

***PJM Generator Interconnection
U2-063 Croydon 5 MW
Combined Feasibility / Impact Study***

October 2008

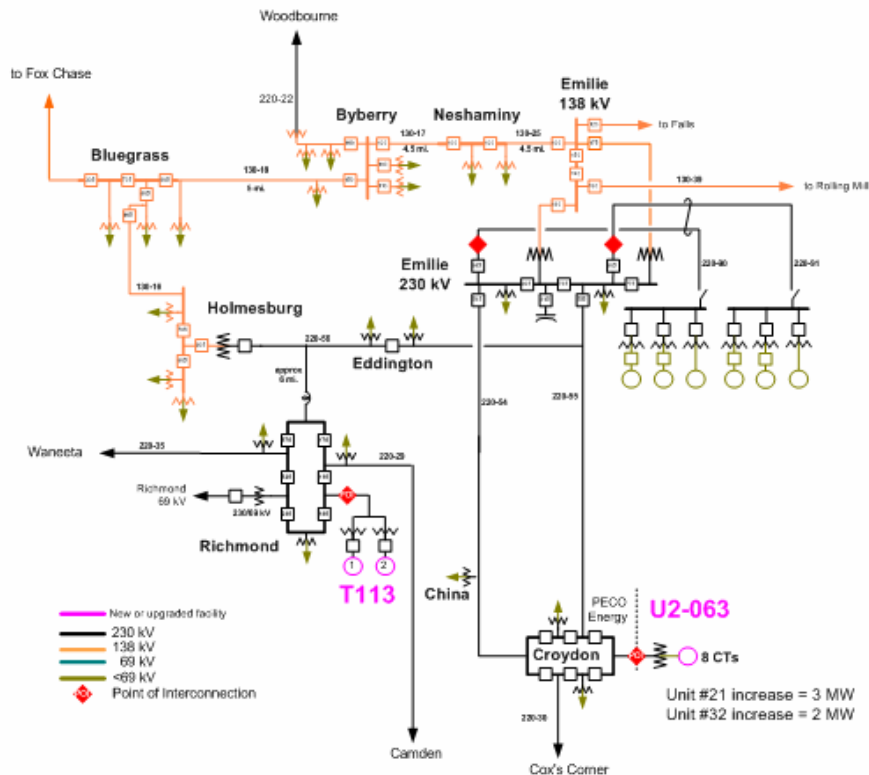
DMS # 506842

General

Queue U2-063 is an Exelon Generation request to obtain an additional 5 MWs of Capacity Interconnection Rights for existing generation connected to Croydon 230 kV substation. There are presently 8 combustion turbine generators connected at Croydon with total Capacity Interconnection Rights (CIRs) of 386 MW. Unit #21 Capacity will increase by 3 MW, and Unit 32 will increase by 2 MW for a new requested total CIRs of 391 MW at U2-063 Point of Interconnection. U2-063 is located at 955 River Road, Bristol Twp, Bucks County, Pennsylvania. U2-063 Capacity increase is already available.

Direct Connection

The U2-063 generation is already connected as shown on the one line diagram below. No additional Direct Connection facilities are required.



Network Impacts

Queue U2-063 was studied as a 5 MW Capacity increase (391 MW total) at Croydon 230 kV bus. Project U2-063 was evaluated for compliance with reliability criteria for summer peak conditions in 2012. Network impacts were as follows:

NETWORK IMPACTS

Generator Deliverability

(Normal System with all facilities in-service and Single, or N-1, contingencies for the Capacity portion only of the interconnection)

No problems were identified.

Multiple Facility Contingency

(Double Circuit Tower Line, stuck breaker and bus fault contingencies for the full energy output.)

No problems were identified.

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 identified.

Short Circuit

Not applicable, there is no change to generator and transformer impedance.

Stability Analysis

Not required, there are no changes to generator characteristics

NETWORK UPGRADE REQUIREMENTS

New System Reinforcements

(Upgrades required to mitigate reliability criteria violations, i.e. "Network Impacts", initially caused by the addition of this project generation)

None identified.

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 Impact Study)

None identified.