PJM Generator Interconnection Request
Queue W4-061
Lawrence (Hopewell) 26kV
Feasibility/Impact Study Report

April 2011
#643218

W4-061 Lawrence (Hopewell) 26kV Feasibility/Impact Study

General

Sun Edison has proposed installing a 9 MW ground mounted solar facility at 1132 Bear Tavern Road, Hopewell, Mercer County, New Jersey. The name for the project is "Hopewell". The proposed in-service date for the project is June 1, 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 interconnection of 9 MW of solar generation at the Hopewell Solar Project in Hopewell, New Jersey will consist of a single 26-kV line interconnection to the project site from the PSE&GI-139 line hat originates from Lawrence Switching Station. The total interconnection cost of **$318,241** is based on the most efficient possible route to the existing line, 26-kV infrastructure and is detailed as follows:

Project Item		26-Kv Single Line
Inside Plant		
Line Position/Feeder Row		-
Relay Protection		-
Manholes/Conduit		-
Other/Misc.		-
	Sub Total	$0
Outside Plant		
Overhead Line		$241,741
Underground Line		-
Manholes/Conduit		-
Other/Misc.		-
	Sub Total	$241,741
Metering/Monitoring		
Revenue Metering/Telemetering/SCADA		$76,500
Feeder Meetering		$0
Other/Misc.		-
	Sub Total	$76,500
Total Cost		**$318,241**
Acceptable Generation level		**Up To 9 MW**

The project will be interconnected to the 26kV circuit on Bear Tavern Road. Sun Edison will need to construct the 26kV interconnection station, switchgear or open air, on their site using PSE&G specifications. The substation will be several hundred yards fron Bear Tavern Road. PSE&G will go overhead, as far as they can, to the last pole. Then the circuit will go underground in conduit supplied by SunEdison into the substation. PSE&G will install the cable.

The cost is exclusive of work required to be performed by the developer as specified in PSE&G's Information & Requirements for Electric Service Handbook. This work includes, but may not be limited to, the following:

- Developer will adhere to specifications detailed in the PSE&G Information and Requirements for electric service handbook
- Developer is responsible for all trenching and the installation of conduits and manholes as normally required and specified by PSE&G
- Developer must obtain all permits and easements required to install the interconnection facilities
- Developer must provide access for the installation, maintenance and operation of all service equipment

It is anticipated that material procurement and construction will require 5-6 months from the date of project approval and authorization.

Project Schedule

December 1, 2011

Interconnection Agreement with PSE&G is fully executed and authorization is received to proceed with construction
Long lead time construction material is placed on order

January 15, 2012

Developer submits preliminary site plan, 26-kV switchgear one-line diagram and equipment specifications for approval

February 1, 2012

PSE&G provides comments on project lay-out and design

March 1, 2012

Developer submits final site plan, 26-kV switchgear one-line diagram and equipment specifications for approval

April 1, 2012

PSE&G commences line construction

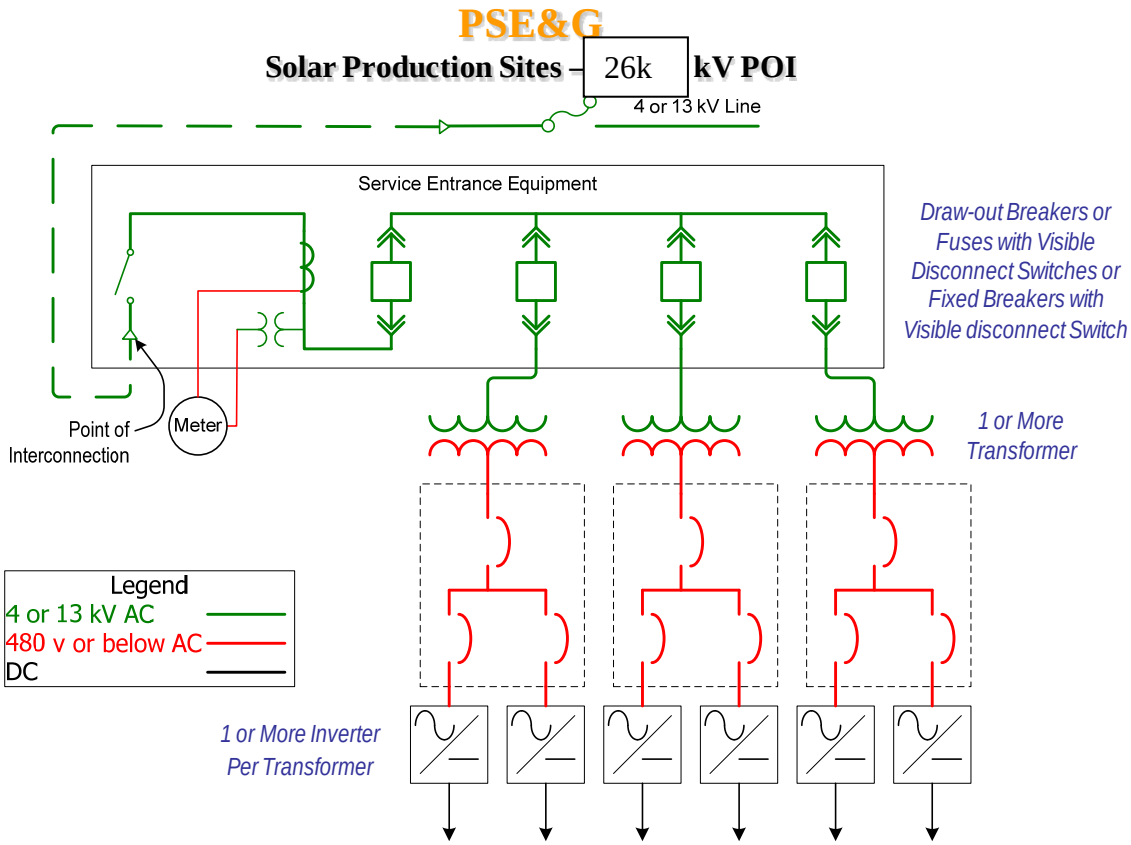
April 15, 2012

PSE&G provides final comments and approval of 26-kV switchgear lay-out and design
Developer begins construction based on approved design

May 15, 2012
Switchgear inspection and approval by PSE&G

June 12, 2012
Completion of interconnection work and service cut-in

Figure #1



Network Impacts

Queue project W4-061 was studied as a(n) 9.0 MW (3.4 MW of which was Capacity) injection into PSEG's system at the Lawrence 26.0 kV substation. The project was studied on a combined feasibility-impact basis which utilizes an AC analysis, and incorporates all contingency types.Project W4-061 was evaluated for compliance with reliability criteria for summer peak conditions in 2014.

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.