PJM Generator Interconnection
Z2-081 Streator
Feasibility Study

March 2015

Network Impacts

The Queue Project Z2-081 was studied as a 13.3 MW (Capacity 13.3 MW) injection at the Streator 138 kV substation in the ComEd area. Project Z2-081 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project Z2-081 was studied with a commercial probability of 100%. Potential network impacts were as follows:

Summer Peak Analysis - 2018

Generator Deliverability
(Single or N-1 contingencies for the Capacity portion only of the interconnection)

None

Multiple Facility Contingency
(Double Circuit Tower Line, Failed Breaker and Bus Fault contingencies for the full energy output)

None

Contribution to Previously Identified Overloads
(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

1. (CE - MISO AMIL) The HENNEPIN ; T-4HENNEPIN S 138 kV line (from bus 271655 to bus 348918 ckt 1) loads from 121.9% to 123.3% (AC power flow) of its emergency rating (160 MVA) for the single line contingency outage of 'KEWANEE ;13-4KEWANEE N'. This project contributes approximately 2.87 MW to the thermal violation.

CONTINGENCY 'KEWANEE ;13-4KEWANEE N'
DISCONNECT BRANCH FROM BUS 271838 TO BUS 348923 CKT 1

END

Steady-State Voltage Requirements
(Results of the steady-state voltage studies should be inserted here)

No issues identified.

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.
Only the most severely overloaded conditions are listed. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed, which will study all overload conditions associated with the overloaded element(s) identified.

Not Applicable

Light Load Analysis - 2018

Not applicable.

System Reinforcements

New System Reinforcements
(Upgrades required to mitigate reliability criteria violations, i.e. Network Impacts, initially caused by the addition of this project generation)

None

Contribution to Previously Identified System Reinforcements
(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Facilities Study)

1. (CE - MISO AMIL) The HENNEPIN; T-4HENNEPIN S 138 kV line:
The limiting element on this line is owned by Ameren Illinois (not a PJM Transmission Owner) and will be determined as part of the System Impact Study phase.

Short Circuit
(Summary form of Cost allocation for breakers will be inserted here if any)

Short circuit analysis is not required for this existing facility.

Stability and Reactive Power Requirement
(Results of the dynamic studies should be inserted here)

The Interconnection Customer shall design its Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.90 lagging measured at the Point of Interconnection .

Stability Analysis is not required for this less than 20 MW existing facility.

Local Impacts

This is an operating facility and there are no local impacts.