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 - 160 MW Injection

Network impacts for the injection of 160 MW into the Muddy Run 230kV Bus were evaluated for 2004 summer peak conditions. Based on the power flow analysis performed the following network impacts were identified:

- Contingency overload of the Conastone 500/230 kV transformer #2 due to the outage of the Brighton - Conastone 500 kV line and the other Conastone 500/230 kV transformer (transformer # 3). This generator contributed approximately 20 MW to the contingency overload of Conastone 500/230 kV transformer #3.

To mitigate the line fault with stuck breaker contingency overload on the Conastone 500/230 kV transformer #2, a new 500 kV breaker will be required at Conastone. The reinforcement cost is estimated at $ 1.3 million with a 20 month lead-time. Project #B28 cost responsibility for this upgrade is dependent upon the outcome of earlier projects in Generator Interconnection Queues A and B which also contribute to this contingency overload and the impact of #B28 relative to the total impact.