

#P26 – McGirr Road - Mendota 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 #P26 project was studied as a 20 MW (4 MW of Capacity) injection into a tap of the segment of line 16901 that connects TSS 979 Mendota Hills Wind Farm and TSS139 Mendota. Project #P26 was evaluated for compliance with PJM reliability criteria for summer peak conditions in 2010. Potential network impacts were as follows:

Generator Deliverability

No problems were identified

Multiple Facility Contingency

No problems were identified

Contribution to Previously Identified Overloads

1. Contribution of 9 MW to further overload the Bus Tie 2-3 Circuit Breaker at Waterman from 146% to 150% of its load-dump rating (247 MVA) for the tower outage of 345 kV lines 18402 & 16703. The violation was originally caused by the #P14 project.
2. Contribution of approximately 11 MW further overloads the TSS 984-TDC 935 West Dekalb 138 kV line 11323 from 137% to 140% of its load-dump rating (300 MVA) for the tower outage of 345 kV lines 18402 & 16703. The violation was previously caused by the #P14 project.
3. Contribution of 11 MW to further overload the TSS 113 Waterman-TDC 375 West Dekalb 138 kV line 11323 from 151% to 155% of its load-dump rating (259 MVA) for the tower outage of 345 kV lines 18402 & 16703. The violation was originally caused by the #P14 project.
4. Contribution of 12 MW to further overload the TSS 984-Steward 138 kV line 18623 from 122% to 126% of its load-dump rating (279 MVA) for the tower outage of 345 kV lines 18402 & 16703. The violation was previously caused by the #P14 project.

New System Reinforcements

To be determined in System Impact Study. Refer to P14 Feasibility Study for system reinforcements identified to address items 1-4 above.

Short Circuit

There were no overdutied circuit breakers due to #P26 identified at this time.

Potential Issues

Impacts on the MISO member transmission systems are not included in this analysis, but they will be included in the Impact Study, which may reveal upgrades needed in the MISO system not identified in this Feasibility Study.

Generation at #P26 project will need to be taken off-line during certain maintenance outages.

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. Contribution of 11 MW to further overload the TSS 11 McGirr Road-H440 138 kV line 16914 from 134% to 139% of its normal rating (209 MVA). The facility was first overloaded by the #P14 project.
2. Contribution of 10 MW further overloads the TSS 186 Steward-H440 138 kV line 18618 from 116% to 121% of its normal rating (209 MVA). The violation was first caused by the #O21 project.
3. Contribution of 20 MW further overloads the TSS 107 Dixon-P21 138 kV line 10714 from 116% to 125% of its emergency rating (225 MVA) for loss of the McGirr Road to Rochelle Tap 138 kV line 16914. The violation was first caused by the #O21 project.