#P38 - Bremo 230 kV (625 MW)
Generation Interconnection

Network Impacts

Network Impacts
The **#P38 project was studied as an injection of 625 MW into Bremo 230kV substation.** Project #P38 was evaluated for compliance with reliability criteria for summer peak conditions in 2010. Potential network impacts were as follows:

Generator Deliverability

1. The MDLTHA – POWHAT 230 kV circuit is overloaded at around 102.4% of its maximum continuous rating (682 MVA) for the outage of the line 553. The P38 project contributes approximately 195 MW to the maximum continuous loading.

Multiple Facility Contingency
No problem identified.

Contribution to Previously Identified Overloads
None

Dominion System Reinforcements (Dominion Assessment Results)

Dominion Virginia Power performed contingency analysis using their criteria to maximize generation output in the local area to determine possible overloads (maximize generation in the local area (S Anna, Louisa CT, N Anna, Cunningham (500 kV)) and then run studies with and without P38.). Dominion uses a 94% facility loading value as a trigger point for relieving specific transmission facilities through upgrades or new installations. The results of these studies indicated the following:

i. The MDLTHA – POWHAT 230 kV circuit is overloaded at around 104% of its maximum continuous rating (682 MVA) for the outage of the Line #553. This line segment is 14 miles long. The P38 project contributes approximately 240 MW to the maximum continuous loading.

ii. The POWHAT – BREMO 230 kV circuit is overloaded at around 99% of its maximum continuous rating (760 MVA) for the outage of the Line #553. This line segment is 21 miles long. The P38 project contributes approximately 240 MW to the maximum continuous loading.

Network System Reinforcements Costs

The estimated cost to uprate the 35 miles of 230 kV line is 30 million dollars and would take approximately 36 months to complete. This estimate is based on a complete rebuild of the line needing to be done in order to obtain an increase in the circuits rating.

Other network upgrades required for the P38 interconnection request that were previously identified by Dominion are detailed in the Dominion – Electric Transmission Generation Interconnection Facilities "Restudy" Report dated 11/7/05.

Contribution to Previously Identified System Reinforcements
None

Short Circuit
No problem identified.