Informational Interconnection Study Report for INFO-2024-2

1/10/2025

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1.0 Executive Summary

This report is an informational evaluation of a 325 MW of Solar Photovoltaic (PV) Generating Facility at the Tundra 345 kV substation, in Pueblo County, Colorado. The customer has requested the study to be conducted as Network Resource Interconnection Service with the expected Commercial Operation Date (COD) of December 31st, 2028.

The 2029HS was selected as a Starting Case to reflect the requested COD. From the Starting case, a Benchmark case was created which included higher queued projects and stressed south study pocket with the full 4050 MW of Native Load Priority dispatched on the Colorado's Power Pathway.

The study results have indicated the following:

- System Intact analysis: No voltage violation attributable to INFO-2024-2 was identified.
- Single Contingency analysis: No voltage violation attributable to INFO-2024-2 was identified.
- Multiple Contingency analysis: Multiple contingency issues were expected to be mitigated using system adjustments, including generation redispatch and/or operator actions.
- There were number of thermal overloads identified on Affected Systems facilities in both system intact analysis and single contingency analysis but were not mitigated as part of this analysis.

Furthermore, adding an interconnection position for the Momentum Solar project at the Tundra 345 kV switching station is not feasible from a preliminary evaluation. All positions in the current planned switching station are all allocated for PSCo planned projects.

No estimated costs for interconnection have been provided as part of this informational study due to the uncertainty of interconnecting the Momentum Solar facility at Tundra 345 kV switching station. Further informational request may be made for alternative POI for this interconnection service request. See section 6 of this report for details on POI evaluation.

Disclaimer: This informational study report does not grant any Interconnection Service or Transmission Service. The results are based on the modeling assumptions and study scope specified by the Customer, which may or may not reflect the standard modeling assumptions following for Large Generator Interconnection Procedures (LGIP) studies.

2.0 Introduction

This report is an informational evaluation of a 325 MW PV Generator Interconnection Request (GIR) requesting 325 MW of interconnection service with a POI at the Tundra 345 kV substation. The study included a Generating Facility model supplied by the customer.

A summary and description of the NRIS request for INFO-2024-2 is shown in Table 1.

Table 1 – Summary of Request for INFO-2024-2 as NRIS

INFO #	Resource Type	Requested Capacity (MW)	Service Type	COD	POI	Location
INFO-2024-2	PV	325	NRIS	12/31/2028	Tundra 345 kV	Pueblo County, CO

The approximate geographical location of the transmission system at and near the POI is shown in Figure 1.

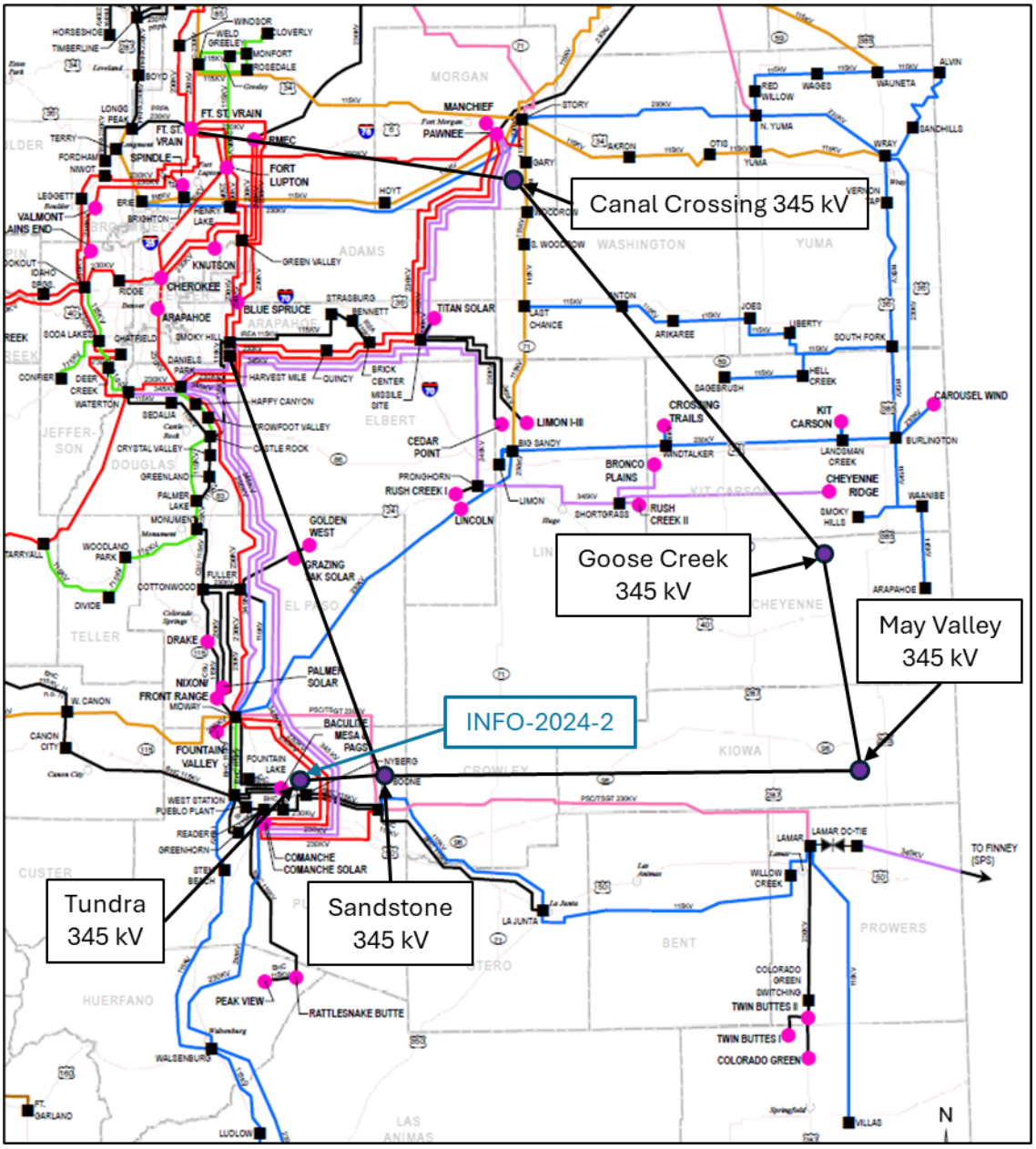

Figure 1: Point of Interconnection of INFO-2024-2

3.0 Study Scope

The study was performed using the modeling assumptions specified by the Customer as well as those outlined in the Business Practices Manual (BPM).

3.1 Study Criteria

The following Criteria are used for the reliability analysis of the PSCo system and Affected Systems:

P0—System Intact conditions:

Thermal Loading: <=100% of the normal facility rating

Voltage range: 0.95 to 1.05 per unit

P1 & P2-1—Single Contingencies:

Thermal Loading: <=100% Normal facility rating

Voltage range: 0.90 to 1.10 per unit

Voltage deviation: <=8% of pre-contingency voltage

P2 (except P2-1), P4, P5 & P7—Multiple Contingencies:

Thermal Loading: <=100% Emergency facility rating

Voltage range: 0.90 to 1.10 per unit

Voltage deviation: <=8% of pre-contingency voltage

3.2 Study Pocket

Based on the POI location of the GIR, the Southern Colorado study pocket will be used. The Southern Colorado study pocket includes WECC designated zone 704. As described in Section 3.11 of the BPM, this study pocket is comprised of South-central Colorado and Southeast Colorado transmission system. Below is the current generation in the South pocket:

- Comanche: Golden West Wind at Fuller, Fountain Valley Gas at Midway, Comanche Coal and Solar (replacement generator), Community Solar at Comanche, Mirasol, Tundra.
- Lamar: Colorado Green Wind, Twin Buttes Wind, DC Tie.

4.0 Base Case Modeling Assumptions

The 2029 Heavy Summer WECC base case was selected as the Starting Case for this study. The 2029HS includes a complete build out of Colorado's Power Pathway with forecasted transmission projects, line uprate projects, substation rebuild project, new transformer additions, and the generation assumed to be part of the Native Load Priority to serve the PSCo Native Load. The Base Case was created from the Starting Case by including the following modeling changes.

- Godfrey - Gilcrest - Anadarko 115 kV L9494 uprate to 239 MVA
- Greenwood Bus-Tie uprate to 956 MVA
- Daniels Park-Prairie-Greenwood uprate L5707 to 916 MVA
- Leetsdale-Monroe-Elati- Denver Terminal L5283 & L5625 uprate to 956 MVA
- Cherokee-Federal Heights-Broomfield L9558 uprate to 398 MVA
- Daniels Park-Prairie-Greenwood uprate L5111 to 916 MVA
- Arapahoe - Greenwood L5709 uprate to 956 MVA
- Arapahoe - South - Bancroft L9335 uprate to 239 MVA
- Arapahoe - ARLQ - South - Gray L9332 uprate to 159 MVA
- Arapahoe Bus-Tie uprate to 397 MVA
- Greenwood - Monaco Series Reactor L5717
- New Fort Lupton T4 230/115 kV 273/319 MVA
- New Arapahoe T6 230/115 kV 272/319 MVA
- Leetsdale-Harrison L9955 uprate to 378 MVA
- Cherokee - Mapleton L9546 uprate to 318 MVA
- Daniels Park - Santa Fe L5107 uprate to 637 MVA
- New South substation 230 kV bus and 230/115 kV 560 MVA transformer
- New Smoky Hill T6 & T7 345/230 kV 560 MVA
- Cherokee - Federal Heights - Semper L9055 uprate to 398 MVA
- New Daniels Park T4 345/230 kV 560 MVA
- Gray Street substation rebuild
- Smokey Hill - Buckley - Tollgate - Jewell - Leetsdale Lin 5285 uprate to 796 MVA
- Buckley - Smokey Hill L5167 uprate to 796 MVA
- New double circuit line from Cherokee-Sandown-Chambers-Harvest Mile 230 kV 1195 MVA (each circuit)
- New Sub_A 115 kV substation tying L9542, L9546, & L9549

- Cherokee - Conoco - Sub_A L9546 uprate to 318 MVA
- Daniels Park - Jackson Fuller L5119 uprate to 637 MVA
- Midway - Jackson Fuller L5129 uprate to 637 MVA
- New Fort St. Vrain T9 345/230 kV 560 MVA
- Gray Street - Lakewood L9000 & 9005 uprate to 128 MVA
- Palmer Lake - Fox Run L9605 uprate to 239 MVA
- Added May Valley Synchronous Condensers
- Added Goose Creek STATCOM

Additionally, the following segments of the Colorado's Power Pathway (CPP) were included in the Base Case:

- Segment #1: Fort St. Vrain – Canal Crossing 345 kV Double Circuit.
- Segment #2: Canal Crossing – Goose Creek 345 kV Double Circuit.
- Segment #3: Goose Creek – May Valley 345 kV Double Circuit.
- Segment #4: May Valley – Sandstone – Tundra 345 kV Double Circuit.
- Segment #5: Sandstone – Harvest Mile 345 kV Double Circuit.

The Base Case model includes the existing PSCo generation resources and all Affected Systems existing resources.

While the higher-queued NRIS requests were dispatched at 100%, the higher-queued ERIS requests were modeled offline.

5.0 Southern Colorado Study Pocket Analysis

5.1 Benchmark Case Modeling

The Benchmark Case was created from the Base Case (2029HS) described in Section 4.0 by modifying the study pocket generation dispatch to create stressed transmission flow conditions from Southern Colorado into the load center of Denver Metro Area, as described in section 3.4.2 of the BPM. This was accomplished by adopting the stressed generation dispatch given in Table 2. Additionally, 4,050 MW of Native Load Priority (NLP) generation was modeled on the Colorado's Power Pathway (CPP), as shown in Table 3. This represents the amount of firm transmission capacity set aside to reasonably meet PSCo's native load obligations using the assumptions about necessary transmission upgrades and generation resources that will be used to serve forecasted native load.

Table 2 – Generation Dispatch Used to Create the Southern Colorado Benchmark Case (MW is Gross Capacity)

Bus Number	Bus Name	Voltage (kV)	ID	Status	Pgen (MW)	Pmax (MW)
70878	BIGHORN_S	0.63	S1	1	210.4	247.5
70708	CO_GRN_E	0.58	W1	1	64.8	81.0
70256	CO_GRN_W	0.58	W2	1	64.8	81.0
70120	COMAN_2	24.00	C2	1	365.0	365.0
70777	COMAN_3	27.00	C3	1	804.9	804.9
70934	COMAN_S1	0.42	S1	1	102.0	120.0
70577	FTNVL1&2	13.8	G1	1	35.4	40.0
70577	FTNVL1&2	13.8	G2	1	35.4	40.0
70578	FTNVL3&4	13.8	G4	1	35.4	40.0
70578	FTNVL3&4	13.8	G3	1	35.4	40.0
70579	FTNVL5&6	13.8	G5	1	35.4	40.0
70579	FTNVL5&6	13.8	G6	1	35.4	40.0
70663	GLDNWST_W1	0.69	W1	1	199.5	249.4
70756	NEPTUNE_B1	0.48	B1	1	106.3	125.0
70758	NEPTUNE_S1	0.66	S1	1	212.9	250.5
70859	SUN_MTN_S1	0.66	S1	1	172.3	202.7
70704	TBI_GEN	0.58	W1	1	60.0	75.0
70010	TBII_GEN	0.69	W	1	62.4	78.0
70761	THNDWLF_B1	0.48	B1	1	85.0	100.0
70763	THNDWLF_S1	0.66	S1	1	170.0	200.0
Total (MW)					**2892.7**	**3220.0**

Table 3 – NLP Generation Included in Benchmark Dispatch

Generator Bus Number	Generator Name	Base kV	ID	Pgen (MW)	Pmax (MW)
700043	24_14_B	0.65	B	192.3	253.6
700057	24_13_W2	0.72	W2	143.3	189.0
700060	24_13_W3	0.72	W3	143.3	189.0
700063	24_13_W4	0.72	W4	122.9	162.0
700067	24_13_W1	0.72	W1	143.3	189.0
700076	24_12_W1	0.72	W1	109.2	144.0
700077	24_12_W2	0.72	W2	122.9	162.0
700078	24_12_W3	0.72	W3	109.2	144.0
700079	24_9_W1	0.72	W1	116.0	153.0
700082	24_9_W2	0.72	W2	122.9	162.0
700085	24_9_W3	0.72	W3	102.4	135.0
700088	24_9_W4	0.72	W4	116.0	153.0
700095	24_18_W	0.72	W	235.8	310.9
700182	24_28_W	0.69	W	389.2	513.2
700196	24_19_W1	0.72	W1	419.8	553.5
700226	24_6_S	0.63	S	336.4	443.5
700232	24_22_S	0.63	S	384.9	507.5
700235	24_26_S1	0.66	S1	116.0	153.0
700237	24_26_B2	0.90	B1	76.6	101.0
700239	24_26_S2	0.66	S2	116.0	153.0
700241	24_26_B2	0.90	B2	76.6	101.0
700244	24_27_B1	0.90	B1	82.9	109.3
700245	24_27_B2	0.90	B2	79.3	104.5
700246	24_27_S1	34.50	S1	96.8	127.7
700247	24_27_S2	34.50	S2	96.8	127.7
Total (MW)				**4050.8**	**5341.4**

5.2 Study Case Modeling

The Study Case was developed from the Benchmark Case by modeling INFO-2024-2 generation at its POI. The additional 325 MW net output from INFO-2024-2 at the POI was balanced against PSCo generation outside of the Southern Colorado study pocket on a pro-rata basis.

5.3 Steady-State Analysis

Contingency analysis was performed on the Southern Colorado study pocket using the Study Case model. The results are summarized below:

- System Intact analysis: No voltage violation attributable to INFO-2024-2 was identified. Table 4 lists the overloads attributed to INFO-2024-2. Thermal overloads occur on Affected Systems' facilities and, therefore, they will not be mitigated as part of this analysis.
- Single Contingency analysis: No voltage violation attributable to INFO-2024-2 was identified. Table 5 lists the overloads attributed to INFO-2024-2. Thermal overloads occur on Affected System's facilities and, therefore, they will not be mitigated as part of this analysis. The P1 continency listed in Table 6 was divergent in both Benchmark and Study Cases. The divergence is not attributed to INFO-2024-2 and will require further investigation.
- Multiple Contingency analysis: Table 7 lists the voltage violations identified in this analysis. Table 8 lists the thermal overloads identified in this analysis. Note two P7 contingencies were divergent in this analysis, as shown in Table 9. Per TPL-001-5, multiple contingency issues were expected to be mitigated using system adjustments, including generation redispatch and/or operator actions. Therefore, the violations presented in the Multiple Contingency analysis are not attributable to INFO-2024-2.

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Table 4 – System Intact Thermal Overloads

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
1	FOXRUN (73414) - FLYHORSE N2 (73738) 115 kV CKT #1	Base Case	115	73	CSU	142	101.04	106.43	5.39
2	FLYHORSE S (73576) – KETTLECK N (73711) 115 kV CKT #1	Base Case	115	73	CSU	162	100.99	107.07	6.08
3	CTTNWD N (73391) – KETTLECK S (73410) 115 kV CKT #1	Base Case	115	73	CSU	162	100.38	104.20	3.82

Table 5 – Single Contingency Thermal Overloads

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
1	CTTNWD N (73391) TO KETTLECK S (73410) 115 kV CKT #1	BRIARGATE S (73389) - BRIARGATE N (73710) 115 kV CKT #1	115	73	CSU	162.0	165.36	170.88	5.52
2	FOXRUN (73414) TO FLYHORSE N2 (73738) 115 kV CKT #1	VOLLMERT (72413) - FULLER (73481) 115 kV CKT #1	115	73	CSU	142.0	154.41	162.13	7.72
3	W CANON (70550) TO HOGBACK115 (71025) 115 kV CKT #1	MIDWAY BR (73413) - HAMBONE TAP (73638) 230 kV CKT #1	115	70	Black Hills	120.0	153.19	160.42	7.23
4	SMELTER (70394) TO W CANON (70550) 115 kV CKT #1	W CANON (73551) - PONCHA BR (79054) 230 kV CKT #1	115	70	Black Hills	73.0	149.31	156.90	7.59
5	FLYHORSE S (73576) TO KETTLECK N (73711) 115 kV CKT #1	VOLLMERT (72413) - FULLER (73481) 115 kV CKT #1	115	73	CSU	162.0	147.86	154.70	6.84

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
6	FTN VLY (70193) TO MIDWAY BR (73412) 115 kV CKT #1	MIDWAY PS (70286) - MIDWAY BR (73413) 230 kV CKT #1	115	70/73	Black Hills	179.0	119.46	128.10	8.64
7	BRIARGATE N (73710) TO KETTLECK N (73711) 115 kV CKT #1	CTTNWD N (73391) - KETTLECK S (73410) 115 kV CKT #1	115	73	CSU	186.0	115.85	120.06	4.21
8	DESRTCOV (70449) TO W. STATON (70456) 115 kV CKT #1	MIDWAY PS (70286) - MIDWAY BR (73413) 230 kV CKT #1	115	70	Black Hills	221.0	104.84	111.88	7.04
9	VOLLMERT (72413) TO FULLER (73481) 115 kV CKT #1	FLYHORSE S (73576) - KETTLECK N (73711) 115 kV CKT #1	115	73	Tri-State G&T	173.0	106.62	110.84	4.22
10	PUEBPLNT (70339) TO READER (70352) 115 kV CKT #1	GREENHRN (70004) - READER (70352) 115 kV CKT #1	115	70	Black Hills	160.0	104.19	110.78	6.59
11	PORTLAND (70330) TO SKALA (70390) 115 kV CKT #1	N_PENROSE (71024) - TRK CRK POI (71032) 115 kV CKT # 1	115	70	Black Hills	110.0	105.01	109.49	4.48
12	MIDWAY PS (70286) TO MIDWAY BR (73413) 230 kV CKT #1	MIDWAY PS (70286) FULLER (73477) 230 kV CKT #1	230	70/73	WAPA	637.0	100.14	105.89	5.75
13	VOLLMERT (72413) TO BLK_SQMV (73460) 115 kV CKT #1	FLYHORSE S (73576) - KETTLECK N (73711) 115 kV CKT #1	115	73	Tri-State G&T	173.0	101.51	105.70	4.19
14	FTN VLY (70193) TO DESRTCOV (70449) 115 kV CKT #1	MIDWAY PS (70286) - MIDWAY BR (73413) 230 kV CKT #1	115	70	Black Hills	221.0	97.34	104.34	7.00
15	BRIARGATE S (73389) TO CTTNWD S (73393) 115 kV CKT #1	CTTNWD N (73391) - KETTLECK S (73410) 115 kV CKT #1	115	73	CSU	150.0	98.70	103.52	4.82

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
16	W CANON (70550/73551) 230/115 kV Transformer T1	MIDWAY BR (73413) - HAMBONE TAP (73638) 230 kV CKT #1	230/115	70/73	Black Hills	100.0	96.38	101.50	5.12

Table 6 – Diverged Single Contingency

Contingency	Benchmark Case	Study Case
Loss of GLDSTNPS (12181) - VALENT (70990) 230 kV CKT #1	Diverged	Diverged

Table 7 – Multiple Contingency Voltage Violation

Bus Name	Bus Number	Base kV	Area	Owner	Contingency Name	Benchmark Case Bus Voltage (p.u.)	Study Case Bus Voltage (p.u.)	Voltage Difference (p.u.)
REUNION	70423	230	70	Tri-State G&T	BF_118a: Valmont 5876	0.9094	0.8992	-0.0102

Table 8 – Multiple Contingency Thermal Overloads

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
1	FOXRUN (73414) TO FLYHORSE N2 (73738) 115 kV CKT #1	P7_129: Lines: 5119 7051	115	73	CSU	157	168.80	178.12	9.32

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
2	FTN VLY (70193) TO MIDWAY BR (73412) 115 kV CKT #1	BF_094d: Midway 5120 stuck	115	70/73	Black Hills	179	162.86	172.61	9.75
3	FLYHORSE S (73576) TO KETTLECK N (73711) 115 kV CKT #1	P7_129: Lines: 5119 7051	115	73	CSU	180	158.26	166.42	8.16
4	W CANON (70550) TO HOGBACK115 (71025) 115 kV CKT #1	BF_094d: Midway 5120 stuck	115	70	Black Hills	120	155.60	162.94	7.34
5	DESRTCOV (70449) TO W STATON (70456) 115 kV CKT #1	BF_094d: Midway 5120 stuck	115	70	Black Hills	221	140.17	148.11	7.94
6	MIDWAY PS (70286) TO MIDWAY BR (73413) 230 kV CKT #1	P7_130: Lines: 5129 7051	230	70/73	WAPA	637	138.23	145.51	7.28
7	FTN VLY (70193) TO DESRTCOV (70449) 115 kV CKT #1	BF_094d: Midway 5120 stuck	115	70	Black Hills	221	132.50	140.40	7.90
8	CTTNWD N (73391) TO KETTLECK S (73410) 115 kV CKT #1	P7_129: Lines: 5119 7051	115	73	CSU	180	133.27	138.72	5.45
9	PUEBPLNT (70339) TO READER (70352) 115 kV CKT #1	P7_53: Lines: 5411 55255	115	70	Black Hills	160	119.44	127.14	7.70
10	BOONE (70061) TO PI_2024_15 (700015) 230 kV CKT #1	P7_53: Lines: 5411 55255	230	70	PSCo	319	110.35	118.17	7.82
11	MIDWAY PS (70286) TO PI_2024_15 (700015) 230 kV CKT #1	P7_53: Lines: 5411 55255	230	70	PSCo	319	110.31	118.13	7.82

Ref. No.	Monitored Facility	Contingency Name	kV	Areas	Owner	Normal Rating (MVA)	Benchmark Case Loading (%)	Study Case Loading (%)	Loading Difference (%)
12	HYDEPARK (70236) TO PUEBPLNT (70339) 115 kV CKT #1	P7_53: Lines: 5411 55255	115	70	Black Hills	159	104.42	112.15	7.73
13	SMOKY HL (70396) TO HARVEST MI (70596) 230 kV CKT #1	P7_137: Lines: 7081 7087	230	70	PSCo	956	103.24	110.23	6.99
14	STORY (73192) TO PAWNEE (70311) 230 kV CKT #1	P7_160: Lines 7329 7297	230	73/70	PSCo	589	103.66	106.65	2.99
15	CLARK (70112) TO JORDAN (70241) 230 kV CKT #1	P7_58: Lines: 5707 5111	230	70	PSCo	364	103.46	105.94	2.48
16	PALMER LK (70308) TO FOXRUN (73414) 115 kV CKT #1	P7_129: Lines: 5119 7051	115	70/73	PSCo	162	97.91	103.97	6.06
17	SMELTER (70394) TO W CANON (70550) 115 kV CKT #1	BF_133a: Spruce 5180 stuck	115	70	Black Hills	73	99.33	103.96	4.63
18	PORTLAND (70330) TO SKALA (70390) 115 kV CKT #1	BF_094d: Midway 5120 stuck	115	70	Black Hills	110	97.54	102.31	4.77
19	W CANON (70550/73551) 230/115 kV CKT #T1	BF_094d: Midway 5120 stuck	230/115	70/73	Black Hills	100	95.93	101.06	5.13

Table 9 – Diverged Multiple Contingencies

Contingency	BM Case	NRIS Study Case
P7_51: Lines 7017, 7235	Converged	Diverged
P7_55: Lines 7015, 7017	Converged	Diverged

5.4 Affected Systems

The study identified Colorado Springs Utilities (CSU), Black Hills, Tri-State G&T and WAPA as Affected Systems as a result of the overloads on their facilities as listed in Table 4, Table 5, and Table 8.

5.5 Summary of Steady-State Analysis

The study did not identify any System Network Upgrades attributed to INFO-2024-2 under single contingency when it is studied as an NRIS request. Any mitigations necessary to alleviate overloads on Affected System's facilities are not part of this study.

The study concludes that NRIS identified for INFO-2024-2 is 325 MW pending satisfactory mitigation of all Affected System thermal overloads.

6.0 Interconnection Facilities

This section provides an assessment of the feasibility for the Momentum Solar project to interconnect at the requested POI, Tundra 345 kV switching station. Currently, adding an interconnection position for the Momentum Solar project at the Tundra 345 kV switching station is not feasible from a preliminary evaluation. The ultimate general arrangement planned for the Tundra 345 kV switching station is a four rung, breaker and a half configuration with eight positions available. All positions in the current planned switch yard are allocated for projects including double circuit transmission lines (two positions each) to Comanche 345 kV substation, Daniels Park 345 kV substation, Sandstone 345 kV switching station, an existing generation interconnection (one position), and reactive support for the transmission system (one position). The PSCo property at Tundra is constrained for expansion on the east and south by a solar/BESS development, on the north by State Land Board land and to the west by PSCo's transmission corridor. There may be room to expand on the west between the current switch yard western fence and the transmission corridor, however, that would require a detailed engineering evaluation, beyond the scope of this information study. Currently there is a storm water detention pond and other storm water features that would require relocation from that area along with an evaluation of grading and setbacks from the transmission corridor.

There are likely minimal options for PSCo to develop a new switching station for an interconnection in the immediate area due to the relatively close proximity of several other PSCo facilities where interconnections could be made: Mirasol 230 kV switching station 12 miles south, Comanche 230/345 kV substation 13 miles southwest, and Sandstone 345 kV switching station (currently in development) 14 miles northeast.

No estimated costs for interconnection have been provided as part of this informational study due to the uncertainty of interconnecting the Momentum Solar facility at Tundra 345 kV switching station.

7.0 Summary of the Informational Study

This report is an informational evaluation of a 325 MW of Solar Photovoltaic (PV) Generating Facility at the Tundra 345 kV substation, in Pueblo County, Colorado. The customer has requested the study to be conducted as Network Resource Interconnection Service with the expected Commercial Operation Date (COD) of December 31st, 2028.

The steady-state analysis has identified no voltage and thermal violations attributed to the generator interconnection request on PSCo transmission system, but there were number of thermal violations on Affected Systems. Mitigation of thermal overloads on Affected Systems was beyond the scope of the study.

Furthermore, adding an interconnection position for the Momentum Solar project at the Tundra 345 kV switching station was found to not be feasible from a preliminary evaluation. All positions in the current planned switching station have all been allocated for PSCo planned projects.

Disclaimer: This informational study report does not grant any Interconnection Service or Transmission Service. The results are based on the modeling assumptions and study scope specified by the Customer, which may or may not reflect the standard modeling assumptions following for Large Generator Interconnection Procedures (LGIP) studies.