PJM Generation Transmission Request

Queue S59

Sharpsburg 12kV

Feasibility / Impact Study Report

434929v2
August 2007

Preface

The intent of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the subject generation interconnection project to the PJM network at a location specified by the Interconnection Customer. 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 may be identified in the feasibility study, but the actual allocation will be deferred until the impact study is performed.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

General

Wenning Poultry has proposed a 1.8 MW energy only project to be studied as interconnected in the Midwest Electric REA of the Dayton system. Project #S59 was evaluated for compliance with reliability criteria for summer peak conditions in 2011. The proposed in-service date for this project is November 1, 2007.

This Generation Interconnection Feasibility / System Impact Study provides analysis results of upgrades necessary for adding the generation to the PJM market.

Attachment Facilities

The proposed generation project will interconnect at the Midwest REA 12 kV circuit that is fed by the Sharpsburg Midwest REA Metering Point. The attachment facilities will be addressed with the REA. No attachment facilities will be required by Dayton or PJM.

The scope of Dayton's work and estimated cost by project segment are listed below:

Direct Connection Network Upgrades

The installed cost for the upgrade required to accommodate the customer generator is $21,000 with the following major components as follows;

a) Materials including control duct to feeder recloser- $11,200
b) DP&L labor to program relay and commission- $5,700
c) DP&L labor to reprogram the revenues meters- $1,000
d) Miscellaneous - $3100

These costs do not include design engineering and field labor cost that Midwest REA will experience.

This estimate assumes that

a) only the source feeder will be tripped and not the entire sub
b) the Cooper feeder recloser Form 6 control can be wired to accept an external trip and can be programmed to close when 69kV source potential has been restored for two minutes.
c) If the recloser cannot be programmed as in b) above, then the 69kV transrupter will need to be the isolating device with the installed cost being reduced to $ 28,500 due to eliminating the need for the field labor and materials to wire the feeder recloser.

Note: This scope of work only includes facilities required at the Sharpsburg distribution tap. The Interconnection Customer must ensure that the metering scheme adequately distinguishes and resolves generation injection from local load.

Non Direct Connection Network Upgrades

Generator Deliverability
None.

Multiple Facility Contingency
None.

Contribution to Previously Identified Overloads
None.

New System Reinforcements
None.

Contribution to Previously Identified System Reinforcements
None.

Short Circuit
None.

COST AND TIMING SUMMARY

Total Estimated Cost for interconnection is **$21,000 in 2007 dollars .**

The project developer must work with Dayton and Midwest Electric to develop an Interconnection Agreement and Construction Agreement for the facilities required for this generation.

This estimate does not include tax gross up.

Figure 1.