ENON PROJECT (QUEUE #67)
FEASIBILITY STUDY ANALYSIS

DESCRIPTION OF PROJECT

The developer wishes to interconnect two 250 MW steam turbine generators (ST) for a maximum total generating capability of 500 MW at their site in Greene County, Pennsylvania, approximately fourteen miles south of Washington, PA. The project will be located in close proximity to the existing Allegheny Power Enon switching station. The units are assumed to generate at 18 kV, using coal for fuel. The customer wishes to interconnect by constructing two 138 kV lines into the Enon station and plans to have the generator in service and producing power by January 2007.

ANALYSIS RESULTS

Normal (Base) System Conditions

Reinforcements necessary as a result of base case conditions are as follows:

- Convert the Enon-Dutch Fork 138 kV circuit to double circuit 954 ACSR.

Single Contingency Conditions

Reinforcements due to N-1 contingencies include:

- Construct two new 138 kV circuits between Enon and Franklin switching stations using double circuit 954 ACSR.

Multiple Contingency Conditions

No overloads or other system deficiencies were identified as being caused by credible multiple contingencies.

Short Circuit Conditions

No breakers were identified as exceeding their maximum interrupting capacity.

SYSTEM REINFORCEMENTS

Required Direct Interconnection Facilities

None identified.

Required System Reinforcements

Install substation facilities at Enon Switching Station:

- Install eight 138 kV breakers and associated facilities.
- Install 138 kV metering equipment and associated facilities.

Estimated cost = $3,500,000

Install substation facilities at Dutch Fork Switching Station:

- Install one 138 kV breaker and associated facilities.
- Install 138 kV metering equipment and associated facilities.

Estimated cost = $300,000

Install substation facilities at Franklin Switching Station:

- Install three 138 kV breakers and associated facilities.
- Install 138 kV metering equipment and associated facilities.

Estimated cost = $780,000

Transmission Line work:

- Convert Enon-Dutch Fork 138 kV line to double circuit 954 ACSR.

Estimated cost = $5,100,000

- Construct new Enon-Franklin 138 kV double circuit with 954 ACSR.

Estimated cost = $11,500,000

Customer site

- Protective relaying at customer site.

Estimated cost = $100,000

Other AP stations

- Review and coordinate protective relaying changes.

Estimated cost = $20,000

Required Short Circuit Reinforcements

None identified.

Summary

Total estimated interconnection costs = $21,300,000