PJM Generator Interconnection Request Queue #E3 Somerville 5 MW Feasibility Study Report

January 2001

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General

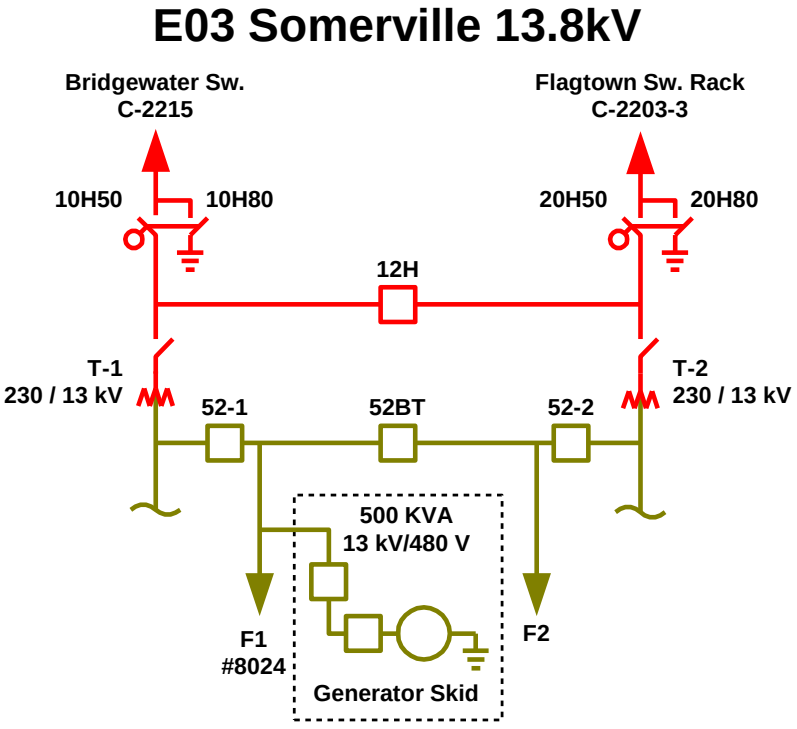
PSE&G has proposed the installation of a five (5) MW Natural Gas Fired Transportable Combustion Turbine at the Somerville substation on circuit #8024 in Somerville Borough, Somerset County, NJ. The unit is capable of going into operation during the June, 2001. The primary purpose of this installation is to mitigate potential shortfalls of station transformer capacity during peak load periods. Because of this project's position in the PJM Generator Interconnection Request Queue, it will be necessary to perform additional analysis, in order to determine this project's cost allocation, if any, for system upgrade requirements.

Direct Connection Requirements

The transportable generating station facility will be connected to the Somerville 230/13.8 kV substation via the 13.8 kV distribution circuit #8024. To connect the project to the system, the following work will be required:

- Construct a 13.8 kV tap to accommodate the radial connection.
- Install the portable generating unit with self contained circuit breakers, protective relaying, metering and remote terminal unit for SCADA.
- Install metering and Supervisory Control and Data Acquisition equipment.

The total cost of the project is $ 62,000 and expected to take one month.



Network Impacts

With Project #E3 and direct connection requirements modeled, the system was evaluated for compliance with reliability criteria**.** A summary of the results is as follows:

Normal System

- No identified problems.

Single Contingency (MAAC Criteria IIA)

- No identified problems.

Second Contingency (MAAC Criteria IIB)

- No identified problems.

Multiple Facility Contingency (MAAC Criteria IIC)

- No identified problems.

Generator Deliverability

- No identified problems.

Stability (MAAC Criteria IV)

- Stability analysis was not performed due to the nature of the project.

CETO/CETL (MAAC Criteria III/IVB)

- No identified problems.

Short Circuit Analysis

- Not required. (no change in generator short circuit contribution to the system)

Network Reinforcements

- None required.