# Generation Interconnections

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

**Network Impacts - 605 MW Injection**

Network impacts for the injection of 605 MW into the Emilie 230kV Bus were evaluated for 2004 summer peak conditions. Based on the power flow analysis performed the following network impacts were identified:

## NETWORK VIOLATIONS

### Normal System

- Normal overload on the Holmsberg 230/138kV transformer. This problem requires the addition of a second Holmsberg 230/138kV transformer at an estimated cost of $1,800,000.

### Single Contingency (MAAC Criteria IIA)

- Contingency overload on the Croydon - Cox's Corner 230 kV circuit due to the outage involving the Emilie - Eddington 230 kV circuit. This problem requires the circuit to be reconductored and certain terminal equipment to be replaced at an estimated cost of $4,000,000.
- Contingency overload on the Cox's Corner - Cookstown 230 kV circuit due to the outage involving the Salem - Deans 500 kV circuit. This problem requires replacing some of the terminal equipment and reconductoring a section of the Cox's Corner - Lumberton 230 kV circuit at an estimated cost of $1,210,000.
- Contingency overload on the Emilie 230/138 kV circuit due to the outage involving the Emilie - Eddington 230 kV circuit. This problem requires a second transformer at an estimated cost of $1,800,000.
- Contingency overload on the Emilie - Blue Grass 138 kV circuit due to the outage involving the Emilie - Eddington 230 kV circuit. This problem requires reconductoring the entire Emilie - Blue Grass 138 kV circuit (e.i. Emilie-Neshaminy $6.3M, Neshaminy-Byberry $6.3M, and Byberry-Bluegrass $6.3M) at an estimated cost of $18,900,000.

### Double Circuit Tower Circuit Outages (MAAC Criteria IIC)

- No identified problems

## SHORT CIRCUIT ANALYSIS

- No identified problems

· Since this analysis is based on preliminary impedance data for this project, a follow-up breaker duty study will be performed for the project #B30 Impact Study.