Generation Interconnection Feasibility Study Report Queue Position AD2-166

Interconnection Customer has proposed an uprate to its existing natural gas 2 x 1 generating facility, designated Queue Numbers A01 and AC1-035, located at 305 Prescott Road in Lebanon, Lebanon County, Pennsylvania. The increased capability of AD2-166 Queue Request is achieved through installation of additional chillers and repairs of old equipment. The total capability of this project will be 825 MW. PJM recognizes 780 MW as Capacity Interconnection Rights.

The proposed in-service date is May 31, 2021. **This study does not imply a Mid-Atlantic Interstate Transmission ("Transmission Owner" or "MAIT") commitment to this in-service date.**

Point of Interconnection (POI)

The Point of Interconnection remains unchanged as in A01 and AC1-035 queue projects.

Network Impacts

Summer Peak Analysis - 2021

The Queue Project AD2-166 was evaluated as a 89.8 MW (Capacity 89.8 MW) injection at the Ironwood 230kV substation in the METED area. Project AD2-166 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AD2-166 was studied with a commercial probability of 53%. Potential network impacts were as follows:

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
(Summary of impacted circuit breakers)

None

Affected System Analysis & Mitigation

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)
(Summary form of Cost allocation for transmission lines and transformers will be inserted here if any)

None

Light Load Load Flow Analysis Reinforcements

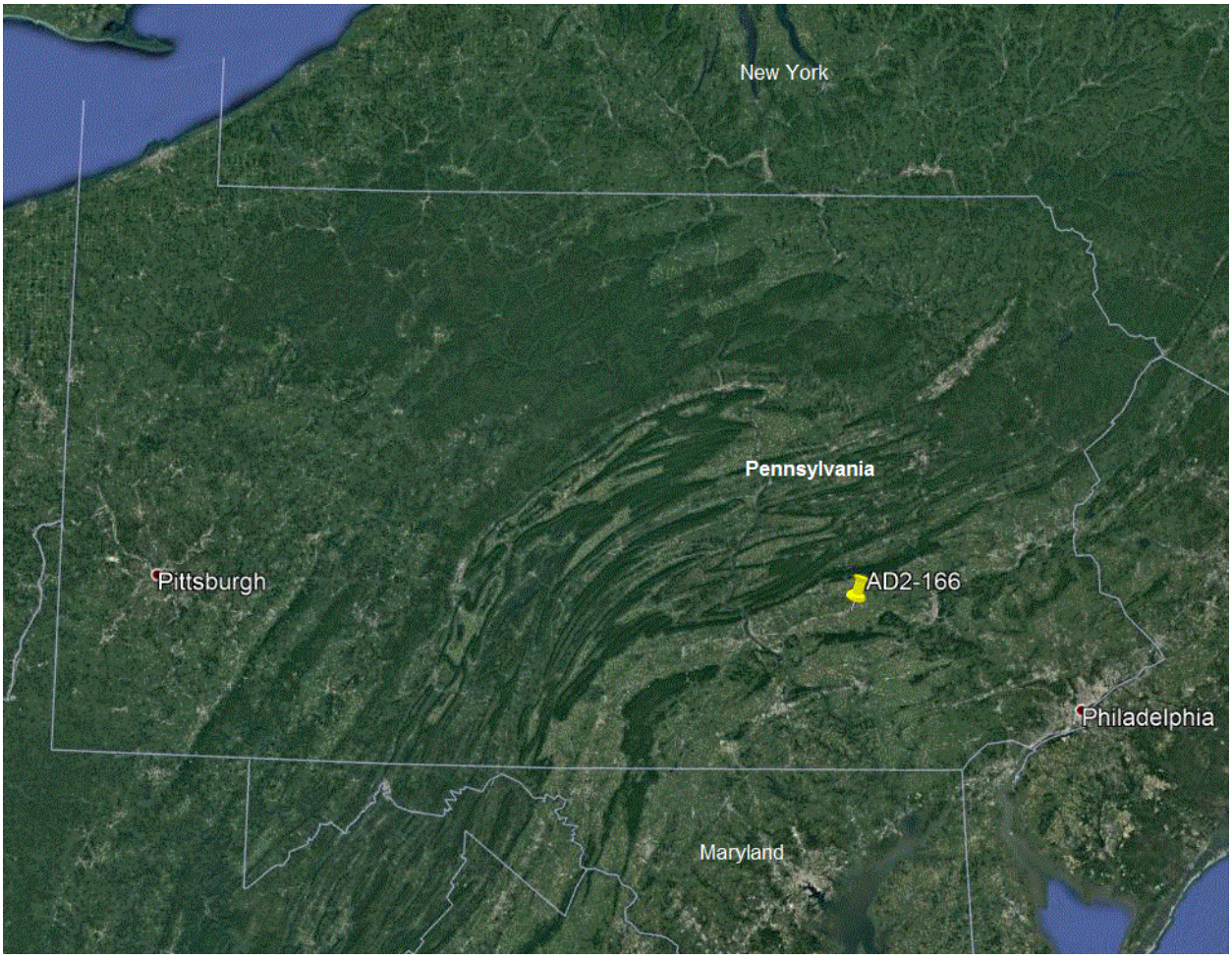
New System Reinforcements
(Upgrades required to mitigate reliability criteria violations, i.e. Network Impacts, initially caused by the addition of this project generation)

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

Appendix 1
Facility Location
PJM Queue Position: AD2-166



Appendix 2

Interconnection One-Line Diagram
PJM Queue Position: AD2-166