Generation Interconnection Feasibility Study Report Queue Position AC1-048

General

Interconnection Customer has proposed a solar photovoltaic generating facility located adjacent to Germantown Substation in Adams County, PA. The installed facilities will have a total capability of 35.0 MW with 13.3 MW of this output being recognized by PJM as capacity. The proposed in-service date for this project is 10-2-2017. **This study does not imply a Mid-Atlantic Interstate Transmission, LLC ("Transmission Owner" or "MAIT") commitment to this in-service date.**

Point of Interconnection

AC1-048 will interconnect with the MAIT transmission system through direct injection into the Germantown Substation via overhead line that dead-end inside the substation.

Alternatively, Option 2 POI is by tapping the 115 kV line north of the Germantown substation with a minimum distance (i.e. as close as possible) to the substation.

Network Impacts

Option 1 POI

The Queue Project AC1-048 was evaluated as a 35.0 MW (Capacity 13.3 MW) injection at the Germantown 115kV substation in the METED area. Project AC1-048 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AC1-048 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Summer Peak Analysis - 2020

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 during the system impact study phase.

Short Circuit:

None.

Affected System Analysis & Mitigation

NYISO Impacts:

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 – 2020:

None.

System Reinforcements

Short Circuit:

None.

Stability and Reactive Power Requirement:

To be determined during the system impact study phase.

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 for mitigating 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

Option 2 POI

The Queue Project AC1-048 was evaluated as a 35.0 MW (Capacity 13.3 MW) injection tapping the Germantown-Straban 115kV line in the METED area. Project AC1-048 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AC1-048 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Summer Peak Analysis - 2020

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 during the system impact study phase.

Short Circuit:

None.

Affected System Analysis & Mitigation

NYISO Impacts:

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 – 2020:

None.

System Reinforcements

Short Circuit:

None.

Stability and Reactive Power Requirement:

To be determined during the system impact study phase.

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):

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Contribution to Previously Identified System Reinforcements:

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Light Load Load Flow Analysis Reinforcements:

New System Reinforcements:

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