

HATFIELD PROJECT (QUEUE #27)

FEASIBILITY STUDY ANALYSIS

DESCRIPTION OF PROJECT

The developer wishes to interconnect two combustion turbine generators and a steam turbine generator for a maximum total generating capability of 620/690 MW (Summer/Winter) at their Hatfield site in Fayette County, Pennsylvania near the borough of Masontown. The project will require a 500 kV interconnection either at Hatfield Ferry Substation (Alternative A) or a new Fayette Energy Substation, which will be located about 0.91 miles from Hatfield Ferry Substation and about 14.29 miles from Fort Martin Substation on the Fort Martin-Hatfield Ferry 500 kV line. The units will generate at 18 kV using natural gas for fuel and will be used for peaking. The customer wishes to interconnect into the 500 kV and plans to have the generators in service and producing power by June 1, 2004.

ANALYSIS RESULTS

Normal (Base) System Conditions

No overloads or other system deficiencies were identified.

Single Contingency Conditions

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

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

Alternative A: At Hatfield Ferry Substation,

- ◆ Extend the #1 and #2 500 kV buses,
- ◆ Install 2-500 kV breakers, and
- ◆ Install 500 kV metering equipment and associated facilities.

Estimated cost to expand Hatfield Ferry Substation = \$2,130,000.

Alternative B: Construct substation facilities at Fayette Energy Facility:

- ◆ Tap the Fort Martin-Hatfield Ferry 500 kV line,
- ◆ Install three 500 kV breakers, and
- ◆ Install 500 kV metering equipment and associated facilities.

Estimated cost to tap line and construct substation = \$8,390,000.

Required System Reinforcements

None identified.

Required Short Circuit Reinforcements

None identified.

Summary

Total estimated cost to interconnect the proposed generation facilities for Alternative A = \$2,130,000.

Total estimated cost to interconnect the proposed generation facilities for Alternative B = \$8,390,000.