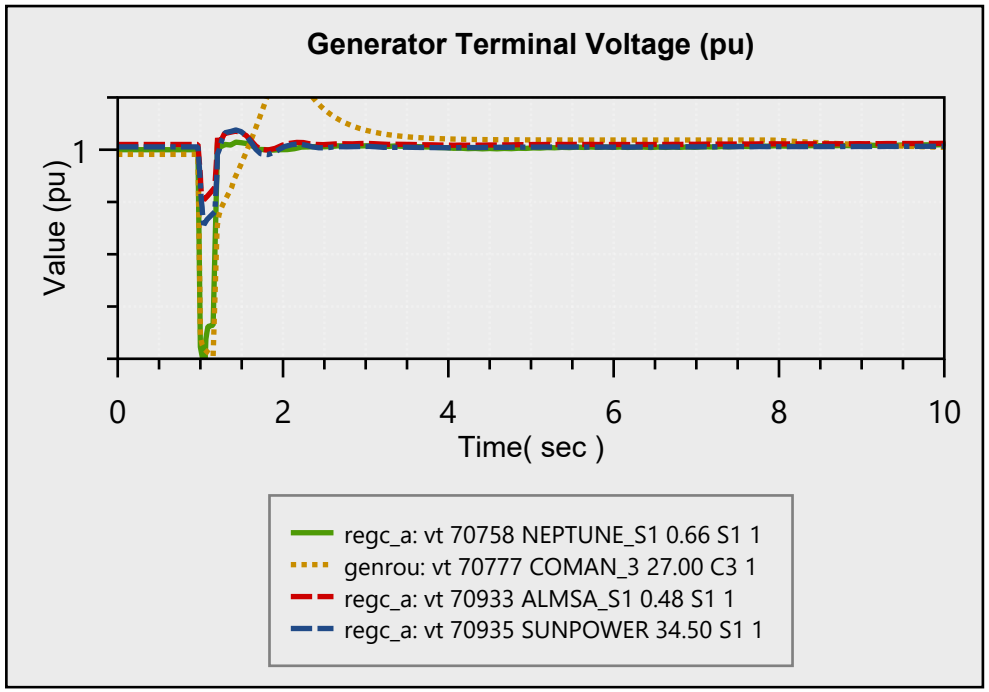

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

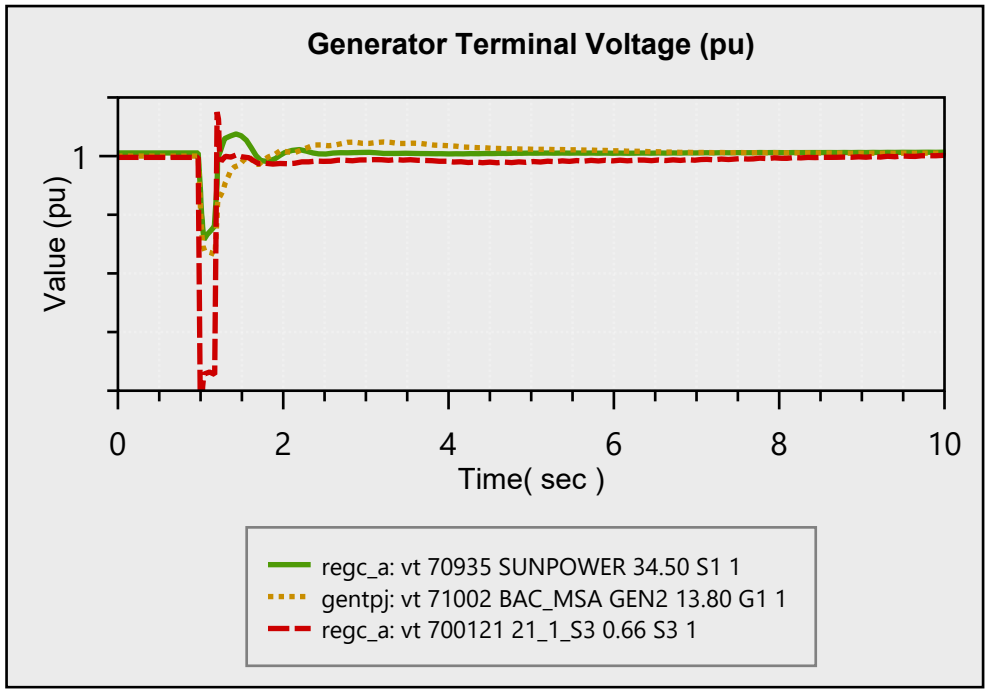

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

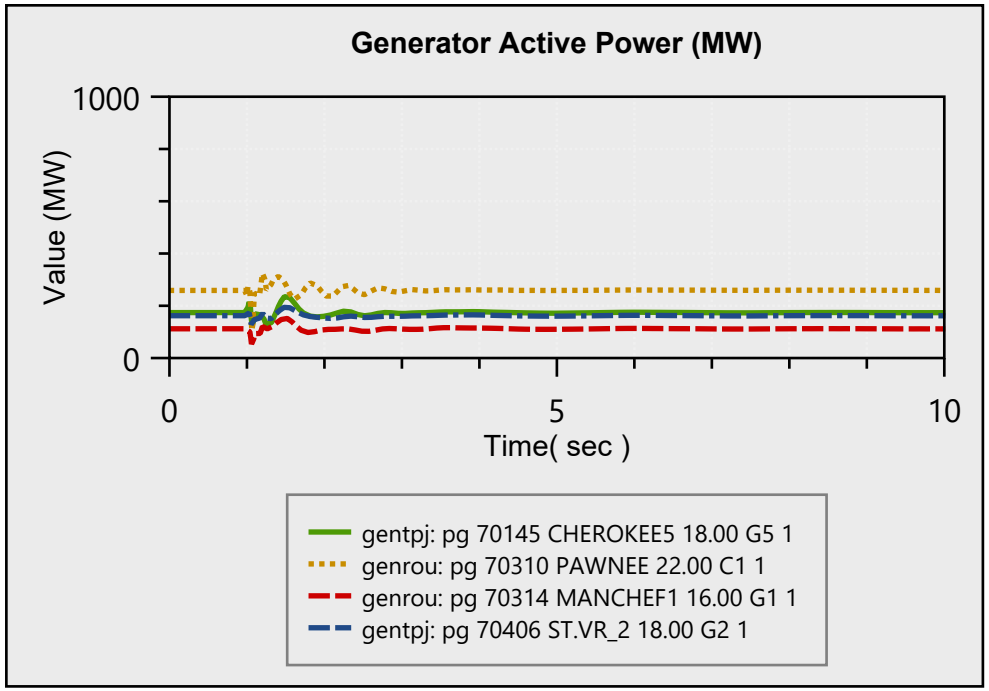

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

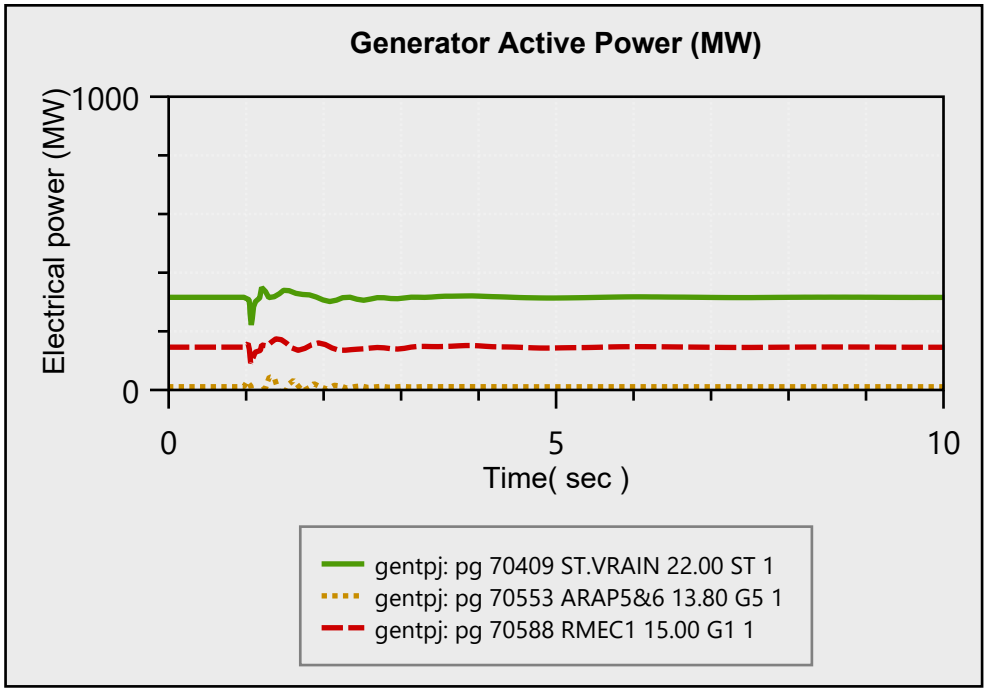

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

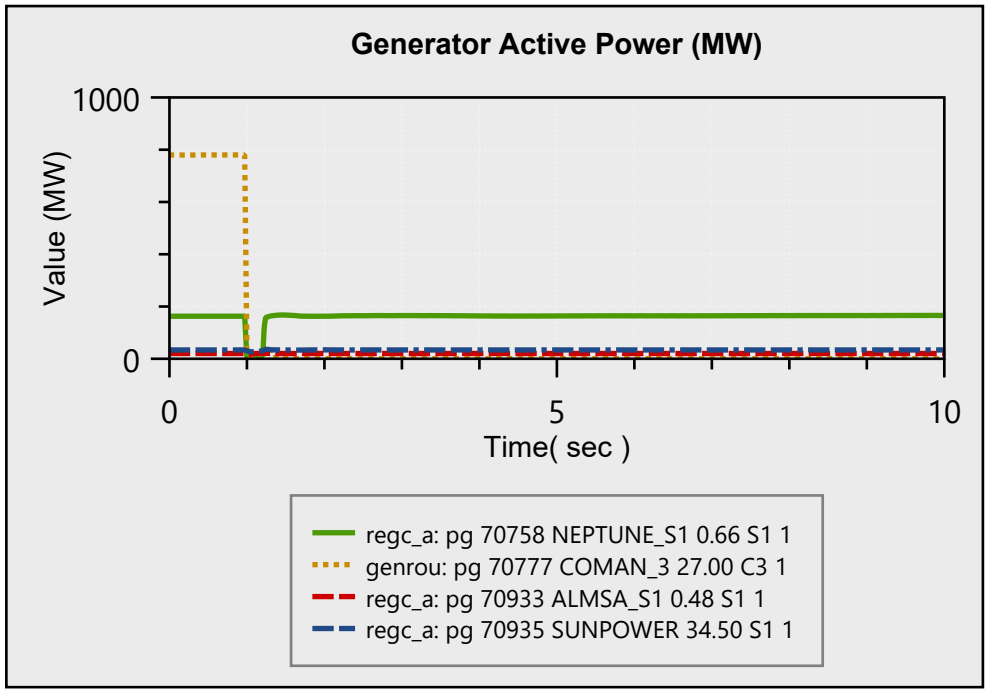

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

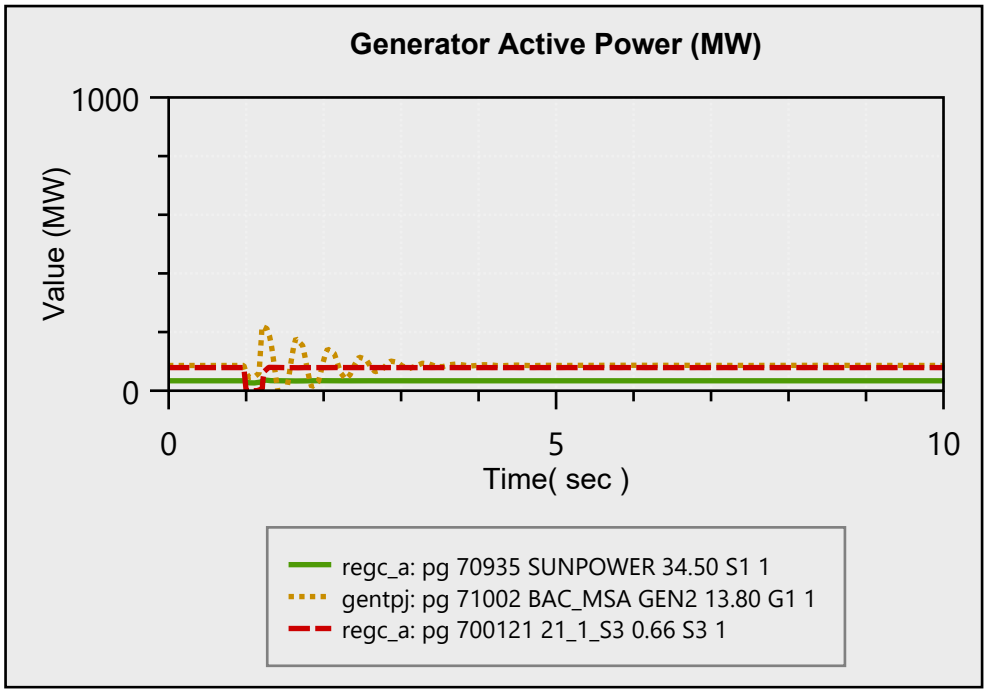

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

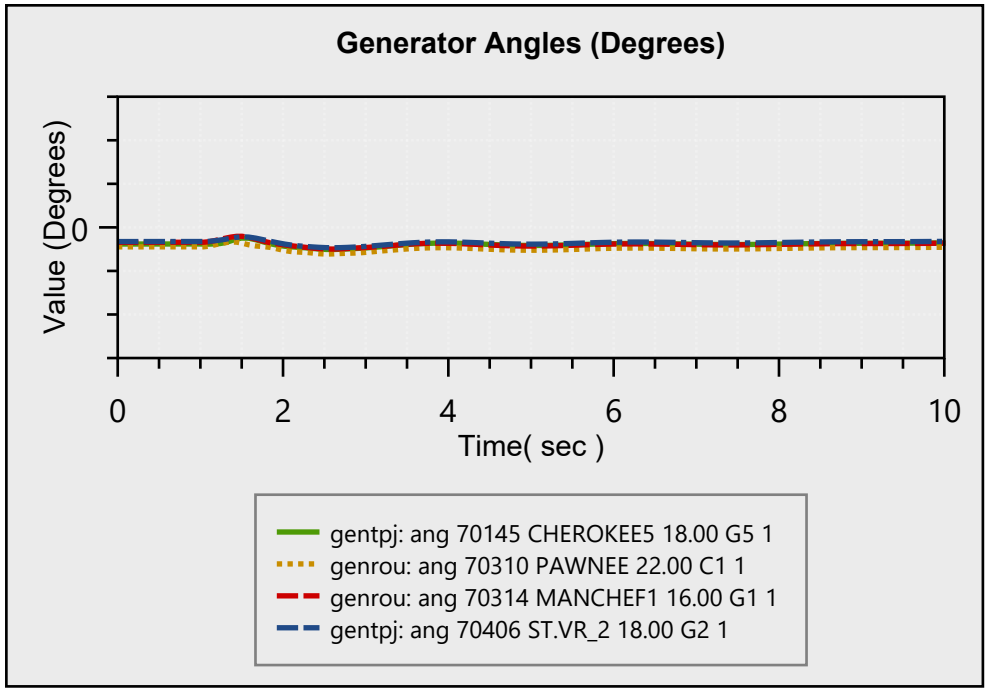

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

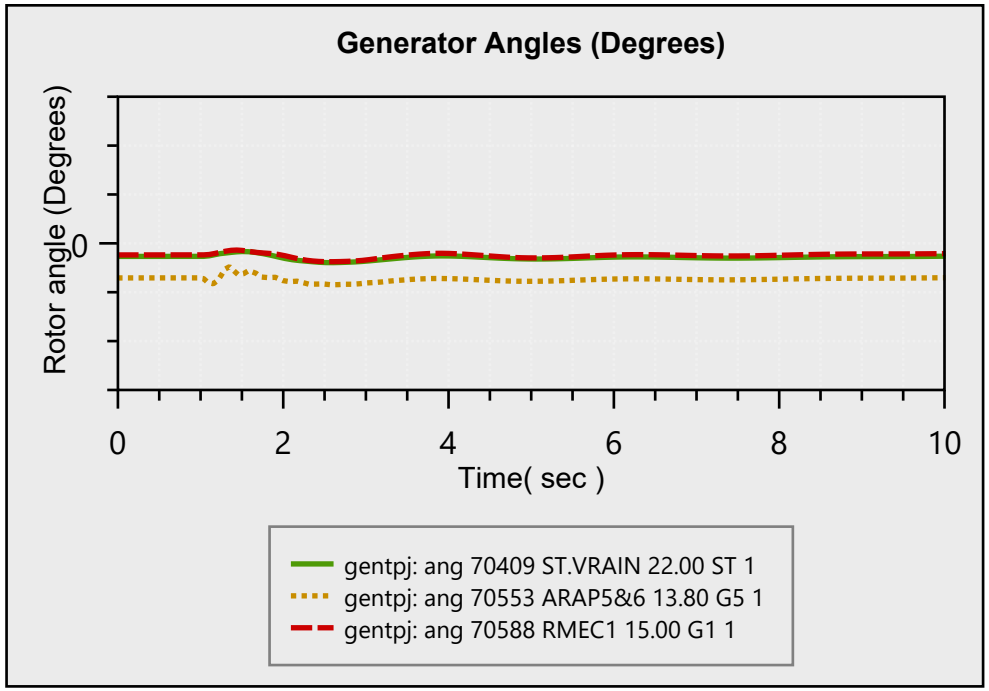

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

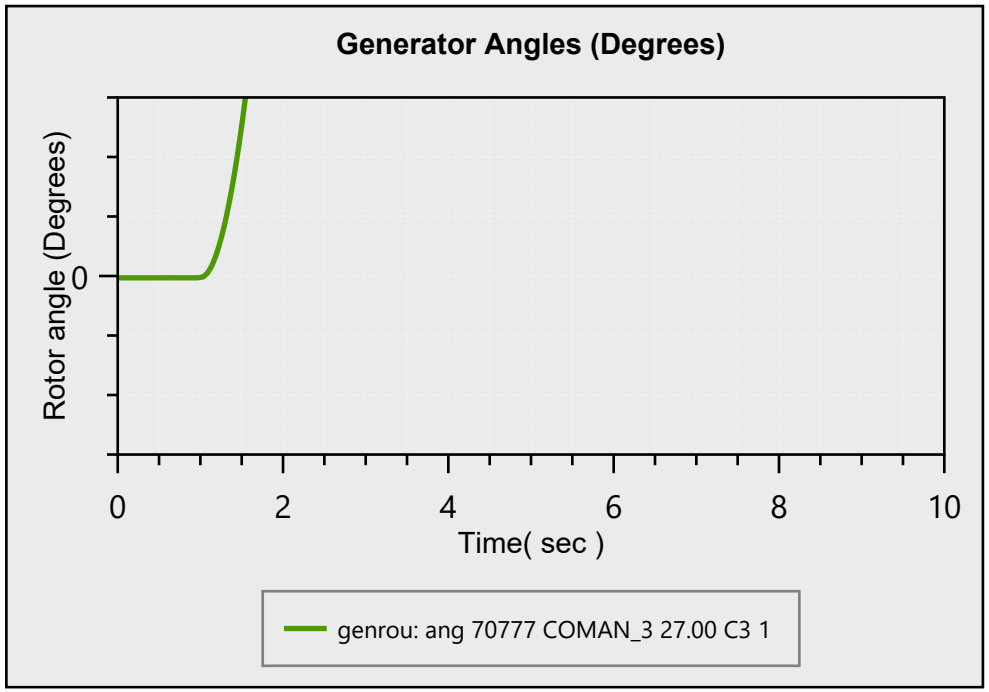

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

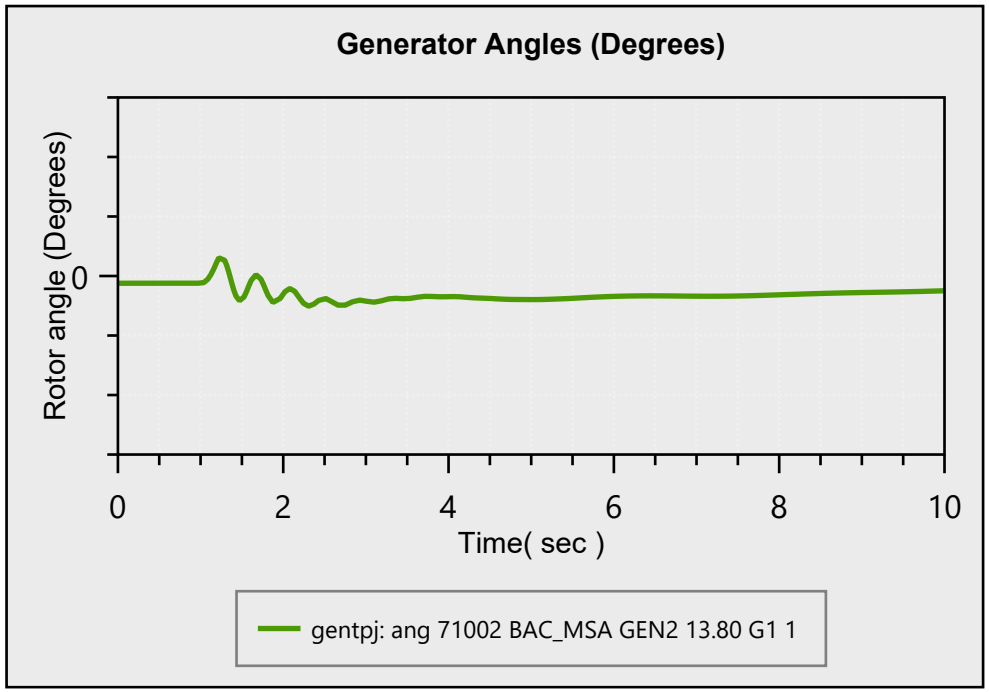

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

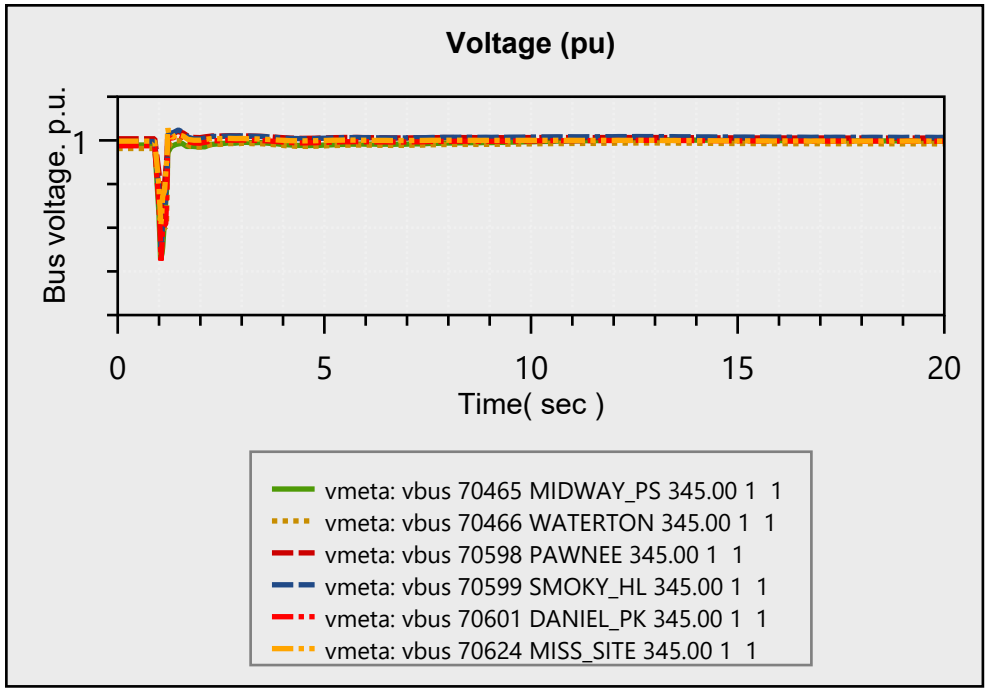

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

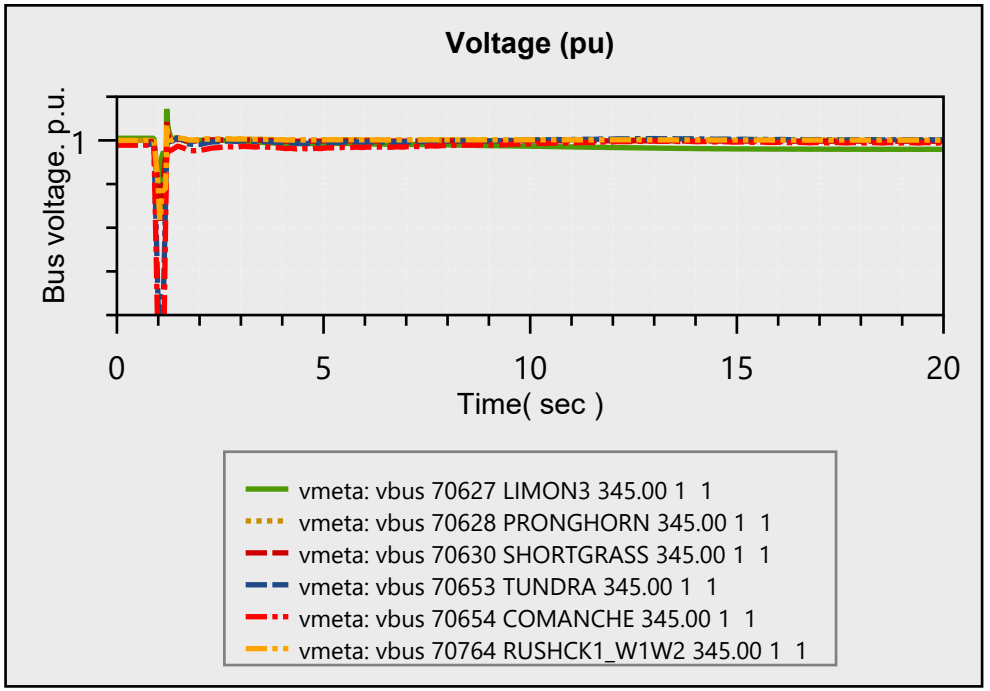

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

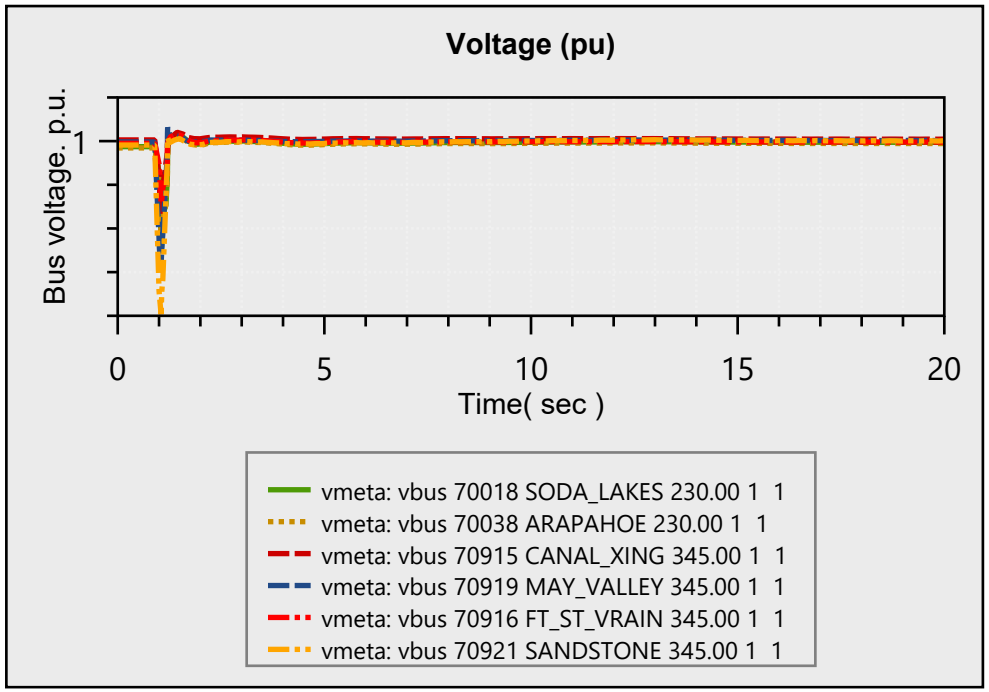

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

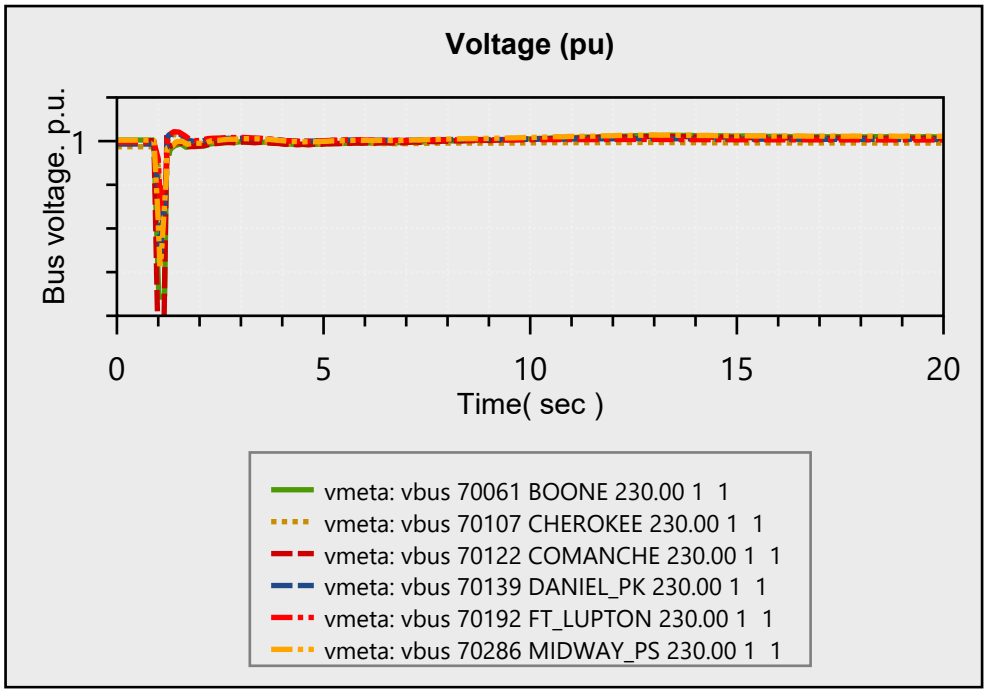

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

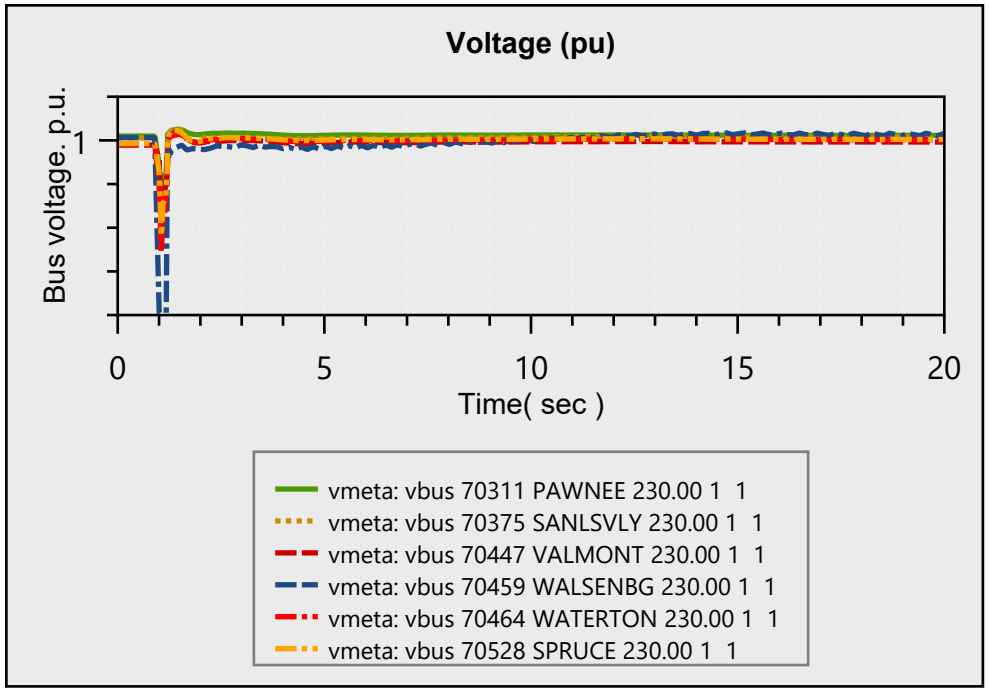

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

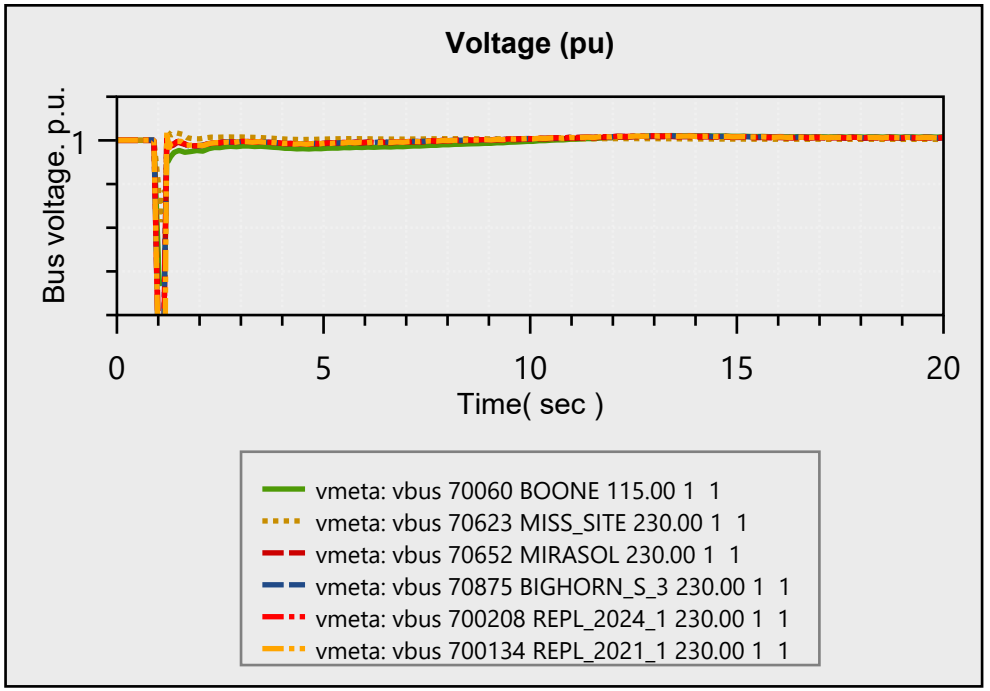

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

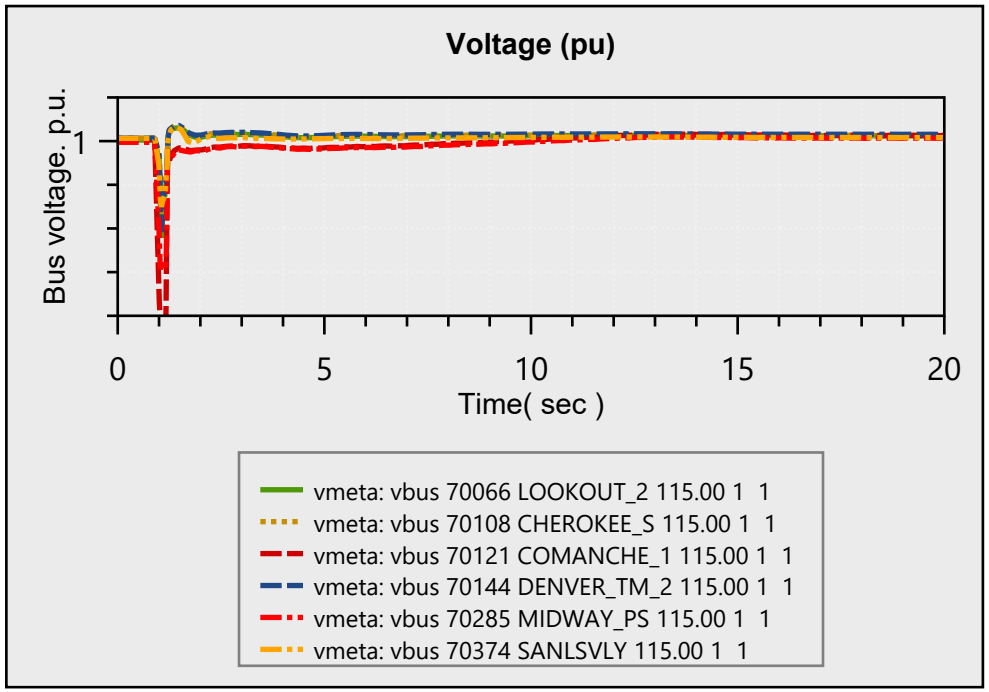

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

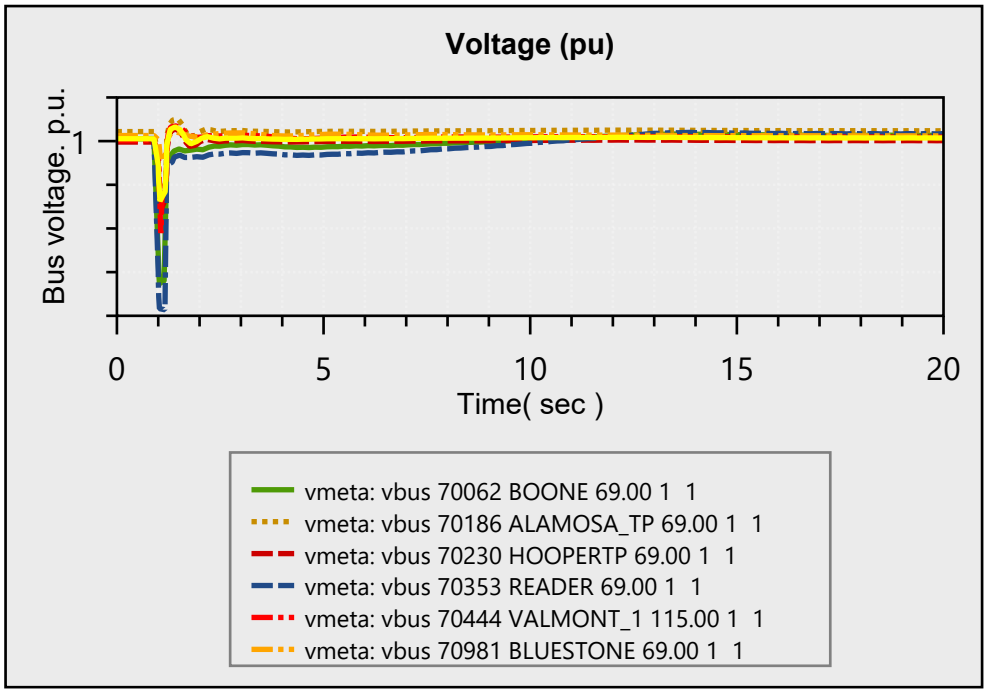

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

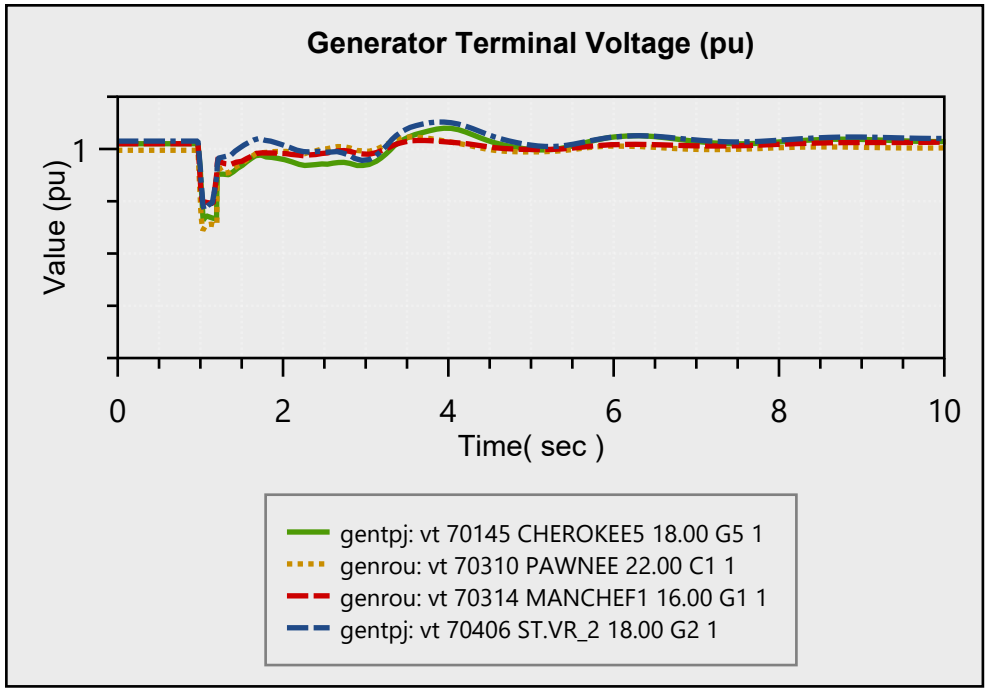

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

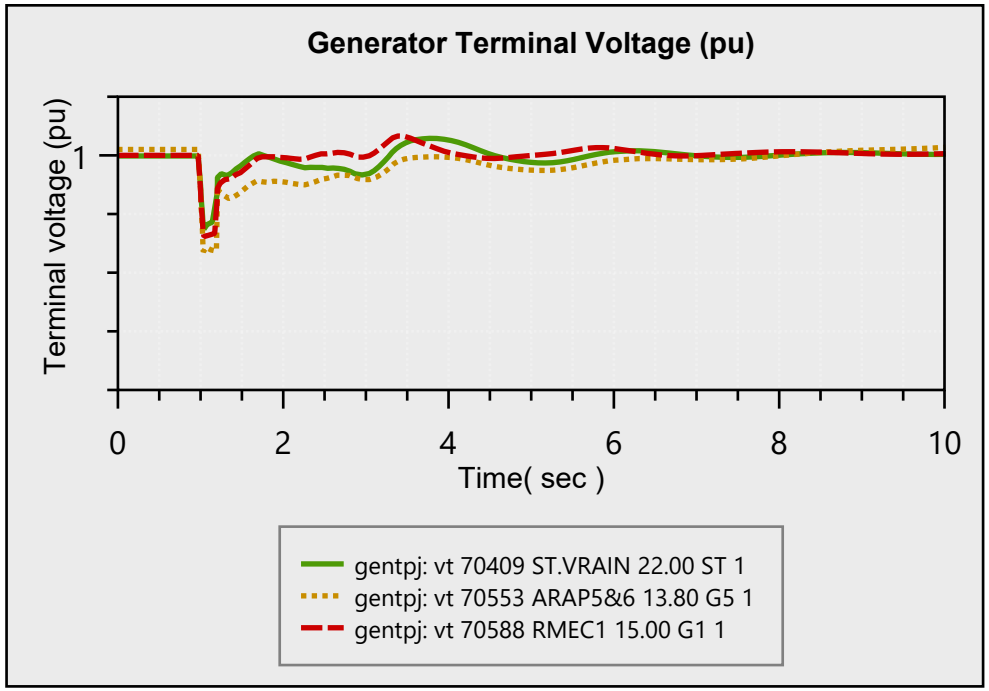

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

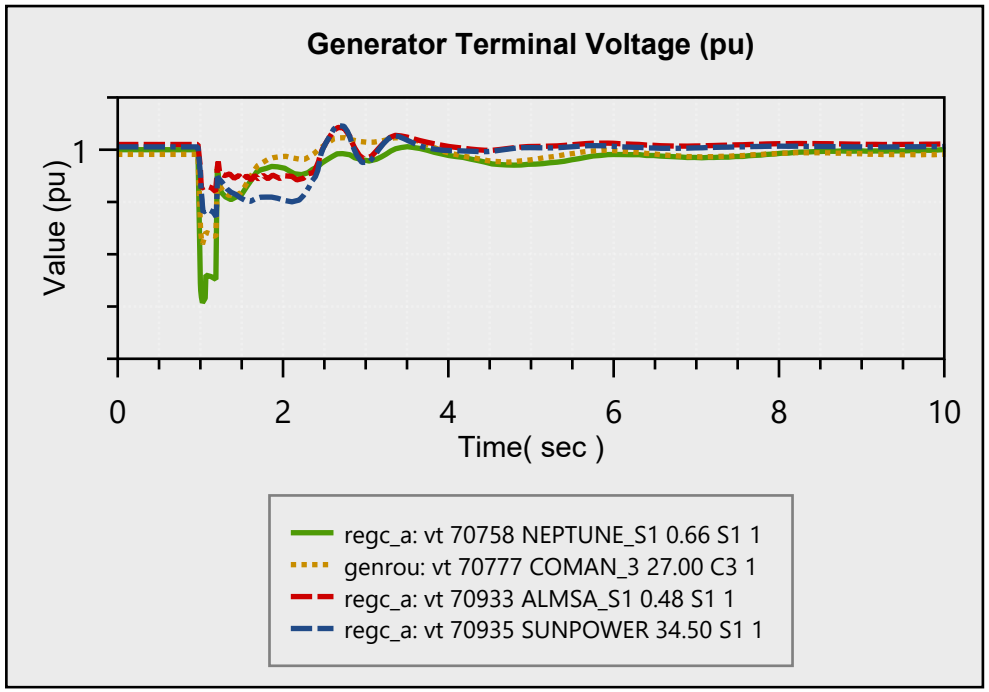

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

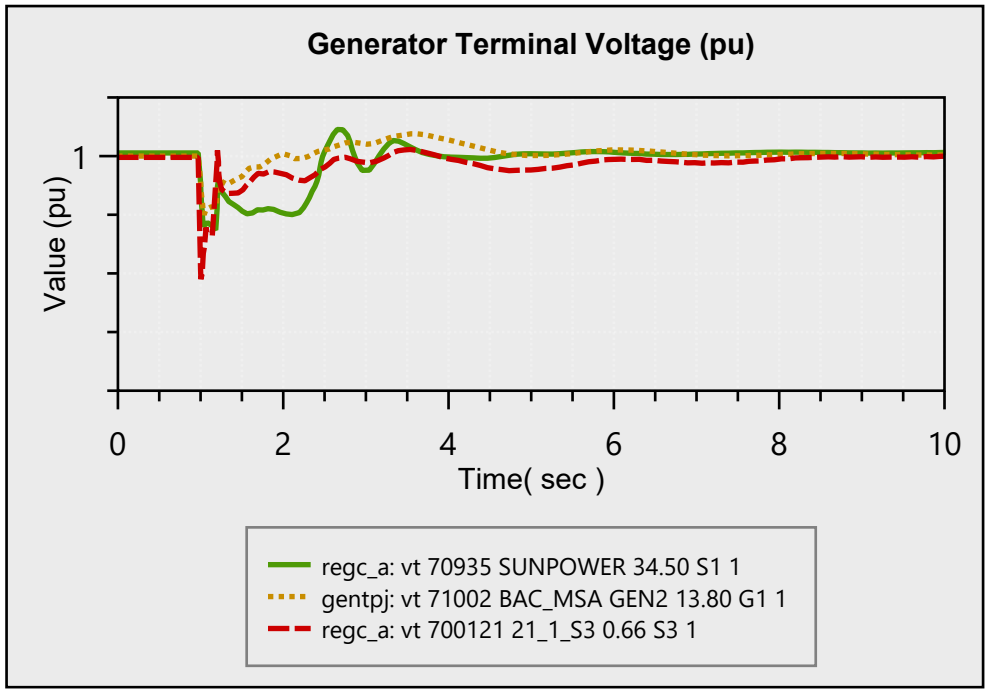

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

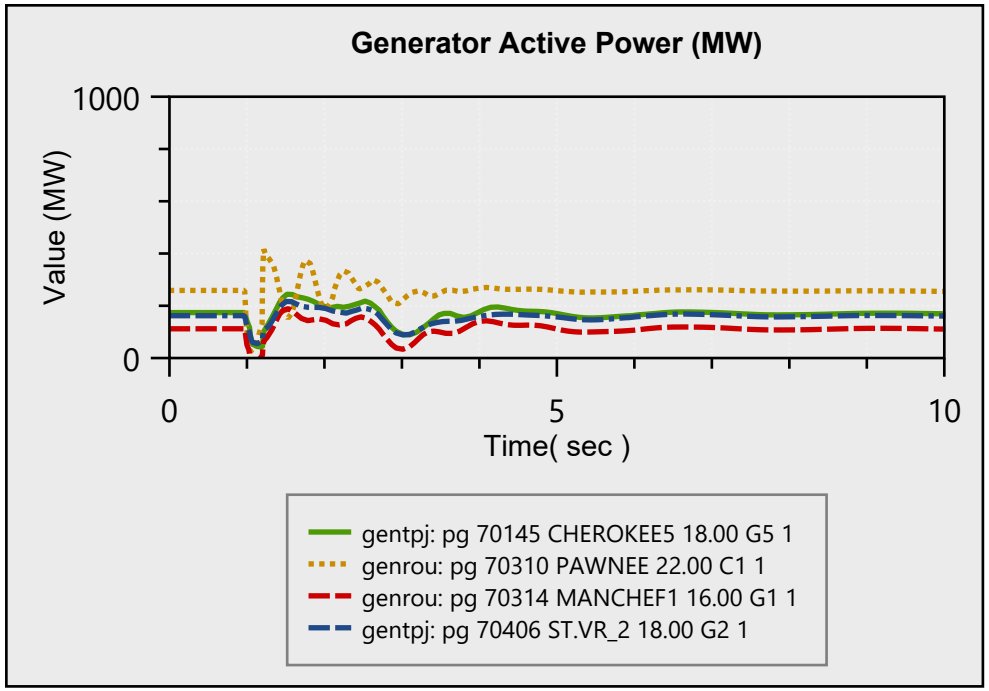

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

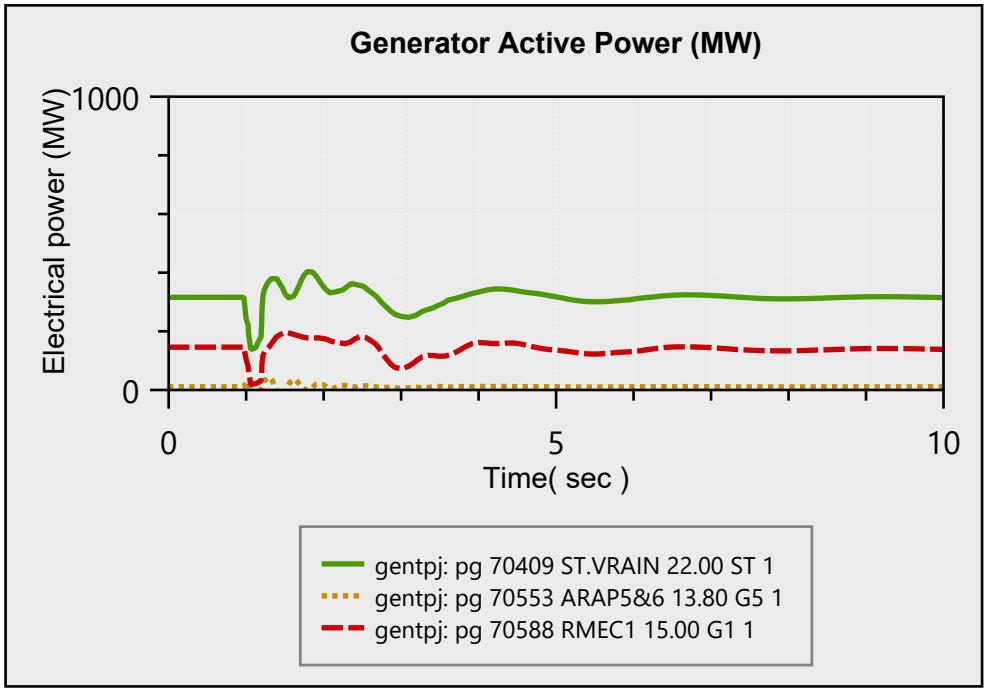

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

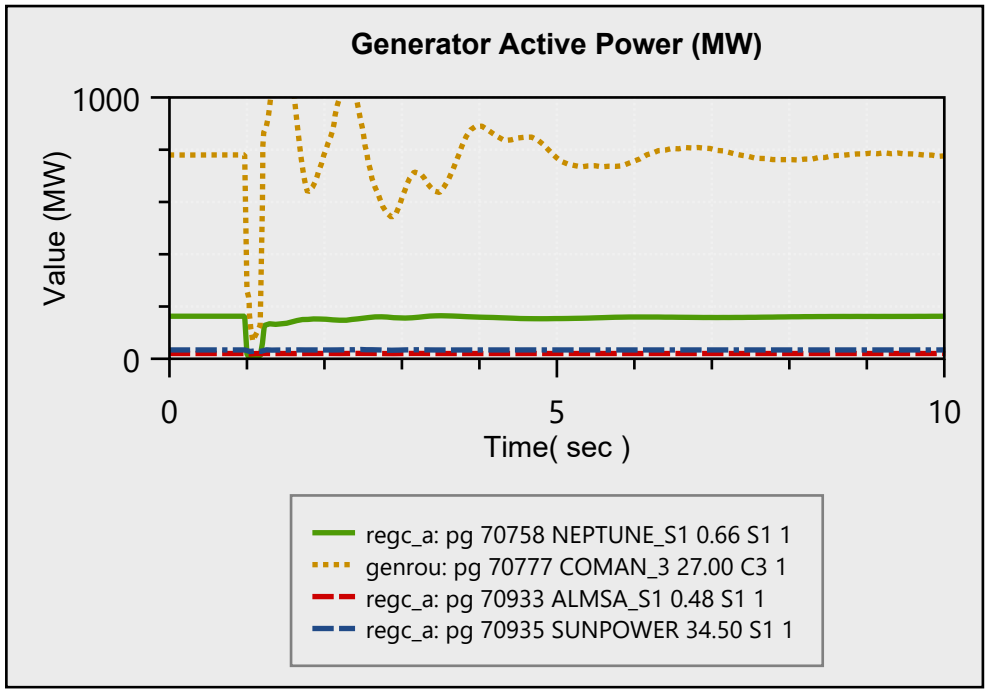

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

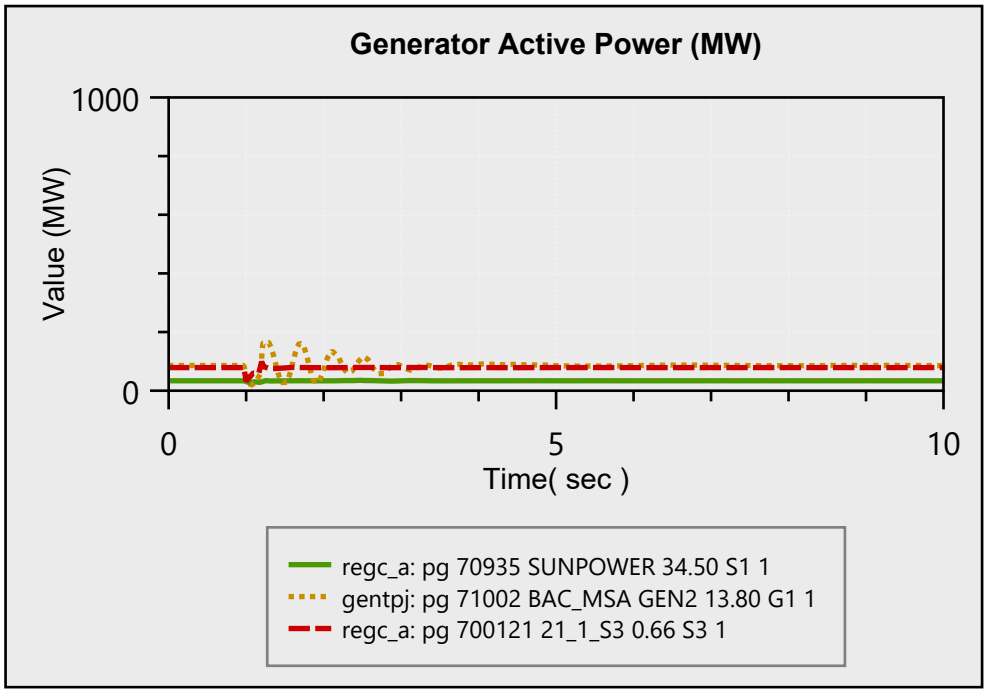

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

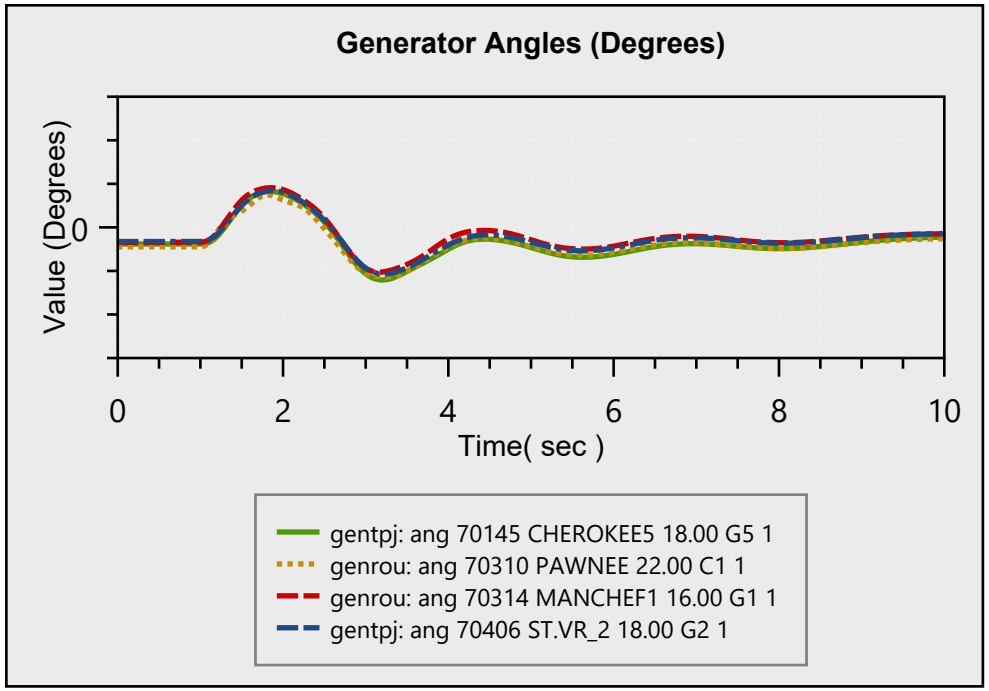

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

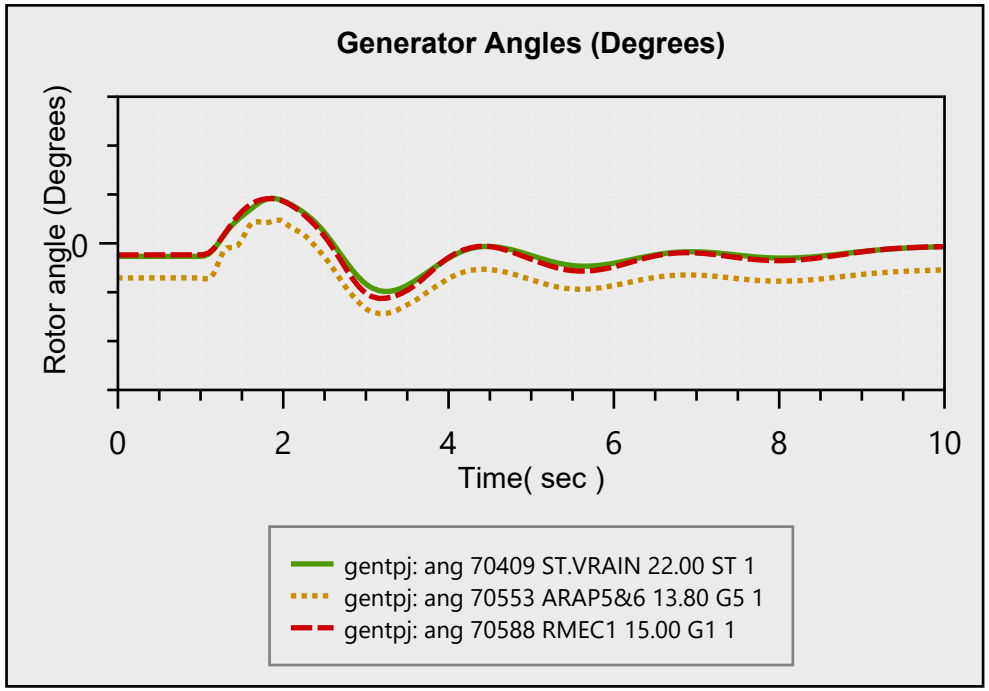

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

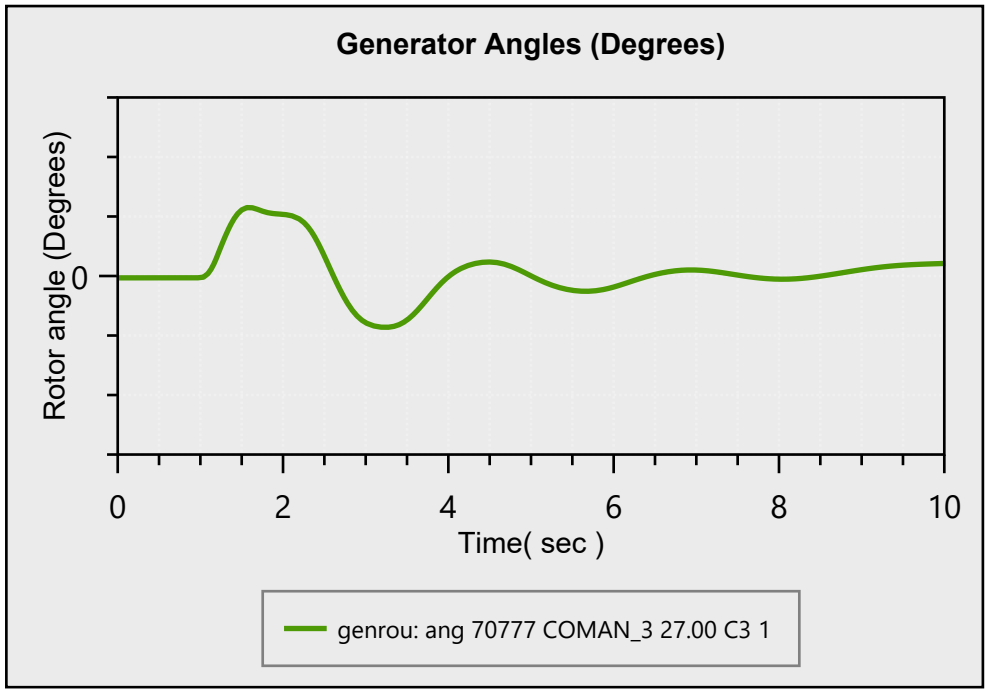

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

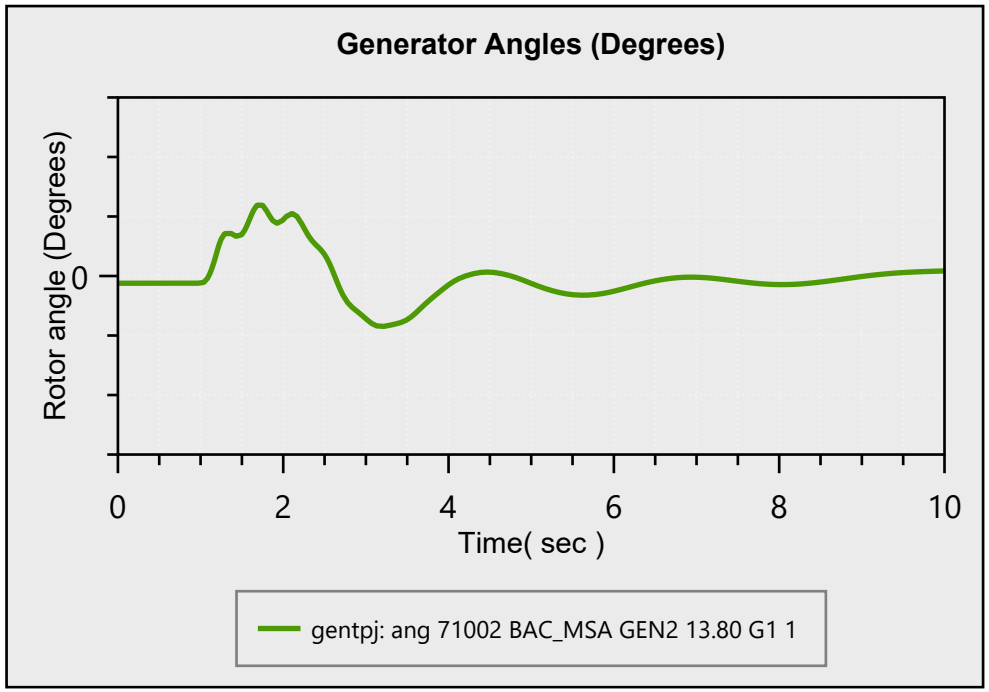

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

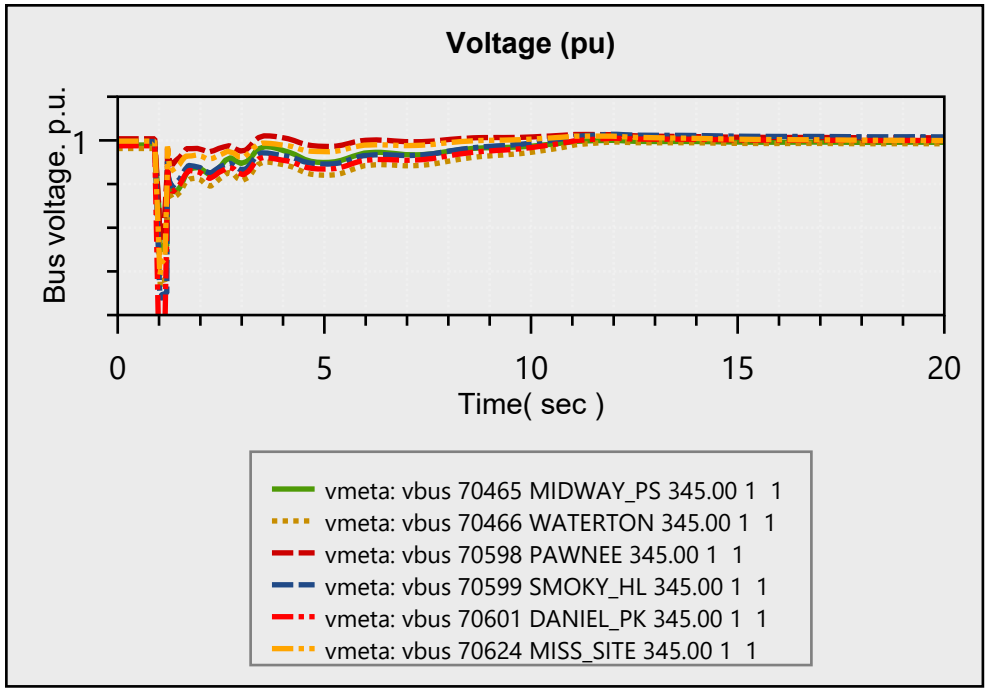

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

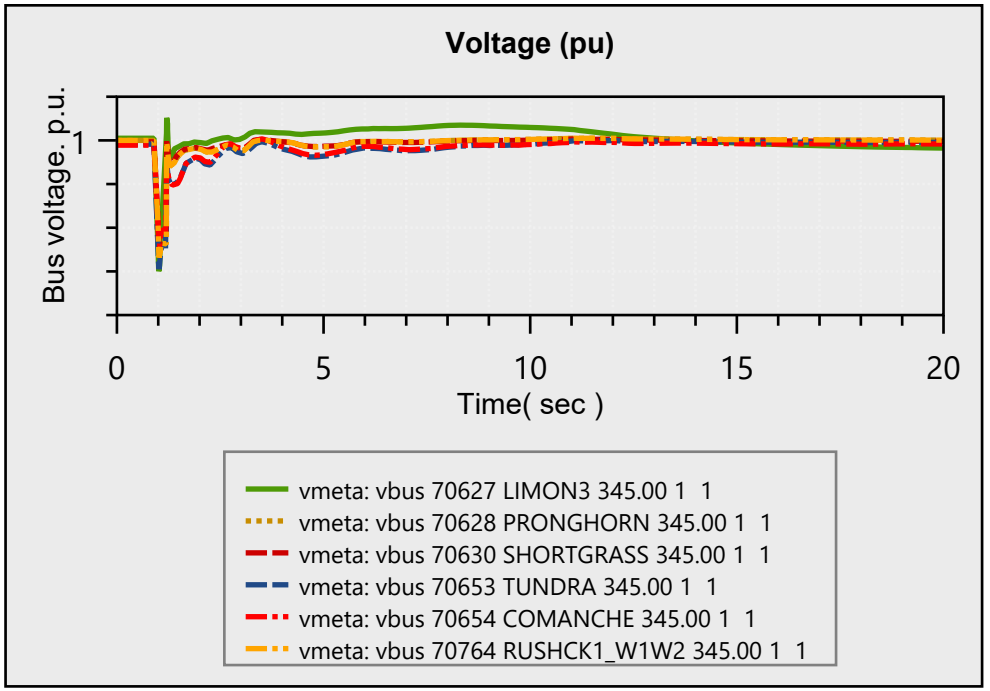

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

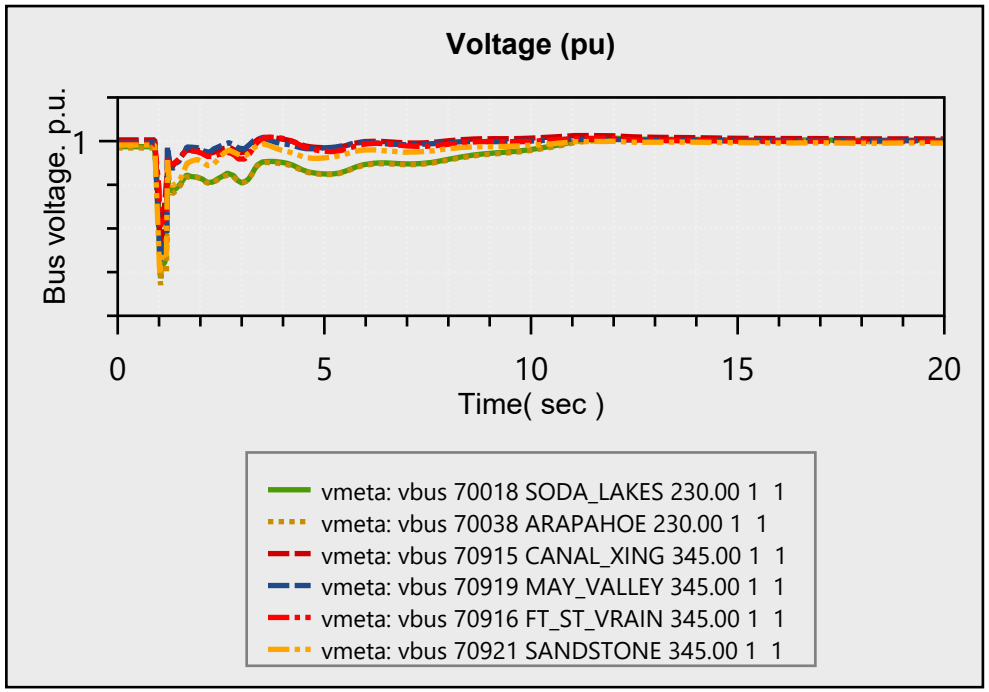

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

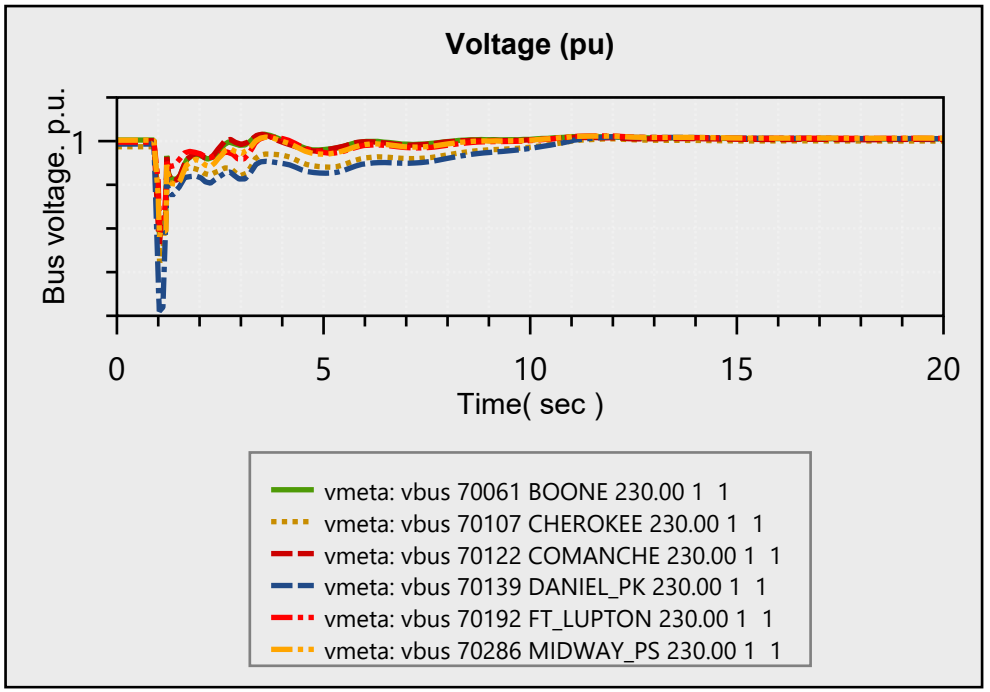

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

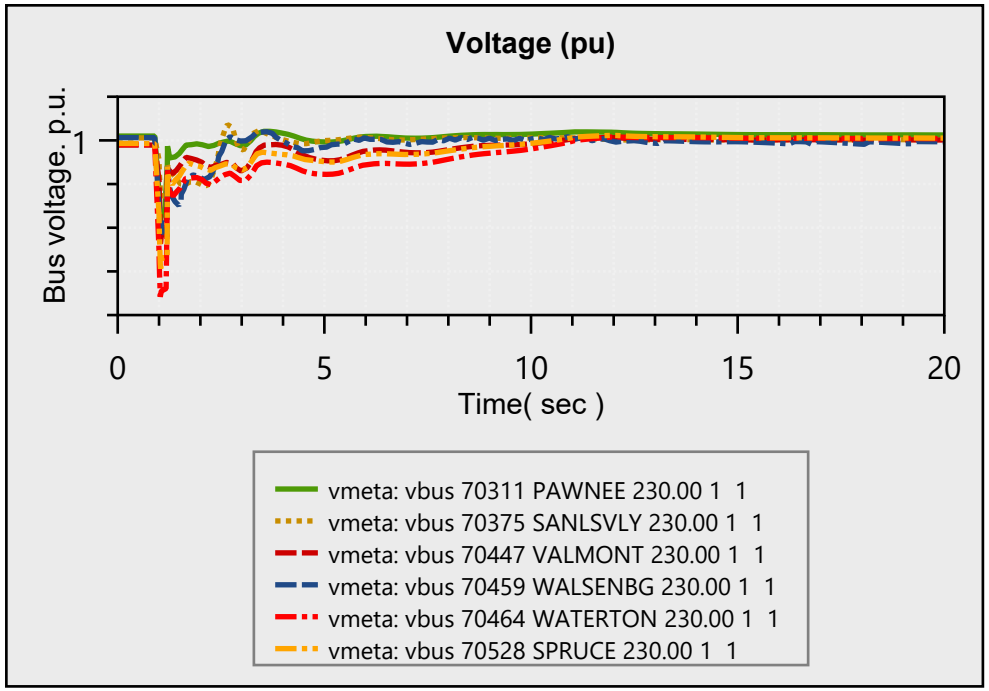

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

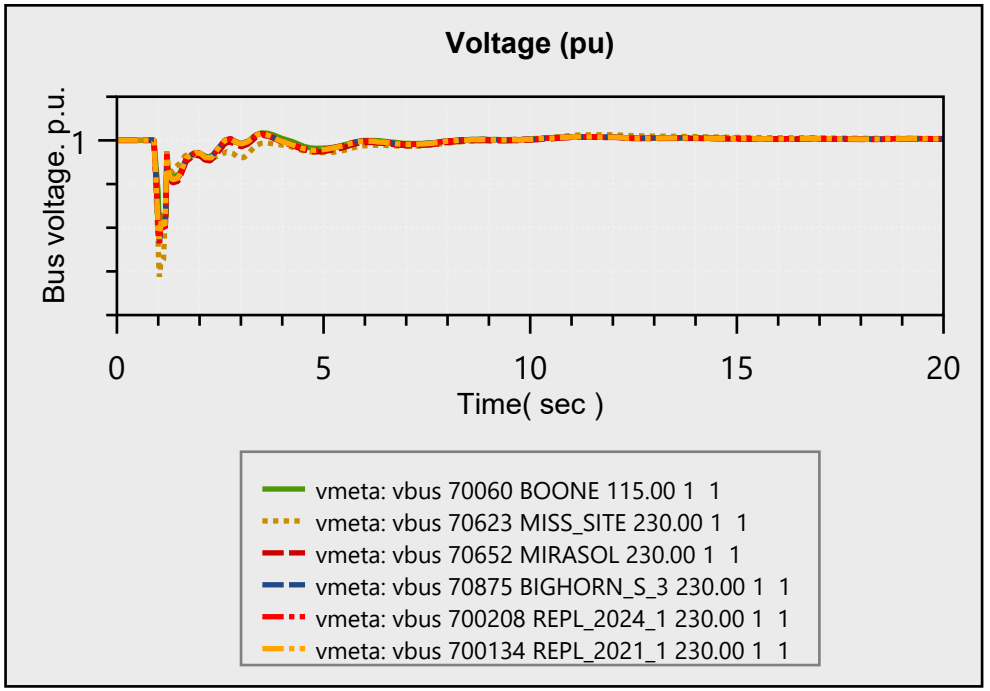

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

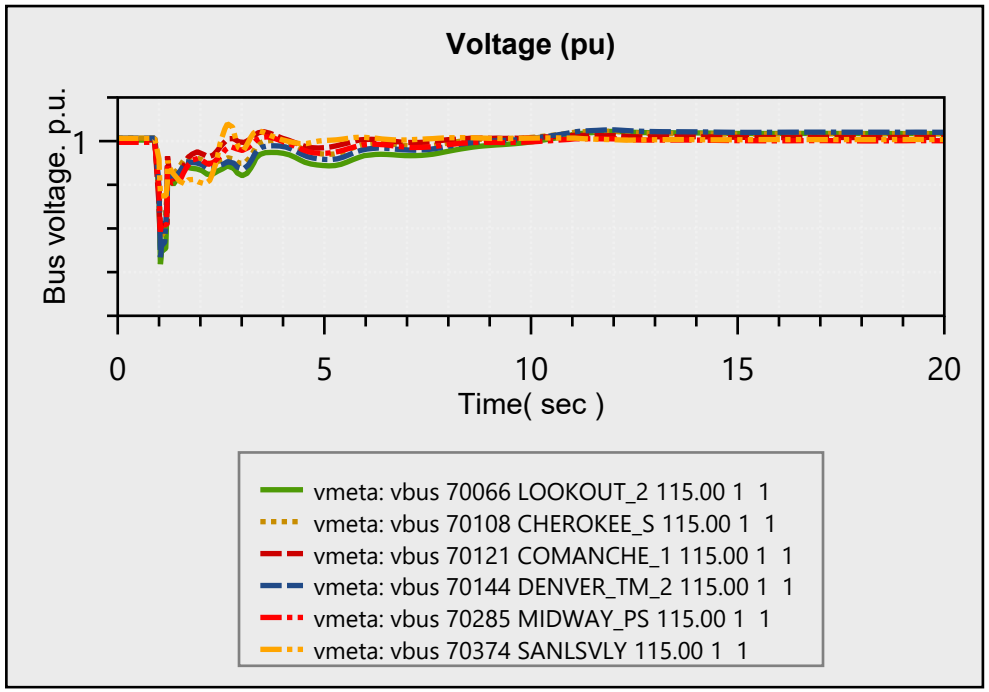

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

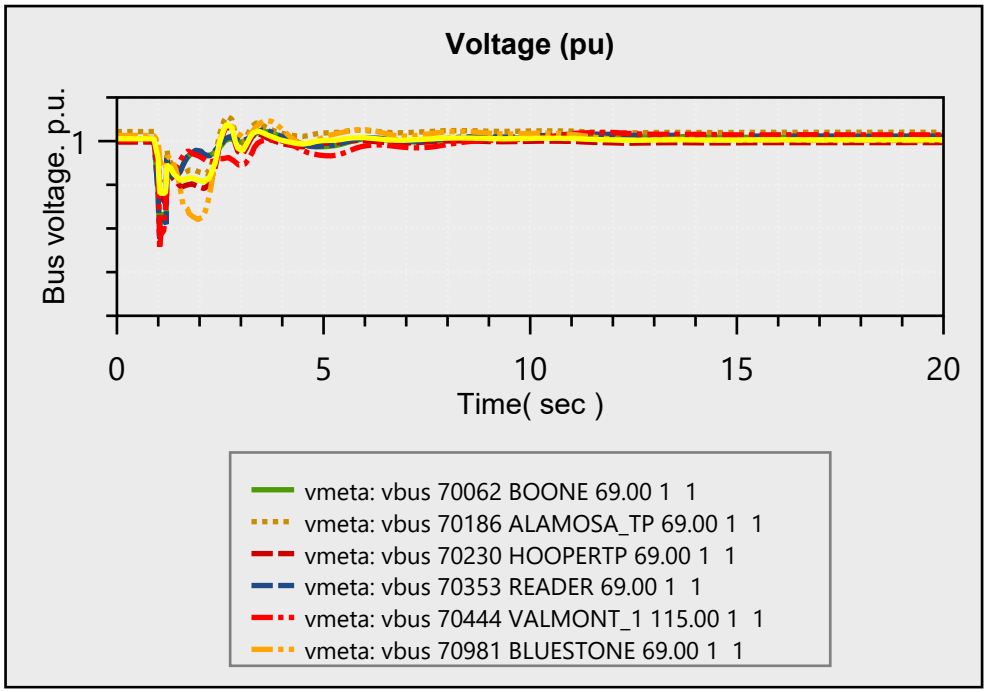

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

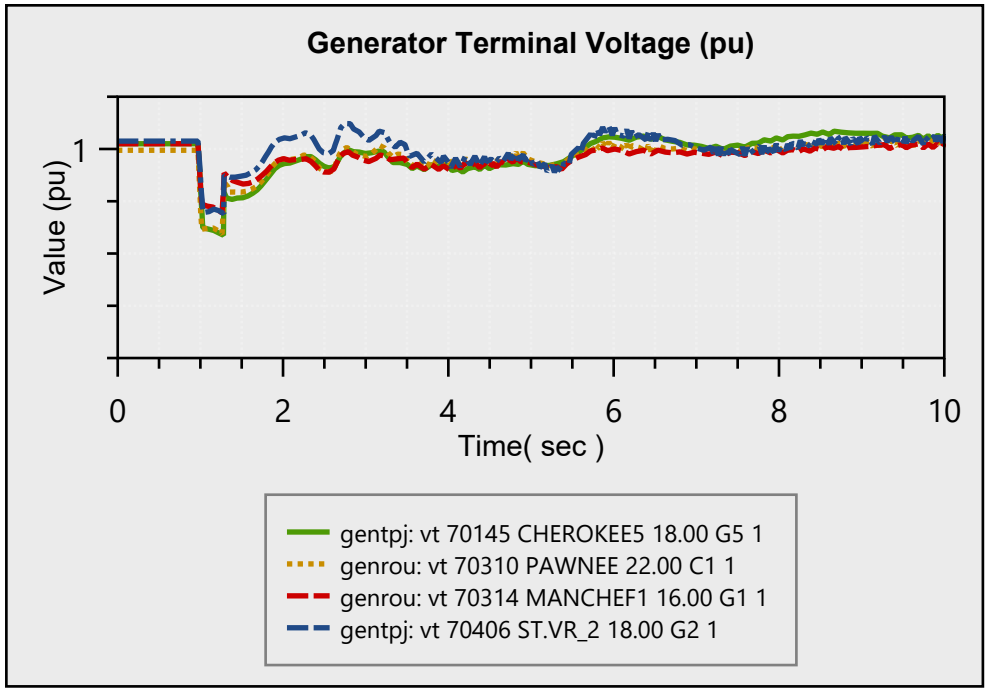

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

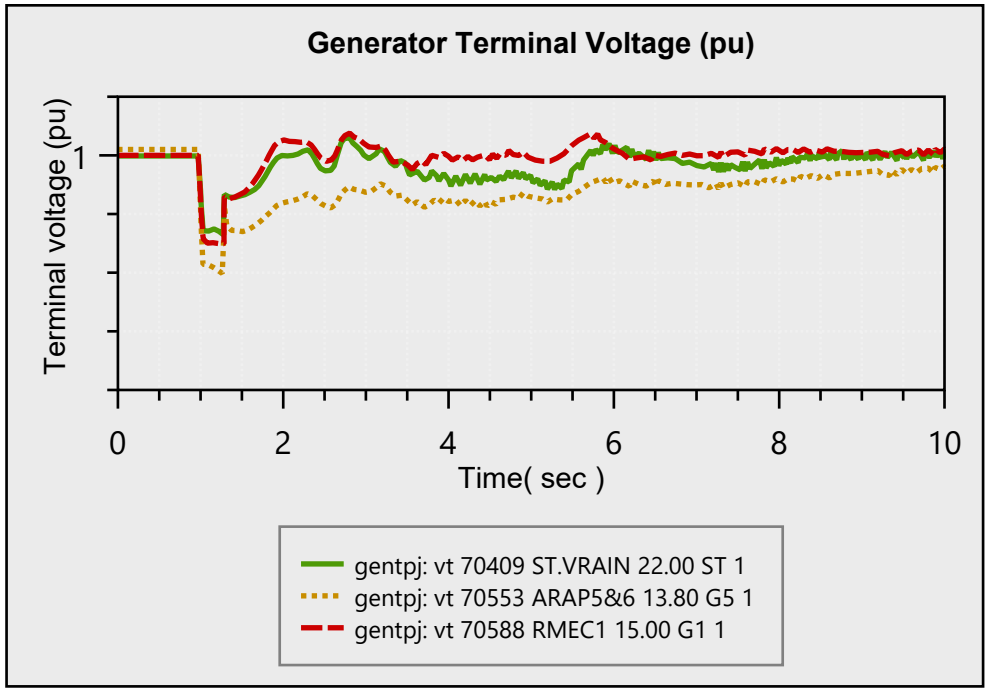

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

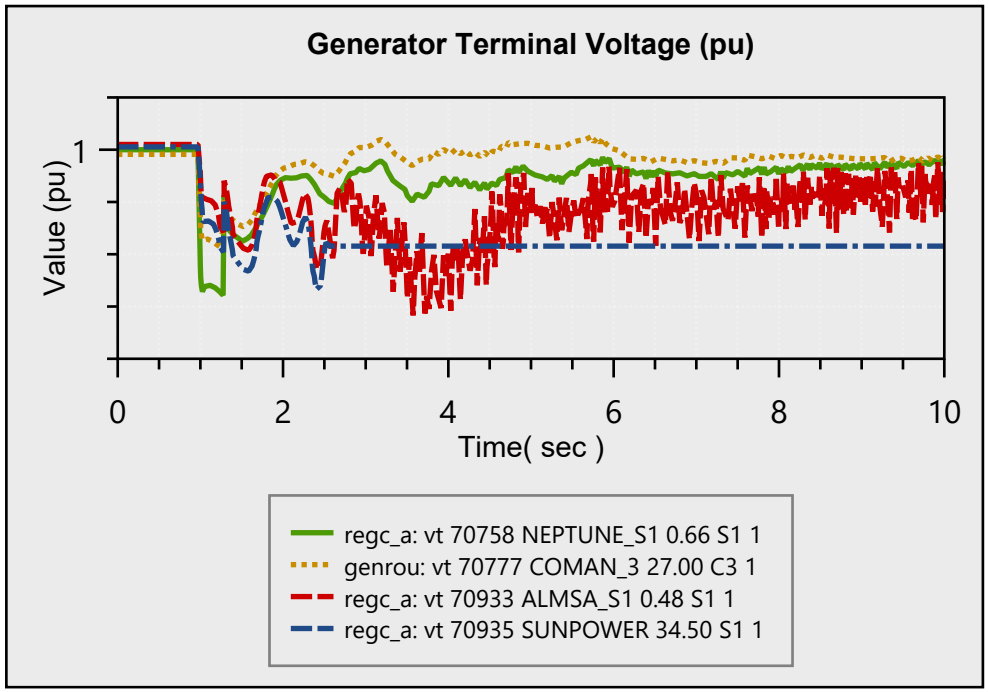

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

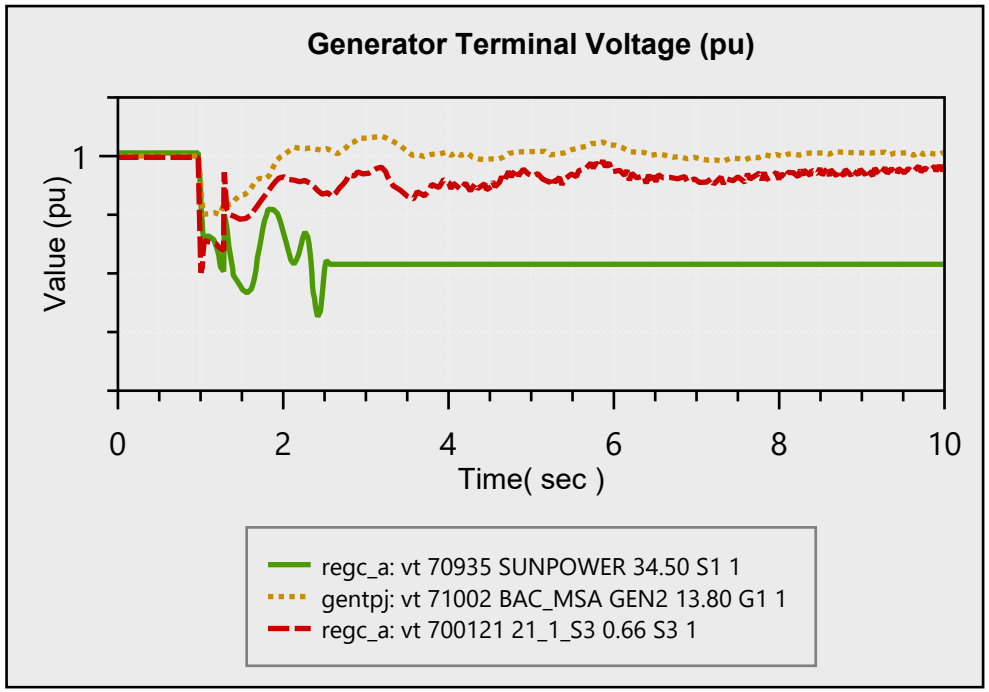

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

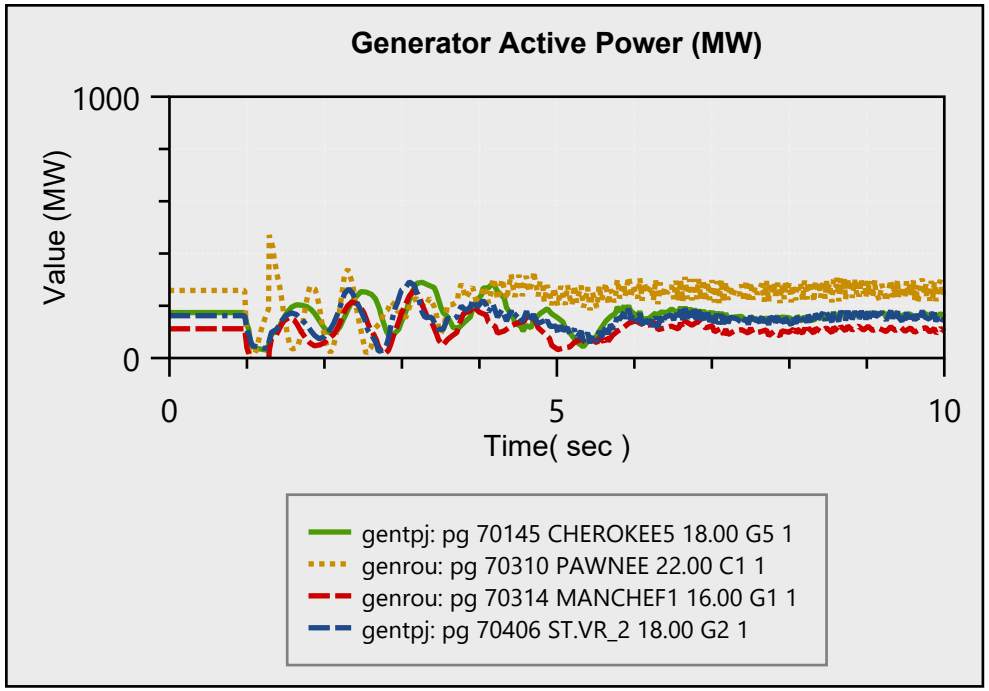

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

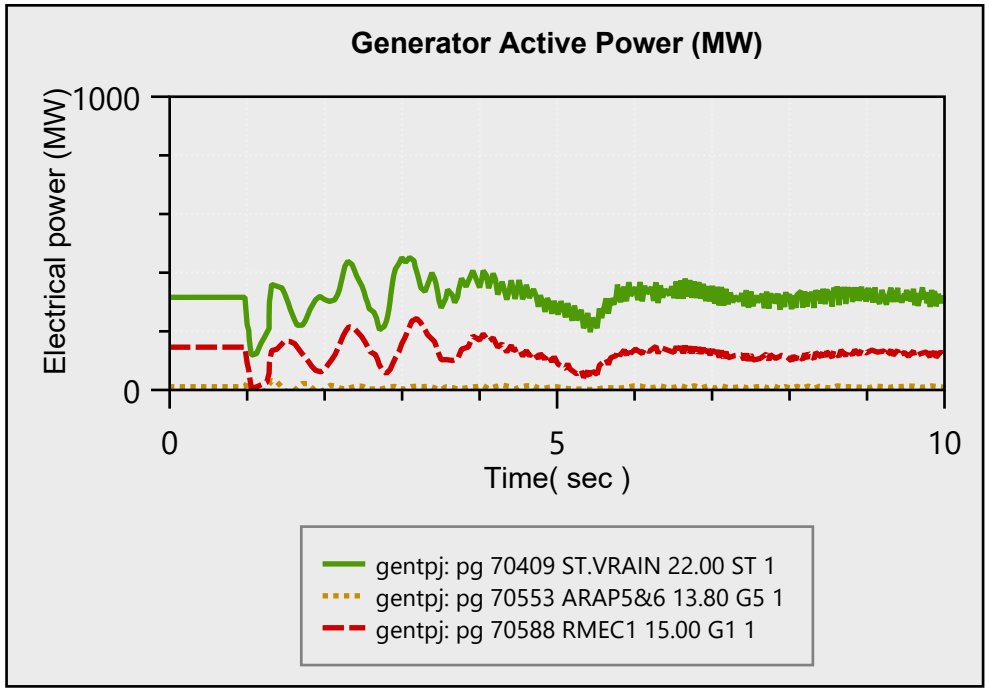

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

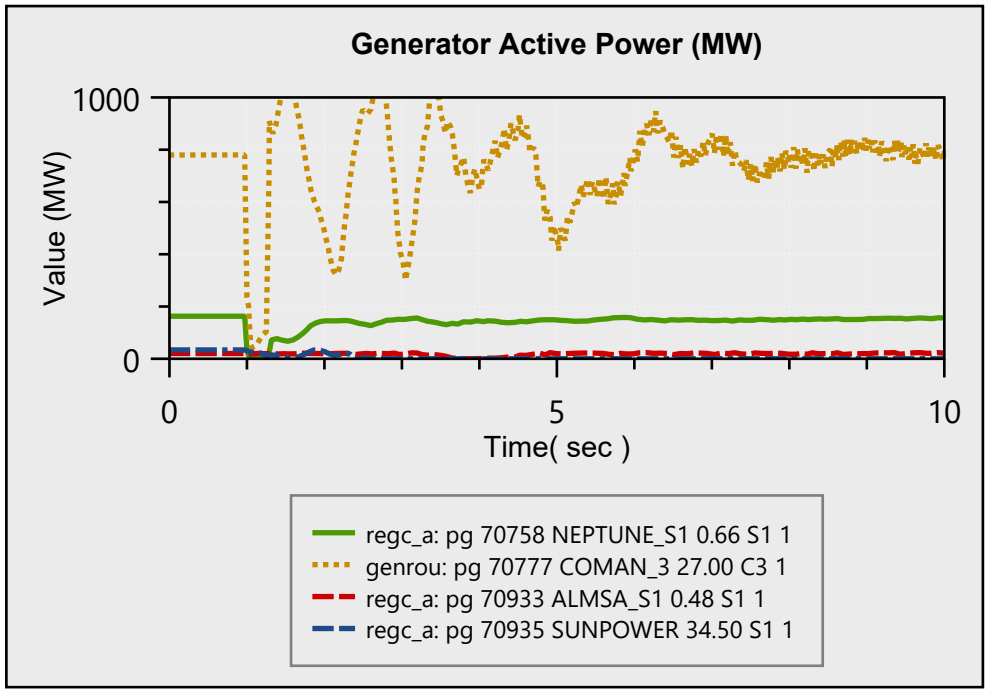

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

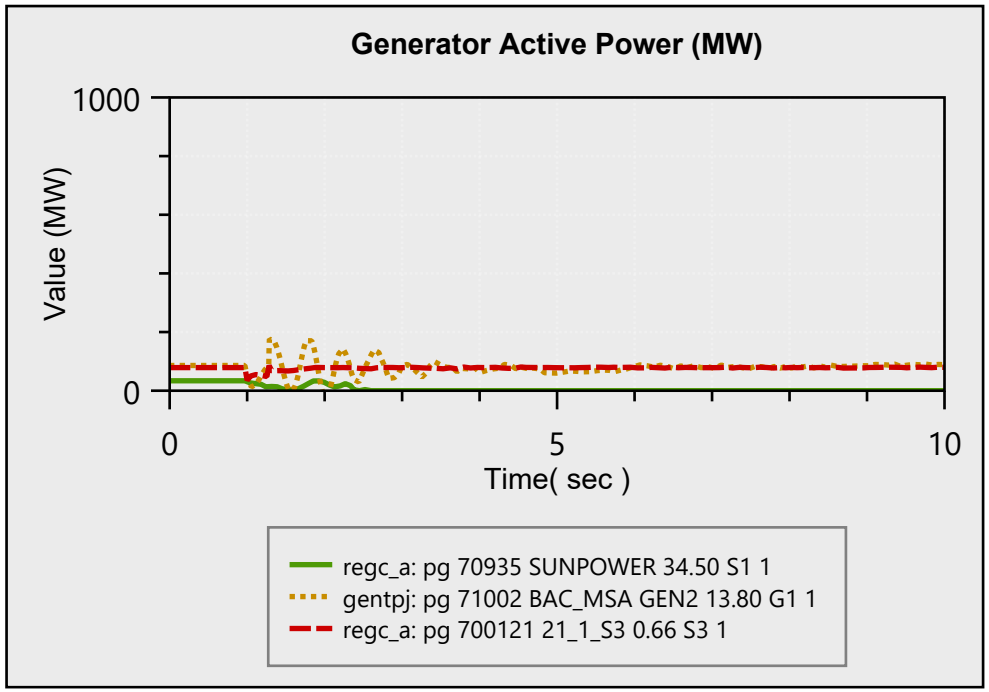

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

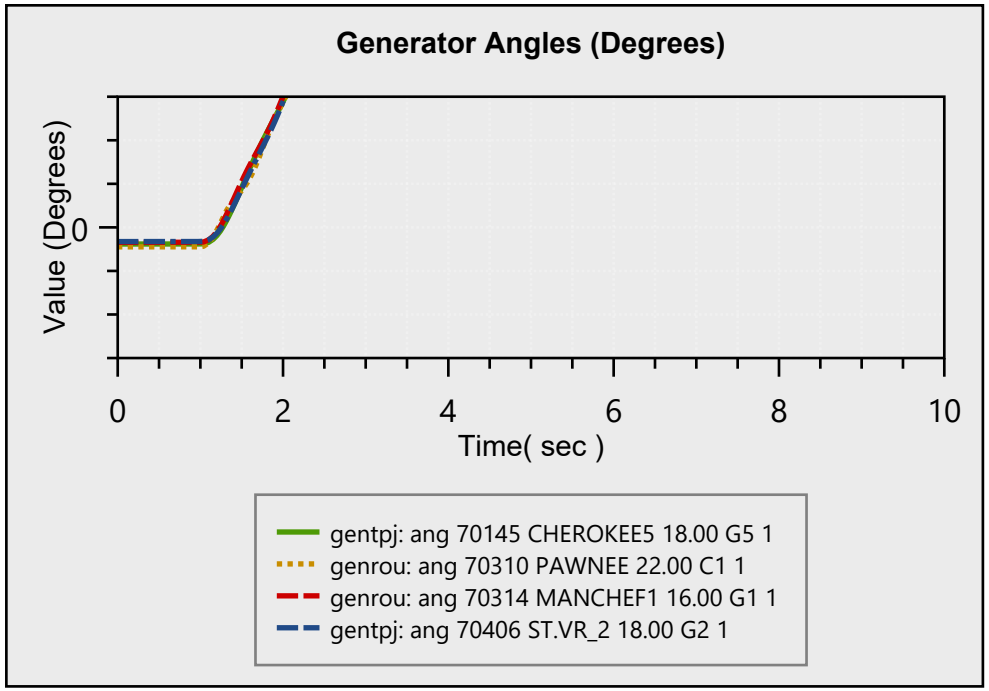

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

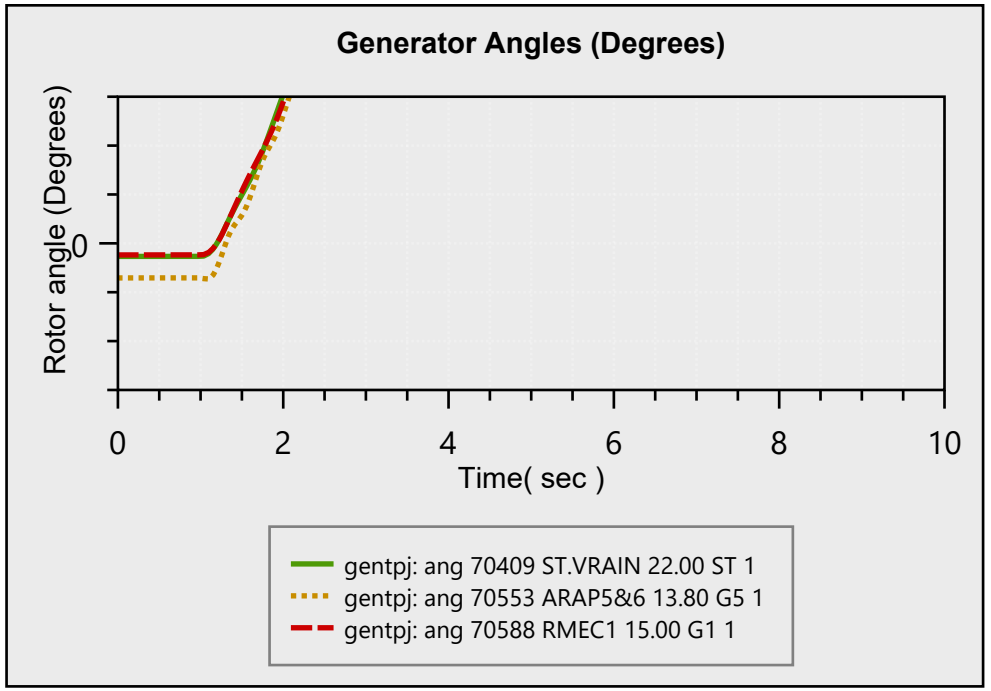

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

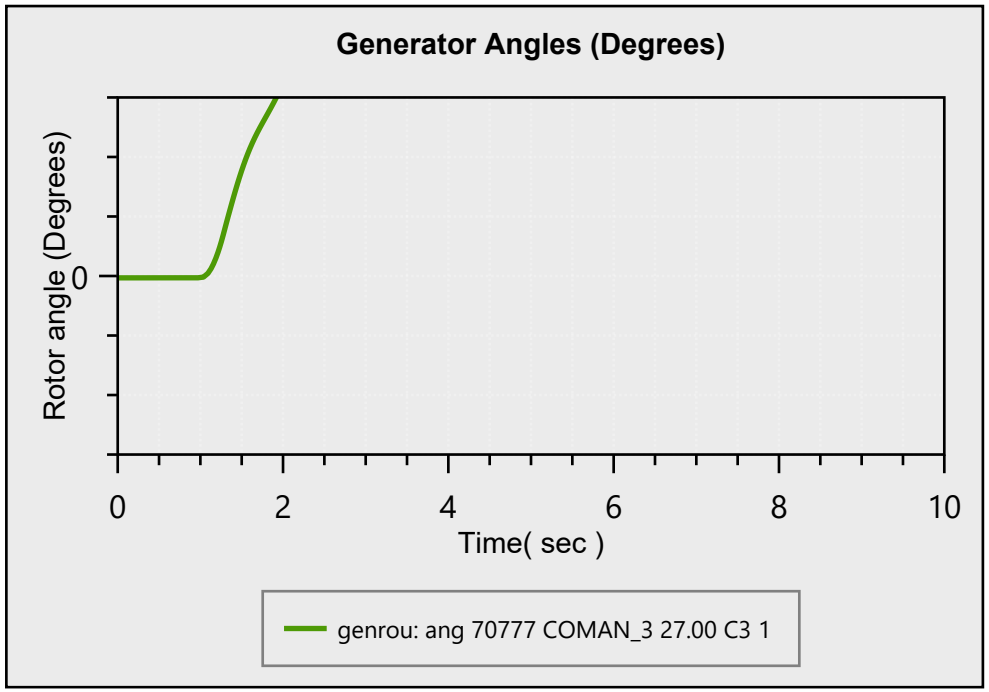

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

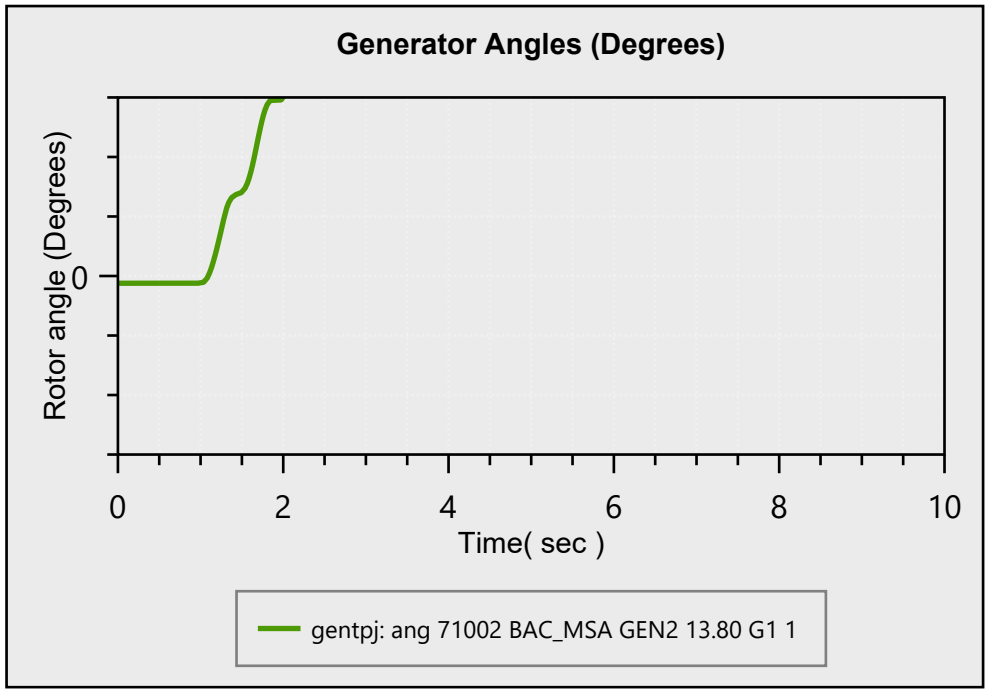

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

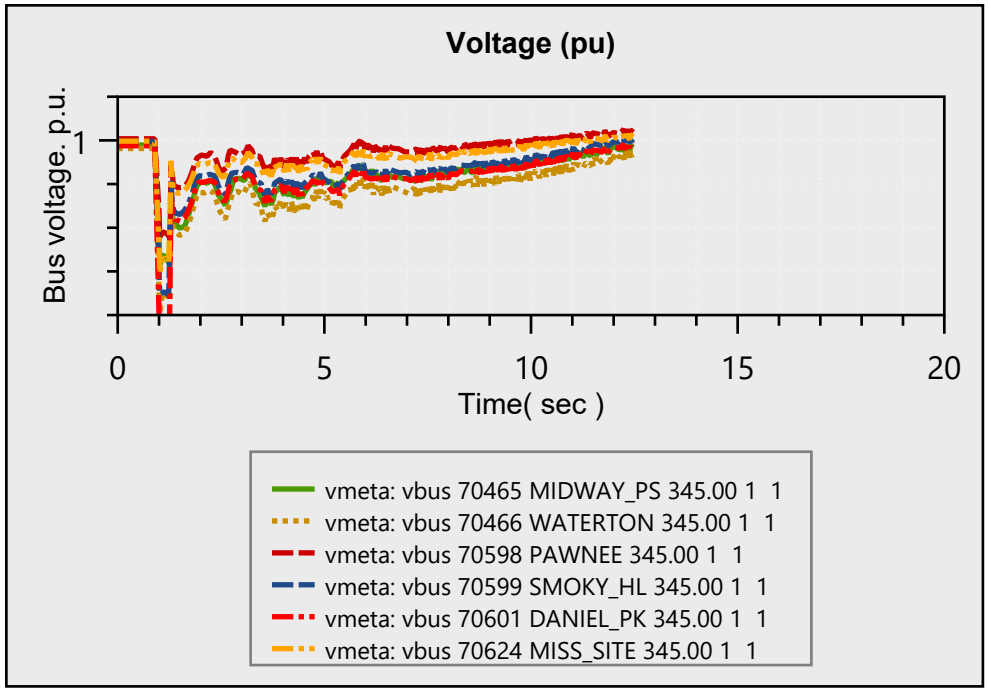

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

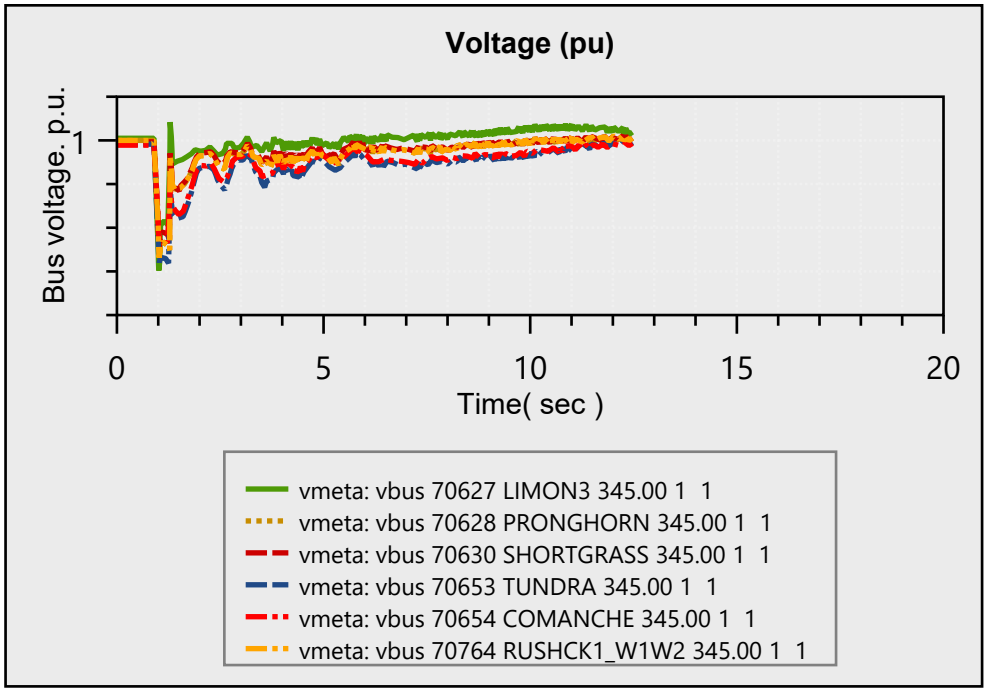

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

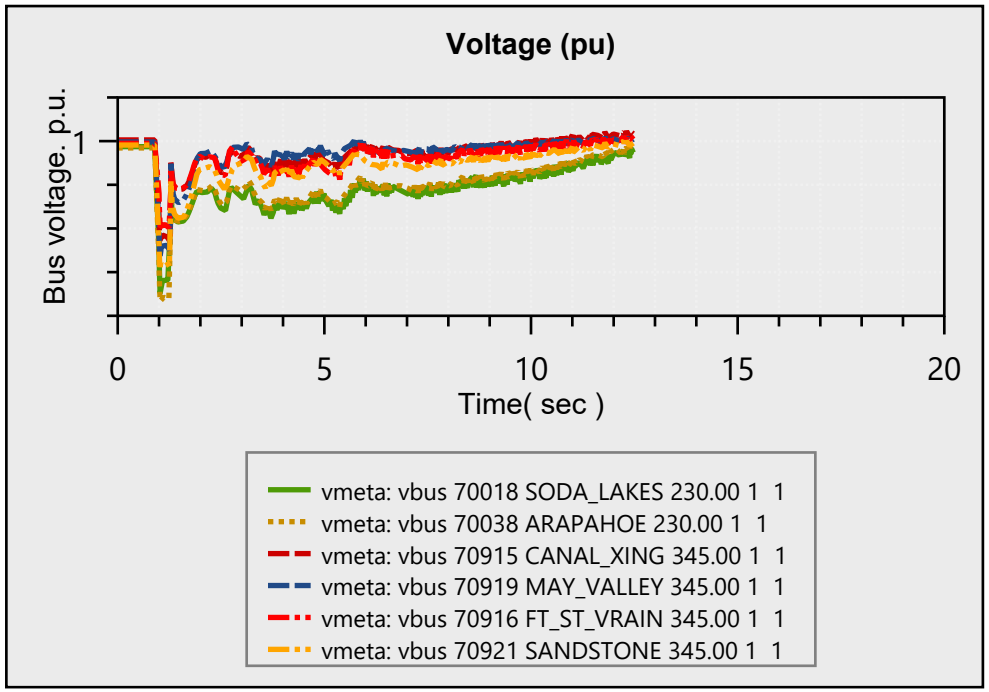

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

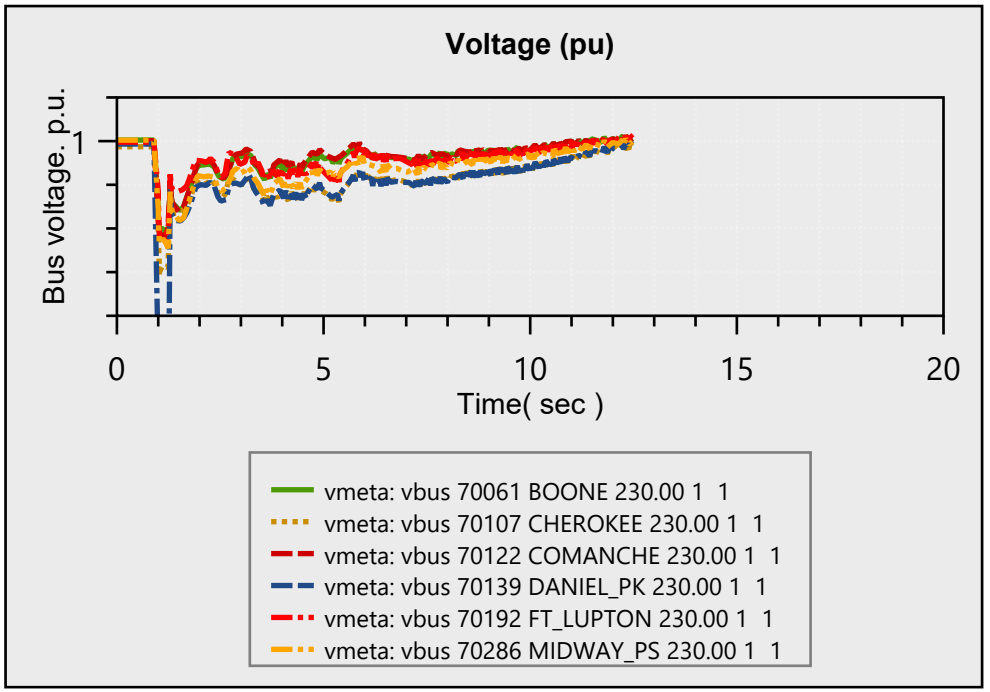

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

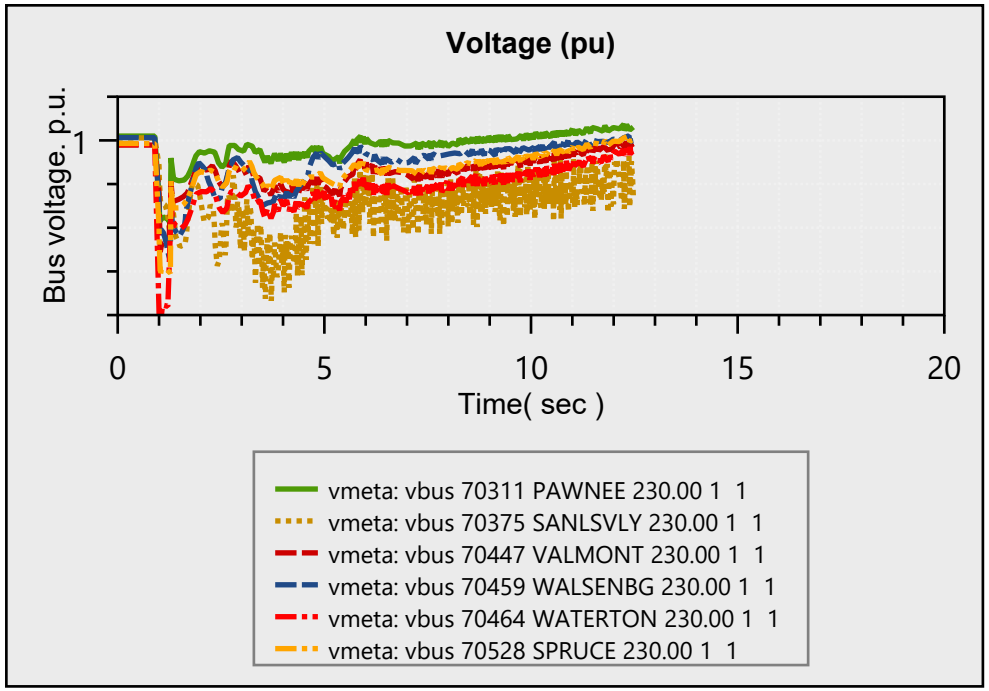

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

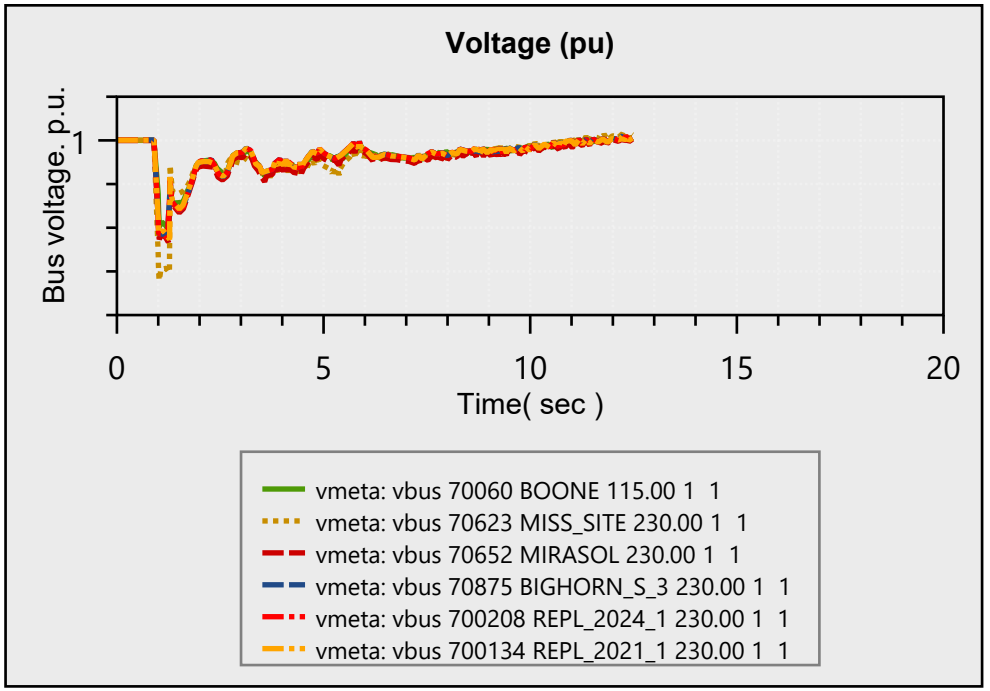

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

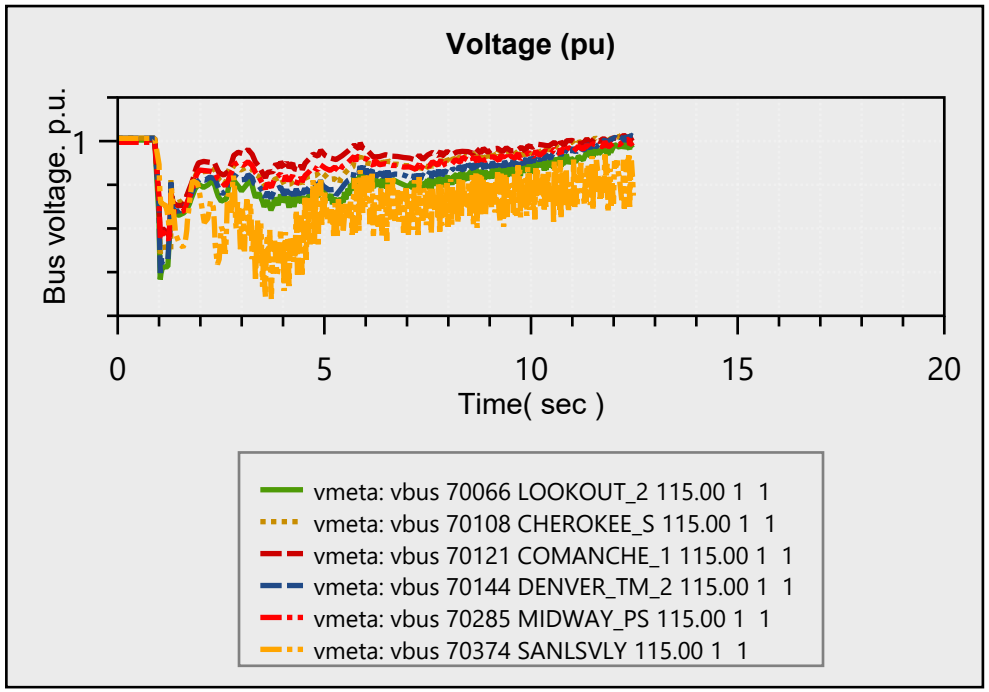

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

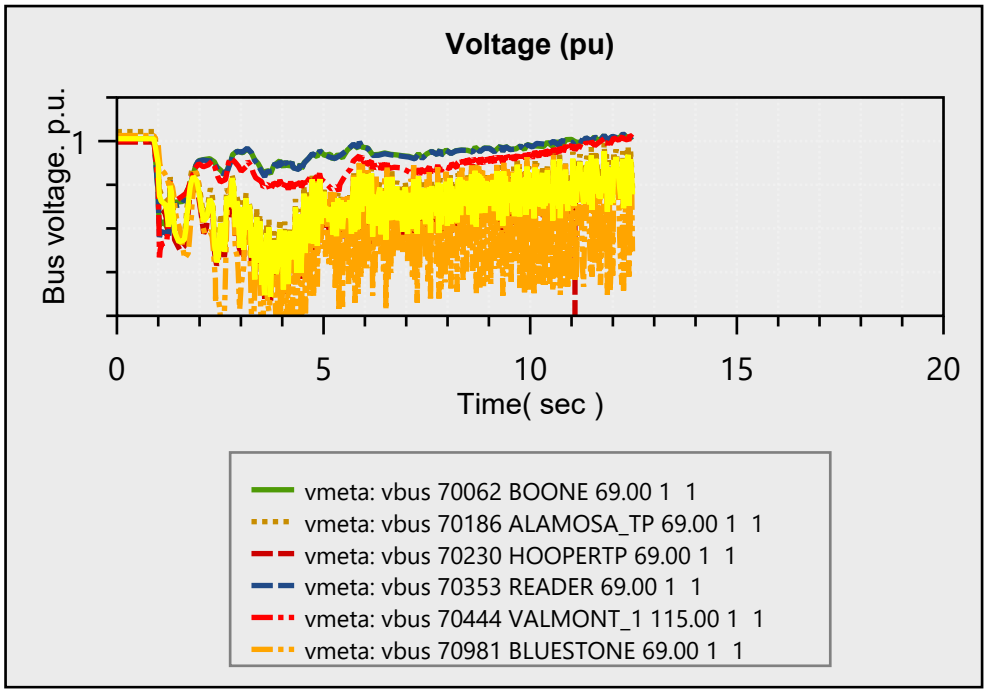

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

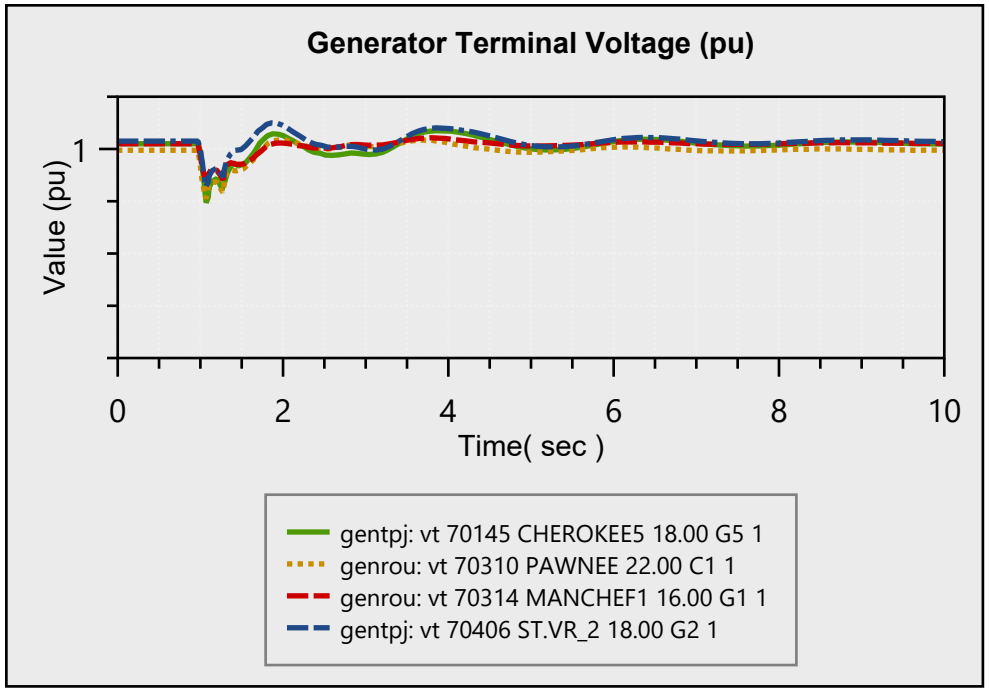

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

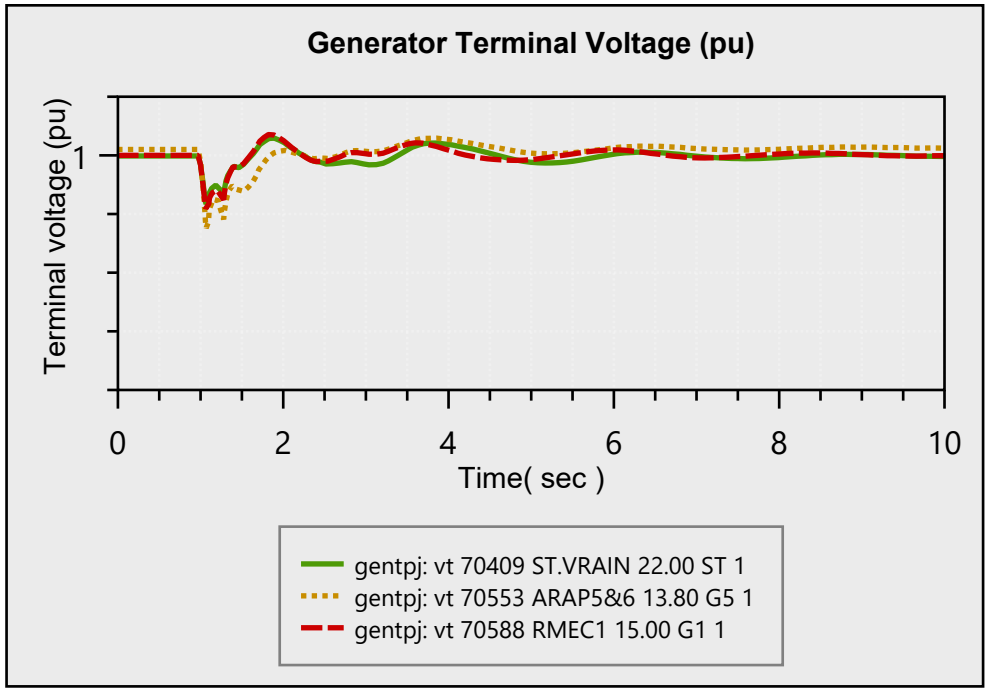

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

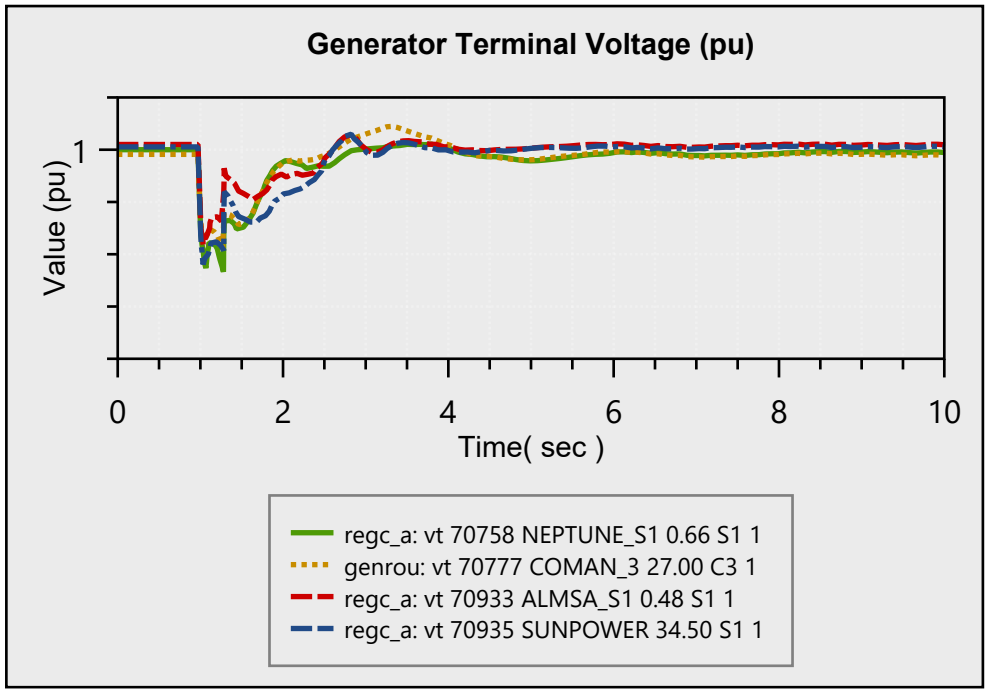

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

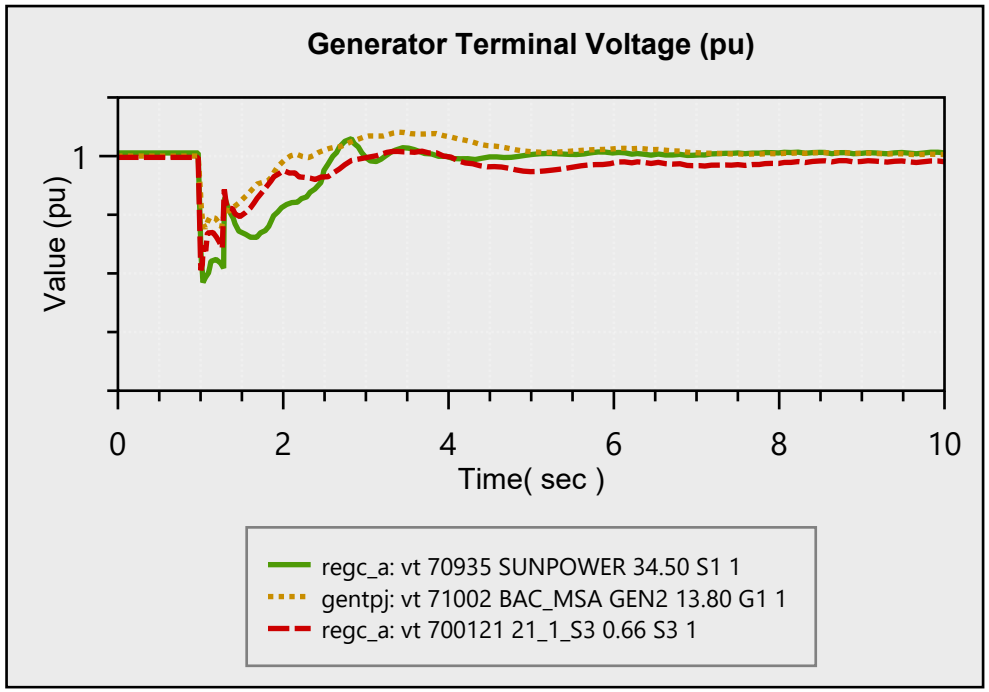

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

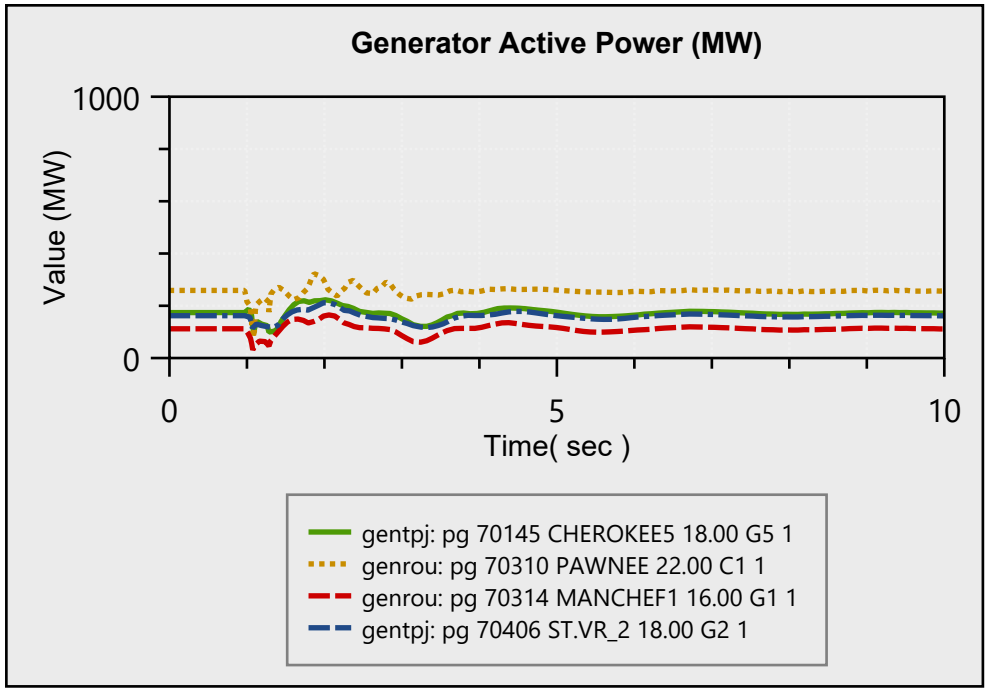

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

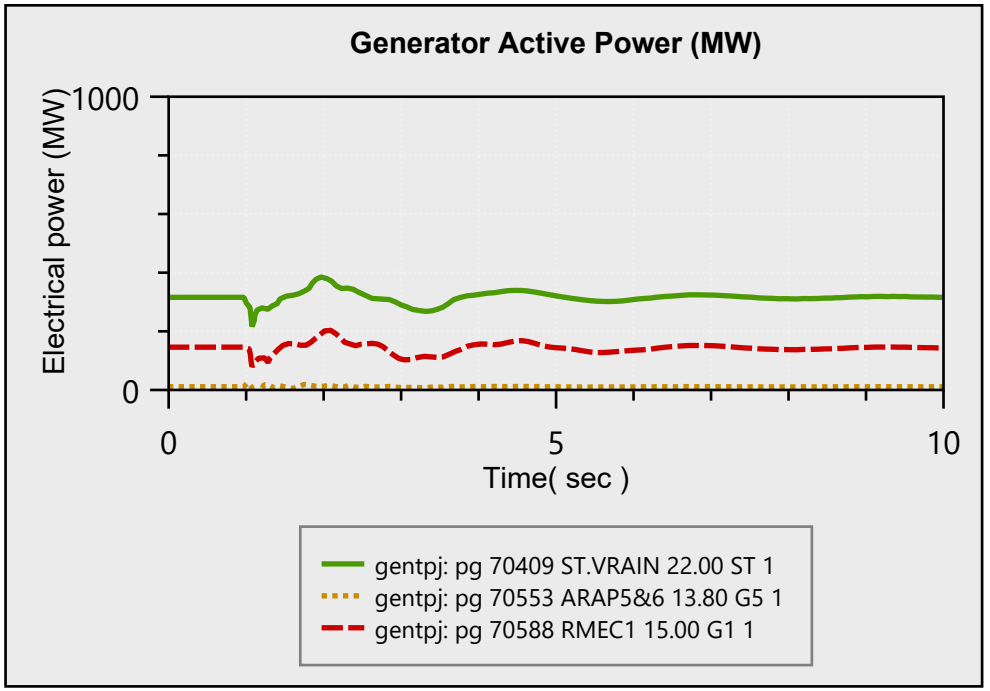

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

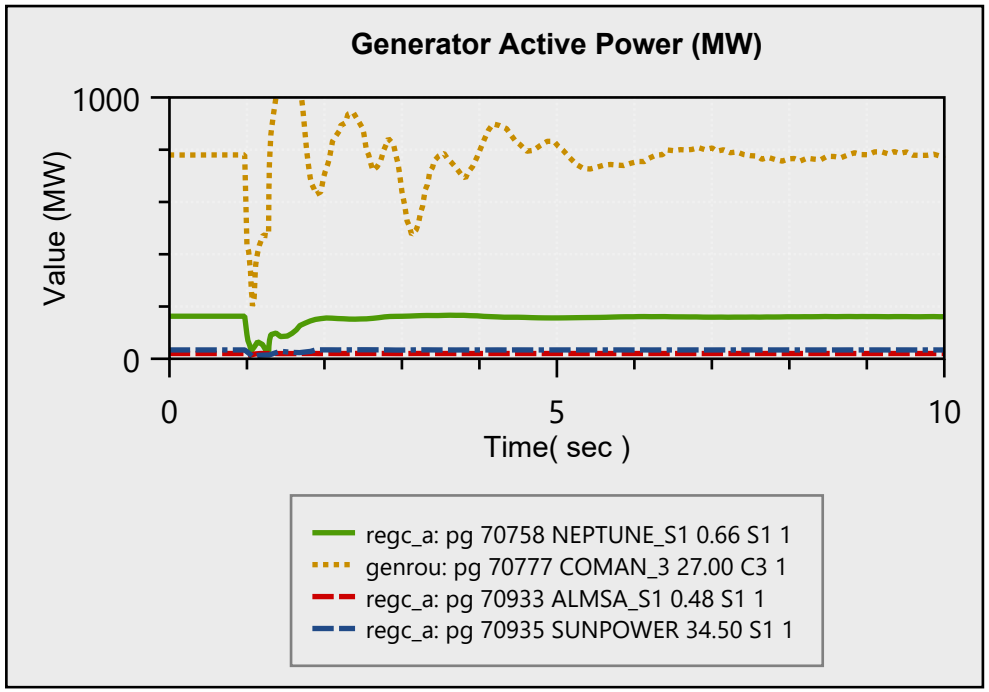

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

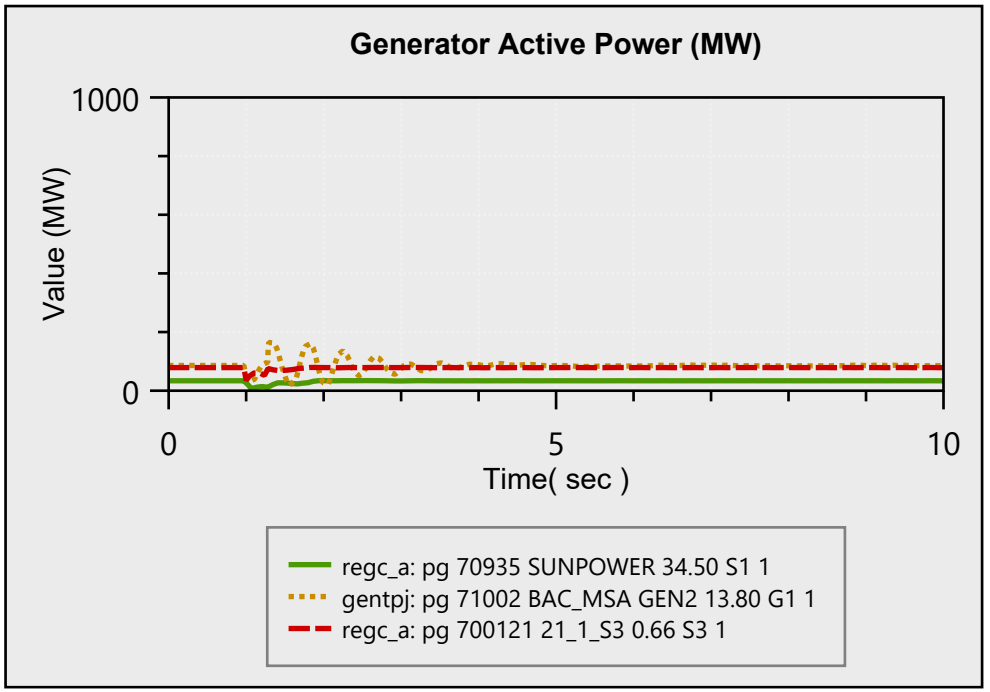

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

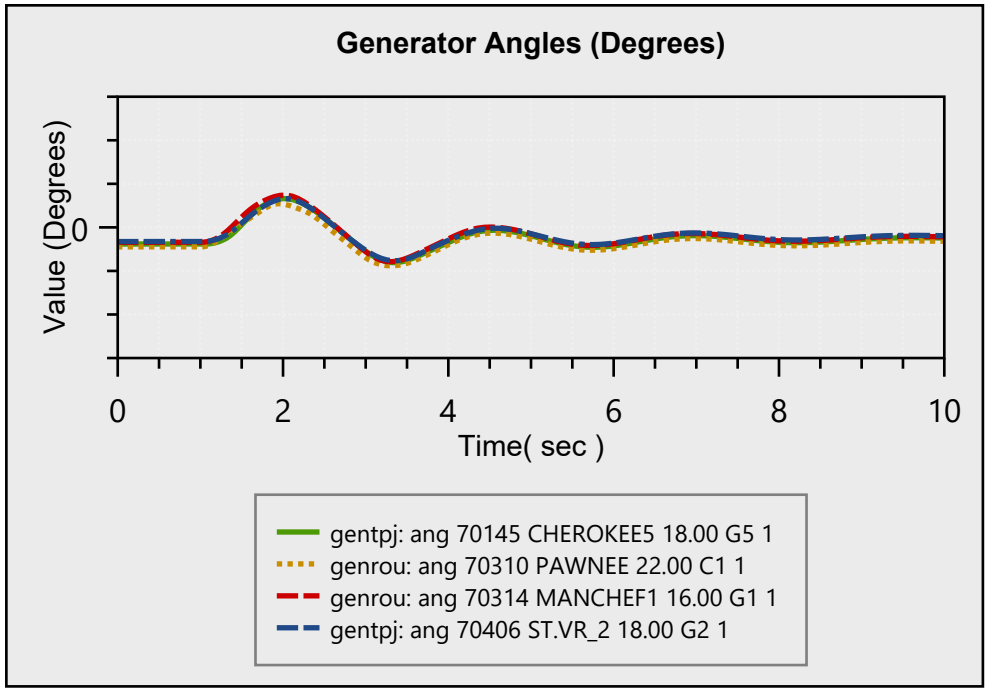

Generator Active Power (MW)
1000
Value (MW)
0
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

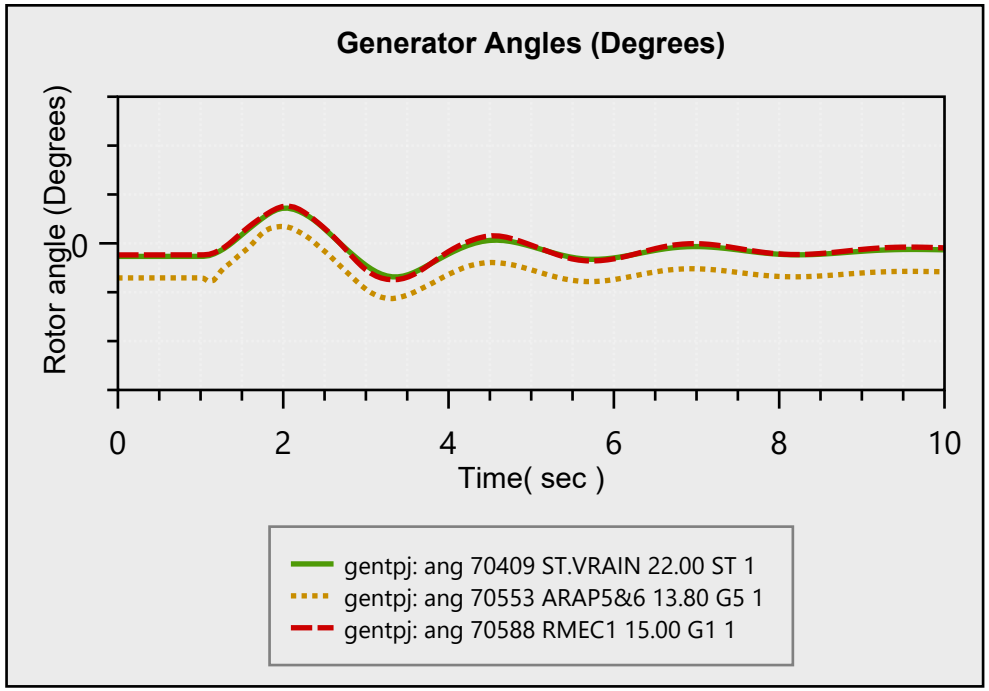

Generator Active Power (MW)
1000
Electrical power (MW)
0
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

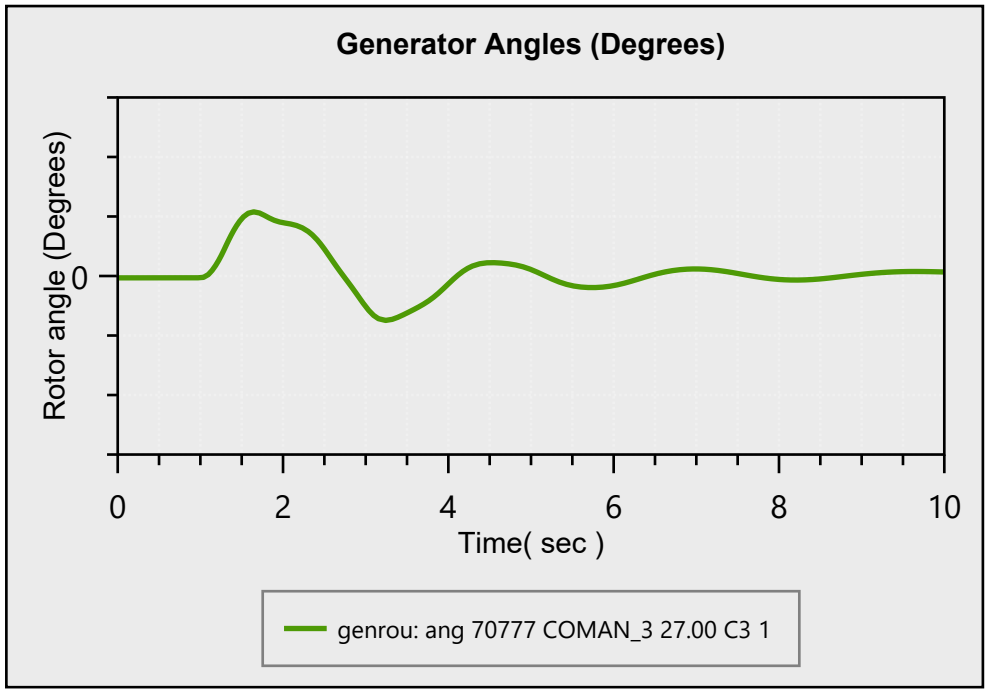

Generator Active Power (MW)
1000
Value (MW)
0
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

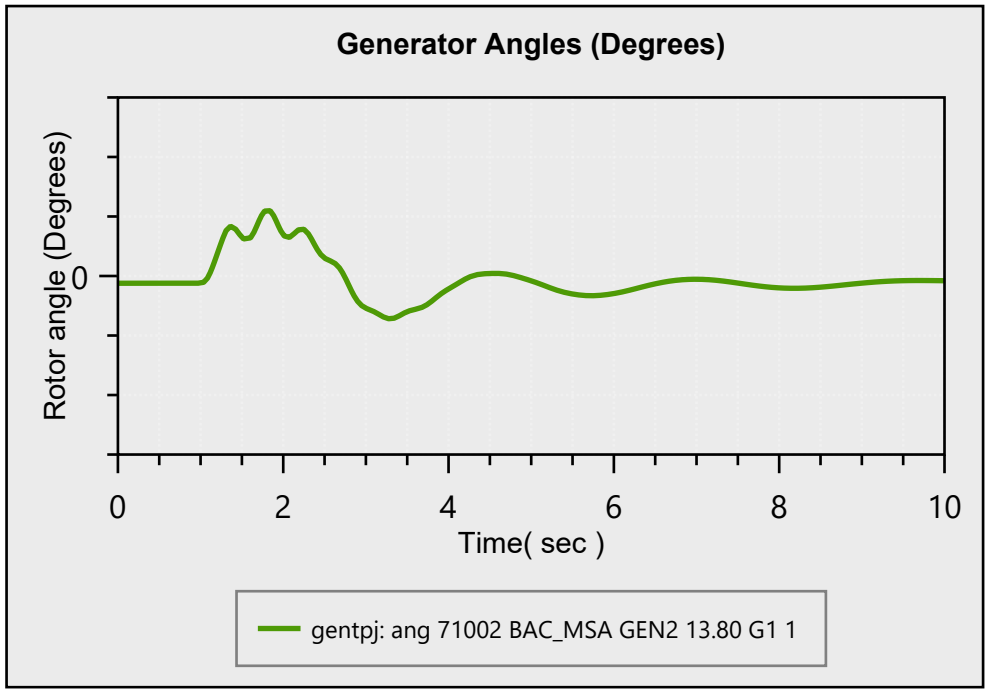

Generator Active Power (MW)
1000
Value (MW)
0
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

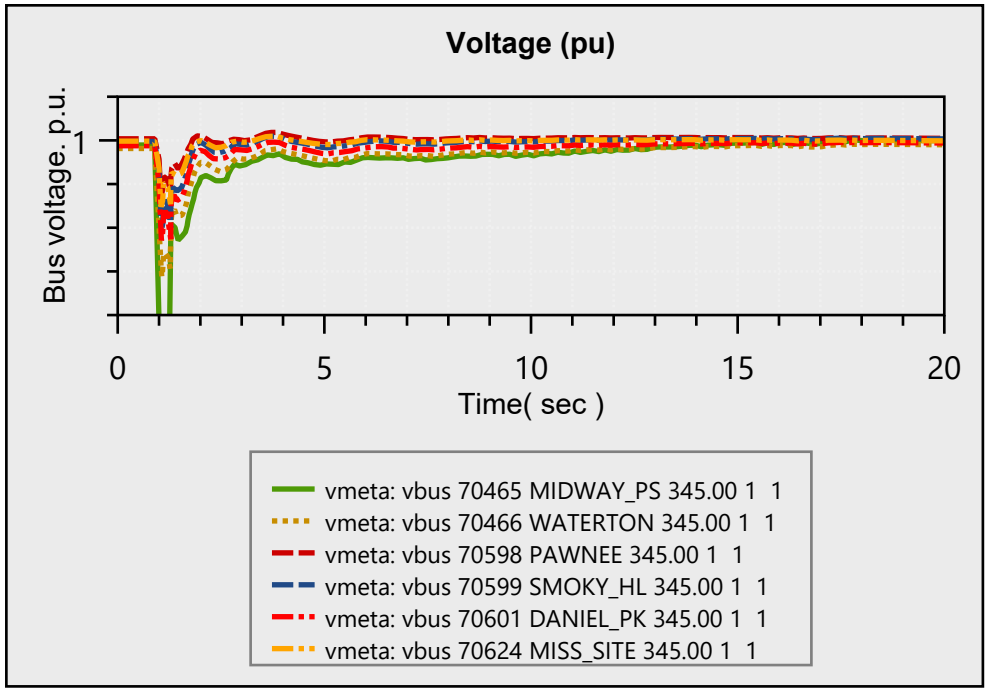

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

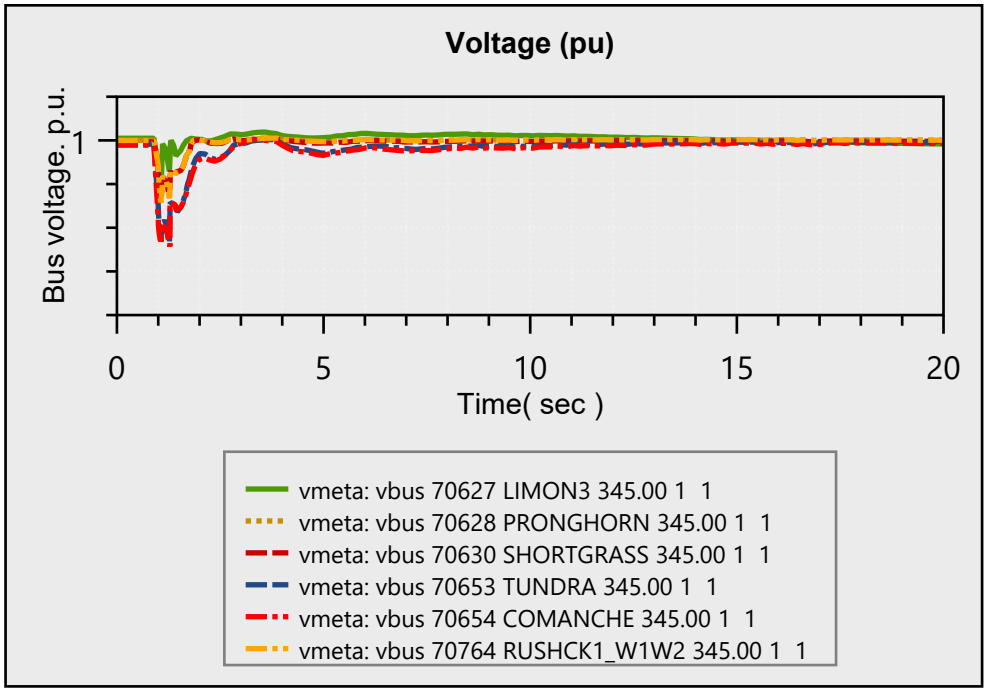

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

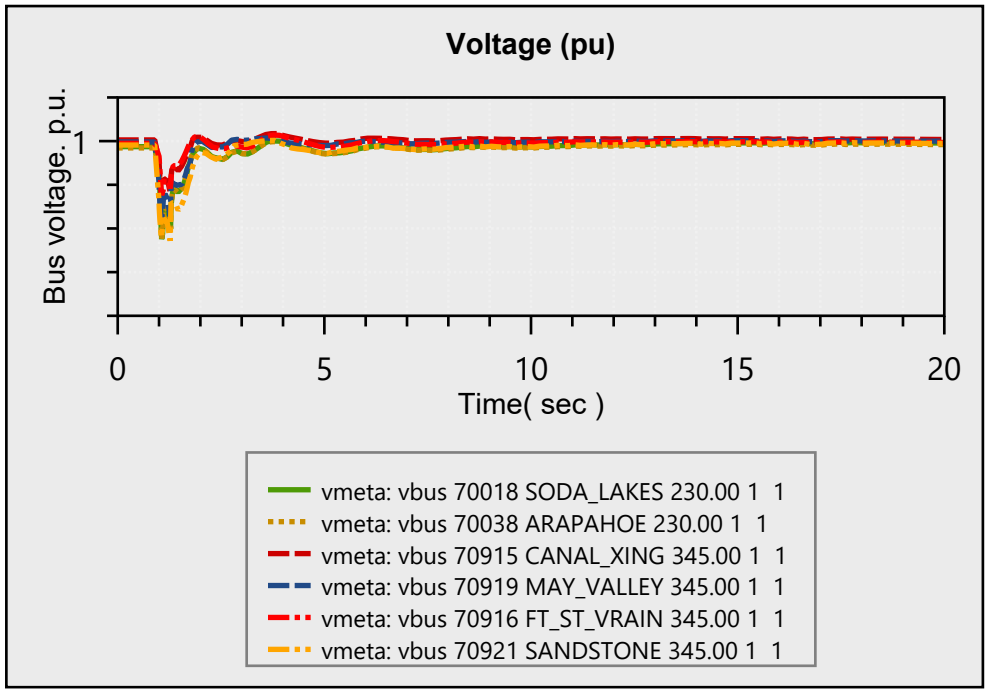

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

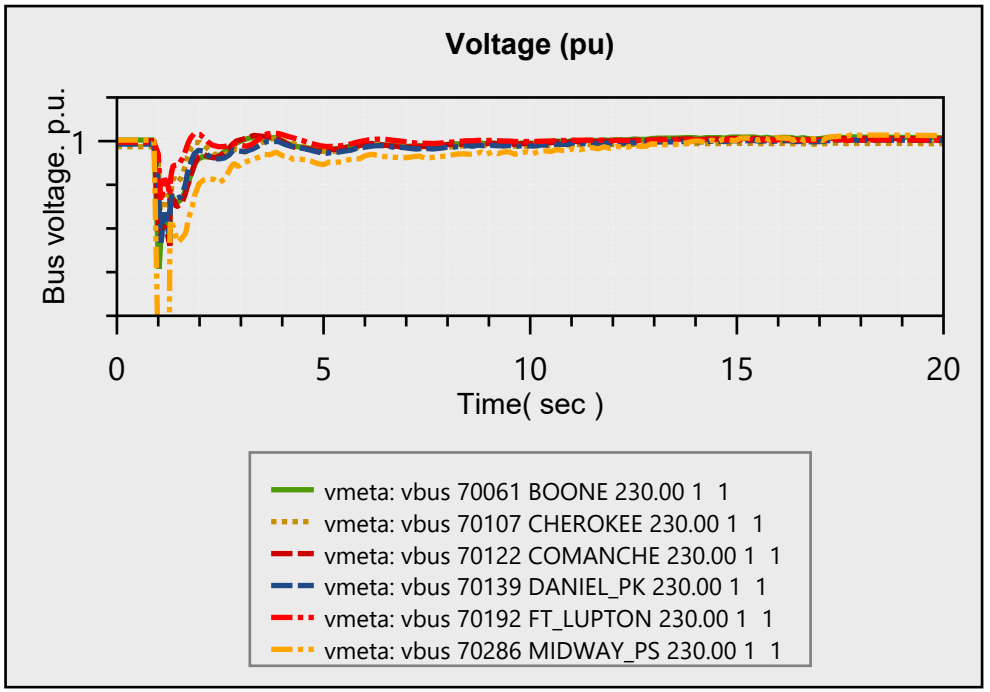

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

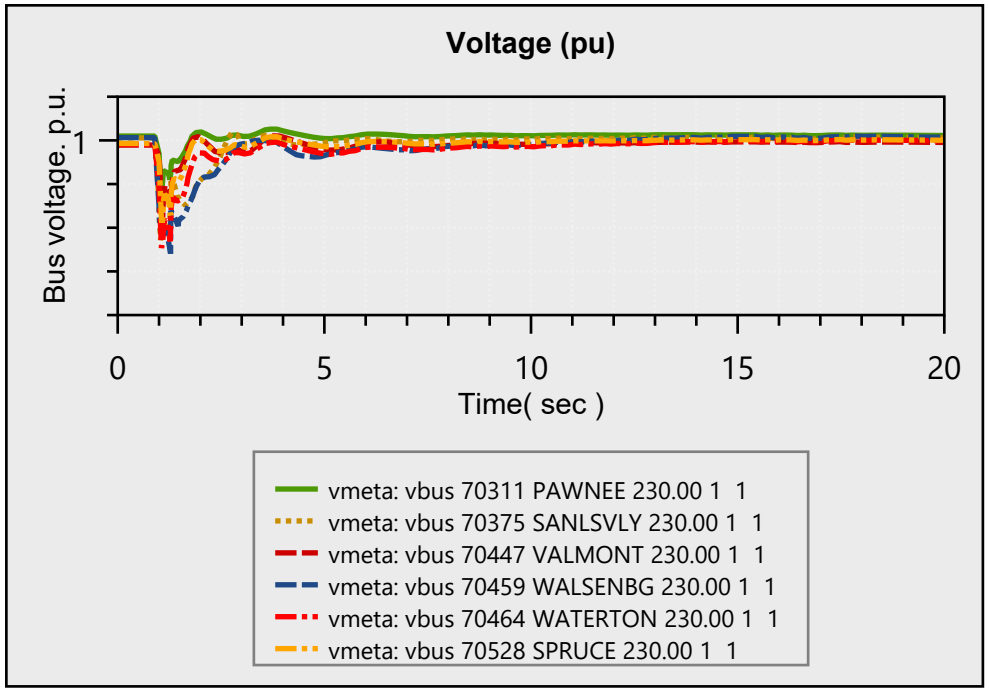

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

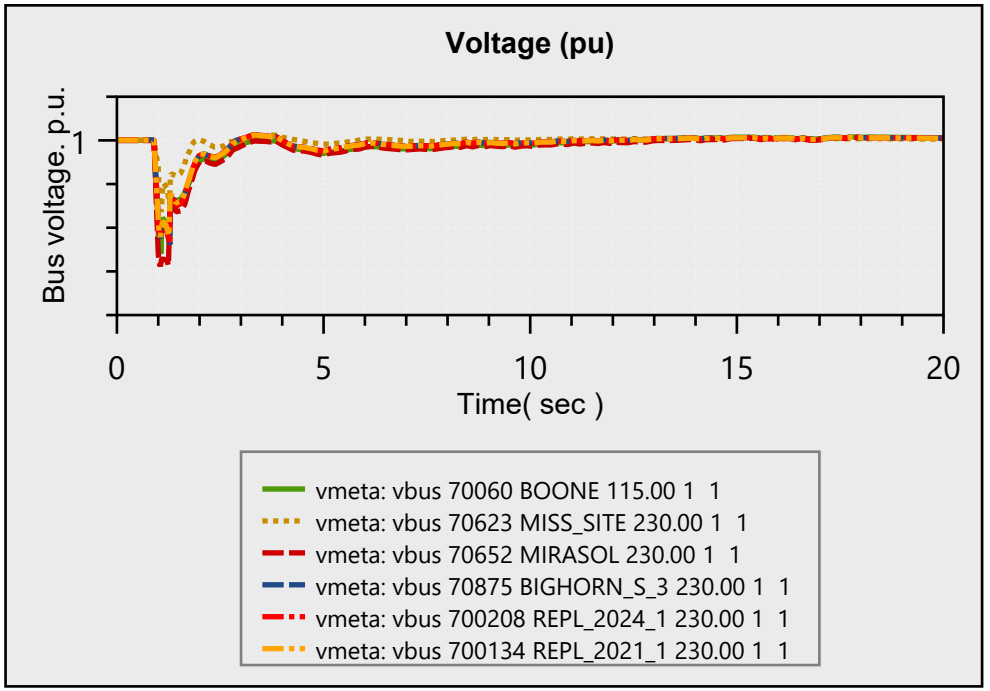

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

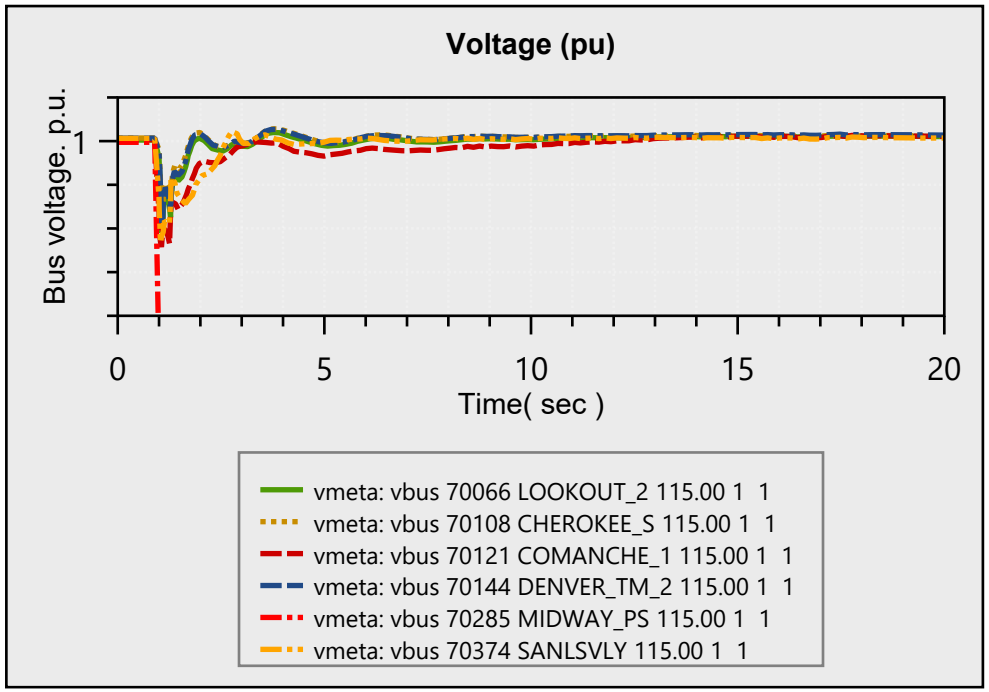

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

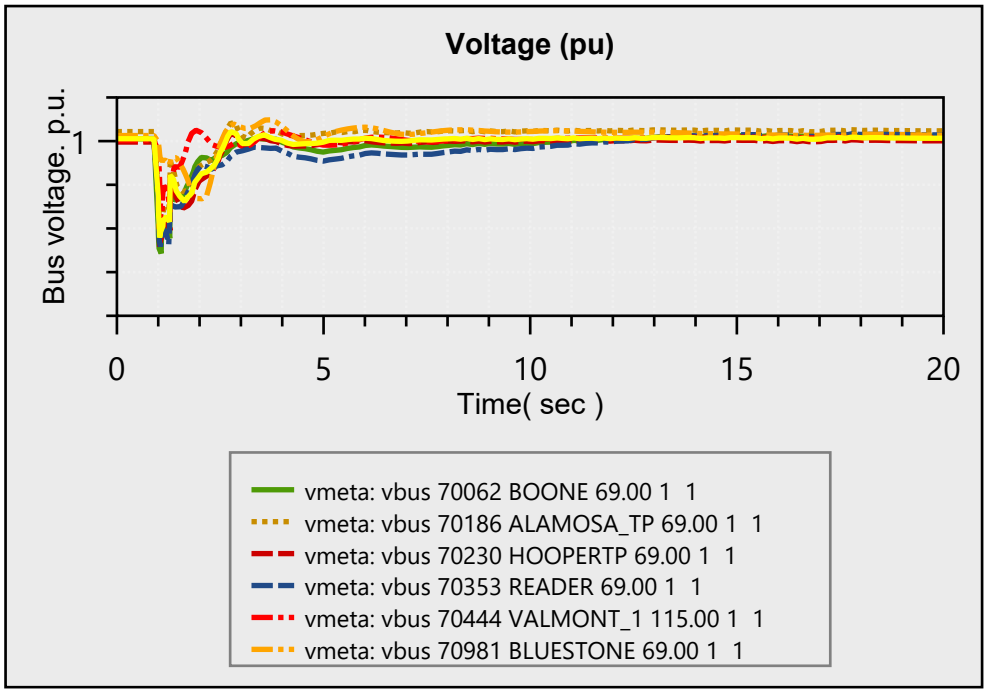

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

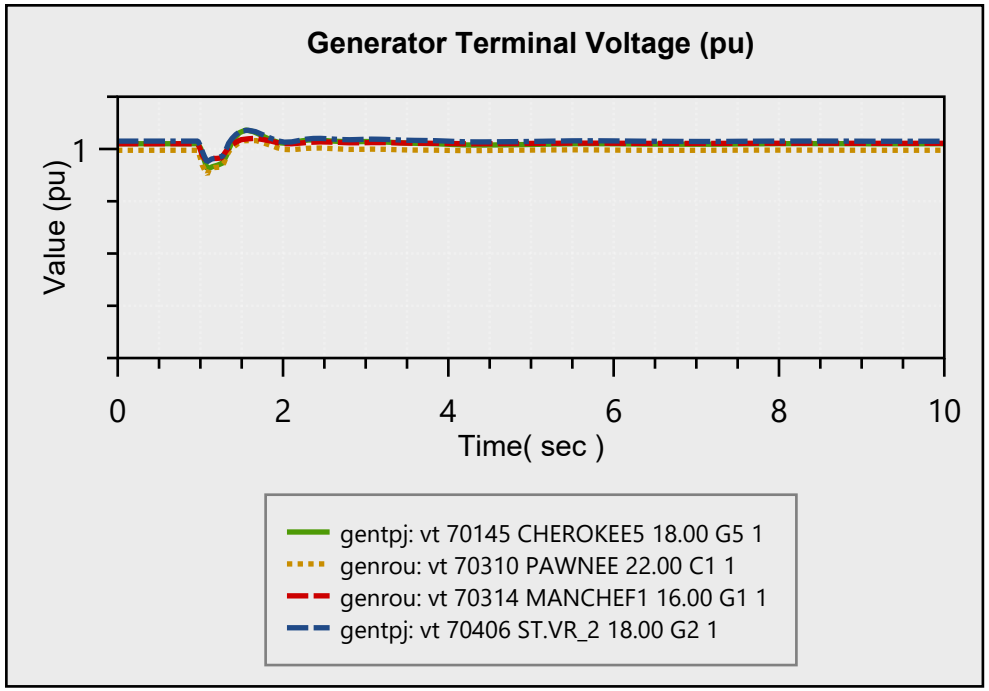

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

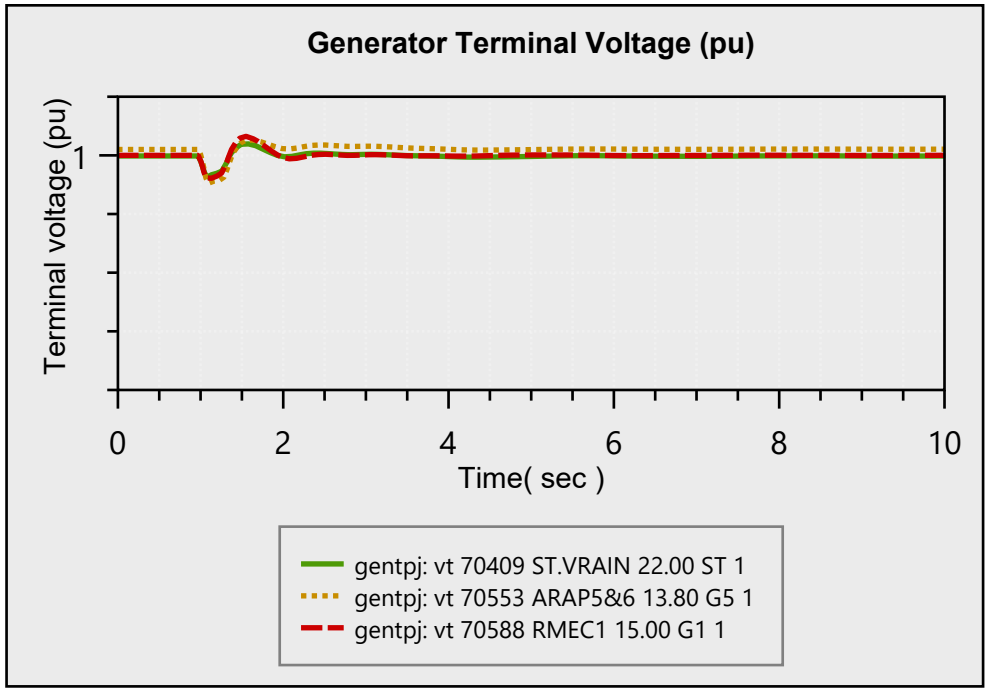

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

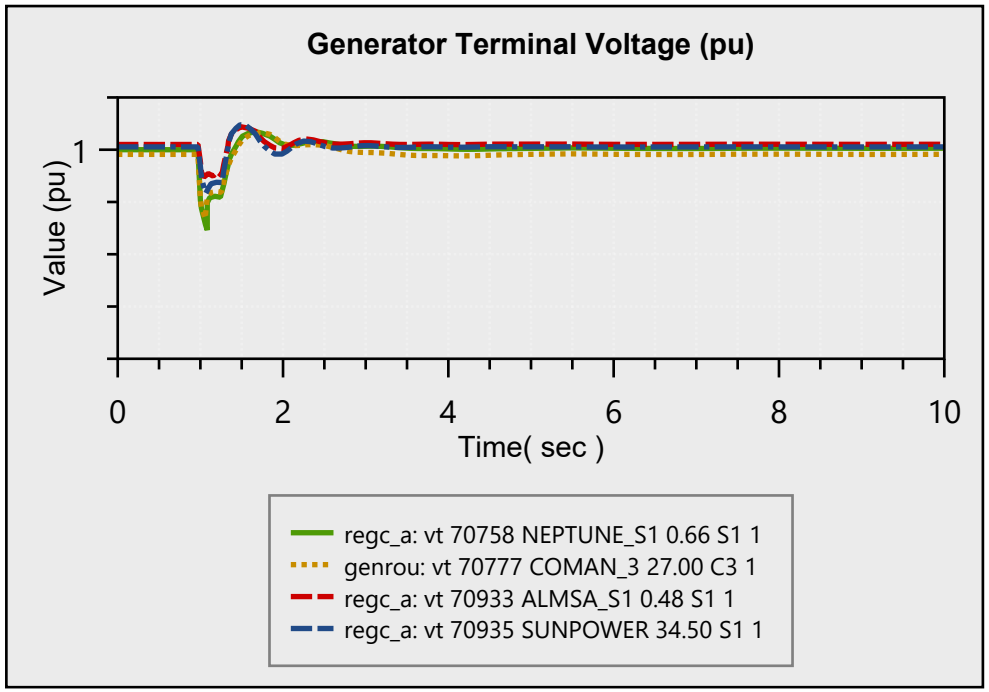

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

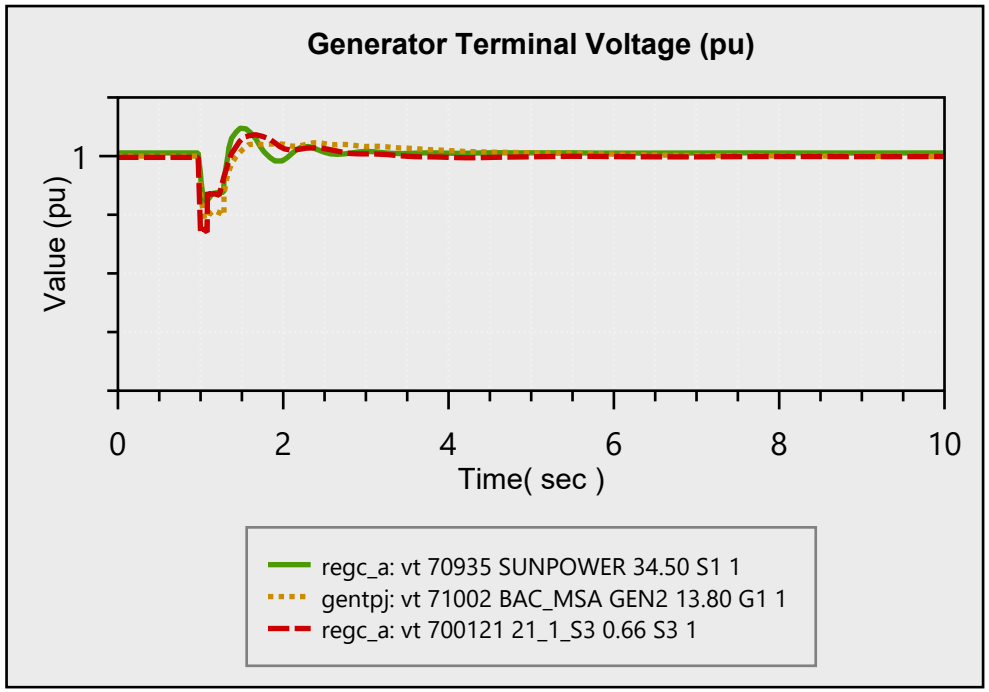

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

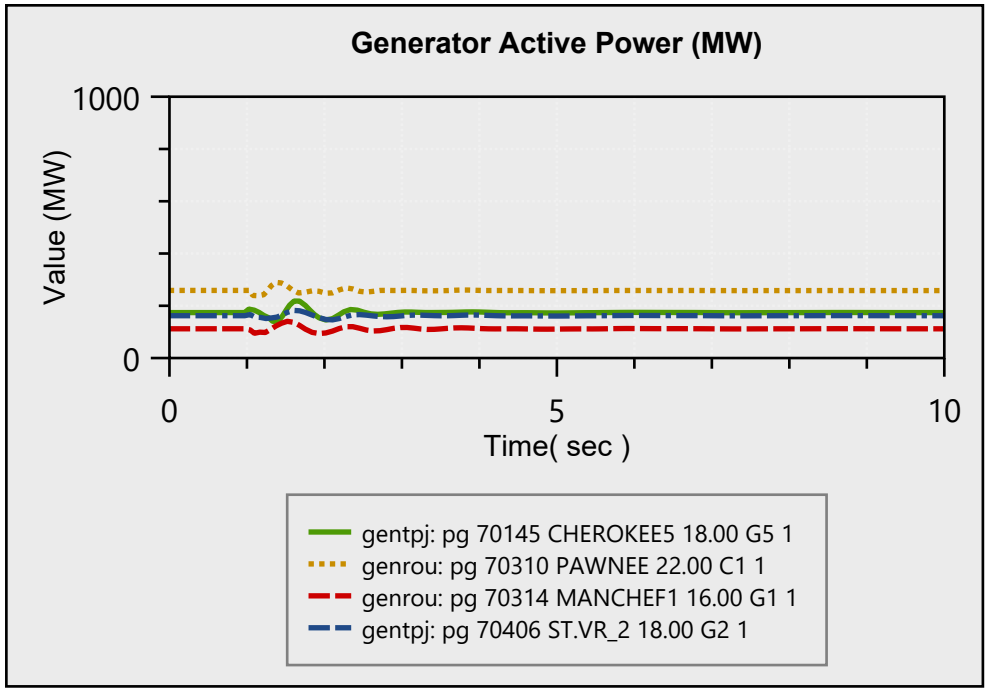

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

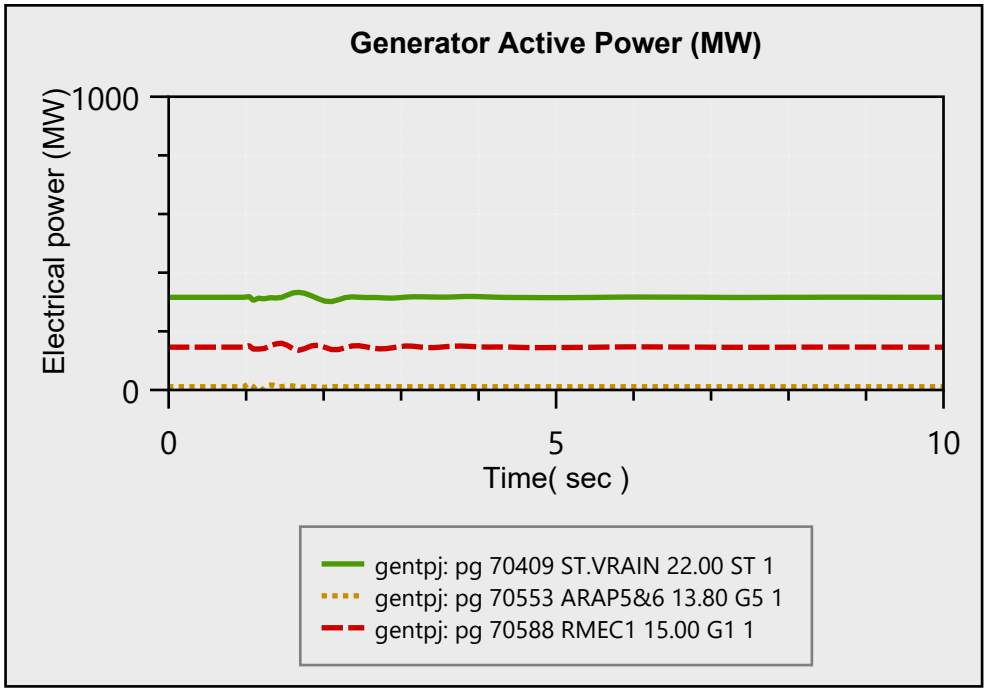

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

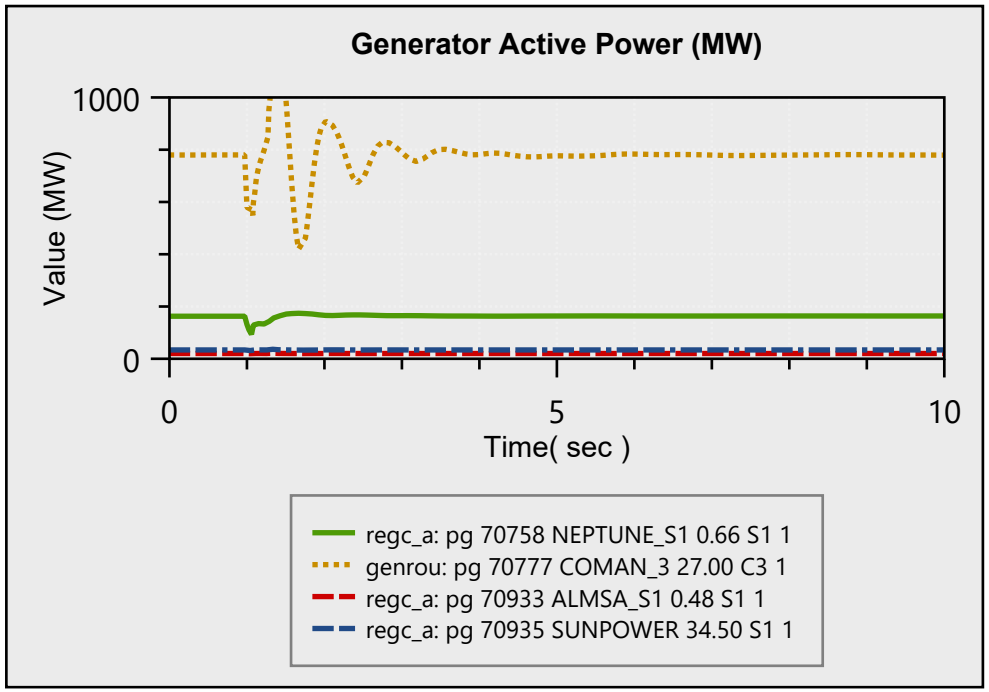

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

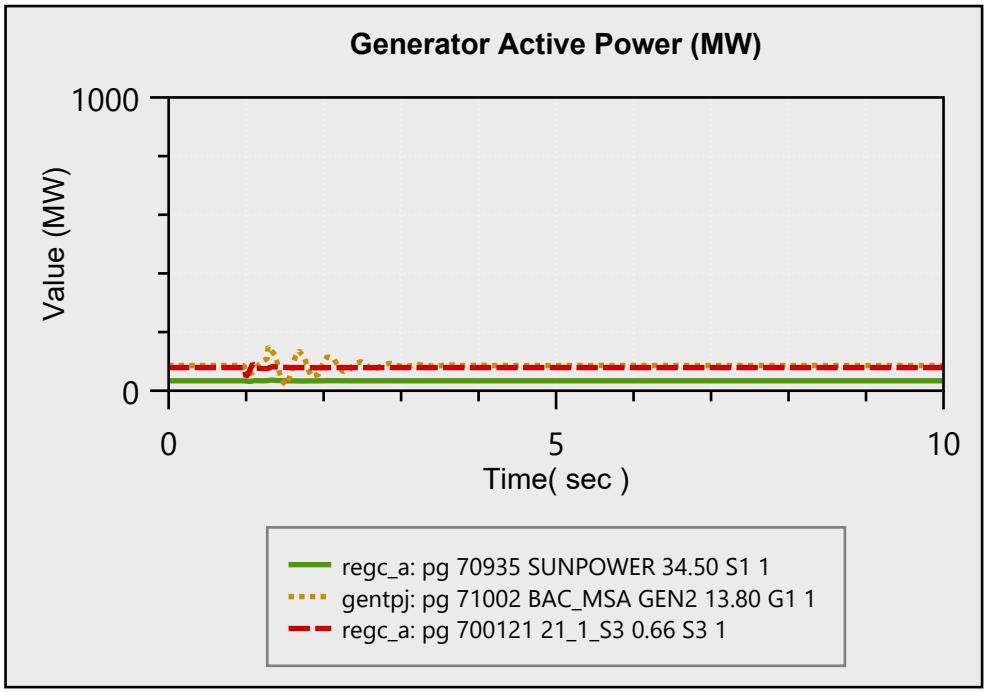

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

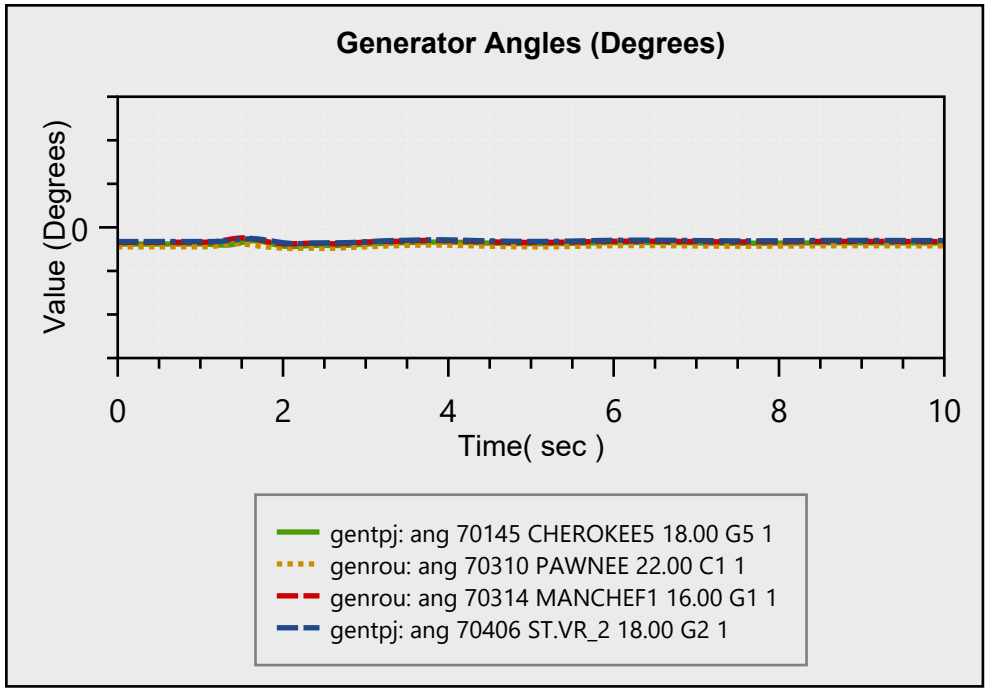

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

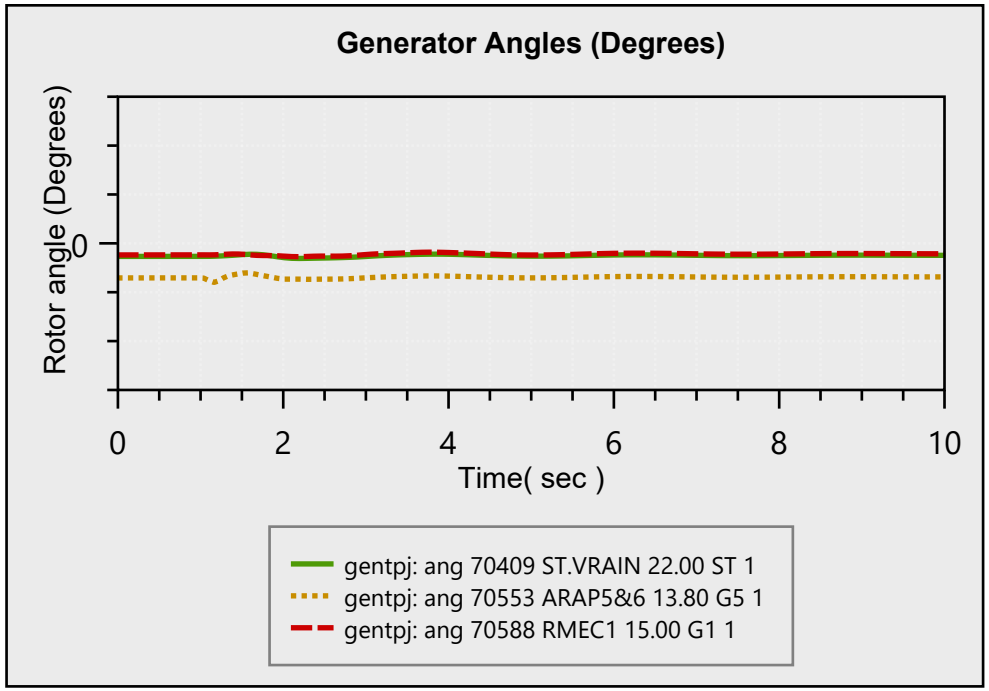

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

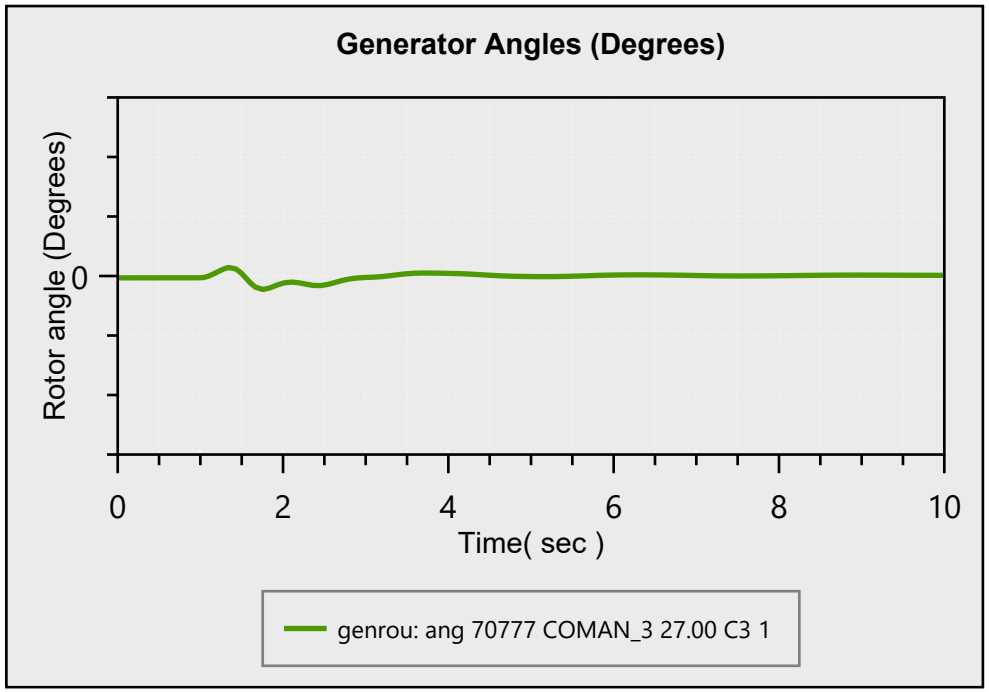

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

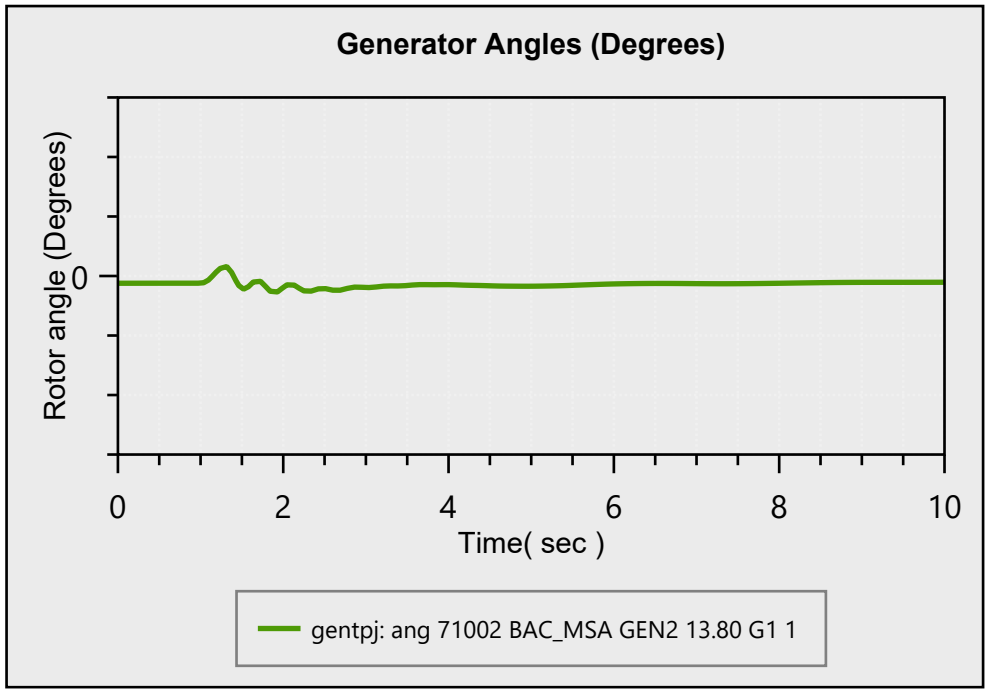

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

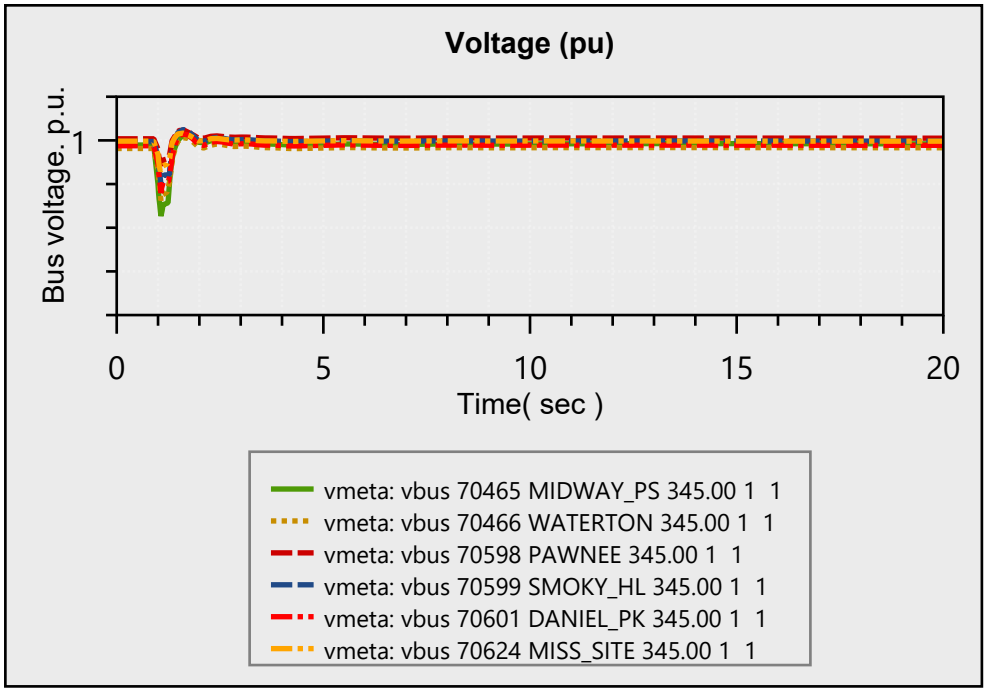

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

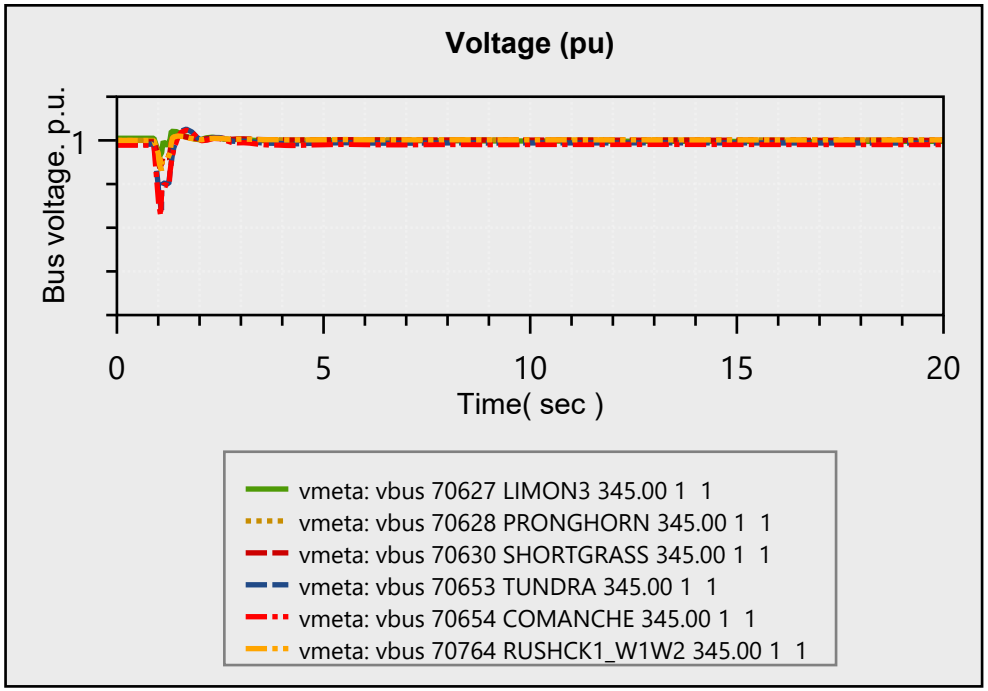

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

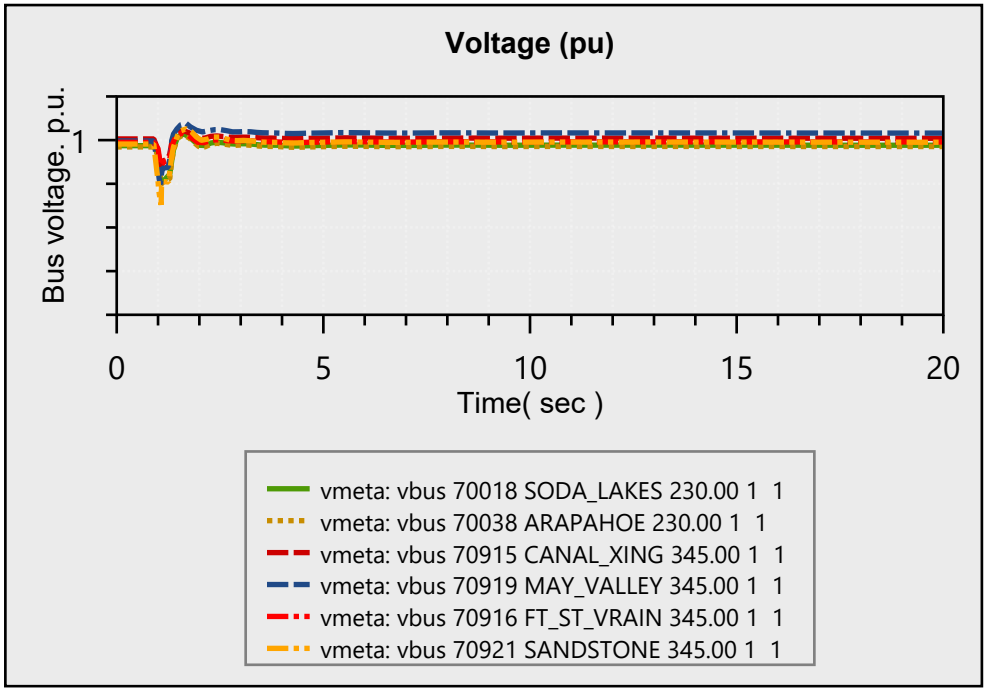

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

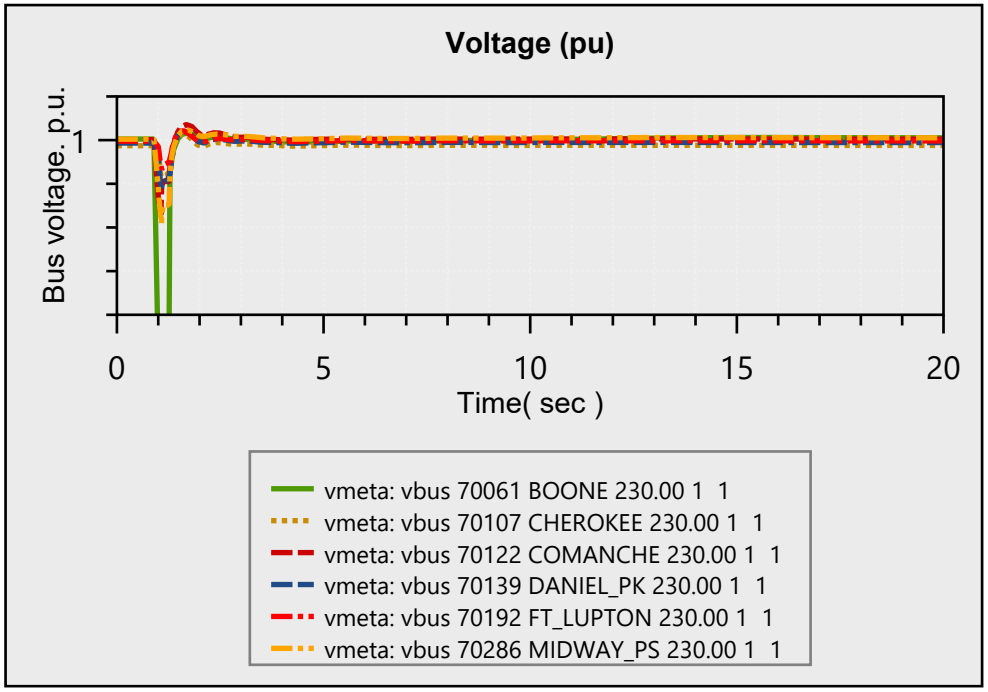

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

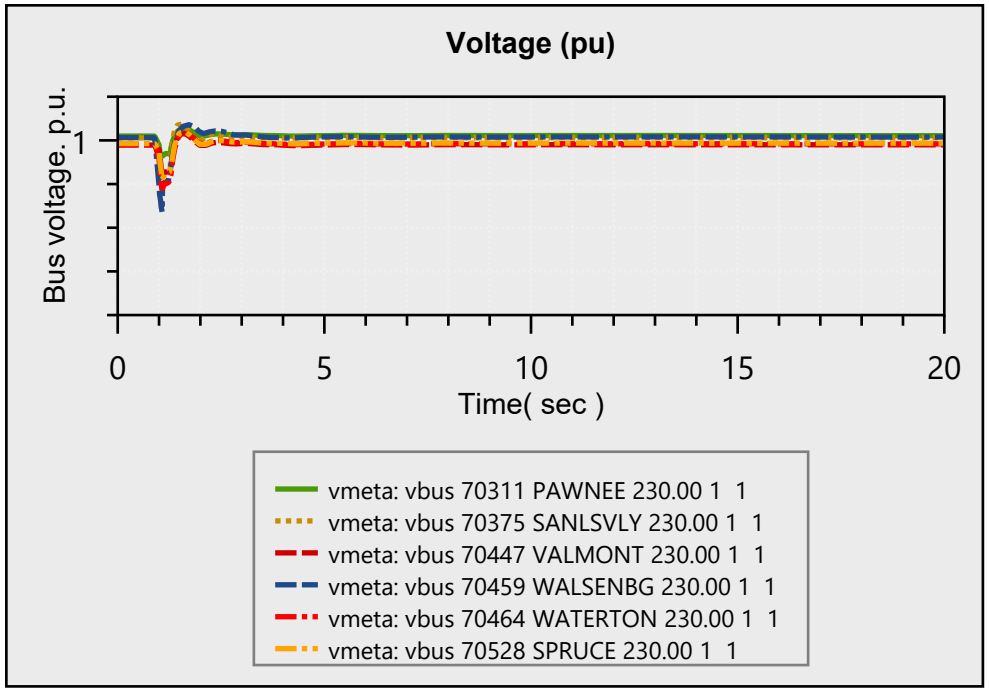

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

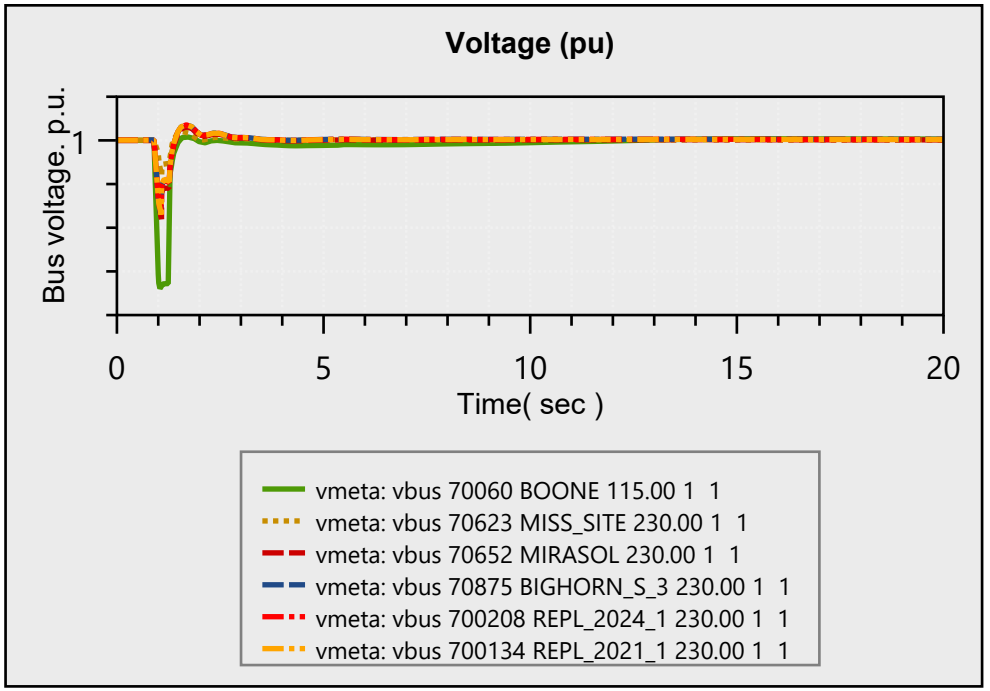

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

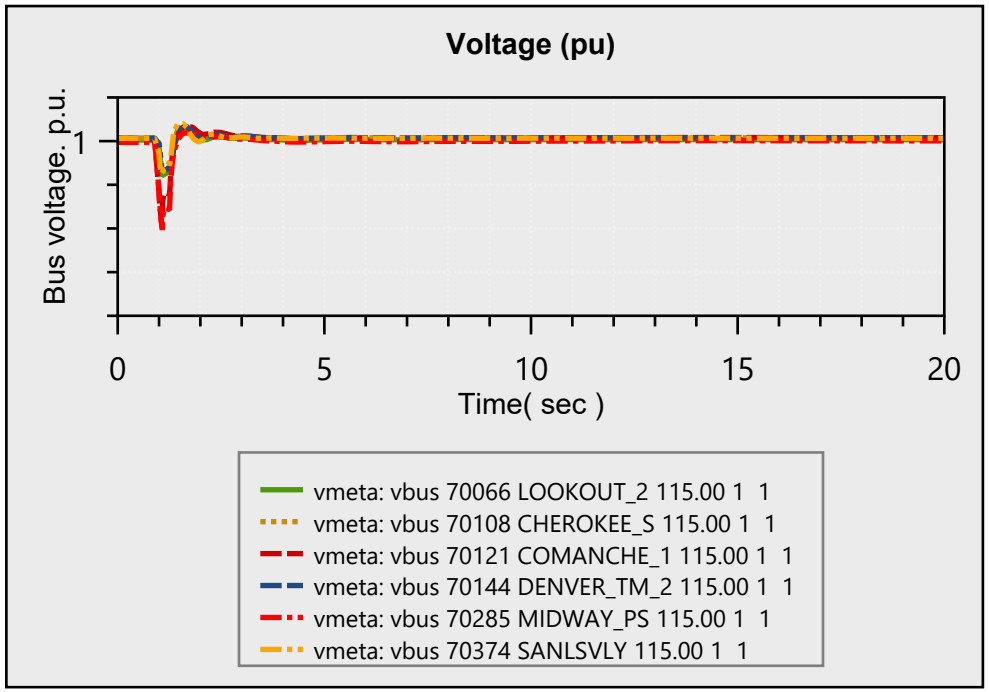

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

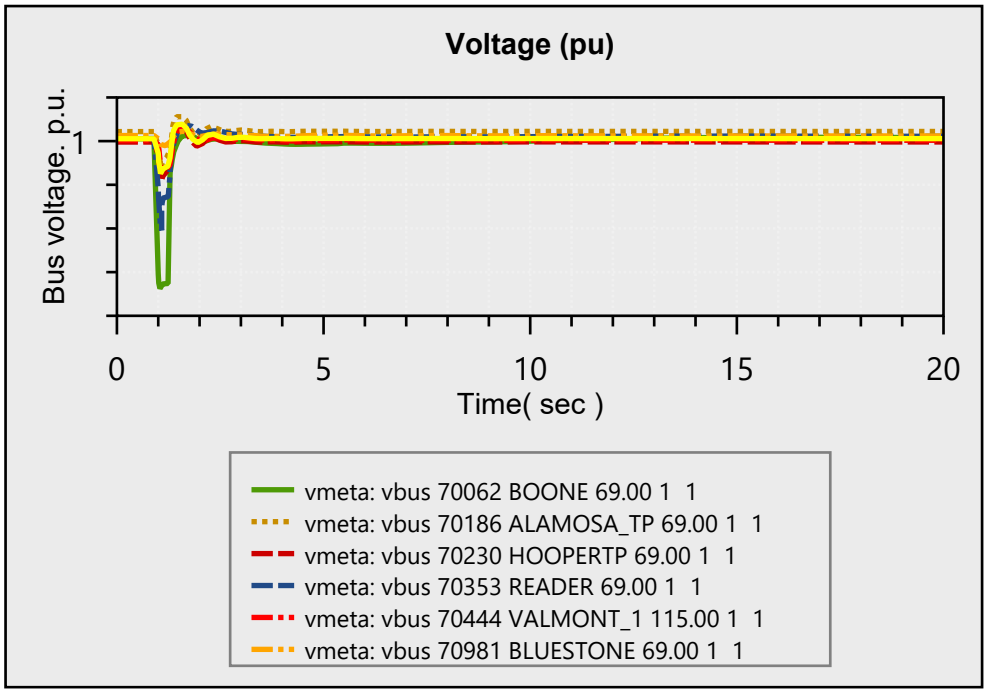

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

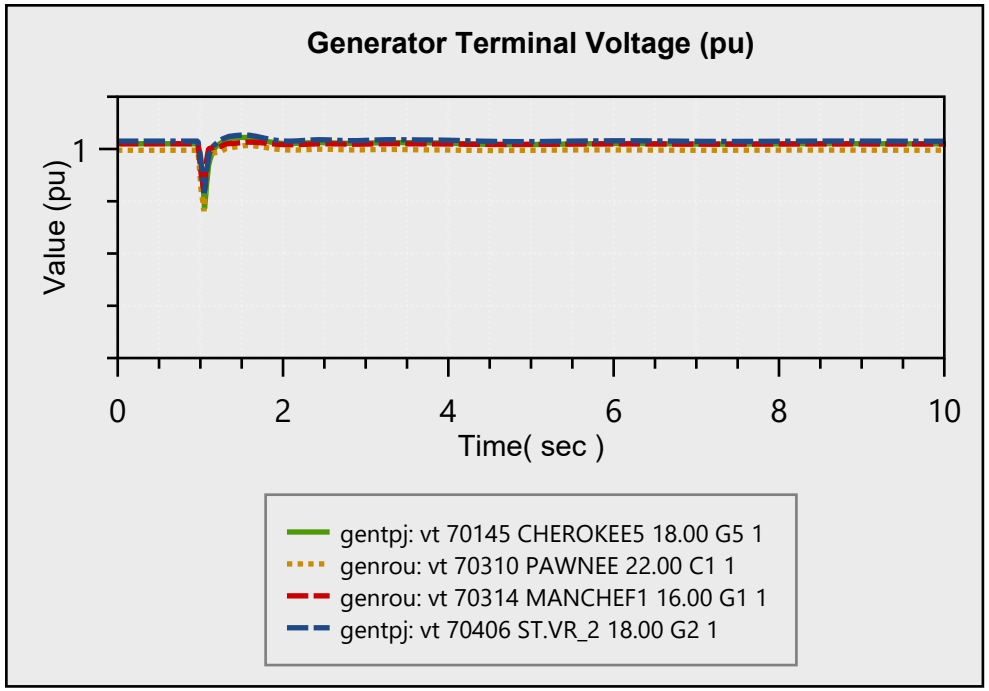

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

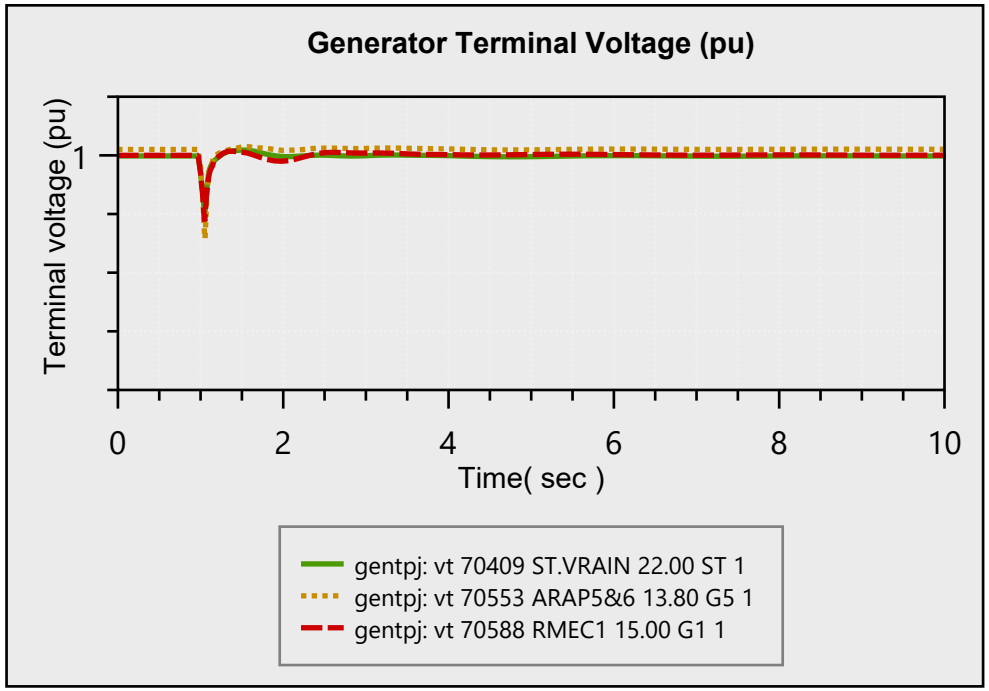

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

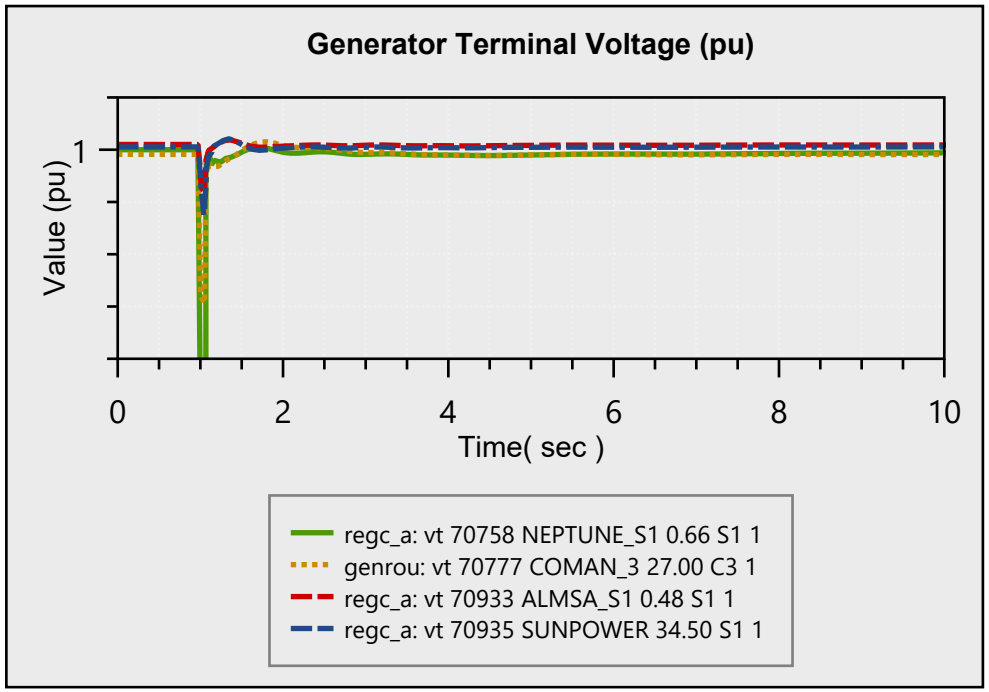

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

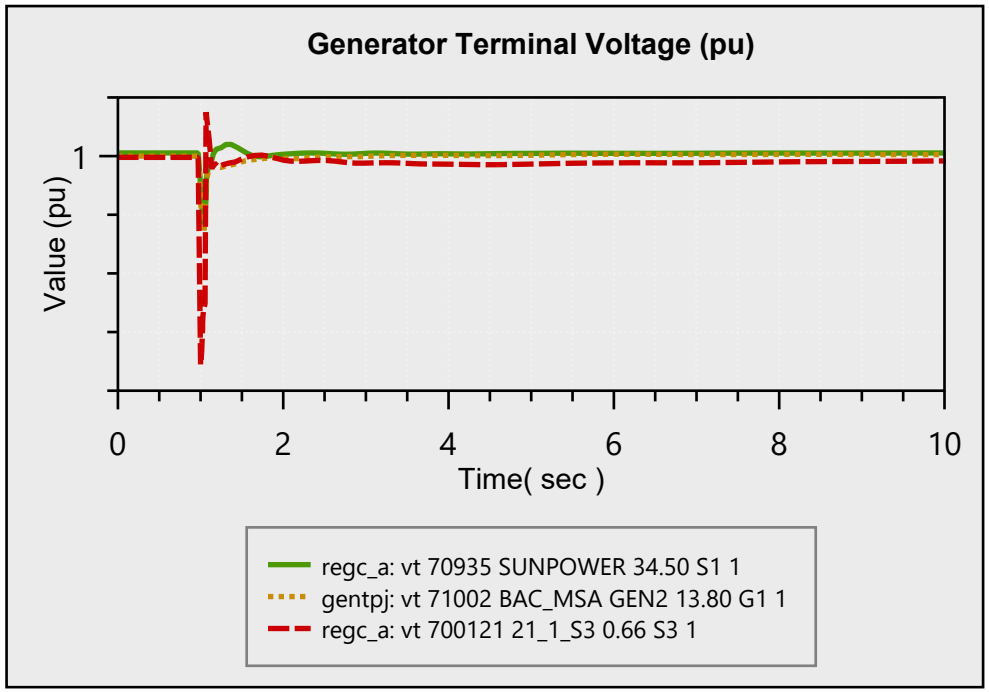

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

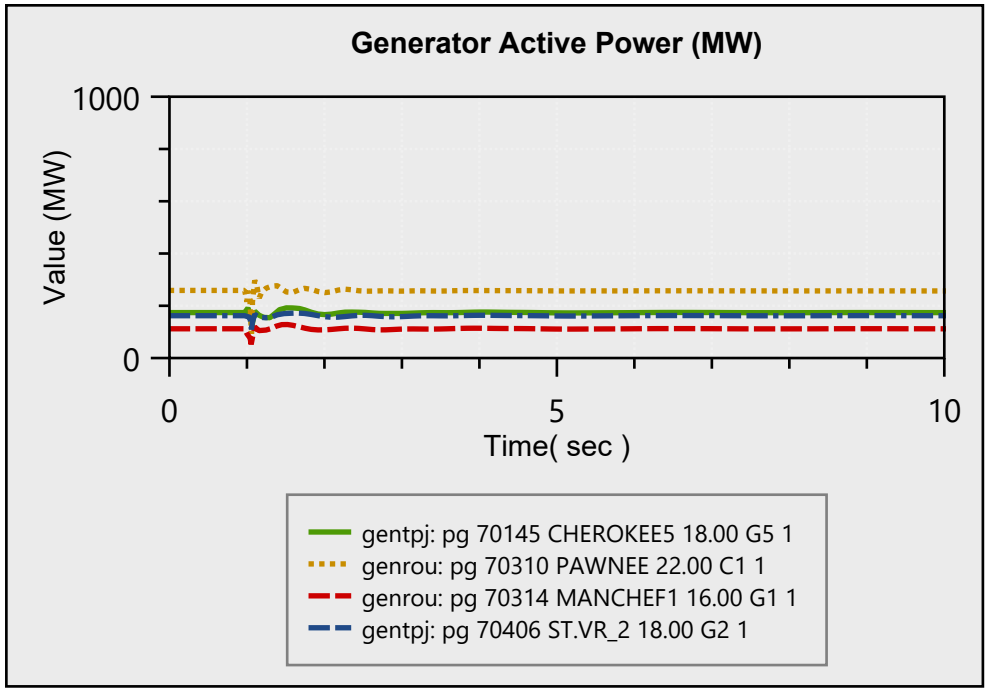

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

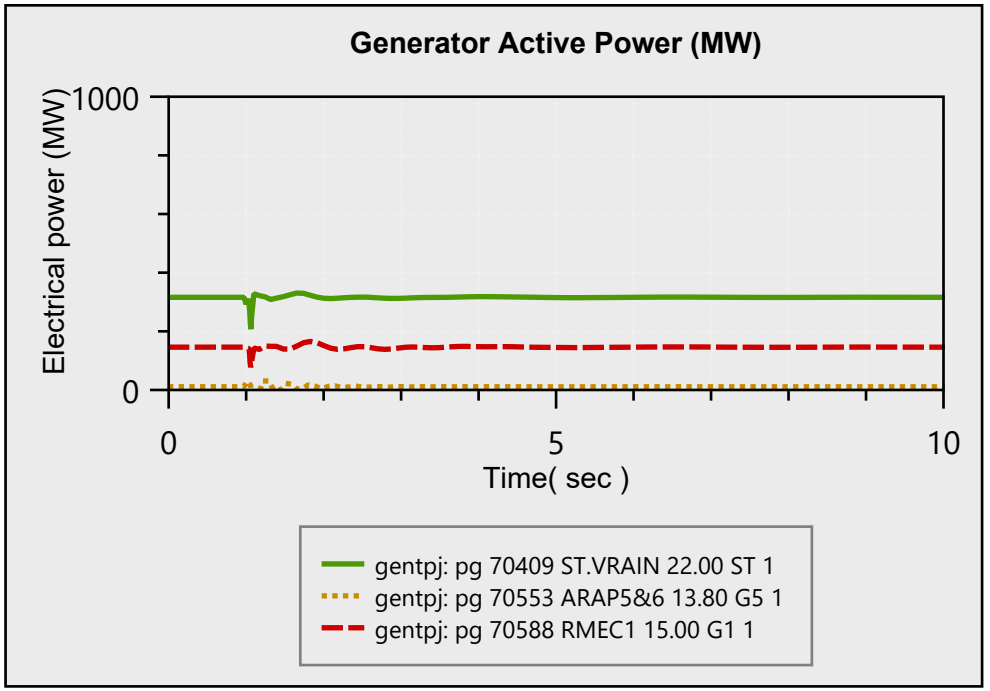

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

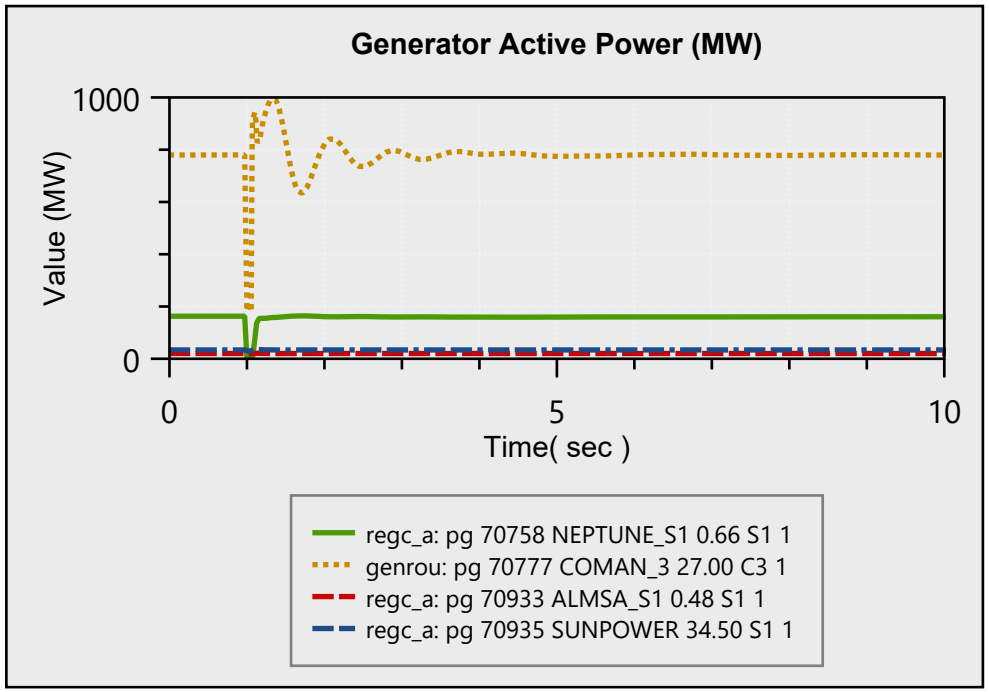

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

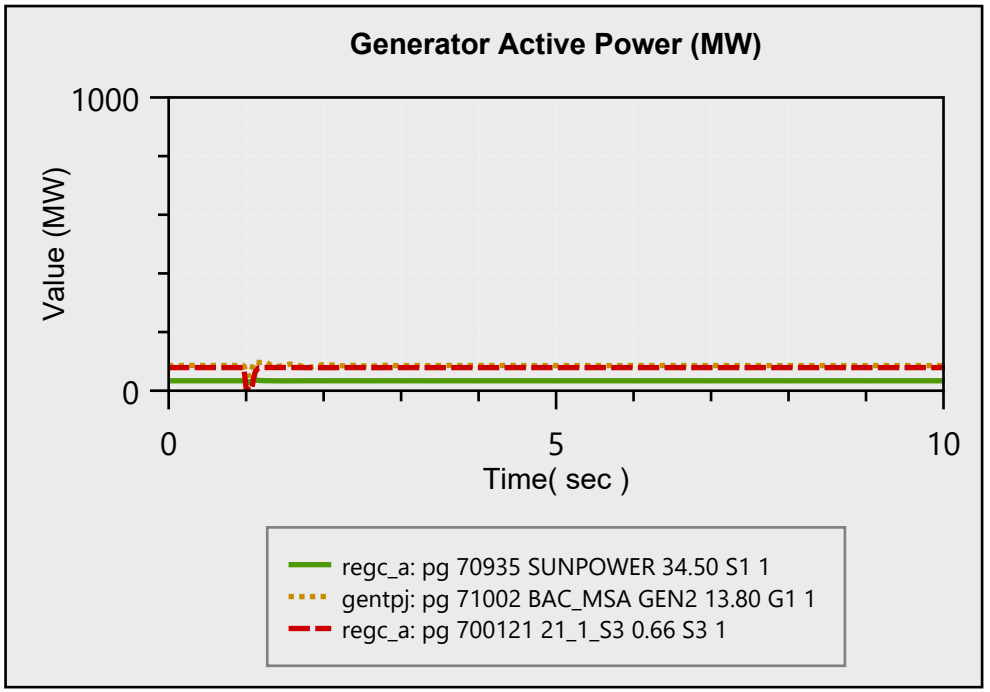

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1

OUTPUTS

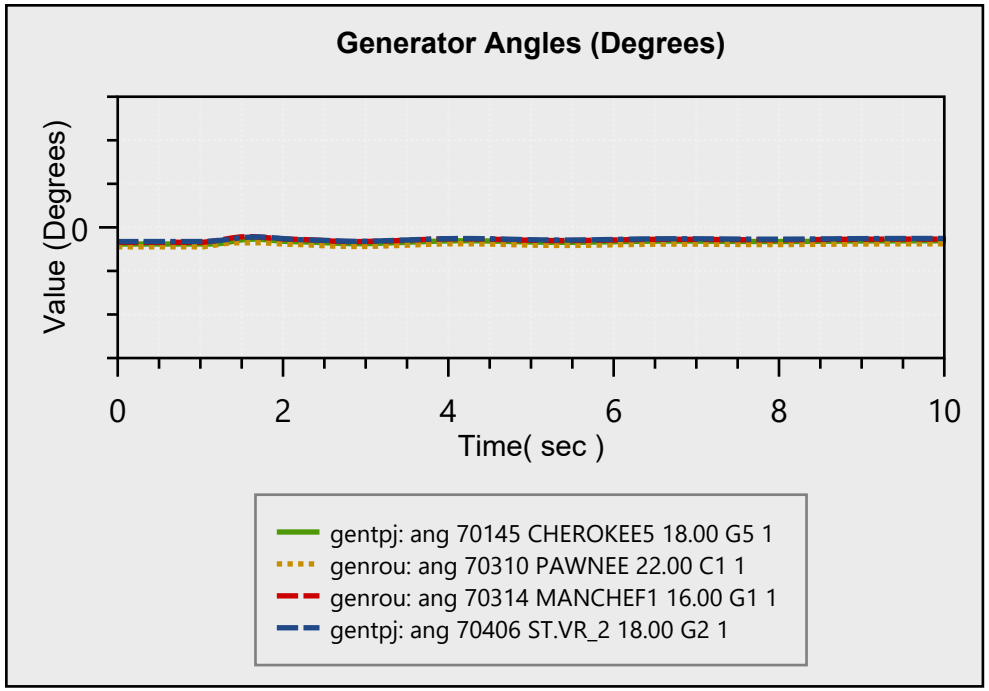

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

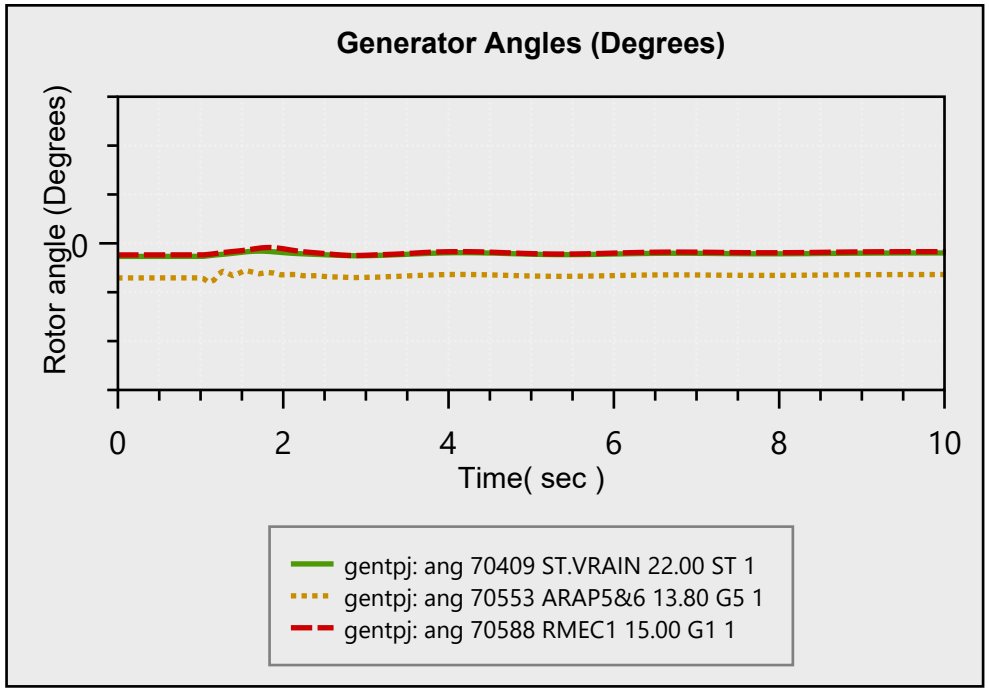

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

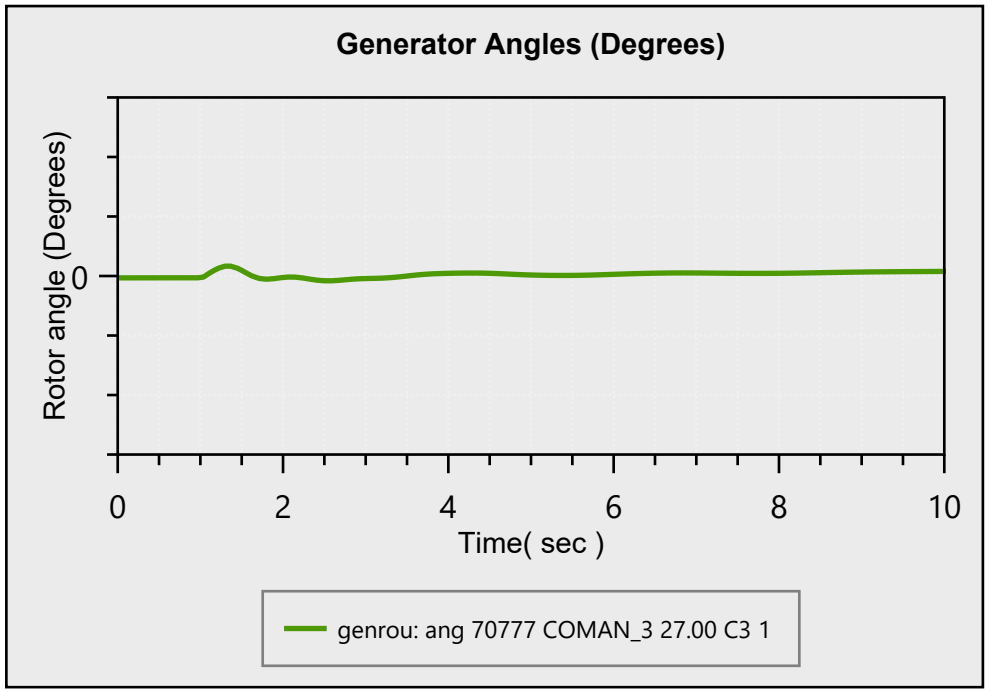

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

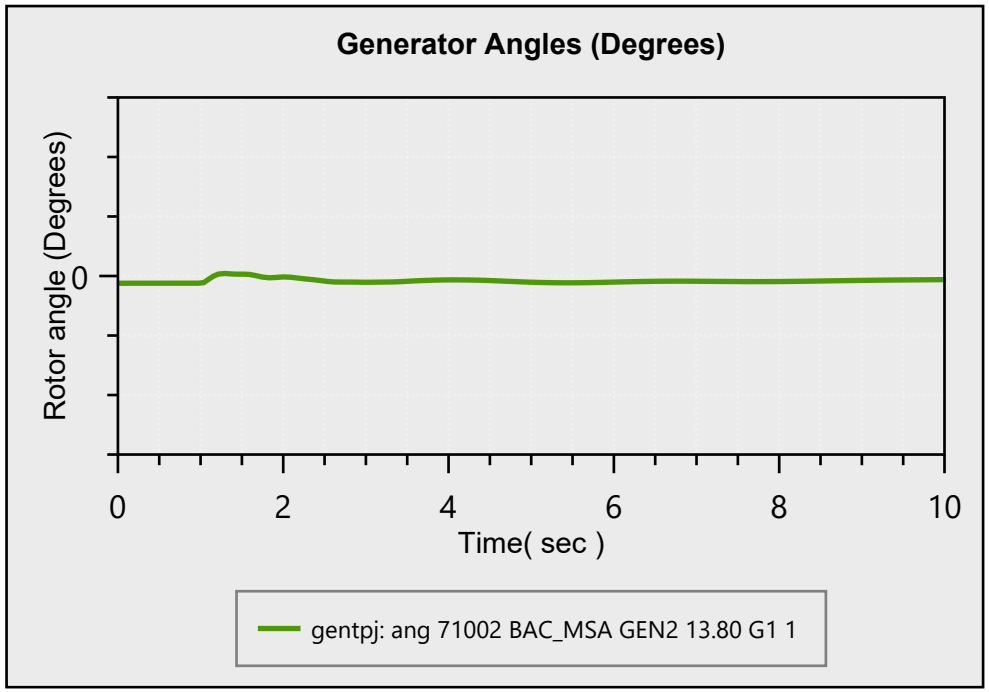

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1

OUTPUTS

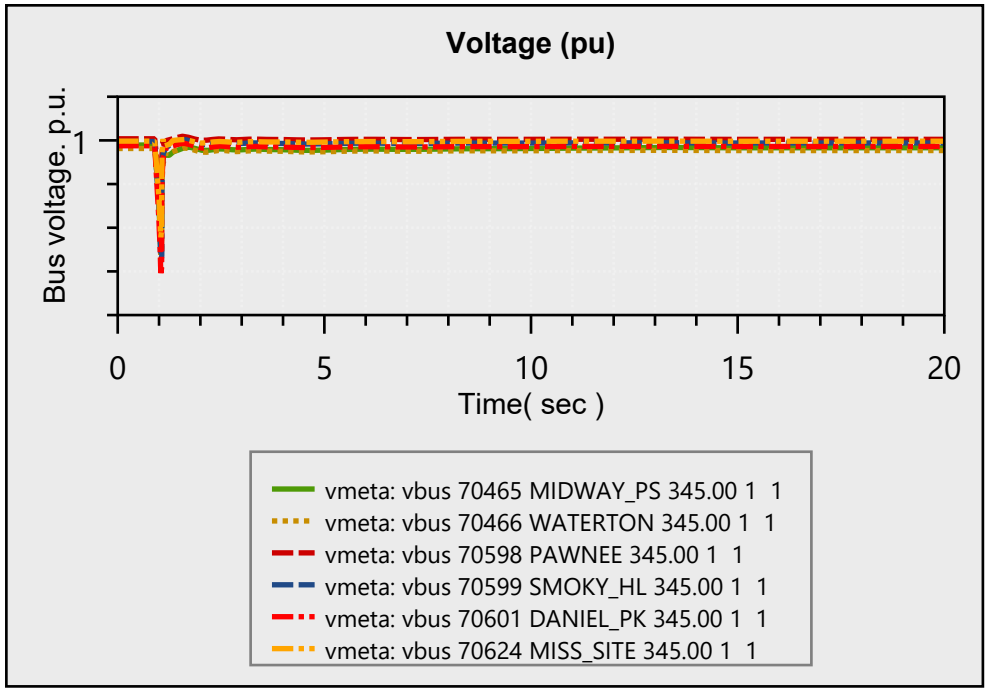

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

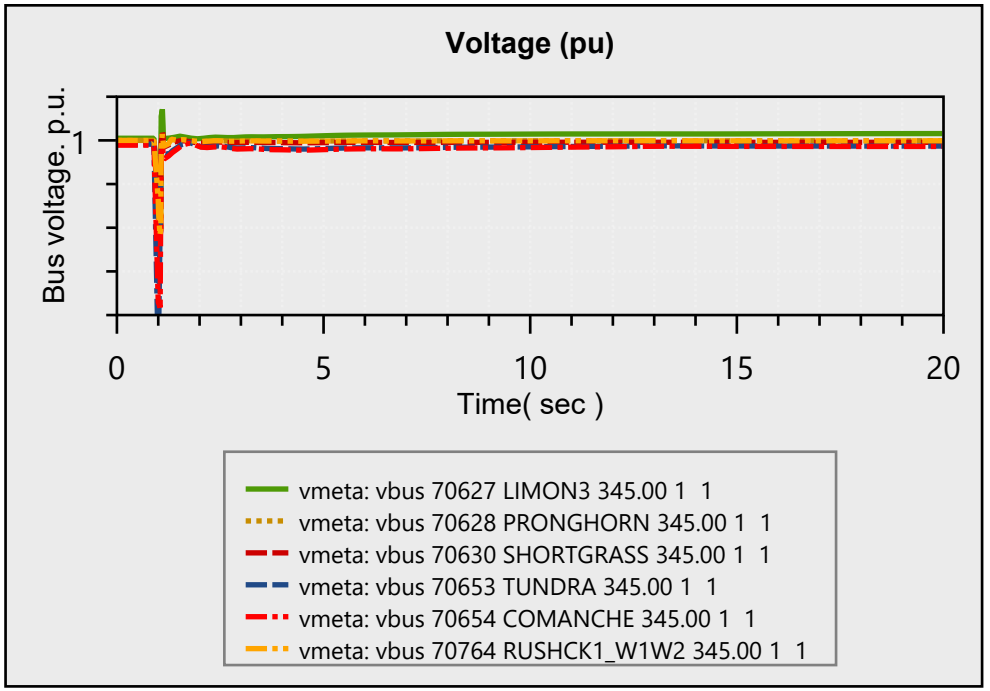

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

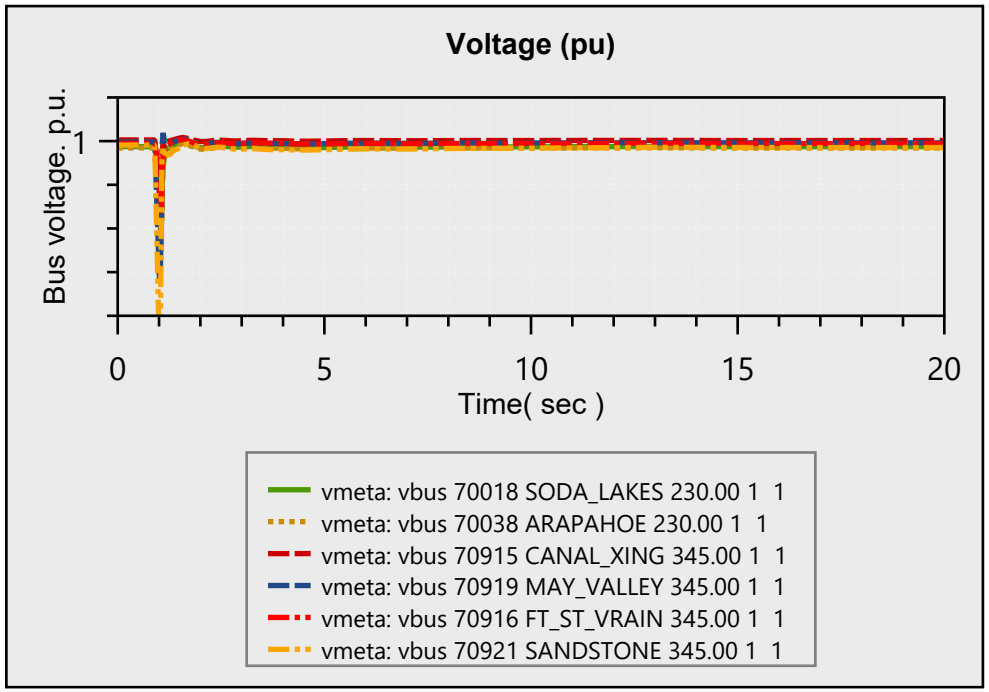

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

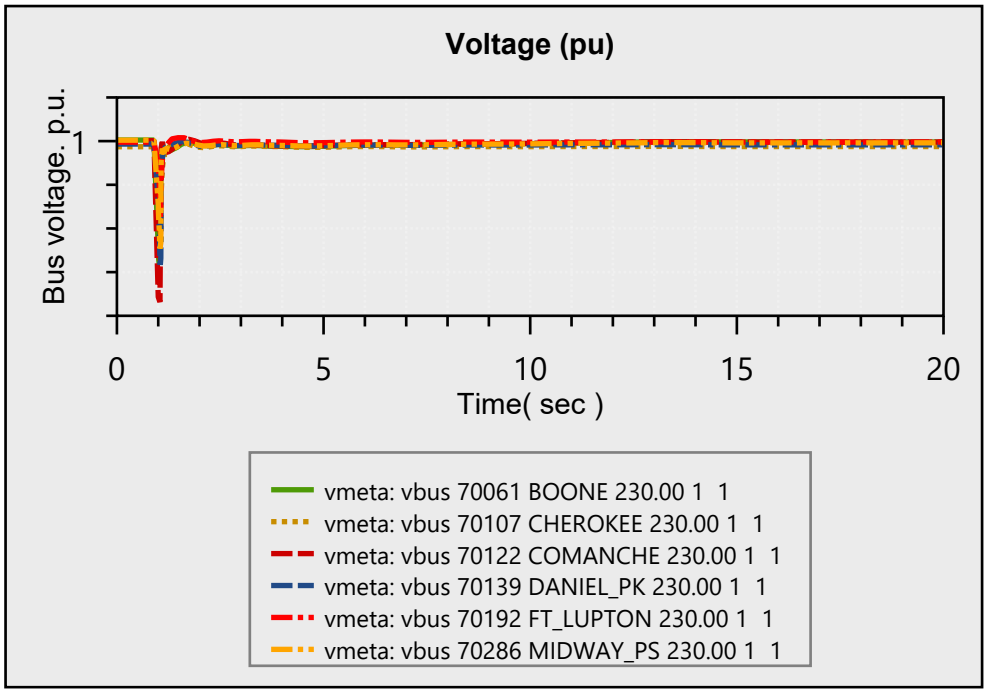

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1

OUTPUTS

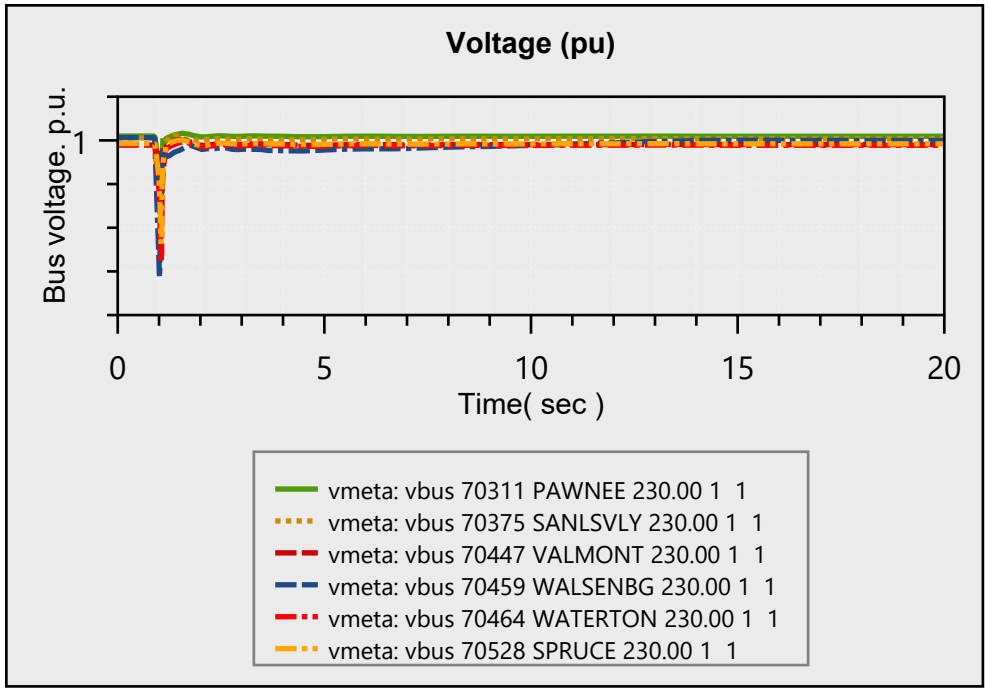

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

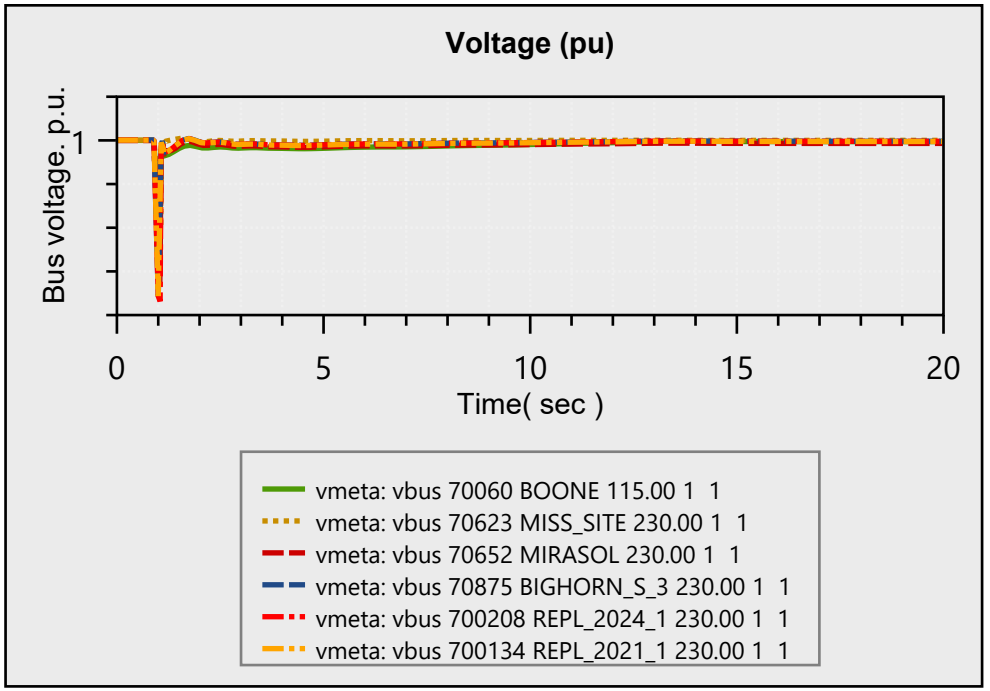

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

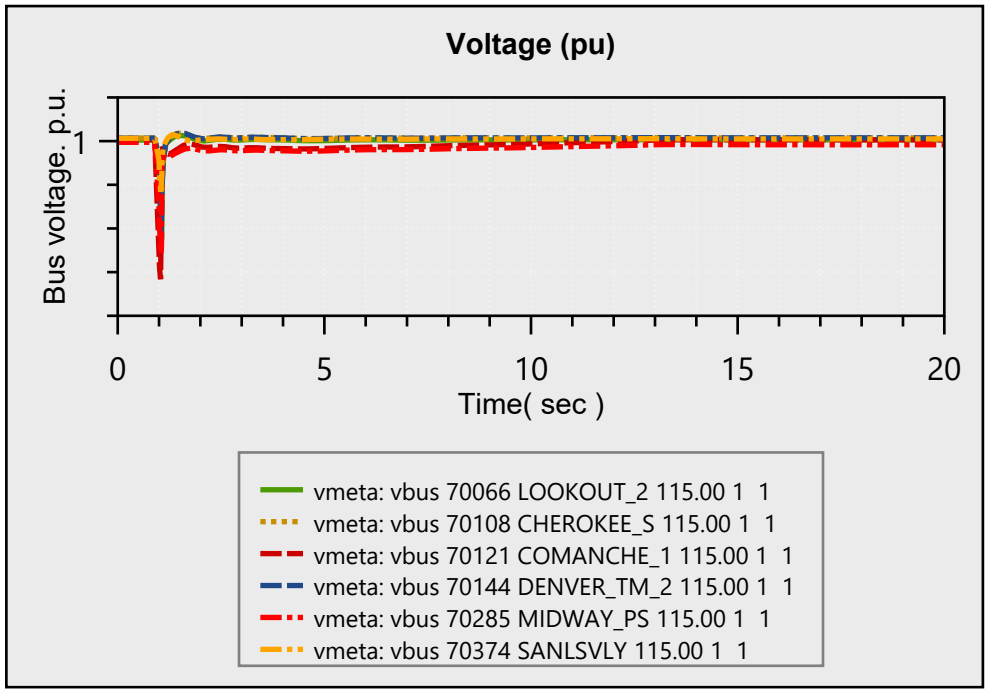

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

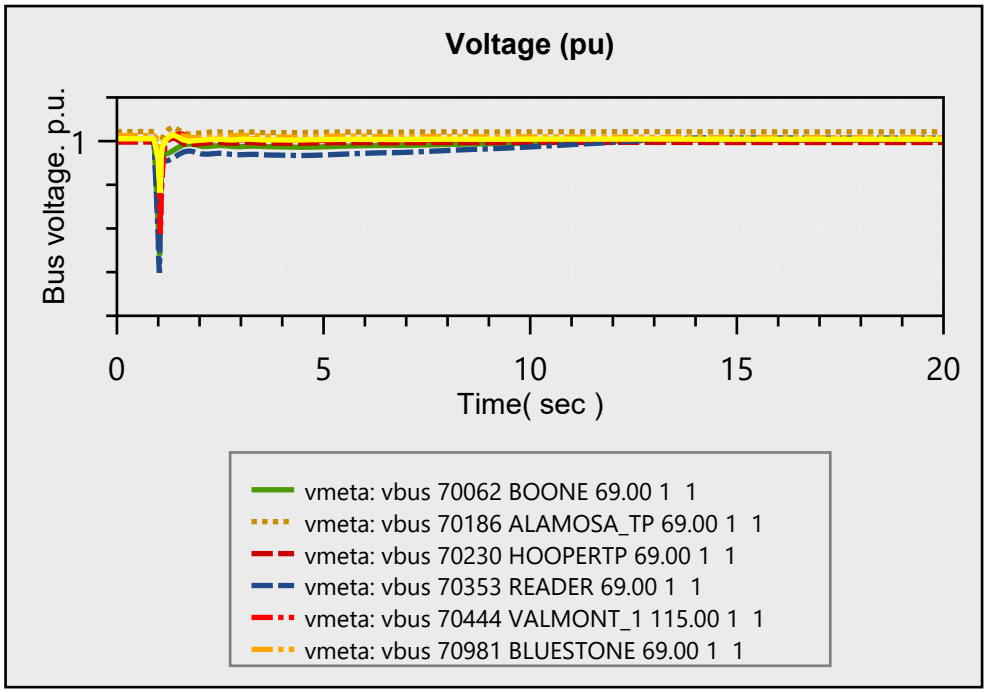

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

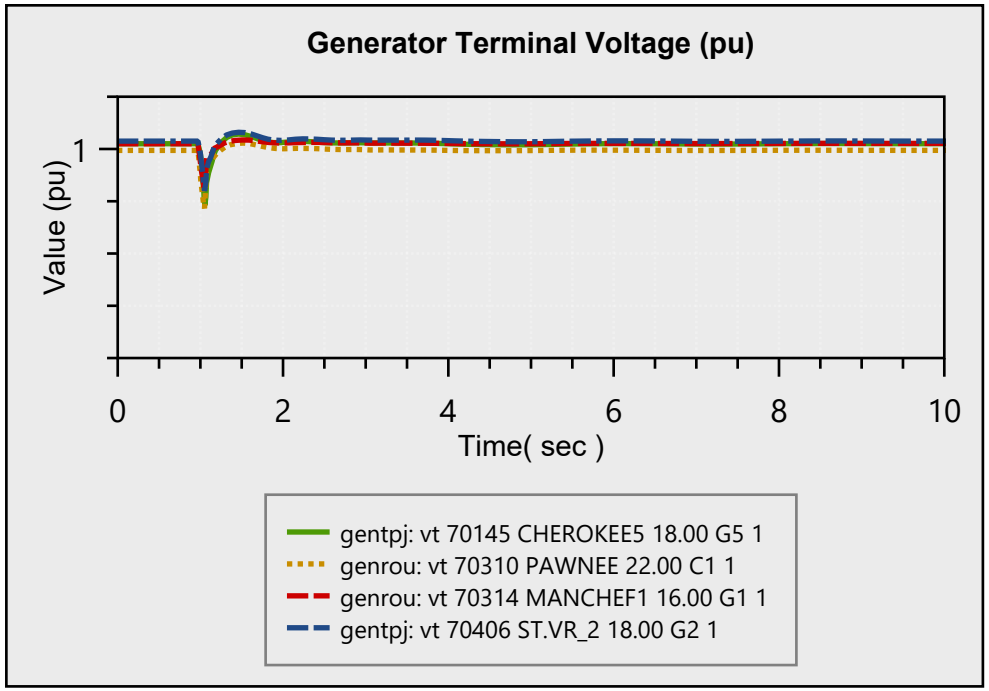

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

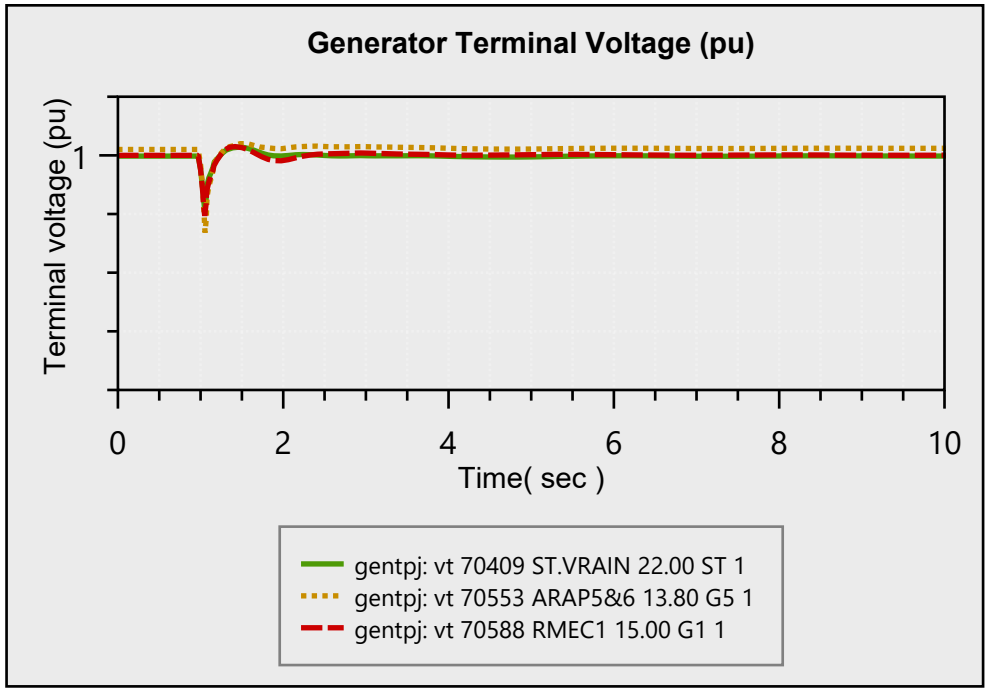

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

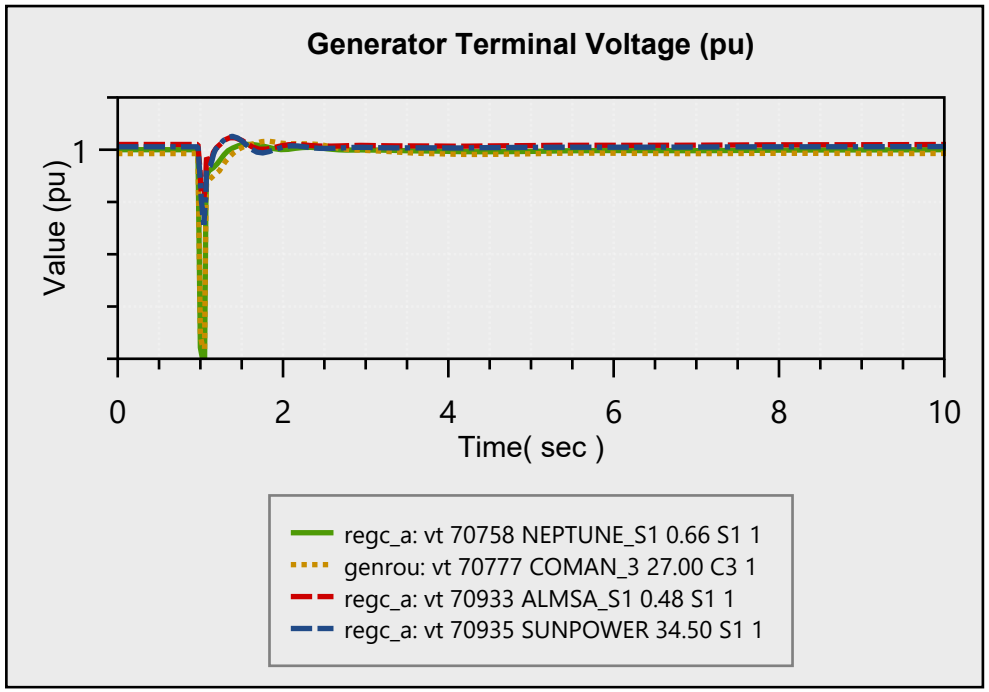

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

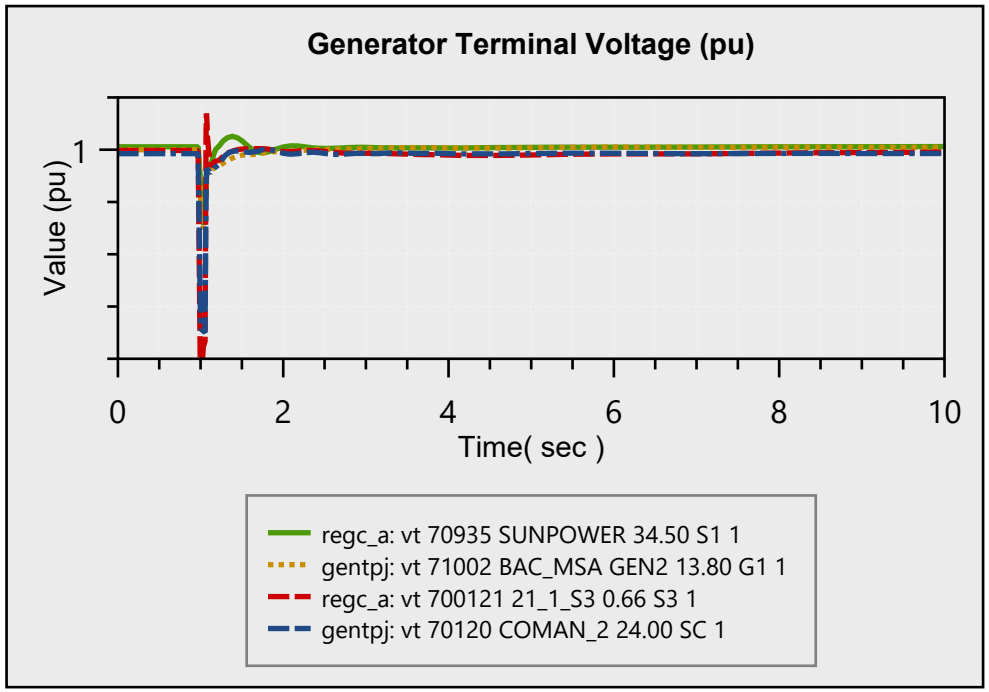

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

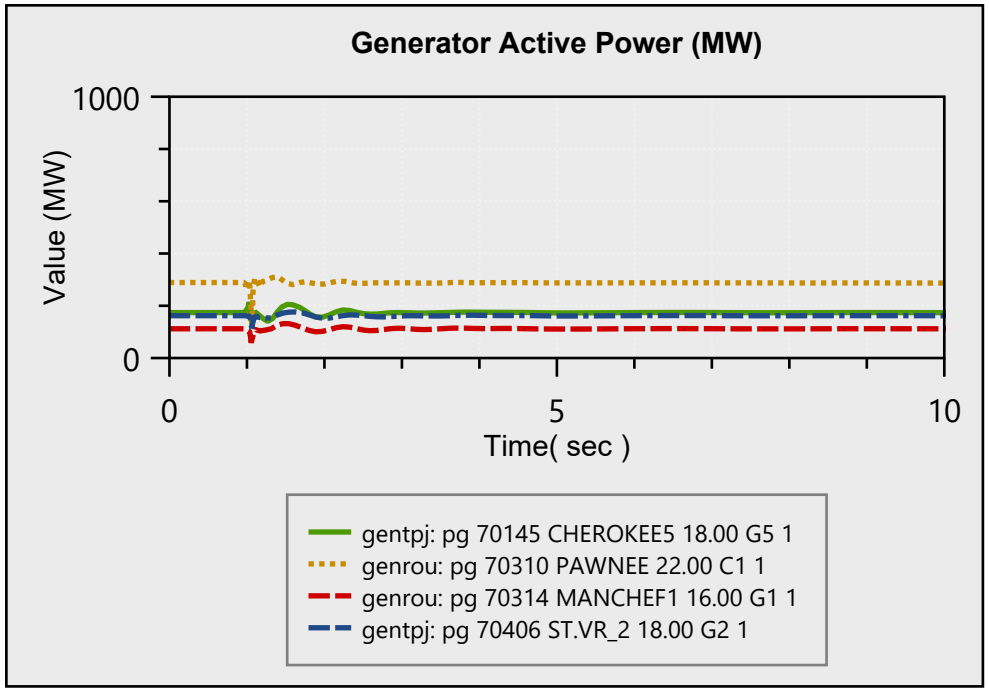

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

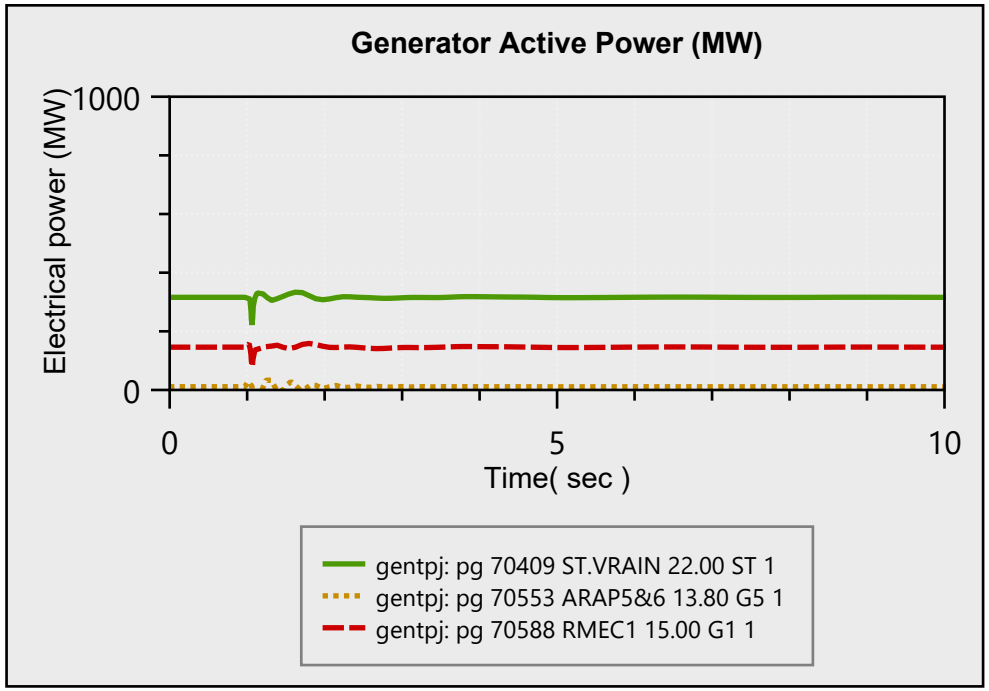

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

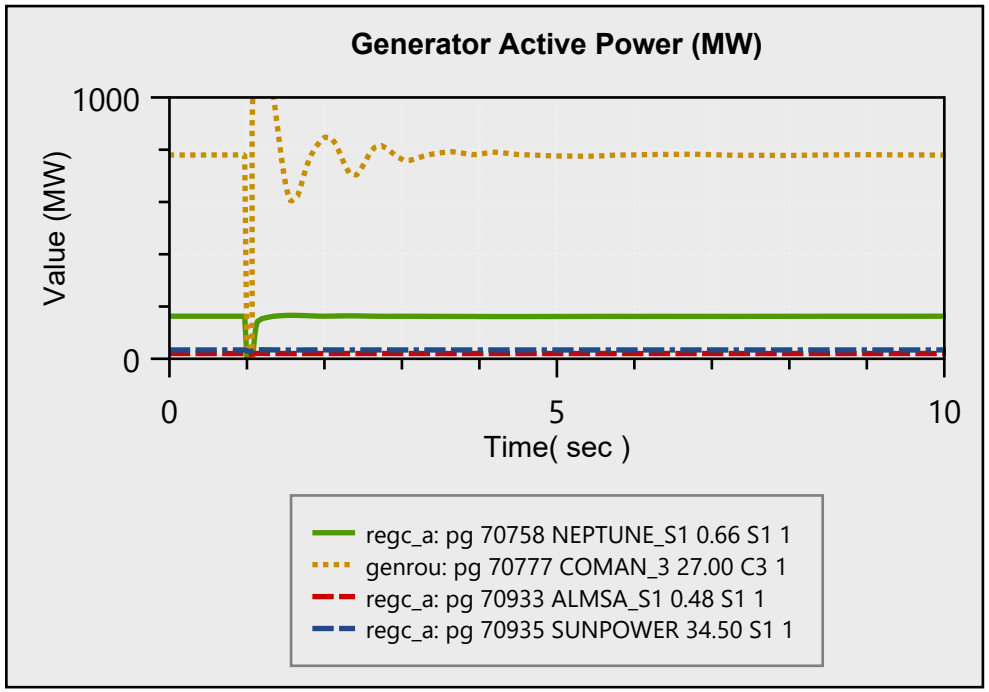

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

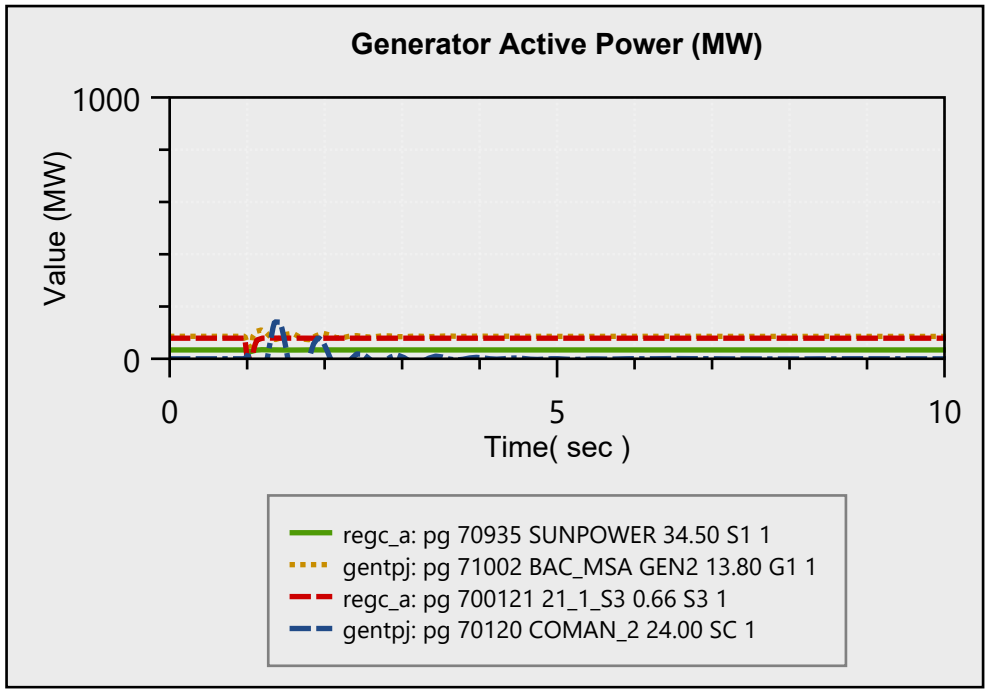

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

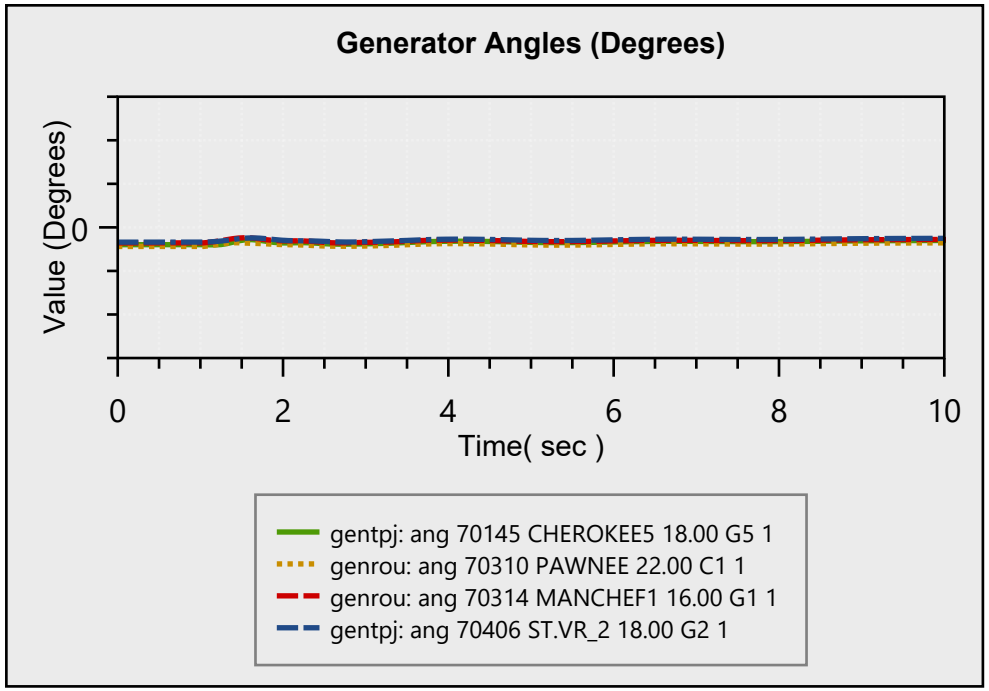

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

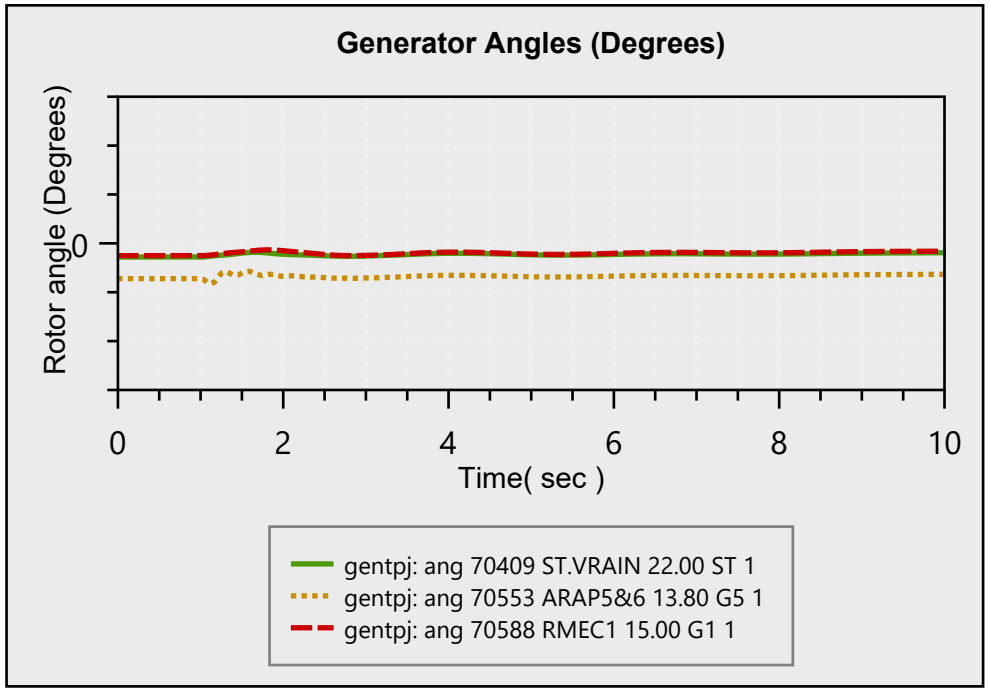

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

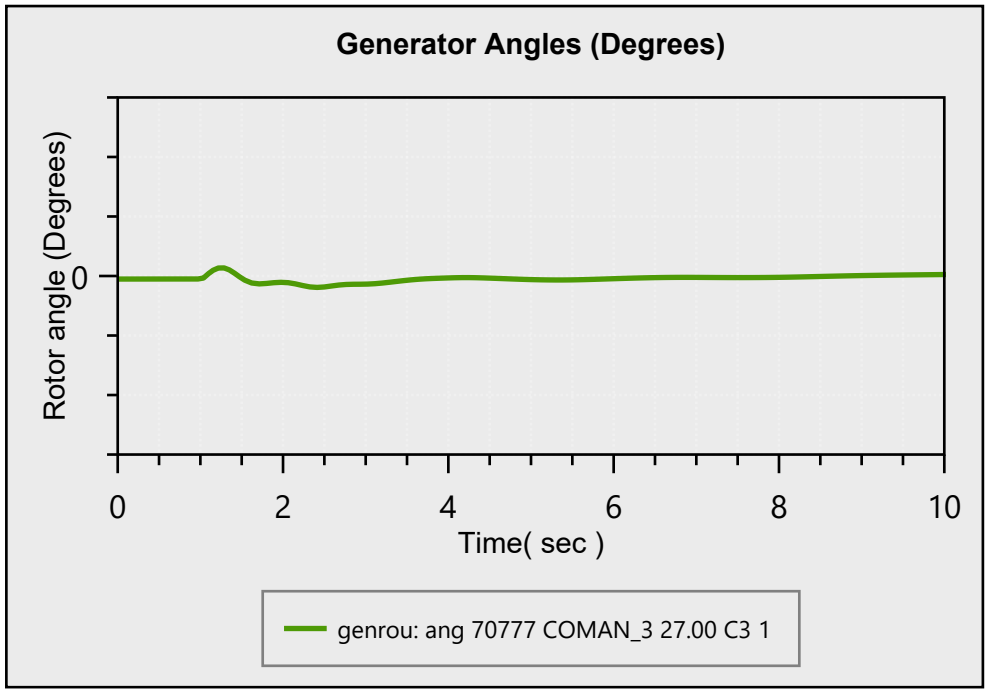

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

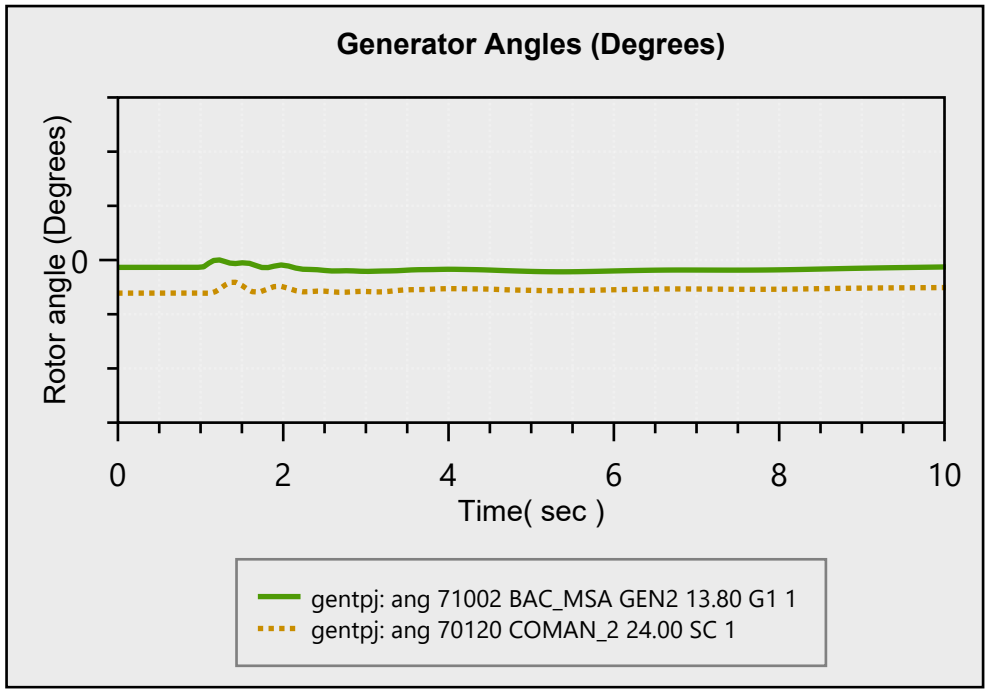

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

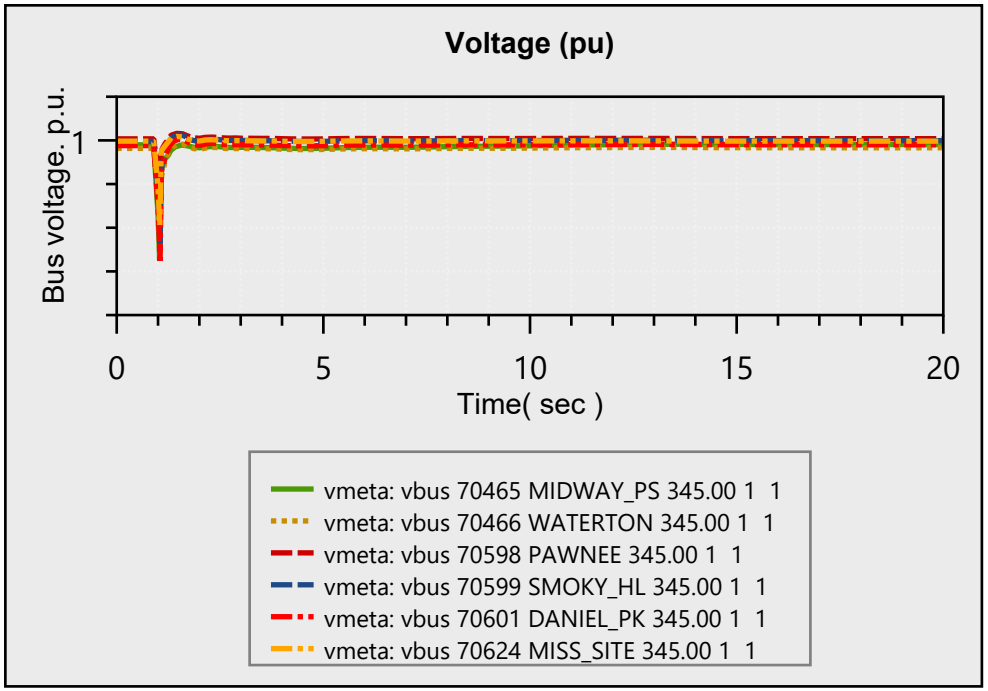

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

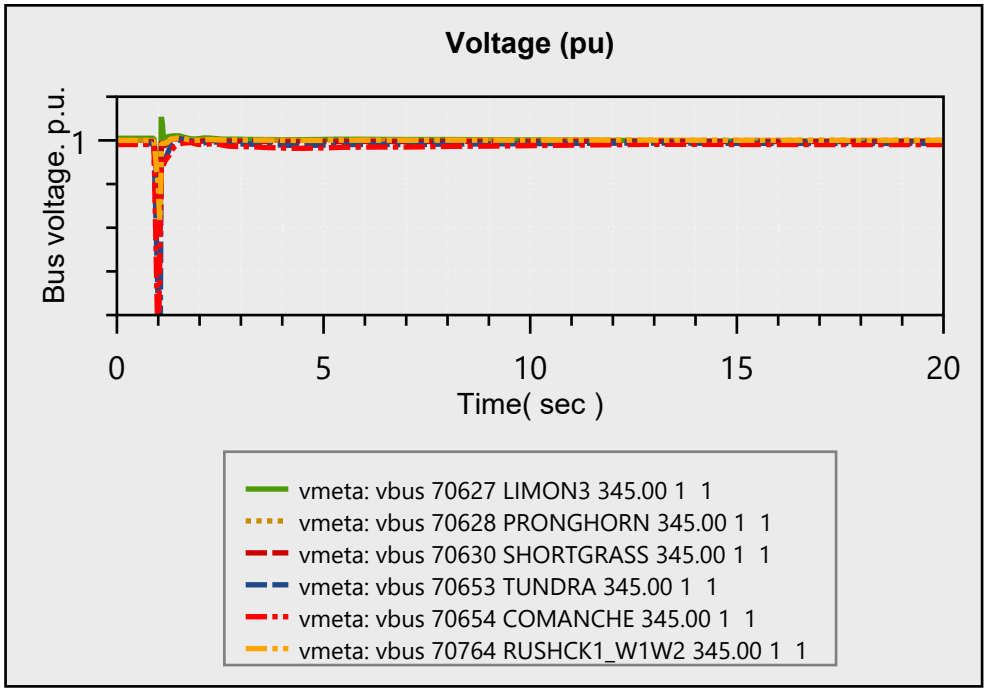

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

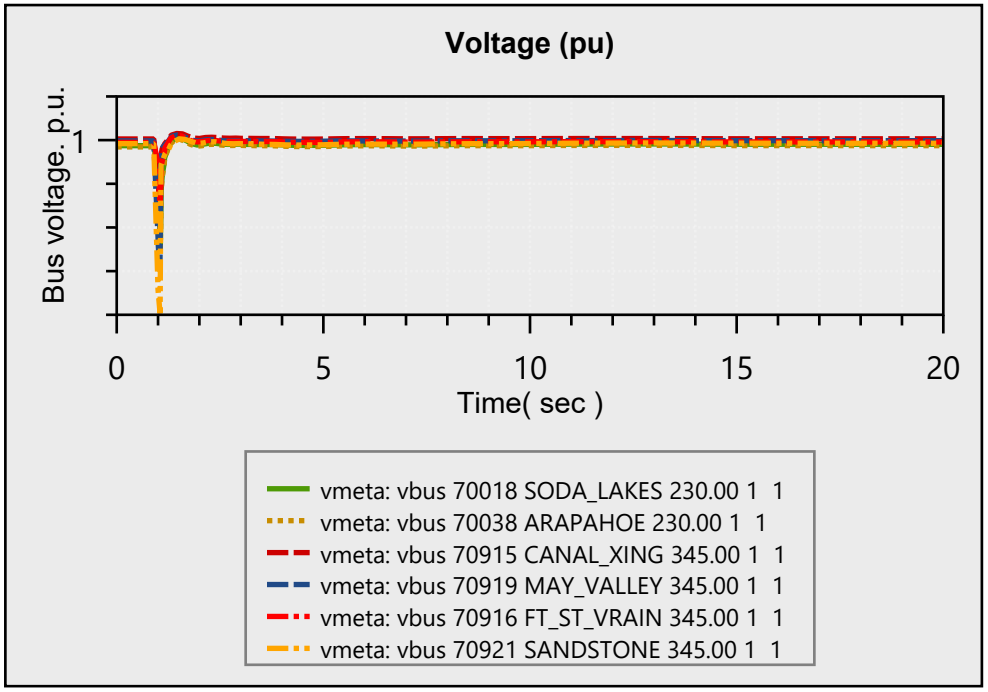

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

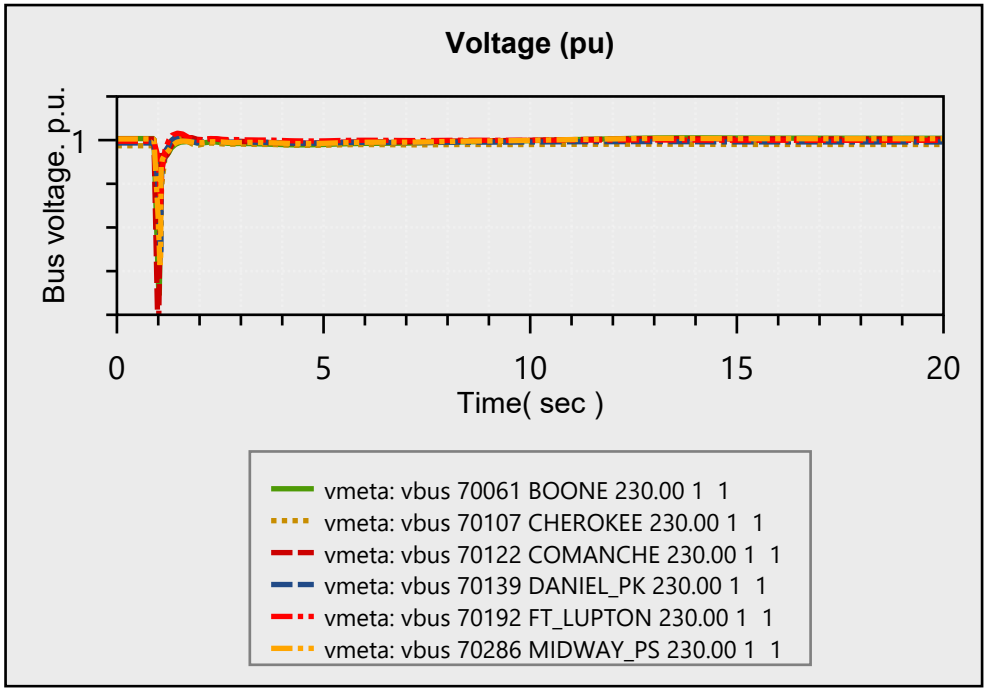

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

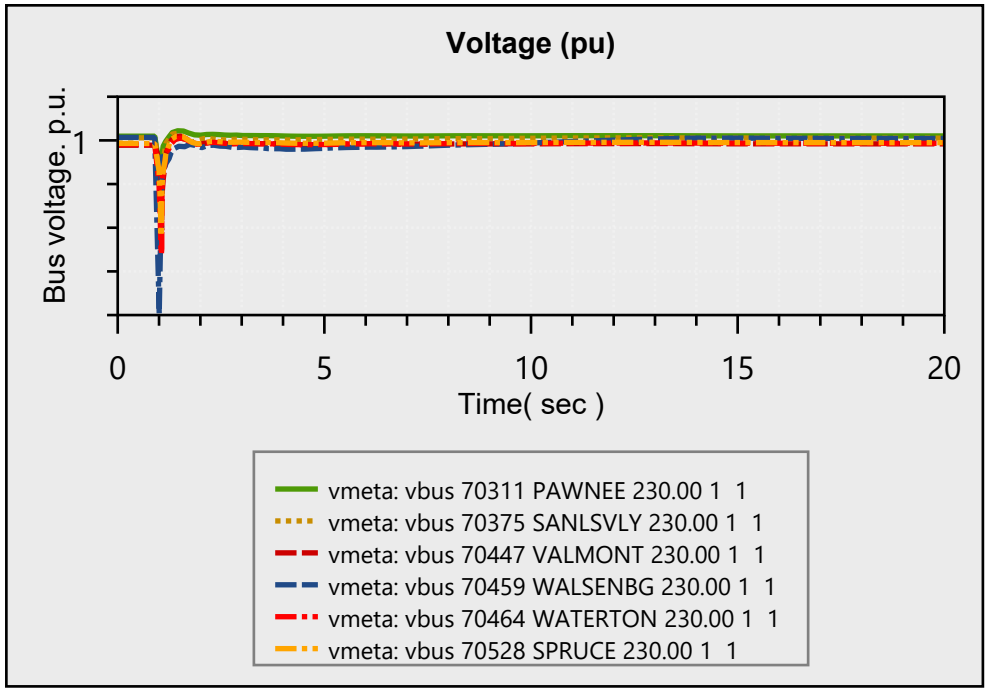

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

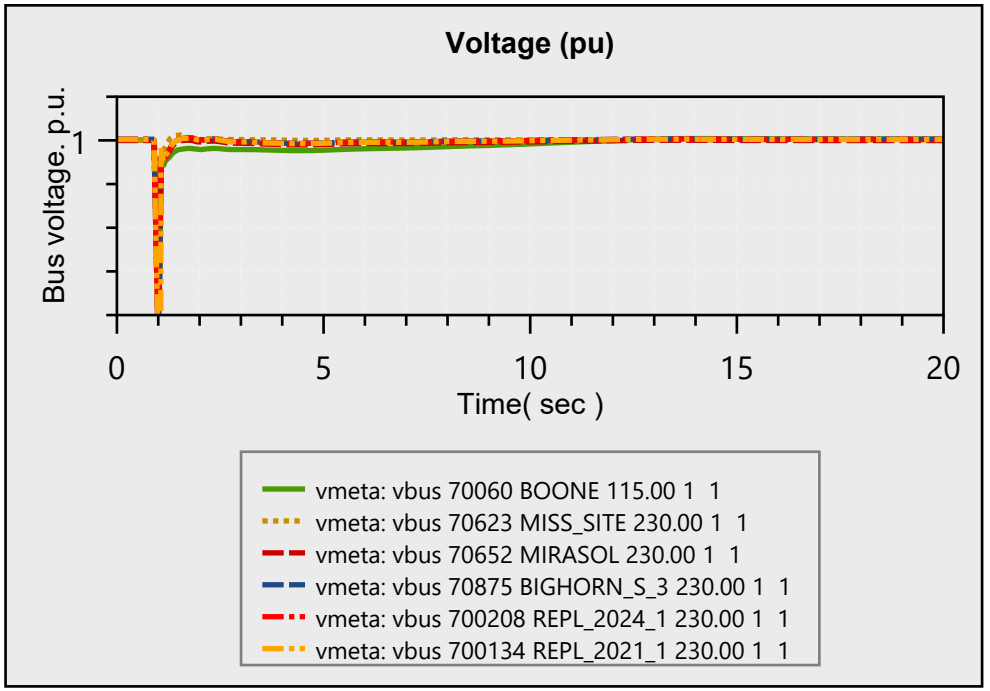

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

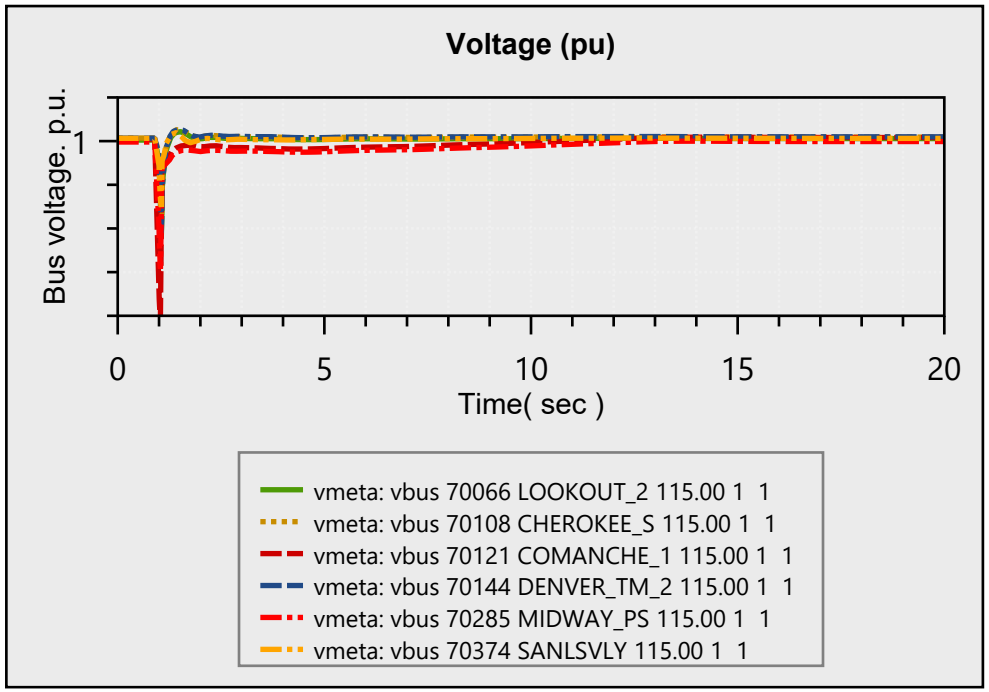

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

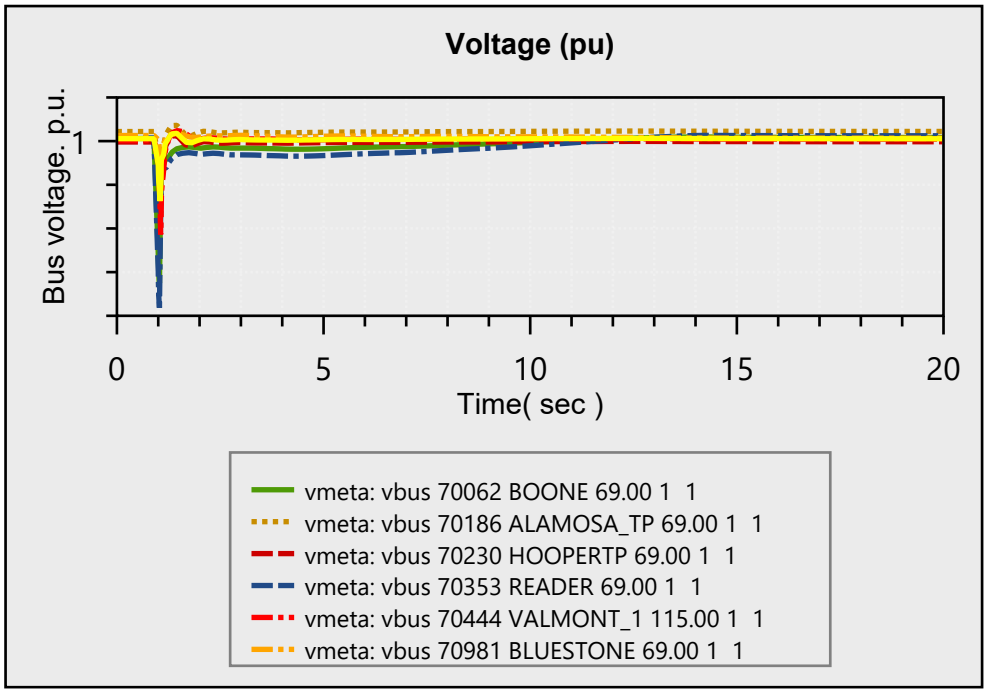

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

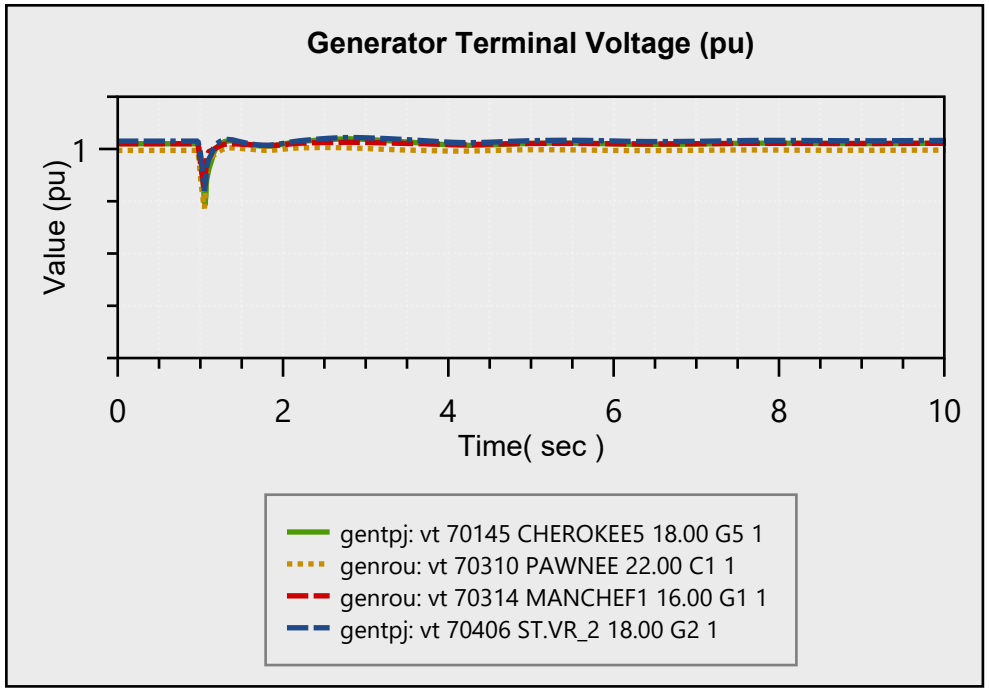

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

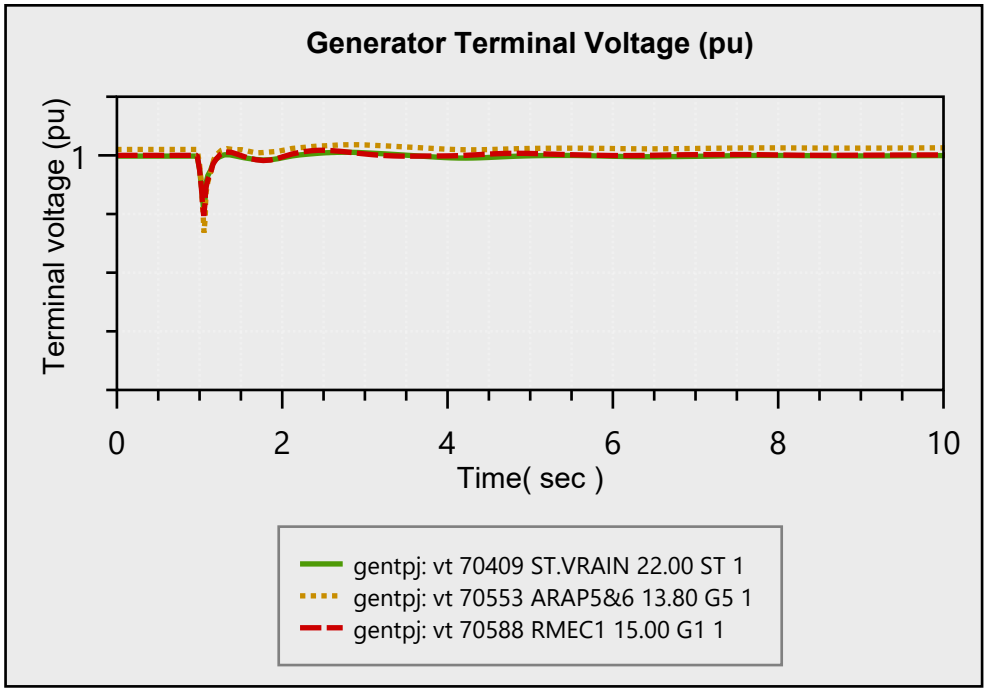

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

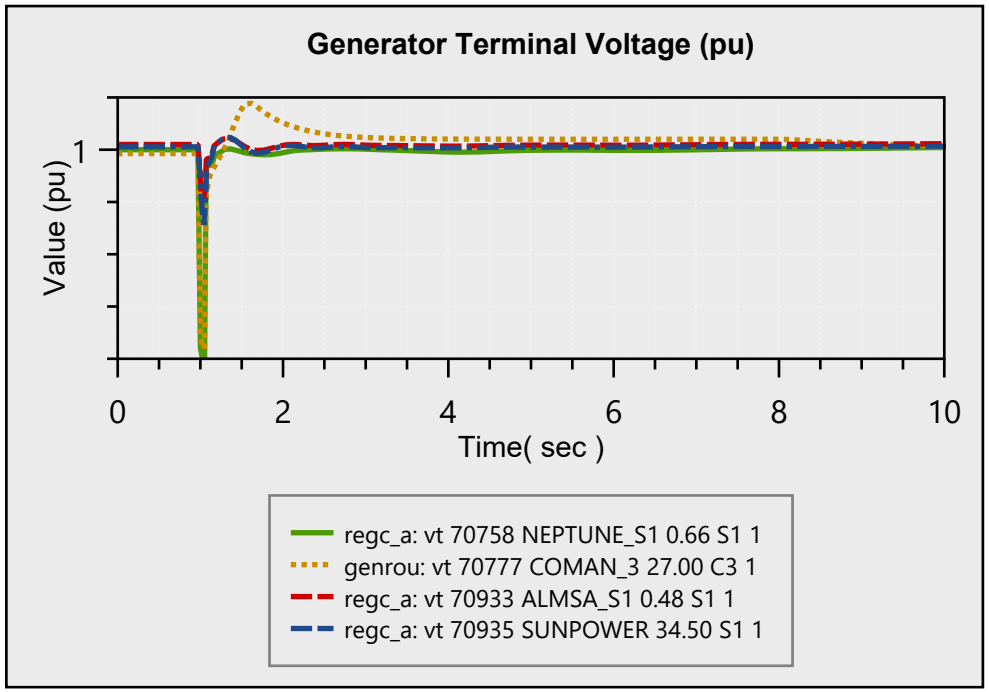

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

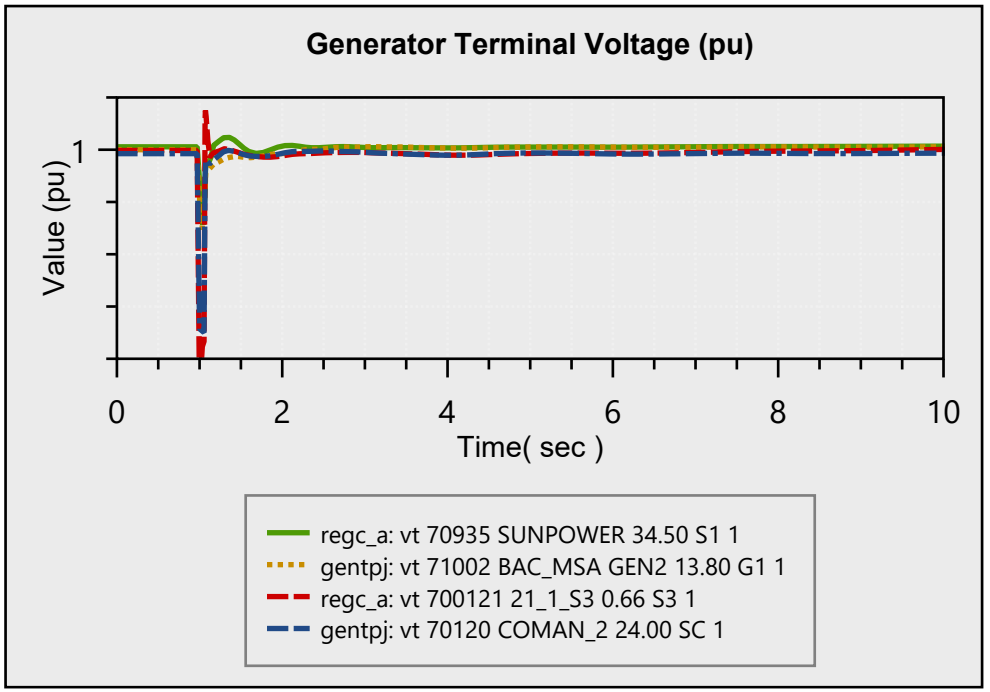

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

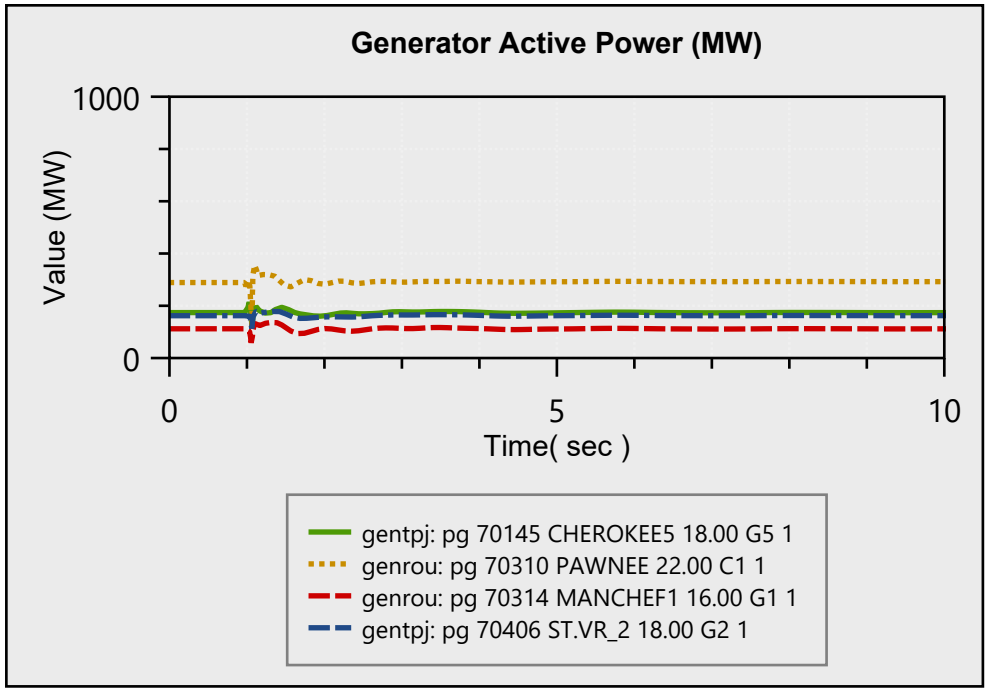

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

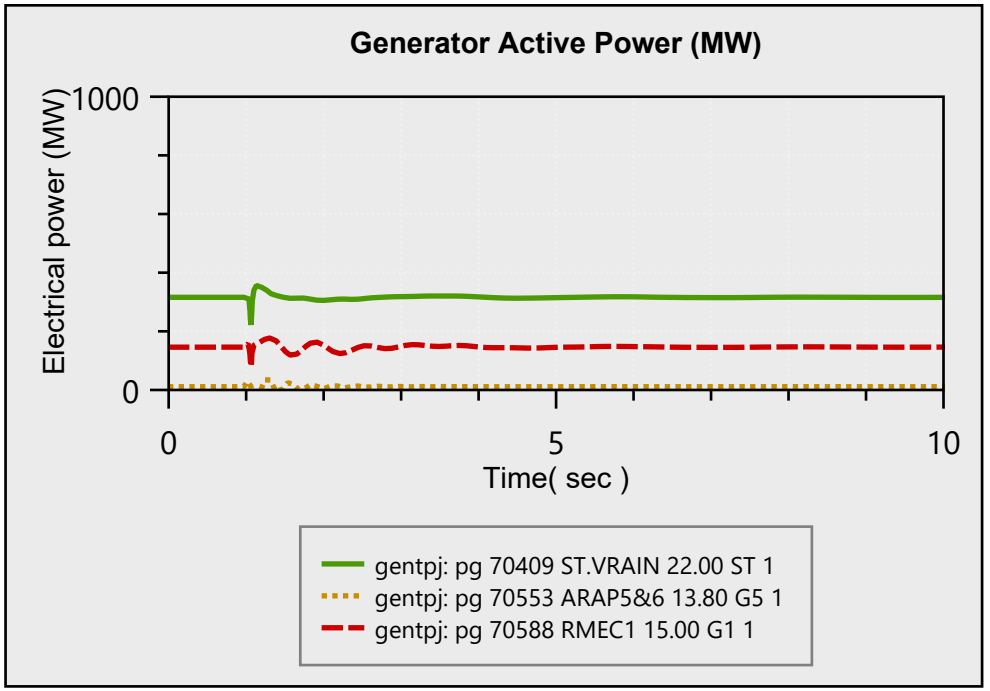

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

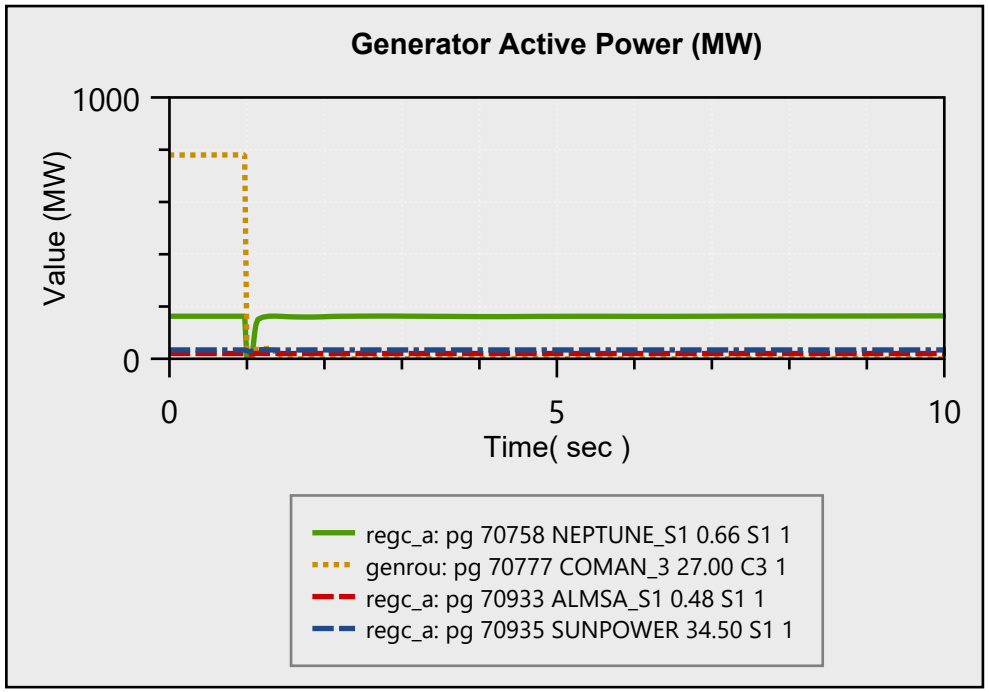

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

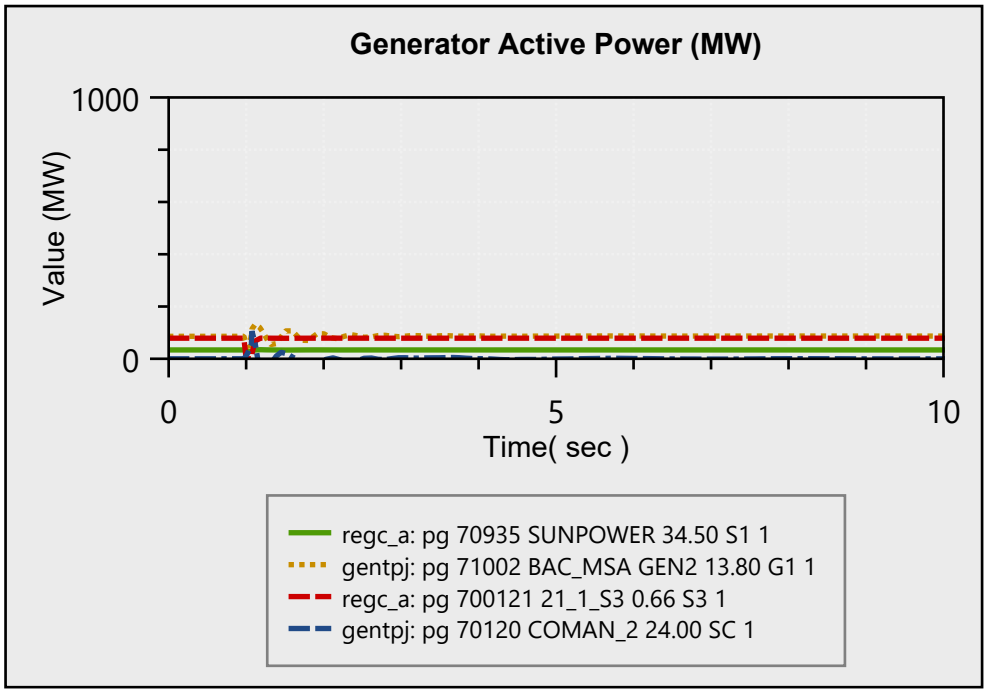

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

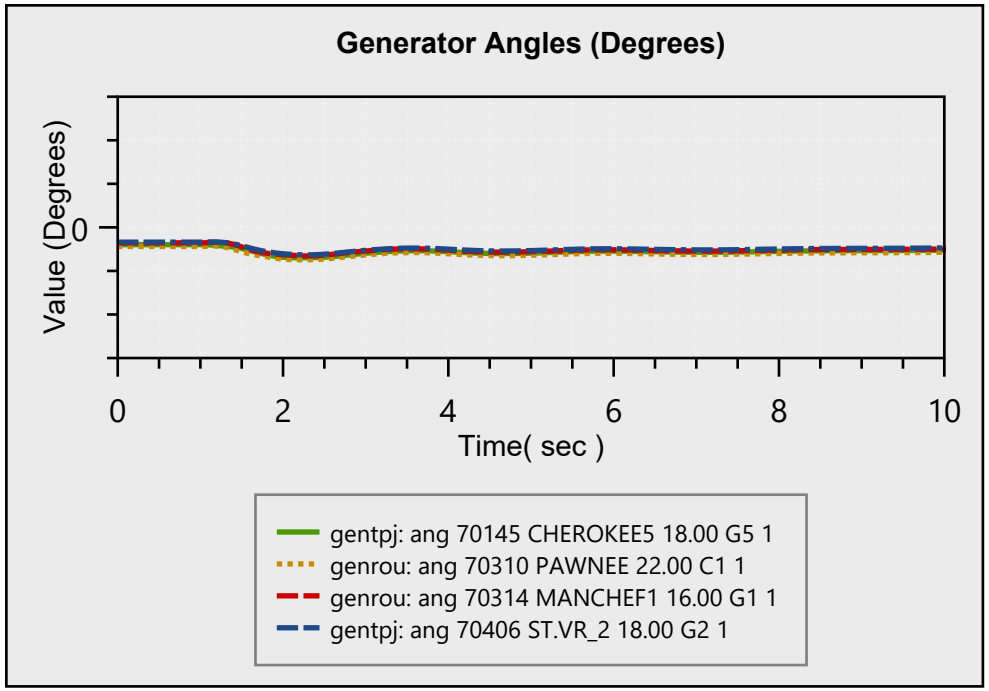

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

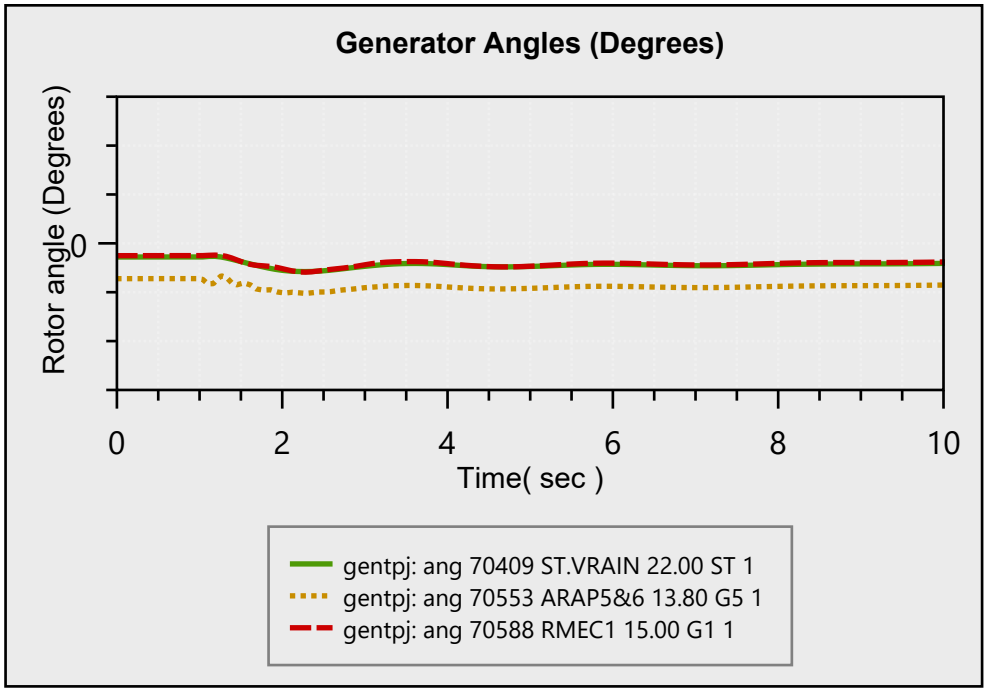

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

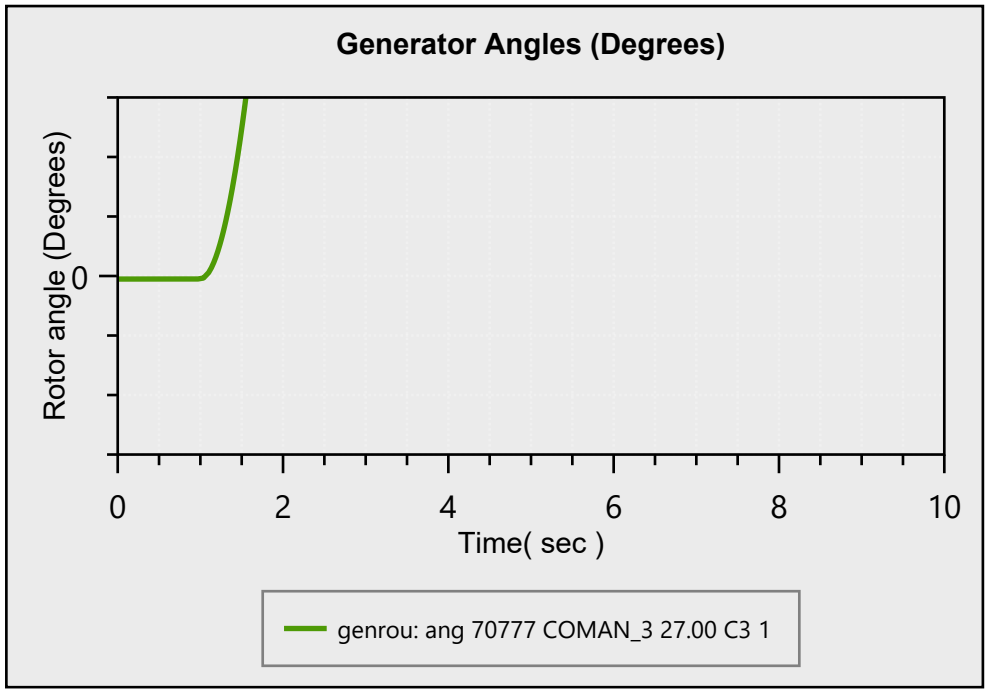

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

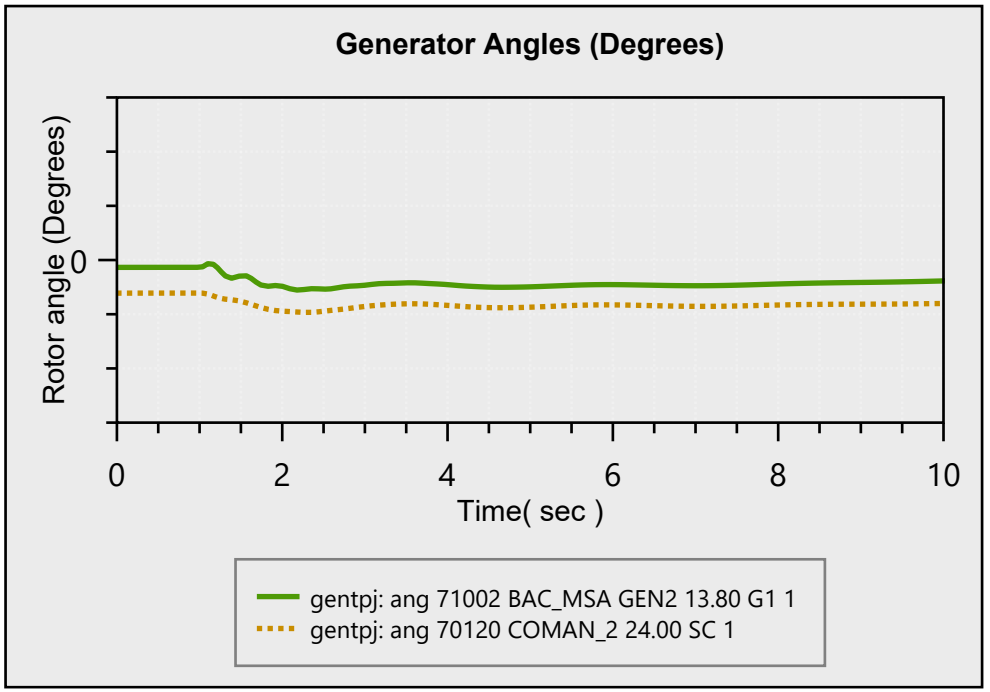

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

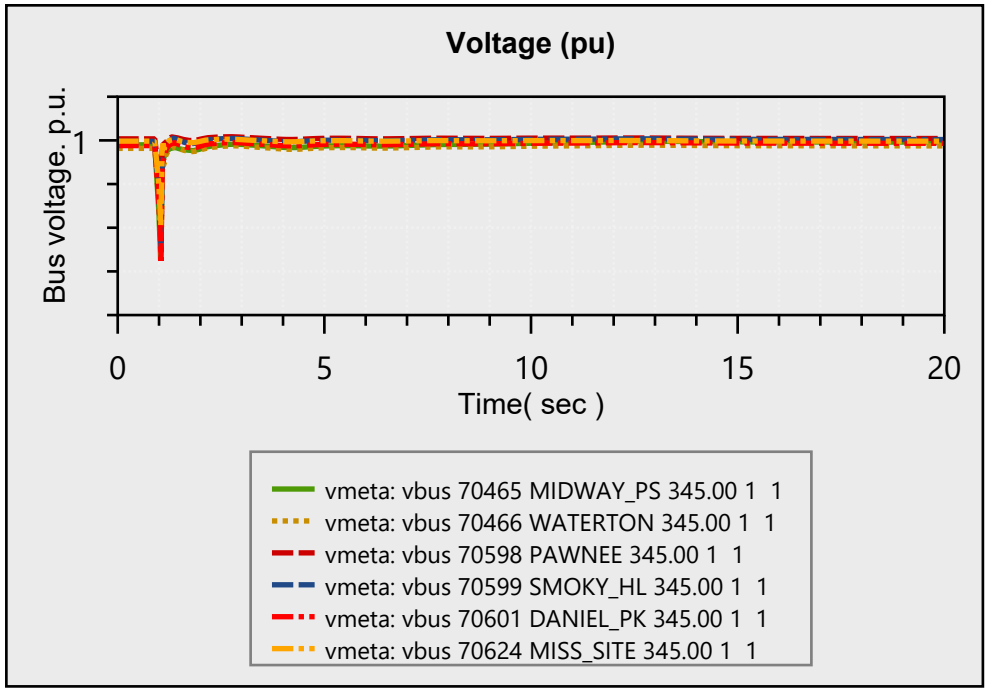

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

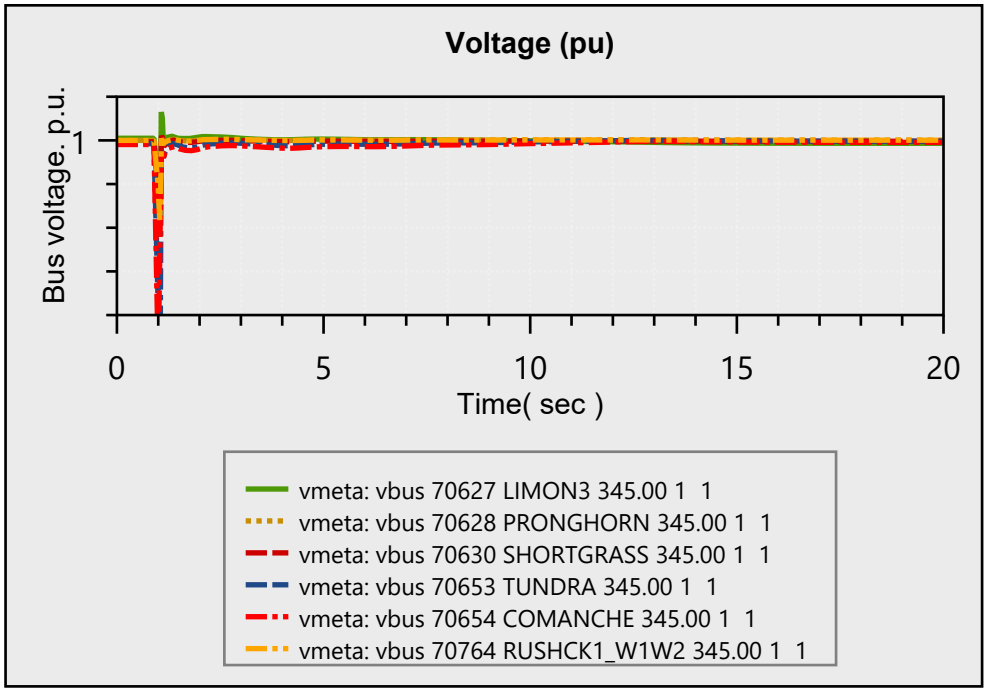

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

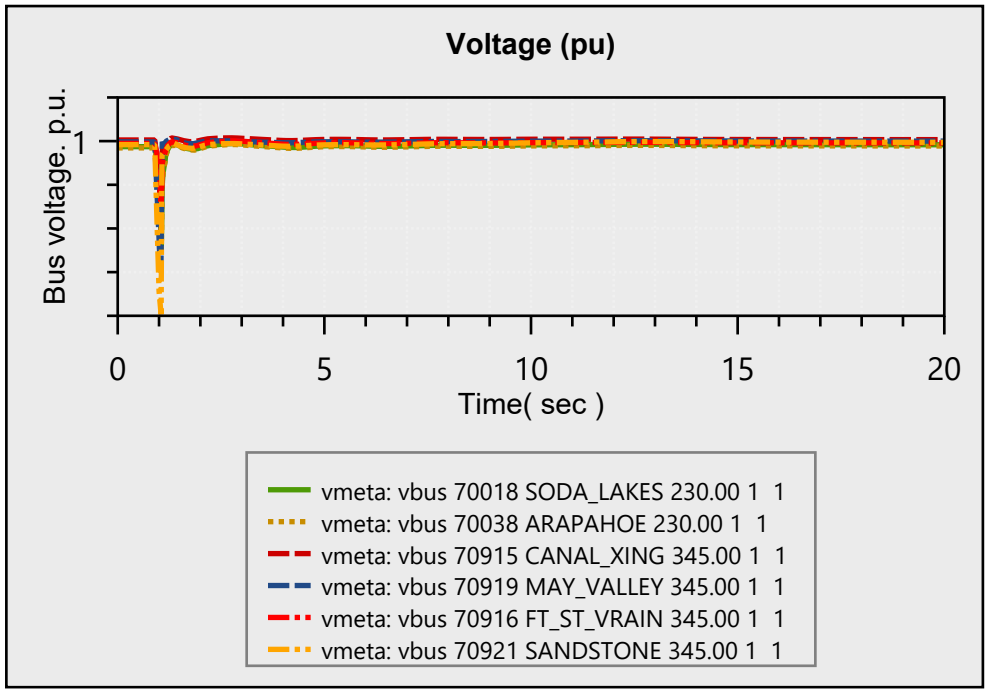

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

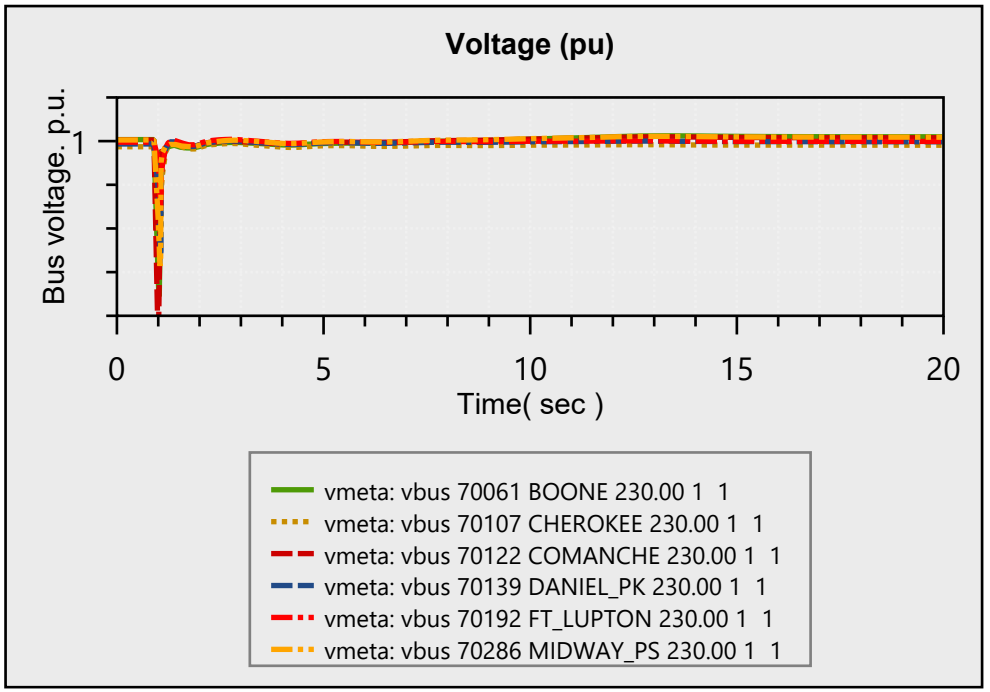

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

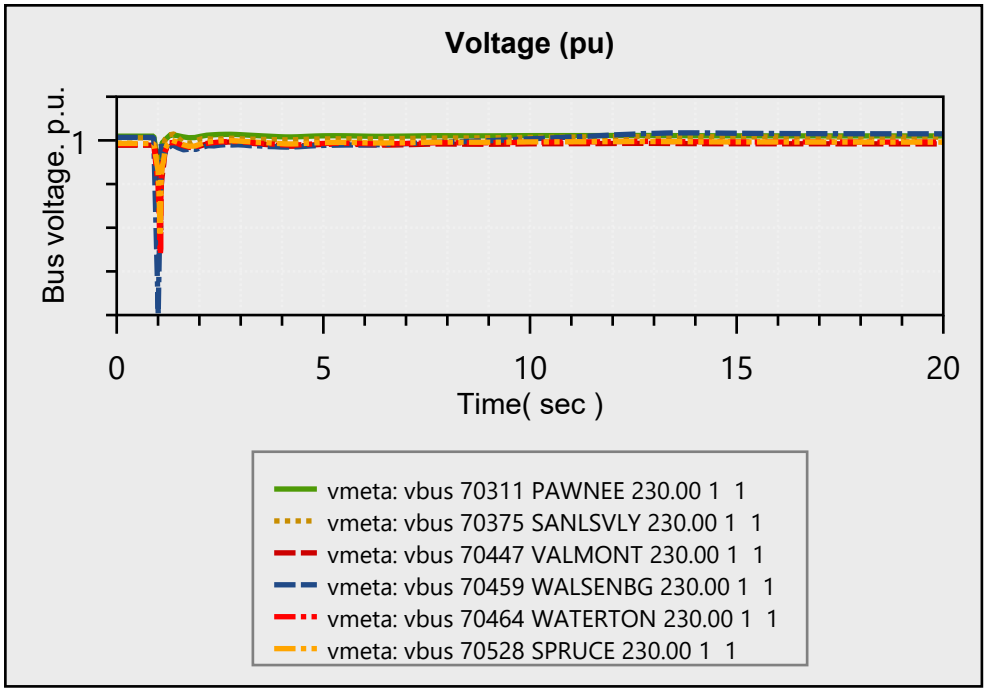

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

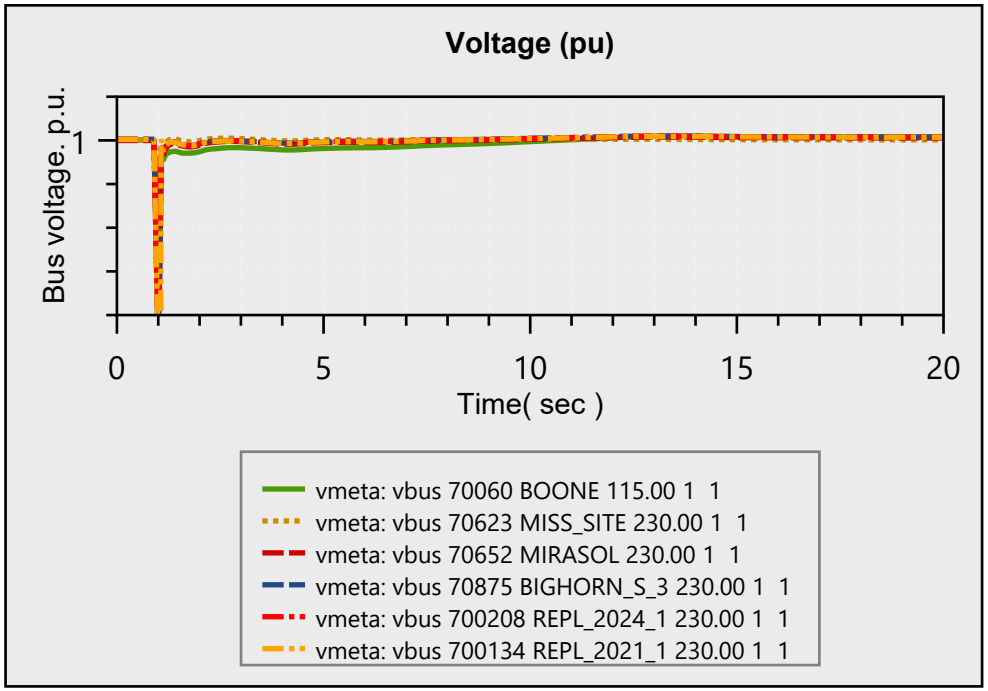

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

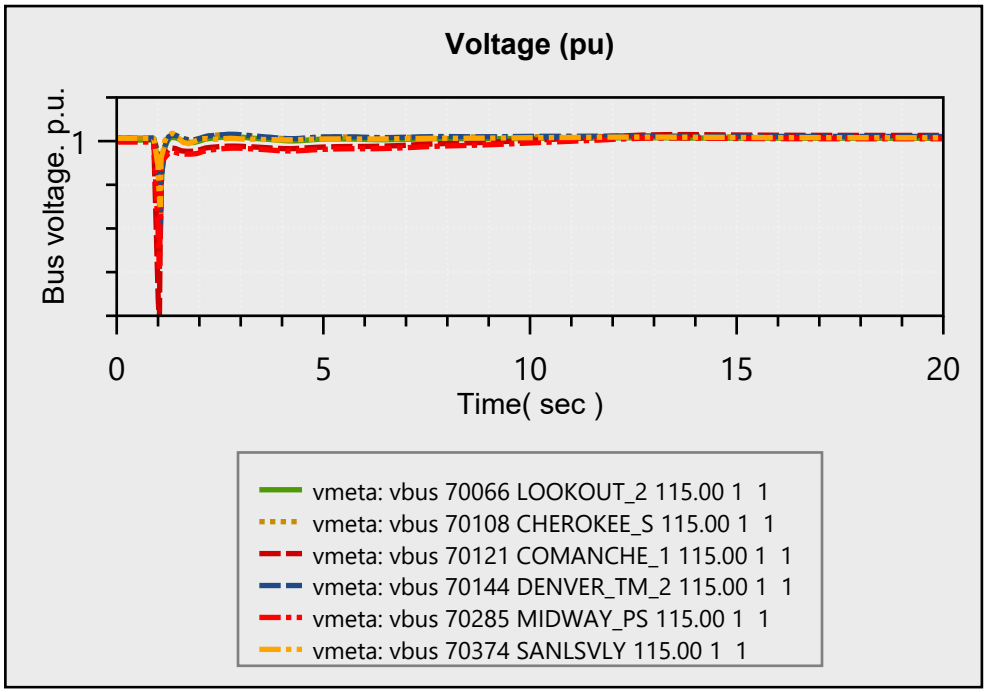

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

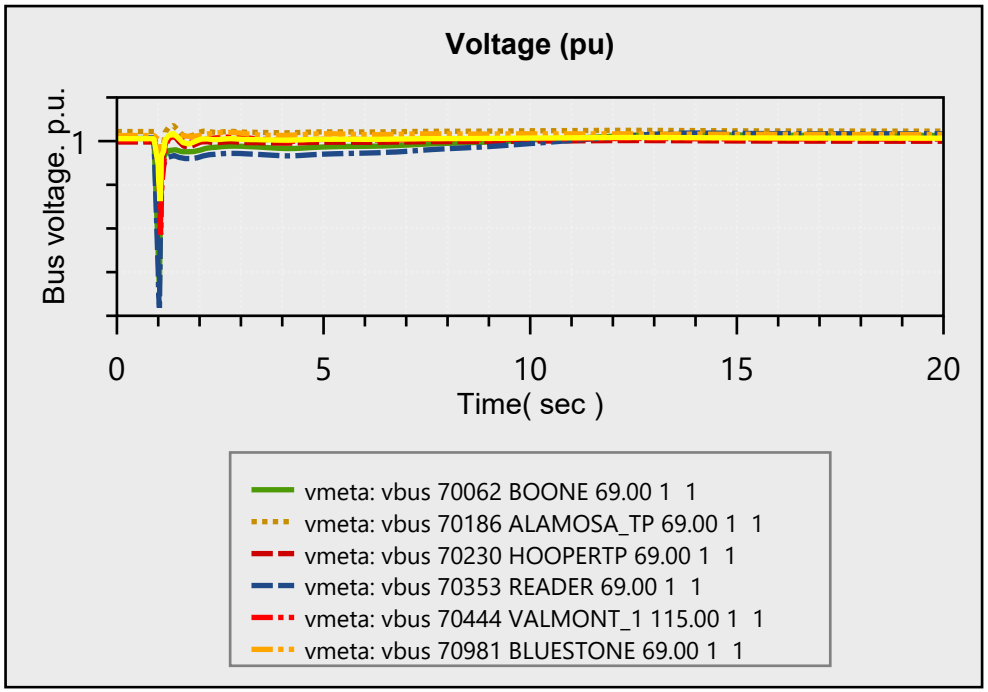

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

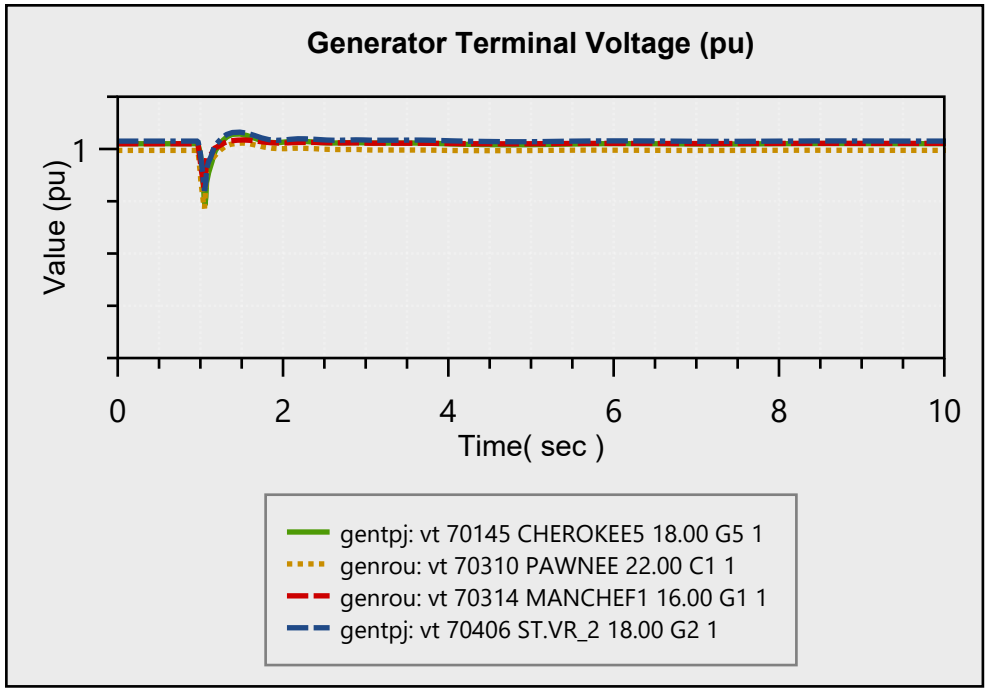

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

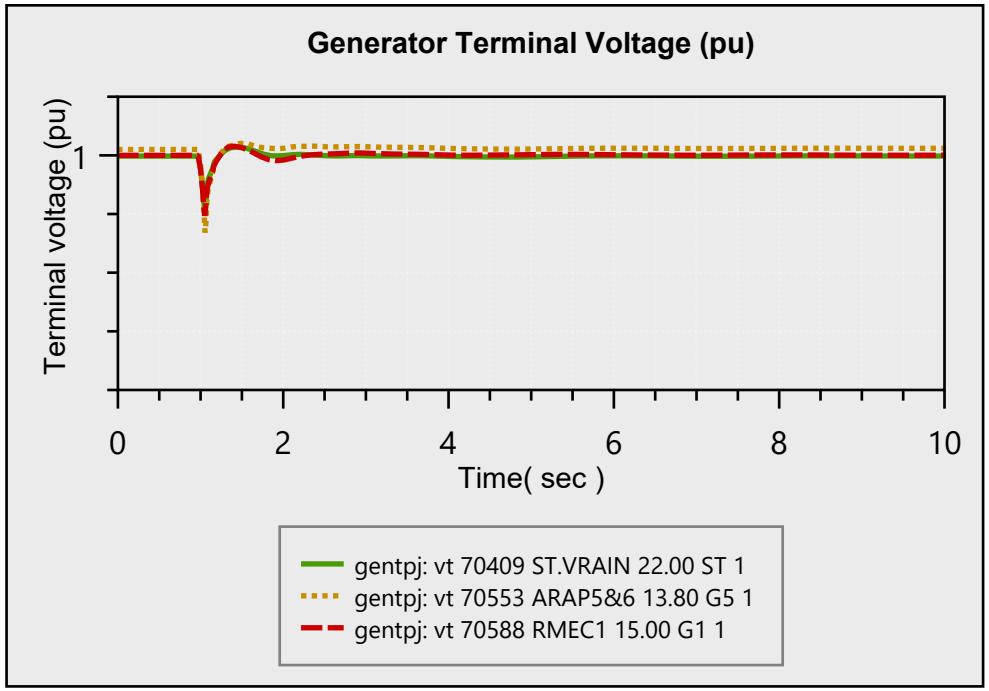

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

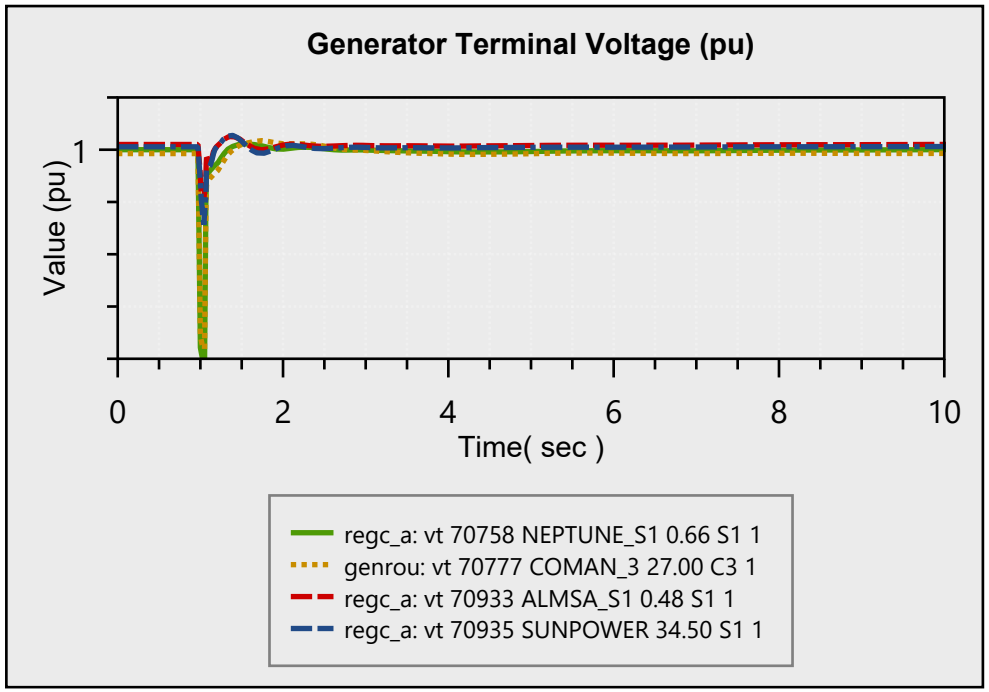

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

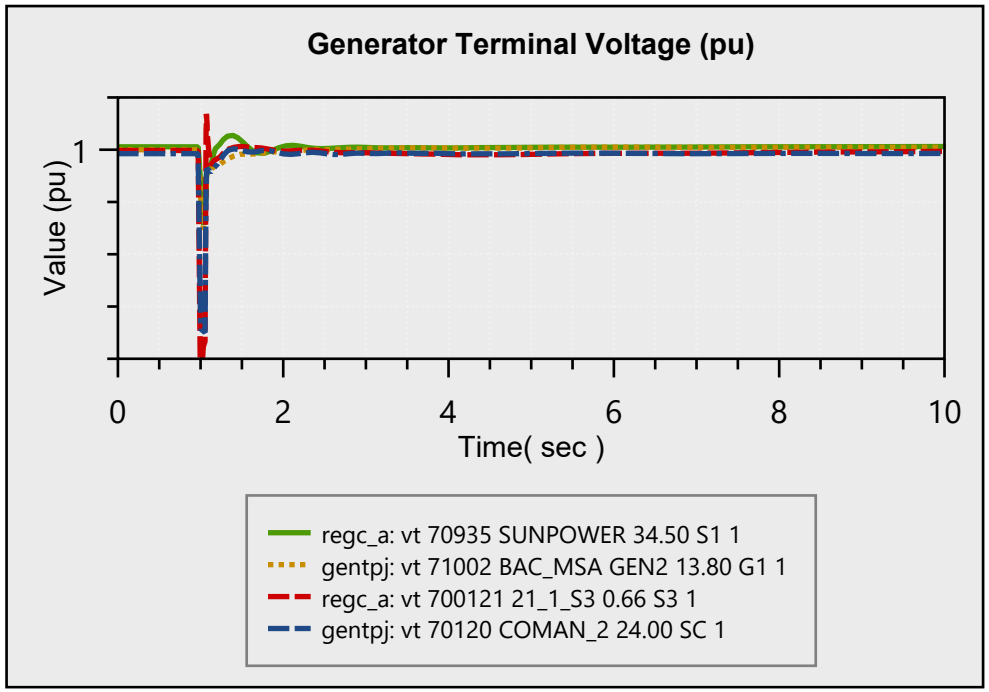

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

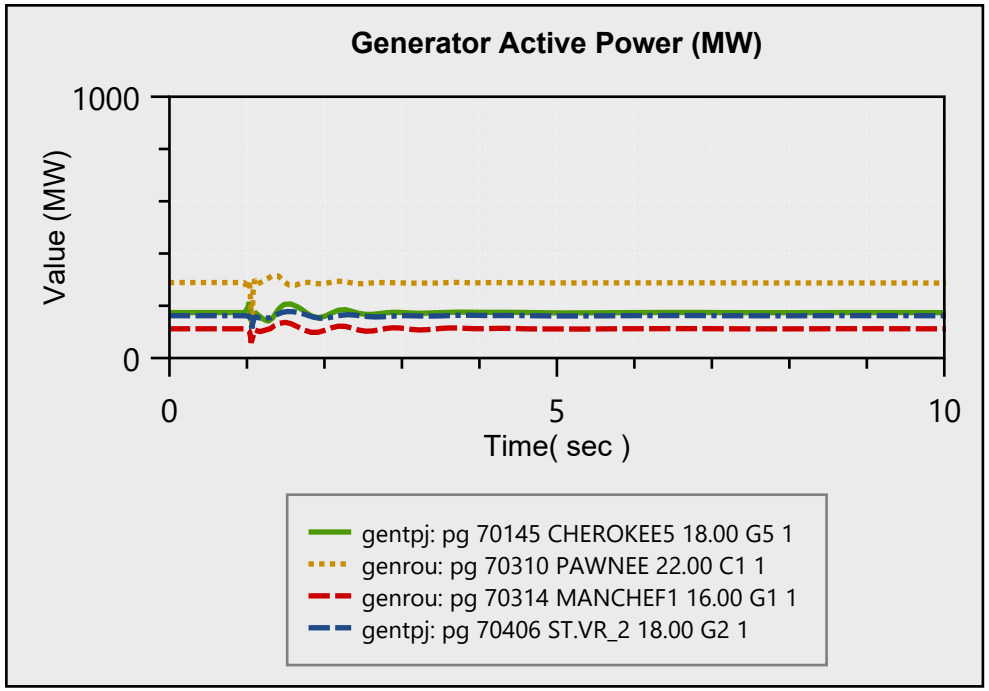

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

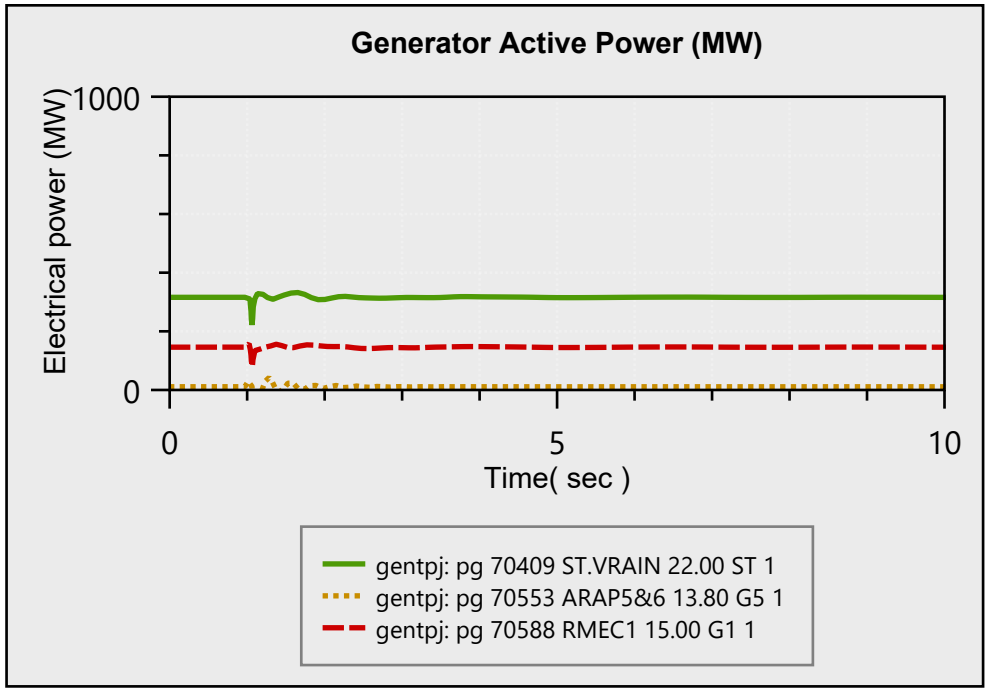

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

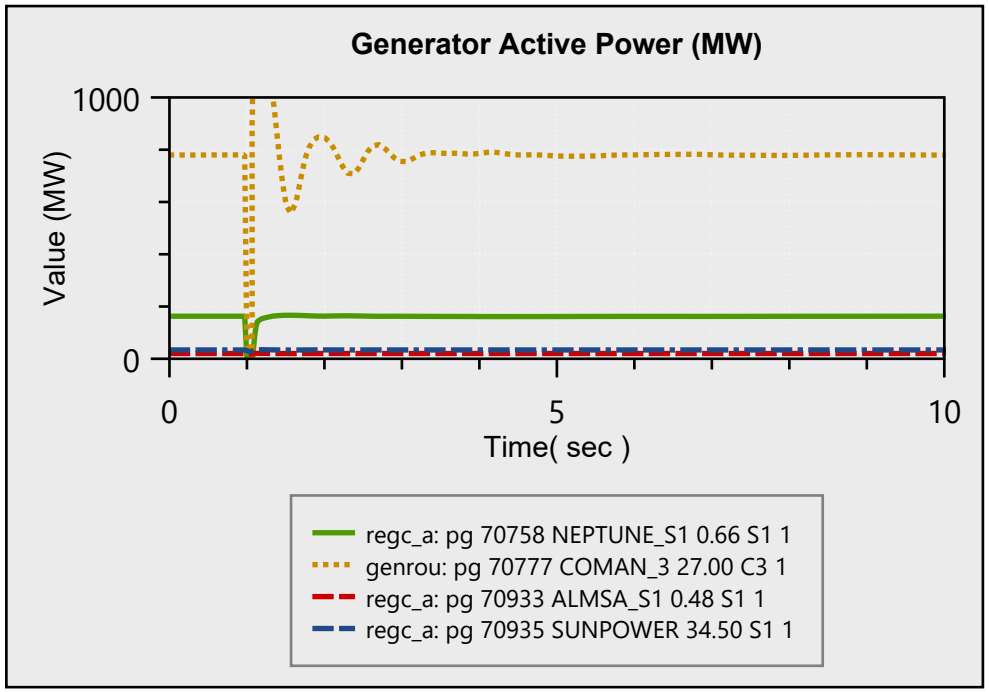

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

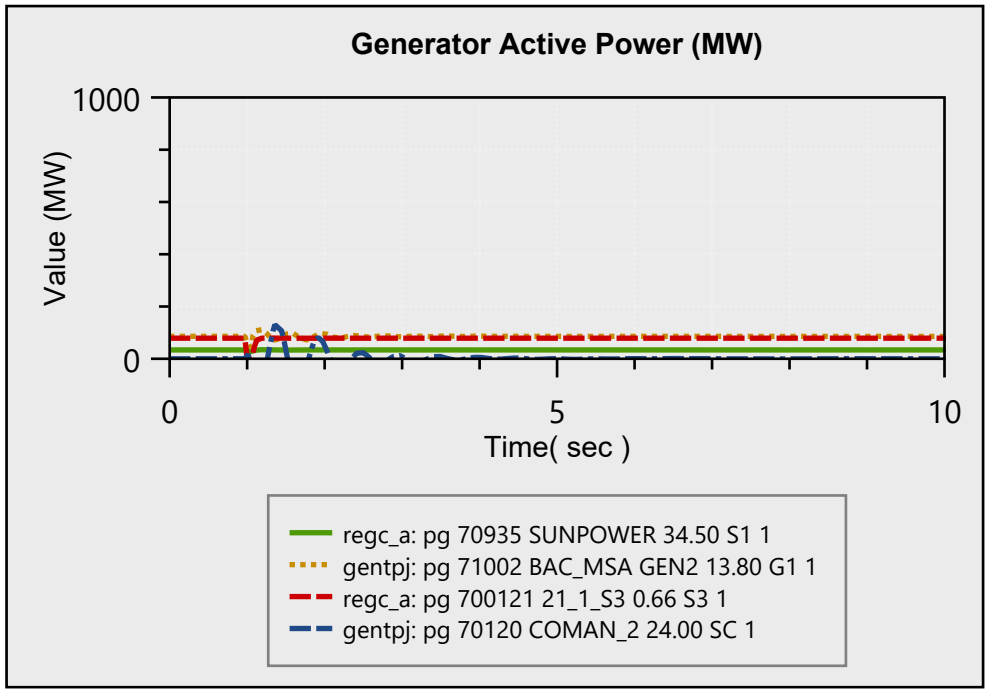

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

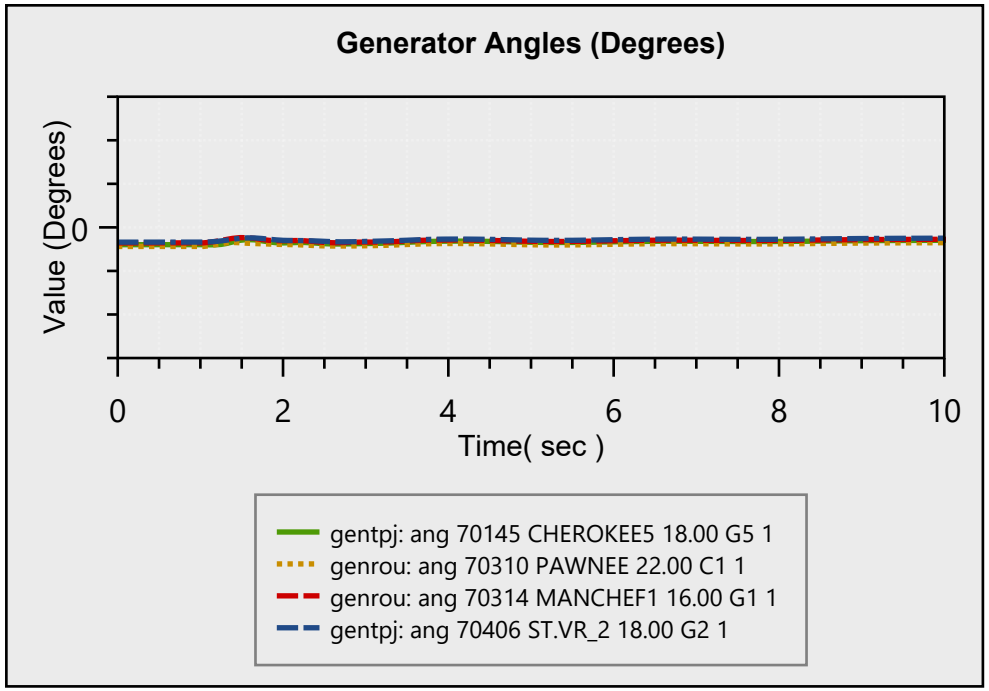

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

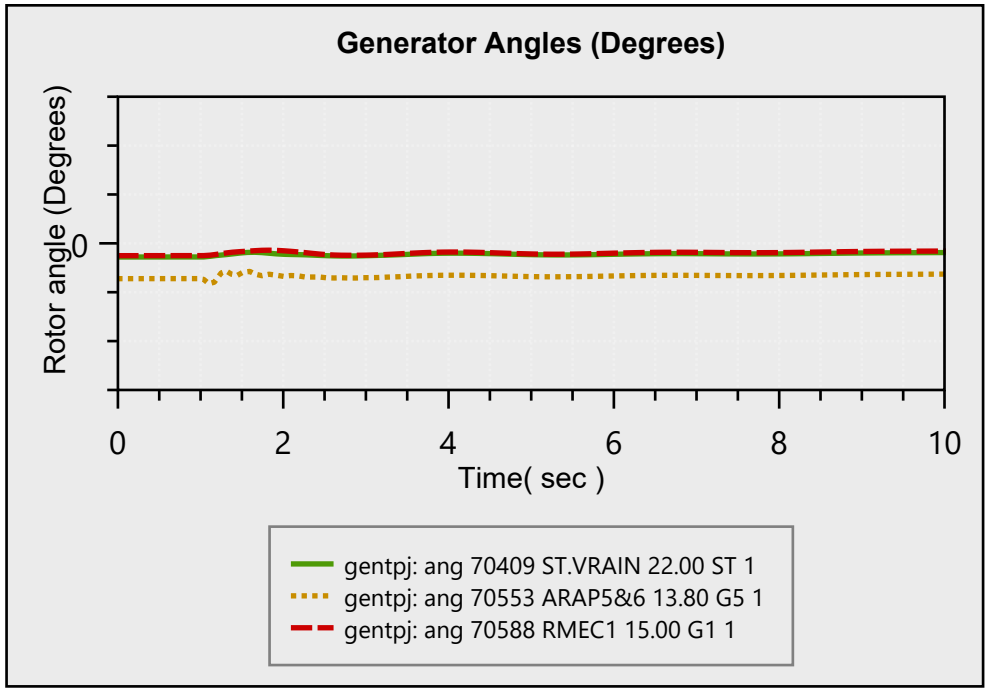

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

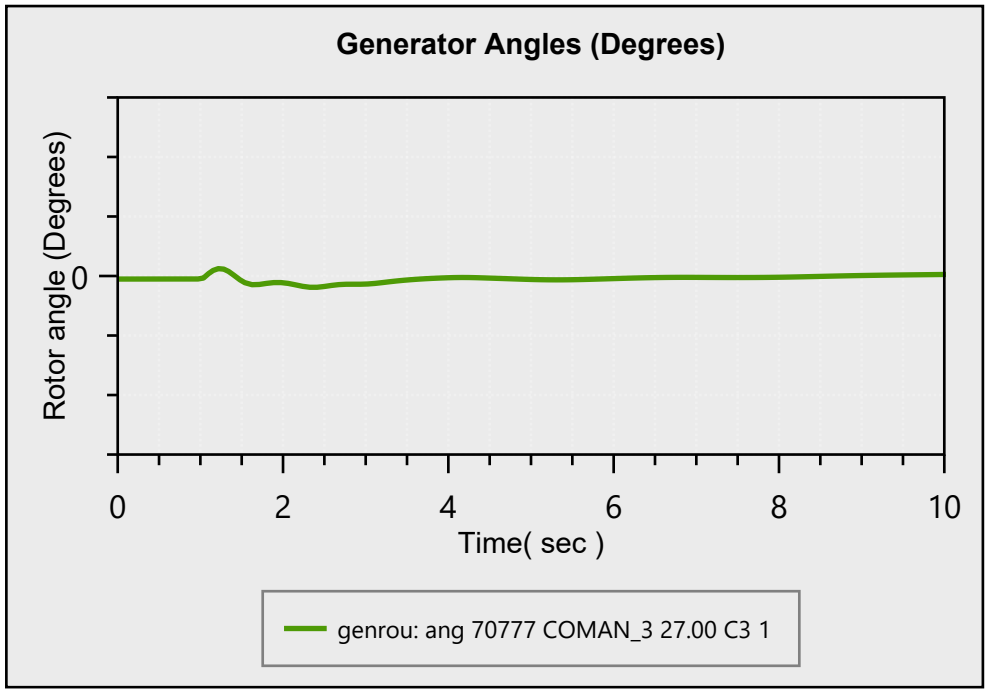

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

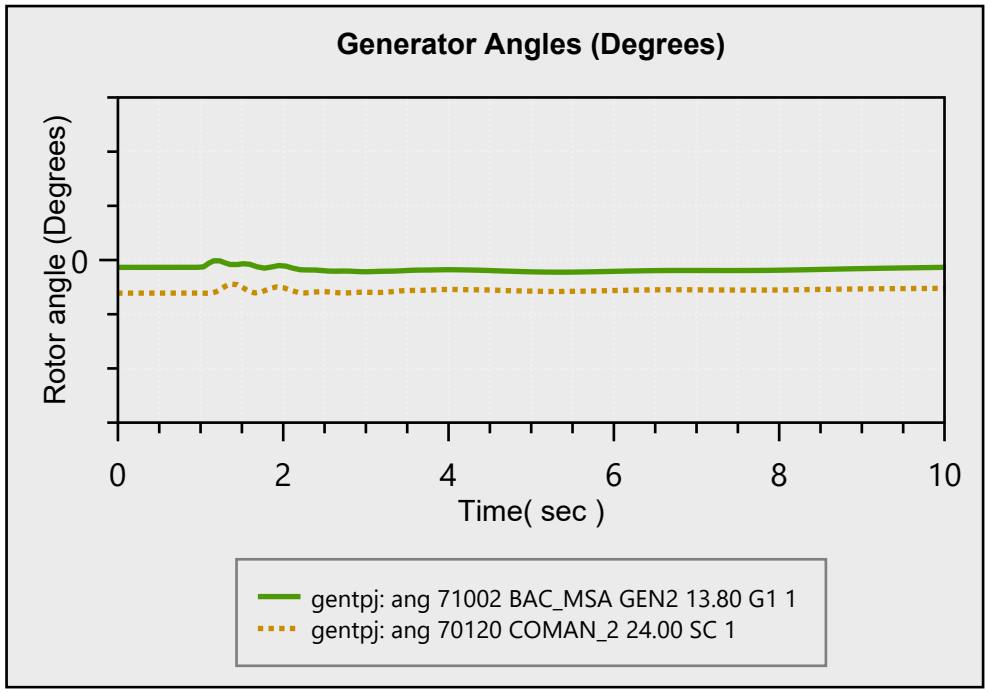

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

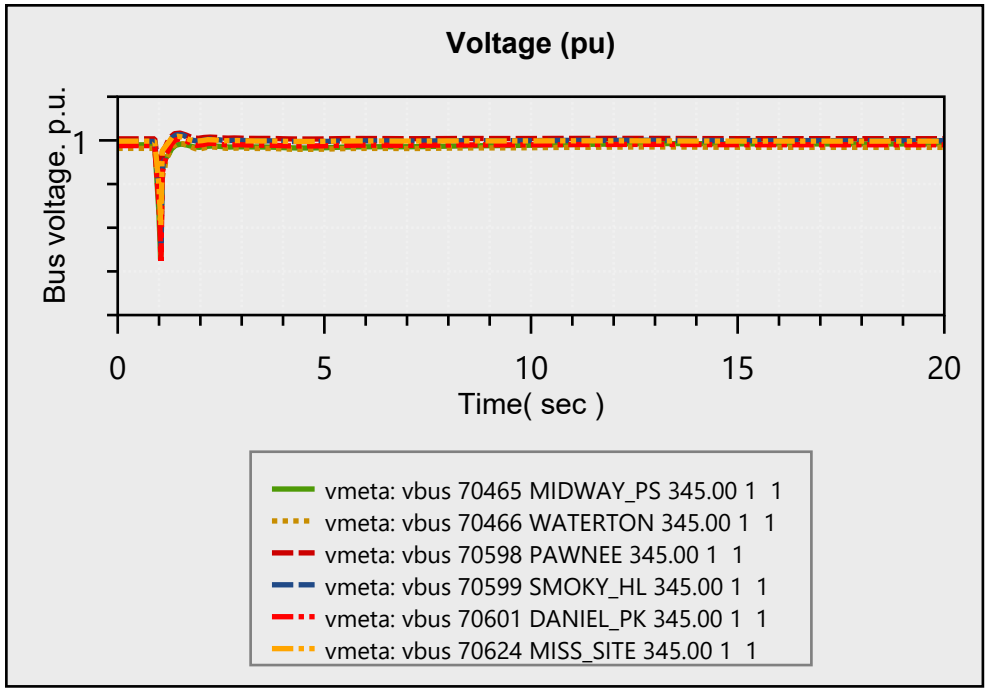

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

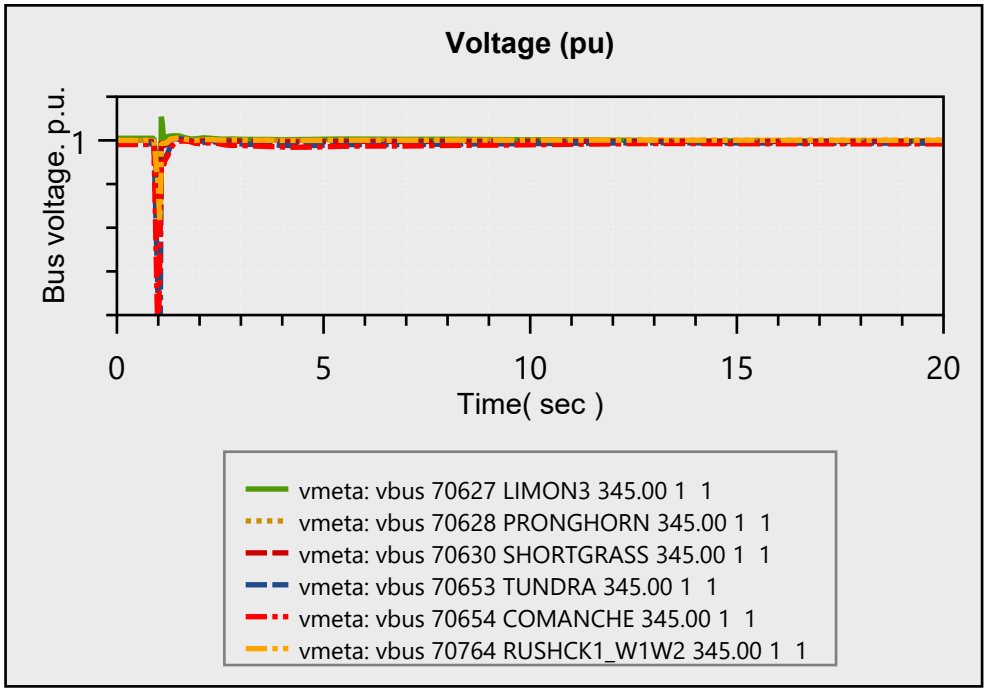

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

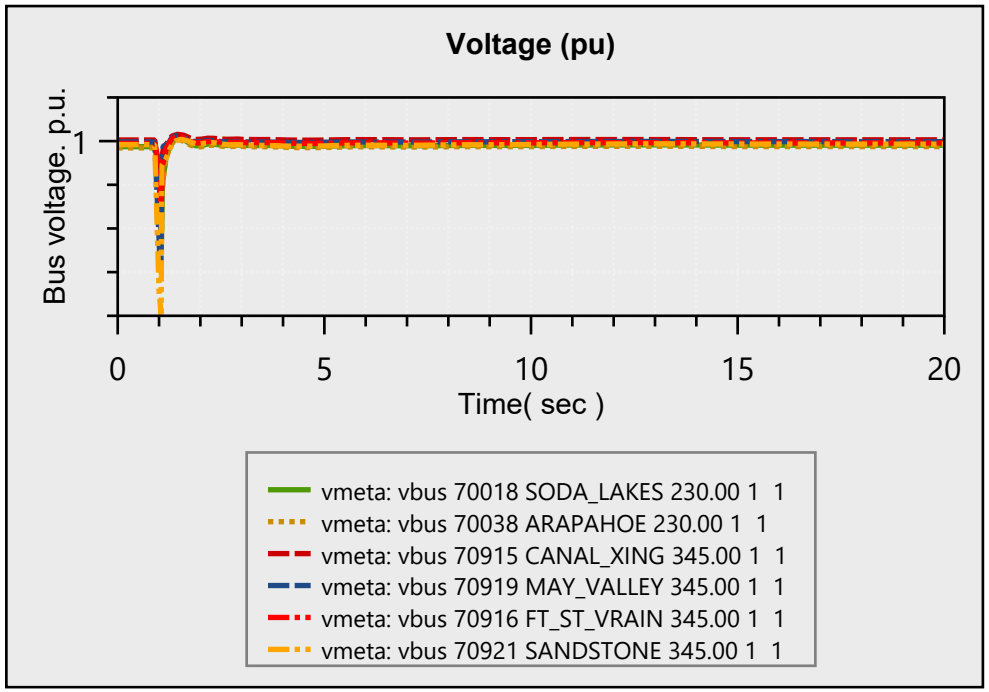

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

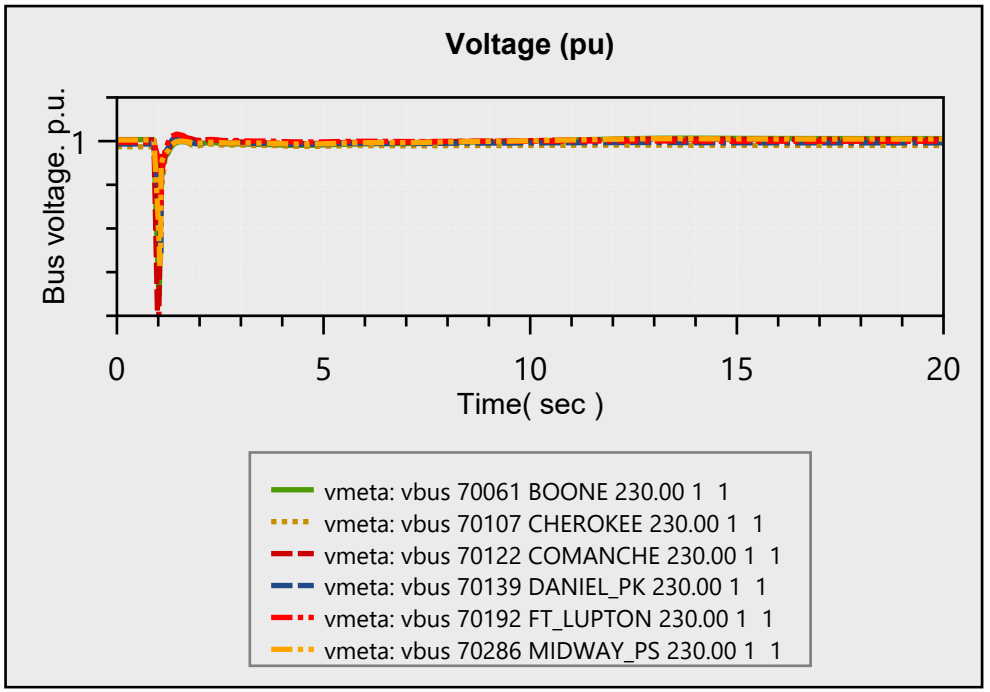

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

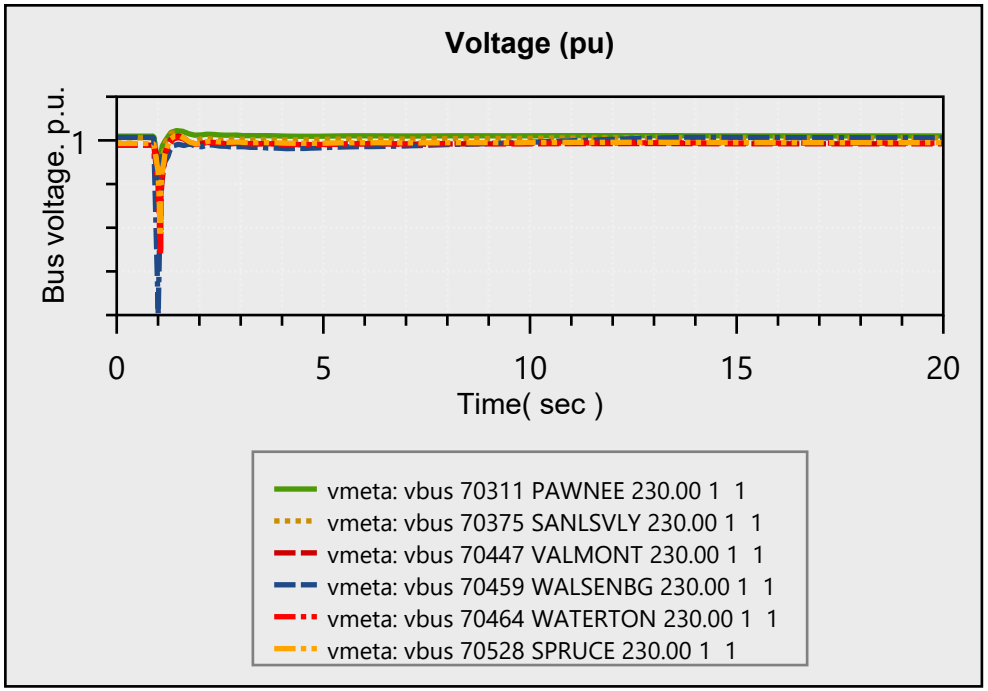

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

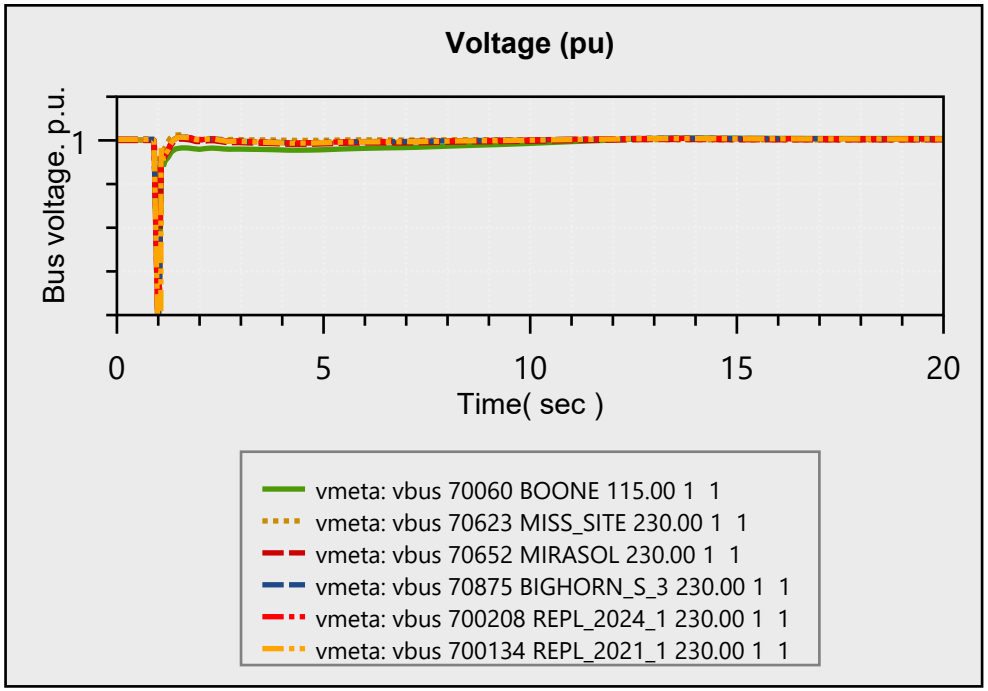

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

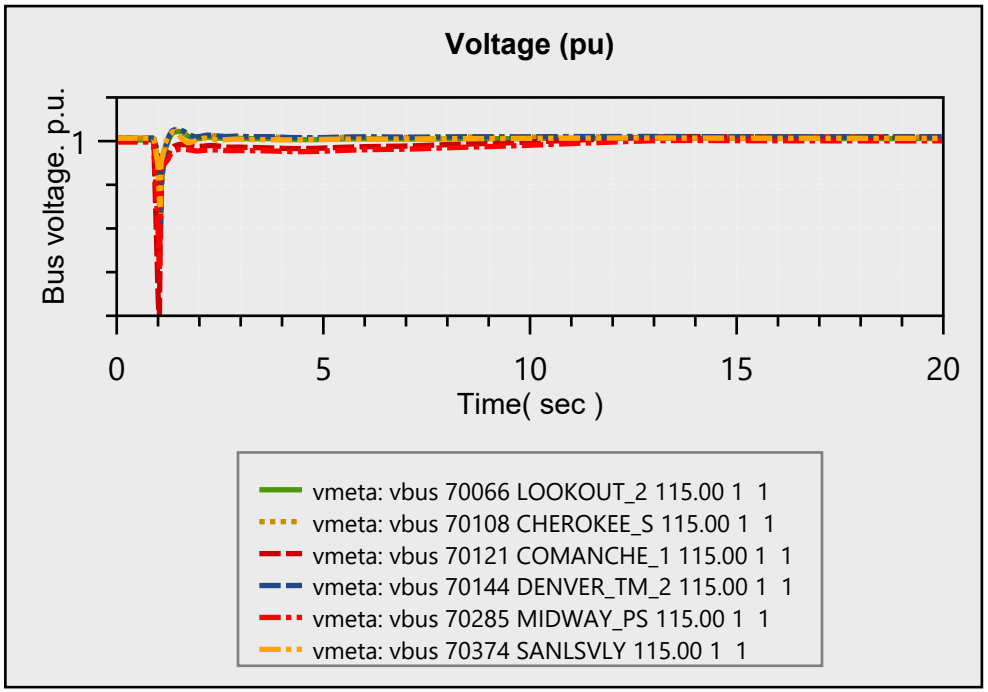

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

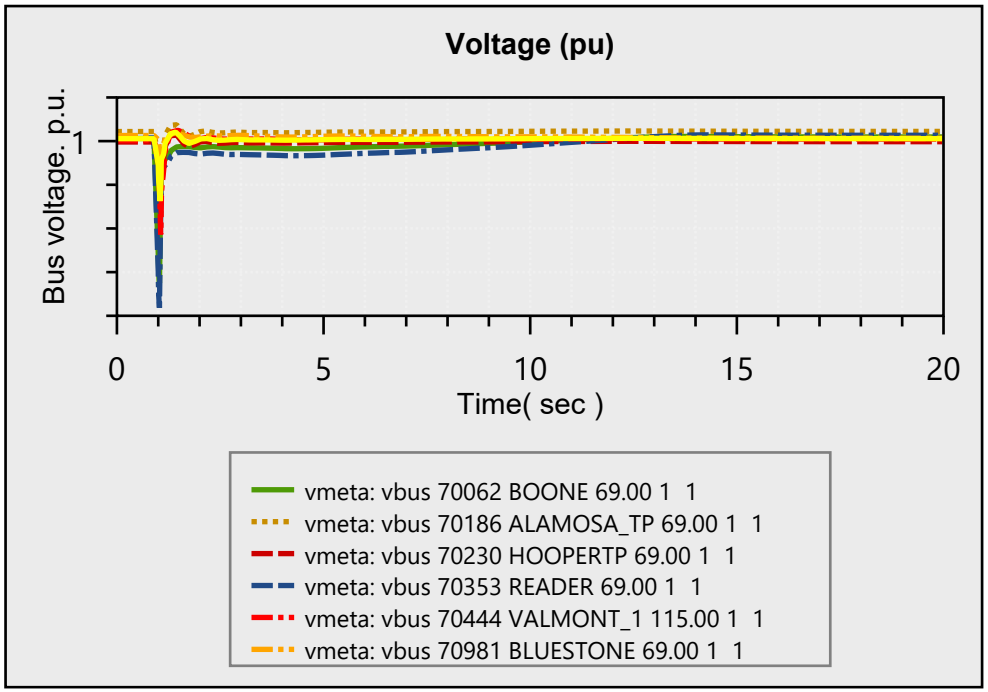

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

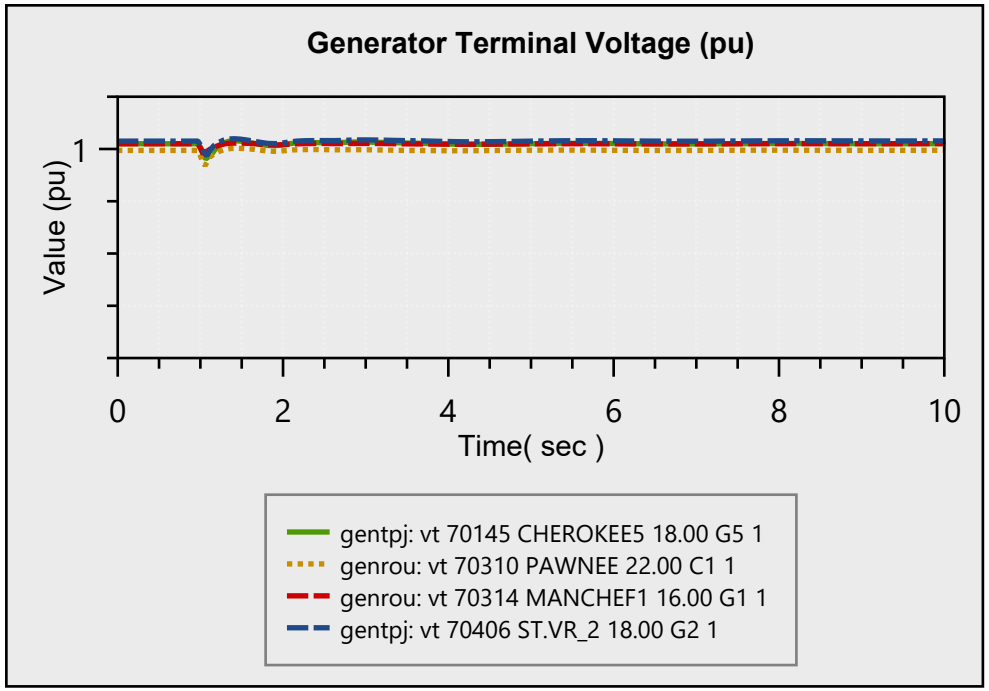

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

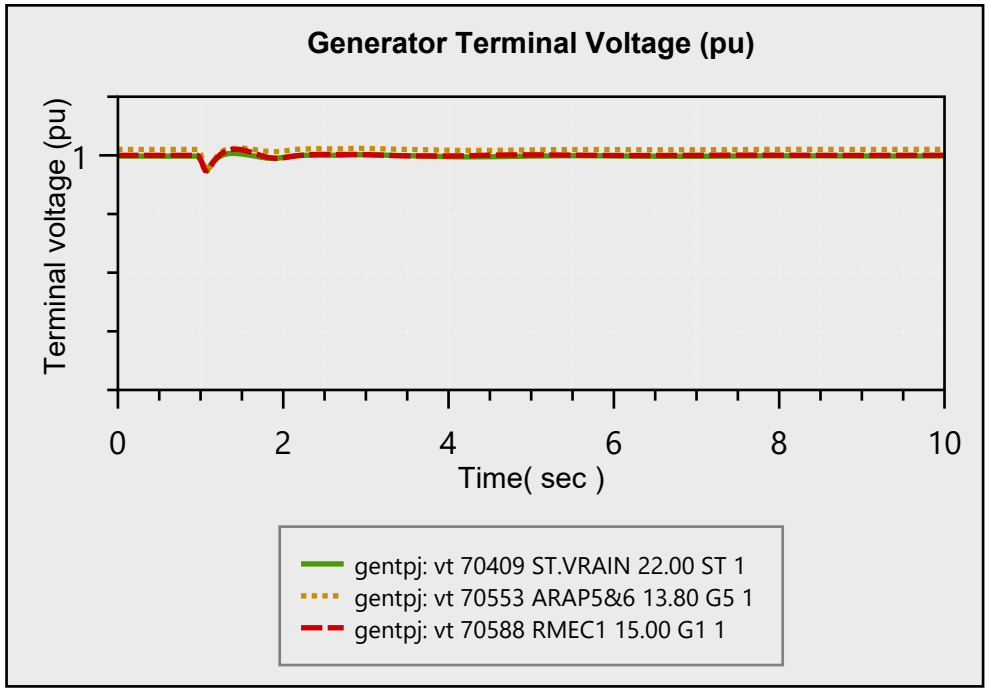

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

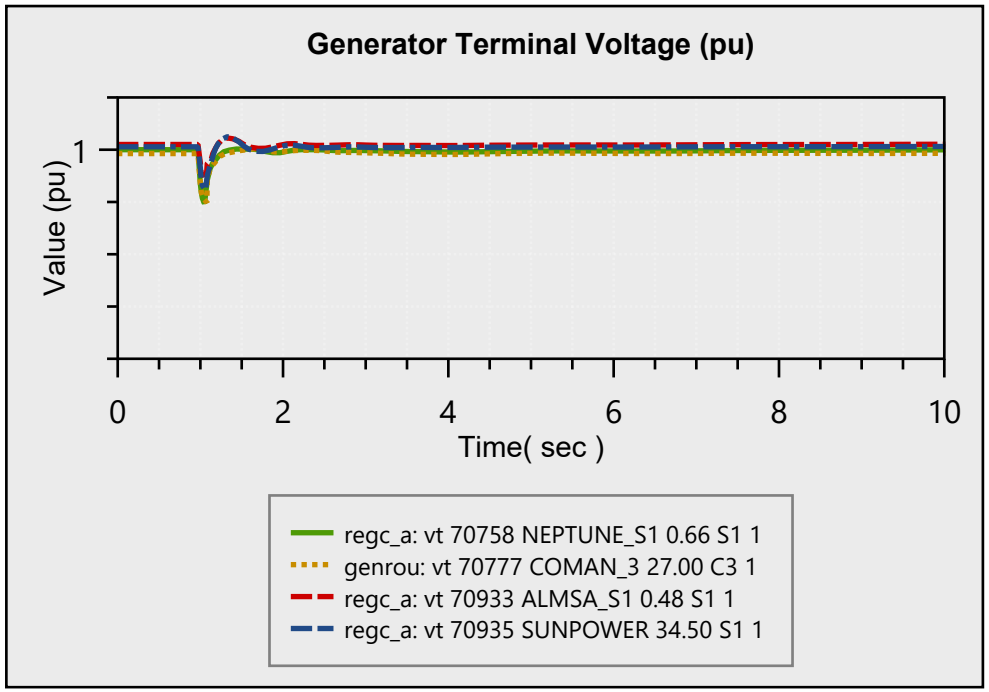

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

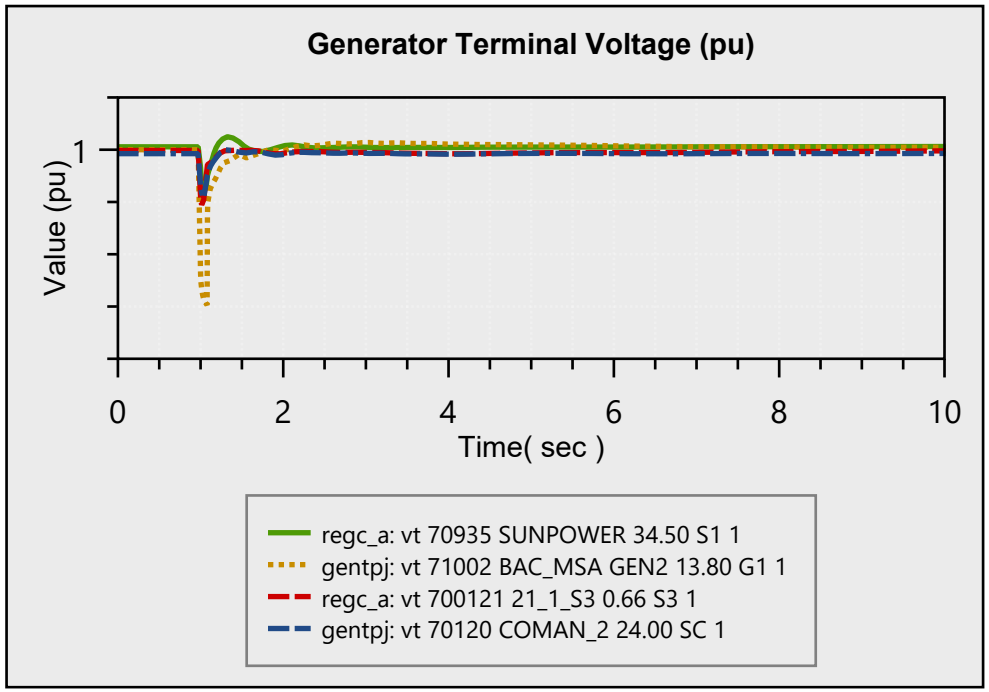

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

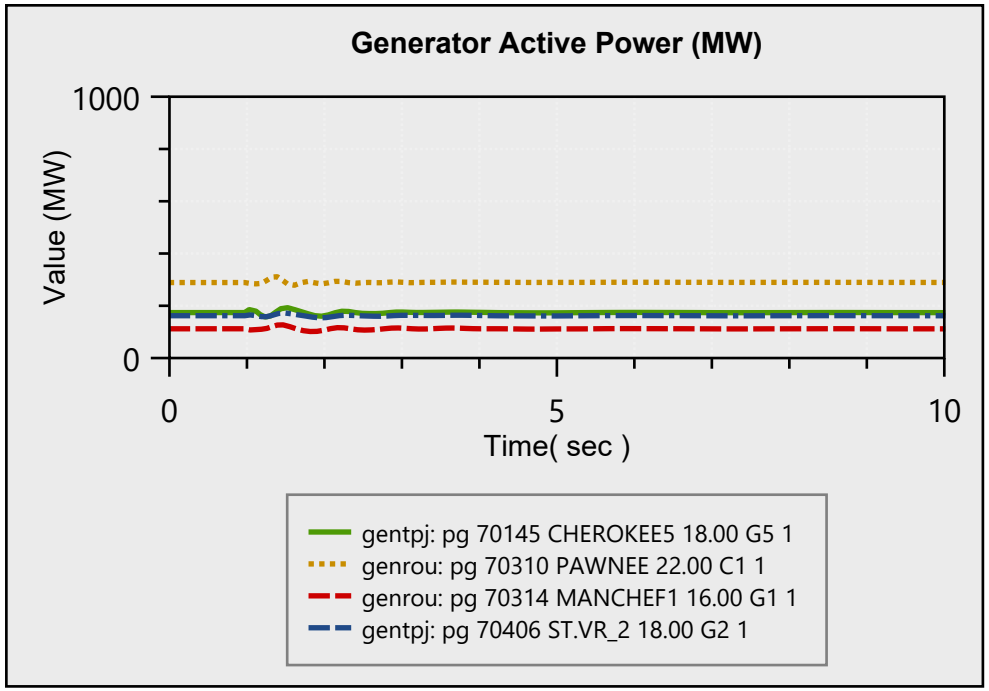

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

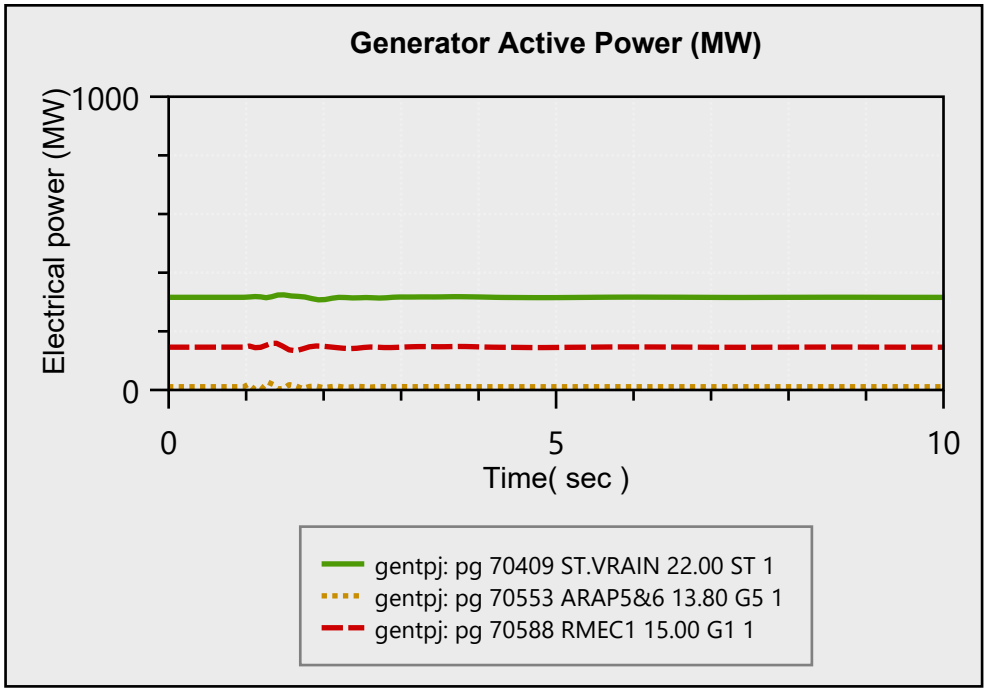

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

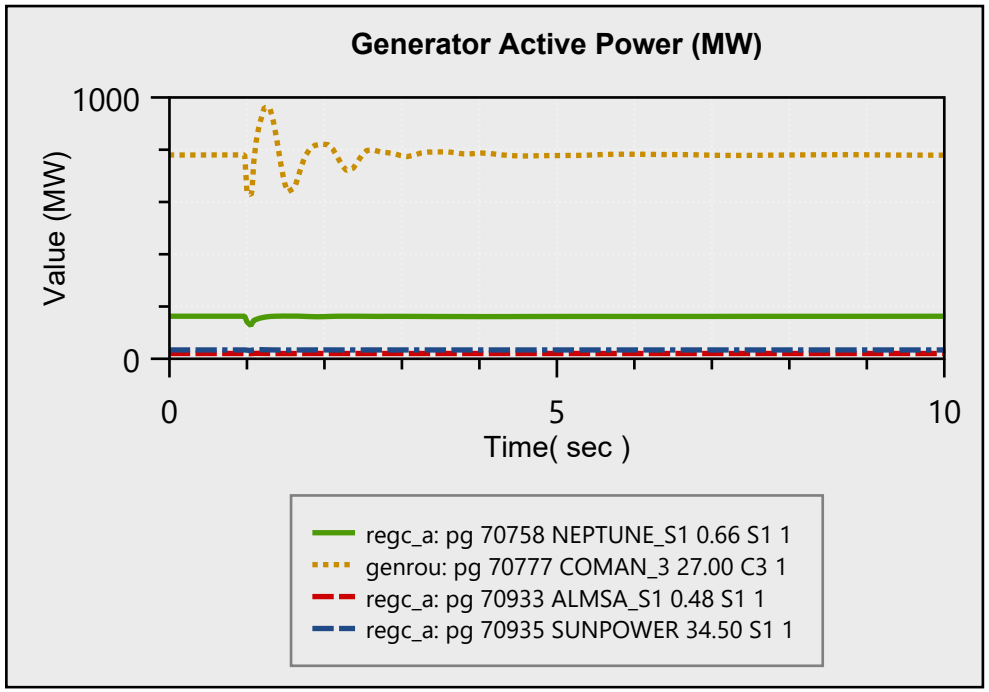

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

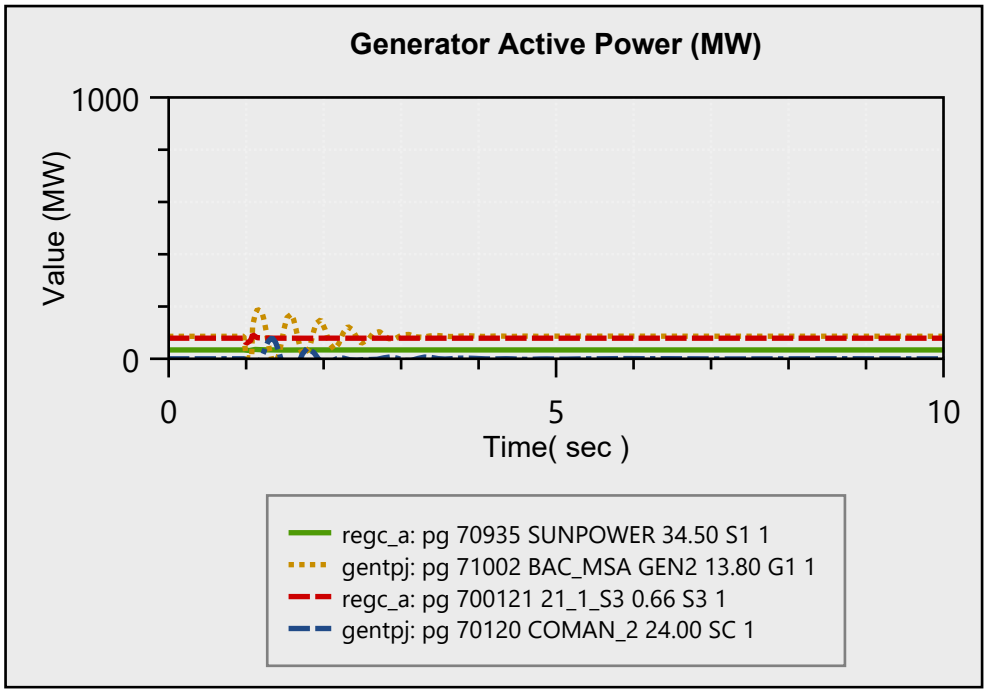

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

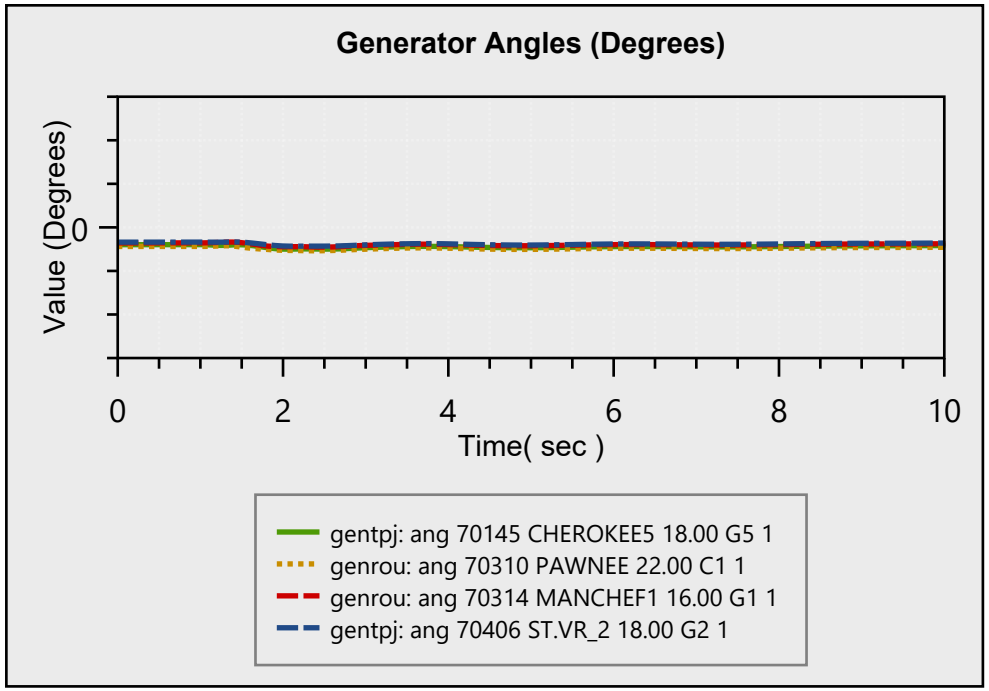

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

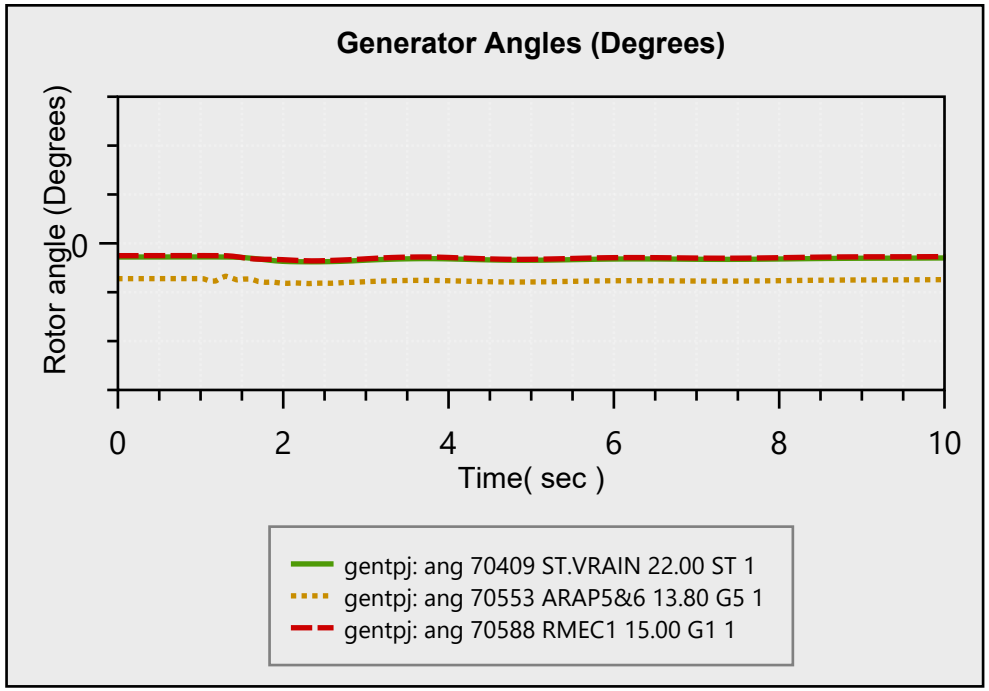

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

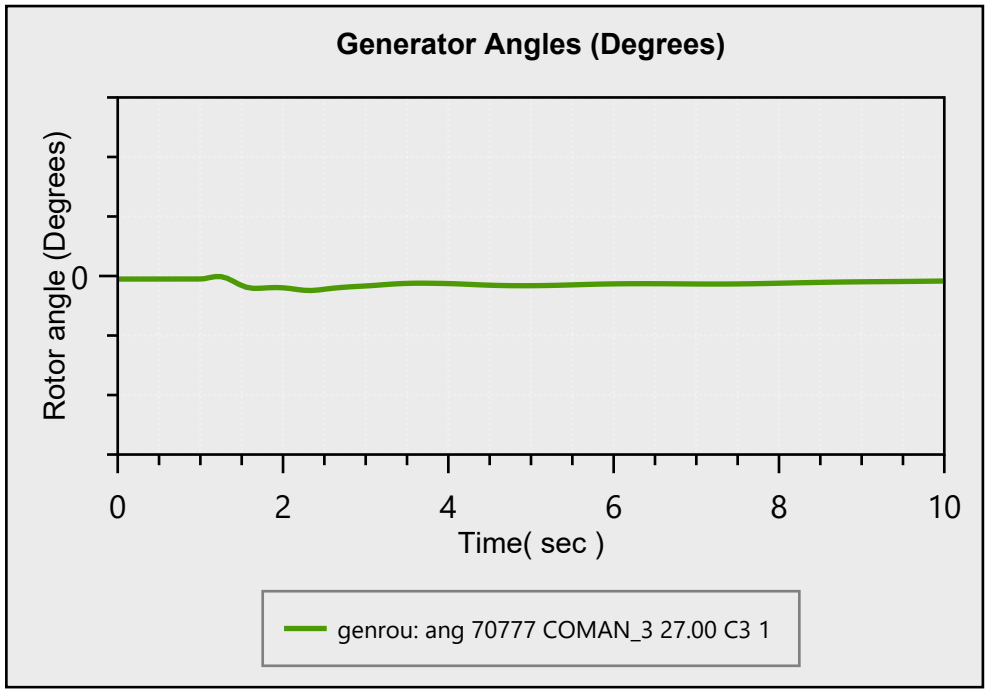

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

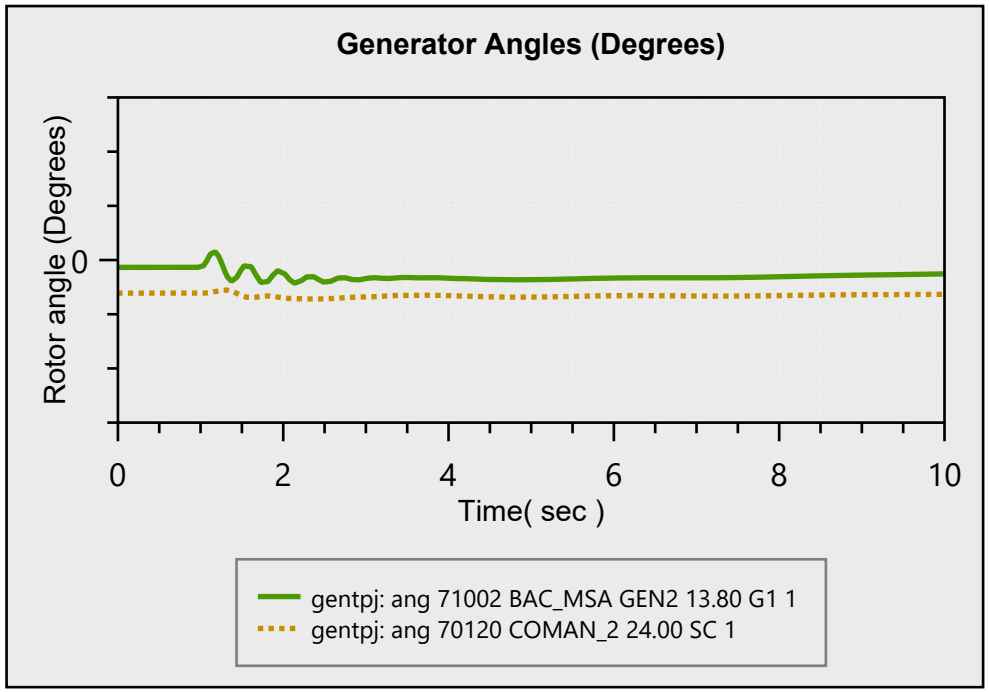

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

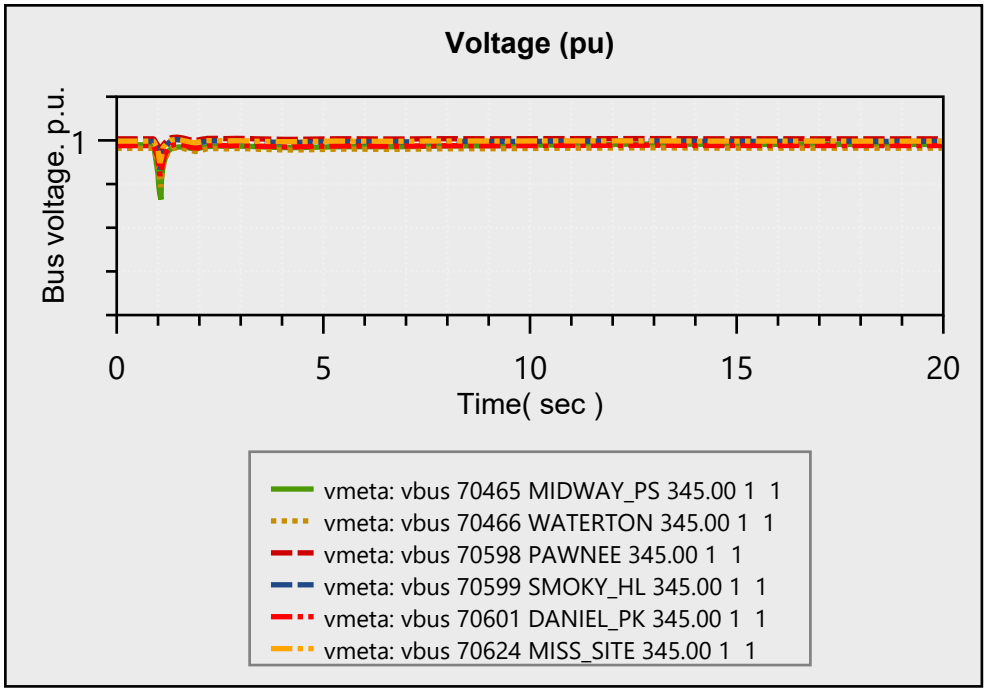

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

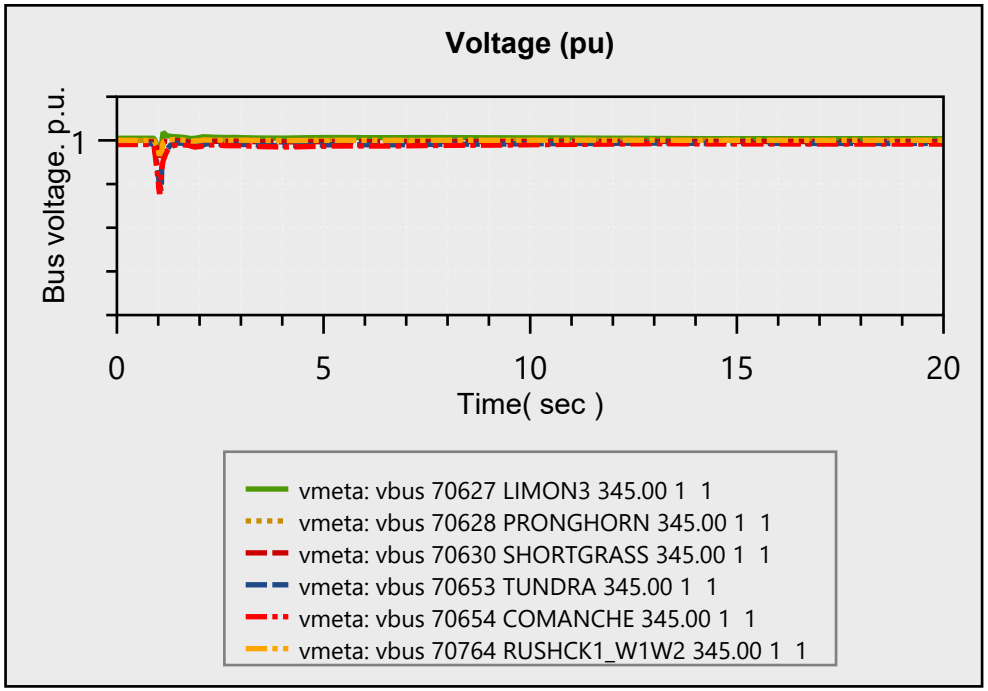

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

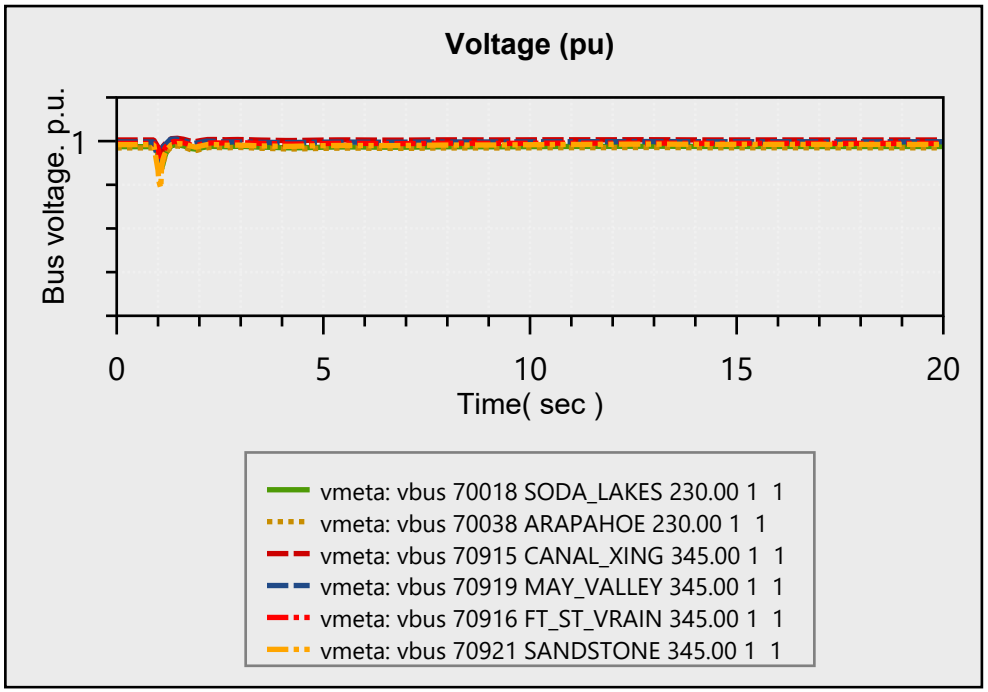

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

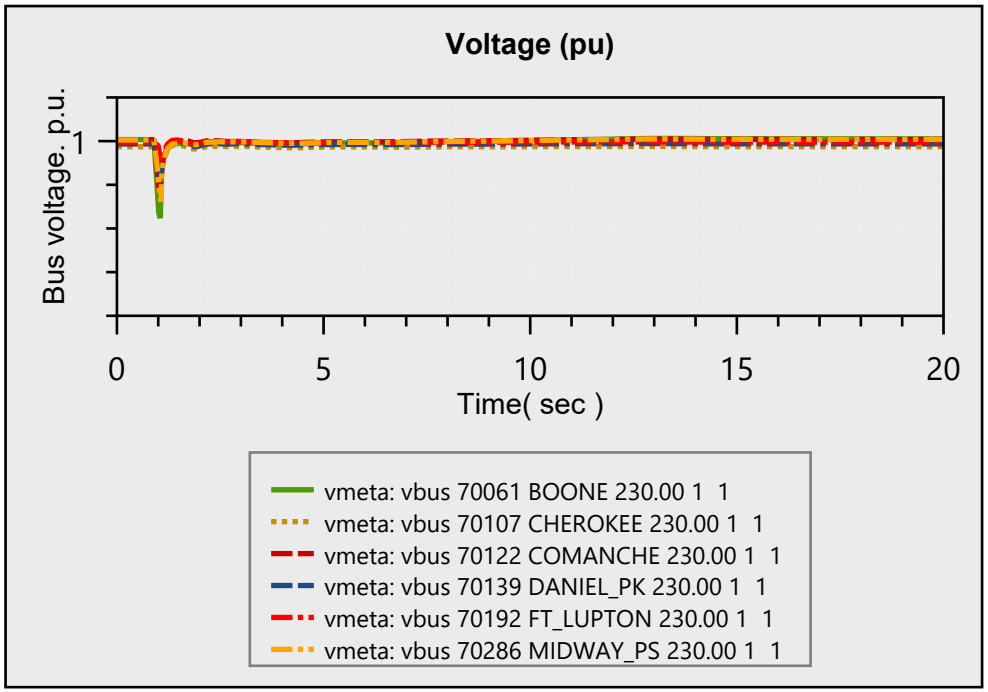

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

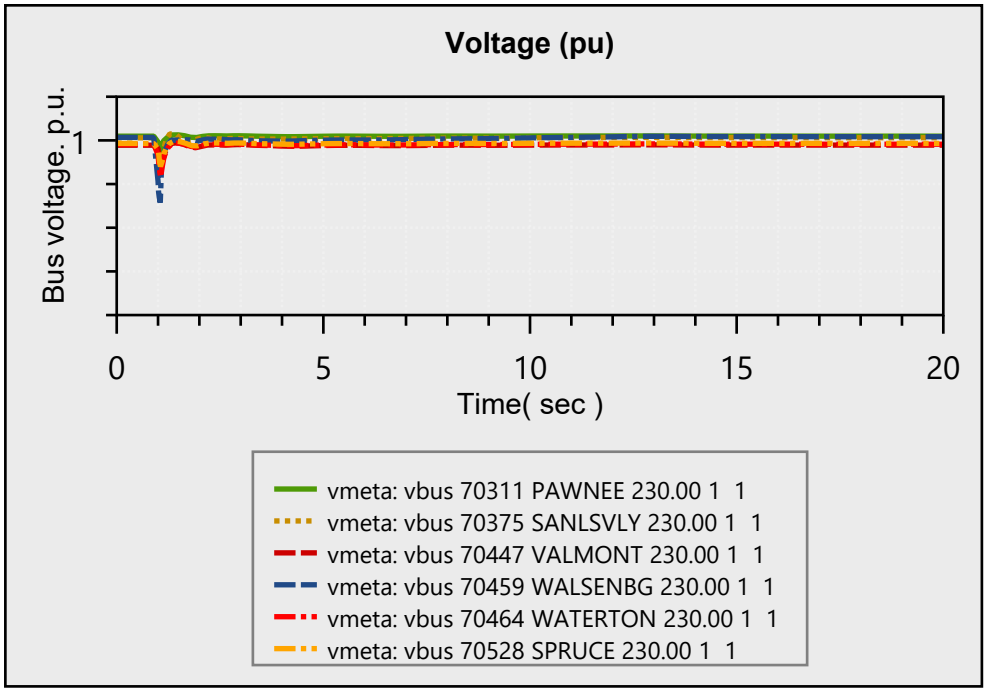

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

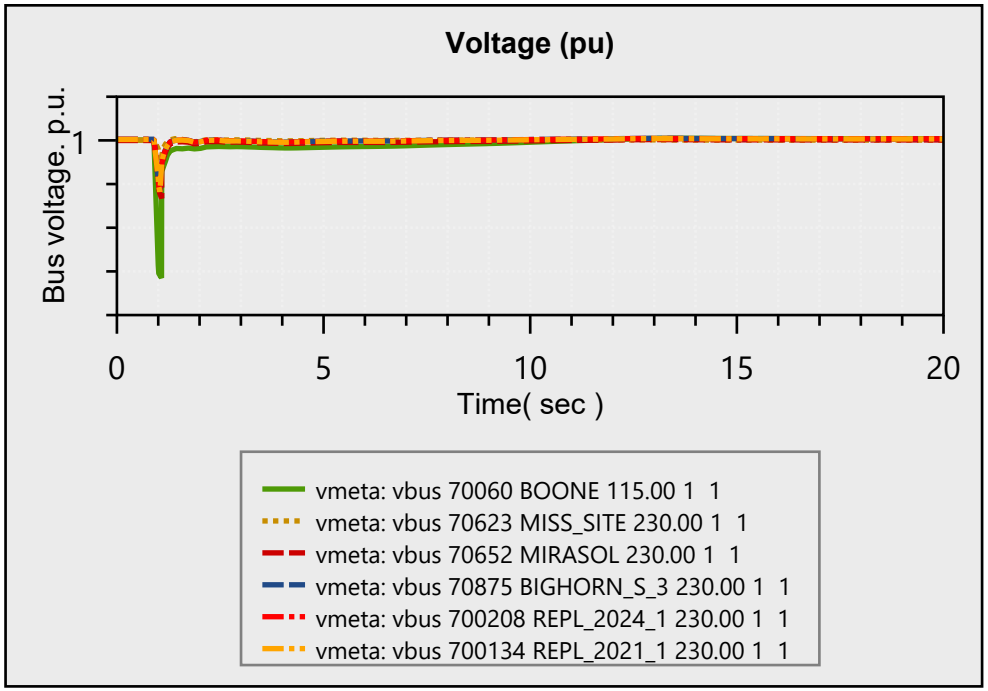

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

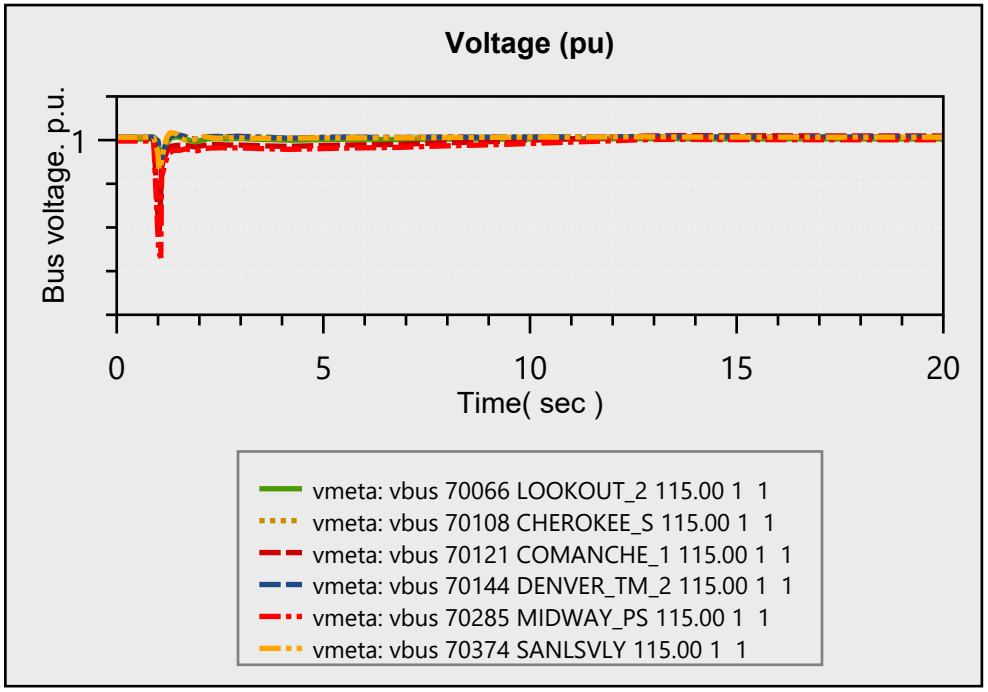

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

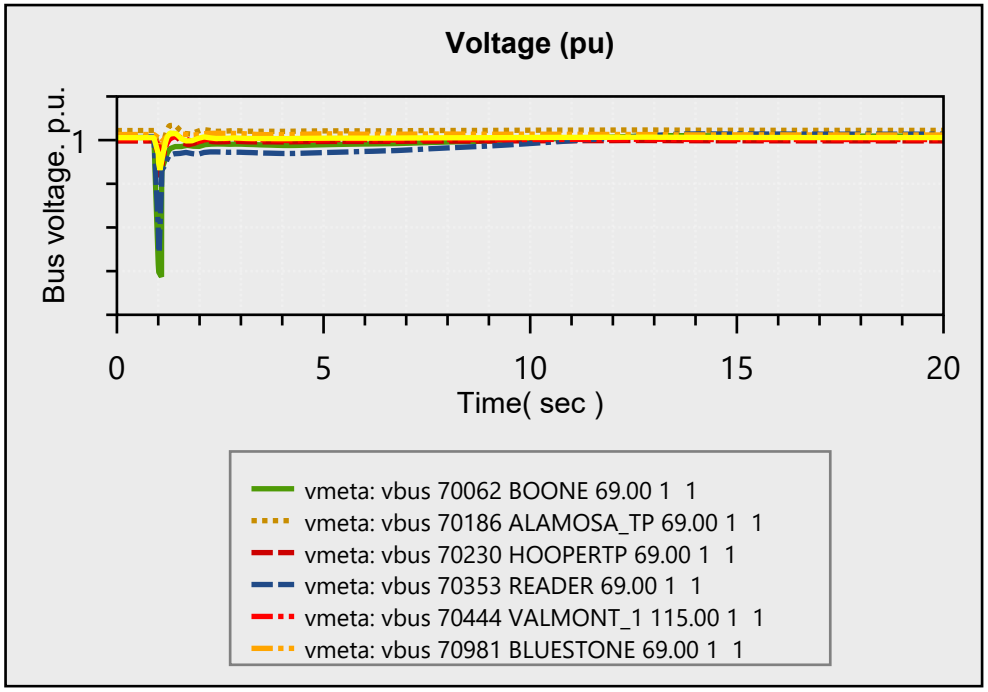

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

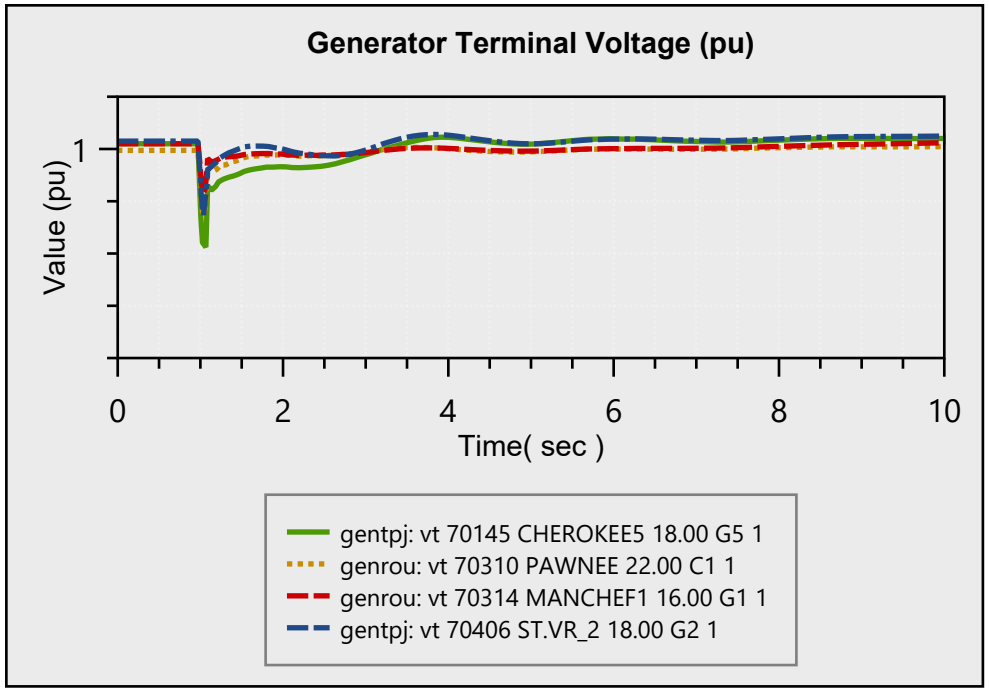

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

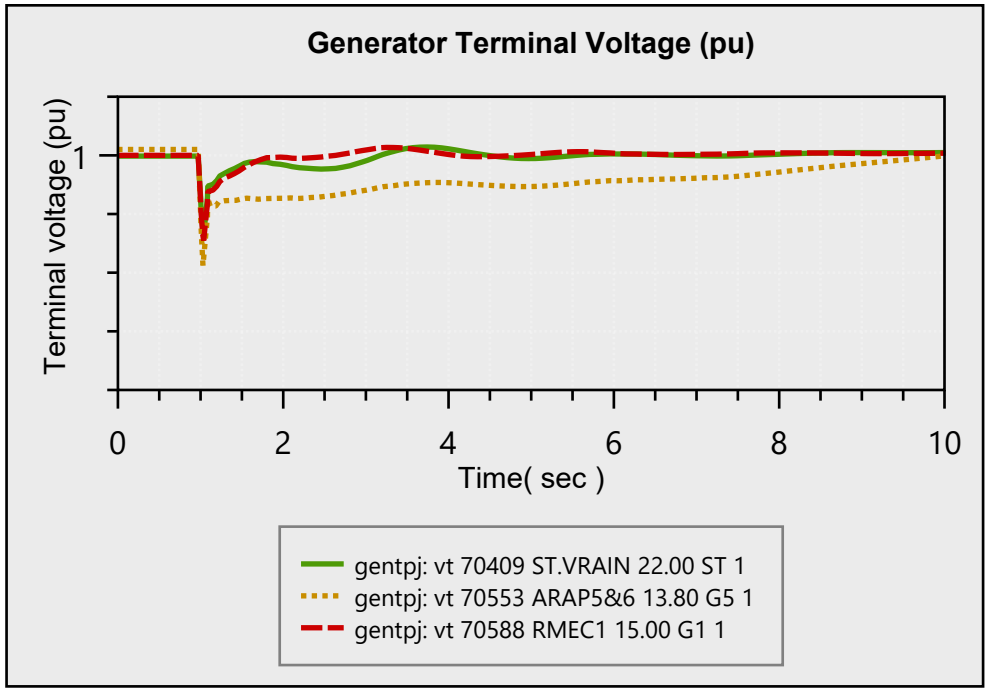

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

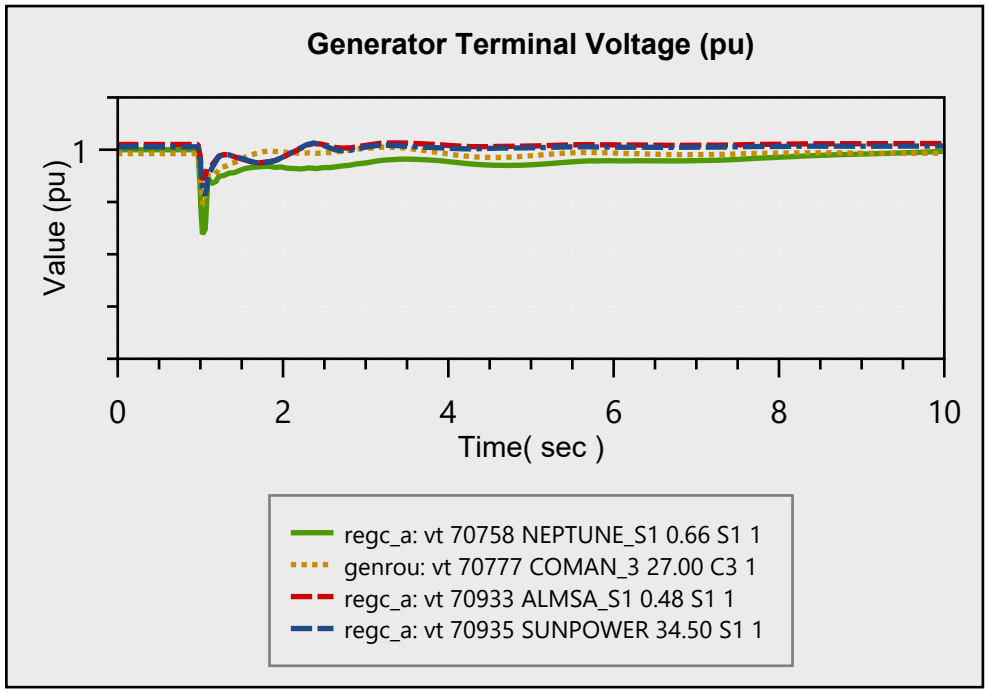

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

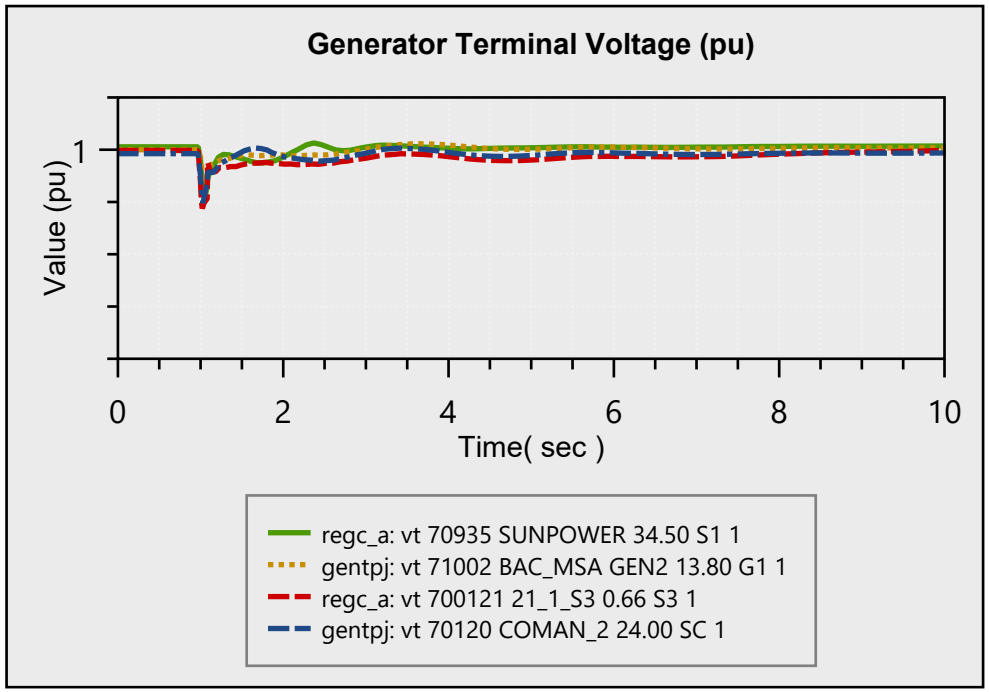

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

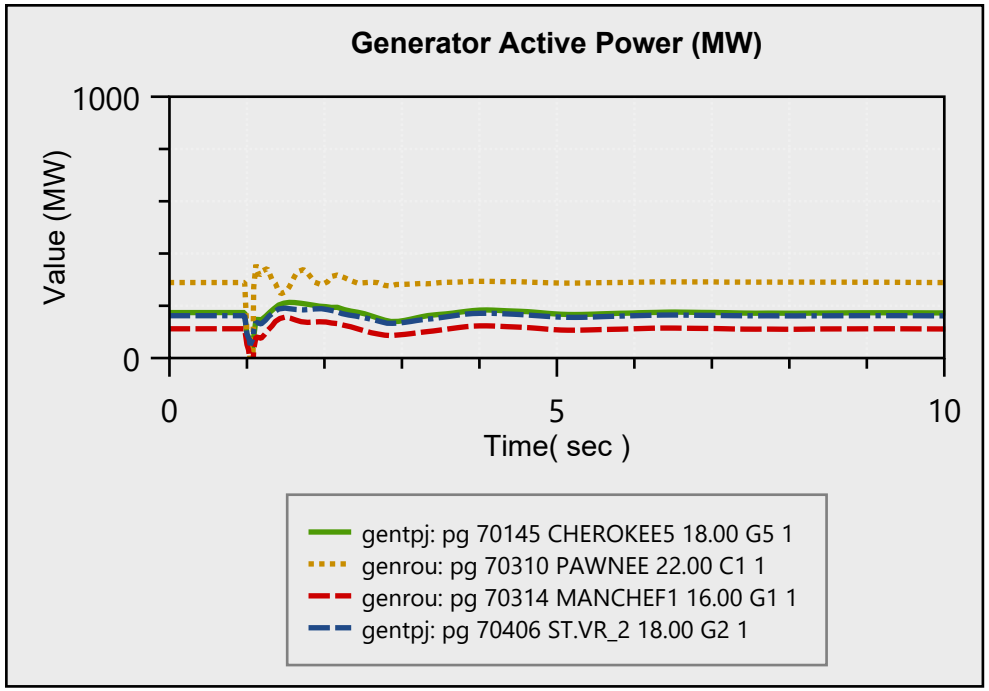

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

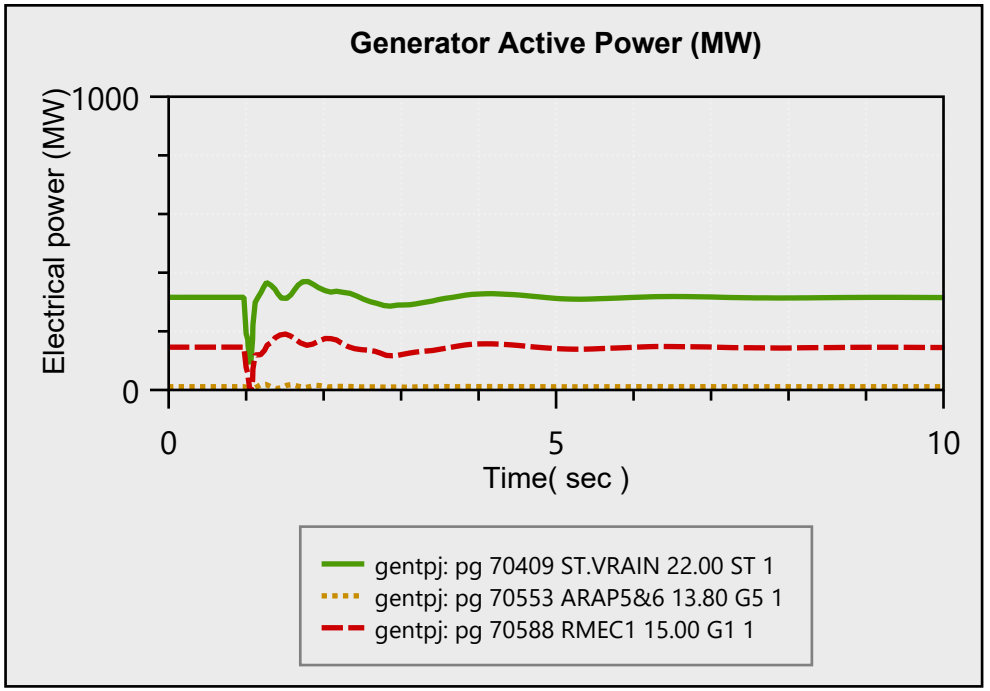

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

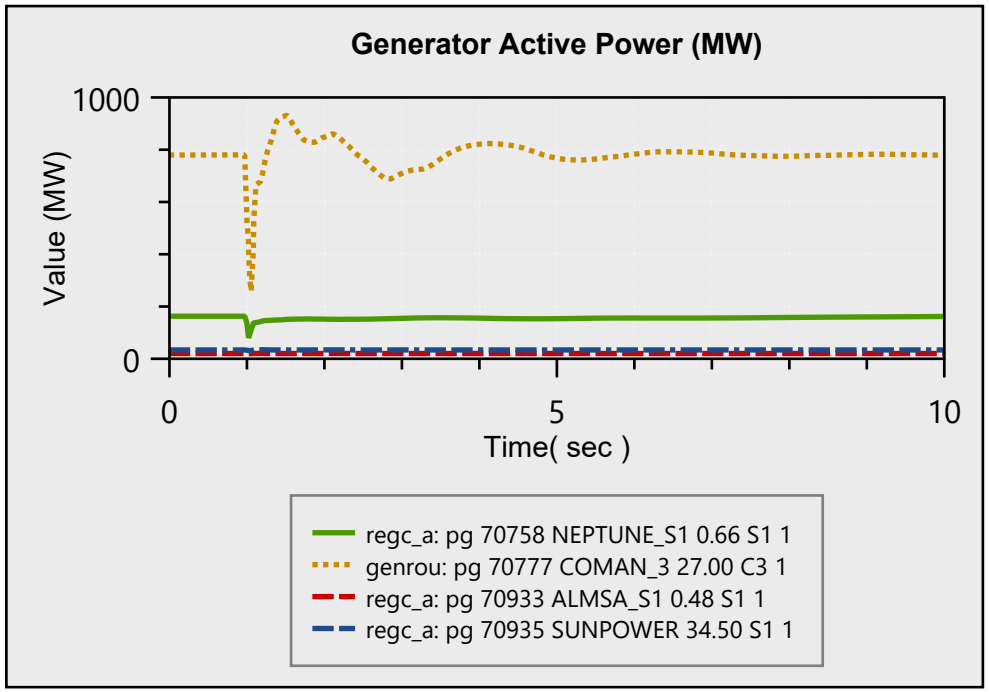

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

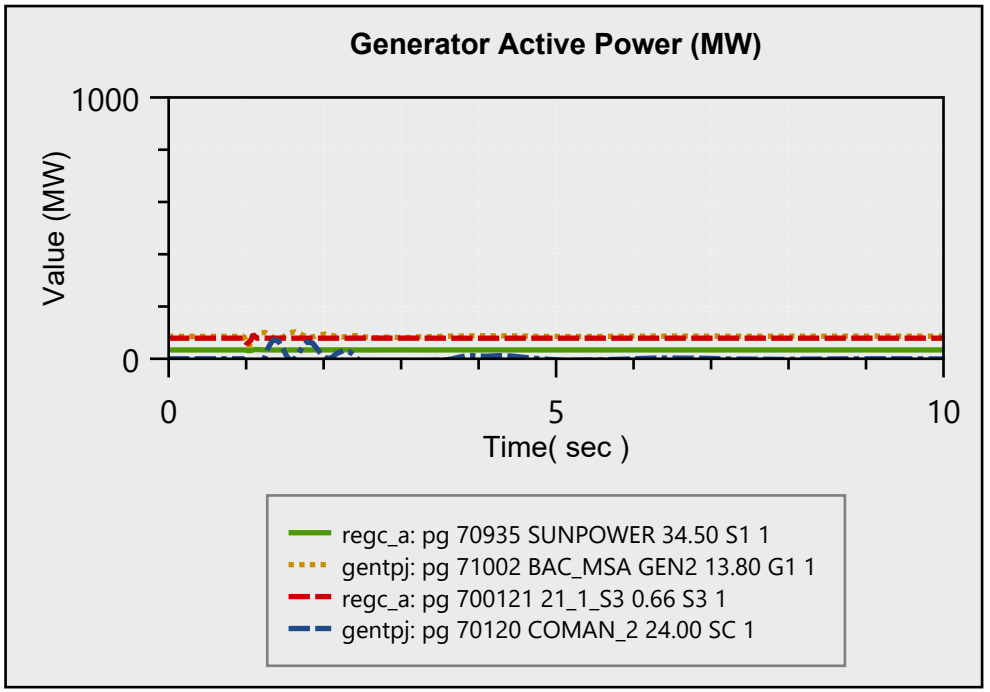

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

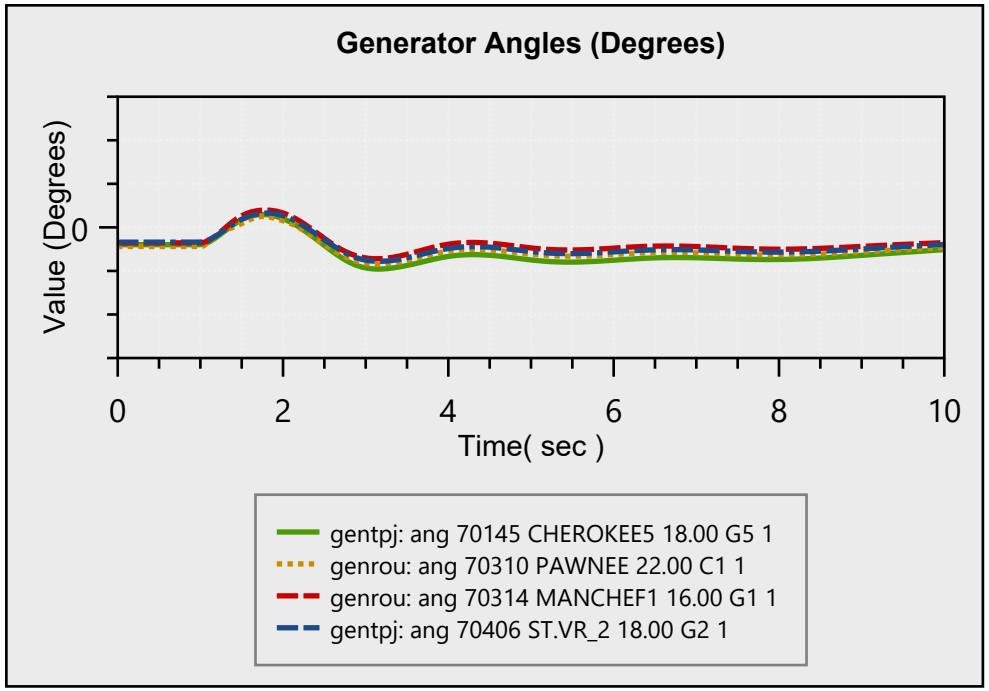

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

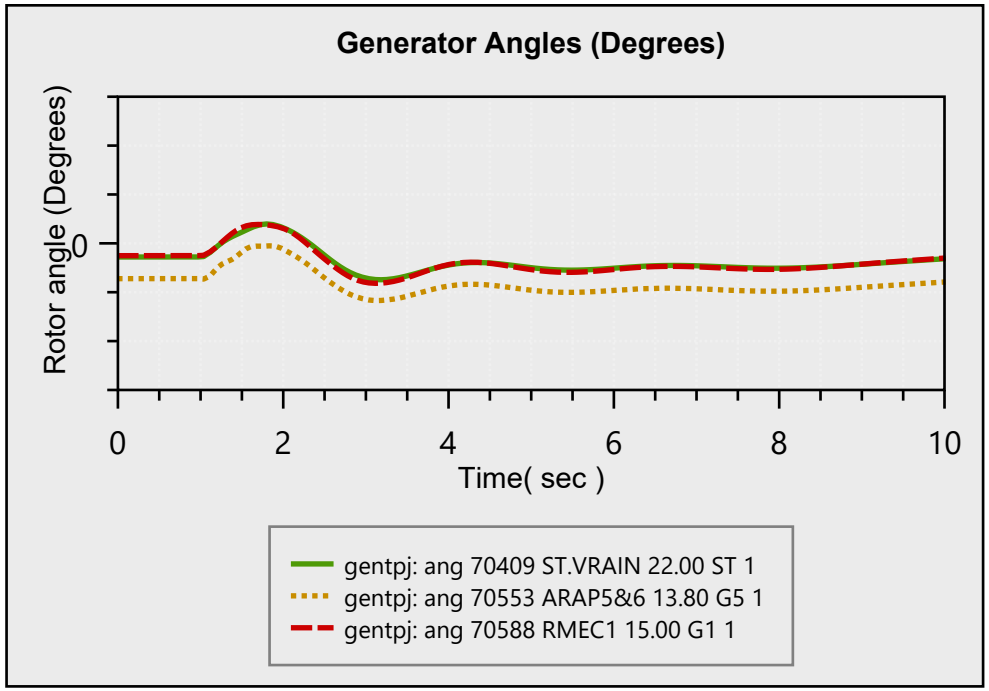

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

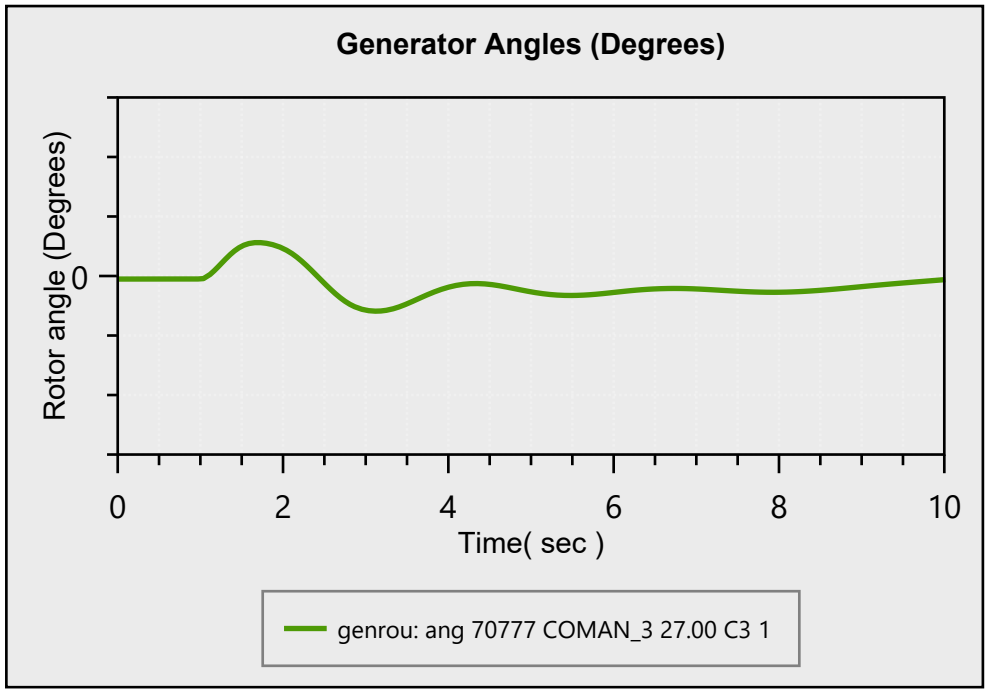

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

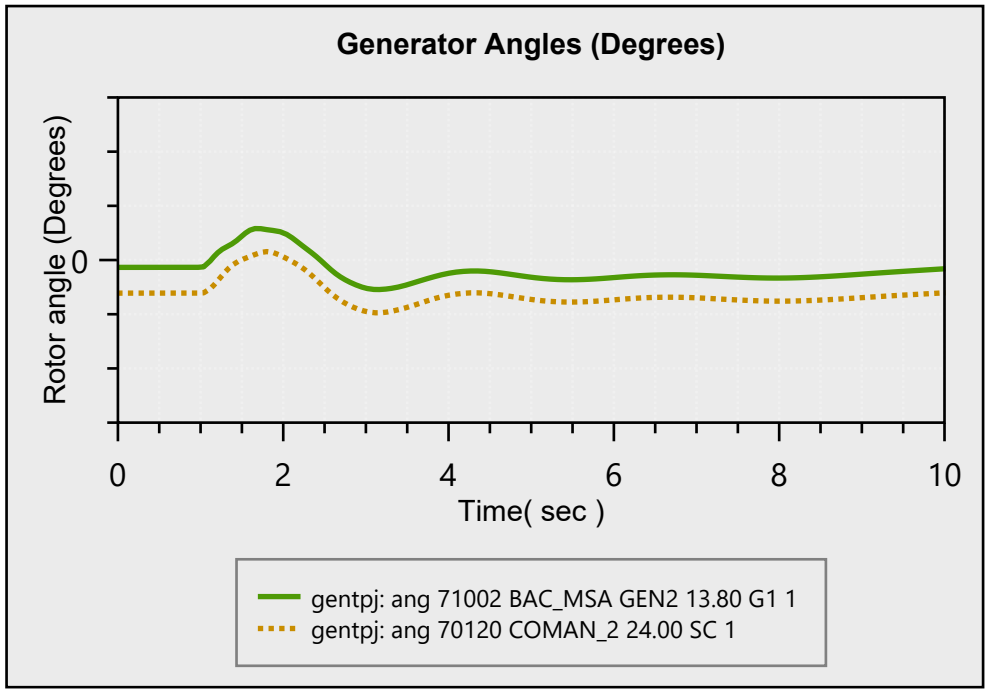

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

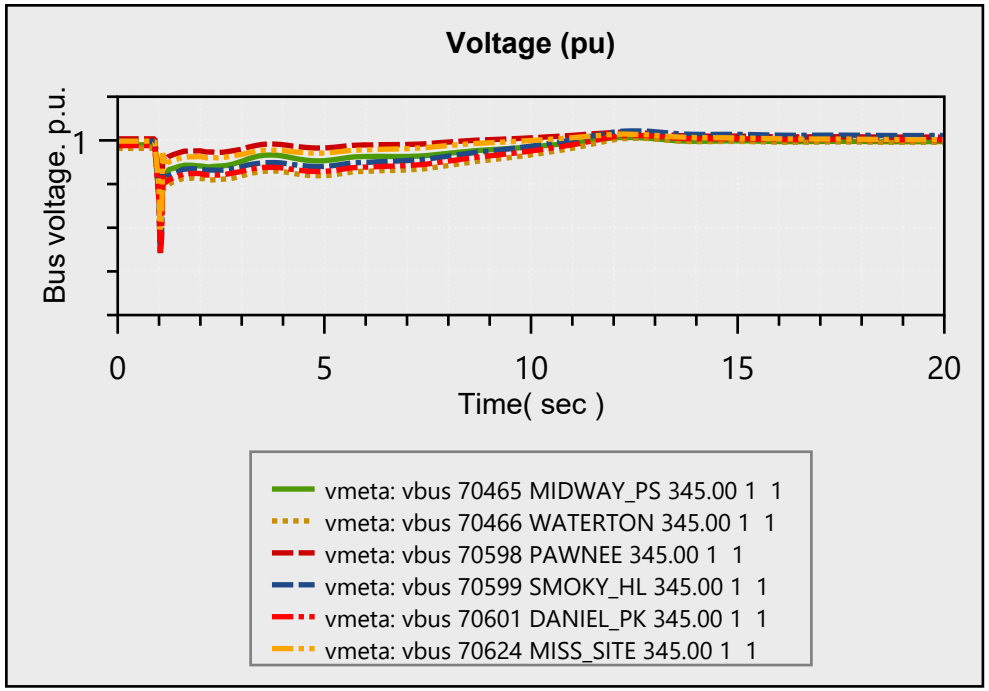

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

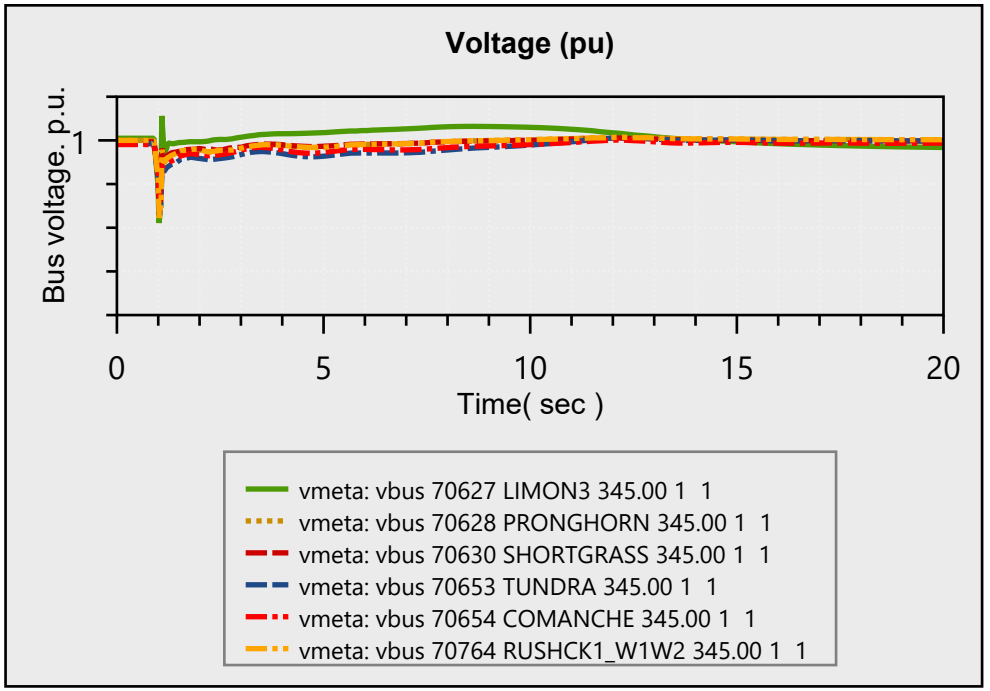

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

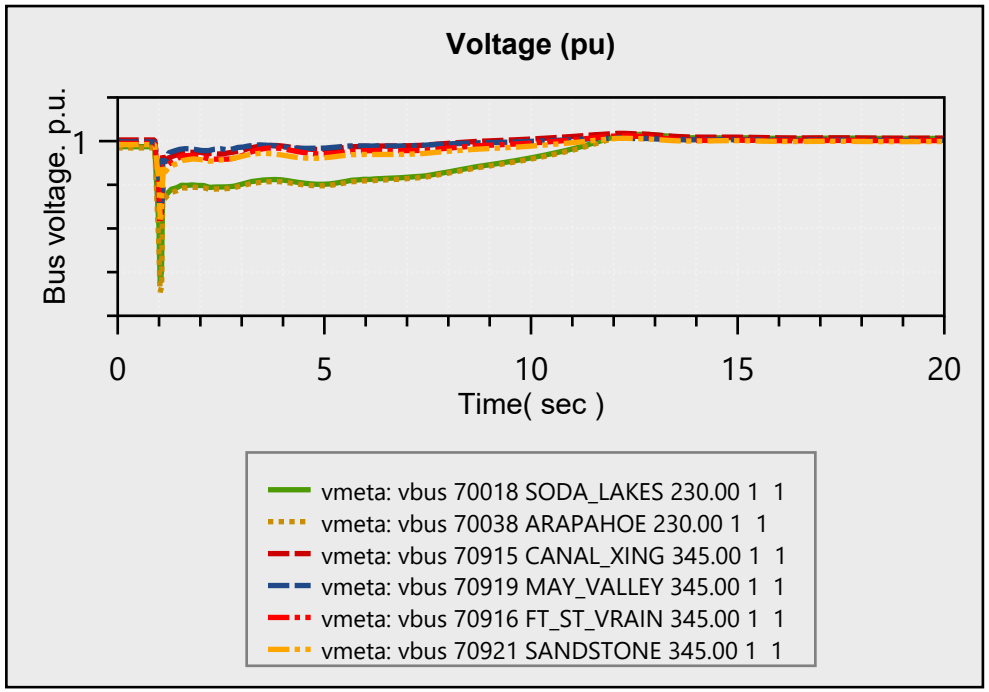

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

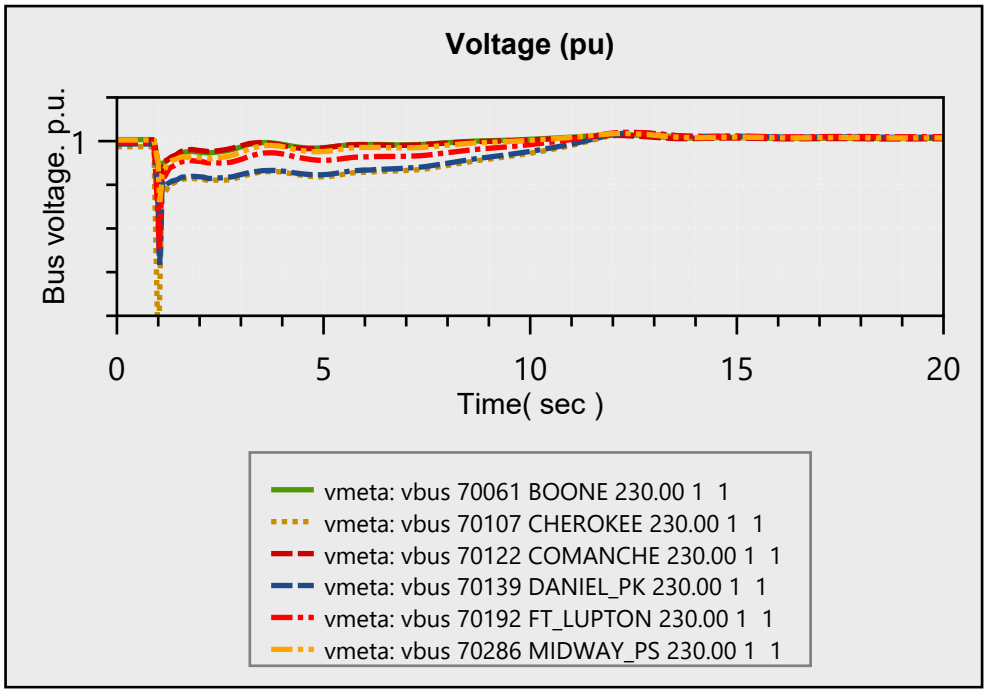

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

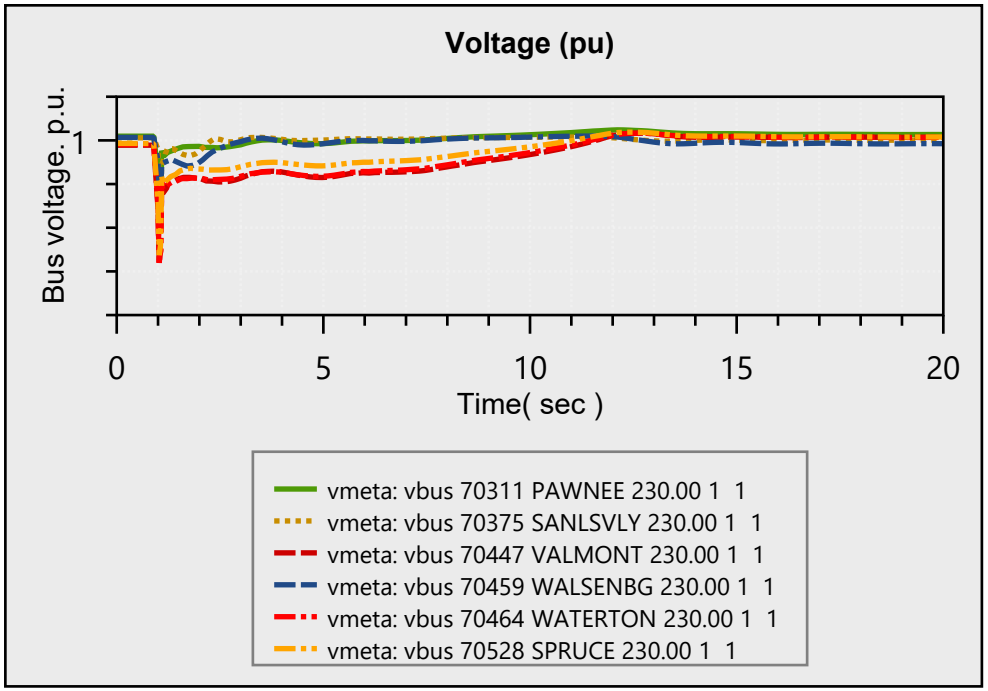

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

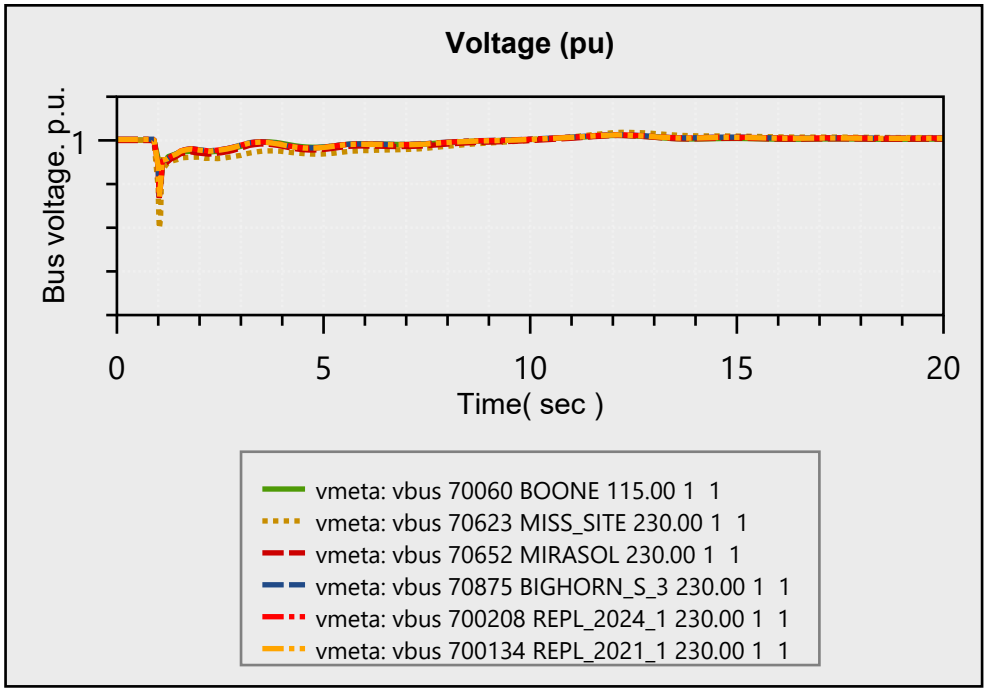

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

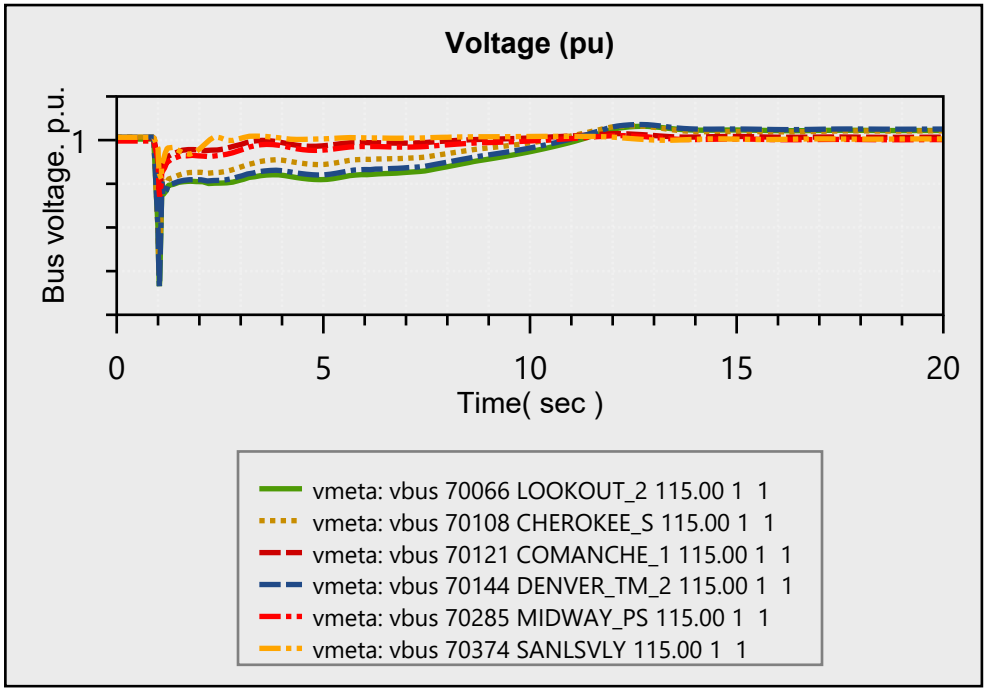

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

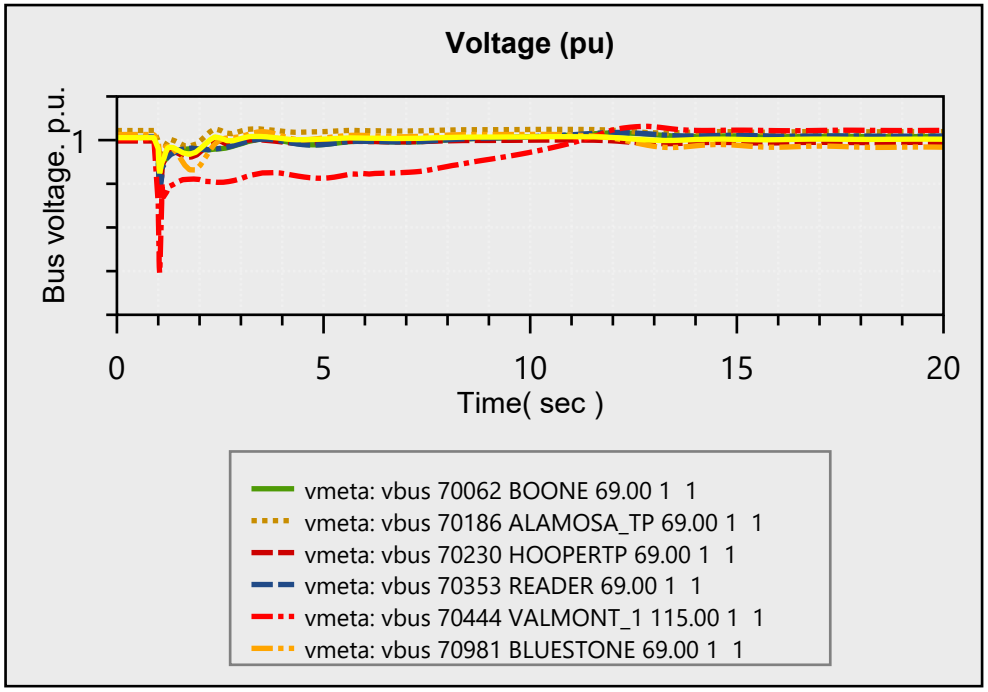

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

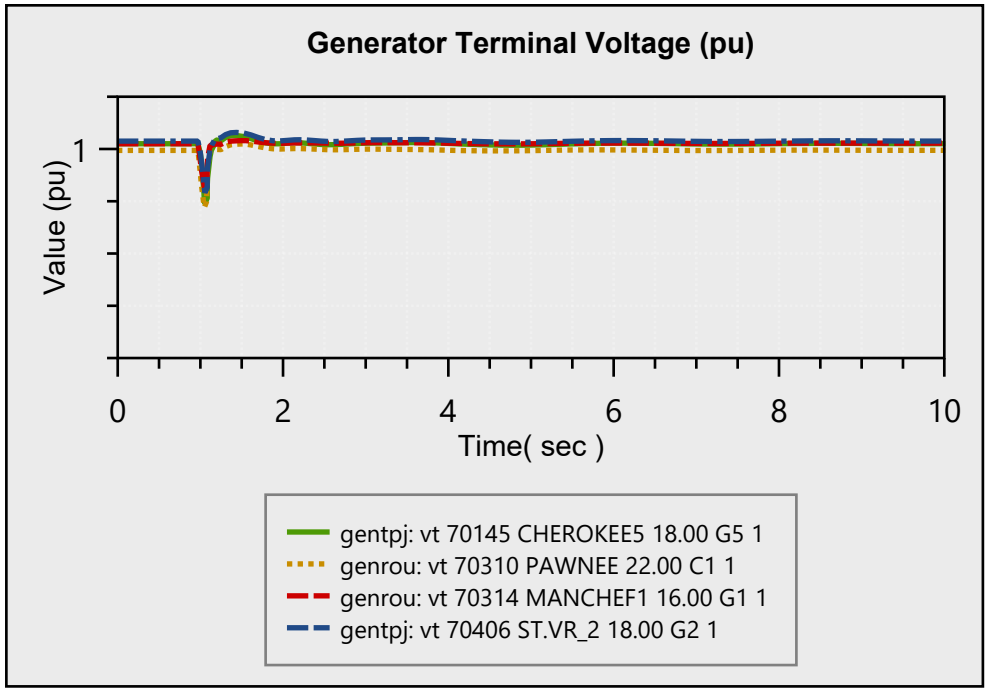

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

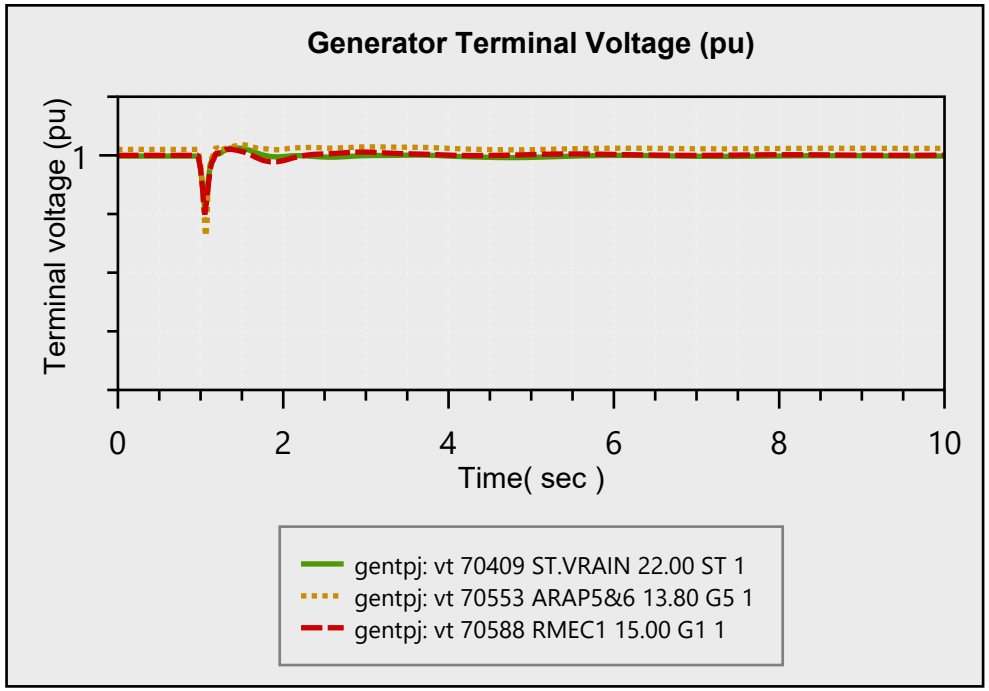

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

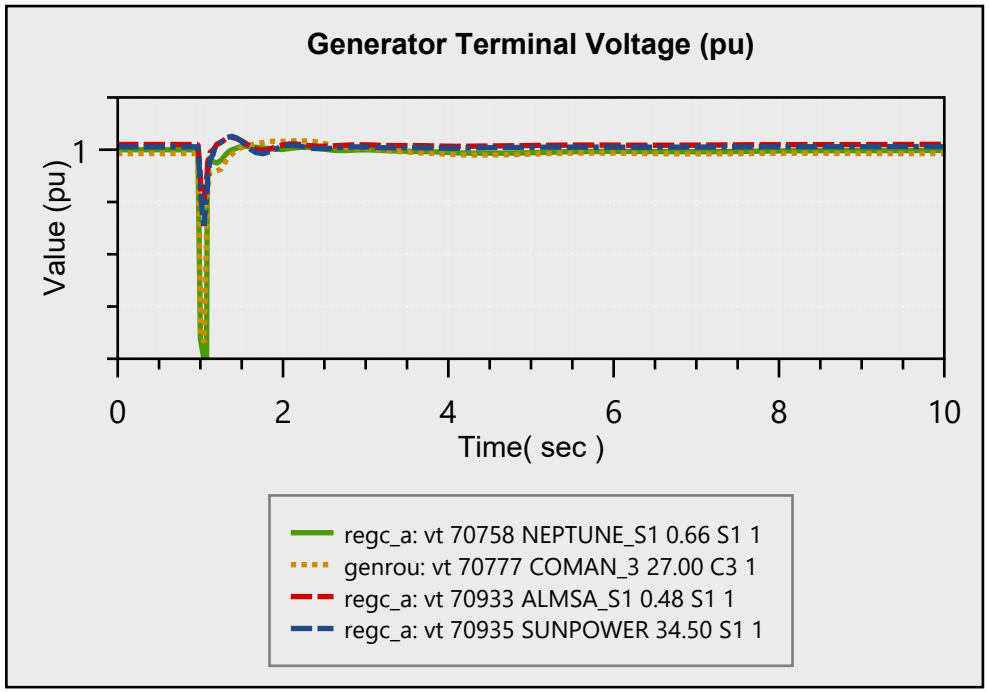

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

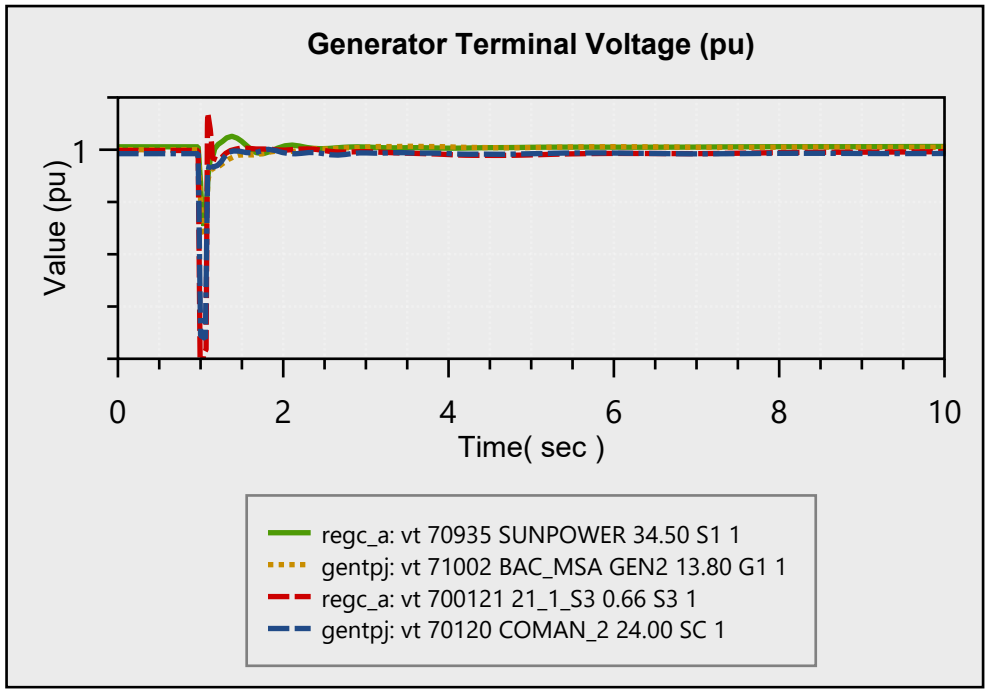

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

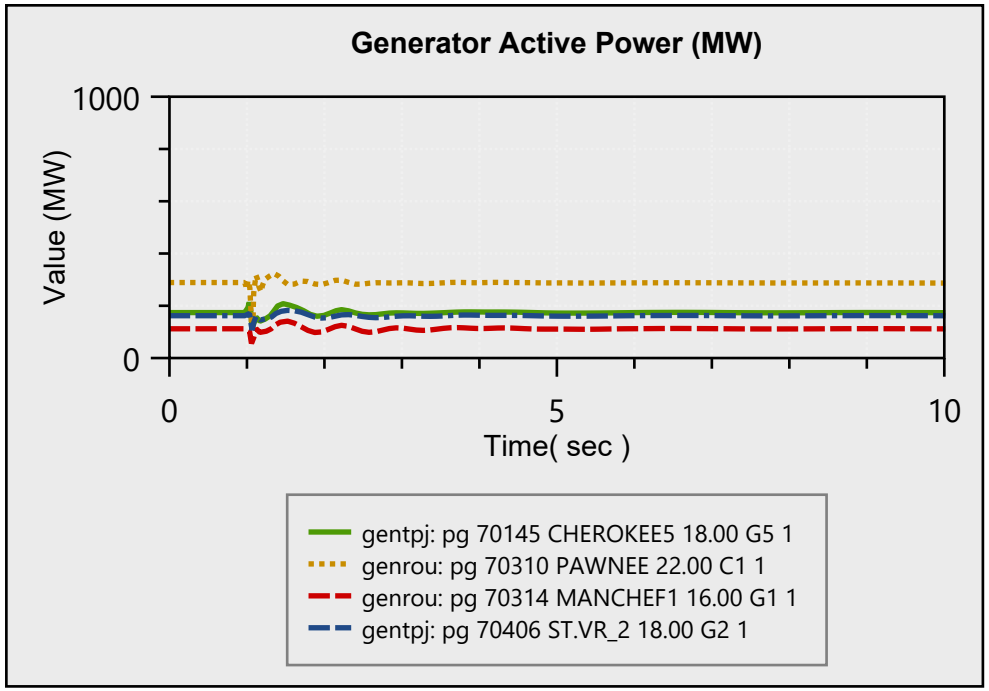

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

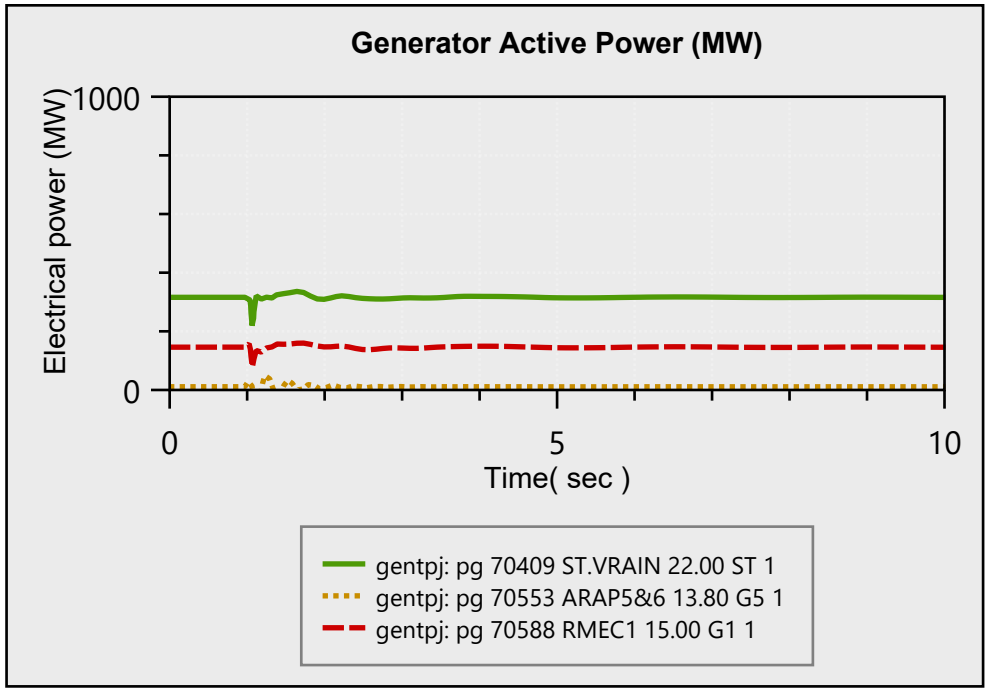

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

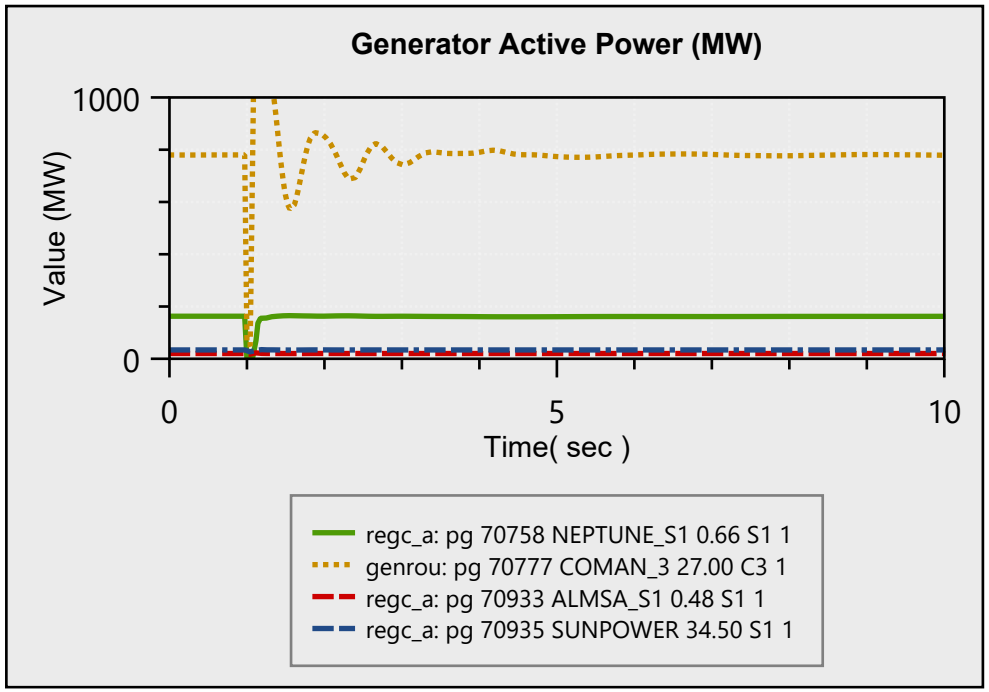

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

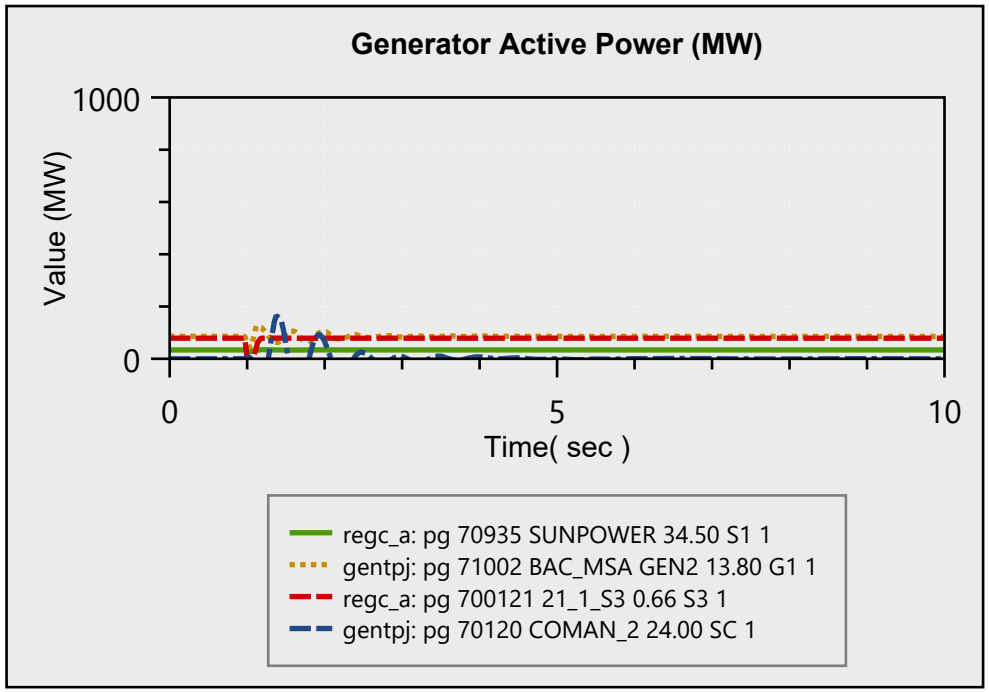

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

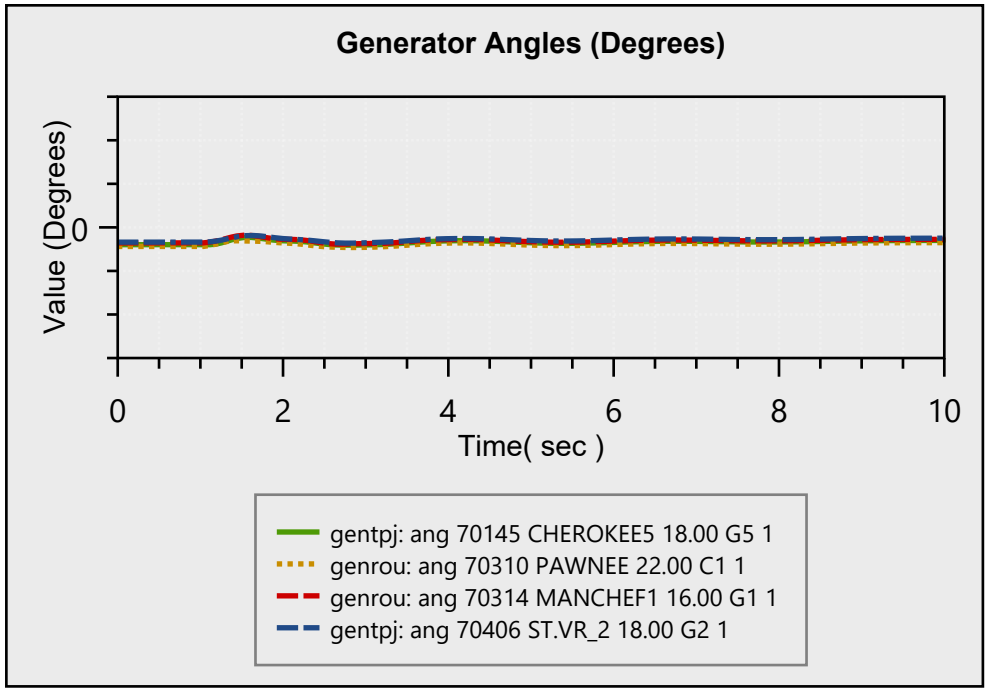

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

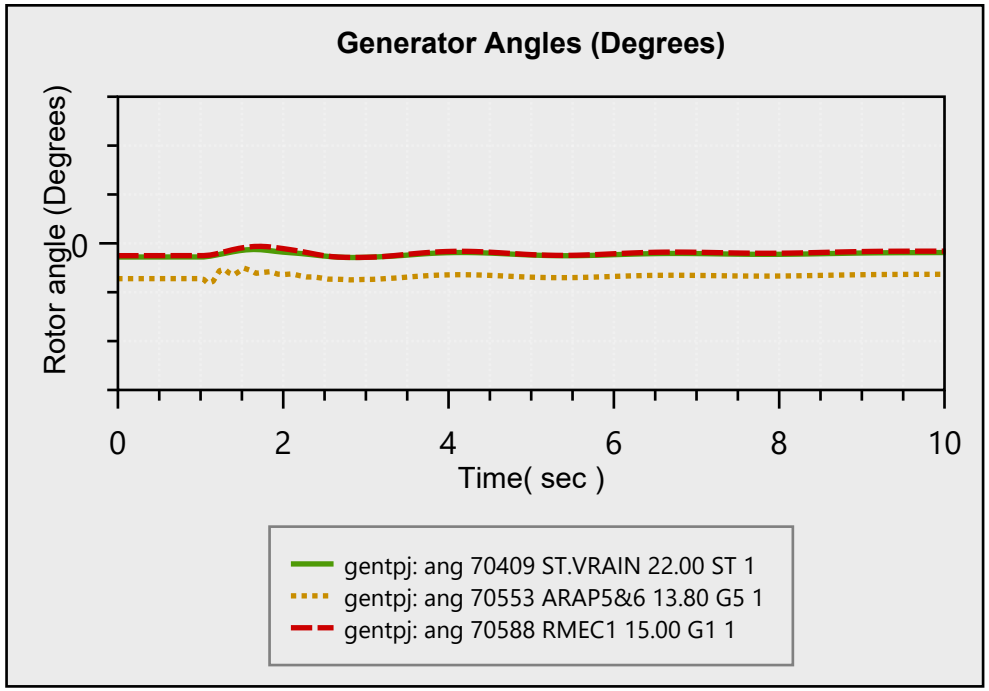

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

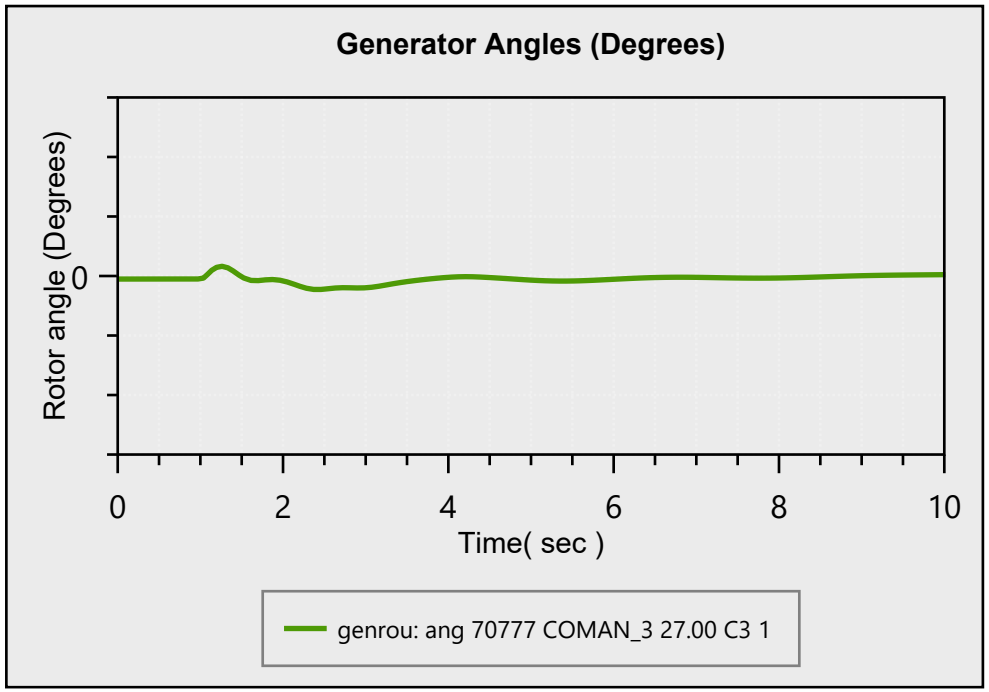

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

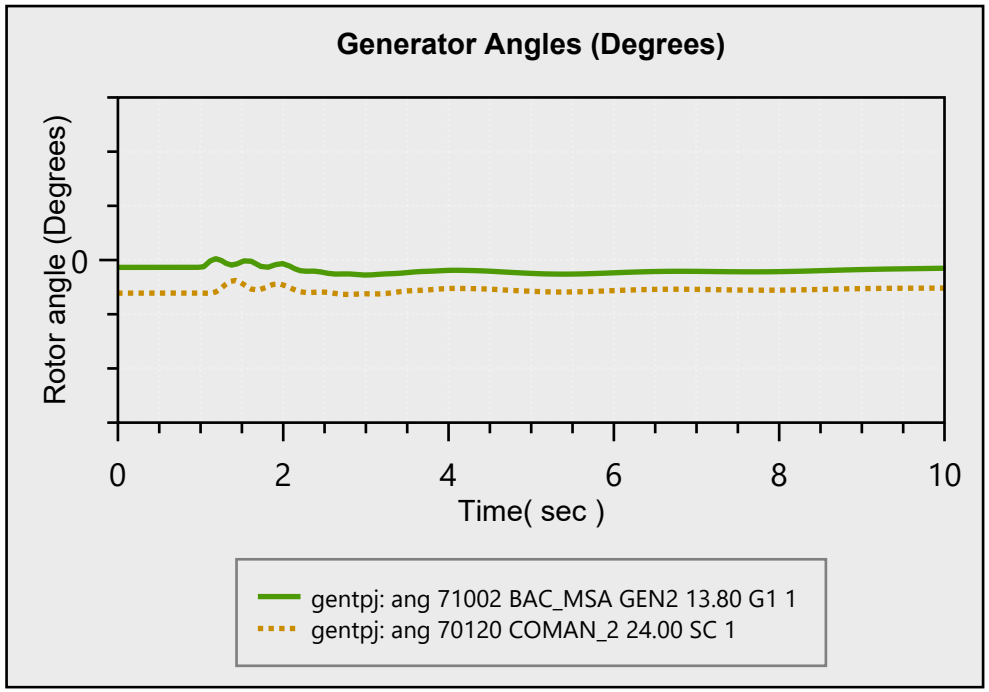

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

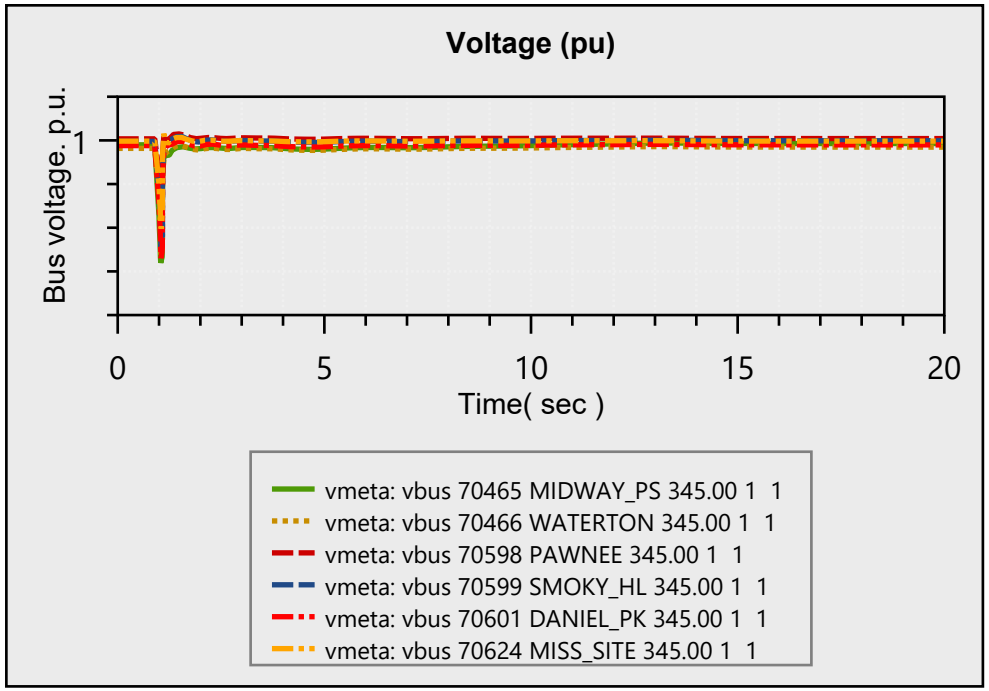

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

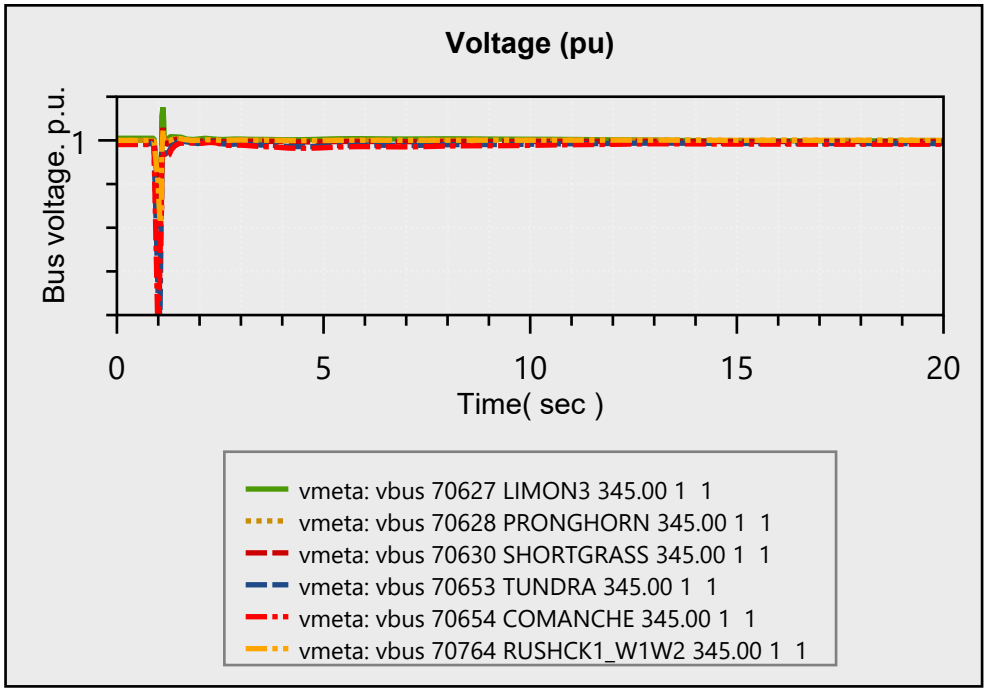

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

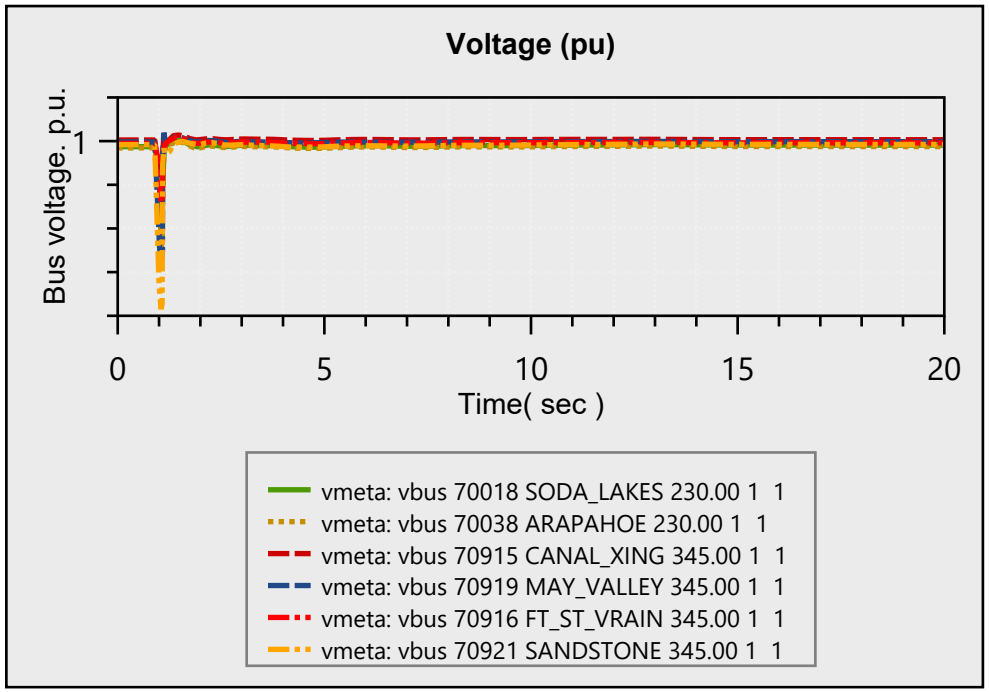

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

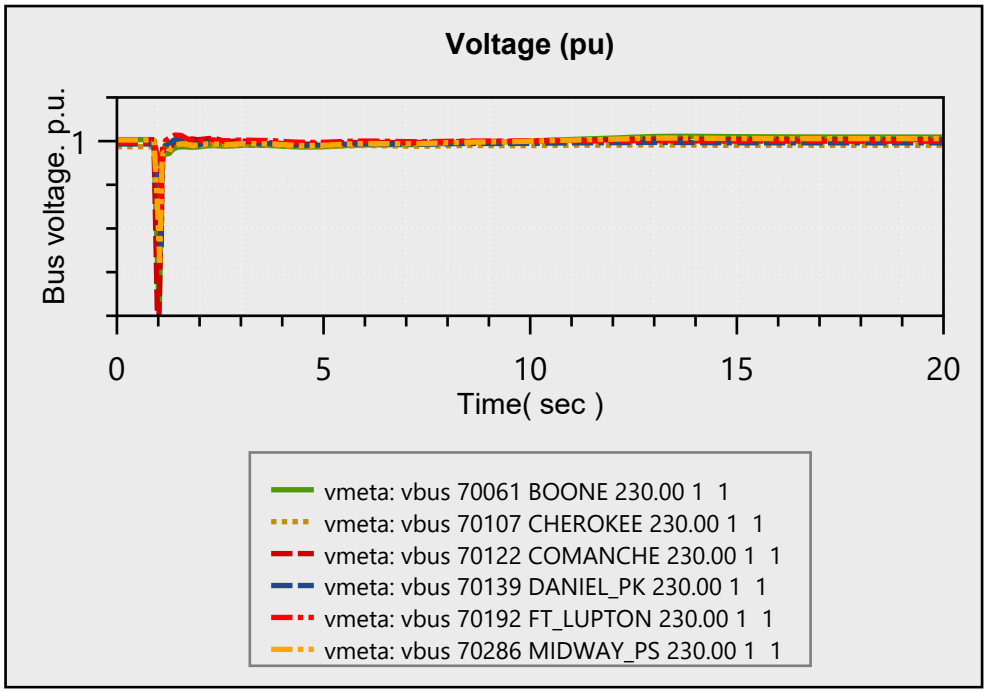

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

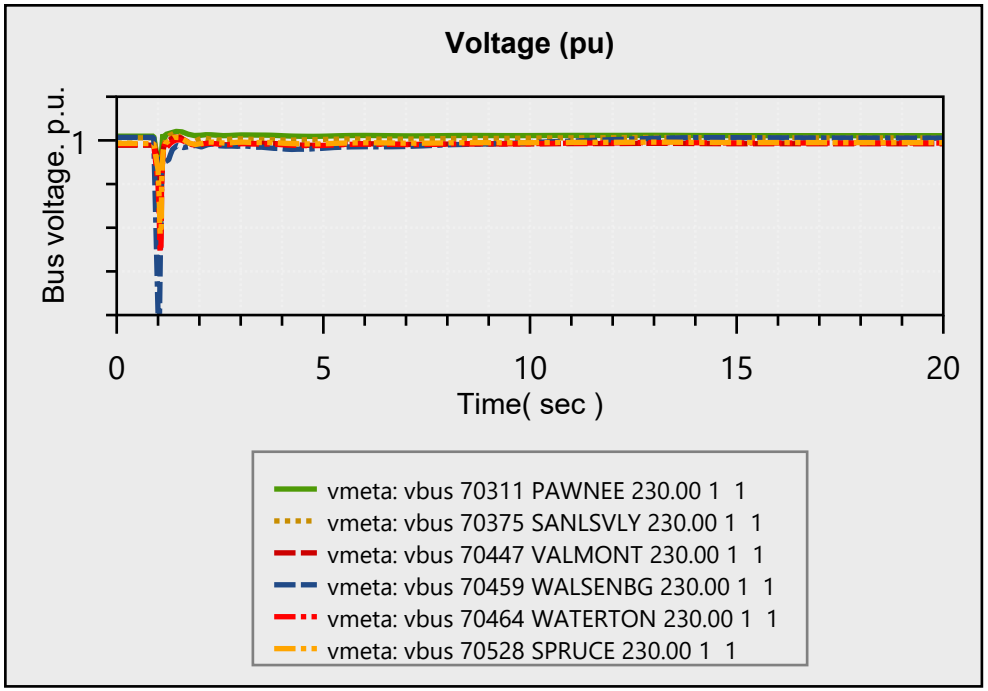

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

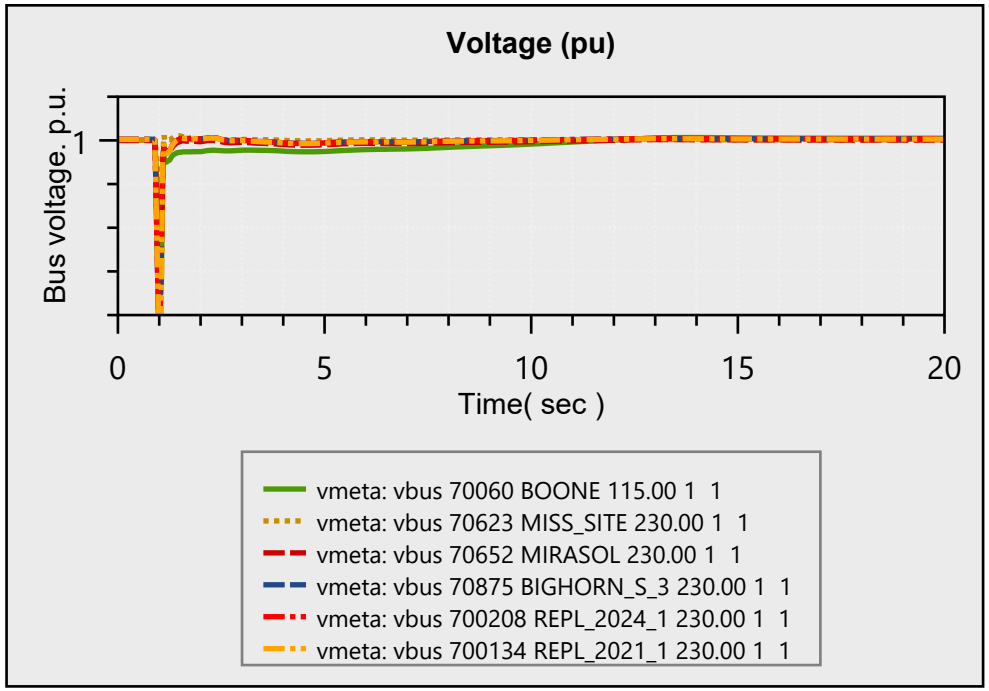

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

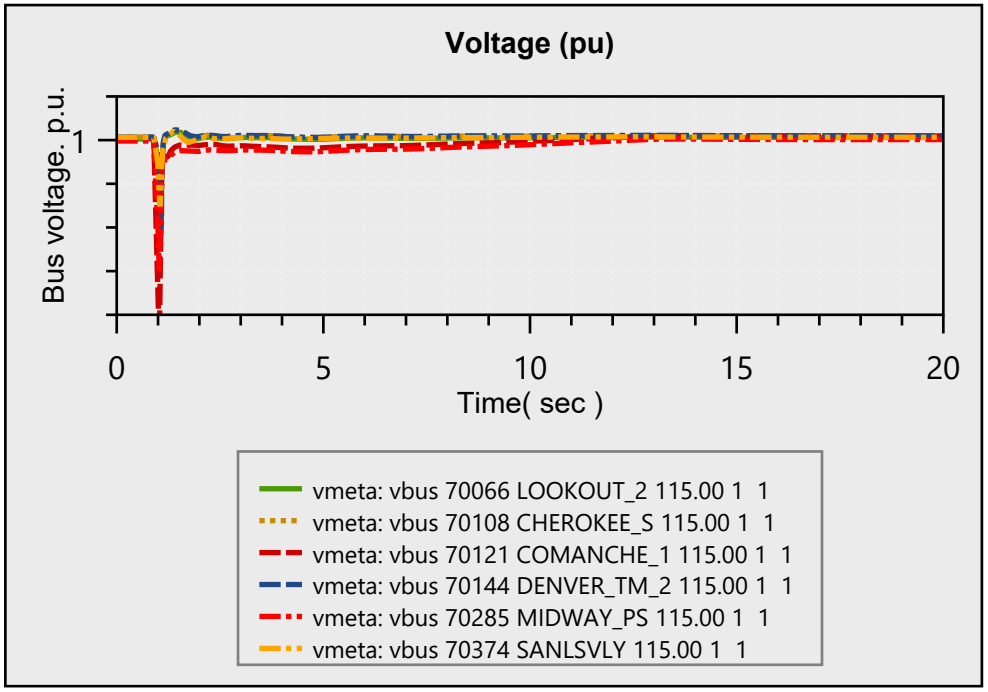

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

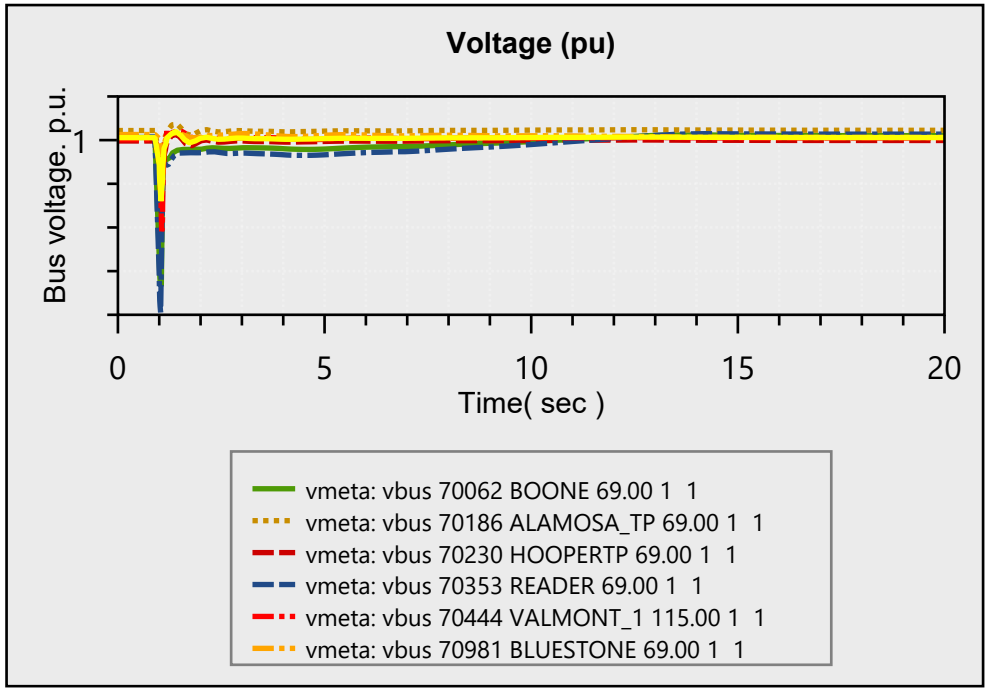

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

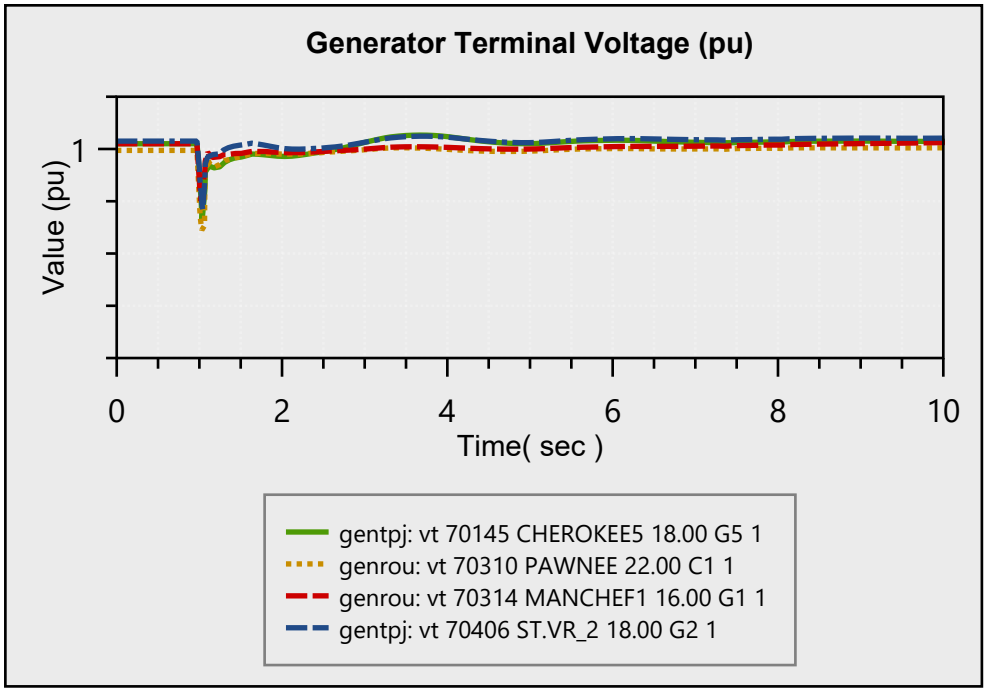

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

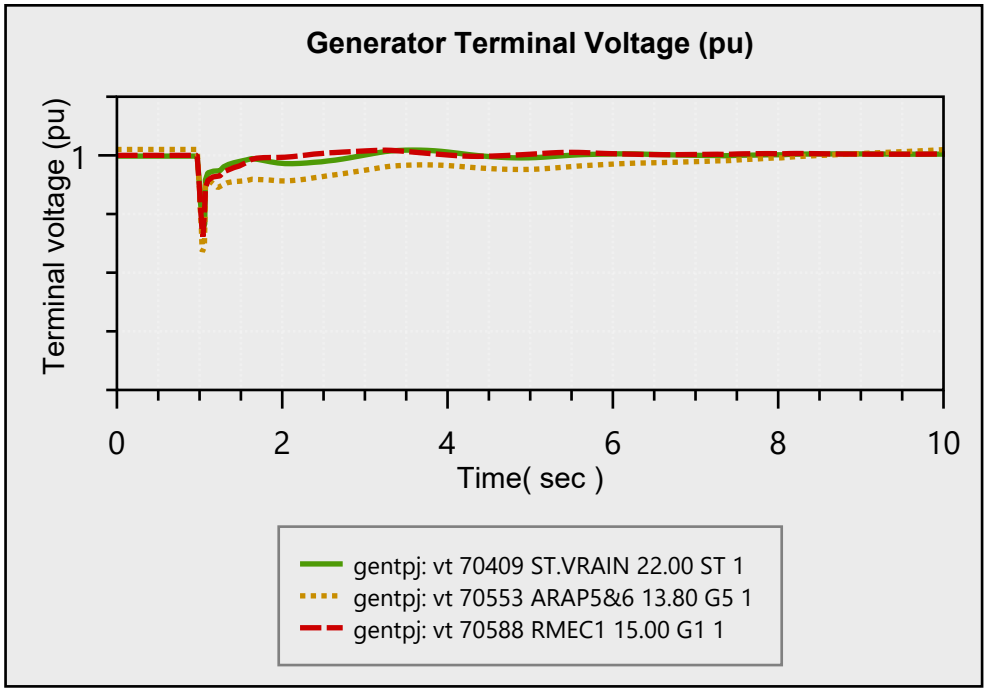

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

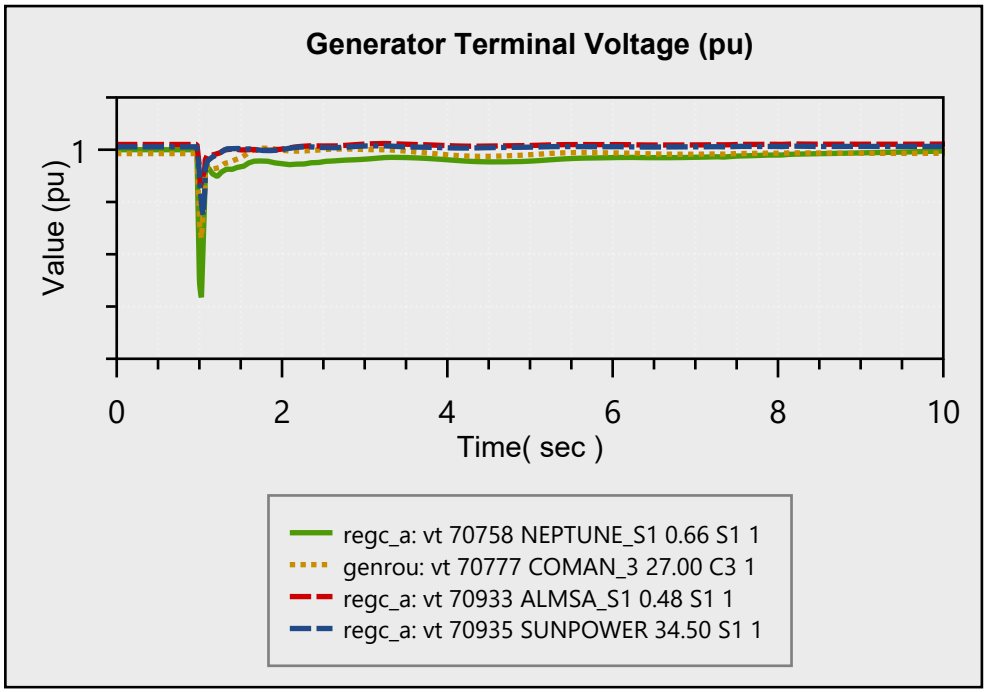

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

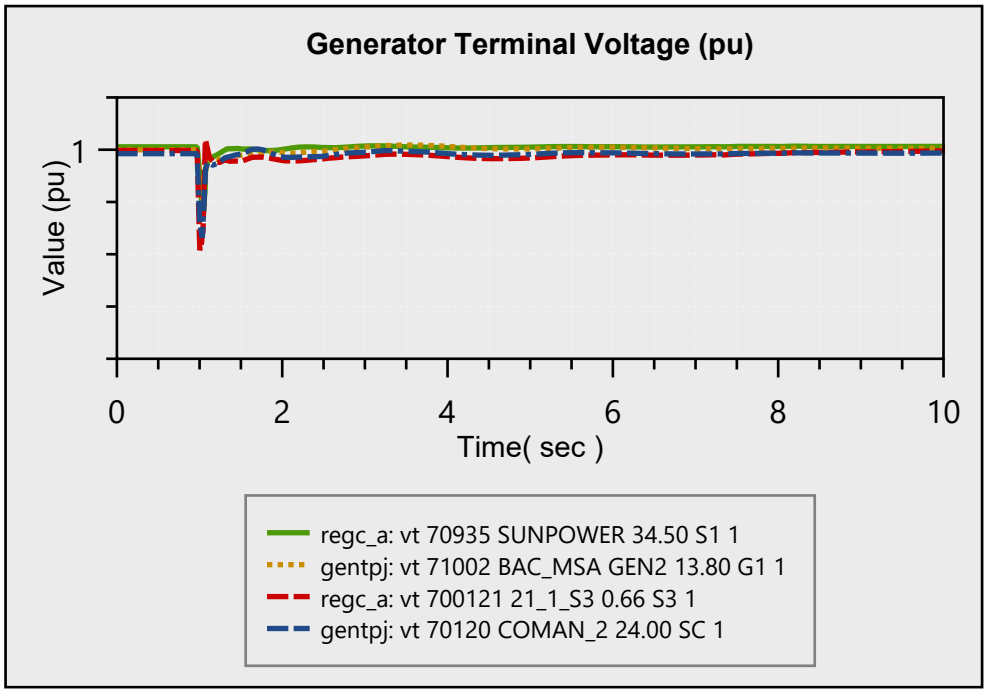

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

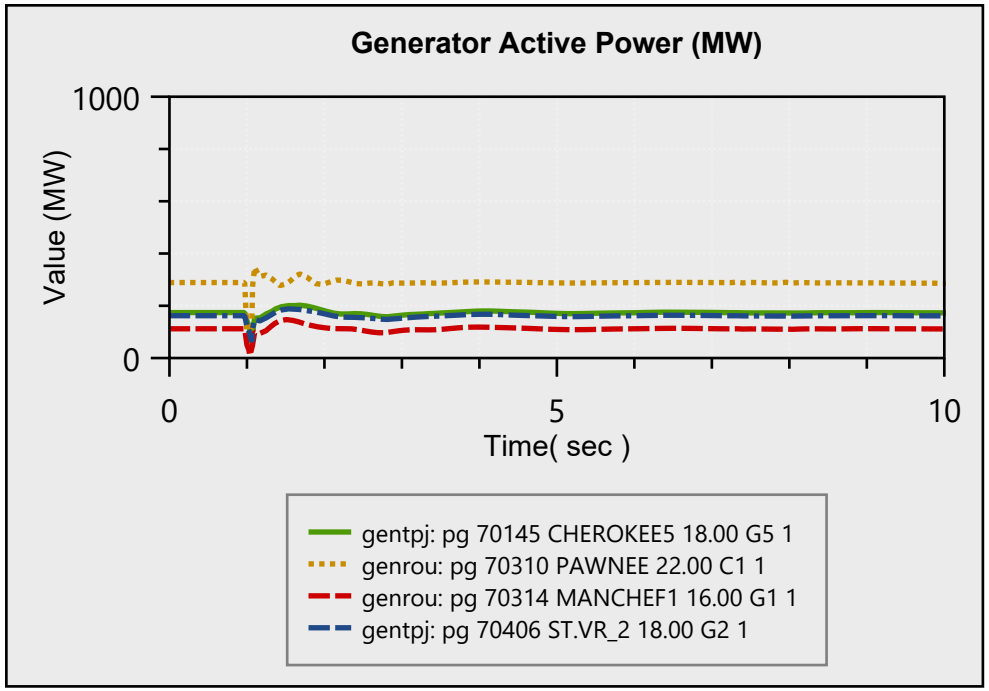

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

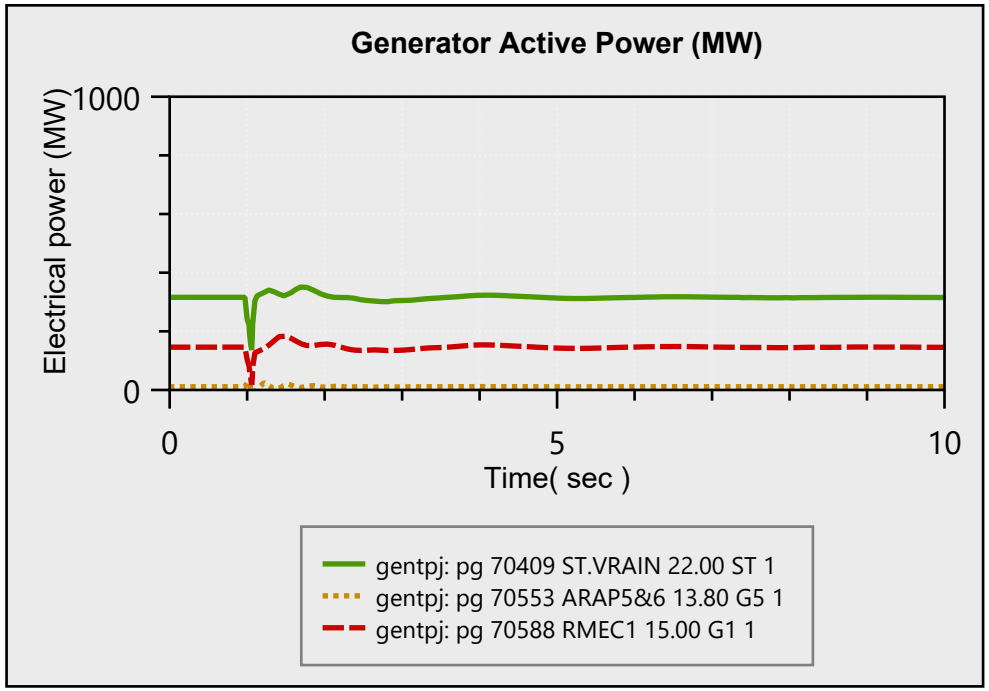

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

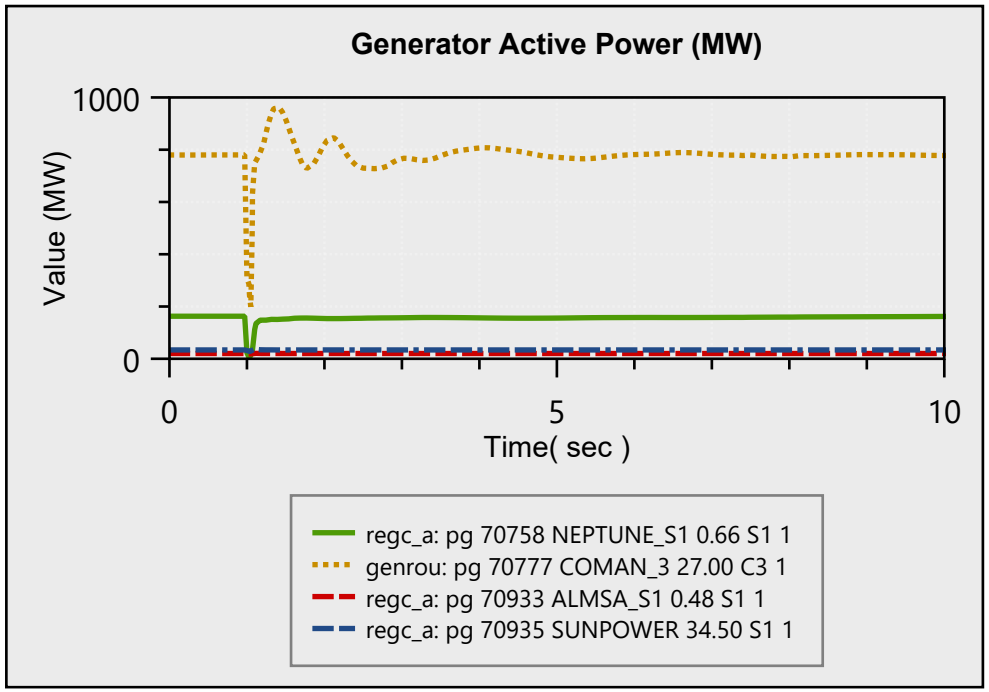

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

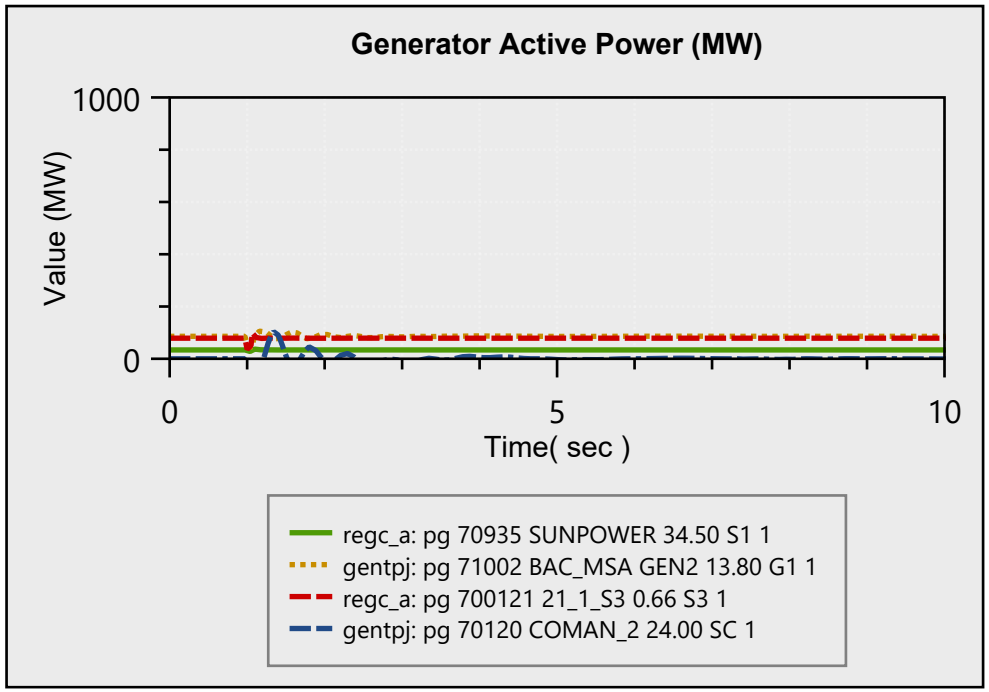

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

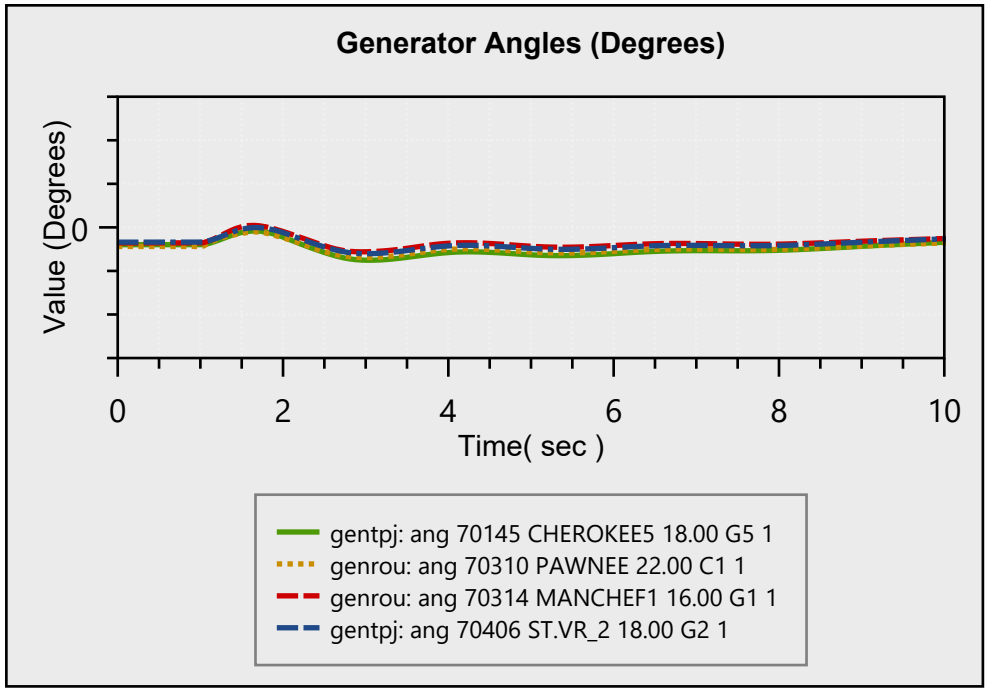

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

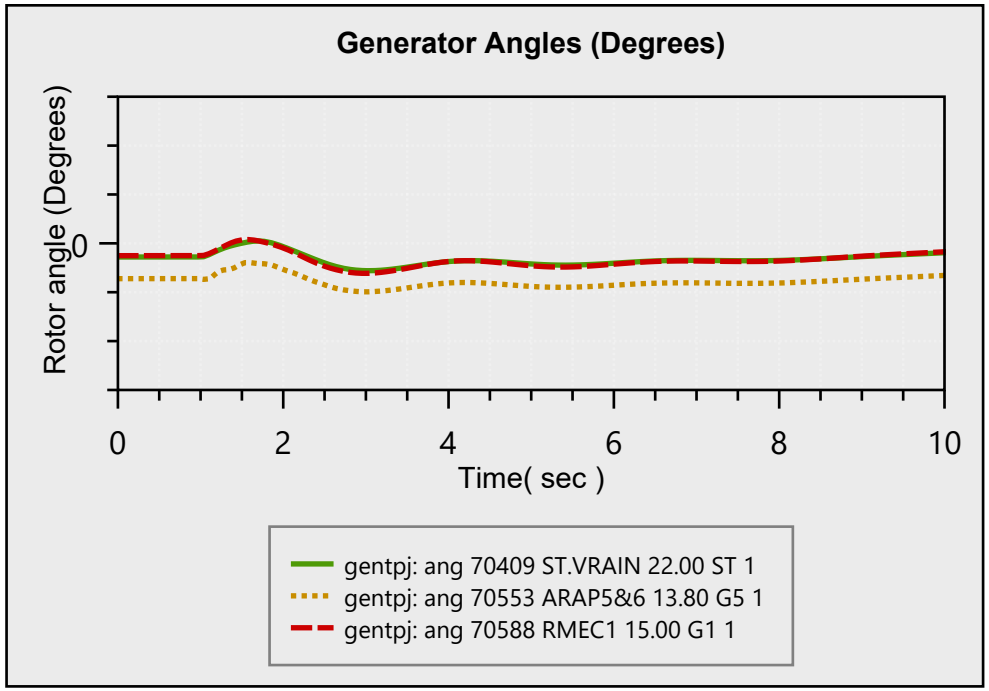

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

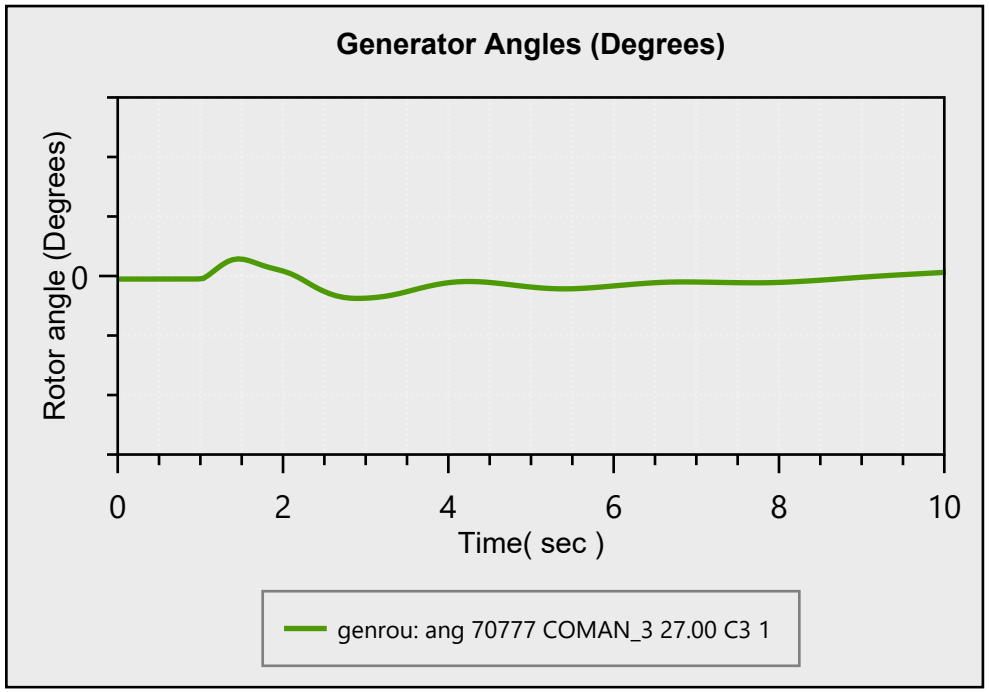

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

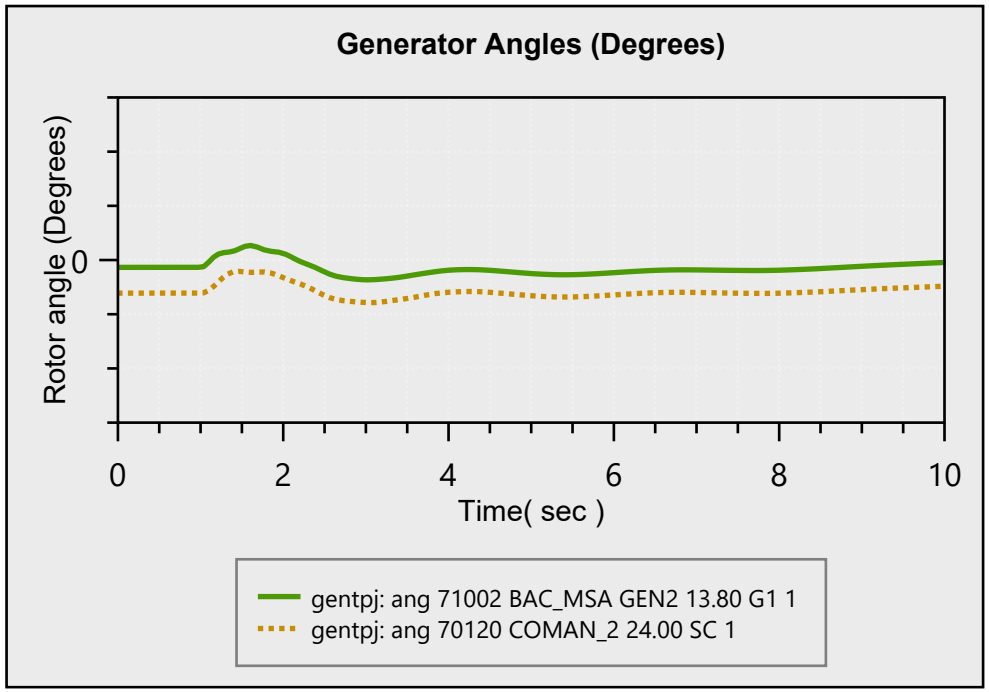

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

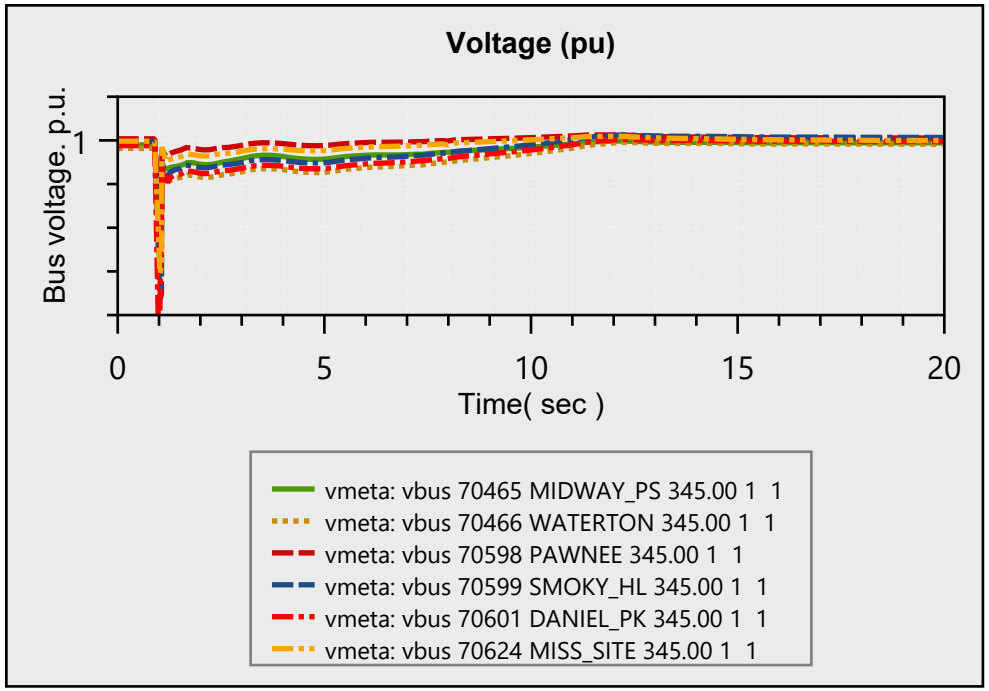

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

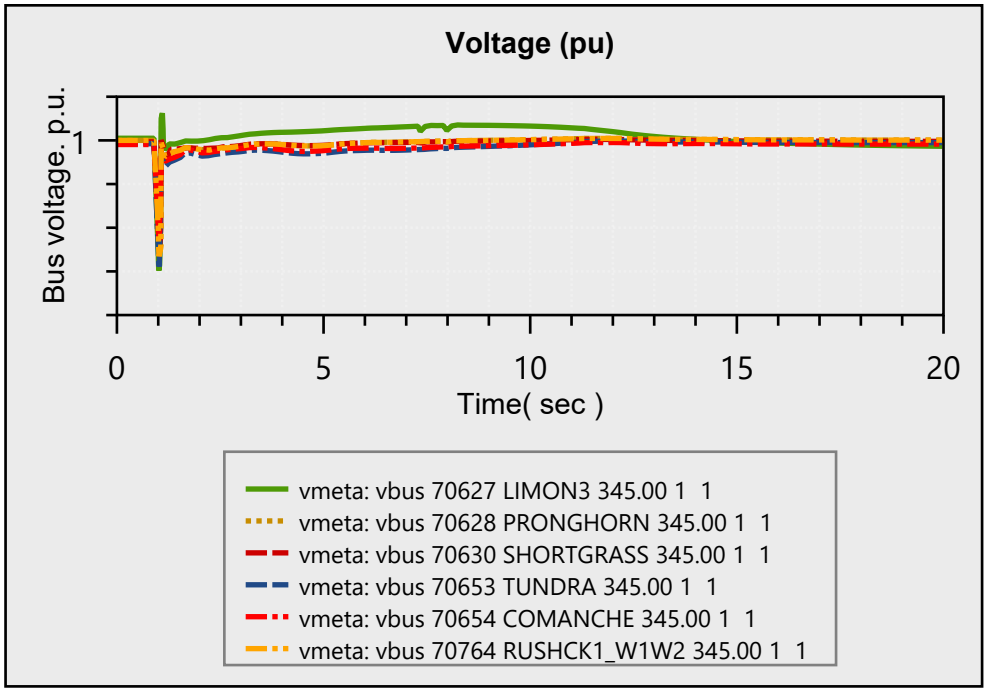

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

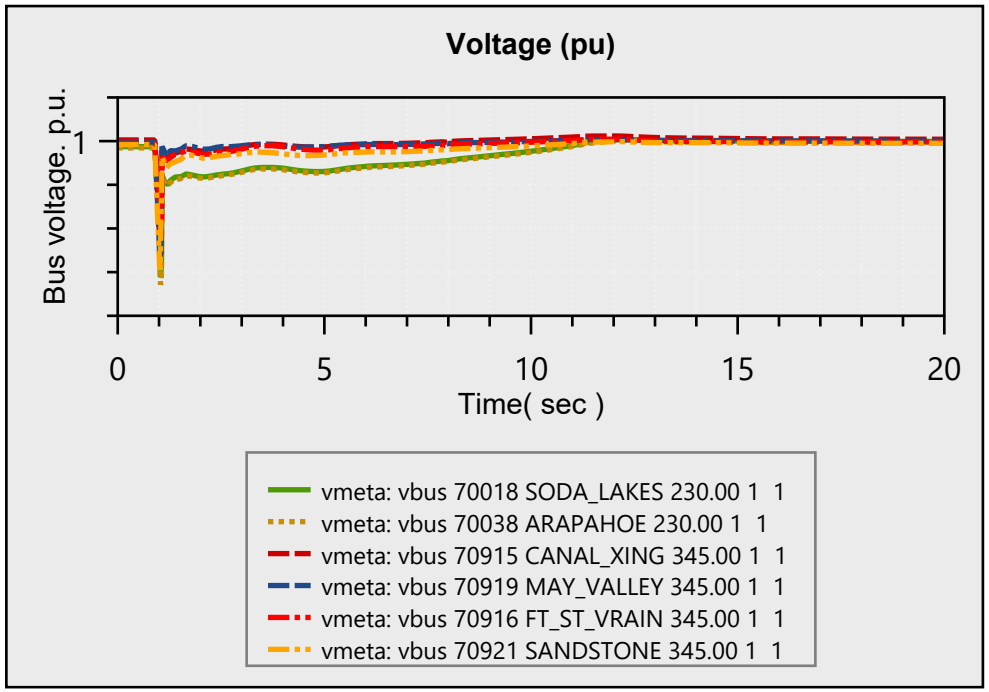

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

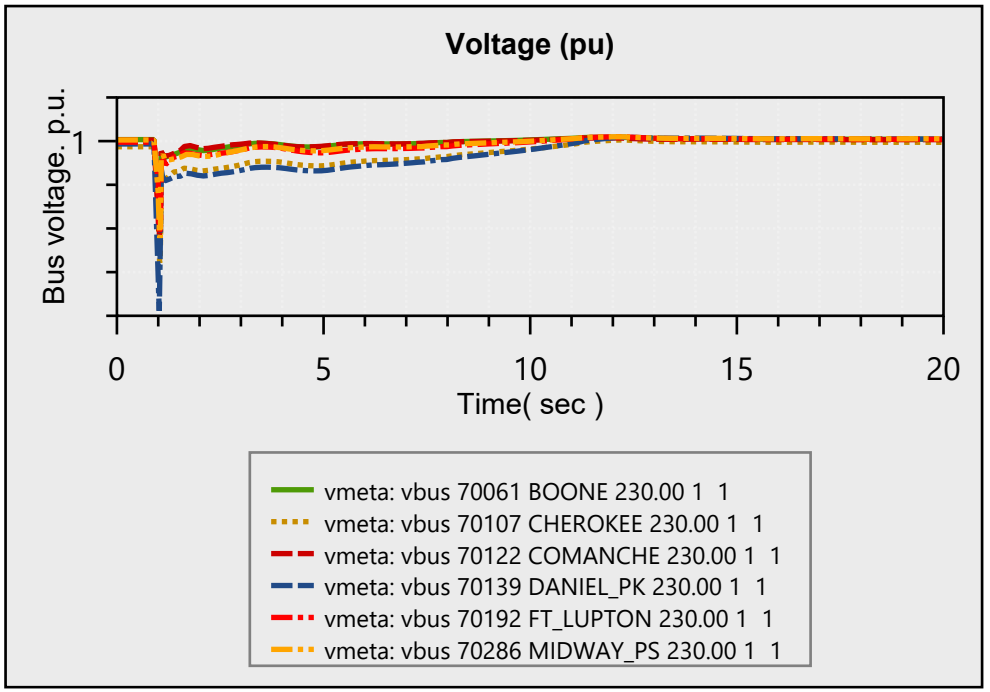

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

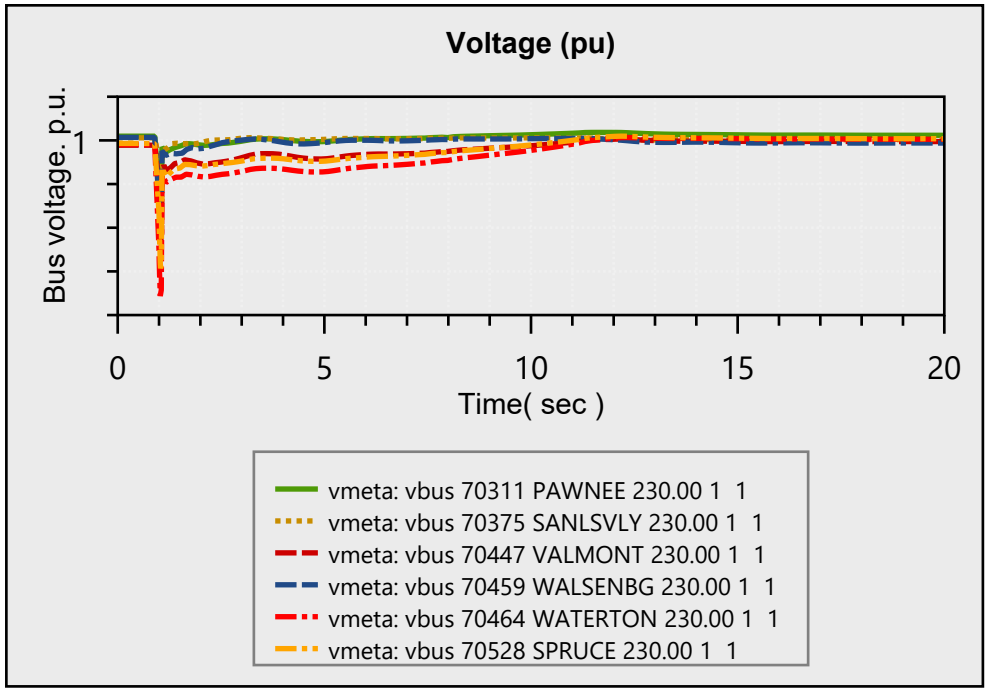

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

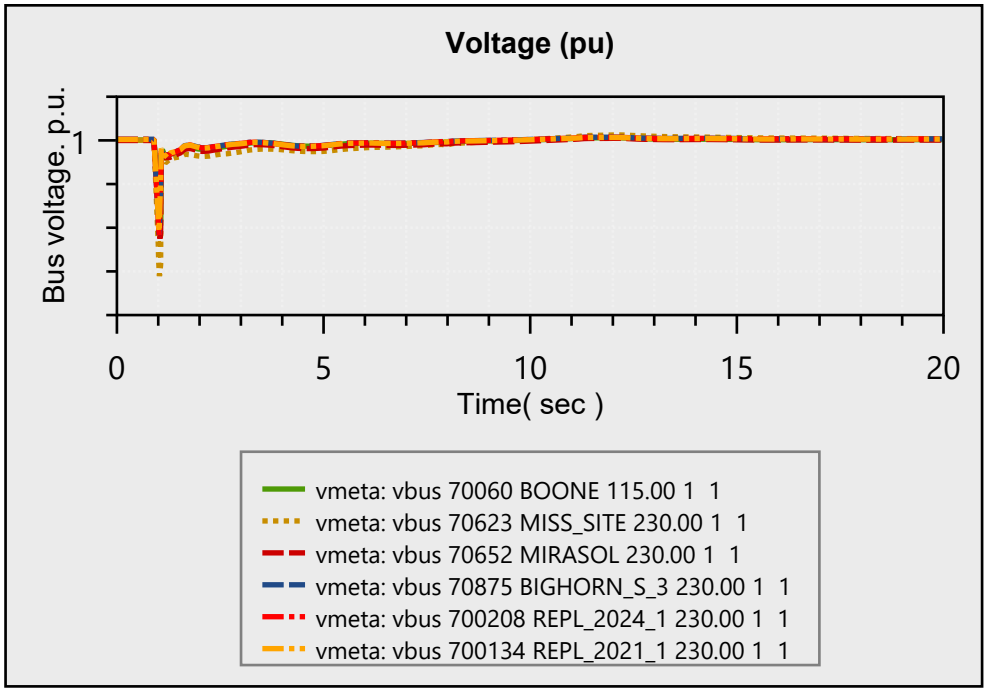

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

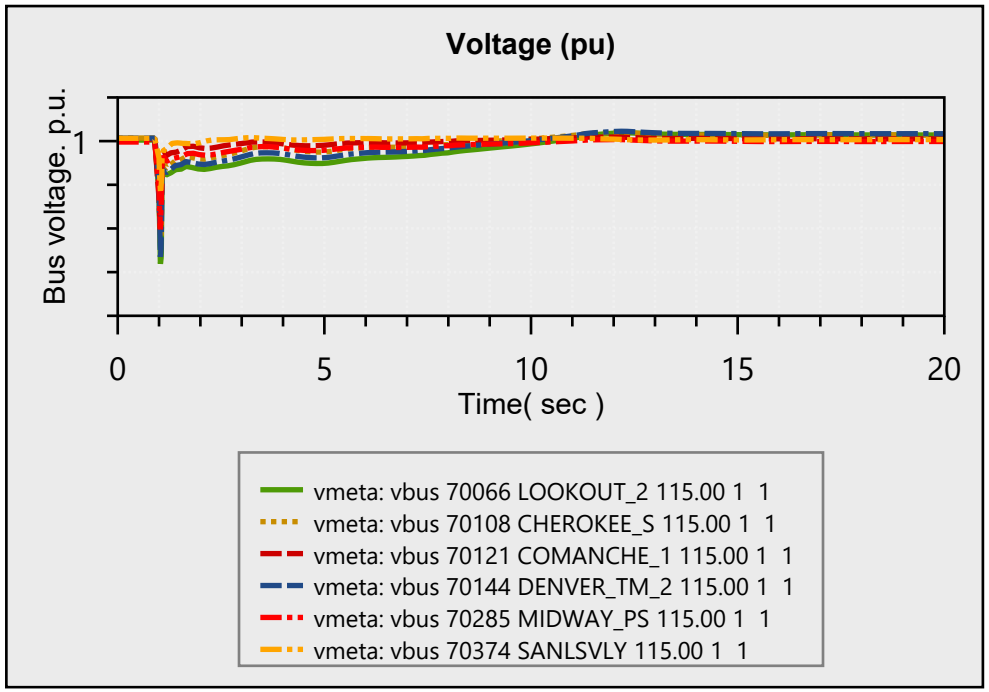

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

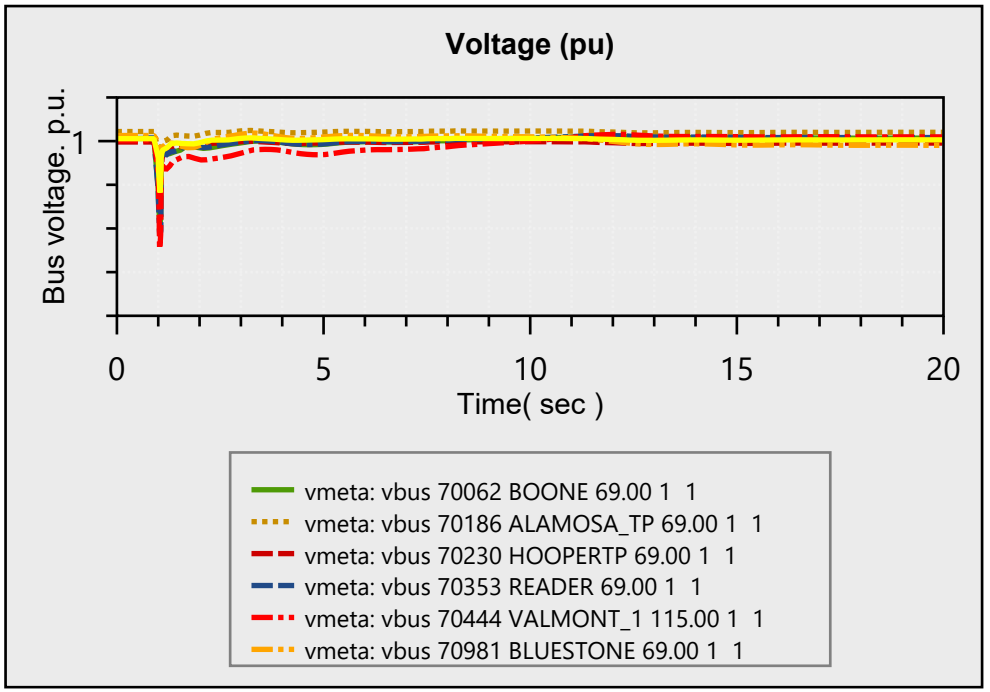

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

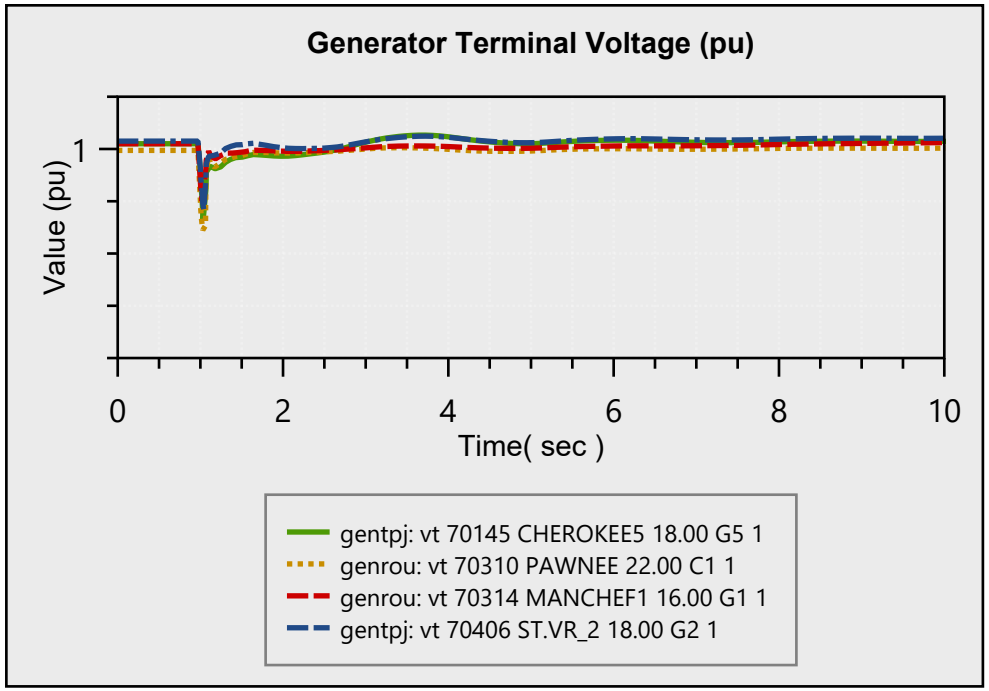

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

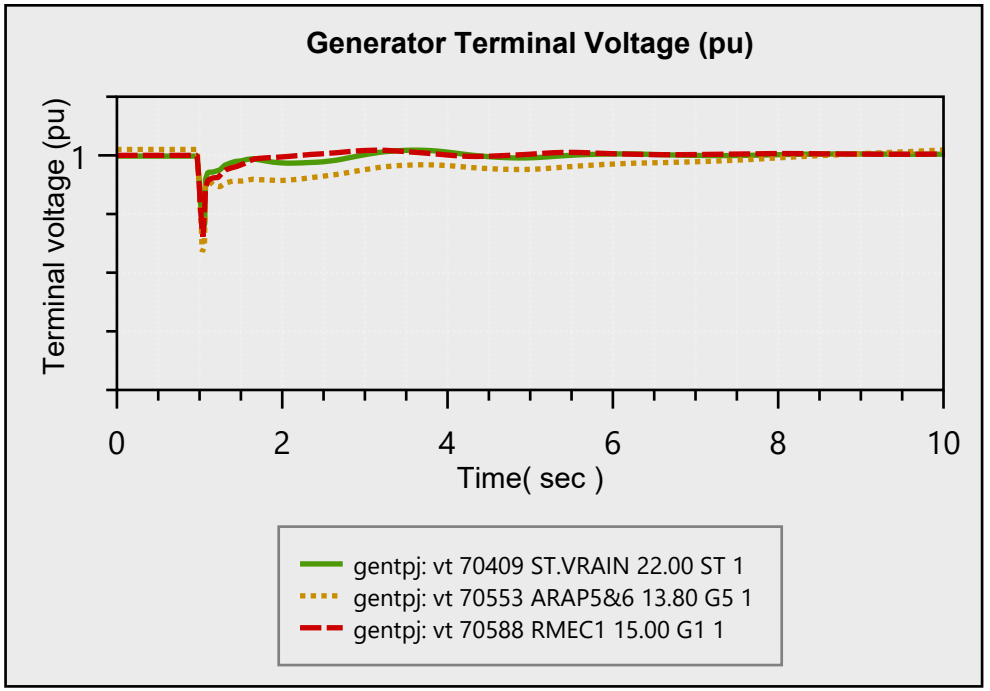

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

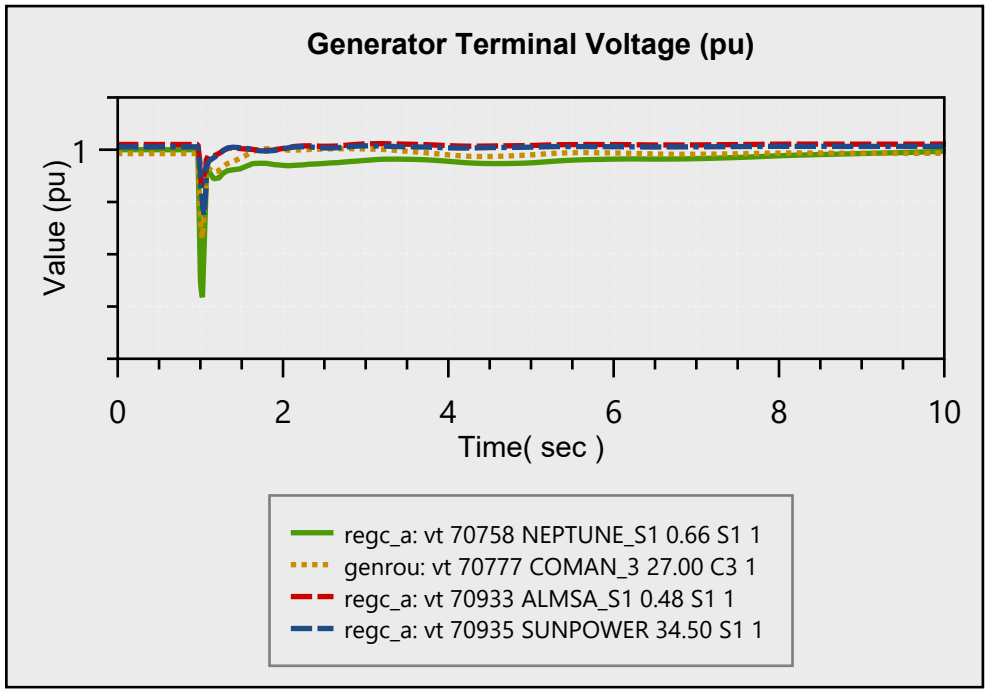

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

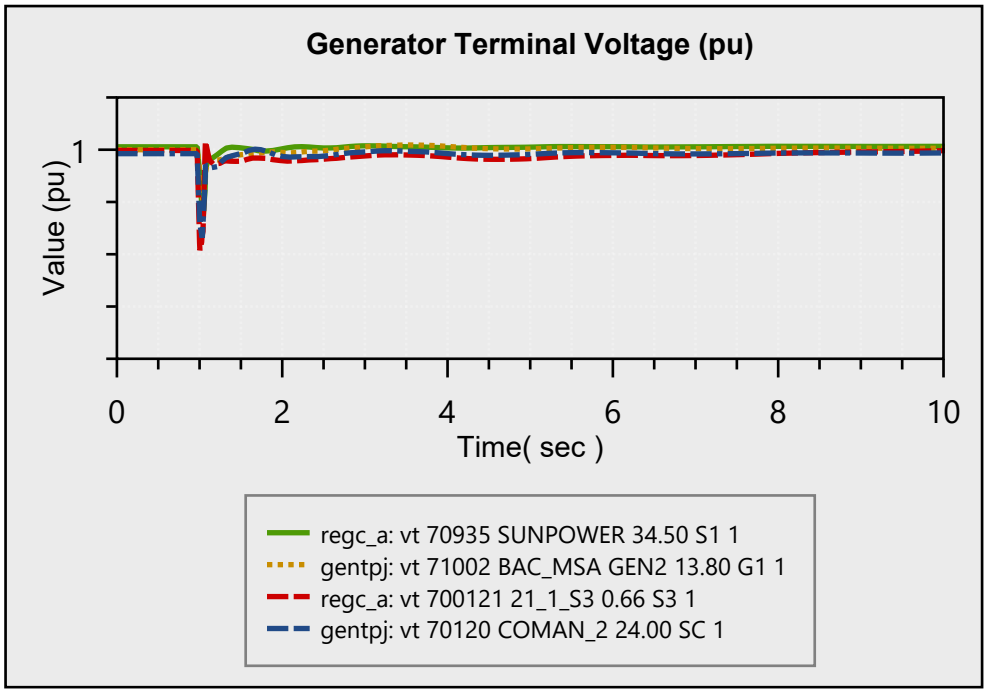

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

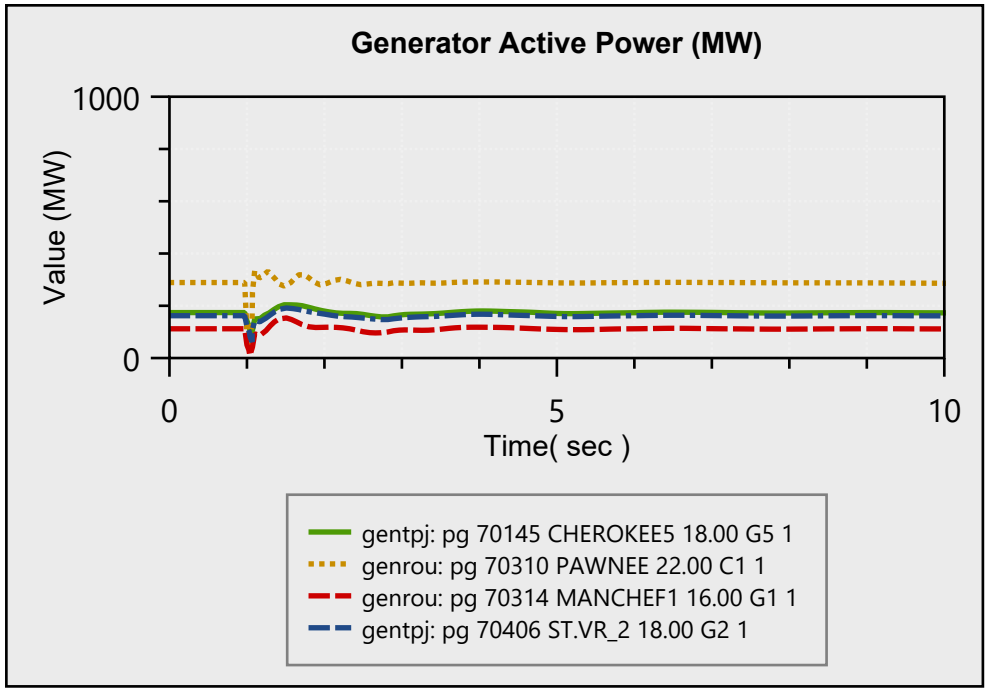

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

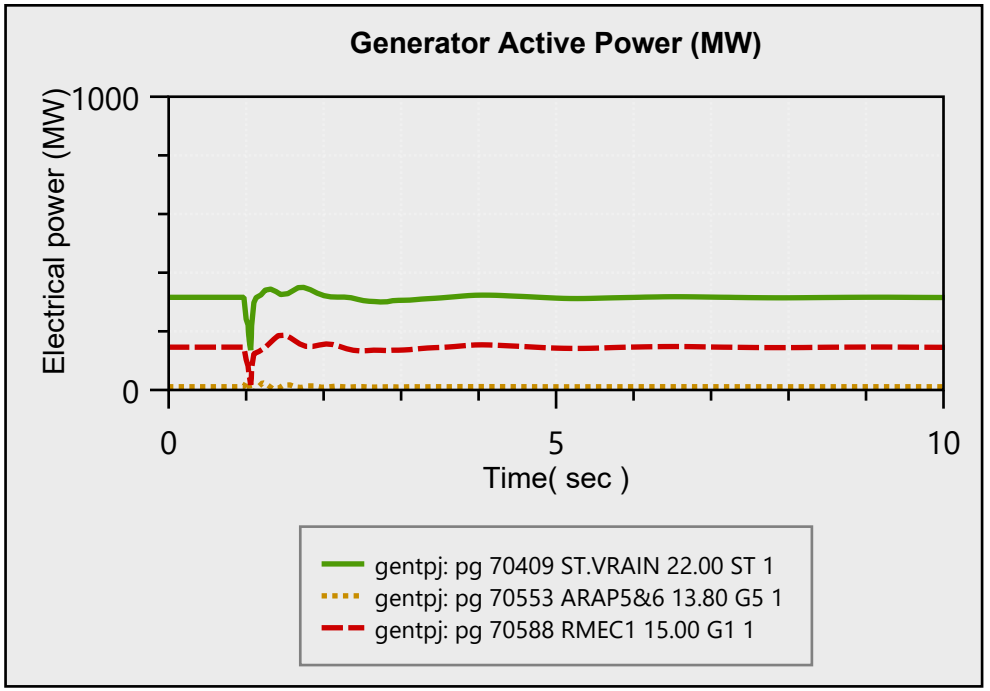

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

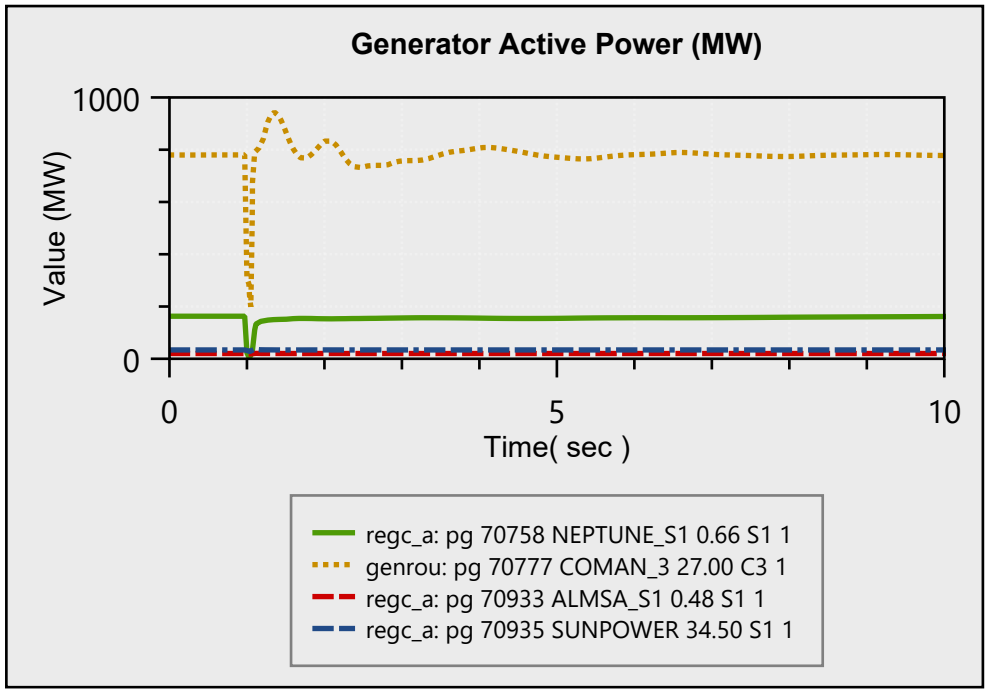

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

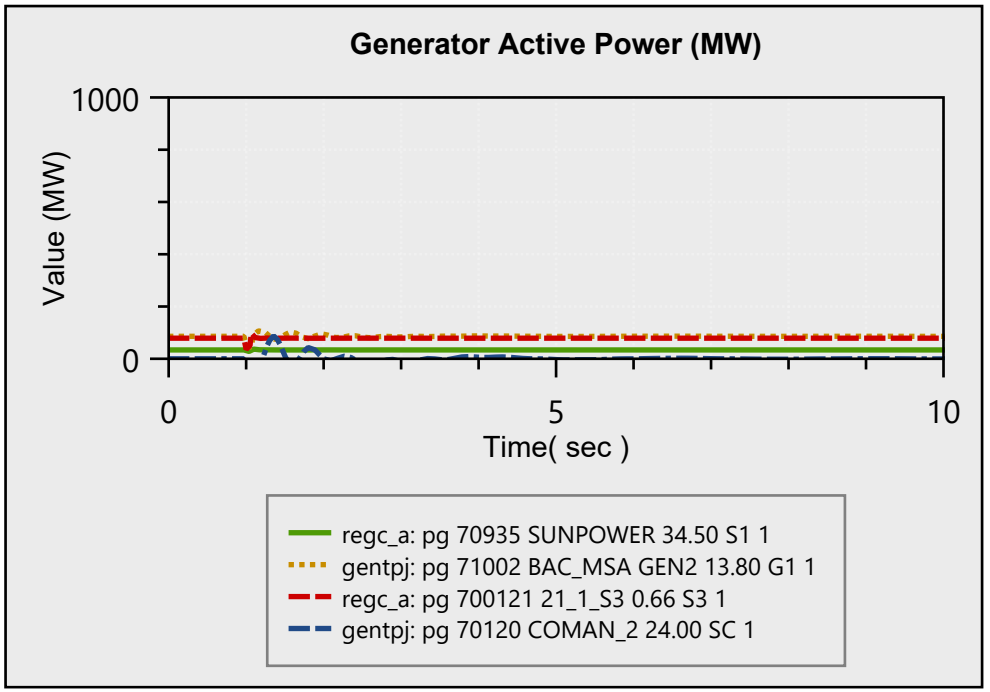

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

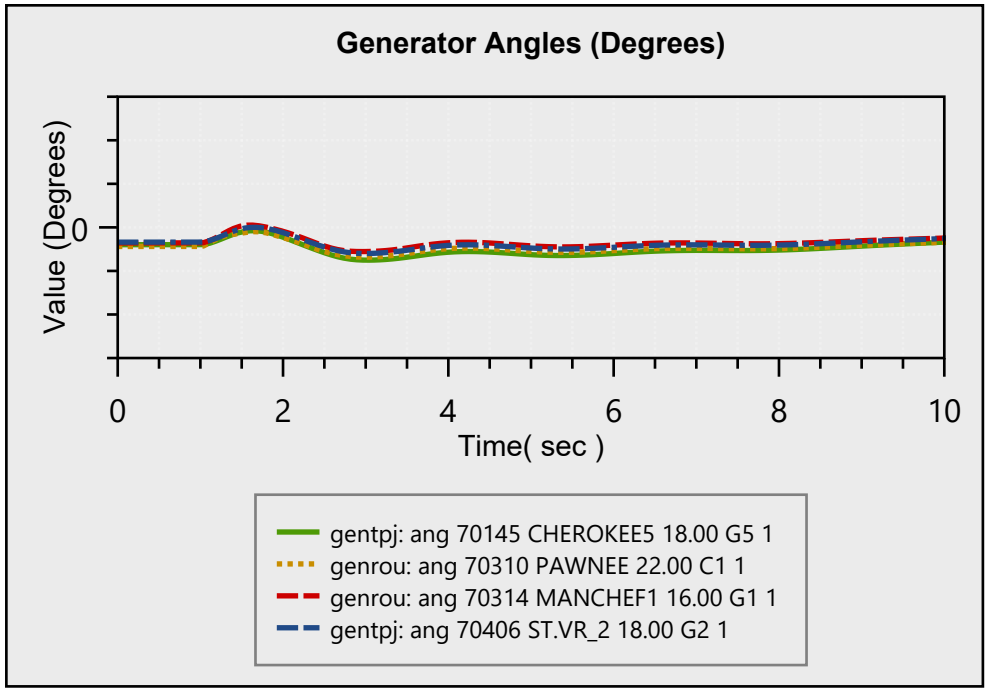

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

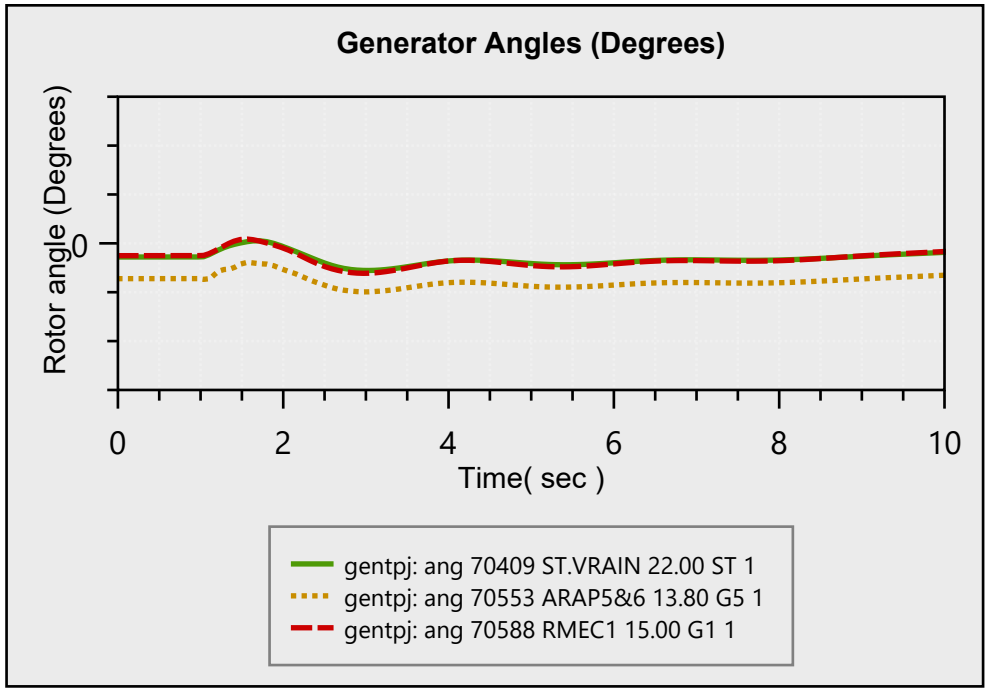

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

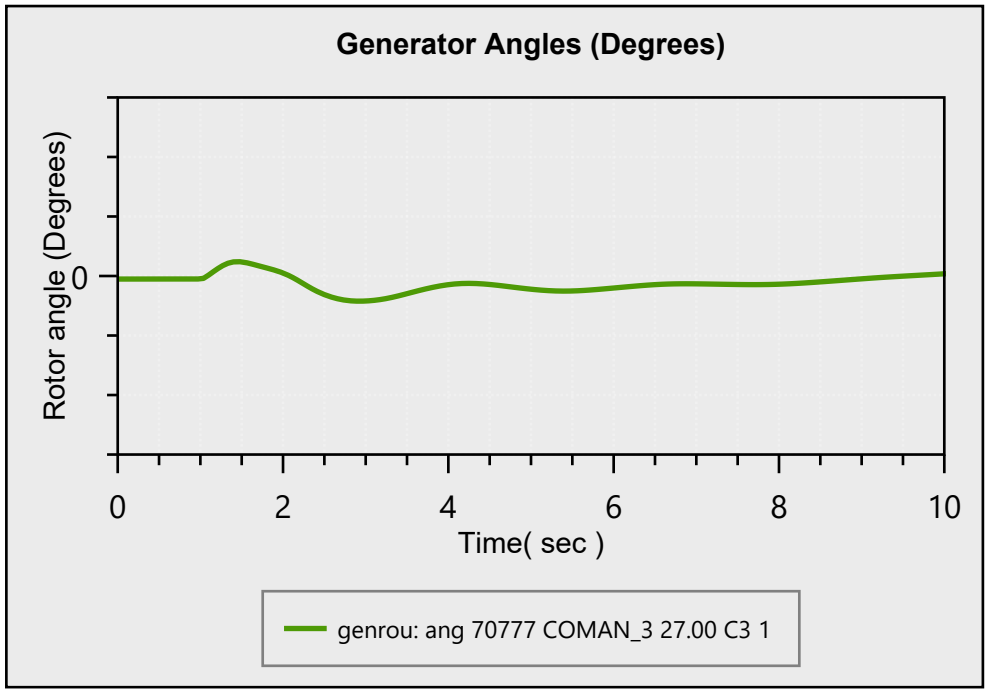

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

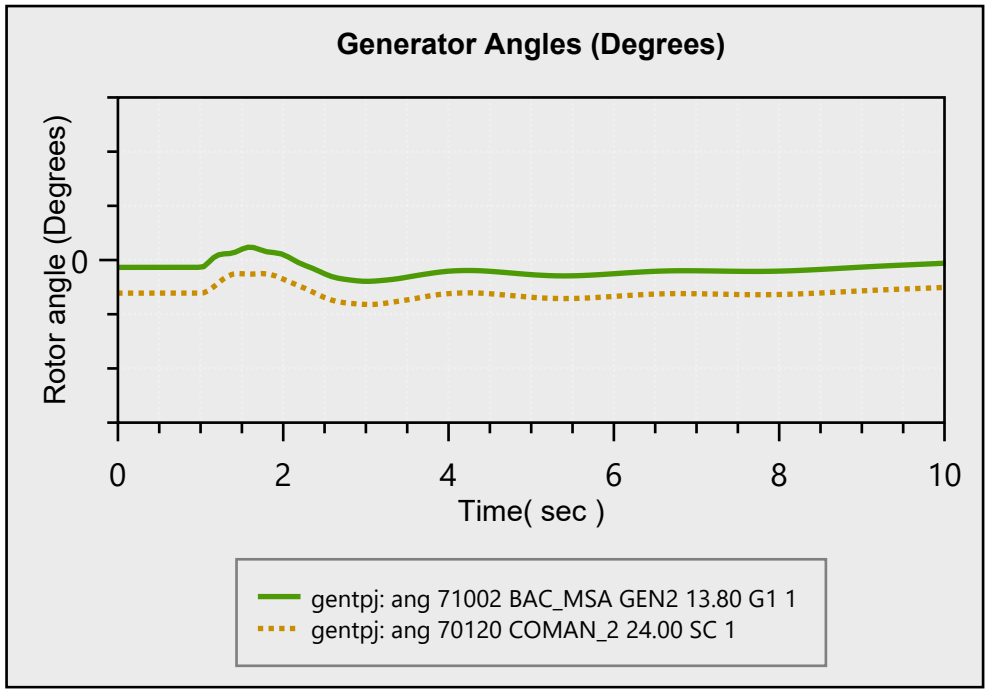

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

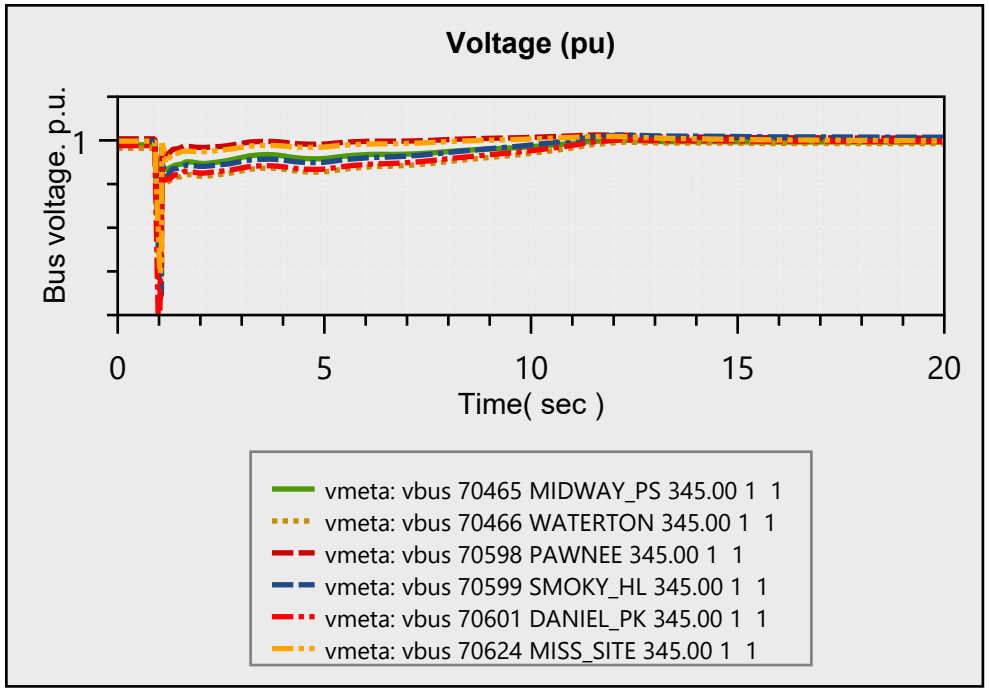

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

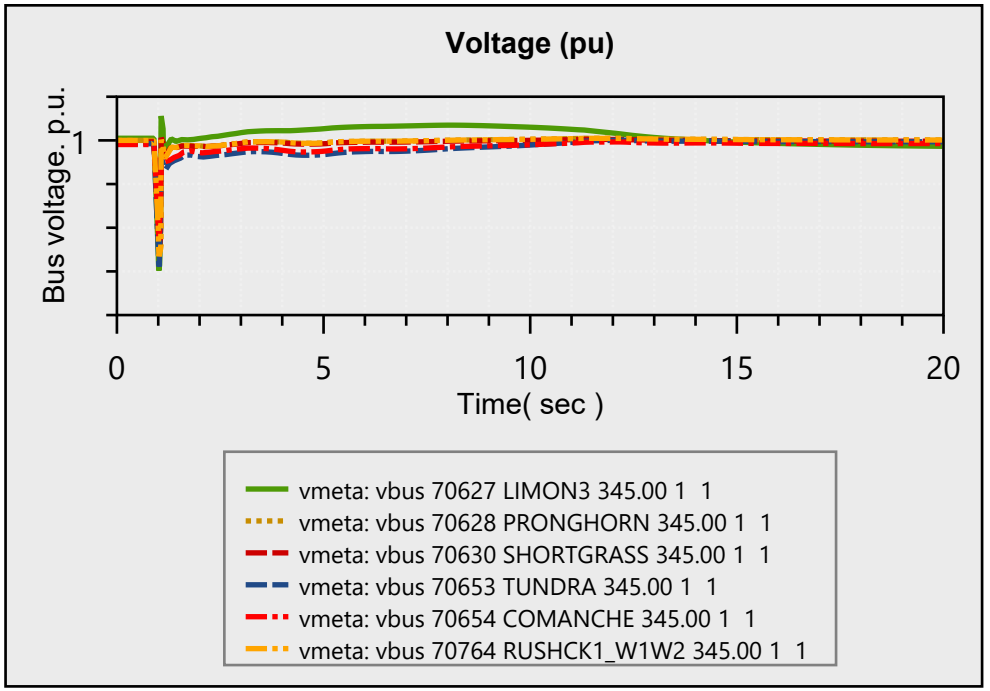

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

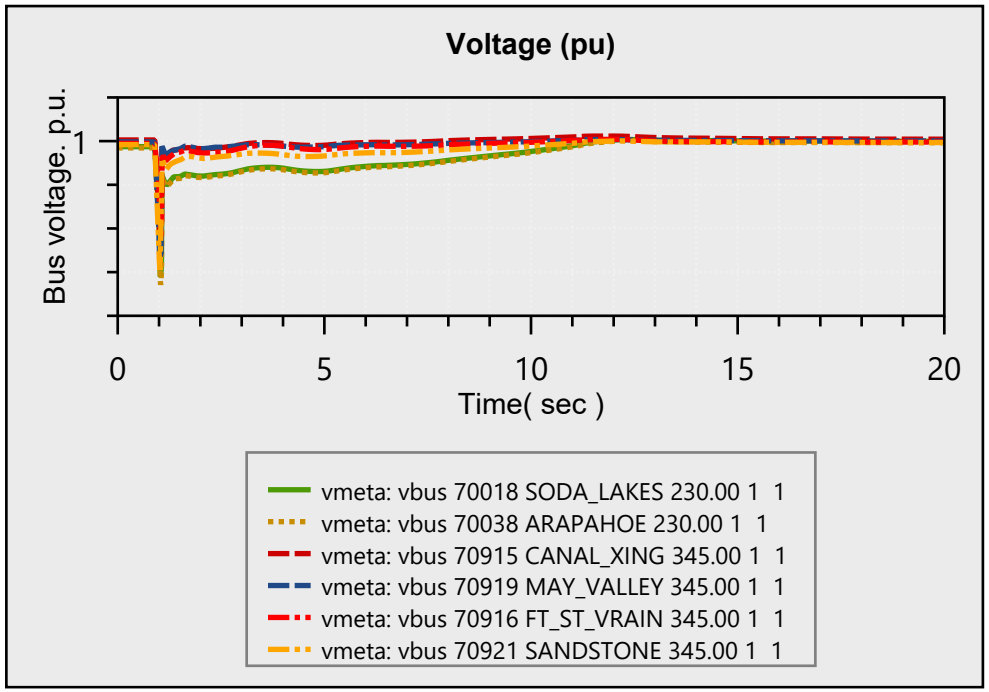

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

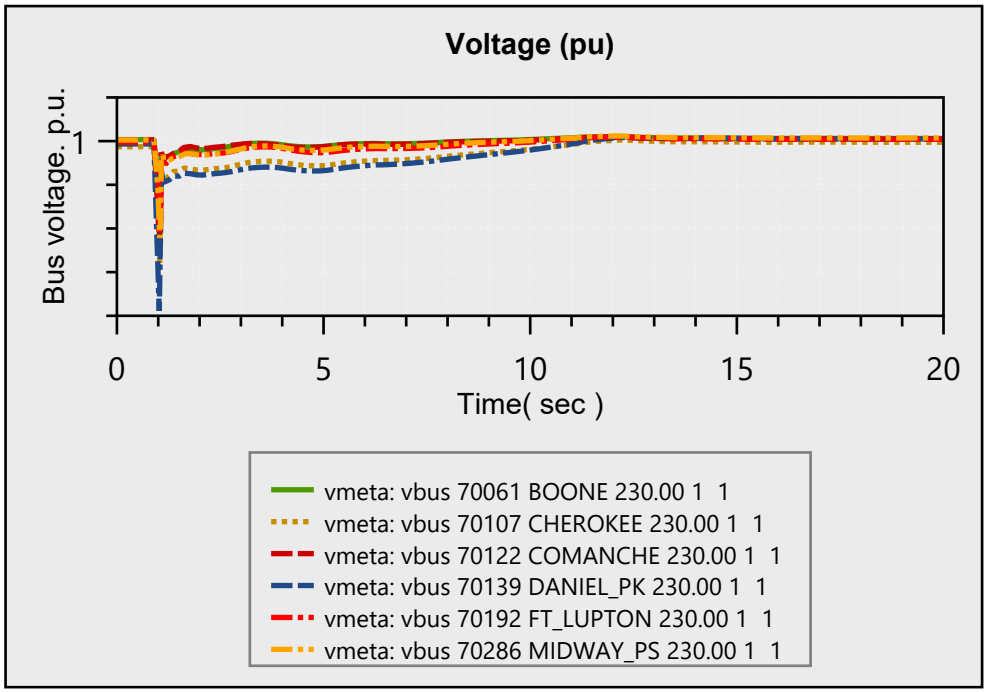

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

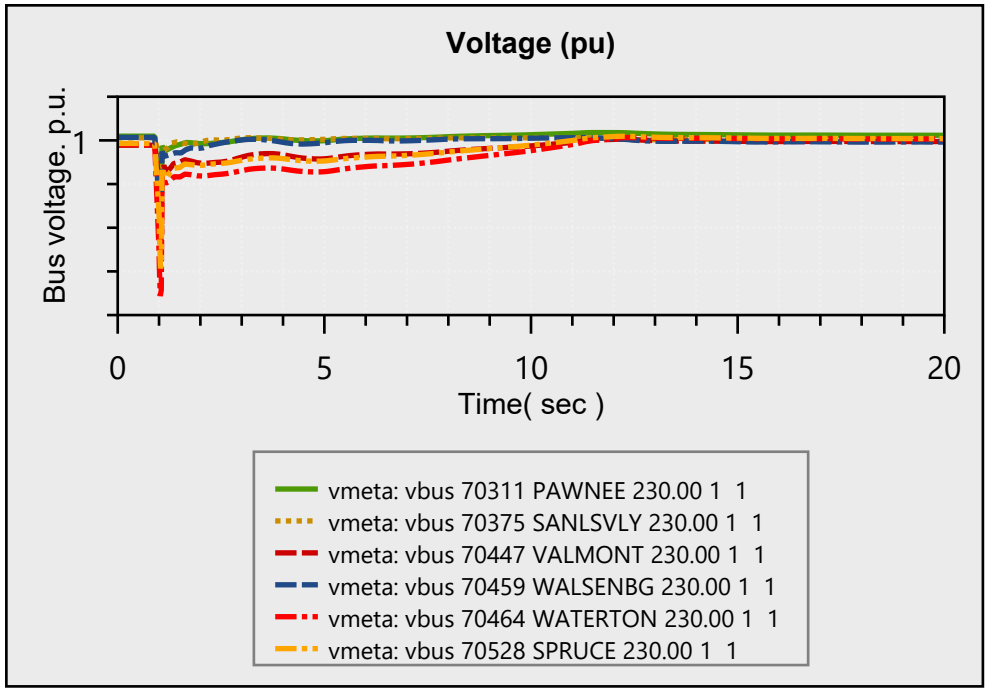

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

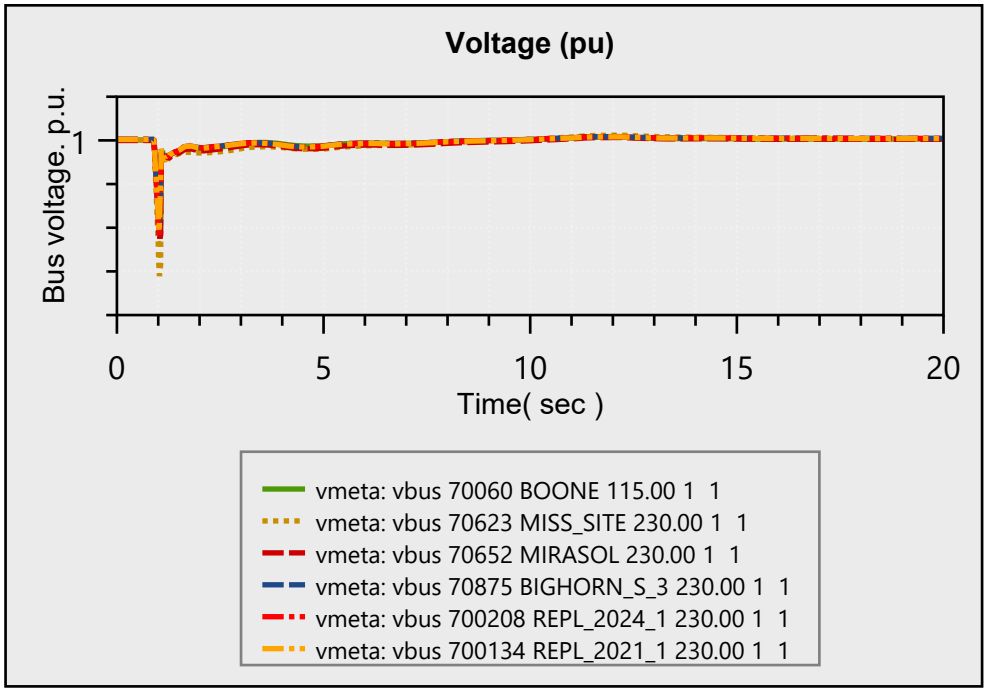

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

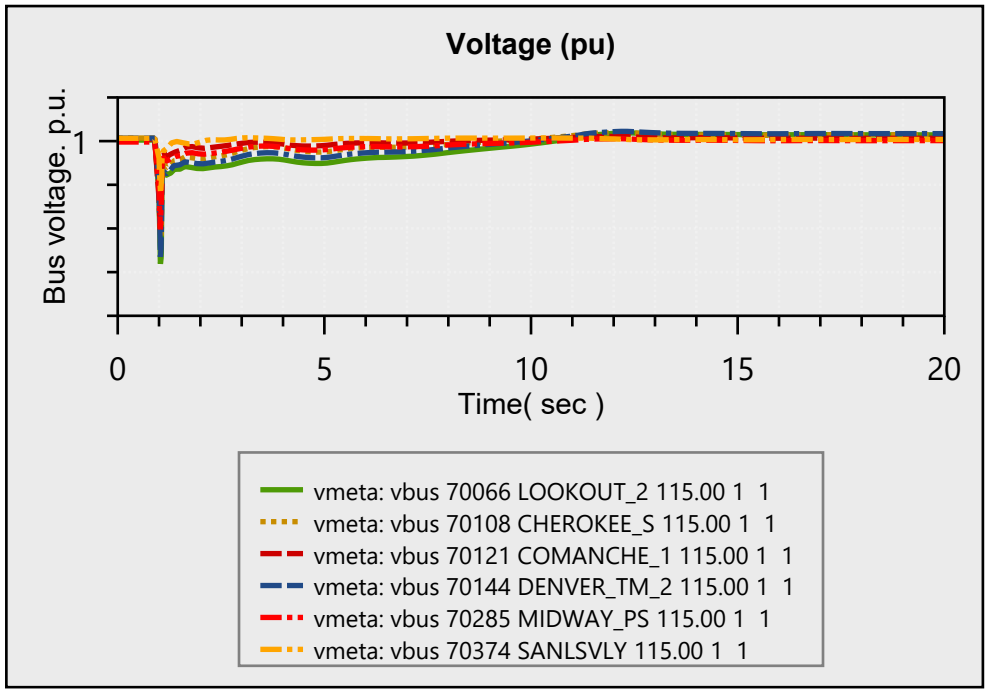

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

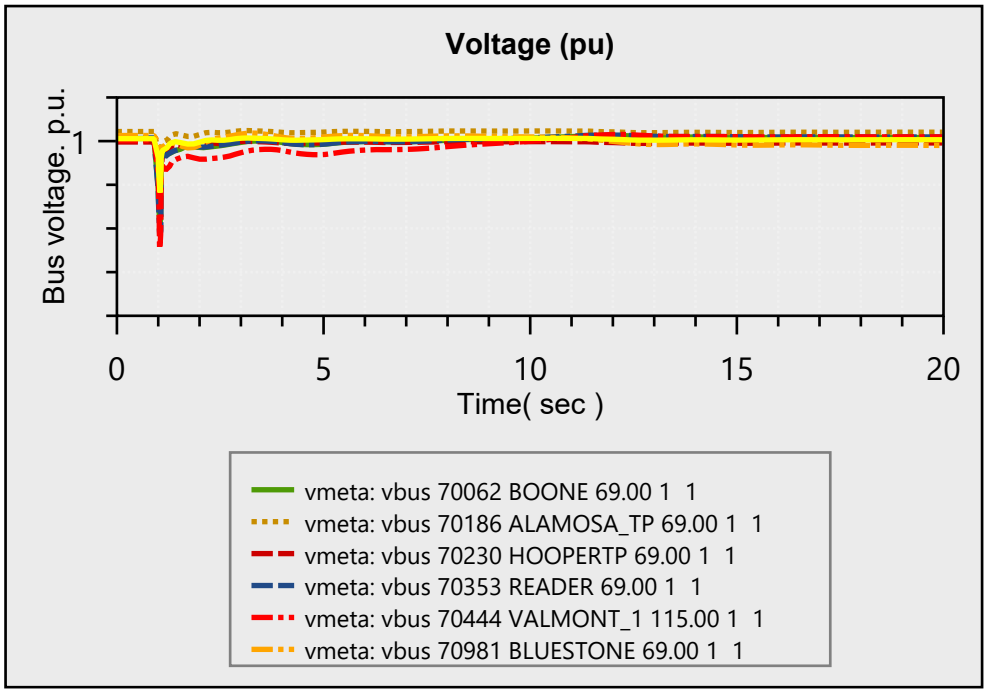

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

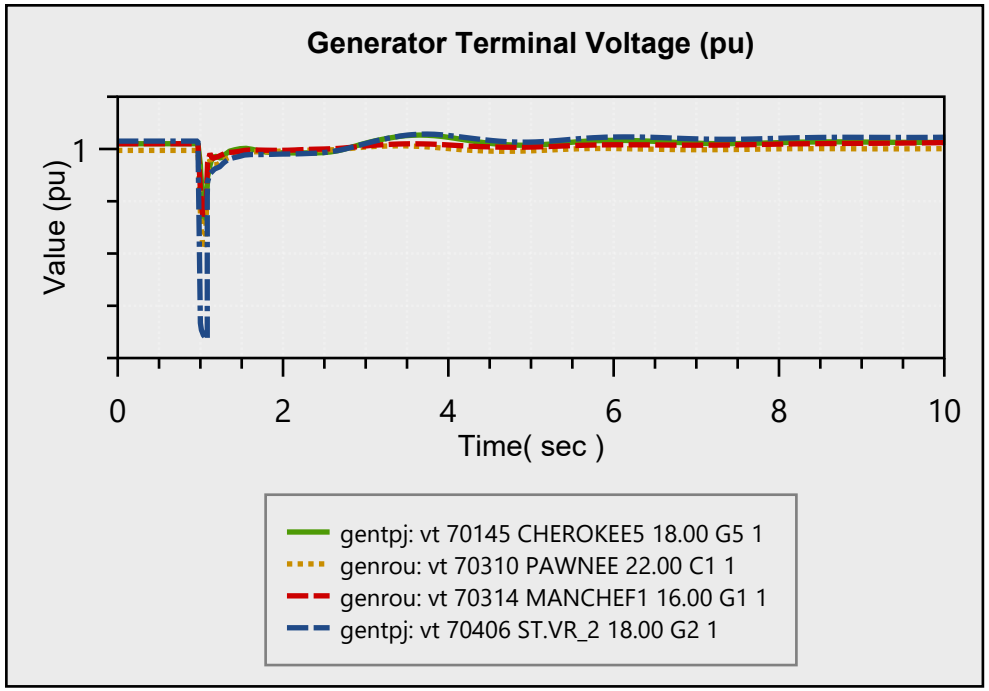

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

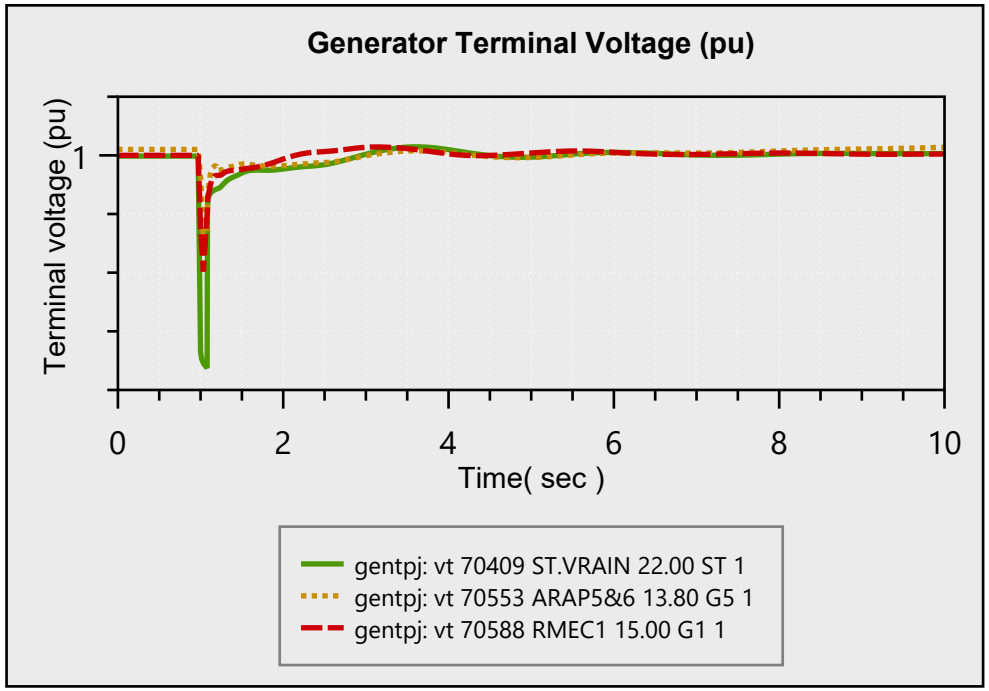

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

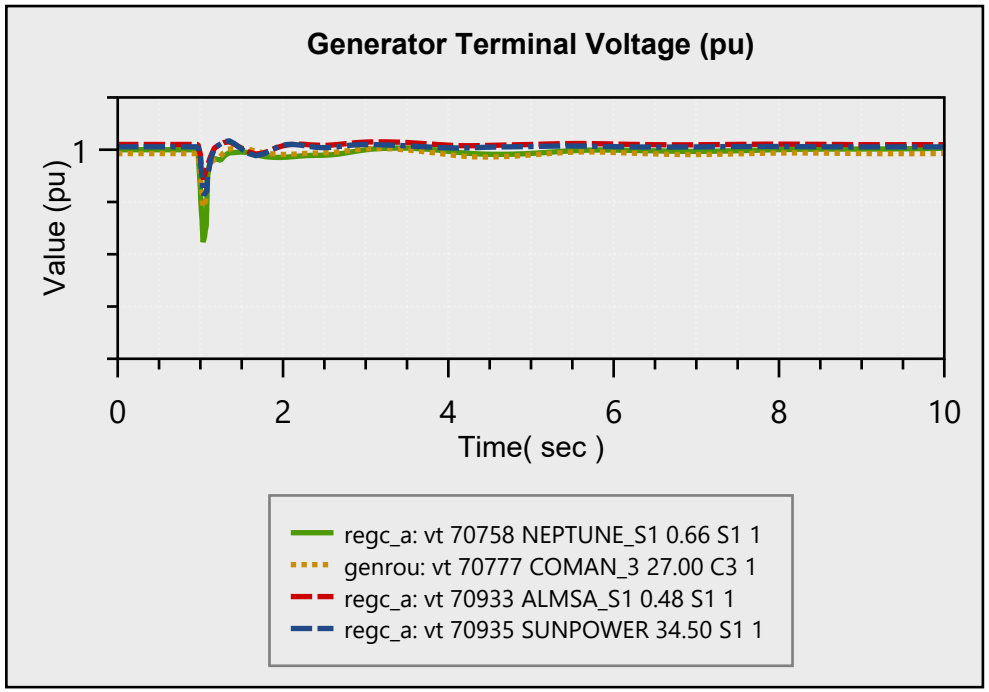

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

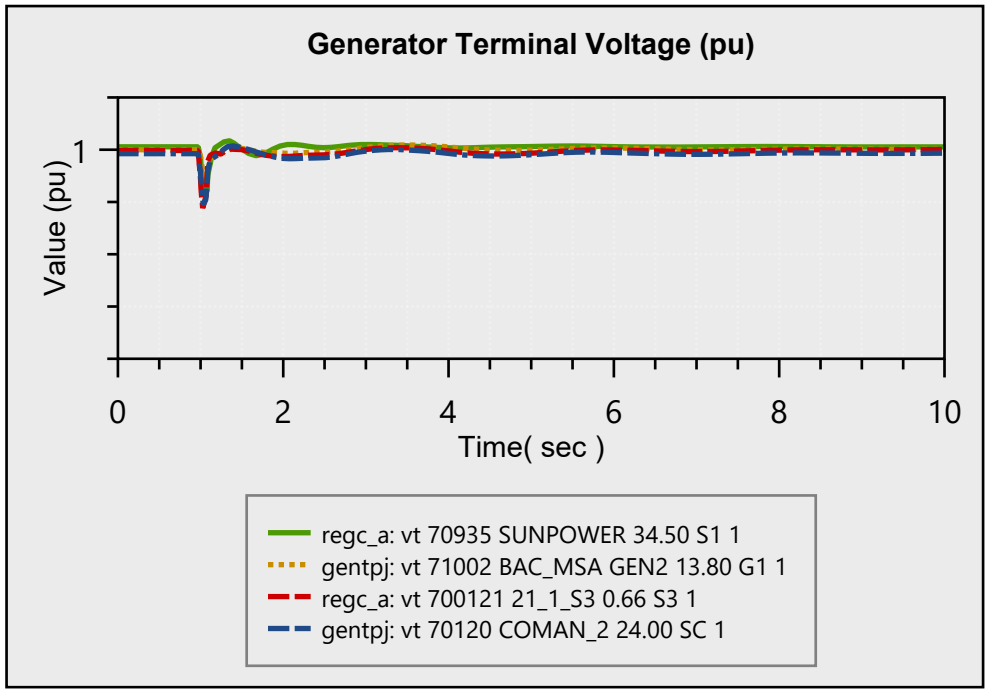

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

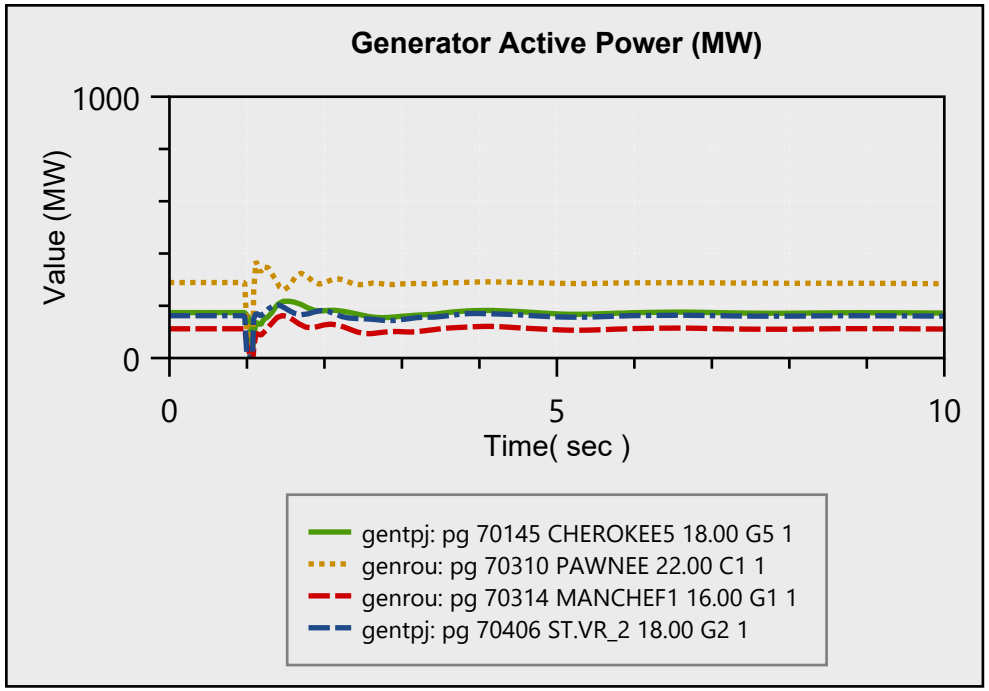

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

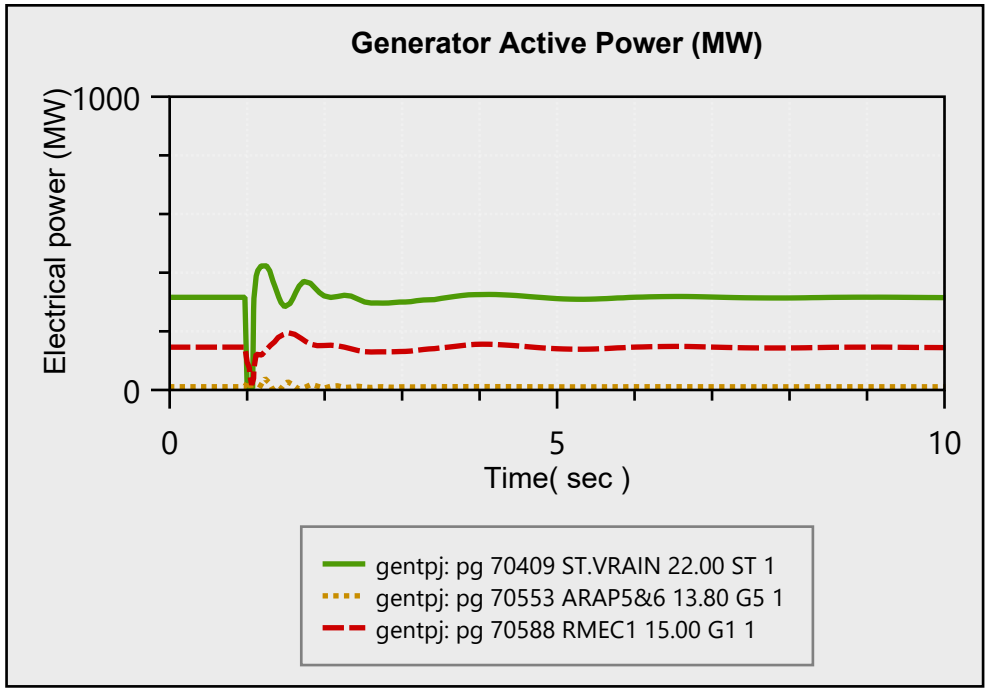

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

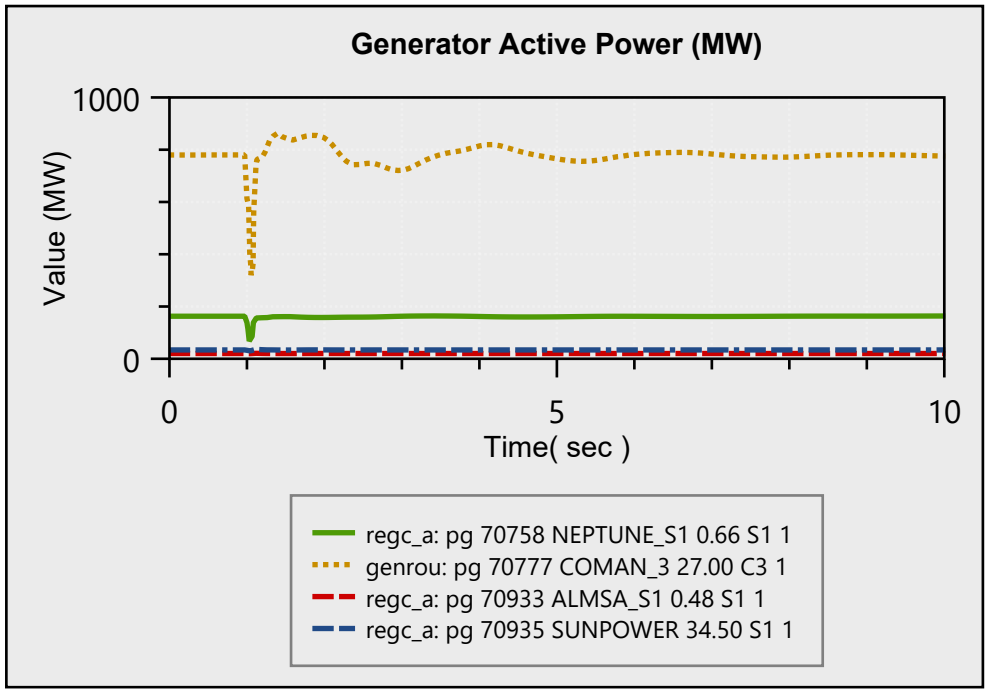

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

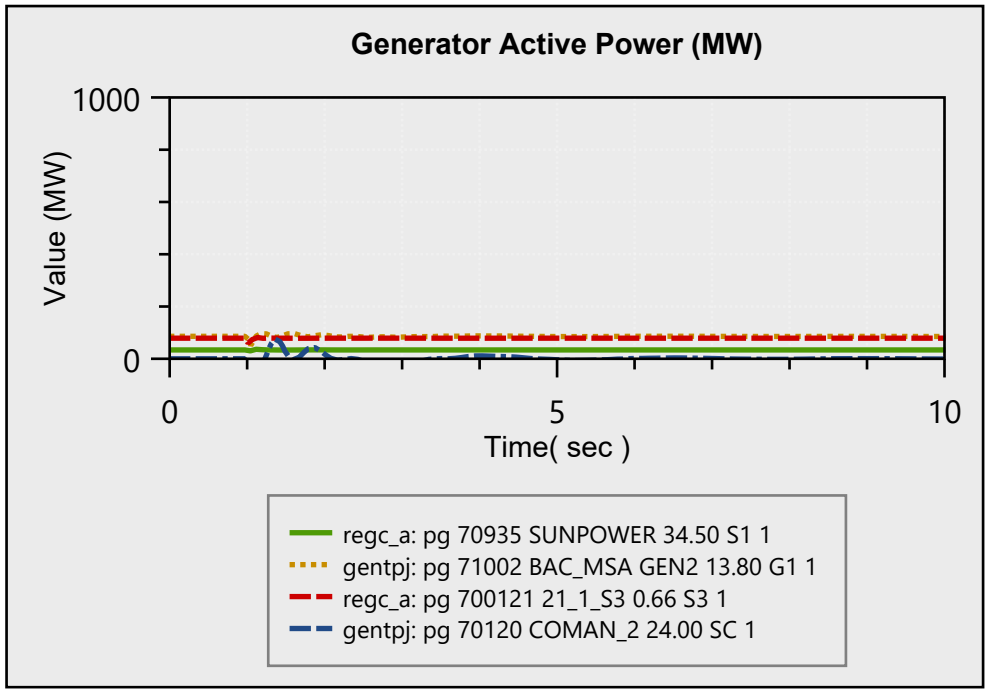

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

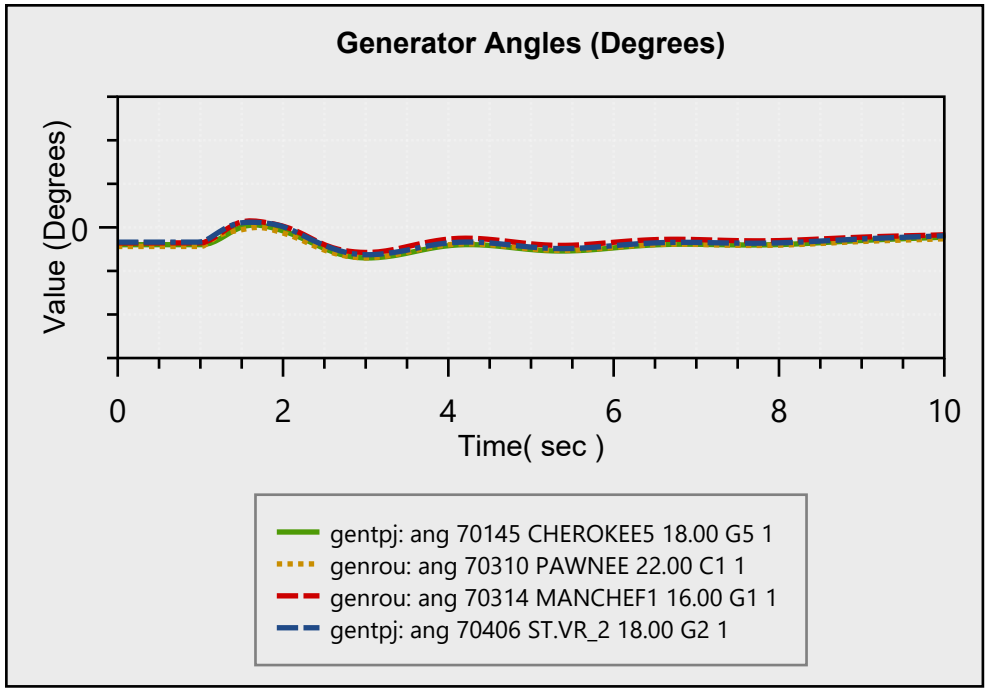

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

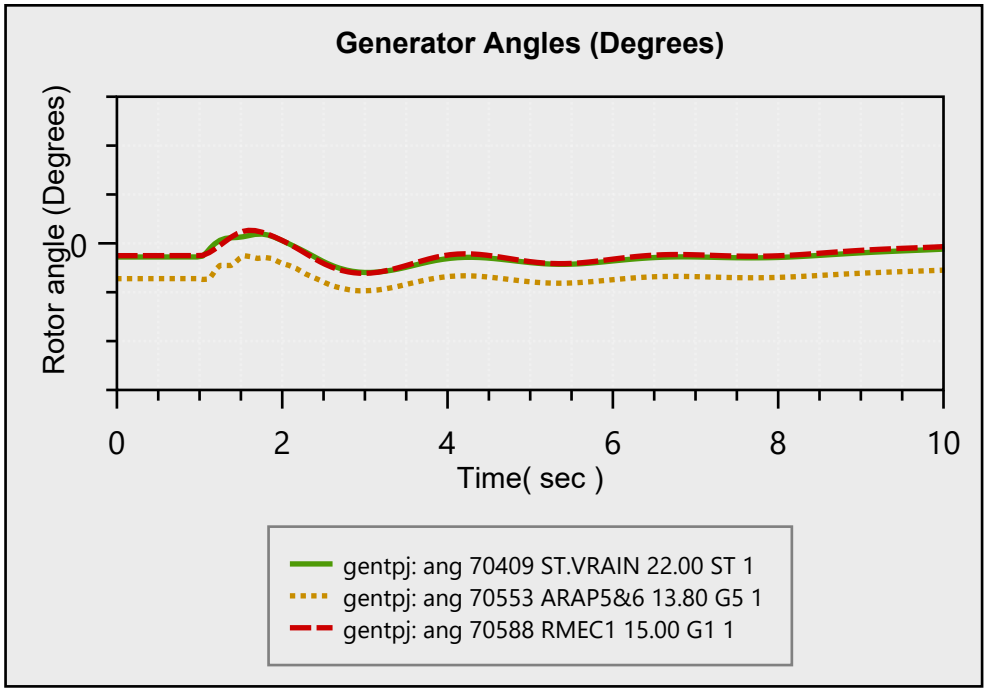

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

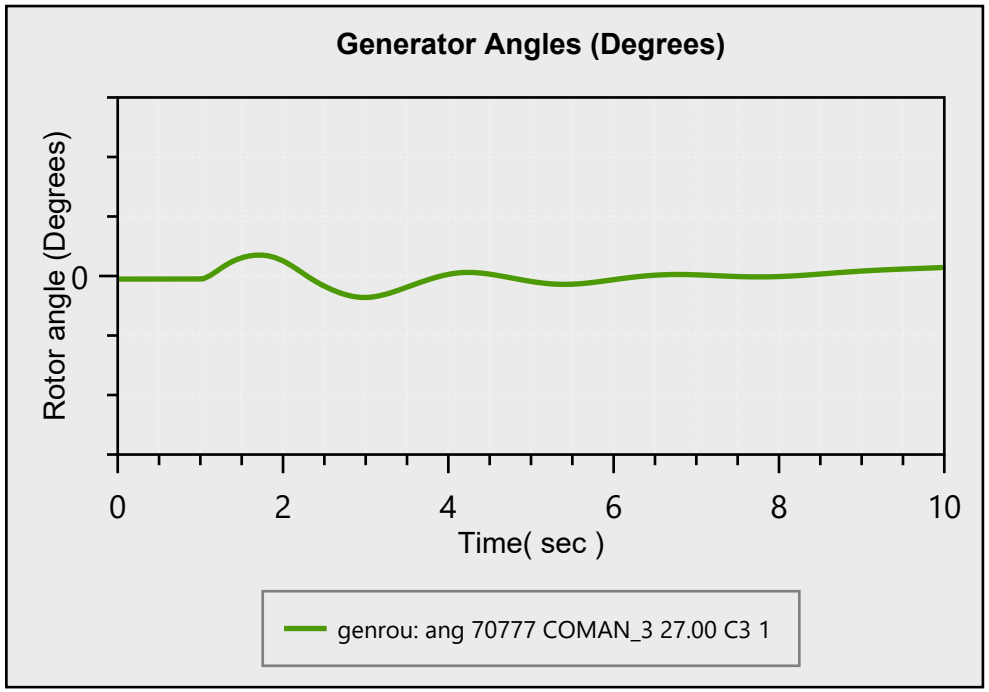

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

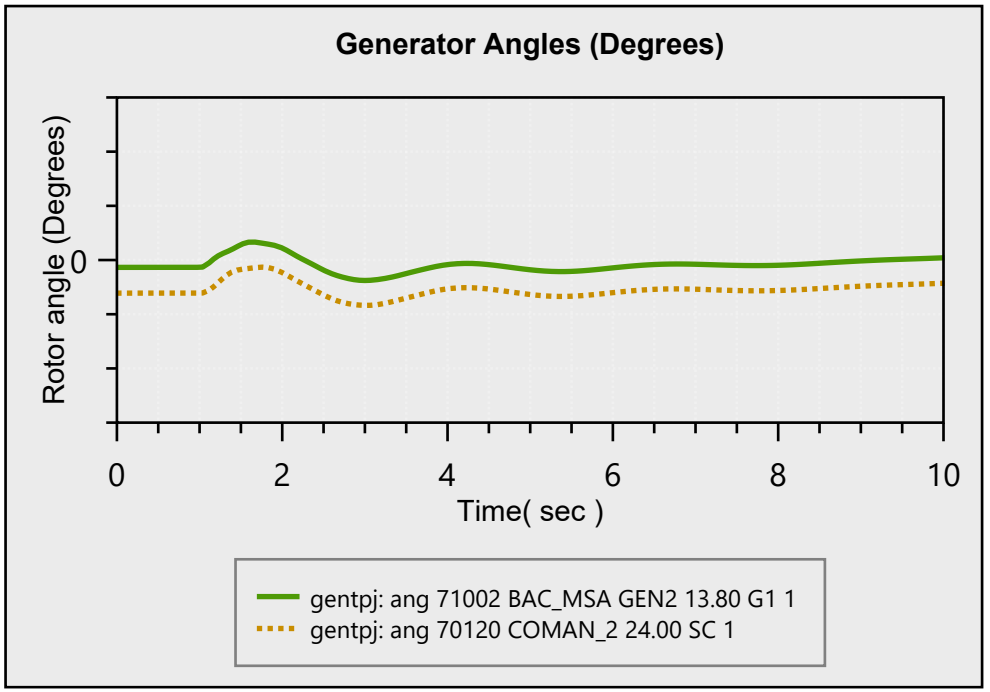

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

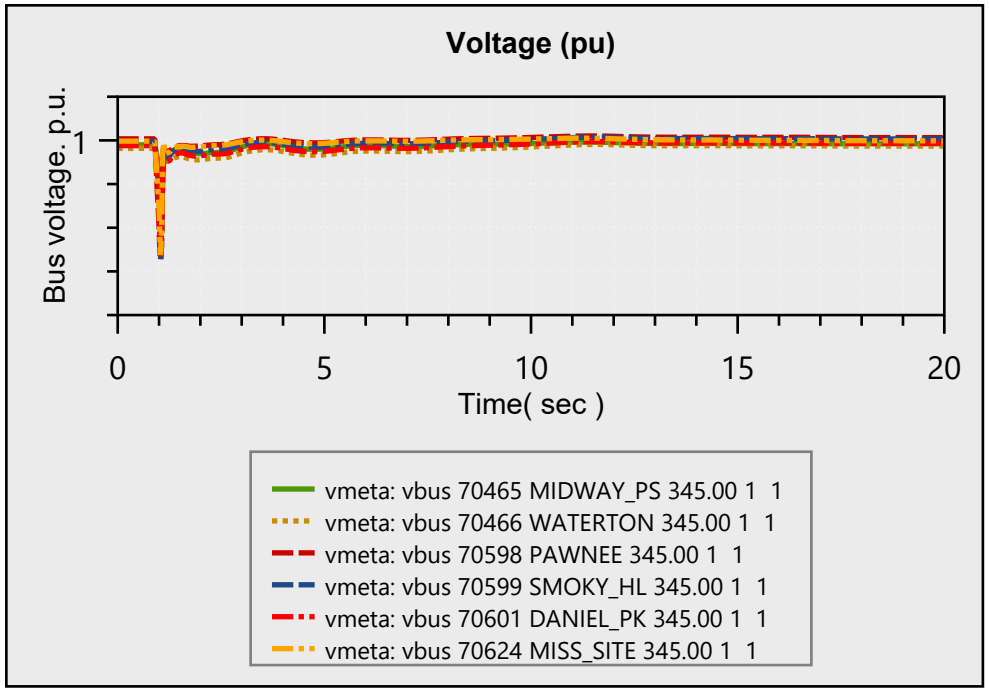

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

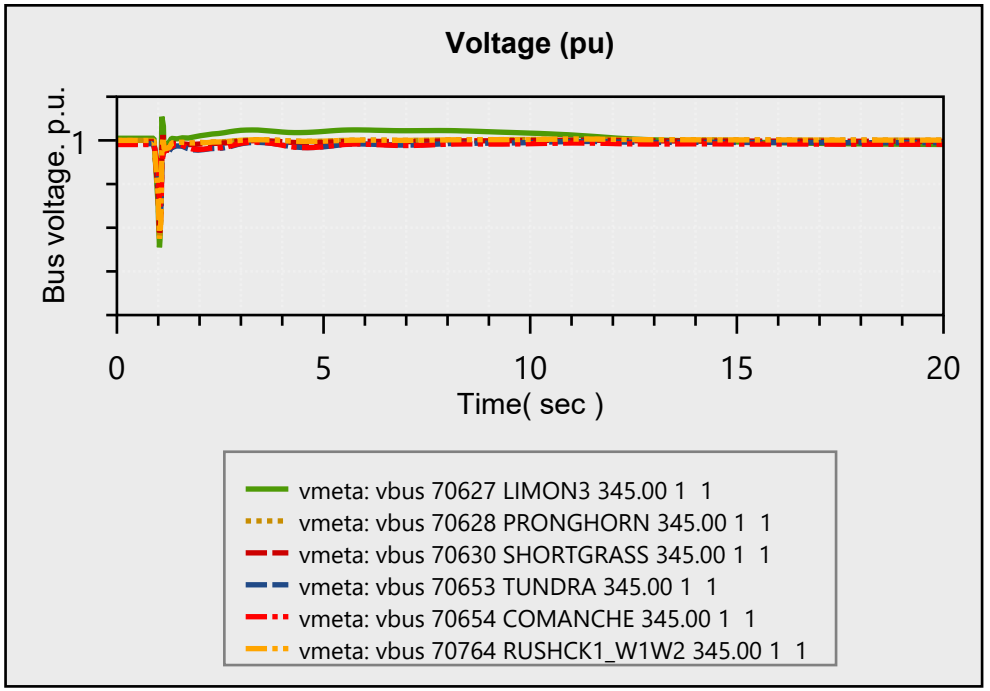

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

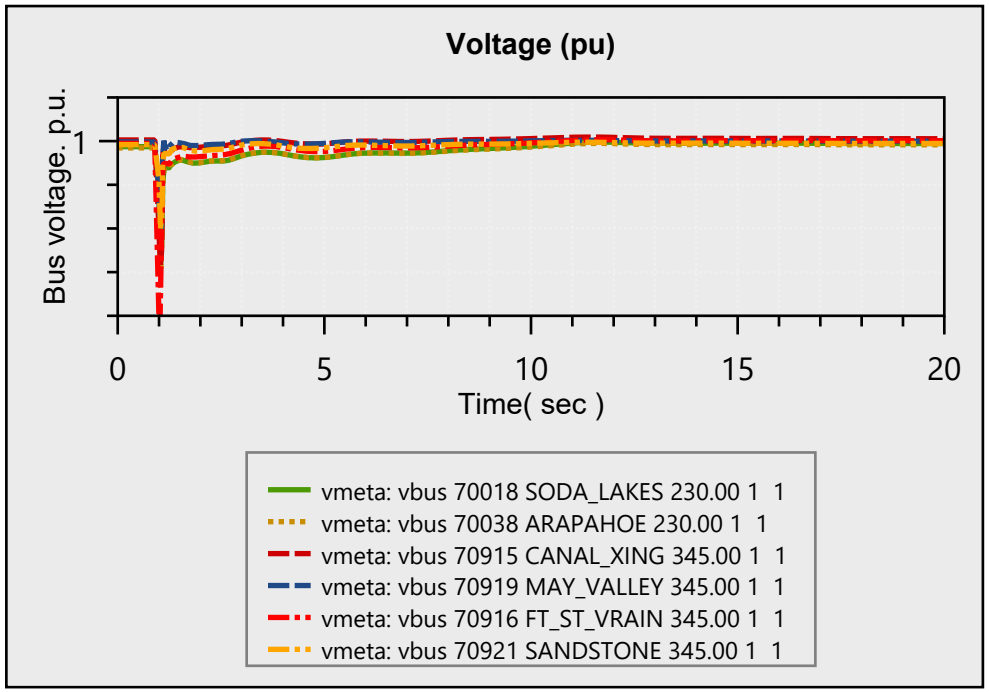

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

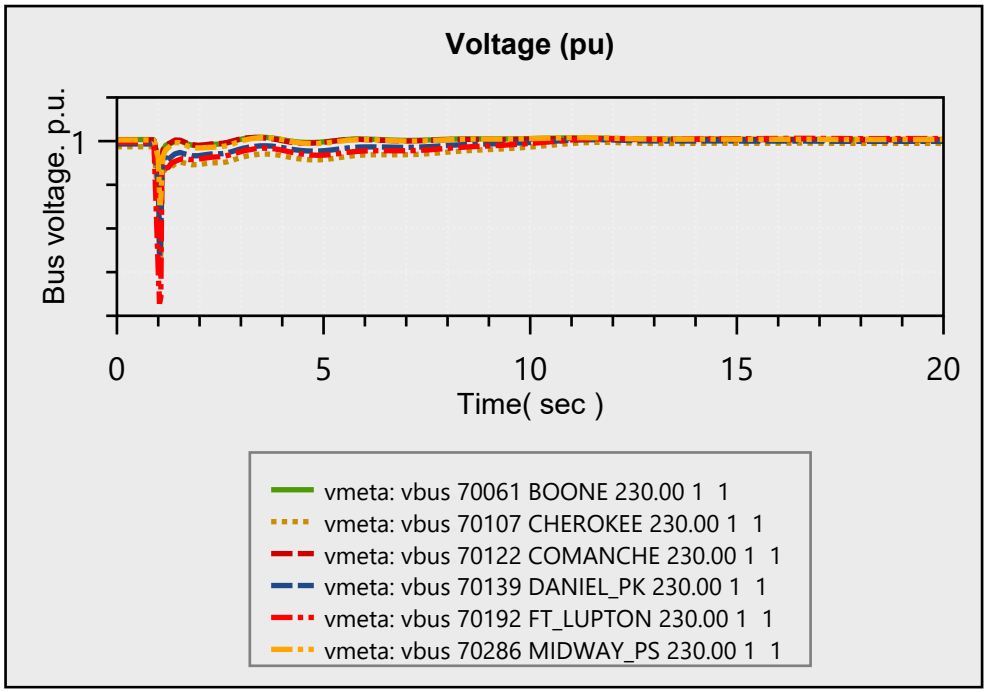

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

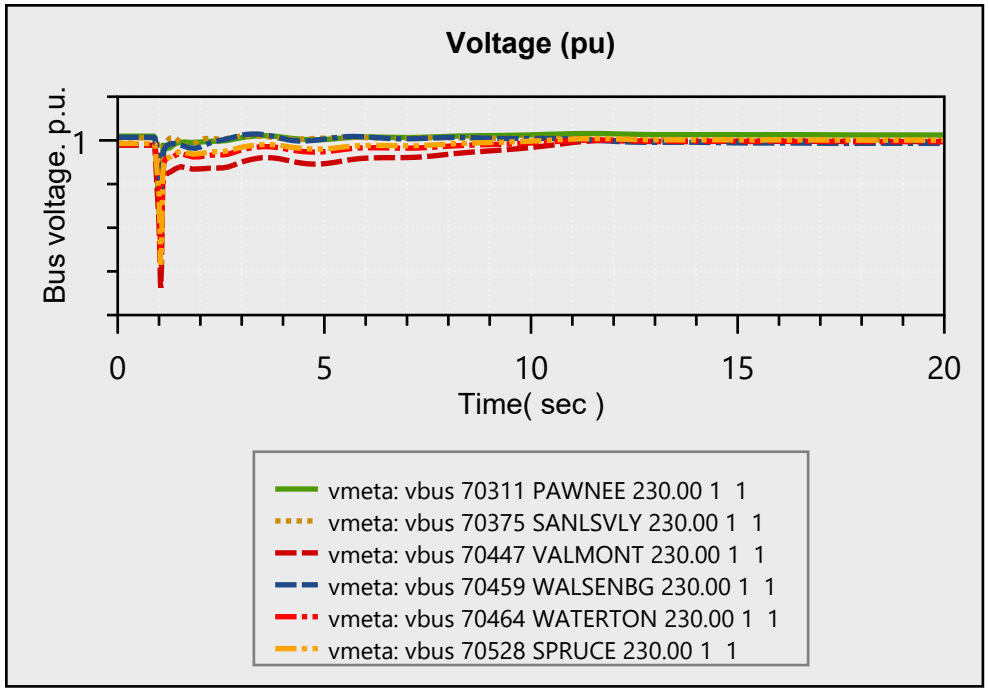

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

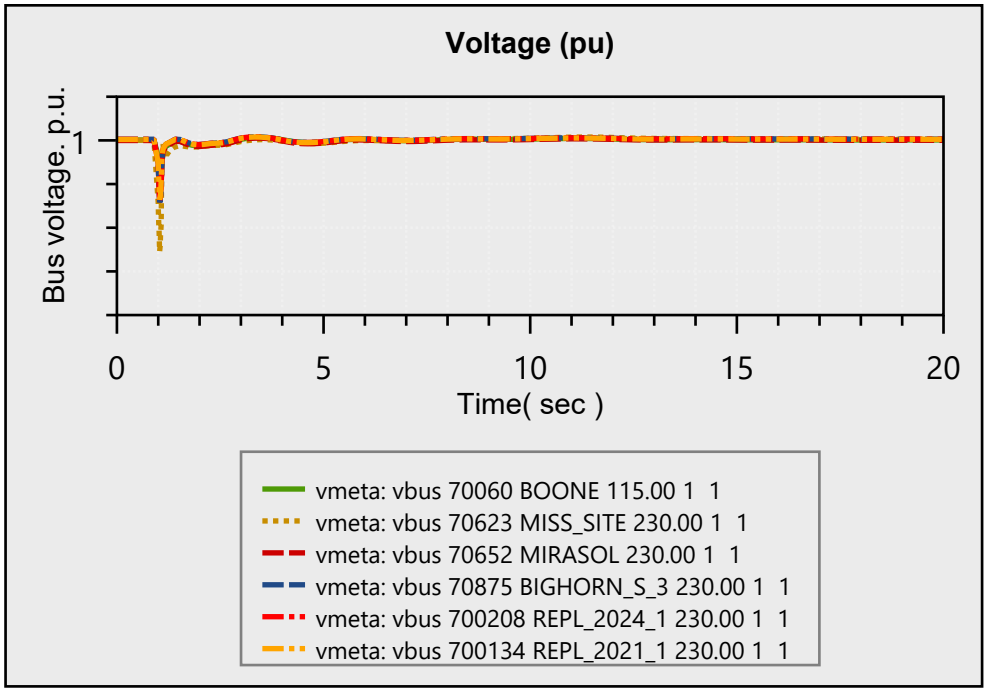

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

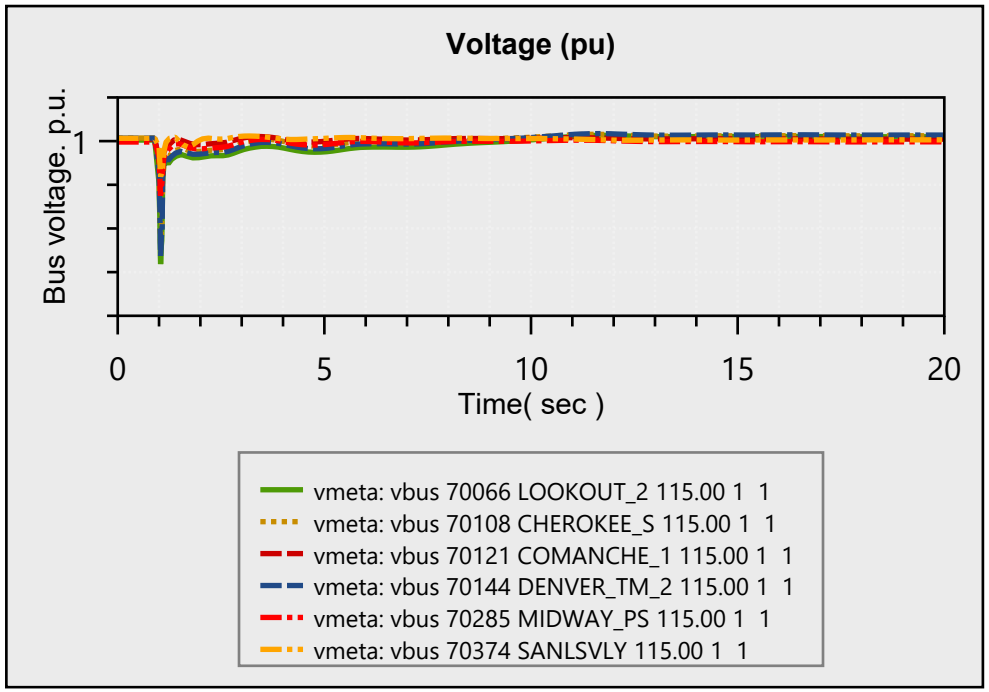

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

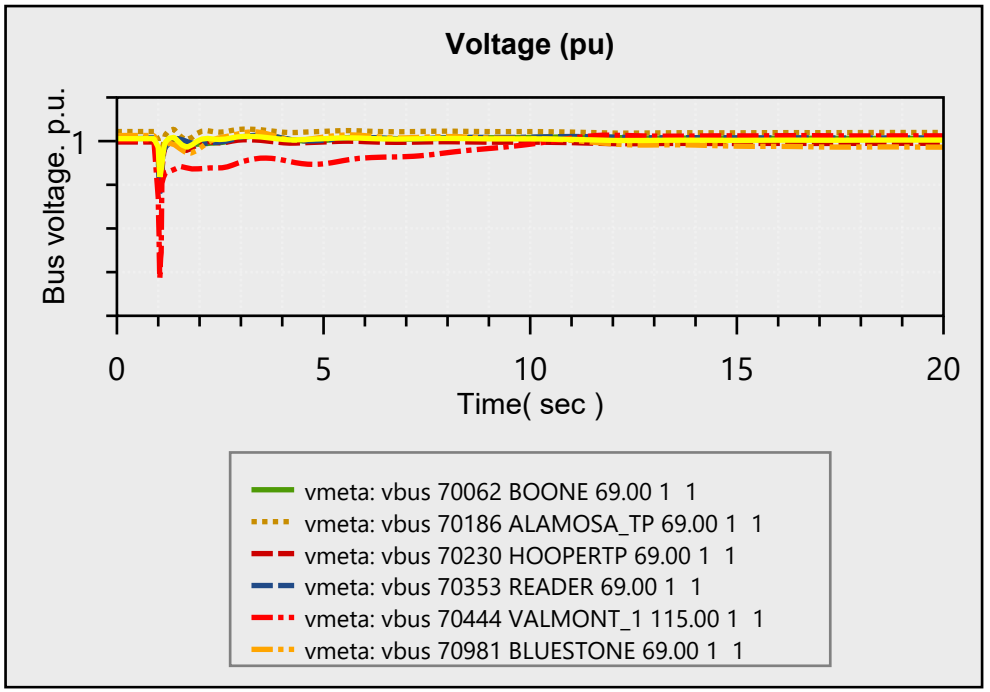

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

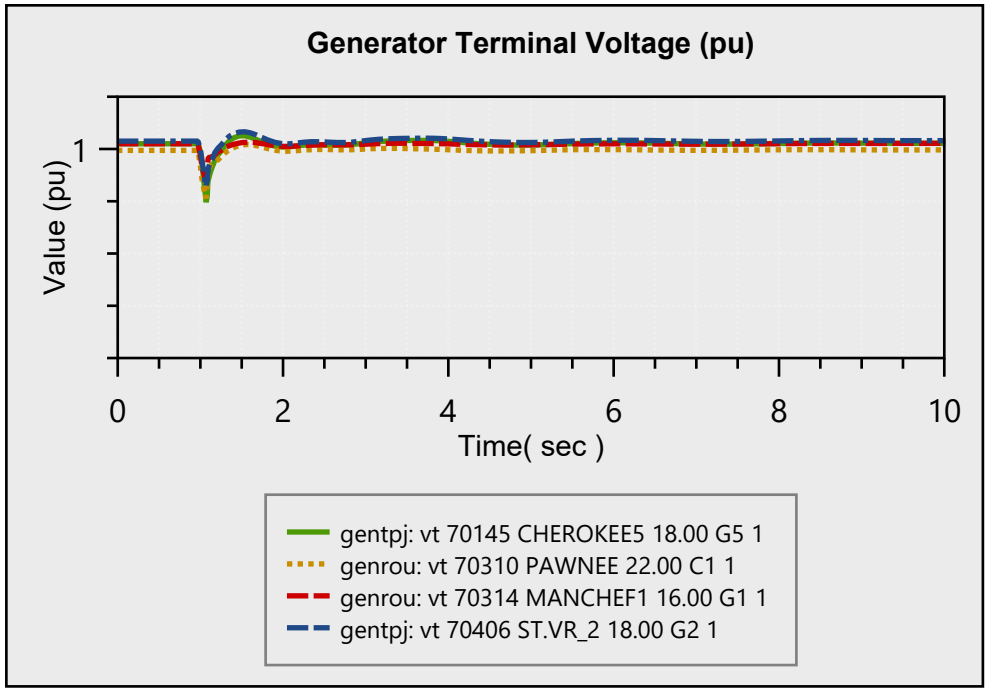

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

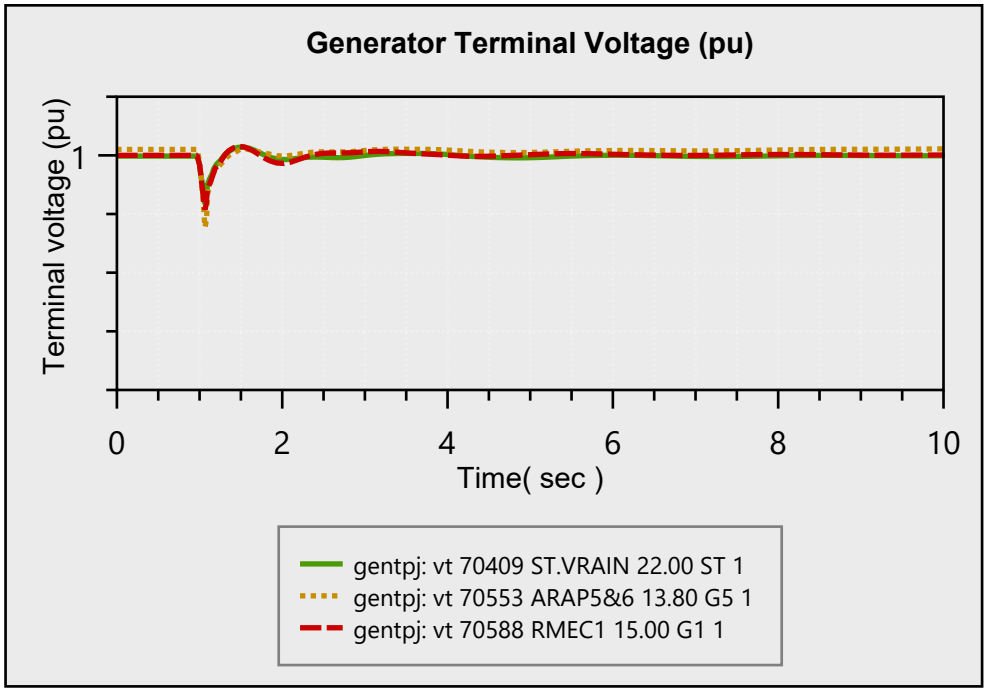

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

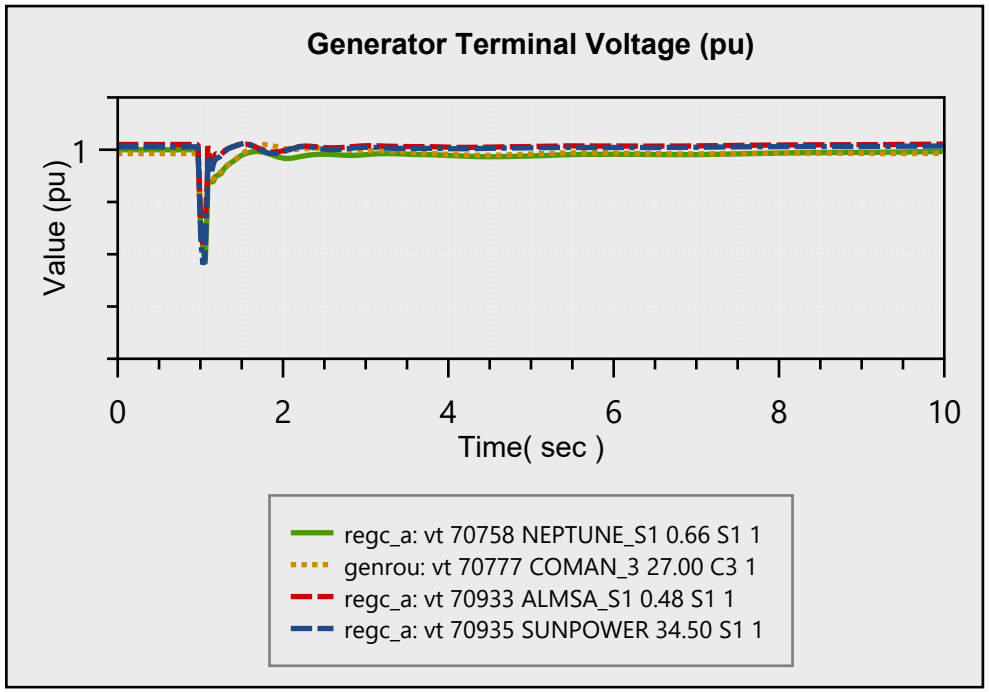

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

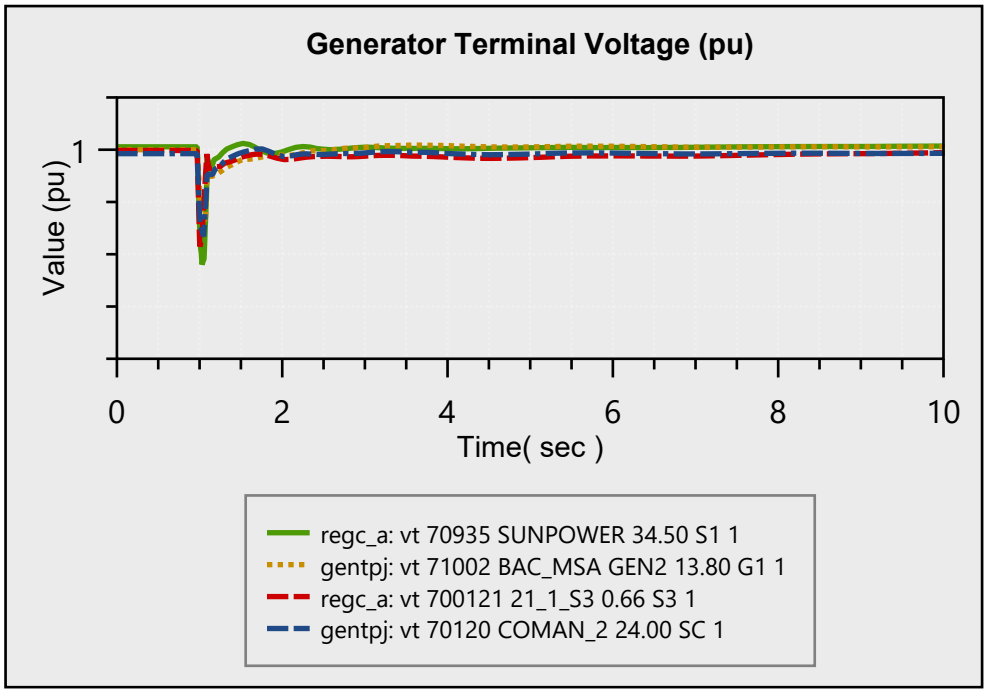

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

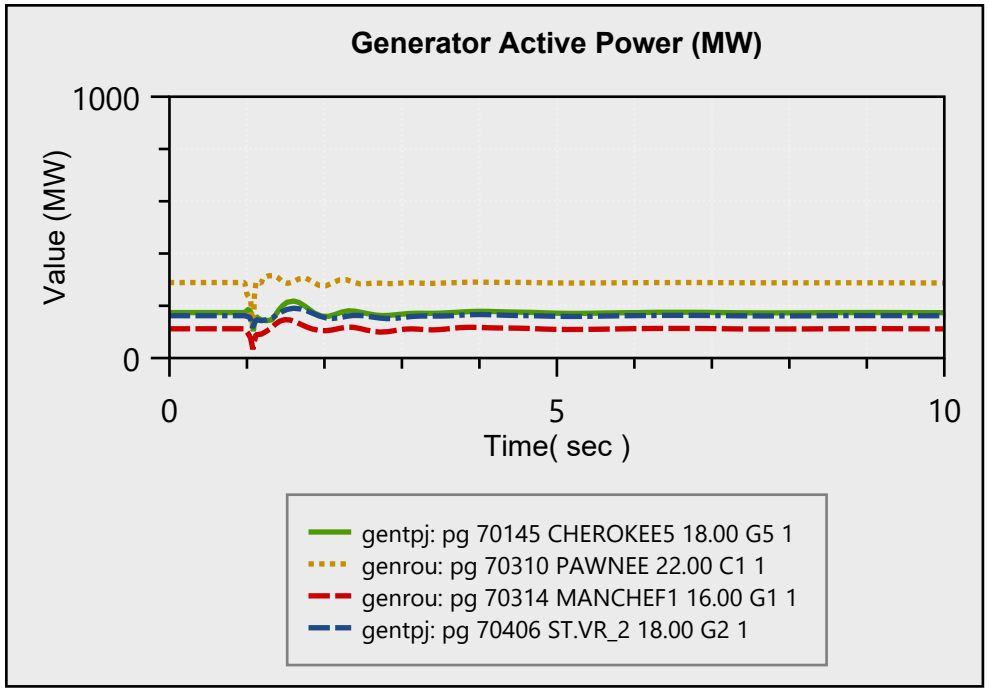

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

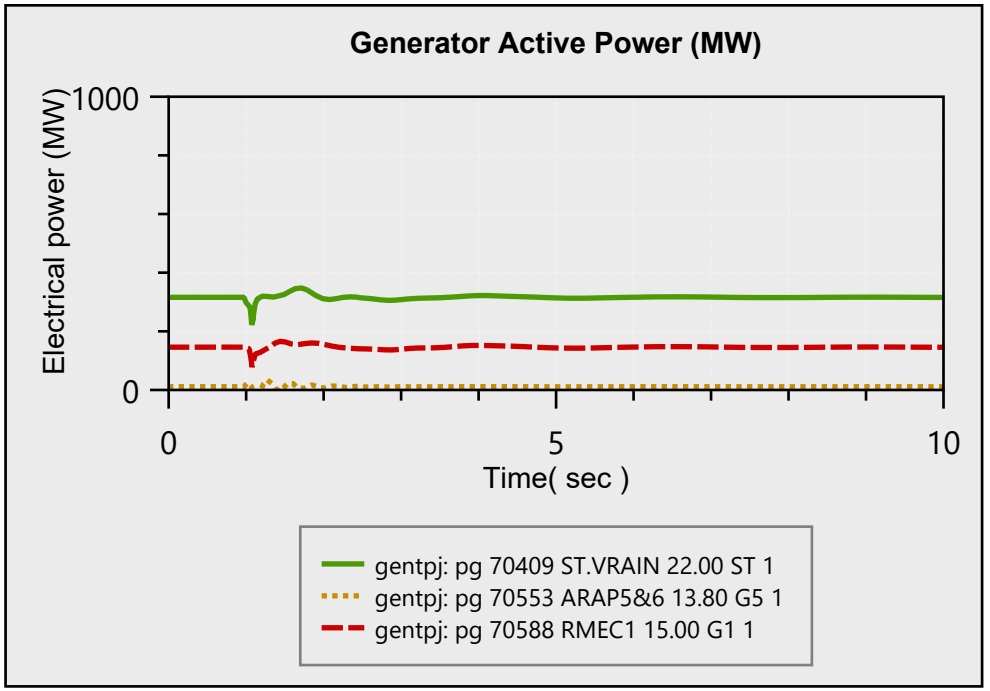

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

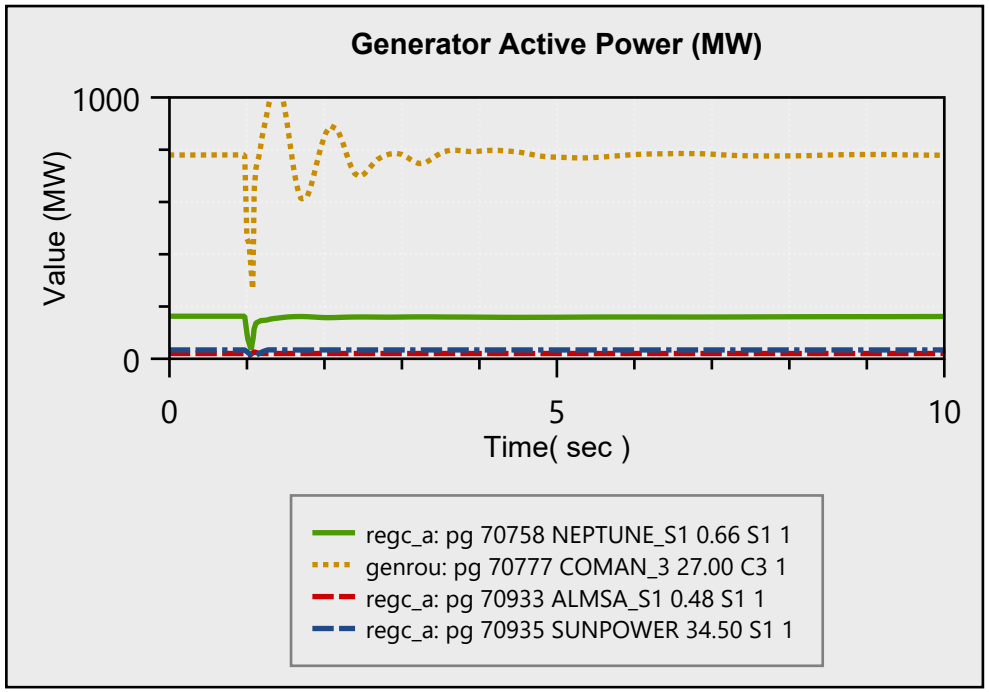

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

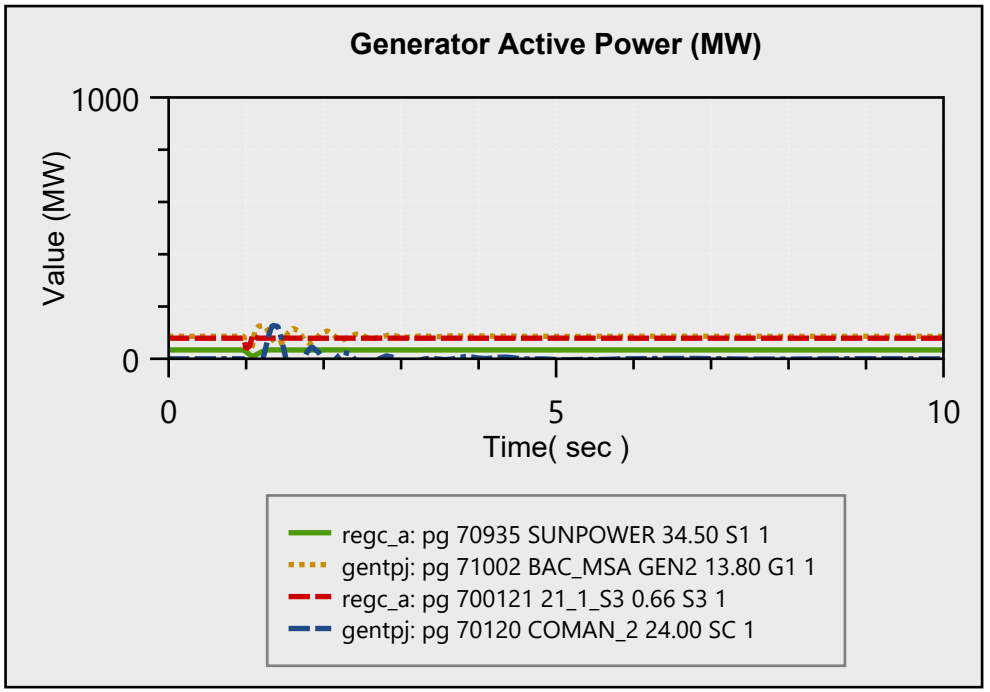

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

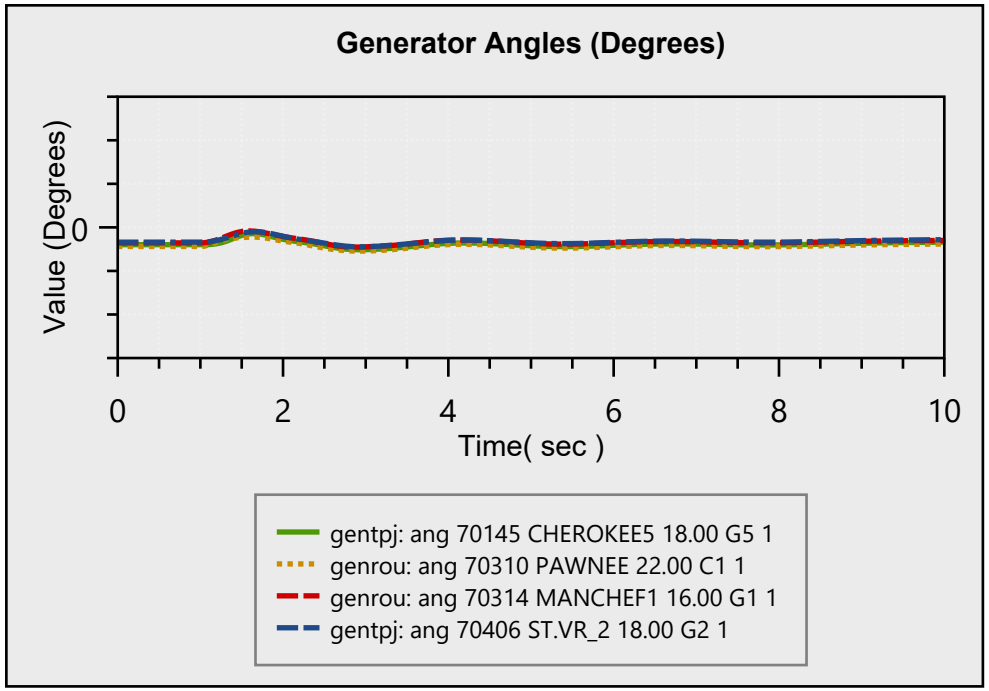

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

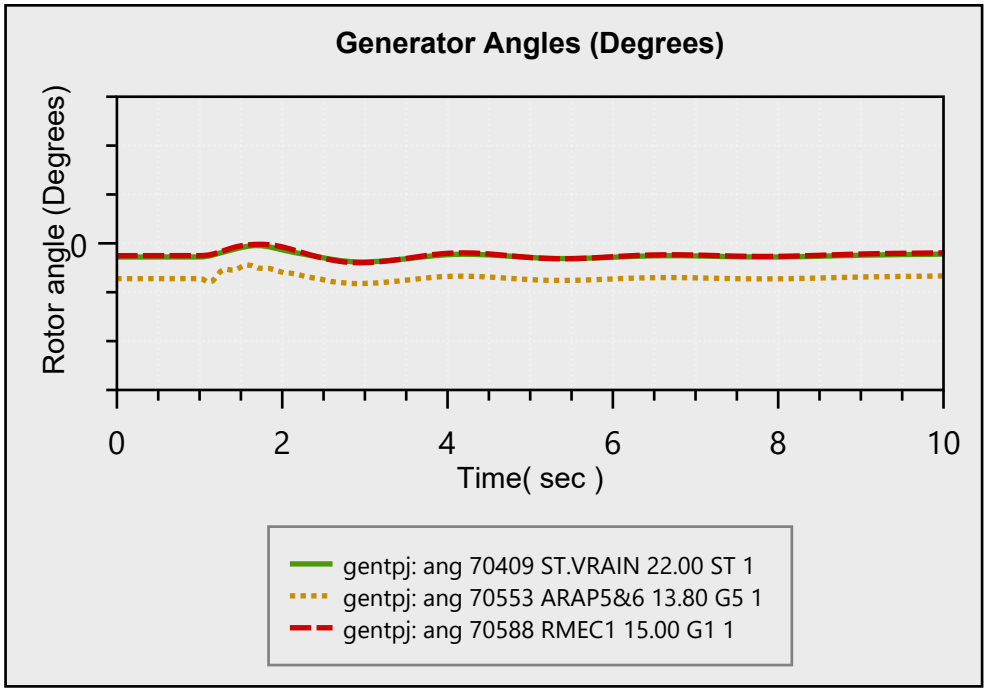

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

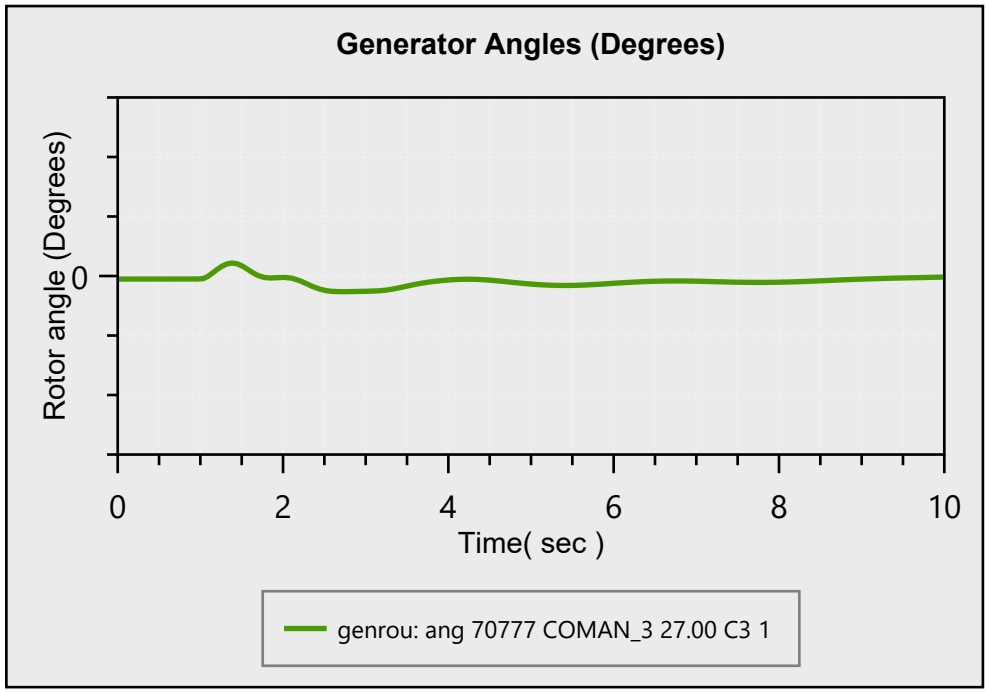

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

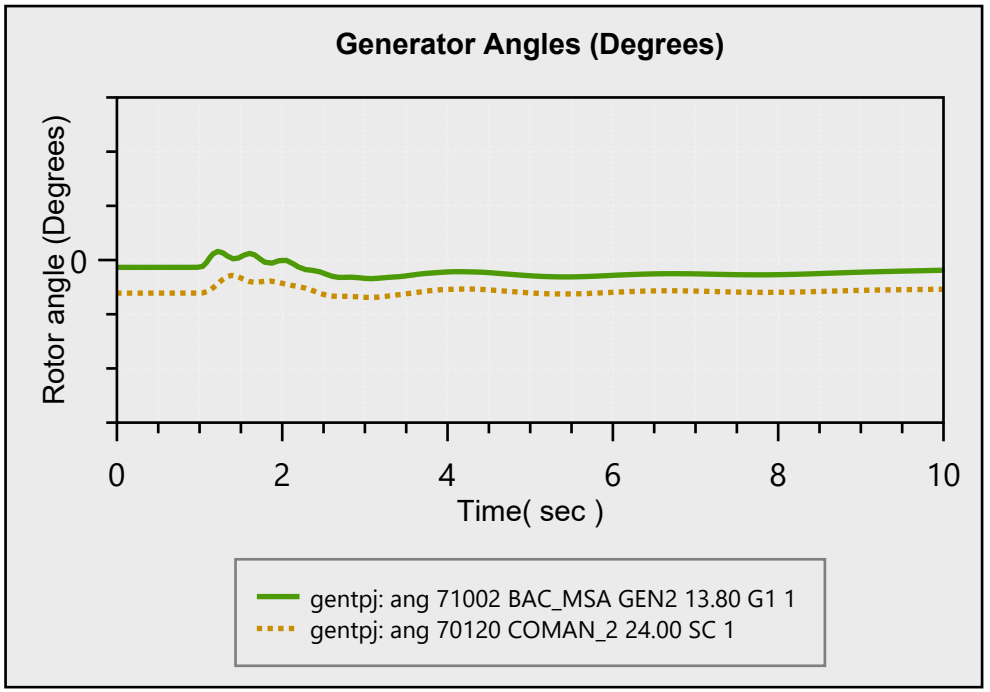

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

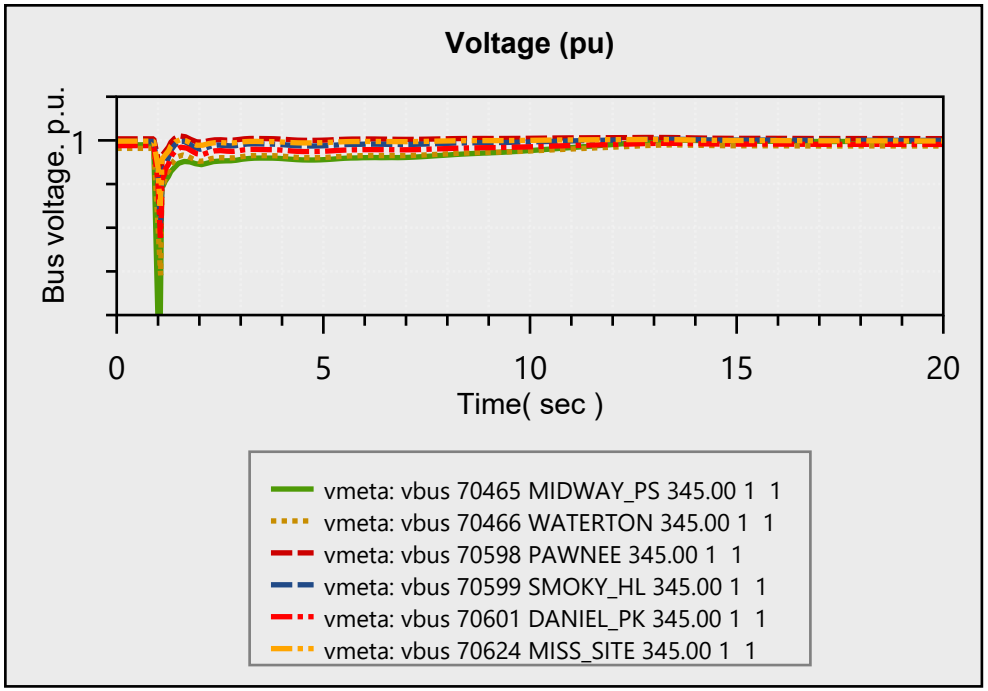

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

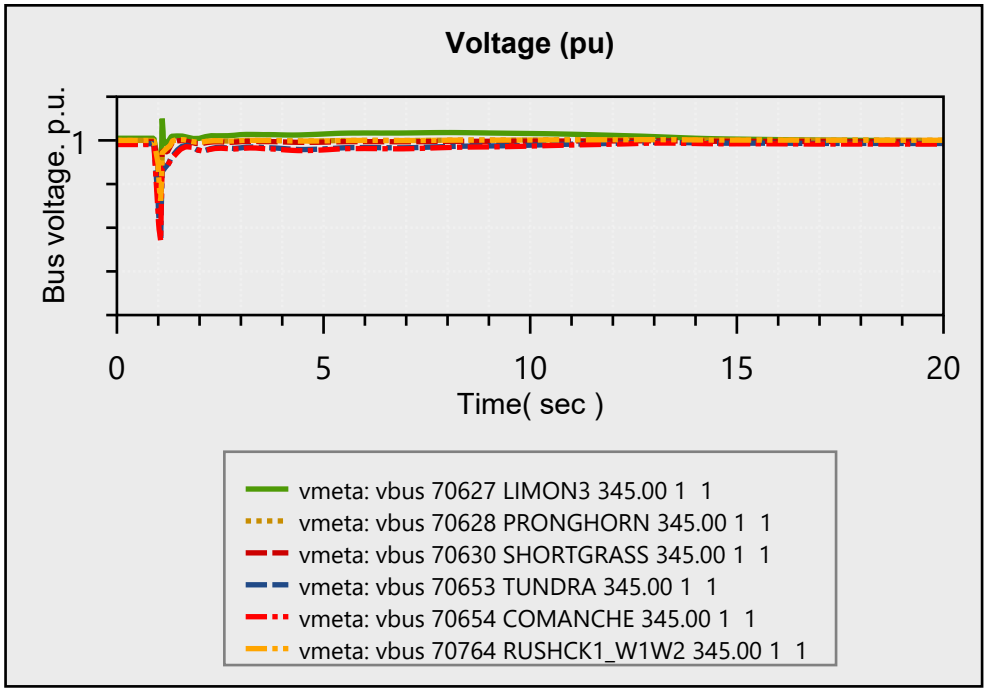

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

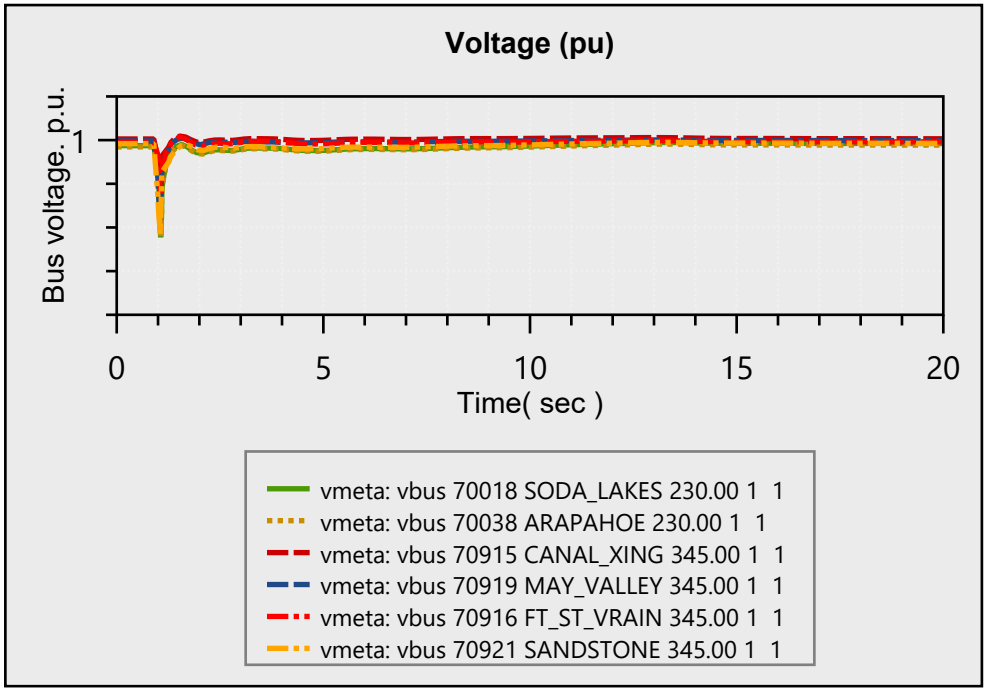

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

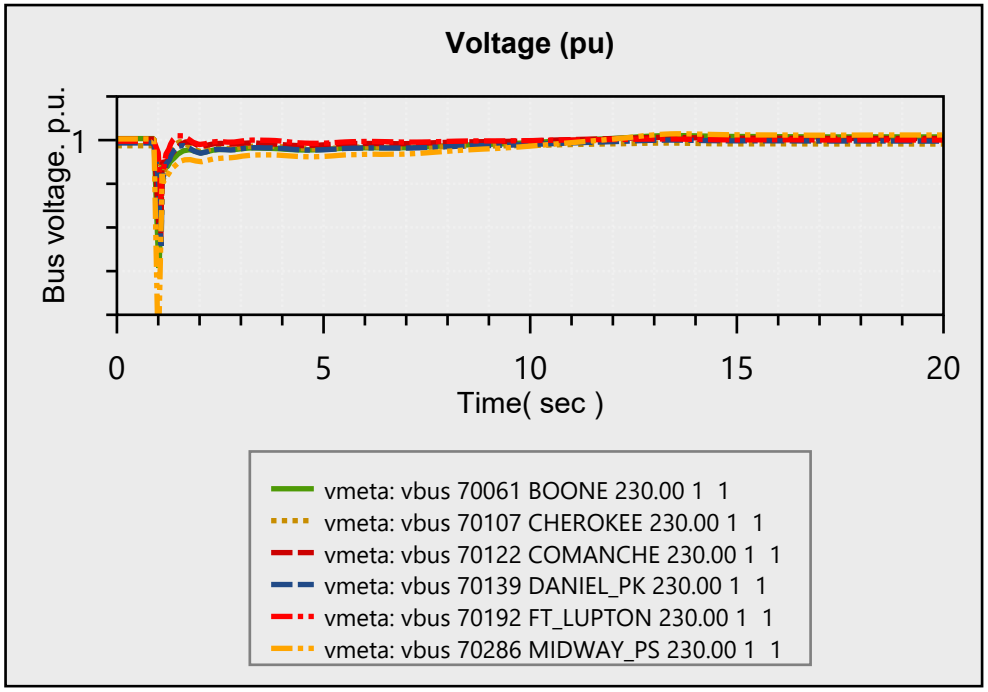

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

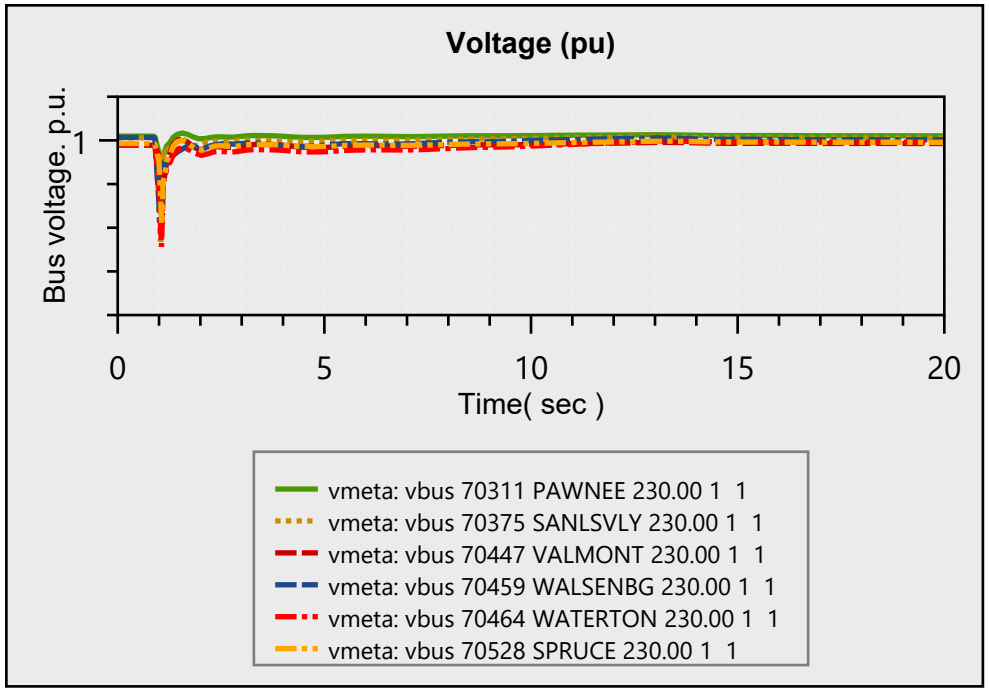

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

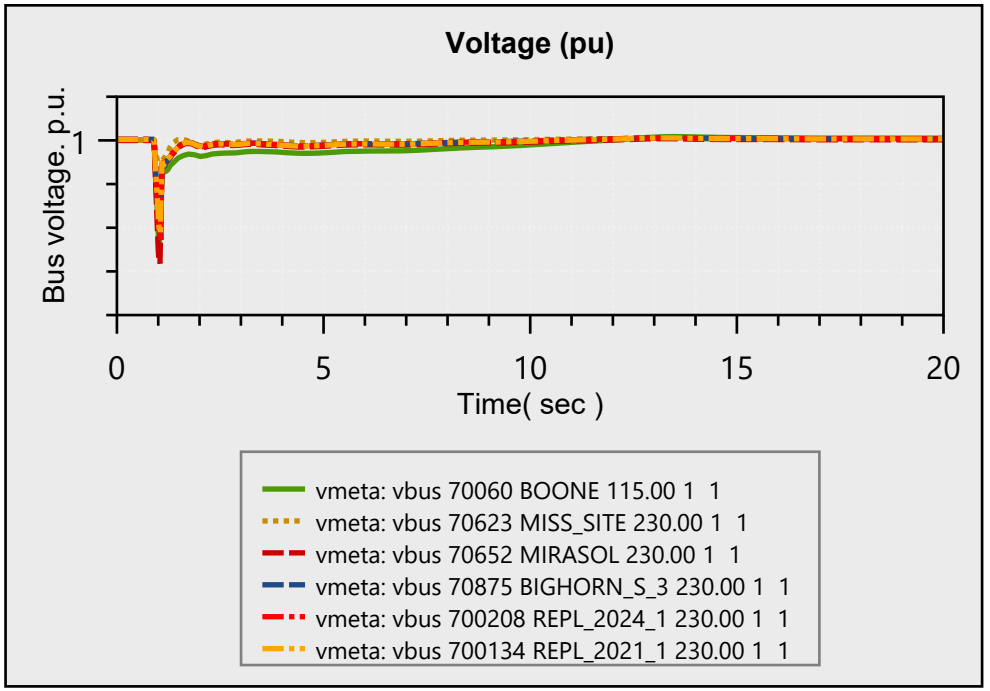

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

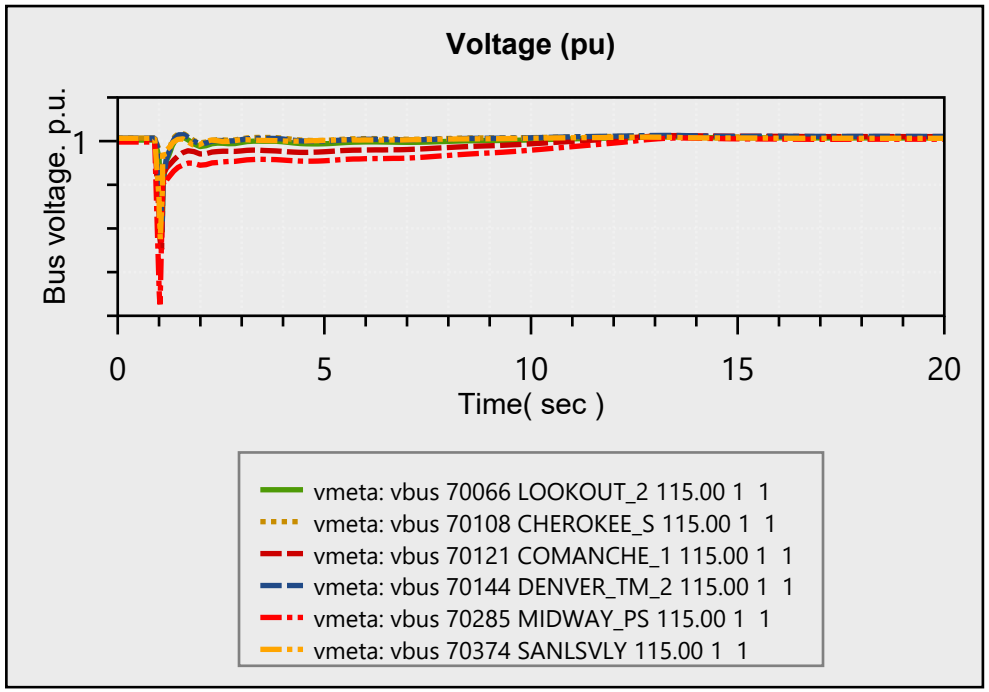

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

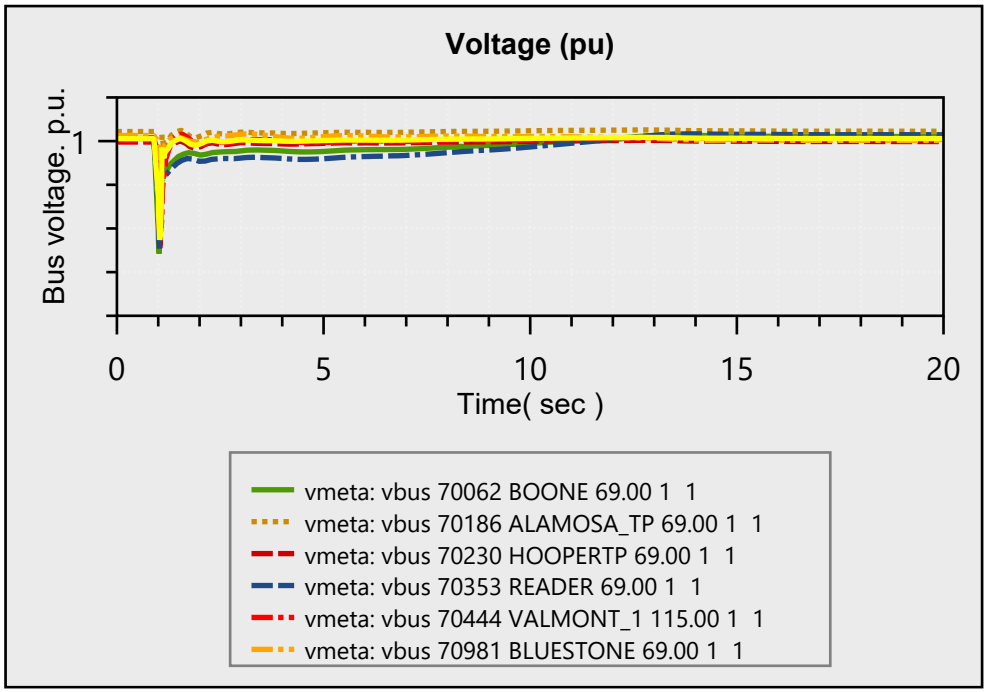

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

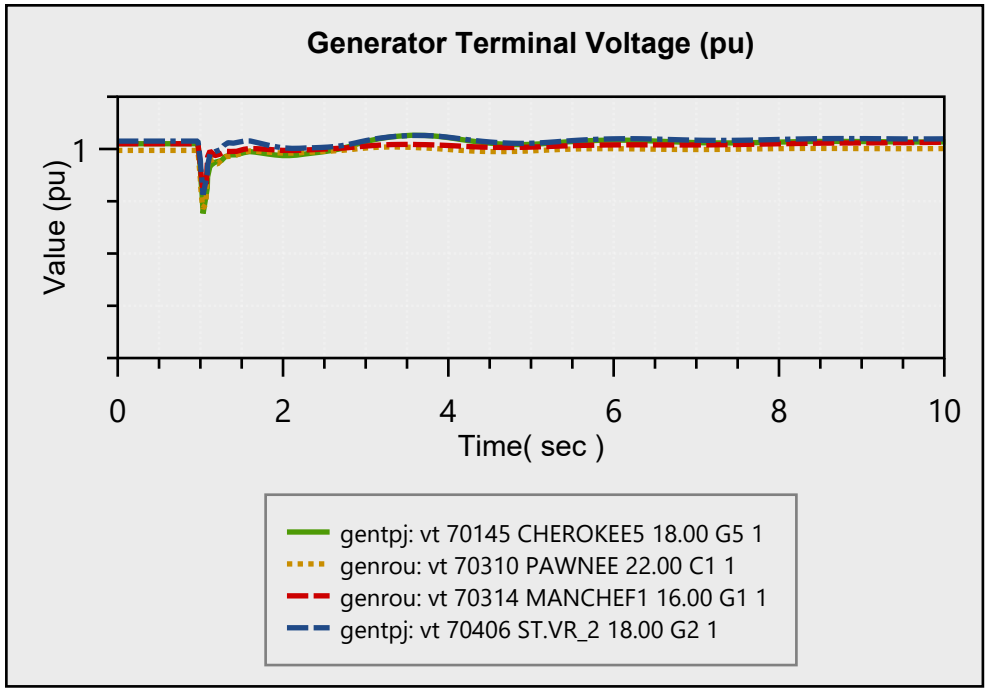

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

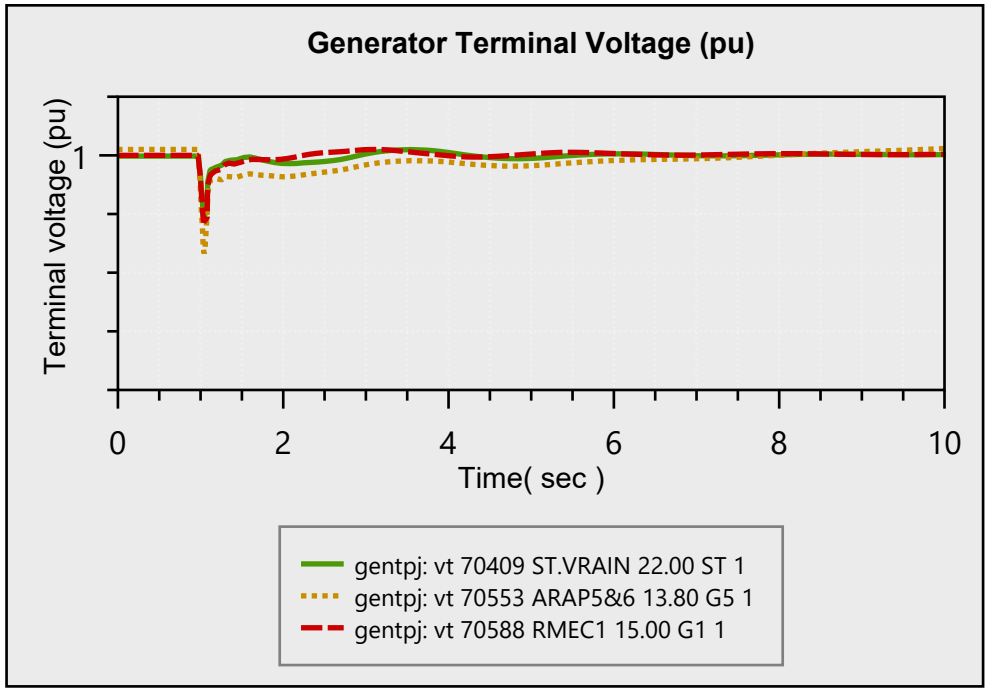

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

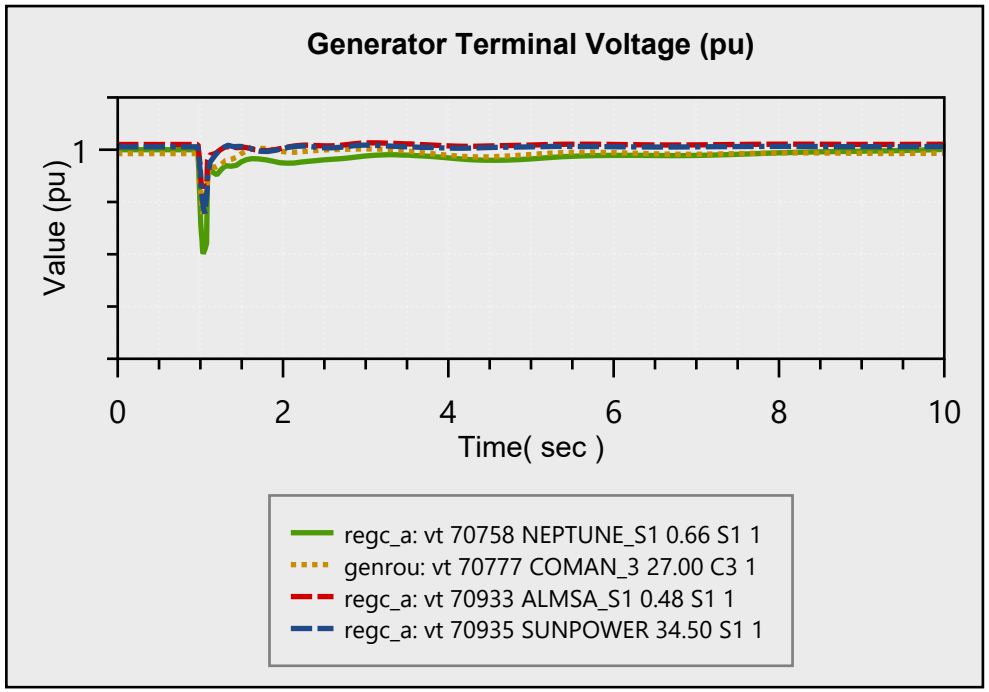

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

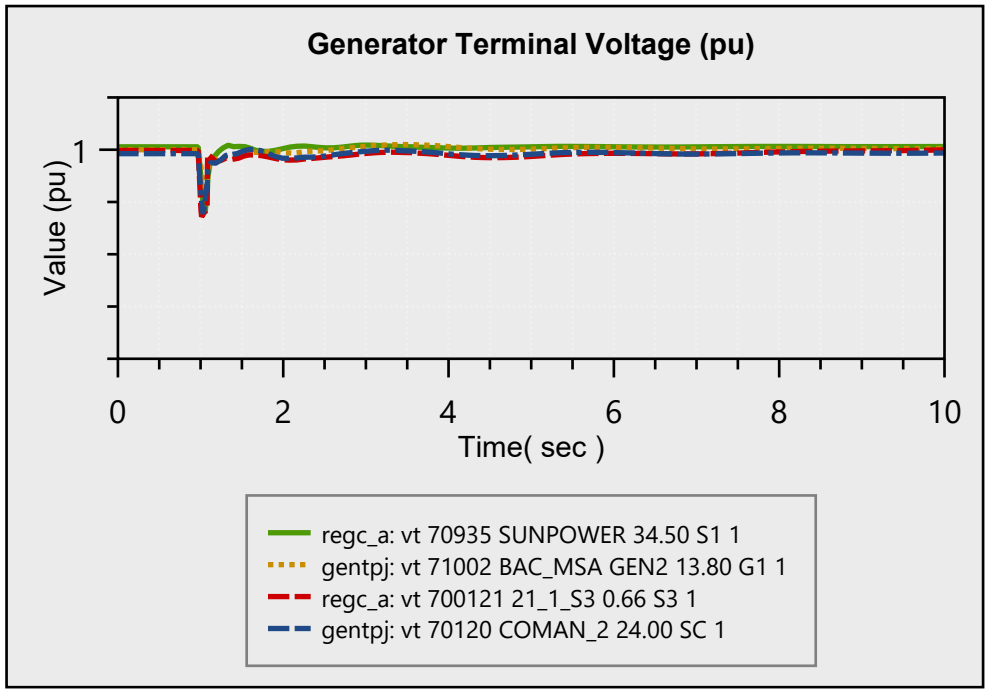

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

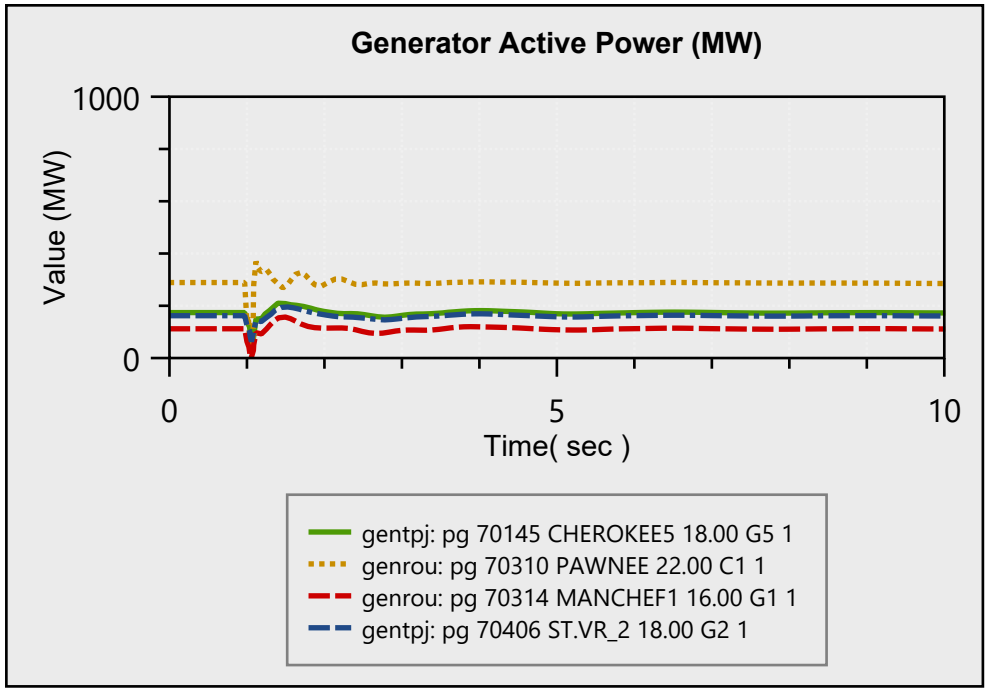

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

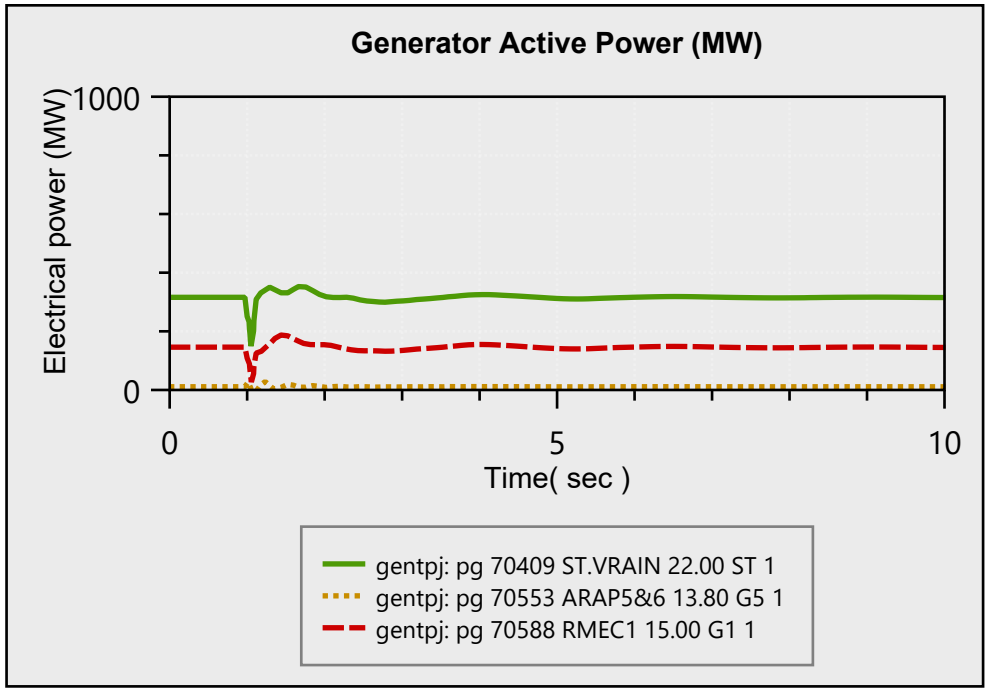

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

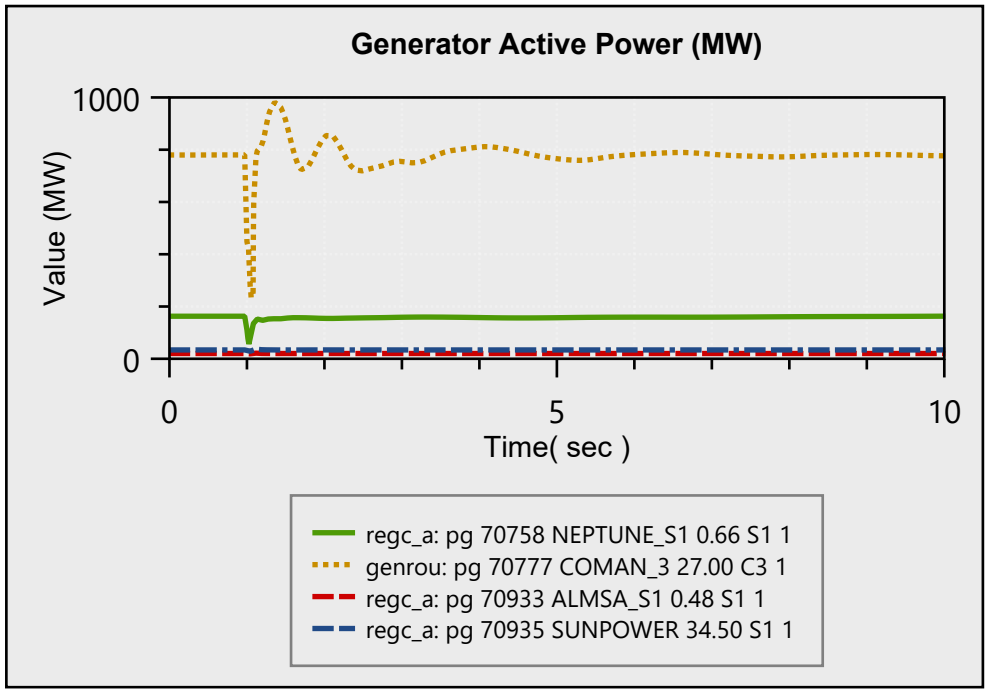

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

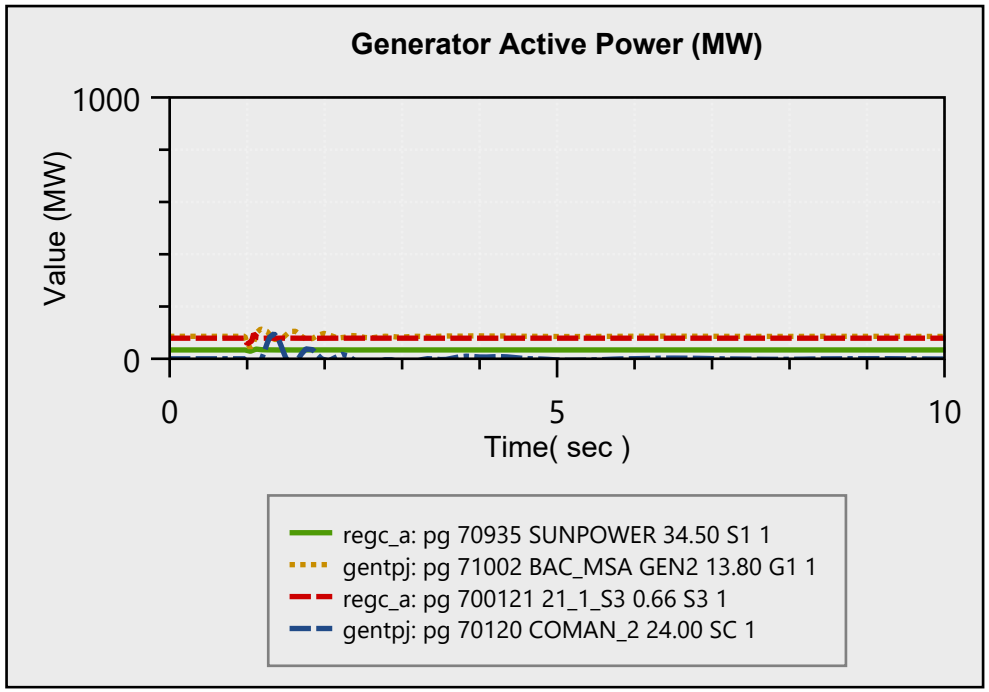

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

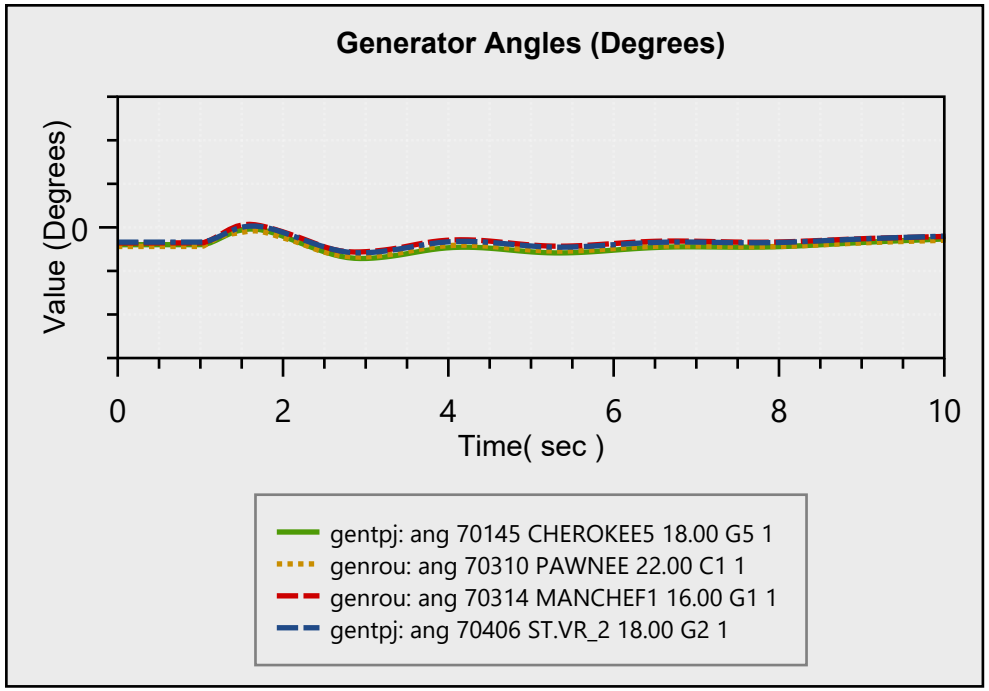

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

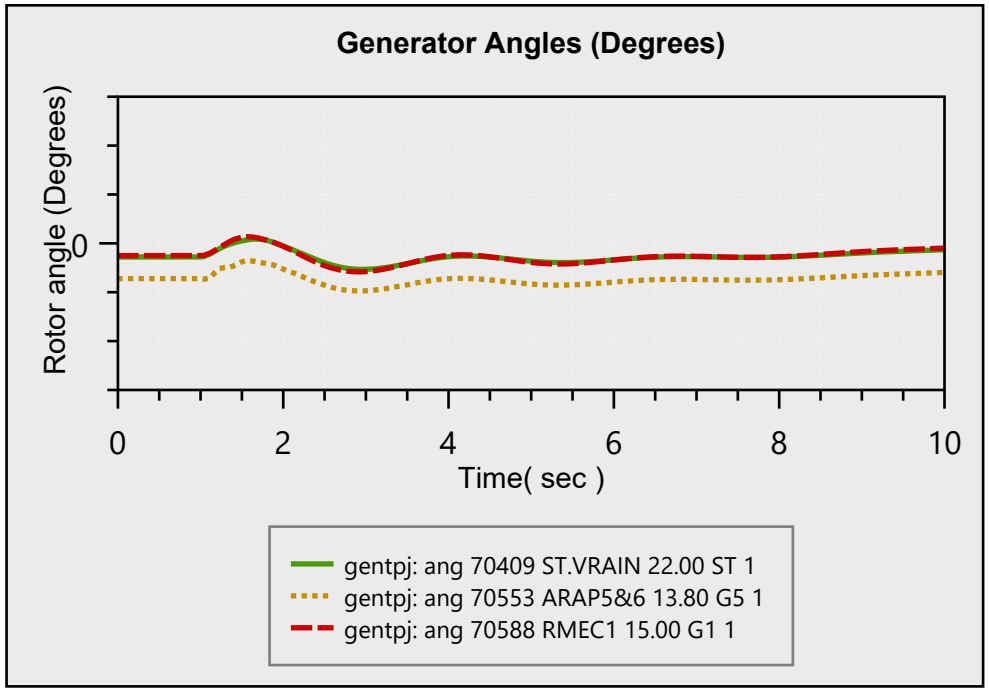

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

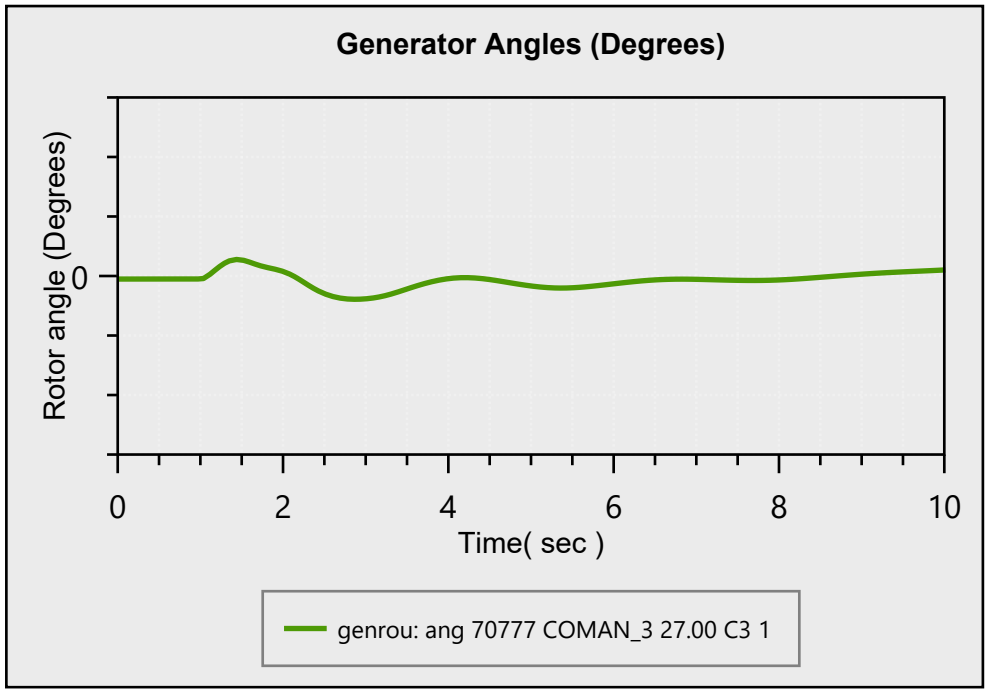

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

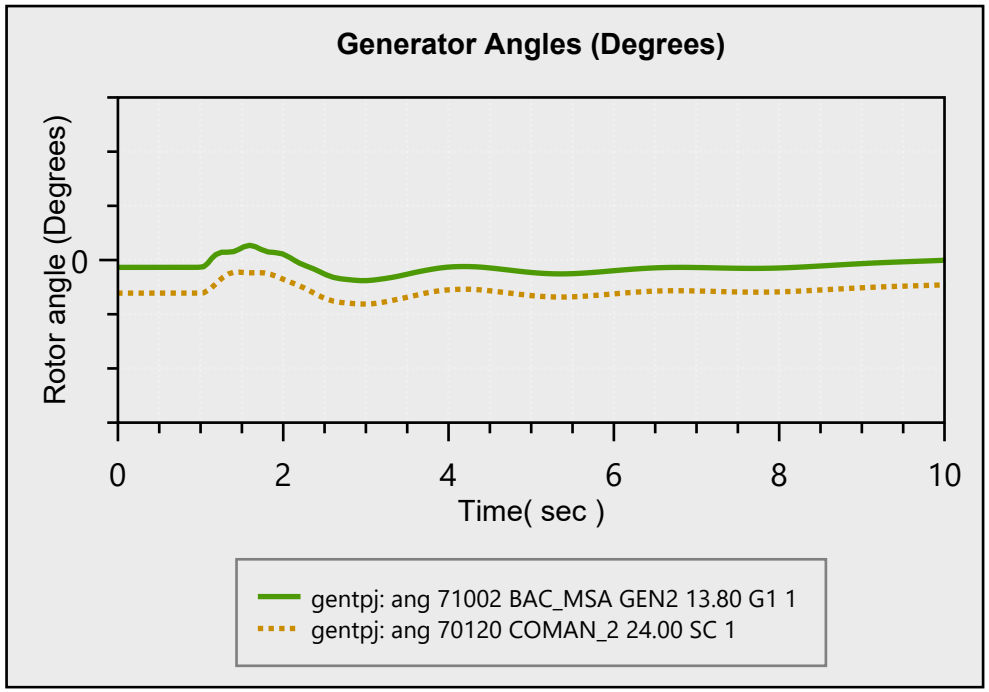

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

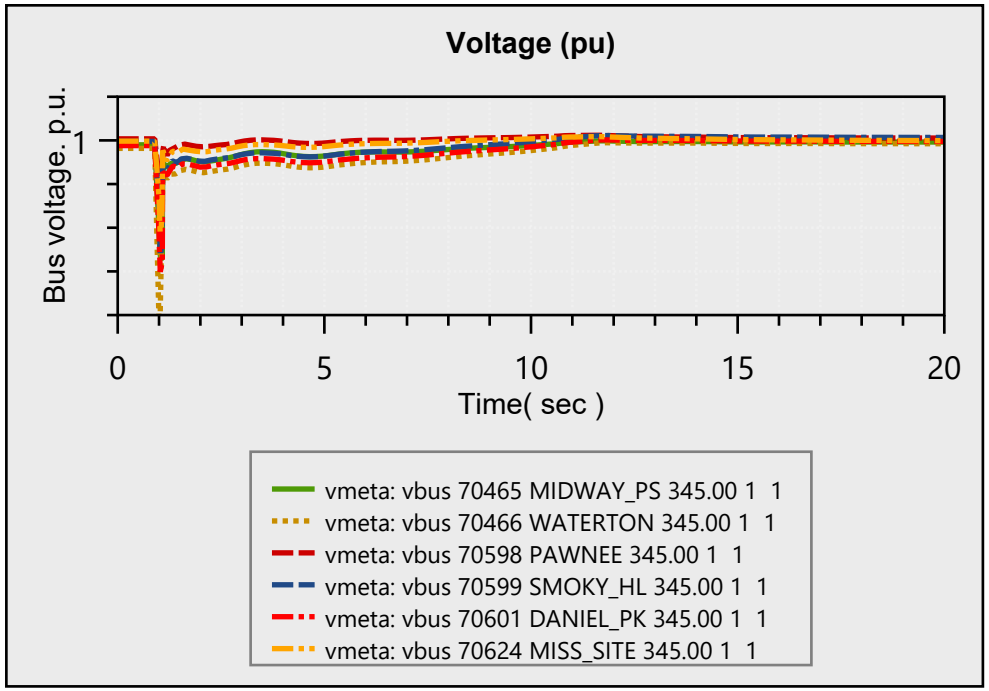

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

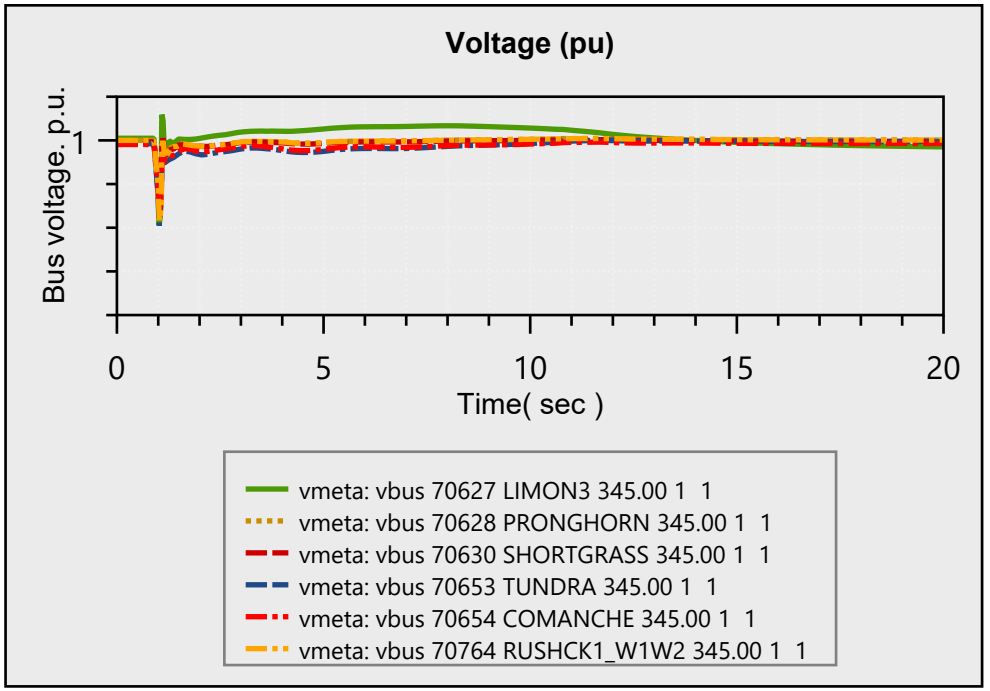

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

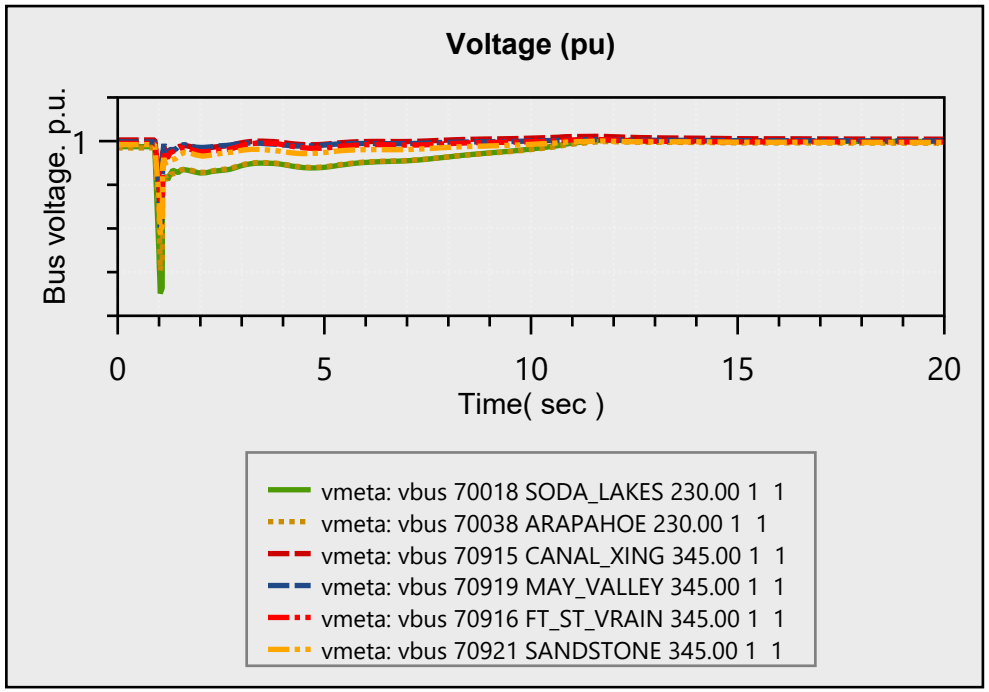

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

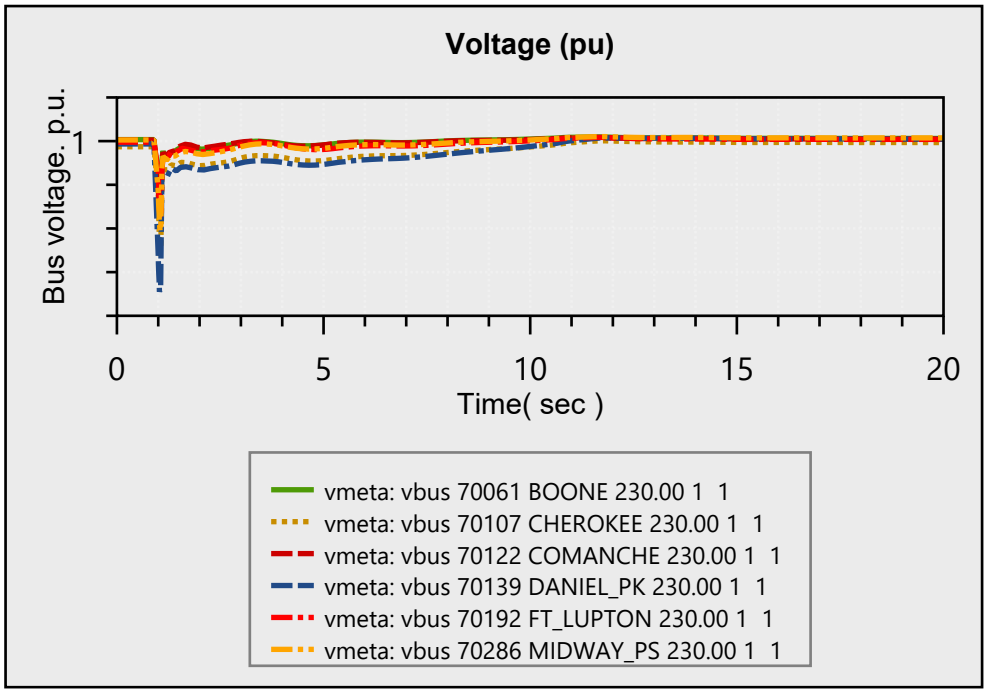

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

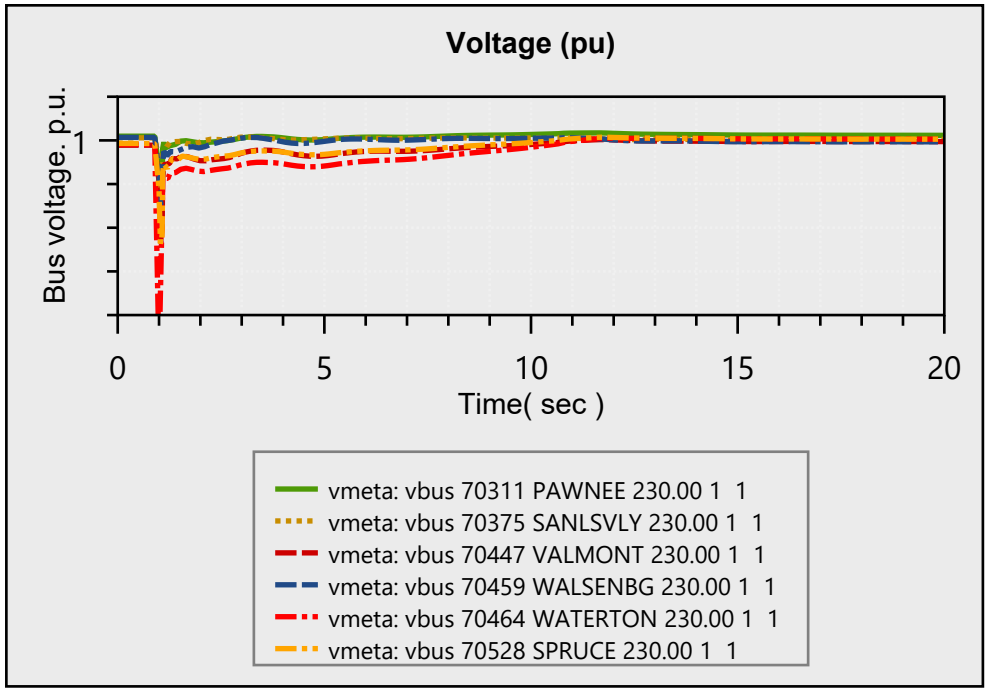

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

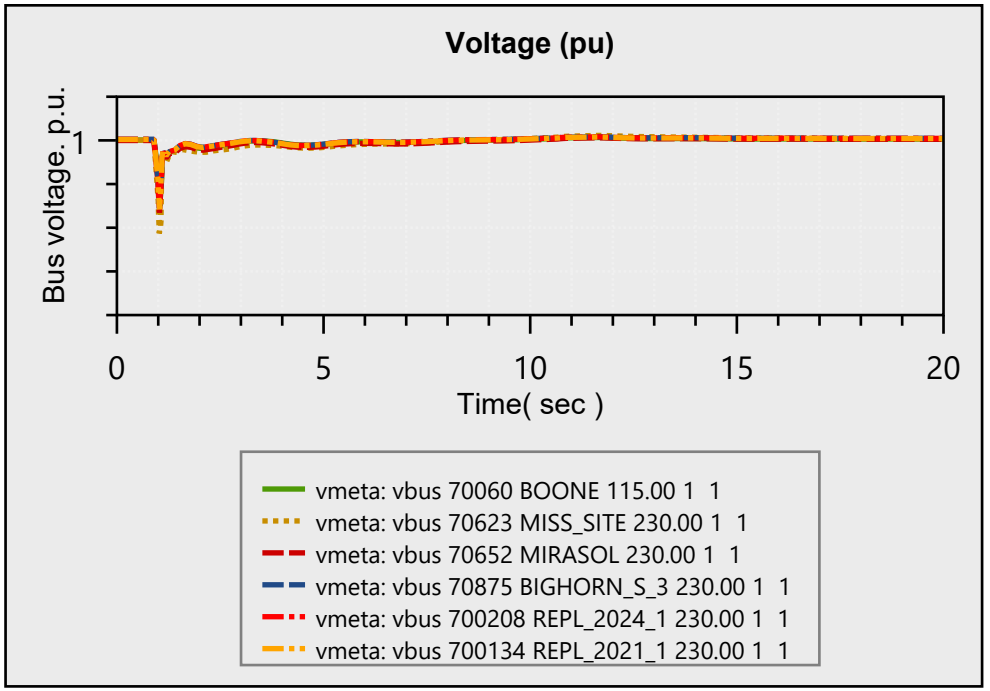

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

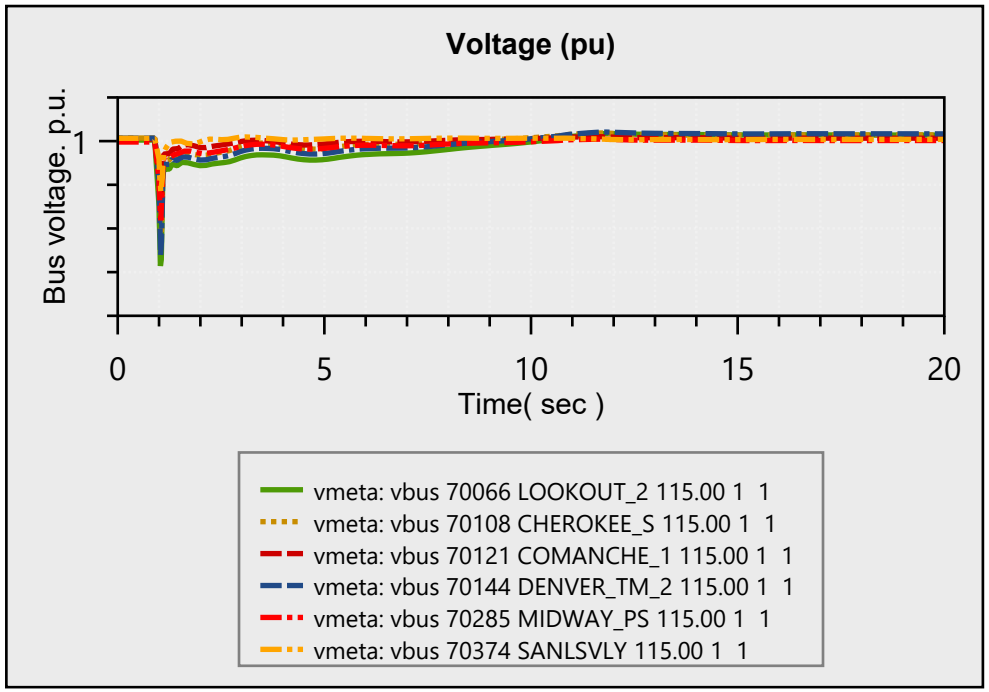

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

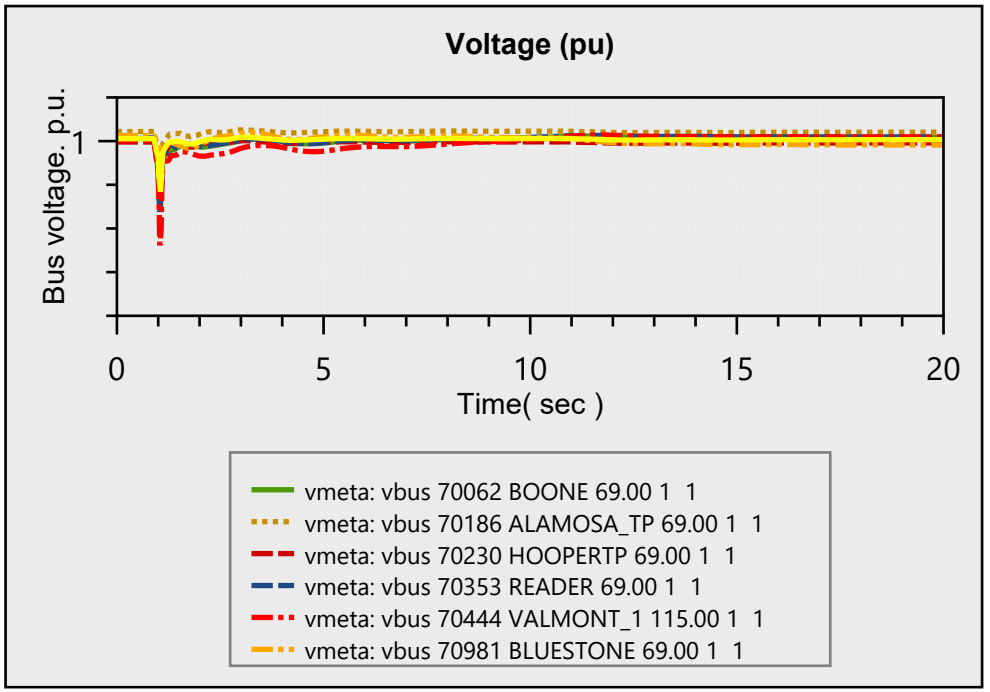

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

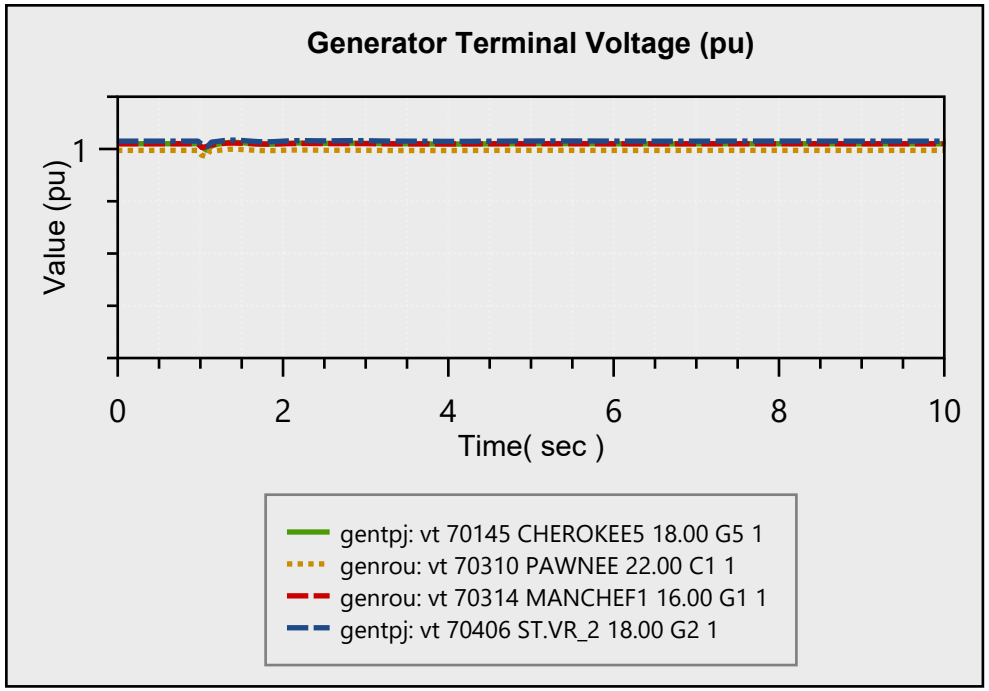

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

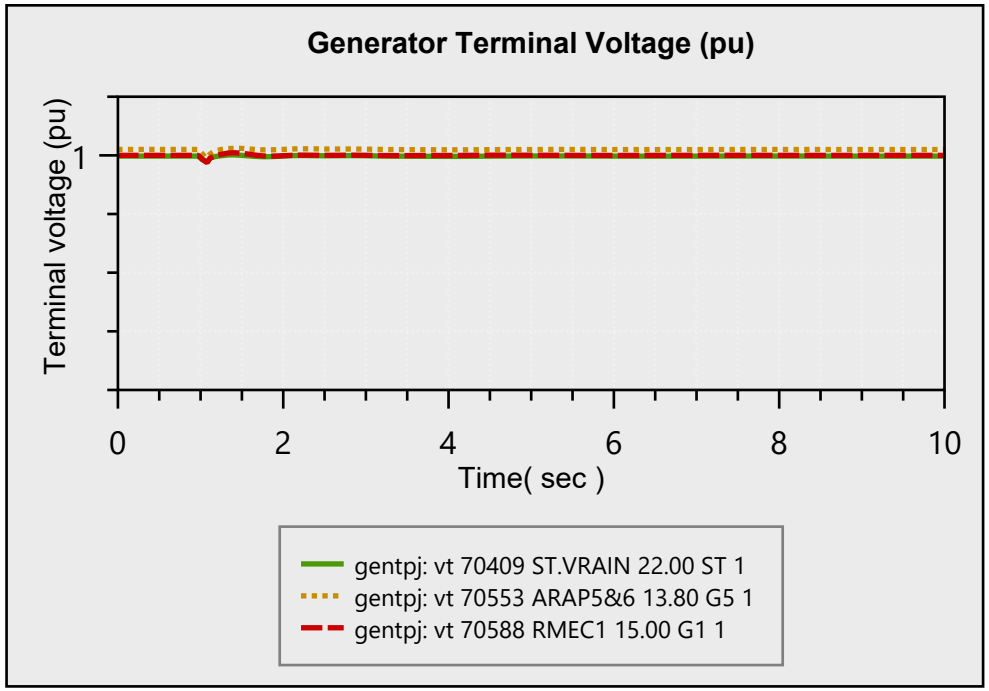

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

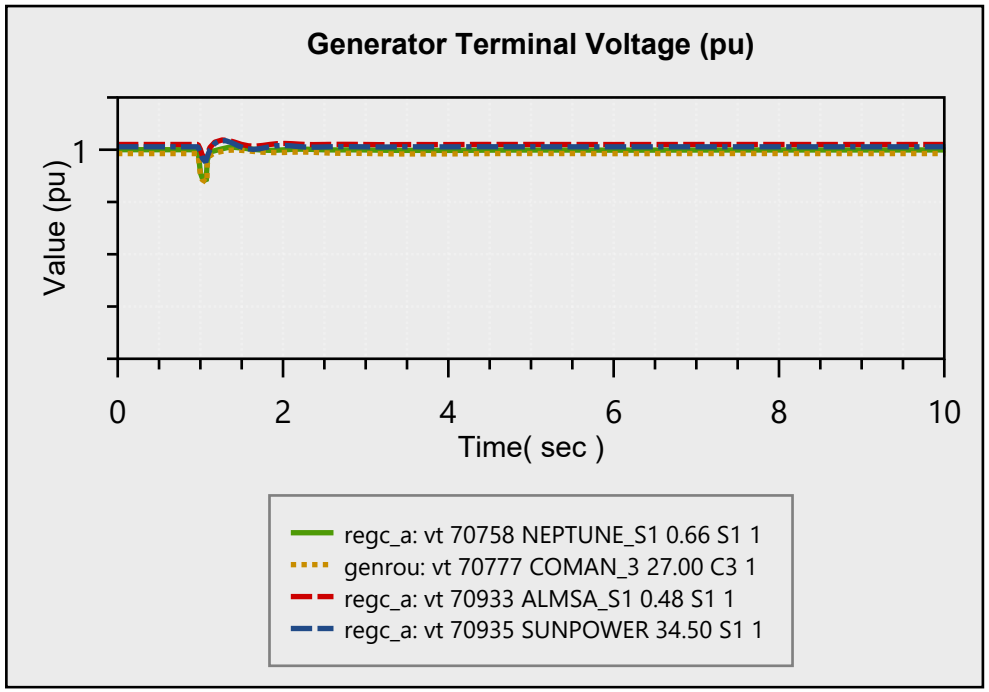

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

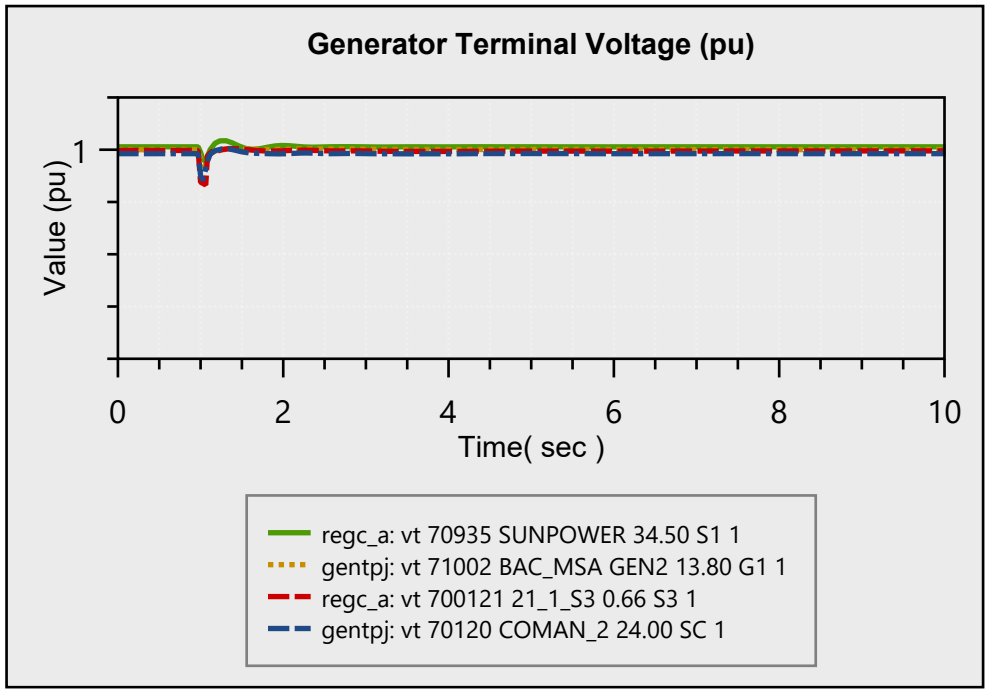

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

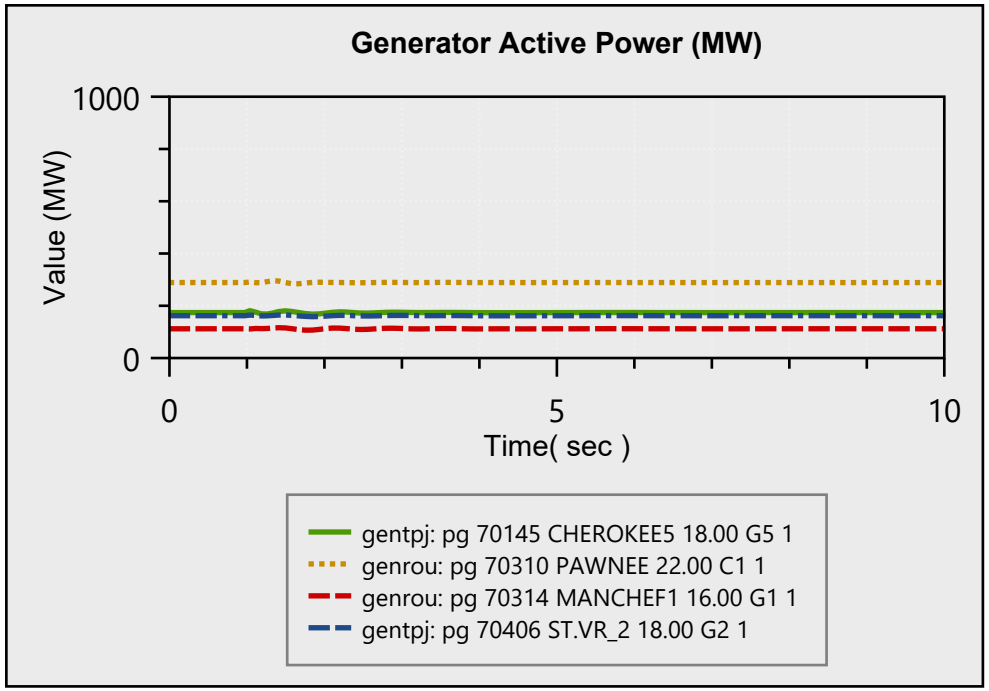

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

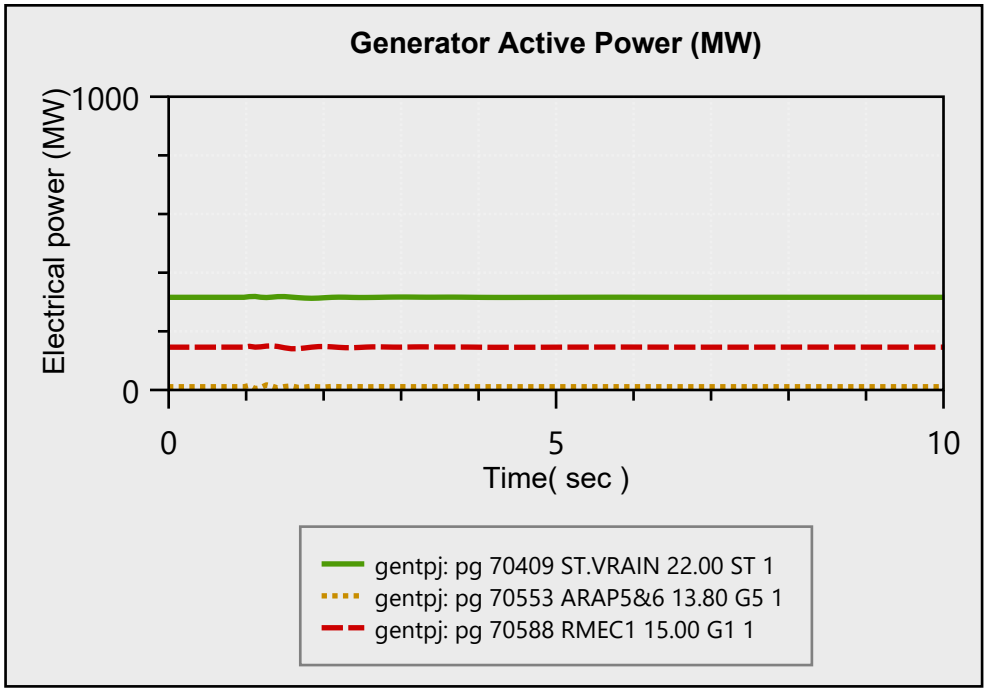

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

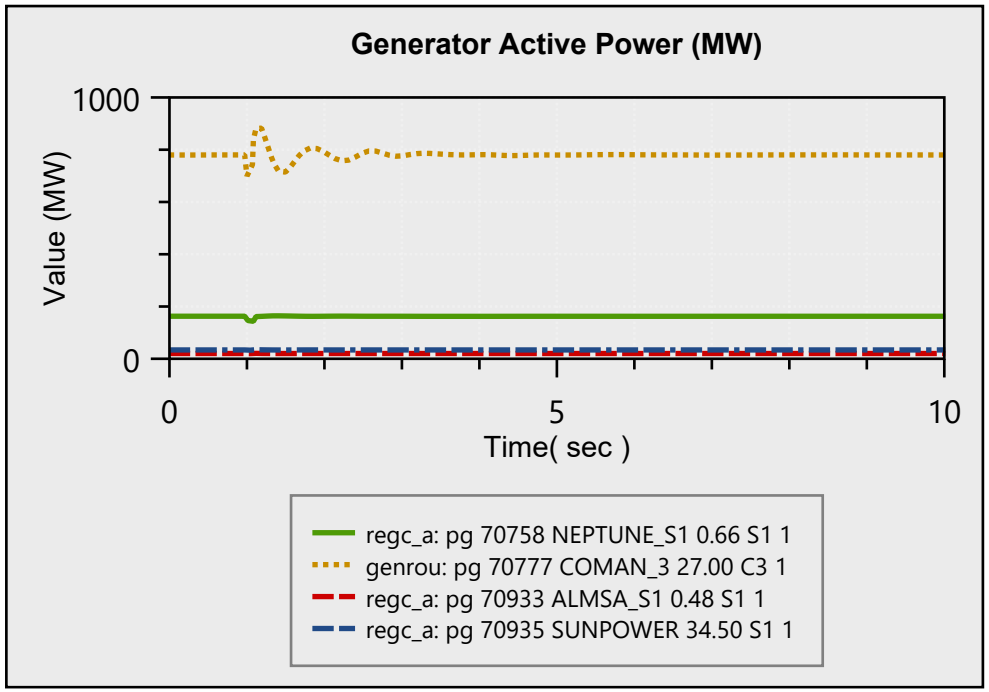

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

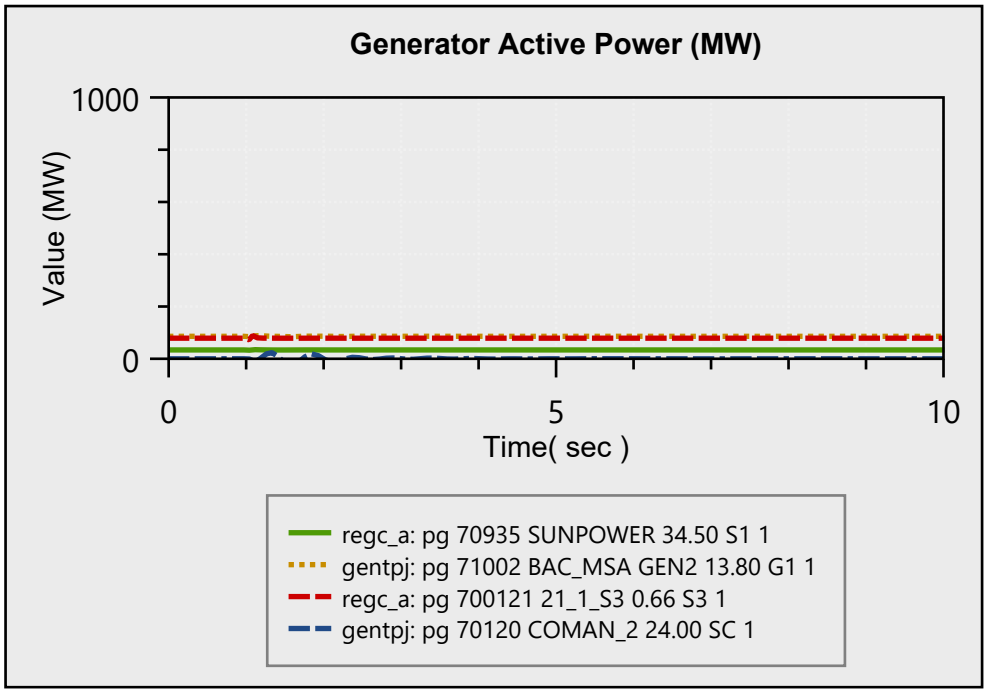

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

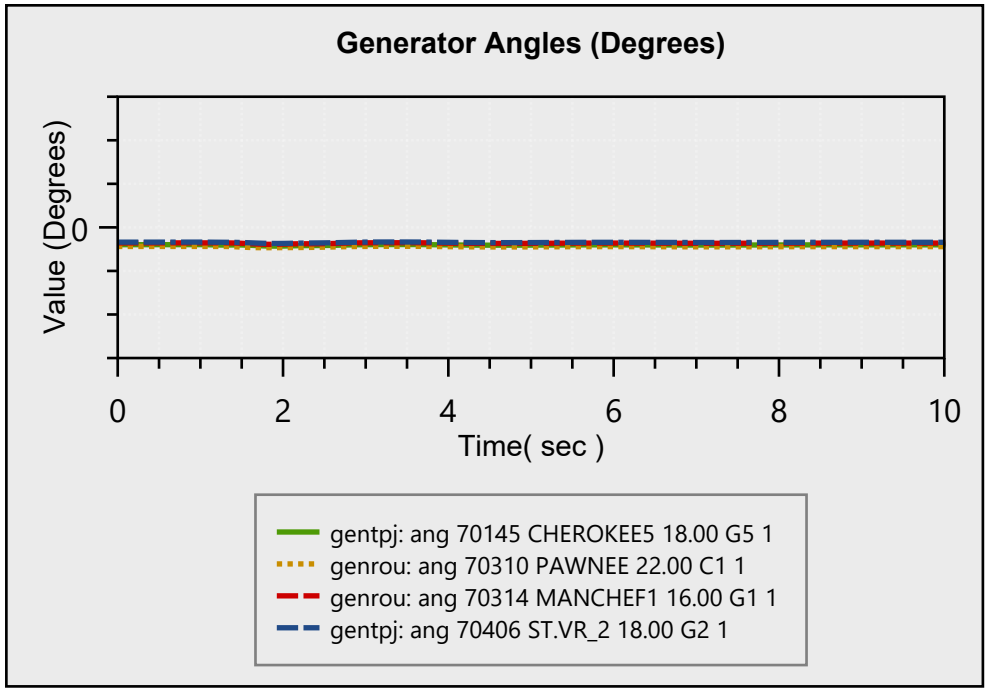

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

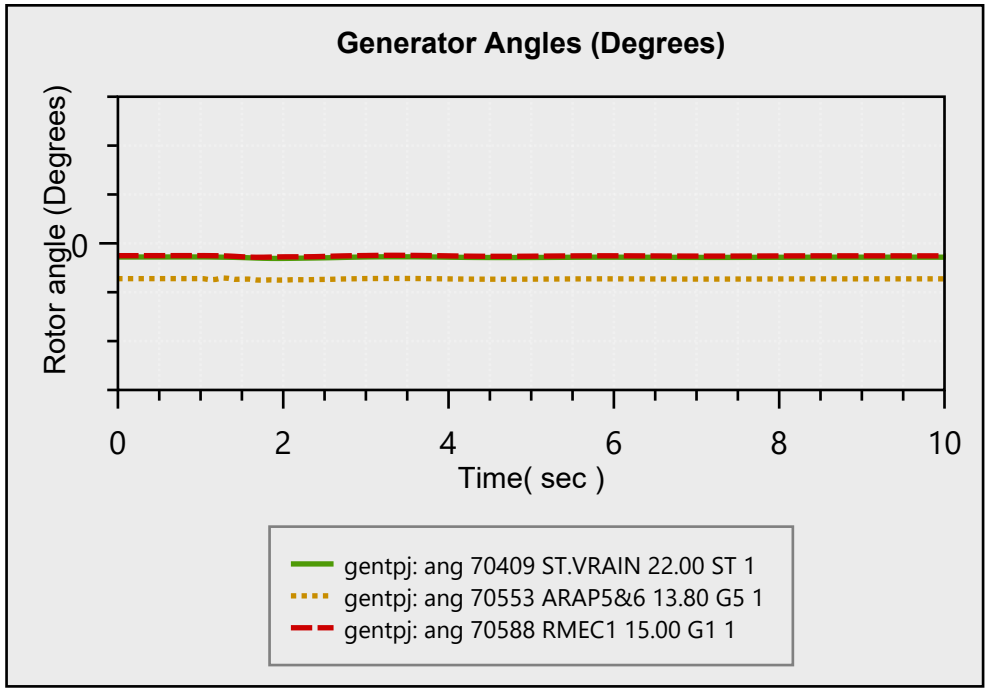

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

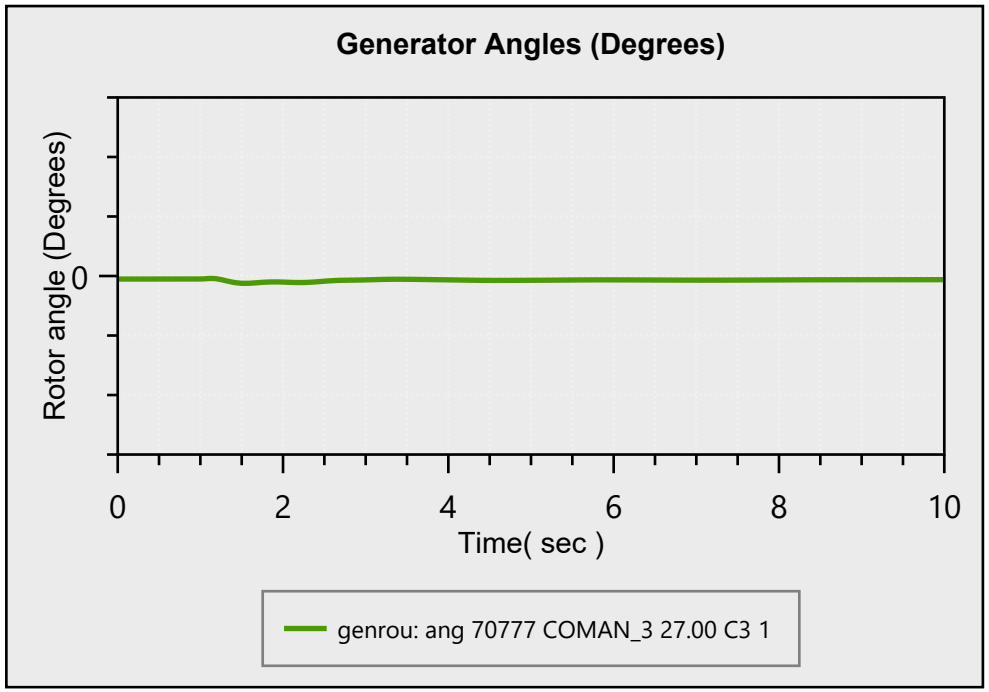

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

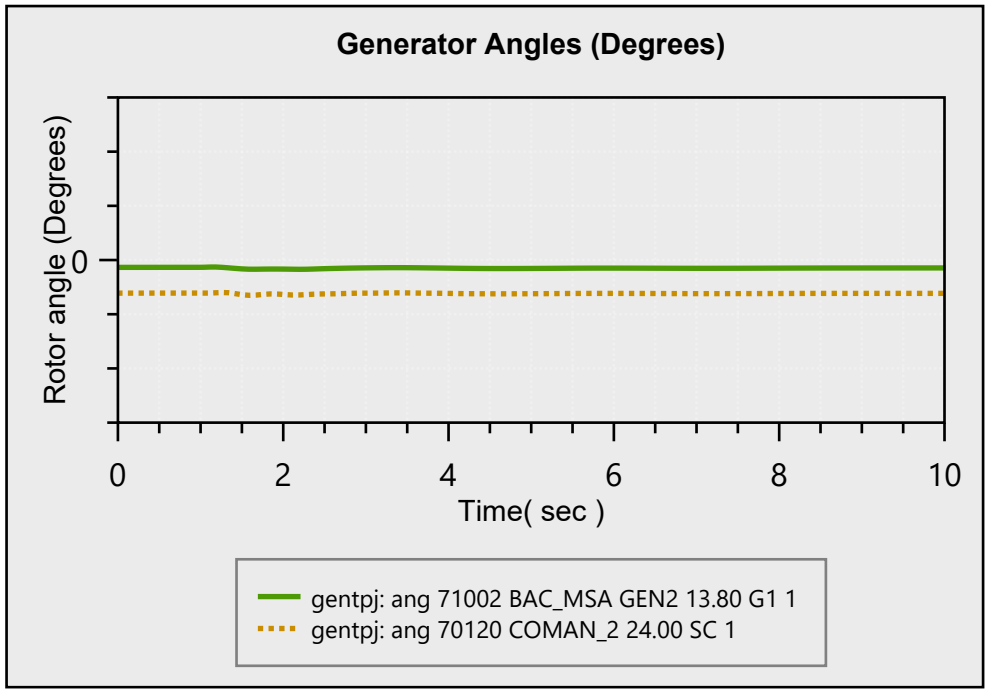

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

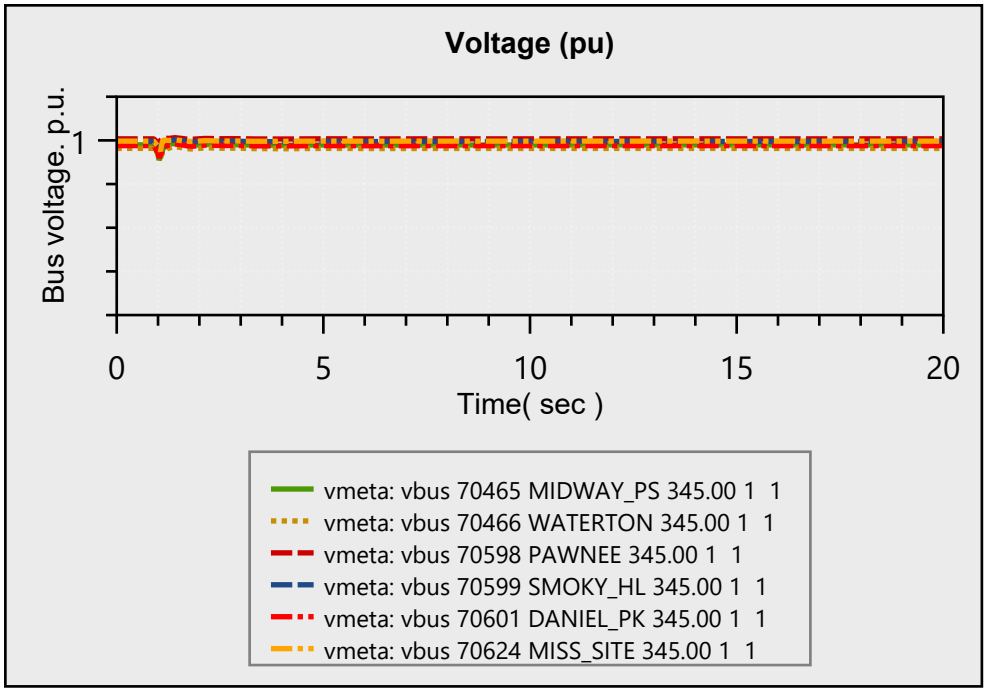

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

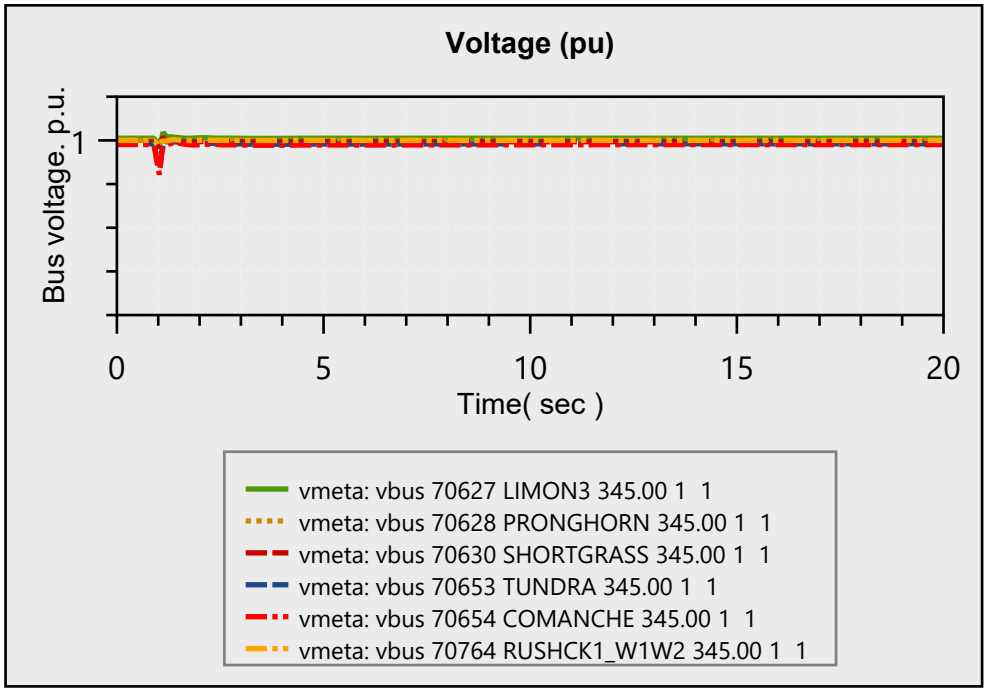

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

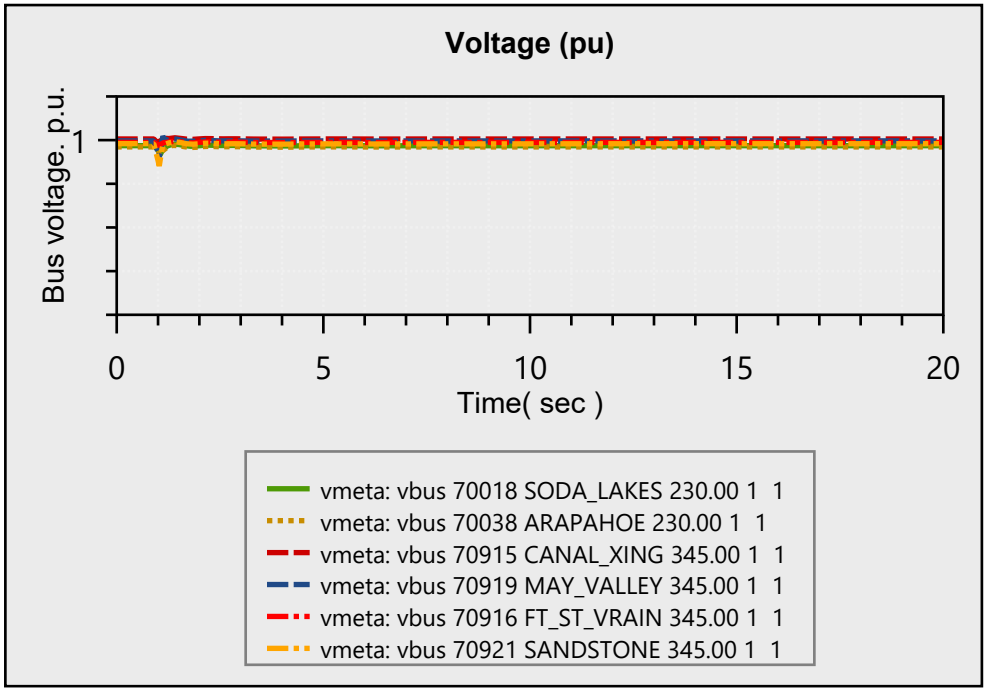

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

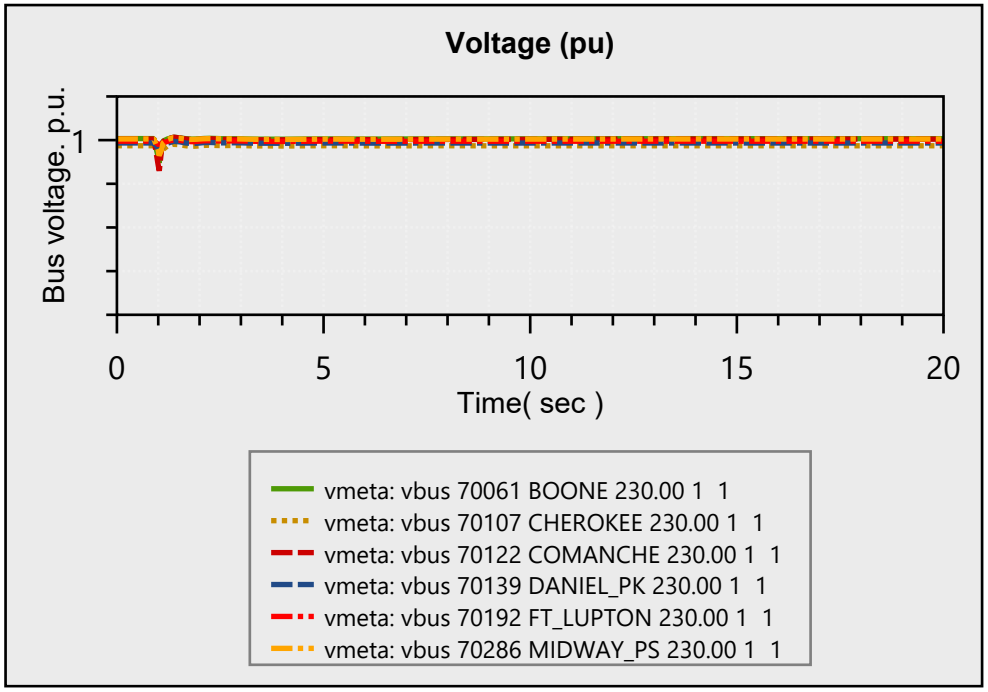

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

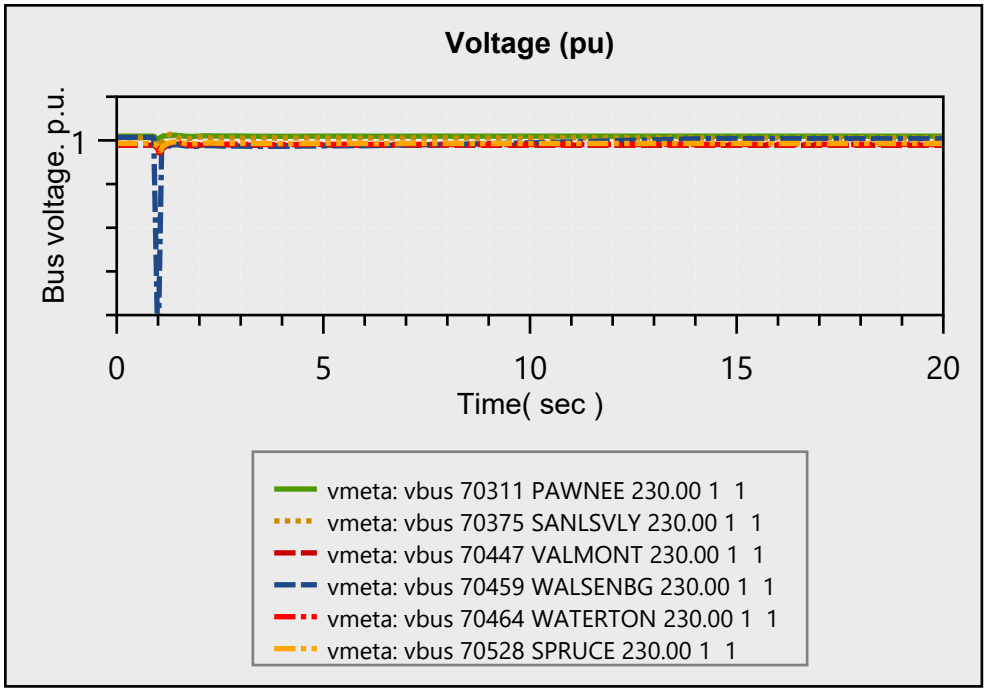

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

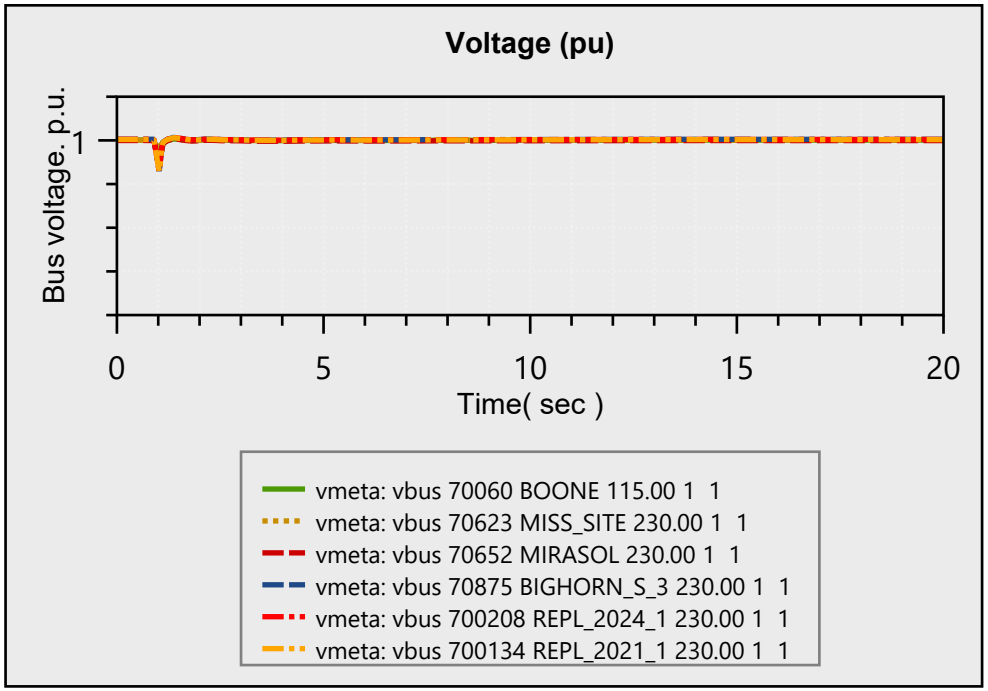

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

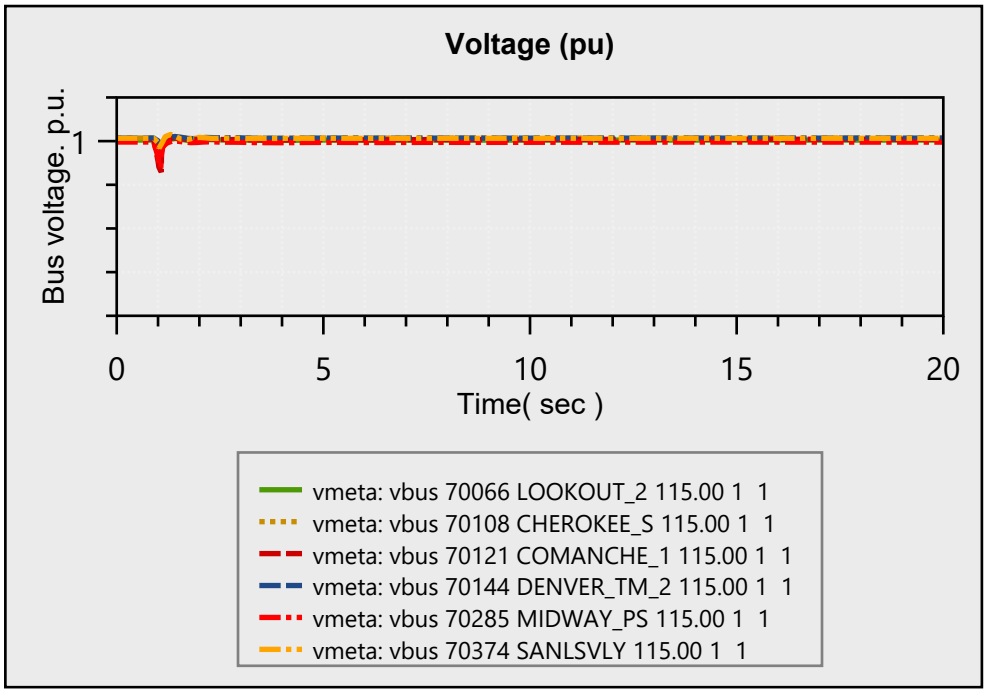

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

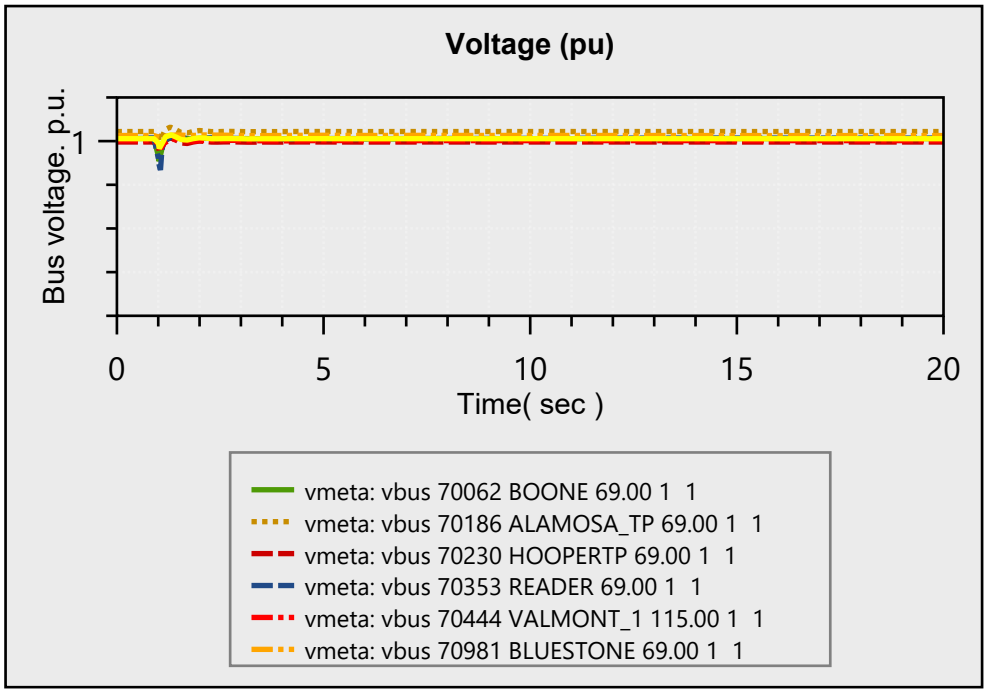

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

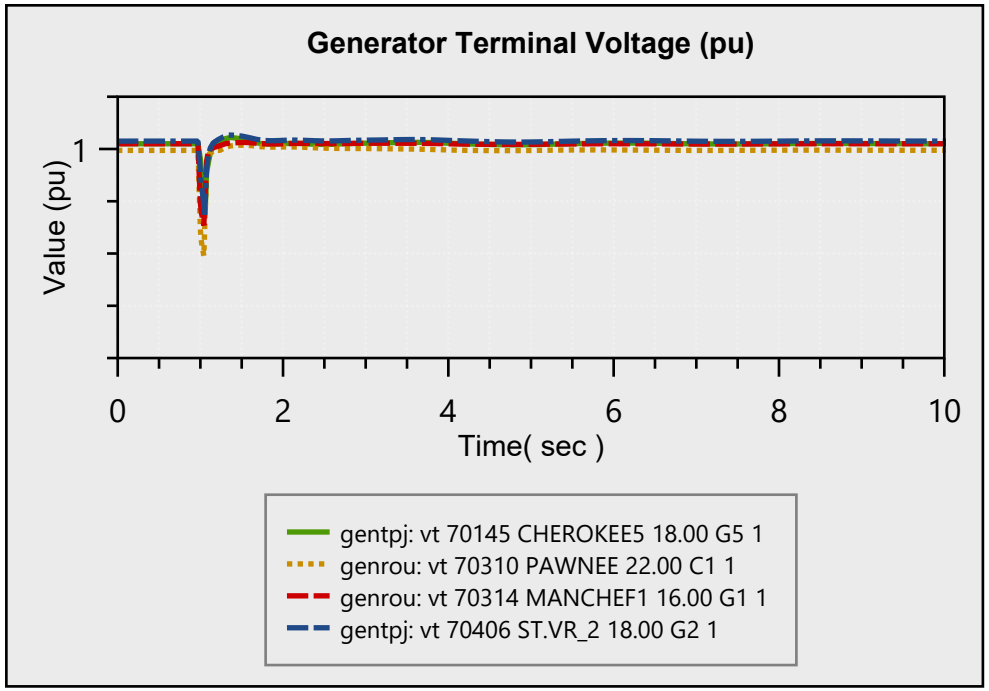

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

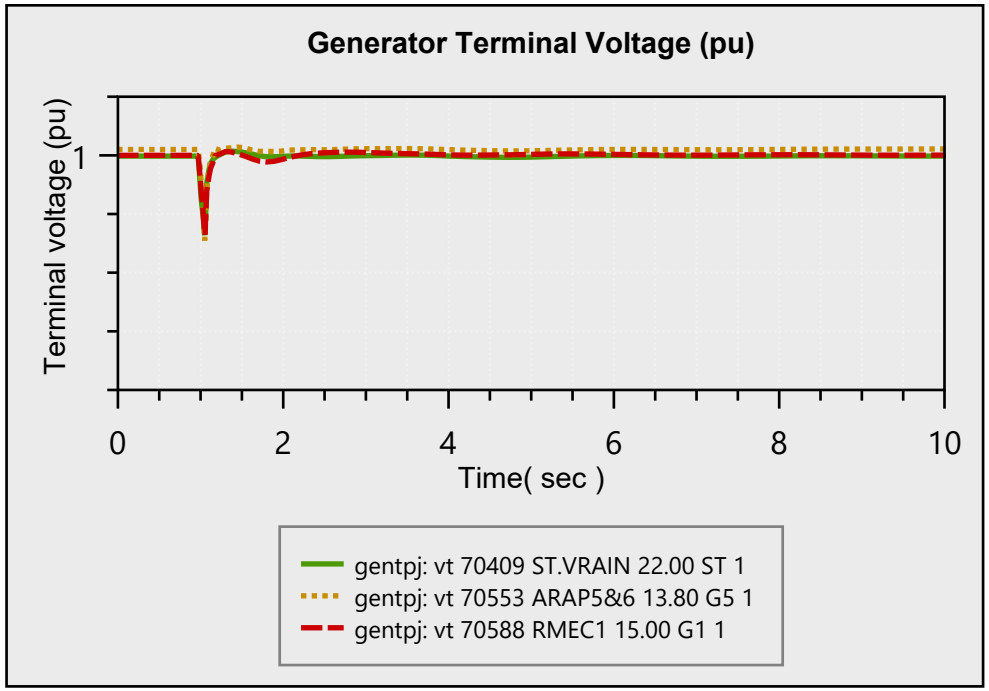

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

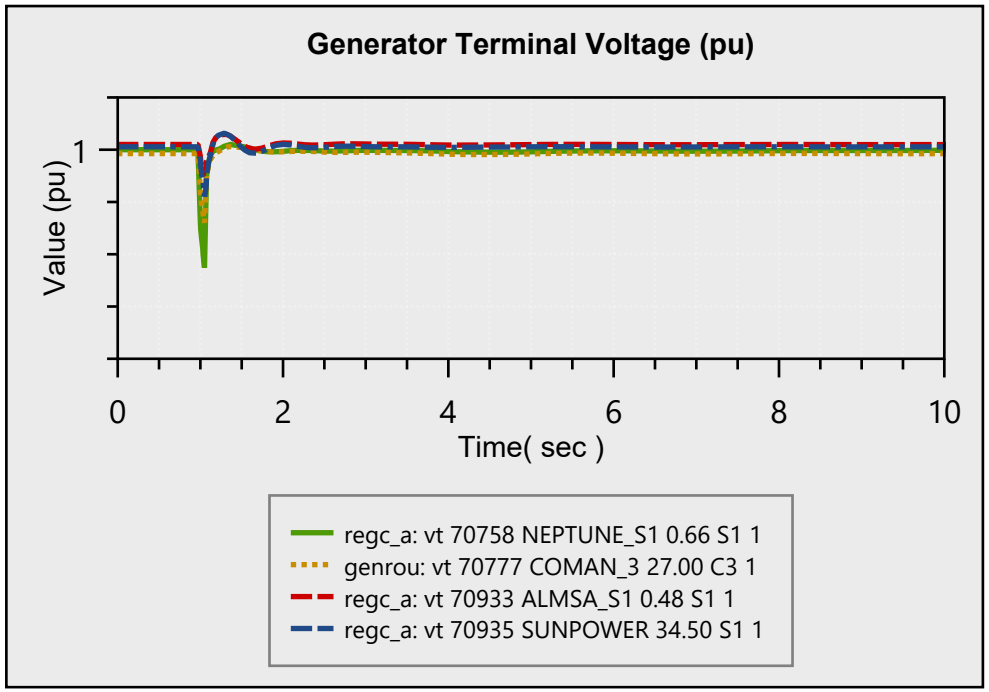

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

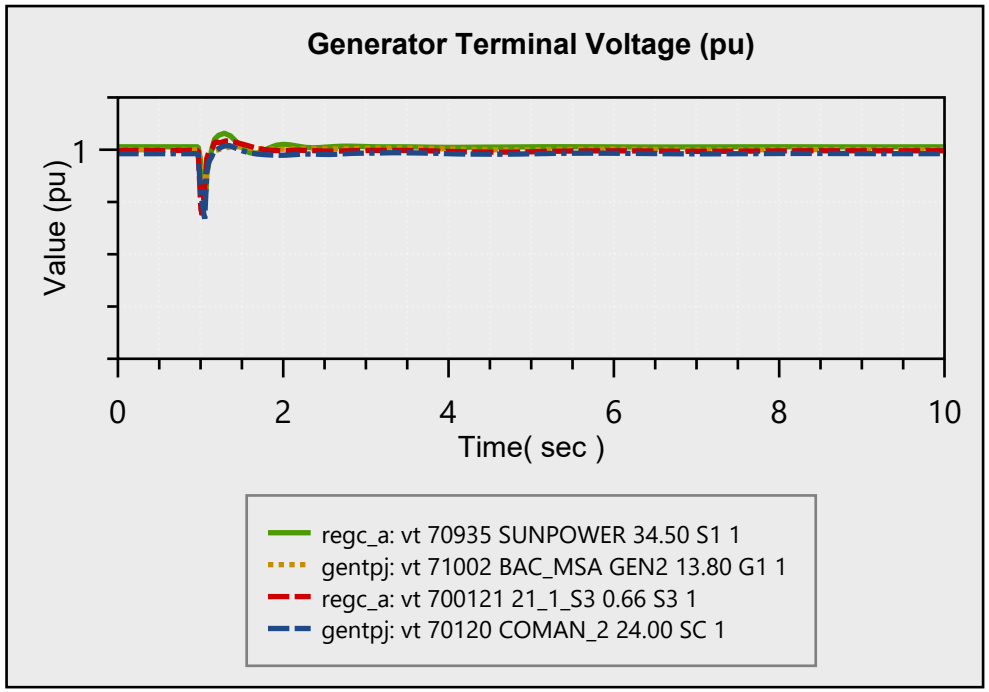

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

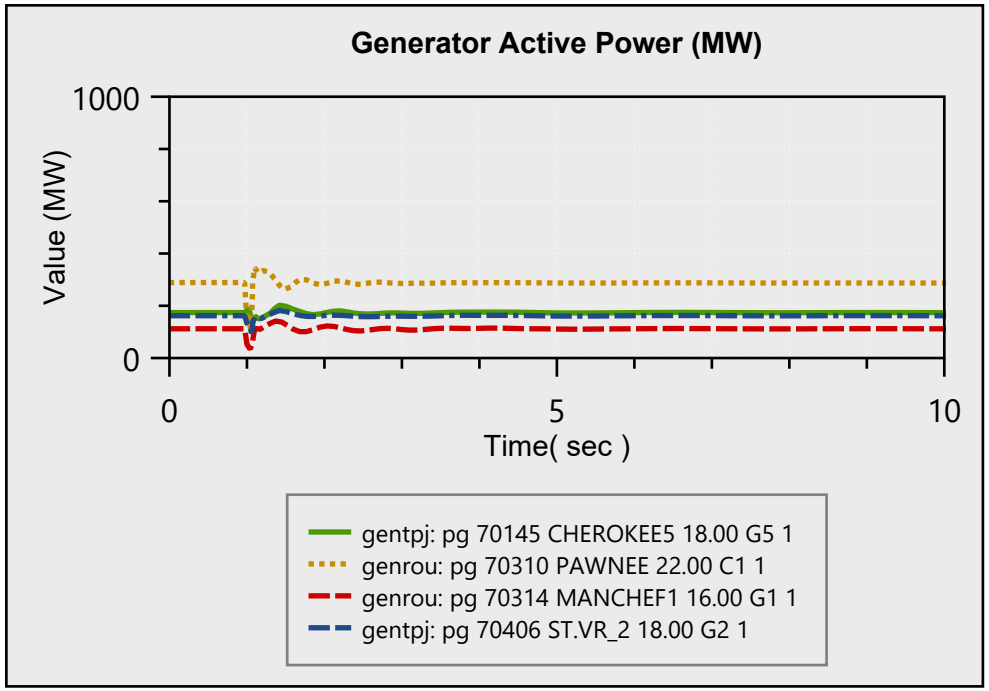

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

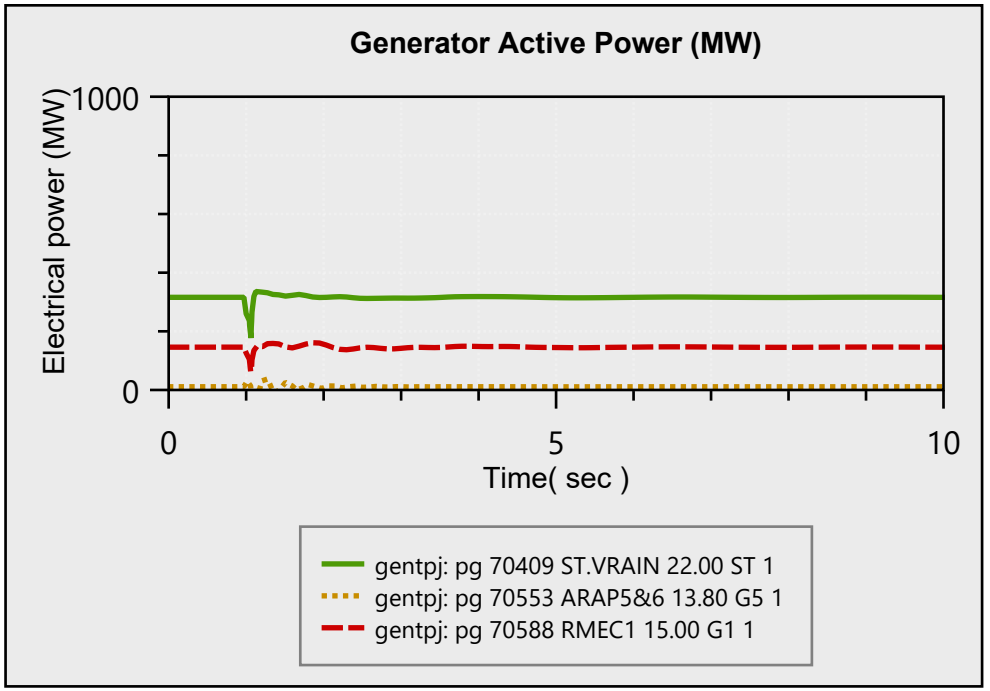

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

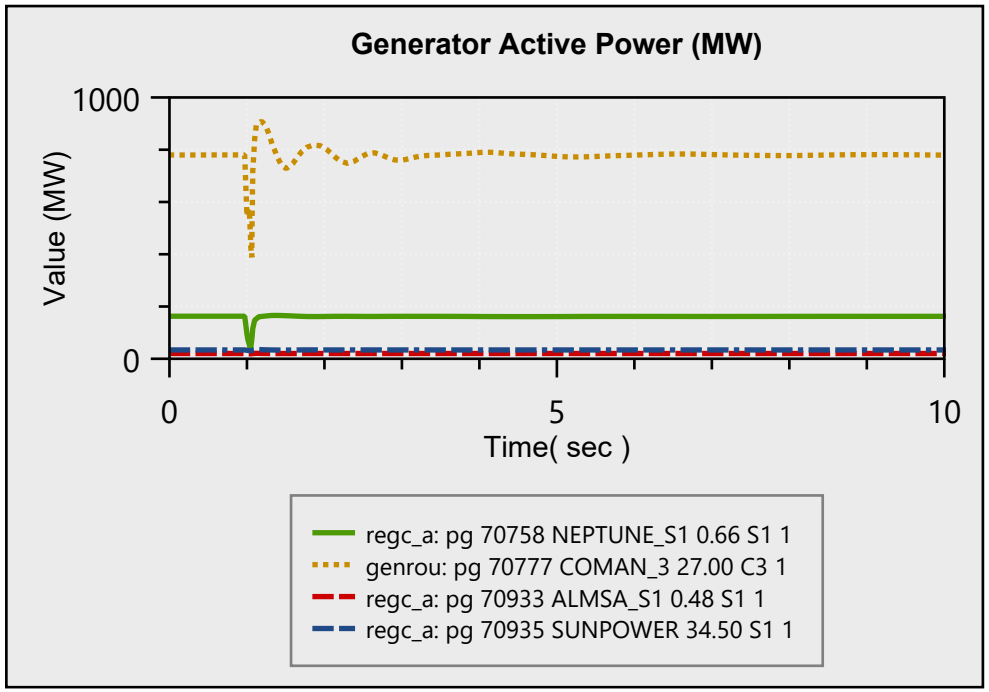

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

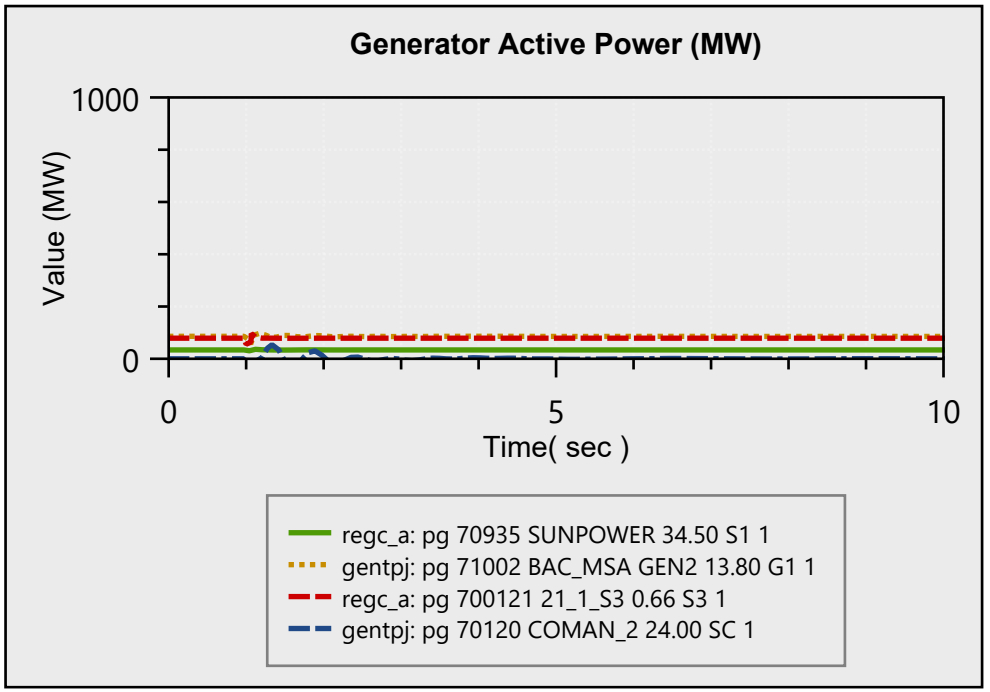

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

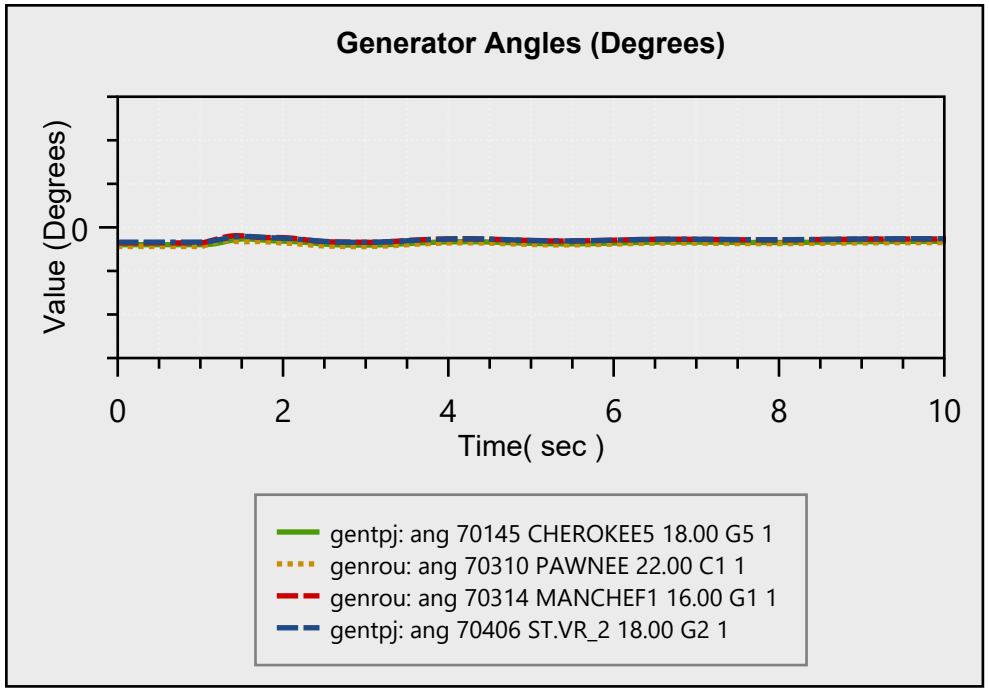

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

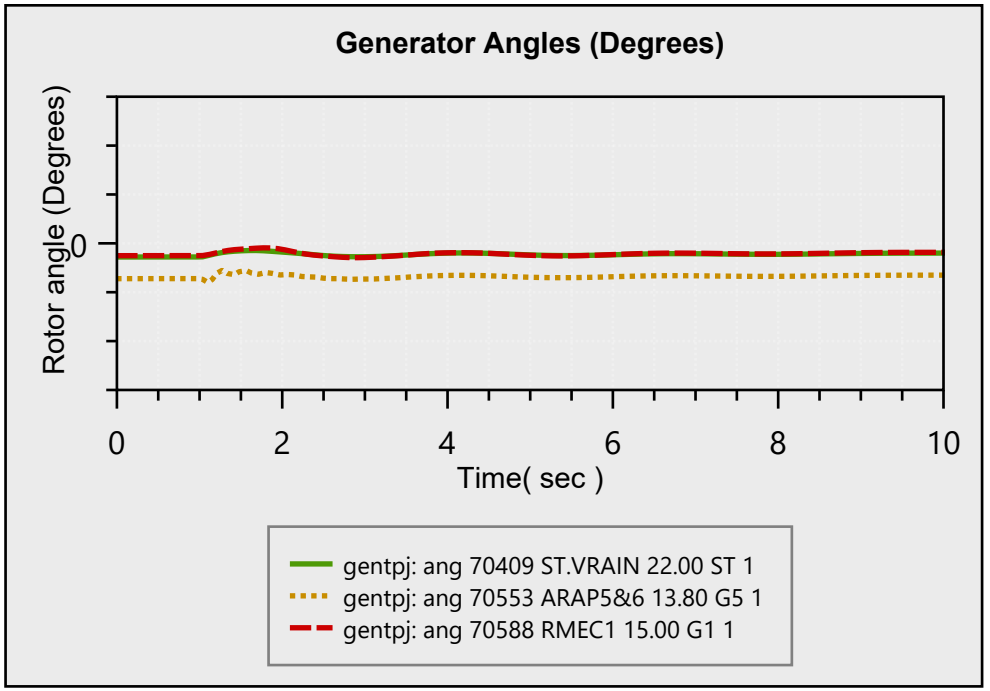

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

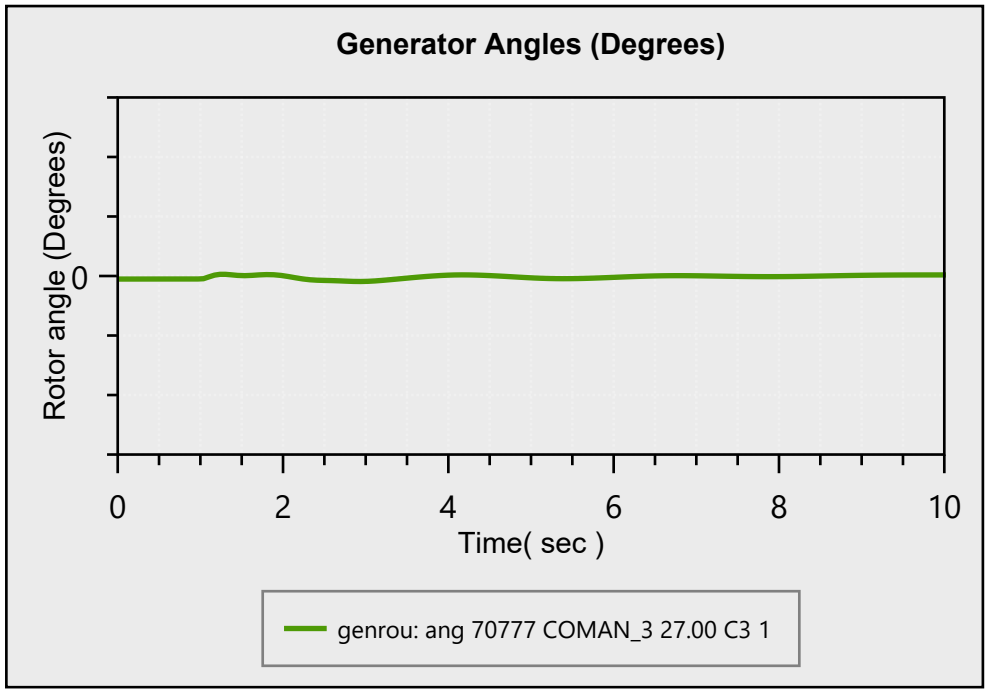

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

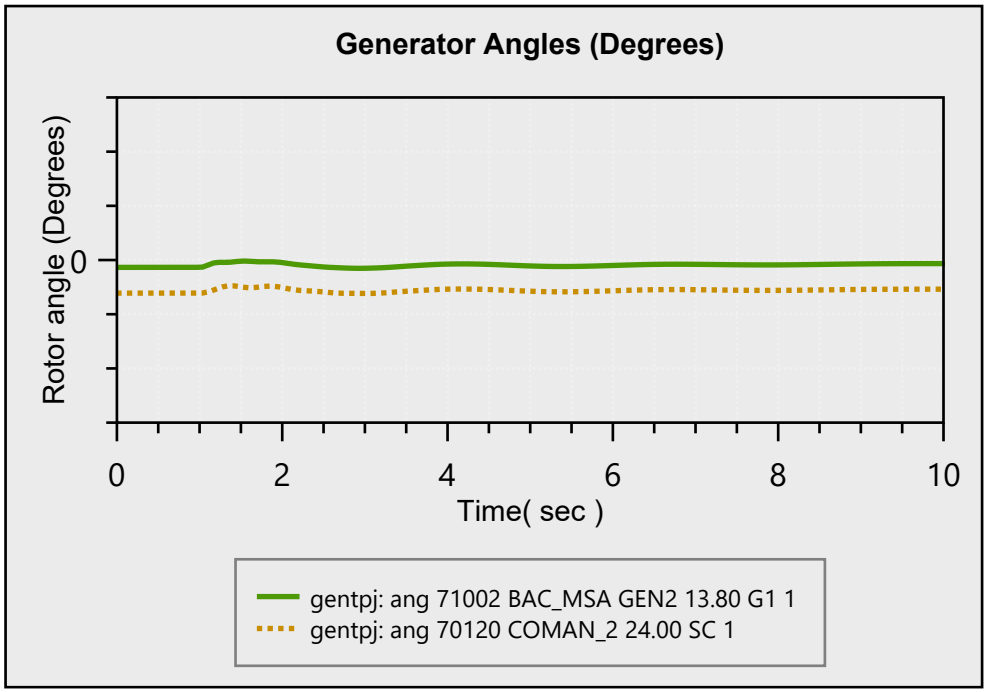

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

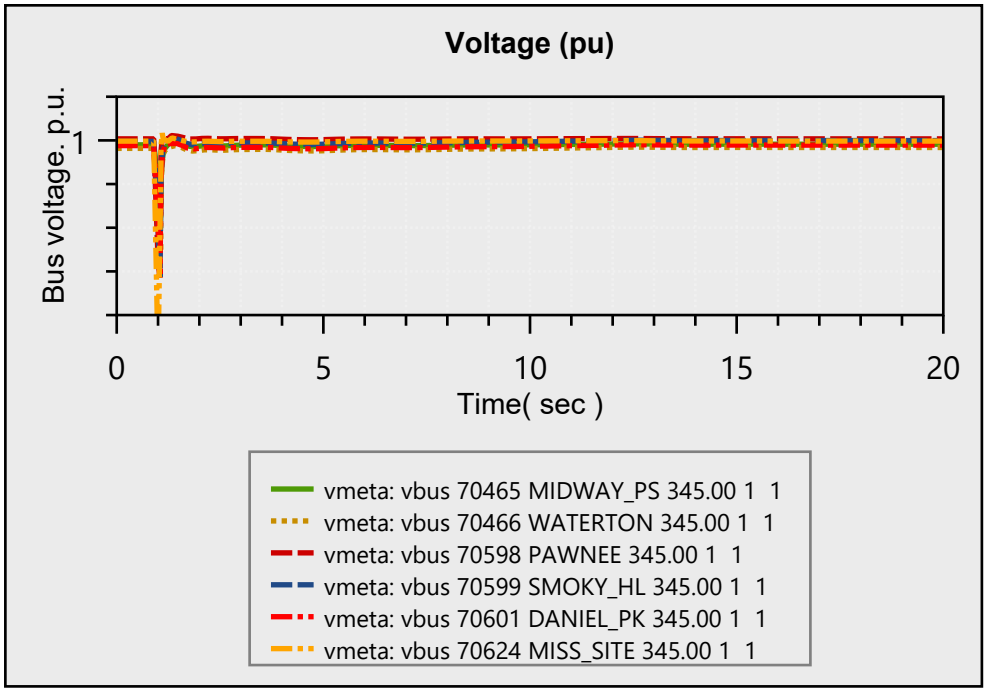

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

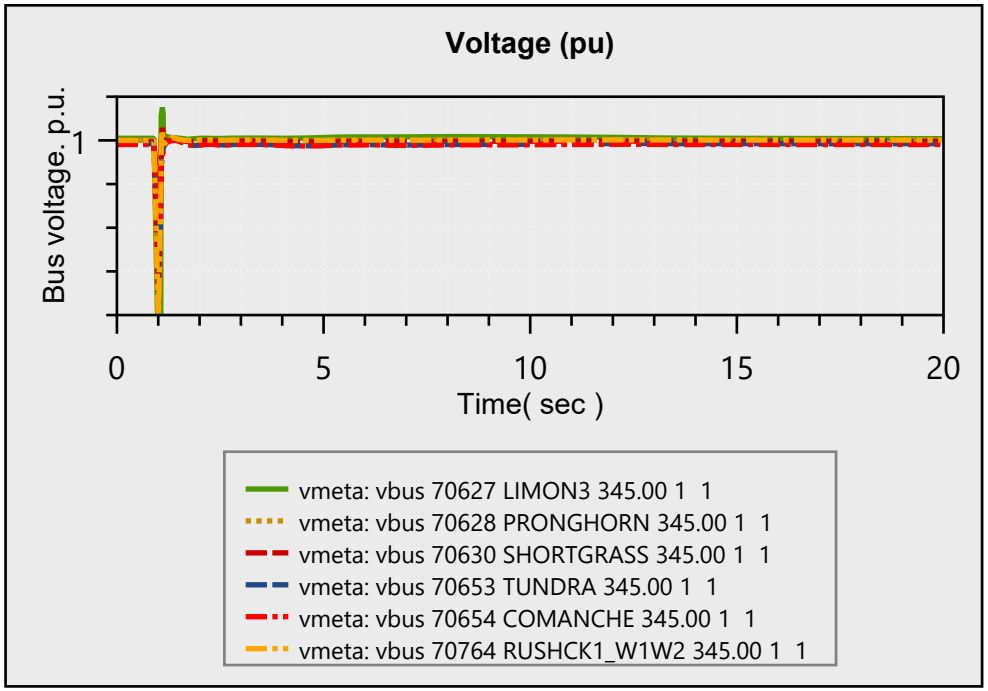

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

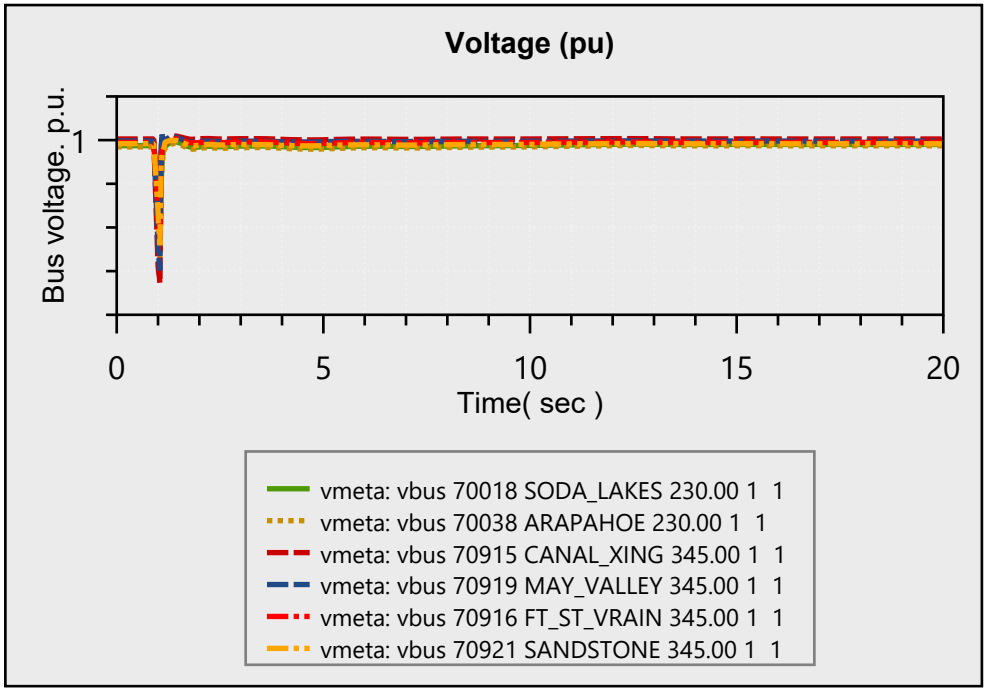

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

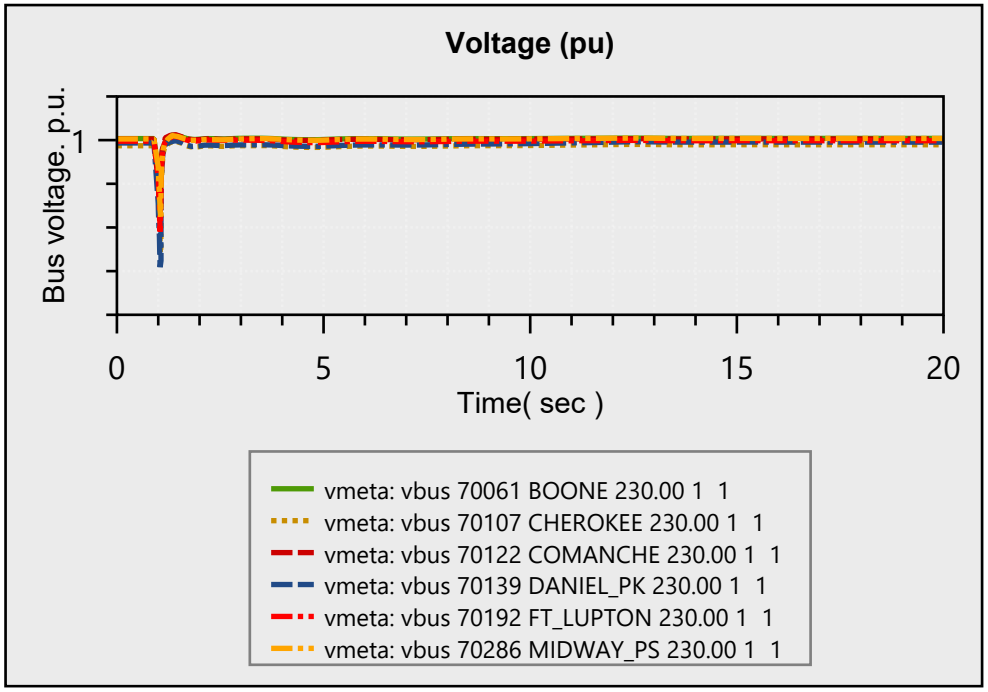

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

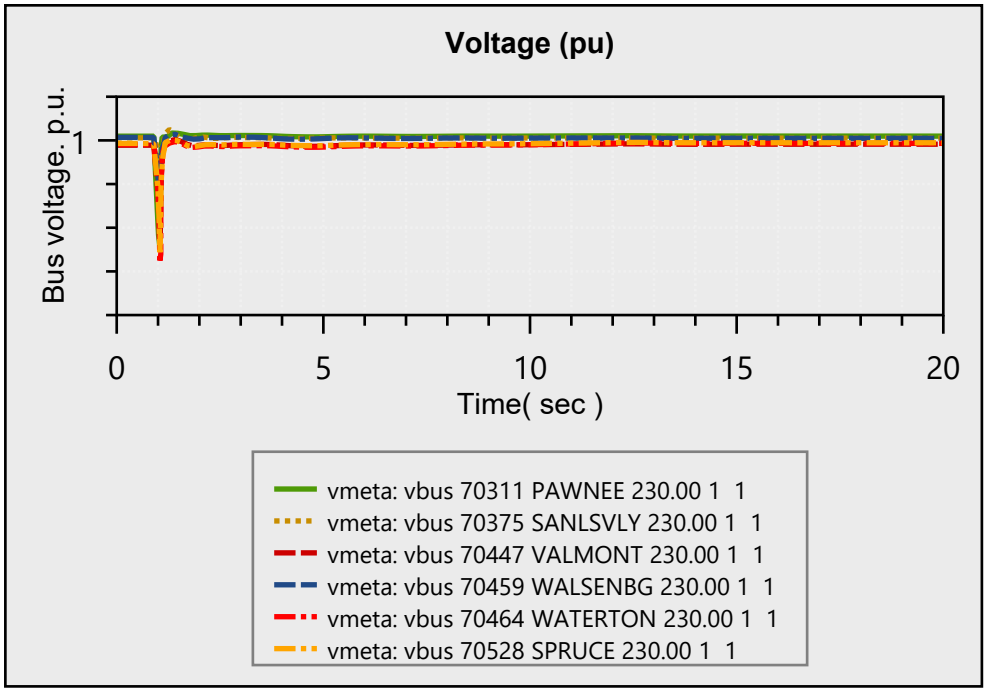

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

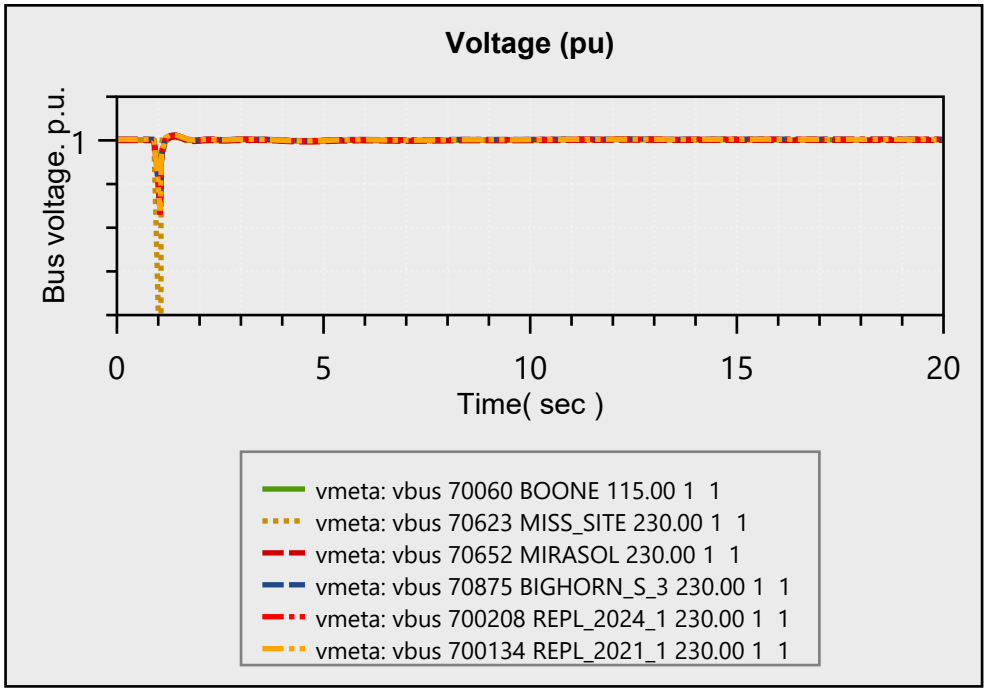

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

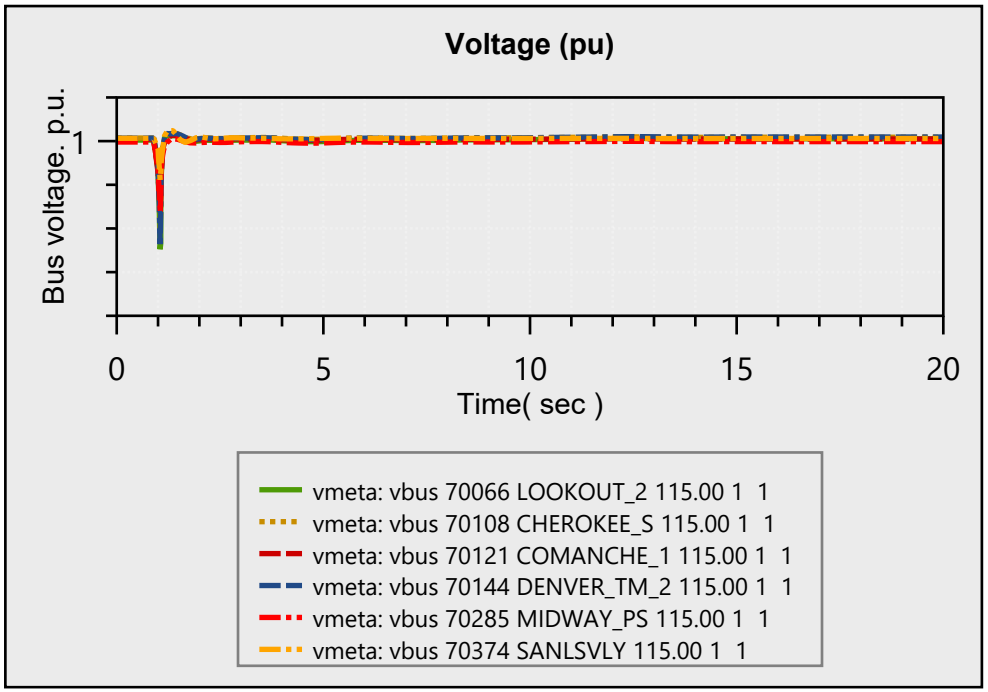

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

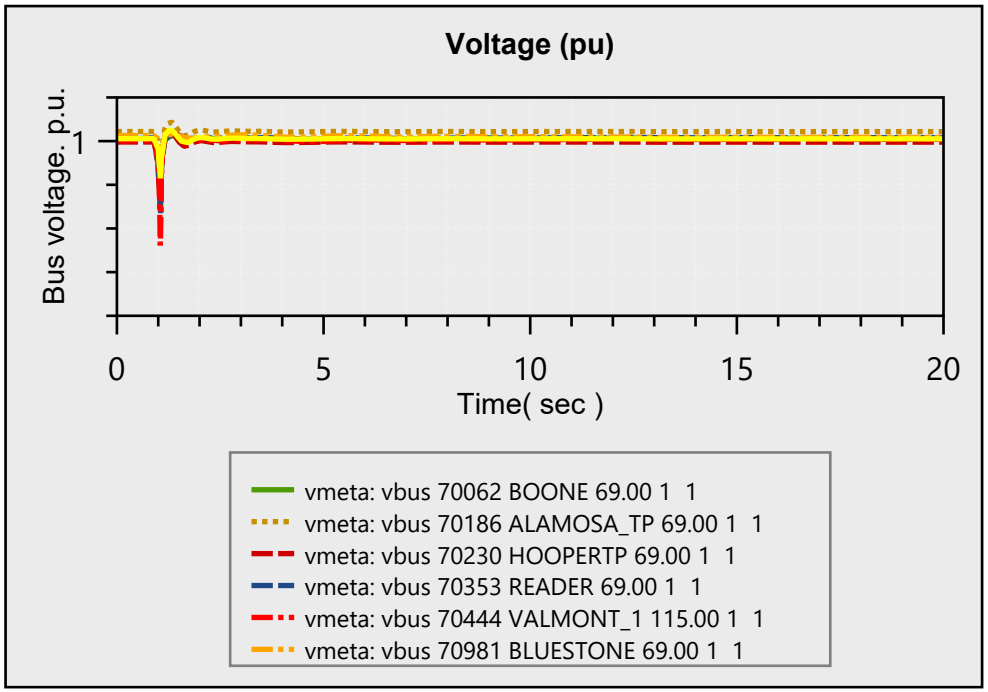

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

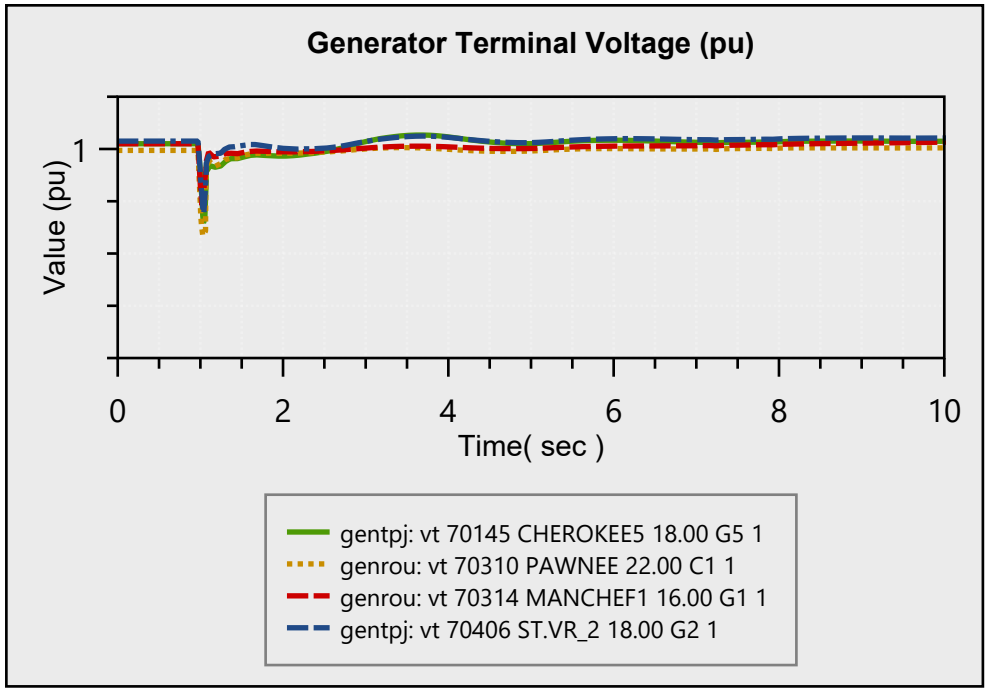

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

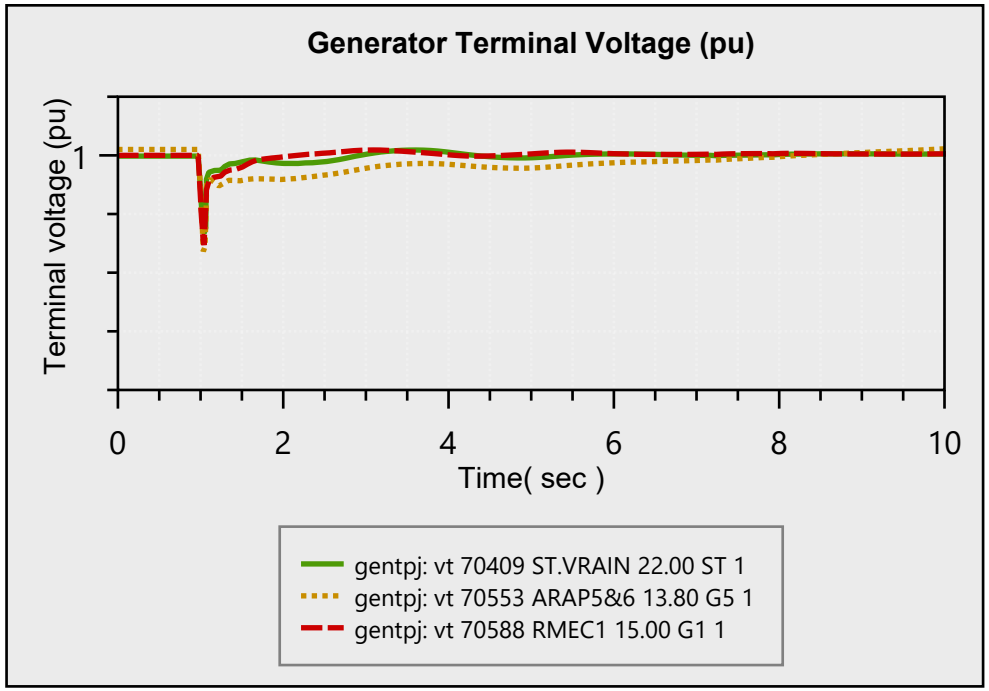

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

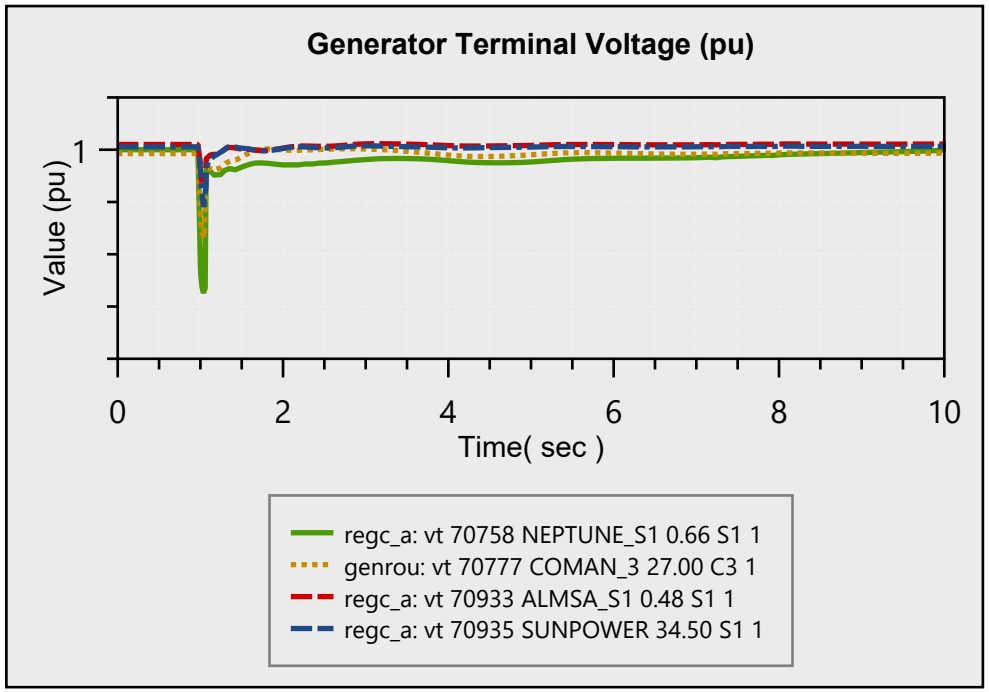

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

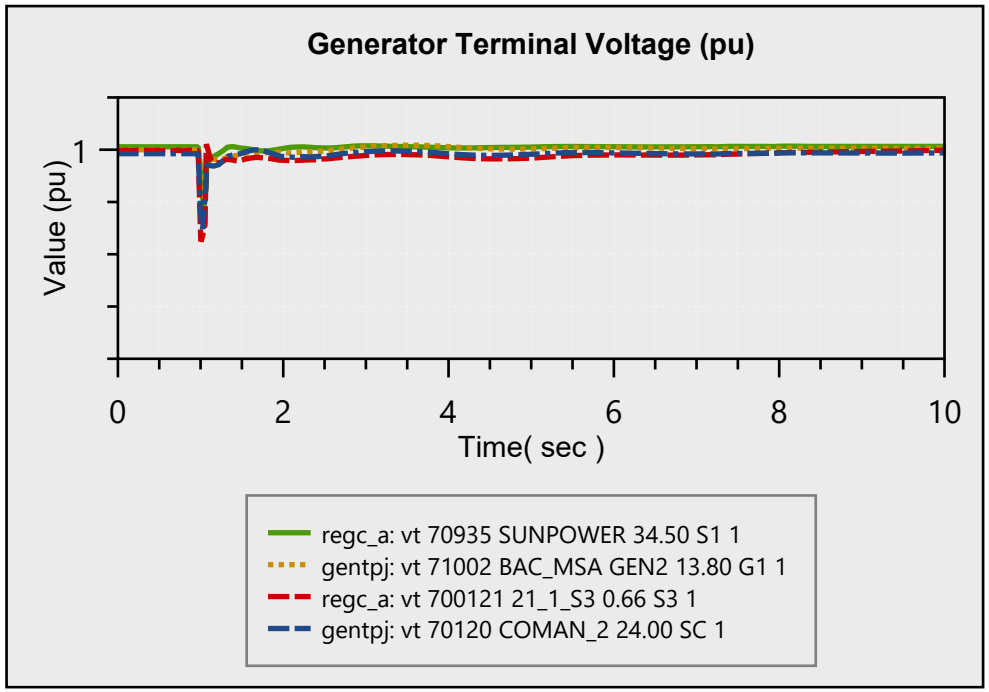

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

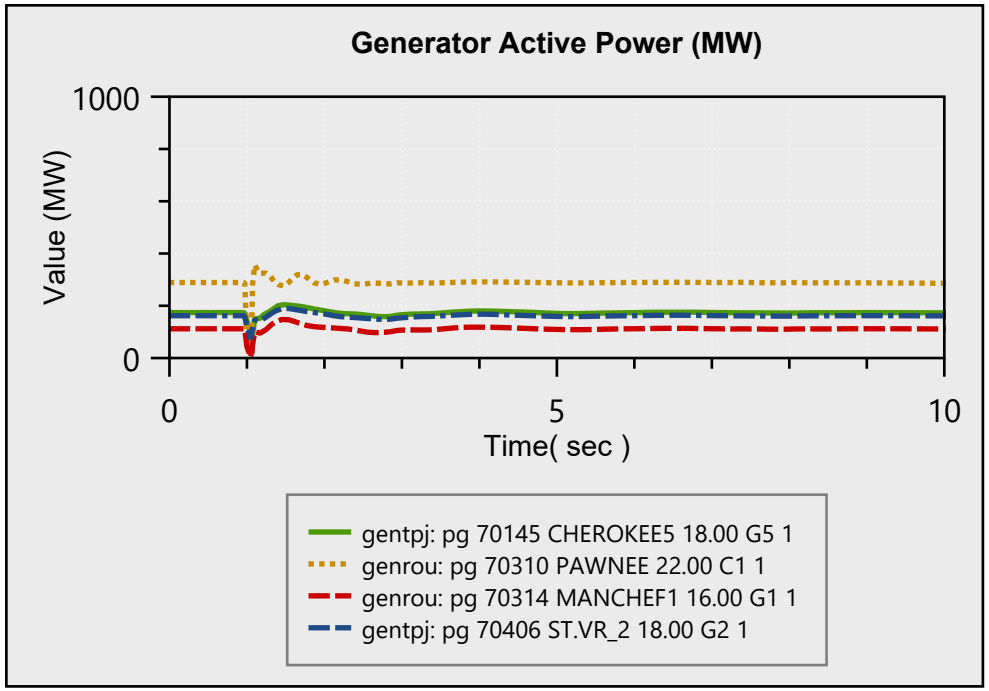

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

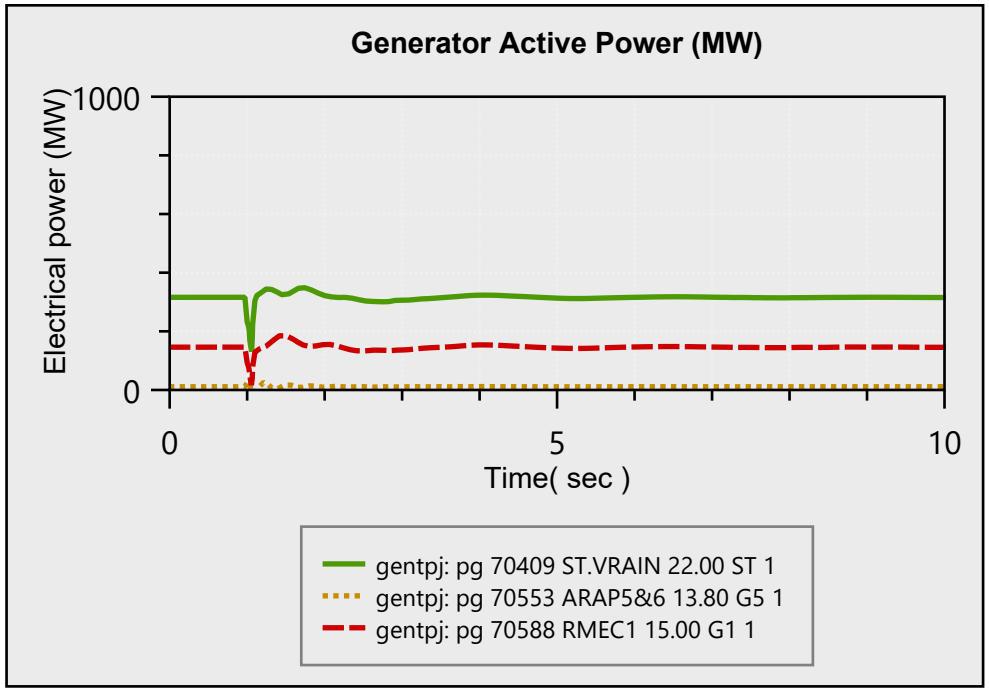

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

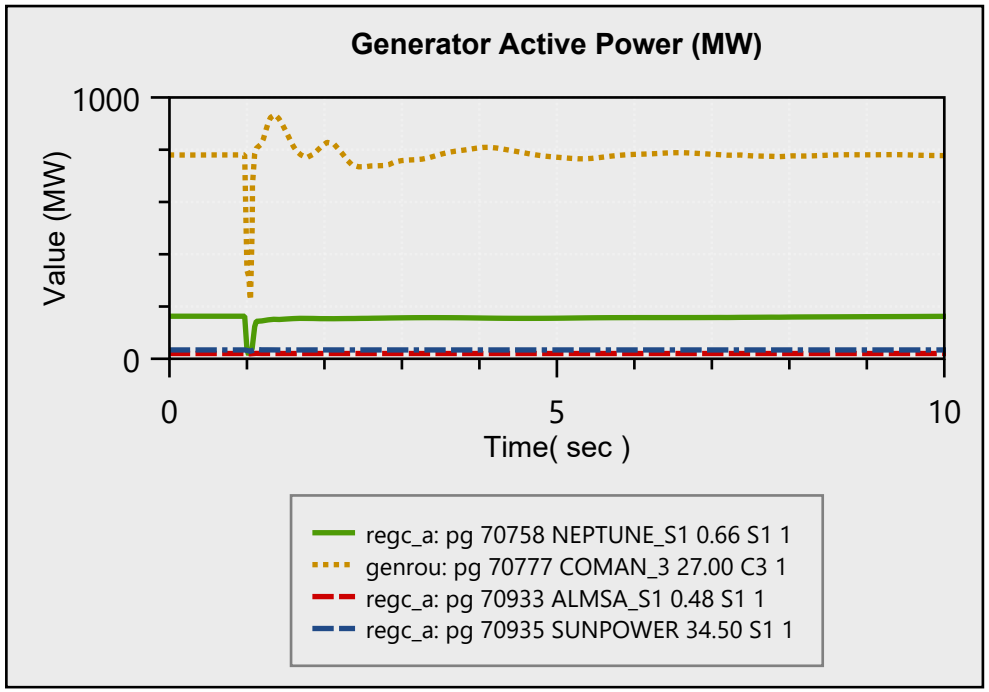

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

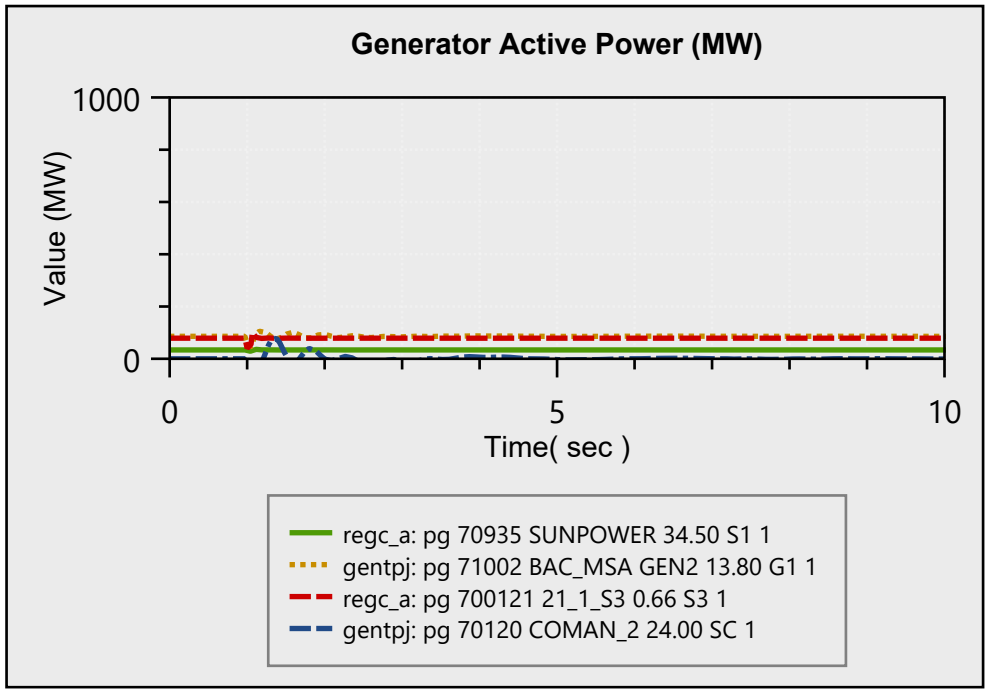

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

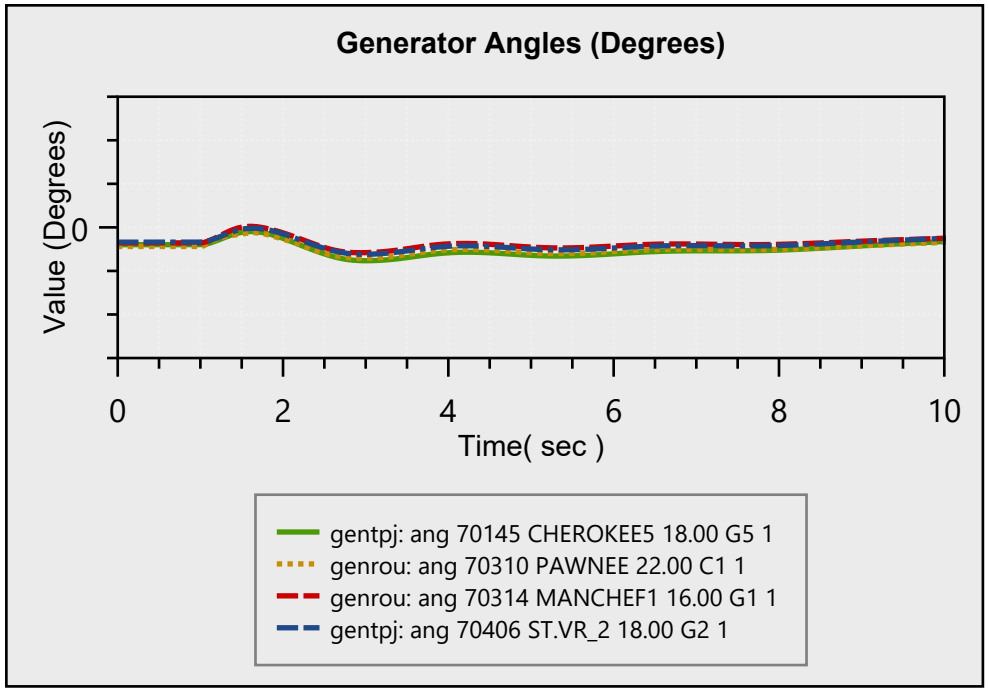

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

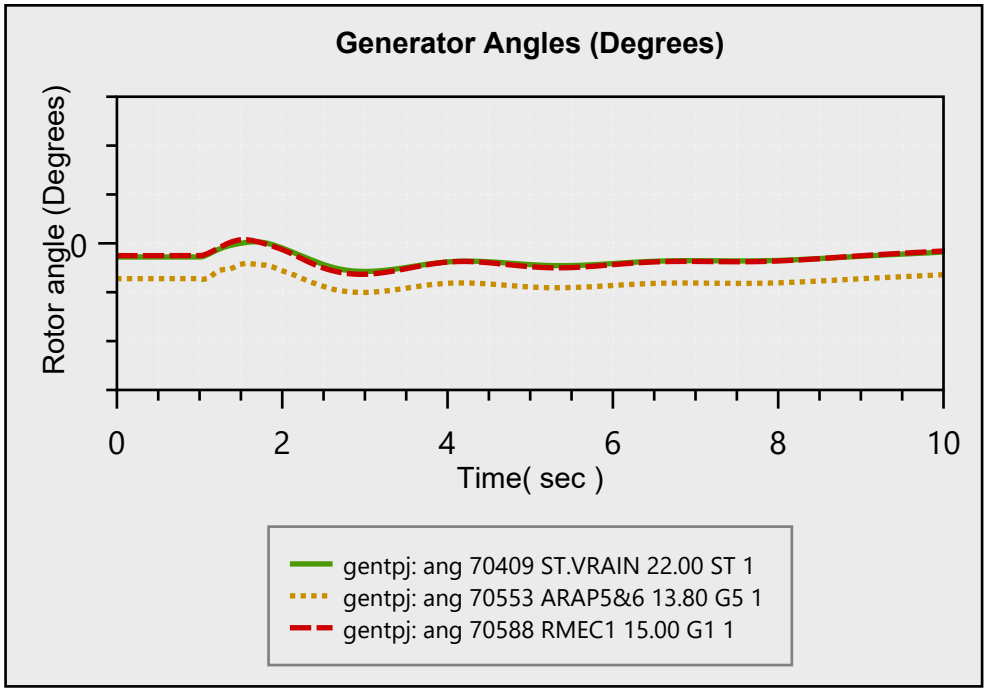

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

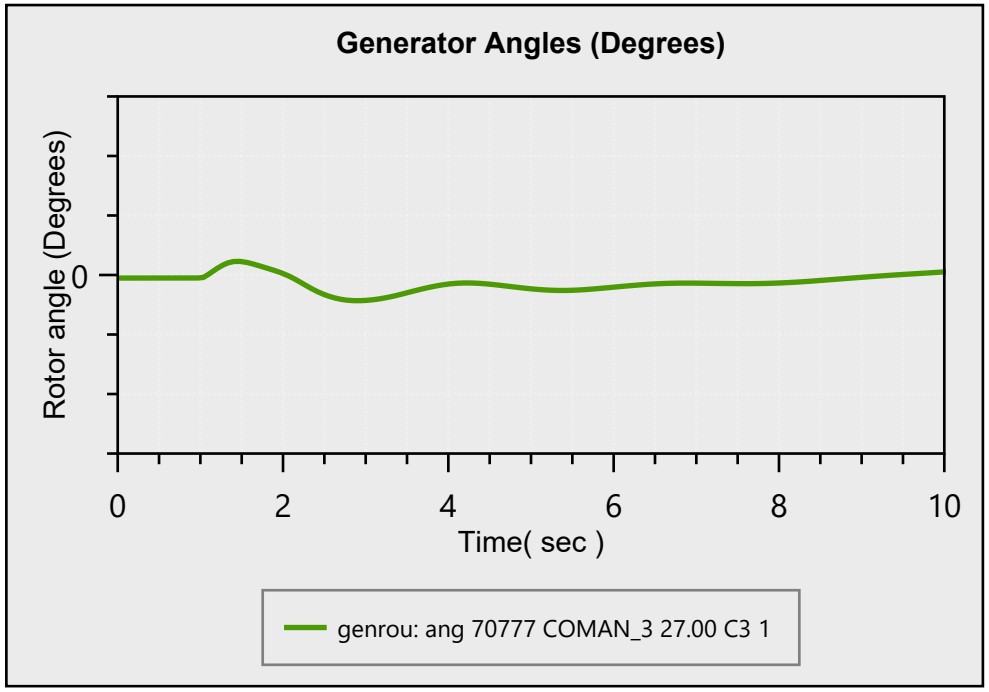

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

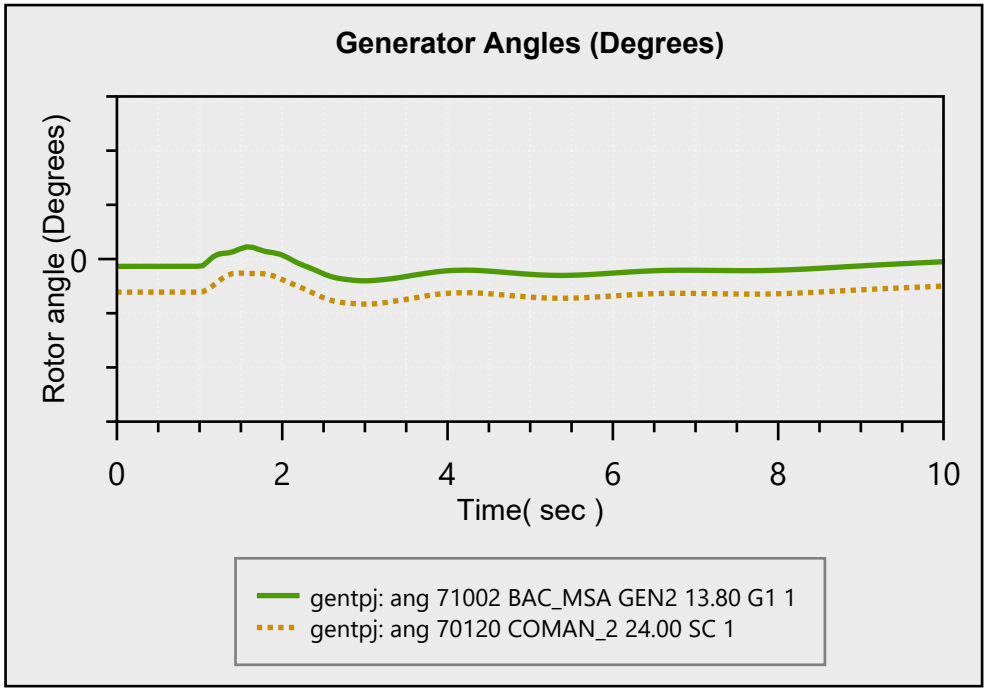

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

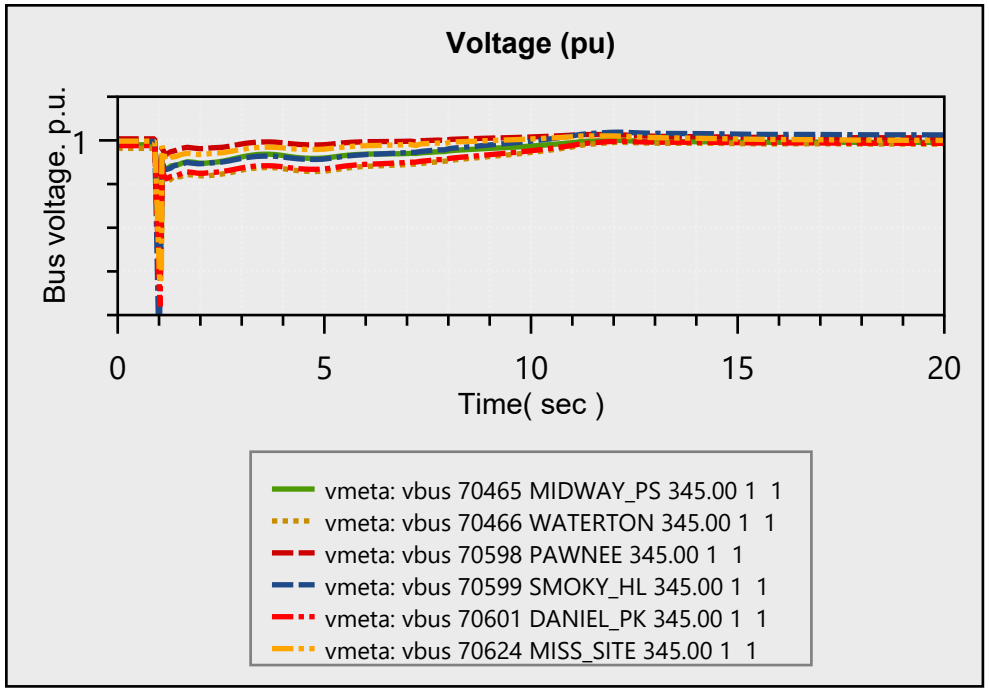

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

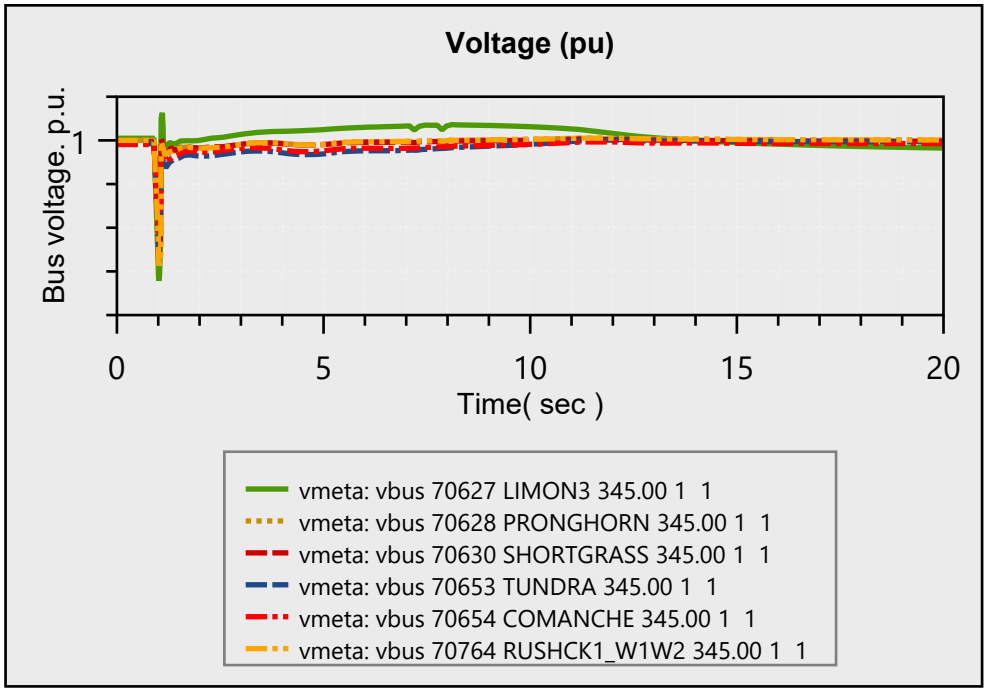

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

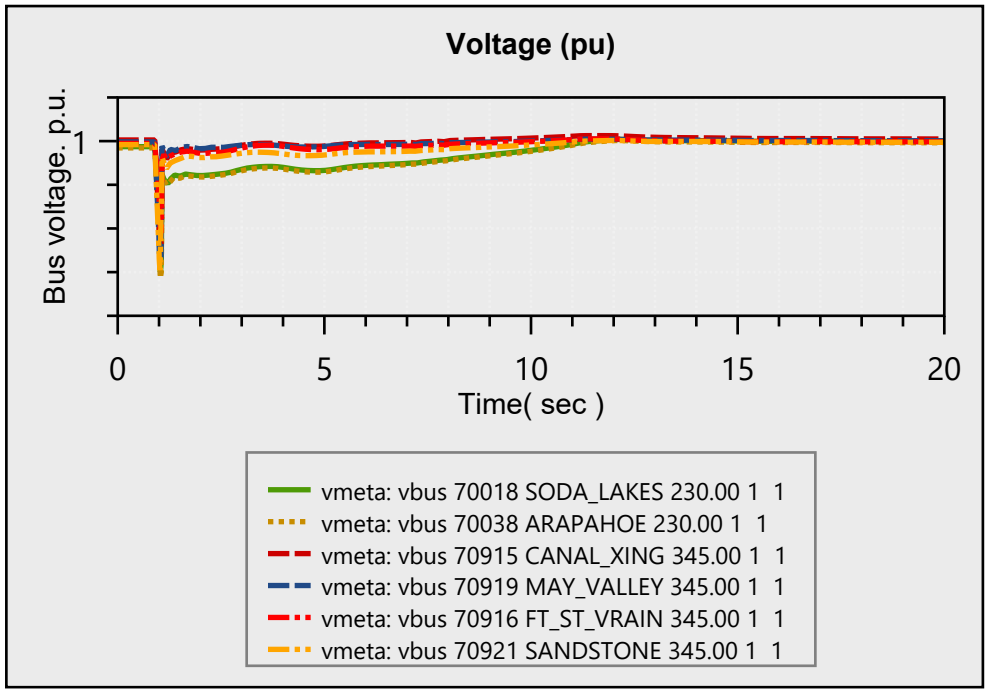

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

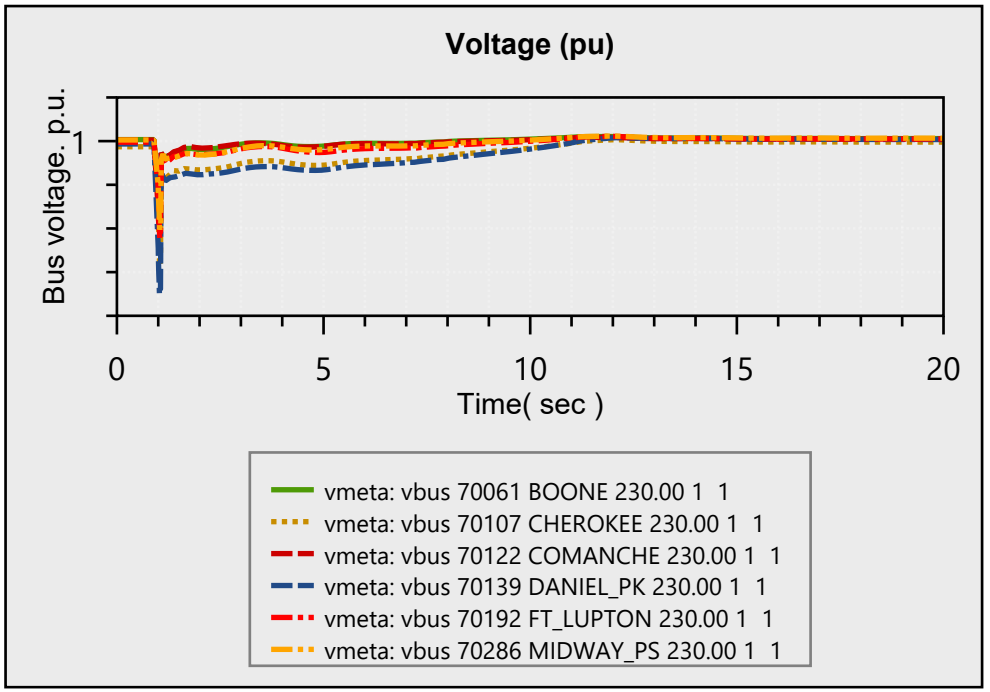

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

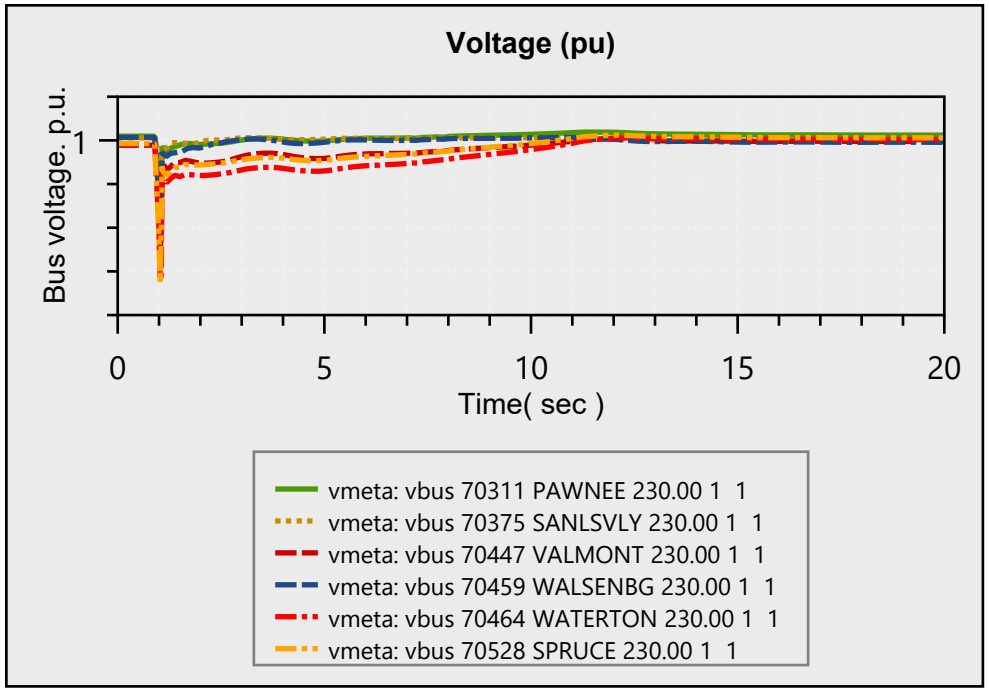

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

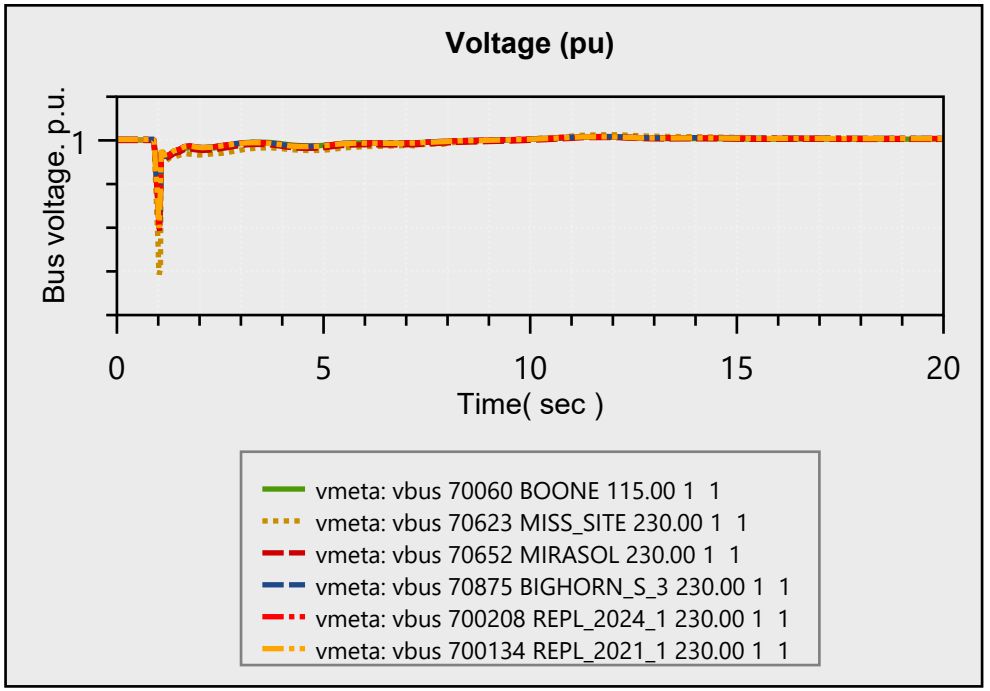

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

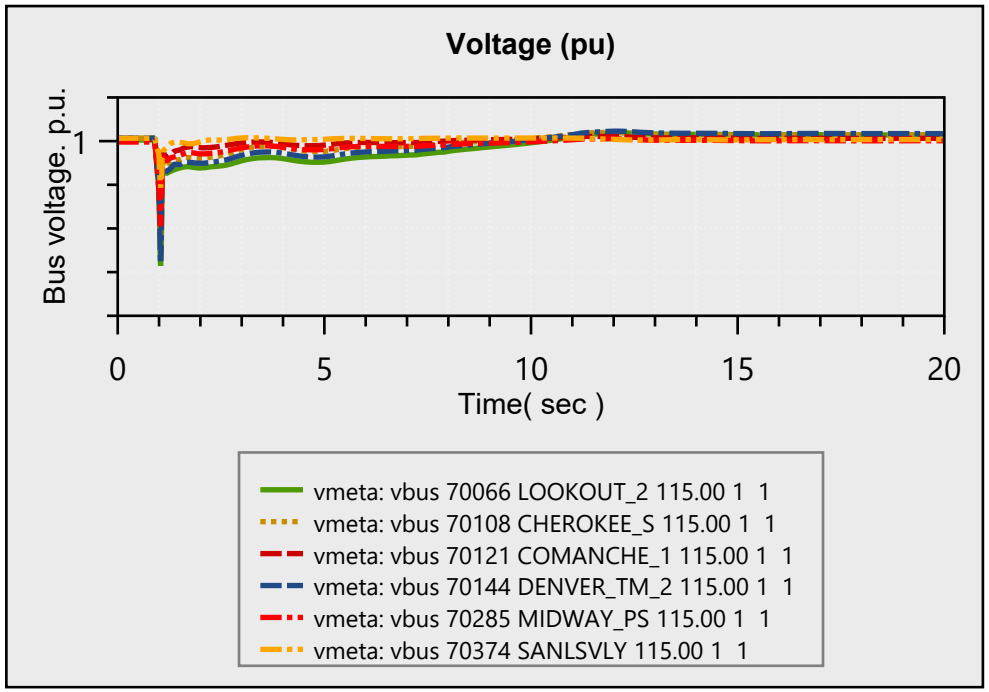

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

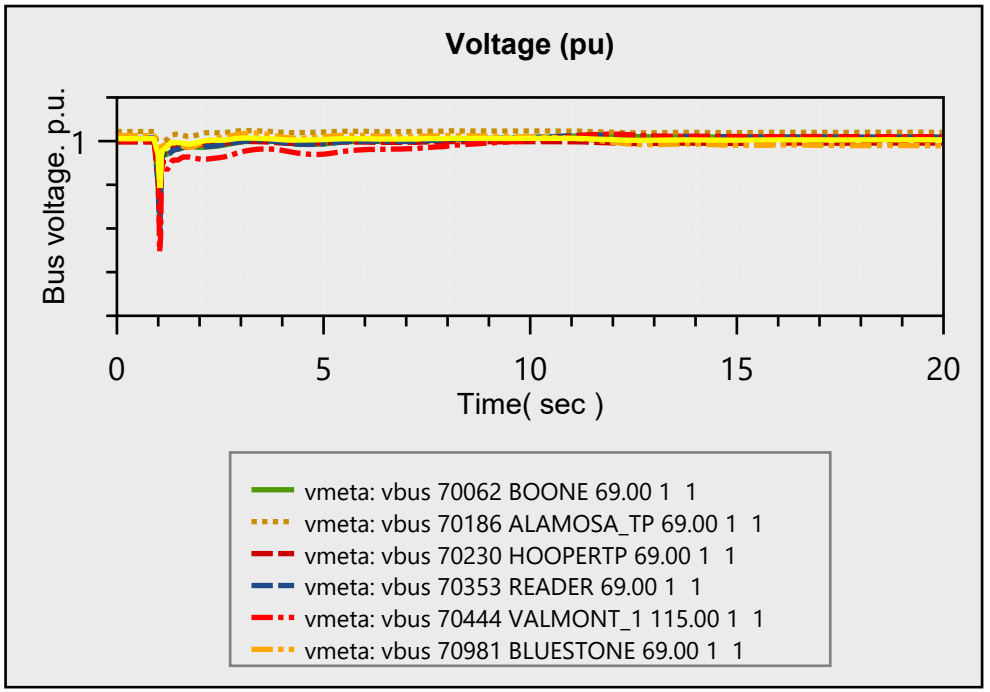

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

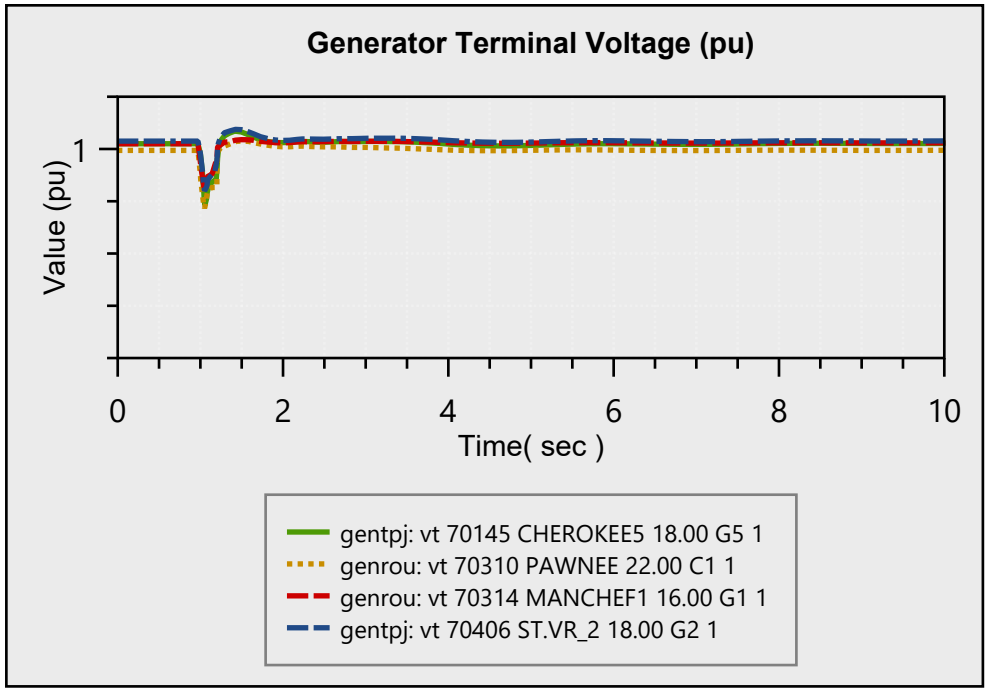

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

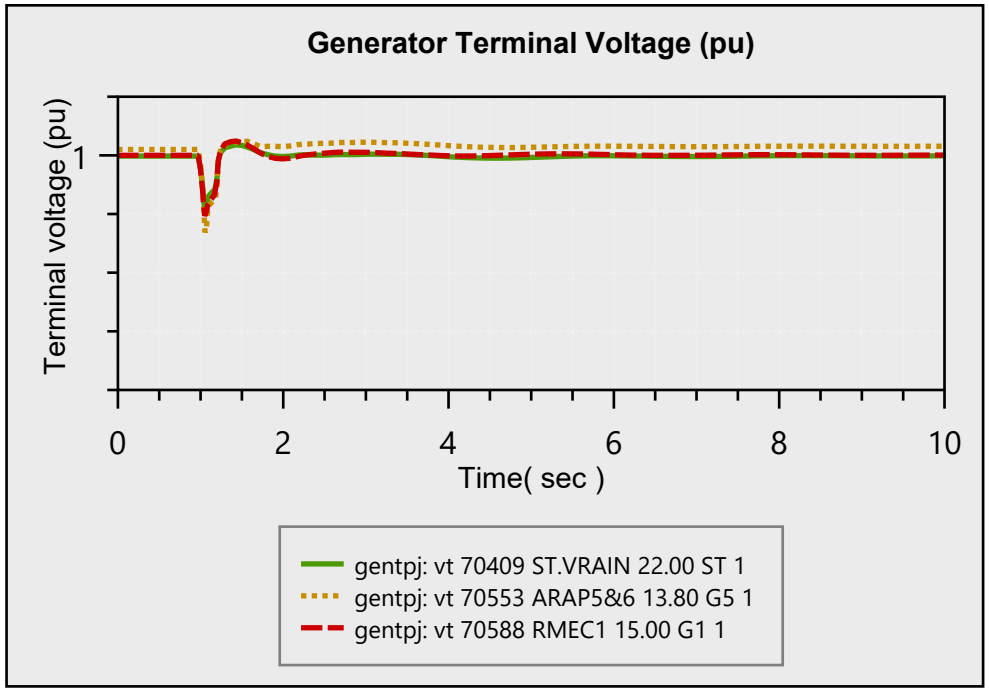

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

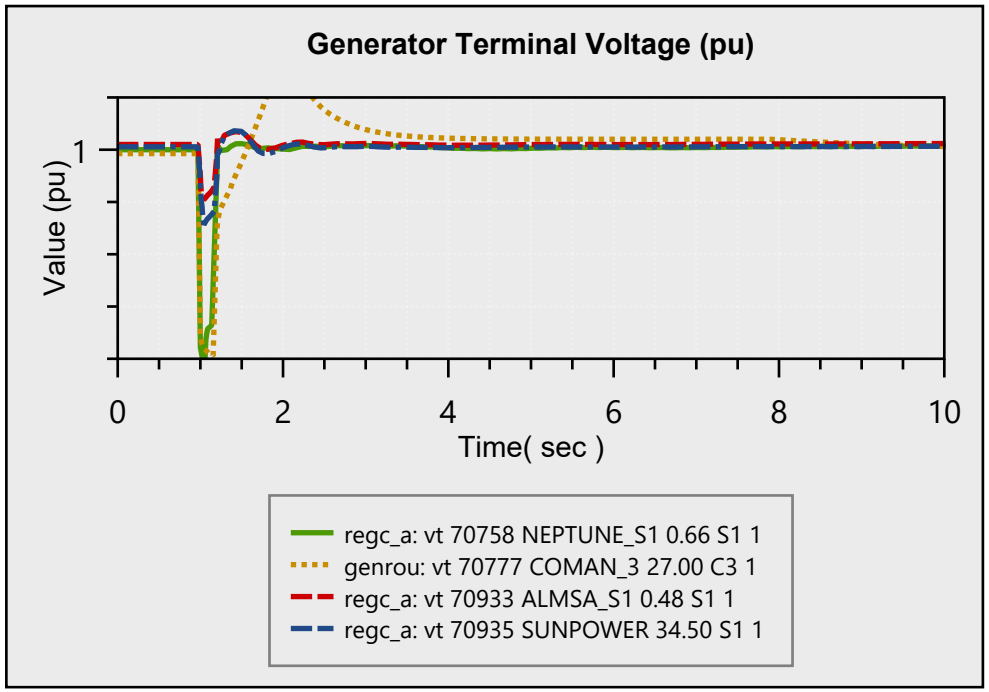

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

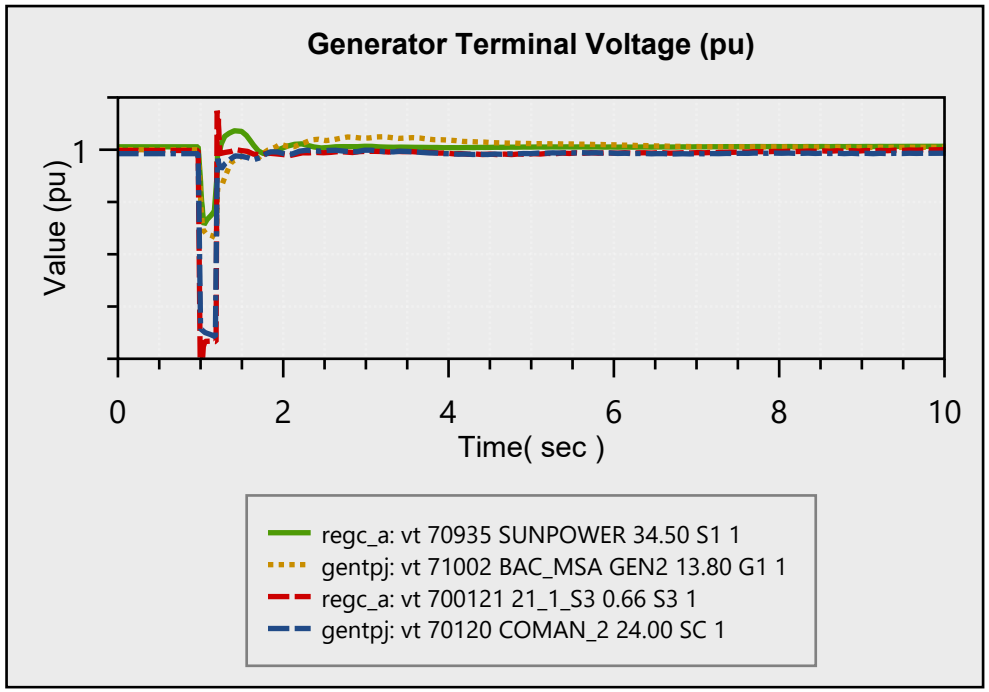

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

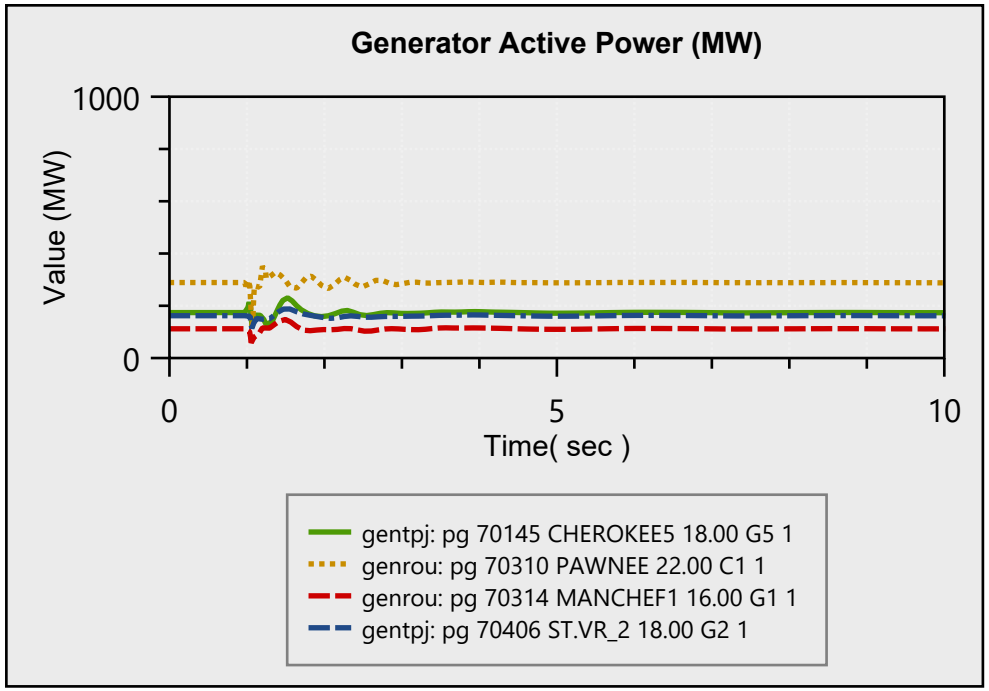

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

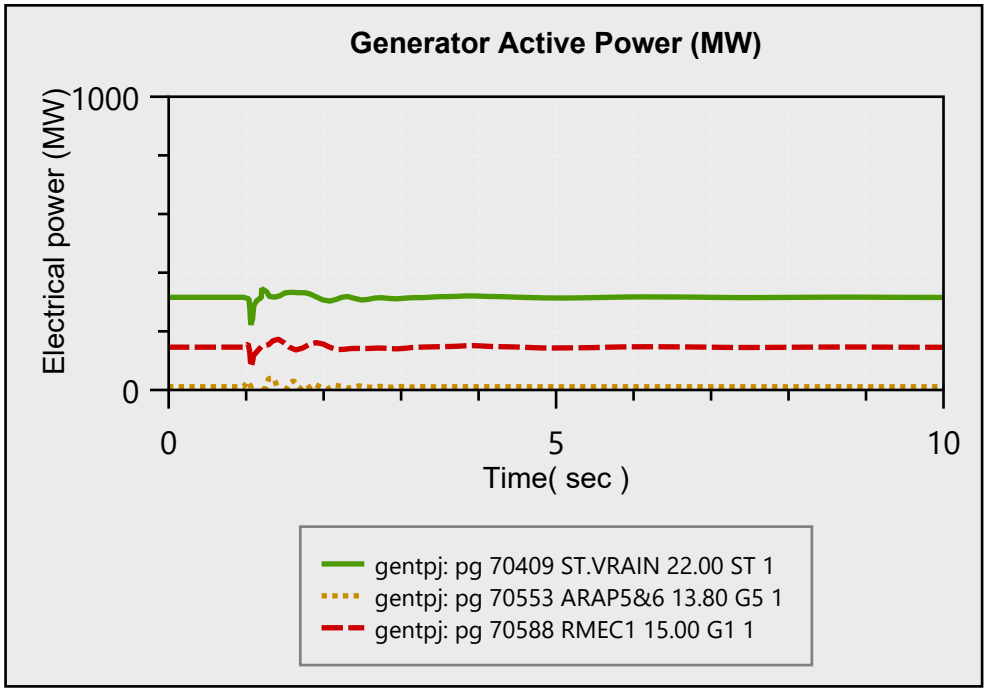

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

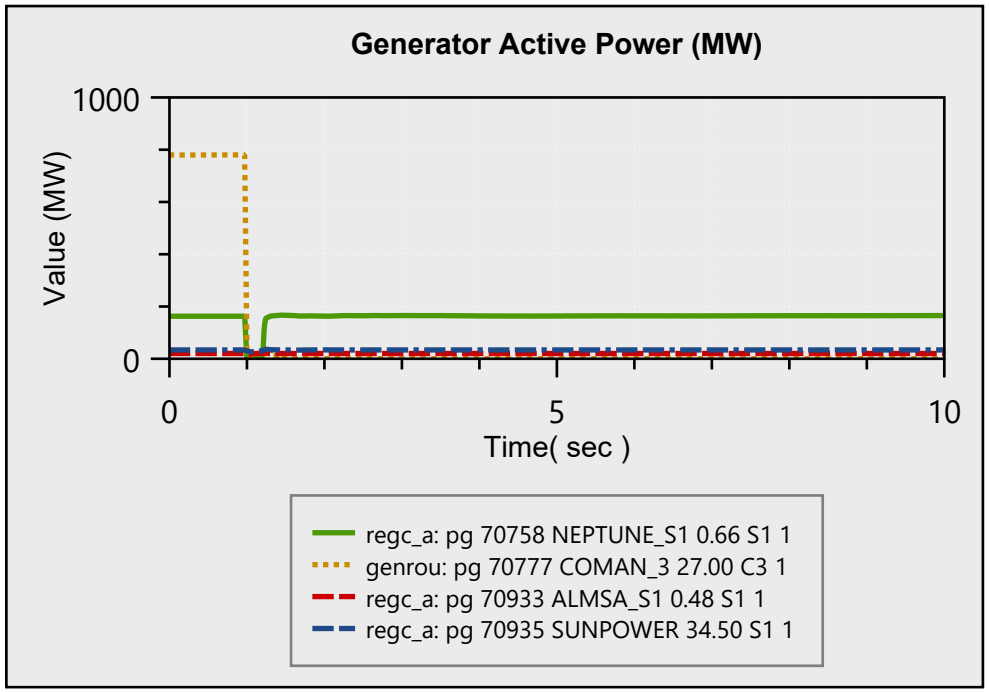

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

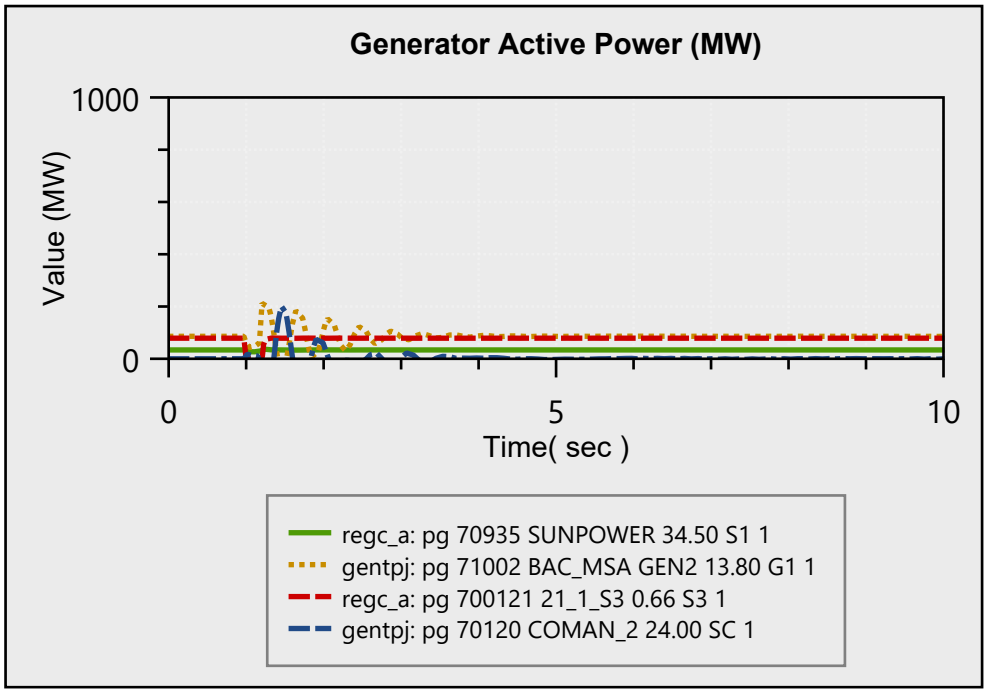

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

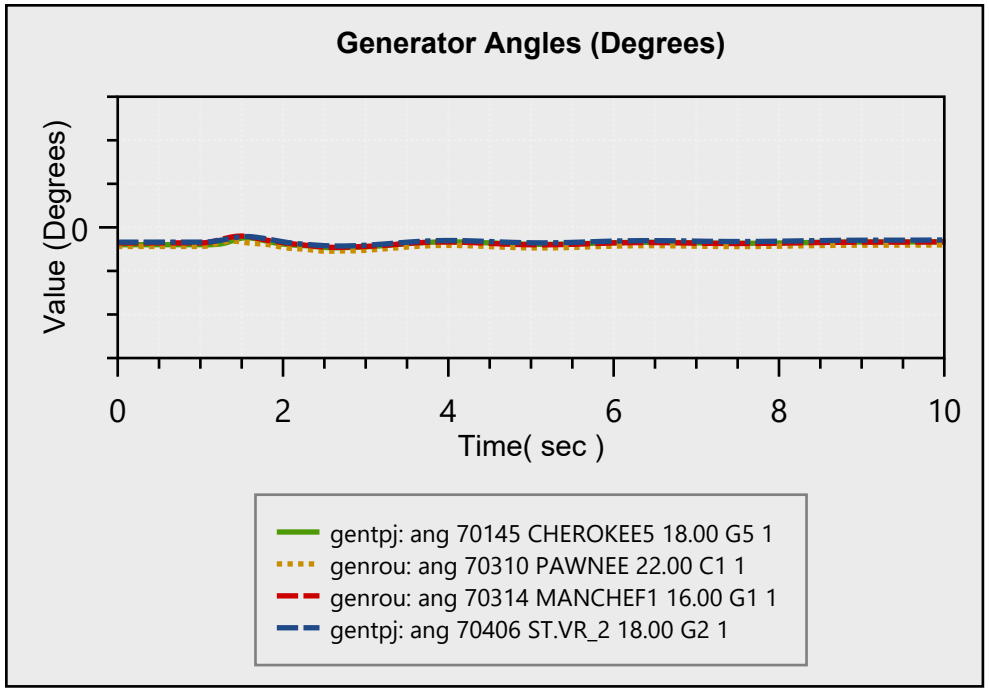

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

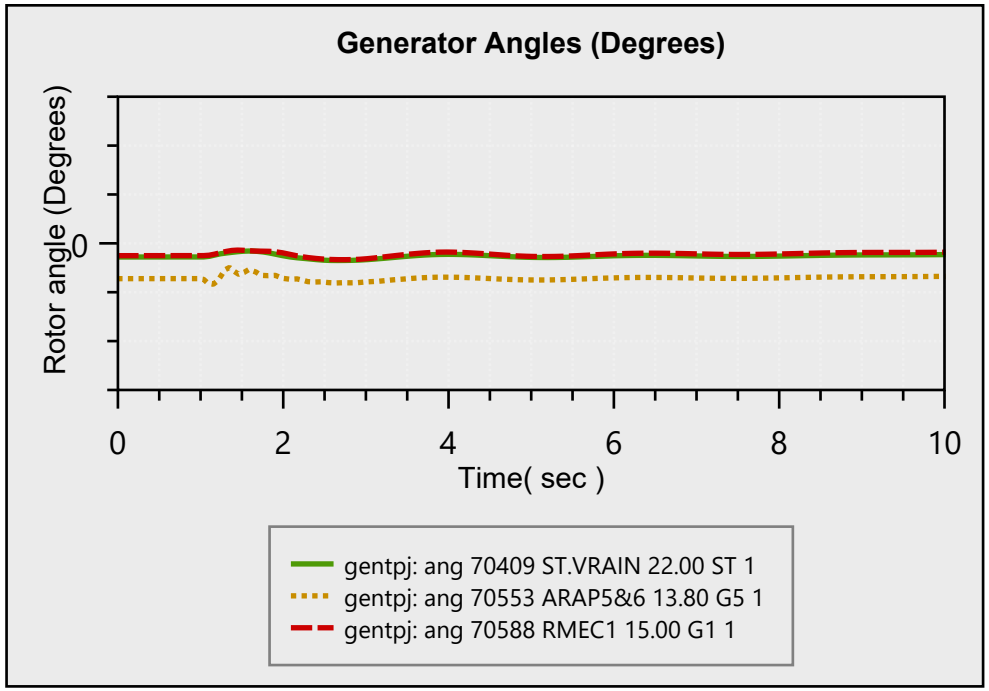

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

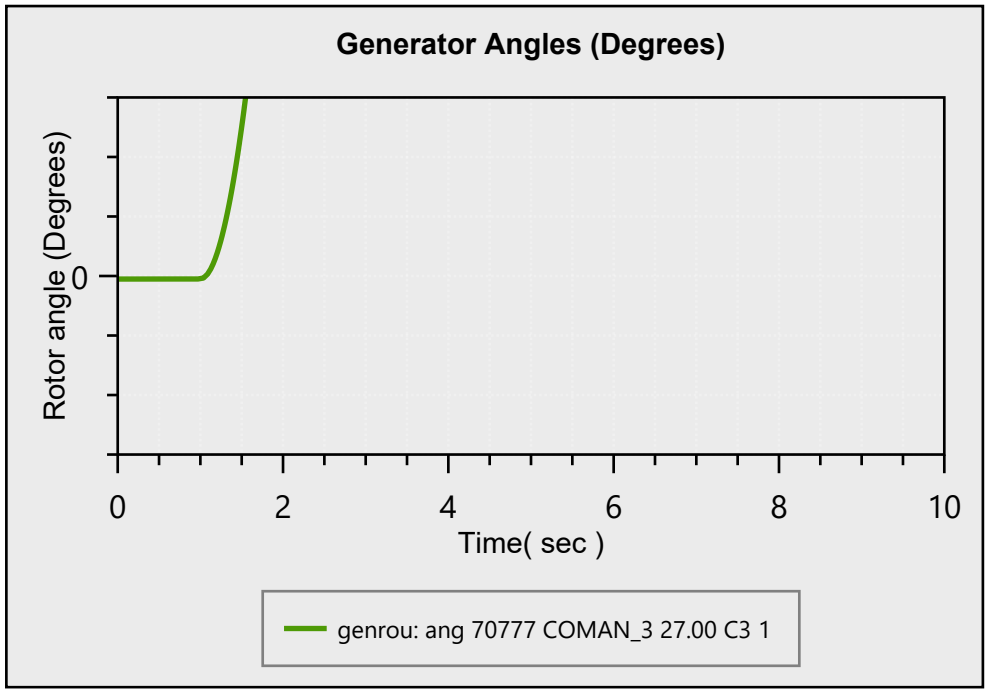

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

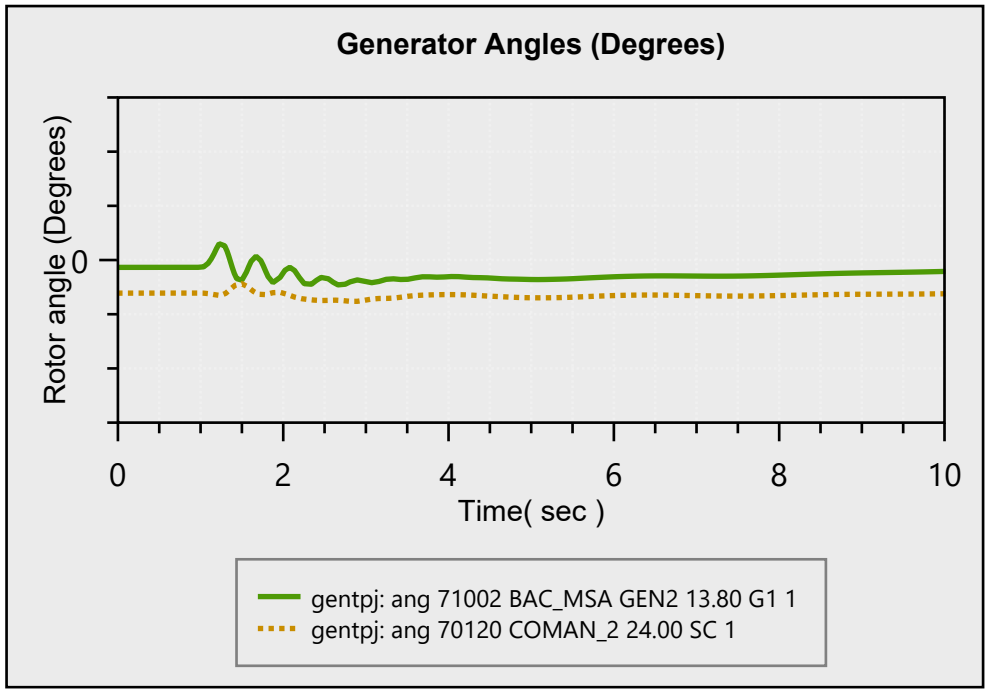

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

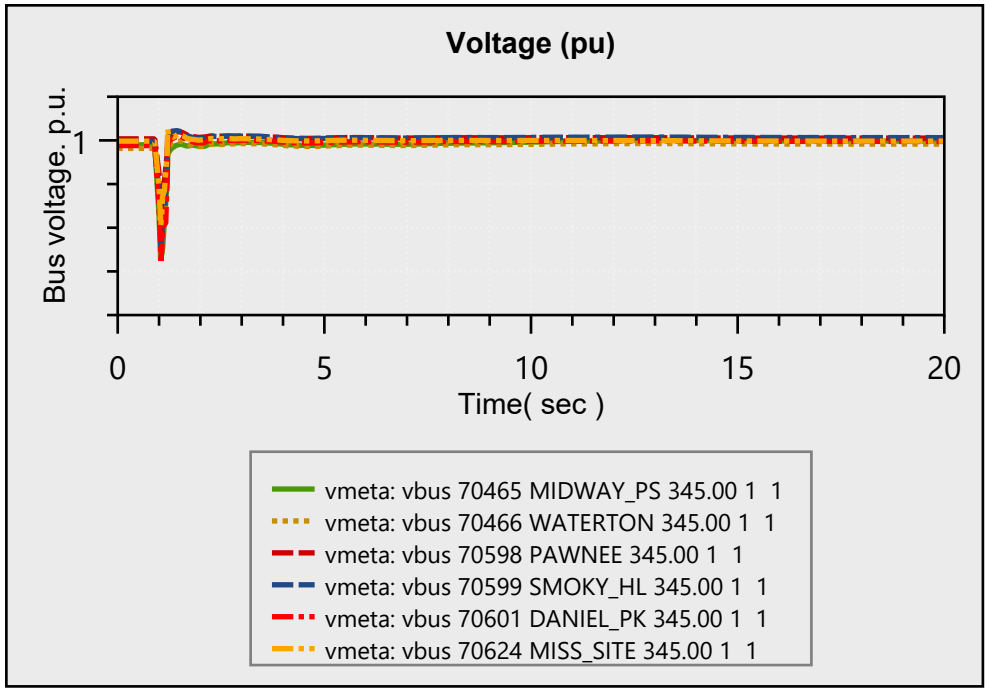

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

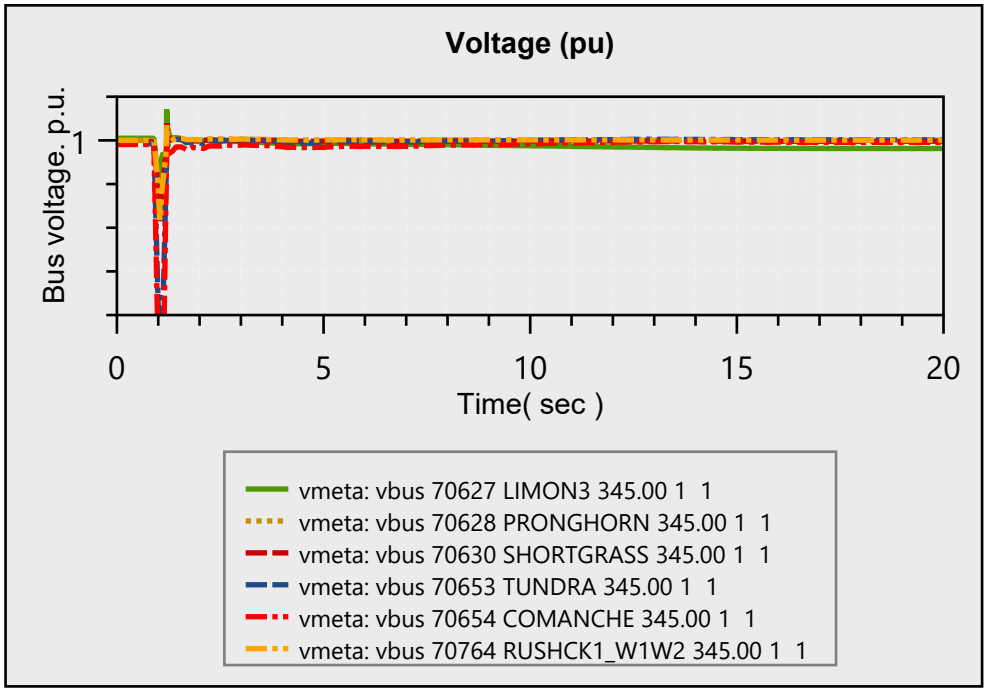

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

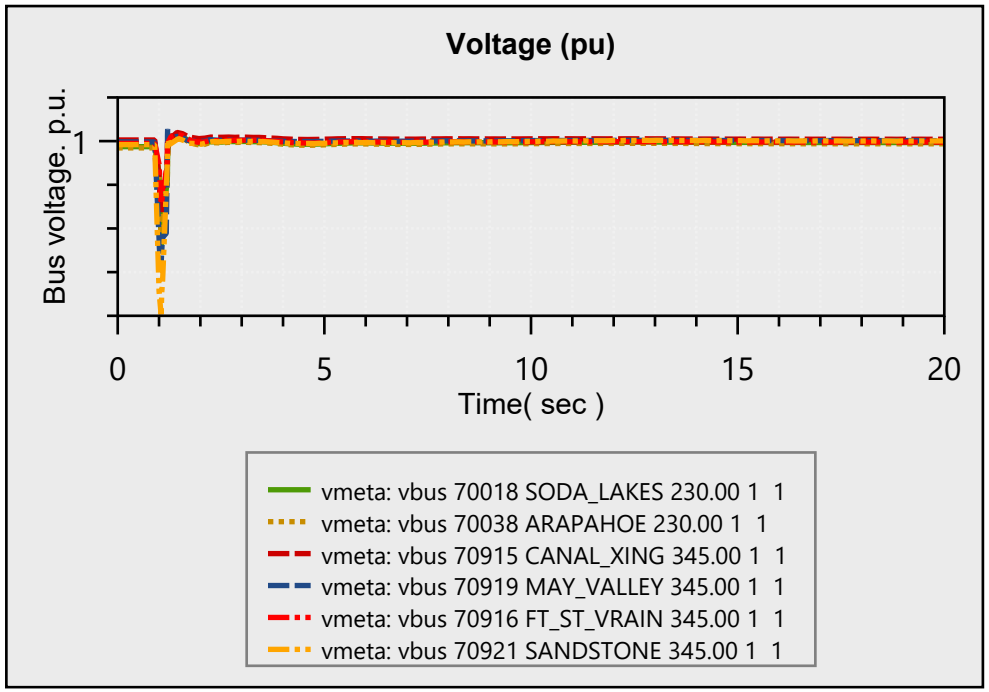

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

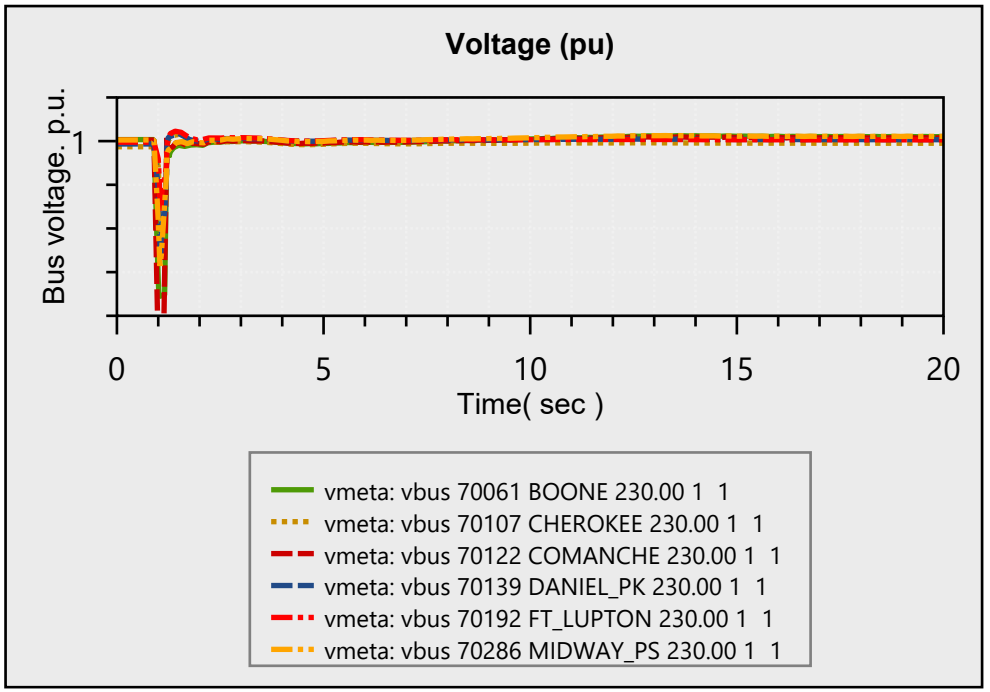

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

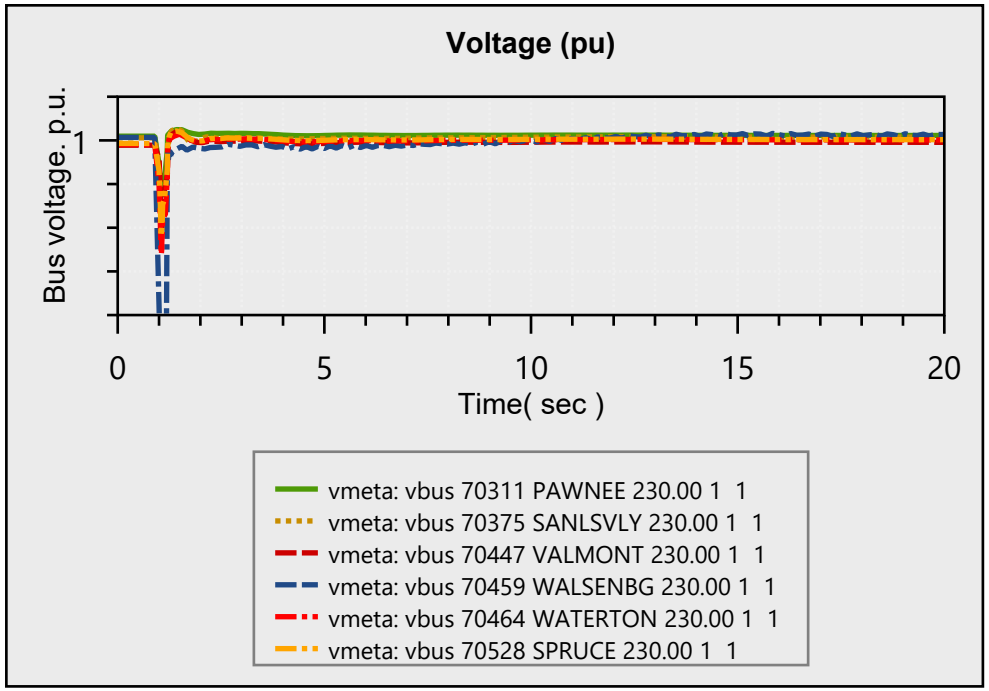

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

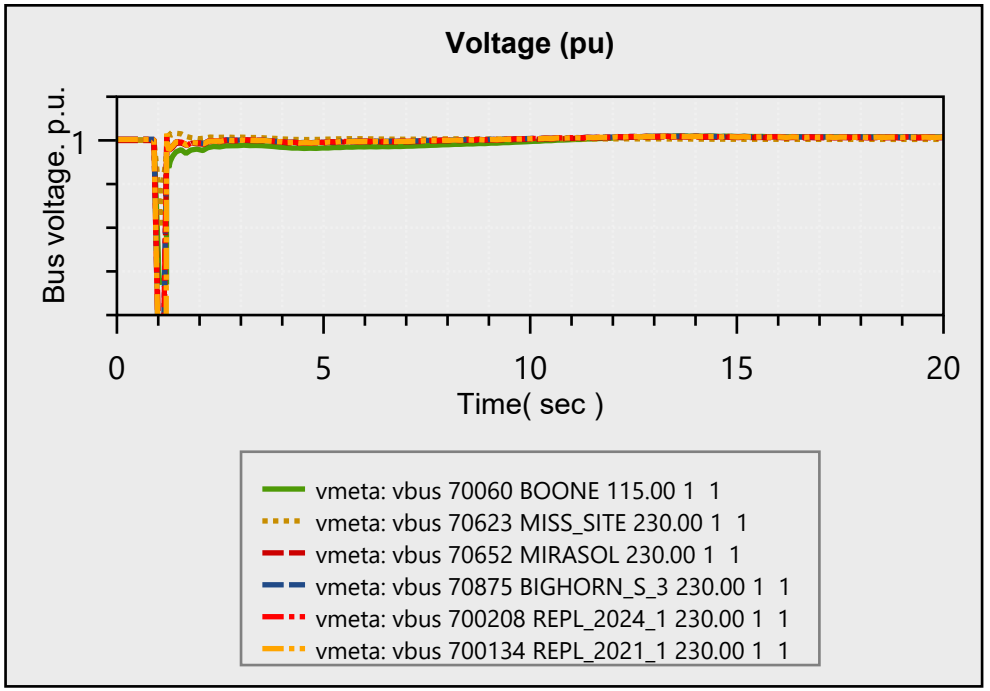

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

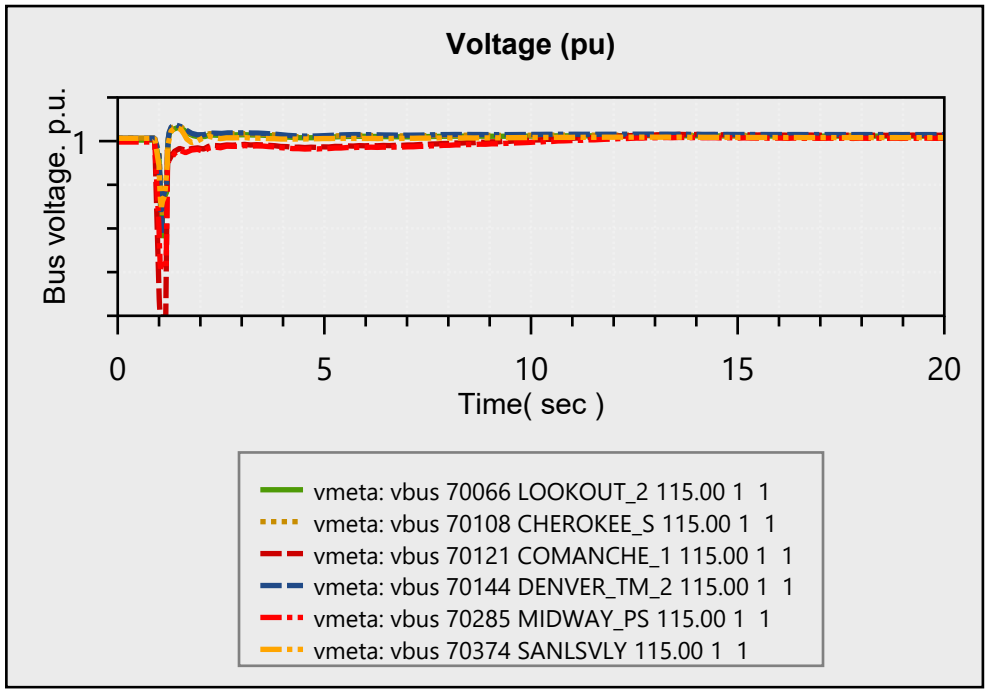

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

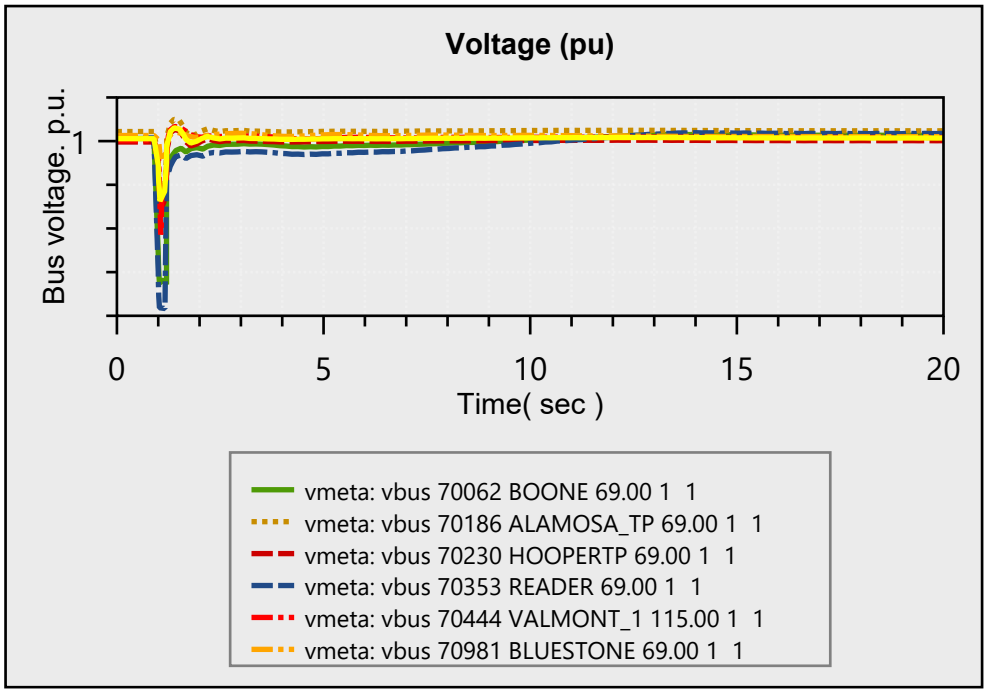

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

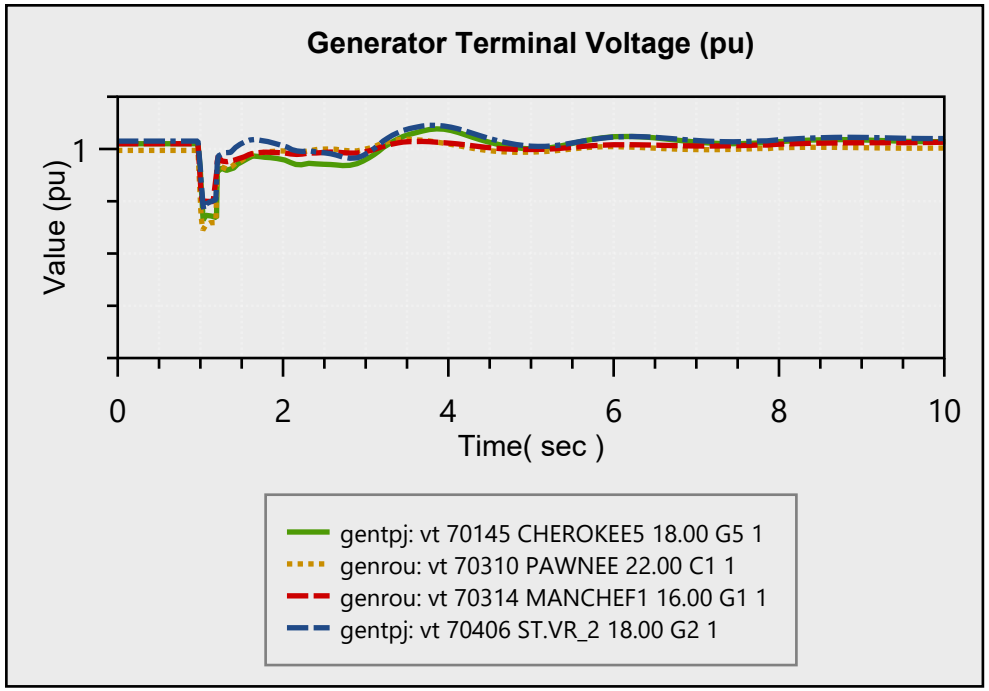

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

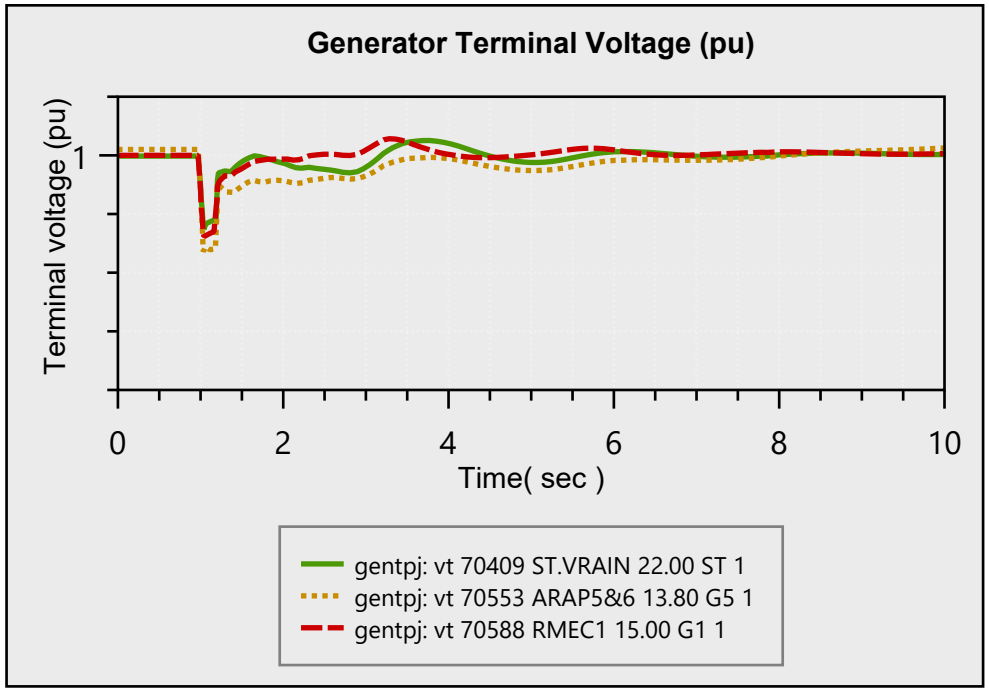

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

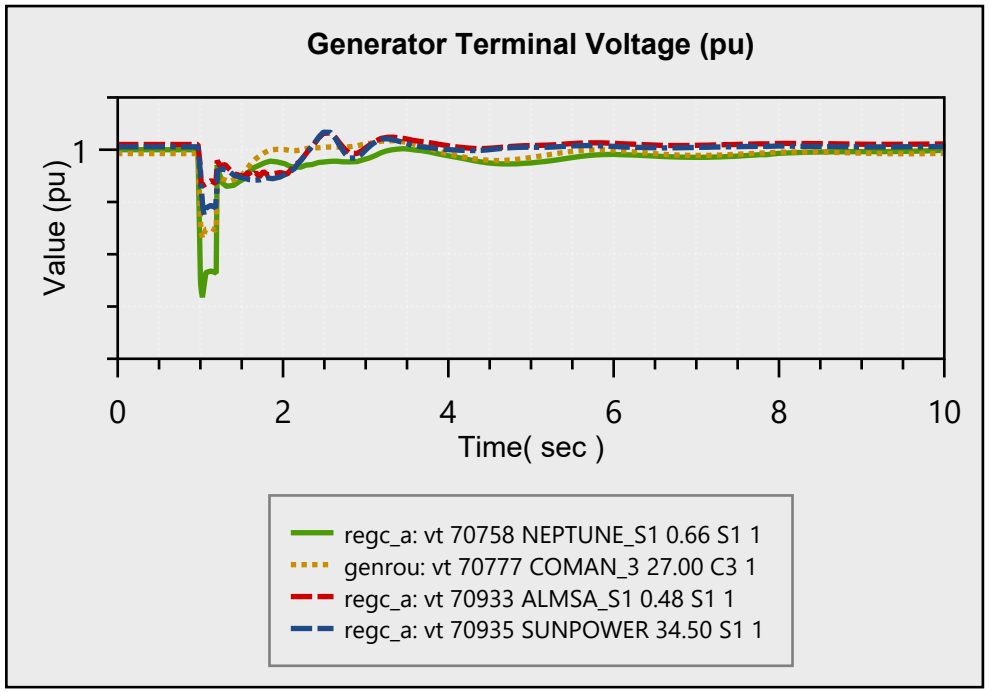

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

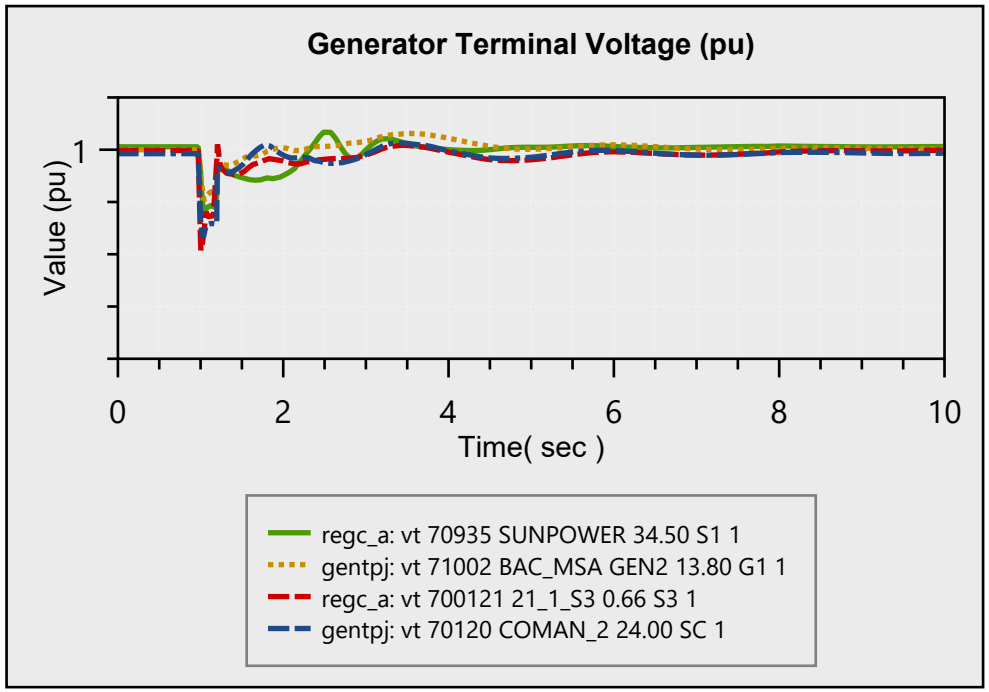

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

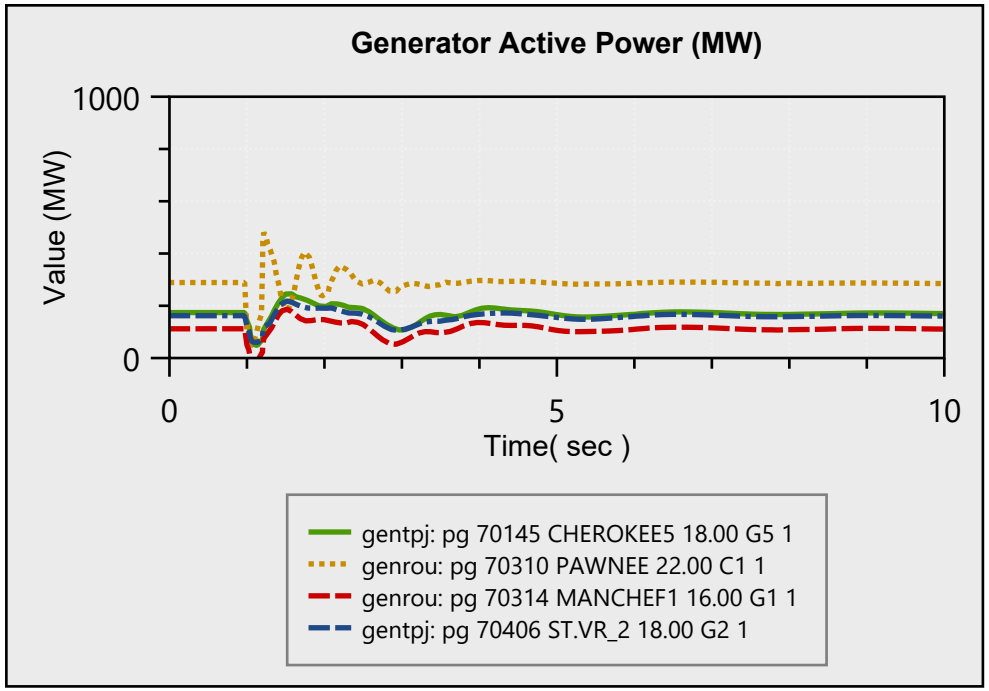

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

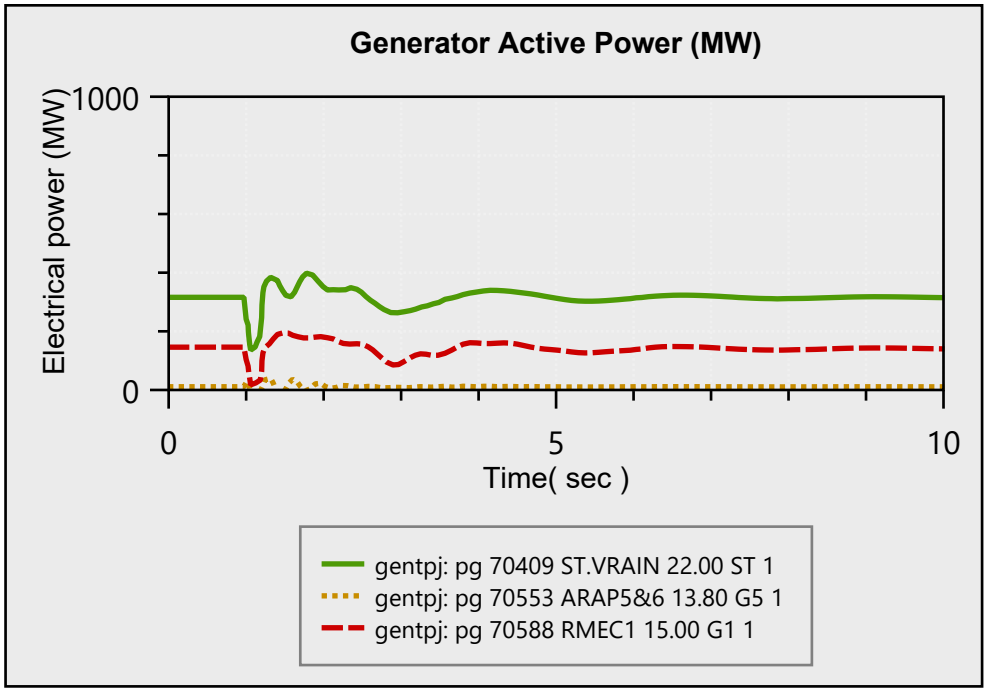

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

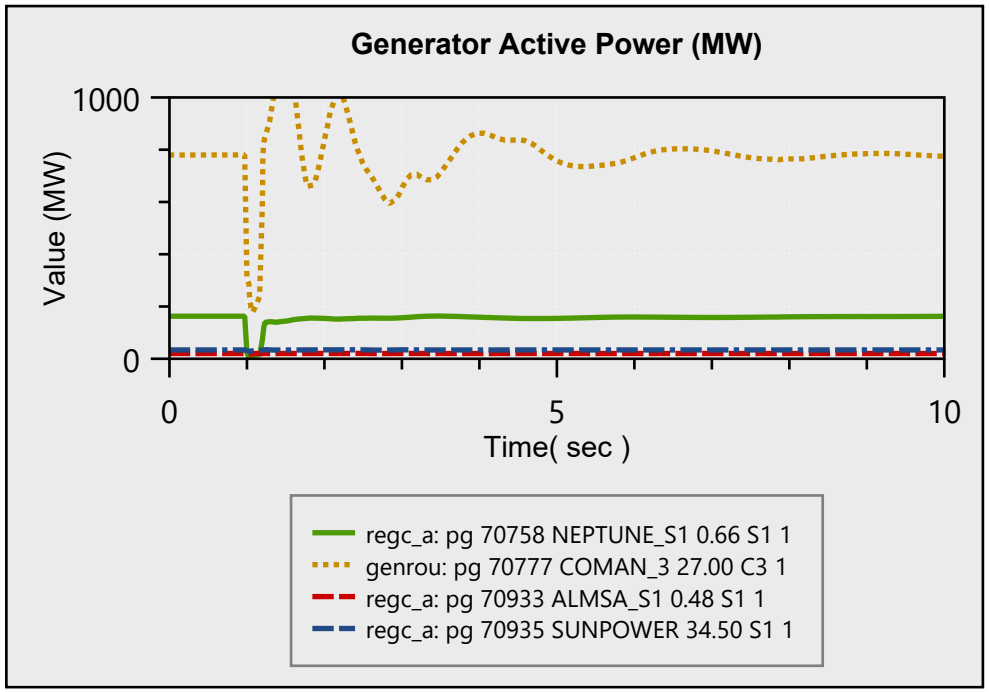

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

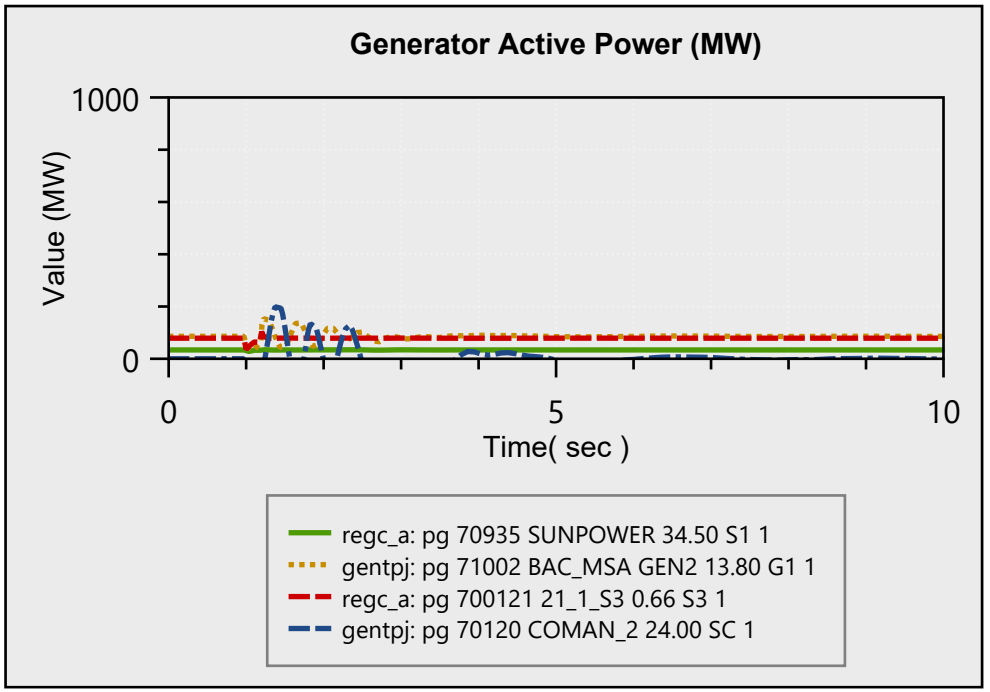

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

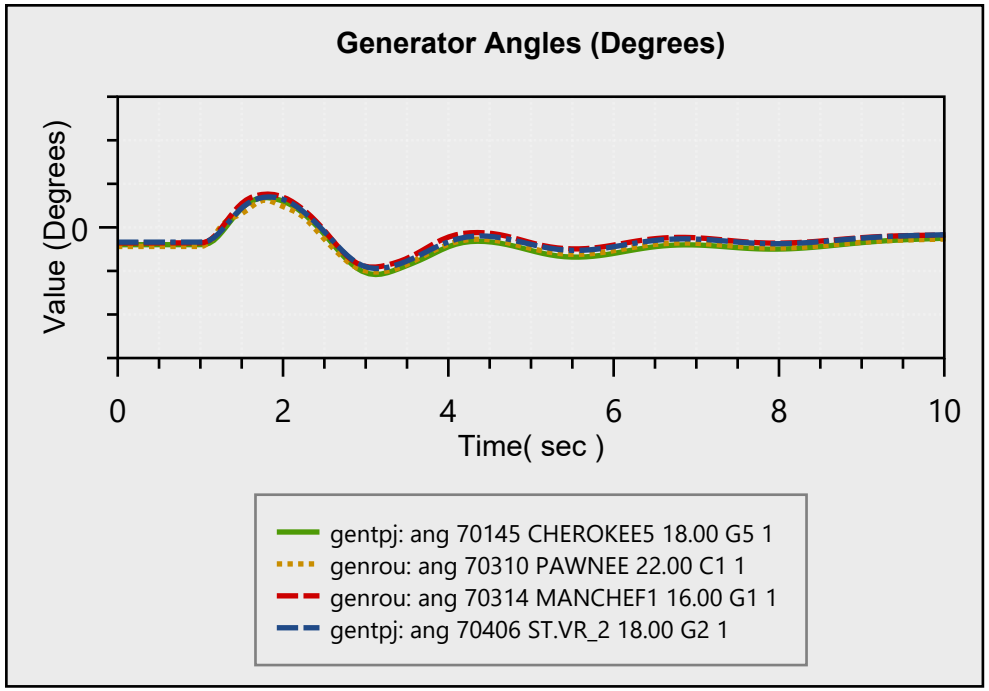

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

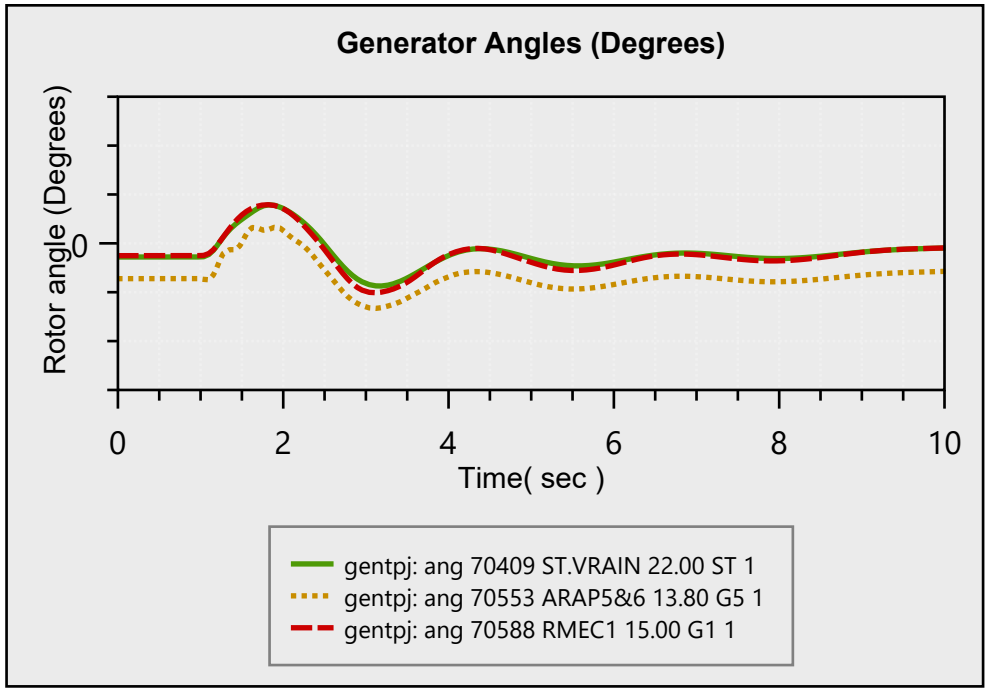

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

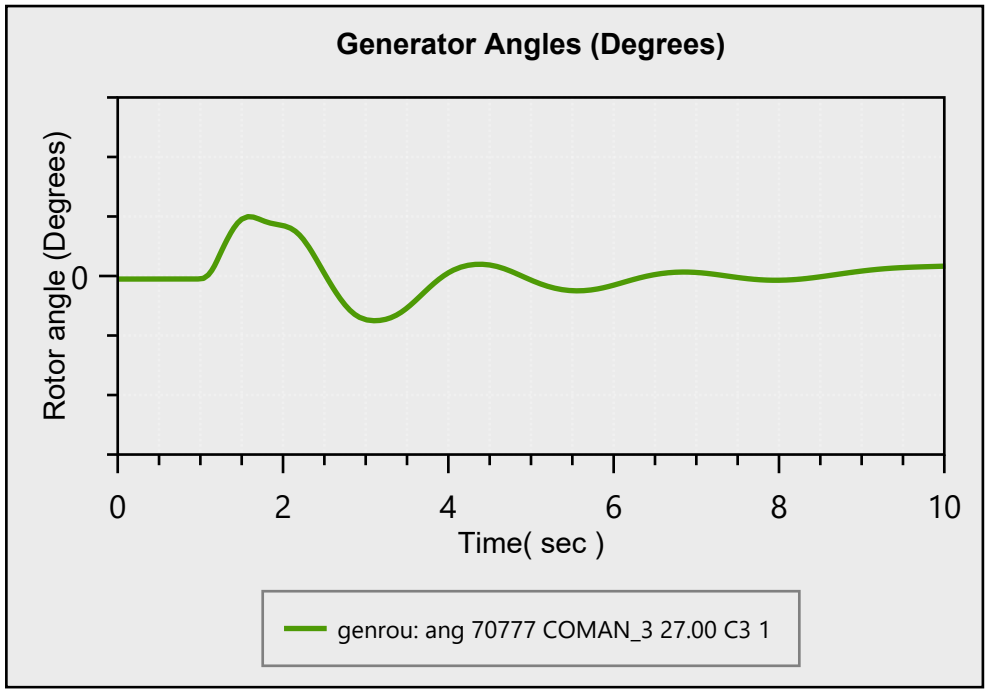

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

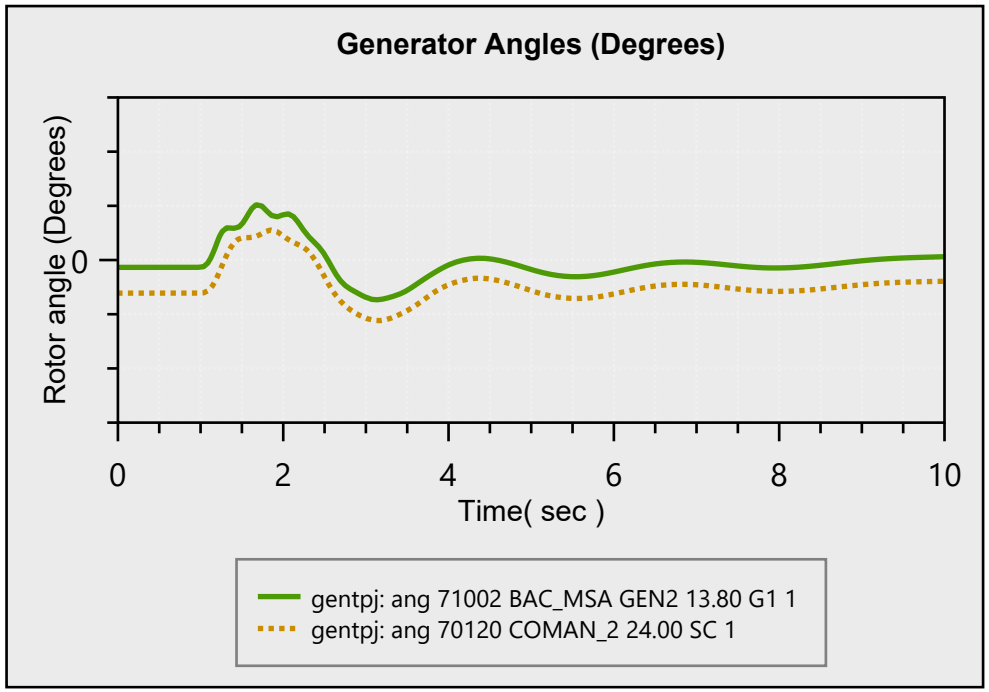

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

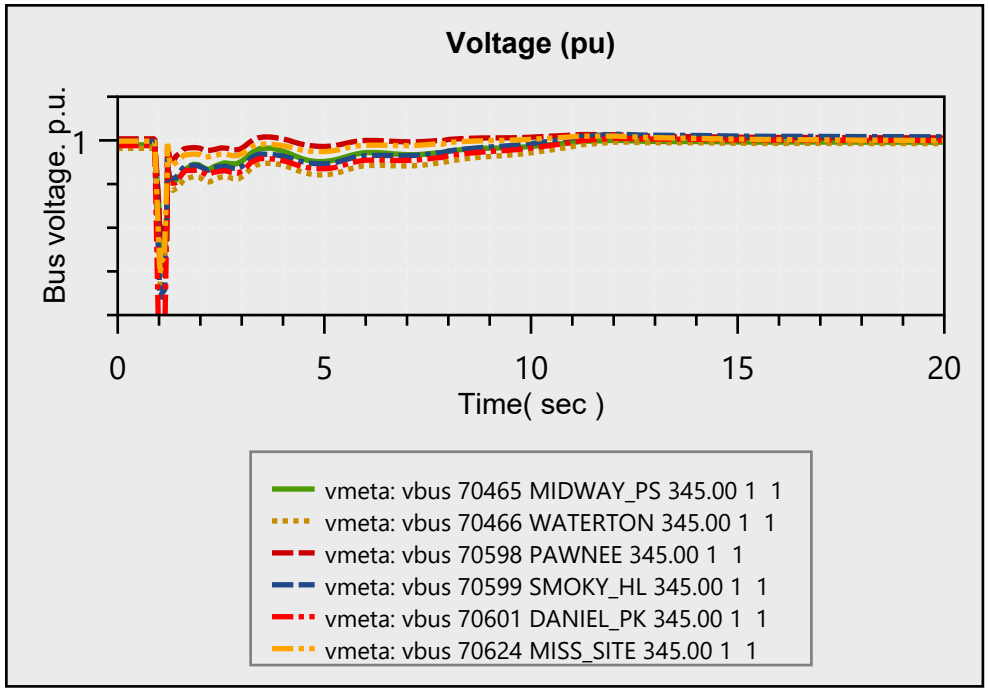

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

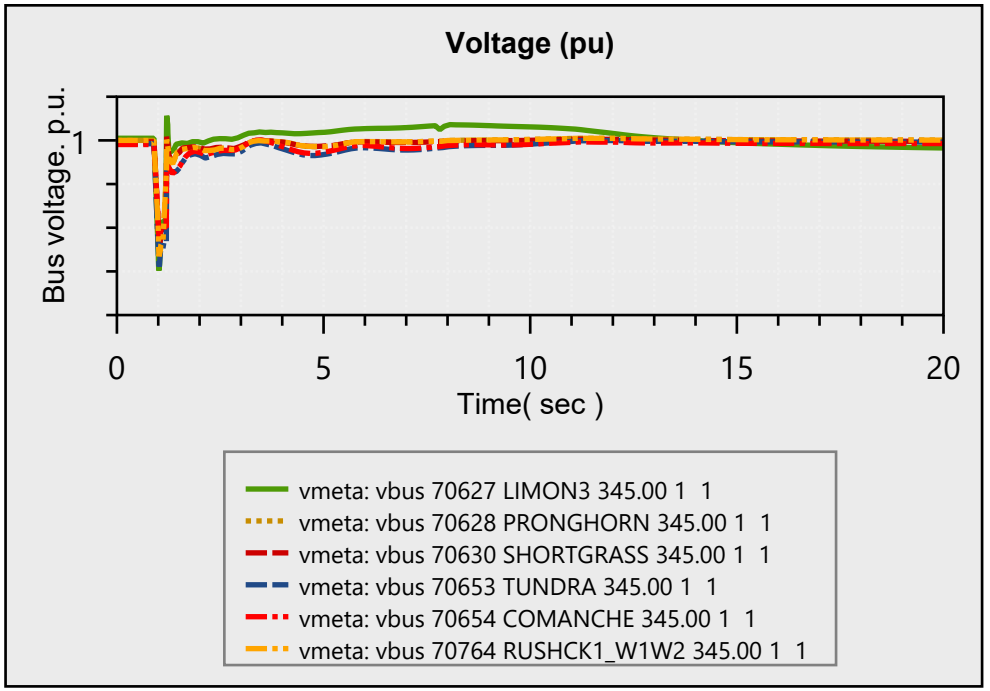

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

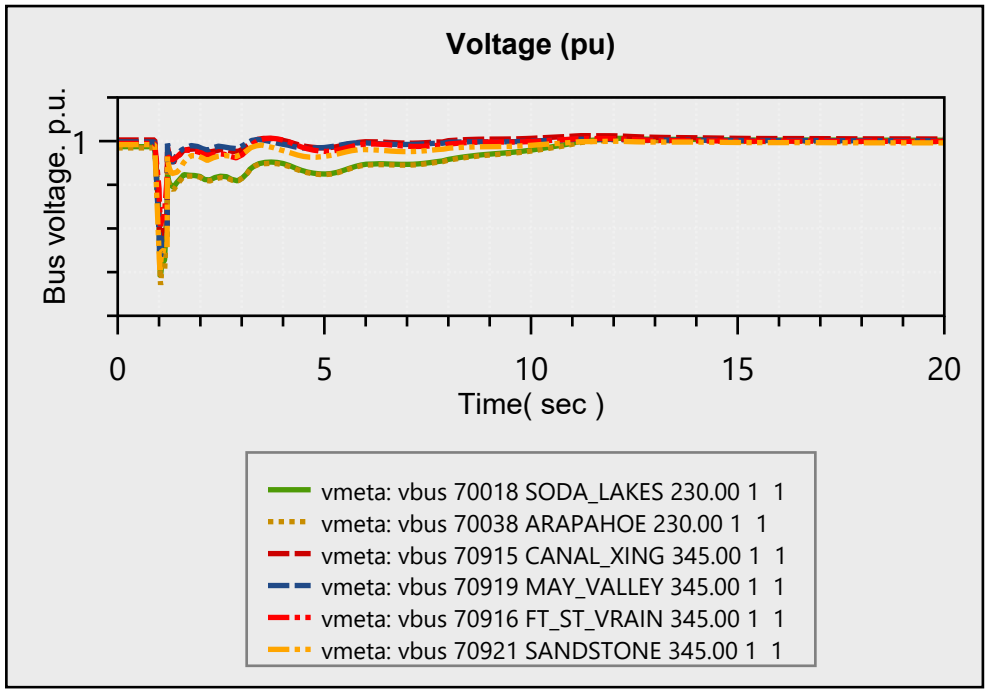

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

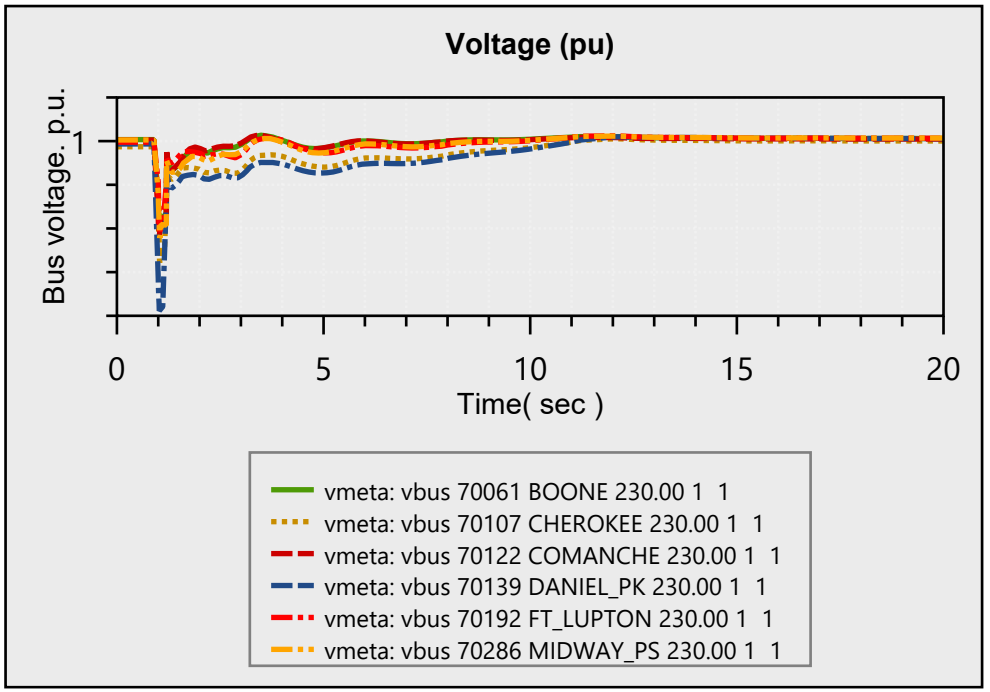

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

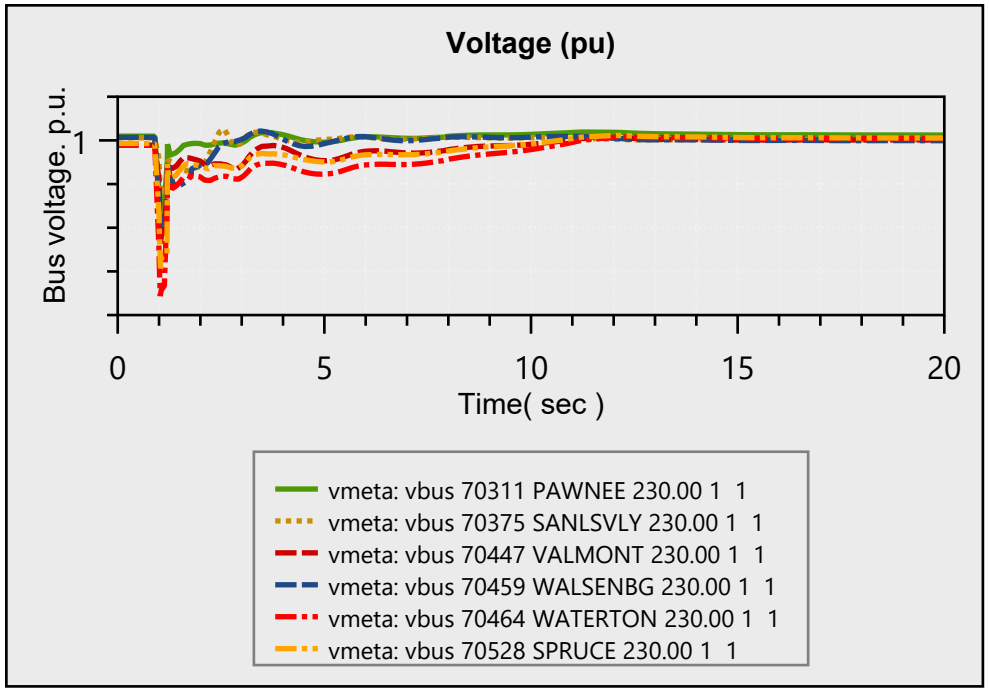

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

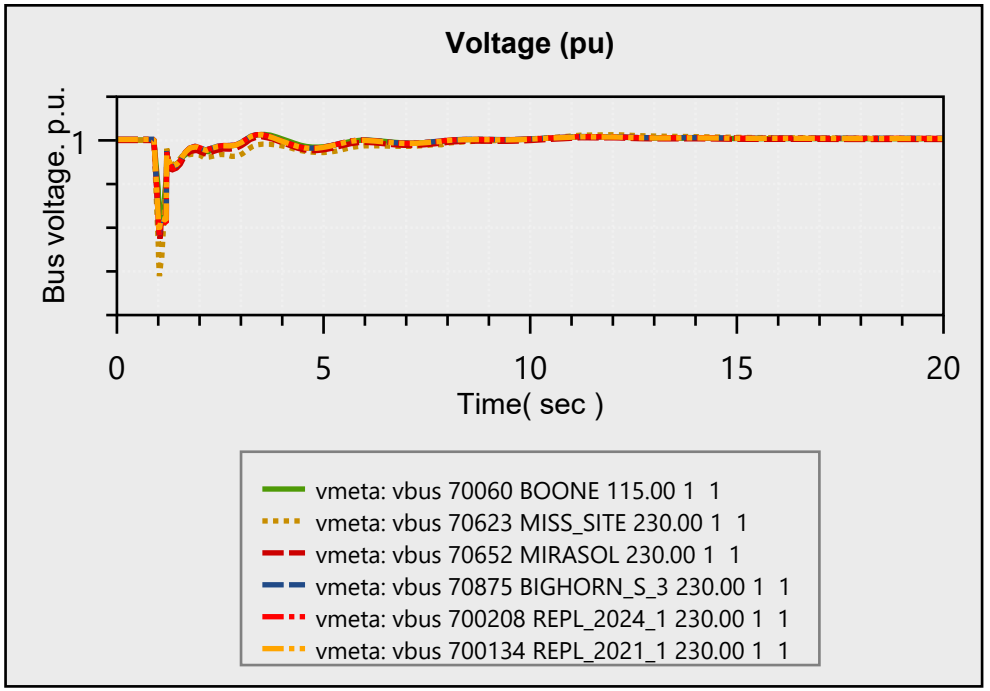

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

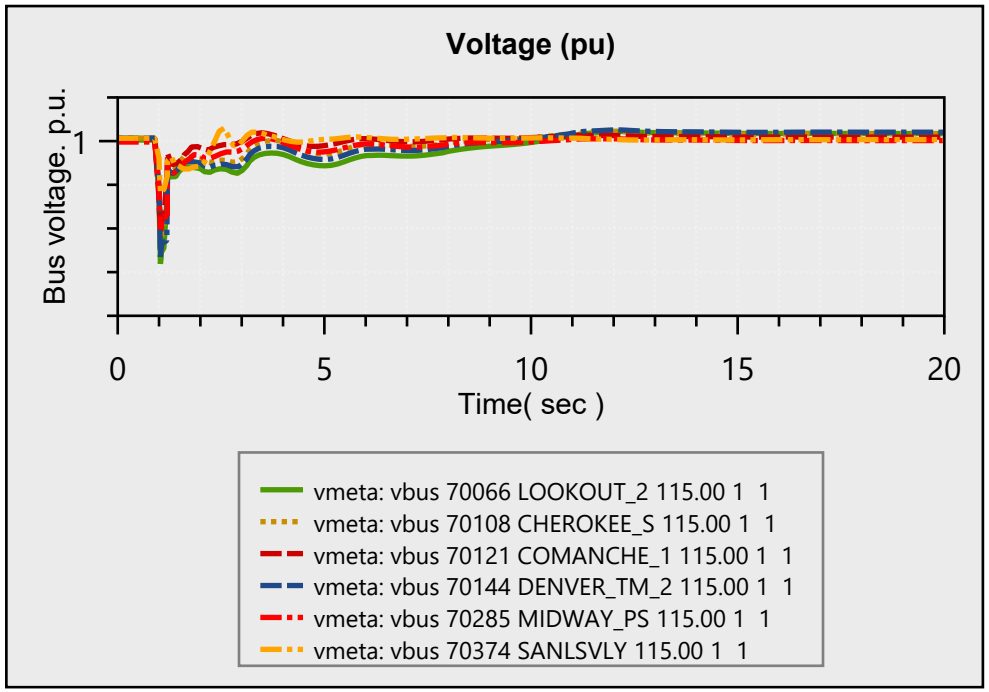

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

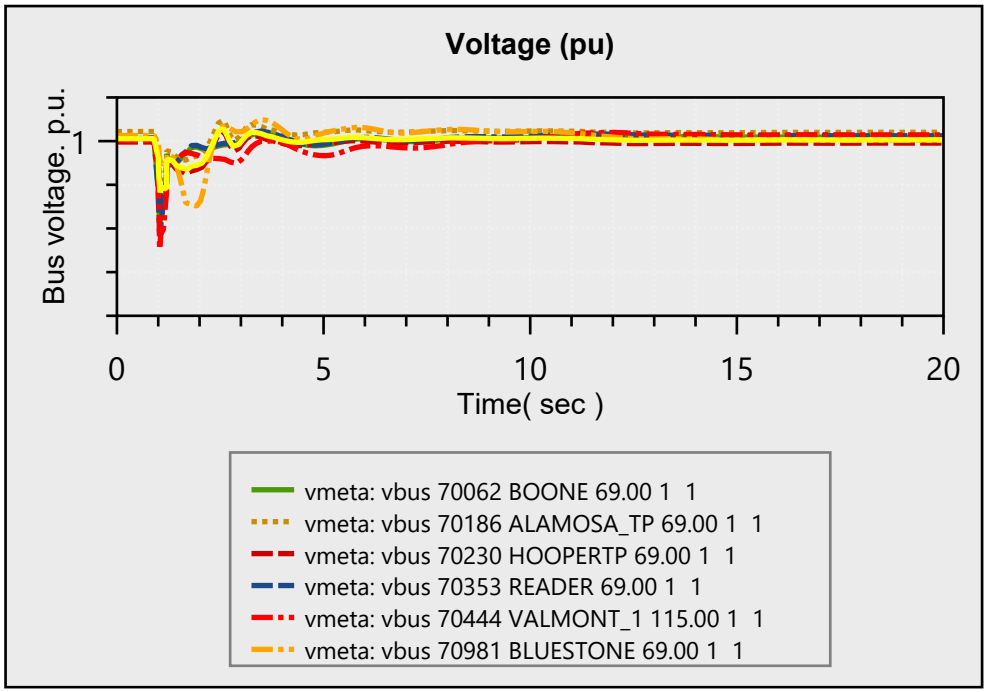

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

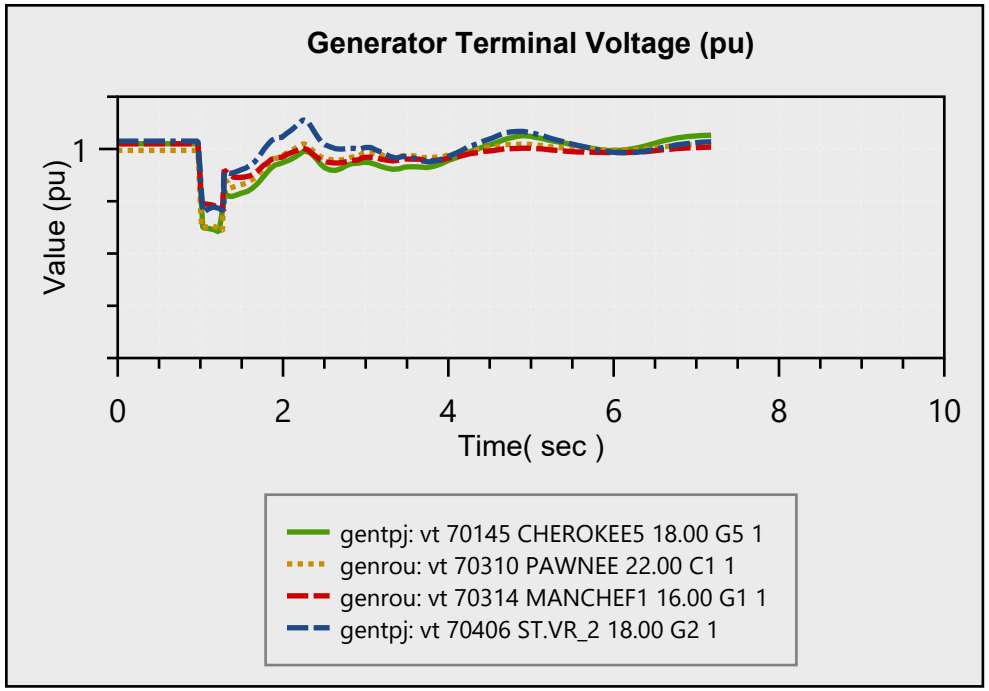

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

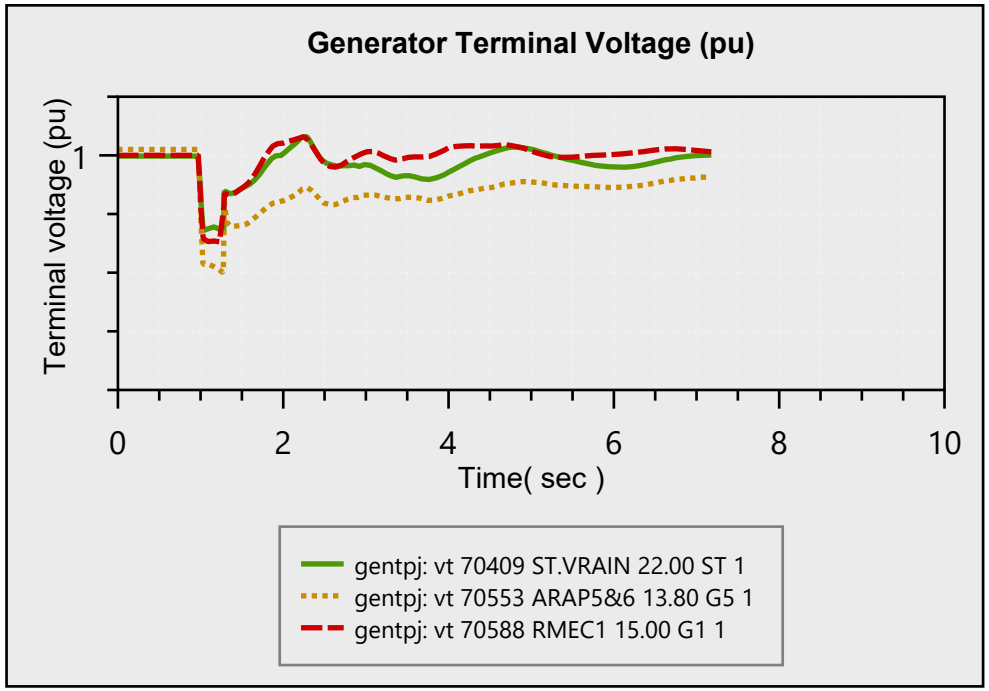

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

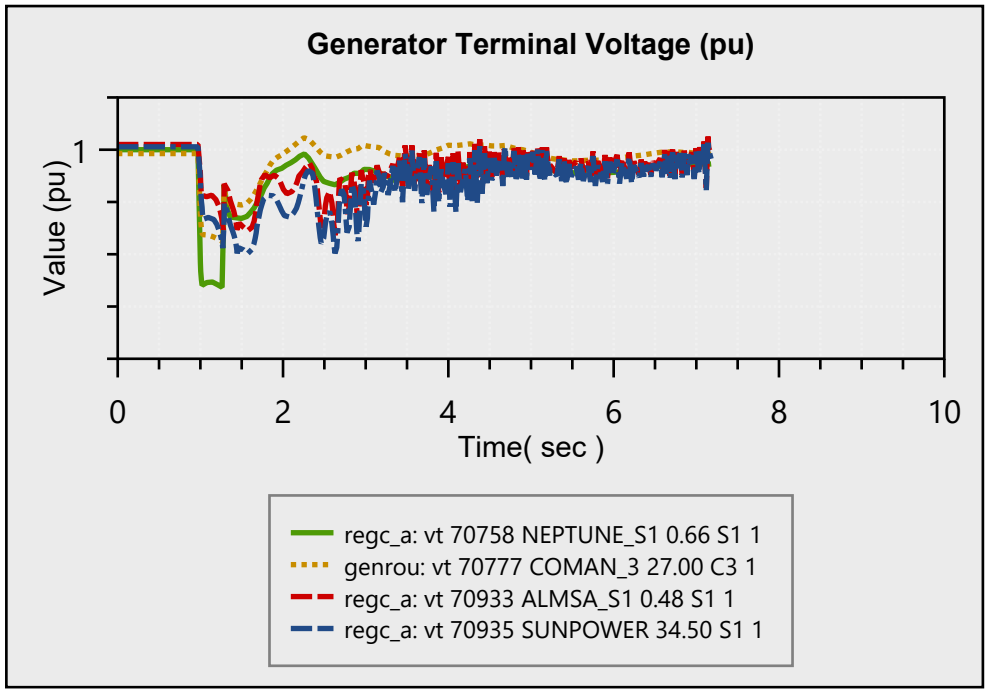

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

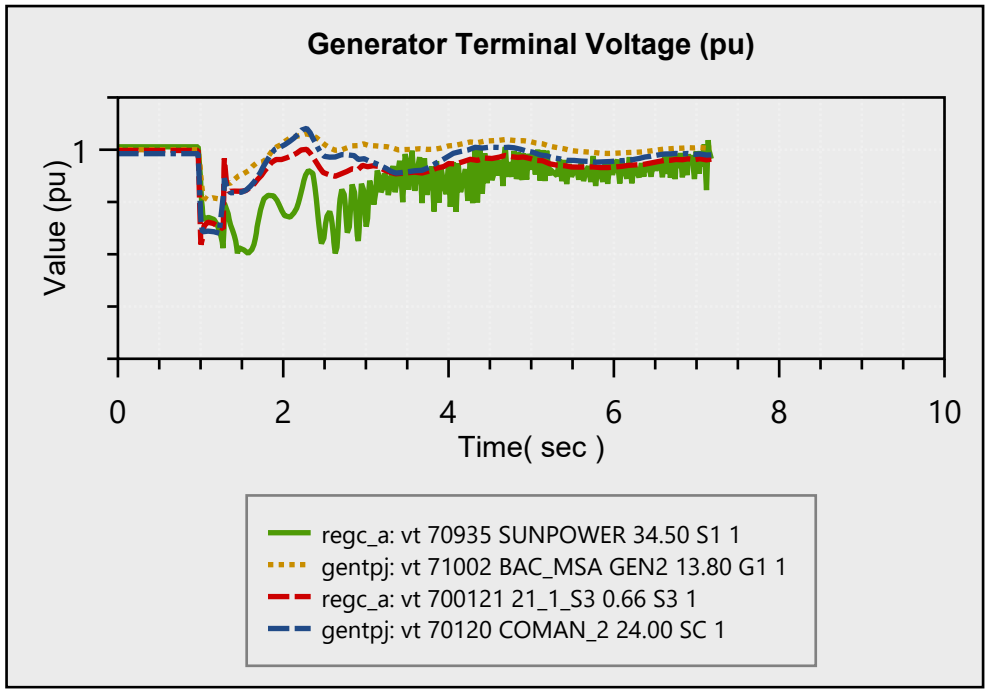

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

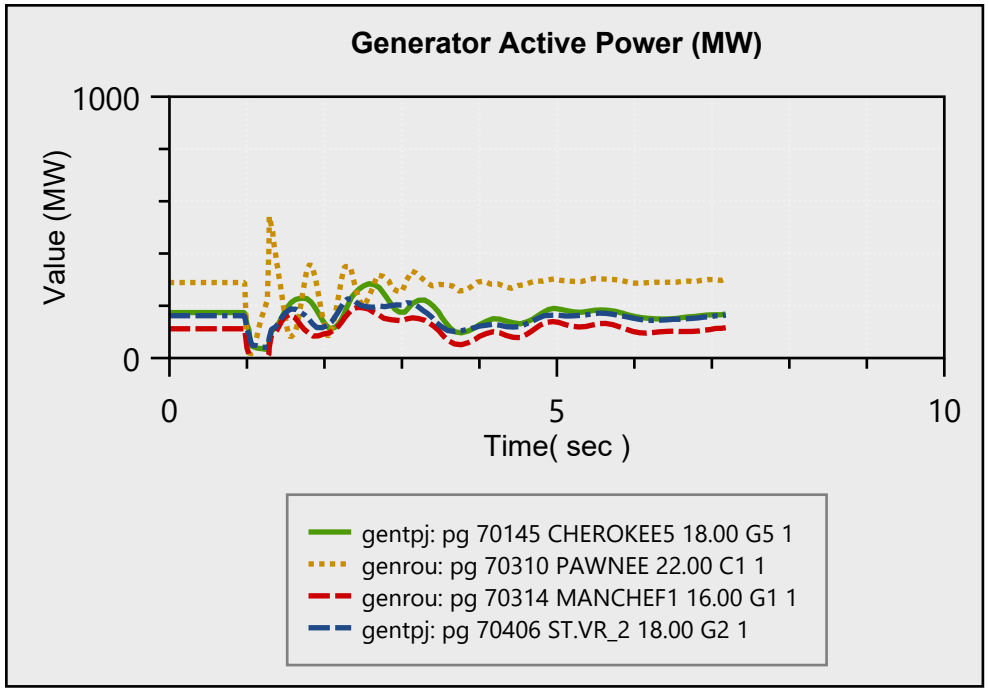

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

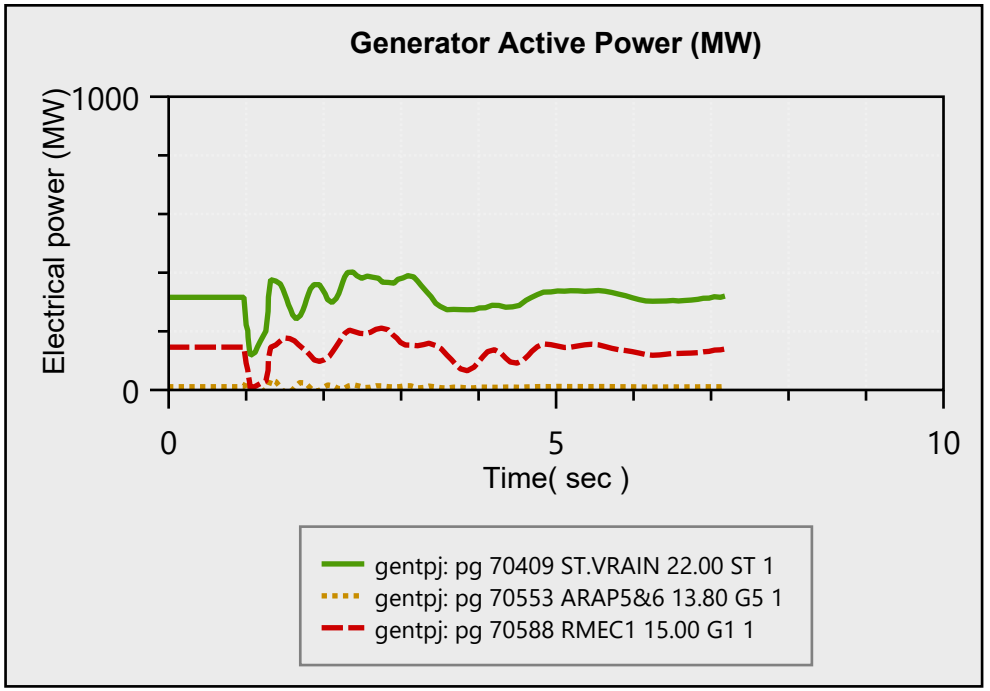

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

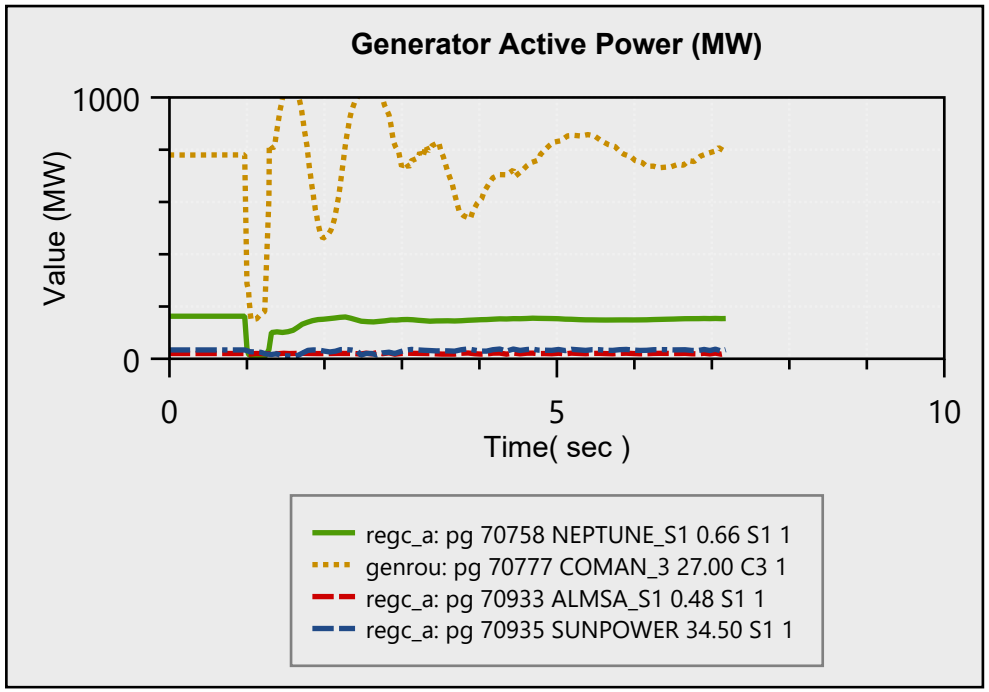

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

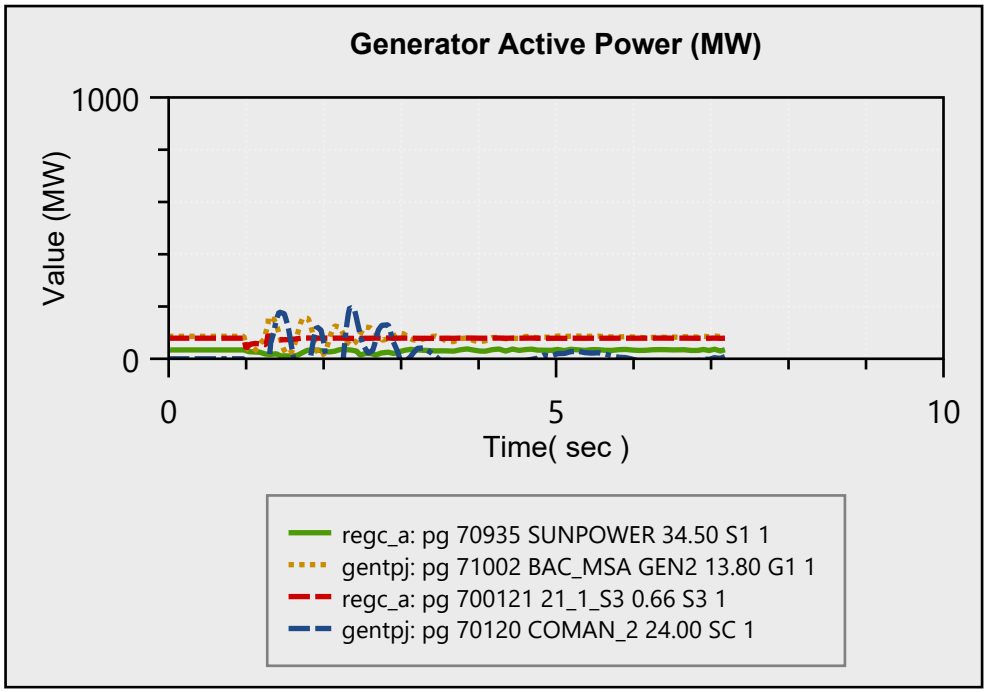

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

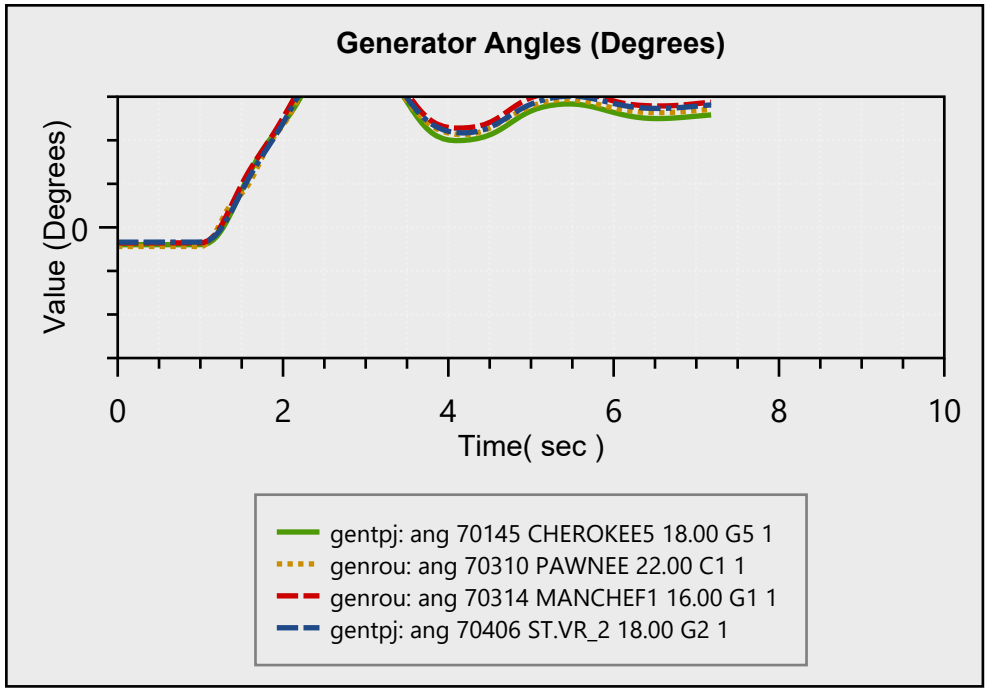

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

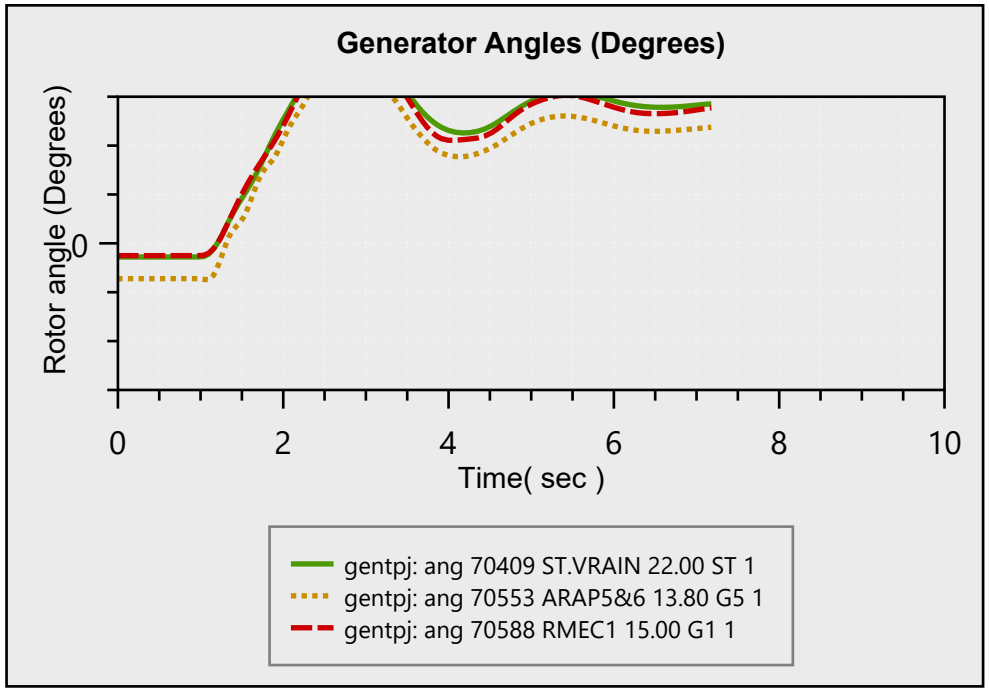

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

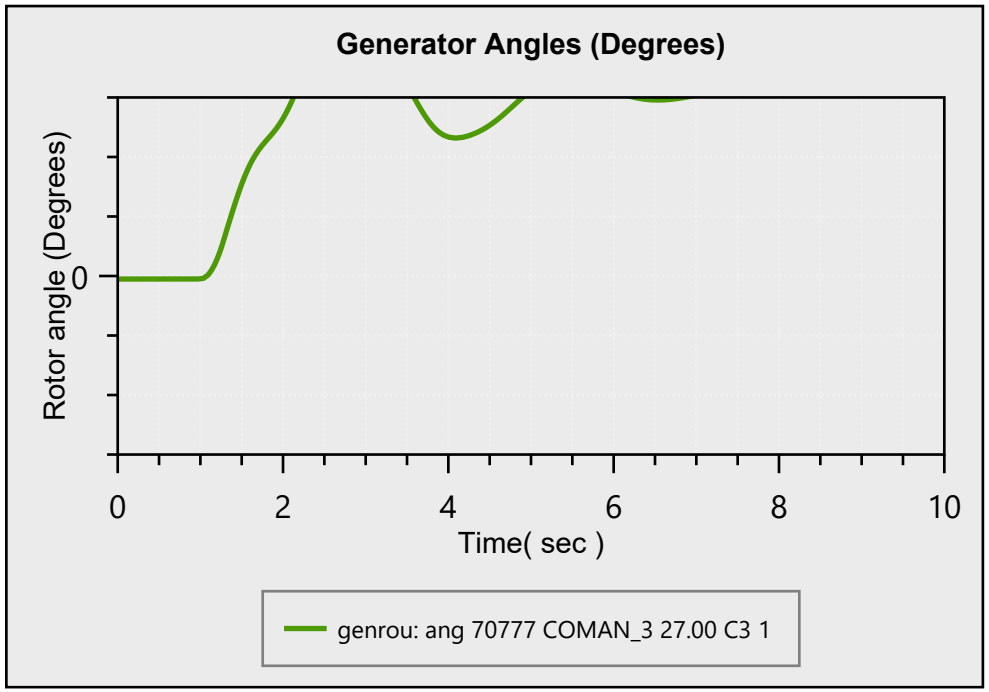

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

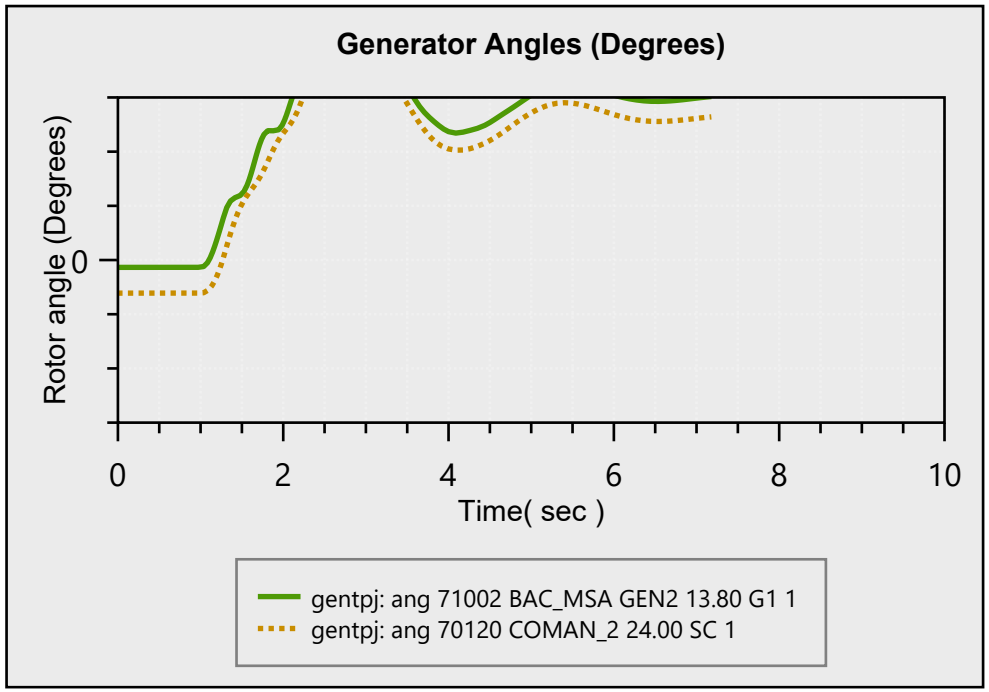

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

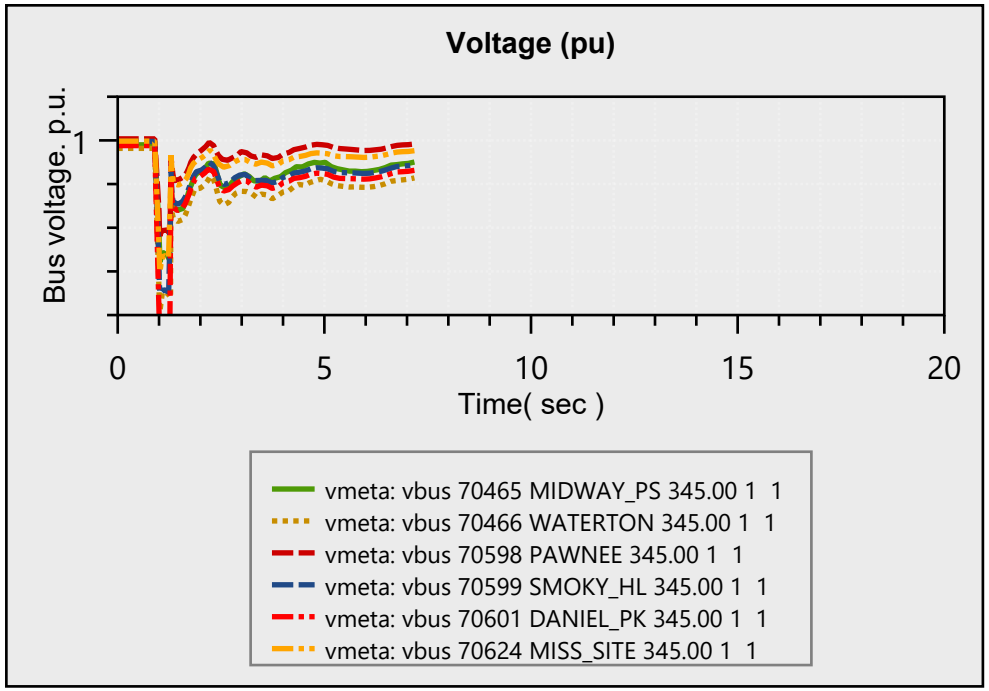

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

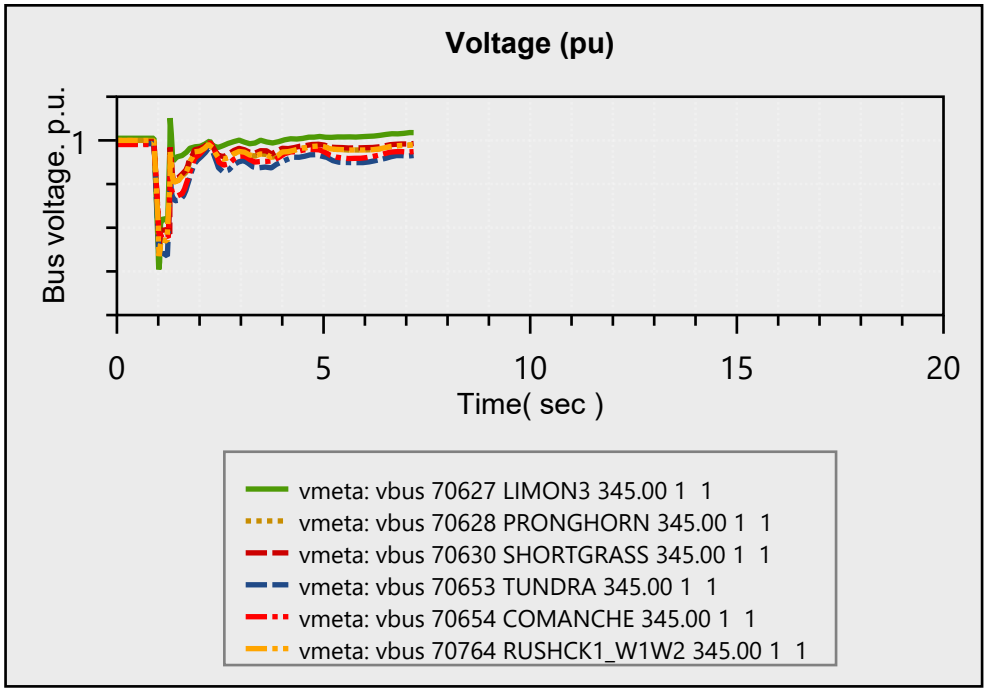

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

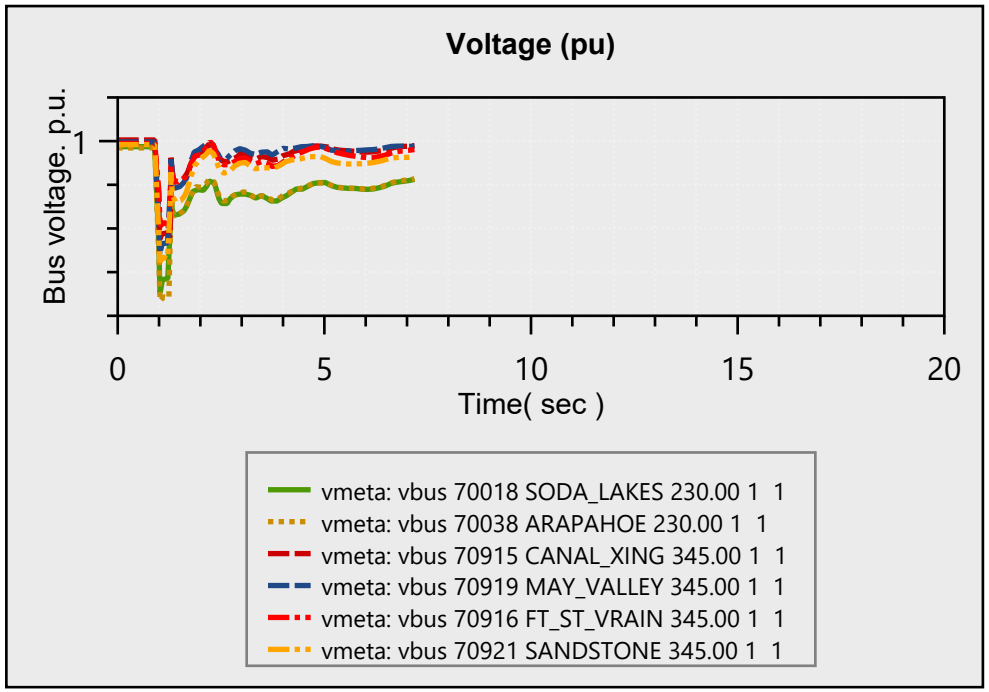

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

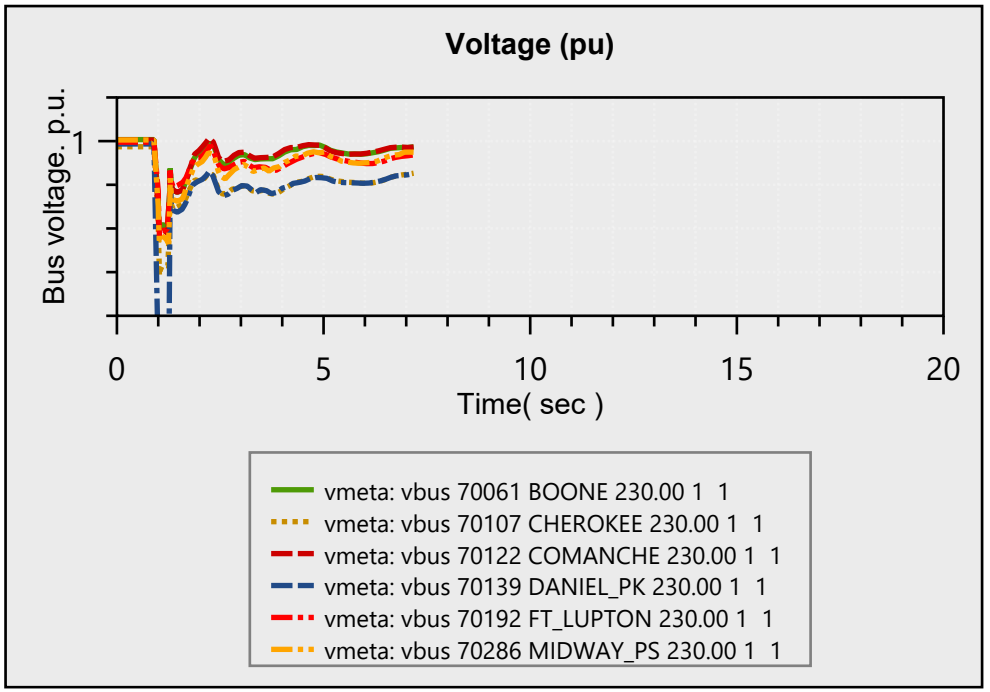

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

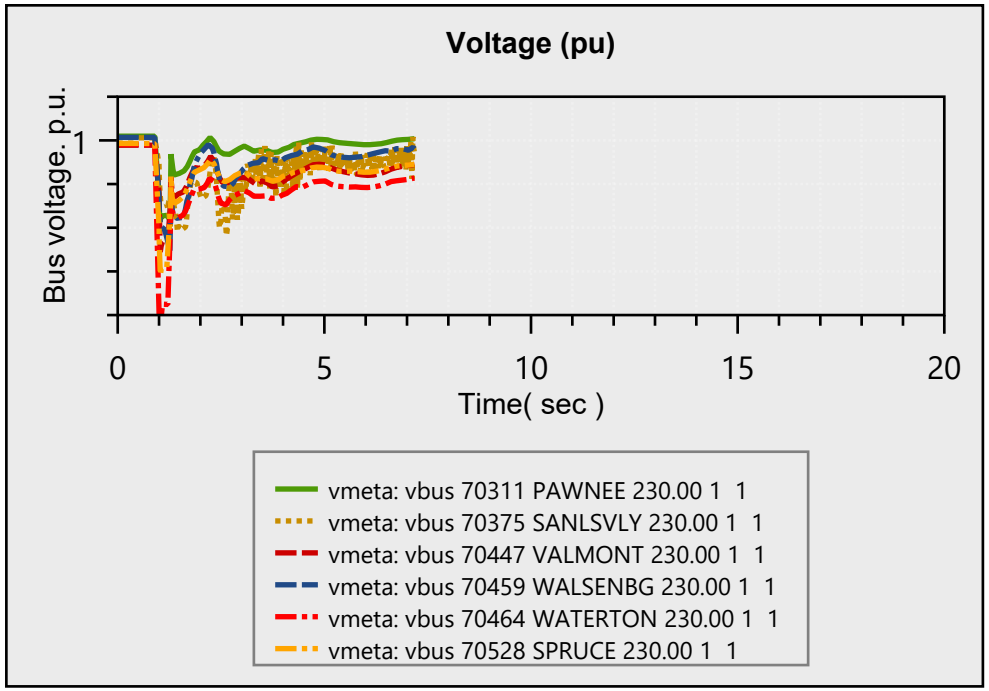

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

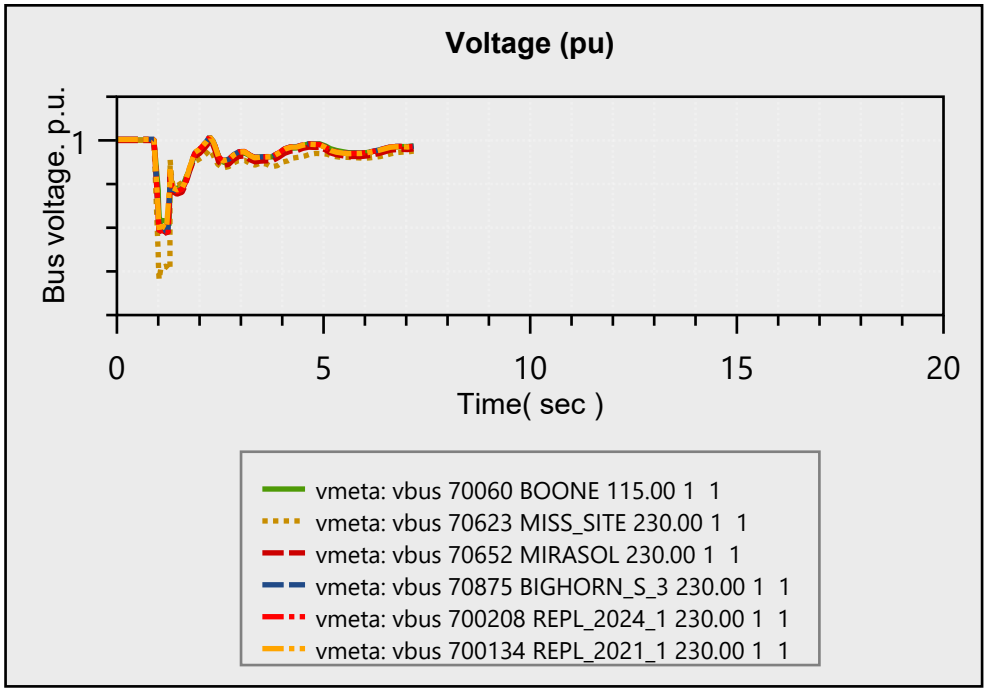

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

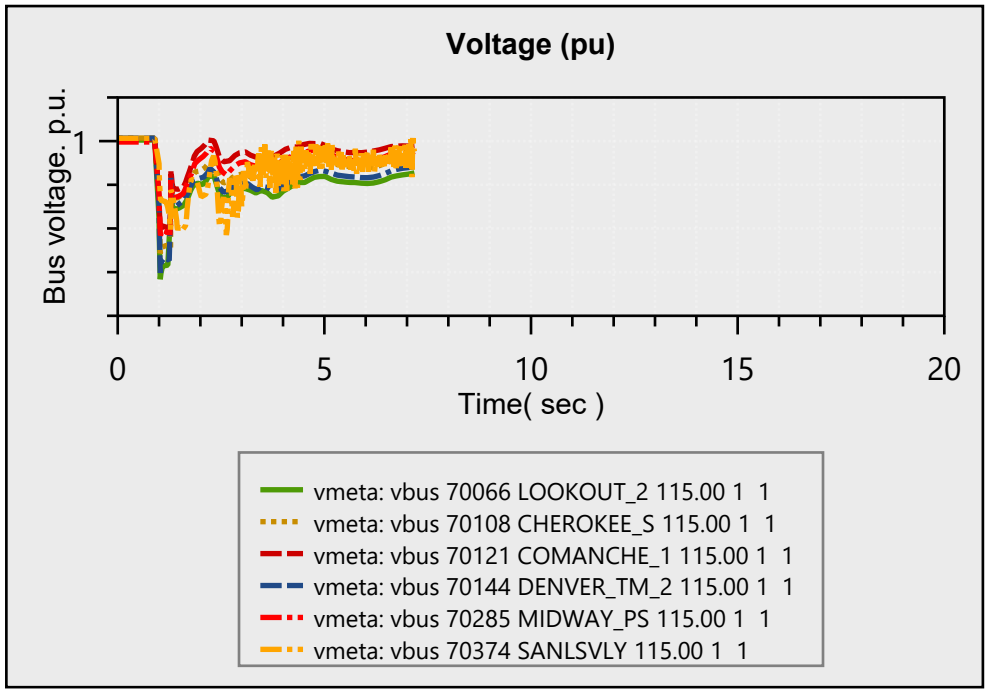

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

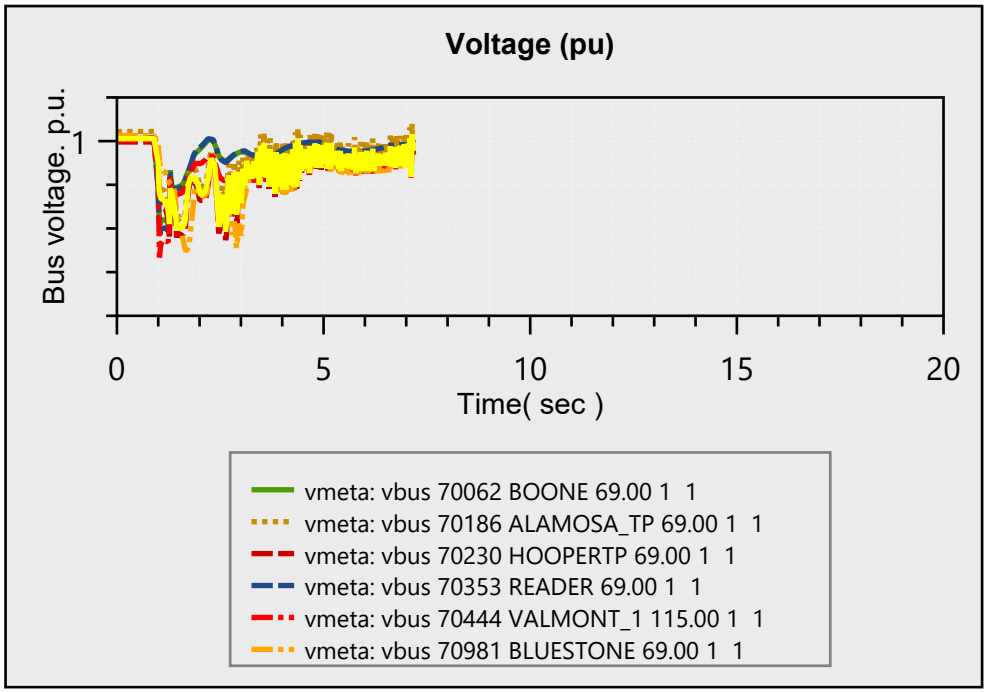

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

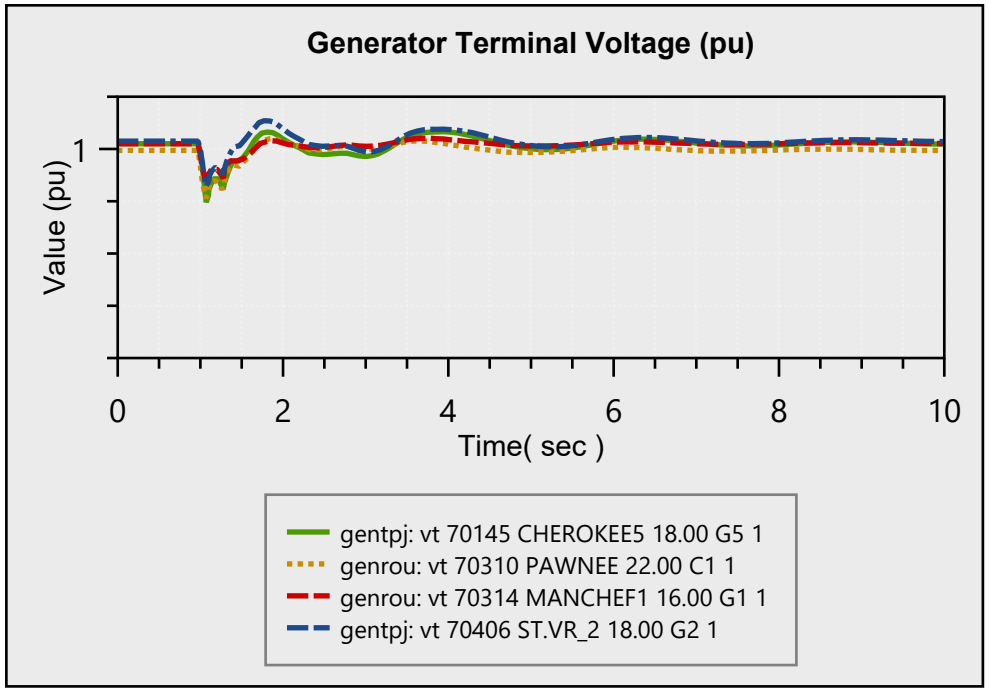

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

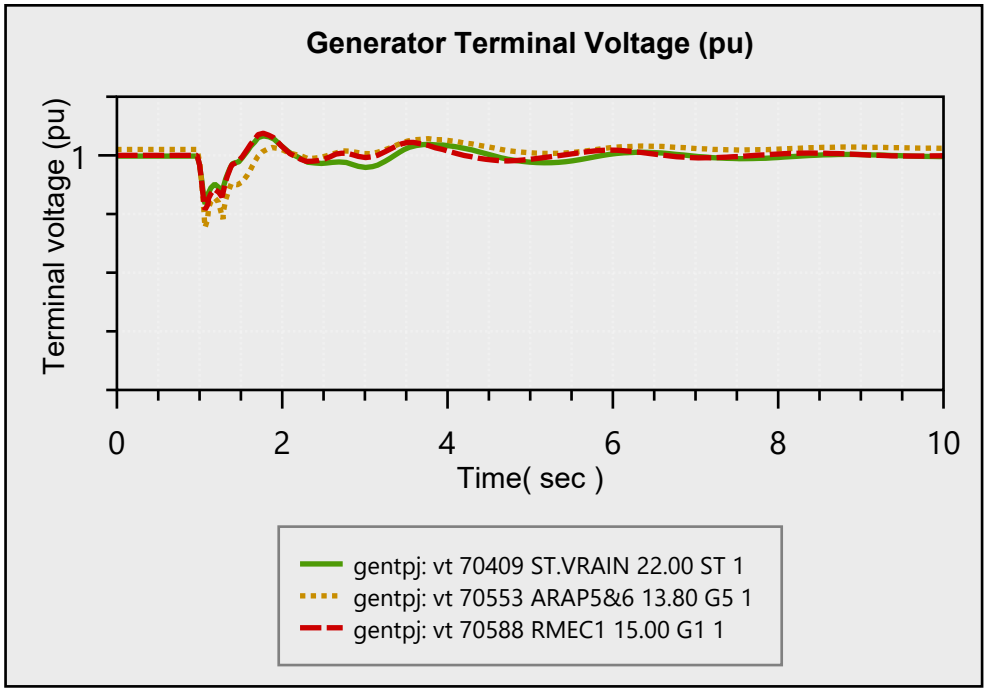

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

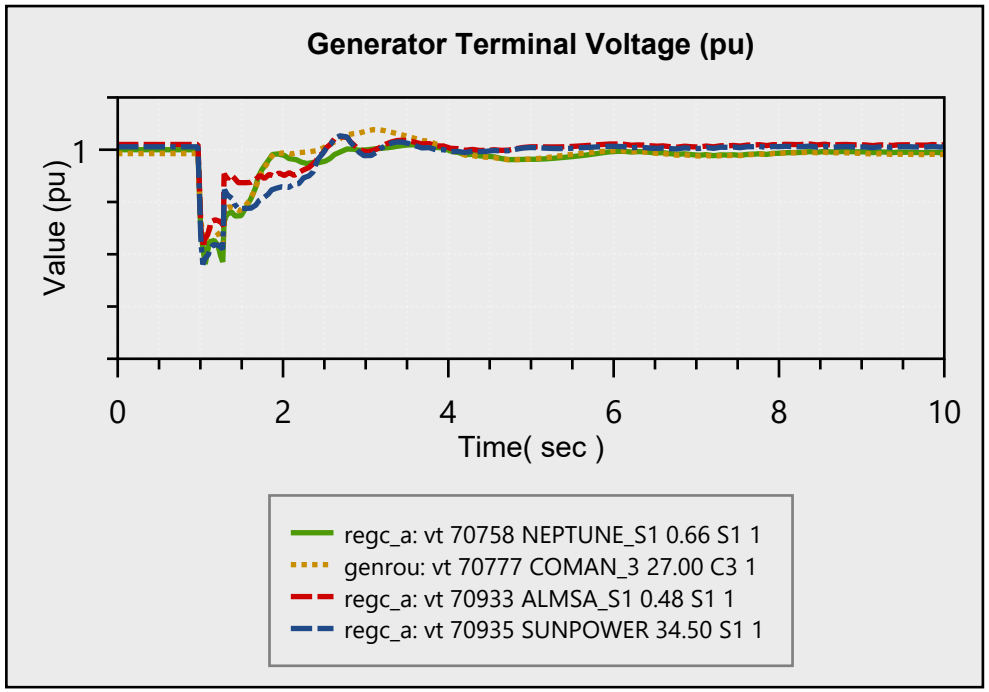

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

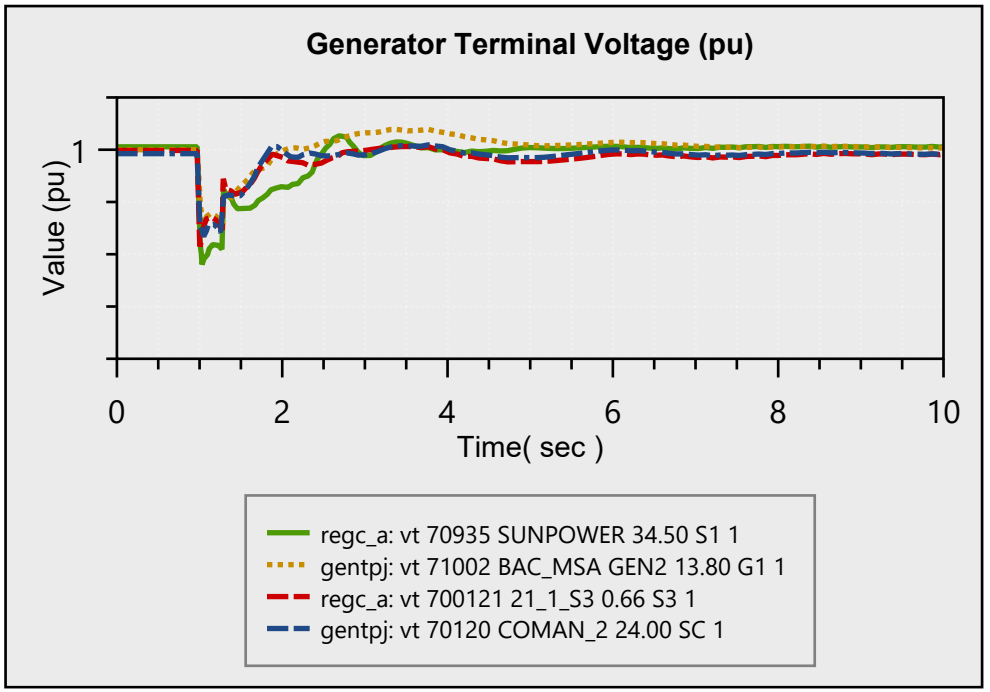

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

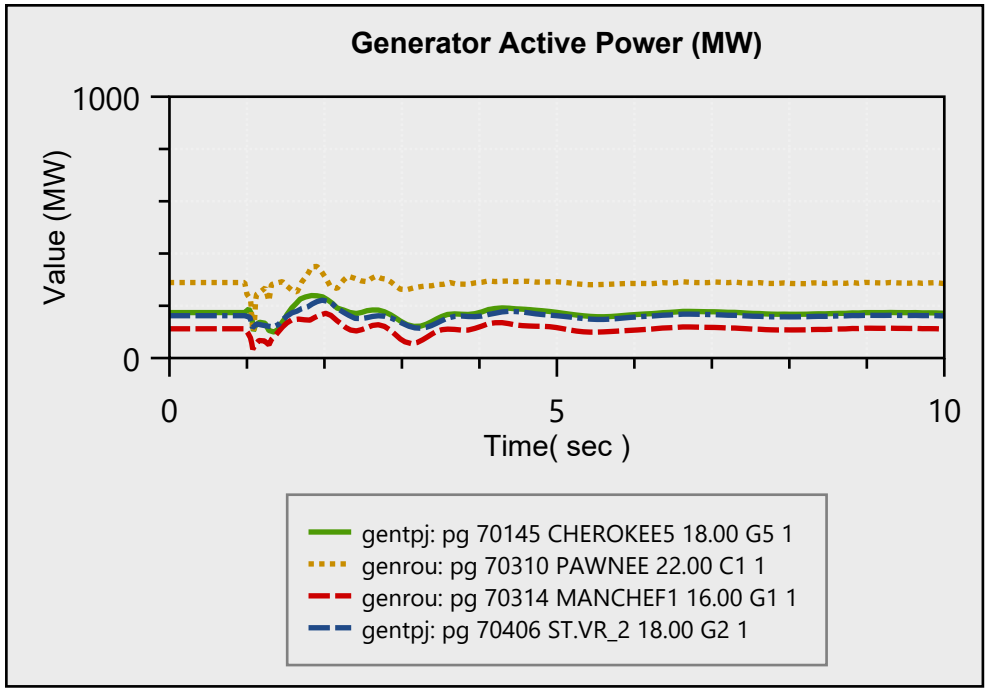

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

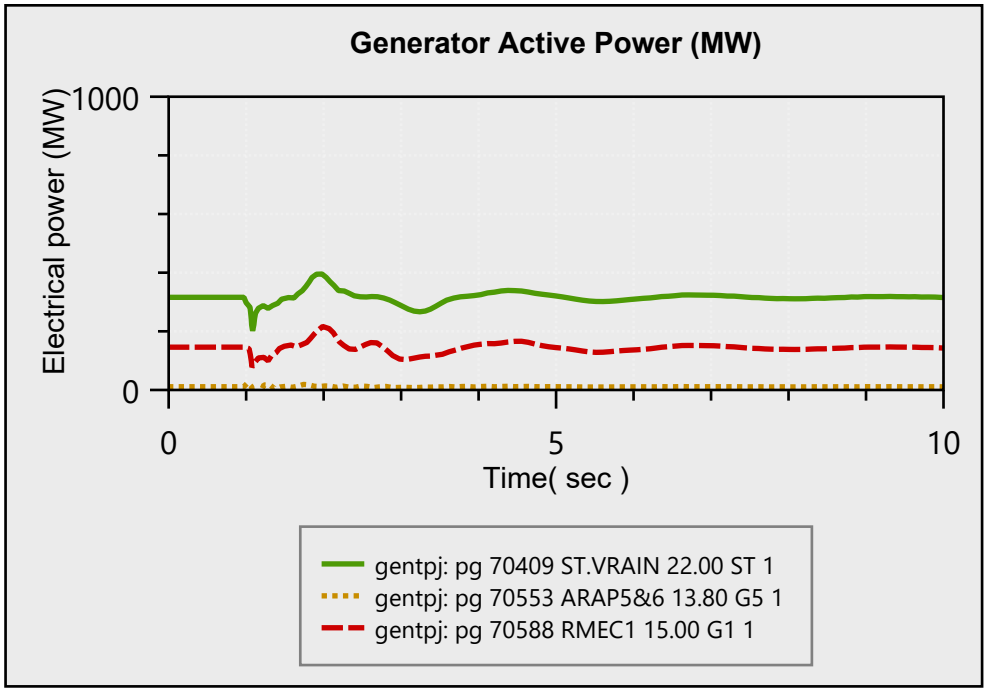

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

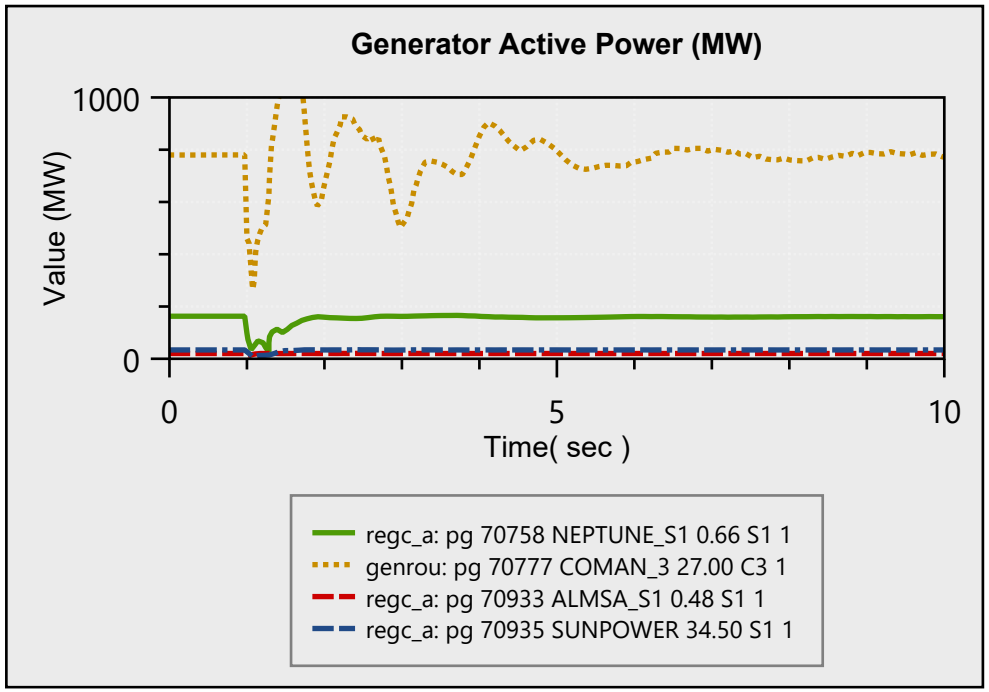

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

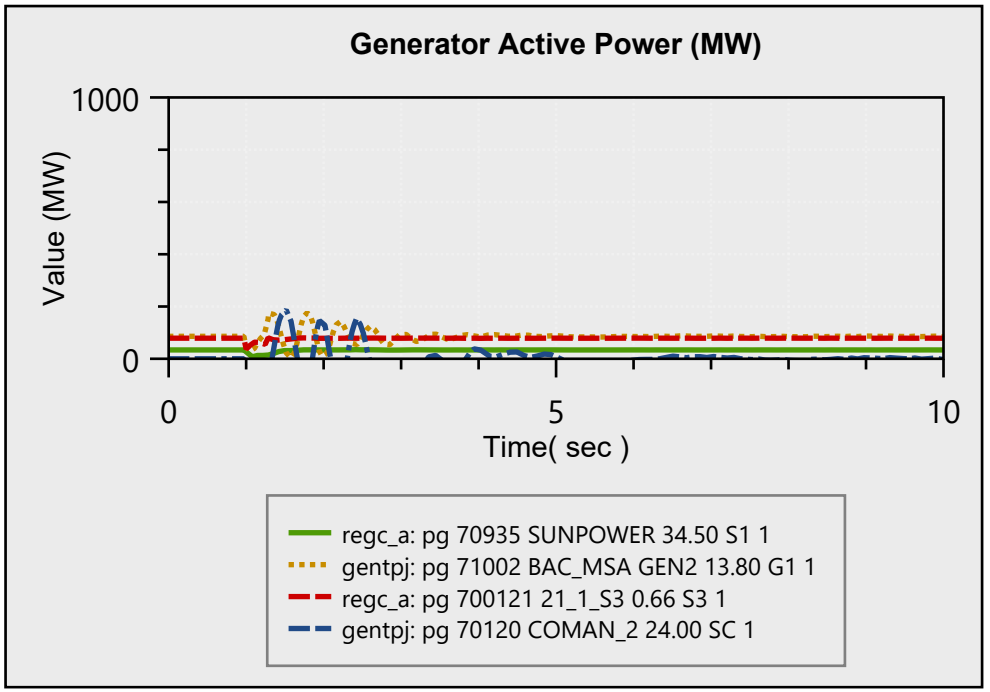

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

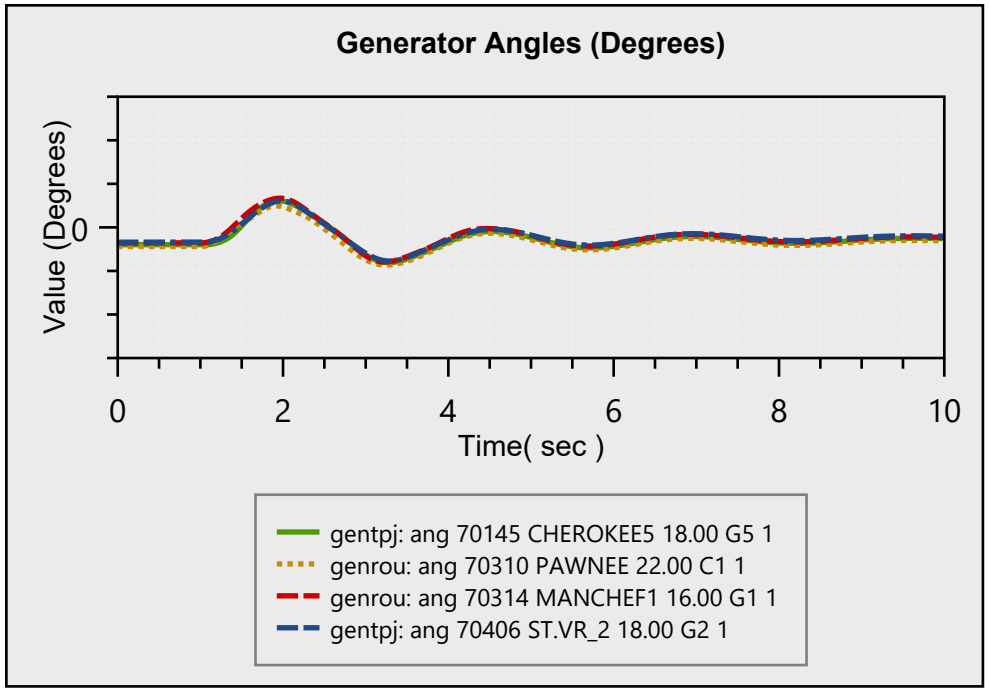

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

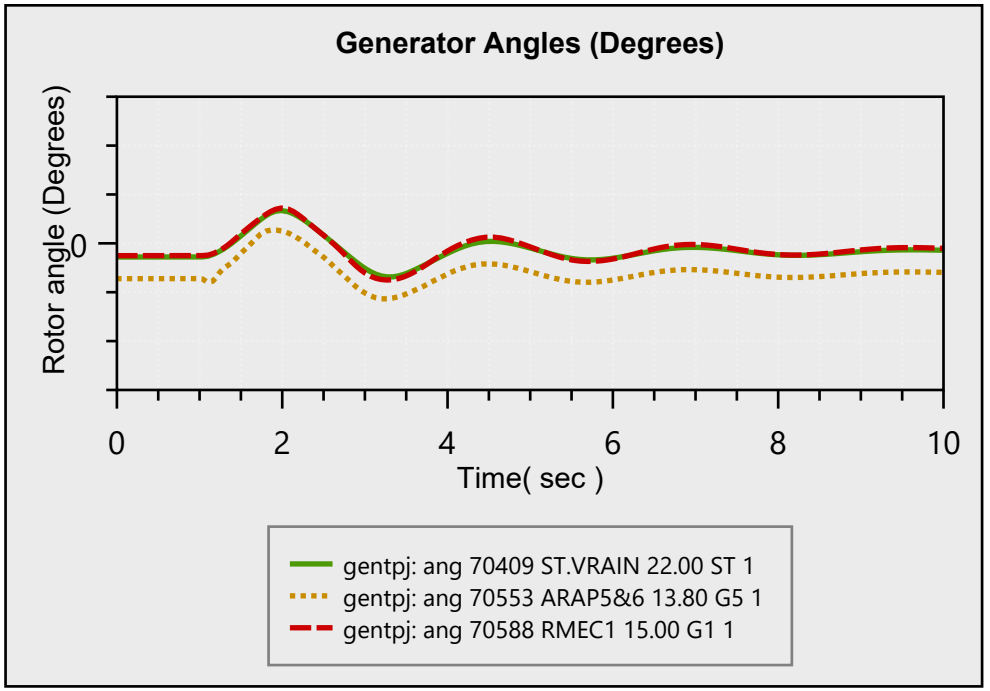

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

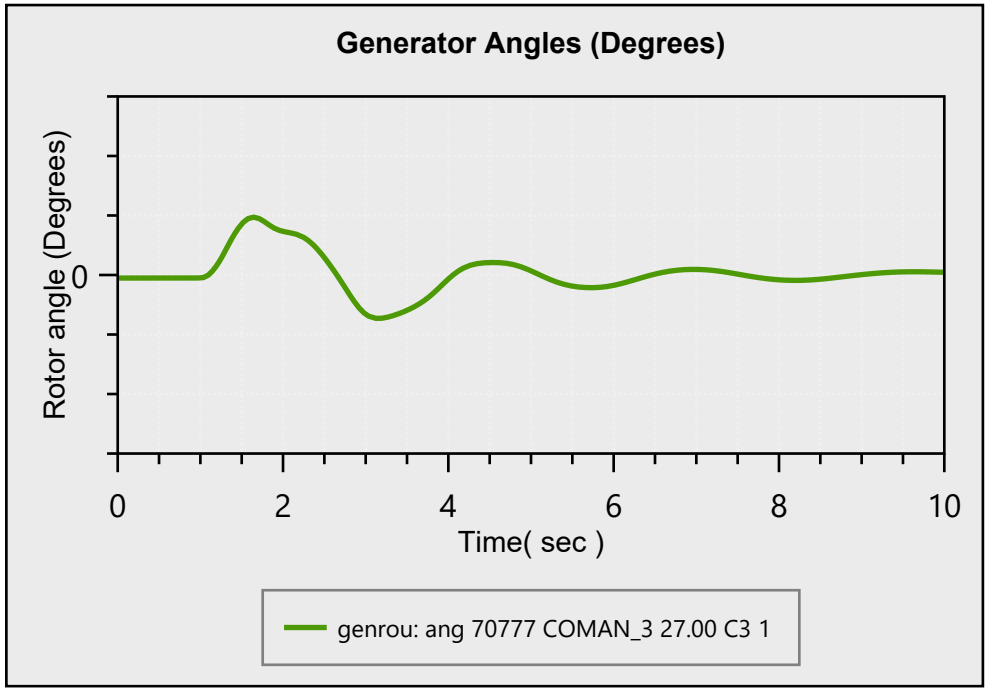

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

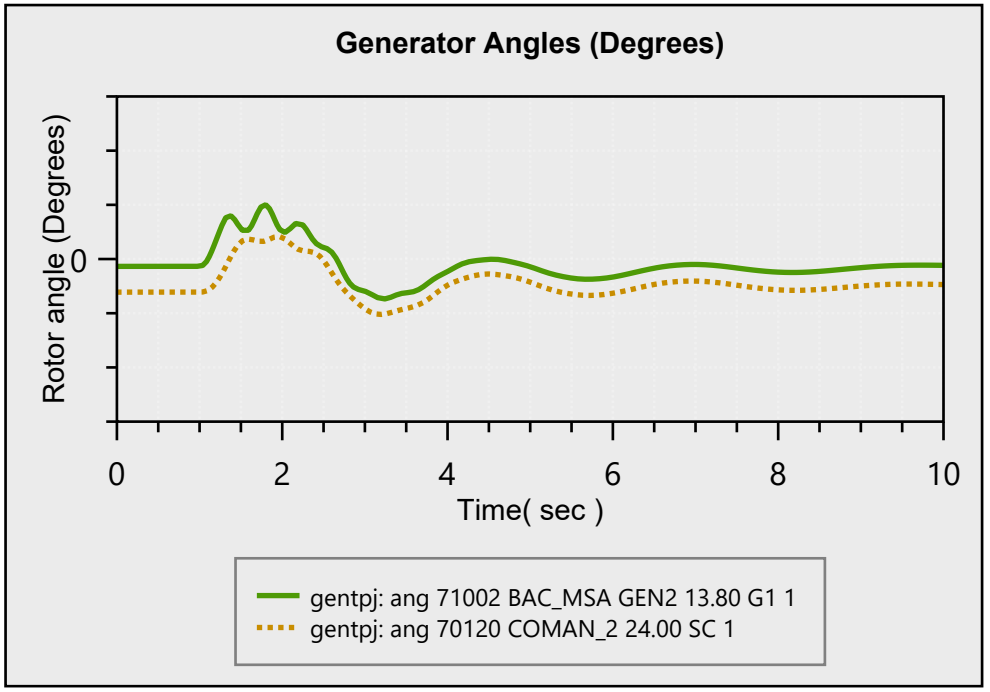

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

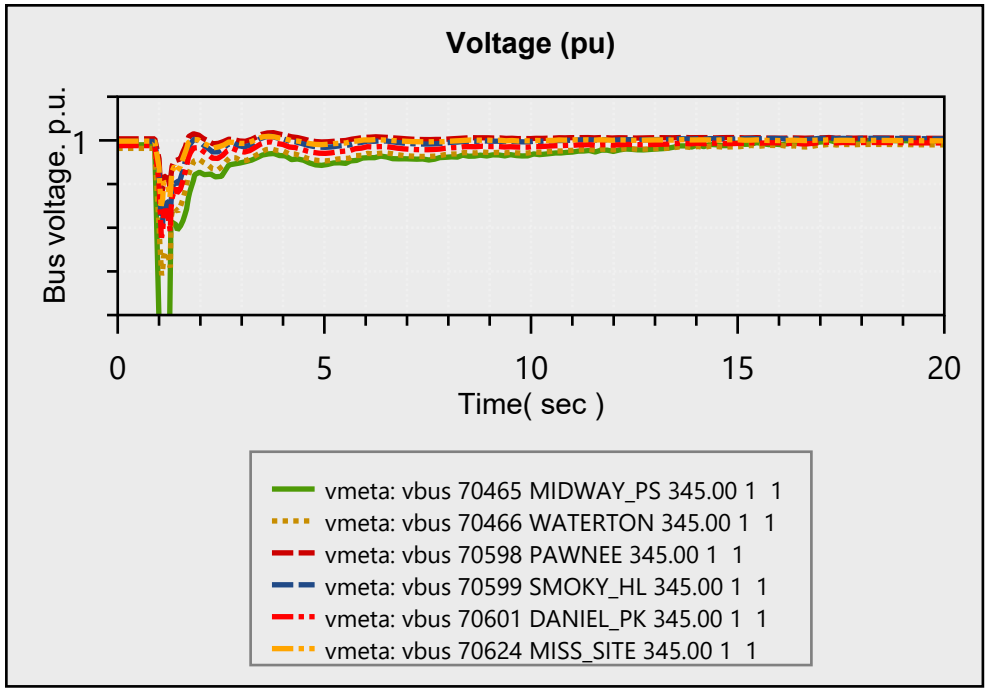

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

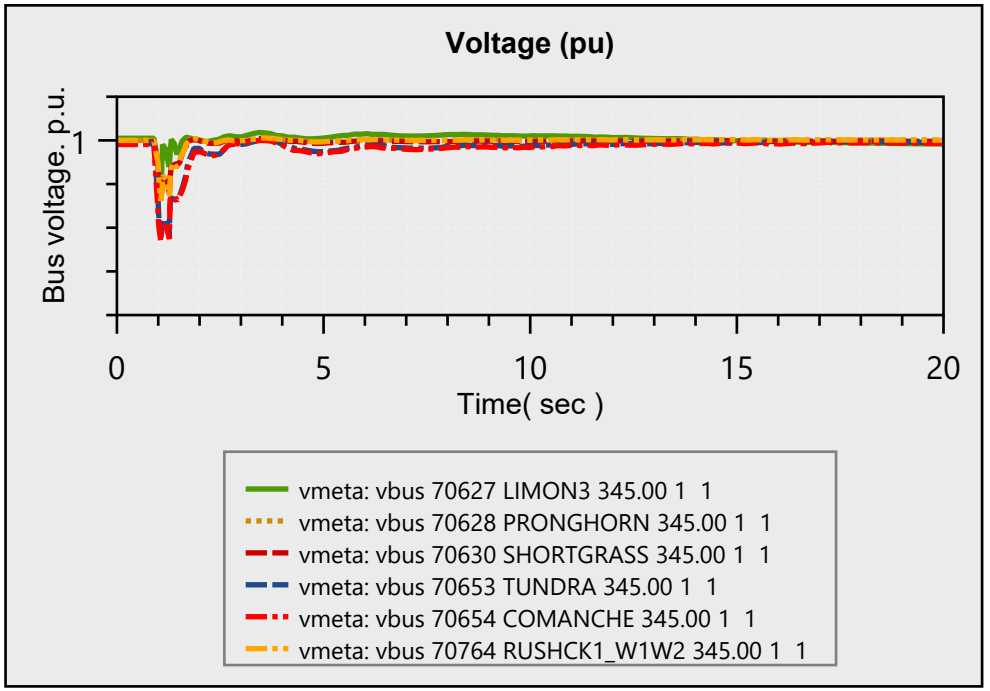

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

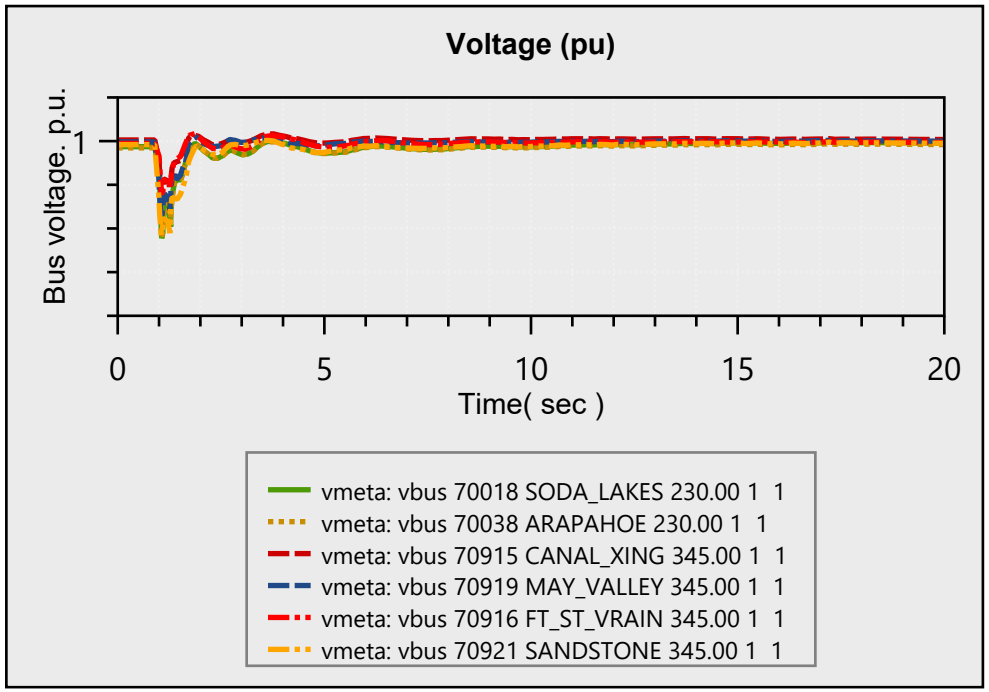

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

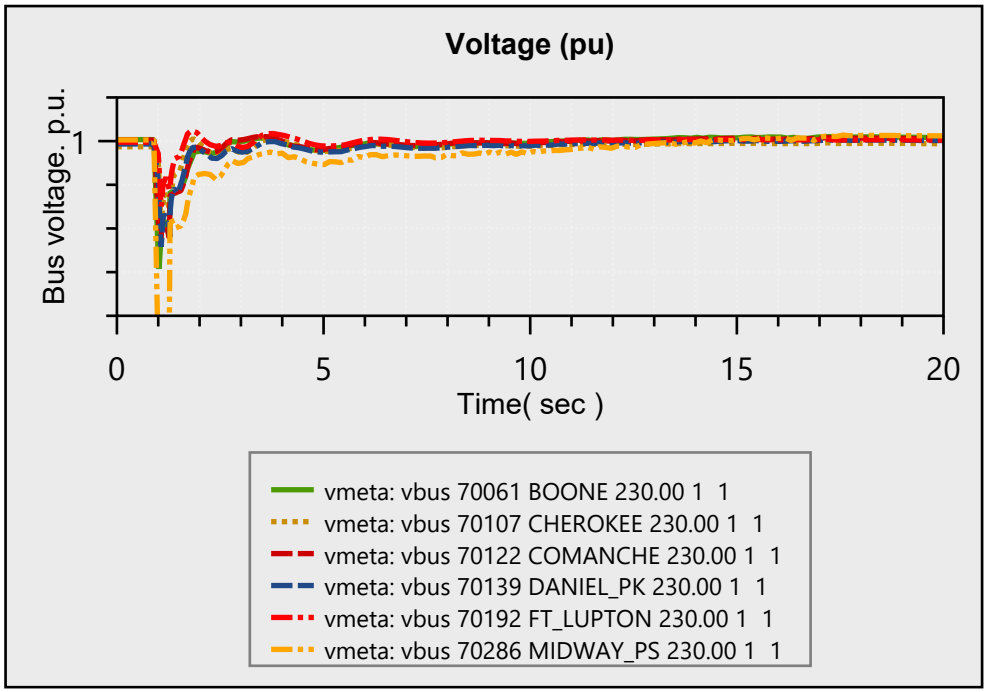

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

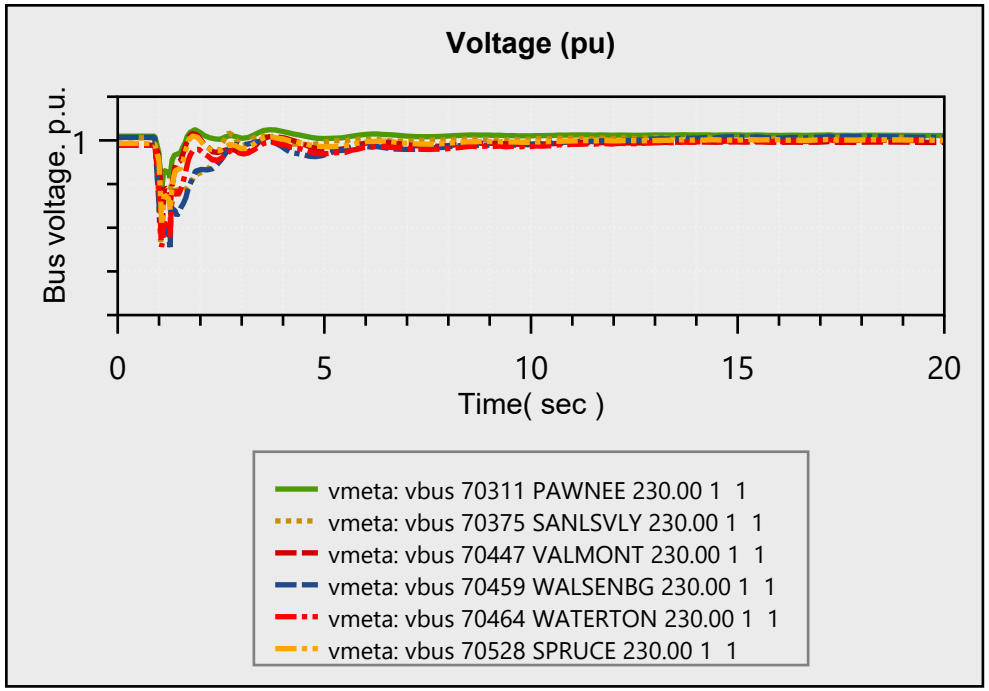

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

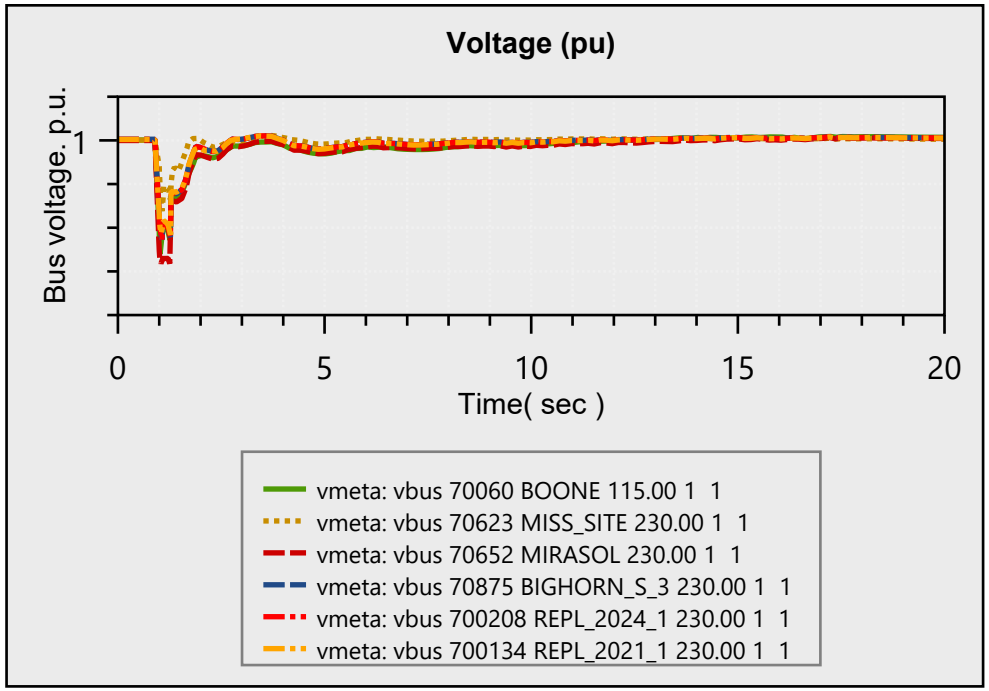

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

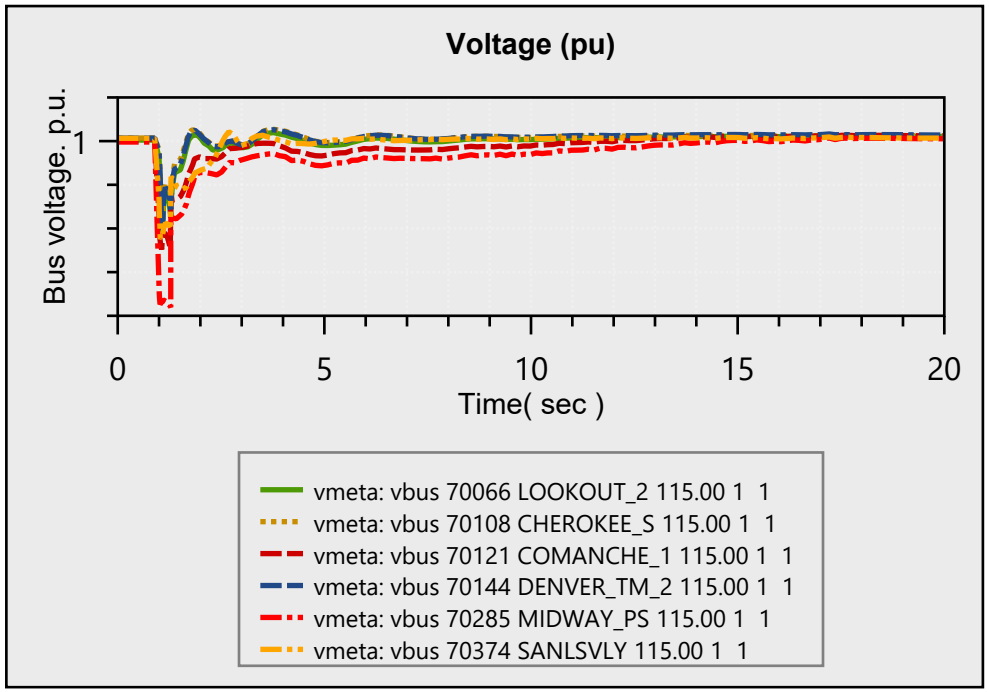

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

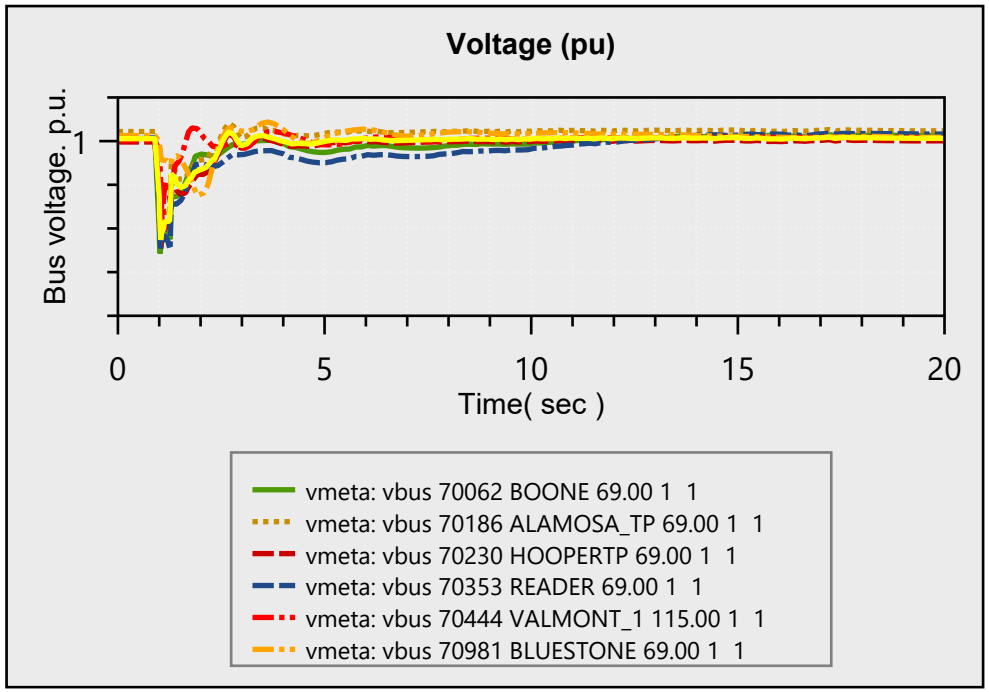

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

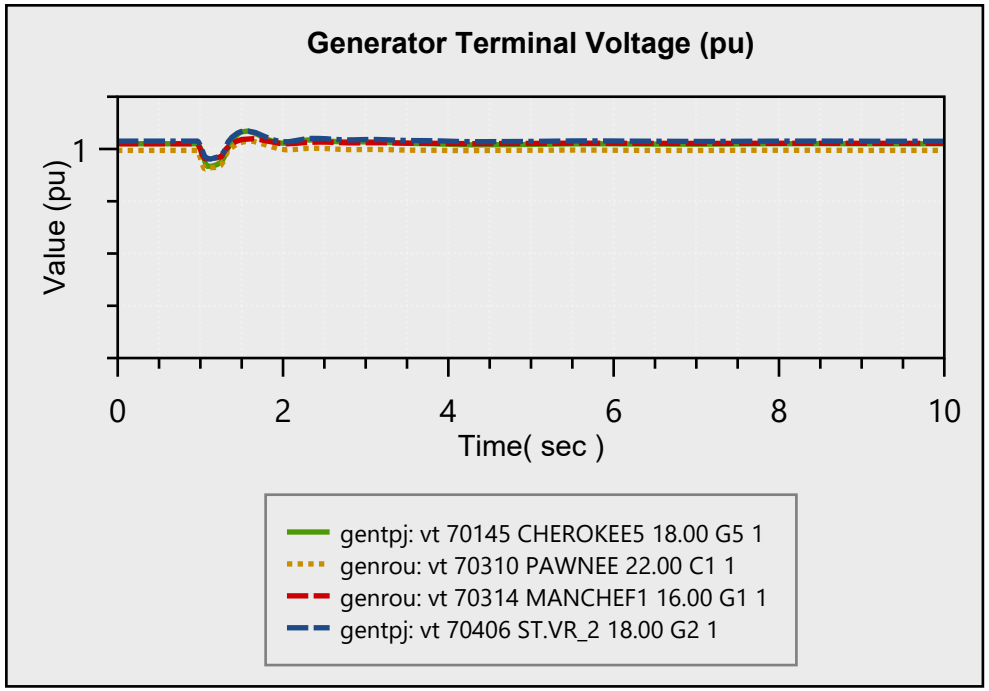

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

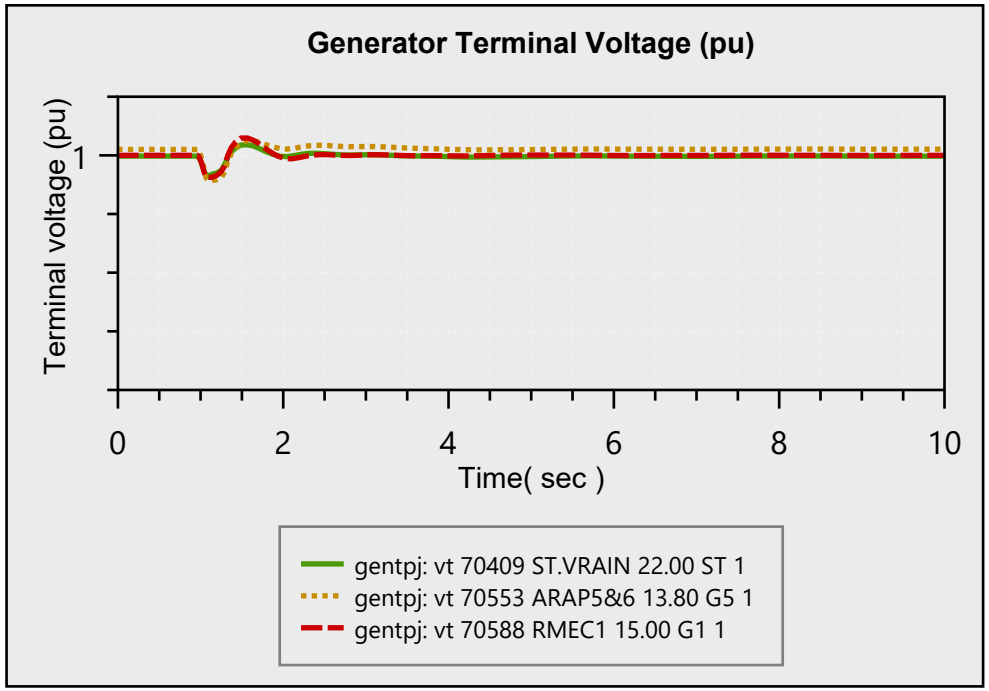

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

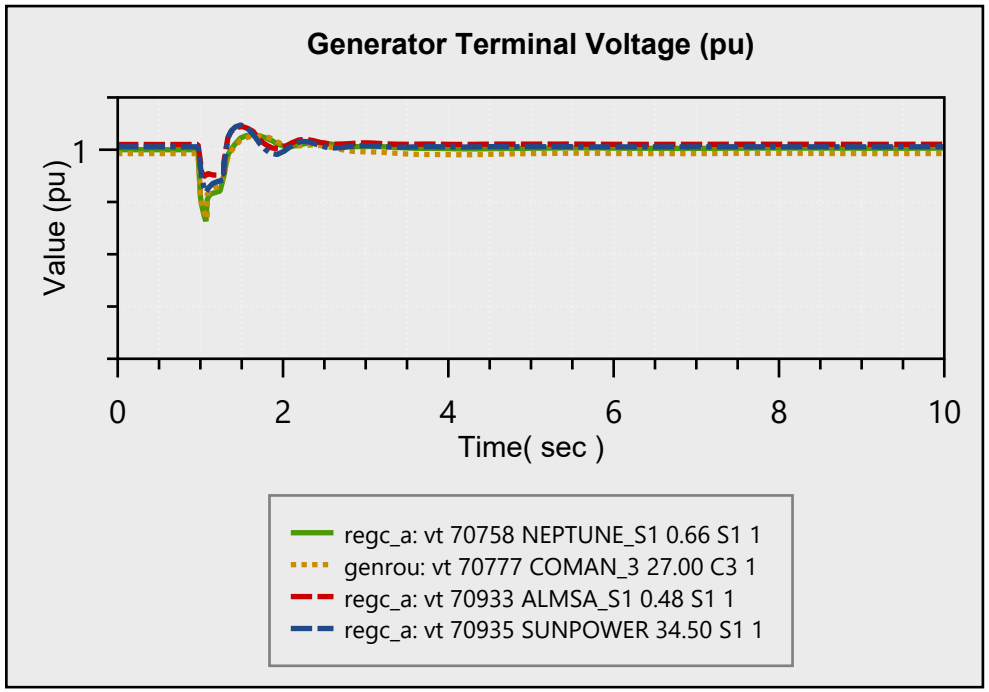

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

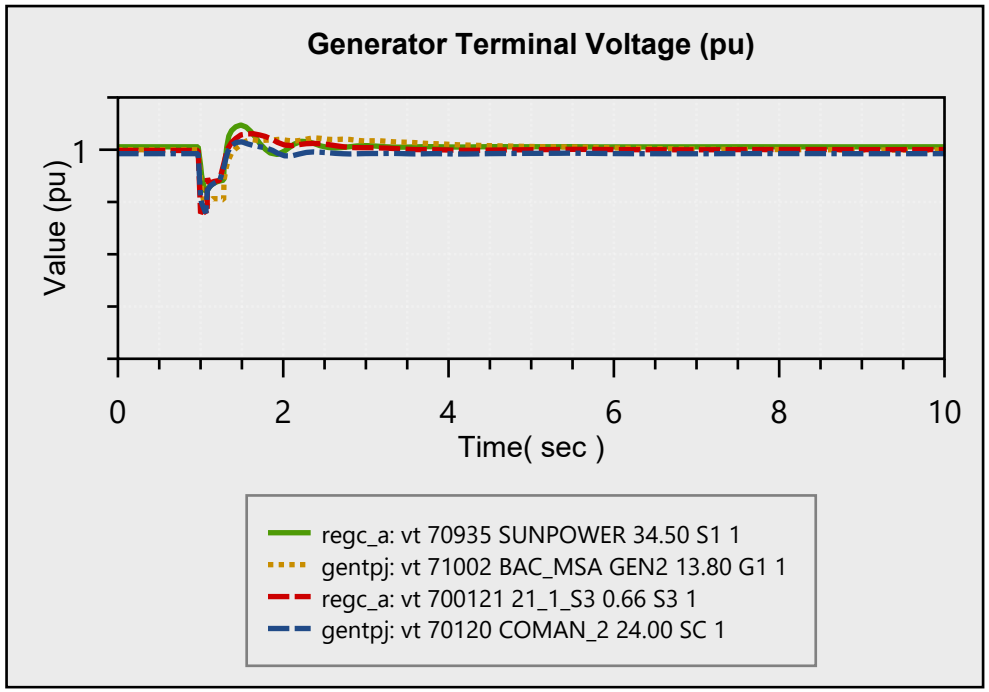

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

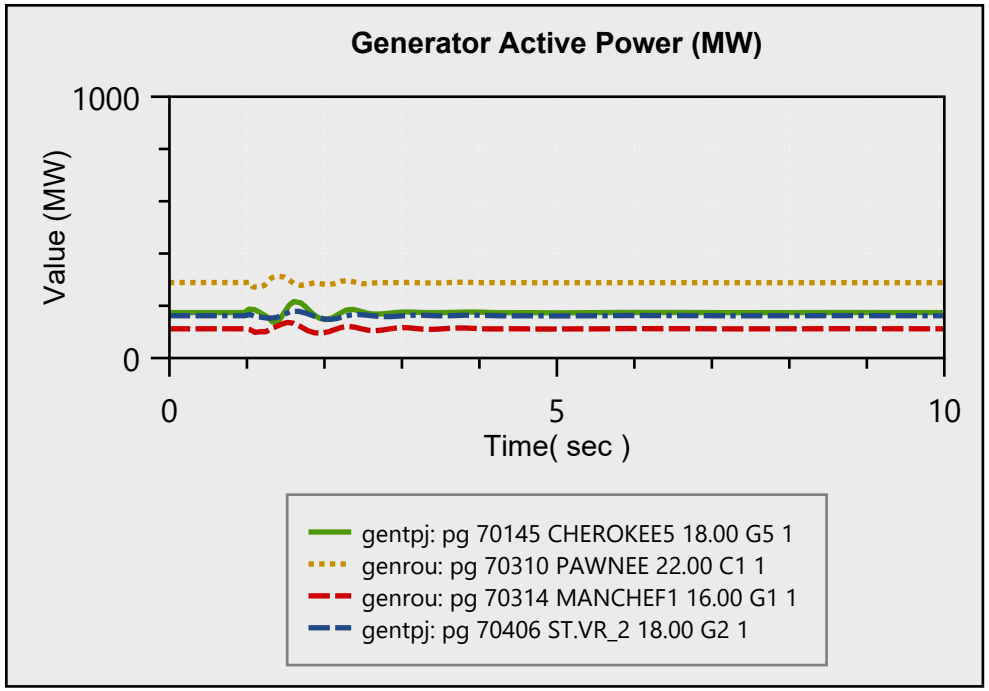

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

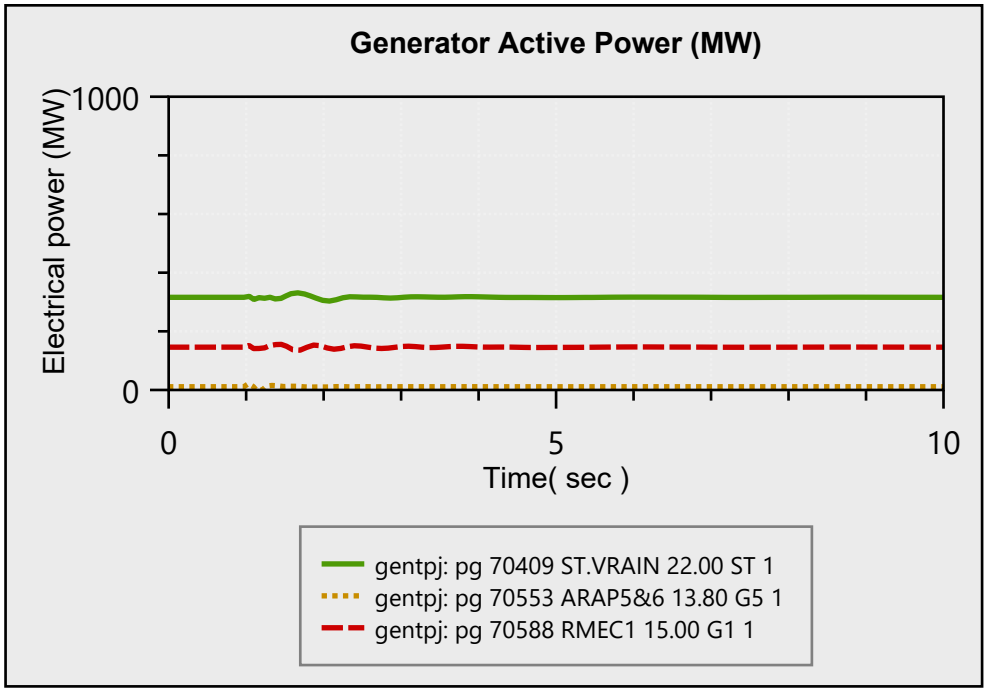

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

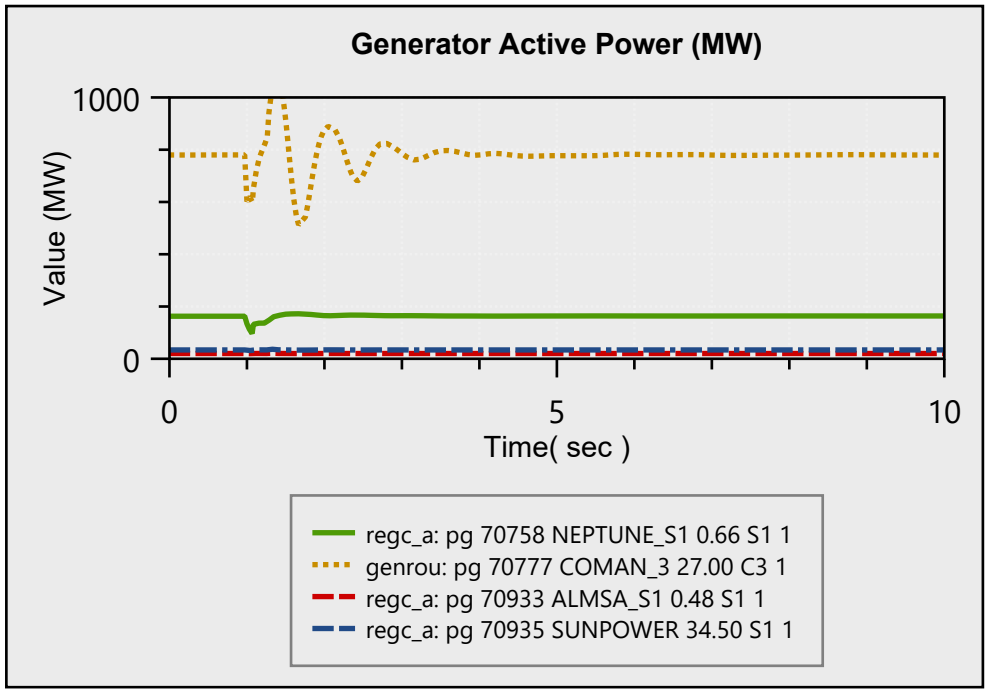

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

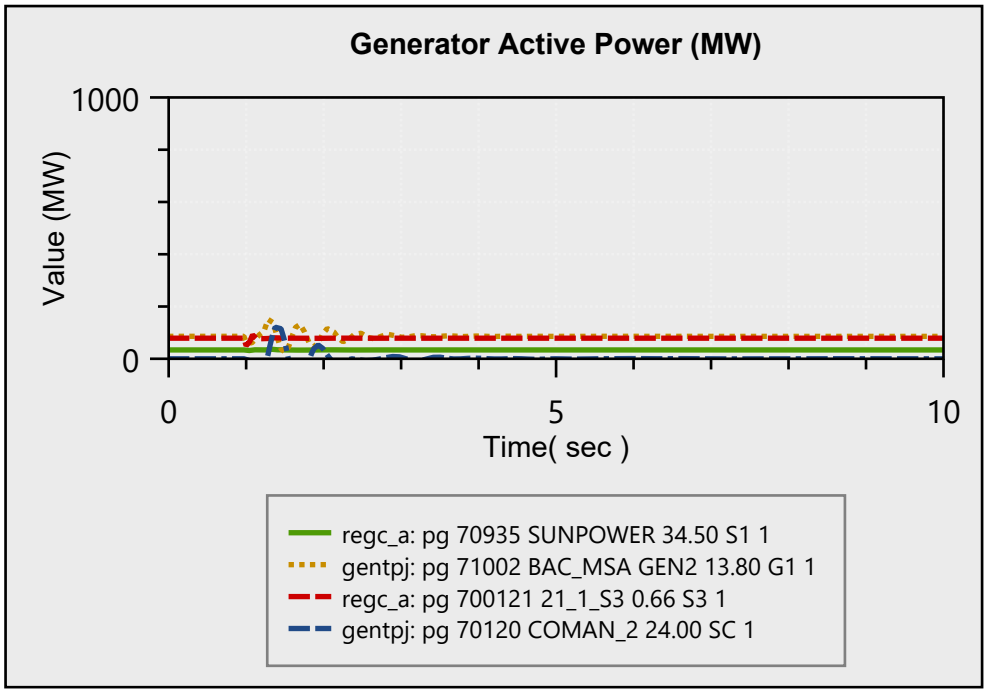

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

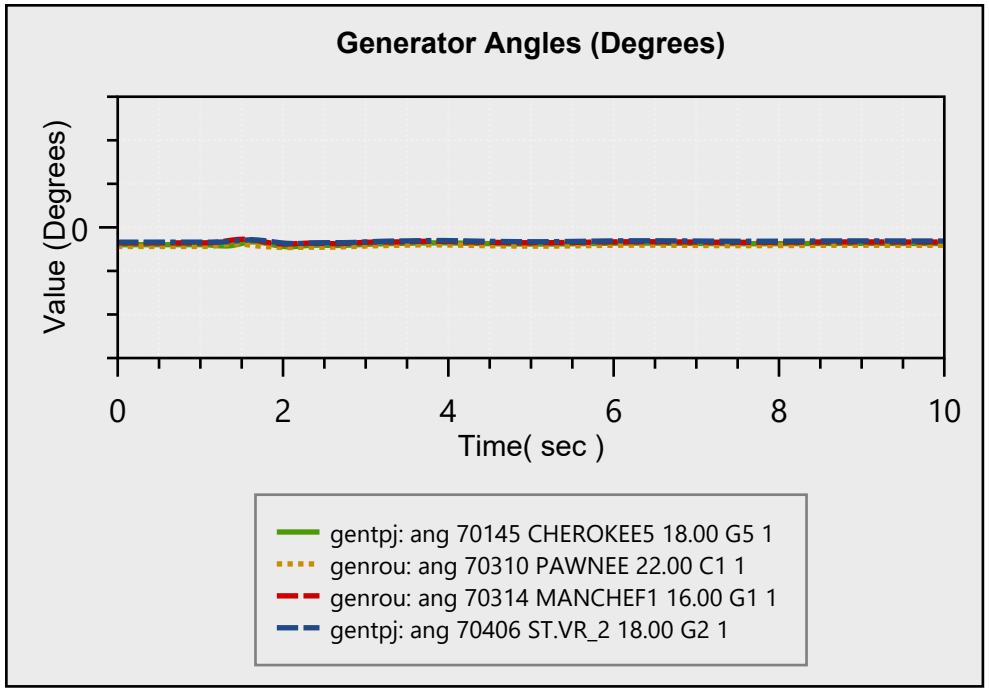

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

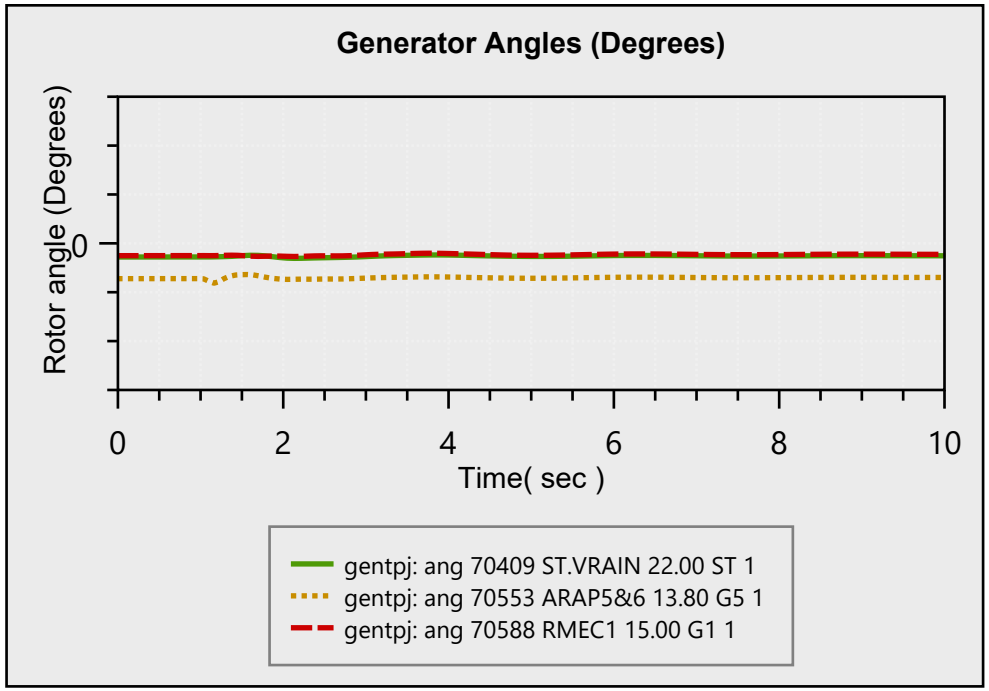

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

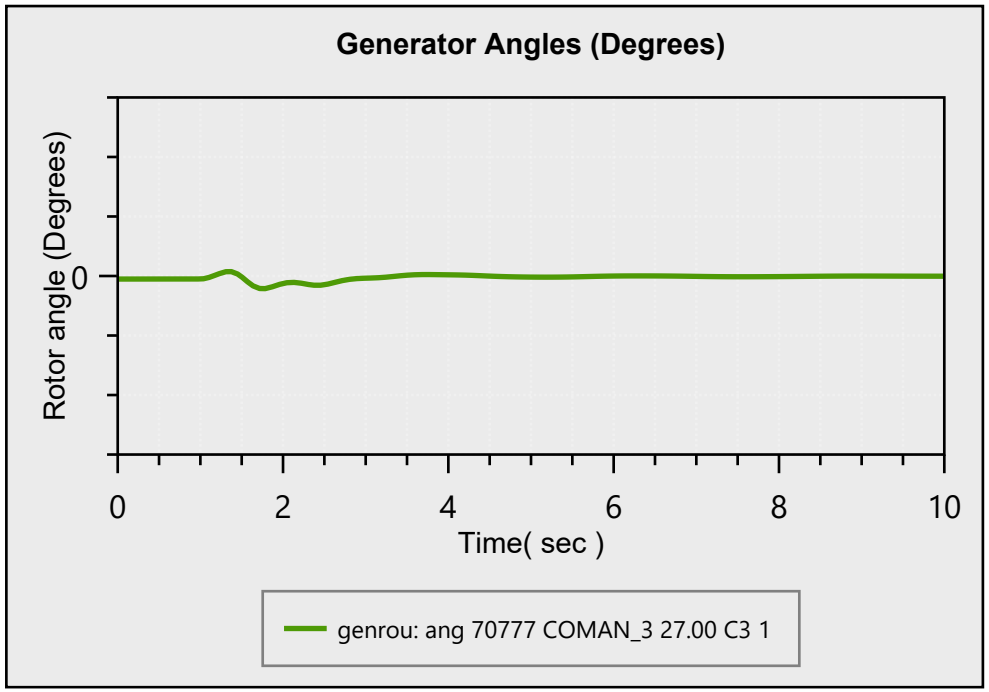

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

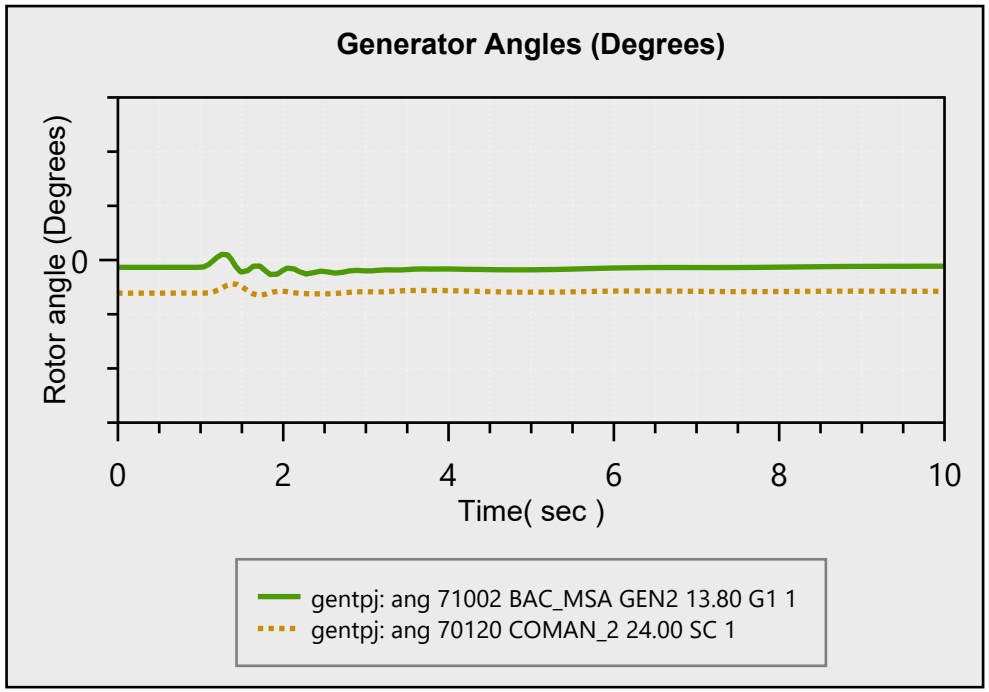

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

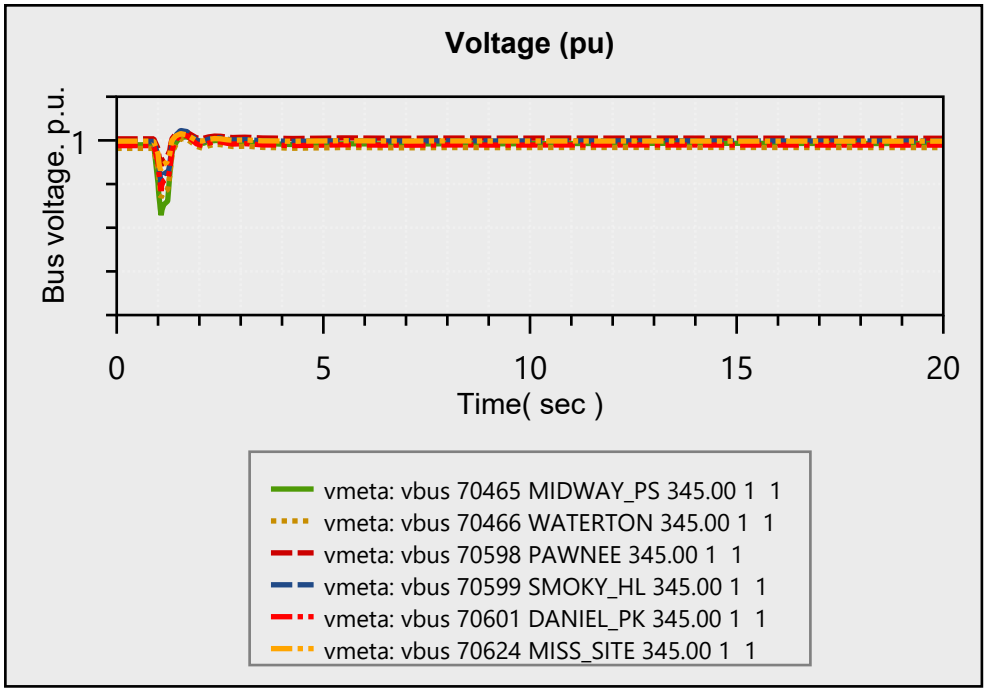

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

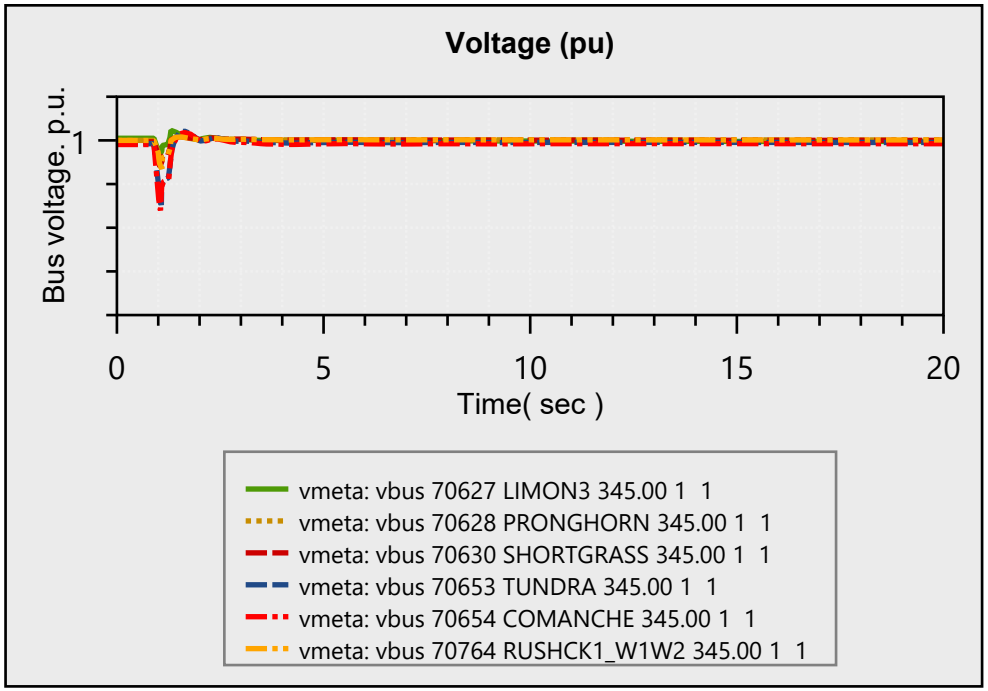

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

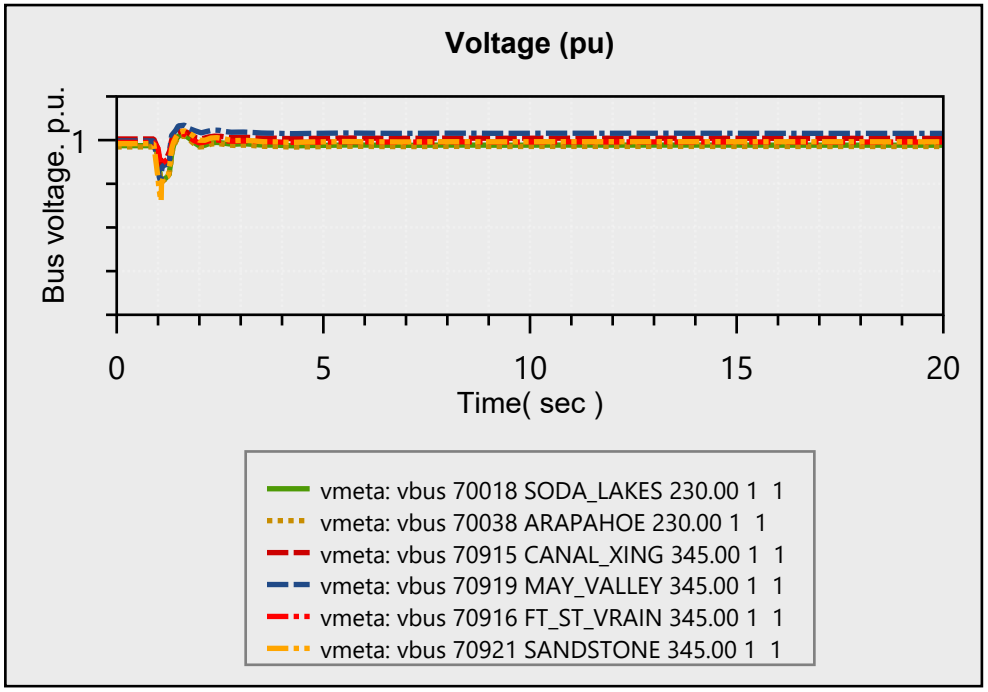

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

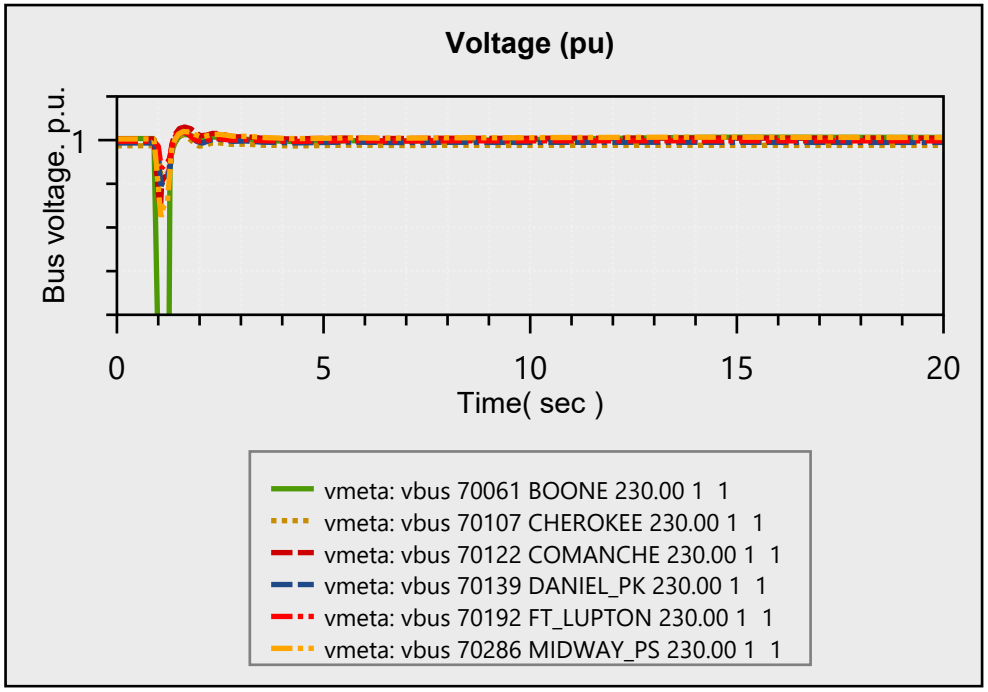

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

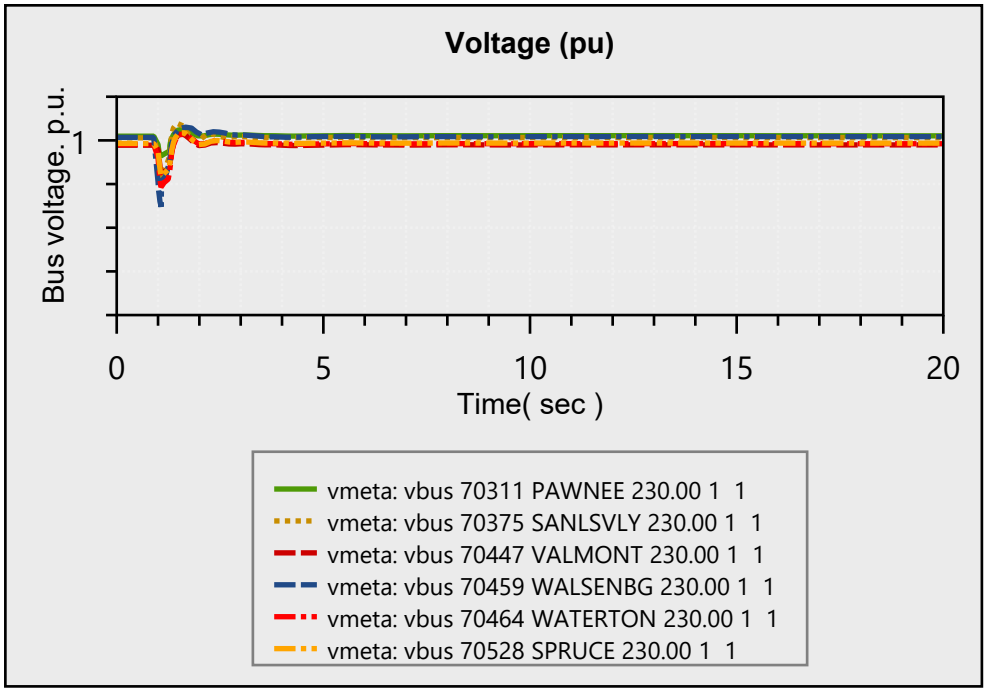

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

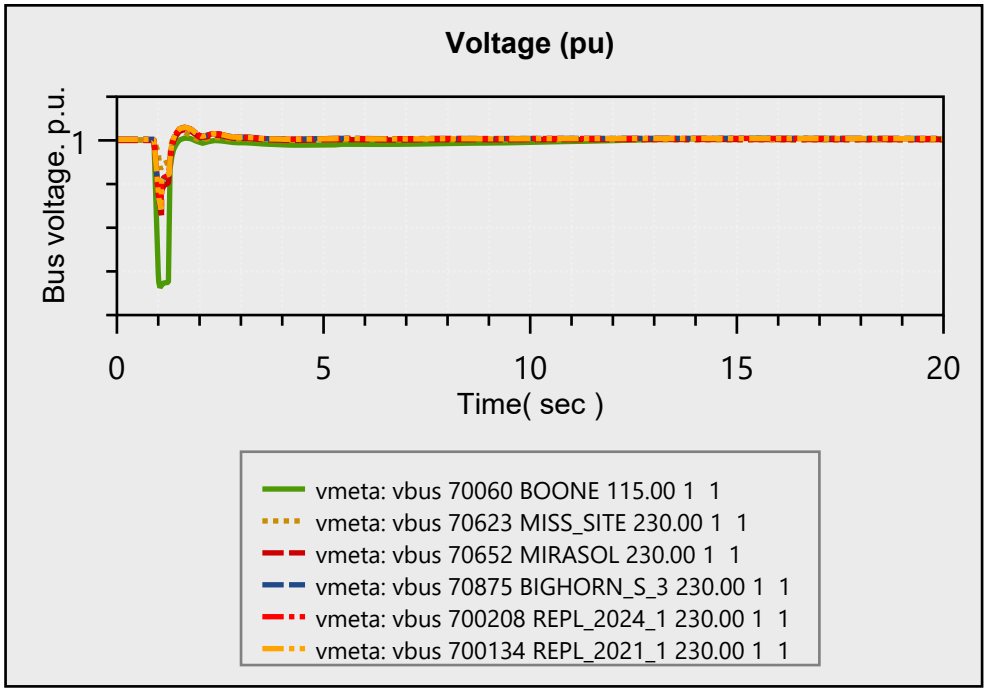

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

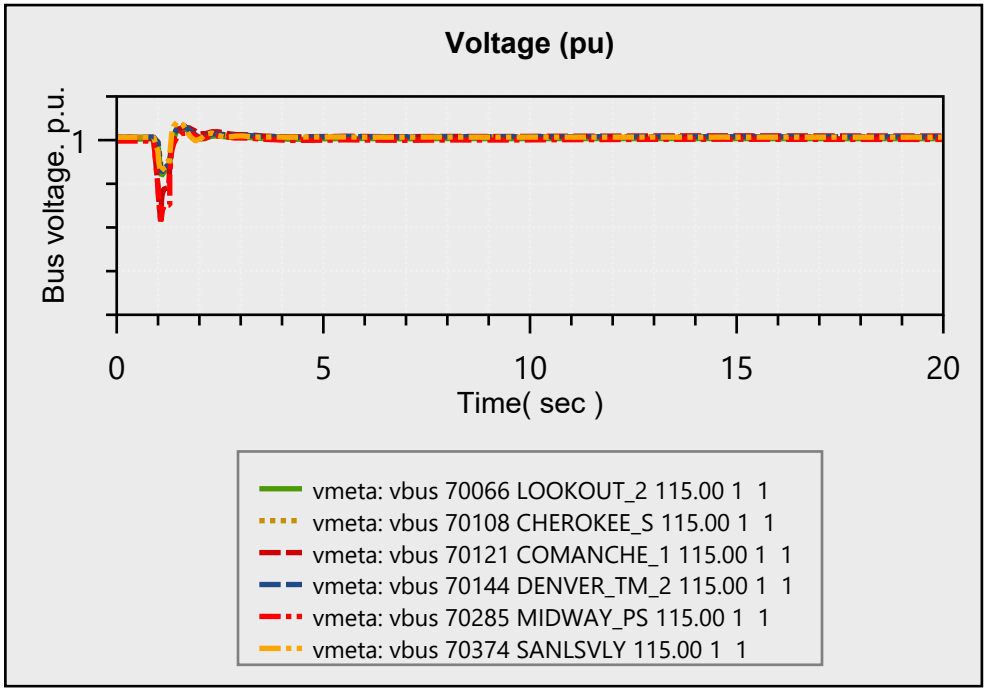

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

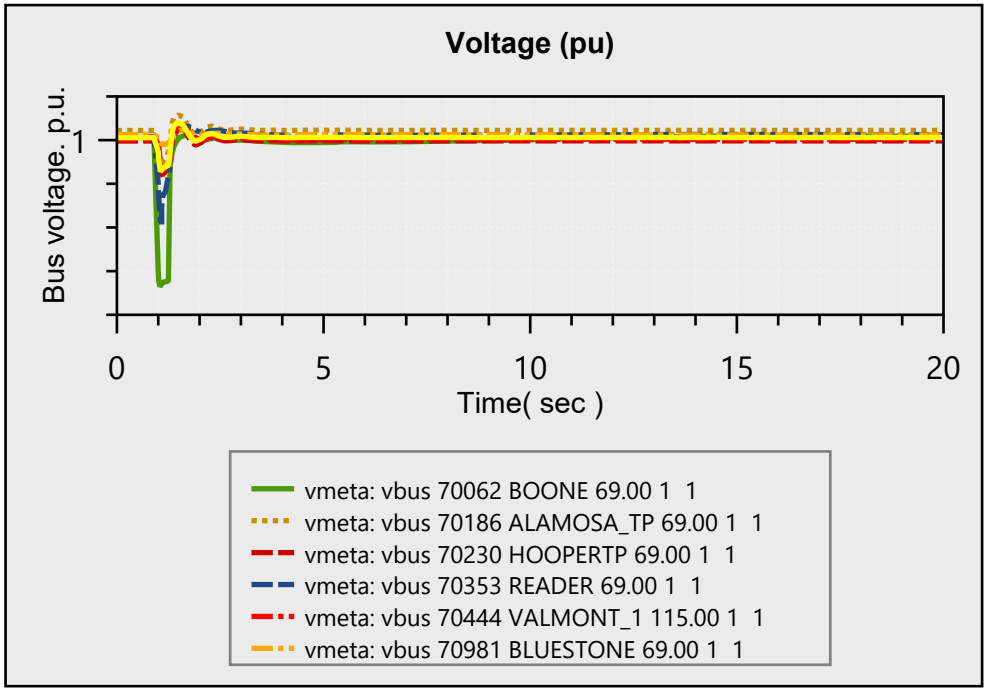

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS

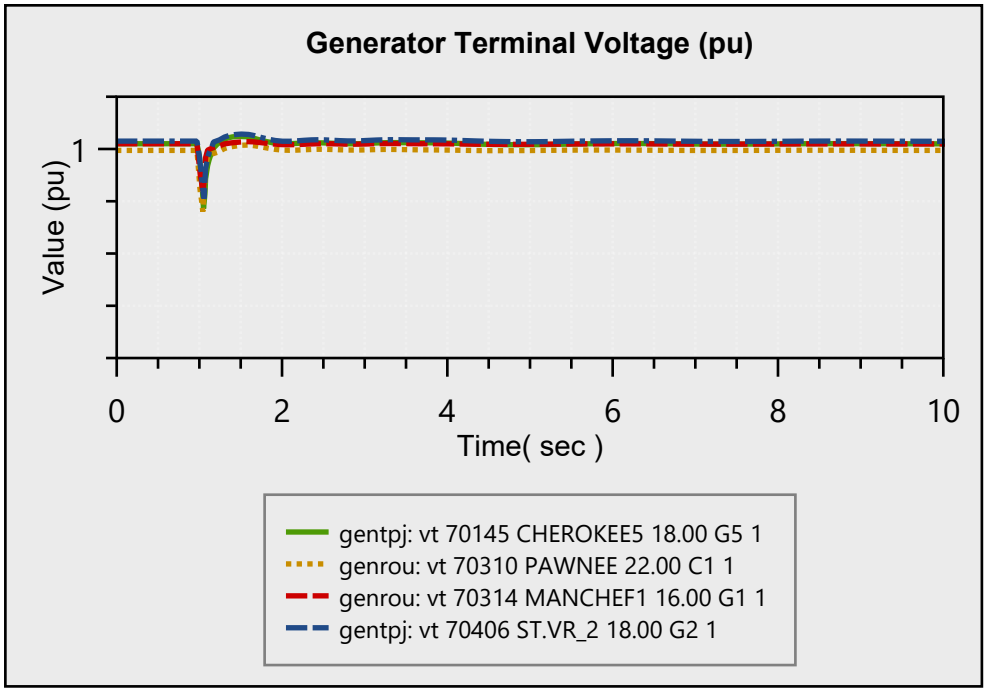

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1

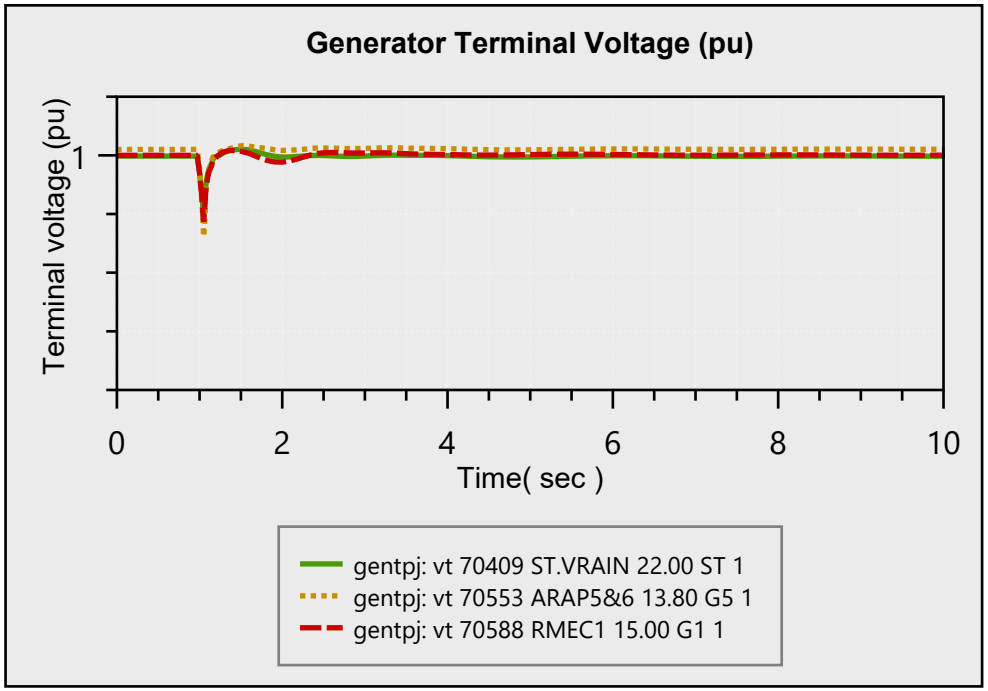

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1

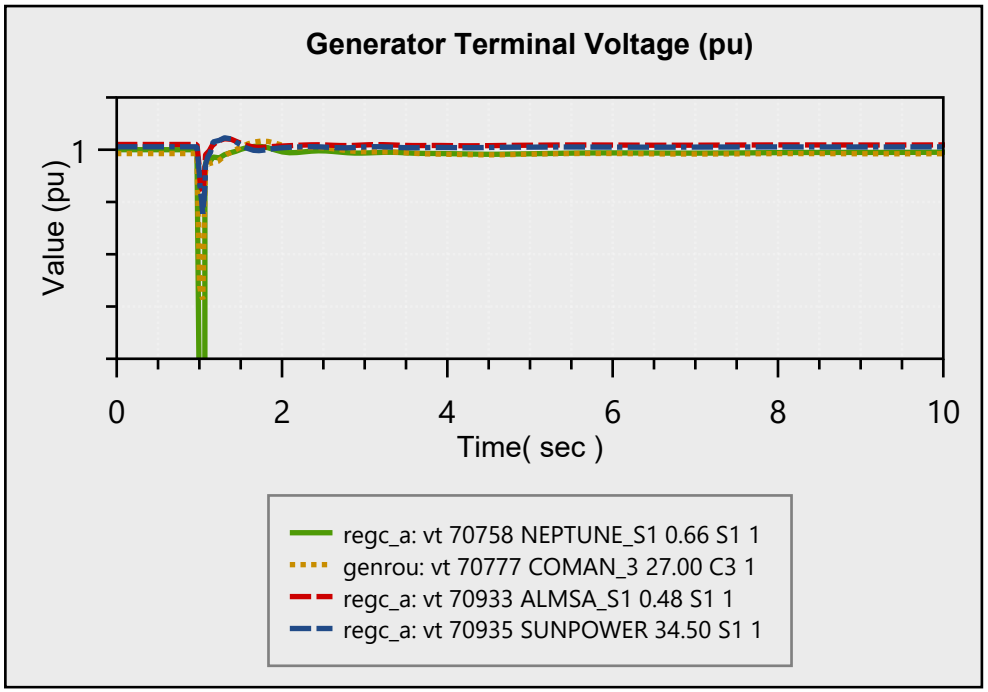

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1

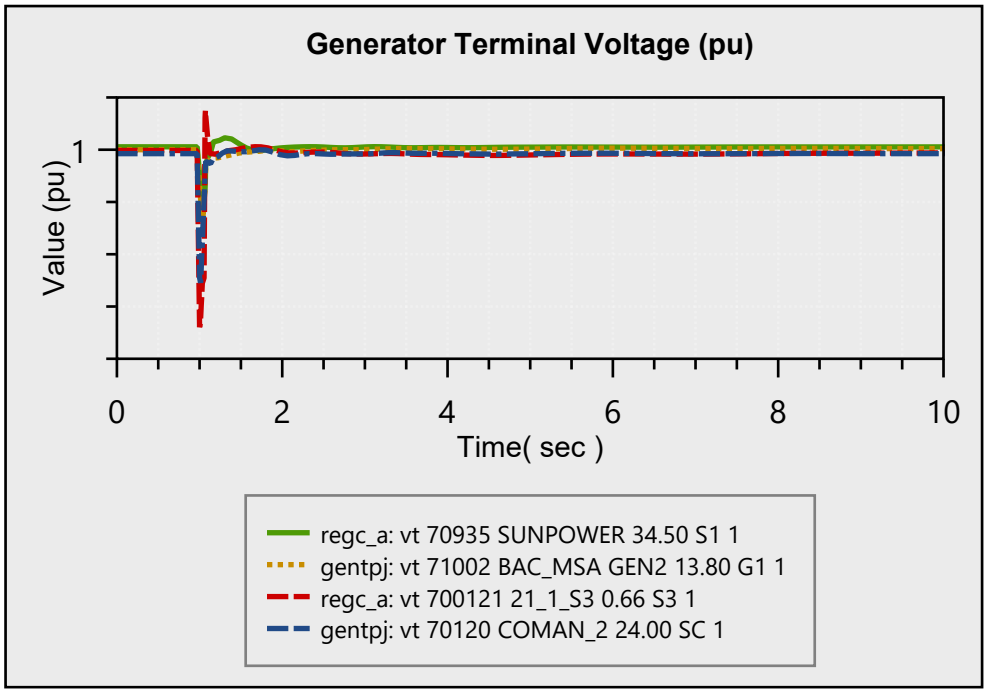

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

OUTPUTS

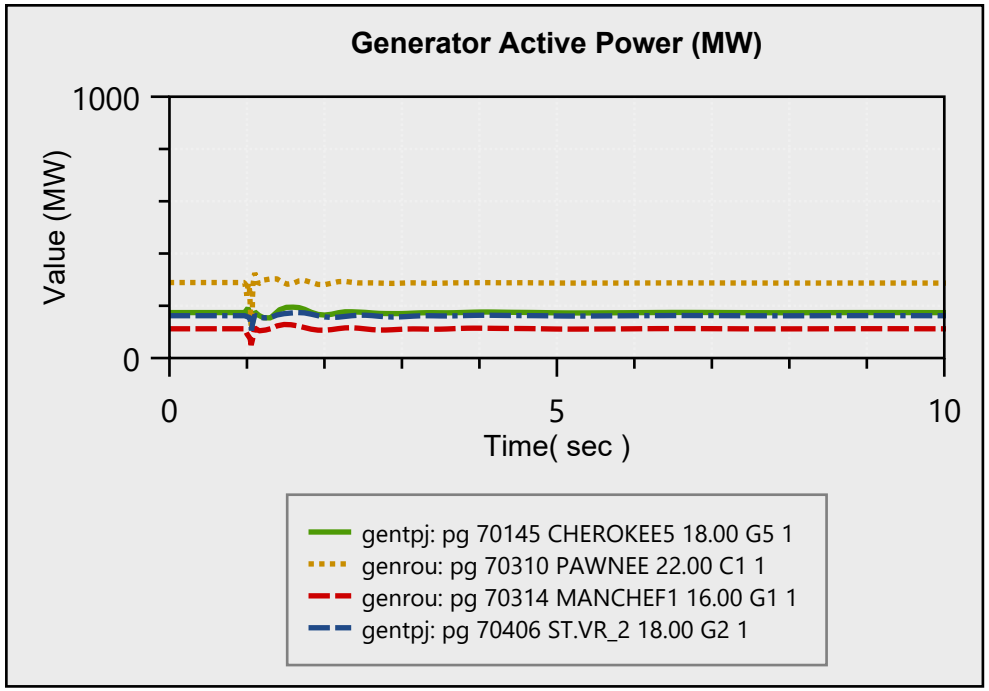

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70145 CHEROKEE5 18.00 G5 1
genrou: vt 70310 PAWNEE 22.00 C1 1
genrou: vt 70314 MANCHEF1 16.00 G1 1
gentpj: vt 70406 ST.VR_2 18.00 G2 1

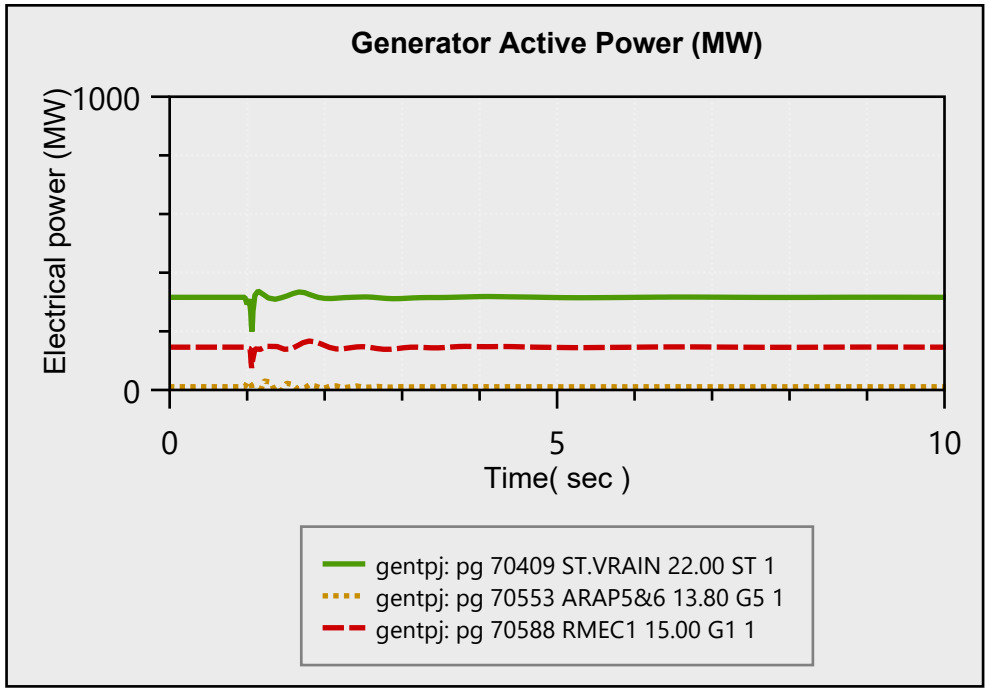

Generator Terminal Voltage (pu)
Terminal voltage (pu)
1
0
2
4
6
8
10
Time(sec)
gentpj: vt 70409 ST.VRAIN 22.00 ST 1
gentpj: vt 70553 ARAP5&6 13.80 G5 1
gentpj: vt 70588 RMEC1 15.00 G1 1

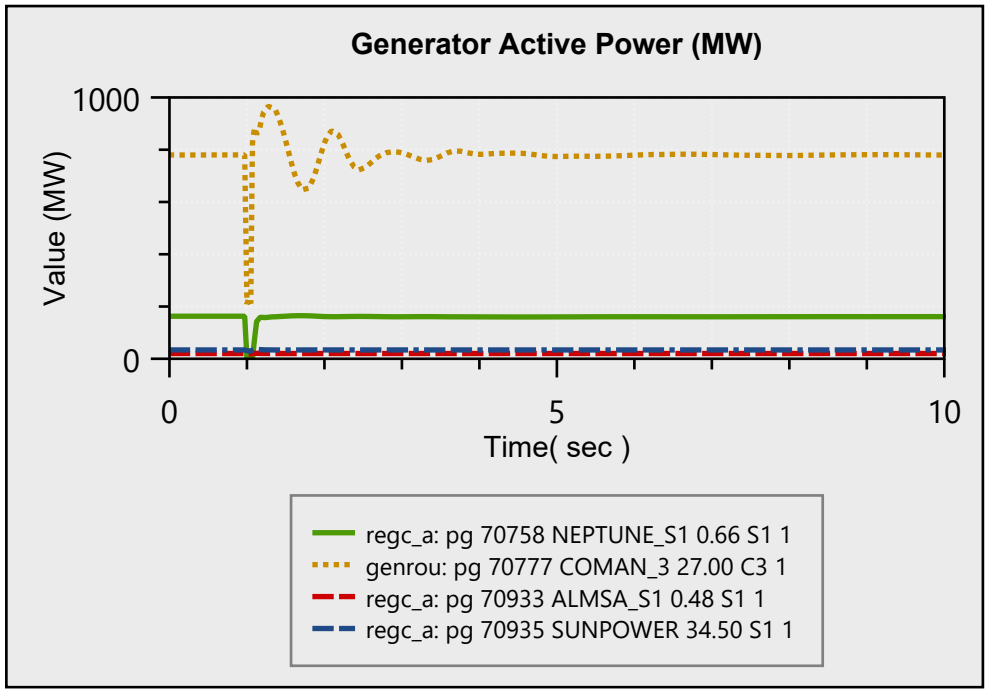

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70758 NEPTUNE_S1 0.66 S1 1
genrou: vt 70777 COMAN_3 27.00 C3 1
regc_a: vt 70933 ALMSA_S1 0.48 S1 1
regc_a: vt 70935 SUNPOWER 34.50 S1 1

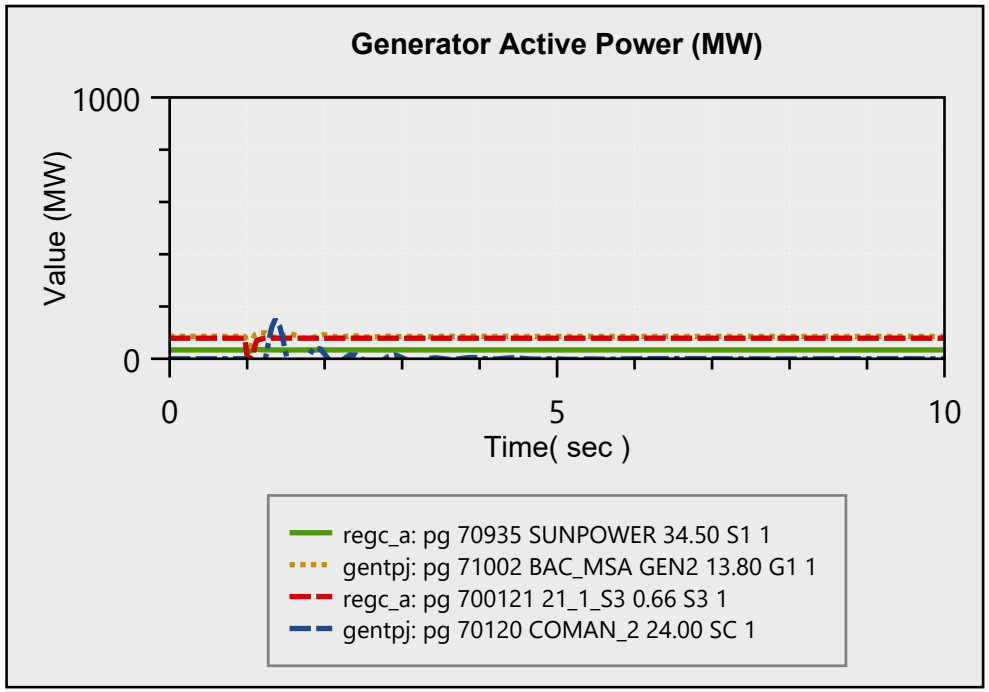

Generator Terminal Voltage (pu)
Value (pu)
1
0
2
4
6
8
10
Time(sec)
regc_a: vt 70935 SUNPOWER 34.50 S1 1
gentpj: vt 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: vt 700121 21_1_S3 0.66 S3 1
gentpj: vt 70120 COMAN_2 24.00 SC 1

OUTPUTS

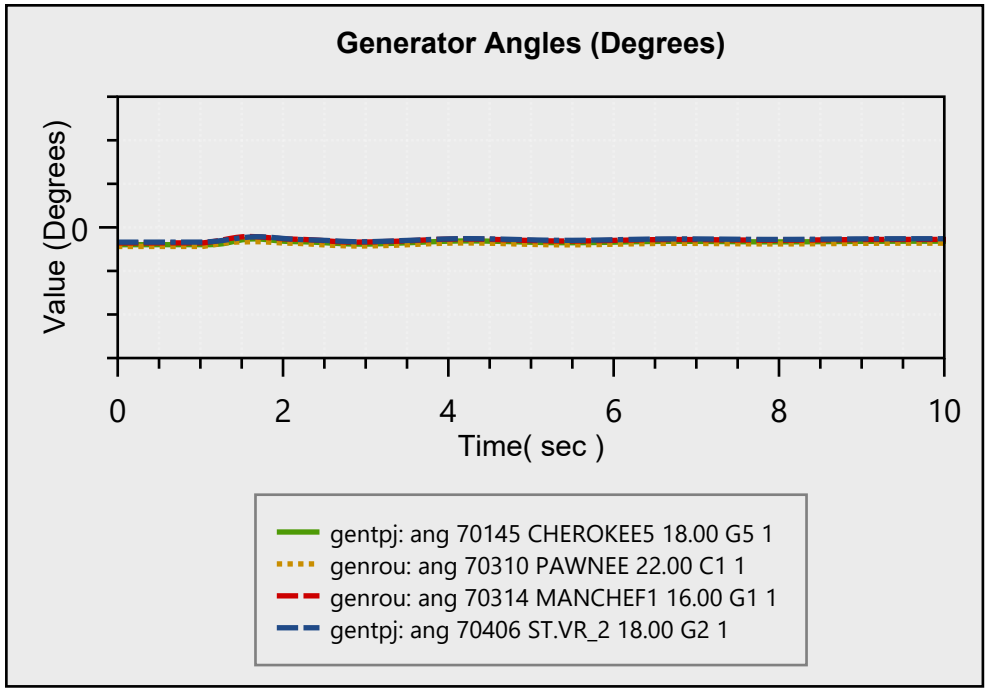

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
gentpj: pg 70145 CHEROKEE5 18.00 G5 1
genrou: pg 70310 PAWNEE 22.00 C1 1
genrou: pg 70314 MANCHEF1 16.00 G1 1
gentpj: pg 70406 ST.VR_2 18.00 G2 1

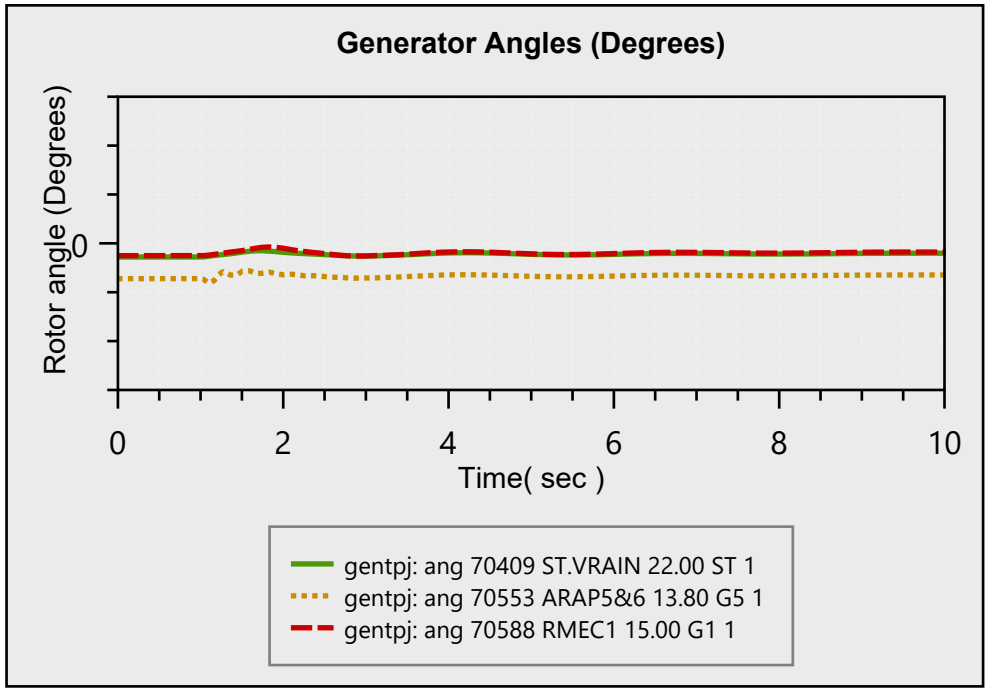

Generator Active Power (MW)
1000
0
Electrical power (MW)
0
5
10
Time(sec)
gentpj: pg 70409 ST.VRAIN 22.00 ST 1
gentpj: pg 70553 ARAP5&6 13.80 G5 1
gentpj: pg 70588 RMEC1 15.00 G1 1

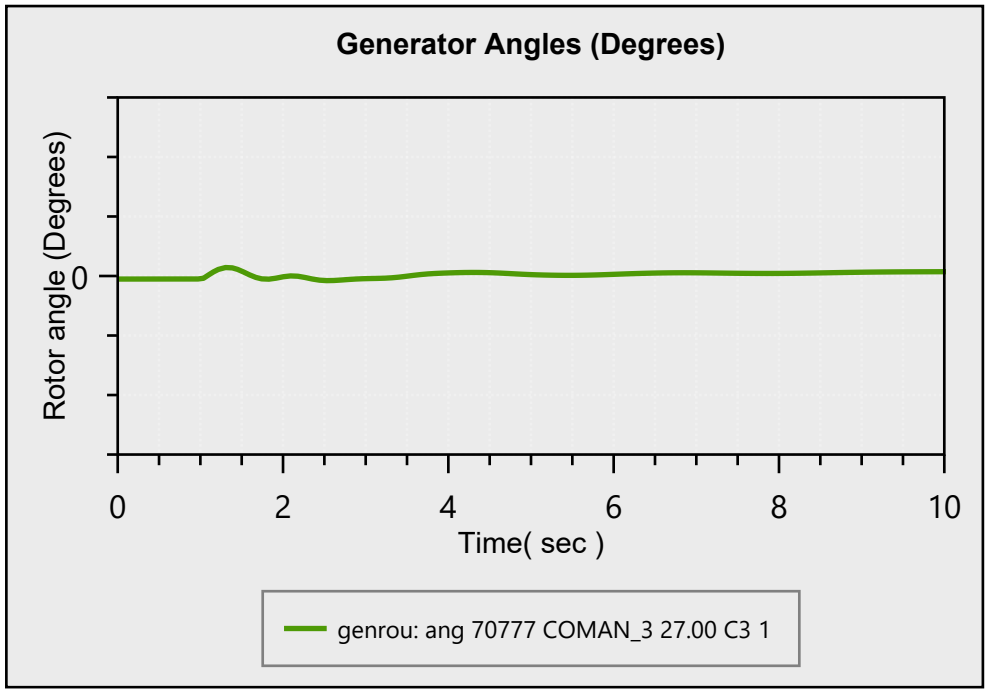

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70758 NEPTUNE_S1 0.66 S1 1
genrou: pg 70777 COMAN_3 27.00 C3 1
regc_a: pg 70933 ALMSA_S1 0.48 S1 1
regc_a: pg 70935 SUNPOWER 34.50 S1 1

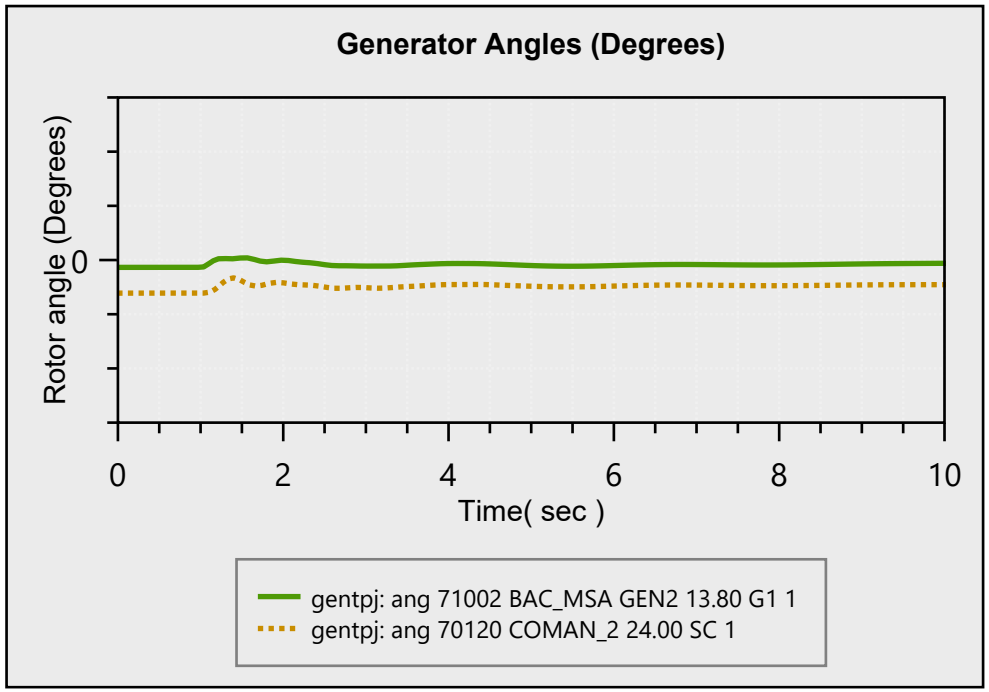

Generator Active Power (MW)
1000
0
Value (MW)
0
5
10
Time(sec)
regc_a: pg 70935 SUNPOWER 34.50 S1 1
gentpj: pg 71002 BAC_MSA GEN2 13.80 G1 1
regc_a: pg 700121 21_1_S3 0.66 S3 1
gentpj: pg 70120 COMAN_2 24.00 SC 1

OUTPUTS

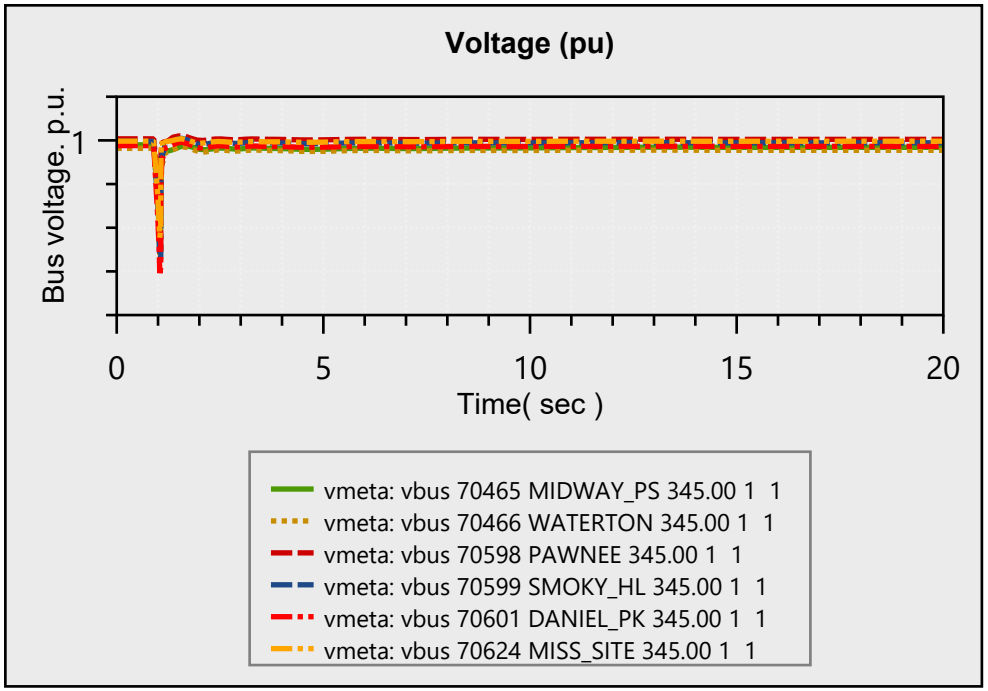

Generator Angles (Degrees)
Value (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70145 CHEROKEE5 18.00 G5 1
genrou: ang 70310 PAWNEE 22.00 C1 1
genrou: ang 70314 MANCHEF1 16.00 G1 1
gentpj: ang 70406 ST.VR_2 18.00 G2 1

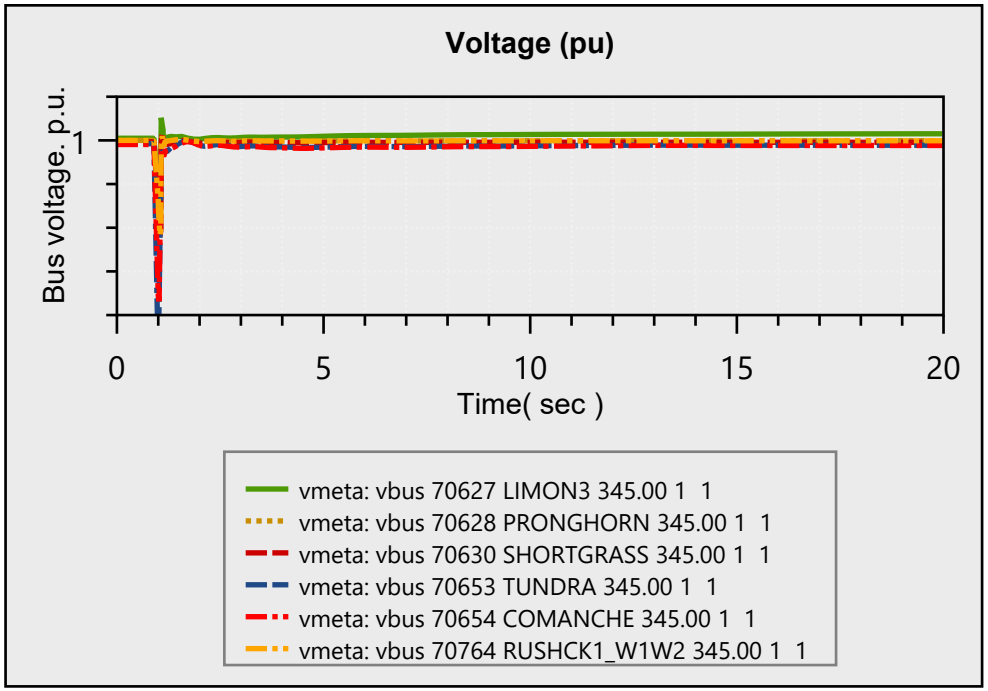

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 70409 ST.VRAIN 22.00 ST 1
gentpj: ang 70553 ARAP5&6 13.80 G5 1
gentpj: ang 70588 RMEC1 15.00 G1 1

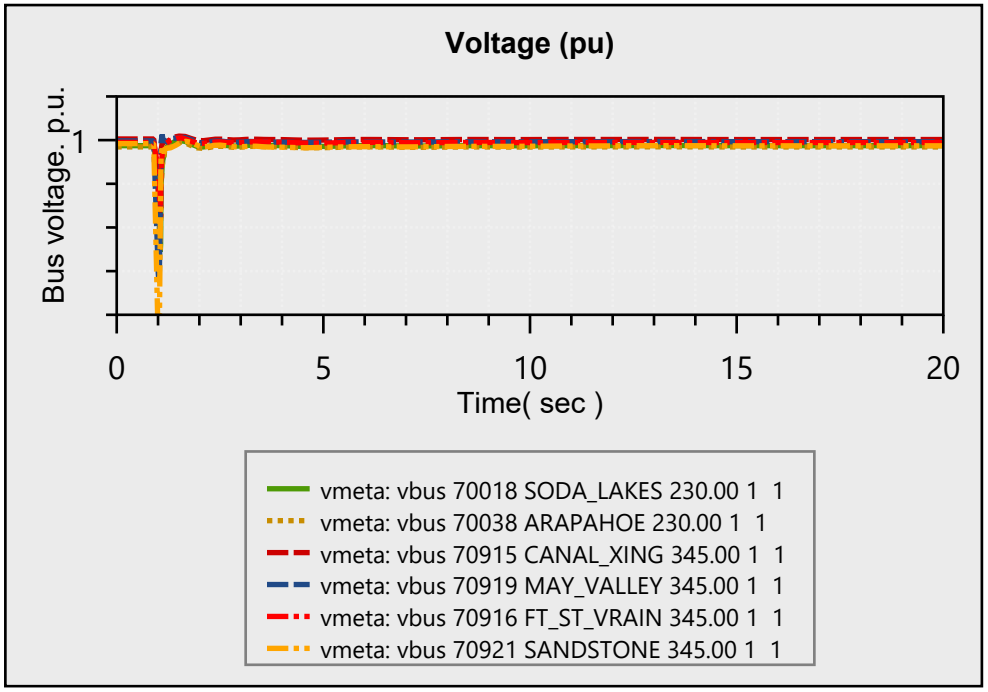

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
genrou: ang 70777 COMAN_3 27.00 C3 1

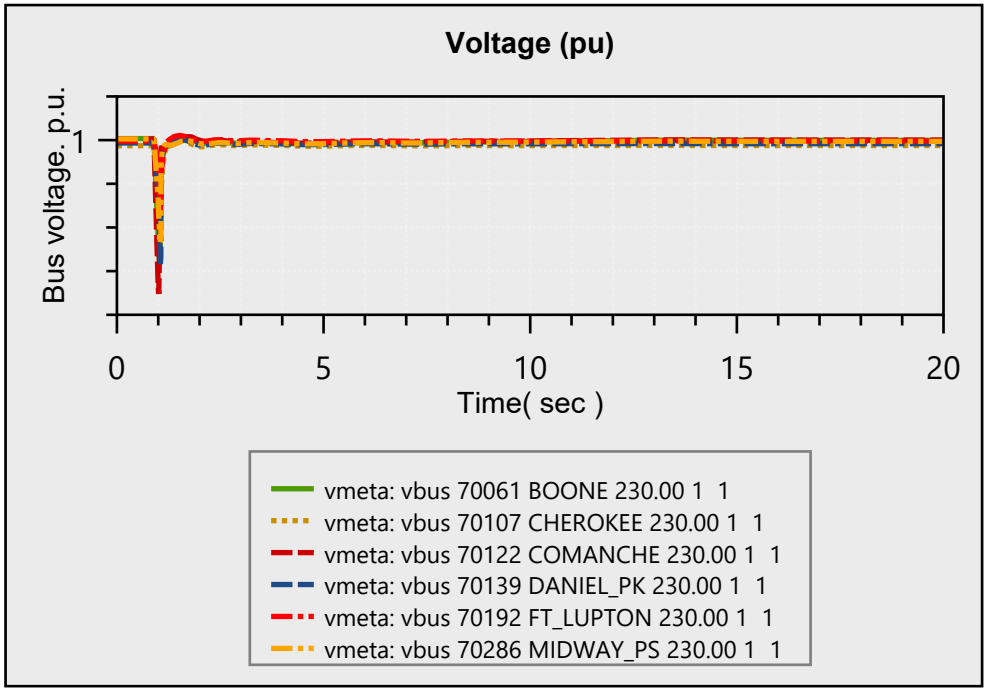

Generator Angles (Degrees)
Rotor angle (Degrees)
0
0
2
4
6
8
10
Time(sec)
gentpj: ang 71002 BAC_MSA GEN2 13.80 G1 1
gentpj: ang 70120 COMAN_2 24.00 SC 1

OUTPUTS

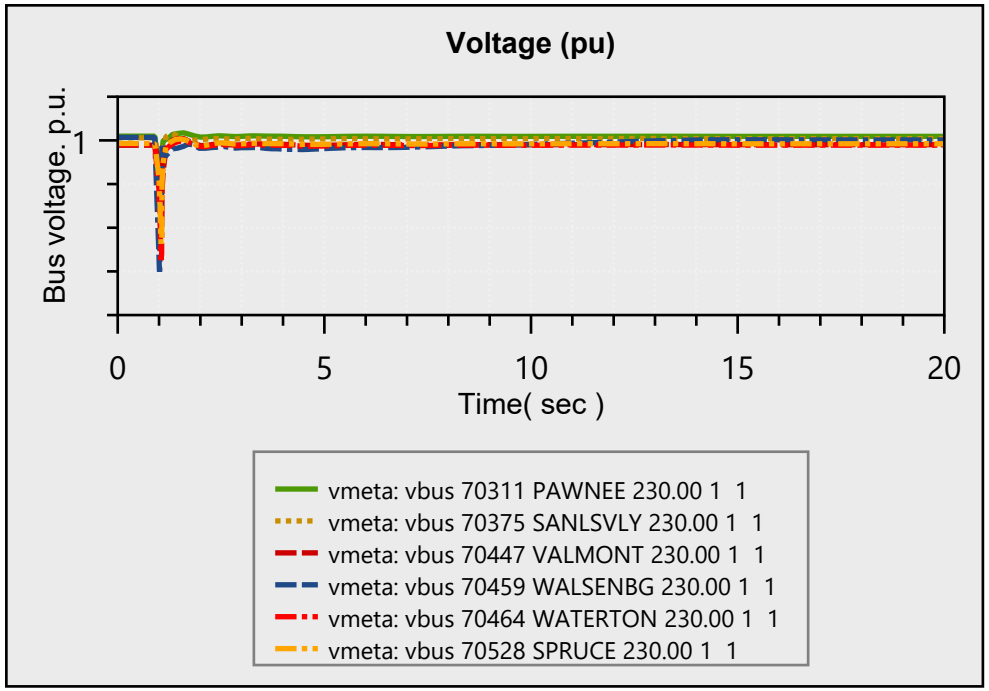

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70465 MIDWAY_PS 345.00 1 1
vmeta: vbus 70466 WATERTON 345.00 1 1
vmeta: vbus 70598 PAWNEE 345.00 1 1
vmeta: vbus 70599 SMOKY_HL 345.00 1 1
vmeta: vbus 70601 DANIEL_PK 345.00 1 1
vmeta: vbus 70624 MISS_SITE 345.00 1 1

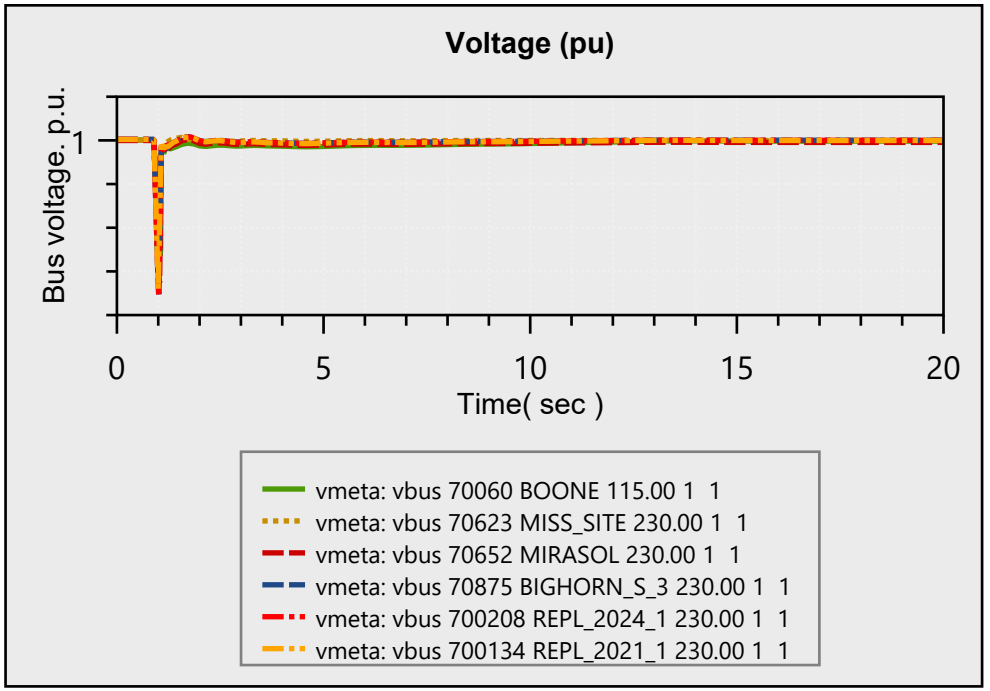

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70627 LIMON3 345.00 1 1
vmeta: vbus 70628 PRONGHORN 345.00 1 1
vmeta: vbus 70630 SHORTGRASS 345.00 1 1
vmeta: vbus 70653 TUNDRA 345.00 1 1
vmeta: vbus 70654 COMANCHE 345.00 1 1
vmeta: vbus 70764 RUSHCK1_W1W2 345.00 1 1

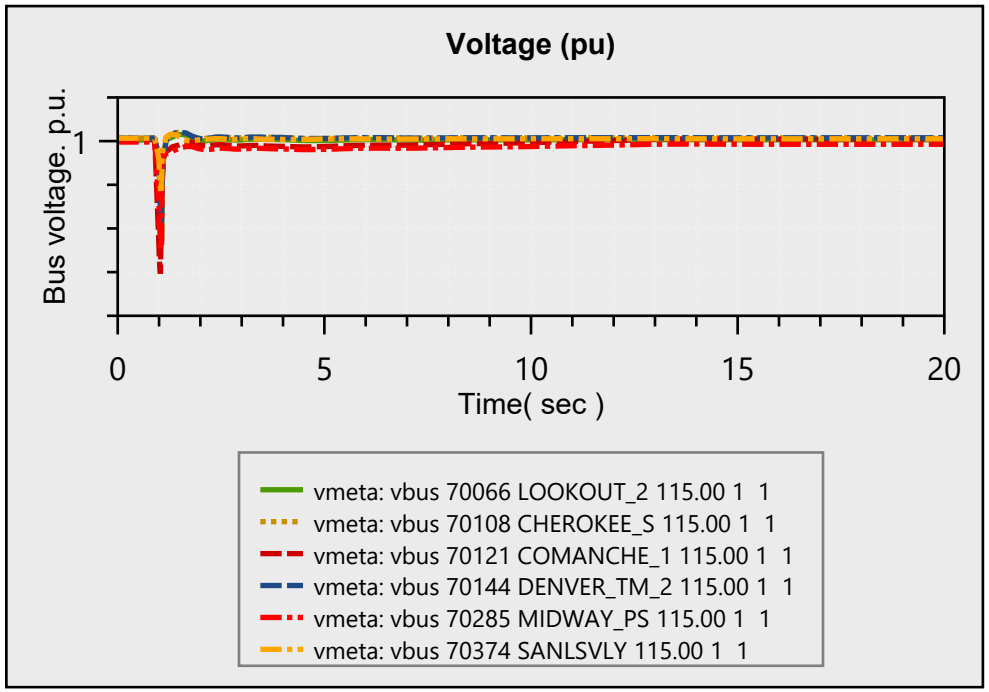

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70018 SODA_LAKES 230.00 1 1
vmeta: vbus 70038 ARAPAHOE 230.00 1 1
vmeta: vbus 70915 CANAL_XING 345.00 1 1
vmeta: vbus 70919 MAY_VALLEY 345.00 1 1
vmeta: vbus 70916 FT_ST_VRAIN 345.00 1 1
vmeta: vbus 70921 SANDSTONE 345.00 1 1

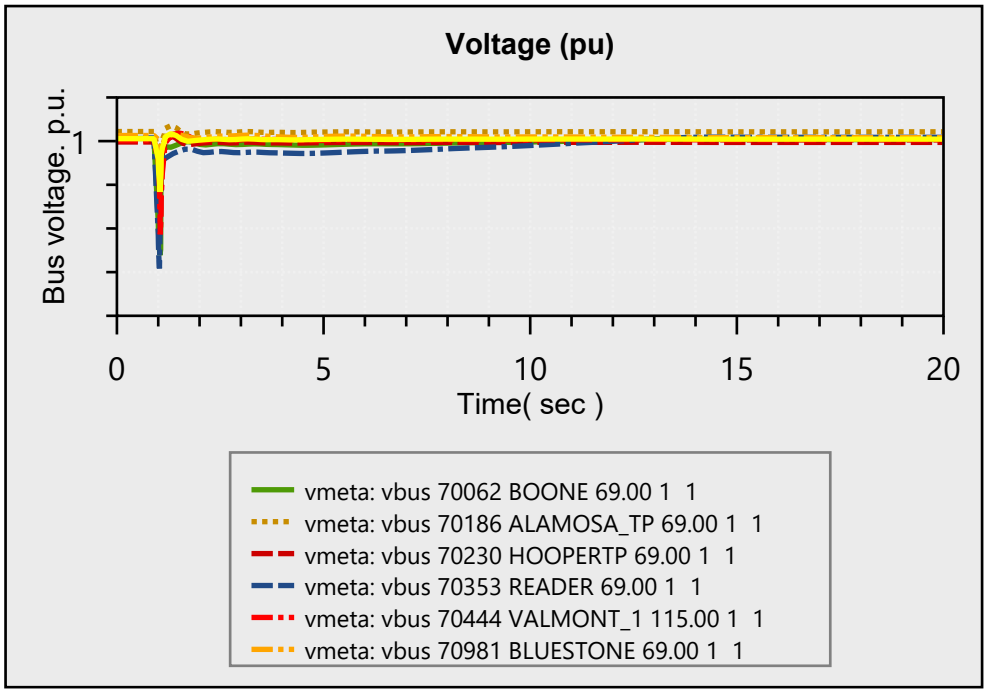

Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70061 BOONE 230.00 1 1
vmeta: vbus 70107 CHEROKEE 230.00 1 1
vmeta: vbus 70122 COMANCHE 230.00 1 1
vmeta: vbus 70139 DANIEL_PK 230.00 1 1
vmeta: vbus 70192 FT_LUPTON 230.00 1 1
vmeta: vbus 70286 MIDWAY_PS 230.00 1 1

OUTPUTS


Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70311 PAWNEE 230.00 1 1
vmeta: vbus 70375 SANLSVLY 230.00 1 1
vmeta: vbus 70447 VALMONT 230.00 1 1
vmeta: vbus 70459 WALSENBG 230.00 1 1
vmeta: vbus 70464 WATERTON 230.00 1 1
vmeta: vbus 70528 SPRUCE 230.00 1 1


Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70060 BOONE 115.00 1 1
vmeta: vbus 70623 MISS_SITE 230.00 1 1
vmeta: vbus 70652 MIRASOL 230.00 1 1
vmeta: vbus 70875 BIGHORN_S_3 230.00 1 1
vmeta: vbus 700208 REPL_2024_1 230.00 1 1
vmeta: vbus 700134 REPL_2021_1 230.00 1 1


Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70066 LOOKOUT_2 115.00 1 1
vmeta: vbus 70108 CHEROKEE_S 115.00 1 1
vmeta: vbus 70121 COMANCHE_1 115.00 1 1
vmeta: vbus 70144 DENVER_TM_2 115.00 1 1
vmeta: vbus 70285 MIDWAY_PS 115.00 1 1
vmeta: vbus 70374 SANLSVLY 115.00 1 1


Voltage (pu)
Bus voltage. p.u.
1
0
5
10
15
20
Time(sec)
vmeta: vbus 70062 BOONE 69.00 1 1
vmeta: vbus 70186 ALAMOSA_TP 69.00 1 1
vmeta: vbus 70230 HOOPERTP 69.00 1 1
vmeta: vbus 70353 READER 69.00 1 1
vmeta: vbus 70444 VALMONT_1 115.00 1 1
vmeta: vbus 70981 BLUESTONE 69.00 1 1

Appendix E Stability Results

See attached spreadsheet Appendix E Stability Results.xlsx

Appendix F Breaker Duty Results

SUBSTATION	BUS NAME	BUS NUMBER	BASE KV	BKR NUMBER	BREAKER MODEL	BREAKER MANUFACTURER	X/R Study	X/R MULT FACT	BRK CAP kA	DRAT CAP kA	TYP	SYMM FAULT AMPS	% BRK MARG	X/R Study		X/R MULT FACT	BRK CAP kA	DRAT CAP kA	TYP	SYMM FAULT AMPS	% BRK MARG
CF&I FURNACE (PSCO/C	CFIF_230KV	262	230	5409	SERIES 2000 230	S & C ELECTRIC	17.22	1.01	20	20	B	14403.32	27.26	11.29	-0.29	1	20	20	B	13458.58	32.71
COMANCHE (PSCO)	COMA_345KV_N	3044	345	7017	362PMI40-30	ABB	29.19	1.09	40	40	L	12851.8	64.98	30.18	-2.98	1.09	40	40	L	14081.25	64.80
COMANCHE (PSCO)	COMA_L7017	1693	345	7014	362PMI40-30	ABB	29.19	1.09	40	40	T	12851.8	64.98	30.18	-2.98	1.09	40	40	T	14081.25	64.80
COMANCHE (PSCO)	COMA_345KV_S	3045	345	7019	362PMI40-30	ABB	29.19	1.09	40	40	L	12851.8	64.98	30.18	-2.98	1.09	40	40	L	14081.25	64.80
COMANCHE (PSCO)	COMA_345KV_N	3044	345	7015	362PMI40-30	ABB	29.19	1.09	40	40	L	12851.8	64.98	30.18	-2.98	1.09	40	40	L	14081.25	64.80
COMANCHE (PSCO)	COMA_GSU3	3061	345	7013	362PMI40-30	ABB	29.2	1.09	40	40	T	12837.89	65.02	30.19	-2.89	1.09	40	40	T	14062.09	64.84
COMANCHE (PSCO)	COMA_L7015	1695	345	7012	362PMI40-30	ABB	29.19	1.09	40	40	T	12851.8	64.98	30.18	-2.98	1.09	40	40	T	14081.25	64.80
COMANCHE (PSCO)	COMA_345KV_S	3045	345	7024	362PMI40-30	ABB	29.19	1.09	40	40	L	12851.8	64.98	30.18	-2.98	1.09	40	40	L	14081.25	64.80
COMANCHE (PSCO)	COMA_345KV_N	3044	345	7023	362PMI40-30	ABB	29.19	1.09	40	40	L	12851.8	64.98	30.18	-2.98	1.09	40	40	L	14081.25	64.80
COMANCHE (PSCO)	COMA_BANK3	1697	345	7010	362PMI40-30	ABB	29.19	1.09	40	40	M	12851.8	64.98	30.18	-2.98	1.09	40	40	T	14081.25	64.80
COMANCHE (PSCO)	COMA_345KV_S	3045	345	7011	362PMI40-30	ABB	29.19	1.09	40	40	L	12851.8	64.98	30.18	-2.98	1.09	40	40	L	14081.25	64.80
COMANCHE (PSCO)	COMA_230KV_N	80	230	5400	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_S	1243	230	5401	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_BANK4	1681	230	5402	242PMR4030	ABB	27.44	1.13	40	40	T	19664.04	44.45	26.62	-2.62	1.12	40	40	T	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_S	1243	230	5403	242PMR4030	ABB	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_N	80	230	5405	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_BANK1	1683	230	5406	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	T	19664.04	44.45	26.62	-2.62	1.12	40	40	T	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_S	1243	230	5407	242PMR4030	ABB	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_S	1243	230	5408	SPS2-245-50	SIEMENS	27.44	1.13	50	50	L	19664.04	55.56	26.62	-2.62	1.12	50	50	L	22379.84	55.24
COMANCHE (PSCO)	COMA_230KV_S	1243	230	5409	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_L5411	1687	230	5410	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_N	80	230	5411	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_L5415	1689	230	5412	SPS2-245-63-1	SIEMENS	27.44	1.13	63	63	T	19664.04	64.73	26.62	-2.62	1.12	63	63	T	22379.84	64.48
COMANCHE (PSCO)	COMA_230KV_N	80	230	5415	242GW40x	WESTINGHOUSE	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_N	80	230	5417	242PMR4030	ABB	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_S	1243	230	5419	242PMR4030	ABB	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_BANK3	1679	230	5418	242PMR4030	ABB	27.44	1.13	40	40	T	19664.04	44.45	26.62	-2.62	1.12	40	40	T	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_N	80	230	5404	242PMR4030	ABB	27.44	1.13	40	40	L	19664.04	44.45	26.62	-2.62	1.12	40	40	L	22379.84	44.05
COMANCHE (PSCO)	COMA_230KV_N	80	230	5416	SPS2-245-63-1	SIEMENS	27.44	1.13	63	63	L	19664.04	64.73	26.62	-2.62	1.12	63	63	L	22379.84	64.48
COMANCHE (PSCO)	COMA_L5416	2446	230	55170	SPS2-245-63-1	SIEMENS	27.44	1.13	63	63	L	19664.04	64.73	26.62	-2.62	1.12	63	63	T	22379.84	64.48
COMANCHE (PSCO)	COMA_230KV_N	80	230	55173	SPS2-245-63-2	SIEMENS	27.44	1.13	63	63	L	19664.04	64.73	26.62	-2.62	1.12	63	63	L	22379.84	64.48
COMANCHE (PSCO)	COMA_L55173	575	230	55172	SPS2-245-63-2	SIEMENS	27.44	1.13	63	63	L	19664.04	64.73	26.62	-2.62	1.12	63	63	T	22379.84	64.48
COMANCHE (PSCO)	COMA_L5413	1692	230	5413	200SFMT40HE	MIT	27.44	1.13	40	40	T	19664.04	44.45	26.62	-2.62	1.12	40	40	T	22379.84	44.05
COMANCHE (PSCO)	COMA_L5413	1692	230	5414	200SFMT40HE	MIT	27.44	1.13	40	40	T	19664.04	44.45	26.62	-2.62	1.12	40	40	T	22379.84	44.05
COMANCHE (PSCO)	COMA_L55175	2447	230	55175	SPS2S-245-63-1	SIEMENS	27.44	1.13	63	63	T	19664.04	64.73	26.62	-2.62	1.12	63	63	T	22379.84	64.48
COMANCHE (PSCO)	COMA_115KV_1	265	115	9980	SPS2-145-63	SIEMENS	28.83	1.14	63	63	L	25343.07	54.14	26.76	-3.66	1.12	63	63	L	28389.76	54.94
COMANCHE (PSCO)	COMA_345KV_N	3044	345	7022	LTB420E2	ABB	29.19	1.09	50	50	T	12851.8	71.98	30.18	-2.98		50	50	T	14081.25	71.84
COMANCHE (PSCO)	COMA_115KV_1	265	115	9981	SPS2-145-63	SIEMENS	28.83	1.14	63	63	T	25343.07	54.14	26.76	-1.66	1.12	63	63	T	28389.76	54.94
COMANCHE (PSCO)	COMA_115KV_2	1242	115	9982	SPS2-145-63	SIEMENS	28.83	1.14	63	63	T	25343.07	54.14	26.76	-1.66	1.12	63	63	T	28389.76	54.94
COMANCHE (PSCO)	COMA_115KV_2	1242	115	9984	121GM40	WESTINGHOUSE	28.83	1.14	40	40	T	25343.07	27.77	26.76	-1.66	1.12	40	40	T	28389.76	29.03
COMANCHE (PSCO)	COMA_115KV_2	1242	115	9985	SPS2S-145-63-1	SIEMENS	28.83	1.14	63	63	M	25343.07	54.14	26.76	-1.66	1.12	63	63	T	28389.76	54.94
COMANCHE (PSCO)	COMA_115KV_1	265	115	9987	121GM40	WESTINGHOUSE	28.83	1.14	40	40	M	25343.07	27.77	26.76	-1.66	1.12	40	40	T	28389.76	29.03
MIDWAY (PSCO)	MIDW_L5129	1699	230	5120	242GW40x	WESTINGHOUSE	28.37	1.13	40	40	T	26060.62	26.38	22.12	-0.52	1.08	40	40	T	26219.71	34.45
MIDWAY (PSCO)	MIDW_BANK1	1702	230	5121	2300GW15000	WESTINGHOUSE	28.37	1.13	34.7	34.7	L	26060.62	15.13	22.12	-0.52	1.08	36.3	36.3	L	26219.71	27.77
MIDWAY (PSCO)	MIDW_BANK1	1702	230	5122	242GW40x	WESTINGHOUSE	28.37	1.13	40	40	T	26060.62	26.38	22.12	-0.52	1.08	40	40	T	26219.71	34.45
MIDWAY (PSCO)	MIDW_L5123	1706	230	5123	242PMR 40-30	ABB	28.37	1.13	40	40	L	26060.62	26.38	22.12	-0.52	1.08	40	40	L	26219.71	34.45
MIDWAY (PSCO)	MIDW_L5411	1703	230	5124	242GW40x	WESTINGHOUSE	28.37	1.13	40	40	T	26060.62	26.38	22.12	-0.52	1.08	40	40	T	26219.71	34.45
MIDWAY (PSCO)	MIDW_BT	1700	230	5125	SPS2-245-63-1	SIEMENS	28.37	1.13	63	63	L	26060.62	53.26	22.12	-0.52	1.08	63	63	L	26219.71	58.38
MIDWAY (PSCO)	MIDW_L55255	1705	230	5126	HVB24240000	HVB	28.37	1.13	31.5	31.5	T	26060.62	6.51	22.12	-0.52	1.08	31.5	31.5	T	26219.71	16.76
MIDWAY (PSCO)	MIDW_L5335	1708	230	5335	SPS2-245-40-1	SIEMENS	28.37	1.13	40	40	L	26060.62	26.38	22.12	-0.52	1.08	40	40	L	26219.71	34.45
MIDWAY (PSCO)	MIDW_230KV_N	1327	230	5411	242GW40x	WESTINGHOUSE	28.37	1.13	40	40	L	26060.62	26.38	22.12	-0.52	1.08	40	40	L	26219.71	34.45
COMANCHE (PSCO)	COMA_115KV_1	265	115	9986	SPS2-145-63	SIEMENS	28.83	1.14	63	63	T	25343.07	54.14	26.76	-1.66	1.12	63	63	T	28389.76	54.94
MIDWAY (PSCO)	MIDW_BANK3	1707	230	5128	SPS2-245-40-1	SIEMENS	28.37	1.13	40	40	T	26060.62	26.38	22.12	-0.52	1.08	40	40	T	26219.71	34.45
MIDWAY (PSCO)	MIDW_230KV_N	1327	230	55033	SPS2-245-63-1	SIEMENS	28.37	1.13	63	63	L	26060.62	53.26	22.12	-0.52	1.08	63	63	L	26219.71	58.38
MIDWAY (PSCO)	MIDW_230KV_N	1327	230	55255	242PMR4030	ABB	28.37	1.13	40	40	L	26060.62	26.38	22.12	-0.52	1.08	40	40	L	26219.71	34.45
MIDWAY (PSCO)	MIDW_230KV_N	1327	230	5129	242PMR4030	ABB	28.37	1.13	40	40	L	26060.62	26.38	22.12	-0.52	1.08	40	40	L	26219.71	34.45
MIDWAY (PSCO)	MIDW_345KV	1283	345	7060	362PMI40-30	ABB	40.53	1.2	40	40	T	8675.944	73.97	35.76	-0.46	1.19	40	40	T	8351.261	79.12
MIDWAY (PSCO)	MIDW_L9637	1713	115	9637	SPS2-145-40-2	SIEMENS	32.8	1.16	40	40	T	16362.56	52.55	29.31	0.19	1.13	40	40	T	17087.66	57.28
MIDWAY (PSCO)	MIDW_BANK3	1295	13.8	1626	72PMI 40-20	ABB	43.13	1.22	40	40	T	31178.07	4.91	INFINITE	#VALUE!	1	40	40	T	---	---
MIDWAY (PSCO)	MIDW_L9636	1712	115	9636	1150GM5000	WESTINGHOUSE	32.8	1.16	25	25	T	16362.56	24.08	29.31	0.19	1.13	25	25	T	17087.66	31.65
MIDWAY (PSCO)	MIDW_BANK1	1710	115	9641	1150GM5000	WESTINGHOUSE	32.8	1.16	25	25	T	16362.56	24.08	29.31	0.19	1.13	25	25	T	17087.66	31.65
BOONE (PSCO/TSG&T)	BOON_230KV_S	727	230	5335	242GMA40x	WESTINGHOUSE	12.93	1	40	40	L	9251.631	76.87	11.08	-0.38	1	40	40	L	8634.593	78.41
BOONE (PSCO/TSG&T)	BOON_L5337	1724	230	5336	RHF84	MCG	12.93	1	31.5	31.5	T	9251.631	70.63	11.08	-0.38	1	31.5	31.5	T	8634.593	72.59

SUBSTATION	BUS NAME	BUS NUMBER	BASE KV	BKR NUMBER	BREAKER MODEL	BREAKER MANUFACTURER	X/R Study	X/R MULT FACT	BRK CAP kA	DRAT CAP kA	TYP	SYMM FAULT AMPS	% BRK MARG	X/R Study		X/R MULT FACT	BRK CAP kA	DRAT CAP kA	TYP	SYMM FAULT AMPS	% BRK MARG
BOONE (PSCO/TSG&T)	BOON_230KV_N	352	230	5337	RHF84	MCG	12.93	1	31.5	31.5	L	9251.631	70.63	11.08	-0.38	1	31.5	31.5	L	8634.593	72.59
BOONE (PSCO/TSG&T)	BOON_230KV_S	727	230	5415	242GMA40	WESTINGHOUSE	12.93	1	31.5	31.5	L	9251.631	70.63	11.08	-0.38	1	31.5	31.5	L	8634.593	72.59
BOONE (PSCO/TSG&T)	BOON_115KV	361	115	8131	ALP54x	MCG	16.21	1	40	40	T	12878.65	67.80	13.02	-0.42	1	40	40	T	11958.08	70.10
BOONE (PSCO/TSG&T)	BOON_115KV	361	115	8134	ALP54	MCE	16.21	1	40	40	T	12878.65	67.80	13.02	-0.42	1	40	40	T	11958.08	70.10
BOONE (PSCO/TSG&T)	BOON_115KV	361	115	8136	GNRC 115kV 20-1	UNKNOWN	16.21	1	20	20	M	12878.65	35.61	13.02	-0.42	1	20	20	T	11958.08	40.21
JACKSON FULLER (PSCO	JFUL_L5119	1923	230	5119	200-SFMT-40HE	MITSUBISHI	13.94	1	40	40	L	16360.59	59.10	7.67	4.43	1	40	40	L	13895.14	65.26
JACKSON FULLER (PSCO	JFUL_L5129	1922	230	5114	200-SFMT-40HE	MITSUBISHI	13.94	1	40	40	T	16360.59	59.10	7.67	4.43	1	40	40	T	13895.14	65.26
JACKSON FULLER (PSCO	JFUL_L5129	1922	230	5129	200-SFMT-40HE	MITSUBISHI	13.94	1	40	40	L	16360.59	59.10	7.67	4.43	1	40	40	L	13895.14	65.26
LAMAR SWITCHING STAT	LASS_230KV_N	836	230	5337	SPS2-245-50	SIEMENS	11.73	1	50	50	L	1762.663	96.47	12.31	0.89	1	50	50	L	2342.659	95.31
LAMAR SWITCHING STAT	LASS_L5337	1730	230	5510	SPS2-245-50	SIEMENS	11.73	1	50	50	L	1762.663	96.47	12.31	0.89	1	50	50	T	2342.659	95.31
LAMAR SWITCHING STAT	LASS_L5511	1731	230	5511	SPS2-245-50	SIEMENS	11.73	1	50	50	L	1762.663	96.47	12.31	0.89	1	50	50	L	2342.659	95.31
DANIELS PARK (PSCO)	DANI_BANK3	1608	345	7033	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_BANK3	1608	345	7030	362PMI40-30	ABB	17.35	1	40	40	T	20933.4	47.67	10.6	5.9	1	40	40	T	19200.29	52.00
DANIELS PARK (PSCO)	DANI_BANK4	1610	345	7034	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_BANK4	1610	345	7032	362PMI40-30	ABB	17.35	1	40	40	T	20933.4	47.67	10.6	5.9	1	40	40	T	19200.29	52.00
DANIELS PARK (PSCO)	DANI_L7017	1611	345	7017	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_BANK5	1612	345	7035	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_L7235	1613	345	7036	362PMI40-30	ABB	17.35	1	40	40	T	20933.4	47.67	10.6	5.9	1	40	40	T	19200.29	52.00
DANIELS PARK (PSCO)	DANI_L7235	1613	345	7235	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_345KV_S	3047	345	7040	362PMI40-30	ABB	17.35	1	40	40	T	20933.4	47.67	10.6	5.9	1	40	40	T	19200.29	52.00
LAMAR SWITCHING STAT	LASS_L5513	1732	230	5512	242PMR4030	ABB	11.73	1	40	40	E	1762.663	95.59	12.31	0.89	1	40	40	E	2342.659	94.14
JACKSON FULLER (PSCO	JFUL_L55159	2503	230	55159	SPS2-245-40-1	SIEMENS	13.94	1	40	40	L	16360.59	59.10	7.67	4.43	1	40	40	L	13895.14	65.26
JACKSON FULLER (PSCO	JFUL_L55159	2503	230	55150	SPS2-245-40-1	SIEMENS	13.94	1	40	40	L	16360.59	59.10	7.67	4.43	1	40	40	L	13895.14	65.26
BOONE (PSCO/TSG&T)	BOON_230KV_S	727	230	5331	MARK III (230kV	S & C ELECTRIC	12.93	1	30	30	T	9251.631	69.16	11.08	-0.38	1	30	30	T	8634.593	71.22
CF&I SOUTHEAST (PSCO	CFIS_9987	268	115	8091	SERIES 2000 138	S & C ELECTRIC	9.16	1	25	25	T	12004.46	51.98	10.63	0.07	1	25	25	T	10347.57	58.61
CF&I SOUTHEAST (PSCO	CFIS_9985	287	115	8092	SERIES 2000 138	S & C ELECTRIC	8.41	1	25	25	T	15325.35	38.70	9.2	0.1	1	25	25	T	13646.56	45.41
DANIELS PARK (PSCO)	DANI_BANK5	1612	345	7038	362PMI40-30	ABB	17.35	1	40	40	T	20933.4	47.67	10.6	5.9	1	40	40	T	19200.29	52.00
DANIELS PARK (PSCO)	DANI_L7109	2745	345	7109	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_L7153	2744	345	7153	362PMI40-30	ABB	17.35	1	40	40	L	20933.4	47.67	10.6	5.9	1	40	40	L	19200.29	52.00
DANIELS PARK (PSCO)	DANI_345KV_S	3047	345	7037	DT1-362-63-F3	GENERAL ELECTRI	17.35	1	63	63	T	20933.4	66.77	10.6	5.9	1	63	63	T	19200.29	69.52
MIRASOL (PSCO)	MSOL_L55255	4110	230	55255	SPS2-245-63-1	SIEMENS	12.06	1	63	63	T	10834.85	82.80	12.62	-0.42	1	63	63	T	9983.762	84.15
MIRASOL (PSCO)	MSOL_L55255	4110	230	55250	SPS2-245-63-1	SIEMENS	12.06	1	63	63	L	10834.85	82.80	12.62	-0.52	1	63	63	L	9983.762	84.15
MIRASOL (PSCO)	MSOL_L55257	4635	230	55257	SPS2-245-63-1	SIEMENS	12.06	1	63	63	L	10834.85	82.80	12.62	-0.42	1	63	63	T	9983.762	84.15
TUNDRA (PSCO)	TUND_L7015	4882	345	7015	DT1-362-63-F3	GENERAL ELECTRI	16.58	1	63	63	T	8859.944	85.94	15.19	1.31	1	63	63	T	8088.016	87.16
TUNDRA (PSCO)	TUND_345KV_N	4844	345	7235	DT1-362-63-F3	GENERAL ELECTRI	16.58	1	63	63	L	8859.944	85.94	15.19	1.31	1	63	63	T	8088.016	87.16
TUNDRA (PSCO)	TUND_L7231_F	4845	345	7230	DT1-362-63-F3	GENERAL ELECTRI	16.58	1	63	63	L	8859.944	85.94	15.19	1.31	1	63	63	L	8088.016	87.16
MIRASOL (PSCO)	MSOL_230KV_W	3997	230	55267	SPS2-245-63-1	SIEMENS	12.06	1	63	63	L	10834.85	82.80	12.62	-0.42	1	63	63	L	9983.762	84.15

Appendix G Automation Files for Case Changes

```
# 2025 Load Scale
from PSLF_PYTHON import*

ret = Pslf.change_record(1,4,'70118  MU','st p q','1 1.82616 0.59785')
ret = Pslf.change_record(1,4,'70345  P1','st p q','1 32.13172 9.6743')
ret = Pslf.change_record(1,4,'70257  P1','st p q','1 1.43484 -0.82612')
ret = Pslf.change_record(1,4,'70251  P1','st p q','1 30.82732 8.83731')
ret = Pslf.change_record(1,4,'70242  P1','st p q','1 44.3496 15.28322')
ret = Pslf.change_record(1,4,'70241  P1','st p q','1 45.49095 21.90305')
ret = Pslf.change_record(1,4,'70240  P1','st p q','1 15.46801 2.174')
ret = Pslf.change_record(1,4,'70237  P1','st p q','1 13.01139 2.35879')
ret = Pslf.change_record(1,4,'70233  P1','st p q','1 18.38117 5.57631')
ret = Pslf.change_record(1,4,'70228  P1','st p q','1 3.02186 1.44571')
ret = Pslf.change_record(1,4,'70259  P1','st p q','1 35.40359 15.50062')
ret = Pslf.change_record(1,4,'70261  P1','st p q','1 41.25165 14.41362')
ret = Pslf.change_record(1,4,'70283  P1','st p q','1 41.27339 17.84854')
ret = Pslf.change_record(1,4,'70281  P1','st p q','1 6.56548 -4.25017')
ret = Pslf.change_record(1,4,'70279  P1','st p q','1 18.94641 6.75027')
ret = Pslf.change_record(1,4,'70276  P1','st p q','1 39.27331 12.41354')
ret = Pslf.change_record(1,4,'70269  P1','st p q','1 30.38165 9.39168')
ret = Pslf.change_record(1,4,'70543  P1','st p q','1 36.0884 12.34832')
ret = Pslf.change_record(1,4,'70263  P1','st p q','1 33.19698 8.29381')
ret = Pslf.change_record(1,4,'70278  P1','st p q','1 34.14267 13.98969')
ret = Pslf.change_record(1,4,'70216  P1','st p q','1 40.91468 20.16385')
ret = Pslf.change_record(1,4,'70166  P1','st p q','1 46.32794 2.05443')
ret = Pslf.change_record(1,4,'70164  P1','st p q','1 5.35891 1.13048')
ret = Pslf.change_record(1,4,'70163  P1','st p q','1 30.82732 9.09819')
ret = Pslf.change_record(1,4,'70162  P1','st p q','1 49.16501 17.89202')
ret = Pslf.change_record(1,4,'79056  P1','st p q','1 0.81525 0.31523')
ret = Pslf.change_record(1,4,'70153  P1','st p q','1 25.25101 7.52204')
ret = Pslf.change_record(1,4,'70142  P1','st p q','1 34.31659 13.66359')
ret = Pslf.change_record(1,4,'70141  P1','st p q','1 40.18639 14.26144')
ret = Pslf.change_record(1,4,'70212  P1','st p q','1 42.2843 12.65268')
ret = Pslf.change_record(1,4,'70206  P1','st p q','1 36.39276 6.14155')
ret = Pslf.change_record(1,4,'70544  P1','st p q','1 20.78344 5.25021')
ret = Pslf.change_record(1,4,'70215  P1','st p q','1 34.95792 7.00028')
ret = Pslf.change_record(1,4,'70200  P1','st p q','1 35.68621 11.18523')
ret = Pslf.change_record(1,4,'70198  P1','st p q','1 10.03301 2.05443')
ret = Pslf.change_record(1,4,'70196  P1','st p q','1 7.1742 2.26096')
ret = Pslf.change_record(1,4,'70187  P1','st p q','1 5.35891 2.31531')
ret = Pslf.change_record(1,4,'70183  P1','st p q','1 9.85909 3.30448')
ret = Pslf.change_record(1,4,'70551  P1','st p q','1 47.37146 23.28354')
ret = Pslf.change_record(1,4,'70175  P1','st p q','1 35.30576 9.59821')
ret = Pslf.change_record(1,4,'70199  P1','st p q','1 1.31527 0.35871')
ret = Pslf.change_record(1,4,'70140  P1','st p q','1 2.13052 0.83699')
ret = Pslf.change_record(1,4,'70284  P1','st p q','1 37.66455 13.34836')
ret = Pslf.change_record(1,4,'70428  P1','st p q','1 38.8059 13.76142')
ret = Pslf.change_record(1,4,'70526  P1','st p q','1 7.57639 -2.0653')
ret = Pslf.change_record(1,4,'70418  P1','st p q','1 8.82644 1.1957')
ret = Pslf.change_record(1,4,'70401  P1','st p q','1 43.95828 15.79411')
ret = Pslf.change_record(1,4,'70400  P1','st p q','1 32.35999 12.05483')
ret = Pslf.change_record(1,4,'70527  P1','st p q','1 44.95832 20.90301')
ret = Pslf.change_record(1,4,'70392  P1','st p q','1 3.39144 0.9783')
ret = Pslf.change_record(1,4,'70384  P1','st p q','1 13.82664 4.55453')
ret = Pslf.change_record(1,4,'70382  P1','st p q','1 45.14311 16.23978')
ret = Pslf.change_record(1,4,'70530  P1','st p q','1 47.76278 15.5441')
ret = Pslf.change_record(1,4,'70512  P1','st p q','1 38.74068 11.27219')
ret = Pslf.change_record(1,4,'70432  P1','st p q','1 3.78276 0.72829')
ret = Pslf.change_record(1,4,'70509  P1','st p q','1 0.56524 -0.05435')
ret = Pslf.change_record(1,4,'70491  P1','st p q','1 43.96915 17.6094')
ret = Pslf.change_record(1,4,'70481  P1','st p q','1 39.49071 16.35935')
ret = Pslf.change_record(1,4,'70480  P1','st p q','1 37.07757 14.98973')
ret = Pslf.change_record(1,4,'70506  P1','st p q','1 3.73928 0.8696')
ret = Pslf.change_record(1,4,'70475  P1','st p q','1 33.53395 6.33721')
ret = Pslf.change_record(1,4,'70474  P1','st p q','1 24.3488 12.63094')
ret = Pslf.change_record(1,4,'70461  P1','st p q','1 37.66455 13.96795')
ret = Pslf.change_record(1,4,'70454  P1','st p q','1 6.93506 1.69572')
```

```
ret = Pslf.change_record(1,4,'70450  P1','st p q','1 12.30484 4.35887')
ret = Pslf.change_record(1,4,'70441  P1','st p q','1 31.59909 8.77209')
ret = Pslf.change_record(1,4,'70438  P1','st p q','1 21.57695 6.58722')
ret = Pslf.change_record(1,4,'70377  P1','st p q','1 43.65392 21.9574')
ret = Pslf.change_record(1,4,'70309  P1','st p q','1 12.14179 0.63046')
ret = Pslf.change_record(1,4,'70537  P1','st p q','1 40.6538 14.68537')
ret = Pslf.change_record(1,4,'70298  P1','st p q','1 39.61028 13.84838')
ret = Pslf.change_record(1,4,'70297  P1','st p q','1 24.60968 6.1959')
ret = Pslf.change_record(1,4,'70296  P1','st p q','1 1.9566 0.71742')
ret = Pslf.change_record(1,4,'70295  P1','st p q','1 19.00076 3.67406')
ret = Pslf.change_record(1,4,'70292  P1','st p q','1 5.82632 -0.19566')
ret = Pslf.change_record(1,4,'70291  P1','st p q','1 40.17552 16.54414')
ret = Pslf.change_record(1,4,'70290  P1','st p q','1 24.19662 10.78304')
ret = Pslf.change_record(1,4,'70289  P1','st p q','1 3.8045 1.61963')
ret = Pslf.change_record(1,4,'70324  P1','st p q','1 28.03373 10.66347')
ret = Pslf.change_record(1,4,'70369  P1','st p q','1 33.89266 13.57663')
ret = Pslf.change_record(1,4,'70368  P1','st p q','1 8.51121 0.45654')
ret = Pslf.change_record(1,4,'70367  P1','st p q','1 3.39144 1.21744')
ret = Pslf.change_record(1,4,'70532  P1','st p q','1 33.95788 7.56552')
ret = Pslf.change_record(1,4,'70362  P1','st p q','1 34.26224 6.09807')
ret = Pslf.change_record(1,4,'70360  P1','st p q','1 4.32626 0.13044')
ret = Pslf.change_record(1,4,'70534  P1','st p q','1 14.39188 0.67394')
ret = Pslf.change_record(1,4,'70343  P1','st p q','1 7.38073 -5.81545')
ret = Pslf.change_record(1,4,'70340  P1','st p q','1 48.93674 17.25069')
ret = Pslf.change_record(1,4,'70331  P1','st p q','1 37.01235 10.44607')
ret = Pslf.change_record(1,4,'70574  P1','st p q','1 27.89242 10.83739')
ret = Pslf.change_record(1,4,'70156  P1','st p q','1 9.52212 6.48939')
ret = Pslf.change_record(1,4,'70209  P1','st p q','1 26.07713 8.57643')
ret = Pslf.change_record(1,4,'70302  P1','st p q','1 19.91384 12.19614')
ret = Pslf.change_record(1,4,'70089  P1','st p q','1 8.86992 0.77177')
ret = Pslf.change_record(1,4,'70862  P1','st p q','1 20.14211 6.71766')
ret = Pslf.change_record(1,4,'70424  P1','st p q','1 22.21828 6.69592')
ret = Pslf.change_record(1,4,'70901  P1','st p q','1 6.05459 -0.05435')
ret = Pslf.change_record(1,4,'70903  P1','st p q','1 31.91432 10.50042')
ret = Pslf.change_record(1,4,'70218  P1','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70287  P1','st p q','1 11.26132 3.6958')
ret = Pslf.change_record(1,4,'70268  P1','st p q','1 14.41362 4.73932')
ret = Pslf.change_record(1,4,'70497  P1','st p q','1 52.15426 17.14199')
ret = Pslf.change_record(1,4,'70902  P1','st p q','1 11.60916 -1.23918')
ret = Pslf.change_record(1,4,'77642  P1','st p q','1 21.59869 2.95664')
ret = Pslf.change_record(1,4,'70032  P1','st p q','1 4.05451 0.6522')
ret = Pslf.change_record(1,4,'70067  P1','st p q','1 38.65372 18.0442')
ret = Pslf.change_record(1,4,'70065  P1','st p q','1 41.11034 16.22891')
ret = Pslf.change_record(1,4,'70064  P1','st p q','1 6.67418 -1.01091')
ret = Pslf.change_record(1,4,'70059  P1','st p q','1 36.89278 17.15286')
ret = Pslf.change_record(1,4,'70057  P1','st p q','1 8.3699 -2.23922')
ret = Pslf.change_record(1,4,'70047  P1','st p q','1 8.98949 -3.76102')
ret = Pslf.change_record(1,4,'70045  P1','st p q','1 27.35979 11.00044')
ret = Pslf.change_record(1,4,'70041  P1','st p q','1 37.52324 8.97862')
ret = Pslf.change_record(1,4,'70073  P1','st p q','1 26.82716 8.98949')
ret = Pslf.change_record(1,4,'70124  P1','st p q','1 11.17436 2.42401')
ret = Pslf.change_record(1,4,'70050  P1','st p q','1 5.45674 -0.18479')
ret = Pslf.change_record(1,4,'70113  P1','st p q','1 21.70739 -0.39132')
ret = Pslf.change_record(1,4,'70039  P1','st p q','1 41.94733 15.1093')
ret = Pslf.change_record(1,4,'70112  P1','st p q','1 32.26216 10.61999')
ret = Pslf.change_record(1,4,'70100  P1','st p q','1 35.53403 10.53303')
ret = Pslf.change_record(1,4,'70087  P1','st p q','1 29.37074 15.13104')
ret = Pslf.change_record(1,4,'70365  P1','st p q','1 51.18683 18.53335')
ret = Pslf.change_record(1,4,'78098  P1','st p q','1 0.83699 0.28262')
ret = Pslf.change_record(1,4,'70029  P1','st p q','1 4.14147 1.56528')
ret = Pslf.change_record(1,4,'70024  P1','st p q','1 5.05455 -0.4348')
ret = Pslf.change_record(1,4,'70023  P1','st p q','1 39.94725 13.14183')
ret = Pslf.change_record(1,4,'70099  P1','st p q','1 23.00092 9.43516')
ret = Pslf.change_record(1,4,'70008  P1','st p q','1 11.51133 4.2393')
ret = Pslf.change_record(1,4,'78071  P1','st p q','1 7.2829 2.3914')
ret = Pslf.change_record(1,4,'78072  P1','st p q','1 10.48955 3.44579')
ret = Pslf.change_record(1,4,'70258  P2','st p q','1 3.05447 3.18491')
```

```
ret = Pslf.change_record(1,4,'70252  P2','st p q','1 46.59969 20.92475')
ret = Pslf.change_record(1,4,'70246  P2','st p q','1 22.68569 -1.60876')
ret = Pslf.change_record(1,4,'70244  P2','st p q','1 35.84926 17.66375')
ret = Pslf.change_record(1,4,'70242  P2','st p q','1 40.9799 11.60916')
ret = Pslf.change_record(1,4,'70239  P2','st p q','1 34.5666 10.60912')
ret = Pslf.change_record(1,4,'70233  P2','st p q','1 22.00088 0.93482')
ret = Pslf.change_record(1,4,'70228  P2','st p q','1 9.21776 4.33713')
ret = Pslf.change_record(1,4,'70259  P2','st p q','1 27.19674 8.71774')
ret = Pslf.change_record(1,4,'70261  P2','st p q','1 25.52276 7.03289')
ret = Pslf.change_record(1,4,'70281  P2','st p q','1 1.34788 -0.11957')
ret = Pslf.change_record(1,4,'70280  P2','st p q','1 25.62059 1.51093')
ret = Pslf.change_record(1,4,'70217  P2','st p q','1 23.45746 7.47856')
ret = Pslf.change_record(1,4,'70278  P2','st p q','1 41.47992 18.38117')
ret = Pslf.change_record(1,4,'70277  P2','st p q','1 46.40403 20.67474')
ret = Pslf.change_record(1,4,'70269  P2','st p q','1 43.00172 14.63102')
ret = Pslf.change_record(1,4,'70263  P2','st p q','1 31.32734 10.45694')
ret = Pslf.change_record(1,4,'70283  P2','st p q','1 37.91456 15.77237')
ret = Pslf.change_record(1,4,'70543  P2','st p q','1 26.81629 7.61987')
ret = Pslf.change_record(1,4,'70163  P2','st p q','1 24.52272 11.06566')
ret = Pslf.change_record(1,4,'70154  P2','st p q','1 34.03397 10.84826')
ret = Pslf.change_record(1,4,'70143  P2','st p q','1 2.29357 1.1957')
ret = Pslf.change_record(1,4,'70167  P2','st p q','1 40.4364 7.9351')
ret = Pslf.change_record(1,4,'70174  P2','st p q','1 46.61056 16.28326')
ret = Pslf.change_record(1,4,'70206  P2','st p q','1 38.2624 12.79399')
ret = Pslf.change_record(1,4,'70200  P2','st p q','1 37.37106 10.64173')
ret = Pslf.change_record(1,4,'70187  P2','st p q','1 4.55453 0.72829')
ret = Pslf.change_record(1,4,'70537  P2','st p q','1 28.72941 9.98953')
ret = Pslf.change_record(1,4,'70428  P2','st p q','1 23.68573 11.58742')
ret = Pslf.change_record(1,4,'70402  P2','st p q','1 54.14347 18.18551')
ret = Pslf.change_record(1,4,'70382  P2','st p q','1 42.53431 14.16361')
ret = Pslf.change_record(1,4,'70379  P2','st p q','1 6.71766 -4.20669')
ret = Pslf.change_record(1,4,'70432  P2','st p q','1 6.78288 1.20657')
ret = Pslf.change_record(1,4,'70475  P2','st p q','1 18.54422 3.19578')
ret = Pslf.change_record(1,4,'70474  P2','st p q','1 26.31627 7.56552')
ret = Pslf.change_record(1,4,'70377  P2','st p q','1 28.56636 9.6743')
ret = Pslf.change_record(1,4,'70461  P2','st p q','1 53.46953 15.35931')
ret = Pslf.change_record(1,4,'70441  P2','st p q','1 34.1318 12.10918')
ret = Pslf.change_record(1,4,'70284  P2','st p q','1 16.31587 4.42409')
ret = Pslf.change_record(1,4,'70369  P2','st p q','1 16.85937 3.79363')
ret = Pslf.change_record(1,4,'70298  P2','st p q','1 28.32722 6.51113')
ret = Pslf.change_record(1,4,'70297  P2','st p q','1 21.28346 8.2612')
ret = Pslf.change_record(1,4,'70296  P2','st p q','1 6.58722 2.41314')
ret = Pslf.change_record(1,4,'70295  P2','st p q','1 18.33769 4.14147')
ret = Pslf.change_record(1,4,'70291  P2','st p q','1 30.74036 9.31559')
ret = Pslf.change_record(1,4,'70324  P2','st p q','1 35.37098 16.35935')
ret = Pslf.change_record(1,4,'70368  P2','st p q','1 18.72901 -3.19578')
ret = Pslf.change_record(1,4,'70367  P2','st p q','1 4.76106 1.76094')
ret = Pslf.change_record(1,4,'70362  P2','st p q','1 34.09919 11.04392')
ret = Pslf.change_record(1,4,'70360  P2','st p q','1 3.02186 0.13044')
ret = Pslf.change_record(1,4,'70346  P2','st p q','1 39.11026 13.32662')
ret = Pslf.change_record(1,4,'70331  P2','st p q','1 41.40383 9.15254')
ret = Pslf.change_record(1,4,'70491  P2','st p q','1 31.0882 14.3484')
ret = Pslf.change_record(1,4,'70138  P2','st p q','1 16.68545 5.48935')
ret = Pslf.change_record(1,4,'70171  P2','st p q','1 36.89278 14.09839')
ret = Pslf.change_record(1,4,'70182  P2','st p q','1 47.9367 13.3701')
ret = Pslf.change_record(1,4,'70189  P2','st p q','1 37.46889 11.02218')
ret = Pslf.change_record(1,4,'70386  P2','st p q','1 9.22863 3.95668')
ret = Pslf.change_record(1,4,'70141  P2','st p q','1 16.54414 -0.56524')
ret = Pslf.change_record(1,4,'70033  P2','st p q','1 35.1101 10.59825')
ret = Pslf.change_record(1,4,'70398  P2','st p q','1 20.40299 7.77205')
ret = Pslf.change_record(1,4,'70287  P2','st p q','1 20.23994 6.65244')
ret = Pslf.change_record(1,4,'70450  P2','st p q','1 7.46769 2.45662')
ret = Pslf.change_record(1,4,'70480  P2','st p q','1 16.65284 5.47848')
ret = Pslf.change_record(1,4,'78094  P2','st p q','1 0.50002 0.16305')
ret = Pslf.change_record(1,4,'70140  P2','st p q','0 0 0')
ret = Pslf.change_record(1,4,'70198  P2','st p q','0 0 0')
ret = Pslf.change_record(1,4,'70218  P2','st p q','1 0 0')
```

```
ret = Pslf.change_record(1,4,'70470  P2','st p q','1 27.49023 3.261')
ret = Pslf.change_record(1,4,'70530  P2','st p q','1 12.23962 0.79351')
ret = Pslf.change_record(1,4,'70532  P2','st p q','1 43.9148 14.43536')
ret = Pslf.change_record(1,4,'70169  P2','st p q','1 2.56532 0.63046')
ret = Pslf.change_record(1,4,'70067  P2','st p q','1 36.29493 12.89182')
ret = Pslf.change_record(1,4,'70065  P2','st p q','1 42.19734 14.33753')
ret = Pslf.change_record(1,4,'70064  P2','st p q','1 8.08728 0.30436')
ret = Pslf.change_record(1,4,'70050  P2','st p q','1 11.03305 -0.03261')
ret = Pslf.change_record(1,4,'70341  P2','st p q','1 46.03445 15.7615')
ret = Pslf.change_record(1,4,'70047  P2','st p q','1 11.78308 2.85881')
ret = Pslf.change_record(1,4,'70045  P2','st p q','1 28.27287 8.85905')
ret = Pslf.change_record(1,4,'70041  P2','st p q','1 42.92563 11.80482')
ret = Pslf.change_record(1,4,'70073  P2','st p q','1 29.16421 3.39144')
ret = Pslf.change_record(1,4,'70392  P2','st p q','1 4.77193 1.00004')
ret = Pslf.change_record(1,4,'70113  P2','st p q','1 18.08768 1.57615')
ret = Pslf.change_record(1,4,'70112  P2','st p q','1 37.80586 19.566')
ret = Pslf.change_record(1,4,'70100  P2','st p q','1 43.89306 11.35915')
ret = Pslf.change_record(1,4,'70039  P2','st p q','1 27.24022 6.9568')
ret = Pslf.change_record(1,4,'70087  P2','st p q','1 26.22931 15.81585')
ret = Pslf.change_record(1,4,'78099  P2','st p q','1 2.09791 1.18483')
ret = Pslf.change_record(1,4,'70365  P2','st p q','1 41.57775 10.57651')
ret = Pslf.change_record(1,4,'70551  P2','st p q','1 31.15342 3.3697')
ret = Pslf.change_record(1,4,'70025  P2','st p q','1 8.64165 3.84798')
ret = Pslf.change_record(1,4,'70023  P2','st p q','1 46.6323 12.59833')
ret = Pslf.change_record(1,4,'70527  P2','st p q','1 18.95728 6.8481')
ret = Pslf.change_record(1,4,'70384  P2','st p q','1 41.9582 -4.20669')
ret = Pslf.change_record(1,4,'70241  P2','st p q','1 13.92447 5.79371')
ret = Pslf.change_record(1,4,'70244  P3','st p q','1 54.52392 33.62091')
ret = Pslf.change_record(1,4,'70239  P3','st p q','1 26.54454 10.81565')
ret = Pslf.change_record(1,4,'70217  P3','st p q','1 30.31643 11.59829')
ret = Pslf.change_record(1,4,'70282  P3','st p q','1 39.68637 14.84842')
ret = Pslf.change_record(1,4,'70278  P3','st p q','1 38.61024 14.53319')
ret = Pslf.change_record(1,4,'70266  P3','st p q','1 54.49131 18.8051')
ret = Pslf.change_record(1,4,'70163  P3','st p q','1 26.90325 12.14179')
ret = Pslf.change_record(1,4,'70162  P3','st p q','1 45.17572 15.6528')
ret = Pslf.change_record(1,4,'70143  P3','st p q','1 1.44571 0.51089')
ret = Pslf.change_record(1,4,'70168  P3','st p q','1 40.37118 13.34836')
ret = Pslf.change_record(1,4,'70209  P3','st p q','1 36.36015 8.28294')
ret = Pslf.change_record(1,4,'70187  P3','st p q','1 1.43484 -0.03261')
ret = Pslf.change_record(1,4,'70174  P3','st p q','1 33.8057 8.76122')
ret = Pslf.change_record(1,4,'70396  P3','st p q','1 19.8921 7.45682')
ret = Pslf.change_record(1,4,'70377  P3','st p q','1 36.21884 12.64181')
ret = Pslf.change_record(1,4,'70441  P3','st p q','1 35.09923 7.90249')
ret = Pslf.change_record(1,4,'70438  P3','st p q','1 13.98969 1.93486')
ret = Pslf.change_record(1,4,'70461  P3','st p q','1 45.40399 21.44651')
ret = Pslf.change_record(1,4,'70323  P3','st p q','1 55.10003 9.51125')
ret = Pslf.change_record(1,4,'70324  P3','st p q','1 24.80534 0.8696')
ret = Pslf.change_record(1,4,'70355  P3','st p q','1 38.31675 11.64177')
ret = Pslf.change_record(1,4,'70155  P3','st p q','1 5.6524 1.04352')
ret = Pslf.change_record(1,4,'70189  P3','st p q','1 32.75131 10.69608')
ret = Pslf.change_record(1,4,'70284  P3','st p q','1 31.29473 10.28302')
ret = Pslf.change_record(1,4,'70327  P3','st p q','1 10.89174 1.85877')
ret = Pslf.change_record(1,4,'70034  P3','st p q','1 29.26204 11.09827')
ret = Pslf.change_record(1,4,'70368  P3','st p q','1 20.04428 6.58722')
ret = Pslf.change_record(1,4,'70423  P3','st p q','1 21.67478 2.01095')
ret = Pslf.change_record(1,4,'70530  P3','st p q','1 12.29397 0.77177')
ret = Pslf.change_record(1,4,'70065  P3','st p q','1 37.04496 10.55477')
ret = Pslf.change_record(1,4,'70064  P3','st p q','1 8.08728 -0.88047')
ret = Pslf.change_record(1,4,'70045  P3','st p q','1 34.15354 -8.14163')
ret = Pslf.change_record(1,4,'70073  P3','st p q','1 13.41358 4.60888')
ret = Pslf.change_record(1,4,'70112  P3','st p q','1 46.1975 17.91376')
ret = Pslf.change_record(1,4,'70087  P3','st p q','1 25.01187 3.5871')
ret = Pslf.change_record(1,4,'70491  P3','st p q','1 28.10982 5.58718')
ret = Pslf.change_record(1,4,'70200  P3','st p q','1 31.70779 7.89162')
ret = Pslf.change_record(1,4,'70029  P3','st p q','1 3.43492 0.36958')
ret = Pslf.change_record(1,4,'70025  P3','st p q','1 7.86988 3.261')
ret = Pslf.change_record(1,4,'70417  P3','st p q','1 38.07761 5.91328')
```

```
ret = Pslf.change_record(1,4,'70263  P3','st p q','1 23.3705 7.66335')
ret = Pslf.change_record(1,4,'70266  P4','st p q','1 37.77325 12.35919')
ret = Pslf.change_record(1,4,'70156  P4','st p q','1 0.6522 0.23914')
ret = Pslf.change_record(1,4,'70149  P4','st p q','1 43.02346 2.43488')
ret = Pslf.change_record(1,4,'70209  P4','st p q','1 35.37098 11.1961')
ret = Pslf.change_record(1,4,'70471  P4','st p q','1 18.23986 6.91332')
ret = Pslf.change_record(1,4,'70058  P4','st p q','1 7.84814 2.57619')
ret = Pslf.change_record(1,4,'70959  P4','st p q','1 31.29473 10.28302')
ret = Pslf.change_record(1,4,'70076  P4','st p q','1 1.79355 0.55437')
ret = Pslf.change_record(1,4,'78091  P4','st p q','1 4.20669 1.40223')
ret = Pslf.change_record(1,4,'70149  P5','st p q','1 37.0667 4.5654')
ret = Pslf.change_record(1,4,'79056  P5','st p q','1 10.47868 3.09795')
ret = Pslf.change_record(1,4,'70471  P5','st p q','1 24.53359 9.4569')
ret = Pslf.change_record(1,4,'70327  P5','st p q','1 25.03361 8.21772')
ret = Pslf.change_record(1,4,'70397  P5','st p q','1 0.77177 0.2174')
ret = Pslf.change_record(1,4,'70959  P5','st p q','1 31.29473 10.28302')
ret = Pslf.change_record(1,4,'70149  P6','st p q','1 30.05555 6.26112')
ret = Pslf.change_record(1,4,'70298  P6','st p q','1 36.33841 11.16349')
ret = Pslf.change_record(1,4,'70959  P6','st p q','1 31.29473 10.28302')
ret = Pslf.change_record(1,4,'70901  P6','st p q','0 0 0')
```

```
ret = Pslf.change_record(1,4,'70436  GV','st p q','1 5.6347 1.4137')
ret = Pslf.change_record(1,4,'70268  GV','st p q','1 11.4101 2.8609')
ret = Pslf.change_record(1,4,'70437  GV','st p q','1 1.7152 0.4288')
ret = Pslf.change_record(1,4,'70183  GV','st p q','1 1.1256 0.2814')
ret = Pslf.change_record(1,4,'70214  GV','st p q','1 21.373 5.3533')
ret = Pslf.change_record(1,4,'79047  GV','st p q','1 2.747 0.6901')
ret = Pslf.change_record(1,4,'70140  GV','st p q','1 1.0385 0.2613')
ret = Pslf.change_record(1,4,'70201  GW','st p q','1 5.2729 1.3199')
ret = Pslf.change_record(1,4,'70288  GW','st p q','1 5.8826 1.474')
ret = Pslf.change_record(1,4,'70854  GW','st p q','1 1.608 0.7035')
ret = Pslf.change_record(1,4,'70363  GW','st p q','1 6.5325 1.6348')
ret = Pslf.change_record(1,4,'79018  HC','st p q','1 6.7938 1.7018')
ret = Pslf.change_record(1,4,'79066  HC','st p q','1 13.0717 3.2763')
ret = Pslf.change_record(1,4,'79069  HC','st p q','1 10.7602 2.6934')
ret = Pslf.change_record(1,4,'79092  HC','st p q','1 7.1355 1.7889')
ret = Pslf.change_record(1,4,'79006  HC','st p q','1 13.5273 3.3902')
ret = Pslf.change_record(1,4,'70535  HC','st p q','1 3.484 0.871')
ret = Pslf.change_record(1,4,'70309  HC','st p q','1 3.1892 0.7973')
ret = Pslf.change_record(1,4,'70540  HC','st p q','1 8.5358 2.1373')
ret = Pslf.change_record(1,4,'70541  HC','st p q','1 16.0867 4.0334')
ret = Pslf.change_record(1,4,'70542  HC','st p q','1 7.6045 1.9028')
ret = Pslf.change_record(1,4,'79056  HC','st p q','1 1.7889 0.4489')
ret = Pslf.change_record(1,4,'70313  CR','st p q','1 28.542 6.5057')
ret = Pslf.change_record(1,4,'71517  CR','st p q','1 6.7394 2.81533')
ret = Pslf.change_record(1,4,'70533  CR','st p q','1 10.251 2.3785')
ret = Pslf.change_record(1,4,'70419  CR','st p q','1 2.412 0.3283')
ret = Pslf.change_record(1,4,'70400  CR','st p q','1 7.839 1.7219')
ret = Pslf.change_record(1,4,'71512  CR','st p q','1 0 0')
ret = Pslf.change_record(1,4,'71505  CR','st p q','1 7.504 1.876')
ret = Pslf.change_record(1,4,'70510  CR','st p q','1 4.623 1.5075')
ret = Pslf.change_record(1,4,'70429  CR','st p q','1 2.814 0.3819')
ret = Pslf.change_record(1,4,'70513  CR','st p q','1 19.43 4.4086')
ret = Pslf.change_record(1,4,'70514  CR','st p q','1 10.988 2.3986')
ret = Pslf.change_record(1,4,'70381  CR','st p q','1 5.829 1.2328')
ret = Pslf.change_record(1,4,'70515  CR','st p q','1 15.946 4.5828')
ret = Pslf.change_record(1,4,'70517  CR','st p q','1 23.115 6.7871')
ret = Pslf.change_record(1,4,'70518  CR','st p q','1 18.09 4.221')
ret = Pslf.change_record(1,4,'70519  CR','st p q','1 18.291 4.3684')
ret = Pslf.change_record(1,4,'70521  CR','st p q','1 21.842 -3.7185')
ret = Pslf.change_record(1,4,'70522  CR','st p q','1 8.107 2.4254')
```

```
  ret = Pslf.change_record(1,4,'70524  CR','st p q','1 19.765 5.3399')
  ret = Pslf.change_record(1,4,'70516  CR','st p q','1 20.703 7.6916')
  ret = Pslf.change_record(1,4,'70571  CR','st p q','1 4.489 1.005')
  ret = Pslf.change_record(1,4,'70576  CR','st p q','1 11.859 3.417')
  ret = Pslf.change_record(1,4,'71508  CR','st p q','1 0.201 0.0536')
  ret = Pslf.change_record(1,4,'71506  CR','st p q','1 13.333 2.6063')
  ret = Pslf.change_record(1,4,'70476  CR','st p q','1 7.839 1.1792')
  ret = Pslf.change_record(1,4,'70575  CR','st p q','1 19.028 5.1925')
  ret = Pslf.change_record(1,4,'70416  CR','st p q','1 13.601 4.6029')
  ret = Pslf.change_record(1,4,'70050  CR','st p q','1 1.876 0.201')
  ret = Pslf.change_record(1,4,'70091  CR','st p q','1 14.271 3.819')
  ret = Pslf.change_record(1,4,'70115  CR','st p q','1 13.065 2.9614')
  ret = Pslf.change_record(1,4,'70117  CR','st p q','1 17.353 2.9882')
  ret = Pslf.change_record(1,4,'70138  CR','st p q','1 12.73 3.484')
  ret = Pslf.change_record(1,4,'70124  CR','st p q','1 12.596 -0.0938')
  ret = Pslf.change_record(1,4,'70547  CR','st p q','1 6.231 1.6549')
  ret = Pslf.change_record(1,4,'70142  CR','st p q','1 4.891 1.3668')
  ret = Pslf.change_record(1,4,'70157  CR','st p q','1 7.035 0.6901')
  ret = Pslf.change_record(1,4,'70926  CR','st p q','1 0.536 0.0201')
  ret = Pslf.change_record(1,4,'70925  CR','st p q','1 0.603 0.0603')
  ret = Pslf.change_record(1,4,'70924  CR','st p q','1 1.005 0.1273')
  ret = Pslf.change_record(1,4,'70584  CR','st p q','1 17.755 3.0954')
  ret = Pslf.change_record(1,4,'70583  CR','st p q','1 12.998 2.6465')
  ret = Pslf.change_record(1,4,'71516  CR','st p q','1 9.4872 1.0117')
  ret = Pslf.change_record(1,4,'70582  CR','st p q','1 6.164 1.541')
  ret = Pslf.change_record(1,4,'70581  CR','st p q','1 20.033 -2.6197')
  ret = Pslf.change_record(1,4,'71502  CR','st p q','1 7.1422 1.4539')
  ret = Pslf.change_record(1,4,'71508  NT','st p q','1 -0.201 -0.0469')
  ret = Pslf.change_record(1,4,'70510  NT','st p q','1 -8.576 -1.742')
  ret = Pslf.change_record(1,4,'79065  YV','st p q','1 23.048 7.5777')
  ret = Pslf.change_record(1,4,'70009  YV','st p q','1 14.405 4.7369')
  ret = Pslf.change_record(1,4,'70525  YV','st p q','1 18.894 6.2109')
```

```
/* The change case = C:\Users\307615\Downloads\34HS1a_MTC_v05_01n - Arroyo II.sav */
/* The comparison case = 34HS1a_MTC_v05_01n.sav */
/* Therefore, 34HS1a_MTC_v05_01n.sav + EPCL = C:\Users\307615\Downloads\34
HS1a_MTC_v05_01n - Arroyo II.sav */

/* File created using epcl_xtract23c: Fri Jul 26 10:19:42 2024 */

/* Note -- Range restrictions used in comparison process */
/* Areas:-->70 */
/* Zones:-->700 */

@logfrom = 70        /*  PSCOLORADO  */
@logindx = rec_index(1, 7, @logfrom, -1, " ", 0, -1)
if (@logindx != -1)
  @logslack = number("  70310 PAWNEE        22.00")
  area[@logindx].iswng = @logslack      /*    70120 COMAN_2       24.00   */
endif

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71942
busd[@logindx].busnam = "24_1_T1      "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71943
busd[@logindx].busnam = "24_1_T2      "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71944
busd[@logindx].busnam = "24_1_T3      "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 99132
busd[@logindx].busnam = "mid_99132    "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
```

```
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 99134
  busd[@logindx].busnam = "mid_99134   "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 99133
  busd[@logindx].busnam = "mid_99133   "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700208
  busd[@logindx].busnam = "REPL_2024_1 "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700209
  busd[@logindx].busnam = "24_1_S1_2   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700210
  busd[@logindx].busnam = "24_1_S2_2   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
```

```
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700211
  busd[@logindx].busnam = "24_1_S3_2   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700212
  busd[@logindx].busnam = "24_1_S1_1   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700213
  busd[@logindx].busnam = "24_1_S2_1   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700214
  busd[@logindx].busnam = "24_1_S3_1   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700215
  busd[@logindx].busnam = "24_1_S1     "
  busd[@logindx].basekv = 0.6600
  busd[@logindx].type = 2
```

```
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700216
busd[@logindx].busnam = "24_1_S2      "
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700217
busd[@logindx].busnam = "24_1_S3      "
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number("  70122 COMANCHE     230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000022
secdd[@logindx].zsecx = 0.000335
secdd[@logindx].bsec = 0.001150
secdd[@logindx].rate[0] = 943.00
secdd[@logindx].rate[1] = 943.00
secdd[@logindx].rate[2] = 943.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.300
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                        "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
```

```
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700212 24_1_S1_1      34.50")
@logto = number(" 700209 24_1_S1_2      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001128
secdd[@logindx].zsecx = 0.001127
secdd[@logindx].bsec = 0.006610
secdd[@logindx].rate[0] = 234.80
secdd[@logindx].rate[1] = 234.80
secdd[@logindx].rate[2] = 234.80
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700213 24_1_S2_1      34.50")
@logto = number(" 700210 24_1_S2_2      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001128
secdd[@logindx].zsecx = 0.001127
secdd[@logindx].bsec = 0.006610
secdd[@logindx].rate[0] = 234.80
secdd[@logindx].rate[1] = 234.80
secdd[@logindx].rate[2] = 234.80
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
```

```
345   secdd[@logindx].lid = "                                                  "
346   secdd[@logindx].ohms = 0
347   secdd[@logindx].nown[0] = 65
348   secdd[@logindx].nown[1] = 0
349   secdd[@logindx].nown[2] = 0
350   secdd[@logindx].nown[3] = 0
351   secdd[@logindx].pown[0] = 1.000
352   secdd[@logindx].pown[1] = 0.000
353   secdd[@logindx].pown[2] = 0.000
354   secdd[@logindx].pown[3] = 0.000
355
356   @logindx = casepar[0].nbrsec
357   @ret=ins("secdd", @logindx-1, 1)
358   @logfrom = number(" 700214 24_1_S3_1      34.50")
359   @logto = number(" 700211 24_1_S3_2      34.50")
360   secdd[@logindx].ifrom = @logfrom
361   secdd[@logindx].ito = @logto
362   secdd[@logindx].ck = "1 "
363   secdd[@logindx].st = 1
364   secdd[@logindx].nsec = 1
365   secdd[@logindx].type = 0
366   secdd[@logindx].zsecr = 0.001128
367   secdd[@logindx].zsecx = 0.001127
368   secdd[@logindx].bsec = 0.006610
369   secdd[@logindx].rate[0] = 234.80
370   secdd[@logindx].rate[1] = 234.80
371   secdd[@logindx].rate[2] = 234.80
372   secdd[@logindx].rate[3] = 0.00
373   secdd[@logindx].rate[4] = 0.00
374   secdd[@logindx].rate[5] = 0.00
375   secdd[@logindx].rate[6] = 0.00
376   secdd[@logindx].rate[7] = 0.00
377   secdd[@logindx].area = 70
378   secdd[@logindx].zone = 704
379   secdd[@logindx].lngsec = 0.000
380   secdd[@logindx].trangi = 0.000000
381   secdd[@logindx].trantapf = 0.000000
382   secdd[@logindx].trantapt = 0.000000
383   secdd[@logindx].lid = "                                                  "
384   secdd[@logindx].ohms = 0
385   secdd[@logindx].nown[0] = 65
386   secdd[@logindx].nown[1] = 0
387   secdd[@logindx].nown[2] = 0
388   secdd[@logindx].nown[3] = 0
389   secdd[@logindx].pown[0] = 1.000
390   secdd[@logindx].pown[1] = 0.000
391   secdd[@logindx].pown[2] = 0.000
392   secdd[@logindx].pown[3] = 0.000
393
394   @logindx = casepar[0].ntran
395   @ret=ins("tran", @logindx-1, 1)
396   @logfrom = number(" 700208 REPL_2024_1  230.00")
397   @logto = number(" 700209 24_1_S1_2      34.50")
398   @logreg = number(" 700209 24_1_S1_2      34.50")
399   @logtert = number("  71942 24_1_T1        13.80")
400   @logint = number("  99132 mid_99143     230.00")
401   tran[@logindx].ifrom = @logfrom
402   tran[@logindx].ito = @logto
403   tran[@logindx].ck = "1 "
404   tran[@logindx].st = 1
405   tran[@logindx].type = 2
406   tran[@logindx].kreg = @logreg
407   tran[@logindx].iztabl = 0
408   tran[@logindx].itert = @logtert
409   tran[@logindx].iint = @logint
410   tran[@logindx].area = 70
411   tran[@logindx].zone = 704
412   tran[@logindx].tbase = 94.000000
413   tran[@logindx].zpsr = 2.230000e-03
```

```
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1                              "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700210 24_1_S2_2     34.50")
@logreg = number(" 700210 24_1_S2_2     34.50")
@logtert = number("  71943 24_1_T2       13.80")
@logint = number("  99133 mid_99141    230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
```

```
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _2                              "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700211 24_1_S3_2     34.50")
@logreg = number(" 700211 24_1_S3_2     34.50")
@logtert = number("  71944 24_1_T3       13.80")
@logint = number("  99134 mid_99142    230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
```

```
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1 _1                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700215 24_1_S1        0.66")
@logto = number(" 700212 24_1_S1_1     34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _1                             "
tran[@logindx].ohms = 0
```

```
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700216 24_1_S2        0.66")
@logto = number(" 700213 24_1_S2_1      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2                              "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
```

```
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700217 24_1_S3        0.66")
@logto = number(" 700214 24_1_S3_1      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2 _1                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700215 24_1_S1        0.66")
@logreg = number(" 700215 24_1_S1        0.66")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S1"
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
```

```
gens[@logindx].zone = 704
gens[@logindx].ba = 65
gens[@logindx].mbase = 132.0000
gens[@logindx].qmax = 67.392998
gens[@logindx].qmin = -67.392998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 125.400002
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 65
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700216 24_1_S2       0.66")
@logreg = number(" 700216 24_1_S2       0.66")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S2"
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].ba = 65
gens[@logindx].mbase = 132.0000
gens[@logindx].qmax = 67.392998
gens[@logindx].qmin = -67.392998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 125.400002
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 65
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
```

```
  gens[@logindx].nown[3] = 0
  gens[@logindx].pown[0] = 1.000
  gens[@logindx].pown[1] = 0.000
  gens[@logindx].pown[2] = 0.000
  gens[@logindx].pown[3] = 0.000
  gens[@logindx].rtr = 0.0000
  gens[@logindx].xtr = 0.0000
  gens[@logindx].gtap = 1.0000
  gens[@logindx].gov_flag = 0
  gens[@logindx].agc_flag = 0
  gens[@logindx].dispatch_flag = 0
  gens[@logindx].baseload_flag = 2
  gens[@logindx].air_temp = 0
  gens[@logindx].turbine_type = 31
  gens[@logindx].fueltype[0] = 0
  gens[@logindx].fueltype[1] = 0
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 0.000000

  @logindx = casepar[0].ngen
  @ret=ins("gens", @logindx-1, 1)
  @logbgen = number(" 700217 24_1_S3       0.66")
  @logreg = number(" 700217 24_1_S3       0.66")
  @loghbus = number("      0 ------------   0.00")
  @logtbus = number("      0 ------------   0.00")
  gens[@logindx].ibgen = @logbgen
  gens[@logindx].id = "S3"
  gens[@logindx].st = 0
  gens[@logindx].igreg = @logreg
  gens[@logindx].area = 70
  gens[@logindx].zone = 704
  gens[@logindx].ba = 65
  gens[@logindx].mbase = 132.0000
  gens[@logindx].qmax = 67.392998
  gens[@logindx].qmin = -67.392998
  gens[@logindx].prf = 1.000000
  gens[@logindx].qrf = 1.000000
  gens[@logindx].pmax = 125.400002
  gens[@logindx].pmin = 0.000000
  gens[@logindx].zgenr = 9999.000
  gens[@logindx].zgenx = 9999.000
  gens[@logindx].rcomp = 0.000
  gens[@logindx].xcomp = 0.000
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "        "
  gens[@logindx].nown[0] = 65
  gens[@logindx].nown[1] = 0
  gens[@logindx].nown[2] = 0
  gens[@logindx].nown[3] = 0
  gens[@logindx].pown[0] = 1.000
  gens[@logindx].pown[1] = 0.000
  gens[@logindx].pown[2] = 0.000
  gens[@logindx].pown[3] = 0.000
  gens[@logindx].rtr = 0.0000
  gens[@logindx].xtr = 0.0000
  gens[@logindx].gtap = 1.0000
  gens[@logindx].gov_flag = 0
  gens[@logindx].agc_flag = 0
  gens[@logindx].dispatch_flag = 0
  gens[@logindx].baseload_flag = 2
  gens[@logindx].air_temp = 0
  gens[@logindx].turbine_type = 31
  gens[@logindx].fueltype[0] = 0
  gens[@logindx].fueltype[1] = 0
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 0.000000
```

```
897
898   @logindx = casepar[0].nload
899   @ret=ins("load", @logindx-1, 1)
900   @loglbus = number(" 700209 24_1_S1_2     34.50")
901   load[@logindx].lbus = @loglbus
902   load[@logindx].id = "SS"
903   load[@logindx].st = 1
904   load[@logindx].area = 70
905   load[@logindx].zone = 704
906   load[@logindx].ba = 65
907   load[@logindx].nonconf = 1
908   load[@logindx].lid = "        "
909   load[@logindx].nown = 65
910   load[@logindx].clzone = "        "
911
912   mispar[0].iordfl = 0        /* Initiate a bus re-order */
913
914   end
915
```

```
# 2026 Load Scale
from PSLF_PYTHON import*

ret = Pslf.change_record(1,4,'70118  MU','st p q','1 1.72536 0.56485')
ret = Pslf.change_record(1,4,'70008  P1','st p q','1 10.87593 4.0053')
ret = Pslf.change_record(1,4,'70023  P1','st p q','1 37.74225 12.41643')
ret = Pslf.change_record(1,4,'70024  P1','st p q','1 4.77555 -0.4108')
ret = Pslf.change_record(1,4,'70029  P1','st p q','1 3.91287 1.47888')
ret = Pslf.change_record(1,4,'70032  P1','st p q','1 3.83071 0.6162')
ret = Pslf.change_record(1,4,'70039  P1','st p q','1 39.63193 14.2753')
ret = Pslf.change_record(1,4,'70041  P1','st p q','1 35.45204 8.48302')
ret = Pslf.change_record(1,4,'70045  P1','st p q','1 25.84959 10.39324')
ret = Pslf.change_record(1,4,'70047  P1','st p q','1 8.49329 -3.55342')
ret = Pslf.change_record(1,4,'70057  P1','st p q','1 7.9079 -2.11562')
ret = Pslf.change_record(1,4,'70059  P1','st p q','1 34.85638 16.20606')
ret = Pslf.change_record(1,4,'70064  P1','st p q','1 6.30578 -0.95511')
ret = Pslf.change_record(1,4,'70065  P1','st p q','1 38.84114 15.33311')
ret = Pslf.change_record(1,4,'70067  P1','st p q','1 36.52012 17.0482')
ret = Pslf.change_record(1,4,'70073  P1','st p q','1 25.34636 8.49329')
ret = Pslf.change_record(1,4,'70087  P1','st p q','1 27.74954 14.29584')
ret = Pslf.change_record(1,4,'70100  P1','st p q','1 33.57263 9.95163')
ret = Pslf.change_record(1,4,'70112  P1','st p q','1 30.48136 10.03379')
ret = Pslf.change_record(1,4,'70113  P1','st p q','1 20.50919 -0.36972')
ret = Pslf.change_record(1,4,'70124  P1','st p q','1 10.55756 2.29021')
ret = Pslf.change_record(1,4,'70140  P1','st p q','1 2.01292 0.79079')
ret = Pslf.change_record(1,4,'70141  P1','st p q','1 37.96819 13.47424')
ret = Pslf.change_record(1,4,'70142  P1','st p q','1 32.42239 12.90939')
ret = Pslf.change_record(1,4,'70153  P1','st p q','1 23.85721 7.10684')
ret = Pslf.change_record(1,4,'70162  P1','st p q','1 46.45121 16.90442')
ret = Pslf.change_record(1,4,'70163  P1','st p q','1 29.12572 8.59599')
ret = Pslf.change_record(1,4,'70164  P1','st p q','1 5.06311 1.06808')
ret = Pslf.change_record(1,4,'70166  P1','st p q','1 43.77074 1.94103')
ret = Pslf.change_record(1,4,'70175  P1','st p q','1 33.35696 9.06841')
ret = Pslf.change_record(1,4,'70183  P1','st p q','1 9.31489 3.12208')
ret = Pslf.change_record(1,4,'70187  P1','st p q','1 5.06311 2.18751')
ret = Pslf.change_record(1,4,'70196  P1','st p q','1 6.7782 2.13616')
ret = Pslf.change_record(1,4,'70198  P1','st p q','1 9.47921 1.94103')
ret = Pslf.change_record(1,4,'70199  P1','st p q','1 1.24267 0.33891')
ret = Pslf.change_record(1,4,'70200  P1','st p q','1 33.71641 10.56783')
ret = Pslf.change_record(1,4,'70206  P1','st p q','1 34.38396 5.80255')
ret = Pslf.change_record(1,4,'70212  P1','st p q','1 39.9503 11.95428')
ret = Pslf.change_record(1,4,'70215  P1','st p q','1 33.02832 6.61388')
ret = Pslf.change_record(1,4,'70216  P1','st p q','1 38.65628 19.05085')
ret = Pslf.change_record(1,4,'70228  P1','st p q','1 2.85506 1.36591')
ret = Pslf.change_record(1,4,'70233  P1','st p q','1 17.36657 5.26851')
ret = Pslf.change_record(1,4,'70237  P1','st p q','1 12.29319 2.22859')
ret = Pslf.change_record(1,4,'70240  P1','st p q','1 14.61421 2.054')
ret = Pslf.change_record(1,4,'70241  P1','st p q','1 42.97995 20.69405')
ret = Pslf.change_record(1,4,'70242  P1','st p q','1 41.9016 14.43962')
ret = Pslf.change_record(1,4,'70251  P1','st p q','1 29.12572 8.34951')
ret = Pslf.change_record(1,4,'70257  P1','st p q','1 1.35564 -0.78052')
ret = Pslf.change_record(1,4,'70259  P1','st p q','1 33.44939 14.64502')
ret = Pslf.change_record(1,4,'70261  P1','st p q','1 38.97465 13.61802')
ret = Pslf.change_record(1,4,'70263  P1','st p q','1 31.36458 7.83601')
ret = Pslf.change_record(1,4,'70269  P1','st p q','1 28.70465 8.87328')
ret = Pslf.change_record(1,4,'70276  P1','st p q','1 37.10551 11.72834')
ret = Pslf.change_record(1,4,'70278  P1','st p q','1 32.25807 13.21749')
ret = Pslf.change_record(1,4,'70279  P1','st p q','1 17.90061 6.37767')
ret = Pslf.change_record(1,4,'70281  P1','st p q','1 6.20308 -4.01557')
ret = Pslf.change_record(1,4,'70283  P1','st p q','1 38.99519 16.86334')
ret = Pslf.change_record(1,4,'70284  P1','st p q','1 35.58555 12.61156')
ret = Pslf.change_record(1,4,'70289  P1','st p q','1 3.5945 1.53023')
ret = Pslf.change_record(1,4,'70290  P1','st p q','1 22.86102 10.18784')
ret = Pslf.change_record(1,4,'70291  P1','st p q','1 37.95792 15.63094')
ret = Pslf.change_record(1,4,'70292  P1','st p q','1 5.50472 -0.18486')
ret = Pslf.change_record(1,4,'70295  P1','st p q','1 17.95196 3.47126')
ret = Pslf.change_record(1,4,'70296  P1','st p q','1 1.8486 0.67782')
```

```
ret = Pslf.change_record(1,4,'70297  P1','st p q','1 23.25128 5.8539')
ret = Pslf.change_record(1,4,'70298  P1','st p q','1 37.42388 13.08398')
ret = Pslf.change_record(1,4,'70309  P1','st p q','1 11.47159 0.59566')
ret = Pslf.change_record(1,4,'70324  P1','st p q','1 26.48633 10.07487')
ret = Pslf.change_record(1,4,'70331  P1','st p q','1 34.96935 9.86947')
ret = Pslf.change_record(1,4,'70340  P1','st p q','1 46.23554 16.29849')
ret = Pslf.change_record(1,4,'70343  P1','st p q','1 6.97333 -5.49445')
ret = Pslf.change_record(1,4,'70345  P1','st p q','1 30.35812 9.1403')
ret = Pslf.change_record(1,4,'70360  P1','st p q','1 4.08746 0.12324')
ret = Pslf.change_record(1,4,'70362  P1','st p q','1 32.37104 5.76147')
ret = Pslf.change_record(1,4,'70367  P1','st p q','1 3.20424 1.15024')
ret = Pslf.change_record(1,4,'70368  P1','st p q','1 8.04141 0.43134')
ret = Pslf.change_record(1,4,'70369  P1','st p q','1 32.02186 12.82723')
ret = Pslf.change_record(1,4,'70377  P1','st p q','1 41.24432 20.7454')
ret = Pslf.change_record(1,4,'70382  P1','st p q','1 42.65131 15.34338')
ret = Pslf.change_record(1,4,'70384  P1','st p q','1 13.06344 4.30313')
ret = Pslf.change_record(1,4,'70392  P1','st p q','1 3.20424 0.9243')
ret = Pslf.change_record(1,4,'70400  P1','st p q','1 30.57379 11.38943')
ret = Pslf.change_record(1,4,'70401  P1','st p q','1 41.53188 14.92231')
ret = Pslf.change_record(1,4,'70418  P1','st p q','1 8.33924 1.1297')
ret = Pslf.change_record(1,4,'70428  P1','st p q','1 36.6639 13.00182')
ret = Pslf.change_record(1,4,'70432  P1','st p q','1 3.57396 0.68809')
ret = Pslf.change_record(1,4,'70438  P1','st p q','1 20.38595 6.22362')
ret = Pslf.change_record(1,4,'70441  P1','st p q','1 29.85489 8.28789')
ret = Pslf.change_record(1,4,'70450  P1','st p q','1 11.62564 4.11827')
ret = Pslf.change_record(1,4,'70454  P1','st p q','1 6.55226 1.60212')
ret = Pslf.change_record(1,4,'70461  P1','st p q','1 35.58555 13.19695')
ret = Pslf.change_record(1,4,'70474  P1','st p q','1 23.0048 11.93374')
ret = Pslf.change_record(1,4,'70475  P1','st p q','1 31.68295 5.98741')
ret = Pslf.change_record(1,4,'70480  P1','st p q','1 35.03097 14.16233')
ret = Pslf.change_record(1,4,'70481  P1','st p q','1 37.31091 15.45635')
ret = Pslf.change_record(1,4,'70491  P1','st p q','1 41.54215 16.6374')
ret = Pslf.change_record(1,4,'70506  P1','st p q','1 3.53288 0.8216')
ret = Pslf.change_record(1,4,'70509  P1','st p q','1 0.53404 -0.05135')
ret = Pslf.change_record(1,4,'70512  P1','st p q','1 36.60228 10.64999')
ret = Pslf.change_record(1,4,'70526  P1','st p q','1 7.15819 -1.9513')
ret = Pslf.change_record(1,4,'70527  P1','st p q','1 42.47672 19.74921')
ret = Pslf.change_record(1,4,'70530  P1','st p q','1 45.12638 14.6861')
ret = Pslf.change_record(1,4,'70532  P1','st p q','1 32.08348 7.14792')
ret = Pslf.change_record(1,4,'70534  P1','st p q','1 13.59748 0.63674')
ret = Pslf.change_record(1,4,'70537  P1','st p q','1 38.4098 13.87477')
ret = Pslf.change_record(1,4,'70543  P1','st p q','1 34.0964 11.66672')
ret = Pslf.change_record(1,4,'70544  P1','st p q','1 19.63624 4.96041')
ret = Pslf.change_record(1,4,'70551  P1','st p q','1 44.75666 21.99834')
ret = Pslf.change_record(1,4,'79056  P1','st p q','1 0.77025 0.29783')
ret = Pslf.change_record(1,4,'70574  P1','st p q','1 26.35282 10.23919')
ret = Pslf.change_record(1,4,'70050  P1','st p q','1 5.15554 -0.17459')
ret = Pslf.change_record(1,4,'70099  P1','st p q','1 21.73132 8.91436')
ret = Pslf.change_record(1,4,'78071  P1','st p q','1 6.8809 2.2594')
ret = Pslf.change_record(1,4,'78072  P1','st p q','1 9.91055 3.25559')
ret = Pslf.change_record(1,4,'78098  P1','st p q','1 0.79079 0.26702')
ret = Pslf.change_record(1,4,'70365  P1','st p q','1 48.36143 17.51035')
ret = Pslf.change_record(1,4,'70862  P1','st p q','1 19.03031 6.34686')
ret = Pslf.change_record(1,4,'70424  P1','st p q','1 20.99188 6.32632')
ret = Pslf.change_record(1,4,'70901  P1','st p q','1 5.72039 -0.05135')
ret = Pslf.change_record(1,4,'70089  P1','st p q','1 8.38032 0.72917')
ret = Pslf.change_record(1,4,'70156  P1','st p q','1 8.99652 6.13119')
ret = Pslf.change_record(1,4,'70209  P1','st p q','1 24.63773 8.10303')
ret = Pslf.change_record(1,4,'70302  P1','st p q','1 18.81464 11.52294')
ret = Pslf.change_record(1,4,'70497  P1','st p q','1 49.27546 16.19579')
ret = Pslf.change_record(1,4,'70902  P1','st p q','1 10.96836 -1.17078')
ret = Pslf.change_record(1,4,'77642  P1','st p q','1 20.40649 2.79344')
ret = Pslf.change_record(1,4,'70268  P1','st p q','1 13.61802 4.47772')
ret = Pslf.change_record(1,4,'70287  P1','st p q','1 10.63972 3.4918')
ret = Pslf.change_record(1,4,'70903  P1','st p q','1 30.15272 9.92082')
ret = Pslf.change_record(1,4,'70218  P1','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70177  P1','st p q','0 0 0')
```

```
ret = Pslf.change_record(1,4,'70804  P1','st p q','1 41.08 19.89299')
ret = Pslf.change_record(1,4,'70023  P2','st p q','1 44.0583 11.90293')
ret = Pslf.change_record(1,4,'70025  P2','st p q','1 8.16465 3.63558')
ret = Pslf.change_record(1,4,'70041  P2','st p q','1 40.55623 11.15322')
ret = Pslf.change_record(1,4,'70045  P2','st p q','1 26.71227 8.37005')
ret = Pslf.change_record(1,4,'70047  P2','st p q','1 11.13268 2.70101')
ret = Pslf.change_record(1,4,'70050  P2','st p q','1 10.42405 -0.03081')
ret = Pslf.change_record(1,4,'70064  P2','st p q','1 7.64088 0.28756')
ret = Pslf.change_record(1,4,'70065  P2','st p q','1 39.86814 13.54613')
ret = Pslf.change_record(1,4,'70067  P2','st p q','1 34.29153 12.18022')
ret = Pslf.change_record(1,4,'70073  P2','st p q','1 27.55441 3.20424')
ret = Pslf.change_record(1,4,'70087  P2','st p q','1 24.78151 14.94285')
ret = Pslf.change_record(1,4,'70100  P2','st p q','1 41.47026 10.73215')
ret = Pslf.change_record(1,4,'70112  P2','st p q','1 35.71906 18.486')
ret = Pslf.change_record(1,4,'70113  P2','st p q','1 17.08928 1.48915')
ret = Pslf.change_record(1,4,'70143  P2','st p q','1 2.16697 1.1297')
ret = Pslf.change_record(1,4,'70154  P2','st p q','1 32.15537 10.24946')
ret = Pslf.change_record(1,4,'70163  P2','st p q','1 23.16912 10.45486')
ret = Pslf.change_record(1,4,'70167  P2','st p q','1 38.2044 7.4971')
ret = Pslf.change_record(1,4,'70174  P2','st p q','1 44.03776 15.38446')
ret = Pslf.change_record(1,4,'70187  P2','st p q','1 4.30313 0.68809')
ret = Pslf.change_record(1,4,'70200  P2','st p q','1 35.30826 10.05433')
ret = Pslf.change_record(1,4,'70206  P2','st p q','1 36.1504 12.08779')
ret = Pslf.change_record(1,4,'70217  P2','st p q','1 22.16266 7.06576')
ret = Pslf.change_record(1,4,'70228  P2','st p q','1 8.70896 4.09773')
ret = Pslf.change_record(1,4,'70233  P2','st p q','1 20.78648 0.88322')
ret = Pslf.change_record(1,4,'70239  P2','st p q','1 32.6586 10.02352')
ret = Pslf.change_record(1,4,'70242  P2','st p q','1 38.7179 10.96836')
ret = Pslf.change_record(1,4,'70244  P2','st p q','1 33.87046 16.68875')
ret = Pslf.change_record(1,4,'70246  P2','st p q','1 21.43349 -1.51996')
ret = Pslf.change_record(1,4,'70252  P2','st p q','1 44.02749 19.76975')
ret = Pslf.change_record(1,4,'70258  P2','st p q','1 2.88587 3.00911')
ret = Pslf.change_record(1,4,'70259  P2','st p q','1 25.69554 8.23654')
ret = Pslf.change_record(1,4,'70261  P2','st p q','1 24.11396 6.64469')
ret = Pslf.change_record(1,4,'70263  P2','st p q','1 29.59814 9.87974')
ret = Pslf.change_record(1,4,'70269  P2','st p q','1 40.62812 13.82342')
ret = Pslf.change_record(1,4,'70277  P2','st p q','1 43.84263 19.53354')
ret = Pslf.change_record(1,4,'70278  P2','st p q','1 39.19032 17.36657')
ret = Pslf.change_record(1,4,'70280  P2','st p q','1 24.20639 1.42753')
ret = Pslf.change_record(1,4,'70281  P2','st p q','1 1.27348 -0.11297')
ret = Pslf.change_record(1,4,'70283  P2','st p q','1 35.82176 14.90177')
ret = Pslf.change_record(1,4,'70284  P2','st p q','1 15.41527 4.17989')
ret = Pslf.change_record(1,4,'70291  P2','st p q','1 29.04356 8.80139')
ret = Pslf.change_record(1,4,'70295  P2','st p q','1 17.32549 3.91287')
ret = Pslf.change_record(1,4,'70296  P2','st p q','1 6.22362 2.27994')
ret = Pslf.change_record(1,4,'70297  P2','st p q','1 20.10866 7.8052')
ret = Pslf.change_record(1,4,'70298  P2','st p q','1 26.76362 6.15173')
ret = Pslf.change_record(1,4,'70324  P2','st p q','1 33.41858 15.45635')
ret = Pslf.change_record(1,4,'70331  P2','st p q','1 39.11843 8.64734')
ret = Pslf.change_record(1,4,'70346  P2','st p q','1 36.95146 12.59102')
ret = Pslf.change_record(1,4,'70360  P2','st p q','1 2.85506 0.12324')
ret = Pslf.change_record(1,4,'70362  P2','st p q','1 32.21699 10.43432')
ret = Pslf.change_record(1,4,'70367  P2','st p q','1 4.49826 1.66374')
ret = Pslf.change_record(1,4,'70368  P2','st p q','1 17.69521 -3.01938')
ret = Pslf.change_record(1,4,'70369  P2','st p q','1 15.92877 3.58423')
ret = Pslf.change_record(1,4,'70377  P2','st p q','1 26.98956 9.1403')
ret = Pslf.change_record(1,4,'70379  P2','st p q','1 6.34686 -3.97449')
ret = Pslf.change_record(1,4,'70382  P2','st p q','1 40.18651 13.38181')
ret = Pslf.change_record(1,4,'70402  P2','st p q','1 51.15487 17.18171')
ret = Pslf.change_record(1,4,'70428  P2','st p q','1 22.37833 10.94782')
ret = Pslf.change_record(1,4,'70432  P2','st p q','1 6.40848 1.13997')
ret = Pslf.change_record(1,4,'70441  P2','st p q','1 32.2478 11.44078')
ret = Pslf.change_record(1,4,'70461  P2','st p q','1 50.51813 14.51151')
ret = Pslf.change_record(1,4,'70474  P2','st p q','1 24.86367 7.14792')
ret = Pslf.change_record(1,4,'70475  P2','st p q','1 17.52062 3.01938')
ret = Pslf.change_record(1,4,'70491  P2','st p q','1 29.3722 13.5564')
ret = Pslf.change_record(1,4,'70537  P2','st p q','1 27.14361 9.43813')
```

```
ret = Pslf.change_record(1,4,'70543  P2','st p q','1 25.33609 7.19927')
ret = Pslf.change_record(1,4,'70141  P2','st p q','1 15.63094 -0.53404')
ret = Pslf.change_record(1,4,'70392  P2','st p q','1 4.50853 0.94484')
ret = Pslf.change_record(1,4,'70039  P2','st p q','1 25.73662 6.5728')
ret = Pslf.change_record(1,4,'70341  P2','st p q','1 43.49345 14.8915')
ret = Pslf.change_record(1,4,'70241  P2','st p q','1 13.15587 5.47391')
ret = Pslf.change_record(1,4,'70527  P2','st p q','1 17.91088 6.4701')
ret = Pslf.change_record(1,4,'70384  P2','st p q','1 39.6422 -3.97449')
ret = Pslf.change_record(1,4,'78099  P2','st p q','1 1.98211 1.11943')
ret = Pslf.change_record(1,4,'70551  P2','st p q','1 29.43382 3.1837')
ret = Pslf.change_record(1,4,'70365  P2','st p q','1 39.28275 9.99271')
ret = Pslf.change_record(1,4,'70033  P2','st p q','1 33.1721 10.01325')
ret = Pslf.change_record(1,4,'70138  P2','st p q','1 15.76445 5.18635')
ret = Pslf.change_record(1,4,'70171  P2','st p q','1 34.85638 13.32019')
ret = Pslf.change_record(1,4,'70182  P2','st p q','1 45.2907 12.6321')
ret = Pslf.change_record(1,4,'70189  P2','st p q','1 35.40069 10.41378')
ret = Pslf.change_record(1,4,'70386  P2','st p q','1 8.71923 3.73828')
ret = Pslf.change_record(1,4,'70398  P2','st p q','1 19.27679 7.34305')
ret = Pslf.change_record(1,4,'70470  P2','st p q','1 25.97283 3.081')
ret = Pslf.change_record(1,4,'70530  P2','st p q','1 11.56402 0.74971')
ret = Pslf.change_record(1,4,'70532  P2','st p q','1 41.4908 13.63856')
ret = Pslf.change_record(1,4,'70169  P2','st p q','1 2.42372 0.59566')
ret = Pslf.change_record(1,4,'70287  P2','st p q','1 19.12274 6.28524')
ret = Pslf.change_record(1,4,'70450  P2','st p q','1 7.05549 2.32102')
ret = Pslf.change_record(1,4,'70480  P2','st p q','1 15.73364 5.17608')
ret = Pslf.change_record(1,4,'78094  P2','st p q','1 0.47242 0.15405')
ret = Pslf.change_record(1,4,'70140  P2','st p q','0 0 0')
ret = Pslf.change_record(1,4,'70198  P2','st p q','0 0 0')
ret = Pslf.change_record(1,4,'70218  P2','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70804  P2','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70025  P3','st p q','1 7.43548 3.081')
ret = Pslf.change_record(1,4,'70029  P3','st p q','1 3.24532 0.34918')
ret = Pslf.change_record(1,4,'70045  P3','st p q','1 32.26834 -7.69223')
ret = Pslf.change_record(1,4,'70064  P3','st p q','1 7.64088 -0.83187')
ret = Pslf.change_record(1,4,'70065  P3','st p q','1 35.00016 9.97217')
ret = Pslf.change_record(1,4,'70073  P3','st p q','1 12.67318 4.35448')
ret = Pslf.change_record(1,4,'70087  P3','st p q','1 23.63127 3.3891')
ret = Pslf.change_record(1,4,'70112  P3','st p q','1 43.6475 16.92496')
ret = Pslf.change_record(1,4,'70143  P3','st p q','1 1.36591 0.48269')
ret = Pslf.change_record(1,4,'70162  P3','st p q','1 42.68212 14.7888')
ret = Pslf.change_record(1,4,'70163  P3','st p q','1 25.41825 11.47159')
ret = Pslf.change_record(1,4,'70168  P3','st p q','1 38.14278 12.61156')
ret = Pslf.change_record(1,4,'70174  P3','st p q','1 31.9397 8.27762')
ret = Pslf.change_record(1,4,'70187  P3','st p q','1 1.35564 -0.03081')
ret = Pslf.change_record(1,4,'70209  P3','st p q','1 34.35315 7.82574')
ret = Pslf.change_record(1,4,'70217  P3','st p q','1 28.64303 10.95809')
ret = Pslf.change_record(1,4,'70239  P3','st p q','1 25.07934 10.21865')
ret = Pslf.change_record(1,4,'70244  P3','st p q','1 51.51432 31.76511')
ret = Pslf.change_record(1,4,'70266  P3','st p q','1 51.48351 17.7671')
ret = Pslf.change_record(1,4,'70278  P3','st p q','1 36.47904 13.73099')
ret = Pslf.change_record(1,4,'70282  P3','st p q','1 37.49577 14.02882')
ret = Pslf.change_record(1,4,'70323  P3','st p q','1 52.05863 8.98625')
ret = Pslf.change_record(1,4,'70324  P3','st p q','1 23.43614 0.8216')
ret = Pslf.change_record(1,4,'70355  P3','st p q','1 36.20175 10.99917')
ret = Pslf.change_record(1,4,'70377  P3','st p q','1 34.21964 11.94401')
ret = Pslf.change_record(1,4,'70396  P3','st p q','1 18.7941 7.04522')
ret = Pslf.change_record(1,4,'70438  P3','st p q','1 13.21749 1.82806')
ret = Pslf.change_record(1,4,'70441  P3','st p q','1 33.16183 7.46629')
ret = Pslf.change_record(1,4,'70461  P3','st p q','1 42.89779 20.26271')
ret = Pslf.change_record(1,4,'70491  P3','st p q','1 26.55822 5.27878')
ret = Pslf.change_record(1,4,'70417  P3','st p q','1 35.97581 5.58688')
ret = Pslf.change_record(1,4,'70263  P3','st p q','1 22.0805 7.24035')
ret = Pslf.change_record(1,4,'70200  P3','st p q','1 29.95759 7.45602')
ret = Pslf.change_record(1,4,'70034  P3','st p q','1 27.64684 10.48567')
ret = Pslf.change_record(1,4,'70155  P3','st p q','1 5.3404 0.98592')
ret = Pslf.change_record(1,4,'70189  P3','st p q','1 30.94351 10.10568')
ret = Pslf.change_record(1,4,'70284  P3','st p q','1 29.56733 9.71542')
```

```
ret = Pslf.change_record(1,4,'70327  P3','st p q','1 10.29054 1.75617')
ret = Pslf.change_record(1,4,'70423  P3','st p q','1 20.47838 1.89995')
ret = Pslf.change_record(1,4,'70530  P3','st p q','1 11.61537 0.72917')
ret = Pslf.change_record(1,4,'70368  P3','st p q','1 18.93788 6.22362')
ret = Pslf.change_record(1,4,'70076  P4','st p q','1 1.69455 0.52377')
ret = Pslf.change_record(1,4,'70149  P4','st p q','1 40.64866 2.30048')
ret = Pslf.change_record(1,4,'70156  P4','st p q','1 0.6162 0.22594')
ret = Pslf.change_record(1,4,'70209  P4','st p q','1 33.41858 10.5781')
ret = Pslf.change_record(1,4,'70266  P4','st p q','1 35.68825 11.67699')
ret = Pslf.change_record(1,4,'70471  P4','st p q','1 17.23306 6.53172')
ret = Pslf.change_record(1,4,'78091  P4','st p q','1 3.97449 1.32483')
ret = Pslf.change_record(1,4,'70959  P4','st p q','1 29.56733 9.71542')
ret = Pslf.change_record(1,4,'70058  P4','st p q','1 7.41494 2.43399')
ret = Pslf.change_record(1,4,'70149  P5','st p q','1 35.0207 4.3134')
ret = Pslf.change_record(1,4,'70471  P5','st p q','1 23.17939 8.9349')
ret = Pslf.change_record(1,4,'79056  P5','st p q','1 9.90028 2.92695')
ret = Pslf.change_record(1,4,'70327  P5','st p q','1 23.65181 7.76412')
ret = Pslf.change_record(1,4,'70397  P5','st p q','1 0.72917 0.2054')
ret = Pslf.change_record(1,4,'70959  P5','st p q','1 29.56733 9.71542')
ret = Pslf.change_record(1,4,'70266  P5','st p q','1 29.2695 9.62299')
```

```
ret = Pslf.change_record(1,4,'70140  GV','st p q','1 1.0385 0.2613')
ret = Pslf.change_record(1,4,'70183  GV','st p q','1 1.1256 0.2814')
ret = Pslf.change_record(1,4,'70214  GV','st p q','1 21.373 5.3533')
ret = Pslf.change_record(1,4,'70268  GV','st p q','1 11.4101 2.8609')
ret = Pslf.change_record(1,4,'70436  GV','st p q','1 5.6347 1.4137')
ret = Pslf.change_record(1,4,'79047  GV','st p q','1 2.747 0.6901')
ret = Pslf.change_record(1,4,'70437  GV','st p q','1 1.7152 0.4288')
ret = Pslf.change_record(1,4,'70201  GW','st p q','1 5.2729 1.3199')
ret = Pslf.change_record(1,4,'70288  GW','st p q','1 5.8826 1.474')
ret = Pslf.change_record(1,4,'70363  GW','st p q','1 6.5325 1.6348')
ret = Pslf.change_record(1,4,'70854  GW','st p q','1 1.608 0.7035')
ret = Pslf.change_record(1,4,'70309  HC','st p q','1 3.1892 0.7973')
ret = Pslf.change_record(1,4,'70535  HC','st p q','1 3.484 0.871')
ret = Pslf.change_record(1,4,'70540  HC','st p q','1 8.5358 2.1373')
ret = Pslf.change_record(1,4,'70541  HC','st p q','1 16.0867 4.0334')
ret = Pslf.change_record(1,4,'70542  HC','st p q','1 7.6045 1.9028')
ret = Pslf.change_record(1,4,'79006  HC','st p q','1 13.5273 3.3902')
ret = Pslf.change_record(1,4,'79018  HC','st p q','1 6.7938 1.7018')
ret = Pslf.change_record(1,4,'79056  HC','st p q','1 1.7889 0.4489')
ret = Pslf.change_record(1,4,'79066  HC','st p q','1 13.0717 3.2763')
ret = Pslf.change_record(1,4,'79069  HC','st p q','1 10.7602 2.6934')
ret = Pslf.change_record(1,4,'79092  HC','st p q','1 7.1355 1.7889')
ret = Pslf.change_record(1,4,'70416  CR','st p q','1 13.601 4.6029')
ret = Pslf.change_record(1,4,'70050  CR','st p q','1 2.8756 0.3081')
ret = Pslf.change_record(1,4,'70091  CR','st p q','1 14.271 3.819')
ret = Pslf.change_record(1,4,'70115  CR','st p q','1 13.065 2.9614')
ret = Pslf.change_record(1,4,'70117  CR','st p q','1 17.353 2.9882')
ret = Pslf.change_record(1,4,'70138  CR','st p q','1 12.73 3.484')
ret = Pslf.change_record(1,4,'70142  CR','st p q','1 4.891 1.3668')
ret = Pslf.change_record(1,4,'70157  CR','st p q','1 7.035 0.6901')
ret = Pslf.change_record(1,4,'70313  CR','st p q','1 28.542 6.5057')
ret = Pslf.change_record(1,4,'70381  CR','st p q','1 5.829 1.2328')
ret = Pslf.change_record(1,4,'70400  CR','st p q','1 7.839 1.7219')
ret = Pslf.change_record(1,4,'70419  CR','st p q','1 2.412 0.3283')
ret = Pslf.change_record(1,4,'70429  CR','st p q','1 2.814 0.3819')
ret = Pslf.change_record(1,4,'70476  CR','st p q','1 7.839 1.1792')
ret = Pslf.change_record(1,4,'70510  CR','st p q','1 4.623 1.5075')
ret = Pslf.change_record(1,4,'70513  CR','st p q','1 19.43 4.4086')
ret = Pslf.change_record(1,4,'70514  CR','st p q','1 10.988 2.3986')
ret = Pslf.change_record(1,4,'70515  CR','st p q','1 15.946 4.5828')
```

```
ret = Pslf.change_record(1,4,'70516  CR','st p q','1 20.703 7.6916')
ret = Pslf.change_record(1,4,'70517  CR','st p q','1 23.115 6.7871')
ret = Pslf.change_record(1,4,'70518  CR','st p q','1 18.09 4.221')
ret = Pslf.change_record(1,4,'70519  CR','st p q','1 18.291 4.3684')
ret = Pslf.change_record(1,4,'70521  CR','st p q','1 21.842 -3.7185')
ret = Pslf.change_record(1,4,'70522  CR','st p q','1 8.107 2.4254')
ret = Pslf.change_record(1,4,'70524  CR','st p q','1 19.765 5.3399')
ret = Pslf.change_record(1,4,'70533  CR','st p q','1 10.251 2.3785')
ret = Pslf.change_record(1,4,'70547  CR','st p q','1 6.231 1.6549')
ret = Pslf.change_record(1,4,'70571  CR','st p q','1 4.489 1.005')
ret = Pslf.change_record(1,4,'70581  CR','st p q','1 20.033 -2.6197')
ret = Pslf.change_record(1,4,'70582  CR','st p q','1 6.164 1.541')
ret = Pslf.change_record(1,4,'70583  CR','st p q','1 12.998 2.6465')
ret = Pslf.change_record(1,4,'70584  CR','st p q','1 17.755 3.0954')
ret = Pslf.change_record(1,4,'70924  CR','st p q','1 1.005 0.1273')
ret = Pslf.change_record(1,4,'70925  CR','st p q','1 0.603 0.0603')
ret = Pslf.change_record(1,4,'70926  CR','st p q','1 0.536 0.0201')
ret = Pslf.change_record(1,4,'70576  CR','st p q','1 11.859 3.417')
ret = Pslf.change_record(1,4,'70124  CR','st p q','1 12.596 -0.0938')
ret = Pslf.change_record(1,4,'70575  CR','st p q','1 19.028 5.1925')
ret = Pslf.change_record(1,4,'71506  CR','st p q','1 13.333 2.6063')
ret = Pslf.change_record(1,4,'71508  CR','st p q','1 0.201 0.0536')
ret = Pslf.change_record(1,4,'71516  CR','st p q','1 9.4872 1.0117')
ret = Pslf.change_record(1,4,'71517  CR','st p q','1 4.154 1.7353')
ret = Pslf.change_record(1,4,'71505  CR','st p q','1 7.504 1.876')
ret = Pslf.change_record(1,4,'71512  CR','st p q','1 0 0')
ret = Pslf.change_record(1,4,'71502  CR','st p q','1 7.1422 1.4539')
ret = Pslf.change_record(1,4,'70510  NT','st p q','1 -8.576 -1.742')
ret = Pslf.change_record(1,4,'71508  NT','st p q','1 -0.201 -0.0469')
ret = Pslf.change_record(1,4,'70009  YV','st p q','1 14.405 4.7369')
ret = Pslf.change_record(1,4,'70525  YV','st p q','1 18.894 6.2109')
ret = Pslf.change_record(1,4,'79065  YV','st p q','1 23.048 7.5777')
ret = Pslf.change_record(1,4,'70541  AS','st p q','1 7.9395 1.9899')

```

```
@logfrom = 70        /*  PSCOLORADO  */
@logindx = rec_index(1, 7, @logfrom, -1, " ", 0, -1)
if (@logindx != -1)
   @logslack = number("  70310 PAWNEE        22.00")
   area[@logindx].iswng = @logslack      /*    70120 COMAN_2      24.00  */
endif

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 70177
busd[@logindx].busnam = "PODER       "
busd[@logindx].basekv = 115.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 700
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65


@logfrom = number("  70074 CALIFORN_TP  115.00")
@logto = number("  70276 MAPLETO1     115.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
   @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70276 MAPLETO1     115.00")
@logto = number("  70177 PODER       115.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000761
secdd[@logindx].zsecx = 0.004655
secdd[@logindx].bsec = 0.000627
secdd[@logindx].rate[0] = 182.00
secdd[@logindx].rate[1] = 200.00
secdd[@logindx].rate[2] = 182.00
secdd[@logindx].rate[3] = 200.00
secdd[@logindx].rate[4] = 182.00
secdd[@logindx].rate[5] = 200.00
secdd[@logindx].rate[6] = 182.00
secdd[@logindx].rate[7] = 200.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 4.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

```

```
  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("  70177 PODER       115.00")
  @logto = number("  70074 CALIFORN_TP  115.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].st = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.001909
  secdd[@logindx].zsecx = 0.011675
  secdd[@logindx].bsec = 0.001573
  secdd[@logindx].rate[0] = 182.00
  secdd[@logindx].rate[1] = 200.00
  secdd[@logindx].rate[2] = 182.00
  secdd[@logindx].rate[3] = 200.00
  secdd[@logindx].rate[4] = 182.00
  secdd[@logindx].rate[5] = 200.00
  secdd[@logindx].rate[6] = 182.00
  secdd[@logindx].rate[7] = 200.00
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 700
  secdd[@logindx].lngsec = 4.000
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].nown[0] = 65
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000

  @logindx = casepar[0].nload
  @ret=ins("load", @logindx-1, 1)
  @loglbus = number("  70177 PODER       115.00")
  load[@logindx].lbus = @loglbus
  load[@logindx].id = "P1"
  load[@logindx].st = 0
  load[@logindx].area = 70
  load[@logindx].zone = 700
  load[@logindx].ba = 65
  load[@logindx].nonconf = 0
  load[@logindx].lid = "HID_MIX "
  load[@logindx].nown = 65
  load[@logindx].clzone = "HID_MIX "

  @logfrom = number("  70260 LEETSDALE    230.00")
  @logto = number("  70291 MONROEPS     230.00")
  $logck = "1 "
  @logsec = 1
  @logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
  if (@logindx != -1)
    secdd[@logindx].rate[0] = 796      /*  311  */
    secdd[@logindx].rate[1] = 796      /*  398  */
    secdd[@logindx].rate[2] = 796      /*  311  */
    secdd[@logindx].rate[3] = 796      /*  398  */
  endif

  @logindx = casepar[0].nload
  @ret=ins("load", @logindx-1, 1)
  @loglbus = number("  70266 LOOKOUT      230.00")
  load[@logindx].lbus = @loglbus
  load[@logindx].id = "P5"
```

```
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 28.50000
load[@logindx].q = 9.367000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.969680
volt[@logindx].va = -0.248379
busd[@logindx].extnum = 70916
busd[@logindx].busnam = "FT_ST_VRAIN "
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 65

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING   345.00")
@logto = number("  70916 FT_ST_VRAIN  345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.002200
secdd[@logindx].zsecx = 0.034300
secdd[@logindx].bsec = 0.604400
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
```

```
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING   345.00")
@logto = number("  70916 FT_ST_VRAIN   345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.002200
secdd[@logindx].zsecx = 0.034300
secdd[@logindx].bsec = 0.604400
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number("  70410 FT_ST_VRAIN   230.00")
@logto = number("  70916 FT_ST_VRAIN   345.00")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T7"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
```

```
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 336.000000
tran[@logindx].zpsr = 5.758420e-04
tran[@logindx].zpsx = 5.209700e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 345.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 560.0
tran[@logindx].rate[1] = 756.0
tran[@logindx].rate[2] = 560.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 0.975000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391232
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number("  70410 FT_ST_VRAIN  230.00")
@logto = number("  70916 FT_ST_VRAIN  345.00")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T8"
```

```
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 336.000000
tran[@logindx].zpsr = 5.758420e-04
tran[@logindx].zpsx = 5.209700e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 345.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 560.0
tran[@logindx].rate[1] = 756.0
tran[@logindx].rate[2] = 560.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 0.975000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391232
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].nsvd
@ret = ins("svd", @logindx-1, 1)
@logbus = number("  70916 FT_ST_VRAIN  345.00")
@logreg = number("  70410 FT_ST_VRAIN  230.00")
svd[@logindx].ibus = @logbus
svd[@logindx].id = "v "
svd[@logindx].projid = 0
```

```
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 4
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 706
svd[@logindx].g = 0.000000
svd[@logindx].b = -1.200000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.025000
svd[@logindx].bstep[0] = -1.200000
svd[@logindx].bstep[1] = 1.440000
svd[@logindx].bstep[2] = 1.440000
svd[@logindx].bstep[3] = 0.000000
svd[@logindx].bstep[4] = 0.000000
svd[@logindx].bstep[5] = 0.000000
svd[@logindx].bstep[6] = 0.000000
svd[@logindx].bstep[7] = 0.000000
svd[@logindx].bstep[8] = 0.000000
svd[@logindx].bstep[9] = 0.000000
svd[@logindx].nstep[0] = 1
svd[@logindx].nstep[1] = 1
svd[@logindx].nstep[2] = 1
svd[@logindx].nstep[3] = 0
svd[@logindx].nstep[4] = 0
svd[@logindx].nstep[5] = 0
svd[@logindx].nstep[6] = 0
svd[@logindx].nstep[7] = 0
svd[@logindx].nstep[8] = 0
svd[@logindx].nstep[9] = 0
svd[@logindx].beffmin = -1.200000
svd[@logindx].beffmax = 2.880000
svd[@logindx].lid = "        "
svd[@logindx].date_in = 19400101
svd[@logindx].date_out = 20391232
svd[@logindx].nown[0] = 65
svd[@logindx].nown[1] = 0
svd[@logindx].nown[2] = 0
svd[@logindx].nown[3] = 0
svd[@logindx].pown[0] = 1.000
svd[@logindx].pown[1] = 0.000
svd[@logindx].pown[2] = 0.000
svd[@logindx].pown[3] = 0.000


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 70804
busd[@logindx].busnam = "COYOTE      "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 700
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65


@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70528 SPRUCE      230.00")
@logto = number("  70804 COYOTE      230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
```

```
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000390
secdd[@logindx].zsecx = 0.001625
secdd[@logindx].bsec = 0.261600
secdd[@logindx].rate[0] = 220.00
secdd[@logindx].rate[1] = 220.00
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70528 SPRUCE      230.00")
@logto = number("  70804 COYOTE      230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000390
secdd[@logindx].zsecx = 0.001625
secdd[@logindx].bsec = 0.261600
secdd[@logindx].rate[0] = 220.00
secdd[@logindx].rate[1] = 220.00
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000


```

```
@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70804 COYOTE      230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P1"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 40.00000
load[@logindx].q = 19.37288
load[@logindx].ba = 65
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].nown = 65
load[@logindx].clzone = "HID_MIX "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70804 COYOTE      230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P2"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 65
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].nown = 65
load[@logindx].clzone = "HID_MIX "

@logindx = number("  70120 COMAN_2     24.00")
if (@logindx != -1)
  busd[@logindx].type = 0      /*  2  */
endif

@logfrom = number("  70120 COMAN_2     24.00")
@logto = number("  70122 COMANCHE    230.00")
$logck = "U2"
@logtert = number("     0 ----------   0.00")
@logindx = rec_index(0, 2, @logfrom, @logto, $logck, 0, -1, @logtert)
if (@logindx != -1)
  tran[@logindx].st = 0      /*  1  */
endif

@logfrom = number("  70120 COMAN_2     24.00")
$logid = "C2"
@logindx = rec_index(0, 3, @logfrom, -1, $logid, 0, -1)
if (@logindx != -1)
  gens[@logindx].st = 0      /*  1  */
endif

@logfrom = number("  70120 COMAN_2     24.00")
$logid = "SS"
@logindx = rec_index(0, 4, @logfrom, -1, $logid, 0, -1)
if (@logindx != -1)
  load[@logindx].st = 0      /*  1  */
endif

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING  345.00")
@logto = number("  70918 GOOSE_CK    345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
```

```
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.004300
secdd[@logindx].zsecx = 0.066400
secdd[@logindx].bsec = 1.188800
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING    345.00")
@logto = number("  70918 GOOSE_CK      345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "t2"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "2 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "        "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70916)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
```

```
volt[@logindx].vm = 1.001200
volt[@logindx].va = 0
busd[@logindx].extnum = 700069
busd[@logindx].busnam = "PI_2024_12"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.001200
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700069,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700070
busd[@logindx].busnam = "24_12_W1_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700070,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700071
busd[@logindx].busnam = "24_12_W2_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
```

```
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700071,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700072
busd[@logindx].busnam =  "24_12_W3_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700072,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700073
busd[@logindx].busnam =  "24_12_W1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700073,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
```

```
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700074
busd[@logindx].busnam = "24_12_W2_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700074,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700075
busd[@logindx].busnam = "24_12_W3_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700075,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700076
busd[@logindx].busnam = "24_12_W1"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
```

```
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
   for @s = 0 to casepar[0].nsubst - 1
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
   next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700076,"date_in date_out","19400101","20391231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.000000
  volt[@logindx].va = 0
  busd[@logindx].extnum = 700077
  busd[@logindx].busnam =  "24_12_W2"
  busd[@logindx].basekv = 0.7200
  busd[@logindx].type = 2
  busd[@logindx].area = 70
  busd[@logindx].zone = 706
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.000000
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
   for @s = 0 to casepar[0].nsubst - 1
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
   next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700077,"date_in date_out","19400101","20391231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.000000
  volt[@logindx].va = 0
  busd[@logindx].extnum = 700078
  busd[@logindx].busnam =  "24_12_W3"
  busd[@logindx].basekv = 0.7200
  busd[@logindx].type = 2
  busd[@logindx].area = 70
  busd[@logindx].zone = 706
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.000000
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
   for @s = 0 to casepar[0].nsubst - 1
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
   next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700078,"date_in date_out","19400101","20391231")
```

```
967
968   @logindx = casepar[0].nbrsec
969   @ret=ins("secdd", @logindx-1, 1)
970   @logfrom = number(" 700069 5RSC_24_16    345.00")
971   @logto = number("  70918 GOOSE_CK      345.00")
972   secdd[@logindx].ifrom = @logfrom
973   secdd[@logindx].ito = @logto
974   secdd[@logindx].ck = "1 "
975   secdd[@logindx].projid = 0
976   secdd[@logindx].st = 1
977   secdd[@logindx].stn = 0
978   secdd[@logindx].nsec = 1
979   secdd[@logindx].type = 0
980   secdd[@logindx].zsecr = 0.000235
981   secdd[@logindx].zsecx = 0.003095
982   secdd[@logindx].bsec = 0.048651
983   secdd[@logindx].rate[0] = 1089.90
984   secdd[@logindx].rate[1] = 1252.50
985   secdd[@logindx].rate[2] = 1089.90
986   secdd[@logindx].rate[3] = 1252.50
987   secdd[@logindx].rate[4] = 0.00
988   secdd[@logindx].rate[5] = 0.00
989   secdd[@logindx].rate[6] = 0.00
990   secdd[@logindx].rate[7] = 0.00
991   secdd[@logindx].aloss = 1.000
992   secdd[@logindx].area = 70
993   secdd[@logindx].zone = 706
994   secdd[@logindx].lngsec = 6.000
995   secdd[@logindx].trangi = 0.000000
996   secdd[@logindx].trantapf = 0.000000
997   secdd[@logindx].trantapt = 0.000000
998   secdd[@logindx].lid = ""
999   secdd[@logindx].ohms = 0
1000  secdd[@logindx].date_in = 19400101
1001  secdd[@logindx].date_out = 20391231
1002  secdd[@logindx].nown[0] = 700
1003  secdd[@logindx].nown[1] = 0
1004  secdd[@logindx].nown[2] = 0
1005  secdd[@logindx].nown[3] = 0
1006  secdd[@logindx].nown[4] = 0
1007  secdd[@logindx].nown[5] = 0
1008  secdd[@logindx].nown[6] = 0
1009  secdd[@logindx].nown[7] = 0
1010  secdd[@logindx].pown[0] = 1.000
1011  secdd[@logindx].pown[1] = 0.000
1012  secdd[@logindx].pown[2] = 0.000
1013  secdd[@logindx].pown[3] = 0.000
1014  secdd[@logindx].pown[4] = 0.000
1015  secdd[@logindx].pown[5] = 0.000
1016  secdd[@logindx].pown[6] = 0.000
1017  secdd[@logindx].pown[7] = 0.000
1018
1019  @logindx = casepar[0].nbrsec
1020  @ret=ins("secdd", @logindx-1, 1)
1021  @logfrom = number(" 700073 5RSC_24_16    34.50")
1022  @logto = number(" 700070 5RSC_24_16    34.50")
1023  secdd[@logindx].ifrom = @logfrom
1024  secdd[@logindx].ito = @logto
1025  secdd[@logindx].ck = "1 "
1026  secdd[@logindx].projid = 0
1027  secdd[@logindx].st = 1
1028  secdd[@logindx].stn = 0
1029  secdd[@logindx].nsec = 1
1030  secdd[@logindx].type = 0
1031  secdd[@logindx].zsecr = 0.006340
1032  secdd[@logindx].zsecx = 0.008378
1033  secdd[@logindx].bsec = 0.092118
1034  secdd[@logindx].rate[0] = 246.20
1035  secdd[@logindx].rate[1] = 246.20
```

```
secdd[@logindx].rate[2] = 246.20
secdd[@logindx].rate[3] = 246.20
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700074 5RSC_24_16    34.50")
@logto = number(" 700071 5RSC_24_16    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006268
secdd[@logindx].zsecx = 0.008283
secdd[@logindx].bsec = 0.112085
secdd[@logindx].rate[0] = 277.00
secdd[@logindx].rate[1] = 277.00
secdd[@logindx].rate[2] = 277.00
secdd[@logindx].rate[3] = 277.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
```

```
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700075 5RSC_24_16    34.50")
@logto = number(" 700072 5RSC_24_16    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006340
secdd[@logindx].zsecx = 0.008378
secdd[@logindx].bsec = 0.092118
secdd[@logindx].rate[0] = 246.20
secdd[@logindx].rate[1] = 246.20
secdd[@logindx].rate[2] = 246.20
secdd[@logindx].rate[3] = 246.20
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
```

```
@logfrom = number(" 700069 5RSC_24_16   345.00")
@logto = number(" 700070 5RSC_24_16   34.50")
@logreg = number(" 700070 5RSC_24_16   34.50")
@logtert = number("      0 ----------   0.00")
@logint = number("      0 ----------   0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 12
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.300000e-03
tran[@logindx].zpsx = 9.997350e-02
tran[@logindx].zptr = 2.300000e-03
tran[@logindx].zptx = 9.997350e-02
tran[@logindx].ztsr = 2.300000e-03
tran[@logindx].ztsx = 1.999868e-01
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 187.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.025000
tran[@logindx].vtmin = 0.975000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000
```

```
1243
1244    @logindx = casepar[0].ntran
1245    @ret=ins("tran", @logindx-1, 1)
1246    @logfrom = number(" 700069 5RSC_24_16    345.00")
1247    @logto = number(" 700071 5RSC_24_16     34.50")
1248    @logreg = number(" 700071 5RSC_24_16     34.50")
1249    @logtert = number("      0 ------------    0.00")
1250    @logint = number("      0 ------------    0.00")
1251    tran[@logindx].ifrom = @logfrom
1252    tran[@logindx].ito = @logto
1253    tran[@logindx].ck = "T2"
1254    tran[@logindx].projid = 0
1255    tran[@logindx].st = 1
1256    tran[@logindx].stn = 0
1257    tran[@logindx].type = 12
1258    tran[@logindx].kreg = @logreg
1259    tran[@logindx].iztabl = 0
1260    tran[@logindx].itert = @logtert
1261    tran[@logindx].iint = @logint
1262    tran[@logindx].area = 70
1263    tran[@logindx].zone = 706
1264    tran[@logindx].tbase = 113.000000
1265    tran[@logindx].zpsr = 2.300000e-03
1266    tran[@logindx].zpsx = 9.997350e-02
1267    tran[@logindx].zptr = 2.300000e-03
1268    tran[@logindx].zptx = 9.997350e-02
1269    tran[@logindx].ztsr = 2.300000e-03
1270    tran[@logindx].ztsx = 1.999868e-01
1271    tran[@logindx].vnomp = 345.000000
1272    tran[@logindx].vnoms = 34.500000
1273    tran[@logindx].vnomt = 13.800000
1274    tran[@logindx].anglp = 0.000000
1275    tran[@logindx].gmag = 0.000000e+00
1276    tran[@logindx].bmag = 0.000000e+00
1277    tran[@logindx].rate[0] = 187.0
1278    tran[@logindx].rate[1] = 187.0
1279    tran[@logindx].rate[2] = 187.0
1280    tran[@logindx].rate[3] = 187.0
1281    tran[@logindx].rate[4] = 0.0
1282    tran[@logindx].rate[5] = 0.0
1283    tran[@logindx].rate[6] = 0.0
1284    tran[@logindx].rate[7] = 0.0
1285    tran[@logindx].aloss = 0.000
1286    tran[@logindx].tmax = 1.100000
1287    tran[@logindx].tmin = 0.900000
1288    tran[@logindx].vtmax = 1.025000
1289    tran[@logindx].vtmin = 0.975000
1290    tran[@logindx].stepp = -0.006250
1291    tran[@logindx].tapp = 1.000000
1292    tran[@logindx].tapfp = 1.000000
1293    tran[@logindx].tapfs = 1.000000
1294    tran[@logindx].tapft = 1.000000
1295    tran[@logindx].lid = " "
1296    tran[@logindx].ohms = 0
1297    tran[@logindx].date_in = 19400101
1298    tran[@logindx].date_out = 20391231
1299    tran[@logindx].nown[0] = 700
1300    tran[@logindx].nown[1] = 0
1301    tran[@logindx].nown[2] = 0
1302    tran[@logindx].nown[3] = 0
1303    tran[@logindx].nown[4] = 0
1304    tran[@logindx].nown[5] = 0
1305    tran[@logindx].nown[6] = 0
1306    tran[@logindx].nown[7] = 0
1307    tran[@logindx].pown[0] = 1.000
1308    tran[@logindx].pown[1] = 0.000
1309    tran[@logindx].pown[2] = 0.000
1310    tran[@logindx].pown[3] = 0.000
1311    tran[@logindx].pown[4] = 0.000
```

```
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700069 5RSC_24_16    345.00")
@logto = number(" 700072 5RSC_24_16     34.50")
@logreg = number(" 700072 5RSC_24_16     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T3"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 12
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.300000e-03
tran[@logindx].zpsx = 9.997350e-02
tran[@logindx].zptr = 2.300000e-03
tran[@logindx].zptx = 9.997350e-02
tran[@logindx].ztsr = 2.300000e-03
tran[@logindx].ztsx = 1.999868e-01
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 187.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.025000
tran[@logindx].vtmin = 0.975000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
```

```
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700076 5RSC_24_16      0.72")
@logto = number(" 700073 5RSC_24_16     34.50")
@logreg = number("      0 ------------     0.00")
@logtert = number("      0 ------------     0.00")
@logint = number("      0 ------------     0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 169.600006
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867620e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.720000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 169.6
tran[@logindx].rate[1] = 169.6
tran[@logindx].rate[2] = 169.6
tran[@logindx].rate[3] = 169.6
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
```

```
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700077 5RSC_24_16    0.72")
@logto = number(" 700074 5RSC_24_16   34.50")
@logreg = number("     0 ----------   0.00")
@logtert = number("     0 ----------   0.00")
@logint = number("     0 ----------   0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 190.800003
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867620e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.720000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 190.8
tran[@logindx].rate[1] = 190.8
tran[@logindx].rate[2] = 190.8
tran[@logindx].rate[3] = 190.8
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
```

```
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700078 5RSC_24_16     0.72")
@logto = number(" 700075 5RSC_24_16    34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U3"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 169.600006
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867620e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.720000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 169.6
tran[@logindx].rate[1] = 169.6
tran[@logindx].rate[2] = 169.6
tran[@logindx].rate[3] = 169.6
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
```

```
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700076 5RSC_24_16      0.72")
@logreg = number(" 700069 5RSC_24_16    345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 169.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 81.599998
gens[@logindx].qmin = -70.400002
gens[@logindx].prf = 0.320000
gens[@logindx].qrf = 0.320000
gens[@logindx].pmax = 144.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1000000.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "Chyenne "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
```

```
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 25
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700077 5RSC_24_16      0.72")
@logreg = number(" 700069 5RSC_24_16    345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W2"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 190.8000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 91.800003
gens[@logindx].qmin = -79.199997
gens[@logindx].prf = 0.360000
gens[@logindx].qrf = 0.360000
gens[@logindx].pmax = 162.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1000000.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "Chyenne "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 25
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
```

```
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 1.000000

  @logindx = casepar[0].ngen
  @ret=ins("gens", @logindx-1, 1)
  @logbgen = number(" 700078 5RSC_24_16      0.72")
  @logreg = number(" 700069 5RSC_24_16    345.00")
  @loghbus = number("      0 ------------    0.00")
  @logtbus = number("      0 ------------    0.00")
  gens[@logindx].ibgen = @logbgen
  gens[@logindx].id = "W3"
  gens[@logindx].projid = 0
  gens[@logindx].st = 0
  gens[@logindx].stn = 0
  gens[@logindx].igreg = @logreg
  gens[@logindx].area = 70
  gens[@logindx].zone = 706
  gens[@logindx].mbase = 169.6000
  gens[@logindx].pgen = 0.0
  gens[@logindx].qgen = 0.000000
  gens[@logindx].qmax = 81.599998
  gens[@logindx].qmin = -70.400002
  gens[@logindx].prf = 0.320000
  gens[@logindx].qrf = 0.320000
  gens[@logindx].pmax = 144.000000
  gens[@logindx].pmin = 0.000000
  gens[@logindx].zgenr = 0.000
  gens[@logindx].zgenx = 1000000.000
  gens[@logindx].rcomp = 0.000
  gens[@logindx].xcomp = 0.000
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "Chyenne "
  gens[@logindx].date_in = 19400101
  gens[@logindx].date_out = 20391231
  gens[@logindx].nown[0] = 700
  gens[@logindx].nown[1] = 0
  gens[@logindx].nown[2] = 0
  gens[@logindx].nown[3] = 0
  gens[@logindx].nown[4] = 0
  gens[@logindx].nown[5] = 0
  gens[@logindx].nown[6] = 0
  gens[@logindx].nown[7] = 0
  gens[@logindx].pown[0] = 1.000
  gens[@logindx].pown[1] = 0.000
  gens[@logindx].pown[2] = 0.000
  gens[@logindx].pown[3] = 0.000
  gens[@logindx].pown[4] = 0.000
  gens[@logindx].pown[5] = 0.000
  gens[@logindx].pown[6] = 0.000
  gens[@logindx].pown[7] = 0.000
  gens[@logindx].rtr = 0.0000
  gens[@logindx].xtr = 0.0000
  gens[@logindx].gtap = 1.0000
  gens[@logindx].gov_flag = 0
  gens[@logindx].agc_flag = 0
  gens[@logindx].dispatch_flag = 0
  gens[@logindx].baseload_flag = 0
  gens[@logindx].air_temp = 25
  gens[@logindx].turbine_type = 24
  gens[@logindx].fueltype[0] = 0
  gens[@logindx].fueltype[1] = 0
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 1.000000

  @logindx = casepar[0].nload
  @ret=ins("load", @logindx-1, 1)
```

```
@loglbus = number(" 700070 5RSC_24_16    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 1.100000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "Chyenne "
load[@logindx].date_in = 991231
load[@logindx].date_out = 991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700071 5RSC_24_16    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 1.100000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "Chyenne "
load[@logindx].date_in = 991231
load[@logindx].date_out = 991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700072 5RSC_24_16    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 1.100000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "Chyenne "
load[@logindx].date_in = 991231
```

```
load[@logindx].date_out = 991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005000
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700151
busd[@logindx].busnam = "2021_6_S1  "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700152
busd[@logindx].busnam = "2021_6_S1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700153
busd[@logindx].busnam = "2021_6_S1_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
```

```
busd[@logindx].extnum = 700154
busd[@logindx].busnam = "2021_6_S1_3"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700155
busd[@logindx].busnam = "GI_2021_6"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 1
busd[@logindx].vsched = 1.013260
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 10150
busd[@logindx].date_out = 10150
busd[@logindx].nown = 65

@logfrom = number("  70048 GREEN_VLY     230.00")
@logto = number("  70392 SKYRANCH      230.00")
$logck = "1"
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
  @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70048 GREENVAL      230.00")
@logto = number("  700155 AURORA_BREAL 230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.002634
secdd[@logindx].zsecx = 0.021045
secdd[@logindx].bsec = 0.046130
secdd[@logindx].rate[0] = 484.00
secdd[@logindx].rate[1] = 555.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
```

```
secdd[@logindx].date_in = 10150
secdd[@logindx].date_out = 10150
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700152 AURABOR_S1_1   34.50")
@logto = number("  700151 AURABOR_S1     34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.007960
secdd[@logindx].zsecx = 0.020520
secdd[@logindx].bsec = 0.068710
secdd[@logindx].rate[0] = 220.00
secdd[@logindx].rate[1] = 220.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700153 AURABOR_S1_2   34.50")
@logto = number("  700152 AURABOR_S1_1   34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
```

```
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.007961
secdd[@logindx].zsecx = 0.020522
secdd[@logindx].bsec = 0.068708
secdd[@logindx].rate[0] = 241.00
secdd[@logindx].rate[1] = 241.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700155 AURORA_BREAL 230.00")
@logto = number("  70392 SKYRANCH     230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000359
secdd[@logindx].zsecx = 0.002870
secdd[@logindx].bsec = 0.006290
secdd[@logindx].rate[0] = 484.00
secdd[@logindx].rate[1] = 555.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 10150
secdd[@logindx].date_out = 10150
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
```

```
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700155 AURORA_BREAL 230.00")
@logto = number("  700154 AURABOR_S1_3 230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001008
secdd[@logindx].zsecx = 0.004860
secdd[@logindx].bsec = 0.007374
secdd[@logindx].rate[0] = 232.00
secdd[@logindx].rate[1] = 274.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number("  700153 AURABOR_S1_2  34.50")
@logto = number("  700154 AURABOR_S1_3 230.00")
@logreg = number("  700154 AURABOR_S1_3 230.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
```

```
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 700
tran[@logindx].tbase = 129.000000
tran[@logindx].zpsr = 1.360000e-03
tran[@logindx].zpsx = 9.500000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 230.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 230.0
tran[@logindx].rate[1] = 230.0
tran[@logindx].rate[2] = 0.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 0.950000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number("  700151 AURABOR_S1    34.50")
@logreg = number("  700151 AURABOR_S1    34.50")
@loghbus = number("       0 ------------     0.00")
@logtbus = number("       0 ------------     0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S1"
gens[@logindx].projid = 0
```

```
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 700
gens[@logindx].mbase = 218.4000
gens[@logindx].pgen = 203.300003
gens[@logindx].qgen = 67.999756
gens[@logindx].qmax = 68.000000
gens[@logindx].qmin = -68.000000
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 203.300003
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].qtab = 0

@logindx = casepar[0].nsvd
@ret = ins("svd", @logindx-1, 1)
@logbus = number("   700153 AURABOR_S1_2   34.50")
@logreg = number("   700153 AURABOR_S1_2   34.50")
svd[@logindx].ibus = @logbus
svd[@logindx].id = "v "
svd[@logindx].projid = 0
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 4
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 700
svd[@logindx].g = 0.000000
svd[@logindx].b = 0.000000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.025000
svd[@logindx].bstep[0] = 0.310000
```

```
2347  svd[@logindx].bstep[1] = 0.000000
2348  svd[@logindx].bstep[2] = 0.000000
2349  svd[@logindx].bstep[3] = 0.000000
2350  svd[@logindx].bstep[4] = 0.000000
2351  svd[@logindx].bstep[5] = 0.000000
2352  svd[@logindx].bstep[6] = 0.000000
2353  svd[@logindx].bstep[7] = 0.000000
2354  svd[@logindx].bstep[8] = 0.000000
2355  svd[@logindx].bstep[9] = 0.000000
2356  svd[@logindx].nstep[0] = 1
2357  svd[@logindx].nstep[1] = 0
2358  svd[@logindx].nstep[2] = 0
2359  svd[@logindx].nstep[3] = 0
2360  svd[@logindx].nstep[4] = 0
2361  svd[@logindx].nstep[5] = 0
2362  svd[@logindx].nstep[6] = 0
2363  svd[@logindx].nstep[7] = 0
2364  svd[@logindx].nstep[8] = 0
2365  svd[@logindx].nstep[9] = 0
2366  svd[@logindx].beffmin = 0.000000
2367  svd[@logindx].beffmax = 0.137000
2368  svd[@logindx].lid = "        "
2369  svd[@logindx].date_in = 19400101
2370  svd[@logindx].date_out = 20391231
2371  svd[@logindx].nown[0] = 700
2372  svd[@logindx].nown[1] = 0
2373  svd[@logindx].nown[2] = 0
2374  svd[@logindx].nown[3] = 0
2375  svd[@logindx].pown[0] = 1.000
2376  svd[@logindx].pown[1] = 0.000
2377  svd[@logindx].pown[2] = 0.000
2378  svd[@logindx].pown[3] = 0.000
2379
2380  @logindx = casepar[0].nbus
2381  @ret=ins("busd", @logindx-1, 1)
2382  @ret=ins("volt", @logindx-1, 1)
2383  busd[@logindx].extnum = 71942
2384  busd[@logindx].busnam = "24_1_T1      "
2385  busd[@logindx].basekv = 13.8000
2386  busd[@logindx].type = 1
2387  busd[@logindx].area = 70
2388  busd[@logindx].ba = 65
2389  busd[@logindx].zone = 704
2390  busd[@logindx].vmax = 1.0500
2391  busd[@logindx].vmin = 0.9500
2392  busd[@logindx].nown = 65
2393
2394  @logindx = casepar[0].nbus
2395  @ret=ins("busd", @logindx-1, 1)
2396  @ret=ins("volt", @logindx-1, 1)
2397  busd[@logindx].extnum = 71943
2398  busd[@logindx].busnam = "24_1_T2      "
2399  busd[@logindx].basekv = 13.8000
2400  busd[@logindx].type = 1
2401  busd[@logindx].area = 70
2402  busd[@logindx].ba = 65
2403  busd[@logindx].zone = 704
2404  busd[@logindx].vmax = 1.0500
2405  busd[@logindx].vmin = 0.9500
2406  busd[@logindx].nown = 65
2407
2408  @logindx = casepar[0].nbus
2409  @ret=ins("busd", @logindx-1, 1)
2410  @ret=ins("volt", @logindx-1, 1)
2411  busd[@logindx].extnum = 71944
2412  busd[@logindx].busnam = "24_1_T3      "
2413  busd[@logindx].basekv = 13.8000
2414  busd[@logindx].type = 1
2415  busd[@logindx].area = 70
```

```
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 99132
  busd[@logindx].busnam = "mid_99132   "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 99134
  busd[@logindx].busnam = "mid_99134   "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 99133
  busd[@logindx].busnam = "mid_99133   "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700208
  busd[@logindx].busnam = "REPL_2024_1 "
  busd[@logindx].basekv = 230.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 704
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 700209
  busd[@logindx].busnam = "24_1_S1_2   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
```

```
2485  busd[@logindx].area = 70
2486  busd[@logindx].ba = 65
2487  busd[@logindx].zone = 704
2488  busd[@logindx].vmax = 1.0500
2489  busd[@logindx].vmin = 0.9500
2490  busd[@logindx].nown = 65
2491
2492  @logindx = casepar[0].nbus
2493  @ret=ins("busd", @logindx-1, 1)
2494  @ret=ins("volt", @logindx-1, 1)
2495  busd[@logindx].extnum = 700210
2496  busd[@logindx].busnam = "24_1_S2_2   "
2497  busd[@logindx].basekv = 34.5000
2498  busd[@logindx].type = 1
2499  busd[@logindx].area = 70
2500  busd[@logindx].ba = 65
2501  busd[@logindx].zone = 704
2502  busd[@logindx].vmax = 1.0500
2503  busd[@logindx].vmin = 0.9500
2504  busd[@logindx].nown = 65
2505
2506  @logindx = casepar[0].nbus
2507  @ret=ins("busd", @logindx-1, 1)
2508  @ret=ins("volt", @logindx-1, 1)
2509  busd[@logindx].extnum = 700211
2510  busd[@logindx].busnam = "24_1_S3_2   "
2511  busd[@logindx].basekv = 34.5000
2512  busd[@logindx].type = 1
2513  busd[@logindx].area = 70
2514  busd[@logindx].ba = 65
2515  busd[@logindx].zone = 704
2516  busd[@logindx].vmax = 1.0500
2517  busd[@logindx].vmin = 0.9500
2518  busd[@logindx].nown = 65
2519
2520  @logindx = casepar[0].nbus
2521  @ret=ins("busd", @logindx-1, 1)
2522  @ret=ins("volt", @logindx-1, 1)
2523  busd[@logindx].extnum = 700212
2524  busd[@logindx].busnam = "24_1_S1_1   "
2525  busd[@logindx].basekv = 34.5000
2526  busd[@logindx].type = 1
2527  busd[@logindx].area = 70
2528  busd[@logindx].ba = 65
2529  busd[@logindx].zone = 704
2530  busd[@logindx].vmax = 1.0500
2531  busd[@logindx].vmin = 0.9500
2532  busd[@logindx].nown = 65
2533
2534  @logindx = casepar[0].nbus
2535  @ret=ins("busd", @logindx-1, 1)
2536  @ret=ins("volt", @logindx-1, 1)
2537  busd[@logindx].extnum = 700213
2538  busd[@logindx].busnam = "24_1_S2_1   "
2539  busd[@logindx].basekv = 34.5000
2540  busd[@logindx].type = 1
2541  busd[@logindx].area = 70
2542  busd[@logindx].ba = 65
2543  busd[@logindx].zone = 704
2544  busd[@logindx].vmax = 1.0500
2545  busd[@logindx].vmin = 0.9500
2546  busd[@logindx].nown = 65
2547
2548  @logindx = casepar[0].nbus
2549  @ret=ins("busd", @logindx-1, 1)
2550  @ret=ins("volt", @logindx-1, 1)
2551  busd[@logindx].extnum = 700214
2552  busd[@logindx].busnam = "24_1_S3_1   "
2553  busd[@logindx].basekv = 34.5000
```

```
2554  busd[@logindx].type = 1
2555  busd[@logindx].area = 70
2556  busd[@logindx].ba = 65
2557  busd[@logindx].zone = 704
2558  busd[@logindx].vmax = 1.0500
2559  busd[@logindx].vmin = 0.9500
2560  busd[@logindx].nown = 65
2561
2562  @logindx = casepar[0].nbus
2563  @ret=ins("busd", @logindx-1, 1)
2564  @ret=ins("volt", @logindx-1, 1)
2565  busd[@logindx].extnum = 700215
2566  busd[@logindx].busnam = "24_1_S1      "
2567  busd[@logindx].basekv = 0.6600
2568  busd[@logindx].type = 2
2569  busd[@logindx].area = 70
2570  busd[@logindx].ba = 65
2571  busd[@logindx].zone = 704
2572  busd[@logindx].vmax = 1.0500
2573  busd[@logindx].vmin = 0.9500
2574  busd[@logindx].nown = 65
2575
2576  @logindx = casepar[0].nbus
2577  @ret=ins("busd", @logindx-1, 1)
2578  @ret=ins("volt", @logindx-1, 1)
2579  busd[@logindx].extnum = 700216
2580  busd[@logindx].busnam = "24_1_S2      "
2581  busd[@logindx].basekv = 0.6600
2582  busd[@logindx].type = 2
2583  busd[@logindx].area = 70
2584  busd[@logindx].ba = 65
2585  busd[@logindx].zone = 704
2586  busd[@logindx].vmax = 1.0500
2587  busd[@logindx].vmin = 0.9500
2588  busd[@logindx].nown = 65
2589
2590  @logindx = casepar[0].nbus
2591  @ret=ins("busd", @logindx-1, 1)
2592  @ret=ins("volt", @logindx-1, 1)
2593  busd[@logindx].extnum = 700217
2594  busd[@logindx].busnam = "24_1_S3      "
2595  busd[@logindx].basekv = 0.6600
2596  busd[@logindx].type = 2
2597  busd[@logindx].area = 70
2598  busd[@logindx].ba = 65
2599  busd[@logindx].zone = 704
2600  busd[@logindx].vmax = 1.0500
2601  busd[@logindx].vmin = 0.9500
2602  busd[@logindx].nown = 65
2603
2604  @logindx = casepar[0].nbrsec
2605  @ret=ins("secdd", @logindx-1, 1)
2606  @logfrom = number(" 700208 REPL_2024_1  230.00")
2607  @logto = number("  70122 COMANCHE    230.00")
2608  secdd[@logindx].ifrom = @logfrom
2609  secdd[@logindx].ito = @logto
2610  secdd[@logindx].ck = "1 "
2611  secdd[@logindx].st = 1
2612  secdd[@logindx].nsec = 1
2613  secdd[@logindx].type = 0
2614  secdd[@logindx].zsecr = 0.000022
2615  secdd[@logindx].zsecx = 0.000335
2616  secdd[@logindx].bsec = 0.001150
2617  secdd[@logindx].rate[0] = 943.00
2618  secdd[@logindx].rate[1] = 943.00
2619  secdd[@logindx].rate[2] = 943.00
2620  secdd[@logindx].rate[3] = 0.00
2621  secdd[@logindx].rate[4] = 0.00
2622  secdd[@logindx].rate[5] = 0.00
```

```
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.300
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700212 24_1_S1_1     34.50")
@logto = number(" 700209 24_1_S1_2     34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001128
secdd[@logindx].zsecx = 0.001127
secdd[@logindx].bsec = 0.006610
secdd[@logindx].rate[0] = 234.80
secdd[@logindx].rate[1] = 234.80
secdd[@logindx].rate[2] = 234.80
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700213 24_1_S2_1     34.50")
@logto = number(" 700210 24_1_S2_2     34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001128
secdd[@logindx].zsecx = 0.001127
```

```
secdd[@logindx].bsec = 0.006610
secdd[@logindx].rate[0] = 234.80
secdd[@logindx].rate[1] = 234.80
secdd[@logindx].rate[2] = 234.80
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700214 24_1_S3_1      34.50")
@logto = number(" 700211 24_1_S3_2      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001128
secdd[@logindx].zsecx = 0.001127
secdd[@logindx].bsec = 0.006610
secdd[@logindx].rate[0] = 234.80
secdd[@logindx].rate[1] = 234.80
secdd[@logindx].rate[2] = 234.80
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700209 24_1_S1_2      34.50")
@logreg = number(" 700209 24_1_S1_2      34.50")
```

```
@logtert = number("  71942 24_1_T1       13.80")
@logint = number("  99132 mid_99143     230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700210 24_1_S2_2     34.50")
@logreg = number(" 700210 24_1_S2_2     34.50")
@logtert = number("  71943 24_1_T2       13.80")
@logint = number("  99133 mid_99141     230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
```

```
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _2                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700211 24_1_S3_2     34.50")
@logreg = number(" 700211 24_1_S3_2     34.50")
@logtert = number("  71944 24_1_T3       13.80")
@logint = number("  99134 mid_99142    230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
```

```
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1 _1                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700215 24_1_S1        0.66")
@logto = number(" 700212 24_1_S1_1     34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
```

```
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _1                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700216 24_1_S2        0.66")
@logto = number(" 700213 24_1_S2_1      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
```

```
3037  tran[@logindx].tapfp = 1.000000
3038  tran[@logindx].tapfs = 1.000000
3039  tran[@logindx].tapft = 1.000000
3040  tran[@logindx].lid = "GSU _2                          "
3041  tran[@logindx].ohms = 0
3042  tran[@logindx].nown[0] = 65
3043  tran[@logindx].nown[1] = 0
3044  tran[@logindx].nown[2] = 0
3045  tran[@logindx].nown[3] = 0
3046  tran[@logindx].pown[0] = 1.000
3047  tran[@logindx].pown[1] = 1.000
3048  tran[@logindx].pown[2] = 1.000
3049  tran[@logindx].pown[3] = 1.000
3050
3051  @logindx = casepar[0].ntran
3052  @ret=ins("tran", @logindx-1, 1)
3053  @logfrom = number(" 700217 24_1_S3       0.66")
3054  @logto = number(" 700214 24_1_S3_1     34.50")
3055  @logreg = number("      0 ------------    0.00")
3056  @logtert = number("      0 ------------    0.00")
3057  @logint = number("      0 ------------    0.00")
3058  tran[@logindx].ifrom = @logfrom
3059  tran[@logindx].ito = @logto
3060  tran[@logindx].ck = "1 "
3061  tran[@logindx].st = 1
3062  tran[@logindx].type = 1
3063  tran[@logindx].kreg = @logreg
3064  tran[@logindx].iztabl = 0
3065  tran[@logindx].itert = @logtert
3066  tran[@logindx].iint = @logint
3067  tran[@logindx].area = 70
3068  tran[@logindx].zone = 704
3069  tran[@logindx].tbase = 132.000000
3070  tran[@logindx].zpsr = 6.693000e-03
3071  tran[@logindx].zpsx = 7.972000e-02
3072  tran[@logindx].zptr = 0.000000e+00
3073  tran[@logindx].zptx = 0.000000e+00
3074  tran[@logindx].ztsr = 0.000000e+00
3075  tran[@logindx].ztsx = 0.000000e+00
3076  tran[@logindx].vnomp = 0.660000
3077  tran[@logindx].vnoms = 34.500000
3078  tran[@logindx].vnomt = 0.000000
3079  tran[@logindx].anglp = 0.000000
3080  tran[@logindx].gmag = 1.150000e-03
3081  tran[@logindx].bmag = -5.000000e-03
3082  tran[@logindx].rate[0] = 132.0
3083  tran[@logindx].rate[1] = 132.0
3084  tran[@logindx].rate[2] = 132.0
3085  tran[@logindx].rate[3] = 0.0
3086  tran[@logindx].rate[4] = 0.0
3087  tran[@logindx].rate[5] = 0.0
3088  tran[@logindx].rate[6] = 0.0
3089  tran[@logindx].rate[7] = 0.0
3090  tran[@logindx].tmax = 1.050000
3091  tran[@logindx].tmin = 0.950000
3092  tran[@logindx].vtmax = 1.050000
3093  tran[@logindx].vtmin = 0.950000
3094  tran[@logindx].stepp = 0.025000
3095  tran[@logindx].tapp = 1.000000
3096  tran[@logindx].tapfp = 1.000000
3097  tran[@logindx].tapfs = 1.000000
3098  tran[@logindx].tapft = 1.000000
3099  tran[@logindx].lid = "GSU _2 _1                       "
3100  tran[@logindx].ohms = 0
3101  tran[@logindx].nown[0] = 65
3102  tran[@logindx].nown[1] = 0
3103  tran[@logindx].nown[2] = 0
3104  tran[@logindx].nown[3] = 0
3105  tran[@logindx].pown[0] = 1.000
```

```
3106   tran[@logindx].pown[1] = 1.000
3107   tran[@logindx].pown[2] = 1.000
3108   tran[@logindx].pown[3] = 1.000
3109
3110   @logindx = casepar[0].ngen
3111   @ret=ins("gens", @logindx-1, 1)
3112   @logbgen = number(" 700215 24_1_S1        0.66")
3113   @logreg = number(" 700215 24_1_S1        0.66")
3114   @loghbus = number("      0 ------------    0.00")
3115   @logtbus = number("      0 ------------    0.00")
3116   gens[@logindx].ibgen = @logbgen
3117   gens[@logindx].id = "S1"
3118   gens[@logindx].st = 0
3119   gens[@logindx].igreg = @logreg
3120   gens[@logindx].area = 70
3121   gens[@logindx].zone = 704
3122   gens[@logindx].ba = 65
3123   gens[@logindx].mbase = 132.0000
3124   gens[@logindx].qmax = 67.392998
3125   gens[@logindx].qmin = -67.392998
3126   gens[@logindx].prf = 1.000000
3127   gens[@logindx].qrf = 1.000000
3128   gens[@logindx].pmax = 125.400002
3129   gens[@logindx].pmin = 0.000000
3130   gens[@logindx].zgenr = 9999.000
3131   gens[@logindx].zgenx = 9999.000
3132   gens[@logindx].rcomp = 0.000
3133   gens[@logindx].xcomp = 0.000
3134   gens[@logindx].hbus = @loghbus
3135   gens[@logindx].tbus = @logtbus
3136   gens[@logindx].lid = "        "
3137   gens[@logindx].nown[0] = 65
3138   gens[@logindx].nown[1] = 0
3139   gens[@logindx].nown[2] = 0
3140   gens[@logindx].nown[3] = 0
3141   gens[@logindx].pown[0] = 1.000
3142   gens[@logindx].pown[1] = 0.000
3143   gens[@logindx].pown[2] = 0.000
3144   gens[@logindx].pown[3] = 0.000
3145   gens[@logindx].rtr = 0.0000
3146   gens[@logindx].xtr = 0.0000
3147   gens[@logindx].gtap = 1.0000
3148   gens[@logindx].gov_flag = 0
3149   gens[@logindx].agc_flag = 0
3150   gens[@logindx].dispatch_flag = 0
3151   gens[@logindx].baseload_flag = 2
3152   gens[@logindx].air_temp = 0
3153   gens[@logindx].turbine_type = 31
3154   gens[@logindx].fueltype[0] = 0
3155   gens[@logindx].fueltype[1] = 0
3156   gens[@logindx].fueltype[2] = 0
3157   gens[@logindx].qtab = 0
3158   gens[@logindx].pf = 0.000000
3159
3160   @logindx = casepar[0].ngen
3161   @ret=ins("gens", @logindx-1, 1)
3162   @logbgen = number(" 700216 24_1_S2        0.66")
3163   @logreg = number(" 700216 24_1_S2        0.66")
3164   @loghbus = number("      0 ------------    0.00")
3165   @logtbus = number("      0 ------------    0.00")
3166   gens[@logindx].ibgen = @logbgen
3167   gens[@logindx].id = "S2"
3168   gens[@logindx].st = 0
3169   gens[@logindx].igreg = @logreg
3170   gens[@logindx].area = 70
3171   gens[@logindx].zone = 704
3172   gens[@logindx].ba = 65
3173   gens[@logindx].mbase = 132.0000
3174   gens[@logindx].qmax = 67.392998
```

```
3175  gens[@logindx].qmin = -67.392998
3176  gens[@logindx].prf = 1.000000
3177  gens[@logindx].qrf = 1.000000
3178  gens[@logindx].pmax = 125.400002
3179  gens[@logindx].pmin = 0.000000
3180  gens[@logindx].zgenr = 9999.000
3181  gens[@logindx].zgenx = 9999.000
3182  gens[@logindx].rcomp = 0.000
3183  gens[@logindx].xcomp = 0.000
3184  gens[@logindx].hbus = @loghbus
3185  gens[@logindx].tbus = @logtbus
3186  gens[@logindx].lid = "        "
3187  gens[@logindx].nown[0] = 65
3188  gens[@logindx].nown[1] = 0
3189  gens[@logindx].nown[2] = 0
3190  gens[@logindx].nown[3] = 0
3191  gens[@logindx].pown[0] = 1.000
3192  gens[@logindx].pown[1] = 0.000
3193  gens[@logindx].pown[2] = 0.000
3194  gens[@logindx].pown[3] = 0.000
3195  gens[@logindx].rtr = 0.0000
3196  gens[@logindx].xtr = 0.0000
3197  gens[@logindx].gtap = 1.0000
3198  gens[@logindx].gov_flag = 0
3199  gens[@logindx].agc_flag = 0
3200  gens[@logindx].dispatch_flag = 0
3201  gens[@logindx].baseload_flag = 2
3202  gens[@logindx].air_temp = 0
3203  gens[@logindx].turbine_type = 31
3204  gens[@logindx].fueltype[0] = 0
3205  gens[@logindx].fueltype[1] = 0
3206  gens[@logindx].fueltype[2] = 0
3207  gens[@logindx].qtab = 0
3208  gens[@logindx].pf = 0.000000
3209
3210  @logindx = casepar[0].ngen
3211  @ret=ins("gens", @logindx-1, 1)
3212  @logbgen = number(" 700217 24_1_S3       0.66")
3213  @logreg = number(" 700217 24_1_S3       0.66")
3214  @loghbus = number("      0 ------------   0.00")
3215  @logtbus = number("      0 ------------   0.00")
3216  gens[@logindx].ibgen = @logbgen
3217  gens[@logindx].id = "S3"
3218  gens[@logindx].st = 0
3219  gens[@logindx].igreg = @logreg
3220  gens[@logindx].area = 70
3221  gens[@logindx].zone = 704
3222  gens[@logindx].ba = 65
3223  gens[@logindx].mbase = 132.0000
3224  gens[@logindx].qmax = 67.392998
3225  gens[@logindx].qmin = -67.392998
3226  gens[@logindx].prf = 1.000000
3227  gens[@logindx].qrf = 1.000000
3228  gens[@logindx].pmax = 125.400002
3229  gens[@logindx].pmin = 0.000000
3230  gens[@logindx].zgenr = 9999.000
3231  gens[@logindx].zgenx = 9999.000
3232  gens[@logindx].rcomp = 0.000
3233  gens[@logindx].xcomp = 0.000
3234  gens[@logindx].hbus = @loghbus
3235  gens[@logindx].tbus = @logtbus
3236  gens[@logindx].lid = "        "
3237  gens[@logindx].nown[0] = 65
3238  gens[@logindx].nown[1] = 0
3239  gens[@logindx].nown[2] = 0
3240  gens[@logindx].nown[3] = 0
3241  gens[@logindx].pown[0] = 1.000
3242  gens[@logindx].pown[1] = 0.000
3243  gens[@logindx].pown[2] = 0.000
```

```
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700209 24_1_S1_2      34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].ba = 65
load[@logindx].nonconf = 1
load[@logindx].lid = "        "
load[@logindx].nown = 65
load[@logindx].clzone = "        "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.015586
volt[@logindx].va = -0.135117
busd[@logindx].extnum = 71967
busd[@logindx].busnam = "24_13_T4"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.003675
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71967,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.013715
volt[@logindx].va = -0.116166
busd[@logindx].extnum = 71968
busd[@logindx].busnam = "24_13_T3"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
```

```
3313  busd[@logindx].zone = 704
3314  busd[@logindx].projid = 0
3315  busd[@logindx].level = 0
3316  busd[@logindx].vsched = 1.003675
3317  busd[@logindx].vmax = 1.1000
3318  busd[@logindx].vmin = 0.9000
3319  busd[@logindx].nown = 700
3320  @snum = -1
3321  @sindx = -1
3322   for @s = 0 to casepar[0].nsubst - 1
3323    if(subst[@s].extnum = @snum)
3324     @sindx = @s
3325    endif
3326   next
3327    busd[@logindx].isubst = @sindx  /*  -1  */
3328  @ret=setbix(busd[@logindx].extnum, @logindx)
3329  @iret=datachange(1,"busd",71968,"date_in date_out","19400101","21991231")
3330
3331  @logindx = casepar[0].nbus
3332  @ret=ins("busd", @logindx-1, 1)
3333  @ret=ins("volt", @logindx-1, 1)
3334  volt[@logindx].vm = 1.013715
3335  volt[@logindx].va = -0.116166
3336  busd[@logindx].extnum = 71969
3337  busd[@logindx].busnam =  "24_13_T2"
3338  busd[@logindx].basekv = 13.8000
3339  busd[@logindx].type = 1
3340  busd[@logindx].area = 70
3341  busd[@logindx].zone = 704
3342  busd[@logindx].projid = 0
3343  busd[@logindx].level = 0
3344  busd[@logindx].vsched = 1.009758
3345  busd[@logindx].vmax = 1.1000
3346  busd[@logindx].vmin = 0.9000
3347  busd[@logindx].nown = 700
3348  @snum = -1
3349  @sindx = -1
3350   for @s = 0 to casepar[0].nsubst - 1
3351    if(subst[@s].extnum = @snum)
3352     @sindx = @s
3353    endif
3354   next
3355    busd[@logindx].isubst = @sindx  /*  -1  */
3356  @ret=setbix(busd[@logindx].extnum, @logindx)
3357  @iret=datachange(1,"busd",71969,"date_in date_out","19400101","21991231")
3358
3359  @logindx = casepar[0].nbus
3360  @ret=ins("busd", @logindx-1, 1)
3361  @ret=ins("volt", @logindx-1, 1)
3362  volt[@logindx].vm = 1.013709
3363  volt[@logindx].va = -0.116173
3364  busd[@logindx].extnum = 71970
3365  busd[@logindx].busnam =  "24_13_T1"
3366  busd[@logindx].basekv = 13.8000
3367  busd[@logindx].type = 1
3368  busd[@logindx].area = 70
3369  busd[@logindx].zone = 704
3370  busd[@logindx].projid = 0
3371  busd[@logindx].level = 0
3372  busd[@logindx].vsched = 1.007598
3373  busd[@logindx].vmax = 1.1000
3374  busd[@logindx].vmin = 0.9000
3375  busd[@logindx].nown = 700
3376  @snum = -1
3377  @sindx = -1
3378   for @s = 0 to casepar[0].nsubst - 1
3379    if(subst[@s].extnum = @snum)
3380     @sindx = @s
3381    endif
```

```
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71970,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.015586
volt[@logindx].va = 0.388482
busd[@logindx].extnum = 98007
busd[@logindx].busnam = "mid_98007"
busd[@logindx].basekv = 1.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.003675
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98007,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.013715
volt[@logindx].va = 0.407433
busd[@logindx].extnum = 98008
busd[@logindx].busnam = "mid_98008"
busd[@logindx].basekv = 1.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.003675
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98008,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.013715
volt[@logindx].va = 0.407433
busd[@logindx].extnum = 98005
busd[@logindx].busnam = "mid_98005"
busd[@logindx].basekv = 1.0000
```

```
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.009758
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98005,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.013709
volt[@logindx].va = 0.407426
busd[@logindx].extnum = 98006
busd[@logindx].busnam =  "mid_98006"
busd[@logindx].basekv = 1.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.007598
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98006,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.009601
volt[@logindx].va = 0.397531
busd[@logindx].extnum = 700056
busd[@logindx].busnam =  "24_13_W2_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.004246
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
```

```
3520        @sindx = @s
3521      endif
3522    next
3523      busd[@logindx].isubst = @sindx  /*  -1  */
3524    @ret=setbix(busd[@logindx].extnum, @logindx)
3525    @iret=datachange(1,"busd",700056,"date_in date_out","19400101","21991231")
3526
3527    @logindx = casepar[0].nbus
3528    @ret=ins("busd", @logindx-1, 1)
3529    @ret=ins("volt", @logindx-1, 1)
3530    volt[@logindx].vm = 1.051765
3531    volt[@logindx].va = 0.97756
3532    busd[@logindx].extnum = 700057
3533    busd[@logindx].busnam =  "24_13_W2"
3534    busd[@logindx].basekv = 0.7200
3535    busd[@logindx].type = 2
3536    busd[@logindx].area = 70
3537    busd[@logindx].zone = 704
3538    busd[@logindx].projid = 0
3539    busd[@logindx].level = 0
3540    busd[@logindx].vsched = 1.00
3541    busd[@logindx].vmax = 1.1000
3542    busd[@logindx].vmin = 0.9000
3543    busd[@logindx].nown = 700
3544    @snum = -1
3545    @sindx = -1
3546    for @s = 0 to casepar[0].nsubst - 1
3547      if(subst[@s].extnum = @snum)
3548        @sindx = @s
3549      endif
3550    next
3551      busd[@logindx].isubst = @sindx  /*  -1  */
3552    @ret=setbix(busd[@logindx].extnum, @logindx)
3553    @iret=datachange(1,"busd",700057,"date_in date_out","19400101","21991231")
3554
3555    @logindx = casepar[0].nbus
3556    @ret=ins("busd", @logindx-1, 1)
3557    @ret=ins("volt", @logindx-1, 1)
3558    volt[@logindx].vm = 1.020838
3559    volt[@logindx].va = 0.40112
3560    busd[@logindx].extnum = 700058
3561    busd[@logindx].busnam =  "24_13_W2_1"
3562    busd[@logindx].basekv = 34.5000
3563    busd[@logindx].type = 1
3564    busd[@logindx].area = 70
3565    busd[@logindx].zone = 704
3566    busd[@logindx].projid = 0
3567    busd[@logindx].level = 0
3568    busd[@logindx].vsched = 1.00
3569    busd[@logindx].vmax = 1.1000
3570    busd[@logindx].vmin = 0.9000
3571    busd[@logindx].nown = 700
3572    @snum = -1
3573    @sindx = -1
3574    for @s = 0 to casepar[0].nsubst - 1
3575      if(subst[@s].extnum = @snum)
3576        @sindx = @s
3577      endif
3578    next
3579      busd[@logindx].isubst = @sindx  /*  -1  */
3580    @ret=setbix(busd[@logindx].extnum, @logindx)
3581    @iret=datachange(1,"busd",700058,"date_in date_out","19400101","21991231")
3582
3583    @logindx = casepar[0].nbus
3584    @ret=ins("busd", @logindx-1, 1)
3585    @ret=ins("volt", @logindx-1, 1)
3586    volt[@logindx].vm = 1.009601
3587    volt[@logindx].va = 0.397531
3588    busd[@logindx].extnum = 700059
```

```
busd[@logindx].busnam = "24_13_W3_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.998649
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700059,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.051765
volt[@logindx].va = 0.97756
busd[@logindx].extnum = 700060
busd[@logindx].busnam = "24_13_W3"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700060,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.020838
volt[@logindx].va = 0.40112
busd[@logindx].extnum = 700061
busd[@logindx].busnam = "24_13_W3_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.010769
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
```

```
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700061,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.011378
volt[@logindx].va = 0.379997
busd[@logindx].extnum = 700062
busd[@logindx].busnam =  "24_13_W4_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.998649
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700062,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.059445
volt[@logindx].va = 0.958692
busd[@logindx].extnum = 700063
busd[@logindx].busnam =  "24_13_W4"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700063,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.024070
```

```
volt[@logindx].va = 0.38315
busd[@logindx].extnum = 700064
busd[@logindx].busnam = "24_13_W4_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.010769
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700064,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.020908
volt[@logindx].va = 0.401141
busd[@logindx].extnum = 700065
busd[@logindx].busnam = "24_13_W1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.0
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700065,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.037300
volt[@logindx].va = 0.278754
busd[@logindx].extnum = 700066
busd[@logindx].busnam = "PI_2024_13"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
```

```
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700066,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.051833
volt[@logindx].va = 0.977574
busd[@logindx].extnum = 700067
busd[@logindx].busnam =  "24_13_W1"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700067,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.009596
volt[@logindx].va = 0.397525
busd[@logindx].extnum = 700068
busd[@logindx].busnam =  "24_13_W1_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.002251
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700068,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
```

```
@logfrom = number("  70919 MAY_VALLEY    345.00")
@logto = number(" 700066 5RSC_24_13     345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000956
secdd[@logindx].zsecx = 0.011705
secdd[@logindx].bsec = 0.203021
secdd[@logindx].rate[0] = 960.00
secdd[@logindx].rate[1] = 960.00
secdd[@logindx].rate[2] = 960.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 31.600
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700056 5RSC_24_13     34.50")
@logto = number(" 700058 5RSC_24_13     34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006100
secdd[@logindx].zsecx = 0.005600
secdd[@logindx].bsec = 0.061300
secdd[@logindx].rate[0] = 263.40
secdd[@logindx].rate[1] = 263.40
secdd[@logindx].rate[2] = 263.40
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
```

```
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700059 5RSC_24_13    34.50")
@logto = number(" 700061 5RSC_24_13    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006100
secdd[@logindx].zsecx = 0.005600
secdd[@logindx].bsec = 0.061300
secdd[@logindx].rate[0] = 263.40
secdd[@logindx].rate[1] = 263.40
secdd[@logindx].rate[2] = 263.40
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
```

```
4003   secdd[@logindx].nown[4] = 0
4004   secdd[@logindx].nown[5] = 0
4005   secdd[@logindx].nown[6] = 0
4006   secdd[@logindx].nown[7] = 0
4007   secdd[@logindx].pown[0] = 1.000
4008   secdd[@logindx].pown[1] = 0.000
4009   secdd[@logindx].pown[2] = 0.000
4010   secdd[@logindx].pown[3] = 0.000
4011   secdd[@logindx].pown[4] = 0.000
4012   secdd[@logindx].pown[5] = 0.000
4013   secdd[@logindx].pown[6] = 0.000
4014   secdd[@logindx].pown[7] = 0.000
4015
4016   @logindx = casepar[0].nbrsec
4017   @ret=ins("secdd", @logindx-1, 1)
4018   @logfrom = number(" 700062 5RSC_24_13    34.50")
4019   @logto = number(" 700064 5RSC_24_13    34.50")
4020   secdd[@logindx].ifrom = @logfrom
4021   secdd[@logindx].ito = @logto
4022   secdd[@logindx].ck = "1 "
4023   secdd[@logindx].projid = 0
4024   secdd[@logindx].st = 1
4025   secdd[@logindx].stn = 1
4026   secdd[@logindx].nsec = 1
4027   secdd[@logindx].type = 0
4028   secdd[@logindx].zsecr = 0.007660
4029   secdd[@logindx].zsecx = 0.007030
4030   secdd[@logindx].bsec = 0.056130
4031   secdd[@logindx].rate[0] = 225.78
4032   secdd[@logindx].rate[1] = 225.78
4033   secdd[@logindx].rate[2] = 225.78
4034   secdd[@logindx].rate[3] = 0.00
4035   secdd[@logindx].rate[4] = 0.00
4036   secdd[@logindx].rate[5] = 0.00
4037   secdd[@logindx].rate[6] = 0.00
4038   secdd[@logindx].rate[7] = 0.00
4039   secdd[@logindx].aloss = 1.000
4040   secdd[@logindx].area = 70
4041   secdd[@logindx].zone = 704
4042   secdd[@logindx].lngsec = 0.000
4043   secdd[@logindx].trangi = 0.000000
4044   secdd[@logindx].trantapf = 0.000000
4045   secdd[@logindx].trantapt = 1.000000
4046   secdd[@logindx].lid = "                                                  "
4047   secdd[@logindx].ohms = 0
4048   secdd[@logindx].date_in = 19400101
4049   secdd[@logindx].date_out = 21991231
4050   secdd[@logindx].nown[0] = 700
4051   secdd[@logindx].nown[1] = 0
4052   secdd[@logindx].nown[2] = 0
4053   secdd[@logindx].nown[3] = 0
4054   secdd[@logindx].nown[4] = 0
4055   secdd[@logindx].nown[5] = 0
4056   secdd[@logindx].nown[6] = 0
4057   secdd[@logindx].nown[7] = 0
4058   secdd[@logindx].pown[0] = 1.000
4059   secdd[@logindx].pown[1] = 0.000
4060   secdd[@logindx].pown[2] = 0.000
4061   secdd[@logindx].pown[3] = 0.000
4062   secdd[@logindx].pown[4] = 0.000
4063   secdd[@logindx].pown[5] = 0.000
4064   secdd[@logindx].pown[6] = 0.000
4065   secdd[@logindx].pown[7] = 0.000
4066
4067   @logindx = casepar[0].nbrsec
4068   @ret=ins("secdd", @logindx-1, 1)
4069   @logfrom = number(" 700068 5RSC_24_13    34.50")
4070   @logto = number(" 700065 5RSC_24_13    34.50")
4071   secdd[@logindx].ifrom = @logfrom
```

```
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006140
secdd[@logindx].zsecx = 0.005640
secdd[@logindx].bsec = 0.061290
secdd[@logindx].rate[0] = 263.40
secdd[@logindx].rate[1] = 263.40
secdd[@logindx].rate[2] = 263.40
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700058 5RSC_24_13    34.50")
@logto = number(" 700057 5RSC_24_13     0.72")
@logreg = number(" 700058 5RSC_24_13    34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 222.600006
tran[@logindx].zpsr = 7.593000e-03
tran[@logindx].zpsx = 9.870800e-02
```

```
4141  tran[@logindx].zptr = 0.000000e+00
4142  tran[@logindx].zptx = 0.000000e+00
4143  tran[@logindx].ztsr = 0.000000e+00
4144  tran[@logindx].ztsx = 0.000000e+00
4145  tran[@logindx].vnomp = 34.500000
4146  tran[@logindx].vnoms = 0.720000
4147  tran[@logindx].vnomt = 0.000000
4148  tran[@logindx].anglp = 0.000000
4149  tran[@logindx].gmag = 0.000000e+00
4150  tran[@logindx].bmag = 0.000000e+00
4151  tran[@logindx].rate[0] = 222.6
4152  tran[@logindx].rate[1] = 222.6
4153  tran[@logindx].rate[2] = 222.6
4154  tran[@logindx].rate[3] = 0.0
4155  tran[@logindx].rate[4] = 0.0
4156  tran[@logindx].rate[5] = 0.0
4157  tran[@logindx].rate[6] = 0.0
4158  tran[@logindx].rate[7] = 0.0
4159  tran[@logindx].aloss = 0.000
4160  tran[@logindx].tmax = 1.050000
4161  tran[@logindx].tmin = 0.950000
4162  tran[@logindx].vtmax = 1.000000
4163  tran[@logindx].vtmin = 1.000000
4164  tran[@logindx].stepp = 0.025000
4165  tran[@logindx].tapp = 1.000000
4166  tran[@logindx].tapfp = 1.000000
4167  tran[@logindx].tapfs = 1.000000
4168  tran[@logindx].tapft = 1.000000
4169  tran[@logindx].lid = "                                        "
4170  tran[@logindx].ohms = 0
4171  tran[@logindx].date_in = 19400101
4172  tran[@logindx].date_out = 21991231
4173  tran[@logindx].nown[0] = 700
4174  tran[@logindx].nown[1] = 0
4175  tran[@logindx].nown[2] = 0
4176  tran[@logindx].nown[3] = 0
4177  tran[@logindx].nown[4] = 0
4178  tran[@logindx].nown[5] = 0
4179  tran[@logindx].nown[6] = 0
4180  tran[@logindx].nown[7] = 0
4181  tran[@logindx].pown[0] = 1.000
4182  tran[@logindx].pown[1] = 0.000
4183  tran[@logindx].pown[2] = 0.000
4184  tran[@logindx].pown[3] = 0.000
4185  tran[@logindx].pown[4] = 0.000
4186  tran[@logindx].pown[5] = 0.000
4187  tran[@logindx].pown[6] = 0.000
4188  tran[@logindx].pown[7] = 0.000
4189
4190  @logindx = casepar[0].ntran
4191  @ret=ins("tran", @logindx-1, 1)
4192  @logfrom = number(" 700061 5RSC_24_13    34.50")
4193  @logto = number(" 700060 5RSC_24_13     0.72")
4194  @logreg = number(" 700061 5RSC_24_13    34.50")
4195  @logtert = number("     0 ------------    0.00")
4196  @logint = number("     0 ------------    0.00")
4197  tran[@logindx].ifrom = @logfrom
4198  tran[@logindx].ito = @logto
4199  tran[@logindx].ck = "U3"
4200  tran[@logindx].projid = 0
4201  tran[@logindx].st = 1
4202  tran[@logindx].stn = 1
4203  tran[@logindx].type = 1
4204  tran[@logindx].kreg = @logreg
4205  tran[@logindx].iztabl = 0
4206  tran[@logindx].itert = @logtert
4207  tran[@logindx].iint = @logint
4208  tran[@logindx].area = 70
4209  tran[@logindx].zone = 704
```

```
tran[@logindx].tbase = 222.600006
tran[@logindx].zpsr = 7.593000e-03
tran[@logindx].zpsx = 9.870800e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 222.6
tran[@logindx].rate[1] = 222.6
tran[@logindx].rate[2] = 222.6
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.000000
tran[@logindx].vtmin = 1.000000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700064 5RSC_24_13    34.50")
@logto = number(" 700063 5RSC_24_13     0.72")
@logreg = number(" 700064 5RSC_24_13    34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U4"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
```

```
4279  tran[@logindx].iint = @logint
4280  tran[@logindx].area = 70
4281  tran[@logindx].zone = 704
4282  tran[@logindx].tbase = 190.800003
4283  tran[@logindx].zpsr = 7.593000e-03
4284  tran[@logindx].zpsx = 9.870800e-02
4285  tran[@logindx].zptr = 0.000000e+00
4286  tran[@logindx].zptx = 0.000000e+00
4287  tran[@logindx].ztsr = 0.000000e+00
4288  tran[@logindx].ztsx = 0.000000e+00
4289  tran[@logindx].vnomp = 34.500000
4290  tran[@logindx].vnoms = 0.720000
4291  tran[@logindx].vnomt = 0.000000
4292  tran[@logindx].anglp = 0.000000
4293  tran[@logindx].gmag = 0.000000e+00
4294  tran[@logindx].bmag = 0.000000e+00
4295  tran[@logindx].rate[0] = 190.8
4296  tran[@logindx].rate[1] = 190.8
4297  tran[@logindx].rate[2] = 190.8
4298  tran[@logindx].rate[3] = 0.0
4299  tran[@logindx].rate[4] = 0.0
4300  tran[@logindx].rate[5] = 0.0
4301  tran[@logindx].rate[6] = 0.0
4302  tran[@logindx].rate[7] = 0.0
4303  tran[@logindx].aloss = 0.000
4304  tran[@logindx].tmax = 1.050000
4305  tran[@logindx].tmin = 0.950000
4306  tran[@logindx].vtmax = 1.000000
4307  tran[@logindx].vtmin = 1.000000
4308  tran[@logindx].stepp = 0.025000
4309  tran[@logindx].tapp = 1.000000
4310  tran[@logindx].tapfp = 1.000000
4311  tran[@logindx].tapfs = 1.000000
4312  tran[@logindx].tapft = 1.000000
4313  tran[@logindx].lid = "                                "
4314  tran[@logindx].ohms = 0
4315  tran[@logindx].date_in = 19400101
4316  tran[@logindx].date_out = 21991231
4317  tran[@logindx].nown[0] = 700
4318  tran[@logindx].nown[1] = 0
4319  tran[@logindx].nown[2] = 0
4320  tran[@logindx].nown[3] = 0
4321  tran[@logindx].nown[4] = 0
4322  tran[@logindx].nown[5] = 0
4323  tran[@logindx].nown[6] = 0
4324  tran[@logindx].nown[7] = 0
4325  tran[@logindx].pown[0] = 1.000
4326  tran[@logindx].pown[1] = 0.000
4327  tran[@logindx].pown[2] = 0.000
4328  tran[@logindx].pown[3] = 0.000
4329  tran[@logindx].pown[4] = 0.000
4330  tran[@logindx].pown[5] = 0.000
4331  tran[@logindx].pown[6] = 0.000
4332  tran[@logindx].pown[7] = 0.000
4333
4334  @logindx = casepar[0].ntran
4335  @ret=ins("tran", @logindx-1, 1)
4336  @logfrom = number(" 700065 5RSC_24_13    34.50")
4337  @logto = number(" 700067 5RSC_24_13     0.72")
4338  @logreg = number(" 700065 5RSC_24_13    34.50")
4339  @logtert = number("      0 ------------    0.00")
4340  @logint = number("      0 ------------    0.00")
4341  tran[@logindx].ifrom = @logfrom
4342  tran[@logindx].ito = @logto
4343  tran[@logindx].ck = "U1"
4344  tran[@logindx].projid = 0
4345  tran[@logindx].st = 1
4346  tran[@logindx].stn = 1
4347  tran[@logindx].type = 1
```

```
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 222.600006
tran[@logindx].zpsr = 7.593000e-03
tran[@logindx].zpsx = 9.870800e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 222.6
tran[@logindx].rate[1] = 222.6
tran[@logindx].rate[2] = 222.6
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.000000
tran[@logindx].vtmin = 1.000000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700066 5RSC_24_13    345.00")
@logto = number(" 700056 5RSC_24_13     34.50")
@logreg = number(" 700056 5RSC_24_13     34.50")
@logtert = number("  71969 5RSC_24_13     13.80")
@logint = number("  98005 5RSC_24_13      1.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T2"
tran[@logindx].projid = 0
```

```
4417   tran[@logindx].st = 1
4418   tran[@logindx].stn = 1
4419   tran[@logindx].type = 2
4420   tran[@logindx].kreg = @logreg
4421   tran[@logindx].iztabl = 0
4422   tran[@logindx].itert = @logtert
4423   tran[@logindx].iint = @logint
4424   tran[@logindx].area = 70
4425   tran[@logindx].zone = 704
4426   tran[@logindx].tbase = 113.000000
4427   tran[@logindx].zpsr = 1.811000e-03
4428   tran[@logindx].zpsx = 9.998399e-02
4429   tran[@logindx].zptr = 2.989000e-03
4430   tran[@logindx].zptx = 1.649730e-01
4431   tran[@logindx].ztsr = 9.060000e-04
4432   tran[@logindx].ztsx = 4.999200e-02
4433   tran[@logindx].vnomp = 345.000000
4434   tran[@logindx].vnoms = 34.500000
4435   tran[@logindx].vnomt = 13.800000
4436   tran[@logindx].anglp = 0.000000
4437   tran[@logindx].gmag = 0.000000e+00
4438   tran[@logindx].bmag = 0.000000e+00
4439   tran[@logindx].rate[0] = 187.0
4440   tran[@logindx].rate[1] = 187.0
4441   tran[@logindx].rate[2] = 187.0
4442   tran[@logindx].rate[3] = 0.0
4443   tran[@logindx].rate[4] = 0.0
4444   tran[@logindx].rate[5] = 0.0
4445   tran[@logindx].rate[6] = 0.0
4446   tran[@logindx].rate[7] = 0.0
4447   tran[@logindx].aloss = 0.000
4448   tran[@logindx].tmax = 1.100000
4449   tran[@logindx].tmin = 0.900000
4450   tran[@logindx].vtmax = 1.015000
4451   tran[@logindx].vtmin = 0.985000
4452   tran[@logindx].stepp = -0.006250
4453   tran[@logindx].tapp = 1.081250
4454   tran[@logindx].tapfp = 1.000000
4455   tran[@logindx].tapfs = 1.000000
4456   tran[@logindx].tapft = 1.000000
4457   tran[@logindx].lid = "                                "
4458   tran[@logindx].ohms = 0
4459   tran[@logindx].date_in = 19400101
4460   tran[@logindx].date_out = 21991231
4461   tran[@logindx].nown[0] = 700
4462   tran[@logindx].nown[1] = 0
4463   tran[@logindx].nown[2] = 0
4464   tran[@logindx].nown[3] = 0
4465   tran[@logindx].nown[4] = 0
4466   tran[@logindx].nown[5] = 0
4467   tran[@logindx].nown[6] = 0
4468   tran[@logindx].nown[7] = 0
4469   tran[@logindx].pown[0] = 1.000
4470   tran[@logindx].pown[1] = 0.000
4471   tran[@logindx].pown[2] = 0.000
4472   tran[@logindx].pown[3] = 0.000
4473   tran[@logindx].pown[4] = 0.000
4474   tran[@logindx].pown[5] = 0.000
4475   tran[@logindx].pown[6] = 0.000
4476   tran[@logindx].pown[7] = 0.000
4477
4478   @logindx = casepar[0].ntran
4479   @ret=ins("tran", @logindx-1, 1)
4480   @logfrom = number(" 700066 5RSC_24_13    345.00")
4481   @logto = number(" 700059 5RSC_24_13     34.50")
4482   @logreg = number(" 700059 5RSC_24_13     34.50")
4483   @logtert = number("  71968 5RSC_24_13     13.80")
4484   @logint = number("  98008 5RSC_24_13      1.00")
4485   tran[@logindx].ifrom = @logfrom
```

```
tran[@logindx].ito = @logto
tran[@logindx].ck = "T3"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 1.811000e-03
tran[@logindx].zpsx = 9.998399e-02
tran[@logindx].zptr = 2.989000e-03
tran[@logindx].zptx = 1.649730e-01
tran[@logindx].ztsr = 9.060000e-04
tran[@logindx].ztsx = 4.999200e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.015000
tran[@logindx].vtmin = 0.985000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.081250
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700066 5RSC_24_13    345.00")
@logto = number(" 700062 5RSC_24_13     34.50")
@logreg = number(" 700062 5RSC_24_13     34.50")
```

```
@logtert = number("  71967 5RSC_24_13    13.80")
@logint = number("  98007 5RSC_24_13     1.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T4"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 1.811000e-03
tran[@logindx].zpsx = 9.998399e-02
tran[@logindx].zptr = 2.989000e-03
tran[@logindx].zptx = 1.649730e-01
tran[@logindx].ztsr = 9.060000e-04
tran[@logindx].ztsx = 4.999200e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.015000
tran[@logindx].vtmin = 0.985000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.081250
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                    "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
```

```
4624   @logfrom = number("  700066 5RSC_24_13     345.00")
4625   @logto = number("  700068 5RSC_24_13      34.50")
4626   @logreg = number("  700068 5RSC_24_13      34.50")
4627   @logtert = number("   71970 5RSC_24_13      13.80")
4628   @logint = number("   98006 5RSC_24_13       1.00")
4629   tran[@logindx].ifrom = @logfrom
4630   tran[@logindx].ito = @logto
4631   tran[@logindx].ck = "T1"
4632   tran[@logindx].projid = 0
4633   tran[@logindx].st = 1
4634   tran[@logindx].stn = 1
4635   tran[@logindx].type = 2
4636   tran[@logindx].kreg = @logreg
4637   tran[@logindx].iztabl = 0
4638   tran[@logindx].itert = @logtert
4639   tran[@logindx].iint = @logint
4640   tran[@logindx].area = 70
4641   tran[@logindx].zone = 704
4642   tran[@logindx].tbase = 113.000000
4643   tran[@logindx].zpsr = 1.811000e-03
4644   tran[@logindx].zpsx = 9.998399e-02
4645   tran[@logindx].zptr = 2.989000e-03
4646   tran[@logindx].zptx = 1.649730e-01
4647   tran[@logindx].ztsr = 9.060000e-04
4648   tran[@logindx].ztsx = 4.999200e-02
4649   tran[@logindx].vnomp = 345.000000
4650   tran[@logindx].vnoms = 34.500000
4651   tran[@logindx].vnomt = 13.800000
4652   tran[@logindx].anglp = 0.000000
4653   tran[@logindx].gmag = 0.000000e+00
4654   tran[@logindx].bmag = 0.000000e+00
4655   tran[@logindx].rate[0] = 187.0
4656   tran[@logindx].rate[1] = 187.0
4657   tran[@logindx].rate[2] = 187.0
4658   tran[@logindx].rate[3] = 0.0
4659   tran[@logindx].rate[4] = 0.0
4660   tran[@logindx].rate[5] = 0.0
4661   tran[@logindx].rate[6] = 0.0
4662   tran[@logindx].rate[7] = 0.0
4663   tran[@logindx].aloss = 0.000
4664   tran[@logindx].tmax = 1.100000
4665   tran[@logindx].tmin = 0.900000
4666   tran[@logindx].vtmax = 1.015000
4667   tran[@logindx].vtmin = 0.985000
4668   tran[@logindx].stepp = -0.006250
4669   tran[@logindx].tapp = 1.081250
4670   tran[@logindx].tapfp = 1.000000
4671   tran[@logindx].tapfs = 1.000000
4672   tran[@logindx].tapft = 1.000000
4673   tran[@logindx].lid = "                                "
4674   tran[@logindx].ohms = 0
4675   tran[@logindx].date_in = 19400101
4676   tran[@logindx].date_out = 21991231
4677   tran[@logindx].nown[0] = 700
4678   tran[@logindx].nown[1] = 0
4679   tran[@logindx].nown[2] = 0
4680   tran[@logindx].nown[3] = 0
4681   tran[@logindx].nown[4] = 0
4682   tran[@logindx].nown[5] = 0
4683   tran[@logindx].nown[6] = 0
4684   tran[@logindx].nown[7] = 0
4685   tran[@logindx].pown[0] = 1.000
4686   tran[@logindx].pown[1] = 0.000
4687   tran[@logindx].pown[2] = 0.000
4688   tran[@logindx].pown[3] = 0.000
4689   tran[@logindx].pown[4] = 0.000
4690   tran[@logindx].pown[5] = 0.000
4691   tran[@logindx].pown[6] = 0.000
4692   tran[@logindx].pown[7] = 0.000
```

```
4693
4694    @logindx = casepar[0].ngen
4695    @ret=ins("gens", @logindx-1, 1)
4696    @logbgen = number(" 700057 5RSC_24_13      0.72")
4697    @logreg = number(" 700066 5RSC_24_13    345.00")
4698    @loghbus = number("      0 ------------    0.00")
4699    @logtbus = number("      0 ------------    0.00")
4700    gens[@logindx].ibgen = @logbgen
4701    gens[@logindx].id = "W2"
4702    gens[@logindx].projid = 0
4703    gens[@logindx].st = 0
4704    gens[@logindx].stn = 0
4705    gens[@logindx].igreg = @logreg
4706    gens[@logindx].area = 70
4707    gens[@logindx].zone = 704
4708    gens[@logindx].mbase = 201.6000
4709    gens[@logindx].pgen = 0.0
4710    gens[@logindx].qgen = 66.503349
4711    gens[@logindx].qmax = 87.192001
4712    gens[@logindx].qmin = -67.199997
4713    gens[@logindx].prf = 1.000000
4714    gens[@logindx].qrf = 1.000000
4715    gens[@logindx].pmax = 189.000000
4716    gens[@logindx].pmin = 0.000000
4717    gens[@logindx].zgenr = 0.000
4718    gens[@logindx].zgenx = 1.000
4719    gens[@logindx].rcomp = 0.000
4720    gens[@logindx].xcomp = 0.000
4721    gens[@logindx].hbus = @loghbus
4722    gens[@logindx].tbus = @logtbus
4723    gens[@logindx].lid = "        "
4724    gens[@logindx].date_in = 19400101
4725    gens[@logindx].date_out = 21991231
4726    gens[@logindx].nown[0] = 700
4727    gens[@logindx].nown[1] = 0
4728    gens[@logindx].nown[2] = 0
4729    gens[@logindx].nown[3] = 0
4730    gens[@logindx].nown[4] = 0
4731    gens[@logindx].nown[5] = 0
4732    gens[@logindx].nown[6] = 0
4733    gens[@logindx].nown[7] = 0
4734    gens[@logindx].pown[0] = 1.000
4735    gens[@logindx].pown[1] = 0.000
4736    gens[@logindx].pown[2] = 0.000
4737    gens[@logindx].pown[3] = 0.000
4738    gens[@logindx].pown[4] = 0.000
4739    gens[@logindx].pown[5] = 0.000
4740    gens[@logindx].pown[6] = 0.000
4741    gens[@logindx].pown[7] = 0.000
4742    gens[@logindx].rtr = 0.0000
4743    gens[@logindx].xtr = 0.0000
4744    gens[@logindx].gtap = 1.0000
4745    gens[@logindx].gov_flag = 0
4746    gens[@logindx].agc_flag = 0
4747    gens[@logindx].dispatch_flag = 0
4748    gens[@logindx].baseload_flag = 0
4749    gens[@logindx].air_temp = 0
4750    gens[@logindx].turbine_type = 24
4751    gens[@logindx].fueltype[0] = 71
4752    gens[@logindx].fueltype[1] = 0
4753    gens[@logindx].fueltype[2] = 0
4754    gens[@logindx].qtab = 0
4755    gens[@logindx].pf = 1.000000
4756
4757    @logindx = casepar[0].ngen
4758    @ret=ins("gens", @logindx-1, 1)
4759    @logbgen = number(" 700060 5RSC_24_13      0.72")
4760    @logreg = number(" 700066 5RSC_24_13    345.00")
4761    @loghbus = number("      0 ------------    0.00")
```

```
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 201.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503349
gens[@logindx].qmax = 87.192001
gens[@logindx].qmin = -67.199997
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 189.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 21991231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 71
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700063 5RSC_24_13     0.72")
@logreg = number(" 700066 5RSC_24_13   345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W4"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
```

```
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 172.8000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503403
gens[@logindx].qmax = 74.736000
gens[@logindx].qmin = -57.599998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 162.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 21991231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 71
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700067 5RSC_24_13     0.72")
@logreg = number(" 700066 5RSC_24_13   345.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 201.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503334
```

```
4900   gens[@logindx].qmax = 87.192001
4901   gens[@logindx].qmin = -67.199997
4902   gens[@logindx].prf = 1.000000
4903   gens[@logindx].qrf = 1.000000
4904   gens[@logindx].pmax = 189.000000
4905   gens[@logindx].pmin = 0.000000
4906   gens[@logindx].zgenr = 0.000
4907   gens[@logindx].zgenx = 1.000
4908   gens[@logindx].rcomp = 0.000
4909   gens[@logindx].xcomp = 0.000
4910   gens[@logindx].hbus = @loghbus
4911   gens[@logindx].tbus = @logtbus
4912   gens[@logindx].lid = "        "
4913   gens[@logindx].date_in = 19400101
4914   gens[@logindx].date_out = 21991231
4915   gens[@logindx].nown[0] = 700
4916   gens[@logindx].nown[1] = 0
4917   gens[@logindx].nown[2] = 0
4918   gens[@logindx].nown[3] = 0
4919   gens[@logindx].nown[4] = 0
4920   gens[@logindx].nown[5] = 0
4921   gens[@logindx].nown[6] = 0
4922   gens[@logindx].nown[7] = 0
4923   gens[@logindx].pown[0] = 1.000
4924   gens[@logindx].pown[1] = 0.000
4925   gens[@logindx].pown[2] = 0.000
4926   gens[@logindx].pown[3] = 0.000
4927   gens[@logindx].pown[4] = 0.000
4928   gens[@logindx].pown[5] = 0.000
4929   gens[@logindx].pown[6] = 0.000
4930   gens[@logindx].pown[7] = 0.000
4931   gens[@logindx].rtr = 0.0000
4932   gens[@logindx].xtr = 0.0000
4933   gens[@logindx].gtap = 1.0000
4934   gens[@logindx].gov_flag = 0
4935   gens[@logindx].agc_flag = 0
4936   gens[@logindx].dispatch_flag = 0
4937   gens[@logindx].baseload_flag = 0
4938   gens[@logindx].air_temp = 0
4939   gens[@logindx].turbine_type = 24
4940   gens[@logindx].fueltype[0] = 71
4941   gens[@logindx].fueltype[1] = 0
4942   gens[@logindx].fueltype[2] = 0
4943   gens[@logindx].qtab = 0
4944   gens[@logindx].pf = 1.000000
4945
4946   @logindx = casepar[0].nload
4947   @ret=ins("load", @logindx-1, 1)
4948   @loglbus = number(" 700056 5RSC_24_13    34.50")
4949   load[@logindx].lbus = @loglbus
4950   load[@logindx].id = "SS"
4951   load[@logindx].projid = 0
4952   load[@logindx].st = 1
4953   load[@logindx].stn = 0
4954   load[@logindx].area = 70
4955   load[@logindx].zone = 704
4956   load[@logindx].p = 0.226850
4957   load[@logindx].q = 0.140650
4958   load[@logindx].pdgen = 0.000000
4959   load[@logindx].qdgen = 0.000000
4960   load[@logindx].ip = 0.000000
4961   load[@logindx].iq = 0.000000
4962   load[@logindx].g = 0.000000
4963   load[@logindx].b = 0.000000
4964   load[@logindx].nonconf = 0
4965   load[@logindx].lid = "        "
4966   load[@logindx].date_in = 19400101
4967   load[@logindx].date_out = 21991231
4968   load[@logindx].nown = 7000
```

```
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700059 5RSC_24_13    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 0.226850
load[@logindx].q = 0.140650
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 21991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700062 5RSC_24_13    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 0.194440
load[@logindx].q = 0.120560
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 21991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700068 5RSC_24_13    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 0.226850
load[@logindx].q = 0.140650
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
```

```
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 21991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700139
busd[@logindx].busnam = "GI_2020_10  "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700139,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.00041
busd[@logindx].extnum = 700140
busd[@logindx].busnam = "20_10_SB12"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700140,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990580
```

```
volt[@logindx].va = 0.117612
busd[@logindx].extnum = 700141
busd[@logindx].busnam = "20_10_SB1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700141,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.999550
volt[@logindx].va = 0.169559
busd[@logindx].extnum = 700142
busd[@logindx].busnam = "20_10_S1"
busd[@logindx].basekv = 0.6300
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700142,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993524
volt[@logindx].va = 0.120537
busd[@logindx].extnum = 700143
busd[@logindx].busnam = "20_10_S1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
```

```
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700143,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990993
volt[@logindx].va = 0.117557
busd[@logindx].extnum = 700144
busd[@logindx].busnam =  "20_10_B1"
busd[@logindx].basekv = 0.9000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700144,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990583
volt[@logindx].va = 0.117609
busd[@logindx].extnum = 700145
busd[@logindx].busnam =  "20_10_B1_1  "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700145,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
```

```
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.999550
volt[@logindx].va = 0.169559
busd[@logindx].extnum = 700146
busd[@logindx].busnam = "20_10_S2"
busd[@logindx].basekv = 0.6300
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700146,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990993
volt[@logindx].va = 0.117557
busd[@logindx].extnum = 700147
busd[@logindx].busnam = "20_10_B2"
busd[@logindx].basekv = 0.9000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700147,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993524
volt[@logindx].va = 0.120537
busd[@logindx].extnum = 700148
busd[@logindx].busnam = "20_10_S2_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
```

```
5314  busd[@logindx].vmin = 0.9000
5315  busd[@logindx].nown = 700
5316  @snum = -1
5317  @sindx = -1
5318   for @s = 0 to casepar[0].nsubst - 1
5319    if(subst[@s].extnum = @snum)
5320     @sindx = @s
5321    endif
5322   next
5323    busd[@logindx].isubst = @sindx  /*  -1  */
5324  @ret=setbix(busd[@logindx].extnum, @logindx)
5325  @iret=datachange(1,"busd",700148,"date_in date_out","19400101","20391231")
5326
5327  @logindx = casepar[0].nbus
5328  @ret=ins("busd", @logindx-1, 1)
5329  @ret=ins("volt", @logindx-1, 1)
5330  volt[@logindx].vm = 0.990583
5331  volt[@logindx].va = 0.117609
5332  busd[@logindx].extnum = 700149
5333  busd[@logindx].busnam =  "20_10_B2_1"
5334  busd[@logindx].basekv = 34.5000
5335  busd[@logindx].type = 1
5336  busd[@logindx].area = 70
5337  busd[@logindx].zone = 704
5338  busd[@logindx].projid = 0
5339  busd[@logindx].level = 0
5340  busd[@logindx].vsched = 1.000000
5341  busd[@logindx].vmax = 1.1000
5342  busd[@logindx].vmin = 0.9000
5343  busd[@logindx].nown = 700
5344  @snum = -1
5345  @sindx = -1
5346   for @s = 0 to casepar[0].nsubst - 1
5347    if(subst[@s].extnum = @snum)
5348     @sindx = @s
5349    endif
5350   next
5351    busd[@logindx].isubst = @sindx  /*  -1  */
5352  @ret=setbix(busd[@logindx].extnum, @logindx)
5353  @iret=datachange(1,"busd",700149,"date_in date_out","19400101","20391231")
5354
5355  @logindx = casepar[0].nbus
5356  @ret=ins("busd", @logindx-1, 1)
5357  @ret=ins("volt", @logindx-1, 1)
5358  volt[@logindx].vm = 0.990580
5359  volt[@logindx].va = 0.117612
5360  busd[@logindx].extnum = 700150
5361  busd[@logindx].busnam =  "20_10_SB2"
5362  busd[@logindx].basekv = 34.5000
5363  busd[@logindx].type = 1
5364  busd[@logindx].area = 70
5365  busd[@logindx].zone = 704
5366  busd[@logindx].projid = 0
5367  busd[@logindx].level = 0
5368  busd[@logindx].vsched = 1.000000
5369  busd[@logindx].vmax = 1.1000
5370  busd[@logindx].vmin = 0.9000
5371  busd[@logindx].nown = 700
5372  @snum = -1
5373  @sindx = -1
5374   for @s = 0 to casepar[0].nsubst - 1
5375    if(subst[@s].extnum = @snum)
5376     @sindx = @s
5377    endif
5378   next
5379    busd[@logindx].isubst = @sindx  /*  -1  */
5380  @ret=setbix(busd[@logindx].extnum, @logindx)
5381  @iret=datachange(1,"busd",700150,"date_in date_out","19400101","20391231")
5382
```

```
5383
5384    @logindx = casepar[0].nbrsec
5385    @ret=ins("secdd", @logindx-1, 1)
5386    @logfrom = number("  70122 COMANCHE     230.00")
5387    @logto = number("  700139 STAGECOACH   230.00")
5388    secdd[@logindx].ifrom = @logfrom
5389    secdd[@logindx].ito = @logto
5390    secdd[@logindx].ck = "1"
5391    secdd[@logindx].projid = 0
5392    secdd[@logindx].st = 1
5393    secdd[@logindx].stn = 1
5394    secdd[@logindx].nsec = 1
5395    secdd[@logindx].type = 0
5396    secdd[@logindx].zsecr = 0.000965
5397    secdd[@logindx].zsecx = 0.008023
5398    secdd[@logindx].bsec = 0.016299
5399    secdd[@logindx].rate[0] = 478.00
5400    secdd[@logindx].rate[1] = 559.00
5401    secdd[@logindx].aloss = 1.000
5402    secdd[@logindx].area = 70
5403    secdd[@logindx].zone = 704
5404    secdd[@logindx].trangi = 0.000000
5405    secdd[@logindx].trantapf = 0.000000
5406    secdd[@logindx].trantapt = 0.000000
5407    secdd[@logindx].lid = "                                                  "
5408    secdd[@logindx].ohms = 0
5409    secdd[@logindx].date_in = 19400101
5410    secdd[@logindx].date_out = 20391232
5411    secdd[@logindx].nown[0] = 65
5412    secdd[@logindx].nown[1] = 0
5413    secdd[@logindx].nown[2] = 0
5414    secdd[@logindx].nown[3] = 0
5415    secdd[@logindx].nown[4] = 0
5416    secdd[@logindx].nown[5] = 0
5417    secdd[@logindx].nown[6] = 0
5418    secdd[@logindx].nown[7] = 0
5419    secdd[@logindx].pown[0] = 1.000
5420    secdd[@logindx].pown[1] = 0.000
5421    secdd[@logindx].pown[2] = 0.000
5422    secdd[@logindx].pown[3] = 0.000
5423    secdd[@logindx].pown[4] = 0.000
5424    secdd[@logindx].pown[5] = 0.000
5425    secdd[@logindx].pown[6] = 0.000
5426    secdd[@logindx].pown[7] = 0.000
5427
5428    @logindx = casepar[0].nbrsec
5429    @ret=ins("secdd", @logindx-1, 1)
5430    @logfrom = number("  700139 STAGECOACH   230.00")
5431    @logto = number("  70652 MIRASOL     230.00")
5432    secdd[@logindx].ifrom = @logfrom
5433    secdd[@logindx].ito = @logto
5434    secdd[@logindx].ck = "1"
5435    secdd[@logindx].projid = 0
5436    secdd[@logindx].st = 1
5437    secdd[@logindx].stn = 1
5438    secdd[@logindx].nsec = 1
5439    secdd[@logindx].type = 0
5440    secdd[@logindx].zsecr = 0.001165
5441    secdd[@logindx].zsecx = 0.009687
5442    secdd[@logindx].bsec = 0.019681
5443    secdd[@logindx].rate[0] = 478.00
5444    secdd[@logindx].rate[1] = 559.00
5445    secdd[@logindx].aloss = 1.000
5446    secdd[@logindx].area = 70
5447    secdd[@logindx].zone = 704
5448    secdd[@logindx].trangi = 0.000000
5449    secdd[@logindx].trantapf = 0.000000
5450    secdd[@logindx].trantapt = 0.000000
5451    secdd[@logindx].lid = "                                                  "
```

```
5452  secdd[@logindx].ohms = 0
5453  secdd[@logindx].date_in = 19400101
5454  secdd[@logindx].date_out = 20391232
5455  secdd[@logindx].nown[0] = 65
5456  secdd[@logindx].nown[1] = 0
5457  secdd[@logindx].nown[2] = 0
5458  secdd[@logindx].nown[3] = 0
5459  secdd[@logindx].nown[4] = 0
5460  secdd[@logindx].nown[5] = 0
5461  secdd[@logindx].nown[6] = 0
5462  secdd[@logindx].nown[7] = 0
5463  secdd[@logindx].pown[0] = 1.000
5464  secdd[@logindx].pown[1] = 0.000
5465  secdd[@logindx].pown[2] = 0.000
5466  secdd[@logindx].pown[3] = 0.000
5467  secdd[@logindx].pown[4] = 0.000
5468  secdd[@logindx].pown[5] = 0.000
5469  secdd[@logindx].pown[6] = 0.000
5470  secdd[@logindx].pown[7] = 0.000
5471
5472  @logfrom = number("  70122 COMANCHE     230.00")
5473  @logto = number("  70652 MIRASOL      230.00")
5474  $logck = "1"
5475  @logsec = 1
5476  @logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
5477  if (@logindx != -1)
5478    @ret = del("secdd", @logindx, 1)
5479  endif
5480
5481  @logindx = casepar[0].nbrsec
5482  @ret=ins("secdd", @logindx-1, 1)
5483  @logfrom = number(" 700139 GI_2020_10    230.00")
5484  @logto = number(" 700140 GI_2020_10    230.00")
5485  secdd[@logindx].ifrom = @logfrom
5486  secdd[@logindx].ito = @logto
5487  secdd[@logindx].ck = "1 "
5488  secdd[@logindx].projid = 0
5489  secdd[@logindx].st = 1
5490  secdd[@logindx].stn = 1
5491  secdd[@logindx].nsec = 1
5492  secdd[@logindx].type = 0
5493  secdd[@logindx].zsecr = 0.000022
5494  secdd[@logindx].zsecx = 0.000133
5495  secdd[@logindx].bsec = 0.000324
5496  secdd[@logindx].rate[0] = 375.00
5497  secdd[@logindx].rate[1] = 375.00
5498  secdd[@logindx].rate[2] = 375.00
5499  secdd[@logindx].rate[3] = 0.00
5500  secdd[@logindx].rate[4] = 0.00
5501  secdd[@logindx].rate[5] = 0.00
5502  secdd[@logindx].rate[6] = 0.00
5503  secdd[@logindx].rate[7] = 0.00
5504  secdd[@logindx].aloss = 0.000
5505  secdd[@logindx].area = 70
5506  secdd[@logindx].zone = 704
5507  secdd[@logindx].lngsec = 0.100
5508  secdd[@logindx].trangi = 0.000000
5509  secdd[@logindx].trantapf = 0.000000
5510  secdd[@logindx].trantapt = 0.000000
5511  secdd[@logindx].lid = "                                                  "
5512  secdd[@logindx].ohms = 0
5513  secdd[@logindx].date_in = 19400101
5514  secdd[@logindx].date_out = 20391231
5515  secdd[@logindx].nown[0] = 700
5516  secdd[@logindx].nown[1] = 0
5517  secdd[@logindx].nown[2] = 0
5518  secdd[@logindx].nown[3] = 0
5519  secdd[@logindx].nown[4] = 0
5520  secdd[@logindx].nown[5] = 0
```

```
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700141 GI_2020_10    34.50")
@logto = number(" 700143 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001990
secdd[@logindx].zsecx = 0.001800
secdd[@logindx].bsec = 0.007323
secdd[@logindx].rate[0] = 189.00
secdd[@logindx].rate[1] = 189.00
secdd[@logindx].rate[2] = 189.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700141 GI_2020_10    34.50")
@logto = number(" 700145 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
```

```
5590   secdd[@logindx].projid = 0
5591   secdd[@logindx].st = 1
5592   secdd[@logindx].stn = 0
5593   secdd[@logindx].nsec = 1
5594   secdd[@logindx].type = 0
5595   secdd[@logindx].zsecr = 0.000380
5596   secdd[@logindx].zsecx = 0.000370
5597   secdd[@logindx].bsec = 0.000634
5598   secdd[@logindx].rate[0] = 147.00
5599   secdd[@logindx].rate[1] = 147.00
5600   secdd[@logindx].rate[2] = 147.00
5601   secdd[@logindx].rate[3] = 0.00
5602   secdd[@logindx].rate[4] = 0.00
5603   secdd[@logindx].rate[5] = 0.00
5604   secdd[@logindx].rate[6] = 0.00
5605   secdd[@logindx].rate[7] = 0.00
5606   secdd[@logindx].aloss = 0.000
5607   secdd[@logindx].area = 70
5608   secdd[@logindx].zone = 704
5609   secdd[@logindx].lngsec = 0.000
5610   secdd[@logindx].trangi = 0.000000
5611   secdd[@logindx].trantapf = 0.000000
5612   secdd[@logindx].trantapt = 0.000000
5613   secdd[@logindx].lid = "                                                  "
5614   secdd[@logindx].ohms = 0
5615   secdd[@logindx].date_in = 19400101
5616   secdd[@logindx].date_out = 20391231
5617   secdd[@logindx].nown[0] = 700
5618   secdd[@logindx].nown[1] = 0
5619   secdd[@logindx].nown[2] = 0
5620   secdd[@logindx].nown[3] = 0
5621   secdd[@logindx].nown[4] = 0
5622   secdd[@logindx].nown[5] = 0
5623   secdd[@logindx].nown[6] = 0
5624   secdd[@logindx].nown[7] = 0
5625   secdd[@logindx].pown[0] = 0.000
5626   secdd[@logindx].pown[1] = 0.000
5627   secdd[@logindx].pown[2] = 0.000
5628   secdd[@logindx].pown[3] = 0.000
5629   secdd[@logindx].pown[4] = 0.000
5630   secdd[@logindx].pown[5] = 0.000
5631   secdd[@logindx].pown[6] = 0.000
5632   secdd[@logindx].pown[7] = 0.000
5633
5634   @logindx = casepar[0].nbrsec
5635   @ret=ins("secdd", @logindx-1, 1)
5636   @logfrom = number(" 700150 GI_2020_10    34.50")
5637   @logto = number(" 700148 GI_2020_10    34.50")
5638   secdd[@logindx].ifrom = @logfrom
5639   secdd[@logindx].ito = @logto
5640   secdd[@logindx].ck = "1 "
5641   secdd[@logindx].projid = 0
5642   secdd[@logindx].st = 1
5643   secdd[@logindx].stn = 1
5644   secdd[@logindx].nsec = 1
5645   secdd[@logindx].type = 0
5646   secdd[@logindx].zsecr = 0.001990
5647   secdd[@logindx].zsecx = 0.001800
5648   secdd[@logindx].bsec = 0.007323
5649   secdd[@logindx].rate[0] = 189.00
5650   secdd[@logindx].rate[1] = 189.00
5651   secdd[@logindx].rate[2] = 189.00
5652   secdd[@logindx].rate[3] = 0.00
5653   secdd[@logindx].rate[4] = 0.00
5654   secdd[@logindx].rate[5] = 0.00
5655   secdd[@logindx].rate[6] = 0.00
5656   secdd[@logindx].rate[7] = 0.00
5657   secdd[@logindx].aloss = 0.000
5658   secdd[@logindx].area = 70
```

```
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700150 GI_2020_10    34.50")
@logto = number(" 700149 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000380
secdd[@logindx].zsecx = 0.000370
secdd[@logindx].bsec = 0.000634
secdd[@logindx].rate[0] = 147.00
secdd[@logindx].rate[1] = 147.00
secdd[@logindx].rate[2] = 147.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 0.000
```

```
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700140 GI_2020_10    230.00")
@logto = number(" 700141 GI_2020_10     34.50")
@logreg = number(" 700141 GI_2020_10     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 117.000000
tran[@logindx].zpsr = 2.221545e-03
tran[@logindx].zpsx = 8.997258e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 117.0
tran[@logindx].rate[1] = 156.0
tran[@logindx].rate[2] = 195.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
```

```
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700140 GI_2020_10    230.00")
@logto = number(" 700150 GI_2020_10     34.50")
@logreg = number(" 700150 GI_2020_10     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 117.000000
tran[@logindx].zpsr = 2.221545e-03
tran[@logindx].zpsx = 8.997258e-02
tran[@logindx].zptr = 3.475000e-03
tran[@logindx].zptx = 1.424580e-01
tran[@logindx].ztsr = 9.270000e-04
tran[@logindx].ztsx = 3.798900e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 117.0
tran[@logindx].rate[1] = 156.0
tran[@logindx].rate[2] = 195.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
```

```
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700143 GI_2020_10    34.50")
@logto = number(" 700142 GI_2020_10    0.63")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 180.000000
tran[@logindx].zpsr = 8.132000e-03
tran[@logindx].zpsx = 5.692200e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 1.000000e-02
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 1.000000e-02
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.630000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 180.0
tran[@logindx].rate[1] = 180.0
tran[@logindx].rate[2] = 180.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
```

```
  tran[@logindx].nown[0] = 700
  tran[@logindx].nown[1] = 0
  tran[@logindx].nown[2] = 0
  tran[@logindx].nown[3] = 0
  tran[@logindx].nown[4] = 0
  tran[@logindx].nown[5] = 0
  tran[@logindx].nown[6] = 0
  tran[@logindx].nown[7] = 0
  tran[@logindx].pown[0] = 0.000
  tran[@logindx].pown[1] = 0.000
  tran[@logindx].pown[2] = 0.000
  tran[@logindx].pown[3] = 0.000
  tran[@logindx].pown[4] = 0.000
  tran[@logindx].pown[5] = 0.000
  tran[@logindx].pown[6] = 0.000
  tran[@logindx].pown[7] = 0.000

  @logindx = casepar[0].ntran
  @ret=ins("tran", @logindx-1, 1)
  @logfrom = number(" 700145 GI_2020_10    34.50")
  @logto = number(" 700144 GI_2020_10    0.90")
  @logreg = number("      0 ------------    0.00")
  @logtert = number("      0 ------------    0.00")
  @logint = number("      0 ------------    0.00")
  tran[@logindx].ifrom = @logfrom
  tran[@logindx].ito = @logto
  tran[@logindx].ck = "1 "
  tran[@logindx].projid = 0
  tran[@logindx].st = 1
  tran[@logindx].stn = 0
  tran[@logindx].type = 1
  tran[@logindx].kreg = @logreg
  tran[@logindx].iztabl = 0
  tran[@logindx].itert = @logtert
  tran[@logindx].iint = @logint
  tran[@logindx].area = 70
  tran[@logindx].zone = 704
  tran[@logindx].tbase = 140.000000
  tran[@logindx].zpsr = 8.682000e-03
  tran[@logindx].zpsx = 6.945900e-02
  tran[@logindx].zptr = 0.000000e+00
  tran[@logindx].zptx = 1.000000e-02
  tran[@logindx].ztsr = 0.000000e+00
  tran[@logindx].ztsx = 1.000000e-02
  tran[@logindx].vnomp = 34.500000
  tran[@logindx].vnoms = 0.900000
  tran[@logindx].vnomt = 0.000000
  tran[@logindx].anglp = 0.000000
  tran[@logindx].gmag = 0.000000e+00
  tran[@logindx].bmag = 0.000000e+00
  tran[@logindx].rate[0] = 140.0
  tran[@logindx].rate[1] = 140.0
  tran[@logindx].rate[2] = 140.0
  tran[@logindx].rate[3] = 0.0
  tran[@logindx].rate[4] = 0.0
  tran[@logindx].rate[5] = 0.0
  tran[@logindx].rate[6] = 0.0
  tran[@logindx].rate[7] = 0.0
  tran[@logindx].aloss = 0.000
  tran[@logindx].tmax = 0.000000
  tran[@logindx].tmin = 0.000000
  tran[@logindx].vtmax = 0.000000
  tran[@logindx].vtmin = 0.000000
  tran[@logindx].stepp = 0.000000
  tran[@logindx].tapp = 1.000000
  tran[@logindx].tapfp = 1.000000
  tran[@logindx].tapfs = 1.000000
  tran[@logindx].tapft = 1.000000
  tran[@logindx].lid = "                                "
```

```
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 0.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700148 GI_2020_10    34.50")
@logto = number(" 700146 GI_2020_10    0.63")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 180.000000
tran[@logindx].zpsr = 8.132000e-03
tran[@logindx].zpsx = 5.692200e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 1.000000e-02
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 1.000000e-02
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.630000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 180.0
tran[@logindx].rate[1] = 180.0
tran[@logindx].rate[2] = 180.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
```

```
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 0.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700149 GI_2020_10    34.50")
@logto = number(" 700147 GI_2020_10     0.90")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 140.000000
tran[@logindx].zpsr = 8.682000e-03
tran[@logindx].zpsx = 6.945900e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 1.000000e-02
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 1.000000e-02
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.900000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 140.0
tran[@logindx].rate[1] = 140.0
tran[@logindx].rate[2] = 140.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
```

```
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                    "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 0.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700142 GI_2020_10     0.63")
@logreg = number(" 700140 GI_2020_10   230.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 180.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.819471
gens[@logindx].qmax = 93.190002
gens[@logindx].qmin = -93.190002
gens[@logindx].prf = 0.280000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 154.110001
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
```

```
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 1
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700144 GI_2020_10      0.90")
@logreg = number(" 700140 GI_2020_10    230.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 140.0000
gens[@logindx].pgen = 0.000000
gens[@logindx].qgen = 0.819472
gens[@logindx].qmax = 74.949997
gens[@logindx].qmin = -74.949997
gens[@logindx].prf = 0.220000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 118.250000
gens[@logindx].pmin = -118.250000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 0.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
```

```
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 0
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700146 GI_2020_10     0.63")
@logreg = number(" 700140 GI_2020_10   230.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S2"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 180.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.819471
gens[@logindx].qmax = 93.190002
gens[@logindx].qmin = -93.190002
gens[@logindx].prf = 0.280000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 154.050003
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 1
```

```
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700147 GI_2020_10     0.90")
@logreg = number(" 700140 GI_2020_10   230.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B2"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 140.0000
gens[@logindx].pgen = 0.000000
gens[@logindx].qgen = 0.819472
gens[@logindx].qmax = 74.949997
gens[@logindx].qmin = -74.949997
gens[@logindx].prf = 0.220000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 118.250000
gens[@logindx].pmin = -118.250000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 0.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 0
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
```

```
6418  gens[@logindx].pf = 0.000000
6419
6420  @logindx = casepar[0].nload
6421  @ret=ins("load", @logindx-1, 1)
6422  @loglbus = number(" 700141 GI_2020_10    34.50")
6423  load[@logindx].lbus = @loglbus
6424  load[@logindx].id = "1 "
6425  load[@logindx].projid = 0
6426  load[@logindx].st = 1
6427  load[@logindx].stn = 1
6428  load[@logindx].area = 70
6429  load[@logindx].zone = 704
6430  load[@logindx].p = 2.000000
6431  load[@logindx].q = 1.500000
6432  load[@logindx].pdgen = 0.000000
6433  load[@logindx].qdgen = 0.000000
6434  load[@logindx].ip = 0.000000
6435  load[@logindx].iq = 0.000000
6436  load[@logindx].g = 0.000000
6437  load[@logindx].b = 0.000000
6438  load[@logindx].nonconf = 0
6439  load[@logindx].lid = "        "
6440  load[@logindx].date_in = 19400101
6441  load[@logindx].date_out = 20391231
6442  load[@logindx].nown = 700
6443  load[@logindx].clzone = "        "
6444
6445  @logindx = casepar[0].nload
6446  @ret=ins("load", @logindx-1, 1)
6447  @loglbus = number(" 700150 GI_2020_10    34.50")
6448  load[@logindx].lbus = @loglbus
6449  load[@logindx].id = "1 "
6450  load[@logindx].projid = 0
6451  load[@logindx].st = 1
6452  load[@logindx].stn = 1
6453  load[@logindx].area = 70
6454  load[@logindx].zone = 704
6455  load[@logindx].p = 2.000000
6456  load[@logindx].q = 1.500000
6457  load[@logindx].pdgen = 0.000000
6458  load[@logindx].qdgen = 0.000000
6459  load[@logindx].ip = 0.000000
6460  load[@logindx].iq = 0.000000
6461  load[@logindx].g = 0.000000
6462  load[@logindx].b = 0.000000
6463  load[@logindx].nonconf = 0
6464  load[@logindx].lid = "        "
6465  load[@logindx].date_in = 19400101
6466  load[@logindx].date_out = 20391231
6467  load[@logindx].nown = 700
6468  load[@logindx].clzone = "        "
6469
6470  mispar[0].iordfl = 0      /* Initiate a bus re-order */
6471
6472  end
6473
```

```
# 2027 Load Scale
from PSLF_PYTHON import*

ret = Pslf.change_record(1,4,'70118  MU','st p q','1 1.74888 0.57255')
ret = Pslf.change_record(1,4,'70008  P1','st p q','1 11.02419 4.0599')
ret = Pslf.change_record(1,4,'70023  P1','st p q','1 38.25675 12.58569')
ret = Pslf.change_record(1,4,'70024  P1','st p q','1 4.84065 -0.4164')
ret = Pslf.change_record(1,4,'70029  P1','st p q','1 3.96621 1.49904')
ret = Pslf.change_record(1,4,'70032  P1','st p q','1 3.88293 0.6246')
ret = Pslf.change_record(1,4,'70039  P1','st p q','1 40.17219 14.4699')
ret = Pslf.change_record(1,4,'70041  P1','st p q','1 35.93532 8.59866')
ret = Pslf.change_record(1,4,'70045  P1','st p q','1 26.20197 10.53492')
ret = Pslf.change_record(1,4,'70047  P1','st p q','1 8.60907 -3.60186')
ret = Pslf.change_record(1,4,'70057  P1','st p q','1 8.0157 -2.14446')
ret = Pslf.change_record(1,4,'70059  P1','st p q','1 35.33154 16.42698')
ret = Pslf.change_record(1,4,'70064  P1','st p q','1 6.39174 -0.96813')
ret = Pslf.change_record(1,4,'70065  P1','st p q','1 39.37062 15.54213')
ret = Pslf.change_record(1,4,'70067  P1','st p q','1 37.01796 17.2806')
ret = Pslf.change_record(1,4,'70073  P1','st p q','1 25.69188 8.60907')
ret = Pslf.change_record(1,4,'70087  P1','st p q','1 28.12782 14.49072')
ret = Pslf.change_record(1,4,'70100  P1','st p q','1 34.03029 10.08729')
ret = Pslf.change_record(1,4,'70112  P1','st p q','1 30.89688 10.17057')
ret = Pslf.change_record(1,4,'70113  P1','st p q','1 20.78877 -0.37476')
ret = Pslf.change_record(1,4,'70124  P1','st p q','1 10.70148 2.32143')
ret = Pslf.change_record(1,4,'70140  P1','st p q','1 2.04036 0.80157')
ret = Pslf.change_record(1,4,'70141  P1','st p q','1 38.48577 13.65792')
ret = Pslf.change_record(1,4,'70142  P1','st p q','1 32.86437 13.08537')
ret = Pslf.change_record(1,4,'70153  P1','st p q','1 24.18243 7.20372')
ret = Pslf.change_record(1,4,'70162  P1','st p q','1 47.08443 17.13486')
ret = Pslf.change_record(1,4,'70163  P1','st p q','1 29.52276 8.71317')
ret = Pslf.change_record(1,4,'70164  P1','st p q','1 5.13213 1.08264')
ret = Pslf.change_record(1,4,'70166  P1','st p q','1 44.36742 1.96749')
ret = Pslf.change_record(1,4,'70175  P1','st p q','1 33.81168 9.19203')
ret = Pslf.change_record(1,4,'70183  P1','st p q','1 9.44187 3.16464')
ret = Pslf.change_record(1,4,'70187  P1','st p q','1 5.13213 2.21733')
ret = Pslf.change_record(1,4,'70196  P1','st p q','1 6.8706 2.16528')
ret = Pslf.change_record(1,4,'70198  P1','st p q','1 9.60843 1.96749')
ret = Pslf.change_record(1,4,'70199  P1','st p q','1 1.25961 0.34353')
ret = Pslf.change_record(1,4,'70200  P1','st p q','1 34.17603 10.71189')
ret = Pslf.change_record(1,4,'70206  P1','st p q','1 34.85268 5.88165')
ret = Pslf.change_record(1,4,'70212  P1','st p q','1 40.4949 12.11724')
ret = Pslf.change_record(1,4,'70215  P1','st p q','1 33.47856 6.70404')
ret = Pslf.change_record(1,4,'70216  P1','st p q','1 39.18324 19.31055')
ret = Pslf.change_record(1,4,'70228  P1','st p q','1 2.89398 1.38453')
ret = Pslf.change_record(1,4,'70233  P1','st p q','1 17.60331 5.34033')
ret = Pslf.change_record(1,4,'70237  P1','st p q','1 12.46077 2.25897')
ret = Pslf.change_record(1,4,'70240  P1','st p q','1 14.81343 2.082')
ret = Pslf.change_record(1,4,'70241  P1','st p q','1 43.56585 20.97615')
ret = Pslf.change_record(1,4,'70242  P1','st p q','1 42.4728 14.63646')
ret = Pslf.change_record(1,4,'70251  P1','st p q','1 29.52276 8.46333')
ret = Pslf.change_record(1,4,'70257  P1','st p q','1 1.37412 -0.79116')
ret = Pslf.change_record(1,4,'70259  P1','st p q','1 33.90537 14.84466')
ret = Pslf.change_record(1,4,'70261  P1','st p q','1 39.50595 13.80366')
ret = Pslf.change_record(1,4,'70263  P1','st p q','1 31.79214 7.94283')
ret = Pslf.change_record(1,4,'70269  P1','st p q','1 29.09595 8.99424')
ret = Pslf.change_record(1,4,'70276  P1','st p q','1 37.61133 11.88822')
ret = Pslf.change_record(1,4,'70278  P1','st p q','1 32.69781 13.39767')
ret = Pslf.change_record(1,4,'70279  P1','st p q','1 18.14463 6.46461')
ret = Pslf.change_record(1,4,'70281  P1','st p q','1 6.28764 -4.07031')
ret = Pslf.change_record(1,4,'70283  P1','st p q','1 39.52677 17.09322')
ret = Pslf.change_record(1,4,'70284  P1','st p q','1 36.07065 12.78348')
ret = Pslf.change_record(1,4,'70289  P1','st p q','1 3.6435 1.55109')
ret = Pslf.change_record(1,4,'70290  P1','st p q','1 23.17266 10.32672')
ret = Pslf.change_record(1,4,'70291  P1','st p q','1 38.47536 15.84402')
ret = Pslf.change_record(1,4,'70292  P1','st p q','1 5.57976 -0.18738')
ret = Pslf.change_record(1,4,'70295  P1','st p q','1 18.19668 3.51858')
ret = Pslf.change_record(1,4,'70296  P1','st p q','1 1.8738 0.68706')
```

```
ret = Pslf.change_record(1,4,'70297  P1','st p q','1 23.56824 5.9337')
ret = Pslf.change_record(1,4,'70298  P1','st p q','1 37.93404 13.26234')
ret = Pslf.change_record(1,4,'70309  P1','st p q','1 11.62797 0.60378')
ret = Pslf.change_record(1,4,'70324  P1','st p q','1 26.84739 10.21221')
ret = Pslf.change_record(1,4,'70331  P1','st p q','1 35.44605 10.00401')
ret = Pslf.change_record(1,4,'70340  P1','st p q','1 46.86582 16.52067')
ret = Pslf.change_record(1,4,'70343  P1','st p q','1 7.06839 -5.56935')
ret = Pslf.change_record(1,4,'70345  P1','st p q','1 30.77196 9.2649')
ret = Pslf.change_record(1,4,'70360  P1','st p q','1 4.14318 0.12492')
ret = Pslf.change_record(1,4,'70362  P1','st p q','1 32.81232 5.84001')
ret = Pslf.change_record(1,4,'70367  P1','st p q','1 3.24792 1.16592')
ret = Pslf.change_record(1,4,'70368  P1','st p q','1 8.15103 0.43722')
ret = Pslf.change_record(1,4,'70369  P1','st p q','1 32.45838 13.00209')
ret = Pslf.change_record(1,4,'70377  P1','st p q','1 41.80656 21.0282')
ret = Pslf.change_record(1,4,'70382  P1','st p q','1 43.23273 15.55254')
ret = Pslf.change_record(1,4,'70384  P1','st p q','1 13.24152 4.36179')
ret = Pslf.change_record(1,4,'70392  P1','st p q','1 3.24792 0.9369')
ret = Pslf.change_record(1,4,'70400  P1','st p q','1 30.99057 11.54469')
ret = Pslf.change_record(1,4,'70401  P1','st p q','1 42.09804 15.12573')
ret = Pslf.change_record(1,4,'70418  P1','st p q','1 8.45292 1.1451')
ret = Pslf.change_record(1,4,'70428  P1','st p q','1 37.1637 13.17906')
ret = Pslf.change_record(1,4,'70432  P1','st p q','1 3.62268 0.69747')
ret = Pslf.change_record(1,4,'70438  P1','st p q','1 20.66385 6.30846')
ret = Pslf.change_record(1,4,'70441  P1','st p q','1 30.26187 8.40087')
ret = Pslf.change_record(1,4,'70450  P1','st p q','1 11.78412 4.17441')
ret = Pslf.change_record(1,4,'70454  P1','st p q','1 6.64158 1.62396')
ret = Pslf.change_record(1,4,'70461  P1','st p q','1 36.07065 13.37685')
ret = Pslf.change_record(1,4,'70474  P1','st p q','1 23.3184 12.09642')
ret = Pslf.change_record(1,4,'70475  P1','st p q','1 32.11485 6.06903')
ret = Pslf.change_record(1,4,'70480  P1','st p q','1 35.50851 14.35539')
ret = Pslf.change_record(1,4,'70481  P1','st p q','1 37.81953 15.66705')
ret = Pslf.change_record(1,4,'70491  P1','st p q','1 42.10845 16.8642')
ret = Pslf.change_record(1,4,'70506  P1','st p q','1 3.58104 0.8328')
ret = Pslf.change_record(1,4,'70509  P1','st p q','1 0.54132 -0.05205')
ret = Pslf.change_record(1,4,'70512  P1','st p q','1 37.10124 10.79517')
ret = Pslf.change_record(1,4,'70526  P1','st p q','1 7.25577 -1.9779')
ret = Pslf.change_record(1,4,'70527  P1','st p q','1 43.05576 20.01843')
ret = Pslf.change_record(1,4,'70530  P1','st p q','1 45.74154 14.8863')
ret = Pslf.change_record(1,4,'70532  P1','st p q','1 32.52084 7.24536')
ret = Pslf.change_record(1,4,'70534  P1','st p q','1 13.78284 0.64542')
ret = Pslf.change_record(1,4,'70537  P1','st p q','1 38.9334 14.06391')
ret = Pslf.change_record(1,4,'70543  P1','st p q','1 34.5612 11.82576')
ret = Pslf.change_record(1,4,'70544  P1','st p q','1 19.90392 5.02803')
ret = Pslf.change_record(1,4,'70551  P1','st p q','1 45.36678 22.29822')
ret = Pslf.change_record(1,4,'79056  P1','st p q','1 0.78075 0.30189')
ret = Pslf.change_record(1,4,'70574  P1','st p q','1 26.71206 10.37877')
ret = Pslf.change_record(1,4,'70050  P1','st p q','1 5.22582 -0.17697')
ret = Pslf.change_record(1,4,'70099  P1','st p q','1 22.02756 9.03588')
ret = Pslf.change_record(1,4,'78071  P1','st p q','1 6.9747 2.2902')
ret = Pslf.change_record(1,4,'78072  P1','st p q','1 10.04565 3.29997')
ret = Pslf.change_record(1,4,'78098  P1','st p q','1 0.80157 0.27066')
ret = Pslf.change_record(1,4,'70365  P1','st p q','1 49.02069 17.74905')
ret = Pslf.change_record(1,4,'70862  P1','st p q','1 19.28973 6.43338')
ret = Pslf.change_record(1,4,'70424  P1','st p q','1 21.27804 6.41256')
ret = Pslf.change_record(1,4,'70901  P1','st p q','1 5.79837 -0.05205')
ret = Pslf.change_record(1,4,'70089  P1','st p q','1 8.49456 0.73911')
ret = Pslf.change_record(1,4,'70156  P1','st p q','1 9.11916 6.21477')
ret = Pslf.change_record(1,4,'70209  P1','st p q','1 24.97359 8.21349')
ret = Pslf.change_record(1,4,'70302  P1','st p q','1 19.07112 11.68002')
ret = Pslf.change_record(1,4,'70497  P1','st p q','1 49.94718 16.41657')
ret = Pslf.change_record(1,4,'70902  P1','st p q','1 11.11788 -1.18674')
ret = Pslf.change_record(1,4,'77642  P1','st p q','1 20.68467 2.83152')
ret = Pslf.change_record(1,4,'70268  P1','st p q','1 13.80366 4.53876')
ret = Pslf.change_record(1,4,'70287  P1','st p q','1 10.78476 3.5394')
ret = Pslf.change_record(1,4,'70903  P1','st p q','1 30.56376 10.05606')
ret = Pslf.change_record(1,4,'70218  P1','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70177  P1','st p q','0 0 0')
```

```
ret = Pslf.change_record(1,4,'70804  P1','st p q','1 41.64 20.16417')
ret = Pslf.change_record(1,4,'70152  P1','st p q','1 24.55719 9.15039')
ret = Pslf.change_record(1,4,'70023  P2','st p q','1 44.6589 12.06519')
ret = Pslf.change_record(1,4,'70025  P2','st p q','1 8.27595 3.68514')
ret = Pslf.change_record(1,4,'70041  P2','st p q','1 41.10909 11.30526')
ret = Pslf.change_record(1,4,'70045  P2','st p q','1 27.07641 8.48415')
ret = Pslf.change_record(1,4,'70047  P2','st p q','1 11.28444 2.73783')
ret = Pslf.change_record(1,4,'70050  P2','st p q','1 10.56615 -0.03123')
ret = Pslf.change_record(1,4,'70064  P2','st p q','1 7.74504 0.29148')
ret = Pslf.change_record(1,4,'70065  P2','st p q','1 40.41162 13.73079')
ret = Pslf.change_record(1,4,'70067  P2','st p q','1 34.75899 12.34626')
ret = Pslf.change_record(1,4,'70073  P2','st p q','1 27.93003 3.24792')
ret = Pslf.change_record(1,4,'70087  P2','st p q','1 25.11933 15.14655')
ret = Pslf.change_record(1,4,'70100  P2','st p q','1 42.03558 10.87845')
ret = Pslf.change_record(1,4,'70112  P2','st p q','1 36.20598 18.738')
ret = Pslf.change_record(1,4,'70113  P2','st p q','1 17.32224 1.50945')
ret = Pslf.change_record(1,4,'70143  P2','st p q','1 2.19651 1.1451')
ret = Pslf.change_record(1,4,'70154  P2','st p q','1 32.59371 10.38918')
ret = Pslf.change_record(1,4,'70163  P2','st p q','1 23.48496 10.59738')
ret = Pslf.change_record(1,4,'70167  P2','st p q','1 38.7252 7.5993')
ret = Pslf.change_record(1,4,'70174  P2','st p q','1 44.63808 15.59418')
ret = Pslf.change_record(1,4,'70187  P2','st p q','1 4.36179 0.69747')
ret = Pslf.change_record(1,4,'70200  P2','st p q','1 35.78958 10.19139')
ret = Pslf.change_record(1,4,'70206  P2','st p q','1 36.6432 12.25257')
ret = Pslf.change_record(1,4,'70217  P2','st p q','1 22.46478 7.16208')
ret = Pslf.change_record(1,4,'70228  P2','st p q','1 8.82768 4.15359')
ret = Pslf.change_record(1,4,'70233  P2','st p q','1 21.06984 0.89526')
ret = Pslf.change_record(1,4,'70239  P2','st p q','1 33.1038 10.16016')
ret = Pslf.change_record(1,4,'70242  P2','st p q','1 39.2457 11.11788')
ret = Pslf.change_record(1,4,'70244  P2','st p q','1 34.33218 16.91625')
ret = Pslf.change_record(1,4,'70246  P2','st p q','1 21.72567 -1.54068')
ret = Pslf.change_record(1,4,'70252  P2','st p q','1 44.62767 20.03925')
ret = Pslf.change_record(1,4,'70258  P2','st p q','1 2.92521 3.05013')
ret = Pslf.change_record(1,4,'70259  P2','st p q','1 26.04582 8.34882')
ret = Pslf.change_record(1,4,'70261  P2','st p q','1 24.44268 6.73527')
ret = Pslf.change_record(1,4,'70263  P2','st p q','1 30.00162 10.01442')
ret = Pslf.change_record(1,4,'70269  P2','st p q','1 41.18196 14.01186')
ret = Pslf.change_record(1,4,'70277  P2','st p q','1 44.44029 19.79982')
ret = Pslf.change_record(1,4,'70278  P2','st p q','1 39.72456 17.60331')
ret = Pslf.change_record(1,4,'70280  P2','st p q','1 24.53637 1.44699')
ret = Pslf.change_record(1,4,'70281  P2','st p q','1 1.29084 -0.11451')
ret = Pslf.change_record(1,4,'70283  P2','st p q','1 36.31008 15.10491')
ret = Pslf.change_record(1,4,'70284  P2','st p q','1 15.62541 4.23687')
ret = Pslf.change_record(1,4,'70291  P2','st p q','1 29.43948 8.92137')
ret = Pslf.change_record(1,4,'70295  P2','st p q','1 17.56167 3.96621')
ret = Pslf.change_record(1,4,'70296  P2','st p q','1 6.30846 2.31102')
ret = Pslf.change_record(1,4,'70297  P2','st p q','1 20.38278 7.9116')
ret = Pslf.change_record(1,4,'70298  P2','st p q','1 27.12846 6.23559')
ret = Pslf.change_record(1,4,'70324  P2','st p q','1 33.87414 15.66705')
ret = Pslf.change_record(1,4,'70331  P2','st p q','1 39.65169 8.76522')
ret = Pslf.change_record(1,4,'70346  P2','st p q','1 37.45518 12.76266')
ret = Pslf.change_record(1,4,'70360  P2','st p q','1 2.89398 0.12492')
ret = Pslf.change_record(1,4,'70362  P2','st p q','1 32.65617 10.57656')
ret = Pslf.change_record(1,4,'70367  P2','st p q','1 4.55958 1.68642')
ret = Pslf.change_record(1,4,'70368  P2','st p q','1 17.93643 -3.06054')
ret = Pslf.change_record(1,4,'70369  P2','st p q','1 16.14591 3.63309')
ret = Pslf.change_record(1,4,'70377  P2','st p q','1 27.35748 9.2649')
ret = Pslf.change_record(1,4,'70379  P2','st p q','1 6.43338 -4.02867')
ret = Pslf.change_record(1,4,'70382  P2','st p q','1 40.73433 13.56423')
ret = Pslf.change_record(1,4,'70402  P2','st p q','1 51.85221 17.41593')
ret = Pslf.change_record(1,4,'70428  P2','st p q','1 22.68339 11.09706')
ret = Pslf.change_record(1,4,'70432  P2','st p q','1 6.49584 1.15551')
ret = Pslf.change_record(1,4,'70441  P2','st p q','1 32.6874 11.59674')
ret = Pslf.change_record(1,4,'70461  P2','st p q','1 51.20679 14.70933')
ret = Pslf.change_record(1,4,'70474  P2','st p q','1 25.20261 7.24536')
ret = Pslf.change_record(1,4,'70475  P2','st p q','1 17.75946 3.06054')
ret = Pslf.change_record(1,4,'70491  P2','st p q','1 29.7726 13.7412')
```

```
ret = Pslf.change_record(1,4,'70537  P2','st p q','1 27.51363 9.56679')
ret = Pslf.change_record(1,4,'70543  P2','st p q','1 25.68147 7.29741')
ret = Pslf.change_record(1,4,'70141  P2','st p q','1 15.84402 -0.54132')
ret = Pslf.change_record(1,4,'70392  P2','st p q','1 4.56999 0.95772')
ret = Pslf.change_record(1,4,'70039  P2','st p q','1 26.08746 6.6624')
ret = Pslf.change_record(1,4,'70341  P2','st p q','1 44.08635 15.0945')
ret = Pslf.change_record(1,4,'70241  P2','st p q','1 13.33521 5.54853')
ret = Pslf.change_record(1,4,'70527  P2','st p q','1 18.15504 6.5583')
ret = Pslf.change_record(1,4,'70384  P2','st p q','1 40.1826 -4.02867')
ret = Pslf.change_record(1,4,'78099  P2','st p q','1 2.00913 1.13469')
ret = Pslf.change_record(1,4,'70551  P2','st p q','1 29.83506 3.2271')
ret = Pslf.change_record(1,4,'70365  P2','st p q','1 39.81825 10.12893')
ret = Pslf.change_record(1,4,'70033  P2','st p q','1 33.6243 10.14975')
ret = Pslf.change_record(1,4,'70138  P2','st p q','1 15.97935 5.25705')
ret = Pslf.change_record(1,4,'70171  P2','st p q','1 35.33154 13.50177')
ret = Pslf.change_record(1,4,'70182  P2','st p q','1 45.9081 12.8043')
ret = Pslf.change_record(1,4,'70189  P2','st p q','1 35.88327 10.55574')
ret = Pslf.change_record(1,4,'70386  P2','st p q','1 8.83809 3.78924')
ret = Pslf.change_record(1,4,'70398  P2','st p q','1 19.53957 7.44315')
ret = Pslf.change_record(1,4,'70470  P2','st p q','1 26.32689 3.123')
ret = Pslf.change_record(1,4,'70530  P2','st p q','1 11.72166 0.75993')
ret = Pslf.change_record(1,4,'70532  P2','st p q','1 42.0564 13.82448')
ret = Pslf.change_record(1,4,'70169  P2','st p q','1 2.45676 0.60378')
ret = Pslf.change_record(1,4,'70287  P2','st p q','1 19.38342 6.37092')
ret = Pslf.change_record(1,4,'70450  P2','st p q','1 7.15167 2.35266')
ret = Pslf.change_record(1,4,'70480  P2','st p q','1 15.94812 5.24664')
ret = Pslf.change_record(1,4,'78094  P2','st p q','1 0.47886 0.15615')
ret = Pslf.change_record(1,4,'70140  P2','st p q','0 0 0')
ret = Pslf.change_record(1,4,'70198  P2','st p q','0 0 0')
ret = Pslf.change_record(1,4,'70218  P2','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70804  P2','st p q','1 0 0')
ret = Pslf.change_record(1,4,'70152  P2','st p q','1 38.06937 18.17586')
ret = Pslf.change_record(1,4,'70025  P3','st p q','1 7.53684 3.123')
ret = Pslf.change_record(1,4,'70029  P3','st p q','1 3.28956 0.35394')
ret = Pslf.change_record(1,4,'70045  P3','st p q','1 32.70822 -7.79709')
ret = Pslf.change_record(1,4,'70064  P3','st p q','1 7.74504 -0.84321')
ret = Pslf.change_record(1,4,'70065  P3','st p q','1 35.47728 10.10811')
ret = Pslf.change_record(1,4,'70073  P3','st p q','1 12.84594 4.41384')
ret = Pslf.change_record(1,4,'70087  P3','st p q','1 23.95341 3.4353')
ret = Pslf.change_record(1,4,'70112  P3','st p q','1 44.2425 17.15568')
ret = Pslf.change_record(1,4,'70143  P3','st p q','1 1.38453 0.48927')
ret = Pslf.change_record(1,4,'70162  P3','st p q','1 43.26396 14.9904')
ret = Pslf.change_record(1,4,'70163  P3','st p q','1 25.76475 11.62797')
ret = Pslf.change_record(1,4,'70168  P3','st p q','1 38.66274 12.78348')
ret = Pslf.change_record(1,4,'70174  P3','st p q','1 32.3751 8.39046')
ret = Pslf.change_record(1,4,'70187  P3','st p q','1 1.37412 -0.03123')
ret = Pslf.change_record(1,4,'70209  P3','st p q','1 34.82145 7.93242')
ret = Pslf.change_record(1,4,'70217  P3','st p q','1 29.03349 11.10747')
ret = Pslf.change_record(1,4,'70239  P3','st p q','1 25.42122 10.35795')
ret = Pslf.change_record(1,4,'70244  P3','st p q','1 52.21656 32.19813')
ret = Pslf.change_record(1,4,'70266  P3','st p q','1 52.18533 18.0093')
ret = Pslf.change_record(1,4,'70278  P3','st p q','1 36.97632 13.91817')
ret = Pslf.change_record(1,4,'70282  P3','st p q','1 38.00691 14.22006')
ret = Pslf.change_record(1,4,'70323  P3','st p q','1 52.76829 9.10875')
ret = Pslf.change_record(1,4,'70324  P3','st p q','1 23.75562 0.8328')
ret = Pslf.change_record(1,4,'70355  P3','st p q','1 36.69525 11.14911')
ret = Pslf.change_record(1,4,'70377  P3','st p q','1 34.68612 12.10683')
ret = Pslf.change_record(1,4,'70396  P3','st p q','1 19.0503 7.14126')
ret = Pslf.change_record(1,4,'70438  P3','st p q','1 13.39767 1.85298')
ret = Pslf.change_record(1,4,'70441  P3','st p q','1 33.61389 7.56807')
ret = Pslf.change_record(1,4,'70461  P3','st p q','1 43.48257 20.53893')
ret = Pslf.change_record(1,4,'70491  P3','st p q','1 26.92026 5.35074')
ret = Pslf.change_record(1,4,'70417  P3','st p q','1 36.46623 5.66304')
ret = Pslf.change_record(1,4,'70263  P3','st p q','1 22.3815 7.33905')
ret = Pslf.change_record(1,4,'70200  P3','st p q','1 30.36597 7.55766')
ret = Pslf.change_record(1,4,'70034  P3','st p q','1 28.02372 10.62861')
ret = Pslf.change_record(1,4,'70155  P3','st p q','1 5.4132 0.99936')
```

```
ret = Pslf.change_record(1,4,'70189  P3','st p q','1 31.36533 10.24344')
ret = Pslf.change_record(1,4,'70284  P3','st p q','1 29.97039 9.84786')
ret = Pslf.change_record(1,4,'70327  P3','st p q','1 10.43082 1.78011')
ret = Pslf.change_record(1,4,'70423  P3','st p q','1 20.75754 1.92585')
ret = Pslf.change_record(1,4,'70530  P3','st p q','1 11.77371 0.73911')
ret = Pslf.change_record(1,4,'70368  P3','st p q','1 19.19604 6.30846')
ret = Pslf.change_record(1,4,'70076  P4','st p q','1 1.71765 0.53091')
ret = Pslf.change_record(1,4,'70149  P4','st p q','1 41.20278 2.33184')
ret = Pslf.change_record(1,4,'70156  P4','st p q','1 0.6246 0.22902')
ret = Pslf.change_record(1,4,'70209  P4','st p q','1 33.87414 10.7223')
ret = Pslf.change_record(1,4,'70266  P4','st p q','1 36.17475 11.83617')
ret = Pslf.change_record(1,4,'70471  P4','st p q','1 17.46798 6.62076')
ret = Pslf.change_record(1,4,'78091  P4','st p q','1 4.02867 1.34289')
ret = Pslf.change_record(1,4,'70959  P4','st p q','1 29.97039 9.84786')
ret = Pslf.change_record(1,4,'70058  P4','st p q','1 7.51602 2.46717')
ret = Pslf.change_record(1,4,'70149  P5','st p q','1 35.4981 4.3722')
ret = Pslf.change_record(1,4,'70471  P5','st p q','1 23.49537 9.0567')
ret = Pslf.change_record(1,4,'79056  P5','st p q','1 10.03524 2.96685')
ret = Pslf.change_record(1,4,'70327  P5','st p q','1 23.97423 7.86996')
ret = Pslf.change_record(1,4,'70397  P5','st p q','1 0.73911 0.2082')
ret = Pslf.change_record(1,4,'70959  P5','st p q','1 29.97039 9.84786')
ret = Pslf.change_record(1,4,'70266  P5','st p q','1 29.6685 9.75417')
ret = Pslf.change_record(1,4,'70149  P6','st p q','1 28.78365 5.99616')
ret = Pslf.change_record(1,4,'70298  P6','st p q','1 34.80063 10.69107')
ret = Pslf.change_record(1,4,'70959  P6','st p q','1 29.97039 9.84786')
ret = Pslf.change_record(1,4,'70901  P6','st p q','0 0 0')
```

```
ret = Pslf.change_record(1,4,'70140  GV','st p q','1 1.0385 0.2613')
ret = Pslf.change_record(1,4,'70183  GV','st p q','1 1.1256 0.2814')
ret = Pslf.change_record(1,4,'70214  GV','st p q','1 21.373 5.3533')
ret = Pslf.change_record(1,4,'70268  GV','st p q','1 11.4101 2.8609')
ret = Pslf.change_record(1,4,'70436  GV','st p q','1 5.6347 1.4137')
ret = Pslf.change_record(1,4,'79047  GV','st p q','1 2.747 0.6901')
ret = Pslf.change_record(1,4,'70437  GV','st p q','1 1.7152 0.4288')
ret = Pslf.change_record(1,4,'70201  GW','st p q','1 5.2729 1.3199')
ret = Pslf.change_record(1,4,'70288  GW','st p q','1 5.8826 1.474')
ret = Pslf.change_record(1,4,'70363  GW','st p q','1 6.5325 1.6348')
ret = Pslf.change_record(1,4,'70854  GW','st p q','1 1.608 0.7035')
ret = Pslf.change_record(1,4,'70309  HC','st p q','1 3.1892 0.7973')
ret = Pslf.change_record(1,4,'70535  HC','st p q','1 3.484 0.871')
ret = Pslf.change_record(1,4,'70540  HC','st p q','1 8.5358 2.1373')
ret = Pslf.change_record(1,4,'70541  HC','st p q','1 16.0867 4.0334')
ret = Pslf.change_record(1,4,'70542  HC','st p q','1 7.6045 1.9028')
ret = Pslf.change_record(1,4,'79006  HC','st p q','1 13.5273 3.3902')
ret = Pslf.change_record(1,4,'79018  HC','st p q','1 6.7938 1.7018')
ret = Pslf.change_record(1,4,'79056  HC','st p q','1 1.7889 0.4489')
ret = Pslf.change_record(1,4,'79066  HC','st p q','1 13.0717 3.2763')
ret = Pslf.change_record(1,4,'79069  HC','st p q','1 10.7602 2.6934')
ret = Pslf.change_record(1,4,'79092  HC','st p q','1 7.1355 1.7889')
ret = Pslf.change_record(1,4,'70416  CR','st p q','1 13.601 4.6029')
ret = Pslf.change_record(1,4,'70050  CR','st p q','1 2.9148 0.3123')
ret = Pslf.change_record(1,4,'70091  CR','st p q','1 14.271 3.819')
ret = Pslf.change_record(1,4,'70115  CR','st p q','1 13.065 2.9614')
ret = Pslf.change_record(1,4,'70117  CR','st p q','1 17.353 2.9882')
ret = Pslf.change_record(1,4,'70138  CR','st p q','1 12.73 3.484')
ret = Pslf.change_record(1,4,'70142  CR','st p q','1 4.891 1.3668')
ret = Pslf.change_record(1,4,'70157  CR','st p q','1 7.035 0.6901')
ret = Pslf.change_record(1,4,'70313  CR','st p q','1 28.542 6.5057')
ret = Pslf.change_record(1,4,'70381  CR','st p q','1 5.829 1.2328')
ret = Pslf.change_record(1,4,'70400  CR','st p q','1 7.839 1.7219')
ret = Pslf.change_record(1,4,'70419  CR','st p q','1 2.412 0.3283')
ret = Pslf.change_record(1,4,'70429  CR','st p q','1 2.814 0.3819')
ret = Pslf.change_record(1,4,'70476  CR','st p q','1 7.839 1.1792')
ret = Pslf.change_record(1,4,'70510  CR','st p q','1 4.623 1.5075')
ret = Pslf.change_record(1,4,'70513  CR','st p q','1 19.43 4.4086')
ret = Pslf.change_record(1,4,'70514  CR','st p q','1 10.988 2.3986')
ret = Pslf.change_record(1,4,'70515  CR','st p q','1 15.946 4.5828')
```

```
ret = Pslf.change_record(1,4,'70516  CR','st p q','1 20.703 7.6916')
ret = Pslf.change_record(1,4,'70517  CR','st p q','1 23.115 6.7871')
ret = Pslf.change_record(1,4,'70518  CR','st p q','1 18.09 4.221')
ret = Pslf.change_record(1,4,'70519  CR','st p q','1 18.291 4.3684')
ret = Pslf.change_record(1,4,'70521  CR','st p q','1 21.842 -3.7185')
ret = Pslf.change_record(1,4,'70522  CR','st p q','1 8.107 2.4254')
ret = Pslf.change_record(1,4,'70524  CR','st p q','1 19.765 5.3399')
ret = Pslf.change_record(1,4,'70533  CR','st p q','1 10.251 2.3785')
ret = Pslf.change_record(1,4,'70547  CR','st p q','1 6.231 1.6549')
ret = Pslf.change_record(1,4,'70571  CR','st p q','1 4.489 1.005')
ret = Pslf.change_record(1,4,'70581  CR','st p q','1 20.033 -2.6197')
ret = Pslf.change_record(1,4,'70582  CR','st p q','1 6.164 1.541')
ret = Pslf.change_record(1,4,'70583  CR','st p q','1 12.998 2.6465')
ret = Pslf.change_record(1,4,'70584  CR','st p q','1 17.755 3.0954')
ret = Pslf.change_record(1,4,'70924  CR','st p q','1 1.005 0.1273')
ret = Pslf.change_record(1,4,'70925  CR','st p q','1 0.603 0.0603')
ret = Pslf.change_record(1,4,'70926  CR','st p q','1 0.536 0.0201')
ret = Pslf.change_record(1,4,'70576  CR','st p q','1 11.859 3.417')
ret = Pslf.change_record(1,4,'70124  CR','st p q','1 12.596 -0.0938')
ret = Pslf.change_record(1,4,'70575  CR','st p q','1 19.028 5.1925')
ret = Pslf.change_record(1,4,'71506  CR','st p q','1 13.333 2.6063')
ret = Pslf.change_record(1,4,'71508  CR','st p q','1 0.201 0.0536')
ret = Pslf.change_record(1,4,'71516  CR','st p q','1 9.4872 1.0117')
ret = Pslf.change_record(1,4,'71517  CR','st p q','1 4.154 1.7353')
ret = Pslf.change_record(1,4,'71505  CR','st p q','1 7.504 1.876')
ret = Pslf.change_record(1,4,'71512  CR','st p q','1 0 0')
ret = Pslf.change_record(1,4,'71507  CR','st p q','1 3.685 -1.1792')
ret = Pslf.change_record(1,4,'71501  CR','st p q','1 8.1271 2.3718')
ret = Pslf.change_record(1,4,'71503  CR','st p q','1 7.2092 -1.9631')
ret = Pslf.change_record(1,4,'71502  CR','st p q','1 7.1422 1.4539')
ret = Pslf.change_record(1,4,'70510  NT','st p q','1 -8.576 -1.742')
ret = Pslf.change_record(1,4,'71508  NT','st p q','1 -0.201 -0.0469')
ret = Pslf.change_record(1,4,'70009  YV','st p q','1 14.405 4.7369')
ret = Pslf.change_record(1,4,'70525  YV','st p q','1 18.894 6.2109')
ret = Pslf.change_record(1,4,'79065  YV','st p q','1 23.048 7.5777')
ret = Pslf.change_record(1,4,'70541  AS','st p q','1 7.9395 1.9899')

```

```
@logindx = number("  70120 COMAN_2      24.00")
if (@logindx != -1)
   busd[@logindx].type = 0      /*  2  */
endif

@logfrom = number("  70120 COMAN_2      24.00")
@logto = number("  70122 COMANCHE     230.00")
$logck = "U2"
@logtert = number("      0 ------------    0.00")
@logindx = rec_index(0, 2, @logfrom, @logto, $logck, 0, -1, @logtert)
if (@logindx != -1)
   tran[@logindx].st = 0      /*  1  */
endif

@logfrom = number("  70120 COMAN_2      24.00")
$logid = "C2"
@logindx = rec_index(0, 3, @logfrom, -1, $logid, 0, -1)
if (@logindx != -1)
   gens[@logindx].st = 0      /*  1  */
endif

@logfrom = number("  70120 COMAN_2      24.00")
$logid = "SS"
@logindx = rec_index(0, 4, @logfrom, -1, $logid, 0, -1)
if (@logindx != -1)
   load[@logindx].st = 0      /*  1  */
endif

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70266 LOOKOUT      230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P5"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 28.50000
load[@logindx].q = 9.367000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 65

@logfrom = number("  70260 LEETSDALE    230.00")
@logto = number("  70291 MONROEPS     230.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
   secdd[@logindx].rate[0] = 796      /*  311  */
   secdd[@logindx].rate[1] = 796      /*  398  */
   secdd[@logindx].rate[2] = 796      /*  311  */
   secdd[@logindx].rate[3] = 796      /*  398  */
endif

@logfrom = number("  70163 ELATI1       230.00")
@logto = number("  70291 MONROEPS     230.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
   secdd[@logindx].rate[0] = 796      /*  319  */
```

```
    secdd[@logindx].rate[1] = 796        /*  398  */
    secdd[@logindx].rate[2] = 796        /*  271  */
    secdd[@logindx].rate[3] = 796        /*  398  */
  endif

  @logfrom = number("  70149 DENVER_TM     230.00")
  @logto = number("  70163 ELATI1        230.00")
  $logck = "1 "
  @logsec = 1
  @logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
  if (@logindx != -1)
    secdd[@logindx].rate[0] = 796        /*  307  */
    secdd[@logindx].rate[1] = 796        /*  440  */
    secdd[@logindx].rate[2] = 796        /*  307  */
    secdd[@logindx].rate[3] = 796        /*  440  */
  endif

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  busd[@logindx].extnum = 70177
  busd[@logindx].busnam = "PODER       "
  busd[@logindx].basekv = 115.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].ba = 65
  busd[@logindx].zone = 700
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].nown = 65


  @logfrom = number("  70074 CALIFORN_TP   115.00")
  @logto = number("  70276 MAPLETO1      115.00")
  $logck = "1 "
  @logsec = 1
  @logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
  if (@logindx != -1)
    @ret = del("secdd", @logindx, 1)
  endif

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("  70276 MAPLETO1      115.00")
  @logto = number("  70177 PODER         115.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].st = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.000761
  secdd[@logindx].zsecx = 0.004655
  secdd[@logindx].bsec = 0.000627
  secdd[@logindx].rate[0] = 182.00
  secdd[@logindx].rate[1] = 200.00
  secdd[@logindx].rate[2] = 182.00
  secdd[@logindx].rate[3] = 200.00
  secdd[@logindx].rate[4] = 182.00
  secdd[@logindx].rate[5] = 200.00
  secdd[@logindx].rate[6] = 182.00
  secdd[@logindx].rate[7] = 200.00
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 700
  secdd[@logindx].lngsec = 4.000
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
```

```
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70177 PODER       115.00")
@logto = number("  70074 CALIFORN_TP  115.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001909
secdd[@logindx].zsecx = 0.011675
secdd[@logindx].bsec = 0.001573
secdd[@logindx].rate[0] = 182.00
secdd[@logindx].rate[1] = 200.00
secdd[@logindx].rate[2] = 182.00
secdd[@logindx].rate[3] = 200.00
secdd[@logindx].rate[4] = 182.00
secdd[@logindx].rate[5] = 200.00
secdd[@logindx].rate[6] = 182.00
secdd[@logindx].rate[7] = 200.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 4.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70177 PODER       115.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P1"
load[@logindx].st = 0
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 65
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].nown = 65
load[@logindx].clzone = "HID_MIX "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 70804
busd[@logindx].busnam =  "COYOTE      "
busd[@logindx].basekv = 230.0000
```

```
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 700
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65


@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70528 SPRUCE      230.00")
@logto = number("  70804 COYOTE      230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000390
secdd[@logindx].zsecx = 0.001625
secdd[@logindx].bsec = 0.261600
secdd[@logindx].rate[0] = 220.00
secdd[@logindx].rate[1] = 220.00
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70528 SPRUCE      230.00")
@logto = number("  70804 COYOTE      230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000390
secdd[@logindx].zsecx = 0.001625
secdd[@logindx].bsec = 0.261600
secdd[@logindx].rate[0] = 220.00
secdd[@logindx].rate[1] = 220.00
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
```

```
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000


@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70804 COYOTE       230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P1"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 40.00000
load[@logindx].q = 19.37288
load[@logindx].ba = 65
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].nown = 65
load[@logindx].clzone = "HID_MIX "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70804 COYOTE       230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P2"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 65
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].nown = 65
load[@logindx].clzone = "HID_MIX "

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING   345.00")
@logto = number("  70918 GOOSE_CK     345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.004300
secdd[@logindx].zsecx = 0.066400
secdd[@logindx].bsec = 1.188800
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
```

```
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                        "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING    345.00")
@logto = number("  70918 GOOSE_CK      345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "t2"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "2 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "        "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70916)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.969680
volt[@logindx].va = -0.248379
busd[@logindx].extnum = 70916
busd[@logindx].busnam = "FT_ST_VRAIN "
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
```

```
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 65

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING    345.00")
@logto = number("  70916 FT_ST_VRAIN   345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.002200
secdd[@logindx].zsecx = 0.034300
secdd[@logindx].bsec = 0.604400
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70915 CANAL_XING    345.00")
@logto = number("  70916 FT_ST_VRAIN   345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.002200
secdd[@logindx].zsecx = 0.034300
secdd[@logindx].bsec = 0.604400
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
```

```
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number("  70410 FT_ST_VRAIN  230.00")
@logto = number("  70916 FT_ST_VRAIN  345.00")
@logreg = number("      0 ------------   0.00")
@logtert = number("      0 ------------   0.00")
@logint = number("      0 ------------   0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T7"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 336.000000
tran[@logindx].zpsr = 5.758420e-04
tran[@logindx].zpsx = 5.209700e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 345.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 560.0
tran[@logindx].rate[1] = 756.0
tran[@logindx].rate[2] = 560.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
```

```
553   tran[@logindx].vtmin = 0.000000
554   tran[@logindx].stepp = 0.000000
555   tran[@logindx].tapp = 1.000000
556   tran[@logindx].tapfp = 1.000000
557   tran[@logindx].tapfs = 0.975000
558   tran[@logindx].tapft = 1.000000
559   tran[@logindx].lid = "                                "
560   tran[@logindx].ohms = 0
561   tran[@logindx].date_in = 19400101
562   tran[@logindx].date_out = 20391232
563   tran[@logindx].nown[0] = 65
564   tran[@logindx].nown[1] = 0
565   tran[@logindx].nown[2] = 0
566   tran[@logindx].nown[3] = 0
567   tran[@logindx].nown[4] = 0
568   tran[@logindx].nown[5] = 0
569   tran[@logindx].nown[6] = 0
570   tran[@logindx].nown[7] = 0
571   tran[@logindx].pown[0] = 1.000
572   tran[@logindx].pown[1] = 0.000
573   tran[@logindx].pown[2] = 0.000
574   tran[@logindx].pown[3] = 0.000
575   tran[@logindx].pown[4] = 0.000
576   tran[@logindx].pown[5] = 0.000
577   tran[@logindx].pown[6] = 0.000
578   tran[@logindx].pown[7] = 0.000
579
580   @logindx = casepar[0].ntran
581   @ret=ins("tran", @logindx-1, 1)
582   @logfrom = number("  70410 FT_ST_VRAIN  230.00")
583   @logto = number("  70916 FT_ST_VRAIN  345.00")
584   @logreg = number("      0 ------------   0.00")
585   @logtert = number("      0 ------------   0.00")
586   @logint = number("      0 ------------   0.00")
587   tran[@logindx].ifrom = @logfrom
588   tran[@logindx].ito = @logto
589   tran[@logindx].ck = "T8"
590   tran[@logindx].projid = 0
591   tran[@logindx].st = 1
592   tran[@logindx].stn = 1
593   tran[@logindx].type = 1
594   tran[@logindx].kreg = @logreg
595   tran[@logindx].iztabl = 0
596   tran[@logindx].itert = @logtert
597   tran[@logindx].iint = @logint
598   tran[@logindx].area = 70
599   tran[@logindx].zone = 706
600   tran[@logindx].tbase = 336.000000
601   tran[@logindx].zpsr = 5.758420e-04
602   tran[@logindx].zpsx = 5.209700e-02
603   tran[@logindx].zptr = 0.000000e+00
604   tran[@logindx].zptx = 0.000000e+00
605   tran[@logindx].ztsr = 0.000000e+00
606   tran[@logindx].ztsx = 0.000000e+00
607   tran[@logindx].vnomp = 230.000000
608   tran[@logindx].vnoms = 345.000000
609   tran[@logindx].vnomt = 0.000000
610   tran[@logindx].anglp = 0.000000
611   tran[@logindx].gmag = 0.000000e+00
612   tran[@logindx].bmag = 0.000000e+00
613   tran[@logindx].rate[0] = 560.0
614   tran[@logindx].rate[1] = 756.0
615   tran[@logindx].rate[2] = 560.0
616   tran[@logindx].rate[3] = 0.0
617   tran[@logindx].rate[4] = 0.0
618   tran[@logindx].rate[5] = 0.0
619   tran[@logindx].rate[6] = 0.0
620   tran[@logindx].rate[7] = 0.0
621   tran[@logindx].aloss = 0.000
```

```
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 0.975000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391232
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].nsvd
@ret = ins("svd", @logindx-1, 1)
@logbus = number("  70916 FT_ST_VRAIN  345.00")
@logreg = number("  70410 FT_ST_VRAIN  230.00")
svd[@logindx].ibus = @logbus
svd[@logindx].id = "v "
svd[@logindx].projid = 0
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 4
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 706
svd[@logindx].g = 0.000000
svd[@logindx].b = -1.200000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.025000
svd[@logindx].bstep[0] = -1.200000
svd[@logindx].bstep[1] = 1.440000
svd[@logindx].bstep[2] = 1.440000
svd[@logindx].bstep[3] = 0.000000
svd[@logindx].bstep[4] = 0.000000
svd[@logindx].bstep[5] = 0.000000
svd[@logindx].bstep[6] = 0.000000
svd[@logindx].bstep[7] = 0.000000
svd[@logindx].bstep[8] = 0.000000
svd[@logindx].bstep[9] = 0.000000
svd[@logindx].nstep[0] = 1
svd[@logindx].nstep[1] = 1
svd[@logindx].nstep[2] = 1
svd[@logindx].nstep[3] = 0
svd[@logindx].nstep[4] = 0
svd[@logindx].nstep[5] = 0
svd[@logindx].nstep[6] = 0
svd[@logindx].nstep[7] = 0
svd[@logindx].nstep[8] = 0
svd[@logindx].nstep[9] = 0
svd[@logindx].beffmin = -1.200000
```

```
691   svd[@logindx].beffmax = 2.880000
692   svd[@logindx].lid = "        "
693   svd[@logindx].date_in = 19400101
694   svd[@logindx].date_out = 20391232
695   svd[@logindx].nown[0] = 65
696   svd[@logindx].nown[1] = 0
697   svd[@logindx].nown[2] = 0
698   svd[@logindx].nown[3] = 0
699   svd[@logindx].pown[0] = 1.000
700   svd[@logindx].pown[1] = 0.000
701   svd[@logindx].pown[2] = 0.000
702   svd[@logindx].pown[3] = 0.000
703
704   @logindx = casepar[0].nbus
705   @ret=ins("busd", @logindx-1, 1)
706   @ret=ins("volt", @logindx-1, 1)
707   volt[@logindx].vm = 0.992250
708   volt[@logindx].va = -0.629952
709   busd[@logindx].extnum = 71507
710   busd[@logindx].busnam = "PINEJCT_CR  "
711   busd[@logindx].basekv = 115.0000
712   busd[@logindx].type = 1
713   busd[@logindx].area = 70
714   busd[@logindx].zone = 705
715   busd[@logindx].projid = 0
716   busd[@logindx].level = 0
717   busd[@logindx].vsched = 1.000000
718   busd[@logindx].vmax = 1.0500
719   busd[@logindx].vmin = 0.9500
720   busd[@logindx].date_in = 400101
721   busd[@logindx].date_out = 391231
722   busd[@logindx].nown = 738
723
724   @logindx = casepar[0].nbrsec
725   @ret=ins("secdd", @logindx-1, 1)
726   @logfrom = number("  70124 CONIFER_CR   115.00")
727   @logto = number("  71507 PINEJCT_CR   115.00")
728   secdd[@logindx].ifrom = @logfrom
729   secdd[@logindx].ito = @logto
730   secdd[@logindx].ck = "1 "
731   secdd[@logindx].projid = 0
732   secdd[@logindx].st = 1
733   secdd[@logindx].stn = 1
734   secdd[@logindx].nsec = 1
735   secdd[@logindx].type = 0
736   secdd[@logindx].zsecr = 0.009230
737   secdd[@logindx].zsecx = 0.049880
738   secdd[@logindx].bsec = 0.006650
739   secdd[@logindx].rate[0] = 180.00
740   secdd[@logindx].rate[1] = 198.00
741   secdd[@logindx].aloss = 0.000
742   secdd[@logindx].area = 70
743   secdd[@logindx].zone = 705
744   secdd[@logindx].trangi = 0.000000
745   secdd[@logindx].trantapf = 0.000000
746   secdd[@logindx].trantapt = 0.000000
747   secdd[@logindx].lid = "                                                  "
748   secdd[@logindx].ohms = 0
749   secdd[@logindx].date_in = 19400101
750   secdd[@logindx].date_out = 20391232
751   secdd[@logindx].nown[0] = 738
752   secdd[@logindx].nown[1] = 0
753   secdd[@logindx].nown[2] = 0
754   secdd[@logindx].nown[3] = 0
755   secdd[@logindx].nown[4] = 0
756   secdd[@logindx].nown[5] = 0
757   secdd[@logindx].nown[6] = 0
758   secdd[@logindx].nown[7] = 0
759   secdd[@logindx].pown[0] = 1.000
```

```
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  71507 PINEJCT_CR    115.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "CR"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 705
load[@logindx].p = 5.502000
load[@logindx].q = -1.759000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_RES "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391232
load[@logindx].nown = 738

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  71507 PINEJCT_CR    115.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "NT"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 705
load[@logindx].p = -6.095418
load[@logindx].q = -0.735244
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 1
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 20391232
load[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.929533
volt[@logindx].va = -0.585485
busd[@logindx].extnum = 71501
busd[@logindx].busnam = "DAWSONRG_CR "
busd[@logindx].basekv = 115.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
```

```
  busd[@logindx].date_out = 391231
  busd[@logindx].nown = 738

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("  71501 DAWSONRG_CR  115.00")
  @logto = number("  70514 PLUM_CK_CR   115.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.008610
  secdd[@logindx].zsecx = 0.046500
  secdd[@logindx].bsec = 0.006804
  secdd[@logindx].rate[0] = 239.00
  secdd[@logindx].rate[1] = 239.00
  secdd[@logindx].aloss = 1.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 400101
  secdd[@logindx].date_out = 391231
  secdd[@logindx].nown[0] = 738
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].nown[4] = 0
  secdd[@logindx].nown[5] = 0
  secdd[@logindx].nown[6] = 0
  secdd[@logindx].nown[7] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000
  secdd[@logindx].pown[4] = 0.000
  secdd[@logindx].pown[5] = 0.000
  secdd[@logindx].pown[6] = 0.000
  secdd[@logindx].pown[7] = 0.000

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("  71502 CITADEL_CR   115.00")
  @logto = number("  71501 DAWSONRG_CR  115.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.001312
  secdd[@logindx].zsecx = 0.010980
  secdd[@logindx].bsec = 0.001580
  secdd[@logindx].rate[0] = 162.00
  secdd[@logindx].rate[1] = 178.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
```

```
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 738
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  71501 DAWSONRG_CR   115.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "CR"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 12.126000
load[@logindx].q = 3.544000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_MIX "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391232
load[@logindx].nown = 738

@logfrom = number("  71502 CITADEL_CR    115.00")
@logto = number("  70514 PLUM_CK_CR    115.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
  @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.953569
volt[@logindx].va = -0.517545
busd[@logindx].extnum = 71503
busd[@logindx].busnam =  "DELBERT_CR  "
busd[@logindx].basekv = 115.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
```

```
  busd[@logindx].date_in = 400101
  busd[@logindx].date_out = 391231
  busd[@logindx].nown = 738

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("    70518 BAYOU_CR      115.00")
  @logto = number("    71503 DELBERT_CR    115.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.002830
  secdd[@logindx].zsecx = 0.027450
  secdd[@logindx].bsec = 0.003950
  secdd[@logindx].rate[0] = 280.00
  secdd[@logindx].rate[1] = 308.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 19400101
  secdd[@logindx].date_out = 20391232
  secdd[@logindx].nown[0] = 738
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].nown[4] = 0
  secdd[@logindx].nown[5] = 0
  secdd[@logindx].nown[6] = 0
  secdd[@logindx].nown[7] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000
  secdd[@logindx].pown[4] = 0.000
  secdd[@logindx].pown[5] = 0.000
  secdd[@logindx].pown[6] = 0.000
  secdd[@logindx].pown[7] = 0.000

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("    71503 DELBERT_CR    115.00")
  @logto = number("    70583 ELIZABET_CR   115.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.002090
  secdd[@logindx].zsecx = 0.020310
  secdd[@logindx].bsec = 0.002923
  secdd[@logindx].rate[0] = 280.00
  secdd[@logindx].rate[1] = 308.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].trangi = 0.000000
```

```
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 738
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  71503 DELBERT_CR    115.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "CR"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 10.763000
load[@logindx].q = -2.927000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_RES "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391232
load[@logindx].nown = 738

@logfrom = number("  70518 BAYOU_CR      115.00")
@logto = number("  70583 ELIZABET_CR   115.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
  @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.930044
volt[@logindx].va = -0.546599
busd[@logindx].extnum = 70152
busd[@logindx].busnam =  "BARKER      "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
```

```
1105   busd[@logindx].vmin = 0.9500
1106   busd[@logindx].date_in = 400101
1107   busd[@logindx].date_out = 391231
1108   busd[@logindx].nown = 65
1109
1110   @logindx = casepar[0].nbrsec
1111   @ret=ins("secdd", @logindx-1, 1)
1112   @logfrom = number("    70324 LACOMBE      230.00")
1113   @logto = number("    70152 BARKER      230.00")
1114   secdd[@logindx].ifrom = @logfrom
1115   secdd[@logindx].ito = @logto
1116   secdd[@logindx].ck = "1 "
1117   secdd[@logindx].projid = 0
1118   secdd[@logindx].st = 1
1119   secdd[@logindx].stn = 1
1120   secdd[@logindx].nsec = 1
1121   secdd[@logindx].type = 0
1122   secdd[@logindx].zsecr = 0.000048
1123   secdd[@logindx].zsecx = 0.000500
1124   secdd[@logindx].bsec = 0.034800
1125   secdd[@logindx].rate[0] = 200.00
1126   secdd[@logindx].rate[1] = 200.00
1127   secdd[@logindx].aloss = 0.000
1128   secdd[@logindx].area = 70
1129   secdd[@logindx].zone = 700
1130   secdd[@logindx].trangi = 0.000000
1131   secdd[@logindx].trantapf = 0.000000
1132   secdd[@logindx].trantapt = 0.000000
1133   secdd[@logindx].lid = "                                                  "
1134   secdd[@logindx].ohms = 0
1135   secdd[@logindx].date_in = 19400101
1136   secdd[@logindx].date_out = 20391231
1137   secdd[@logindx].nown[0] = 65
1138   secdd[@logindx].nown[1] = 0
1139   secdd[@logindx].nown[2] = 0
1140   secdd[@logindx].nown[3] = 0
1141   secdd[@logindx].nown[4] = 0
1142   secdd[@logindx].nown[5] = 0
1143   secdd[@logindx].nown[6] = 0
1144   secdd[@logindx].nown[7] = 0
1145   secdd[@logindx].pown[0] = 1.000
1146   secdd[@logindx].pown[1] = 0.000
1147   secdd[@logindx].pown[2] = 0.000
1148   secdd[@logindx].pown[3] = 0.000
1149   secdd[@logindx].pown[4] = 0.000
1150   secdd[@logindx].pown[5] = 0.000
1151   secdd[@logindx].pown[6] = 0.000
1152   secdd[@logindx].pown[7] = 0.000
1153
1154   @logindx = casepar[0].nbrsec
1155   @ret=ins("secdd", @logindx-1, 1)
1156   @logfrom = number("    70324 LACOMBE      230.00")
1157   @logto = number("    70152 BARKER      230.00")
1158   secdd[@logindx].ifrom = @logfrom
1159   secdd[@logindx].ito = @logto
1160   secdd[@logindx].ck = "2 "
1161   secdd[@logindx].projid = 0
1162   secdd[@logindx].st = 1
1163   secdd[@logindx].stn = 1
1164   secdd[@logindx].nsec = 1
1165   secdd[@logindx].type = 0
1166   secdd[@logindx].zsecr = 0.000048
1167   secdd[@logindx].zsecx = 0.000500
1168   secdd[@logindx].bsec = 0.034800
1169   secdd[@logindx].rate[0] = 200.00
1170   secdd[@logindx].rate[1] = 200.00
1171   secdd[@logindx].aloss = 0.000
1172   secdd[@logindx].area = 70
1173   secdd[@logindx].zone = 700
```

```
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("    70152 BARKER       230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P1"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 23.586624
load[@logindx].q = 8.786597
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_COM "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 65

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("    70152 BARKER       230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "P2"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 36.566452
load[@logindx].q = 17.463362
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "HID_COM "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 65

@logindx = casepar[0].nbrsec
```

```
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70199 GILMAN       115.00")
@logto = number("  79092 AVON        115.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 0
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.013140
secdd[@logindx].zsecx = 0.053520
secdd[@logindx].bsec = 0.006570
secdd[@logindx].rate[0] = 159.00
secdd[@logindx].rate[1] = 159.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 709
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.985561
volt[@logindx].va = -0.235381
busd[@logindx].extnum = 70921
busd[@logindx].busnam = "SANDSTONE   "
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 65

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70653 TUNDRA       345.00")
@logto = number("  70921 SANDSTONE    345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
```

```
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.000500
  secdd[@logindx].zsecx = 0.007600
  secdd[@logindx].bsec = 0.133600
  secdd[@logindx].rate[0] = 1449.00
  secdd[@logindx].rate[1] = 1637.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 712
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 19400101
  secdd[@logindx].date_out = 20391232
  secdd[@logindx].nown[0] = 65
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].nown[4] = 0
  secdd[@logindx].nown[5] = 0
  secdd[@logindx].nown[6] = 0
  secdd[@logindx].nown[7] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000
  secdd[@logindx].pown[4] = 0.000
  secdd[@logindx].pown[5] = 0.000
  secdd[@logindx].pown[6] = 0.000
  secdd[@logindx].pown[7] = 0.000

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("  70653 TUNDRA      345.00")
  @logto = number("  70921 SANDSTONE   345.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "2 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.000500
  secdd[@logindx].zsecx = 0.007600
  secdd[@logindx].bsec = 0.133600
  secdd[@logindx].rate[0] = 1449.00
  secdd[@logindx].rate[1] = 1637.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 712
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 19400101
  secdd[@logindx].date_out = 20391232
  secdd[@logindx].nown[0] = 65
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
```

```
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("   70919 MAY_VALLEY    345.00")
@logto = number("   70921 SANDSTONE     345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.003600
secdd[@logindx].zsecx = 0.055000
secdd[@logindx].bsec = 0.978500
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 712
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("   70919 MAY_VALLEY    345.00")
@logto = number("   70921 SANDSTONE     345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
```

```
secdd[@logindx].zsecr = 0.003600
secdd[@logindx].zsecx = 0.055000
secdd[@logindx].bsec = 0.978500
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 712
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number("  70597 HARVEST_MI   345.00")
@logto = number("  70596 HARVEST_MI   230.00")
@logreg = number("      0 ------------   0.00")
@logtert = number("      0 ------------   0.00")
@logint = number("      0 ------------   0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 700
tran[@logindx].tbase = 336.000000
tran[@logindx].zpsr = 5.300000e-04
tran[@logindx].zpsx = 5.210000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 230.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 560.0
tran[@logindx].rate[1] = 756.0
tran[@logindx].rate[2] = 560.0
tran[@logindx].rate[3] = 0.0
```

```
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 1.100000
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "HARVEST _1                    "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391232
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70919 MAY_VALLEY   345.00")
@logto = number("  70921 SANDSTONE    345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "f1"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "1 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "        "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70922)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
```

```
@logfrom = number("  70919 MAY_VALLEY   345.00")
@logto = number("  70921 SANDSTONE   345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "t1"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "1 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "       "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70922)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70919 MAY_VALLEY   345.00")
@logto = number("  70921 SANDSTONE   345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "f2"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "2 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "       "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70922)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70919 MAY_VALLEY   345.00")
@logto = number("  70921 SANDSTONE   345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "t2"
shunt[@logindx].ito = @logto
```

```
shunt[@logindx].ck = "2 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "        "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
   @ret = bix(70922)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "

@logindx = casepar[0].nsvd
@ret = ins("svd", @logindx-1, 1)
@logbus = number("  70921 SANDSTONE    345.00")
@logreg = number("  70921 SANDSTONE    345.00")
svd[@logindx].ibus = @logbus
svd[@logindx].id = "v "
svd[@logindx].projid = 0
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 4
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 704
svd[@logindx].g = 0.000000
svd[@logindx].b = 0.000000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.025000
svd[@logindx].bstep[0] = -0.600000
svd[@logindx].bstep[1] = -0.600000
svd[@logindx].bstep[2] = 0.000000
svd[@logindx].bstep[3] = 0.000000
svd[@logindx].bstep[4] = 0.000000
svd[@logindx].bstep[5] = 0.000000
svd[@logindx].bstep[6] = 0.000000
svd[@logindx].bstep[7] = 0.000000
svd[@logindx].bstep[8] = 0.000000
svd[@logindx].bstep[9] = 0.000000
svd[@logindx].nstep[0] = 1
svd[@logindx].nstep[1] = 1
svd[@logindx].nstep[2] = 0
svd[@logindx].nstep[3] = 0
svd[@logindx].nstep[4] = 0
svd[@logindx].nstep[5] = 0
svd[@logindx].nstep[6] = 0
svd[@logindx].nstep[7] = 0
svd[@logindx].nstep[8] = 0
svd[@logindx].nstep[9] = 0
svd[@logindx].beffmin = -1.200000
svd[@logindx].beffmax = 0.000000
svd[@logindx].lid = "        "
svd[@logindx].date_in = 19400101
svd[@logindx].date_out = 20391232
svd[@logindx].nown[0] = 65
```

```
svd[@logindx].nown[1] = 0
svd[@logindx].nown[2] = 0
svd[@logindx].nown[3] = 0
svd[@logindx].pown[0] = 1.000
svd[@logindx].pown[1] = 0.000
svd[@logindx].pown[2] = 0.000
svd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70597 HARVEST_MI   345.00")
@logto = number("  70921 SANDSTONE    345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.004100
secdd[@logindx].zsecx = 0.063100
secdd[@logindx].bsec = 1.127300
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70597 HARVEST_MI   345.00")
@logto = number("  70921 SANDSTONE    345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.004100
secdd[@logindx].zsecx = 0.063100
secdd[@logindx].bsec = 1.127300
secdd[@logindx].rate[0] = 1637.00
secdd[@logindx].rate[1] = 1727.00
```

```
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391232
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70597 HARVEST_MI   345.00")
@logto = number("  70921 SANDSTONE    345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "t1"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "1 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "        "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70598)
shunt[@logindx].isvd = @ret
shunt[@logindx].idsvd = "  "

@logindx = casepar[0].nshunt
@ret=ins("shunt", @logindx-1, 1)
@logfrom = number("  70597 HARVEST_MI   345.00")
```

```
@logto = number("  70921 SANDSTONE    345.00")
shunt[@logindx].ifrom = @logfrom
shunt[@logindx].id = "t2"
shunt[@logindx].ito = @logto
shunt[@logindx].ck = "2 "
shunt[@logindx].projid = 0
shunt[@logindx].st = 1
shunt[@logindx].stn = 1
shunt[@logindx].nsecsh = 1
shunt[@logindx].area = 70
shunt[@logindx].zone = 700
shunt[@logindx].ba = 65
shunt[@logindx].g = 0.000000
shunt[@logindx].b = -0.600000
shunt[@logindx].lid = "        "
shunt[@logindx].date_in = 19400101
shunt[@logindx].date_out = 20391232
shunt[@logindx].nown[0] = 65
shunt[@logindx].nown[1] = 0
shunt[@logindx].nown[2] = 0
shunt[@logindx].nown[3] = 0
shunt[@logindx].pown[0] = 1.000
shunt[@logindx].pown[1] = 0.000
shunt[@logindx].pown[2] = 0.000
shunt[@logindx].pown[3] = 0.000
shunt[@logindx].stsvd = 8224
  @ret = bix(70598)
shunt[@logindx].isvd =  @ret
shunt[@logindx].idsvd = "  "

# ENSURE THE GREEN VALLEY to SPRUCE LINE IS REMOVED

@logfrom = number("70048 GREEN_VLY    230.00")
@logto = number("70528 SPRUCE      230.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
  @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 70077
busd[@logindx].busnam =  "R_2023_05   "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 0
busd[@logindx].zone = 700
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65


@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70048 GREEN_VLY    230.00")
@logto = number("  70077 R_2023_05    230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001491
secdd[@logindx].zsecx = 0.016929
secdd[@logindx].bsec = 0.061480
```

```
secdd[@logindx].rate[0] = 956.00
secdd[@logindx].rate[1] = 956.00
secdd[@logindx].rate[2] = 956.00
secdd[@logindx].rate[3] = 956.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 15.320
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000


@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70528 SPRUCE       230.00")
@logto = number("  70077 R_2023_05    230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000798
secdd[@logindx].zsecx = 0.009061
secdd[@logindx].bsec = 0.032910
secdd[@logindx].rate[0] = 956.00
secdd[@logindx].rate[1] = 956.00
secdd[@logindx].rate[2] = 956.00
secdd[@logindx].rate[3] = 956.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 8.200
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000




@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
```

```
@loglbus = number("    70077 R_2023_05     230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I1"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("    70077 R_2023_05     230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I2"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("    70077 R_2023_05     230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I3"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("    70077 R_2023_05     230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I4"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("    70077 R_2023_05     230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I5"
load[@logindx].st = 1
load[@logindx].p = 98.0
```

```
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70077 R_2023_05    230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I6"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70077 R_2023_05    230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I7"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number("  70077 R_2023_05    230.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "I8"
load[@logindx].st = 1
load[@logindx].p = 98.0
load[@logindx].q = -19.9
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].ba = 0
load[@logindx].nonconf = 1
load[@logindx].lid = "IND_SRF "
load[@logindx].nown = 65
load[@logindx].clzone = "IND_SRF "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.015586
volt[@logindx].va = -0.135117
busd[@logindx].extnum = 71967
busd[@logindx].busnam =  "24_13_T4"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
```

```
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.003675
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71967,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.013715
volt[@logindx].va = -0.116166
busd[@logindx].extnum = 71968
busd[@logindx].busnam =  "24_13_T3"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.003675
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71968,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.013715
volt[@logindx].va = -0.116166
busd[@logindx].extnum = 71969
busd[@logindx].busnam =  "24_13_T2"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.009758
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
```

```
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",71969,"date_in date_out","19400101","21991231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.013709
  volt[@logindx].va = -0.116173
  busd[@logindx].extnum = 71970
  busd[@logindx].busnam =  "24_13_T1"
  busd[@logindx].basekv = 13.8000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].zone = 704
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.007598
  busd[@logindx].vmax = 1.1000
  busd[@logindx].vmin = 0.9000
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
   for @s = 0 to casepar[0].nsubst - 1
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
   next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",71970,"date_in date_out","19400101","21991231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.015586
  volt[@logindx].va = 0.388482
  busd[@logindx].extnum = 98007
  busd[@logindx].busnam =  "mid_98007"
  busd[@logindx].basekv = 1.0000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].zone = 704
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.003675
  busd[@logindx].vmax = 1.1000
  busd[@logindx].vmin = 0.9000
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
   for @s = 0 to casepar[0].nsubst - 1
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
   next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",98007,"date_in date_out","19400101","21991231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.013715
  volt[@logindx].va = 0.407433
  busd[@logindx].extnum = 98008
  busd[@logindx].busnam =  "mid_98008"
  busd[@logindx].basekv = 1.0000
  busd[@logindx].type = 1
```

```
2278   busd[@logindx].area = 70
2279   busd[@logindx].zone = 704
2280   busd[@logindx].projid = 0
2281   busd[@logindx].level = 0
2282   busd[@logindx].vsched = 1.003675
2283   busd[@logindx].vmax = 1.1000
2284   busd[@logindx].vmin = 0.9000
2285   busd[@logindx].nown = 700
2286   @snum = -1
2287   @sindx = -1
2288    for @s = 0 to casepar[0].nsubst - 1
2289     if(subst[@s].extnum = @snum)
2290       @sindx = @s
2291     endif
2292    next
2293     busd[@logindx].isubst = @sindx  /*  -1  */
2294   @ret=setbix(busd[@logindx].extnum, @logindx)
2295   @iret=datachange(1,"busd",98008,"date_in date_out","19400101","21991231")
2296
2297   @logindx = casepar[0].nbus
2298   @ret=ins("busd", @logindx-1, 1)
2299   @ret=ins("volt", @logindx-1, 1)
2300   volt[@logindx].vm = 1.013715
2301   volt[@logindx].va = 0.407433
2302   busd[@logindx].extnum = 98005
2303   busd[@logindx].busnam =  "mid_98005"
2304   busd[@logindx].basekv = 1.0000
2305   busd[@logindx].type = 1
2306   busd[@logindx].area = 70
2307   busd[@logindx].zone = 704
2308   busd[@logindx].projid = 0
2309   busd[@logindx].level = 0
2310   busd[@logindx].vsched = 1.009758
2311   busd[@logindx].vmax = 1.1000
2312   busd[@logindx].vmin = 0.9000
2313   busd[@logindx].nown = 700
2314   @snum = -1
2315   @sindx = -1
2316    for @s = 0 to casepar[0].nsubst - 1
2317     if(subst[@s].extnum = @snum)
2318       @sindx = @s
2319     endif
2320    next
2321     busd[@logindx].isubst = @sindx  /*  -1  */
2322   @ret=setbix(busd[@logindx].extnum, @logindx)
2323   @iret=datachange(1,"busd",98005,"date_in date_out","19400101","21991231")
2324
2325   @logindx = casepar[0].nbus
2326   @ret=ins("busd", @logindx-1, 1)
2327   @ret=ins("volt", @logindx-1, 1)
2328   volt[@logindx].vm = 1.013709
2329   volt[@logindx].va = 0.407426
2330   busd[@logindx].extnum = 98006
2331   busd[@logindx].busnam =  "mid_98006"
2332   busd[@logindx].basekv = 1.0000
2333   busd[@logindx].type = 1
2334   busd[@logindx].area = 70
2335   busd[@logindx].zone = 704
2336   busd[@logindx].projid = 0
2337   busd[@logindx].level = 0
2338   busd[@logindx].vsched = 1.007598
2339   busd[@logindx].vmax = 1.1000
2340   busd[@logindx].vmin = 0.9000
2341   busd[@logindx].nown = 700
2342   @snum = -1
2343   @sindx = -1
2344    for @s = 0 to casepar[0].nsubst - 1
2345     if(subst[@s].extnum = @snum)
2346       @sindx = @s
```

```
2347    endif
2348   next
2349    busd[@logindx].isubst = @sindx  /*  -1  */
2350   @ret=setbix(busd[@logindx].extnum, @logindx)
2351   @iret=datachange(1,"busd",98006,"date_in date_out","19400101","21991231")
2352
2353   @logindx = casepar[0].nbus
2354   @ret=ins("busd", @logindx-1, 1)
2355   @ret=ins("volt", @logindx-1, 1)
2356   volt[@logindx].vm = 1.009601
2357   volt[@logindx].va = 0.397531
2358   busd[@logindx].extnum = 700056
2359   busd[@logindx].busnam =  "24_13_W2_2"
2360   busd[@logindx].basekv = 34.5000
2361   busd[@logindx].type = 1
2362   busd[@logindx].area = 70
2363   busd[@logindx].zone = 704
2364   busd[@logindx].projid = 0
2365   busd[@logindx].level = 0
2366   busd[@logindx].vsched = 1.004246
2367   busd[@logindx].vmax = 1.0150
2368   busd[@logindx].vmin = 0.9850
2369   busd[@logindx].nown = 700
2370   @snum = -1
2371   @sindx = -1
2372    for @s = 0 to casepar[0].nsubst - 1
2373    if(subst[@s].extnum = @snum)
2374     @sindx = @s
2375    endif
2376   next
2377    busd[@logindx].isubst = @sindx  /*  -1  */
2378   @ret=setbix(busd[@logindx].extnum, @logindx)
2379   @iret=datachange(1,"busd",700056,"date_in date_out","19400101","21991231")
2380
2381   @logindx = casepar[0].nbus
2382   @ret=ins("busd", @logindx-1, 1)
2383   @ret=ins("volt", @logindx-1, 1)
2384   volt[@logindx].vm = 1.051765
2385   volt[@logindx].va = 0.97756
2386   busd[@logindx].extnum = 700057
2387   busd[@logindx].busnam =  "24_13_W2"
2388   busd[@logindx].basekv = 0.7200
2389   busd[@logindx].type = 2
2390   busd[@logindx].area = 70
2391   busd[@logindx].zone = 704
2392   busd[@logindx].projid = 0
2393   busd[@logindx].level = 0
2394   busd[@logindx].vsched = 1.00
2395   busd[@logindx].vmax = 1.1000
2396   busd[@logindx].vmin = 0.9000
2397   busd[@logindx].nown = 700
2398   @snum = -1
2399   @sindx = -1
2400    for @s = 0 to casepar[0].nsubst - 1
2401    if(subst[@s].extnum = @snum)
2402     @sindx = @s
2403    endif
2404   next
2405    busd[@logindx].isubst = @sindx  /*  -1  */
2406   @ret=setbix(busd[@logindx].extnum, @logindx)
2407   @iret=datachange(1,"busd",700057,"date_in date_out","19400101","21991231")
2408
2409   @logindx = casepar[0].nbus
2410   @ret=ins("busd", @logindx-1, 1)
2411   @ret=ins("volt", @logindx-1, 1)
2412   volt[@logindx].vm = 1.020838
2413   volt[@logindx].va = 0.40112
2414   busd[@logindx].extnum = 700058
2415   busd[@logindx].busnam =  "24_13_W2_1"
```

```
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700058,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.009601
volt[@logindx].va = 0.397531
busd[@logindx].extnum = 700059
busd[@logindx].busnam =  "24_13_W3_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.998649
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700059,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.051765
volt[@logindx].va = 0.97756
busd[@logindx].extnum = 700060
busd[@logindx].busnam =  "24_13_W3"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
```

```
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700060,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.020838
volt[@logindx].va = 0.40112
busd[@logindx].extnum = 700061
busd[@logindx].busnam = "24_13_W3_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.010769
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700061,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.011378
volt[@logindx].va = 0.379997
busd[@logindx].extnum = 700062
busd[@logindx].busnam = "24_13_W4_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.998649
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700062,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.059445
volt[@logindx].va = 0.958692
```

```
busd[@logindx].extnum = 700063
busd[@logindx].busnam = "24_13_W4"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700063,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.024070
volt[@logindx].va = 0.38315
busd[@logindx].extnum = 700064
busd[@logindx].busnam = "24_13_W4_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.010769
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700064,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.020908
volt[@logindx].va = 0.401141
busd[@logindx].extnum = 700065
busd[@logindx].busnam = "24_13_W1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.0
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
```

```
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700065,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.037300
volt[@logindx].va = 0.278754
busd[@logindx].extnum = 700066
busd[@logindx].busnam =  "PI_2024_13"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700066,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.051833
volt[@logindx].va = 0.977574
busd[@logindx].extnum = 700067
busd[@logindx].busnam =  "24_13_W1"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.00
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700067,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
```

```
volt[@logindx].vm = 1.009596
volt[@logindx].va = 0.397525
busd[@logindx].extnum = 700068
busd[@logindx].busnam = "24_13_W1_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.002251
busd[@logindx].vmax = 1.0150
busd[@logindx].vmin = 0.9850
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700068,"date_in date_out","19400101","21991231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70919 MAY_VALLEY    345.00")
@logto = number(" 700066 5RSC_24_13    345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000956
secdd[@logindx].zsecx = 0.011705
secdd[@logindx].bsec = 0.203021
secdd[@logindx].rate[0] = 960.00
secdd[@logindx].rate[1] = 960.00
secdd[@logindx].rate[2] = 960.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 31.600
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
```

```
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700056 5RSC_24_13    34.50")
@logto = number(" 700058 5RSC_24_13    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006100
secdd[@logindx].zsecx = 0.005600
secdd[@logindx].bsec = 0.061300
secdd[@logindx].rate[0] = 263.40
secdd[@logindx].rate[1] = 263.40
secdd[@logindx].rate[2] = 263.40
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700059 5RSC_24_13    34.50")
@logto = number(" 700061 5RSC_24_13    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
```

```
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006100
secdd[@logindx].zsecx = 0.005600
secdd[@logindx].bsec = 0.061300
secdd[@logindx].rate[0] = 263.40
secdd[@logindx].rate[1] = 263.40
secdd[@logindx].rate[2] = 263.40
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700062 5RSC_24_13    34.50")
@logto = number(" 700064 5RSC_24_13    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.007660
secdd[@logindx].zsecx = 0.007030
secdd[@logindx].bsec = 0.056130
secdd[@logindx].rate[0] = 225.78
secdd[@logindx].rate[1] = 225.78
secdd[@logindx].rate[2] = 225.78
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
```

```
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700068 5RSC_24_13    34.50")
@logto = number(" 700065 5RSC_24_13    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006140
secdd[@logindx].zsecx = 0.005640
secdd[@logindx].bsec = 0.061290
secdd[@logindx].rate[0] = 263.40
secdd[@logindx].rate[1] = 263.40
secdd[@logindx].rate[2] = 263.40
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 1.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 21991231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
```

```
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700058 5RSC_24_13     34.50")
@logto = number(" 700057 5RSC_24_13      0.72")
@logreg = number(" 700058 5RSC_24_13     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 222.600006
tran[@logindx].zpsr = 7.593000e-03
tran[@logindx].zpsx = 9.870800e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 222.6
tran[@logindx].rate[1] = 222.6
tran[@logindx].rate[2] = 222.6
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.000000
tran[@logindx].vtmin = 1.000000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
```

```
3037   tran[@logindx].pown[2] = 0.000
3038   tran[@logindx].pown[3] = 0.000
3039   tran[@logindx].pown[4] = 0.000
3040   tran[@logindx].pown[5] = 0.000
3041   tran[@logindx].pown[6] = 0.000
3042   tran[@logindx].pown[7] = 0.000
3043
3044   @logindx = casepar[0].ntran
3045   @ret=ins("tran", @logindx-1, 1)
3046   @logfrom = number(" 700061 5RSC_24_13     34.50")
3047   @logto = number(" 700060 5RSC_24_13      0.72")
3048   @logreg = number(" 700061 5RSC_24_13     34.50")
3049   @logtert = number("      0 ------------    0.00")
3050   @logint = number("      0 ------------    0.00")
3051   tran[@logindx].ifrom = @logfrom
3052   tran[@logindx].ito = @logto
3053   tran[@logindx].ck = "U3"
3054   tran[@logindx].projid = 0
3055   tran[@logindx].st = 1
3056   tran[@logindx].stn = 1
3057   tran[@logindx].type = 1
3058   tran[@logindx].kreg = @logreg
3059   tran[@logindx].iztabl = 0
3060   tran[@logindx].itert = @logtert
3061   tran[@logindx].iint = @logint
3062   tran[@logindx].area = 70
3063   tran[@logindx].zone = 704
3064   tran[@logindx].tbase = 222.600006
3065   tran[@logindx].zpsr = 7.593000e-03
3066   tran[@logindx].zpsx = 9.870800e-02
3067   tran[@logindx].zptr = 0.000000e+00
3068   tran[@logindx].zptx = 0.000000e+00
3069   tran[@logindx].ztsr = 0.000000e+00
3070   tran[@logindx].ztsx = 0.000000e+00
3071   tran[@logindx].vnomp = 34.500000
3072   tran[@logindx].vnoms = 0.720000
3073   tran[@logindx].vnomt = 0.000000
3074   tran[@logindx].anglp = 0.000000
3075   tran[@logindx].gmag = 0.000000e+00
3076   tran[@logindx].bmag = 0.000000e+00
3077   tran[@logindx].rate[0] = 222.6
3078   tran[@logindx].rate[1] = 222.6
3079   tran[@logindx].rate[2] = 222.6
3080   tran[@logindx].rate[3] = 0.0
3081   tran[@logindx].rate[4] = 0.0
3082   tran[@logindx].rate[5] = 0.0
3083   tran[@logindx].rate[6] = 0.0
3084   tran[@logindx].rate[7] = 0.0
3085   tran[@logindx].aloss = 0.000
3086   tran[@logindx].tmax = 1.050000
3087   tran[@logindx].tmin = 0.950000
3088   tran[@logindx].vtmax = 1.000000
3089   tran[@logindx].vtmin = 1.000000
3090   tran[@logindx].stepp = 0.025000
3091   tran[@logindx].tapp = 1.000000
3092   tran[@logindx].tapfp = 1.000000
3093   tran[@logindx].tapfs = 1.000000
3094   tran[@logindx].tapft = 1.000000
3095   tran[@logindx].lid = "                                        "
3096   tran[@logindx].ohms = 0
3097   tran[@logindx].date_in = 19400101
3098   tran[@logindx].date_out = 21991231
3099   tran[@logindx].nown[0] = 700
3100   tran[@logindx].nown[1] = 0
3101   tran[@logindx].nown[2] = 0
3102   tran[@logindx].nown[3] = 0
3103   tran[@logindx].nown[4] = 0
3104   tran[@logindx].nown[5] = 0
3105   tran[@logindx].nown[6] = 0
```

```
3106  tran[@logindx].nown[7] = 0
3107  tran[@logindx].pown[0] = 1.000
3108  tran[@logindx].pown[1] = 0.000
3109  tran[@logindx].pown[2] = 0.000
3110  tran[@logindx].pown[3] = 0.000
3111  tran[@logindx].pown[4] = 0.000
3112  tran[@logindx].pown[5] = 0.000
3113  tran[@logindx].pown[6] = 0.000
3114  tran[@logindx].pown[7] = 0.000
3115
3116  @logindx = casepar[0].ntran
3117  @ret=ins("tran", @logindx-1, 1)
3118  @logfrom = number(" 700064 5RSC_24_13    34.50")
3119  @logto = number(" 700063 5RSC_24_13     0.72")
3120  @logreg = number(" 700064 5RSC_24_13    34.50")
3121  @logtert = number("      0 ------------    0.00")
3122  @logint = number("      0 ------------    0.00")
3123  tran[@logindx].ifrom = @logfrom
3124  tran[@logindx].ito = @logto
3125  tran[@logindx].ck = "U4"
3126  tran[@logindx].projid = 0
3127  tran[@logindx].st = 1
3128  tran[@logindx].stn = 1
3129  tran[@logindx].type = 1
3130  tran[@logindx].kreg = @logreg
3131  tran[@logindx].iztabl = 0
3132  tran[@logindx].itert = @logtert
3133  tran[@logindx].iint = @logint
3134  tran[@logindx].area = 70
3135  tran[@logindx].zone = 704
3136  tran[@logindx].tbase = 190.800003
3137  tran[@logindx].zpsr = 7.593000e-03
3138  tran[@logindx].zpsx = 9.870800e-02
3139  tran[@logindx].zptr = 0.000000e+00
3140  tran[@logindx].zptx = 0.000000e+00
3141  tran[@logindx].ztsr = 0.000000e+00
3142  tran[@logindx].ztsx = 0.000000e+00
3143  tran[@logindx].vnomp = 34.500000
3144  tran[@logindx].vnoms = 0.720000
3145  tran[@logindx].vnomt = 0.000000
3146  tran[@logindx].anglp = 0.000000
3147  tran[@logindx].gmag = 0.000000e+00
3148  tran[@logindx].bmag = 0.000000e+00
3149  tran[@logindx].rate[0] = 190.8
3150  tran[@logindx].rate[1] = 190.8
3151  tran[@logindx].rate[2] = 190.8
3152  tran[@logindx].rate[3] = 0.0
3153  tran[@logindx].rate[4] = 0.0
3154  tran[@logindx].rate[5] = 0.0
3155  tran[@logindx].rate[6] = 0.0
3156  tran[@logindx].rate[7] = 0.0
3157  tran[@logindx].aloss = 0.000
3158  tran[@logindx].tmax = 1.050000
3159  tran[@logindx].tmin = 0.950000
3160  tran[@logindx].vtmax = 1.000000
3161  tran[@logindx].vtmin = 1.000000
3162  tran[@logindx].stepp = 0.025000
3163  tran[@logindx].tapp = 1.000000
3164  tran[@logindx].tapfp = 1.000000
3165  tran[@logindx].tapfs = 1.000000
3166  tran[@logindx].tapft = 1.000000
3167  tran[@logindx].lid = "                                        "
3168  tran[@logindx].ohms = 0
3169  tran[@logindx].date_in = 19400101
3170  tran[@logindx].date_out = 21991231
3171  tran[@logindx].nown[0] = 700
3172  tran[@logindx].nown[1] = 0
3173  tran[@logindx].nown[2] = 0
3174  tran[@logindx].nown[3] = 0
```

```
3175   tran[@logindx].nown[4] = 0
3176   tran[@logindx].nown[5] = 0
3177   tran[@logindx].nown[6] = 0
3178   tran[@logindx].nown[7] = 0
3179   tran[@logindx].pown[0] = 1.000
3180   tran[@logindx].pown[1] = 0.000
3181   tran[@logindx].pown[2] = 0.000
3182   tran[@logindx].pown[3] = 0.000
3183   tran[@logindx].pown[4] = 0.000
3184   tran[@logindx].pown[5] = 0.000
3185   tran[@logindx].pown[6] = 0.000
3186   tran[@logindx].pown[7] = 0.000
3187
3188   @logindx = casepar[0].ntran
3189   @ret=ins("tran", @logindx-1, 1)
3190   @logfrom = number(" 700065 5RSC_24_13    34.50")
3191   @logto = number(" 700067 5RSC_24_13     0.72")
3192   @logreg = number(" 700065 5RSC_24_13    34.50")
3193   @logtert = number("      0 ------------    0.00")
3194   @logint = number("      0 ------------    0.00")
3195   tran[@logindx].ifrom = @logfrom
3196   tran[@logindx].ito = @logto
3197   tran[@logindx].ck = "U1"
3198   tran[@logindx].projid = 0
3199   tran[@logindx].st = 1
3200   tran[@logindx].stn = 1
3201   tran[@logindx].type = 1
3202   tran[@logindx].kreg = @logreg
3203   tran[@logindx].iztabl = 0
3204   tran[@logindx].itert = @logtert
3205   tran[@logindx].iint = @logint
3206   tran[@logindx].area = 70
3207   tran[@logindx].zone = 704
3208   tran[@logindx].tbase = 222.600006
3209   tran[@logindx].zpsr = 7.593000e-03
3210   tran[@logindx].zpsx = 9.870800e-02
3211   tran[@logindx].zptr = 0.000000e+00
3212   tran[@logindx].zptx = 0.000000e+00
3213   tran[@logindx].ztsr = 0.000000e+00
3214   tran[@logindx].ztsx = 0.000000e+00
3215   tran[@logindx].vnomp = 34.500000
3216   tran[@logindx].vnoms = 0.720000
3217   tran[@logindx].vnomt = 0.000000
3218   tran[@logindx].anglp = 0.000000
3219   tran[@logindx].gmag = 0.000000e+00
3220   tran[@logindx].bmag = 0.000000e+00
3221   tran[@logindx].rate[0] = 222.6
3222   tran[@logindx].rate[1] = 222.6
3223   tran[@logindx].rate[2] = 222.6
3224   tran[@logindx].rate[3] = 0.0
3225   tran[@logindx].rate[4] = 0.0
3226   tran[@logindx].rate[5] = 0.0
3227   tran[@logindx].rate[6] = 0.0
3228   tran[@logindx].rate[7] = 0.0
3229   tran[@logindx].aloss = 0.000
3230   tran[@logindx].tmax = 1.050000
3231   tran[@logindx].tmin = 0.950000
3232   tran[@logindx].vtmax = 1.000000
3233   tran[@logindx].vtmin = 1.000000
3234   tran[@logindx].stepp = 0.025000
3235   tran[@logindx].tapp = 1.000000
3236   tran[@logindx].tapfp = 1.000000
3237   tran[@logindx].tapfs = 1.000000
3238   tran[@logindx].tapft = 1.000000
3239   tran[@logindx].lid = "                                "
3240   tran[@logindx].ohms = 0
3241   tran[@logindx].date_in = 19400101
3242   tran[@logindx].date_out = 21991231
3243   tran[@logindx].nown[0] = 700
```

```
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700066 5RSC_24_13    345.00")
@logto = number(" 700056 5RSC_24_13     34.50")
@logreg = number(" 700056 5RSC_24_13     34.50")
@logtert = number("  71969 5RSC_24_13     13.80")
@logint = number("  98005 5RSC_24_13      1.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 1.811000e-03
tran[@logindx].zpsx = 9.998399e-02
tran[@logindx].zptr = 2.989000e-03
tran[@logindx].zptx = 1.649730e-01
tran[@logindx].ztsr = 9.060000e-04
tran[@logindx].ztsx = 4.999200e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.015000
tran[@logindx].vtmin = 0.985000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.081250
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
```

```
3313   tran[@logindx].date_in = 19400101
3314   tran[@logindx].date_out = 21991231
3315   tran[@logindx].nown[0] = 700
3316   tran[@logindx].nown[1] = 0
3317   tran[@logindx].nown[2] = 0
3318   tran[@logindx].nown[3] = 0
3319   tran[@logindx].nown[4] = 0
3320   tran[@logindx].nown[5] = 0
3321   tran[@logindx].nown[6] = 0
3322   tran[@logindx].nown[7] = 0
3323   tran[@logindx].pown[0] = 1.000
3324   tran[@logindx].pown[1] = 0.000
3325   tran[@logindx].pown[2] = 0.000
3326   tran[@logindx].pown[3] = 0.000
3327   tran[@logindx].pown[4] = 0.000
3328   tran[@logindx].pown[5] = 0.000
3329   tran[@logindx].pown[6] = 0.000
3330   tran[@logindx].pown[7] = 0.000
3331
3332   @logindx = casepar[0].ntran
3333   @ret=ins("tran", @logindx-1, 1)
3334   @logfrom = number(" 700066 5RSC_24_13    345.00")
3335   @logto = number(" 700059 5RSC_24_13     34.50")
3336   @logreg = number(" 700059 5RSC_24_13     34.50")
3337   @logtert = number("  71968 5RSC_24_13     13.80")
3338   @logint = number("  98008 5RSC_24_13      1.00")
3339   tran[@logindx].ifrom = @logfrom
3340   tran[@logindx].ito = @logto
3341   tran[@logindx].ck = "T3"
3342   tran[@logindx].projid = 0
3343   tran[@logindx].st = 1
3344   tran[@logindx].stn = 1
3345   tran[@logindx].type = 2
3346   tran[@logindx].kreg = @logreg
3347   tran[@logindx].iztabl = 0
3348   tran[@logindx].itert = @logtert
3349   tran[@logindx].iint = @logint
3350   tran[@logindx].area = 70
3351   tran[@logindx].zone = 704
3352   tran[@logindx].tbase = 113.000000
3353   tran[@logindx].zpsr = 1.811000e-03
3354   tran[@logindx].zpsx = 9.998399e-02
3355   tran[@logindx].zptr = 2.989000e-03
3356   tran[@logindx].zptx = 1.649730e-01
3357   tran[@logindx].ztsr = 9.060000e-04
3358   tran[@logindx].ztsx = 4.999200e-02
3359   tran[@logindx].vnomp = 345.000000
3360   tran[@logindx].vnoms = 34.500000
3361   tran[@logindx].vnomt = 13.800000
3362   tran[@logindx].anglp = 0.000000
3363   tran[@logindx].gmag = 0.000000e+00
3364   tran[@logindx].bmag = 0.000000e+00
3365   tran[@logindx].rate[0] = 187.0
3366   tran[@logindx].rate[1] = 187.0
3367   tran[@logindx].rate[2] = 187.0
3368   tran[@logindx].rate[3] = 0.0
3369   tran[@logindx].rate[4] = 0.0
3370   tran[@logindx].rate[5] = 0.0
3371   tran[@logindx].rate[6] = 0.0
3372   tran[@logindx].rate[7] = 0.0
3373   tran[@logindx].aloss = 0.000
3374   tran[@logindx].tmax = 1.100000
3375   tran[@logindx].tmin = 0.900000
3376   tran[@logindx].vtmax = 1.015000
3377   tran[@logindx].vtmin = 0.985000
3378   tran[@logindx].stepp = -0.006250
3379   tran[@logindx].tapp = 1.081250
3380   tran[@logindx].tapfp = 1.000000
3381   tran[@logindx].tapfs = 1.000000
```

```
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700066 5RSC_24_13    345.00")
@logto = number(" 700062 5RSC_24_13     34.50")
@logreg = number(" 700062 5RSC_24_13     34.50")
@logtert = number("  71967 5RSC_24_13     13.80")
@logint = number("  98007 5RSC_24_13      1.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T4"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 1.811000e-03
tran[@logindx].zpsx = 9.998399e-02
tran[@logindx].zptr = 2.989000e-03
tran[@logindx].zptx = 1.649730e-01
tran[@logindx].ztsr = 9.060000e-04
tran[@logindx].ztsx = 4.999200e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.015000
tran[@logindx].vtmin = 0.985000
tran[@logindx].stepp = -0.006250
```

```
tran[@logindx].tapp = 1.081250
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700066 5RSC_24_13    345.00")
@logto = number(" 700068 5RSC_24_13     34.50")
@logreg = number(" 700068 5RSC_24_13     34.50")
@logtert = number("  71970 5RSC_24_13     13.80")
@logint = number("  98006 5RSC_24_13      1.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 1.811000e-03
tran[@logindx].zpsx = 9.998399e-02
tran[@logindx].zptr = 2.989000e-03
tran[@logindx].zptx = 1.649730e-01
tran[@logindx].ztsr = 9.060000e-04
tran[@logindx].ztsx = 4.999200e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
```

```
tran[@logindx].vtmax = 1.015000
tran[@logindx].vtmin = 0.985000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.081250
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 21991231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700057 5RSC_24_13     0.72")
@logreg = number(" 700066 5RSC_24_13   345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W2"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 201.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503349
gens[@logindx].qmax = 87.192001
gens[@logindx].qmin = -67.199997
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 189.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 21991231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
```

```
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 71
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700060 5RSC_24_13      0.72")
@logreg = number(" 700066 5RSC_24_13    345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 201.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503349
gens[@logindx].qmax = 87.192001
gens[@logindx].qmin = -67.199997
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 189.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 21991231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
```

```
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 71
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700063 5RSC_24_13      0.72")
@logreg = number(" 700066 5RSC_24_13    345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W4"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 172.8000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503403
gens[@logindx].qmax = 74.736000
gens[@logindx].qmin = -57.599998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 162.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 21991231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
```

```
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 71
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700067 5RSC_24_13      0.72")
@logreg = number(" 700066 5RSC_24_13    345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 201.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 66.503334
gens[@logindx].qmax = 87.192001
gens[@logindx].qmin = -67.199997
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 189.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 21991231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 71
gens[@logindx].fueltype[1] = 0
```

```
3796  gens[@logindx].fueltype[2] = 0
3797  gens[@logindx].qtab = 0
3798  gens[@logindx].pf = 1.000000
3799
3800  @logindx = casepar[0].nload
3801  @ret=ins("load", @logindx-1, 1)
3802  @loglbus = number(" 700056 5RSC_24_13    34.50")
3803  load[@logindx].lbus = @loglbus
3804  load[@logindx].id = "SS"
3805  load[@logindx].projid = 0
3806  load[@logindx].st = 1
3807  load[@logindx].stn = 0
3808  load[@logindx].area = 70
3809  load[@logindx].zone = 704
3810  load[@logindx].p = 0.226850
3811  load[@logindx].q = 0.140650
3812  load[@logindx].pdgen = 0.000000
3813  load[@logindx].qdgen = 0.000000
3814  load[@logindx].ip = 0.000000
3815  load[@logindx].iq = 0.000000
3816  load[@logindx].g = 0.000000
3817  load[@logindx].b = 0.000000
3818  load[@logindx].nonconf = 0
3819  load[@logindx].lid = "        "
3820  load[@logindx].date_in = 19400101
3821  load[@logindx].date_out = 21991231
3822  load[@logindx].nown = 7000
3823  load[@logindx].clzone = "        "
3824
3825  @logindx = casepar[0].nload
3826  @ret=ins("load", @logindx-1, 1)
3827  @loglbus = number(" 700059 5RSC_24_13    34.50")
3828  load[@logindx].lbus = @loglbus
3829  load[@logindx].id = "SS"
3830  load[@logindx].projid = 0
3831  load[@logindx].st = 1
3832  load[@logindx].stn = 0
3833  load[@logindx].area = 70
3834  load[@logindx].zone = 704
3835  load[@logindx].p = 0.226850
3836  load[@logindx].q = 0.140650
3837  load[@logindx].pdgen = 0.000000
3838  load[@logindx].qdgen = 0.000000
3839  load[@logindx].ip = 0.000000
3840  load[@logindx].iq = 0.000000
3841  load[@logindx].g = 0.000000
3842  load[@logindx].b = 0.000000
3843  load[@logindx].nonconf = 0
3844  load[@logindx].lid = "        "
3845  load[@logindx].date_in = 19400101
3846  load[@logindx].date_out = 21991231
3847  load[@logindx].nown = 700
3848  load[@logindx].clzone = "        "
3849
3850  @logindx = casepar[0].nload
3851  @ret=ins("load", @logindx-1, 1)
3852  @loglbus = number(" 700062 5RSC_24_13    34.50")
3853  load[@logindx].lbus = @loglbus
3854  load[@logindx].id = "SS"
3855  load[@logindx].projid = 0
3856  load[@logindx].st = 1
3857  load[@logindx].stn = 0
3858  load[@logindx].area = 70
3859  load[@logindx].zone = 704
3860  load[@logindx].p = 0.194440
3861  load[@logindx].q = 0.120560
3862  load[@logindx].pdgen = 0.000000
3863  load[@logindx].qdgen = 0.000000
3864  load[@logindx].ip = 0.000000
```

```
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 21991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700068 5RSC_24_13    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 0.226850
load[@logindx].q = 0.140650
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 21991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.001200
volt[@logindx].va = 0
busd[@logindx].extnum = 700069
busd[@logindx].busnam = "PI_2024_12"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.001200
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700069,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
```

```
busd[@logindx].extnum = 700070
busd[@logindx].busnam = "24_12_W1_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700070,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700071
busd[@logindx].busnam = "24_12_W2_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700071,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700072
busd[@logindx].busnam = "24_12_W3_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
```

```
4003  @sindx = -1
4004   for @s = 0 to casepar[0].nsubst - 1
4005    if(subst[@s].extnum = @snum)
4006     @sindx = @s
4007    endif
4008   next
4009    busd[@logindx].isubst = @sindx  /*  -1  */
4010  @ret=setbix(busd[@logindx].extnum, @logindx)
4011  @iret=datachange(1,"busd",700072,"date_in date_out","19400101","20391231")
4012
4013  @logindx = casepar[0].nbus
4014  @ret=ins("busd", @logindx-1, 1)
4015  @ret=ins("volt", @logindx-1, 1)
4016  volt[@logindx].vm = 1.000000
4017  volt[@logindx].va = 0
4018  busd[@logindx].extnum = 700073
4019  busd[@logindx].busnam =  "24_12_W1_1"
4020  busd[@logindx].basekv = 34.5000
4021  busd[@logindx].type = 1
4022  busd[@logindx].area = 70
4023  busd[@logindx].zone = 706
4024  busd[@logindx].projid = 0
4025  busd[@logindx].level = 0
4026  busd[@logindx].vsched = 1.000000
4027  busd[@logindx].vmax = 1.0500
4028  busd[@logindx].vmin = 0.9500
4029  busd[@logindx].nown = 700
4030  @snum = -1
4031  @sindx = -1
4032   for @s = 0 to casepar[0].nsubst - 1
4033    if(subst[@s].extnum = @snum)
4034     @sindx = @s
4035    endif
4036   next
4037    busd[@logindx].isubst = @sindx  /*  -1  */
4038  @ret=setbix(busd[@logindx].extnum, @logindx)
4039  @iret=datachange(1,"busd",700073,"date_in date_out","19400101","20391231")
4040
4041  @logindx = casepar[0].nbus
4042  @ret=ins("busd", @logindx-1, 1)
4043  @ret=ins("volt", @logindx-1, 1)
4044  volt[@logindx].vm = 1.000000
4045  volt[@logindx].va = 0
4046  busd[@logindx].extnum = 700074
4047  busd[@logindx].busnam =  "24_12_W2_1"
4048  busd[@logindx].basekv = 34.5000
4049  busd[@logindx].type = 1
4050  busd[@logindx].area = 70
4051  busd[@logindx].zone = 706
4052  busd[@logindx].projid = 0
4053  busd[@logindx].level = 0
4054  busd[@logindx].vsched = 1.000000
4055  busd[@logindx].vmax = 1.0500
4056  busd[@logindx].vmin = 0.9500
4057  busd[@logindx].nown = 700
4058  @snum = -1
4059  @sindx = -1
4060   for @s = 0 to casepar[0].nsubst - 1
4061    if(subst[@s].extnum = @snum)
4062     @sindx = @s
4063    endif
4064   next
4065    busd[@logindx].isubst = @sindx  /*  -1  */
4066  @ret=setbix(busd[@logindx].extnum, @logindx)
4067  @iret=datachange(1,"busd",700074,"date_in date_out","19400101","20391231")
4068
4069  @logindx = casepar[0].nbus
4070  @ret=ins("busd", @logindx-1, 1)
4071  @ret=ins("volt", @logindx-1, 1)
```

```
4072  volt[@logindx].vm = 1.000000
4073  volt[@logindx].va = 0
4074  busd[@logindx].extnum = 700075
4075  busd[@logindx].busnam = "24_12_W3_1"
4076  busd[@logindx].basekv = 34.5000
4077  busd[@logindx].type = 1
4078  busd[@logindx].area = 70
4079  busd[@logindx].zone = 706
4080  busd[@logindx].projid = 0
4081  busd[@logindx].level = 0
4082  busd[@logindx].vsched = 1.000000
4083  busd[@logindx].vmax = 1.0500
4084  busd[@logindx].vmin = 0.9500
4085  busd[@logindx].nown = 700
4086  @snum = -1
4087  @sindx = -1
4088   for @s = 0 to casepar[0].nsubst - 1
4089    if(subst[@s].extnum = @snum)
4090     @sindx = @s
4091    endif
4092   next
4093    busd[@logindx].isubst = @sindx  /*  -1  */
4094  @ret=setbix(busd[@logindx].extnum, @logindx)
4095  @iret=datachange(1,"busd",700075,"date_in date_out","19400101","20391231")
4096
4097  @logindx = casepar[0].nbus
4098  @ret=ins("busd", @logindx-1, 1)
4099  @ret=ins("volt", @logindx-1, 1)
4100  volt[@logindx].vm = 1.000000
4101  volt[@logindx].va = 0
4102  busd[@logindx].extnum = 700076
4103  busd[@logindx].busnam = "24_12_W1"
4104  busd[@logindx].basekv = 0.7200
4105  busd[@logindx].type = 2
4106  busd[@logindx].area = 70
4107  busd[@logindx].zone = 706
4108  busd[@logindx].projid = 0
4109  busd[@logindx].level = 0
4110  busd[@logindx].vsched = 1.000000
4111  busd[@logindx].vmax = 1.0500
4112  busd[@logindx].vmin = 0.9500
4113  busd[@logindx].nown = 700
4114  @snum = -1
4115  @sindx = -1
4116   for @s = 0 to casepar[0].nsubst - 1
4117    if(subst[@s].extnum = @snum)
4118     @sindx = @s
4119    endif
4120   next
4121    busd[@logindx].isubst = @sindx  /*  -1  */
4122  @ret=setbix(busd[@logindx].extnum, @logindx)
4123  @iret=datachange(1,"busd",700076,"date_in date_out","19400101","20391231")
4124
4125  @logindx = casepar[0].nbus
4126  @ret=ins("busd", @logindx-1, 1)
4127  @ret=ins("volt", @logindx-1, 1)
4128  volt[@logindx].vm = 1.000000
4129  volt[@logindx].va = 0
4130  busd[@logindx].extnum = 700077
4131  busd[@logindx].busnam = "24_12_W2"
4132  busd[@logindx].basekv = 0.7200
4133  busd[@logindx].type = 2
4134  busd[@logindx].area = 70
4135  busd[@logindx].zone = 706
4136  busd[@logindx].projid = 0
4137  busd[@logindx].level = 0
4138  busd[@logindx].vsched = 1.000000
4139  busd[@logindx].vmax = 1.0500
4140  busd[@logindx].vmin = 0.9500
```

```
4141  busd[@logindx].nown = 700
4142  @snum = -1
4143  @sindx = -1
4144   for @s = 0 to casepar[0].nsubst - 1
4145    if(subst[@s].extnum = @snum)
4146     @sindx = @s
4147    endif
4148   next
4149    busd[@logindx].isubst = @sindx  /*  -1  */
4150  @ret=setbix(busd[@logindx].extnum, @logindx)
4151  @iret=datachange(1,"busd",700077,"date_in date_out","19400101","20391231")
4152
4153  @logindx = casepar[0].nbus
4154  @ret=ins("busd", @logindx-1, 1)
4155  @ret=ins("volt", @logindx-1, 1)
4156  volt[@logindx].vm = 1.000000
4157  volt[@logindx].va = 0
4158  busd[@logindx].extnum = 700078
4159  busd[@logindx].busnam =  "24_12_W3"
4160  busd[@logindx].basekv = 0.7200
4161  busd[@logindx].type = 2
4162  busd[@logindx].area = 70
4163  busd[@logindx].zone = 706
4164  busd[@logindx].projid = 0
4165  busd[@logindx].level = 0
4166  busd[@logindx].vsched = 1.000000
4167  busd[@logindx].vmax = 1.0500
4168  busd[@logindx].vmin = 0.9500
4169  busd[@logindx].nown = 700
4170  @snum = -1
4171  @sindx = -1
4172   for @s = 0 to casepar[0].nsubst - 1
4173    if(subst[@s].extnum = @snum)
4174     @sindx = @s
4175    endif
4176   next
4177    busd[@logindx].isubst = @sindx  /*  -1  */
4178  @ret=setbix(busd[@logindx].extnum, @logindx)
4179  @iret=datachange(1,"busd",700078,"date_in date_out","19400101","20391231")
4180
4181  @logindx = casepar[0].nbrsec
4182  @ret=ins("secdd", @logindx-1, 1)
4183  @logfrom = number(" 700069 5RSC_24_16   345.00")
4184  @logto = number("  70918 GOOSE_CK    345.00")
4185  secdd[@logindx].ifrom = @logfrom
4186  secdd[@logindx].ito = @logto
4187  secdd[@logindx].ck = "1 "
4188  secdd[@logindx].projid = 0
4189  secdd[@logindx].st = 1
4190  secdd[@logindx].stn = 0
4191  secdd[@logindx].nsec = 1
4192  secdd[@logindx].type = 0
4193  secdd[@logindx].zsecr = 0.000235
4194  secdd[@logindx].zsecx = 0.003095
4195  secdd[@logindx].bsec = 0.048651
4196  secdd[@logindx].rate[0] = 1089.90
4197  secdd[@logindx].rate[1] = 1252.50
4198  secdd[@logindx].rate[2] = 1089.90
4199  secdd[@logindx].rate[3] = 1252.50
4200  secdd[@logindx].rate[4] = 0.00
4201  secdd[@logindx].rate[5] = 0.00
4202  secdd[@logindx].rate[6] = 0.00
4203  secdd[@logindx].rate[7] = 0.00
4204  secdd[@logindx].aloss = 1.000
4205  secdd[@logindx].area = 70
4206  secdd[@logindx].zone = 706
4207  secdd[@logindx].lngsec = 6.000
4208  secdd[@logindx].trangi = 0.000000
4209  secdd[@logindx].trantapf = 0.000000
```

```
4210   secdd[@logindx].trantapt = 0.000000
4211   secdd[@logindx].lid = ""
4212   secdd[@logindx].ohms = 0
4213   secdd[@logindx].date_in = 19400101
4214   secdd[@logindx].date_out = 20391231
4215   secdd[@logindx].nown[0] = 700
4216   secdd[@logindx].nown[1] = 0
4217   secdd[@logindx].nown[2] = 0
4218   secdd[@logindx].nown[3] = 0
4219   secdd[@logindx].nown[4] = 0
4220   secdd[@logindx].nown[5] = 0
4221   secdd[@logindx].nown[6] = 0
4222   secdd[@logindx].nown[7] = 0
4223   secdd[@logindx].pown[0] = 1.000
4224   secdd[@logindx].pown[1] = 0.000
4225   secdd[@logindx].pown[2] = 0.000
4226   secdd[@logindx].pown[3] = 0.000
4227   secdd[@logindx].pown[4] = 0.000
4228   secdd[@logindx].pown[5] = 0.000
4229   secdd[@logindx].pown[6] = 0.000
4230   secdd[@logindx].pown[7] = 0.000
4231
4232   @logindx = casepar[0].nbrsec
4233   @ret=ins("secdd", @logindx-1, 1)
4234   @logfrom = number(" 700073 5RSC_24_16    34.50")
4235   @logto = number(" 700070 5RSC_24_16    34.50")
4236   secdd[@logindx].ifrom = @logfrom
4237   secdd[@logindx].ito = @logto
4238   secdd[@logindx].ck = "1 "
4239   secdd[@logindx].projid = 0
4240   secdd[@logindx].st = 1
4241   secdd[@logindx].stn = 0
4242   secdd[@logindx].nsec = 1
4243   secdd[@logindx].type = 0
4244   secdd[@logindx].zsecr = 0.006340
4245   secdd[@logindx].zsecx = 0.008378
4246   secdd[@logindx].bsec = 0.092118
4247   secdd[@logindx].rate[0] = 246.20
4248   secdd[@logindx].rate[1] = 246.20
4249   secdd[@logindx].rate[2] = 246.20
4250   secdd[@logindx].rate[3] = 246.20
4251   secdd[@logindx].rate[4] = 0.00
4252   secdd[@logindx].rate[5] = 0.00
4253   secdd[@logindx].rate[6] = 0.00
4254   secdd[@logindx].rate[7] = 0.00
4255   secdd[@logindx].aloss = 1.000
4256   secdd[@logindx].area = 70
4257   secdd[@logindx].zone = 706
4258   secdd[@logindx].lngsec = 0.000
4259   secdd[@logindx].trangi = 0.000000
4260   secdd[@logindx].trantapf = 0.000000
4261   secdd[@logindx].trantapt = 0.000000
4262   secdd[@logindx].lid = "                                        "
4263   secdd[@logindx].ohms = 0
4264   secdd[@logindx].date_in = 19400101
4265   secdd[@logindx].date_out = 20391231
4266   secdd[@logindx].nown[0] = 700
4267   secdd[@logindx].nown[1] = 0
4268   secdd[@logindx].nown[2] = 0
4269   secdd[@logindx].nown[3] = 0
4270   secdd[@logindx].nown[4] = 0
4271   secdd[@logindx].nown[5] = 0
4272   secdd[@logindx].nown[6] = 0
4273   secdd[@logindx].nown[7] = 0
4274   secdd[@logindx].pown[0] = 1.000
4275   secdd[@logindx].pown[1] = 0.000
4276   secdd[@logindx].pown[2] = 0.000
4277   secdd[@logindx].pown[3] = 0.000
4278   secdd[@logindx].pown[4] = 0.000
```

```
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700074 5RSC_24_16    34.50")
@logto = number(" 700071 5RSC_24_16    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006268
secdd[@logindx].zsecx = 0.008283
secdd[@logindx].bsec = 0.112085
secdd[@logindx].rate[0] = 277.00
secdd[@logindx].rate[1] = 277.00
secdd[@logindx].rate[2] = 277.00
secdd[@logindx].rate[3] = 277.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700075 5RSC_24_16    34.50")
@logto = number(" 700072 5RSC_24_16    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006340
secdd[@logindx].zsecx = 0.008378
```

```
secdd[@logindx].bsec = 0.092118
secdd[@logindx].rate[0] = 246.20
secdd[@logindx].rate[1] = 246.20
secdd[@logindx].rate[2] = 246.20
secdd[@logindx].rate[3] = 246.20
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700069 5RSC_24_16    345.00")
@logto = number(" 700070 5RSC_24_16    34.50")
@logreg = number(" 700070 5RSC_24_16    34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 12
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.300000e-03
tran[@logindx].zpsx = 9.997350e-02
tran[@logindx].zptr = 2.300000e-03
tran[@logindx].zptx = 9.997350e-02
tran[@logindx].ztsr = 2.300000e-03
tran[@logindx].ztsx = 1.999868e-01
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
```

```
4417  tran[@logindx].bmag = 0.000000e+00
4418  tran[@logindx].rate[0] = 187.0
4419  tran[@logindx].rate[1] = 187.0
4420  tran[@logindx].rate[2] = 187.0
4421  tran[@logindx].rate[3] = 187.0
4422  tran[@logindx].rate[4] = 0.0
4423  tran[@logindx].rate[5] = 0.0
4424  tran[@logindx].rate[6] = 0.0
4425  tran[@logindx].rate[7] = 0.0
4426  tran[@logindx].aloss = 0.000
4427  tran[@logindx].tmax = 1.100000
4428  tran[@logindx].tmin = 0.900000
4429  tran[@logindx].vtmax = 1.025000
4430  tran[@logindx].vtmin = 0.975000
4431  tran[@logindx].stepp = -0.006250
4432  tran[@logindx].tapp = 1.000000
4433  tran[@logindx].tapfp = 1.000000
4434  tran[@logindx].tapfs = 1.000000
4435  tran[@logindx].tapft = 1.000000
4436  tran[@logindx].lid = " "
4437  tran[@logindx].ohms = 0
4438  tran[@logindx].date_in = 19400101
4439  tran[@logindx].date_out = 20391231
4440  tran[@logindx].nown[0] = 700
4441  tran[@logindx].nown[1] = 0
4442  tran[@logindx].nown[2] = 0
4443  tran[@logindx].nown[3] = 0
4444  tran[@logindx].nown[4] = 0
4445  tran[@logindx].nown[5] = 0
4446  tran[@logindx].nown[6] = 0
4447  tran[@logindx].nown[7] = 0
4448  tran[@logindx].pown[0] = 1.000
4449  tran[@logindx].pown[1] = 0.000
4450  tran[@logindx].pown[2] = 0.000
4451  tran[@logindx].pown[3] = 0.000
4452  tran[@logindx].pown[4] = 0.000
4453  tran[@logindx].pown[5] = 0.000
4454  tran[@logindx].pown[6] = 0.000
4455  tran[@logindx].pown[7] = 0.000
4456
4457  @logindx = casepar[0].ntran
4458  @ret=ins("tran", @logindx-1, 1)
4459  @logfrom = number(" 700069 5RSC_24_16    345.00")
4460  @logto = number(" 700071 5RSC_24_16     34.50")
4461  @logreg = number(" 700071 5RSC_24_16     34.50")
4462  @logtert = number("      0 ------------    0.00")
4463  @logint = number("      0 ------------    0.00")
4464  tran[@logindx].ifrom = @logfrom
4465  tran[@logindx].ito = @logto
4466  tran[@logindx].ck = "T2"
4467  tran[@logindx].projid = 0
4468  tran[@logindx].st = 1
4469  tran[@logindx].stn = 0
4470  tran[@logindx].type = 12
4471  tran[@logindx].kreg = @logreg
4472  tran[@logindx].iztabl = 0
4473  tran[@logindx].itert = @logtert
4474  tran[@logindx].iint = @logint
4475  tran[@logindx].area = 70
4476  tran[@logindx].zone = 706
4477  tran[@logindx].tbase = 113.000000
4478  tran[@logindx].zpsr = 2.300000e-03
4479  tran[@logindx].zpsx = 9.997350e-02
4480  tran[@logindx].zptr = 2.300000e-03
4481  tran[@logindx].zptx = 9.997350e-02
4482  tran[@logindx].ztsr = 2.300000e-03
4483  tran[@logindx].ztsx = 1.999868e-01
4484  tran[@logindx].vnomp = 345.000000
4485  tran[@logindx].vnoms = 34.500000
```

```
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 187.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.025000
tran[@logindx].vtmin = 0.975000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700069 5RSC_24_16    345.00")
@logto = number(" 700072 5RSC_24_16     34.50")
@logreg = number(" 700072 5RSC_24_16     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T3"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 12
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.300000e-03
tran[@logindx].zpsx = 9.997350e-02
tran[@logindx].zptr = 2.300000e-03
tran[@logindx].zptx = 9.997350e-02
tran[@logindx].ztsr = 2.300000e-03
```

```
tran[@logindx].ztsx = 1.999868e-01
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 187.0
tran[@logindx].rate[1] = 187.0
tran[@logindx].rate[2] = 187.0
tran[@logindx].rate[3] = 187.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.025000
tran[@logindx].vtmin = 0.975000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700076 5RSC_24_16     0.72")
@logto = number(" 700073 5RSC_24_16    34.50")
@logreg = number("     0 ------------    0.00")
@logtert = number("     0 ------------    0.00")
@logint = number("     0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 169.600006
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867620e-02
```

```
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.720000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 169.6
tran[@logindx].rate[1] = 169.6
tran[@logindx].rate[2] = 169.6
tran[@logindx].rate[3] = 169.6
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700077 5RSC_24_16    0.72")
@logto = number(" 700074 5RSC_24_16   34.50")
@logreg = number("     0 ----------    0.00")
@logtert = number("     0 ----------    0.00")
@logint = number("     0 ----------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
```

```
tran[@logindx].tbase = 190.800003
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867620e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.720000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 190.8
tran[@logindx].rate[1] = 190.8
tran[@logindx].rate[2] = 190.8
tran[@logindx].rate[3] = 190.8
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700078 5RSC_24_16     0.72")
@logto = number(" 700075 5RSC_24_16    34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U3"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
```

```
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 169.600006
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867620e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.720000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 169.6
tran[@logindx].rate[1] = 169.6
tran[@logindx].rate[2] = 169.6
tran[@logindx].rate[3] = 169.6
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = " "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700076 5RSC_24_16     0.72")
@logreg = number(" 700069 5RSC_24_16   345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
```

```
gens[@logindx].mbase = 169.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 81.599998
gens[@logindx].qmin = -70.400002
gens[@logindx].prf = 0.320000
gens[@logindx].qrf = 0.320000
gens[@logindx].pmax = 144.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1000000.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "Chyenne "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 25
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700077 5RSC_24_16     0.72")
@logreg = number(" 700069 5RSC_24_16   345.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W2"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 190.8000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 91.800003
gens[@logindx].qmin = -79.199997
gens[@logindx].prf = 0.360000
```

```
gens[@logindx].qrf = 0.360000
gens[@logindx].pmax = 162.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1000000.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "Chyenne "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 25
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700078 5RSC_24_16     0.72")
@logreg = number(" 700069 5RSC_24_16   345.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 169.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 81.599998
gens[@logindx].qmin = -70.400002
gens[@logindx].prf = 0.320000
gens[@logindx].qrf = 0.320000
gens[@logindx].pmax = 144.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1000000.000
gens[@logindx].rcomp = 0.000
```

```
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "Chyenne "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 25
gens[@logindx].turbine_type = 24
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700070 5RSC_24_16    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 1.100000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "Chyenne "
load[@logindx].date_in = 991231
load[@logindx].date_out = 991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700071 5RSC_24_16    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
```

```
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 1.100000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "Chyenne "
load[@logindx].date_in = 991231
load[@logindx].date_out = 991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700072 5RSC_24_16    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 1.100000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "Chyenne "
load[@logindx].date_in = 991231
load[@logindx].date_out = 991231
load[@logindx].nown = 700
load[@logindx].clzone = "        "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700139
busd[@logindx].busnam = "GI_2020_10  "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
```

```
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700139,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.00041
busd[@logindx].extnum = 700140
busd[@logindx].busnam = "20_10_SB12"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700140,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990580
volt[@logindx].va = 0.117612
busd[@logindx].extnum = 700141
busd[@logindx].busnam = "20_10_SB1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700141,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.999550
volt[@logindx].va = 0.169559
busd[@logindx].extnum = 700142
busd[@logindx].busnam = "20_10_S1"
busd[@logindx].basekv = 0.6300
busd[@logindx].type = 2
busd[@logindx].area = 70
```

```
5176   busd[@logindx].zone = 704
5177   busd[@logindx].projid = 0
5178   busd[@logindx].level = 0
5179   busd[@logindx].vsched = 1.000000
5180   busd[@logindx].vmax = 1.1000
5181   busd[@logindx].vmin = 0.9000
5182   busd[@logindx].nown = 700
5183   @snum = -1
5184   @sindx = -1
5185    for @s = 0 to casepar[0].nsubst - 1
5186     if(subst[@s].extnum = @snum)
5187       @sindx = @s
5188     endif
5189    next
5190     busd[@logindx].isubst = @sindx  /*  -1  */
5191   @ret=setbix(busd[@logindx].extnum, @logindx)
5192   @iret=datachange(1,"busd",700142,"date_in date_out","19400101","20391231")
5193
5194   @logindx = casepar[0].nbus
5195   @ret=ins("busd", @logindx-1, 1)
5196   @ret=ins("volt", @logindx-1, 1)
5197   volt[@logindx].vm = 0.993524
5198   volt[@logindx].va = 0.120537
5199   busd[@logindx].extnum = 700143
5200   busd[@logindx].busnam = "20_10_S1_1"
5201   busd[@logindx].basekv = 34.5000
5202   busd[@logindx].type = 1
5203   busd[@logindx].area = 70
5204   busd[@logindx].zone = 704
5205   busd[@logindx].projid = 0
5206   busd[@logindx].level = 0
5207   busd[@logindx].vsched = 1.000000
5208   busd[@logindx].vmax = 1.1000
5209   busd[@logindx].vmin = 0.9000
5210   busd[@logindx].nown = 700
5211   @snum = -1
5212   @sindx = -1
5213    for @s = 0 to casepar[0].nsubst - 1
5214     if(subst[@s].extnum = @snum)
5215       @sindx = @s
5216     endif
5217    next
5218     busd[@logindx].isubst = @sindx  /*  -1  */
5219   @ret=setbix(busd[@logindx].extnum, @logindx)
5220   @iret=datachange(1,"busd",700143,"date_in date_out","19400101","20391231")
5221
5222   @logindx = casepar[0].nbus
5223   @ret=ins("busd", @logindx-1, 1)
5224   @ret=ins("volt", @logindx-1, 1)
5225   volt[@logindx].vm = 0.990993
5226   volt[@logindx].va = 0.117557
5227   busd[@logindx].extnum = 700144
5228   busd[@logindx].busnam = "20_10_B1"
5229   busd[@logindx].basekv = 0.9000
5230   busd[@logindx].type = 2
5231   busd[@logindx].area = 70
5232   busd[@logindx].zone = 704
5233   busd[@logindx].projid = 0
5234   busd[@logindx].level = 0
5235   busd[@logindx].vsched = 1.000000
5236   busd[@logindx].vmax = 1.1000
5237   busd[@logindx].vmin = 0.9000
5238   busd[@logindx].nown = 700
5239   @snum = -1
5240   @sindx = -1
5241    for @s = 0 to casepar[0].nsubst - 1
5242     if(subst[@s].extnum = @snum)
5243       @sindx = @s
5244     endif
```

```
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700144,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990583
volt[@logindx].va = 0.117609
busd[@logindx].extnum = 700145
busd[@logindx].busnam =  "20_10_B1_1  "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700145,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.999550
volt[@logindx].va = 0.169559
busd[@logindx].extnum = 700146
busd[@logindx].busnam =  "20_10_S2"
busd[@logindx].basekv = 0.6300
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700146,"date_in date_out","19400101","20391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.990993
volt[@logindx].va = 0.117557
busd[@logindx].extnum = 700147
busd[@logindx].busnam =  "20_10_B2"
busd[@logindx].basekv = 0.9000
```

```
5314  busd[@logindx].type = 2
5315  busd[@logindx].area = 70
5316  busd[@logindx].zone = 704
5317  busd[@logindx].projid = 0
5318  busd[@logindx].level = 0
5319  busd[@logindx].vsched = 1.000000
5320  busd[@logindx].vmax = 1.1000
5321  busd[@logindx].vmin = 0.9000
5322  busd[@logindx].nown = 700
5323  @snum = -1
5324  @sindx = -1
5325   for @s = 0 to casepar[0].nsubst - 1
5326    if(subst[@s].extnum = @snum)
5327     @sindx = @s
5328    endif
5329   next
5330    busd[@logindx].isubst = @sindx  /*  -1  */
5331  @ret=setbix(busd[@logindx].extnum, @logindx)
5332  @iret=datachange(1,"busd",700147,"date_in date_out","19400101","20391231")
5333
5334  @logindx = casepar[0].nbus
5335  @ret=ins("busd", @logindx-1, 1)
5336  @ret=ins("volt", @logindx-1, 1)
5337  volt[@logindx].vm = 0.993524
5338  volt[@logindx].va = 0.120537
5339  busd[@logindx].extnum = 700148
5340  busd[@logindx].busnam =  "20_10_S2_1"
5341  busd[@logindx].basekv = 34.5000
5342  busd[@logindx].type = 1
5343  busd[@logindx].area = 70
5344  busd[@logindx].zone = 704
5345  busd[@logindx].projid = 0
5346  busd[@logindx].level = 0
5347  busd[@logindx].vsched = 1.000000
5348  busd[@logindx].vmax = 1.1000
5349  busd[@logindx].vmin = 0.9000
5350  busd[@logindx].nown = 700
5351  @snum = -1
5352  @sindx = -1
5353   for @s = 0 to casepar[0].nsubst - 1
5354    if(subst[@s].extnum = @snum)
5355     @sindx = @s
5356    endif
5357   next
5358    busd[@logindx].isubst = @sindx  /*  -1  */
5359  @ret=setbix(busd[@logindx].extnum, @logindx)
5360  @iret=datachange(1,"busd",700148,"date_in date_out","19400101","20391231")
5361
5362  @logindx = casepar[0].nbus
5363  @ret=ins("busd", @logindx-1, 1)
5364  @ret=ins("volt", @logindx-1, 1)
5365  volt[@logindx].vm = 0.990583
5366  volt[@logindx].va = 0.117609
5367  busd[@logindx].extnum = 700149
5368  busd[@logindx].busnam =  "20_10_B2_1"
5369  busd[@logindx].basekv = 34.5000
5370  busd[@logindx].type = 1
5371  busd[@logindx].area = 70
5372  busd[@logindx].zone = 704
5373  busd[@logindx].projid = 0
5374  busd[@logindx].level = 0
5375  busd[@logindx].vsched = 1.000000
5376  busd[@logindx].vmax = 1.1000
5377  busd[@logindx].vmin = 0.9000
5378  busd[@logindx].nown = 700
5379  @snum = -1
5380  @sindx = -1
5381   for @s = 0 to casepar[0].nsubst - 1
5382    if(subst[@s].extnum = @snum)
```

```
5383        @sindx = @s
5384      endif
5385    next
5386      busd[@logindx].isubst = @sindx  /*  -1  */
5387    @ret=setbix(busd[@logindx].extnum, @logindx)
5388    @iret=datachange(1,"busd",700149,"date_in date_out","19400101","20391231")
5389
5390    @logindx = casepar[0].nbus
5391    @ret=ins("busd", @logindx-1, 1)
5392    @ret=ins("volt", @logindx-1, 1)
5393    volt[@logindx].vm = 0.990580
5394    volt[@logindx].va = 0.117612
5395    busd[@logindx].extnum = 700150
5396    busd[@logindx].busnam =  "20_10_SB2"
5397    busd[@logindx].basekv = 34.5000
5398    busd[@logindx].type = 1
5399    busd[@logindx].area = 70
5400    busd[@logindx].zone = 704
5401    busd[@logindx].projid = 0
5402    busd[@logindx].level = 0
5403    busd[@logindx].vsched = 1.000000
5404    busd[@logindx].vmax = 1.1000
5405    busd[@logindx].vmin = 0.9000
5406    busd[@logindx].nown = 700
5407    @snum = -1
5408    @sindx = -1
5409    for @s = 0 to casepar[0].nsubst - 1
5410      if(subst[@s].extnum = @snum)
5411        @sindx = @s
5412      endif
5413    next
5414      busd[@logindx].isubst = @sindx  /*  -1  */
5415    @ret=setbix(busd[@logindx].extnum, @logindx)
5416    @iret=datachange(1,"busd",700150,"date_in date_out","19400101","20391231")
5417
5418
5419    @logindx = casepar[0].nbrsec
5420    @ret=ins("secdd", @logindx-1, 1)
5421    @logfrom = number("  70122 COMANCHE     230.00")
5422    @logto = number("  700139 STAGECOACH   230.00")
5423    secdd[@logindx].ifrom = @logfrom
5424    secdd[@logindx].ito = @logto
5425    secdd[@logindx].ck = "1"
5426    secdd[@logindx].projid = 0
5427    secdd[@logindx].st = 1
5428    secdd[@logindx].stn = 1
5429    secdd[@logindx].nsec = 1
5430    secdd[@logindx].type = 0
5431    secdd[@logindx].zsecr = 0.000965
5432    secdd[@logindx].zsecx = 0.008023
5433    secdd[@logindx].bsec = 0.016299
5434    secdd[@logindx].rate[0] = 478.00
5435    secdd[@logindx].rate[1] = 559.00
5436    secdd[@logindx].aloss = 1.000
5437    secdd[@logindx].area = 70
5438    secdd[@logindx].zone = 704
5439    secdd[@logindx].trangi = 0.000000
5440    secdd[@logindx].trantapf = 0.000000
5441    secdd[@logindx].trantapt = 0.000000
5442    secdd[@logindx].lid = "                                                  "
5443    secdd[@logindx].ohms = 0
5444    secdd[@logindx].date_in = 19400101
5445    secdd[@logindx].date_out = 20391232
5446    secdd[@logindx].nown[0] = 65
5447    secdd[@logindx].nown[1] = 0
5448    secdd[@logindx].nown[2] = 0
5449    secdd[@logindx].nown[3] = 0
5450    secdd[@logindx].nown[4] = 0
5451    secdd[@logindx].nown[5] = 0
```

```
5452   secdd[@logindx].nown[6] = 0
5453   secdd[@logindx].nown[7] = 0
5454   secdd[@logindx].pown[0] = 1.000
5455   secdd[@logindx].pown[1] = 0.000
5456   secdd[@logindx].pown[2] = 0.000
5457   secdd[@logindx].pown[3] = 0.000
5458   secdd[@logindx].pown[4] = 0.000
5459   secdd[@logindx].pown[5] = 0.000
5460   secdd[@logindx].pown[6] = 0.000
5461   secdd[@logindx].pown[7] = 0.000
5462
5463   @logindx = casepar[0].nbrsec
5464   @ret=ins("secdd", @logindx-1, 1)
5465   @logfrom = number("  700139 STAGECOACH   230.00")
5466   @logto = number("  70652 MIRASOL     230.00")
5467   secdd[@logindx].ifrom = @logfrom
5468   secdd[@logindx].ito = @logto
5469   secdd[@logindx].ck = "1"
5470   secdd[@logindx].projid = 0
5471   secdd[@logindx].st = 1
5472   secdd[@logindx].stn = 1
5473   secdd[@logindx].nsec = 1
5474   secdd[@logindx].type = 0
5475   secdd[@logindx].zsecr = 0.001165
5476   secdd[@logindx].zsecx = 0.009687
5477   secdd[@logindx].bsec = 0.019681
5478   secdd[@logindx].rate[0] = 478.00
5479   secdd[@logindx].rate[1] = 559.00
5480   secdd[@logindx].aloss = 1.000
5481   secdd[@logindx].area = 70
5482   secdd[@logindx].zone = 704
5483   secdd[@logindx].trangi = 0.000000
5484   secdd[@logindx].trantapf = 0.000000
5485   secdd[@logindx].trantapt = 0.000000
5486   secdd[@logindx].lid = "                                                  "
5487   secdd[@logindx].ohms = 0
5488   secdd[@logindx].date_in = 19400101
5489   secdd[@logindx].date_out = 20391232
5490   secdd[@logindx].nown[0] = 65
5491   secdd[@logindx].nown[1] = 0
5492   secdd[@logindx].nown[2] = 0
5493   secdd[@logindx].nown[3] = 0
5494   secdd[@logindx].nown[4] = 0
5495   secdd[@logindx].nown[5] = 0
5496   secdd[@logindx].nown[6] = 0
5497   secdd[@logindx].nown[7] = 0
5498   secdd[@logindx].pown[0] = 1.000
5499   secdd[@logindx].pown[1] = 0.000
5500   secdd[@logindx].pown[2] = 0.000
5501   secdd[@logindx].pown[3] = 0.000
5502   secdd[@logindx].pown[4] = 0.000
5503   secdd[@logindx].pown[5] = 0.000
5504   secdd[@logindx].pown[6] = 0.000
5505   secdd[@logindx].pown[7] = 0.000
5506
5507   @logfrom = number("  70122 COMANCHE    230.00")
5508   @logto = number("  70652 MIRASOL     230.00")
5509   $logck = "1"
5510   @logsec = 1
5511   @logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
5512   if (@logindx != -1)
5513     @ret = del("secdd", @logindx, 1)
5514   endif
5515
5516   @logindx = casepar[0].nbrsec
5517   @ret=ins("secdd", @logindx-1, 1)
5518   @logfrom = number(" 700139 GI_2020_10   230.00")
5519   @logto = number(" 700140 GI_2020_10   230.00")
5520   secdd[@logindx].ifrom = @logfrom
```

```
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000022
secdd[@logindx].zsecx = 0.000133
secdd[@logindx].bsec = 0.000324
secdd[@logindx].rate[0] = 375.00
secdd[@logindx].rate[1] = 375.00
secdd[@logindx].rate[2] = 375.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.100
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700141 GI_2020_10    34.50")
@logto = number(" 700143 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001990
secdd[@logindx].zsecx = 0.001800
secdd[@logindx].bsec = 0.007323
secdd[@logindx].rate[0] = 189.00
secdd[@logindx].rate[1] = 189.00
secdd[@logindx].rate[2] = 189.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
```

```
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700141 GI_2020_10    34.50")
@logto = number(" 700145 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000380
secdd[@logindx].zsecx = 0.000370
secdd[@logindx].bsec = 0.000634
secdd[@logindx].rate[0] = 147.00
secdd[@logindx].rate[1] = 147.00
secdd[@logindx].rate[2] = 147.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
```

```
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 0.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700150 GI_2020_10    34.50")
@logto = number(" 700148 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001990
secdd[@logindx].zsecx = 0.001800
secdd[@logindx].bsec = 0.007323
secdd[@logindx].rate[0] = 189.00
secdd[@logindx].rate[1] = 189.00
secdd[@logindx].rate[2] = 189.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700150 GI_2020_10    34.50")
@logto = number(" 700149 GI_2020_10    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
```

```
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000380
secdd[@logindx].zsecx = 0.000370
secdd[@logindx].bsec = 0.000634
secdd[@logindx].rate[0] = 147.00
secdd[@logindx].rate[1] = 147.00
secdd[@logindx].rate[2] = 147.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 19400101
secdd[@logindx].date_out = 20391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 0.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700140 GI_2020_10    230.00")
@logto = number(" 700141 GI_2020_10     34.50")
@logreg = number(" 700141 GI_2020_10     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 117.000000
tran[@logindx].zpsr = 2.221545e-03
tran[@logindx].zpsx = 8.997258e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
```

```
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 117.0
tran[@logindx].rate[1] = 156.0
tran[@logindx].rate[2] = 195.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700140 GI_2020_10    230.00")
@logto = number(" 700150 GI_2020_10     34.50")
@logreg = number(" 700150 GI_2020_10     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 117.000000
tran[@logindx].zpsr = 2.221545e-03
tran[@logindx].zpsx = 8.997258e-02
```

```
tran[@logindx].zptr = 3.475000e-03
tran[@logindx].zptx = 1.424580e-01
tran[@logindx].ztsr = 9.270000e-04
tran[@logindx].ztsx = 3.798900e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 117.0
tran[@logindx].rate[1] = 156.0
tran[@logindx].rate[2] = 195.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700143 GI_2020_10    34.50")
@logto = number(" 700142 GI_2020_10    0.63")
@logreg = number("     0 ------------    0.00")
@logtert = number("     0 ------------    0.00")
@logint = number("     0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
```

```
tran[@logindx].tbase = 180.000000
tran[@logindx].zpsr = 8.132000e-03
tran[@logindx].zpsx = 5.692200e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 1.000000e-02
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 1.000000e-02
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.630000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 180.0
tran[@logindx].rate[1] = 180.0
tran[@logindx].rate[2] = 180.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 0.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700145 GI_2020_10    34.50")
@logto = number(" 700144 GI_2020_10    0.90")
@logreg = number("     0 ------------    0.00")
@logtert = number("     0 ------------    0.00")
@logint = number("     0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
```

```
6004   tran[@logindx].iint = @logint
6005   tran[@logindx].area = 70
6006   tran[@logindx].zone = 704
6007   tran[@logindx].tbase = 140.000000
6008   tran[@logindx].zpsr = 8.682000e-03
6009   tran[@logindx].zpsx = 6.945900e-02
6010   tran[@logindx].zptr = 0.000000e+00
6011   tran[@logindx].zptx = 1.000000e-02
6012   tran[@logindx].ztsr = 0.000000e+00
6013   tran[@logindx].ztsx = 1.000000e-02
6014   tran[@logindx].vnomp = 34.500000
6015   tran[@logindx].vnoms = 0.900000
6016   tran[@logindx].vnomt = 0.000000
6017   tran[@logindx].anglp = 0.000000
6018   tran[@logindx].gmag = 0.000000e+00
6019   tran[@logindx].bmag = 0.000000e+00
6020   tran[@logindx].rate[0] = 140.0
6021   tran[@logindx].rate[1] = 140.0
6022   tran[@logindx].rate[2] = 140.0
6023   tran[@logindx].rate[3] = 0.0
6024   tran[@logindx].rate[4] = 0.0
6025   tran[@logindx].rate[5] = 0.0
6026   tran[@logindx].rate[6] = 0.0
6027   tran[@logindx].rate[7] = 0.0
6028   tran[@logindx].aloss = 0.000
6029   tran[@logindx].tmax = 0.000000
6030   tran[@logindx].tmin = 0.000000
6031   tran[@logindx].vtmax = 0.000000
6032   tran[@logindx].vtmin = 0.000000
6033   tran[@logindx].stepp = 0.000000
6034   tran[@logindx].tapp = 1.000000
6035   tran[@logindx].tapfp = 1.000000
6036   tran[@logindx].tapfs = 1.000000
6037   tran[@logindx].tapft = 1.000000
6038   tran[@logindx].lid = "                                "
6039   tran[@logindx].ohms = 0
6040   tran[@logindx].date_in = 19400101
6041   tran[@logindx].date_out = 20391231
6042   tran[@logindx].nown[0] = 700
6043   tran[@logindx].nown[1] = 0
6044   tran[@logindx].nown[2] = 0
6045   tran[@logindx].nown[3] = 0
6046   tran[@logindx].nown[4] = 0
6047   tran[@logindx].nown[5] = 0
6048   tran[@logindx].nown[6] = 0
6049   tran[@logindx].nown[7] = 0
6050   tran[@logindx].pown[0] = 0.000
6051   tran[@logindx].pown[1] = 0.000
6052   tran[@logindx].pown[2] = 0.000
6053   tran[@logindx].pown[3] = 0.000
6054   tran[@logindx].pown[4] = 0.000
6055   tran[@logindx].pown[5] = 0.000
6056   tran[@logindx].pown[6] = 0.000
6057   tran[@logindx].pown[7] = 0.000
6058
6059   @logindx = casepar[0].ntran
6060   @ret=ins("tran", @logindx-1, 1)
6061   @logfrom = number(" 700148 GI_2020_10     34.50")
6062   @logto = number(" 700146 GI_2020_10     0.63")
6063   @logreg = number("      0 ------------    0.00")
6064   @logtert = number("      0 ------------    0.00")
6065   @logint = number("      0 ------------    0.00")
6066   tran[@logindx].ifrom = @logfrom
6067   tran[@logindx].ito = @logto
6068   tran[@logindx].ck = "1 "
6069   tran[@logindx].projid = 0
6070   tran[@logindx].st = 1
6071   tran[@logindx].stn = 0
6072   tran[@logindx].type = 1
```

```
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 180.000000
tran[@logindx].zpsr = 8.132000e-03
tran[@logindx].zpsx = 5.692200e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 1.000000e-02
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 1.000000e-02
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.630000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 180.0
tran[@logindx].rate[1] = 180.0
tran[@logindx].rate[2] = 180.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 0.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700149 GI_2020_10    34.50")
@logto = number(" 700147 GI_2020_10    0.90")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
```

```
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 140.000000
tran[@logindx].zpsr = 8.682000e-03
tran[@logindx].zpsx = 6.945900e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 1.000000e-02
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 1.000000e-02
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.900000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 140.0
tran[@logindx].rate[1] = 140.0
tran[@logindx].rate[2] = 140.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 0.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700142 GI_2020_10     0.63")
@logreg = number(" 700140 GI_2020_10   230.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S1"
```

```
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 180.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.819471
gens[@logindx].qmax = 93.190002
gens[@logindx].qmin = -93.190002
gens[@logindx].prf = 0.280000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 154.110001
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 1
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700144 GI_2020_10     0.90")
@logreg = number(" 700140 GI_2020_10   230.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
```

```
gens[@logindx].mbase = 140.0000
gens[@logindx].pgen = 0.000000
gens[@logindx].qgen = 0.819472
gens[@logindx].qmax = 74.949997
gens[@logindx].qmin = -74.949997
gens[@logindx].prf = 0.220000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 118.250000
gens[@logindx].pmin = -118.250000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 0.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 0
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700146 GI_2020_10     0.63")
@logreg = number(" 700140 GI_2020_10   230.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S2"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 180.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.819471
gens[@logindx].qmax = 93.190002
gens[@logindx].qmin = -93.190002
gens[@logindx].prf = 0.280000
```

```
  gens[@logindx].qrf = 1.000000
  gens[@logindx].pmax = 154.050003
  gens[@logindx].pmin = 0.000000
  gens[@logindx].zgenr = 0.000
  gens[@logindx].zgenx = 999.000
  gens[@logindx].rcomp = 0.000
  gens[@logindx].xcomp = 0.000
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "        "
  gens[@logindx].date_in = 19400101
  gens[@logindx].date_out = 20391231
  gens[@logindx].nown[0] = 700
  gens[@logindx].nown[1] = 0
  gens[@logindx].nown[2] = 0
  gens[@logindx].nown[3] = 0
  gens[@logindx].nown[4] = 0
  gens[@logindx].nown[5] = 0
  gens[@logindx].nown[6] = 0
  gens[@logindx].nown[7] = 0
  gens[@logindx].pown[0] = 1.000
  gens[@logindx].pown[1] = 1.000
  gens[@logindx].pown[2] = 1.000
  gens[@logindx].pown[3] = 1.000
  gens[@logindx].pown[4] = 0.000
  gens[@logindx].pown[5] = 0.000
  gens[@logindx].pown[6] = 0.000
  gens[@logindx].pown[7] = 0.000
  gens[@logindx].rtr = 0.0000
  gens[@logindx].xtr = 0.0000
  gens[@logindx].gtap = 1.0000
  gens[@logindx].gov_flag = 0
  gens[@logindx].agc_flag = 0
  gens[@logindx].dispatch_flag = 0
  gens[@logindx].baseload_flag = 1
  gens[@logindx].air_temp = 0
  gens[@logindx].turbine_type = 20
  gens[@logindx].fueltype[0] = 0
  gens[@logindx].fueltype[1] = 0
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 0.000000

  @logindx = casepar[0].ngen
  @ret=ins("gens", @logindx-1, 1)
  @logbgen = number(" 700147 GI_2020_10     0.90")
  @logreg = number(" 700140 GI_2020_10   230.00")
  @loghbus = number("      0 ------------   0.00")
  @logtbus = number("      0 ------------   0.00")
  gens[@logindx].ibgen = @logbgen
  gens[@logindx].id = "B2"
  gens[@logindx].projid = 0
  gens[@logindx].st = 0
  gens[@logindx].stn = 0
  gens[@logindx].igreg = @logreg
  gens[@logindx].area = 70
  gens[@logindx].zone = 704
  gens[@logindx].mbase = 140.0000
  gens[@logindx].pgen = 0.000000
  gens[@logindx].qgen = 0.819472
  gens[@logindx].qmax = 74.949997
  gens[@logindx].qmin = -74.949997
  gens[@logindx].prf = 0.220000
  gens[@logindx].qrf = 1.000000
  gens[@logindx].pmax = 118.250000
  gens[@logindx].pmin = -118.250000
  gens[@logindx].zgenr = 0.000
  gens[@logindx].zgenx = 0.000
  gens[@logindx].rcomp = 0.000
```

```
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 0.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 0
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700141 GI_2020_10    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "1 "
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 2.000000
load[@logindx].q = 1.500000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700150 GI_2020_10    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "1 "
load[@logindx].projid = 0
load[@logindx].st = 1
```

```
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 2.000000
load[@logindx].q = 1.500000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005000
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700151
busd[@logindx].busnam = "2021_6_S1  "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700152
busd[@logindx].busnam = "2021_6_S1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700153
busd[@logindx].busnam = "2021_6_S1_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
```

```
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700154
busd[@logindx].busnam = "2021_6_S1_3"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005690
volt[@logindx].va = 0.041888
busd[@logindx].extnum = 700155
busd[@logindx].busnam = "GI_2021_6"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 1
busd[@logindx].vsched = 1.013260
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 10150
busd[@logindx].date_out = 10150
busd[@logindx].nown = 65

@logfrom = number("  70048 GREEN_VLY     230.00")
@logto = number("  70392 SKYRANCH      230.00")
$logck = "1"
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
  @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70048 GREENVAL      230.00")
@logto = number("  700155 AURORA_BREAL 230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
```

```
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.002634
secdd[@logindx].zsecx = 0.021045
secdd[@logindx].bsec = 0.046130
secdd[@logindx].rate[0] = 484.00
secdd[@logindx].rate[1] = 555.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 10150
secdd[@logindx].date_out = 10150
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700152 AURABOR_S1_1   34.50")
@logto = number("  700151 AURABOR_S1     34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.007960
secdd[@logindx].zsecx = 0.020520
secdd[@logindx].bsec = 0.068710
secdd[@logindx].rate[0] = 220.00
secdd[@logindx].rate[1] = 220.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
```

```
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700153 AURABOR_S1_2   34.50")
@logto = number("  700152 AURABOR_S1_1   34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.007961
secdd[@logindx].zsecx = 0.020522
secdd[@logindx].bsec = 0.068708
secdd[@logindx].rate[0] = 241.00
secdd[@logindx].rate[1] = 241.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700155 AURORA_BREAL 230.00")
@logto = number("  70392 SKYRANCH     230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000359
secdd[@logindx].zsecx = 0.002870
secdd[@logindx].bsec = 0.006290
secdd[@logindx].rate[0] = 484.00
secdd[@logindx].rate[1] = 555.00
```

```
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 10150
secdd[@logindx].date_out = 10150
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700155 AURORA_BREAL 230.00")
@logto = number("  700154 AURABOR_S1_3 230.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001008
secdd[@logindx].zsecx = 0.004860
secdd[@logindx].bsec = 0.007374
secdd[@logindx].rate[0] = 232.00
secdd[@logindx].rate[1] = 274.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
```

```
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number("  700153 AURABOR_S1_2  34.50")
@logto = number("  700154 AURABOR_S1_3 230.00")
@logreg = number("  700154 AURABOR_S1_3 230.00")
@logtert = number("      0 ------------   0.00")
@logint = number("      0 ------------   0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 700
tran[@logindx].tbase = 129.000000
tran[@logindx].zpsr = 1.360000e-03
tran[@logindx].zpsx = 9.500000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 230.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 230.0
tran[@logindx].rate[1] = 230.0
tran[@logindx].rate[2] = 0.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 0.950000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
```

```
6901  tran[@logindx].pown[4] = 0.000
6902  tran[@logindx].pown[5] = 0.000
6903  tran[@logindx].pown[6] = 0.000
6904  tran[@logindx].pown[7] = 0.000
6905
6906  @logindx = casepar[0].ngen
6907  @ret=ins("gens", @logindx-1, 1)
6908  @logbgen = number("  700151 AURABOR_S1    34.50")
6909  @logreg = number("  700151 AURABOR_S1    34.50")
6910  @loghbus = number("       0 ------------   0.00")
6911  @logtbus = number("       0 ------------   0.00")
6912  gens[@logindx].ibgen = @logbgen
6913  gens[@logindx].id = "S1"
6914  gens[@logindx].projid = 0
6915  gens[@logindx].st = 0
6916  gens[@logindx].stn = 0
6917  gens[@logindx].igreg = @logreg
6918  gens[@logindx].area = 70
6919  gens[@logindx].zone = 700
6920  gens[@logindx].mbase = 218.4000
6921  gens[@logindx].pgen = 203.300003
6922  gens[@logindx].qgen = 67.999756
6923  gens[@logindx].qmax = 68.000000
6924  gens[@logindx].qmin = -68.000000
6925  gens[@logindx].prf = 1.000000
6926  gens[@logindx].qrf = 1.000000
6927  gens[@logindx].pmax = 203.300003
6928  gens[@logindx].pmin = 0.000000
6929  gens[@logindx].zgenr = 0.000
6930  gens[@logindx].zgenx = 0.000
6931  gens[@logindx].rcomp = 0.000
6932  gens[@logindx].xcomp = 0.000
6933  gens[@logindx].hbus = @loghbus
6934  gens[@logindx].tbus = @logtbus
6935  gens[@logindx].lid = "        "
6936  gens[@logindx].date_in = 400101
6937  gens[@logindx].date_out = 391231
6938  gens[@logindx].nown[0] = 700
6939  gens[@logindx].nown[1] = 0
6940  gens[@logindx].nown[2] = 0
6941  gens[@logindx].nown[3] = 0
6942  gens[@logindx].nown[4] = 0
6943  gens[@logindx].nown[5] = 0
6944  gens[@logindx].nown[6] = 0
6945  gens[@logindx].nown[7] = 0
6946  gens[@logindx].pown[0] = 1.000
6947  gens[@logindx].pown[1] = 0.000
6948  gens[@logindx].pown[2] = 0.000
6949  gens[@logindx].pown[3] = 0.000
6950  gens[@logindx].pown[4] = 0.000
6951  gens[@logindx].pown[5] = 0.000
6952  gens[@logindx].pown[6] = 0.000
6953  gens[@logindx].pown[7] = 0.000
6954  gens[@logindx].rtr = 0.0000
6955  gens[@logindx].xtr = 0.0000
6956  gens[@logindx].gtap = 1.0000
6957  gens[@logindx].gov_flag = 0
6958  gens[@logindx].agc_flag = 0
6959  gens[@logindx].dispatch_flag = 0
6960  gens[@logindx].baseload_flag = 2
6961  gens[@logindx].air_temp = 0
6962  gens[@logindx].turbine_type = 31
6963  gens[@logindx].qtab = 0
6964
6965  @logindx = casepar[0].nsvd
6966  @ret = ins("svd", @logindx-1, 1)
6967  @logbus = number("  700153 AURABOR_S1_2  34.50")
6968  @logreg = number("  700153 AURABOR_S1_2  34.50")
6969  svd[@logindx].ibus = @logbus
```

```
svd[@logindx].id = "v "
svd[@logindx].projid = 0
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 4
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 700
svd[@logindx].g = 0.000000
svd[@logindx].b = 0.000000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.025000
svd[@logindx].bstep[0] = 0.310000
svd[@logindx].bstep[1] = 0.000000
svd[@logindx].bstep[2] = 0.000000
svd[@logindx].bstep[3] = 0.000000
svd[@logindx].bstep[4] = 0.000000
svd[@logindx].bstep[5] = 0.000000
svd[@logindx].bstep[6] = 0.000000
svd[@logindx].bstep[7] = 0.000000
svd[@logindx].bstep[8] = 0.000000
svd[@logindx].bstep[9] = 0.000000
svd[@logindx].nstep[0] = 1
svd[@logindx].nstep[1] = 0
svd[@logindx].nstep[2] = 0
svd[@logindx].nstep[3] = 0
svd[@logindx].nstep[4] = 0
svd[@logindx].nstep[5] = 0
svd[@logindx].nstep[6] = 0
svd[@logindx].nstep[7] = 0
svd[@logindx].nstep[8] = 0
svd[@logindx].nstep[9] = 0
svd[@logindx].beffmin = 0.000000
svd[@logindx].beffmax = 0.137000
svd[@logindx].lid = "        "
svd[@logindx].date_in = 19400101
svd[@logindx].date_out = 20391231
svd[@logindx].nown[0] = 700
svd[@logindx].nown[1] = 0
svd[@logindx].nown[2] = 0
svd[@logindx].nown[3] = 0
svd[@logindx].pown[0] = 1.000
svd[@logindx].pown[1] = 0.000
svd[@logindx].pown[2] = 0.000
svd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71942
busd[@logindx].busnam = "24_1_T1      "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71943
busd[@logindx].busnam = "24_1_T2      "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
```

```
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71944
busd[@logindx].busnam = "24_1_T3      "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 99132
busd[@logindx].busnam = "mid_99132   "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 99134
busd[@logindx].busnam = "mid_99134   "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 99133
busd[@logindx].busnam = "mid_99133   "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700208
busd[@logindx].busnam = "REPL_2024_1 "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
```

```
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700209
busd[@logindx].busnam = "24_1_S1_2   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700210
busd[@logindx].busnam = "24_1_S2_2   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700211
busd[@logindx].busnam = "24_1_S3_2   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700212
busd[@logindx].busnam = "24_1_S1_1   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700213
busd[@logindx].busnam = "24_1_S2_1   "
busd[@logindx].basekv = 34.5000
```

```
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700214
busd[@logindx].busnam = "24_1_S3_1   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700215
busd[@logindx].busnam = "24_1_S1     "
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700216
busd[@logindx].busnam = "24_1_S2     "
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700217
busd[@logindx].busnam = "24_1_S3     "
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 65

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number("  70122 COMANCHE    230.00")
secdd[@logindx].ifrom = @logfrom
```

```
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].st = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.000022
  secdd[@logindx].zsecx = 0.000335
  secdd[@logindx].bsec = 0.001150
  secdd[@logindx].rate[0] = 943.00
  secdd[@logindx].rate[1] = 943.00
  secdd[@logindx].rate[2] = 943.00
  secdd[@logindx].rate[3] = 0.00
  secdd[@logindx].rate[4] = 0.00
  secdd[@logindx].rate[5] = 0.00
  secdd[@logindx].rate[6] = 0.00
  secdd[@logindx].rate[7] = 0.00
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].lngsec = 0.300
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].nown[0] = 65
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number(" 700212 24_1_S1_1     34.50")
  @logto = number(" 700209 24_1_S1_2     34.50")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].st = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.001128
  secdd[@logindx].zsecx = 0.001127
  secdd[@logindx].bsec = 0.006610
  secdd[@logindx].rate[0] = 234.80
  secdd[@logindx].rate[1] = 234.80
  secdd[@logindx].rate[2] = 234.80
  secdd[@logindx].rate[3] = 0.00
  secdd[@logindx].rate[4] = 0.00
  secdd[@logindx].rate[5] = 0.00
  secdd[@logindx].rate[6] = 0.00
  secdd[@logindx].rate[7] = 0.00
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].lngsec = 0.000
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].nown[0] = 65
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
```

```
7315   secdd[@logindx].pown[3] = 0.000
7316
7317   @logindx = casepar[0].nbrsec
7318   @ret=ins("secdd", @logindx-1, 1)
7319   @logfrom = number(" 700213 24_1_S2_1      34.50")
7320   @logto = number(" 700210 24_1_S2_2      34.50")
7321   secdd[@logindx].ifrom = @logfrom
7322   secdd[@logindx].ito = @logto
7323   secdd[@logindx].ck = "1 "
7324   secdd[@logindx].st = 1
7325   secdd[@logindx].nsec = 1
7326   secdd[@logindx].type = 0
7327   secdd[@logindx].zsecr = 0.001128
7328   secdd[@logindx].zsecx = 0.001127
7329   secdd[@logindx].bsec = 0.006610
7330   secdd[@logindx].rate[0] = 234.80
7331   secdd[@logindx].rate[1] = 234.80
7332   secdd[@logindx].rate[2] = 234.80
7333   secdd[@logindx].rate[3] = 0.00
7334   secdd[@logindx].rate[4] = 0.00
7335   secdd[@logindx].rate[5] = 0.00
7336   secdd[@logindx].rate[6] = 0.00
7337   secdd[@logindx].rate[7] = 0.00
7338   secdd[@logindx].area = 70
7339   secdd[@logindx].zone = 704
7340   secdd[@logindx].lngsec = 0.000
7341   secdd[@logindx].trangi = 0.000000
7342   secdd[@logindx].trantapf = 0.000000
7343   secdd[@logindx].trantapt = 0.000000
7344   secdd[@logindx].lid = "                                                  "
7345   secdd[@logindx].ohms = 0
7346   secdd[@logindx].nown[0] = 65
7347   secdd[@logindx].nown[1] = 0
7348   secdd[@logindx].nown[2] = 0
7349   secdd[@logindx].nown[3] = 0
7350   secdd[@logindx].pown[0] = 1.000
7351   secdd[@logindx].pown[1] = 0.000
7352   secdd[@logindx].pown[2] = 0.000
7353   secdd[@logindx].pown[3] = 0.000
7354
7355   @logindx = casepar[0].nbrsec
7356   @ret=ins("secdd", @logindx-1, 1)
7357   @logfrom = number(" 700214 24_1_S3_1      34.50")
7358   @logto = number(" 700211 24_1_S3_2      34.50")
7359   secdd[@logindx].ifrom = @logfrom
7360   secdd[@logindx].ito = @logto
7361   secdd[@logindx].ck = "1 "
7362   secdd[@logindx].st = 1
7363   secdd[@logindx].nsec = 1
7364   secdd[@logindx].type = 0
7365   secdd[@logindx].zsecr = 0.001128
7366   secdd[@logindx].zsecx = 0.001127
7367   secdd[@logindx].bsec = 0.006610
7368   secdd[@logindx].rate[0] = 234.80
7369   secdd[@logindx].rate[1] = 234.80
7370   secdd[@logindx].rate[2] = 234.80
7371   secdd[@logindx].rate[3] = 0.00
7372   secdd[@logindx].rate[4] = 0.00
7373   secdd[@logindx].rate[5] = 0.00
7374   secdd[@logindx].rate[6] = 0.00
7375   secdd[@logindx].rate[7] = 0.00
7376   secdd[@logindx].area = 70
7377   secdd[@logindx].zone = 704
7378   secdd[@logindx].lngsec = 0.000
7379   secdd[@logindx].trangi = 0.000000
7380   secdd[@logindx].trantapf = 0.000000
7381   secdd[@logindx].trantapt = 0.000000
7382   secdd[@logindx].lid = "                                                  "
7383   secdd[@logindx].ohms = 0
```

```
7384  secdd[@logindx].nown[0] = 65
7385  secdd[@logindx].nown[1] = 0
7386  secdd[@logindx].nown[2] = 0
7387  secdd[@logindx].nown[3] = 0
7388  secdd[@logindx].pown[0] = 1.000
7389  secdd[@logindx].pown[1] = 0.000
7390  secdd[@logindx].pown[2] = 0.000
7391  secdd[@logindx].pown[3] = 0.000
7392
7393  @logindx = casepar[0].ntran
7394  @ret=ins("tran", @logindx-1, 1)
7395  @logfrom = number(" 700208 REPL_2024_1  230.00")
7396  @logto = number(" 700209 24_1_S1_2     34.50")
7397  @logreg = number(" 700209 24_1_S1_2     34.50")
7398  @logtert = number("  71942 24_1_T1       13.80")
7399  @logint = number("  99132 mid_99143    230.00")
7400  tran[@logindx].ifrom = @logfrom
7401  tran[@logindx].ito = @logto
7402  tran[@logindx].ck = "1 "
7403  tran[@logindx].st = 1
7404  tran[@logindx].type = 2
7405  tran[@logindx].kreg = @logreg
7406  tran[@logindx].iztabl = 0
7407  tran[@logindx].itert = @logtert
7408  tran[@logindx].iint = @logint
7409  tran[@logindx].area = 70
7410  tran[@logindx].zone = 704
7411  tran[@logindx].tbase = 94.000000
7412  tran[@logindx].zpsr = 2.230000e-03
7413  tran[@logindx].zpsx = 9.497000e-02
7414  tran[@logindx].zptr = 3.350000e-03
7415  tran[@logindx].zptx = 1.424600e-01
7416  tran[@logindx].ztsr = 6.700000e-04
7417  tran[@logindx].ztsx = 2.849000e-02
7418  tran[@logindx].vnomp = 230.000000
7419  tran[@logindx].vnoms = 34.500000
7420  tran[@logindx].vnomt = 13.800000
7421  tran[@logindx].anglp = 0.000000
7422  tran[@logindx].gmag = 9.574469e-04
7423  tran[@logindx].bmag = -1.000000e-03
7424  tran[@logindx].rate[0] = 156.7
7425  tran[@logindx].rate[1] = 156.7
7426  tran[@logindx].rate[2] = 156.7
7427  tran[@logindx].rate[3] = 0.0
7428  tran[@logindx].rate[4] = 0.0
7429  tran[@logindx].rate[5] = 0.0
7430  tran[@logindx].rate[6] = 0.0
7431  tran[@logindx].rate[7] = 0.0
7432  tran[@logindx].tmax = 1.100000
7433  tran[@logindx].tmin = 0.900000
7434  tran[@logindx].vtmax = 1.020000
7435  tran[@logindx].vtmin = 0.980000
7436  tran[@logindx].stepp = -0.006250
7437  tran[@logindx].tapp = 1.000000
7438  tran[@logindx].tapfp = 1.000000
7439  tran[@logindx].tapfs = 1.000000
7440  tran[@logindx].tapft = 1.000000
7441  tran[@logindx].lid = "MPT _1                              "
7442  tran[@logindx].ohms = 0
7443  tran[@logindx].nown[0] = 65
7444  tran[@logindx].nown[1] = 0
7445  tran[@logindx].nown[2] = 0
7446  tran[@logindx].nown[3] = 0
7447  tran[@logindx].pown[0] = 1.000
7448  tran[@logindx].pown[1] = 1.000
7449  tran[@logindx].pown[2] = 1.000
7450  tran[@logindx].pown[3] = 1.000
7451
7452  @logindx = casepar[0].ntran
```

```
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700210 24_1_S2_2     34.50")
@logreg = number(" 700210 24_1_S2_2     34.50")
@logtert = number("  71943 24_1_T2       13.80")
@logint = number("  99133 mid_99141     230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _2                              "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700208 REPL_2024_1  230.00")
@logto = number(" 700211 24_1_S3_2     34.50")
@logreg = number(" 700211 24_1_S3_2     34.50")
@logtert = number("  71944 24_1_T3       13.80")
@logint = number("  99134 mid_99142     230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
```

```
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1 _1                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700215 24_1_S1        0.66")
@logto = number(" 700212 24_1_S1_1     34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
```

```
7591  tran[@logindx].zptr = 0.000000e+00
7592  tran[@logindx].zptx = 0.000000e+00
7593  tran[@logindx].ztsr = 0.000000e+00
7594  tran[@logindx].ztsx = 0.000000e+00
7595  tran[@logindx].vnomp = 0.660000
7596  tran[@logindx].vnoms = 34.500000
7597  tran[@logindx].vnomt = 0.000000
7598  tran[@logindx].anglp = 0.000000
7599  tran[@logindx].gmag = 1.150000e-03
7600  tran[@logindx].bmag = -5.000000e-03
7601  tran[@logindx].rate[0] = 132.0
7602  tran[@logindx].rate[1] = 132.0
7603  tran[@logindx].rate[2] = 132.0
7604  tran[@logindx].rate[3] = 0.0
7605  tran[@logindx].rate[4] = 0.0
7606  tran[@logindx].rate[5] = 0.0
7607  tran[@logindx].rate[6] = 0.0
7608  tran[@logindx].rate[7] = 0.0
7609  tran[@logindx].tmax = 1.050000
7610  tran[@logindx].tmin = 0.950000
7611  tran[@logindx].vtmax = 1.050000
7612  tran[@logindx].vtmin = 0.950000
7613  tran[@logindx].stepp = 0.025000
7614  tran[@logindx].tapp = 1.000000
7615  tran[@logindx].tapfp = 1.000000
7616  tran[@logindx].tapfs = 1.000000
7617  tran[@logindx].tapft = 1.000000
7618  tran[@logindx].lid = "GSU _1                              "
7619  tran[@logindx].ohms = 0
7620  tran[@logindx].nown[0] = 65
7621  tran[@logindx].nown[1] = 0
7622  tran[@logindx].nown[2] = 0
7623  tran[@logindx].nown[3] = 0
7624  tran[@logindx].pown[0] = 1.000
7625  tran[@logindx].pown[1] = 1.000
7626  tran[@logindx].pown[2] = 1.000
7627  tran[@logindx].pown[3] = 1.000
7628
7629  @logindx = casepar[0].ntran
7630  @ret=ins("tran", @logindx-1, 1)
7631  @logfrom = number(" 700216 24_1_S2        0.66")
7632  @logto = number(" 700213 24_1_S2_1      34.50")
7633  @logreg = number("      0 ------------    0.00")
7634  @logtert = number("      0 ------------    0.00")
7635  @logint = number("      0 ------------    0.00")
7636  tran[@logindx].ifrom = @logfrom
7637  tran[@logindx].ito = @logto
7638  tran[@logindx].ck = "1 "
7639  tran[@logindx].st = 1
7640  tran[@logindx].type = 1
7641  tran[@logindx].kreg = @logreg
7642  tran[@logindx].iztabl = 0
7643  tran[@logindx].itert = @logtert
7644  tran[@logindx].iint = @logint
7645  tran[@logindx].area = 70
7646  tran[@logindx].zone = 704
7647  tran[@logindx].tbase = 132.000000
7648  tran[@logindx].zpsr = 6.693000e-03
7649  tran[@logindx].zpsx = 7.972000e-02
7650  tran[@logindx].zptr = 0.000000e+00
7651  tran[@logindx].zptx = 0.000000e+00
7652  tran[@logindx].ztsr = 0.000000e+00
7653  tran[@logindx].ztsx = 0.000000e+00
7654  tran[@logindx].vnomp = 0.660000
7655  tran[@logindx].vnoms = 34.500000
7656  tran[@logindx].vnomt = 0.000000
7657  tran[@logindx].anglp = 0.000000
7658  tran[@logindx].gmag = 1.150000e-03
7659  tran[@logindx].bmag = -5.000000e-03
```

```
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2                          "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700217 24_1_S3        0.66")
@logto = number(" 700214 24_1_S3_1      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 132.000000
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 132.0
tran[@logindx].rate[1] = 132.0
tran[@logindx].rate[2] = 132.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
```

```
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2 _1                         "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 65
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700215 24_1_S1       0.66")
@logreg = number(" 700215 24_1_S1       0.66")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S1"
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].ba = 65
gens[@logindx].mbase = 132.0000
gens[@logindx].qmax = 67.392998
gens[@logindx].qmin = -67.392998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 125.400002
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 65
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
```

```
@ret=ins("gens", @logindx-1, 1)
@logbgen = number("700216 24_1_S2       0.66")
@logreg = number("700216 24_1_S2       0.66")
@loghbus = number("     0 ------------   0.00")
@logtbus = number("     0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S2"
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].ba = 65
gens[@logindx].mbase = 132.0000
gens[@logindx].qmax = 67.392998
gens[@logindx].qmin = -67.392998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 125.400002
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 65
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number("700217 24_1_S3       0.66")
@logreg = number("700217 24_1_S3       0.66")
@loghbus = number("     0 ------------   0.00")
@logtbus = number("     0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S3"
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].ba = 65
gens[@logindx].mbase = 132.0000
gens[@logindx].qmax = 67.392998
gens[@logindx].qmin = -67.392998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 125.400002
gens[@logindx].pmin = 0.000000
```

```
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 65
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700209 24_1_S1_2      34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].ba = 65
load[@logindx].nonconf = 1
load[@logindx].lid = "        "
load[@logindx].nown = 65
load[@logindx].clzone = "        "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700001
busd[@logindx].busnam =  "PI_24_3"
busd[@logindx].basekv = 18.0000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 700
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
```

```
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700001,"date_in date_out","400101","391231")


  @logindx = casepar[0].ntran
  @ret=ins("tran", @logindx-1, 1)
  @logfrom = number(" 700001 5RSC_24_1      18.00")
  @logto = number("  70191 FTLUPTON      115.00")
  @logreg = number("      0 ------------    0.00")
  @logtert = number("      0 ------------    0.00")
  @logint = number("      0 ------------    0.00")
  tran[@logindx].ifrom = @logfrom
  tran[@logindx].ito = @logto
  tran[@logindx].ck = "T1"
  tran[@logindx].projid = 0
  tran[@logindx].st = 1
  tran[@logindx].stn = 1
  tran[@logindx].type = 1
  tran[@logindx].kreg = @logreg
  tran[@logindx].iztabl = 0
  tran[@logindx].itert = @logtert
  tran[@logindx].iint = @logint
  tran[@logindx].area = 70
  tran[@logindx].zone = 700
  tran[@logindx].tbase = 168.000000
  tran[@logindx].zpsr = 1.973000e-03
  tran[@logindx].zpsx = 7.797400e-02
  tran[@logindx].zptr = 0.000000e+00
  tran[@logindx].zptx = 0.000000e+00
  tran[@logindx].ztsr = 0.000000e+00
  tran[@logindx].ztsx = 0.000000e+00
  tran[@logindx].vnomp = 18.000000
  tran[@logindx].vnoms = 115.000000
  tran[@logindx].vnomt = 0.000000
  tran[@logindx].anglp = 0.000000
  tran[@logindx].gmag = 6.000000e-04
  tran[@logindx].bmag = -1.980000e-03
  tran[@logindx].rate[0] = 280.0
  tran[@logindx].rate[1] = 280.0
  tran[@logindx].rate[2] = 280.0
  tran[@logindx].rate[3] = 280.0
  tran[@logindx].rate[4] = 280.0
  tran[@logindx].rate[5] = 280.0
  tran[@logindx].rate[6] = 280.0
  tran[@logindx].rate[7] = 280.0
  tran[@logindx].aloss = 1.000
  tran[@logindx].tmax = 0.000000
  tran[@logindx].tmin = 0.000000
  tran[@logindx].vtmax = 0.000000
  tran[@logindx].vtmin = 0.000000
  tran[@logindx].stepp = 0.000000
  tran[@logindx].tapp = 1.000000
  tran[@logindx].tapfp = 0.956522
  tran[@logindx].tapfs = 0.956522
  tran[@logindx].tapft = 1.000000
  tran[@logindx].lid = "                                        "
  tran[@logindx].ohms = 0
  tran[@logindx].date_in = 19400101
  tran[@logindx].date_out = 20391231
  tran[@logindx].nown[0] = 700
  tran[@logindx].nown[1] = 0
  tran[@logindx].nown[2] = 0
  tran[@logindx].nown[3] = 0
  tran[@logindx].nown[4] = 0
  tran[@logindx].nown[5] = 0
  tran[@logindx].nown[6] = 0
  tran[@logindx].nown[7] = 0
  tran[@logindx].pown[0] = 1.000
```

```
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000


@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700001 5RSC_24_1     18.00")
@logreg = number(" 700001 5RSC_24_1     18.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "G3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 700
gens[@logindx].mbase = 277.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 145.919006
gens[@logindx].qmin = -145.919006
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 235.449997
gens[@logindx].pmin = 50.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.190
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 0.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 11
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
```

```
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700001 5RSC_24_1     18.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 700
load[@logindx].p = 6.000000
load[@logindx].q = 3.720000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 1
load[@logindx].lid = "PPA_AUX "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "PPA_AUX "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.020000
volt[@logindx].va = 0
busd[@logindx].extnum = 700002
busd[@logindx].busnam = "PI_24_2_G7"
busd[@logindx].basekv = 19.0000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.020000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700002,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.020000
volt[@logindx].va = 0
busd[@logindx].extnum = 700003
busd[@logindx].busnam = "PI_24_2_G8"
busd[@logindx].basekv = 19.0000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
```

```
busd[@logindx].level = 0
busd[@logindx].vsched = 1.020000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700003,"date_in date_out","400101","391231")

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700002 5RSC_24_2     19.00")
@logto = number("  70410 ST.VRAIN    230.00")
@logreg = number("      0 ------------   0.00")
@logtert = number("      0 ------------   0.00")
@logint = number("      0 ------------   0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U7"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 171.000000
tran[@logindx].zpsr = 1.973000e-03
tran[@logindx].zpsx = 7.497400e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 19.000000
tran[@logindx].vnoms = 230.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 8.200000e-04
tran[@logindx].bmag = -1.500000e-03
tran[@logindx].rate[0] = 227.0
tran[@logindx].rate[1] = 227.0
tran[@logindx].rate[2] = 227.0
tran[@logindx].rate[3] = 227.0
tran[@logindx].rate[4] = 227.0
tran[@logindx].rate[5] = 227.0
tran[@logindx].rate[6] = 227.0
tran[@logindx].rate[7] = 227.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 0.975000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = ""
tran[@logindx].ohms = 0
```

```
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700003 5RSC_24_2     19.00")
@logto = number("  70410 ST.VRAIN     230.00")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U8"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 171.000000
tran[@logindx].zpsr = 1.973000e-03
tran[@logindx].zpsx = 7.497400e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 19.000000
tran[@logindx].vnoms = 230.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 8.200000e-04
tran[@logindx].bmag = -1.500000e-03
tran[@logindx].rate[0] = 227.0
tran[@logindx].rate[1] = 227.0
tran[@logindx].rate[2] = 227.0
tran[@logindx].rate[3] = 227.0
tran[@logindx].rate[4] = 227.0
tran[@logindx].rate[5] = 227.0
tran[@logindx].rate[6] = 227.0
tran[@logindx].rate[7] = 227.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 0.975000
tran[@logindx].tapfs = 1.000000
```

```
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                  "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 19400101
tran[@logindx].date_out = 20391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000


@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700002 5RSC_24_2     19.00")
@logreg = number(" 700002 5RSC_24_2     19.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "G7"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 277.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 145.919006
gens[@logindx].qmin = -145.919006
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 235.449997
gens[@logindx].pmin = 50.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.141
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 19400101
gens[@logindx].date_out = 20391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
```

```
8350   gens[@logindx].pown[6] = 0.000
8351   gens[@logindx].pown[7] = 0.000
8352   gens[@logindx].rtr = 0.0000
8353   gens[@logindx].xtr = 0.0000
8354   gens[@logindx].gtap = 1.0000
8355   gens[@logindx].gov_flag = 0
8356   gens[@logindx].agc_flag = 0
8357   gens[@logindx].dispatch_flag = 0
8358   gens[@logindx].baseload_flag = 0
8359   gens[@logindx].air_temp = 0
8360   gens[@logindx].turbine_type = 11
8361   gens[@logindx].fueltype[0] = 0
8362   gens[@logindx].fueltype[1] = 0
8363   gens[@logindx].fueltype[2] = 0
8364   gens[@logindx].qtab = 0
8365   gens[@logindx].pf = 0.000000
8366
8367   @logindx = casepar[0].ngen
8368   @ret=ins("gens", @logindx-1, 1)
8369   @logbgen = number(" 700003 5RSC_24_2      19.00")
8370   @logreg = number(" 700003 5RSC_24_2      19.00")
8371   @loghbus = number("      0 ------------    0.00")
8372   @logtbus = number("      0 ------------    0.00")
8373   gens[@logindx].ibgen = @logbgen
8374   gens[@logindx].id = "G8"
8375   gens[@logindx].projid = 0
8376   gens[@logindx].st = 0
8377   gens[@logindx].stn = 1
8378   gens[@logindx].igreg = @logreg
8379   gens[@logindx].area = 70
8380   gens[@logindx].zone = 706
8381   gens[@logindx].mbase = 277.0000
8382   gens[@logindx].pgen = 0.0
8383   gens[@logindx].qgen = 0.000000
8384   gens[@logindx].qmax = 145.919006
8385   gens[@logindx].qmin = -145.919006
8386   gens[@logindx].prf = 1.000000
8387   gens[@logindx].qrf = 1.000000
8388   gens[@logindx].pmax = 235.449997
8389   gens[@logindx].pmin = 50.000000
8390   gens[@logindx].zgenr = 0.000
8391   gens[@logindx].zgenx = 0.141
8392   gens[@logindx].rcomp = 0.000
8393   gens[@logindx].xcomp = 0.000
8394   gens[@logindx].hbus = @loghbus
8395   gens[@logindx].tbus = @logtbus
8396   gens[@logindx].lid = "        "
8397   gens[@logindx].date_in = 19400101
8398   gens[@logindx].date_out = 20391231
8399   gens[@logindx].nown[0] = 700
8400   gens[@logindx].nown[1] = 0
8401   gens[@logindx].nown[2] = 0
8402   gens[@logindx].nown[3] = 0
8403   gens[@logindx].nown[4] = 0
8404   gens[@logindx].nown[5] = 0
8405   gens[@logindx].nown[6] = 0
8406   gens[@logindx].nown[7] = 0
8407   gens[@logindx].pown[0] = 1.000
8408   gens[@logindx].pown[1] = 0.000
8409   gens[@logindx].pown[2] = 0.000
8410   gens[@logindx].pown[3] = 0.000
8411   gens[@logindx].pown[4] = 0.000
8412   gens[@logindx].pown[5] = 0.000
8413   gens[@logindx].pown[6] = 0.000
8414   gens[@logindx].pown[7] = 0.000
8415   gens[@logindx].rtr = 0.0000
8416   gens[@logindx].xtr = 0.0000
8417   gens[@logindx].gtap = 1.0000
8418   gens[@logindx].gov_flag = 0
```

```
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 11
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700002 5RSC_24_2     19.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 6.000000
load[@logindx].q = 3.718500
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 1
load[@logindx].lid = "PPA_AUX "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 700
load[@logindx].clzone = "PPA_AUX "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700003 5RSC_24_2     19.00")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 6.000000
load[@logindx].q = 3.718500
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 1
load[@logindx].lid = "PPA_AUX "
load[@logindx].date_in = 19400101
load[@logindx].date_out = 20391231
load[@logindx].nown = 700
load[@logindx].clzone = "PPA_AUX "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000442
volt[@logindx].va = 0.192183
busd[@logindx].extnum = 700004
busd[@logindx].busnam = "24_5_G"
```

```
busd[@logindx].basekv = 0.4800
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 710
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700004,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.992991
volt[@logindx].va = 0.130779
busd[@logindx].extnum = 700005
busd[@logindx].busnam =  "24_5_G_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 710
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700005,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.000936
busd[@logindx].extnum = 700006
busd[@logindx].busnam =  "PI_2024_5"
busd[@logindx].basekv = 69.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 710
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
```

```
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
  next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700006,"date_in date_out","400101","391231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 0.992777
  volt[@logindx].va = 0.130581
  busd[@logindx].extnum = 700007
  busd[@logindx].busnam =  "24_5_G_2"
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].zone = 710
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.000000
  busd[@logindx].vmax = 1.1000
  busd[@logindx].vmin = 0.9000
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
  for @s = 0 to casepar[0].nsubst - 1
    if(subst[@s].extnum = @snum)
      @sindx = @s
    endif
  next
    busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700007,"date_in date_out","400101","391231")

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number(" 700005 5RSC_24_3      34.50")
  @logto = number(" 700007 5RSC_24_3      34.50")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.000440
  secdd[@logindx].zsecx = 0.000377
  secdd[@logindx].bsec = 0.000780
  secdd[@logindx].rate[0] = 86.29
  secdd[@logindx].rate[1] = 99.23
  secdd[@logindx].rate[2] = 99.23
  secdd[@logindx].rate[3] = 0.00
  secdd[@logindx].rate[4] = 0.00
  secdd[@logindx].rate[5] = 0.00
  secdd[@logindx].rate[6] = 0.00
  secdd[@logindx].rate[7] = 0.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 710
  secdd[@logindx].lngsec = 1.000
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 400101
```

```
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  700006 5RSC_24_3      69.00")
@logto = number("   70026 ALMSA_TM         69.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000302
secdd[@logindx].zsecx = 0.001840
secdd[@logindx].bsec = 0.000040
secdd[@logindx].rate[0] = 108.40
secdd[@logindx].rate[1] = 124.66
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 710
secdd[@logindx].lngsec = 0.120
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

```

```
@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700005 5RSC_24_3      34.50")
@logto = number(" 700004 5RSC_24_3      0.48")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 710
tran[@logindx].tbase = 57.000000
tran[@logindx].zpsr = 8.682000e-03
tran[@logindx].zpsx = 6.945900e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.480000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 57.0
tran[@logindx].rate[1] = 57.0
tran[@logindx].rate[2] = 57.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.700006
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU1                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
```

```
8764   tran[@logindx].pown[6] = 0.000
8765   tran[@logindx].pown[7] = 0.000
8766
8767   @logindx = casepar[0].ntran
8768   @ret=ins("tran", @logindx-1, 1)
8769   @logfrom = number(" 700006 5RSC_24_3      69.00")
8770   @logto = number(" 700007 5RSC_24_3      34.50")
8771   @logreg = number(" 700007 5RSC_24_3      34.50")
8772   @logtert = number("      0 ------------    0.00")
8773   @logint = number("      0 ------------    0.00")
8774   tran[@logindx].ifrom = @logfrom
8775   tran[@logindx].ito = @logto
8776   tran[@logindx].ck = "1 "
8777   tran[@logindx].projid = 0
8778   tran[@logindx].st = 1
8779   tran[@logindx].stn = 1
8780   tran[@logindx].type = 1
8781   tran[@logindx].kreg = @logreg
8782   tran[@logindx].iztabl = 0
8783   tran[@logindx].itert = @logtert
8784   tran[@logindx].iint = @logint
8785   tran[@logindx].area = 70
8786   tran[@logindx].zone = 710
8787   tran[@logindx].tbase = 33.000000
8788   tran[@logindx].zpsr = 3.539000e-03
8789   tran[@logindx].zpsx = 8.492600e-02
8790   tran[@logindx].zptr = 0.000000e+00
8791   tran[@logindx].zptx = 0.000000e+00
8792   tran[@logindx].ztsr = 0.000000e+00
8793   tran[@logindx].ztsx = 0.000000e+00
8794   tran[@logindx].vnomp = 69.000000
8795   tran[@logindx].vnoms = 34.500000
8796   tran[@logindx].vnomt = 0.000000
8797   tran[@logindx].anglp = 0.000000
8798   tran[@logindx].gmag = 0.000000e+00
8799   tran[@logindx].bmag = 0.000000e+00
8800   tran[@logindx].rate[0] = 33.0
8801   tran[@logindx].rate[1] = 44.0
8802   tran[@logindx].rate[2] = 55.0
8803   tran[@logindx].rate[3] = 0.0
8804   tran[@logindx].rate[4] = 0.0
8805   tran[@logindx].rate[5] = 0.0
8806   tran[@logindx].rate[6] = 0.0
8807   tran[@logindx].rate[7] = 0.0
8808   tran[@logindx].aloss = 0.000
8809   tran[@logindx].tmax = 1.700006
8810   tran[@logindx].tmin = 0.900000
8811   tran[@logindx].vtmax = 1.020000
8812   tran[@logindx].vtmin = 0.980000
8813   tran[@logindx].stepp = 0.006250
8814   tran[@logindx].tapp = 1.000000
8815   tran[@logindx].tapfp = 1.000000
8816   tran[@logindx].tapfs = 1.000000
8817   tran[@logindx].tapft = 1.000000
8818   tran[@logindx].lid = "MPT1                                "
8819   tran[@logindx].ohms = 0
8820   tran[@logindx].date_in = 400101
8821   tran[@logindx].date_out = 391231
8822   tran[@logindx].nown[0] = 700
8823   tran[@logindx].nown[1] = 0
8824   tran[@logindx].nown[2] = 0
8825   tran[@logindx].nown[3] = 0
8826   tran[@logindx].nown[4] = 0
8827   tran[@logindx].nown[5] = 0
8828   tran[@logindx].nown[6] = 0
8829   tran[@logindx].nown[7] = 0
8830   tran[@logindx].pown[0] = 1.000
8831   tran[@logindx].pown[1] = 1.000
8832   tran[@logindx].pown[2] = 1.000
```

```
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000


@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700004 5RSC_24_3      0.48")
@logreg = number(" 700006 5RSC_24_3     69.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "G"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 710
gens[@logindx].mbase = 54.1500
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 1.378545
gens[@logindx].qmax = 20.302299
gens[@logindx].qmin = -20.302299
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 50.200001
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.500
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 42
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000
```

```
8902
8903    @logindx = casepar[0].nsvd
8904    @ret = ins("svd", @logindx-1, 1)
8905    @logbus = number("  700007 5RSC_24_3      34.50")
8906    @logreg = number("  700007 5RSC_24_3      34.50")
8907    svd[@logindx].ibus = @logbus
8908    svd[@logindx].id = "v"
8909    svd[@logindx].projid = 0
8910    svd[@logindx].st = 1
8911    svd[@logindx].stn = 1
8912    svd[@logindx].type = 0
8913    svd[@logindx].kreg = @logreg
8914    svd[@logindx].area = 70
8915    svd[@logindx].zone = 710
8916    svd[@logindx].g = 0.000000
8917    svd[@logindx].b = 0.000000
8918    svd[@logindx].bmin = 0.000000
8919    svd[@logindx].bmax = 0.000000
8920    svd[@logindx].vband = 0.050000
8921    svd[@logindx].bstep[0] = 0.180000
8922    svd[@logindx].bstep[1] = 0.000000
8923    svd[@logindx].bstep[2] = 0.000000
8924    svd[@logindx].bstep[3] = 0.000000
8925    svd[@logindx].bstep[4] = 0.000000
8926    svd[@logindx].bstep[5] = 0.000000
8927    svd[@logindx].bstep[6] = 0.000000
8928    svd[@logindx].bstep[7] = 0.000000
8929    svd[@logindx].bstep[8] = 0.000000
8930    svd[@logindx].bstep[9] = 0.000000
8931    svd[@logindx].nstep[0] = 1
8932    svd[@logindx].nstep[1] = 0
8933    svd[@logindx].nstep[2] = 0
8934    svd[@logindx].nstep[3] = 0
8935    svd[@logindx].nstep[4] = 0
8936    svd[@logindx].nstep[5] = 0
8937    svd[@logindx].nstep[6] = 0
8938    svd[@logindx].nstep[7] = 0
8939    svd[@logindx].nstep[8] = 0
8940    svd[@logindx].nstep[9] = 0
8941    svd[@logindx].beffmin = 0.000000
8942    svd[@logindx].beffmax = 0.180000
8943    svd[@logindx].lid = "        "
8944    svd[@logindx].date_in = 400101
8945    svd[@logindx].date_out = 391231
8946    svd[@logindx].nown[0] = 700
8947    svd[@logindx].nown[1] = 0
8948    svd[@logindx].nown[2] = 0
8949    svd[@logindx].nown[3] = 0
8950    svd[@logindx].pown[0] = 1.000
8951    svd[@logindx].pown[1] = 0.000
8952    svd[@logindx].pown[2] = 0.000
8953    svd[@logindx].pown[3] = 0.000
8954
8955
8956    mispar[0].iordfl = 0      /* Initiate a bus re-order */
8957
8958    end
8959
```

```
@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000912
volt[@logindx].va = 0.175354
busd[@logindx].extnum = 71972
busd[@logindx].busnam = "24_7_T"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000960
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71972,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000912
volt[@logindx].va = 0.175354
busd[@logindx].extnum = 99166
busd[@logindx].busnam = "mid_99166"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000960
busd[@logindx].vmax = 0.0000
busd[@logindx].vmin = 0.0000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",99166,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.22677
busd[@logindx].extnum = 700044
busd[@logindx].busnam = "24_7_B"
busd[@logindx].basekv = 0.9000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
```

```
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700044,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000858
volt[@logindx].va = 0.166175
busd[@logindx].extnum = 700045
busd[@logindx].busnam =  "24_7_B_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000910
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700045,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000018
volt[@logindx].va = 0.164718
busd[@logindx].extnum = 700046
busd[@logindx].busnam =  "24_7_B_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000080
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
```

```
@iret=datachange(1,"busd",700046,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000413
volt[@logindx].va = 0.002905
busd[@logindx].extnum = 700047
busd[@logindx].busnam = "PI_2024_7"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000620
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700047,"date_in date_out","400101","391231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700045 5RSC_24_12    34.50")
@logto = number(" 700046 5RSC_24_12    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000490
secdd[@logindx].zsecx = 0.000635
secdd[@logindx].bsec = 0.005960
secdd[@logindx].rate[0] = 225.00
secdd[@logindx].rate[1] = 225.00
secdd[@logindx].rate[2] = 225.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
```

```
  secdd[@logindx].nown[5] = 0
  secdd[@logindx].nown[6] = 0
  secdd[@logindx].nown[7] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000
  secdd[@logindx].pown[4] = 0.000
  secdd[@logindx].pown[5] = 0.000
  secdd[@logindx].pown[6] = 0.000
  secdd[@logindx].pown[7] = 0.000

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number(" 700047 5RSC_24_12    345.00")
  @logto = number("  70654 COMANCHE     345.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.000349
  secdd[@logindx].zsecx = 0.000401
  secdd[@logindx].bsec = 0.010920
  secdd[@logindx].rate[0] = 268.90
  secdd[@logindx].rate[1] = 268.90
  secdd[@logindx].rate[2] = 268.90
  secdd[@logindx].rate[3] = 0.00
  secdd[@logindx].rate[4] = 0.00
  secdd[@logindx].rate[5] = 0.00
  secdd[@logindx].rate[6] = 0.00
  secdd[@logindx].rate[7] = 0.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].lngsec = 1.300
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 400101
  secdd[@logindx].date_out = 391231
  secdd[@logindx].nown[0] = 700
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].nown[4] = 0
  secdd[@logindx].nown[5] = 0
  secdd[@logindx].nown[6] = 0
  secdd[@logindx].nown[7] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000
  secdd[@logindx].pown[4] = 0.000
  secdd[@logindx].pown[5] = 0.000
  secdd[@logindx].pown[6] = 0.000
  secdd[@logindx].pown[7] = 0.000

  @logindx = casepar[0].ntran
  @ret=ins("tran", @logindx-1, 1)
  @logfrom = number(" 700044 5RSC_24_12     0.90")
  @logto = number(" 700045 5RSC_24_12    34.50")
  @logreg = number("      0 ------------    0.00")
  @logtert = number("      0 ------------    0.00")
```

```
277   @logint = number("      0 ------------    0.00")
278   tran[@logindx].ifrom = @logfrom
279   tran[@logindx].ito = @logto
280   tran[@logindx].ck = "U1"
281   tran[@logindx].projid = 0
282   tran[@logindx].st = 1
283   tran[@logindx].stn = 1
284   tran[@logindx].type = 1
285   tran[@logindx].kreg = @logreg
286   tran[@logindx].iztabl = 0
287   tran[@logindx].itert = @logtert
288   tran[@logindx].iint = @logint
289   tran[@logindx].area = 70
290   tran[@logindx].zone = 704
291   tran[@logindx].tbase = 225.000000
292   tran[@logindx].zpsr = 5.884830e-03
293   tran[@logindx].zpsx = 6.473295e-02
294   tran[@logindx].zptr = 0.000000e+00
295   tran[@logindx].zptx = 0.000000e+00
296   tran[@logindx].ztsr = 0.000000e+00
297   tran[@logindx].ztsx = 0.000000e+00
298   tran[@logindx].vnomp = 0.900000
299   tran[@logindx].vnoms = 34.500000
300   tran[@logindx].vnomt = 0.000000
301   tran[@logindx].anglp = 0.000000
302   tran[@logindx].gmag = 0.000000e+00
303   tran[@logindx].bmag = 0.000000e+00
304   tran[@logindx].rate[0] = 225.0
305   tran[@logindx].rate[1] = 225.0
306   tran[@logindx].rate[2] = 225.0
307   tran[@logindx].rate[3] = 0.0
308   tran[@logindx].rate[4] = 0.0
309   tran[@logindx].rate[5] = 0.0
310   tran[@logindx].rate[6] = 0.0
311   tran[@logindx].rate[7] = 0.0
312   tran[@logindx].aloss = 0.000
313   tran[@logindx].tmax = 1.100000
314   tran[@logindx].tmin = 0.900000
315   tran[@logindx].vtmax = 1.100000
316   tran[@logindx].vtmin = 0.900000
317   tran[@logindx].stepp = 0.006250
318   tran[@logindx].tapp = 1.000000
319   tran[@logindx].tapfp = 1.000000
320   tran[@logindx].tapfs = 1.000000
321   tran[@logindx].tapft = 1.000000
322   tran[@logindx].lid = "                                    "
323   tran[@logindx].ohms = 0
324   tran[@logindx].date_in = 400101
325   tran[@logindx].date_out = 391231
326   tran[@logindx].nown[0] = 700
327   tran[@logindx].nown[1] = 0
328   tran[@logindx].nown[2] = 0
329   tran[@logindx].nown[3] = 0
330   tran[@logindx].nown[4] = 0
331   tran[@logindx].nown[5] = 0
332   tran[@logindx].nown[6] = 0
333   tran[@logindx].nown[7] = 0
334   tran[@logindx].pown[0] = 1.000
335   tran[@logindx].pown[1] = 1.000
336   tran[@logindx].pown[2] = 1.000
337   tran[@logindx].pown[3] = 1.000
338   tran[@logindx].pown[4] = 0.000
339   tran[@logindx].pown[5] = 0.000
340   tran[@logindx].pown[6] = 0.000
341   tran[@logindx].pown[7] = 0.000
342
343   @logindx = casepar[0].ntran
344   @ret=ins("tran", @logindx-1, 1)
345   @logfrom = number(" 700047 5RSC_24_12    345.00")
```

```
@logto = number(" 700046 5RSC_24_12     34.50")
@logreg = number("      0 ------------     0.00")
@logtert = number(" 71972 5RSC_24_12     13.80")
@logint = number(" 99166 mid_pt        345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 100.000000
tran[@logindx].zpsr = 1.807380e-03
tran[@logindx].zpsx = 7.952490e-02
tran[@logindx].zptr = 2.819520e-03
tran[@logindx].zptx = 1.240590e-01
tran[@logindx].ztsr = 7.733800e-04
tran[@logindx].ztsx = 3.402870e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 220.0
tran[@logindx].rate[1] = 220.0
tran[@logindx].rate[2] = 220.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.100000
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

```

```
@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700044 5RSC_24_12      0.90")
@logreg = number(" 700044 5RSC_24_12      0.90")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 225.0000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = -15.620944
gens[@logindx].qmax = 82.700996
gens[@logindx].qmin = -82.700996
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 209.250000
gens[@logindx].pmin = -209.250000
gens[@logindx].zgenr = 10000.000
gens[@logindx].zgenx = 10000.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700046 5RSC_24_12     34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
```

```
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].p = 4.950000
load[@logindx].q = 0.705000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nsvd
@ret = ins("svd", @logindx-1, 1)
@logbus = number(" 700046 5RSC_24_12    34.50")
@logreg = number(" 700046 5RSC_24_12    34.50")
svd[@logindx].ibus = @logbus
svd[@logindx].id = "v"
svd[@logindx].projid = 0
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 0
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 704
svd[@logindx].g = 0.000000
svd[@logindx].b = 0.400000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.000000
svd[@logindx].bstep[0] = 0.400000
svd[@logindx].bstep[1] = 0.000000
svd[@logindx].bstep[2] = 0.000000
svd[@logindx].bstep[3] = 0.000000
svd[@logindx].bstep[4] = 0.000000
svd[@logindx].bstep[5] = 0.000000
svd[@logindx].bstep[6] = 0.000000
svd[@logindx].bstep[7] = 0.000000
svd[@logindx].bstep[8] = 0.000000
svd[@logindx].bstep[9] = 0.000000
svd[@logindx].nstep[0] = 1
svd[@logindx].nstep[1] = 0
svd[@logindx].nstep[2] = 0
svd[@logindx].nstep[3] = 0
svd[@logindx].nstep[4] = 0
svd[@logindx].nstep[5] = 0
svd[@logindx].nstep[6] = 0
svd[@logindx].nstep[7] = 0
svd[@logindx].nstep[8] = 0
svd[@logindx].nstep[9] = 0
svd[@logindx].beffmin = 0.000000
svd[@logindx].beffmax = 0.400000
svd[@logindx].lid = "        "
svd[@logindx].date_in = 400101
svd[@logindx].date_out = 391231
svd[@logindx].nown[0] = 700
svd[@logindx].nown[1] = 0
svd[@logindx].nown[2] = 0
svd[@logindx].nown[3] = 0
svd[@logindx].pown[0] = 1.000
svd[@logindx].pown[1] = 0.000
svd[@logindx].pown[2] = 0.000
```

```
svd[@logindx].pown[3] = 0.000


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.001049
volt[@logindx].va = -0.189437
busd[@logindx].extnum = 71966
busd[@logindx].busnam = "24_9_T4"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.009840
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71966,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.998324
volt[@logindx].va = -0.181668
busd[@logindx].extnum = 71965
busd[@logindx].busnam = "24_9_T3"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.007220
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71965,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.004126
volt[@logindx].va = -0.206447
busd[@logindx].extnum = 71964
busd[@logindx].busnam = "24_9_T2"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
```

```
622   busd[@logindx].zone = 706
623   busd[@logindx].projid = 0
624   busd[@logindx].level = 0
625   busd[@logindx].vsched = 1.012800
626   busd[@logindx].vmax = 1.1000
627   busd[@logindx].vmin = 0.9000
628   busd[@logindx].nown = 700
629   @snum = -1
630   @sindx = -1
631    for @s = 0 to casepar[0].nsubst - 1
632     if(subst[@s].extnum = @snum)
633       @sindx = @s
634     endif
635    next
636     busd[@logindx].isubst = @sindx  /*  -1  */
637   @ret=setbix(busd[@logindx].extnum, @logindx)
638   @iret=datachange(1,"busd",71964,"date_in date_out","400101","391231")
639
640   @logindx = casepar[0].nbus
641   @ret=ins("busd", @logindx-1, 1)
642   @ret=ins("volt", @logindx-1, 1)
643   volt[@logindx].vm = 1.000068
644   volt[@logindx].va = -0.19028
645   busd[@logindx].extnum = 71963
646   busd[@logindx].busnam =  "24_9_T1"
647   busd[@logindx].basekv = 13.8000
648   busd[@logindx].type = 1
649   busd[@logindx].area = 70
650   busd[@logindx].zone = 706
651   busd[@logindx].projid = 0
652   busd[@logindx].level = 0
653   busd[@logindx].vsched = 1.008900
654   busd[@logindx].vmax = 1.1000
655   busd[@logindx].vmin = 0.9000
656   busd[@logindx].nown = 700
657   @snum = -1
658   @sindx = -1
659    for @s = 0 to casepar[0].nsubst - 1
660     if(subst[@s].extnum = @snum)
661       @sindx = @s
662     endif
663    next
664     busd[@logindx].isubst = @sindx  /*  -1  */
665   @ret=setbix(busd[@logindx].extnum, @logindx)
666   @iret=datachange(1,"busd",71963,"date_in date_out","400101","391231")
667
668   @logindx = casepar[0].nbus
669   @ret=ins("busd", @logindx-1, 1)
670   @ret=ins("volt", @logindx-1, 1)
671   volt[@logindx].vm = 1.001049
672   volt[@logindx].va = 0.334162
673   busd[@logindx].extnum = 98009
674   busd[@logindx].busnam =  "mid_98009"
675   busd[@logindx].basekv = 345.0000
676   busd[@logindx].type = 1
677   busd[@logindx].area = 70
678   busd[@logindx].zone = 706
679   busd[@logindx].projid = 0
680   busd[@logindx].level = 0
681   busd[@logindx].vsched = 1.009840
682   busd[@logindx].vmax = 0.0000
683   busd[@logindx].vmin = 0.0000
684   busd[@logindx].nown = 700
685   @snum = -1
686   @sindx = -1
687    for @s = 0 to casepar[0].nsubst - 1
688     if(subst[@s].extnum = @snum)
689       @sindx = @s
690     endif
```

```
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98009,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.004126
volt[@logindx].va = 0.317151
busd[@logindx].extnum = 98010
busd[@logindx].busnam =  "mid_98010"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.012800
busd[@logindx].vmax = 0.0000
busd[@logindx].vmin = 0.0000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98010,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000068
volt[@logindx].va = 0.333319
busd[@logindx].extnum = 98011
busd[@logindx].busnam =  "mid_98011"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.008900
busd[@logindx].vmax = 0.0000
busd[@logindx].vmin = 0.0000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98011,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.998324
volt[@logindx].va = 0.341931
busd[@logindx].extnum = 98012
busd[@logindx].busnam =  "mid_98012"
busd[@logindx].basekv = 345.0000
```

```
760   busd[@logindx].type = 1
761   busd[@logindx].area = 70
762   busd[@logindx].zone = 706
763   busd[@logindx].projid = 0
764   busd[@logindx].level = 0
765   busd[@logindx].vsched = 1.007220
766   busd[@logindx].vmax = 0.0000
767   busd[@logindx].vmin = 0.0000
768   busd[@logindx].nown = 700
769   @snum = -1
770   @sindx = -1
771    for @s = 0 to casepar[0].nsubst - 1
772     if(subst[@s].extnum = @snum)
773       @sindx = @s
774     endif
775    next
776     busd[@logindx].isubst = @sindx  /*  -1  */
777   @ret=setbix(busd[@logindx].extnum, @logindx)
778   @iret=datachange(1,"busd",98012,"date_in date_out","400101","391231")
779
780   @logindx = casepar[0].nbus
781   @ret=ins("busd", @logindx-1, 1)
782   @ret=ins("volt", @logindx-1, 1)
783   volt[@logindx].vm = 1.023872
784   volt[@logindx].va = -2.196125
785   busd[@logindx].extnum = 700079
786   busd[@logindx].busnam =  "24_9_W1"
787   busd[@logindx].basekv = 0.7200
788   busd[@logindx].type = 2
789   busd[@logindx].area = 70
790   busd[@logindx].zone = 706
791   busd[@logindx].projid = 0
792   busd[@logindx].level = 0
793   busd[@logindx].vsched = 1.036270
794   busd[@logindx].vmax = 1.1000
795   busd[@logindx].vmin = 0.9000
796   busd[@logindx].nown = 700
797   @snum = -1
798   @sindx = -1
799    for @s = 0 to casepar[0].nsubst - 1
800     if(subst[@s].extnum = @snum)
801       @sindx = @s
802     endif
803    next
804     busd[@logindx].isubst = @sindx  /*  -1  */
805   @ret=setbix(busd[@logindx].extnum, @logindx)
806   @iret=datachange(1,"busd",700079,"date_in date_out","400101","391231")
807
808   @logindx = casepar[0].nbus
809   @ret=ins("busd", @logindx-1, 1)
810   @ret=ins("volt", @logindx-1, 1)
811   volt[@logindx].vm = 1.010858
812   volt[@logindx].va = 0.341606
813   busd[@logindx].extnum = 700080
814   busd[@logindx].busnam =  "24_9_W1_1"
815   busd[@logindx].basekv = 34.5000
816   busd[@logindx].type = 1
817   busd[@logindx].area = 70
818   busd[@logindx].zone = 706
819   busd[@logindx].projid = 0
820   busd[@logindx].level = 0
821   busd[@logindx].vsched = 1.019900
822   busd[@logindx].vmax = 1.1000
823   busd[@logindx].vmin = 0.9000
824   busd[@logindx].nown = 700
825   @snum = -1
826   @sindx = -1
827    for @s = 0 to casepar[0].nsubst - 1
828     if(subst[@s].extnum = @snum)
```

```
        @sindx = @s
      endif
    next
      busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700080,"date_in date_out","400101","391231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.000695
  volt[@logindx].va = 0.327521
  busd[@logindx].extnum = 700081
  busd[@logindx].busnam = "24_9_W1_2"
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].zone = 706
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.009190
  busd[@logindx].vmax = 1.1000
  busd[@logindx].vmin = 0.9000
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
    for @s = 0 to casepar[0].nsubst - 1
      if(subst[@s].extnum = @snum)
        @sindx = @s
      endif
    next
      busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700081,"date_in date_out","400101","391231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.027306
  volt[@logindx].va = -2.17854
  busd[@logindx].extnum = 700082
  busd[@logindx].busnam = "24_9_W2"
  busd[@logindx].basekv = 0.7200
  busd[@logindx].type = 2
  busd[@logindx].area = 70
  busd[@logindx].zone = 706
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.039980
  busd[@logindx].vmax = 1.1000
  busd[@logindx].vmin = 0.9000
  busd[@logindx].nown = 700
  @snum = -1
  @sindx = -1
    for @s = 0 to casepar[0].nsubst - 1
      if(subst[@s].extnum = @snum)
        @sindx = @s
      endif
    next
      busd[@logindx].isubst = @sindx  /*  -1  */
  @ret=setbix(busd[@logindx].extnum, @logindx)
  @iret=datachange(1,"busd",700082,"date_in date_out","400101","391231")

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.014849
  volt[@logindx].va = 0.359732
  busd[@logindx].extnum = 700083
```

```
busd[@logindx].busnam = "24_9_W2_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.024360
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700083,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.998050
volt[@logindx].va = 0.334904
busd[@logindx].extnum = 700084
busd[@logindx].busnam = "24_9_W2_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.006660
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700084,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.029070
volt[@logindx].va = -2.212185
busd[@logindx].extnum = 700085
busd[@logindx].busnam = "24_9_W3"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.041910
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
```

```
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700085,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.014807
volt[@logindx].va = 0.326366
busd[@logindx].extnum = 700086
busd[@logindx].busnam =  "24_9_W3_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.023870
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700086,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.003727
volt[@logindx].va = 0.311333
busd[@logindx].extnum = 700087
busd[@logindx].busnam =  "24_9_W3_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.012110
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700087,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.030536
```

```
volt[@logindx].va = -2.186393
busd[@logindx].extnum = 700088
busd[@logindx].busnam = "24_9_W4"
busd[@logindx].basekv = 0.7200
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.043420
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700088,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.017564
volt[@logindx].va = 0.352384
busd[@logindx].extnum = 700089
busd[@logindx].busnam = "24_9_W4_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.027110
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700089,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.999767
volt[@logindx].va = 0.326712
busd[@logindx].extnum = 700090
busd[@logindx].busnam = "24_9_W4_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.008310
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
```

```
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700090,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.002905
volt[@logindx].va = 0.194544
busd[@logindx].extnum = 700091
busd[@logindx].busnam =  "PI_2024_9"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.005420
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700091,"date_in date_out","400101","391231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700080 5RSC_24_17     34.50")
@logto = number(" 700081 5RSC_24_17     34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.006445
secdd[@logindx].zsecx = 0.009628
secdd[@logindx].bsec = 0.007600
secdd[@logindx].rate[0] = 180.20
secdd[@logindx].rate[1] = 180.20
secdd[@logindx].rate[2] = 180.20
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
```

```
   secdd[@logindx].lid = "                                                  "
   secdd[@logindx].ohms = 0
   secdd[@logindx].date_in = 400101
   secdd[@logindx].date_out = 391231
   secdd[@logindx].nown[0] = 700
   secdd[@logindx].nown[1] = 0
   secdd[@logindx].nown[2] = 0
   secdd[@logindx].nown[3] = 0
   secdd[@logindx].nown[4] = 0
   secdd[@logindx].nown[5] = 0
   secdd[@logindx].nown[6] = 0
   secdd[@logindx].nown[7] = 0
   secdd[@logindx].pown[0] = 1.000
   secdd[@logindx].pown[1] = 0.000
   secdd[@logindx].pown[2] = 0.000
   secdd[@logindx].pown[3] = 0.000
   secdd[@logindx].pown[4] = 0.000
   secdd[@logindx].pown[5] = 0.000
   secdd[@logindx].pown[6] = 0.000
   secdd[@logindx].pown[7] = 0.000

   @logindx = casepar[0].nbrsec
   @ret=ins("secdd", @logindx-1, 1)
   @logfrom = number(" 700083 5RSC_24_17    34.50")
   @logto = number(" 700084 5RSC_24_17    34.50")
   secdd[@logindx].ifrom = @logfrom
   secdd[@logindx].ito = @logto
   secdd[@logindx].ck = "1 "
   secdd[@logindx].projid = 0
   secdd[@logindx].st = 1
   secdd[@logindx].stn = 1
   secdd[@logindx].nsec = 1
   secdd[@logindx].type = 0
   secdd[@logindx].zsecr = 0.010231
   secdd[@logindx].zsecx = 0.015979
   secdd[@logindx].bsec = 0.011790
   secdd[@logindx].rate[0] = 190.80
   secdd[@logindx].rate[1] = 190.80
   secdd[@logindx].rate[2] = 190.80
   secdd[@logindx].rate[3] = 0.00
   secdd[@logindx].rate[4] = 0.00
   secdd[@logindx].rate[5] = 0.00
   secdd[@logindx].rate[6] = 0.00
   secdd[@logindx].rate[7] = 0.00
   secdd[@logindx].aloss = 0.000
   secdd[@logindx].area = 70
   secdd[@logindx].zone = 706
   secdd[@logindx].lngsec = 0.000
   secdd[@logindx].trangi = 0.000000
   secdd[@logindx].trantapf = 0.000000
   secdd[@logindx].trantapt = 0.000000
   secdd[@logindx].lid = "                                                  "
   secdd[@logindx].ohms = 0
   secdd[@logindx].date_in = 400101
   secdd[@logindx].date_out = 391231
   secdd[@logindx].nown[0] = 700
   secdd[@logindx].nown[1] = 0
   secdd[@logindx].nown[2] = 0
   secdd[@logindx].nown[3] = 0
   secdd[@logindx].nown[4] = 0
   secdd[@logindx].nown[5] = 0
   secdd[@logindx].nown[6] = 0
   secdd[@logindx].nown[7] = 0
   secdd[@logindx].pown[0] = 1.000
   secdd[@logindx].pown[1] = 0.000
   secdd[@logindx].pown[2] = 0.000
   secdd[@logindx].pown[3] = 0.000
   secdd[@logindx].pown[4] = 0.000
   secdd[@logindx].pown[5] = 0.000
```

```
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700086 5RSC_24_17    34.50")
@logto = number(" 700087 5RSC_24_17    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.007807
secdd[@logindx].zsecx = 0.011854
secdd[@logindx].bsec = 0.006890
secdd[@logindx].rate[0] = 159.00
secdd[@logindx].rate[1] = 159.00
secdd[@logindx].rate[2] = 159.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700089 5RSC_24_17    34.50")
@logto = number(" 700090 5RSC_24_17    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.011391
secdd[@logindx].zsecx = 0.017659
secdd[@logindx].bsec = 0.012020
```

```
secdd[@logindx].rate[0] = 180.20
secdd[@logindx].rate[1] = 180.20
secdd[@logindx].rate[2] = 180.20
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700091 5RSC_24_17    345.00")
@logto = number("  70918 GOOSE_CK     345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.003138
secdd[@logindx].zsecx = 0.009021
secdd[@logindx].bsec = 0.350740
secdd[@logindx].rate[0] = 710.20
secdd[@logindx].rate[1] = 710.20
secdd[@logindx].rate[2] = 710.20
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 26.900
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
```

```
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700080 5RSC_24_17    34.50")
@logto = number(" 700079 5RSC_24_17    0.72")
@logreg = number("     0 ----------    0.00")
@logtert = number("     0 ----------    0.00")
@logint = number("     0 ----------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 180.199997
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867600e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.0
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 180.2
tran[@logindx].rate[1] = 180.2
tran[@logindx].rate[2] = 180.2
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.100000
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
```

```
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700083 5RSC_24_17    34.50")
@logto = number(" 700082 5RSC_24_17     0.72")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U2"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 190.800003
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867600e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.0
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 190.8
tran[@logindx].rate[1] = 190.8
tran[@logindx].rate[2] = 190.8
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.100000
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
```

```
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700086 5RSC_24_17    34.50")
@logto = number(" 700085 5RSC_24_17     0.72")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U3"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 159.000000
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867600e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.0
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 159.0
tran[@logindx].rate[1] = 159.0
tran[@logindx].rate[2] = 159.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.100000
```

```
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700089 5RSC_24_17    34.50")
@logto = number(" 700088 5RSC_24_17    0.72")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U4"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 180.199997
tran[@logindx].zpsr = 8.000000e-03
tran[@logindx].zpsx = 9.867600e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.720000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.0
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 180.2
tran[@logindx].rate[1] = 180.2
tran[@logindx].rate[2] = 180.2
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
```

```
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.100000
tran[@logindx].vtmin = 0.900000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700091 5RSC_24_17    345.00")
@logto = number(" 700081 5RSC_24_17     34.50")
@logreg = number(" 700081 5RSC_24_17     34.50")
@logtert = number("  71966 5RSC_24_17     13.80")
@logint = number("  98009 mid_pt        345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.222000e-03
tran[@logindx].zpsx = 9.997500e-02
tran[@logindx].zptr = 3.110000e-03
tran[@logindx].zptx = 1.399650e-01
tran[@logindx].ztsr = 6.670000e-04
tran[@logindx].ztsx = 2.999300e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 188.0
tran[@logindx].rate[1] = 188.0
tran[@logindx].rate[2] = 188.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
```

```
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700091 5RSC_24_17    345.00")
@logto = number(" 700084 5RSC_24_17     34.50")
@logreg = number(" 700084 5RSC_24_17     34.50")
@logtert = number("  71965 5RSC_24_17     13.80")
@logint = number("  98012 mid_pt       345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.222000e-03
tran[@logindx].zpsx = 9.997500e-02
tran[@logindx].zptr = 3.110000e-03
tran[@logindx].zptx = 1.399650e-01
tran[@logindx].ztsr = 6.670000e-04
tran[@logindx].ztsx = 2.999300e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 188.0
tran[@logindx].rate[1] = 188.0
tran[@logindx].rate[2] = 188.0
```

```
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700091 5RSC_24_17    345.00")
@logto = number(" 700087 5RSC_24_17     34.50")
@logreg = number(" 700087 5RSC_24_17     34.50")
@logtert = number("  71964 5RSC_24_17     13.80")
@logint = number("  98010 mid_pt        345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.222000e-03
tran[@logindx].zpsx = 9.997500e-02
tran[@logindx].zptr = 3.110000e-03
tran[@logindx].zptx = 1.399650e-01
tran[@logindx].ztsr = 6.670000e-04
tran[@logindx].ztsx = 2.999300e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
```

```
tran[@logindx].rate[0] = 188.0
tran[@logindx].rate[1] = 188.0
tran[@logindx].rate[2] = 188.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700091 5RSC_24_17    345.00")
@logto = number(" 700090 5RSC_24_17     34.50")
@logreg = number(" 700090 5RSC_24_17     34.50")
@logtert = number("  71963 5RSC_24_17     13.80")
@logint = number("  98011 mid_pt        345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 113.000000
tran[@logindx].zpsr = 2.222000e-03
tran[@logindx].zpsx = 9.997500e-02
tran[@logindx].zptr = 3.110000e-03
tran[@logindx].zptx = 1.399650e-01
tran[@logindx].ztsr = 6.670000e-04
tran[@logindx].ztsx = 2.999300e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
```

```
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 188.0
tran[@logindx].rate[1] = 188.0
tran[@logindx].rate[2] = 188.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700079 5RSC_24_17     0.72")
@logreg = number("  70918 GOOSE_CK     345.00")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 180.2000
gens[@logindx].pgen = 153.000000
gens[@logindx].qgen = 18.013607
gens[@logindx].qmax = 86.699997
gens[@logindx].qmin = -54.400002
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 153.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.030
gens[@logindx].zgenx = 1.200
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
```

```
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "        "
  gens[@logindx].date_in = 400101
  gens[@logindx].date_out = 391231
  gens[@logindx].nown[0] = 700
  gens[@logindx].nown[1] = 0
  gens[@logindx].nown[2] = 0
  gens[@logindx].nown[3] = 0
  gens[@logindx].nown[4] = 0
  gens[@logindx].nown[5] = 0
  gens[@logindx].nown[6] = 0
  gens[@logindx].nown[7] = 0
  gens[@logindx].pown[0] = 1.000
  gens[@logindx].pown[1] = 1.000
  gens[@logindx].pown[2] = 1.000
  gens[@logindx].pown[3] = 1.000
  gens[@logindx].pown[4] = 0.000
  gens[@logindx].pown[5] = 0.000
  gens[@logindx].pown[6] = 0.000
  gens[@logindx].pown[7] = 0.000
  gens[@logindx].rtr = 0.0000
  gens[@logindx].xtr = 0.0000
  gens[@logindx].gtap = 1.0000
  gens[@logindx].gov_flag = 0
  gens[@logindx].agc_flag = 0
  gens[@logindx].dispatch_flag = 0
  gens[@logindx].baseload_flag = 0
  gens[@logindx].air_temp = 0
  gens[@logindx].turbine_type = 20
  gens[@logindx].fueltype[0] = 0
  gens[@logindx].fueltype[1] = 0
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 0.000000

  @logindx = casepar[0].ngen
  @ret=ins("gens", @logindx-1, 1)
  @logbgen = number("  700082 5RSC_24_17     0.72")
  @logreg = number("   70918 GOOSE_CK     345.00")
  @loghbus = number("       0 ------------    0.00")
  @logtbus = number("       0 ------------    0.00")
  gens[@logindx].ibgen = @logbgen
  gens[@logindx].id = "W2"
  gens[@logindx].projid = 0
  gens[@logindx].st = 0
  gens[@logindx].stn = 1
  gens[@logindx].igreg = @logreg
  gens[@logindx].area = 70
  gens[@logindx].zone = 706
  gens[@logindx].mbase = 190.8000
  gens[@logindx].pgen = 162.000000
  gens[@logindx].qgen = 18.013411
  gens[@logindx].qmax = 91.800003
  gens[@logindx].qmin = -57.599998
  gens[@logindx].prf = 1.000000
  gens[@logindx].qrf = 1.000000
  gens[@logindx].pmax = 162.000000
  gens[@logindx].pmin = 0.000000
  gens[@logindx].zgenr = 0.030
  gens[@logindx].zgenx = 1.200
  gens[@logindx].rcomp = 0.000
  gens[@logindx].xcomp = 0.000
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "        "
  gens[@logindx].date_in = 400101
  gens[@logindx].date_out = 391231
  gens[@logindx].nown[0] = 700
```

```
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number("  700085 5RSC_24_17      0.72")
@logreg = number("   70918 GOOSE_CK      345.00")
@loghbus = number("       0 ------------    0.00")
@logtbus = number("       0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 159.0000
gens[@logindx].pgen = 135.000000
gens[@logindx].qgen = 18.013811
gens[@logindx].qmax = 76.500000
gens[@logindx].qmin = -48.000000
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 135.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.030
gens[@logindx].zgenx = 1.200
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
```

```
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700088 5RSC_24_17      0.72")
@logreg = number("  70918 GOOSE_CK      345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "W4"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 180.2000
gens[@logindx].pgen = 153.000000
gens[@logindx].qgen = 18.013685
gens[@logindx].qmax = 86.699997
gens[@logindx].qmin = -54.400002
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 153.000000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.030
gens[@logindx].zgenx = 1.200
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
```

```
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700081 5RSC_24_17    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 0.045000
load[@logindx].q = 0.034000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700084 5RSC_24_17    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 0.045000
load[@logindx].q = 0.034000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
```

```
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700087 5RSC_24_17    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 0.045000
load[@logindx].q = 0.034000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700090 5RSC_24_17    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 0.045000
load[@logindx].q = 0.034000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 71960
busd[@logindx].busnam =  "24_11_T"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
```

```
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71960,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 98004
busd[@logindx].busnam =  "mid_98004"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",98004,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700097
busd[@logindx].busnam =  "PI_2024_11"
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700097,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
```

```
volt[@logindx].va = 0
busd[@logindx].extnum = 700098
busd[@logindx].busnam = "24_11_B_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700098,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700099
busd[@logindx].busnam = "24_11_B_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700099,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0
busd[@logindx].extnum = 700100
busd[@logindx].busnam = "24_11_B"
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
```

```
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700100,"date_in date_out","400101","391231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number("  70916 FT_ST_VRAIN   345.00")
@logto = number(" 700097 5RSC_24_14    345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000539
secdd[@logindx].zsecx = 0.002708
secdd[@logindx].bsec = 0.004470
secdd[@logindx].rate[0] = 304.75
secdd[@logindx].rate[1] = 358.53
secdd[@logindx].rate[2] = 304.75
secdd[@logindx].rate[3] = 358.53
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 2.500
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 1
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700098 5RSC_24_14    34.50")
@logto = number(" 700099 5RSC_24_14    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
```

```
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 0
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000203
secdd[@logindx].zsecx = 0.000189
secdd[@logindx].bsec = 0.000411
secdd[@logindx].rate[0] = 265.33
secdd[@logindx].rate[1] = 331.67
secdd[@logindx].rate[2] = 265.33
secdd[@logindx].rate[3] = 331.67
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 1
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700097 5RSC_24_14    345.00")
@logto = number(" 700098 5RSC_24_14     34.50")
@logreg = number(" 700098 5RSC_24_14     34.50")
@logtert = number("  71960 5RSC_24_14     13.80")
@logint = number("  98004 mid_pt         13.80")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 165.000000
tran[@logindx].zpsr = 2.082881e-03
tran[@logindx].zpsx = 9.997831e-02
tran[@logindx].zptr = 5.677747e-03
tran[@logindx].zptx = 1.498925e-01
```

```
tran[@logindx].ztsr = 6.878418e-03
tran[@logindx].ztsx = 4.952461e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 275.0
tran[@logindx].rate[1] = 275.0
tran[@logindx].rate[2] = 275.0
tran[@logindx].rate[3] = 275.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 1
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700099 5RSC_24_14    34.50")
@logto = number(" 700100 5RSC_24_14     0.66")
@logreg = number(" 700099 5RSC_24_14    34.50")
@logtert = number("     0 ------------    0.00")
@logint = number("     0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "2 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 0
tran[@logindx].type = 11
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 268.799988
tran[@logindx].zpsr = 4.982729e-03
```

```
tran[@logindx].zpsx = 5.979275e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.660000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 268.8
tran[@logindx].rate[1] = 268.8
tran[@logindx].rate[2] = 268.8
tran[@logindx].rate[3] = 268.8
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.000000
tran[@logindx].tmin = 1.000000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 1
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700100 5RSC_24_14     0.66")
@logreg = number(" 700097 5RSC_24_14   345.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 268.8000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 173.113403
gens[@logindx].qmin = -173.113403
```

```
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 205.633606
gens[@logindx].pmin = -205.633606
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "Gen Type"
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 1
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 42
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 1.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700098 5RSC_24_14    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 0
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 5.000000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "gen aux "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

```

```
2830
2831
2832
2833  @logindx = casepar[0].nbus
2834  @ret=ins("busd", @logindx-1, 1)
2835  @ret=ins("volt", @logindx-1, 1)
2836  volt[@logindx].vm = 1.000371
2837  volt[@logindx].va = 0.046517
2838  busd[@logindx].extnum = 71951
2839  busd[@logindx].busnam = "24_28_T2"
2840  busd[@logindx].basekv = 13.8000
2841  busd[@logindx].type = 1
2842  busd[@logindx].area = 70
2843  busd[@logindx].zone = 706
2844  busd[@logindx].projid = 0
2845  busd[@logindx].level = 0
2846  busd[@logindx].vsched = 1.000370
2847  busd[@logindx].vmax = 1.0500
2848  busd[@logindx].vmin = 0.9500
2849  busd[@logindx].nown = 700
2850  @snum = -1
2851  @sindx = -1
2852   for @s = 0 to casepar[0].nsubst - 1
2853    if(subst[@s].extnum = @snum)
2854      @sindx = @s
2855    endif
2856   next
2857    busd[@logindx].isubst = @sindx  /*  -1  */
2858  @ret=setbix(busd[@logindx].extnum, @logindx)
2859  @iret=datachange(1,"busd",71951,"date_in date_out","400101","391231")
2860
2861  @logindx = casepar[0].nbus
2862  @ret=ins("busd", @logindx-1, 1)
2863  @ret=ins("volt", @logindx-1, 1)
2864  volt[@logindx].vm = 1.000371
2865  volt[@logindx].va = 0.046517
2866  busd[@logindx].extnum = 71952
2867  busd[@logindx].busnam = "24_28_T1"
2868  busd[@logindx].basekv = 13.8000
2869  busd[@logindx].type = 1
2870  busd[@logindx].area = 70
2871  busd[@logindx].zone = 706
2872  busd[@logindx].projid = 0
2873  busd[@logindx].level = 0
2874  busd[@logindx].vsched = 1.000370
2875  busd[@logindx].vmax = 1.0500
2876  busd[@logindx].vmin = 0.9500
2877  busd[@logindx].nown = 700
2878  @snum = -1
2879  @sindx = -1
2880   for @s = 0 to casepar[0].nsubst - 1
2881    if(subst[@s].extnum = @snum)
2882      @sindx = @s
2883    endif
2884   next
2885    busd[@logindx].isubst = @sindx  /*  -1  */
2886  @ret=setbix(busd[@logindx].extnum, @logindx)
2887  @iret=datachange(1,"busd",71952,"date_in date_out","400101","391231")
2888
2889  @logindx = casepar[0].nbus
2890  @ret=ins("busd", @logindx-1, 1)
2891  @ret=ins("volt", @logindx-1, 1)
2892  volt[@logindx].vm = 1.000371
2893  volt[@logindx].va = 0.046517
2894  busd[@logindx].extnum = 98001
2895  busd[@logindx].busnam = "mid_98001"
2896  busd[@logindx].basekv = 345.0000
2897  busd[@logindx].type = 1
2898  busd[@logindx].area = 70
```

```
2899  busd[@logindx].zone = 706
2900  busd[@logindx].projid = 0
2901  busd[@logindx].level = 0
2902  busd[@logindx].vsched = 1.000370
2903  busd[@logindx].vmax = 0.0000
2904  busd[@logindx].vmin = 0.0000
2905  busd[@logindx].nown = 700
2906  @snum = -1
2907  @sindx = -1
2908   for @s = 0 to casepar[0].nsubst - 1
2909    if(subst[@s].extnum = @snum)
2910     @sindx = @s
2911    endif
2912   next
2913    busd[@logindx].isubst = @sindx  /*  -1  */
2914  @ret=setbix(busd[@logindx].extnum, @logindx)
2915  @iret=datachange(1,"busd",98001,"date_in date_out","400101","391231")
2916
2917  @logindx = casepar[0].nbus
2918  @ret=ins("busd", @logindx-1, 1)
2919  @ret=ins("volt", @logindx-1, 1)
2920  volt[@logindx].vm = 1.000371
2921  volt[@logindx].va = 0.046517
2922  busd[@logindx].extnum = 98002
2923  busd[@logindx].busnam =  "mid_98002"
2924  busd[@logindx].basekv = 345.0000
2925  busd[@logindx].type = 1
2926  busd[@logindx].area = 70
2927  busd[@logindx].zone = 706
2928  busd[@logindx].projid = 0
2929  busd[@logindx].level = 0
2930  busd[@logindx].vsched = 1.000370
2931  busd[@logindx].vmax = 0.0000
2932  busd[@logindx].vmin = 0.0000
2933  busd[@logindx].nown = 700
2934  @snum = -1
2935  @sindx = -1
2936   for @s = 0 to casepar[0].nsubst - 1
2937    if(subst[@s].extnum = @snum)
2938     @sindx = @s
2939    endif
2940   next
2941    busd[@logindx].isubst = @sindx  /*  -1  */
2942  @ret=setbix(busd[@logindx].extnum, @logindx)
2943  @iret=datachange(1,"busd",98002,"date_in date_out","400101","391231")
2944
2945  @logindx = casepar[0].nbus
2946  @ret=ins("busd", @logindx-1, 1)
2947  @ret=ins("volt", @logindx-1, 1)
2948  volt[@logindx].vm = 1.007501
2949  volt[@logindx].va = 0.224966
2950  busd[@logindx].extnum = 700182
2951  busd[@logindx].busnam =  "24_28_W"
2952  busd[@logindx].basekv = 0.6900
2953  busd[@logindx].type = 2
2954  busd[@logindx].area = 70
2955  busd[@logindx].zone = 706
2956  busd[@logindx].projid = 0
2957  busd[@logindx].level = 0
2958  busd[@logindx].vsched = 1.007500
2959  busd[@logindx].vmax = 1.0500
2960  busd[@logindx].vmin = 0.9500
2961  busd[@logindx].nown = 700
2962  @snum = -1
2963  @sindx = -1
2964   for @s = 0 to casepar[0].nsubst - 1
2965    if(subst[@s].extnum = @snum)
2966     @sindx = @s
2967    endif
```

```
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700182,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.001283
volt[@logindx].va = 0.182038
busd[@logindx].extnum = 700183
busd[@logindx].busnam = "24_28_W_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.001280
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700183,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.995733
volt[@logindx].va = 0.17129
busd[@logindx].extnum = 700184
busd[@logindx].busnam = "24_28_W_2"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.995730
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700184,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.050265
busd[@logindx].extnum = 700185
busd[@logindx].busnam = "5RSC_24_28  "
busd[@logindx].basekv = 345.0000
```

```
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 706
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700185,"date_in date_out","400101","391231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700183 5RSC_24_28    34.50")
@logto = number(" 700184 5RSC_24_28    34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001100
secdd[@logindx].zsecx = 0.002100
secdd[@logindx].bsec = 0.111200
secdd[@logindx].rate[0] = 570.30
secdd[@logindx].rate[1] = 570.30
secdd[@logindx].rate[2] = 570.30
secdd[@logindx].rate[3] = 570.30
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 700
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
```

```
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700185 5RSC_24_28    345.00")
@logto = number("  70918 GOOSE_CK      345.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001362
secdd[@logindx].zsecx = 0.009825
secdd[@logindx].bsec = 0.083453
secdd[@logindx].rate[0] = 541.98
secdd[@logindx].rate[1] = 603.53
secdd[@logindx].rate[2] = 541.98
secdd[@logindx].rate[3] = 603.53
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 706
secdd[@logindx].lngsec = 13.800
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700183 5RSC_24_28    34.50")
@logto = number(" 700182 5RSC_24_28     0.69")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
```

```
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 706
tran[@logindx].tbase = 672.849976
tran[@logindx].zpsr = 7.600000e-03
tran[@logindx].zpsx = 5.700000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.690000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 672.8
tran[@logindx].rate[1] = 672.8
tran[@logindx].rate[2] = 672.8
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 1.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "EQ_PAD                          "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700185 5RSC_24_28    345.00")
@logto = number(" 700184 5RSC_24_28     34.50")
@logreg = number(" 700185 5RSC_24_28    345.00")
@logtert = number("  71952 5RSC_24_28     13.80")
@logint = number("  98001 mid_pt        345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
```

```
3244   tran[@logindx].type = 1
3245   tran[@logindx].kreg = @logreg
3246   tran[@logindx].iztabl = 0
3247   tran[@logindx].itert = @logtert
3248   tran[@logindx].iint = @logint
3249   tran[@logindx].area = 70
3250   tran[@logindx].zone = 706
3251   tran[@logindx].tbase = 168.000000
3252   tran[@logindx].zpsr = 2.000000e-03
3253   tran[@logindx].zpsx = 7.998000e-02
3254   tran[@logindx].zptr = 2.000000e-03
3255   tran[@logindx].zptx = 7.998000e-02
3256   tran[@logindx].ztsr = 4.120000e-03
3257   tran[@logindx].ztsx = 1.649500e-01
3258   tran[@logindx].vnomp = 345.000000
3259   tran[@logindx].vnoms = 34.500000
3260   tran[@logindx].vnomt = 13.800000
3261   tran[@logindx].anglp = 0.000000
3262   tran[@logindx].gmag = 0.000000e+00
3263   tran[@logindx].bmag = 0.000000e+00
3264   tran[@logindx].rate[0] = 280.0
3265   tran[@logindx].rate[1] = 280.0
3266   tran[@logindx].rate[2] = 280.0
3267   tran[@logindx].rate[3] = 0.0
3268   tran[@logindx].rate[4] = 0.0
3269   tran[@logindx].rate[5] = 0.0
3270   tran[@logindx].rate[6] = 0.0
3271   tran[@logindx].rate[7] = 0.0
3272   tran[@logindx].aloss = 0.000
3273   tran[@logindx].tmax = 1.050000
3274   tran[@logindx].tmin = 0.950000
3275   tran[@logindx].vtmax = 1.050000
3276   tran[@logindx].vtmin = 0.950000
3277   tran[@logindx].stepp = 0.025000
3278   tran[@logindx].tapp = 1.000000
3279   tran[@logindx].tapfp = 1.000000
3280   tran[@logindx].tapfs = 1.000000
3281   tran[@logindx].tapft = 1.000000
3282   tran[@logindx].lid = "GSU#1                              "
3283   tran[@logindx].ohms = 0
3284   tran[@logindx].date_in = 400101
3285   tran[@logindx].date_out = 391231
3286   tran[@logindx].nown[0] = 700
3287   tran[@logindx].nown[1] = 0
3288   tran[@logindx].nown[2] = 0
3289   tran[@logindx].nown[3] = 0
3290   tran[@logindx].nown[4] = 0
3291   tran[@logindx].nown[5] = 0
3292   tran[@logindx].nown[6] = 0
3293   tran[@logindx].nown[7] = 0
3294   tran[@logindx].pown[0] = 1.000
3295   tran[@logindx].pown[1] = 0.000
3296   tran[@logindx].pown[2] = 0.000
3297   tran[@logindx].pown[3] = 0.000
3298   tran[@logindx].pown[4] = 0.000
3299   tran[@logindx].pown[5] = 0.000
3300   tran[@logindx].pown[6] = 0.000
3301   tran[@logindx].pown[7] = 0.000
3302
3303   @logindx = casepar[0].ntran
3304   @ret=ins("tran", @logindx-1, 1)
3305   @logfrom = number(" 700185 5RSC_24_28    345.00")
3306   @logto = number(" 700184 5RSC_24_28     34.50")
3307   @logreg = number(" 700185 5RSC_24_28    345.00")
3308   @logtert = number("  71951 5RSC_24_28     13.80")
3309   @logint = number("  98002 mid_pt        345.00")
3310   tran[@logindx].ifrom = @logfrom
3311   tran[@logindx].ito = @logto
3312   tran[@logindx].ck = "T2"
```

```
3313   tran[@logindx].projid = 0
3314   tran[@logindx].st = 1
3315   tran[@logindx].stn = 1
3316   tran[@logindx].type = 1
3317   tran[@logindx].kreg = @logreg
3318   tran[@logindx].iztabl = 0
3319   tran[@logindx].itert = @logtert
3320   tran[@logindx].iint = @logint
3321   tran[@logindx].area = 70
3322   tran[@logindx].zone = 706
3323   tran[@logindx].tbase = 168.000000
3324   tran[@logindx].zpsr = 2.000000e-03
3325   tran[@logindx].zpsx = 7.998000e-02
3326   tran[@logindx].zptr = 2.000000e-03
3327   tran[@logindx].zptx = 7.998000e-02
3328   tran[@logindx].ztsr = 4.120000e-03
3329   tran[@logindx].ztsx = 1.649500e-01
3330   tran[@logindx].vnomp = 345.000000
3331   tran[@logindx].vnoms = 34.500000
3332   tran[@logindx].vnomt = 13.800000
3333   tran[@logindx].anglp = 0.000000
3334   tran[@logindx].gmag = 0.000000e+00
3335   tran[@logindx].bmag = 0.000000e+00
3336   tran[@logindx].rate[0] = 280.0
3337   tran[@logindx].rate[1] = 280.0
3338   tran[@logindx].rate[2] = 280.0
3339   tran[@logindx].rate[3] = 0.0
3340   tran[@logindx].rate[4] = 0.0
3341   tran[@logindx].rate[5] = 0.0
3342   tran[@logindx].rate[6] = 0.0
3343   tran[@logindx].rate[7] = 0.0
3344   tran[@logindx].aloss = 0.000
3345   tran[@logindx].tmax = 1.050000
3346   tran[@logindx].tmin = 0.950000
3347   tran[@logindx].vtmax = 1.050000
3348   tran[@logindx].vtmin = 0.950000
3349   tran[@logindx].stepp = 0.025000
3350   tran[@logindx].tapp = 1.000000
3351   tran[@logindx].tapfp = 1.000000
3352   tran[@logindx].tapfs = 1.000000
3353   tran[@logindx].tapft = 1.000000
3354   tran[@logindx].lid = "GSU#2                              "
3355   tran[@logindx].ohms = 0
3356   tran[@logindx].date_in = 400101
3357   tran[@logindx].date_out = 391231
3358   tran[@logindx].nown[0] = 700
3359   tran[@logindx].nown[1] = 0
3360   tran[@logindx].nown[2] = 0
3361   tran[@logindx].nown[3] = 0
3362   tran[@logindx].nown[4] = 0
3363   tran[@logindx].nown[5] = 0
3364   tran[@logindx].nown[6] = 0
3365   tran[@logindx].nown[7] = 0
3366   tran[@logindx].pown[0] = 1.000
3367   tran[@logindx].pown[1] = 0.000
3368   tran[@logindx].pown[2] = 0.000
3369   tran[@logindx].pown[3] = 0.000
3370   tran[@logindx].pown[4] = 0.000
3371   tran[@logindx].pown[5] = 0.000
3372   tran[@logindx].pown[6] = 0.000
3373   tran[@logindx].pown[7] = 0.000
3374
3375   @logindx = casepar[0].ngen
3376   @ret=ins("gens", @logindx-1, 1)
3377   @logbgen = number(" 700182 5RSC_24_28     0.69")
3378   @logreg = number(" 700185 5RSC_24_28   345.00")
3379   @loghbus = number("      0 ------------    0.00")
3380   @logtbus = number("      0 ------------    0.00")
3381   gens[@logindx].ibgen = @logbgen
```

```
gens[@logindx].id = "W "
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 706
gens[@logindx].mbase = 570.2100
gens[@logindx].pgen = 0.000000
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 248.570007
gens[@logindx].qmin = -248.570007
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 513.239990
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.800
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 1
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700184 5RSC_24_28    34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].projid = 0
load[@logindx].st = 1
load[@logindx].stn = 1
load[@logindx].area = 70
load[@logindx].zone = 706
load[@logindx].p = 2.420000
load[@logindx].q = 0.000000
load[@logindx].pdgen = 0.000000
```

```
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 1
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nsvd
@ret = ins("svd", @logindx-1, 1)
@logbus = number(" 700184 5RSC_24_28    34.50")
@logreg = number(" 700184 5RSC_24_28    34.50")
svd[@logindx].ibus = @logbus
svd[@logindx].id = "v "
svd[@logindx].projid = 0
svd[@logindx].st = 1
svd[@logindx].stn = 1
svd[@logindx].type = 4
svd[@logindx].kreg = @logreg
svd[@logindx].area = 70
svd[@logindx].zone = 706
svd[@logindx].g = 0.000000
svd[@logindx].b = 0.000000
svd[@logindx].bmin = 0.000000
svd[@logindx].bmax = 0.000000
svd[@logindx].vband = 0.025000
svd[@logindx].bstep[0] = 0.190000
svd[@logindx].bstep[1] = 0.000000
svd[@logindx].bstep[2] = 0.000000
svd[@logindx].bstep[3] = 0.000000
svd[@logindx].bstep[4] = 0.000000
svd[@logindx].bstep[5] = 0.000000
svd[@logindx].bstep[6] = 0.000000
svd[@logindx].bstep[7] = 0.000000
svd[@logindx].bstep[8] = 0.000000
svd[@logindx].bstep[9] = 0.000000
svd[@logindx].nstep[0] = 1
svd[@logindx].nstep[1] = 0
svd[@logindx].nstep[2] = 0
svd[@logindx].nstep[3] = 0
svd[@logindx].nstep[4] = 0
svd[@logindx].nstep[5] = 0
svd[@logindx].nstep[6] = 0
svd[@logindx].nstep[7] = 0
svd[@logindx].nstep[8] = 0
svd[@logindx].nstep[9] = 0
svd[@logindx].beffmin = 0.000000
svd[@logindx].beffmax = 0.000000
svd[@logindx].lid = "        "
svd[@logindx].date_in = 400101
svd[@logindx].date_out = 391231
svd[@logindx].nown[0] = 700
svd[@logindx].nown[1] = 0
svd[@logindx].nown[2] = 0
svd[@logindx].nown[3] = 0
svd[@logindx].pown[0] = 1.000
svd[@logindx].pown[1] = 0.000
svd[@logindx].pown[2] = 0.000
svd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 71949
busd[@logindx].busnam = "23_2_T      "
```

```
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 99604
busd[@logindx].busnam = "mid_99604"
busd[@logindx].basekv = 345.00
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700188
busd[@logindx].busnam = "PI_2023_2   "
busd[@logindx].basekv = 345.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700189
busd[@logindx].busnam = "23_2_B1_2   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700190
busd[@logindx].busnam = "23_2_B1_1   "
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].ba = 65
busd[@logindx].zone = 704
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700191
```

```
3589  busd[@logindx].busnam = "23_2_B1      "
3590  busd[@logindx].basekv = 0.6000
3591  busd[@logindx].type = 2
3592  busd[@logindx].area = 70
3593  busd[@logindx].ba = 65
3594  busd[@logindx].zone = 704
3595  busd[@logindx].vmax = 1.0500
3596  busd[@logindx].vmin = 0.9500
3597  busd[@logindx].nown = 700
3598
3599  @logindx = casepar[0].nbrsec
3600  @ret=ins("secdd", @logindx-1, 1)
3601  @logfrom = number(" 700188 PI_2023_2    345.00")
3602  @logto = number("  70654 COMANCHE     345.00")
3603  secdd[@logindx].ifrom = @logfrom
3604  secdd[@logindx].ito = @logto
3605  secdd[@logindx].ck = "1 "
3606  secdd[@logindx].st = 1
3607  secdd[@logindx].nsec = 1
3608  secdd[@logindx].type = 0
3609  secdd[@logindx].zsecr = 0.000001
3610  secdd[@logindx].zsecx = 0.000005
3611  secdd[@logindx].bsec = 0.000090
3612  secdd[@logindx].rate[0] = 1084.00
3613  secdd[@logindx].rate[1] = 1084.00
3614  secdd[@logindx].rate[2] = 1084.00
3615  secdd[@logindx].rate[3] = 0.00
3616  secdd[@logindx].rate[4] = 0.00
3617  secdd[@logindx].rate[5] = 0.00
3618  secdd[@logindx].rate[6] = 0.00
3619  secdd[@logindx].rate[7] = 0.00
3620  secdd[@logindx].area = 70
3621  secdd[@logindx].zone = 704
3622  secdd[@logindx].lngsec = 0.010
3623  secdd[@logindx].trangi = 0.000000
3624  secdd[@logindx].trantapf = 0.000000
3625  secdd[@logindx].trantapt = 0.000000
3626  secdd[@logindx].lid = "                                                  "
3627  secdd[@logindx].ohms = 0
3628  secdd[@logindx].nown[0] = 700
3629  secdd[@logindx].nown[1] = 0
3630  secdd[@logindx].nown[2] = 0
3631  secdd[@logindx].nown[3] = 0
3632  secdd[@logindx].pown[0] = 1.000
3633  secdd[@logindx].pown[1] = 0.000
3634  secdd[@logindx].pown[2] = 0.000
3635  secdd[@logindx].pown[3] = 0.000
3636
3637  @logindx = casepar[0].nbrsec
3638  @ret=ins("secdd", @logindx-1, 1)
3639  @logfrom = number(" 700190 23_2_B1_1    34.50")
3640  @logto = number(" 700189 23_2_B1_2    34.50")
3641  secdd[@logindx].ifrom = @logfrom
3642  secdd[@logindx].ito = @logto
3643  secdd[@logindx].ck = "1 "
3644  secdd[@logindx].st = 1
3645  secdd[@logindx].nsec = 1
3646  secdd[@logindx].type = 0
3647  secdd[@logindx].zsecr = 0.000500
3648  secdd[@logindx].zsecx = 0.000804
3649  secdd[@logindx].bsec = 0.001480
3650  secdd[@logindx].rate[0] = 140.90
3651  secdd[@logindx].rate[1] = 140.90
3652  secdd[@logindx].rate[2] = 140.90
3653  secdd[@logindx].rate[3] = 0.00
3654  secdd[@logindx].rate[4] = 0.00
3655  secdd[@logindx].rate[5] = 0.00
3656  secdd[@logindx].rate[6] = 0.00
3657  secdd[@logindx].rate[7] = 0.00
```

```
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700188 PI_2023_2     345.00")
@logto = number(" 700189 23_2_B1_2     34.50")
@logreg = number(" 700189 23_2_B1_2     34.50")
@logtert = number("  71949 23_2_T       13.80")
@logint = number("  99604 mid_99604     345.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = -2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 7.500000
tran[@logindx].zpsr = 2.460000e-03
tran[@logindx].zpsx = 6.996000e-02
tran[@logindx].zptr = 3.680000e-03
tran[@logindx].zptx = 1.049400e-01
tran[@logindx].ztsr = 7.400000e-04
tran[@logindx].ztsx = 2.099000e-02
tran[@logindx].vnomp = 345.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.333333e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 12.5
tran[@logindx].rate[1] = 12.5
tran[@logindx].rate[2] = 12.5
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT                                "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
```

```
3727   tran[@logindx].nown[2] = 0
3728   tran[@logindx].nown[3] = 0
3729   tran[@logindx].pown[0] = 1.000
3730   tran[@logindx].pown[1] = 0.000
3731   tran[@logindx].pown[2] = 0.000
3732   tran[@logindx].pown[3] = 0.000
3733
3734   @logindx = casepar[0].ntran
3735   @ret=ins("tran", @logindx-1, 1)
3736   @logfrom = number(" 700191 23_2_B1        0.60")
3737   @logto = number(" 700190 23_2_B1_1      34.50")
3738   @logreg = number("      0 ------------    0.00")
3739   @logtert = number("      0 ------------    0.00")
3740   @logint = number("      0 ------------    0.00")
3741   tran[@logindx].ifrom = @logfrom
3742   tran[@logindx].ito = @logto
3743   tran[@logindx].ck = "1 "
3744   tran[@logindx].st = 1
3745   tran[@logindx].type = 1
3746   tran[@logindx].kreg = @logreg
3747   tran[@logindx].iztabl = 0
3748   tran[@logindx].itert = @logtert
3749   tran[@logindx].iint = @logint
3750   tran[@logindx].area = 70
3751   tran[@logindx].zone = 704
3752   tran[@logindx].tbase = 15.000000
3753   tran[@logindx].zpsr = 6.000000e-03
3754   tran[@logindx].zpsx = 6.000100e-02
3755   tran[@logindx].zptr = 0.000000e+00
3756   tran[@logindx].zptx = 0.000000e+00
3757   tran[@logindx].ztsr = 0.000000e+00
3758   tran[@logindx].ztsx = 0.000000e+00
3759   tran[@logindx].vnomp = 0.600000
3760   tran[@logindx].vnoms = 34.500000
3761   tran[@logindx].vnomt = 0.000000
3762   tran[@logindx].anglp = 0.000000
3763   tran[@logindx].gmag = 1.666667e-03
3764   tran[@logindx].bmag = -5.000000e-03
3765   tran[@logindx].rate[0] = 15.0
3766   tran[@logindx].rate[1] = 15.0
3767   tran[@logindx].rate[2] = 15.0
3768   tran[@logindx].rate[3] = 0.0
3769   tran[@logindx].rate[4] = 0.0
3770   tran[@logindx].rate[5] = 0.0
3771   tran[@logindx].rate[6] = 0.0
3772   tran[@logindx].rate[7] = 0.0
3773   tran[@logindx].tmax = 1.050000
3774   tran[@logindx].tmin = 0.950000
3775   tran[@logindx].vtmax = 1.050000
3776   tran[@logindx].vtmin = 0.950000
3777   tran[@logindx].stepp = 0.025000
3778   tran[@logindx].tapp = 1.000000
3779   tran[@logindx].tapfp = 1.000000
3780   tran[@logindx].tapfs = 1.000000
3781   tran[@logindx].tapft = 1.000000
3782   tran[@logindx].lid = "GSU 10MW                          "
3783   tran[@logindx].ohms = 0
3784   tran[@logindx].nown[0] = 700
3785   tran[@logindx].nown[1] = 0
3786   tran[@logindx].nown[2] = 0
3787   tran[@logindx].nown[3] = 0
3788   tran[@logindx].pown[0] = 1.000
3789   tran[@logindx].pown[1] = 0.000
3790   tran[@logindx].pown[2] = 0.000
3791   tran[@logindx].pown[3] = 0.000
3792
3793   @logindx = casepar[0].ngen
3794   @ret=ins("gens", @logindx-1, 1)
3795   @logbgen = number(" 700191 23_2_B1        0.60")
```

```
@logreg = number(" 700191 23_2_B1        0.60")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B1"
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].ba = 65
gens[@logindx].mbase = 15.0000
gens[@logindx].qmax = 9.865000
gens[@logindx].qmin = -9.865000
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 14.250000
gens[@logindx].pmin = -14.250000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 20
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].nload
@ret=ins("load", @logindx-1, 1)
@loglbus = number(" 700189 23_2_B1_2      34.50")
load[@logindx].lbus = @loglbus
load[@logindx].id = "SS"
load[@logindx].st = 1
load[@logindx].area = 70
load[@logindx].zone = 704
load[@logindx].ba = 65
load[@logindx].nonconf = 1
load[@logindx].lid = "        "
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
busd[@logindx].extnum = 700218
busd[@logindx].busnam = "24_8_SB_1   "
busd[@logindx].basekv = 115.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
```

```
3865   busd[@logindx].ba = 65
3866   busd[@logindx].zone = 710
3867   busd[@logindx].vmax = 1.0500
3868   busd[@logindx].vmin = 0.9500
3869   busd[@logindx].nown = 700
3870
3871   @logindx = casepar[0].nbus
3872   @ret=ins("busd", @logindx-1, 1)
3873   @ret=ins("volt", @logindx-1, 1)
3874   busd[@logindx].extnum = 700219
3875   busd[@logindx].busnam = "24_8_SB      "
3876   busd[@logindx].basekv = 34.5000
3877   busd[@logindx].type = 1
3878   busd[@logindx].area = 70
3879   busd[@logindx].ba = 65
3880   busd[@logindx].zone = 710
3881   busd[@logindx].vmax = 1.0500
3882   busd[@logindx].vmin = 0.9500
3883   busd[@logindx].nown = 700
3884
3885   @logindx = casepar[0].nbus
3886   @ret=ins("busd", @logindx-1, 1)
3887   @ret=ins("volt", @logindx-1, 1)
3888   busd[@logindx].extnum = 700220
3889   busd[@logindx].busnam = "24_8_S_1    "
3890   busd[@logindx].basekv = 34.5000
3891   busd[@logindx].type = 1
3892   busd[@logindx].area = 70
3893   busd[@logindx].ba = 65
3894   busd[@logindx].zone = 710
3895   busd[@logindx].vmax = 1.0500
3896   busd[@logindx].vmin = 0.9500
3897   busd[@logindx].nown = 700
3898
3899   @logindx = casepar[0].nbus
3900   @ret=ins("busd", @logindx-1, 1)
3901   @ret=ins("volt", @logindx-1, 1)
3902   busd[@logindx].extnum = 700221
3903   busd[@logindx].busnam = "24_8_B_1    "
3904   busd[@logindx].basekv = 34.5000
3905   busd[@logindx].type = 1
3906   busd[@logindx].area = 70
3907   busd[@logindx].ba = 65
3908   busd[@logindx].zone = 710
3909   busd[@logindx].vmax = 1.0500
3910   busd[@logindx].vmin = 0.9500
3911   busd[@logindx].nown = 700
3912
3913   @logindx = casepar[0].nbus
3914   @ret=ins("busd", @logindx-1, 1)
3915   @ret=ins("volt", @logindx-1, 1)
3916   busd[@logindx].extnum = 700222
3917   busd[@logindx].busnam = "24_8_S       "
3918   busd[@logindx].basekv = 0.6300
3919   busd[@logindx].type = 2
3920   busd[@logindx].area = 70
3921   busd[@logindx].ba = 65
3922   busd[@logindx].zone = 710
3923   busd[@logindx].vmax = 1.0500
3924   busd[@logindx].vmin = 0.9500
3925   busd[@logindx].nown = 700
3926
3927   @logindx = casepar[0].nbus
3928   @ret=ins("busd", @logindx-1, 1)
3929   @ret=ins("volt", @logindx-1, 1)
3930   busd[@logindx].extnum = 700223
3931   busd[@logindx].busnam = "24_8_B       "
3932   busd[@logindx].basekv = 0.4340
3933   busd[@logindx].type = 2
```

```
3934   busd[@logindx].area = 70
3935   busd[@logindx].ba = 65
3936   busd[@logindx].zone = 710
3937   busd[@logindx].vmax = 1.0500
3938   busd[@logindx].vmin = 0.9500
3939   busd[@logindx].nown = 700
3940
3941   @logindx = casepar[0].nbus
3942   @ret=ins("busd", @logindx-1, 1)
3943   @ret=ins("volt", @logindx-1, 1)
3944   busd[@logindx].extnum = 700224
3945   busd[@logindx].busnam = "PI_2024_8   "
3946   busd[@logindx].basekv = 115.0000
3947   busd[@logindx].type = 1
3948   busd[@logindx].area = 70
3949   busd[@logindx].ba = 65
3950   busd[@logindx].zone = 710
3951   busd[@logindx].vmax = 1.0500
3952   busd[@logindx].vmin = 0.9500
3953   busd[@logindx].nown = 65
3954
3955   @logindx = casepar[0].nbrsec
3956   @ret=ins("secdd", @logindx-1, 1)
3957   @logfrom = number("  70025 ALMSA_TM    115.00")
3958   @logto = number(" 700224 PI_2024_8    115.00")
3959   secdd[@logindx].ifrom = @logfrom
3960   secdd[@logindx].ito = @logto
3961   secdd[@logindx].ck = "1 "
3962   secdd[@logindx].st = 1
3963   secdd[@logindx].nsec = 1
3964   secdd[@logindx].type = 0
3965   secdd[@logindx].zsecr = 0.009365
3966   secdd[@logindx].zsecx = 0.036995
3967   secdd[@logindx].bsec = 0.004760
3968   secdd[@logindx].rate[0] = 162.00
3969   secdd[@logindx].rate[1] = 178.00
3970   secdd[@logindx].rate[2] = 0.00
3971   secdd[@logindx].rate[3] = 0.00
3972   secdd[@logindx].rate[4] = 0.00
3973   secdd[@logindx].rate[5] = 0.00
3974   secdd[@logindx].rate[6] = 0.00
3975   secdd[@logindx].rate[7] = 0.00
3976   secdd[@logindx].area = 70
3977   secdd[@logindx].zone = 710
3978   secdd[@logindx].lngsec = 6.000
3979   secdd[@logindx].trangi = 0.000000
3980   secdd[@logindx].trantapf = 0.000000
3981   secdd[@logindx].trantapt = 0.000000
3982   secdd[@logindx].lid = "                                                  "
3983   secdd[@logindx].ohms = 0
3984   secdd[@logindx].nown[0] = 65
3985   secdd[@logindx].nown[1] = 0
3986   secdd[@logindx].nown[2] = 0
3987   secdd[@logindx].nown[3] = 0
3988   secdd[@logindx].pown[0] = 1.000
3989   secdd[@logindx].pown[1] = 0.000
3990   secdd[@logindx].pown[2] = 0.000
3991   secdd[@logindx].pown[3] = 0.000
3992
3993   @logindx = casepar[0].nbrsec
3994   @ret=ins("secdd", @logindx-1, 1)
3995   @logfrom = number(" 700218 24_8_SB_1    115.00")
3996   @logto = number(" 700224 PI_2024_8    115.00")
3997   secdd[@logindx].ifrom = @logfrom
3998   secdd[@logindx].ito = @logto
3999   secdd[@logindx].ck = "1 "
4000   secdd[@logindx].st = 1
4001   secdd[@logindx].nsec = 1
4002   secdd[@logindx].type = 0
```

```
4003   secdd[@logindx].zsecr = 0.000164
4004   secdd[@logindx].zsecx = 0.000576
4005   secdd[@logindx].bsec = 0.000075
4006   secdd[@logindx].rate[0] = 130.50
4007   secdd[@logindx].rate[1] = 130.50
4008   secdd[@logindx].rate[2] = 0.00
4009   secdd[@logindx].rate[3] = 0.00
4010   secdd[@logindx].rate[4] = 0.00
4011   secdd[@logindx].rate[5] = 0.00
4012   secdd[@logindx].rate[6] = 0.00
4013   secdd[@logindx].rate[7] = 0.00
4014   secdd[@logindx].area = 70
4015   secdd[@logindx].zone = 710
4016   secdd[@logindx].lngsec = 0.000
4017   secdd[@logindx].trangi = 0.000000
4018   secdd[@logindx].trantapf = 0.000000
4019   secdd[@logindx].trantapt = 0.000000
4020   secdd[@logindx].lid = "                                                  "
4021   secdd[@logindx].ohms = 0
4022   secdd[@logindx].nown[0] = 700
4023   secdd[@logindx].nown[1] = 0
4024   secdd[@logindx].nown[2] = 0
4025   secdd[@logindx].nown[3] = 0
4026   secdd[@logindx].pown[0] = 1.000
4027   secdd[@logindx].pown[1] = 0.000
4028   secdd[@logindx].pown[2] = 0.000
4029   secdd[@logindx].pown[3] = 0.000
4030
4031   @logindx = casepar[0].nbrsec
4032   @ret=ins("secdd", @logindx-1, 1)
4033   @logfrom = number(" 700220 24_8_S_1      34.50")
4034   @logto = number(" 700219 24_8_SB       34.50")
4035   secdd[@logindx].ifrom = @logfrom
4036   secdd[@logindx].ito = @logto
4037   secdd[@logindx].ck = "1 "
4038   secdd[@logindx].st = 1
4039   secdd[@logindx].nsec = 1
4040   secdd[@logindx].type = 0
4041   secdd[@logindx].zsecr = 0.003964
4042   secdd[@logindx].zsecx = 0.006376
4043   secdd[@logindx].bsec = 0.013599
4044   secdd[@logindx].rate[0] = 129.00
4045   secdd[@logindx].rate[1] = 129.00
4046   secdd[@logindx].rate[2] = 0.00
4047   secdd[@logindx].rate[3] = 0.00
4048   secdd[@logindx].rate[4] = 0.00
4049   secdd[@logindx].rate[5] = 0.00
4050   secdd[@logindx].rate[6] = 0.00
4051   secdd[@logindx].rate[7] = 0.00
4052   secdd[@logindx].area = 70
4053   secdd[@logindx].zone = 710
4054   secdd[@logindx].lngsec = 0.000
4055   secdd[@logindx].trangi = 0.000000
4056   secdd[@logindx].trantapf = 0.000000
4057   secdd[@logindx].trantapt = 0.000000
4058   secdd[@logindx].lid = "                                                  "
4059   secdd[@logindx].ohms = 0
4060   secdd[@logindx].nown[0] = 700
4061   secdd[@logindx].nown[1] = 0
4062   secdd[@logindx].nown[2] = 0
4063   secdd[@logindx].nown[3] = 0
4064   secdd[@logindx].pown[0] = 1.000
4065   secdd[@logindx].pown[1] = 0.000
4066   secdd[@logindx].pown[2] = 0.000
4067   secdd[@logindx].pown[3] = 0.000
4068
4069   @logindx = casepar[0].nbrsec
4070   @ret=ins("secdd", @logindx-1, 1)
4071   @logfrom = number(" 700221 24_8_B_1      34.50")
```

```
@logto = number(" 700219 24_8_SB      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.003187
secdd[@logindx].zsecx = 0.001612
secdd[@logindx].bsec = 0.002057
secdd[@logindx].rate[0] = 111.10
secdd[@logindx].rate[1] = 111.10
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 710
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700224 PI_2024_8    115.00")
@logto = number("  70937 BLANCA_PEAK  115.00")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].st = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.009365
secdd[@logindx].zsecx = 0.036995
secdd[@logindx].bsec = 0.004760
secdd[@logindx].rate[0] = 162.00
secdd[@logindx].rate[1] = 178.00
secdd[@logindx].rate[2] = 0.00
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].area = 70
secdd[@logindx].zone = 710
secdd[@logindx].lngsec = 6.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].nown[0] = 65
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].pown[0] = 1.000
```

```
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000

@logfrom = number("  70025 ALMSA_TM      115.00")
@logto = number("  70937 BLANCA_PEAK  115.00")
$logck = "1 "
@logsec = 1
@logindx = rec_index(0, 1, @logfrom, @logto, $logck, @logsec, -1)
if (@logindx != -1)
   @ret = del("secdd", @logindx, 1)
endif

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700219 24_8_SB       34.50")
@logto = number(" 700218 24_8_SB_1    115.00")
@logreg = number(" 700218 24_8_SB_1    115.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 0
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 710
tran[@logindx].tbase = 66.000000
tran[@logindx].zpsr = 2.374000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 115.000000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 110.0
tran[@logindx].rate[1] = 110.0
tran[@logindx].rate[2] = 0.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
```

```
4210   tran[@logindx].pown[2] = 0.000
4211   tran[@logindx].pown[3] = 0.000
4212
4213   @logindx = casepar[0].ntran
4214   @ret=ins("tran", @logindx-1, 1)
4215   @logfrom = number(" 700222 24_8_S         0.63")
4216   @logto = number(" 700220 24_8_S_1       34.50")
4217   @logreg = number(" 700220 24_8_S_1       34.50")
4218   @logtert = number("       0 ------------     0.00")
4219   @logint = number("       0 ------------     0.00")
4220   tran[@logindx].ifrom = @logfrom
4221   tran[@logindx].ito = @logto
4222   tran[@logindx].ck = "1 "
4223   tran[@logindx].st = 1
4224   tran[@logindx].type = 0
4225   tran[@logindx].kreg = @logreg
4226   tran[@logindx].iztabl = 0
4227   tran[@logindx].itert = @logtert
4228   tran[@logindx].iint = @logint
4229   tran[@logindx].area = 70
4230   tran[@logindx].zone = 710
4231   tran[@logindx].tbase = 100.800003
4232   tran[@logindx].zpsr = 4.980000e-03
4233   tran[@logindx].zpsx = 5.477000e-02
4234   tran[@logindx].zptr = 0.000000e+00
4235   tran[@logindx].zptx = 0.000000e+00
4236   tran[@logindx].ztsr = 0.000000e+00
4237   tran[@logindx].ztsx = 0.000000e+00
4238   tran[@logindx].vnomp = 0.630000
4239   tran[@logindx].vnoms = 34.500000
4240   tran[@logindx].vnomt = 0.000000
4241   tran[@logindx].anglp = 0.000000
4242   tran[@logindx].gmag = 0.000000e+00
4243   tran[@logindx].bmag = 0.000000e+00
4244   tran[@logindx].rate[0] = 132.5
4245   tran[@logindx].rate[1] = 132.5
4246   tran[@logindx].rate[2] = 0.0
4247   tran[@logindx].rate[3] = 0.0
4248   tran[@logindx].rate[4] = 0.0
4249   tran[@logindx].rate[5] = 0.0
4250   tran[@logindx].rate[6] = 0.0
4251   tran[@logindx].rate[7] = 0.0
4252   tran[@logindx].tmax = 0.000000
4253   tran[@logindx].tmin = 0.000000
4254   tran[@logindx].vtmax = 0.000000
4255   tran[@logindx].vtmin = 0.000000
4256   tran[@logindx].stepp = 0.000000
4257   tran[@logindx].tapp = 1.000000
4258   tran[@logindx].tapfp = 1.000000
4259   tran[@logindx].tapfs = 1.000000
4260   tran[@logindx].tapft = 1.000000
4261   tran[@logindx].lid = "                                        "
4262   tran[@logindx].ohms = 0
4263   tran[@logindx].nown[0] = 700
4264   tran[@logindx].nown[1] = 0
4265   tran[@logindx].nown[2] = 0
4266   tran[@logindx].nown[3] = 0
4267   tran[@logindx].pown[0] = 1.000
4268   tran[@logindx].pown[1] = 0.000
4269   tran[@logindx].pown[2] = 0.000
4270   tran[@logindx].pown[3] = 0.000
4271
4272   @logindx = casepar[0].ntran
4273   @ret=ins("tran", @logindx-1, 1)
4274   @logfrom = number(" 700223 24_8_B         0.43")
4275   @logto = number(" 700221 24_8_B_1       34.50")
4276   @logreg = number(" 700220 24_8_S_1       34.50")
4277   @logtert = number("       0 ------------     0.00")
4278   @logint = number("       0 ------------     0.00")
```

```
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].st = 1
tran[@logindx].type = 0
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 710
tran[@logindx].tbase = 100.000000
tran[@logindx].zpsr = 7.460000e-03
tran[@logindx].zpsx = 7.462000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.434000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 100.0
tran[@logindx].rate[1] = 100.0
tran[@logindx].rate[2] = 0.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].tmax = 0.000000
tran[@logindx].tmin = 0.000000
tran[@logindx].vtmax = 0.000000
tran[@logindx].vtmin = 0.000000
tran[@logindx].stepp = 0.000000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 0.000
tran[@logindx].pown[2] = 0.000
tran[@logindx].pown[3] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700222 24_8_S        0.63")
@logreg = number(" 700219 24_8_SB      34.50")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S "
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 710
gens[@logindx].ba = 65
gens[@logindx].mbase = 100.8000
gens[@logindx].qmax = 42.070000
gens[@logindx].qmin = -42.070000
gens[@logindx].prf = 1.000000
```

```
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 91.500000
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 2
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700223 24_8_B        0.43")
@logreg = number(" 700219 24_8_SB      34.50")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B "
gens[@logindx].st = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 710
gens[@logindx].ba = 65
gens[@logindx].mbase = 99.0000
gens[@logindx].qmax = 42.369999
gens[@logindx].qmin = -42.369999
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 79.400002
gens[@logindx].pmin = -76.599998
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 0.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].rtr = 0.0000
```

```
4417  gens[@logindx].xtr = 0.0000
4418  gens[@logindx].gtap = 1.0000
4419  gens[@logindx].gov_flag = 0
4420  gens[@logindx].agc_flag = 0
4421  gens[@logindx].dispatch_flag = 0
4422  gens[@logindx].baseload_flag = 0
4423  gens[@logindx].air_temp = 0
4424  gens[@logindx].turbine_type = 42
4425  gens[@logindx].fueltype[0] = 0
4426  gens[@logindx].fueltype[1] = 0
4427  gens[@logindx].fueltype[2] = 0
4428  gens[@logindx].qtab = 0
4429  gens[@logindx].pf = 0.000000
4430
4431  @logindx = casepar[0].nload
4432  @ret=ins("load", @logindx-1, 1)
4433  @loglbus = number(" 700219 24_8_SB      34.50")
4434  load[@logindx].lbus = @loglbus
4435  load[@logindx].id = "SS"
4436  load[@logindx].st = 1
4437  load[@logindx].area = 70
4438  load[@logindx].zone = 710
4439  load[@logindx].ba = 65
4440  load[@logindx].nonconf = 1
4441  load[@logindx].lid = "        "
4442  load[@logindx].nown = 700
4443  load[@logindx].clzone = "        "
4444
4445  @logindx = casepar[0].nsvd
4446  @ret = ins("svd", @logindx-1, 1)
4447  @logbus = number(" 700219 24_8_SB      34.50")
4448  @logreg = number(" 700219 24_8_SB      34.50")
4449  svd[@logindx].ibus = @logbus
4450  svd[@logindx].id = "v "
4451  svd[@logindx].type = 0
4452  svd[@logindx].kreg = @logreg
4453  svd[@logindx].area = 70
4454  svd[@logindx].zone = 710
4455  svd[@logindx].b = 0.120000
4456  svd[@logindx].bmin = 0.000000
4457  svd[@logindx].bmax = 0.000000
4458  svd[@logindx].vband = 0.000000
4459  svd[@logindx].ba = 65
4460  svd[@logindx].bstep[0] = 0.000000
4461  svd[@logindx].bstep[1] = 0.000000
4462  svd[@logindx].bstep[2] = 0.000000
4463  svd[@logindx].bstep[3] = 0.000000
4464  svd[@logindx].bstep[4] = 0.000000
4465  svd[@logindx].bstep[5] = 0.000000
4466  svd[@logindx].bstep[6] = 0.000000
4467  svd[@logindx].bstep[7] = 0.000000
4468  svd[@logindx].bstep[8] = 0.000000
4469  svd[@logindx].bstep[9] = 0.000000
4470  svd[@logindx].nstep[0] = 0
4471  svd[@logindx].nstep[1] = 0
4472  svd[@logindx].nstep[2] = 0
4473  svd[@logindx].nstep[3] = 0
4474  svd[@logindx].nstep[4] = 0
4475  svd[@logindx].nstep[5] = 0
4476  svd[@logindx].nstep[6] = 0
4477  svd[@logindx].nstep[7] = 0
4478  svd[@logindx].nstep[8] = 0
4479  svd[@logindx].nstep[9] = 0
4480  svd[@logindx].beffmin = 0.000000
4481  svd[@logindx].beffmax = 0.000000
4482  svd[@logindx].nown[0] = 700
4483  svd[@logindx].nown[1] = 0
4484  svd[@logindx].nown[2] = 0
4485  svd[@logindx].nown[3] = 0
```

```
svd[@logindx].pown[0] = 1.000
svd[@logindx].pown[1] = 0.000
svd[@logindx].pown[2] = 0.000
svd[@logindx].pown[3] = 0.000
svd[@logindx].vrefmin = 0
svd[@logindx].vrefmax = 65


@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.992809
volt[@logindx].va = 0.148713
busd[@logindx].extnum = 71957
busd[@logindx].busnam = "21_1_T3"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993990
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71957,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993693
volt[@logindx].va = 0.148586
busd[@logindx].extnum = 71958
busd[@logindx].busnam = "21_1_T2"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993990
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71958,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993693
volt[@logindx].va = 0.148586
```

```
busd[@logindx].extnum = 71959
busd[@logindx].busnam = "21_1_T1"
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993990
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",71959,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993699
volt[@logindx].va = 0.148592
busd[@logindx].extnum = 990151
busd[@logindx].busnam = "mid_990151"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993990
busd[@logindx].vmax = 0.0000
busd[@logindx].vmin = 0.0000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",990151,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.992815
volt[@logindx].va = 0.148719
busd[@logindx].extnum = 990152
busd[@logindx].busnam = "mid_990152"
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993990
busd[@logindx].vmax = 0.0000
busd[@logindx].vmin = 0.0000
busd[@logindx].nown = 700
@snum = -1
```

```
4624  @sindx = -1
4625   for @s = 0 to casepar[0].nsubst - 1
4626    if(subst[@s].extnum = @snum)
4627     @sindx = @s
4628    endif
4629   next
4630    busd[@logindx].isubst = @sindx  /*  -1  */
4631  @ret=setbix(busd[@logindx].extnum, @logindx)
4632  @iret=datachange(1,"busd",990152,"date_in date_out","400101","391231")
4633
4634  @logindx = casepar[0].nbus
4635  @ret=ins("busd", @logindx-1, 1)
4636  @ret=ins("volt", @logindx-1, 1)
4637  volt[@logindx].vm = 0.993699
4638  volt[@logindx].va = 0.148592
4639  busd[@logindx].extnum = 990153
4640  busd[@logindx].busnam =  "mid_990153"
4641  busd[@logindx].basekv = 230.0000
4642  busd[@logindx].type = 1
4643  busd[@logindx].area = 70
4644  busd[@logindx].zone = 704
4645  busd[@logindx].projid = 0
4646  busd[@logindx].level = 0
4647  busd[@logindx].vsched = 0.993990
4648  busd[@logindx].vmax = 0.0000
4649  busd[@logindx].vmin = 0.0000
4650  busd[@logindx].nown = 700
4651  @snum = -1
4652  @sindx = -1
4653   for @s = 0 to casepar[0].nsubst - 1
4654    if(subst[@s].extnum = @snum)
4655     @sindx = @s
4656    endif
4657   next
4658    busd[@logindx].isubst = @sindx  /*  -1  */
4659  @ret=setbix(busd[@logindx].extnum, @logindx)
4660  @iret=datachange(1,"busd",990153,"date_in date_out","400101","391231")
4661
4662  @logindx = casepar[0].nbus
4663  @ret=ins("busd", @logindx-1, 1)
4664  @ret=ins("volt", @logindx-1, 1)
4665  volt[@logindx].vm = 1.000000
4666  volt[@logindx].va = 0.208137
4667  busd[@logindx].extnum = 700119
4668  busd[@logindx].busnam =  "21_1_S1"
4669  busd[@logindx].basekv = 0.6600
4670  busd[@logindx].type = 2
4671  busd[@logindx].area = 70
4672  busd[@logindx].zone = 704
4673  busd[@logindx].projid = 0
4674  busd[@logindx].level = 0
4675  busd[@logindx].vsched = 1.000000
4676  busd[@logindx].vmax = 1.1000
4677  busd[@logindx].vmin = 0.9000
4678  busd[@logindx].nown = 700
4679  @snum = -1
4680  @sindx = -1
4681   for @s = 0 to casepar[0].nsubst - 1
4682    if(subst[@s].extnum = @snum)
4683     @sindx = @s
4684    endif
4685   next
4686    busd[@logindx].isubst = @sindx  /*  -1  */
4687  @ret=setbix(busd[@logindx].extnum, @logindx)
4688  @iret=datachange(1,"busd",700119,"date_in date_out","400101","391231")
4689
4690  @logindx = casepar[0].nbus
4691  @ret=ins("busd", @logindx-1, 1)
4692  @ret=ins("volt", @logindx-1, 1)
```

```
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.208137
busd[@logindx].extnum = 700120
busd[@logindx].busnam = "21_1_S2"
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700120,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.998247
volt[@logindx].va = 0.208525
busd[@logindx].extnum = 700121
busd[@logindx].busnam = "21_1_S3"
busd[@logindx].basekv = 0.6600
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700121,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.139025
busd[@logindx].extnum = 700122
busd[@logindx].busnam = "21_1_B1"
busd[@logindx].basekv = 0.6900
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
```

```
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700122,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.139025
busd[@logindx].extnum = 700123
busd[@logindx].busnam =  "21_1_B1"
busd[@logindx].basekv = 0.6900
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700123,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.000000
volt[@logindx].va = 0.139059
busd[@logindx].extnum = 700124
busd[@logindx].busnam =  "21_1_B3"
busd[@logindx].basekv = 0.6900
busd[@logindx].type = 2
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700124,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
```

```
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.994946
volt[@logindx].va = 0.139069
busd[@logindx].extnum = 700125
busd[@logindx].busnam = "21_1_S1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.995260
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700125,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.994946
volt[@logindx].va = 0.139069
busd[@logindx].extnum = 700126
busd[@logindx].busnam = "21_1_S2_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.995260
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
   @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700126,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.994121
volt[@logindx].va = 0.139199
busd[@logindx].extnum = 700127
busd[@logindx].busnam = "21_1_S3_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.995260
```

```
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700127,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993522
volt[@logindx].va = 0.137425
busd[@logindx].extnum = 700128
busd[@logindx].busnam =  "21_1_B1_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993830
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700128,"date_in date_out","400101","391231")

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 0.993522
volt[@logindx].va = 0.137425
busd[@logindx].extnum = 700129
busd[@logindx].busnam =  "21_1_B2_1"
busd[@logindx].basekv = 34.5000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 704
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 0.993830
busd[@logindx].vmax = 1.1000
busd[@logindx].vmin = 0.9000
busd[@logindx].nown = 700
@snum = -1
@sindx = -1
 for @s = 0 to casepar[0].nsubst - 1
  if(subst[@s].extnum = @snum)
    @sindx = @s
  endif
 next
  busd[@logindx].isubst = @sindx  /*  -1  */
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700129,"date_in date_out","400101","391231")
```

```
4969
4970    @logindx = casepar[0].nbus
4971    @ret=ins("busd", @logindx-1, 1)
4972    @ret=ins("volt", @logindx-1, 1)
4973    volt[@logindx].vm = 0.992723
4974    volt[@logindx].va = 0.137528
4975    busd[@logindx].extnum = 700130
4976    busd[@logindx].busnam = "21_1_B3_1"
4977    busd[@logindx].basekv = 34.5000
4978    busd[@logindx].type = 1
4979    busd[@logindx].area = 70
4980    busd[@logindx].zone = 704
4981    busd[@logindx].projid = 0
4982    busd[@logindx].level = 0
4983    busd[@logindx].vsched = 0.993830
4984    busd[@logindx].vmax = 1.1000
4985    busd[@logindx].vmin = 0.9000
4986    busd[@logindx].nown = 700
4987    @snum = -1
4988    @sindx = -1
4989     for @s = 0 to casepar[0].nsubst - 1
4990      if(subst[@s].extnum = @snum)
4991        @sindx = @s
4992      endif
4993     next
4994      busd[@logindx].isubst = @sindx  /*  -1  */
4995    @ret=setbix(busd[@logindx].extnum, @logindx)
4996    @iret=datachange(1,"busd",700130,"date_in date_out","400101","391231")
4997
4998    @logindx = casepar[0].nbus
4999    @ret=ins("busd", @logindx-1, 1)
5000    @ret=ins("volt", @logindx-1, 1)
5001    volt[@logindx].vm = 0.993467
5002    volt[@logindx].va = 0.137438
5003    busd[@logindx].extnum = 700131
5004    busd[@logindx].busnam = "21_1_SB1"
5005    busd[@logindx].basekv = 34.5000
5006    busd[@logindx].type = 1
5007    busd[@logindx].area = 70
5008    busd[@logindx].zone = 704
5009    busd[@logindx].projid = 0
5010    busd[@logindx].level = 0
5011    busd[@logindx].vsched = 0.993780
5012    busd[@logindx].vmax = 1.1000
5013    busd[@logindx].vmin = 0.9000
5014    busd[@logindx].nown = 700
5015    @snum = -1
5016    @sindx = -1
5017     for @s = 0 to casepar[0].nsubst - 1
5018      if(subst[@s].extnum = @snum)
5019        @sindx = @s
5020      endif
5021     next
5022      busd[@logindx].isubst = @sindx  /*  -1  */
5023    @ret=setbix(busd[@logindx].extnum, @logindx)
5024    @iret=datachange(1,"busd",700131,"date_in date_out","400101","391231")
5025
5026    @logindx = casepar[0].nbus
5027    @ret=ins("busd", @logindx-1, 1)
5028    @ret=ins("volt", @logindx-1, 1)
5029    volt[@logindx].vm = 0.993467
5030    volt[@logindx].va = 0.137438
5031    busd[@logindx].extnum = 700132
5032    busd[@logindx].busnam = "21_1_SB2"
5033    busd[@logindx].basekv = 34.5000
5034    busd[@logindx].type = 1
5035    busd[@logindx].area = 70
5036    busd[@logindx].zone = 704
5037    busd[@logindx].projid = 0
```

```
5038  busd[@logindx].level = 0
5039  busd[@logindx].vsched = 0.993780
5040  busd[@logindx].vmax = 1.1000
5041  busd[@logindx].vmin = 0.9000
5042  busd[@logindx].nown = 700
5043  @snum = -1
5044  @sindx = -1
5045   for @s = 0 to casepar[0].nsubst - 1
5046    if(subst[@s].extnum = @snum)
5047     @sindx = @s
5048    endif
5049   next
5050    busd[@logindx].isubst = @sindx  /*  -1  */
5051  @ret=setbix(busd[@logindx].extnum, @logindx)
5052  @iret=datachange(1,"busd",700132,"date_in date_out","400101","391231")
5053
5054  @logindx = casepar[0].nbus
5055  @ret=ins("busd", @logindx-1, 1)
5056  @ret=ins("volt", @logindx-1, 1)
5057  volt[@logindx].vm = 0.992662
5058  volt[@logindx].va = 0.137544
5059  busd[@logindx].extnum = 700133
5060  busd[@logindx].busnam =  "21_1_SB3"
5061  busd[@logindx].basekv = 34.5000
5062  busd[@logindx].type = 1
5063  busd[@logindx].area = 70
5064  busd[@logindx].zone = 704
5065  busd[@logindx].projid = 0
5066  busd[@logindx].level = 0
5067  busd[@logindx].vsched = 0.993780
5068  busd[@logindx].vmax = 1.1000
5069  busd[@logindx].vmin = 0.9000
5070  busd[@logindx].nown = 700
5071  @snum = -1
5072  @sindx = -1
5073   for @s = 0 to casepar[0].nsubst - 1
5074    if(subst[@s].extnum = @snum)
5075     @sindx = @s
5076    endif
5077   next
5078    busd[@logindx].isubst = @sindx  /*  -1  */
5079  @ret=setbix(busd[@logindx].extnum, @logindx)
5080  @iret=datachange(1,"busd",700133,"date_in date_out","400101","391231")
5081
5082  @logindx = casepar[0].nbus
5083  @ret=ins("busd", @logindx-1, 1)
5084  @ret=ins("volt", @logindx-1, 1)
5085  volt[@logindx].vm = 0.998021
5086  volt[@logindx].va = 0.026249
5087  busd[@logindx].extnum = 700134
5088  busd[@logindx].busnam =  "REPL_2021_1"
5089  busd[@logindx].basekv = 230.0000
5090  busd[@logindx].type = 1
5091  busd[@logindx].area = 70
5092  busd[@logindx].zone = 704
5093  busd[@logindx].projid = 0
5094  busd[@logindx].level = 0
5095  busd[@logindx].vsched = 0.998500
5096  busd[@logindx].vmax = 1.1000
5097  busd[@logindx].vmin = 0.9000
5098  busd[@logindx].nown = 700
5099  @snum = -1
5100  @sindx = -1
5101   for @s = 0 to casepar[0].nsubst - 1
5102    if(subst[@s].extnum = @snum)
5103     @sindx = @s
5104    endif
5105   next
5106    busd[@logindx].isubst = @sindx  /*  -1  */
```

```
@ret=setbix(busd[@logindx].extnum, @logindx)
@iret=datachange(1,"busd",700134,"date_in date_out","400101","391231")

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700125 ERP_1010      34.50")
@logto = number(" 700131 ERP_1010      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001410
secdd[@logindx].zsecx = 0.001409
secdd[@logindx].bsec = 0.005290
secdd[@logindx].rate[0] = 187.90
secdd[@logindx].rate[1] = 187.90
secdd[@logindx].rate[2] = 187.90
secdd[@logindx].rate[3] = 0.00
secdd[@logindx].rate[4] = 0.00
secdd[@logindx].rate[5] = 0.00
secdd[@logindx].rate[6] = 0.00
secdd[@logindx].rate[7] = 0.00
secdd[@logindx].aloss = 0.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 704
secdd[@logindx].lngsec = 0.000
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700126 ERP_1010      34.50")
@logto = number(" 700132 ERP_1010      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.001410
secdd[@logindx].zsecx = 0.001409
secdd[@logindx].bsec = 0.005290
```

```
  secdd[@logindx].rate[0] = 187.90
  secdd[@logindx].rate[1] = 187.90
  secdd[@logindx].rate[2] = 187.90
  secdd[@logindx].rate[3] = 0.00
  secdd[@logindx].rate[4] = 0.00
  secdd[@logindx].rate[5] = 0.00
  secdd[@logindx].rate[6] = 0.00
  secdd[@logindx].rate[7] = 0.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].lngsec = 0.000
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 400101
  secdd[@logindx].date_out = 391231
  secdd[@logindx].nown[0] = 700
  secdd[@logindx].nown[1] = 0
  secdd[@logindx].nown[2] = 0
  secdd[@logindx].nown[3] = 0
  secdd[@logindx].nown[4] = 0
  secdd[@logindx].nown[5] = 0
  secdd[@logindx].nown[6] = 0
  secdd[@logindx].nown[7] = 0
  secdd[@logindx].pown[0] = 1.000
  secdd[@logindx].pown[1] = 0.000
  secdd[@logindx].pown[2] = 0.000
  secdd[@logindx].pown[3] = 0.000
  secdd[@logindx].pown[4] = 0.000
  secdd[@logindx].pown[5] = 0.000
  secdd[@logindx].pown[6] = 0.000
  secdd[@logindx].pown[7] = 0.000

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number(" 700127 ERP_1010      34.50")
  @logto = number(" 700133 ERP_1010      34.50")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
  secdd[@logindx].ck = "1 "
  secdd[@logindx].projid = 0
  secdd[@logindx].st = 1
  secdd[@logindx].stn = 1
  secdd[@logindx].nsec = 1
  secdd[@logindx].type = 0
  secdd[@logindx].zsecr = 0.001410
  secdd[@logindx].zsecx = 0.001409
  secdd[@logindx].bsec = 0.005290
  secdd[@logindx].rate[0] = 187.90
  secdd[@logindx].rate[1] = 187.90
  secdd[@logindx].rate[2] = 187.90
  secdd[@logindx].rate[3] = 0.00
  secdd[@logindx].rate[4] = 0.00
  secdd[@logindx].rate[5] = 0.00
  secdd[@logindx].rate[6] = 0.00
  secdd[@logindx].rate[7] = 0.00
  secdd[@logindx].aloss = 0.000
  secdd[@logindx].area = 70
  secdd[@logindx].zone = 704
  secdd[@logindx].lngsec = 0.000
  secdd[@logindx].trangi = 0.000000
  secdd[@logindx].trantapf = 0.000000
  secdd[@logindx].trantapt = 0.000000
  secdd[@logindx].lid = "                                                  "
  secdd[@logindx].ohms = 0
  secdd[@logindx].date_in = 400101
```

```
5245   secdd[@logindx].date_out = 391231
5246   secdd[@logindx].nown[0] = 700
5247   secdd[@logindx].nown[1] = 0
5248   secdd[@logindx].nown[2] = 0
5249   secdd[@logindx].nown[3] = 0
5250   secdd[@logindx].nown[4] = 0
5251   secdd[@logindx].nown[5] = 0
5252   secdd[@logindx].nown[6] = 0
5253   secdd[@logindx].nown[7] = 0
5254   secdd[@logindx].pown[0] = 1.000
5255   secdd[@logindx].pown[1] = 0.000
5256   secdd[@logindx].pown[2] = 0.000
5257   secdd[@logindx].pown[3] = 0.000
5258   secdd[@logindx].pown[4] = 0.000
5259   secdd[@logindx].pown[5] = 0.000
5260   secdd[@logindx].pown[6] = 0.000
5261   secdd[@logindx].pown[7] = 0.000
5262
5263   @logindx = casepar[0].nbrsec
5264   @ret=ins("secdd", @logindx-1, 1)
5265   @logfrom = number(" 700128 ERP_1010      34.50")
5266   @logto = number(" 700131 ERP_1010      34.50")
5267   secdd[@logindx].ifrom = @logfrom
5268   secdd[@logindx].ito = @logto
5269   secdd[@logindx].ck = "1 "
5270   secdd[@logindx].projid = 0
5271   secdd[@logindx].st = 1
5272   secdd[@logindx].stn = 1
5273   secdd[@logindx].nsec = 1
5274   secdd[@logindx].type = 0
5275   secdd[@logindx].zsecr = 0.000500
5276   secdd[@logindx].zsecx = 0.000804
5277   secdd[@logindx].bsec = 0.001480
5278   secdd[@logindx].rate[0] = 140.90
5279   secdd[@logindx].rate[1] = 140.90
5280   secdd[@logindx].rate[2] = 140.90
5281   secdd[@logindx].rate[3] = 0.00
5282   secdd[@logindx].rate[4] = 0.00
5283   secdd[@logindx].rate[5] = 0.00
5284   secdd[@logindx].rate[6] = 0.00
5285   secdd[@logindx].rate[7] = 0.00
5286   secdd[@logindx].aloss = 0.000
5287   secdd[@logindx].area = 70
5288   secdd[@logindx].zone = 704
5289   secdd[@logindx].lngsec = 0.000
5290   secdd[@logindx].trangi = 0.000000
5291   secdd[@logindx].trantapf = 0.000000
5292   secdd[@logindx].trantapt = 0.000000
5293   secdd[@logindx].lid = "                                                  "
5294   secdd[@logindx].ohms = 0
5295   secdd[@logindx].date_in = 400101
5296   secdd[@logindx].date_out = 391231
5297   secdd[@logindx].nown[0] = 700
5298   secdd[@logindx].nown[1] = 0
5299   secdd[@logindx].nown[2] = 0
5300   secdd[@logindx].nown[3] = 0
5301   secdd[@logindx].nown[4] = 0
5302   secdd[@logindx].nown[5] = 0
5303   secdd[@logindx].nown[6] = 0
5304   secdd[@logindx].nown[7] = 0
5305   secdd[@logindx].pown[0] = 1.000
5306   secdd[@logindx].pown[1] = 0.000
5307   secdd[@logindx].pown[2] = 0.000
5308   secdd[@logindx].pown[3] = 0.000
5309   secdd[@logindx].pown[4] = 0.000
5310   secdd[@logindx].pown[5] = 0.000
5311   secdd[@logindx].pown[6] = 0.000
5312   secdd[@logindx].pown[7] = 0.000
5313
```

```
5314   @logindx = casepar[0].nbrsec
5315   @ret=ins("secdd", @logindx-1, 1)
5316   @logfrom = number(" 700129 ERP_1010      34.50")
5317   @logto = number(" 700132 ERP_1010      34.50")
5318   secdd[@logindx].ifrom = @logfrom
5319   secdd[@logindx].ito = @logto
5320   secdd[@logindx].ck = "1 "
5321   secdd[@logindx].projid = 0
5322   secdd[@logindx].st = 1
5323   secdd[@logindx].stn = 1
5324   secdd[@logindx].nsec = 1
5325   secdd[@logindx].type = 0
5326   secdd[@logindx].zsecr = 0.000500
5327   secdd[@logindx].zsecx = 0.000804
5328   secdd[@logindx].bsec = 0.001480
5329   secdd[@logindx].rate[0] = 140.90
5330   secdd[@logindx].rate[1] = 140.90
5331   secdd[@logindx].rate[2] = 140.90
5332   secdd[@logindx].rate[3] = 0.00
5333   secdd[@logindx].rate[4] = 0.00
5334   secdd[@logindx].rate[5] = 0.00
5335   secdd[@logindx].rate[6] = 0.00
5336   secdd[@logindx].rate[7] = 0.00
5337   secdd[@logindx].aloss = 0.000
5338   secdd[@logindx].area = 70
5339   secdd[@logindx].zone = 704
5340   secdd[@logindx].lngsec = 0.000
5341   secdd[@logindx].trangi = 0.000000
5342   secdd[@logindx].trantapf = 0.000000
5343   secdd[@logindx].trantapt = 0.000000
5344   secdd[@logindx].lid = "                                                  "
5345   secdd[@logindx].ohms = 0
5346   secdd[@logindx].date_in = 400101
5347   secdd[@logindx].date_out = 391231
5348   secdd[@logindx].nown[0] = 700
5349   secdd[@logindx].nown[1] = 0
5350   secdd[@logindx].nown[2] = 0
5351   secdd[@logindx].nown[3] = 0
5352   secdd[@logindx].nown[4] = 0
5353   secdd[@logindx].nown[5] = 0
5354   secdd[@logindx].nown[6] = 0
5355   secdd[@logindx].nown[7] = 0
5356   secdd[@logindx].pown[0] = 1.000
5357   secdd[@logindx].pown[1] = 0.000
5358   secdd[@logindx].pown[2] = 0.000
5359   secdd[@logindx].pown[3] = 0.000
5360   secdd[@logindx].pown[4] = 0.000
5361   secdd[@logindx].pown[5] = 0.000
5362   secdd[@logindx].pown[6] = 0.000
5363   secdd[@logindx].pown[7] = 0.000
5364
5365   @logindx = casepar[0].nbrsec
5366   @ret=ins("secdd", @logindx-1, 1)
5367   @logfrom = number(" 700130 ERP_1010      34.50")
5368   @logto = number(" 700133 ERP_1010      34.50")
5369   secdd[@logindx].ifrom = @logfrom
5370   secdd[@logindx].ito = @logto
5371   secdd[@logindx].ck = "1 "
5372   secdd[@logindx].projid = 0
5373   secdd[@logindx].st = 1
5374   secdd[@logindx].stn = 1
5375   secdd[@logindx].nsec = 1
5376   secdd[@logindx].type = 0
5377   secdd[@logindx].zsecr = 0.000500
5378   secdd[@logindx].zsecx = 0.000804
5379   secdd[@logindx].bsec = 0.001480
5380   secdd[@logindx].rate[0] = 140.90
5381   secdd[@logindx].rate[1] = 140.90
5382   secdd[@logindx].rate[2] = 140.90
```

```
5383   secdd[@logindx].rate[3] = 0.00
5384   secdd[@logindx].rate[4] = 0.00
5385   secdd[@logindx].rate[5] = 0.00
5386   secdd[@logindx].rate[6] = 0.00
5387   secdd[@logindx].rate[7] = 0.00
5388   secdd[@logindx].aloss = 0.000
5389   secdd[@logindx].area = 70
5390   secdd[@logindx].zone = 704
5391   secdd[@logindx].lngsec = 0.000
5392   secdd[@logindx].trangi = 0.000000
5393   secdd[@logindx].trantapf = 0.000000
5394   secdd[@logindx].trantapt = 0.000000
5395   secdd[@logindx].lid = "                                                  "
5396   secdd[@logindx].ohms = 0
5397   secdd[@logindx].date_in = 400101
5398   secdd[@logindx].date_out = 391231
5399   secdd[@logindx].nown[0] = 700
5400   secdd[@logindx].nown[1] = 0
5401   secdd[@logindx].nown[2] = 0
5402   secdd[@logindx].nown[3] = 0
5403   secdd[@logindx].nown[4] = 0
5404   secdd[@logindx].nown[5] = 0
5405   secdd[@logindx].nown[6] = 0
5406   secdd[@logindx].nown[7] = 0
5407   secdd[@logindx].pown[0] = 1.000
5408   secdd[@logindx].pown[1] = 0.000
5409   secdd[@logindx].pown[2] = 0.000
5410   secdd[@logindx].pown[3] = 0.000
5411   secdd[@logindx].pown[4] = 0.000
5412   secdd[@logindx].pown[5] = 0.000
5413   secdd[@logindx].pown[6] = 0.000
5414   secdd[@logindx].pown[7] = 0.000
5415
5416   @logindx = casepar[0].nbrsec
5417   @ret=ins("secdd", @logindx-1, 1)
5418   @logfrom = number(" 700134 ERP_1010     230.00")
5419   @logto = number("  70122 COMANCHE     230.00")
5420   secdd[@logindx].ifrom = @logfrom
5421   secdd[@logindx].ito = @logto
5422   secdd[@logindx].ck = "1 "
5423   secdd[@logindx].projid = 0
5424   secdd[@logindx].st = 1
5425   secdd[@logindx].stn = 1
5426   secdd[@logindx].nsec = 1
5427   secdd[@logindx].type = 0
5428   secdd[@logindx].zsecr = 0.000451
5429   secdd[@logindx].zsecx = 0.006988
5430   secdd[@logindx].bsec = 0.023910
5431   secdd[@logindx].rate[0] = 943.00
5432   secdd[@logindx].rate[1] = 943.00
5433   secdd[@logindx].rate[2] = 943.00
5434   secdd[@logindx].rate[3] = 0.00
5435   secdd[@logindx].rate[4] = 0.00
5436   secdd[@logindx].rate[5] = 0.00
5437   secdd[@logindx].rate[6] = 0.00
5438   secdd[@logindx].rate[7] = 0.00
5439   secdd[@logindx].aloss = 0.000
5440   secdd[@logindx].area = 70
5441   secdd[@logindx].zone = 704
5442   secdd[@logindx].lngsec = 6.250
5443   secdd[@logindx].trangi = 0.000000
5444   secdd[@logindx].trantapf = 0.000000
5445   secdd[@logindx].trantapt = 0.000000
5446   secdd[@logindx].lid = "                                                  "
5447   secdd[@logindx].ohms = 0
5448   secdd[@logindx].date_in = 400101
5449   secdd[@logindx].date_out = 391231
5450   secdd[@logindx].nown[0] = 700
5451   secdd[@logindx].nown[1] = 0
```

```
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700119 ERP_1010       0.66")
@logto = number(" 700125 ERP_1010      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 127.599998
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 127.6
tran[@logindx].rate[1] = 127.6
tran[@logindx].rate[2] = 127.6
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _1                              "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
```

```
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700120 ERP_1010      0.66")
@logto = number(" 700126 ERP_1010     34.50")
@logreg = number("      0 ----------     0.00")
@logtert = number("      0 ----------     0.00")
@logint = number("      0 ----------     0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 127.599998
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 127.6
tran[@logindx].rate[1] = 127.6
tran[@logindx].rate[2] = 127.6
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
```

```
tran[@logindx].lid = "GSU _2                          "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700121 ERP_1010      0.66")
@logto = number(" 700127 ERP_1010     34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 127.599998
tran[@logindx].zpsr = 6.693000e-03
tran[@logindx].zpsx = 7.972000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.660000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.150000e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 127.6
tran[@logindx].rate[1] = 127.6
tran[@logindx].rate[2] = 127.6
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
```

```
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2 _1                         "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700122 ERP_1010       0.69")
@logto = number(" 700128 ERP_1010      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 82.199997
tran[@logindx].zpsr = 7.782000e-03
tran[@logindx].zpsx = 8.966300e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.690000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.012166e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 82.2
tran[@logindx].rate[1] = 82.2
tran[@logindx].rate[2] = 82.2
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
```

```
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _1 _1                          "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700123 ERP_1010       0.69")
@logto = number(" 700129 ERP_1010      34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 82.199997
tran[@logindx].zpsr = 7.782000e-03
tran[@logindx].zpsx = 8.966300e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.690000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.012166e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 82.2
tran[@logindx].rate[1] = 82.2
tran[@logindx].rate[2] = 82.2
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
```

```
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2 _2                         "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700124 ERP_1010      0.69")
@logto = number(" 700130 ERP_1010     34.50")
@logreg = number("      0 ------------    0.00")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 82.199997
tran[@logindx].zpsr = 7.782000e-03
tran[@logindx].zpsx = 8.966300e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 0.690000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 1.012166e-03
tran[@logindx].bmag = -5.000000e-03
tran[@logindx].rate[0] = 82.2
tran[@logindx].rate[1] = 82.2
tran[@logindx].rate[2] = 82.2
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
```

```
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "GSU _2 _1 _1                    "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700134 ERP_1010     230.00")
@logto = number(" 700131 ERP_1010     34.50")
@logreg = number(" 700131 ERP_1010     34.50")
@logtert = number("  71959 ERP_1010     13.80")
@logint = number("  990151 mid_pt      230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
```

```
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1                          "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700134 ERP_1010     230.00")
@logto = number(" 700132 ERP_1010     34.50")
@logreg = number(" 700132 ERP_1010     34.50")
@logtert = number("  71958 ERP_1010     13.80")
@logint = number("  990153 mid_pt      230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "1 "
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 2
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 704
tran[@logindx].tbase = 94.000000
tran[@logindx].zpsr = 2.230000e-03
tran[@logindx].zpsx = 9.497000e-02
tran[@logindx].zptr = 3.350000e-03
tran[@logindx].zptx = 1.424600e-01
tran[@logindx].ztsr = 6.700000e-04
tran[@logindx].ztsx = 2.849000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
```

```
6004   tran[@logindx].rate[0] = 156.7
6005   tran[@logindx].rate[1] = 156.7
6006   tran[@logindx].rate[2] = 156.7
6007   tran[@logindx].rate[3] = 0.0
6008   tran[@logindx].rate[4] = 0.0
6009   tran[@logindx].rate[5] = 0.0
6010   tran[@logindx].rate[6] = 0.0
6011   tran[@logindx].rate[7] = 0.0
6012   tran[@logindx].aloss = 0.000
6013   tran[@logindx].tmax = 1.100000
6014   tran[@logindx].tmin = 0.900000
6015   tran[@logindx].vtmax = 1.020000
6016   tran[@logindx].vtmin = 0.980000
6017   tran[@logindx].stepp = -0.006250
6018   tran[@logindx].tapp = 1.000000
6019   tran[@logindx].tapfp = 1.000000
6020   tran[@logindx].tapfs = 1.000000
6021   tran[@logindx].tapft = 1.000000
6022   tran[@logindx].lid = "MPT _2                          "
6023   tran[@logindx].ohms = 0
6024   tran[@logindx].date_in = 400101
6025   tran[@logindx].date_out = 391231
6026   tran[@logindx].nown[0] = 700
6027   tran[@logindx].nown[1] = 0
6028   tran[@logindx].nown[2] = 0
6029   tran[@logindx].nown[3] = 0
6030   tran[@logindx].nown[4] = 0
6031   tran[@logindx].nown[5] = 0
6032   tran[@logindx].nown[6] = 0
6033   tran[@logindx].nown[7] = 0
6034   tran[@logindx].pown[0] = 1.000
6035   tran[@logindx].pown[1] = 1.000
6036   tran[@logindx].pown[2] = 1.000
6037   tran[@logindx].pown[3] = 1.000
6038   tran[@logindx].pown[4] = 0.000
6039   tran[@logindx].pown[5] = 0.000
6040   tran[@logindx].pown[6] = 0.000
6041   tran[@logindx].pown[7] = 0.000
6042
6043   @logindx = casepar[0].ntran
6044   @ret=ins("tran", @logindx-1, 1)
6045   @logfrom = number(" 700134 ERP_1010     230.00")
6046   @logto = number(" 700133 ERP_1010      34.50")
6047   @logreg = number(" 700133 ERP_1010      34.50")
6048   @logtert = number("  71957 ERP_1010      13.80")
6049   @logint = number("  990152 mid_pt       230.00")
6050   tran[@logindx].ifrom = @logfrom
6051   tran[@logindx].ito = @logto
6052   tran[@logindx].ck = "1 "
6053   tran[@logindx].projid = 0
6054   tran[@logindx].st = 1
6055   tran[@logindx].stn = 1
6056   tran[@logindx].type = 2
6057   tran[@logindx].kreg = @logreg
6058   tran[@logindx].iztabl = 0
6059   tran[@logindx].itert = @logtert
6060   tran[@logindx].iint = @logint
6061   tran[@logindx].area = 70
6062   tran[@logindx].zone = 704
6063   tran[@logindx].tbase = 94.000000
6064   tran[@logindx].zpsr = 2.230000e-03
6065   tran[@logindx].zpsx = 9.497000e-02
6066   tran[@logindx].zptr = 3.350000e-03
6067   tran[@logindx].zptx = 1.424600e-01
6068   tran[@logindx].ztsr = 6.700000e-04
6069   tran[@logindx].ztsx = 2.849000e-02
6070   tran[@logindx].vnomp = 230.000000
6071   tran[@logindx].vnoms = 34.500000
6072   tran[@logindx].vnomt = 13.800000
```

```
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 9.574469e-04
tran[@logindx].bmag = -1.000000e-03
tran[@logindx].rate[0] = 156.7
tran[@logindx].rate[1] = 156.7
tran[@logindx].rate[2] = 156.7
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.100000
tran[@logindx].tmin = 0.900000
tran[@logindx].vtmax = 1.020000
tran[@logindx].vtmin = 0.980000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "MPT _1 _1                          "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700119 ERP_1010       0.66")
@logreg = number(" 700119 ERP_1010       0.66")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 127.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 2.960288
gens[@logindx].qmax = 64.324997
gens[@logindx].qmin = -64.324997
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 121.220001
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
```

```
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "        "
  gens[@logindx].date_in = 400101
  gens[@logindx].date_out = 391231
  gens[@logindx].nown[0] = 700
  gens[@logindx].nown[1] = 0
  gens[@logindx].nown[2] = 0
  gens[@logindx].nown[3] = 0
  gens[@logindx].nown[4] = 0
  gens[@logindx].nown[5] = 0
  gens[@logindx].nown[6] = 0
  gens[@logindx].nown[7] = 0
  gens[@logindx].pown[0] = 1.000
  gens[@logindx].pown[1] = 1.000
  gens[@logindx].pown[2] = 1.000
  gens[@logindx].pown[3] = 1.000
  gens[@logindx].pown[4] = 0.000
  gens[@logindx].pown[5] = 0.000
  gens[@logindx].pown[6] = 0.000
  gens[@logindx].pown[7] = 0.000
  gens[@logindx].rtr = 0.0000
  gens[@logindx].xtr = 0.0000
  gens[@logindx].gtap = 1.0000
  gens[@logindx].gov_flag = 0
  gens[@logindx].agc_flag = 0
  gens[@logindx].dispatch_flag = 0
  gens[@logindx].baseload_flag = 0
  gens[@logindx].air_temp = 0
  gens[@logindx].turbine_type = 31
  gens[@logindx].fueltype[0] = 0
  gens[@logindx].fueltype[1] = 0
  gens[@logindx].fueltype[2] = 0
  gens[@logindx].qtab = 0
  gens[@logindx].pf = 0.000000

  @logindx = casepar[0].ngen
  @ret=ins("gens", @logindx-1, 1)
  @logbgen = number(" 700120 ERP_1010      0.66")
  @logreg = number(" 700120 ERP_1010      0.66")
  @loghbus = number("      0 ------------   0.00")
  @logtbus = number("      0 ------------   0.00")
  gens[@logindx].ibgen = @logbgen
  gens[@logindx].id = "S2"
  gens[@logindx].projid = 0
  gens[@logindx].st = 0
  gens[@logindx].stn = 1
  gens[@logindx].igreg = @logreg
  gens[@logindx].area = 70
  gens[@logindx].zone = 704
  gens[@logindx].mbase = 127.6000
  gens[@logindx].pgen = 0.0
  gens[@logindx].qgen = 2.960288
  gens[@logindx].qmax = 64.324997
  gens[@logindx].qmin = -64.324997
  gens[@logindx].prf = 1.000000
  gens[@logindx].qrf = 1.000000
  gens[@logindx].pmax = 121.220001
  gens[@logindx].pmin = 0.000000
  gens[@logindx].zgenr = 9999.000
  gens[@logindx].zgenx = 9999.000
  gens[@logindx].rcomp = 0.000
  gens[@logindx].xcomp = 0.000
  gens[@logindx].hbus = @loghbus
  gens[@logindx].tbus = @logtbus
  gens[@logindx].lid = "        "
  gens[@logindx].date_in = 400101
  gens[@logindx].date_out = 391231
  gens[@logindx].nown[0] = 700
```

```
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number("  700121 ERP_1010      0.66")
@logreg = number("  700120 ERP_1010      0.66")
@loghbus = number("       0 ------------    0.00")
@logtbus = number("       0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "S3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 127.6000
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 1.480095
gens[@logindx].qmax = 64.324997
gens[@logindx].qmin = -64.324997
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 121.220001
gens[@logindx].pmin = 0.000000
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
```

```
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 31
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700122 ERP_1010       0.69")
@logreg = number(" 700122 ERP_1010       0.69")
@loghbus = number("       0 ------------   0.00")
@logtbus = number("       0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B1"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 80.6400
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 5.975537
gens[@logindx].qmax = 40.035000
gens[@logindx].qmin = -40.035000
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 76.608002
gens[@logindx].pmin = -76.608002
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
```

```
6349  gens[@logindx].pown[5] = 0.000
6350  gens[@logindx].pown[6] = 0.000
6351  gens[@logindx].pown[7] = 0.000
6352  gens[@logindx].rtr = 0.0000
6353  gens[@logindx].xtr = 0.0000
6354  gens[@logindx].gtap = 1.0000
6355  gens[@logindx].gov_flag = 0
6356  gens[@logindx].agc_flag = 0
6357  gens[@logindx].dispatch_flag = 0
6358  gens[@logindx].baseload_flag = 0
6359  gens[@logindx].air_temp = 0
6360  gens[@logindx].turbine_type = 42
6361  gens[@logindx].fueltype[0] = 0
6362  gens[@logindx].fueltype[1] = 0
6363  gens[@logindx].fueltype[2] = 0
6364  gens[@logindx].qtab = 0
6365  gens[@logindx].pf = 0.000000
6366
6367  @logindx = casepar[0].ngen
6368  @ret=ins("gens", @logindx-1, 1)
6369  @logbgen = number(" 700123 ERP_1010      0.69")
6370  @logreg = number(" 700123 ERP_1010      0.69")
6371  @loghbus = number("      0 ------------   0.00")
6372  @logtbus = number("      0 ------------   0.00")
6373  gens[@logindx].ibgen = @logbgen
6374  gens[@logindx].id = "B2"
6375  gens[@logindx].projid = 0
6376  gens[@logindx].st = 0
6377  gens[@logindx].stn = 1
6378  gens[@logindx].igreg = @logreg
6379  gens[@logindx].area = 70
6380  gens[@logindx].zone = 704
6381  gens[@logindx].mbase = 80.6400
6382  gens[@logindx].pgen = 0.0
6383  gens[@logindx].qgen = 5.975537
6384  gens[@logindx].qmax = 40.035000
6385  gens[@logindx].qmin = -40.035000
6386  gens[@logindx].prf = 1.000000
6387  gens[@logindx].qrf = 1.000000
6388  gens[@logindx].pmax = 76.608002
6389  gens[@logindx].pmin = -76.608002
6390  gens[@logindx].zgenr = 9999.000
6391  gens[@logindx].zgenx = 9999.000
6392  gens[@logindx].rcomp = 0.000
6393  gens[@logindx].xcomp = 0.000
6394  gens[@logindx].hbus = @loghbus
6395  gens[@logindx].tbus = @logtbus
6396  gens[@logindx].lid = "        "
6397  gens[@logindx].date_in = 400101
6398  gens[@logindx].date_out = 391231
6399  gens[@logindx].nown[0] = 700
6400  gens[@logindx].nown[1] = 0
6401  gens[@logindx].nown[2] = 0
6402  gens[@logindx].nown[3] = 0
6403  gens[@logindx].nown[4] = 0
6404  gens[@logindx].nown[5] = 0
6405  gens[@logindx].nown[6] = 0
6406  gens[@logindx].nown[7] = 0
6407  gens[@logindx].pown[0] = 1.000
6408  gens[@logindx].pown[1] = 1.000
6409  gens[@logindx].pown[2] = 1.000
6410  gens[@logindx].pown[3] = 1.000
6411  gens[@logindx].pown[4] = 0.000
6412  gens[@logindx].pown[5] = 0.000
6413  gens[@logindx].pown[6] = 0.000
6414  gens[@logindx].pown[7] = 0.000
6415  gens[@logindx].rtr = 0.0000
6416  gens[@logindx].xtr = 0.0000
6417  gens[@logindx].gtap = 1.0000
```

```
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 42
gens[@logindx].fueltype[0] = 0
gens[@logindx].fueltype[1] = 0
gens[@logindx].fueltype[2] = 0
gens[@logindx].qtab = 0
gens[@logindx].pf = 0.000000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700124 ERP_1010      0.69")
@logreg = number(" 700124 ERP_1010      0.69")
@loghbus = number("      0 ------------   0.00")
@logtbus = number("      0 ------------   0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B3"
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 1
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 704
gens[@logindx].mbase = 80.6400
gens[@logindx].pgen = 0.0
gens[@logindx].qgen = 6.707852
gens[@logindx].qmax = 40.035000
gens[@logindx].qmin = -40.035000
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 76.608002
gens[@logindx].pmin = -76.608002
gens[@logindx].zgenr = 9999.000
gens[@logindx].zgenx = 9999.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 1.000
gens[@logindx].pown[2] = 1.000
gens[@logindx].pown[3] = 1.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
gens[@logindx].gtap = 1.0000
gens[@logindx].gov_flag = 0
gens[@logindx].agc_flag = 0
gens[@logindx].dispatch_flag = 0
gens[@logindx].baseload_flag = 0
gens[@logindx].air_temp = 0
gens[@logindx].turbine_type = 42
```

```
6487  gens[@logindx].fueltype[0] = 0
6488  gens[@logindx].fueltype[1] = 0
6489  gens[@logindx].fueltype[2] = 0
6490  gens[@logindx].qtab = 0
6491  gens[@logindx].pf = 0.000000
6492
6493  @logindx = casepar[0].nload
6494  @ret=ins("load", @logindx-1, 1)
6495  @loglbus = number(" 700131 ERP_1010      34.50")
6496  load[@logindx].lbus = @loglbus
6497  load[@logindx].id = "SS"
6498  load[@logindx].projid = 0
6499  load[@logindx].st = 1
6500  load[@logindx].stn = 1
6501  load[@logindx].area = 70
6502  load[@logindx].zone = 704
6503  load[@logindx].p = 2.210000
6504  load[@logindx].q = 1.660000
6505  load[@logindx].pdgen = 0.000000
6506  load[@logindx].qdgen = 0.000000
6507  load[@logindx].ip = 0.000000
6508  load[@logindx].iq = 0.000000
6509  load[@logindx].g = 0.000000
6510  load[@logindx].b = 0.000000
6511  load[@logindx].nonconf = 0
6512  load[@logindx].lid = "        "
6513  load[@logindx].date_in = 400101
6514  load[@logindx].date_out = 391231
6515  load[@logindx].nown = 700
6516  load[@logindx].clzone = "        "
6517
6518  @logindx = casepar[0].nload
6519  @ret=ins("load", @logindx-1, 1)
6520  @loglbus = number(" 700132 ERP_1010      34.50")
6521  load[@logindx].lbus = @loglbus
6522  load[@logindx].id = "SS"
6523  load[@logindx].projid = 0
6524  load[@logindx].st = 1
6525  load[@logindx].stn = 1
6526  load[@logindx].area = 70
6527  load[@logindx].zone = 704
6528  load[@logindx].p = 2.210000
6529  load[@logindx].q = 1.660000
6530  load[@logindx].pdgen = 0.000000
6531  load[@logindx].qdgen = 0.000000
6532  load[@logindx].ip = 0.000000
6533  load[@logindx].iq = 0.000000
6534  load[@logindx].g = 0.000000
6535  load[@logindx].b = 0.000000
6536  load[@logindx].nonconf = 0
6537  load[@logindx].lid = "        "
6538  load[@logindx].date_in = 400101
6539  load[@logindx].date_out = 391231
6540  load[@logindx].nown = 700
6541  load[@logindx].clzone = "        "
6542
6543  @logindx = casepar[0].nload
6544  @ret=ins("load", @logindx-1, 1)
6545  @loglbus = number(" 700133 ERP_1010      34.50")
6546  load[@logindx].lbus = @loglbus
6547  load[@logindx].id = "SS"
6548  load[@logindx].projid = 0
6549  load[@logindx].st = 1
6550  load[@logindx].stn = 1
6551  load[@logindx].area = 70
6552  load[@logindx].zone = 704
6553  load[@logindx].p = 2.210000
6554  load[@logindx].q = 1.660000
6555  load[@logindx].pdgen = 0.000000
```

```
load[@logindx].qdgen = 0.000000
load[@logindx].ip = 0.000000
load[@logindx].iq = 0.000000
load[@logindx].g = 0.000000
load[@logindx].b = 0.000000
load[@logindx].nonconf = 0
load[@logindx].lid = "        "
load[@logindx].date_in = 400101
load[@logindx].date_out = 391231
load[@logindx].nown = 700
load[@logindx].clzone = "        "

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005140
volt[@logindx].va = -0.104893
busd[@logindx].extnum = 71971
busd[@logindx].busnam = "24_10_T     "
busd[@logindx].basekv = 13.8000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 703
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.005140
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005140
volt[@logindx].va = -0.104893
busd[@logindx].extnum = 98770
busd[@logindx].busnam = "mid_98770   "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 703
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.005140
busd[@logindx].vmax = 0.0000
busd[@logindx].vmin = 0.0000
busd[@logindx].date_in = 400101
busd[@logindx].date_out = 391231
busd[@logindx].nown = 700

@logindx = casepar[0].nbus
@ret=ins("busd", @logindx-1, 1)
@ret=ins("volt", @logindx-1, 1)
volt[@logindx].vm = 1.005110
volt[@logindx].va = -0.104893
busd[@logindx].extnum = 700052
busd[@logindx].busnam = "PI_2024_10  "
busd[@logindx].basekv = 230.0000
busd[@logindx].type = 1
busd[@logindx].area = 70
busd[@logindx].zone = 703
busd[@logindx].projid = 0
busd[@logindx].level = 0
busd[@logindx].vsched = 1.000000
busd[@logindx].vmax = 1.0500
busd[@logindx].vmin = 0.9500
busd[@logindx].date_in = 400101
```

```
  busd[@logindx].date_out = 391231
  busd[@logindx].nown = 700

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.005070
  volt[@logindx].va = -0.104893
  busd[@logindx].extnum = 700053
  busd[@logindx].busnam = "24_10_B_2   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].zone = 703
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.005070
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].date_in = 400101
  busd[@logindx].date_out = 391231
  busd[@logindx].nown = 700

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.005070
  volt[@logindx].va = -0.104893
  busd[@logindx].extnum = 700054
  busd[@logindx].busnam = "24_10_B_1   "
  busd[@logindx].basekv = 34.5000
  busd[@logindx].type = 1
  busd[@logindx].area = 70
  busd[@logindx].zone = 703
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.005070
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].date_in = 400101
  busd[@logindx].date_out = 391231
  busd[@logindx].nown = 700

  @logindx = casepar[0].nbus
  @ret=ins("busd", @logindx-1, 1)
  @ret=ins("volt", @logindx-1, 1)
  volt[@logindx].vm = 1.005070
  volt[@logindx].va = -0.104893
  busd[@logindx].extnum = 700055
  busd[@logindx].busnam = "24_10_B     "
  busd[@logindx].basekv = 0.6600
  busd[@logindx].type = 2
  busd[@logindx].area = 70
  busd[@logindx].zone = 703
  busd[@logindx].projid = 0
  busd[@logindx].level = 0
  busd[@logindx].vsched = 1.005070
  busd[@logindx].vmax = 1.0500
  busd[@logindx].vmin = 0.9500
  busd[@logindx].date_in = 400101
  busd[@logindx].date_out = 391231
  busd[@logindx].nown = 700

  @logindx = casepar[0].nbrsec
  @ret=ins("secdd", @logindx-1, 1)
  @logfrom = number("  70592 SPINDLE     230.00")
  @logto = number(" 700052 PI_2024_10   230.00")
  secdd[@logindx].ifrom = @logfrom
  secdd[@logindx].ito = @logto
```

```
secdd[@logindx].ck = "1 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000200
secdd[@logindx].zsecx = 0.001540
secdd[@logindx].bsec = 0.000840
secdd[@logindx].rate[0] = 304.75
secdd[@logindx].rate[1] = 358.53
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 703
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].nbrsec
@ret=ins("secdd", @logindx-1, 1)
@logfrom = number(" 700053 24_10_B_2      34.50")
@logto = number(" 700054 24_10_B_1      34.50")
secdd[@logindx].ifrom = @logfrom
secdd[@logindx].ito = @logto
secdd[@logindx].ck = "2 "
secdd[@logindx].projid = 0
secdd[@logindx].st = 1
secdd[@logindx].stn = 1
secdd[@logindx].nsec = 1
secdd[@logindx].type = 0
secdd[@logindx].zsecr = 0.000200
secdd[@logindx].zsecx = 0.000190
secdd[@logindx].bsec = 0.000410
secdd[@logindx].rate[0] = 265.33
secdd[@logindx].rate[1] = 331.67
secdd[@logindx].aloss = 1.000
secdd[@logindx].area = 70
secdd[@logindx].zone = 703
secdd[@logindx].trangi = 0.000000
secdd[@logindx].trantapf = 0.000000
secdd[@logindx].trantapt = 0.000000
secdd[@logindx].lid = "                                                  "
secdd[@logindx].ohms = 0
secdd[@logindx].date_in = 400101
secdd[@logindx].date_out = 391231
secdd[@logindx].nown[0] = 700
secdd[@logindx].nown[1] = 0
secdd[@logindx].nown[2] = 0
secdd[@logindx].nown[3] = 0
```

```
secdd[@logindx].nown[4] = 0
secdd[@logindx].nown[5] = 0
secdd[@logindx].nown[6] = 0
secdd[@logindx].nown[7] = 0
secdd[@logindx].pown[0] = 1.000
secdd[@logindx].pown[1] = 0.000
secdd[@logindx].pown[2] = 0.000
secdd[@logindx].pown[3] = 0.000
secdd[@logindx].pown[4] = 0.000
secdd[@logindx].pown[5] = 0.000
secdd[@logindx].pown[6] = 0.000
secdd[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700052 PI_2024_10    230.00")
@logto = number(" 700053 24_10_B_2     34.50")
@logreg = number(" 700053 24_10_B_2     34.50")
@logtert = number("  71971 24_10_T      13.80")
@logint = number("  98770 mid_98770    230.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "T1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 703
tran[@logindx].tbase = 165.000000
tran[@logindx].zpsr = 2.080000e-03
tran[@logindx].zpsx = 9.998000e-02
tran[@logindx].zptr = 5.680000e-03
tran[@logindx].zptx = 1.498900e-01
tran[@logindx].ztsr = 6.880000e-03
tran[@logindx].ztsx = 4.952000e-02
tran[@logindx].vnomp = 230.000000
tran[@logindx].vnoms = 34.500000
tran[@logindx].vnomt = 13.800000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 275.0
tran[@logindx].rate[1] = 275.0
tran[@logindx].rate[2] = 275.0
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = -0.006250
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                "
tran[@logindx].ohms = 0
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
```

```
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ntran
@ret=ins("tran", @logindx-1, 1)
@logfrom = number(" 700054 24_10_B_1     34.50")
@logto = number(" 700055 24_10_B       0.66")
@logreg = number(" 700054 24_10_B_1     34.50")
@logtert = number("      0 ------------    0.00")
@logint = number("      0 ------------    0.00")
tran[@logindx].ifrom = @logfrom
tran[@logindx].ito = @logto
tran[@logindx].ck = "U1"
tran[@logindx].projid = 0
tran[@logindx].st = 1
tran[@logindx].stn = 1
tran[@logindx].type = 1
tran[@logindx].kreg = @logreg
tran[@logindx].iztabl = 0
tran[@logindx].itert = @logtert
tran[@logindx].iint = @logint
tran[@logindx].area = 70
tran[@logindx].zone = 703
tran[@logindx].tbase = 268.799988
tran[@logindx].zpsr = 4.980000e-03
tran[@logindx].zpsx = 5.979000e-02
tran[@logindx].zptr = 0.000000e+00
tran[@logindx].zptx = 0.000000e+00
tran[@logindx].ztsr = 0.000000e+00
tran[@logindx].ztsx = 0.000000e+00
tran[@logindx].vnomp = 34.500000
tran[@logindx].vnoms = 0.660000
tran[@logindx].vnomt = 0.000000
tran[@logindx].anglp = 0.000000
tran[@logindx].gmag = 0.000000e+00
tran[@logindx].bmag = 0.000000e+00
tran[@logindx].rate[0] = 268.8
tran[@logindx].rate[1] = 268.8
tran[@logindx].rate[2] = 268.8
tran[@logindx].rate[3] = 0.0
tran[@logindx].rate[4] = 0.0
tran[@logindx].rate[5] = 0.0
tran[@logindx].rate[6] = 0.0
tran[@logindx].rate[7] = 0.0
tran[@logindx].aloss = 0.000
tran[@logindx].tmax = 1.050000
tran[@logindx].tmin = 0.950000
tran[@logindx].vtmax = 1.050000
tran[@logindx].vtmin = 0.950000
tran[@logindx].stepp = 0.025000
tran[@logindx].tapp = 1.000000
tran[@logindx].tapfp = 1.000000
tran[@logindx].tapfs = 1.000000
tran[@logindx].tapft = 1.000000
tran[@logindx].lid = "                                        "
tran[@logindx].ohms = 0
```

```
tran[@logindx].date_in = 400101
tran[@logindx].date_out = 391231
tran[@logindx].nown[0] = 700
tran[@logindx].nown[1] = 0
tran[@logindx].nown[2] = 0
tran[@logindx].nown[3] = 0
tran[@logindx].nown[4] = 0
tran[@logindx].nown[5] = 0
tran[@logindx].nown[6] = 0
tran[@logindx].nown[7] = 0
tran[@logindx].pown[0] = 1.000
tran[@logindx].pown[1] = 1.000
tran[@logindx].pown[2] = 1.000
tran[@logindx].pown[3] = 1.000
tran[@logindx].pown[4] = 0.000
tran[@logindx].pown[5] = 0.000
tran[@logindx].pown[6] = 0.000
tran[@logindx].pown[7] = 0.000

@logindx = casepar[0].ngen
@ret=ins("gens", @logindx-1, 1)
@logbgen = number(" 700055 24_10_B        0.66")
@logreg = number(" 700052 PI_2024_10    230.00")
@loghbus = number("      0 ------------    0.00")
@logtbus = number("      0 ------------    0.00")
gens[@logindx].ibgen = @logbgen
gens[@logindx].id = "B "
gens[@logindx].projid = 0
gens[@logindx].st = 0
gens[@logindx].stn = 0
gens[@logindx].igreg = @logreg
gens[@logindx].area = 70
gens[@logindx].zone = 703
gens[@logindx].mbase = 268.8000
gens[@logindx].pgen = 0.000000
gens[@logindx].qgen = 0.000000
gens[@logindx].qmax = 173.322998
gens[@logindx].qmin = -173.322998
gens[@logindx].prf = 1.000000
gens[@logindx].qrf = 1.000000
gens[@logindx].pmax = 205.457001
gens[@logindx].pmin = -205.457001
gens[@logindx].zgenr = 0.000
gens[@logindx].zgenx = 1.000
gens[@logindx].rcomp = 0.000
gens[@logindx].xcomp = 0.000
gens[@logindx].hbus = @loghbus
gens[@logindx].tbus = @logtbus
gens[@logindx].lid = "        "
gens[@logindx].date_in = 400101
gens[@logindx].date_out = 391231
gens[@logindx].nown[0] = 700
gens[@logindx].nown[1] = 0
gens[@logindx].nown[2] = 0
gens[@logindx].nown[3] = 0
gens[@logindx].nown[4] = 0
gens[@logindx].nown[5] = 0
gens[@logindx].nown[6] = 0
gens[@logindx].nown[7] = 0
gens[@logindx].pown[0] = 1.000
gens[@logindx].pown[1] = 0.000
gens[@logindx].pown[2] = 0.000
gens[@logindx].pown[3] = 0.000
gens[@logindx].pown[4] = 0.000
gens[@logindx].pown[5] = 0.000
gens[@logindx].pown[6] = 0.000
gens[@logindx].pown[7] = 0.000
gens[@logindx].rtr = 0.0000
gens[@logindx].xtr = 0.0000
```

```
6970   gens[@logindx].gtap = 1.0000
6971   gens[@logindx].gov_flag = 0
6972   gens[@logindx].agc_flag = 0
6973   gens[@logindx].dispatch_flag = 0
6974   gens[@logindx].baseload_flag = 0
6975   gens[@logindx].air_temp = 0
6976   gens[@logindx].turbine_type = 0
6977   gens[@logindx].qtab = 0
6978
6979   @logindx = casepar[0].nload
6980   @ret=ins("load", @logindx-1, 1)
6981   @loglbus = number(" 700053 24_10_B_2     34.50")
6982   load[@logindx].lbus = @loglbus
6983   load[@logindx].id = "SS"
6984   load[@logindx].projid = 0
6985   load[@logindx].st = 1
6986   load[@logindx].stn = 1
6987   load[@logindx].area = 70
6988   load[@logindx].zone = 703
6989   load[@logindx].p = 5.000000
6990   load[@logindx].q = 0.000000
6991   load[@logindx].ip = 0.000000
6992   load[@logindx].iq = 0.000000
6993   load[@logindx].g = 0.000000
6994   load[@logindx].b = 0.000000
6995   load[@logindx].nonconf = 1
6996   load[@logindx].lid = "        "
6997   load[@logindx].date_in = 400101
6998   load[@logindx].date_out = 391231
6999   load[@logindx].nown = 700
7000
7001   mispar[0].iordfl = 0       /* Initiate a bus re-order */
7002
7003   end
7004
```