#U2-090 Desoto-Tanners Creek 345kV

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

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 criteria in accordance with the AEP FERC Form 715. Therefore, this set of criteria was used to assess the impact of the proposed facility on the AEP System. The project was studied as a 200 MW net energy injection consistent with the interconnection application. This project was studied with PJM projects #S71 and U2-062 already in service at 100% output in the vicinity of U2-090. The results are summarized below.

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Normal System (2012 Summer Conditions)

- No problems identified

Single Contingency (2012 Summer Conditions)

- No problems identified

Multiple Contingency (2012 Summer Conditions)

- No problems identified

Short Circuit Analysis

- No problems identified

Stability Analysis

- Stability studies were not performed as part of this Feasibility Study and are not normally performed as part of a Facility Study effort. The stability assessments are part of the System Impact Study. Based upon the results of this future System Impact Study, the extent of system upgrades could change and the associated costs could be significantly different.

Local Upgrades

- No problems identified

Network Impacts

The queue project U2-090 was studied as a 26 MW(capacity) injection (200 MW energy) into the AEP system at the Desoto - Tanner 345 kV substation. U2-090 was evaluated for compliance with reliability criteria for summer peak conditions in 2012. Potential network impacts were 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, Line with Failed Breaker and Bus Fault contingencies for the full energy output)

None

Short Circuit
(Summary form of Cost allocation for breakers will be inserted here if any)

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)

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)
(Summary form of Cost allocation for transmission lines and transformers will be inserted here if any)

None

MISO Impacts

Any impacts on the MISO transmission systems will be identified in the Impact Study.