#M04 Calvert Cliffs 100 MW

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 - 100 MW Capacity Injection

Calvert Cliffs Queue **M04 was studied as a 100 MW capacity** increase to Calvert Cliffs Units #1 and #2 and evaluated for compliance with reliability criteria for summer peak conditions in **2008**. Potential network impacts were as follows:

Generator Deliverability
No problems identified.

Multiple Facility Contingency – Tower Line Outages (MAAC Criteria IIC)
No problems identified.

Short Circuit
No problems identified.

The planned Unit 2 uprates do not change the generator impedance; however, there was a change of impedance for the Unit #1 generator, and Units #1 and #2 generator step-up transformers were replaced with GSUs having a different impedance.

Power Factor Requirements

PJM OATT Section 57.4.1 requires that "A Generation Interconnection Customer shall design its Customer Facility to maintain a composite power delivery at continuous rated power output at the generator's terminals at a power factor of at least 0.95 leading to 0.90 lagging".

Based on the existing reactive capabilities, 46 Mvar of additional reactive support is needed to maintain 0.9 p.f lagging in unit #1 and 18 Mvar of additional reactive support is needed to maintain 0.9 pf lagging in unit #2.

New System Reinforcements
None required.

Contribution to Previously Identified System Reinforcements
None.