



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 - 449MW Injection at Atlantic

Potential network impacts for the injection of 449 MW into the Atlantic 230 kV substations were evaluated for summer peak conditions in 2004. Several generation scenarios were studied in an attempt to bracket expected system conditions in 2004.

Based on this analysis, a 449 MW injection at the Atlantic 230 kV substation would result in the following local network enhancement. Reconnector the Englishtown - RT. 33 Switch Point 34.5 kV line at an estimated cost of \$2.7 million. The lead-time for the reconductoring is approximately 18 months.

A summary of the results for both the local and bulk transmission system analysis follow:

A) Normal Conditions

- No problems were identified.

B) Single Contingency

- Results in contingency overload on the Englishtown - RT. 33 Switch Point 34.5 kV circuit for the outage of the Windsor - East Windsor - Smithburg 230 kV circuit.

C) Tower Line Contingency

- No problems were identified.

D) Short Circuit Analysis

- The fault duty was evaluated at all 230 kV and 500 kV substations that had a greater than 5% increase in fault current due to a 449 MW generator at the Atlantic 230 kV substation. The fault duty was below all circuit breaker interrupting capabilities and, as such, no bulk system circuit breaker replacements would be expected due to this new generation.