# *PJM Generator Interconnection Request*
# *Queue #W1-083*
# *Deptford (West Deptford Solar) 13kV*
# *Feasibility/Impact Study Report*

**July 2010**
**#603942**

# W1-083 Deptford (West Deptford Solar) 13kV Feasibility/Impact Study

## General

West Deptford Solar, LLC has proposed installing a 6.2 MW solar project, utilizing 30,243 GE PV 205 panels. The project is located in West Deptford Township, New Jersey at Route 295 and exit 22 off Crown Point Road. The commercial operation date is June 1, 2011 or before. West Deptford Solar expects to break ground by December 31, 2010.

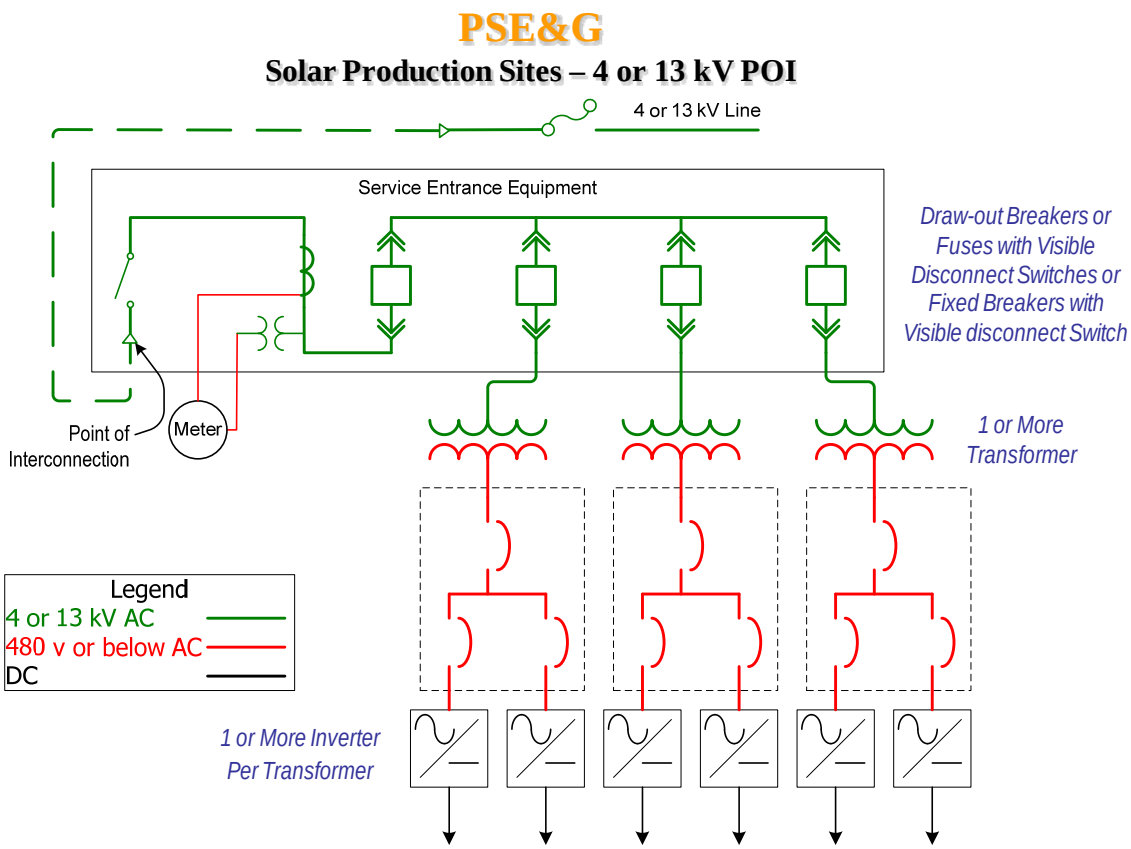
## Direct Connection

The project will be connected to two separate 13kV distribution circuits. Cost Estimates and details of the interconnection will be provided by PSE&G. West Deptford Solar will be responsible for meeting all provisions of the project Interconnection Agreement betweeen West Deptford Solar and PSE&G.

The cost in the Interconnection Agreement 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:

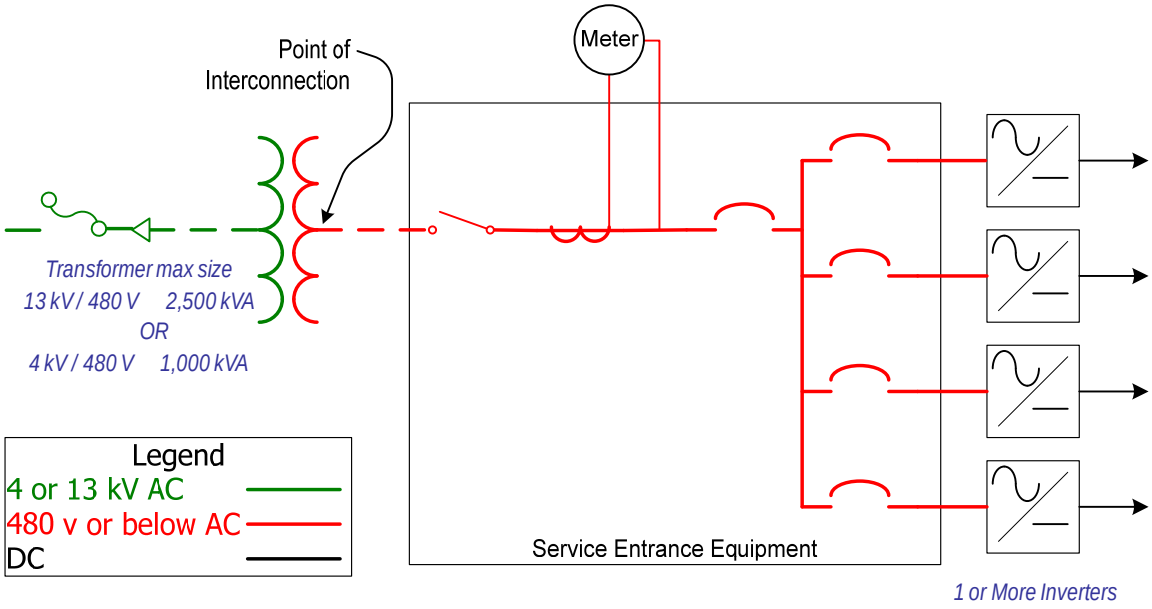
- Developer is responsible for purchase and installation of all low voltage (277/480v) or high voltage (13-kV) service equipment as required for each site
- Developer will adhere to specifications detailed in the PSE&G Information and Requirements for electric service handbook
- Developer is responsible 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

## Figure #1



**PSE&G**

**Solar Production Sites – 480 volt POI**




## Network Impacts

Queue project W1-083 was studied as a(n) 6.2MW ( 2.3MW of which was Capacity) injection into PSEG's system at the Gloucester 26kV substation. Project W1-083 was evaluated for compliance with reliability criteria for summer peak conditions in 2014. 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.