PJM Generator Interconnection Request Queue W3-004 Ridgefield (234 Moonachie Corp) 13kV Feasibility/Impact Study Report

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#630419

W3-004 East Rutherford (234 Moonachie Corp) 13kV Feasibility/Impact Study

General

Public Service electric and Gas Company has proposed installing a 1.261 MW AC chrystalline panel solar project on property located at 234 Moonachie Road, Moonachie Borough, Bergen County, New Jersey. The capacity evaluation is based upon 5.7 MW. The commercial operation date is March 25, 2012.

The intent of the Feasibility/Impact study is to determine system reinforcements and associated costs and construction time estimates required to facilitate the addition of the new generating plant to the transmission system. The reinforcements include the direct connection of the generator to the system and any network upgrades necessary to maintain the reliability of the transmission system.

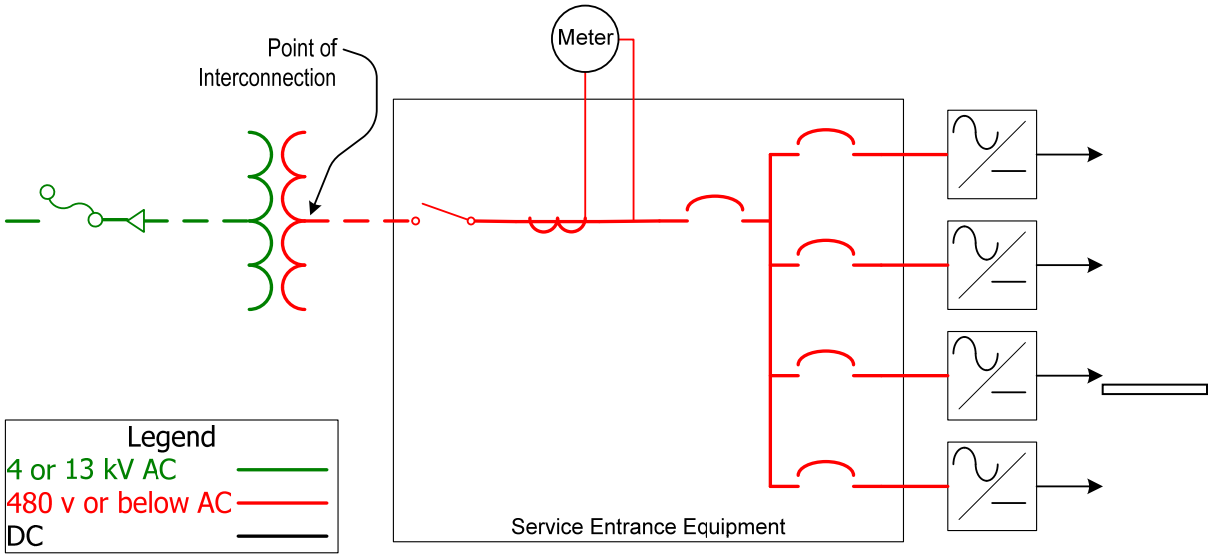
Direct Connection

The W3-004 project will be connected to Ridgefield 13kV feeder 8014. Service will be at 277/480 volts. PSE&G will provide and install the 13kV-277/480V transformer. The project will have a separate service than the one that supplies the building. The project is required to pay for the interconnection requirements described in the interconnection study provided by PSE&G. The interconnection single-line-diagram is shown in Figure #1.

Figure #1

PSE&G

Solar Production Sites – 480 volt POI



Network Impacts

Queue project W3-004 was studied as a(n) 1.26 MW (0.479 MW of which was Capacity) injection into PSEG's system at the Ridgefield 13kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types. Project W3-0804was evaluated for compliance with reliability criteria for summer peak conditions in 2015. Potential network impacts were as follows:

Generator Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

No problems identified

Multiple Facility Contingency

(Double Circuit Tower Line, Line with Failed Breaker and Bus Fault contingencies for the full energy output)

No problems identified.

Short Circuit

(Summary form of Cost allocation for breakers will be inserted here if any)

No problems identified

Stability

Not required because the project is less than 30 MW.

System Reinforcements

None

Energy Portion of Interconnection Request

(PJM also studied the delivery of the energy portion of the surrounding generation. Any potential 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. 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 analyzes all overload conditions associated with the overloaded element(s) identified. As a result of the aggregate energy resources in the area, the following violations were identified.)

No problems identified.