



# Initiation of a Proceeding to Investigate Approaches to Mitigate Solar Development Volatility pursuant to N.J.S.A. 48:3-87(d)(3)(a)

Prepared by Charlie Garrison November 7, 2013 Renewable Energy Meeting Trenton, NJ



### **Solar Installed Capacity Data**

- The preliminary installed solar capacity as of 10/31/13 is approximately 1,155.4 MW.
  - Approximately 13.2 MW installed in current month.
- The preliminary solar capacity project pipeline as of 10/31/13 is approximately 357.4 MW.
  - —The project pipeline increased approximately 3 MW in the current month.



# NJCEP Solar Installed Projects Plus Pipeline Projects

#### **Preliminary Values As of 10/31/13**

**Installed Solar Projects** 

Interconnection Type	Project Qty	Total Capacity (KW DC)	Percent of Capacity	Avg System Size (kW DC)
Behind the meter	24,586	928,819.8	80.4%	37.8
Direct Grid Supply	108	226,615.8	19.6%	2,098.3
Installed Totals	24,694	1,155,435.6	100.0%	46.8

**Solar Project Pipeline** 

Interconnection Type	Project Qty	Total Capacity (KW DC)	Percent of Capacity	Avg System Size (kW DC)
Behind the meter	4,411	161,076.2	45.1%	36.5
Direct Grid Supply	31	196,356.1	54.9%	6,334.1
Pipeline Totals	4,442	357,432.2	100.0%	80.5

<b>Totals For All Projects</b>	29,136	1,512,867.8
--------------------------------	--------	-------------

51.9



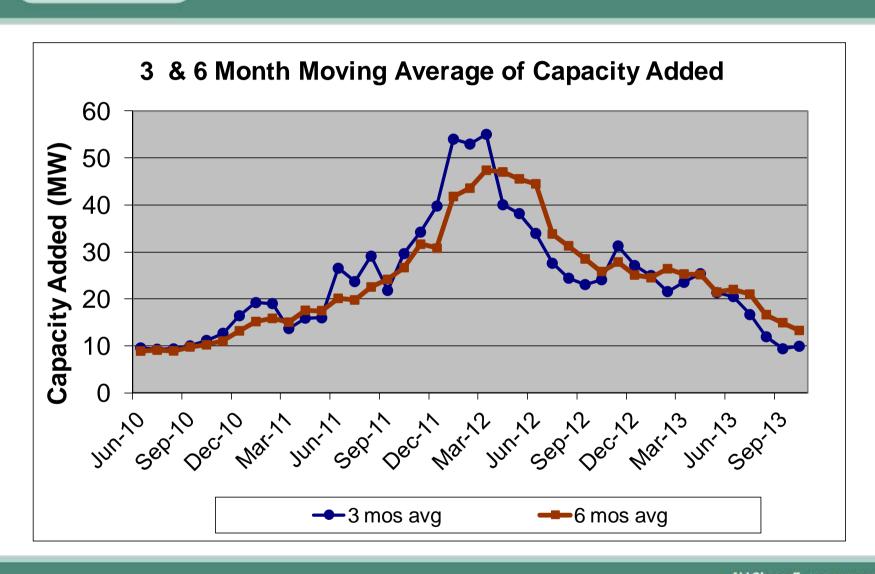
### NJCEP Solar Pipeline Plus Installed Projects History

NJCEP Solar Pipeline Plus Installed Projects History as of 10/31/13							
As Of	MW Installed	MW Pipeline	Combined MW				
7/31/2012	852.7	756.2	1,608.9				
8/31/2012	876.0	806.9	1,682.9				
9/30/2012	900.9	739.9	1,640.8				
10/31/2012	924.9	732.0	1,656.9				
11/30/2012	969.9	723.5	1,693.4				
12/31/2012	982.3	717.6	1,699.9				
1/31/2013	999.8	704.9	1,704.7				
2/28/2013	1,034.5	675.4	1,709.9				
3/31/2013	1,052.8	675.5	1,728.3				
4/30/2013	1,075.9	660.2	1,736.1				
5/31/2013	1,098.5	656.9	1,755.4				
6/30/2013	1,114.3	562.5	1,676.8				
7/31/2013	1,125.8	516.9	1,642.7				
8/31/2013	1,134.3	357.1	1,491.4				
9/30/2013	1,142.3	354.4	1,496.7				
10/31/2013	1,155.4	357.4	1,512.8				

Preliminary values for 10/31/13



### Solar Installed Capacity All Projects



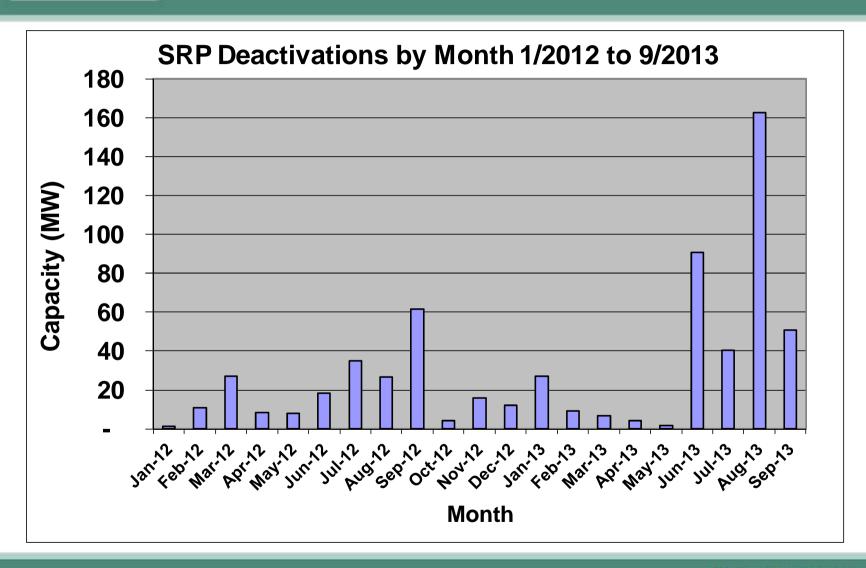


### **SRP Deactivations by Month**

SRP Deactiv	SRP Deactivations by Month as of 9/30/13							
Month End	Project Qty	Capacity (kW)						
Jun-12	107	18,306						
Jul-12	215	34,800						
Aug-12	140	26,579						
Sep-12	337	61,572						
Oct-12	30	4,083						
Nov-12	342	15,879						
Dec-12	132	12,012						
Jan-13	132	27,273						
Feb-13	142	9,392						
Mar-13	173	6,559						
Apr-13	76	4,226						
May-13	120	1,839						
Jun-13	105	90,875						
Jul-13	104	40,546						
Aug-13	137	162,547						
Sep-13	90	50,731						



### **SRP Deactivations by Month**





#### Retail sales estimate by Energy Year

 Incorporate revised final retail sales value for EY2013, 76.26 Million MWHs

Seek additional input from stakeholder group on assumptions used in forecast:

- Behind the meter run rate changes by year for new capacity added
- Direct grid supply project installations by EY



### Discussion points from previous meeting:

- 1) pick a growth percentage and apply it each year;
- 2) use 3 years forward, 6 months back approach;
- 3) use recent average of NJ retail electric sales data and consider using EIA data for future trends; and
- 4) refer to NJ econometric model to help inform the estimate of future retail electric sales.
- 5) consider using 1,300 kWh/kW instead of 1200 kWh/kW value being used in the current calculations.



#### **RPS Requirement By Energy Year**

Energy Yr	RPS Req	Status
2012	442,000	Actual
2013	596,000	Actual
2014	1,660,500	Estimated
2015	1,984,500	Estimated
2016	2,227,500	Estimated

Energy Yr	Retail Sales Est (MWh)	RPS %	Est RPS Req (MWh)
2014	81,000,000	2.05%	1,660,500
2015	81,000,000	2.45%	1,984,500
2016	81,000,000	2.75%	2,227,500

Note: The Retail Sales estimates shown above were used to estimate RPS MWh requirement for EY 2014-2016



#### **NJCEP Solar Generation Forecast**

Assumptions used in forecast of annual capacity added for each EY

	Est Capa	acity Added	(kW/Yr)	BTM Monthly Run Rate (kW/Month)			Estimated Annual Grid Supply Capacity Added (kW/Yr)			
EY	Low	Med	High	Low	Med	High	Low	Med	High	
EY2014	263,720	303,096	335,824	16,810	19,508	21,069	62,000	69,000	83,000	
EY2015	273,720	318,096	370,048	16,810	19,508	22,754	72,000	84,000	97,000	
EY2016	283,720	330,096	406,888	16,810	19,508	24,574	82,000	96,000	112,000	

Capacity added each year = (12 months x BTM monthly run rate) + annual grid supply added

Low, Med, High Assumptions used in forecast of annual capacity added for each EY:

Low Based upon 4 year historical run rate for BTM installs plus annual additions from grid supply table above

Med Based upon 1 year historical run rate for BTM installs plus annual additions from grid supply table above

Based upon 1 year historical run rate for BTM installs with 8% growth per year plus annual

High additions from grid supply table above

The above table will be re-arranged so that the totals are on the right side.

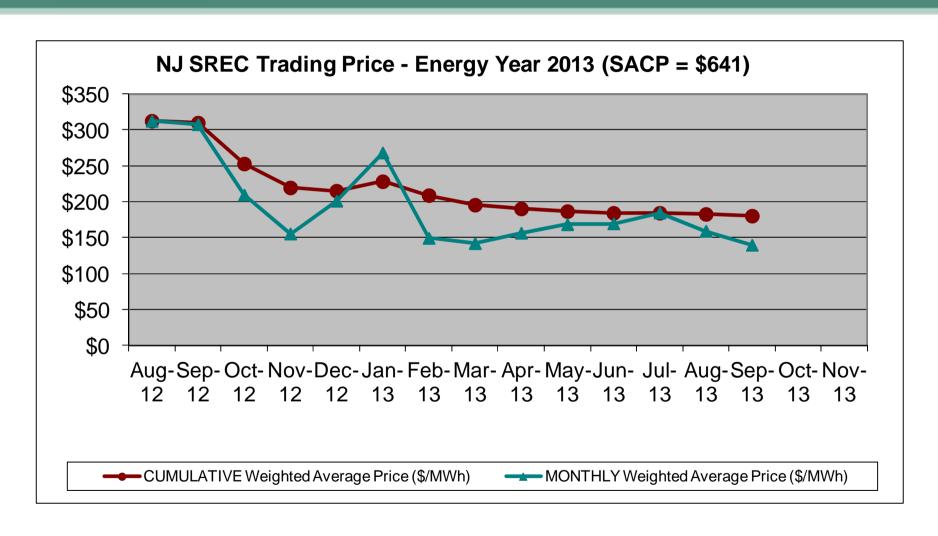


# **Current SREC Trading Statistics Energy Year 2013**

EY 2	2013 SA	CP= \$641	SREC Quantity			Mor	ithly		Cumulative		
Month	Year	Active kW DC	Issued in Month	Traded in Month	High (\$/MWh)		Low (\$/MWh)		# of SRECs Traded	Weighted Avg Price (\$/MWh)	
Nov	2013										
Oct	2013										
Sept	2013	1,104,519	5,550	101,996	\$	641	\$	70	1,811,810	\$180.30	
Aug	2013	1,098,046	9,454	114,737	\$	585	\$	70	1,709,814	\$182.72	
Jul	2013	1,084,104	19,714	553,447	\$	610	\$	50	1,595,077	\$184.41	
Jun	2013	1,060,295	157,361	145,381	\$	641	\$	50	1,041,630	\$184.28	
May	2013	1,028,561	137,672	150,287	\$	613	\$	50	896,249	\$186.66	
Apr	2013	996,680	96,105	100,390	\$	640	\$	40	745,962	\$190.31	
Mar	2013	977,167	61,194	128,898	\$	641	\$	68	645,572	\$195.57	
Feb	2013	941,684	55,566	126,629	\$	620	\$	40	516,674	\$208.88	
Jan	2013	930,630	47,642	96,603	\$	641	\$	40	390,045	\$228.20	
Dec	2012	907,536	65,933	72,070	\$	620	\$	40	293,442	\$215.06	
Nov	2012	895,981	60,244	75,602	\$	658	\$	60	221,372	\$219.56	
Oct	2012	876,328	90,783	82,813	\$	658	\$	40	145,770	\$252.81	
Sept	2012	860,221	106,498	34,124	\$	650	\$	50	62,957	\$309.77	
Aug	2012	845,415	101,993	21,510	\$	620	\$	50	28,833	\$312.37	
Jul	2012	824,005	95,855	7,323	Due to low trade volume, the July trades are reported with the pricing data for August.						
	Total		1,111,564	1,811,810							



# Current SREC Trading Statistics Energy Year 2013





### For More Information

Subscribe to the Renewable Energy Committee Notification list <a href="http://www.njcleanenergy.com/RElist">http://www.njcleanenergy.com/RElist</a>

New Jersey Clean Energy Program Renewable Energy Reports Installation Summary by Technology <a href="http://www.njcleanenergy.com/projectreports">http://www.njcleanenergy.com/projectreports</a>

Program Status Reports
<a href="http://www.njcleanenergy.com/statusreports">http://www.njcleanenergy.com/statusreports</a>

NJ SREC Trading Statistics for each Energy Year <a href="http://www.njcleanenergy.com/srecpricing">http://www.njcleanenergy.com/srecpricing</a>