# PSE&G Solar 4 All Segment 2 Neighborhood Solar Pole Attached Solar Installations

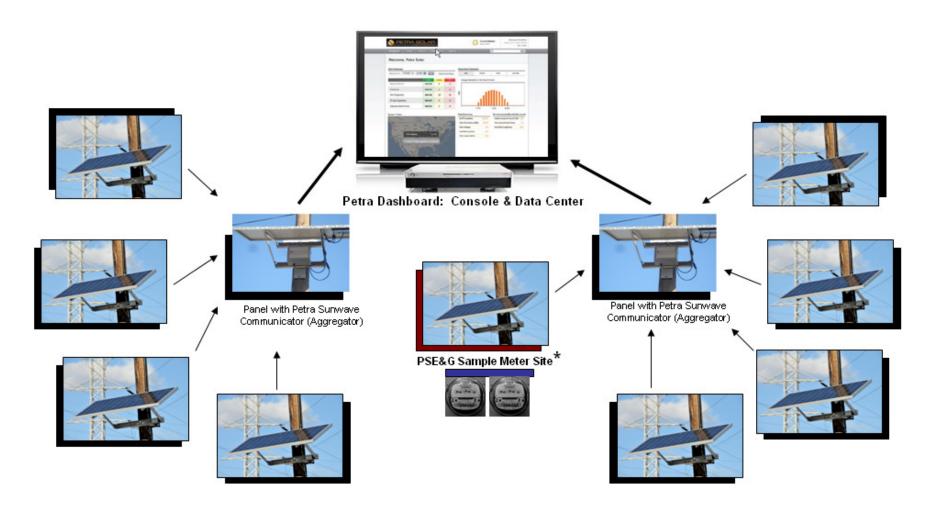
Meeting Date/Time: 12/07/2010 @ 1:00 PM

## Agenda

- Review of Pole Attached Solar Basics
- Program Update
- Methods for submitting kWhs for SRECs
- PSE&G methodology for determining kWhs for periods prior to energy sales
- Time Frame for entering Energy Year 2010 Production in PJM GATS

# **Description - Pole Attached Solar**

Diagram showing relationship of primary equipment including pole units, aggregators, sample meter locations, and Petra dashboard.



# **Pole Attached Solar – Distributed Sample Meter Locations**



## Pole Attached Solar – Installations through November 2010

### Installation Update:

- Pole attached installations started in September 2009
- Monthly Install totals through November 2010

Month	Panels Installed	Total kWdc
September, 2009	86	17.2
October, 2009	80	16.0
November, 2009	1,484	296.8
December, 2009	3,503	700.6
January, 2010	2,851	578.9
February, 2010	2,517	511.2
March, 2010	3,406	689.9
April, 2010	7,735	1,562.0
May, 2010	6,296	1,259.3
June, 2010	7,870	1,579.0
July, 2010	5,543	1,161.1
August, 2010	5,959	1,242.1
September, 2010	5,546	1,147.7
October, 2010	7,469	1,493.8
November, 2010	6,295	1,259.0
Grand Totals:	66,640	13,514.7

### **Metering / Communications Network Update**

### Process for obtaining kWh data from Pole Installations

- Total of 687 aggregators are currently installed.
- Approximately 38,000+ units are reporting to the host computer dashboard with meter data.
- Network design and installation of aggregators is ongoing.
- For optimal Network design the installation of pole attached units in each geographic area is completed first, then install data is analyzed to determine proper locations for aggregators.

#### AFTER START OF ENERGY SALES:

The AC kWh generation for pole attached solar sources directly from PJM energy sales. This is the ideal state which will be reached once network is fully deployed and project is fully constructed. Method has been reviewed and approved by PJM.

#### PRIOR TO START OF ENERGY SALES:

The generation for pole attached solar will be entered by PSE&G via PJM BTM Generator. This is the interim plan needed in order to recognize kWhs for all pole units which are installed and operating, including units that are not yet reporting in through the communications system.

All revenues from the sale of SRECs generated from the Segment 2 – pole attached solar project through the full recognition of SRECs generated will directly benefit ratepayers.

### AFTER START OF ENERGY SALES - Process for submitting kWh:

- PSE&G submits daily kWhs for each sample group for energy sales. The kWhs source directly from the Petra Solar units. PSE&G meters at substations are used to determine which kWhs are assigned to which time bin (hour 1, hour 2, hour 3...).
- At end of month, the total kWhs submitted is used by PJM GATS group for SREC creation.
- Production for SRECs is based on same data submitted for energy sales.
- PSE&G currently has earned a total of 228 SRECs sourcing from pole attached solar energy sales from June 2010 through October 2010.

This methodology has been reviewed and approved by PJM.

### PRIOR TO START OF ENERGY SALES – Process for submitting kWh:

- Production for SRECs is entered in PJM GATS BTM account
- One BTM generator created in which PSE&G enters total kWhs for each month for all poles which are operating but have not been included in energy sales.
- PSE&G will use metered kWhs from Petra Solar units as basis for determining total kWhs generated by all installed units. This is the same data that is utilized for energy sales.

#### PRIOR TO START OF ENERGY SALES:

PSE&G determines kWh Production for SRECs using actual data reported from solar units to scale up to the universe of installed units

- 1. Each solar panel that is reporting in through the communications system will report its lifetime kWhs
- 2. Data for the panels are grouped based on the month in which they were installed; for each group, calculate an average of the lifetime kWhs (covering the units installed in a given month)
- 3. The average lifetime kWhs for each group are allocated to monthly periods (using PVWatts to determine a monthly output pattern); this represents an average output by month for one solar unit
- 4. The average output for one unit is multiplied by the total number of units installed; this result reflects the estimated output of all the installed units

### Results – Estimated kWhs and SRECs for Sept 09 – May 2010

The table below reports the calculated kWhs and SRECs for all pole attached solar installations which occurred from Sept 2009 through May 2010.

Month of	Production		PVWatts v1
Generation	kWh	SRECs	kWh @ 0.77
Sep-09	448	0	858
Oct-09	1,212	1	2,373
Nov-09	8,479	9	12,023
Dec-09	31,765	31	42,499
Jan-10	80,253	81	101,013
Feb-10	135,035	135	159,988
Mar-10	236,223	236	266,292
Apr-10	364,090	364	384,583
May-10	649,250	649	607,398
Total	1,506,755	1,506	1,577,026

### Timing – for SRECs for Sept 09 – May 2010

- PSE&G will submit kWh production for pole attached solar units for energy year 2010 in December 2010
- SRECs will be issued on December 31, 2010.