S112 North Anna 500-kV
Generation Interconnection

The Queue S112 project was studied as a 65 MW (Capacity) increase at North Anna 500 kV substation. The project was evaluated for compliance with reliability criteria for summer peak conditions in 2012.

Network Impacts

Generator Deliverability

No Problems were identified.

Multiple Facility Contingency

No Problems were identified.

Contribution to Previously Identified Overloads

1. Contribution of approximately 45 MW to further overload the North Anna – Ladysmith 500 kV line from 120% to 122% of its emergency rating (2598 MVA) for the outage of Morrisville – North Anna 500 kV line (Cont Id. LN 573).

2. Contribution of approximately 40 MW to further overload the North Anna – Morrisville 500 kV line from 108% to 110% of its emergency rating (2598 MVA) for the outage of Ladysmith – North Anna 500 kV line (Cont Id. LN 575).

New System Reinforcements

To be determined at the System Impact Study.

Contribution to Previously Identified System Reinforcements

The overloads identified above are both mitigated by the following system reinforcement for PJM Queue Project, Q65:

Installation of a new 15-mile long 500 kV Line from North Anna Substation to Ladysmith Switching Substation. This line is estimated to cost $20 million dollars and is estimated to take five years to complete. The installation of two 500 kV breakers is included in this estimate one each at both terminal substations. No new right-of-way will be required for this line.

The cost allocation responsibility will be calculated and reported in the System Impact Study.

Short Circuit

No Problems were identified. Further analysis to be performed in the System Impact Study.

Dominion First Contingency Incremental Transfer Capability (FCITC)

No Problems were identified.