P52 – Albright 138kV

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 #P52 project was studied as an 80 MW (16 MW of Capacity) injection at a tap of the Mettiki-Albright 138 kV line. Project #P52 was evaluated for compliance with reliability criteria for summer peak conditions in 2010. Potential network impacts to the transmission system are as follows:

Generator Deliverability

No problems were identified

Multiple Facility Contingency

No problems were identified

Contribution to Previously Identified Overloads

No significant contributions to previously overloaded facilities were identified

New System Reinforcements

To be determined at the System Impact Study

Contribution to Previously Identified System Reinforcements

To be determined at the System Impact Study

Short Circuit

No breaker replacements were identified for the limited study.

Delivery of Energy Portion of Interconnection Request

PJM also studied the delivery of the energy portion of this interconnection request. 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:

1. The Albright-Brandon 138 kV line loads from 95% to 100% of its emergency rating (143 MVA) for the outage of the G51_W60-Yukon 500 kV line. The #P52 contributes 8 MW to cause this violation.

2. Contribution of 64 MW to further overload the Albright-P52 from 126% to 157% of its emergency rating (202 MVA) for the outage of the N.Peters-N.Frank-Seneca 138 kV line.
3. Contribution of 16 MW to further overload the Loughs Lane-Parsons 138 kV line from 114% to 127% of its emergency rating (126 MVA) for the outage of the N.Peters-N.Frank-Seneca 138 kV line.

4. Contribution of 16 MW to further overload the William-Parsons 138 kV line from 123% to 136% of its emergency rating (126 MVA) for the outage of the N.Peters-N.Frank-Seneca 138 kV line.