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 -610 MW Injection into the TMI-Peach Bottom 500kV substation (G14)

Network Impacts

Potential network impacts for the injection of 610 MW into the TMI - Peach Bottom 500 kV circuit were evaluated for the summer peak conditions in 2005. The load flow study was performed under the assumption that the Yorkana-Otter Creek 230 kV line and Otter Creek 230 kV switchyard are in-service.

Generator Deliverability

No identified problems.

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

No identified problems.

Short Circuit

No identified problems.

Sub-Transmission System 69kV Overloads

Several 69kV system overloads were identified as a result of adding the G32 project.

- Manor-Engleside #2 line
- Manor-Engleside #1 line
- Manor-Face Rock line
- Manor-West Hempfield line

New System Reinforcements

The total cost to eliminate the overloads on the 69kV sub-transmission system is estimated to cost $5 million and take 3 years to complete. A more refined description of the 69kV overloads and associated cost and time estimates will be provided in the Impact Study.

Contribution to Previously Identified System Reinforcements

The G14 project contributes to the need to replace or upgrade eleven (11) breakers at the Peach Bottom 500 kV substation. The cost estimate is $8 million with a 2-year lead-time.
The actual cost allocation amounts for network upgrades required by more than one generation project will be defined in the Impact Study report.

Note: Several projects in the area have recently withdrawn from the PJM queue. Based upon a cursory review of the area, additional 230kV system overloads may occur due to these project withdrawals. The extent of the overloads and required upgrades will be defined in the Impact Study.