

Generation Interconnection

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

Network Impacts -70 MW Injection at East Carbondale 69kV

Network Impacts

Potential network impacts for the injection of 70 MW into the East Carbondale-Lackawanna 69 kV circuit at transformer #1 was evaluated as an energy resource for summer peak conditions in 2005.

Normal System

- No identified problems.

Multiple Facility Contingency – Tower Line Outages (MAAC Criteria IIC)

- The project contributes 3.8 MW (5.48% DFAX) to a previously identified overload of the Martins Creek – Morris Park 230 kV circuit due to an outage of the Portland – Greystone Q 230 kV and Portland – Kittatiny 230 kV circuits.
- The project contributes 3.7 MW (5.34% DFAX) to a previously identified overload of the Gilbert – Morris Park 230 kV circuit due to an outage of the Portland – Greystone Q 230 kV and Portland – Kittatiny 230 kV circuits.

Generator Deliverability

- Not performed (energy only project).

Short Circuit Analysis

- No identified problems.

System Reinforcements

The new generation contributes to a previously identified overload in northern New Jersey. The new generator may be allocated a percentage of the costs for the upgrades based on their MW contribution in relation to other new generators. Cost allocation percentages are not provided as part of the Feasibility Study analysis but will be provided in the Impact Study report.

The Martins Creek-Morris Park-Gilbert 230 kV overload will be eliminated by upgrading the circuit capability to 1300 MVA normal and 1500 MVA emergency by adding 3 1590

ACSR conductors to the vacant side of the double circuit tower line. The conductors will be tied at the Delaware River crossing, at the Morris Park tap and at the Gilbert substation establishing a 6-wire circuit. The estimated cost for upgrading the line is \$6.5 million and it is anticipated it will take 15 months to complete.