

Queue #O51 - Pontiac Midpoint – Wilton Center 345kV Generator Interconnection

Network Impacts

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The #O51 project was studied as a total injection of 500 MW (100 MW of Capacity) into a tap of the Pontiac Midpoint to Wilton Center 345 kV line 8012. Project #O51 was evaluated for compliance with reliability criteria for summer peak conditions in 2009. Potential network impacts were as follows:

Generator Deliverability

No problems were identified

Multiple Facility Contingency

The Wilton Center to O51 345 kV line 11212 loads from 80% to 101% of its load-dump rating (1419 MVA) for the Dresden to Wolfs and Dresden to Electric Junction 345 kV tower outage of lines 1221 and 1223. The O51 project contributes 311 MW to cause this thermal violation.

Contribution to Previously Identified Overloads

1. It contributes 37 MW to the thermal violation of the Kammer 765/500 kV transformer in AP, which was originally caused by the #N42 project. The necessary reinforcements and associated cost estimates are being studied by AP and will be available at the Impact Study phase for this project.
2. It contributes 60 MW to the overload of the Elwood to Goodings Grove Red 345 kV line 11622 to load the facility from 103% to 106% of its load-dump rating (1760 MVA). This violation was first caused by the O24 project for the Dresden to Wolfs and Dresden to Electric Junction 345 kV tower outage of lines 1221 and 1223.

Contribution to Previously Identified System Reinforcements

To be determined

Short Circuit

No problems were identified.

Potential Issues

Note: Impact on the MISO member transmission Systems is not included in this analysis, but will be in the Impact Study, which possibly may reveal upgrades needed in the MISO system not identified in this Feasibility Study.

New System Reinforcements

Cost estimate:

Qty	Item Description	Material	Labor	Total
.19 miles	Reconductor 345kV L11212	\$ 17,000	\$ 71,000	\$ 88,000

System Reinforcement Schedule:

Estimated timeframe to complete engineering, procurement, and construction for this reinforcement is approximately 18 – 24 months, and can be done concurrently with the Direct Connection schedule.