Y3-096 Hanging Rock 765kV

Generation Interconnection

Local Network Impacts

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 performance parameters prescribed in the AEP FERC Form 715[1] and Connection Requirements for AEP Transmission System[2]. Therefore, these criteria were used to assess the impact of the proposed facility on the AEP System. Project #Y3-096 was studied as a 10 MW (0 MW capacity) injection at the Hanging Rock 765 kV substation consistent with the interconnection application. Project #Y3-096 was evaluated for compliance with reliability criteria for summer peak conditions in 2017.

Potential network impacts were as follows:

Normal System (2017 Summer Conditions Capacity Output)

- Not Applicable

Single Contingency (2017 Summer Conditions Capacity Output)

- Not Applicable

Multiple Contingency (2017 Summer Conditions Capacity Output)

- Not Applicable

Contribution to Previously Identified Overloads (2017 Summer Conditions Capacity Output)

- Not Applicable

Normal System (2017 Summer Conditions Full Output)

- No problems identified

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1 https://www.aep.com/about/codeofconduct/oasis/transmissionstudies/GuideLines/2012%20AEP%20PJM%20FERC%20715_Final_Part%204.pdf

2 https://www.aep.com/about/codeofconduct/OASIS/TransmissionStudies/Requirements/AEP_Interconnection_Requirements_rev0.pdf

Single Contingency (2017 Summer Conditions Full Output)

- No problems identified

Multiple Contingency (2017 Summer Conditions Full Output)

- No problems identified

Contribution to Previously Identified Overloads (2017 Summer Conditions Full Output)

- No problems identified

Short Circuit Analysis

- No problems identified.

Stability Analysis

- Stability studies were not performed as part of this Feasibility Study. The stability assessments will be performed during the System Impact Study.

Voltage Variations

- No problems identified.

Additional Limitations of Concern

- No problems identified

Local/Network Upgrades

- No problems identified.

Network Impacts

The Queue Project #Y3-096 was studied as a 10.0MW (Capacity 0.0MW) injection at the Hanging Rock 765 kV substation in the AEP area. Project #Y3-096 was evaluated for compliance with reliability criteria for summer peak conditions in 2017. Potential network impacts were as follows:

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

No problems were identified.

Multiple Facility Contingency
(Double Circuit Tower Line contingencies only for the full energy output. Stuck breaker and bus fault contingencies will be performed for the Impact Study)

No problems were identified.

Short Circuit

No problems were identified

Stability Analysis
This analysis will be completed in the final Impact Study.

Light Load Analysis

Light Load Studies are to be conducted during later study phases (applicable to wind, coal, nuclear, and pumped storage projects).

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.

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