#R48 - Antwerp-Payne (Harrison) 69kV
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 R48 project was studied as a 48 MW (9.6 MW of Capacity) injection into the Payne-S. Hicksville 69kV circuit. Project R48 was evaluated for compliance with reliability criteria for summer peak conditions in 2012. Potential network impacts are as follows:

Generator Deliverability (This evaluation is done at the Capacity value)
No problems were identified

Multiple Facility Contingency (This evaluation is done at the Full plant output)
No problems were identified

Short Circuit
No problems identified.

Contribution to Previously Identified Overloads
No problems were identified

New System Reinforcements
None

Contribution to Previously Identified System Reinforcements
None

Delivery of Energy Portion of interconnection Request
PJM also studied the delivery of the energy portion of this interconnection request in addition to evaluating for Capacity Interconnection Rights. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

As a result of the aggregate energy resources in the area, the following violations were identified:

No problems were identified.

Local Impacts

The impact of the proposed generating facility on the AEP System was assessed for adherence with applicable reliability criteria. AEP planning criteria require that the transmission system

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meet single contingency performance criteria in accordance with the AEP FERC Form 715. Therefore, this criterion was used to assess the impact of the proposed facility on the AEP System. The R48 project was studied as a 48MW net capacity consistent with the interconnection application. The results are summarized below.

Normal System (2009 Summer Conditions)

- No problems identified.

Single Contingency (2009 Summer Conditions)

- No problems identified.

Short Circuit Analysis

- No problems identified.

Stability Analysis

- Stability studies were not performed as part of this Feasibility Study and are not normally performed as part of a Facility Study effort. The stability assessments are part of the System Impact Study. Based upon the results of this future System Impact Study, the extent of system upgrades could change and the associated costs could be significantly different.

Reactive Requirements

PJM requires a power factor correction to 95% lead/lag as defined in section 4.7.1.1 of Appendix 2 of Attachment O of the PJM OATT for interconnection of wind generating facilities. It is expected that the developer will adhere to this standard.

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