



# 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 - 550 MW Injection

Network impacts for the injection of 550 MW into the Graceton 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

- No identified problems

#### Single Contingency (MAAC Criteria IIA)

- No identified problems

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

- Contingency overload of the Northeast 230/115 kV transformer #3 due to the loss of the Riverside 230 kV - Northeast 230 kV tower line and the Northeast 230/115 kV transformer #2 for a Riverside 230 kV - Northeast 230 kV tower line fault. The cost to replace Northeast 230/115 kV transformer #3 with a larger transformer is estimated at a to cost \$5,500,000.

### SHORT CIRCUIT ANALYSIS

- A short circuit screening analysis was performed to determine the impact to the network circuit breaker because of increased short circuit current provided by the proposed injection of generation. Results indicate that there are two circuit breakers at the Conasone 230 kV substation and one circuit breaker at the Graceton 230 kV substation which require replacement if this generation is installed along with all others which are previous to the project in Queue B.

