Generation Interconnection Feasibility Study Report Queue Position AD2-109

Interconnection Customer has proposed an ***uprate to*** its existing natural gas generating facility located on State Route 3002, Gans, Fayette County, Pennsylvania. This project requests an increase to the install capability of 4 MW Energy and 12 MW Capacity Interconnection Rights ("CIR"). The installed facilities will have a total capability of 100 MW with 100 MW of this output being recognized by PJM as capacity. The proposed in-service date for this project is 5/31/2022. **This study does not imply a West Penn Power ("Transmission Owner") commitment to this in-service date.**

Point of Interconnection ("POI")

The AD2-109 uprate project will use the same existing units POI, assigned Queue No. B23_W04. The existing POI will remain unchanged. The AD2-109 is interconnecting with the West Penn Power transmission system by direct injection into Gans switching station which is tapping the Lake Lynn – South Union 138 kV transmission line at a point located approximately two miles from Lake Lynn substation and ten miles from South Union substation.

Network Impacts

The Queue Project AD2-109 was evaluated as a 12.0 MW (Capacity 12.0 MW) injection at the Gans 138kV substation in the APS area. Project AD2-109 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AD2-109 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Summer Peak Analysis - 2021

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

None

Multiple Facility Contingency
(Double Circuit Tower Line, Fault with a Stuck 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)

None

Steady-State Voltage Requirements

To be determined at the system impact study stage.

Short Circuit

None

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 - 2021

Light Load Studies to be conducted during later study phases (as required by PJM Manual 14B).

System Reinforcements

Short Circuit

None

Stability and Reactive Power Requirement

To be determined at the system impact study stage.

Summer Peak Load Flow Analysis 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 Impact Study)

None

Light Load Load Flow Analysis 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 Impact Study)

None