

Synchronous Condenser at La Junta (TriState bus)

Fault 1: 3PH fault at Lamar 230 for 4 cycles, trip Boone-Lamar --> works

Fault 2: 3PH fault at Boone 230 for 6 cycles, trip Boone-Lamar --> works

Fault 3: 3PH fault at Lamar 115 for 6 cycles, trip Lamar 230-115 auto -->

<max condenser output for this fault: 149 MVAR>

<post-transient output for this fault: 35 MVAR? Hard to pinpoint b/c DC tie keeps oscillating the west-side shunts>

Fault 12: 3PH fault at Boone 230 for 6 cycles, trip Boone 230-116 auto --> works

<post-transient condenser output for this fault: 45 MVAR>

RAS required for Boone-Lamar trip:

1. Trip Lamar DC Tie including shunt bank and filter bank.
2. Trip Colorado Green 230 kV line (due to wind turbine trip on U.V.)
3. Trip Signal Hill 230 kV line (due to wind turbine trip on U.V.)

Fault 3: Note that unsteady post transient is due to DC tie west-side shunt reactor oscillating between 0 to -40 MVAR.



