PJM Generator Interconnection Request
Queue X1-098
Cook Road (Montgomery Recycling) 13kV
Feasibility/Impact Report

July 2011
#657035

Preface

The intent of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The Interconnection Customer may request the interconnection of generation as a capacity resource or as an energy-only resource. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: (1) Direct Connections, which are new facilities and/or facilities upgrades needed to connect the generator to the PJM network, and (2) Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system.

In some instances a generator interconnection may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects may be identified in the feasibility study, but the actual allocation will be deferred until the impact study is performed.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

X1-070 Levittown (Mills Creek) 13kV Feasibility/Impact Study

General

Montgomery Recycling Corporation has proposed installing a 0.5 MW synchronous generator capable of running on biodiesel or conventional diesel fuel on property at 45 Montgomery Street, Belleville, Essex County, New Jersey, 07109. The capacity evaluation is based upon 0.5 MW. The commercial operation date is January 1, 2012.

Direct Connection

The following is an estimate (including risk and contingencies) for the interconnection of 0.5 MW biodiesel generation facility located at 45 Montgomery Street, Belleville, New Jersey. As previously specified, the generator will be connected to the customer's existing switch gear fed from Cook Rd 13kV circuit 8023. Upon field inspection of the existing installation it was determined that the Montgomery Recycling facility is supplied by three separate single phase transformers that are incapable of handling 0.5MW. The following estimate reflects the cost to install a properly rated transformer.

Project Item		Cook Road 8023
Inside Plant		
Line Position/Feeder Row		$0
Relay Protection		-
Manholes/Conduit		-
Other/Misc.		-
	Sub Total	$0
Outside Plant		
Overhead Line		$0
Underground Line		-
Manholes/Conduit		-
Transformer		$45,000
	Sub Total	$45,000
Metering/Monitoring		
Revenue Metering/Telemetering/SCADA		$9,400
Feeder Metering		$0
Other/Misc.		-
	Sub Total	$9,400
Total Cost		**$54,400**
Acceptable Generation Level		**Up to 0.5 MW**

The existing load meter will need to be replaced by a bi-directional meter. To be a Capacity Resource the project will need to transmit real-time data from the generator.

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

August 7, 2011
Developer submits preliminary site plan, one-line diagram and equipment specifications for approval

August 15, 2011
PSE&G provides comments on project lay-out and design

September 15, 2011
Developer submits final site plan, one-line diagram and equipment specifications for approval

November 1, 2011
PSE&G provides final comments and approval of lay-out and design
Developer begins construction based on approved design

December 1, 2011
PSE&G commences transformer installation

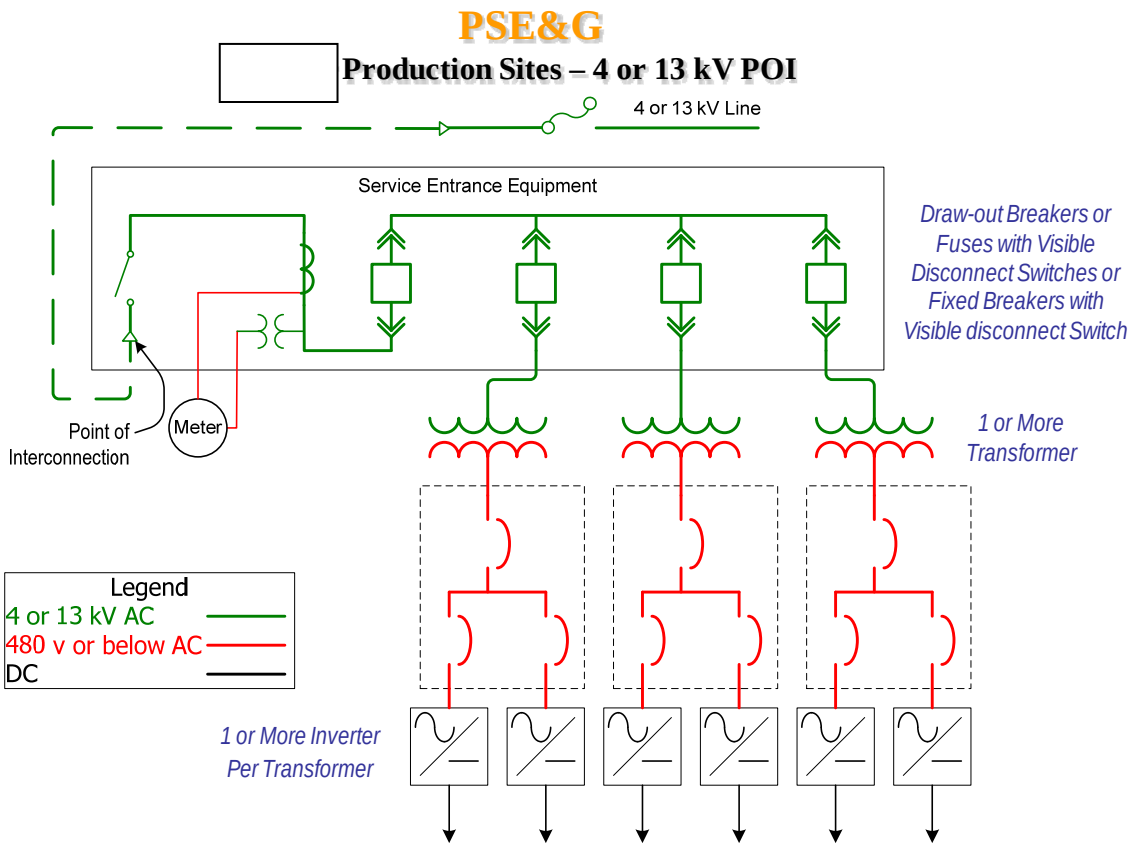
December 31, 2011
Completion of interconnection work

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 X1-098 was studied as a(n) 0.5 MW (0.5 MW of which was Capacity) injection into PSEG's system at the BELLVL26 26.0 kV substation. Project X1-098 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.