

Generation Interconnection

This analysis was completed to assess the reliability impact for a new generator interconnecting to the PJM system as a Capacity Resource.

Network Impacts

The Queue Q27 wind generation project was studied as a **100 MW (energy) and 20 MW Capacity injection into the Frackville 69kV bus** for summer peak conditions in 2011. Network impact results were as follows:

Generator Deliverability (single contingency)

No problems identified.

Local System Impacts

No problems identified.

Multiple Facility Contingency (MAAC Criteria IIC)

No identified problems.

Short Circuit Analysis

With the addition of Q27 generation the three-phase symmetrical short circuit duty at the Frackville 69kV bus is estimated to be approximately 25,031Amps. The phase-to-ground symmetrical short circuit duty will be approximately 29,672Amps. The Mowry and Hauto #3 69kV circuit breakers at Frackville have an interrupting rating of 27,000 Amps and therefore will be overdutied.

Stability (MAAC Stability Criteria)

Stability reviewed during Impact Study, results provided in Impact Study report.

Network Upgrade Requirements

- Replacement of the overdutied Mowry and Hauto #3 69kV circuit breakers at Frackville at an estimated cost of \$ 333,600.