

#V4-003 (Churchmans 14 MW)
Generation Interconnection

This analysis was completed to assess the reliability impact for a new Generation Interconnection to the PJM System.

NETWORK IMPACTS

Queue V4-003 was studied as a 14 MW Energy / 5 MW Capacity injection into the Harmony (#3353) and Kiamensi (#3312) 34 kV lines. V4-003 was evaluated for compliance with reliability criteria for summer peak conditions in 2014. Potential network impacts were as follows:

Local System Impacts

(Normal system and contingency conditions per documented Delmarva 69 kV system Reliability Criteria with all facilities in service)

No thermal impacts were identified.

Voltage impacts will be further investigated by performing dynamic simulation analysis during the Queue V4-003 Impact Study.

Generator Deliverability

(Overloads for Normal System, Single or N-1 contingencies caused by this queue at a MW output equal to the requested Capacity for the interconnection)

No problems identified.

Multiple Facility Contingencies

(Overloads for Double Circuit Tower Line, Stuck Breaker and Bus Fault contingencies caused by this queue at full energy output)

No problems identified.

Contribution to Overloads Subject to Cost Allocation

(This project contributes greater than the PJM cost allocation threshold amount of loading to the following contingency overloads, i.e. "Network Impacts" which were identified for other relative Queues subject to cost allocation.)

None identified.

Short Circuit

No problems identified.

Stability Analysis

Not required because of generator size, technology and Point of Interconnection.

NETWORK UPGRADE REQUIREMENTS

New System Reinforcements

(Upgrades required to mitigate reliability criteria violations, i.e. “Network Impacts”, initially caused by the addition of this project generation)

None identified. Awaiting results from dynamics study.

Contribution to Previously Identified System Reinforcements

(Overloads initially caused by other Queue positions with contribution to the overloading by this project. This project will have a % allocation cost responsibility)

None.