



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 -30 MW Increased Injection at Three Mile Island

Potential network impacts for the increased injection of 30 MW at Three Mile Island 230kV substation were evaluated for summer peak conditions in 2004.

Based on this analysis, the 30 MW increased injection contributes to the following overloads:

A) Normal Conditions

- Normal overload on Manor - West Hempfield 230kV circuit. The generation at Three Mile Island 230kV substation increases the flow on this circuit by 3 MVA.

B) Single Contingency

- Contingency overload on the Manor-West Hempfield 230kV circuit for the outage of the Manor-Conastone 230kV circuit. The increased generation at Three Mile Island 230kV substation increases the flow by 4 MVA.

C) Tower Line Outages

- No system problems were identified.

D) Short Circuit Analysis

- Increasing the output capability will not increase the short circuit contribution from the unit, therefore, there are no breaker changes attributable to the project.

The flows on the Manor - West Hempfield 230 kV circuit are negatively impacted by several new generation projects. Due to the existing number of generation interconnection requests that impact these circuits, it is not reasonable at this time to completely develop what, if any, reinforcements will be required. One possible solution that will be evaluated is the addition of a new 230 kV transmission line from Brunner to South Akron, which alleviates some existing network problems and will provide capability to relieve the overloads listed above. The line will cost approximately \$52 million and take approximately six years to build. However, the Brunner area will be studied extensively during the next level of analysis. The impact of this resource will be

evaluated, along with all others in the area, and any system reinforcements and associated costs will be specified at that time, if required.