**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 - 500 MW into the Berks - South Reading 230 kV line or TMI - Hosensack 500 kV line

Potential network impacts for the injection of 500 MW into the Berks - South Reading 230 kV line or TMI - Hosensack 500 kV line were evaluated for summer peak conditions in 2004.

A summary of the results follows:

# Network Impacts: Alternative #1

Alternative #1: B50 project connected to the Berks - South Reading 230 kV line.

## Normal System

- No identified problems

**Single Contingency (MAAC Criteria IIA)**

- No identified problems

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

- No identified problems

**Generator Deliverability**

- The new generation contributes 23 MW to a normal overload on the Martins Creek - Morris Park 230 kV line.

- The new generation contributes 24 MW to the overload on the Morris Park - Gilbert 230 kV line for loss of the Hosensack- Steelcity 500 kV line.

**Short Circuit Analysis**

- The new generation causes the South Reading - North Boyertown 230 kV breaker at the South Reading 230 kV substation to be overdutied.

**System Reinforcements**

**Northern New Jersey Overloads**

The new generation contributes to previously identified overloads in northern New Jersey. The new generator will be allocated a percentage of the costs for the upgrades based on their MW contribution in relation to other new generators. Cost allocation percentages are not provided as part of the Feasibility Study analysis but will be provided in the Impact Study report.

The new generation contributes to the normal overload on the Martins Creek - Morris Park 230 kV line and contingency overload on the Morris Park - Gilbert 230 kV line. These problems were previously identified for an earlier queued generator. A new Portland - Whippany 230 kV line (see Figure 3) is required to alleviate the overloads. It is estimated that the line will cost $62.3 million and take 5 years to complete.

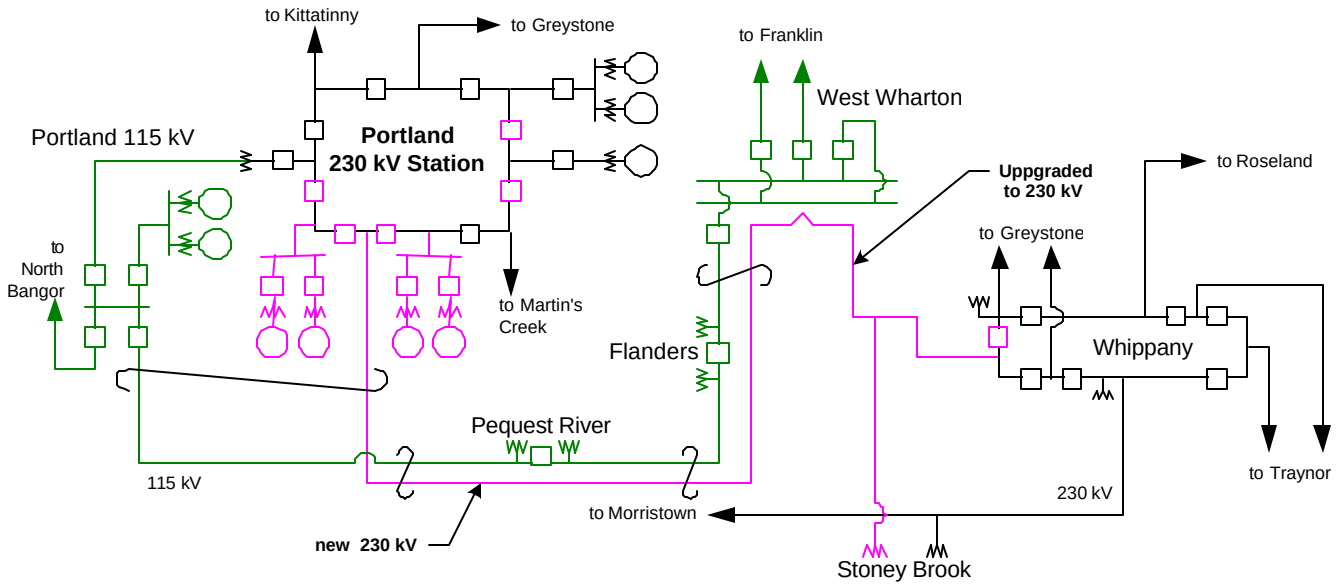


*Figure 3: Northern New Jersey Upgrades*

**Breaker Replacement**

Replacing the South Reading - North Boyerstown 230 kV circuit breaker at the South Reading 230 kV substation is expected to cost $680,000.

# Network Impacts: Alternative #2

Alternative #2: B50 project connected to the TMI - Hosensack 500 kV line.

## Normal System

- No identified problems

**Single Contingency (MAAC Criteria IIA)**

- No identified problems

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

- No identified problems

**Generator Deliverability**

- No identified problems

**Short Circuit Analysis**

- No identified problems

**System Reinforcements**

- No identified reinforcements.