



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

**Charlie Garrison**

**March 13, 2013**

**Renewable Energy Meeting**

**Trenton, NJ**



## Solar Installed Capacity Data

- The installed solar capacity as of 1/31/13 is approximately 973.4 MW.
  - Approximately 17.8 MW installed in current month.
- The preliminary solar capacity project pipeline as of 1/31/13 is approximately 732 MW
  - The project pipeline decreased approximately 13 MW in the current month.

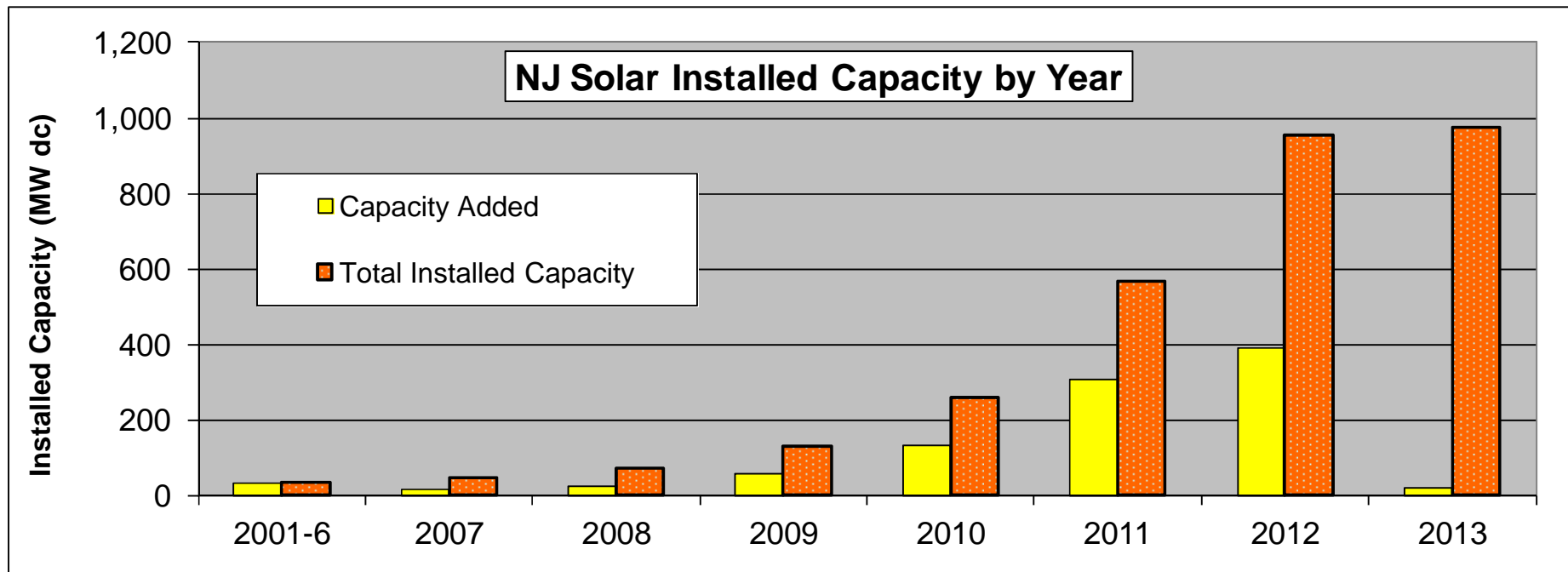


# New Jersey Solar Installations by Year As of 01/31/13

Year	# Projects	Total kW	Total Rebate \$
2001	3	7.5	\$ 37,145
2002	37	623.5	\$ 2,424,694
2003	95	1,176.6	\$ 5,323,411
2004	289	2,037.1	\$ 10,581,975
2005	729	9,908.1	\$ 46,235,897
2006	867	18,320.4	\$ 78,086,786
2007	693	15,258.3	\$ 58,122,386
2008	833	22,711.3	\$ 44,923,416
2009	1,349	57,254.3	\$ 56,026,262
2010	3,134	132,415.7	\$ 45,973,150
2011	5,397	305,207.2	\$ 13,394,332
2012	5,901	390,649.4	\$ 2,394,540
2013	592	17,871.8	\$ 2,070
<b>Total</b>	<b>19,919</b>	<b>973,441.1</b>	<b>\$ 363,526,065</b>



# Solar Installed Capacity





# NJCEP Solar Pipeline Plus Installed Projects History

<b>NJCEP Solar Pipeline Plus Installed Projects History as of 1/31/13</b>			
<b>As Of</b>	<b>MW Installed</b>	<b>MW Pipeline</b>	<b>Combined MW</b>
9/30/2011	447.7	569.3	1,017.0
10/31/2011	490.5	571.7	1,062.2
11/30/2011	531.7	599.4	1,131.1
12/31/2011	565.9	618.7	1,184.6
1/31/2012	649.9	548.0	1,197.1
2/29/2012	688.3	542.3	1,231.4
3/31/2012	730.0	526.1	1,256.5
4/30/2012	770.0	510.0	1,280.0
5/31/2012	802.8	560.7	1,363.5
6/30/2012	831.9	590.3	1,422.2
7/31/2012	852.6	756.2	1,608.8
8/31/2012	876.1	806.9	1,683.0
9/30/2012	900.9	740.0	1,640.9
10/31/2012	918.1	738.9	1,657.0
11/30/2012	943.2	750.3	1,693.5
12/31/2012	955.6	744.4	1,700.0
1/31/2013	973.4	731.6	1,705.0

Preliminary values for 1/31/13

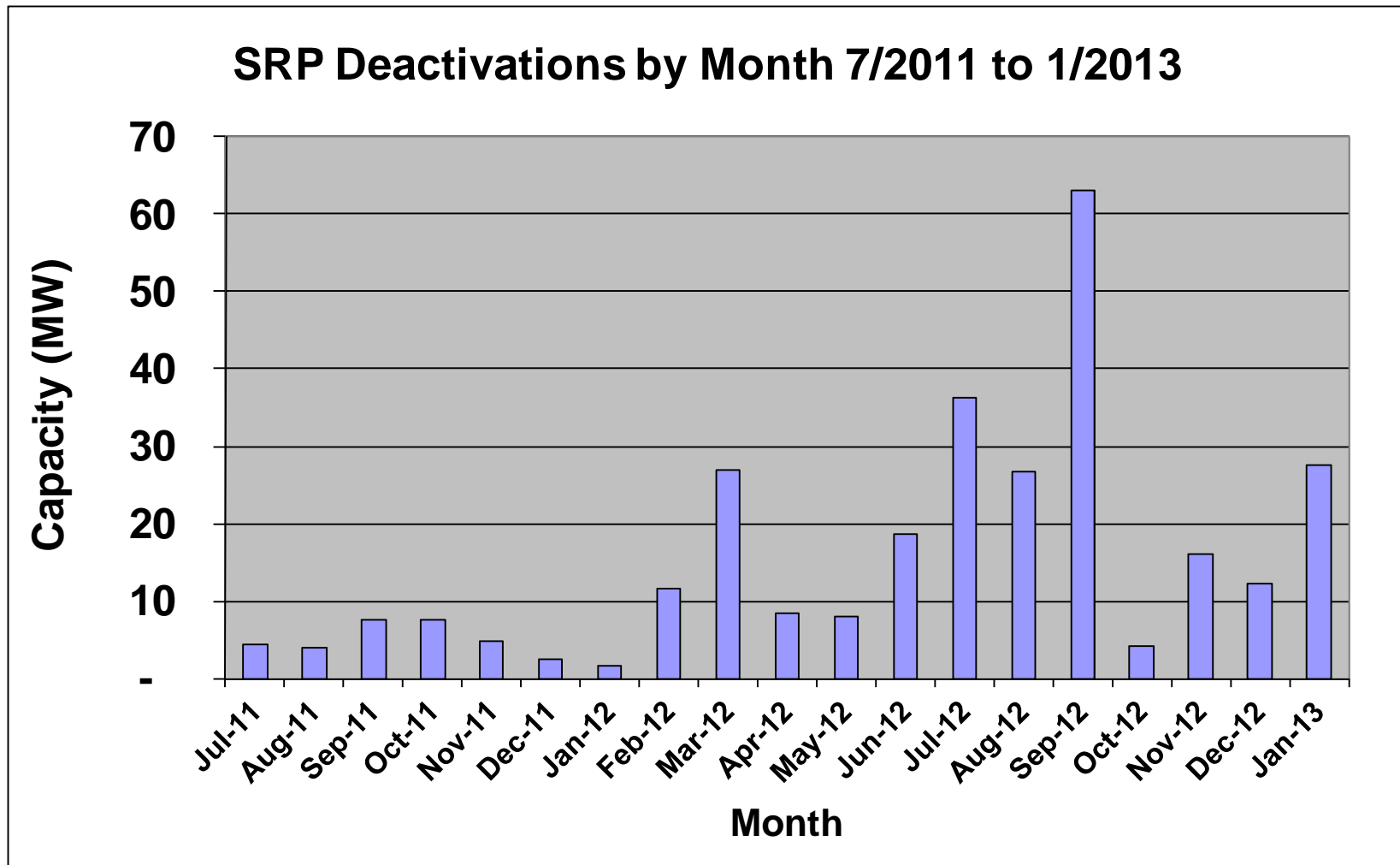


# SRP Deactivations by Month

SRP Deactivations by Month			
Year	Month End	Project Qty	Capacity (kW)
2011	Oct-11	120	7,485
2011	Nov-11	46	4,689
2011	Dec-11	81	2,493
2012	Jan-12	40	1,496
2012	Feb-12	86	11,552
2012	Mar-12	150	26,976
2012	Apr-12	116	8,323
2012	May-12	133	7,928
2012	Jun-12	122	18,540
2012	Jul-12	227	36,378
2012	Aug-12	146	26,674
2012	Sep-12	346	62,985
2012	Oct-12	35	4,126
2012	Nov-12	356	16,049
2012	Dec-12	144	12,258
2013	Jan-13	147	27,569



# SRP Deactivations by Month





# Solar Capacity By Interconnection Type

<b>Installed Solar Projects as of 1/31/13</b>				
Interconnection Type	Qty	System Size (kW)	Percent	Avg System Size (kW)
Behind the meter	19,824	778,094.5	79.9%	39.3
Direct Grid Supply	95	195,346.6	20.1%	2,056.3
<b>Totals</b>	<b>19,919</b>	<b>973,441.1</b>	<b>100.0%</b>	<b>48.9</b>
<b>Solar Project Pipeline as of 1/31/13</b>				
Interconnection Type	Qty	System Size (kW)	Percent	Avg System Size (kW)
Behind the meter	4,750	233,567.5	31.9%	49.2
Direct Grid Supply	49	497,887.1	68.1%	10,161.0
<b>Totals</b>	<b>4,799</b>	<b>731,454.6</b>	<b>100.0%</b>	<b>152.4</b>
<b>Totals For All Projects</b>	<b>24,718</b>	<b>1,704,895.7</b>		<b>69.0</b>





# Solar Capacity By Interconnection Type

## NJCEP Solar Installed Projects Plus Pipeline History as of 12/31/12

As Of	MW Installed		MW Pipeline		Combined MW
	BTM	DGS	BTM	DGS	
12/31/2011	458.1	107.7	446.5	172.3	1,184.6
3/31/2012	567.8	162.6	376.4	149.8	1,256.6
6/30/2012	659.7	171.9	338.5	251.7	1,421.8
9/30/2012	708.5	192.4	271.2	468.8	1,640.9
12/31/2012	760.3	195.3	246.5	497.9	1,700.0

BTM = Behind The Meter

DGS = Direct Grid Supply



# NJCEP Solar Generation Forecast

*This data is provided for informational purposes only. Past levels of installed capacity rates are not predictive of future values, and any persons considering investment in the solar market should perform their independent due diligence.*



# NJCEP Solar Installed Capacity Forecast - As of 1/31/13

## Cumulative Installed Capacity (MW dc)

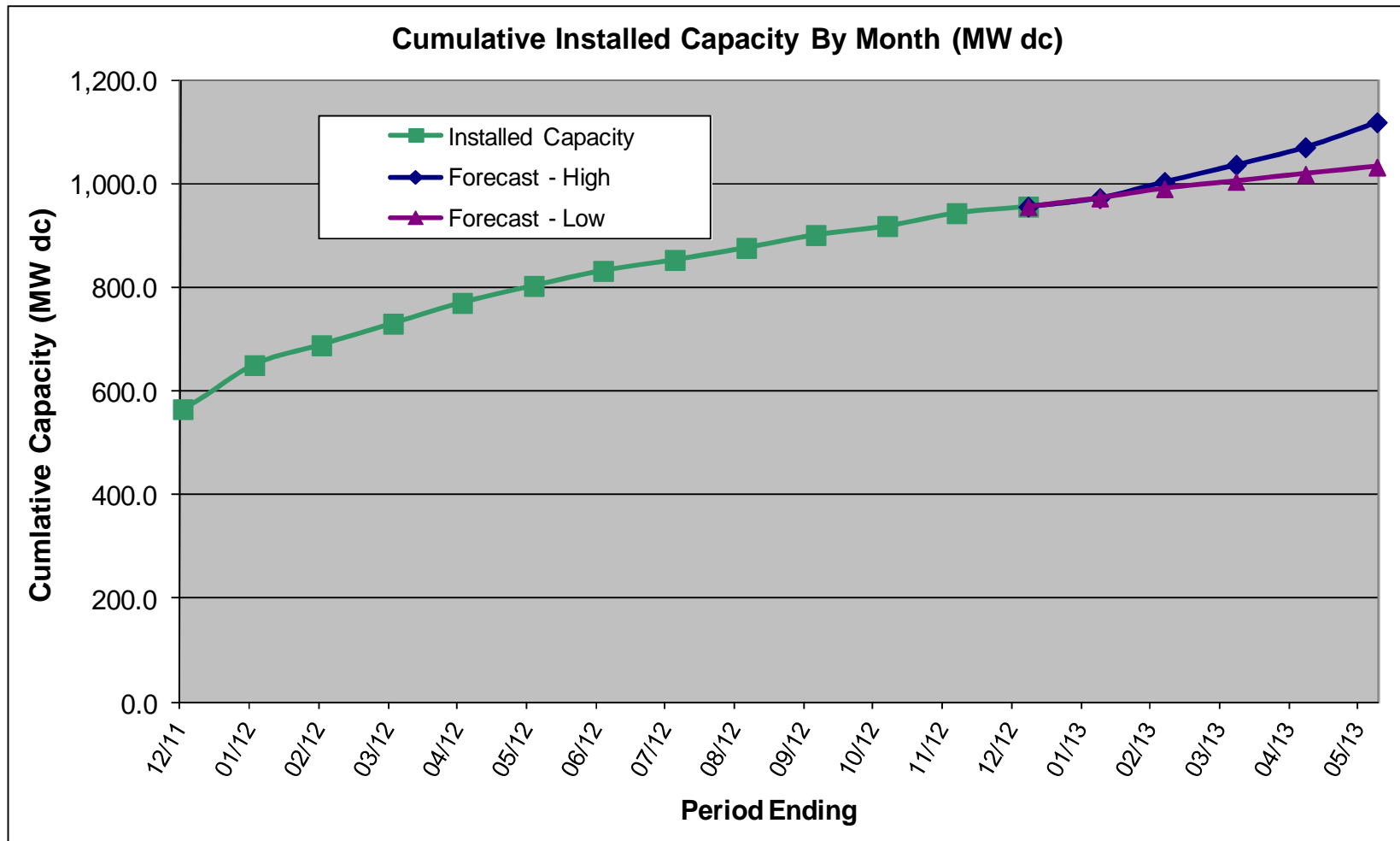
End Date	05/31/12	06/30/12	07/31/12	08/31/12	09/30/12	10/31/12	11/30/12	12/31/12	01/31/13	02/28/13	03/31/13	04/30/13	05/31/13
Forecast - Low	802.8	831.8	852.7	876.1	900.9	918.1	943.2	955.6	973.4	991.4	1,007.4	1,021.4	1,035.4
Forecast - High	802.8	831.8	852.7	876.1	900.9	918.1	943.2	955.6	973.4	1,011.4	1,045.4	1,079.4	1,127.5

The 973.4 MW of solar capacity installed as of 01/31/13 and the additionally forecast installed solar capacity for the remainder of Energy Year 2013 is estimated to be capable of producing approximately 1,105,700 to 1,118,800 SRECs during Energy Year 2013.

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# NJCEP Solar Installed Capacity Forecast - As of 1/31/13





# NJCEP Solar Generation Forecast

## 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

## NJCEP Solar Generation Forecast

### Forecasted MW Capacity Added By Energy Year - As of 01/31/13

Energy Yr	Low	Med	High
2012	442.0	442.0	442.0
2013	251.5	278.5	309.5
2014	168.5	354.8	576.6
2015	270.0	256.5	337.5
2016	303.8	243.0	222.8

### Assumptions used in forecast of annual capacity added for each EY expressed as a percent of RPS requirement

Energy Yr	Low	Med	High
2012	390%	390%	390%
2013	196%	217%	241%
2014	19%	40%	65%
2015	100%	95%	125%
2016	150%	120%	110%



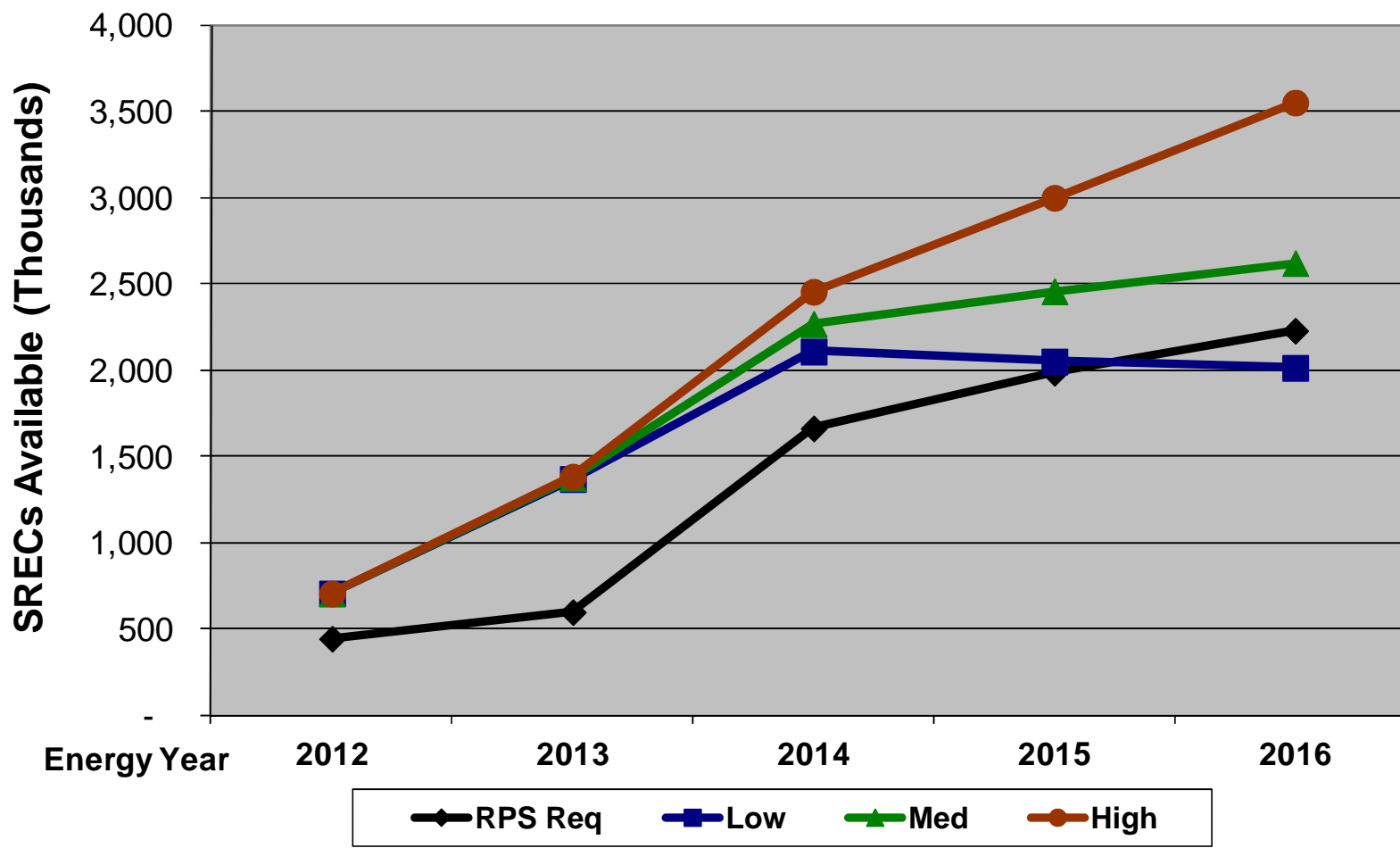
# NJCEP Solar Generation Forecast Summary By Energy Year - As of 1/31/13

Energy Yr (RPS Req)	Item	Low	Med	High
<b>EY2012 (442 GWh)</b>	Est Avail (MWh)	704,688	704,688	704,688
	% of RPS Requirement	<b>159.4%</b>	<b>159.4%</b>	<b>159.4%</b>
	MW Difference	218.9	218.9	218.9
<b>EY2013 (596 GWh)</b>	Est Avail (MWh)	1,368,388	1,374,588	1,381,488
	% of RPS Requirement	<b>229.6%</b>	<b>230.6%</b>	<b>231.8%</b>
	MW Difference	643.7	648.8	654.6
<b>EY2014 (1660.5 GWh)</b>	Est Avail (MWh)	2,106,988	2,265,888	2,453,288
	% of RPS Requirement	<b>126.9%</b>	<b>136.5%</b>	<b>147.7%</b>
	MW Difference	372.1	504.5	660.7
<b>EY2015 (1984.5 GWh)</b>	Est Avail (MWh)	2,048,888	2,454,988	2,998,088
	% of RPS Requirement	<b>103.2%</b>	<b>123.7%</b>	<b>151.1%</b>
	MW Difference	53.7	392.1	844.7
<b>EY2016 (2227.5 GWh)</b>	Est Avail (MWh)	2,012,588	2,619,188	3,549,688
	% of RPS Requirement	<b>90.4%</b>	<b>117.6%</b>	<b>159.4%</b>
	MW Difference	(179.1)	326.4	1,101.8



# NJCEP Solar Generation Forecast

## Forecasted SRECs Available By Energy Year







# Current SREC Trading Statistics Energy Year 2013

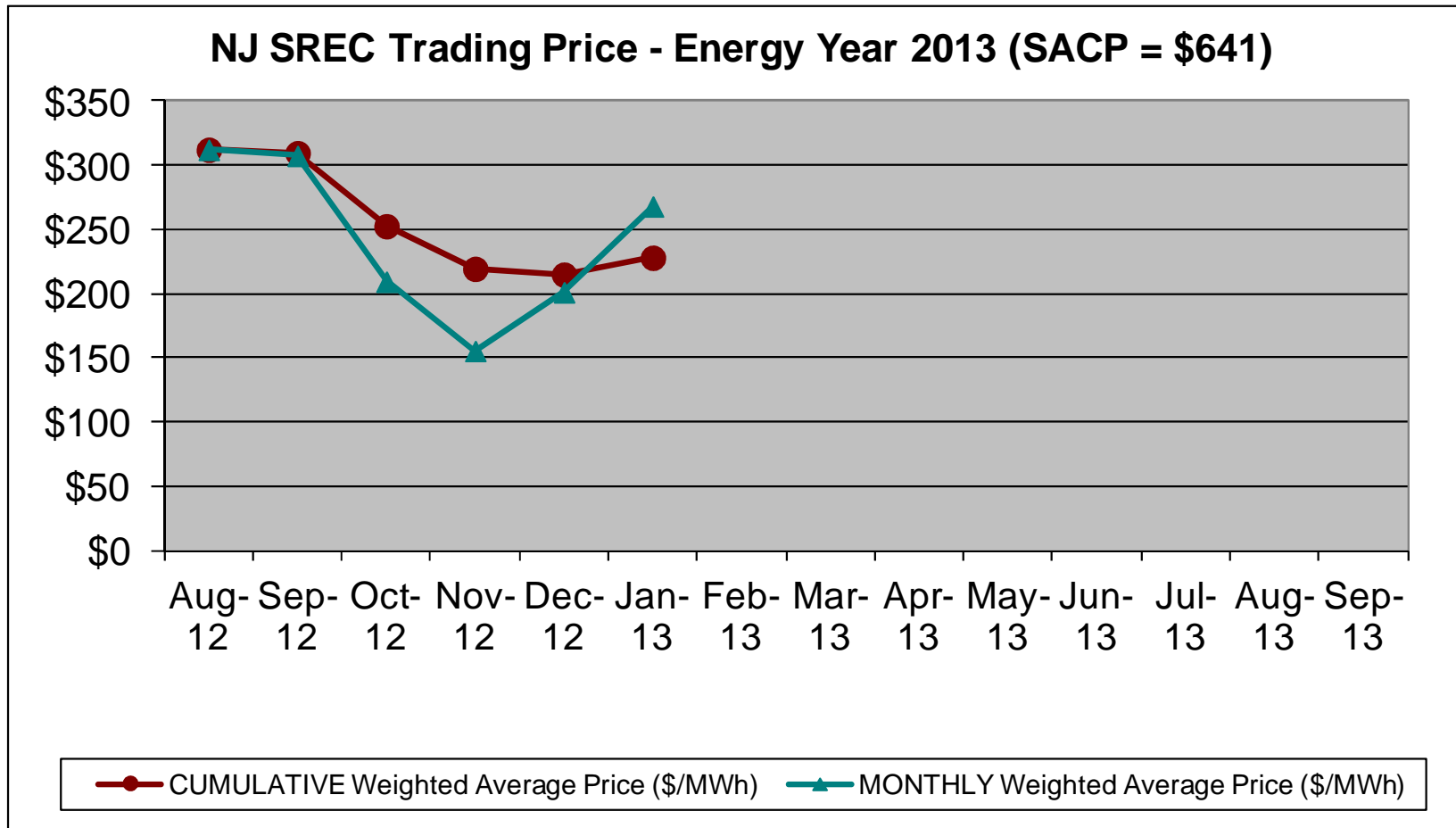
## Current SREC Trading Statistics Energy Year 2013

For SRECs from electricity produced June 1, 2012 – May 31, 2013. Includes transactions during the true-up period.

EY 2013 SACP= \$641			SREC Quantity		Monthly		Cumulative	
Month	Year	Active kW DC	Issued in Month	Traded in Month	High (\$/MWh)	Low (\$/MWh)	# of SRECs Traded	Weighted Avg Price (\$/MWh)
Mar	2013							
Feb	2013							
Jan	2013	921,280	47,648	96,603	\$ 641	\$ 40	390,045	\$228.20
Dec	2012	898,186	65,933	72,070	\$ 620	\$ 40	293,442	\$215.06
Nov	2012	886,645	60,244	75,602	\$ 658	\$ 60	221,372	\$219.56
Oct	2012	866,992	90,783	82,813	\$ 658	\$ 40	145,770	\$252.81
Sept	2012	850,885	106,498	34,124	\$ 650	\$ 50	62,957	\$309.77
Aug	2012	836,079	101,993	21,510	\$ 620	\$ 50	28,833	\$312.37
Jul	2012	814,669	95,855	7,323	Due to low trade volume, the July trades are reported with the pricing data for August.			
	<b>Total</b>		<b>568,954</b>	<b>390,045</b>				



# Current SREC Trading Statistics Energy Year 2013





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NJ SREC Trading Statistics for each Energy Year

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