

***PJM Generator Interconnection Request  
Queue X1-113  
Lawrence (Bristol-Myers) 26kV  
Impact Report***

**August 2011  
#662303**

# X1-113 Lawrence (Bristol-Myers) 26kV Impact Study

## General

Bristol-Myers Squibb has proposed a 10.0 MW solar project at 3401 Princeton Pike, Lawrenceville, Mercer County, New Jersey. The project in-service date is June 1, 2012. The name for the project is “Bristol-Myers”

The project will connect to the M143 26kV circuit on Franklin Corner Road that emanates from Lawrence station.

## Direct Connection

The following is an estimate (including risk and contingencies) for the interconnection of 10.0 MW of solar generation at the Bristol-Myers Squibb Solar project in Lawrence, New Jersey. The project will interconnect with the 26-kV M-143 circuit from Lawrence Station. The total interconnection cost of **\$278,976** is based on the most efficient possible route to the existing 26-kV infrastructure and is detailed as follows:

<u>Project Item</u>	<u>26-Kv Single Line M-143</u>
Inside Plant	
Line Position/Feeder Row	-
Relay Protection	-
Manholes/Conduit	-
Other/Misc.	-
Sub Total	\$0
Outside Plant	
Overhead Line	\$202,376
Underground Line	-
Manholes/Conduit	-
Other/Misc.	-
Sub Total	\$202,376
Metering/Monitoring	
Revenue Metering/Telemetry/SCADA	\$76,600
Feeder Metering	\$0
Other/Misc.	-
Sub Total	\$76,600
<b>Total Cost</b>	<b>\$278,976</b>
<b>Acceptable Generation Level</b>	<b>Up to 10.0 MW</b>

This 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

February 15, 2012

WMPA and IA (with PSE&G) are fully executed and authorization is received to proceed with construction  
Long lead time construction material is placed on order

March 1, 2012

Developer submits preliminary site plan, 13-kV switchgear one-line diagram and equipment specifications for approval

March 15, 2012

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

April 15, 2012

Developer submits final site plan, 13-kV switchgear one-line diagram and equipment specifications for approval

May 15, 2012

PSE&G commences line construction

June 1, 2012

PSE&G provides final comments and approval of 13-kV switchgear lay-out and design. Developer begins construction based on approved design

June 15, 2012

Switchgear inspection and approval by PSE&G

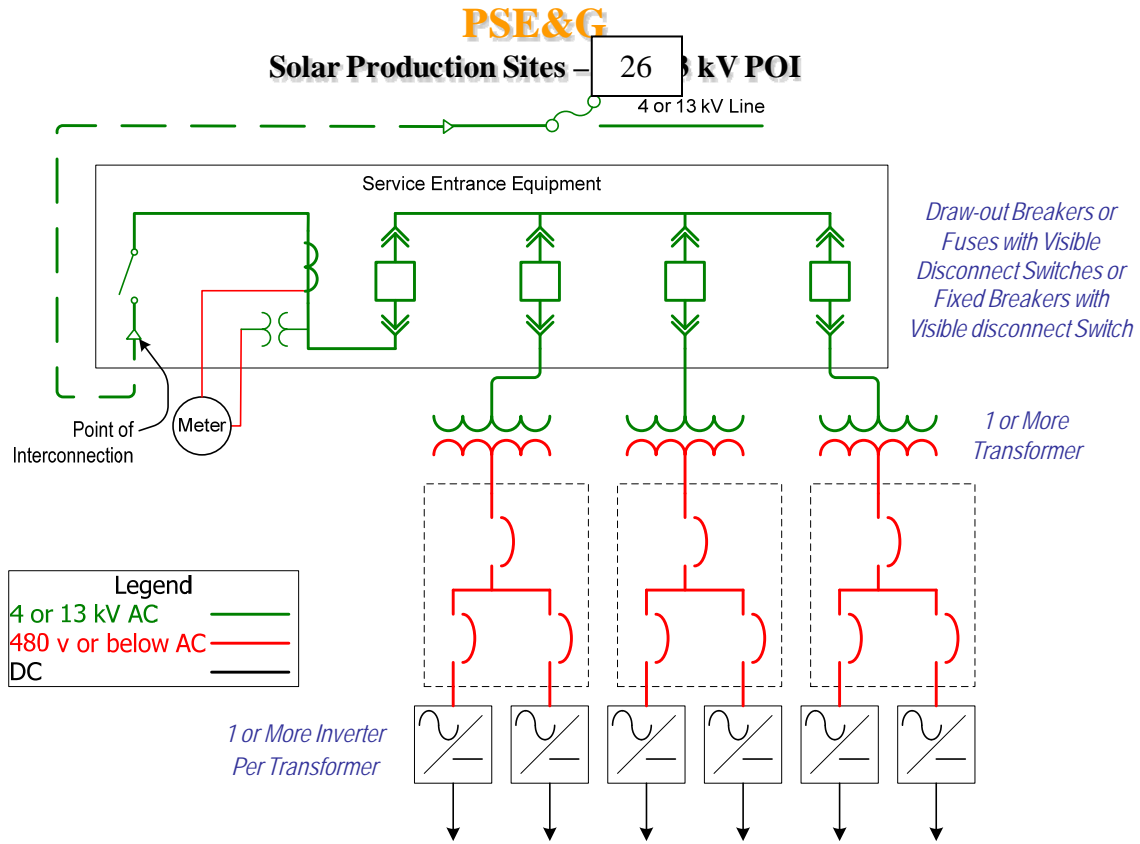
July 1, 2012

Completion of interconnection work and service cut-in

Notes:

- 1) Customer will abide by PSE&G Information and Requirements for electric service hand book
- 2) Customer is responsible to provide trench, conduit and manholes were applicable
- 3) Customer is responsible to provide access and easements
- 4) Customer is responsible to provide permits and associated costs.
- 5) Electric service route was based on most efficient route
- 6) Material procurement will be six months from project approval/authorization

**Figure #1**



**Network Impacts**

Queue project X1-113 was studied as a(n) 10.0 MW (3.8 MW of which was Capacity) injection into PSEG's system at the Lawrence 26 kV substation. Project X1-113 was evaluated for compliance with reliability criteria for summer peak conditions in 2015.

**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.