Generation Interconnection

Queue Project AE1-120

Feasibility Study Report

Capacity : 44 MW / Energy : 0 MW

January, 2019

General

Interconnection Customer has proposed a capacity-only uprate of 0 MW Energy and 44 MW Capacity to its facilities located in Mount Orab, Brown County, Ohio.

The proposed in-service date is December 31, 2020. This study does not imply a Duke Energy Ohio Kentucky company (Transmission Owner or DEOK) commitment to this in-service date.

Point of Interconnection

This facility will interconnect with the DEOK transmission system by direct injection into the Hillcrest Substation 138 kV bus.

Network Impacts

The Queue Project AE1-120 was evaluated as a 0 MW (Capacity 44 MW) injection at HILLCREST 138 KV substation in the PenElec area. Project AE1-120 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AE1-120 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Summer Peak Analysis - 2022

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

Short Circuit

None. (No overdutied circuit breakers 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.

None

System Reinforcements

Short Circuit

None.

Stability and Reactive Power Requirement

Will be determined at a later study stages.

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.