

## 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 - 336 MW Injection

Network impacts for the injection of 336 MW into the Burlington 138kV Bus were evaluated for 2004 summer peak conditions. Based on the power flow analysis performed the following network impacts were identified:

#### Normal System

- No identified problems.

#### Single Contingency (MAAC Criteria IIA)

- No identified problems.

#### Multiple Facility Contingency (MAAC Criteria IIC)

- No identified problems.

#### Generator Deliverability

- Overload of the Emilie 230/138kV transformer for the outage involving the Eddington Tap 230kV. A second Emilie 230/138kV transformer may be needed at an estimated cost of \$1,800,000.
- Overload of the Emilie - Neshaminy 138kV circuit for the outage involving the Eddington Tap 230kV. The Emilie - Neshaminy 138kV circuit may need to be rebuilt at an estimated cost of \$6,300,000.
- Overload of the Neshaminy - Byberry 138kV circuit for the outage involving the Eddington Tap 230kV. The Neshaminy - Byberry 138kV circuit may need to be rebuilt at an estimated cost of \$6,300,000.
- Overload of the Byberry - Blue Grass 138kV circuit for the outage involving the Eddington Tap 230kV. The Neshaminy - Byberry 138kV circuit may need to be rebuilt at an estimated cost of \$6,300,000.
- Overload of the Holmsberg 230/138kV transformer for the outage involving the Coxs Corner - Lumberton 230kV. A second Emilie 230/138kV transformer may be needed at an estimated cost of \$1,800,000.

- Overload of the Cox's Corner – Lumberton 230kV circuit for the outage of the Salem - Deans 500kV circuit. The Cox's Corner – Lumberton 230kV circuit can be recondutored at an estimated cost of \$1,200,000.
- Overload of the Lumberton – Cookstown 230kV circuit for the outage of the Salem – Deans 500kV circuit. The Lumberton – Cookstown 230kV circuit can be upgraded by replacing some of its terminal equipment at an estimated cost of \$100,000.

#### Short Circuit Analysis

- No identified problems

The estimated time to construct the above Network Upgrades is 24 to 36 months.