

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

The #P02 project was studied as a 550 MW Capacity resource connecting at the Ohio Central 138 kV substation. Project #P02 was evaluated for compliance with reliability criteria for summer peak conditions in 2010. Utilizing a base case that includes the 502 Junction - Mt. Storm - Meadowbrook - Loudoun 500 kV line model. Including this line in the 2010 case model allows us to obtain Feasibility Study results that concur with the ones at the Impact Study phase, for which a 2011 base case will be used. Potential network impacts were as follows:

Generator Deliverability

No problems were identified

Multiple Facility Contingency

No problems were identified

Short Circuit

This was evaluated in the original interconnection request made to AEP.

Contribution to Previously Identified Overloads

Contribution of 54 MW to further overloads the Kammer 765/500 kV transformer for the Beverly-Tidd-W. Bellair and Kammer-W. Bellair 345 kV tower outage. This violation was first identified for the #N42 project.

New System Reinforcements

None

Contribution to Previously Identified System Reinforcements

The overload of the Kammer transformer can be alleviated by replacing the existing 1500 MVA transformer with three single phase units rated at 600 MVA each and a 600 MVA spare and replacing other substation equipment as required. (Upgrade # n0480) The estimated cost for the replacement is \$ **18,000,000**. The estimated lead time for replacement is 24 months. The P02 project will be allocated a portion of the cost for this upgrade.