#V1-015 New Liberty 138kV

Generation Interconnection

This analysis was completed to assess the reliability impact for the new generation interconnecting to the PJM system as a capacity resource.

Local AEP Impacts

Local Network Upgrades

The impact of the proposed generating facility on the AEP System was assessed for adherence with applicable reliability criteria. AEP planning criteria require that the transmission system meet single contingency performance criteria in accordance with the AEP FERC Form 715. Therefore, this criterion was used to assess the impact of the proposed facility on the AEP System. The project was studied as a 4.8 MW net capacity consistent with the interconnection application. The results are summarized below.

The results for both interconnection Option #1, connection to the North Baltimore-North Findlay #2 34.5kV circuit, and Option #2, connection to the North Findlay #1-North Findlay #2 34.5kV circuit, are the same.

Normal System (2013 Summer Conditions)

- No problems identified.

Single Contingency (2013 Summer Conditions)

- No problems identified.

Double Contingency (2013 Summer Conditions)

- No problems identified.

Short Circuit Analysis

- No problems identified.

Local Network Upgrades

- No Local Network Upgrades are needed.

Network Impacts

The queue V1-015 project was studied as a 4.8MW (capacity) injection into AEP's system. This project has selected two options for its potential point of interconnection. The primary option is on the North Findlay to North Baltimore #2, 34.5kV line, while the secondary option is to

connect to the North Findlay #1-North Findlay #2 34.5kV line. For PJM's transmission level study purposes the project was modeled at the North Findlay 138kV substation for both options. Project V1-015 was evaluated for compliance with reliability criteria for summer peak conditions in 2013. Potential network impacts were as follows:

The results for both interconnection Option #1 and Option #2 are the same.

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

No problems identified.

Multiple Facility Contingency
(Double Circuit Tower Line, Line with Failed Breaker and Bus Fault contingencies for the full energy output)

No problems identified

Short Circuit

No problems identified.

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)

No problems identified.

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