U2-061 Garrett County
Generation Interconnection

General

The Interconnection Customer has proposed a 50 MWE wind power generating facility to be located in the Roth Rock (Backbone) area of Garrett County, Maryland. The project was evaluated for compliance with reliability criteria for summer peak conditions in 2012. The planned in service date of the project is December, 2009.

Point of Interconnection

U2-061 will interconnect with the Allegheny Power transmission system at the future Roth Rock 138kV substation on the Albright-William-Mettiki 138kV circuit. U2-061 was studied as a 50 MW injection into the AP system.

Direct Connection Requirements

Transmission Owner Scope of Direct Connection Work

The Transmission Owner's scope of work includes:

- Install facilities for transfer trip at the Albright 138kV substation. Install 138kV line trap, CVT, transfer trip panel and associated equipment.
  Estimated Cost: $130,600 in 2010 dollars

- Install facilities for transfer trip at the William 138kV substation. Expansion of the control building will be required. Install 138kV line trap, CVT, transfer trip panel and associated equipment.
  Estimated Cost: $233,900 in 2010 dollars

Interconnection Customer Scope of Direct Connection Work

The Interconnection Customer (IC) has assumed full responsibility for the design and construction of all associated U2-061 facilities on both sides of the Point of Interconnection. The IC will interconnect U2-061 with the AP system by constructing a customer-owned 138kV circuit from the generating facility site to AP's Roth Rock 138kV substation. Route selection, line design, right-of-way acquisition and construction of such lines will be entirely the responsibility of the IC.

Roth Rock Substation - Construct the new Roth Rock substation on land furnished by the Interconnection Customer. The new substation will be situated on the Albright-William-Mettiki 138kV circuit. The IC will be responsible for grading the site, installing fencing, ground grid, yard stone, and access roads. The new substation will consist of: one (1) 138kV breaker, 138kV metering, three (3) 138kV disconnect switches, two (2) 138kV deadend structures, 138kV power VT

for station service, 16'x 36' metal control building, control cables, panels and equipment, SCADA, telephone service, and associated facilities.

Mettiki Tap Facility - Obtain property and tap the existing Mettiki 138kV tap served from the Albright-William 138kV line. Construct one span (0.1 mile) 954 ACSR 138kV tap line to the Roth Rock 138kV station site.

The IC will be required to install metering and telemetry equipment to provide revenue metering and real-time telemetry data to PJM. The requirements for this equipment are listed in Appendix 2, Section 8 of Attachment O to the PJM Tariff, as well as PJM Manuals 01 and 14D. Protective relaying and metering design and installation must comply with the Allegheny Power Applicable Standards.

Cost and Timing Summary

While the information in this transmittal is reasonable for the scope of work defined, it should be noted that the cost figures are conceptual in nature at this stage and that an engineering team has not yet been assigned to the project. Obviously, any change to the scope of work will require that the estimates be revisited. The costs are a best estimate, but the developer will be charged for actual costs. Any under-runs or over-runs will be reconciled at the conclusion of the project.

The cost estimates in this report do not include tax gross-up or any network upgrades which may have been identified and required by this project.

The estimated time for Allegheny Power to provide for the interconnection of this project is under development.

Network Impacts

Potential network impacts are as follows:

Generator Deliverability

*(Single or N-1 contingencies for the **Capacity** output of the interconnection)*

None

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 System Impact Study)*

None

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

Short Circuit

No breakers were identified as being over their maximum interrupting rating.

Stability and Reactive Power Requirements

Will be performed during the Queue U2-061 System Impact Study.

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 System Impact Study)

None

Delivery of Energy Portion of Interconnection Request

(PJM also studied the delivery of the energy portion of this Interconnection Request. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with Network Upgrades to eliminate the operational restriction at their discretion by submitting a Transmission Interconnection Request. Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which shall study all overload conditions associated with the overloaded element(s) identified.

None