

Generation Interconnection Feasibility Study Report Queue Position AD2-059

The Interconnection Customer (IC) has proposed a 0.99 MW (0.24 MWC) 16 unit car charging battery storage project to be located at various locations within the city limits of Newark, Delaware. PJM studied the AD2-059 project into the Delmarva Power & Light Company (DPL) system as an injection into the Chapel Street 138 kV Substation and evaluated it for compliance with reliability criteria for summer peak conditions in 2021. AD2-059 was studied with a commercial probability of 53%. The planned in-service date, as requested by the IC during the project kick-off call, is October, 2018. This date may not be attainable due to additional required PJM studies and Transmission Owner construction schedules.

Point of Interconnection

The Interconnection Customer requested a distribution level interconnection. Distribution facilities in the area of the AD2-059 project are owned by the City of Newark, Delaware. The DPL transmission system supplies the City of Newark at the Chapel Street 138 kV Substation. It is anticipated that the AD2-059 project will connect with the City of Newark's distribution system at various locations.

Transmission Owner Scope of Work

There is no DPL Attachment Facility work required for the AD2-059 project. The IC must contact the City of Newark for their work scope and schedule.

Interconnection Customer Scope of Work

The Interconnection Customer assumes full responsibility for design and construction of all facilities on the IC side of the Point of Interconnection.

The IC will be required to install metering and telemetry equipment to provide revenue metering and real-time telemetry data to PJM. The requirements for this equipment are listed in Appendix 2, Section 8 of Attachment O to the PJM Tariff, as well as PJM Manuals 01 and 14D.

It is the IC's responsibility to send the data that PJM and DPL requires directly to PJM. The IC will grant permission for PJM to send DPL the following telemetry that the IC sends to PJM: real time MW, MVAR, volts, amperes, generator status, and interval MWH and MVARH.

Summer Peak Analysis - 2020

Transmission Network Impacts

Potential transmission network impacts are 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

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

Short Circuit

No issues identified.

Stability and Reactive Power Requirement

Not required.

Light Load Analysis - 2021

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

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.

None

Facilities Study Estimate

(If a Facilities Study is required, provide the estimated duration and cost estimate to perform Facilities Study)

If a Facilities Study is required, the deposit will be \$15,000 and take approximately 8 months to complete.