PJM Generator Interconnection Request
Combined Feasibility/Impact Study
Report

Queue Position #T154
Bellefontaine 12 kV Project
10 MW
April, 2008

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Preface

The Combined Feasibility and System Impact Study is intended to identify the facilities necessary for interconnection to the transmission system. It also provides cost and schedule information for both direct connection facilities and transmission network upgrades necessary for the reliable interconnection of a generation project into the transmission system. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system. All facilities required for interconnection of a generation interconnection project must be designed to meet the technical specifications (on PJM web site) for the appropriate transmission owner.

In some instances an interconnection customer may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection or merchant transmission upgrade, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects and the actual allocation, if applicable, will be included in the Combined Feasibility and System Impact Study.

General

Bellefontaine Gas Producers, LLC has proposed a 10 MW landfill gas fired generating facility to be interconnected to the 12.5kV system at or near pole No. 489473 owned by the Dayton Power & Light Company. This facility is intended to provide both energy and capacity. The proposed in-service date for this first portion of this project, approximately 4.8 MW, is December 2008.

Network Impacts

The queue project T154 was studied as a 10MW (capacity) injection into Dayton's system at the Bellefontaine 69kV facility (project will actually connect to the 12kV system). T154 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)

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

Not required.

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.

Stability and Reactive Power Requirement

Not required due to size of project.

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.

SINGLE LINE DIAGRAM