

New Jersey's Renewable Portfolio Standard Rules

2010 Annual Report

DRAFT FOR PUBLIC COMMENT

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in New Jersey's Board of Public Utilities

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1. Executive Summary

The following report provides a summary of the results from compliance with New Jersey's Renewable Portfolio Standard (RPS) by regulated retail electricity suppliers and providers and other renewable energy market developments from 2010. The Office of Clean Energy in the New Jersey Board of Public Utilities (the Board) oversees implementation of the state's RPS rules including the facilitation of annual compliance reporting for regulated entities. The Office of Clean Energy has issued this report toward providing policy makers, market participants and other decision makers with information to judge the status of the RPS rules and the affected renewable energy markets.

The RPS regulations, which are authorized by the Electric Discount and Energy Competition Act of 1999, N.J.S.A. 48:3-49 et seq., require electric power suppliers and basic generation service providers, referred to as "supplier/providers", to include minimum amounts¹ of renewable energy in the electricity they sell. The rules specify a separate minimum requirement for solar electric generation, for Class I renewable energy, and for Class II renewable energy. These minimum amounts increase over time to require greater REC retirement and demand for renewable energy. There are two methods by which a supplier/provider may meet the applicable minimum volumetric or percentage requirement: by retiring renewable energy certificates (RECs), each representing the renewable energy attributes of a megawatt hour (MWh) of electricity; or by submitting alternative compliance payments (ACPs).

The RPS requires supplier/providers to submit compliance reports by October 1, four months after the close of each "Reporting Year"² (RY) (N.J.A.C. 14:8-2.11). The compliance results summarized in this report cover RPS Reporting Year 2010 (RY10), which ended May 31, 2010. During RY10, over 77 million MWh of retail electricity were sold by supplier/providers, down significantly from RY09's 81 million MWh. Retail sales in New Jersey's regulated electricity markets were the lowest since the RY05 compliance year level. Lower retail sales were attributed to mild weather and the economic recession.

For Class I and Class II renewable energy, the RY10 minimum percentage requirements, 4.685% and 2.5% respectively, were met *almost* entirely through the retirement of Renewable Energy Certificates (RECs). This is the second consecutive year, since RECs were authorized by the Board for use in NJ RPS compliance, that the Class I and Class II requirements were achieved largely through REC retirement, with little or no use of ACPs. Over three million (3,627,069) NJ Class I RECs and less than two million (1,935,469) NJ Class II RECs were retired toward RY10 compliance. Class I REC prices were reported at all time low of \$2.00 per REC by the end of RY10. Eligible new capacity appears to be coming online at a faster pace than the aggregated demand from regional state RPSs.

¹ The Solar Advancement Act of 2010 signed January 17, 2010 directed the Board to change the NJ RPS solar requirements from a percentage basis to a volumetric requirement effective upon adoption. The Board proposed amendments to the RPS regulations on March 30, 2011. The EY11 solar requirements are 306 GWhs.

² The Solar Advancement Act of 2010 also changed the terminology for a compliance period for the NJ RPS from a "Reporting Year" to an "Energy Year". This amendment and other regulatory changes proposed on March 30, 2011 will be published in the New Jersey Register with a 60 day public comment period.

By contrast with the Class I and II compliance results, there were insufficient SRECs to meet the RY10 minimum percentage requirement for solar electric generation, which increased from 0.16% in RY09 to 0.2210% in RY10. The RPS required 171,095 SRECs or SACP payments and regulated entities retired only 123,717 SRECs for RY10 compliance. Over 72% of the NJ RPS solar requirements in RY10 were met with SRECs retired compared with less than 58% of the solar obligation in the previous compliance year (RY09) fulfilled with SRECs. As a result of the relatively higher levels of compliance via SREC retirement, the cost of SACP payments fell from RY09's \$38.9 million to \$32.8 million in RY10. On March 30, 2011, the Board approved an RPS rule amendment which proposes a process for returning these funds to ratepayers as required by the Solar Advancement Act of 2010.

The Office of Clean Energy estimates the total cost of compliance with the RY10 RPS was approximately \$122 million, slightly more than RY09's cost of RPS compliance calculated at \$120 million. The solar RPS requirement is estimated to have cost approximately \$109 million: \$32.8 million paid in SACP's plus more than \$76 million in SRECs purchased for retirement. The Class I requirements are estimated to have cost approximately \$11 million and the Class II requirements cost less than \$2 million. Supplier/providers, who bear the obligation of RPS compliance, are presumed to pass through to their customers, the New Jersey electricity ratepayers, the majority of these costs. In addition, over \$47 million in solar rebate payments were made on CORE and REIP commitments in 2010.

The SREC-based finance programs administered by the Electric Distribution Companies (EDCs) achieved several significant milestones in 2010. The first projects awarded long term SREC contracts in the program offered to JCPL, ACE and Rockland customers were constructed and began contributing SRECs. And PSEG's Solar Loan and Solar For All Programs each contributed significant amounts of new capacity to NJ's SREC market. The first auction of SRECs created by participating projects occurred in January 2010, with additional auctions held in July and October. All SRECs auctioned had originated in the PSEG solar programs and will be used to offset the \$217 million in solar investments reported as incurred in 2010.

The market for renewable energy, particularly solar photovoltaic installations, in New Jersey during 2010 was strong despite the national economy's slow emergence from the recession. Solar installations in New Jersey continued to come online at an unprecedented rate through both the Board's New Jersey Clean Energy Program (NJCEP) rebate programs and the non-rebated SREC Registration Program (SRP). Solar project installation reached an all-time monthly high in December 2010 with 24 MWs of capacity reported through the rebate and SREC Registration programs.

New Jersey's renewable energy market, as a result of our RPS program, continues to attract diverse participants including facility owners of all sizes, renewable energy generation project developers, system installers, energy brokers, aggregators and auction hosts. However, since our state's RPS comprises one portion of the regional compliance market for RECs and is complemented by other states' markets, continued review of our goals and objectives in light of regional developments is warranted.

2. NJ Renewable Energy Market Development Activities in 2010

The 2009 Annual Report for New Jersey's Renewable Portfolio Standard Rules (2009 Report) issued February 8th, 2010 includes a comprehensive chronology of the evolution of the state's RPS rules and the basic elements driving NJ renewable energy market development. Readers unfamiliar with the significant changes in state renewable energy incentive policy are encouraged to review the 2009 Report which can be accessed via: <http://www.njcleanenergy.com/main/clean-energy-council-committees/rps-rule-revisions>.

New Jersey renewable energy market development activity is reported via a variety of "project activity reports" issued periodically through the Renewable Energy Committee list server and posted on the NJCEP website at <http://www.njcleanenergy.com/renewable-energy/project-activity-reports/project-activity-reports>. The sources of new capacity eligible to create RECs for use in New Jersey's RPS are different for each category; solar, Class I and Class II. The sources of new installations eligible to create SRECs for use in the NJ RPS include the legacy solar rebate programs; CORE and REIP, as well as the SREC Registration Program. The SREC Registration Program was established in 2007 to enable projects to participate in the NJ SREC market without first receiving an NJCEP rebate. The Board authorized its contractors, known as the Renewable Energy Market Managers, to issue the last rebate commitments in the CORE program in 2009.

On December 6, 2010, the Board approved the Market Manager's request to issue the last remaining solar rebate commitments in the REIP for applications received in September 2010. The Board also approved a new EDC Solar Finance Incentive (EFSI) program with a budget of \$3.8 million for small solar projects; residential less than 10 kW and commercial less than 50 kW. To participate in the EFSI program, projects must be located in JCPL, ACE or Rockland territories, register in the SREC Registration Program, receive an award in the competitive SREC solicitation process, install and fulfill final program inspection processes by December 31, 2011. The intent of the EFSI is to motivate developer participation in the under-subscribed, small solar market segment of the EDC SREC-based finance programs. The PSEG solar finance programs were not deemed to be under-subscribed hence their participants are ineligible in the EFSI incentive program.

a. New Capacity by Technology

In the NJ RPS, Class I and Class II RECs can be created by facilities generating energy "within or delivered into the PJM region, as defined in [N.J.A.C. 14:4-1.2](#). Energy generated outside the PJM region shall be considered delivered into the PJM region if it has been added to the PJM region through dynamic scheduling of the output to load inside the PJM region" (N.J.A.C. 14:8-2.7 (b)). Facilities eligible to create Class I and Class II RECs have included those that participate in the NJCEP rebate and grant programs as well those from 9 other states (Appendix 4).

The Office of Clean Energy certifies renewable energy facilities that seek to create RECs through the PJM-EIS Generation Attribute Tracking System (GATS) for use in the NJ

RPS. In RY10, no new facilities were certified as eligible to create Class II RECs, but 29 new facilities from seven states for nearly 1200 MW of capacity was certified as eligible to create NJ Class I RECs within PJM-EIS GATS (Table 1). The newly certified facilities include six wind and one biomass project provided NJCEP rebates in calendar year 2009.

Table 1. New Capacity Certified as NJ RPS-eligible Class I by State in RY10

NJ Class I Certified Capacity Added in GATS for RY10 (MW)			
State	Wind	LFG	Total
NJ	0.1046	3.236	3.3406
MD	0	3.24	3.24
IL	556.5	0	556.5
IN	349.65	0	349.65
PA	153	9.2	162.2
WV	100.5	0	100.5
VA	0	16.3	16.3
TOTAL	1159.7546	31.976	1191.7306

As of December 31, 2010, nearly 300 MW of solar and NJ Class I renewable energy capacity had been installed in New Jersey as a result of the incentives available through the NJCEP, the net metering and interconnection regulations and the Renewable Portfolio Standard regulations. The solar photovoltaic market has provided the greatest portion of the state's renewable energy capacity (259 MWdc) and by an equally large margin the greatest number of installations at over 8,000 systems. Biomass installations are the second largest resource by aggregate capacity participating in the NJCEP with nearly 31 MW installed followed by wind installations with nearly 7.9 MW (Table 2).

Table 2. Installed Projects Participating in the NJCEP from Inception through 2010

NJCEP Renewable Energy Technologies			
Installed Projects 2001 to 12/31/2010			
Technology	# Projects	Total kW	Total Rebate \$
Solar	8,037	259,674.3	\$ 349,578,777
Biomass	17	30,905.0	\$ 14,188,624
Fuel Cell	8	1,505.0	\$ 4,707,312
Wind	33	7,899.1	\$ 4,717,522
Total*	8,095	299,983.3	\$ 373,192,234

The majority of the solar energy capacity eligible to participate in the RPS was installed in the last year with more than 132 MWdc of solar photovoltaics connected to the electric distribution system serving New Jersey in 2010 (Figure 1 and Table 3). In fact, the amount of solar capacity installed in 2010 exceeded the cumulative capacity installed since the inception of the clean energy incentive programs in 2001.

Figure 1. NJ RPS-eligible Solar PV Capacity Installed by Year and Cumulative

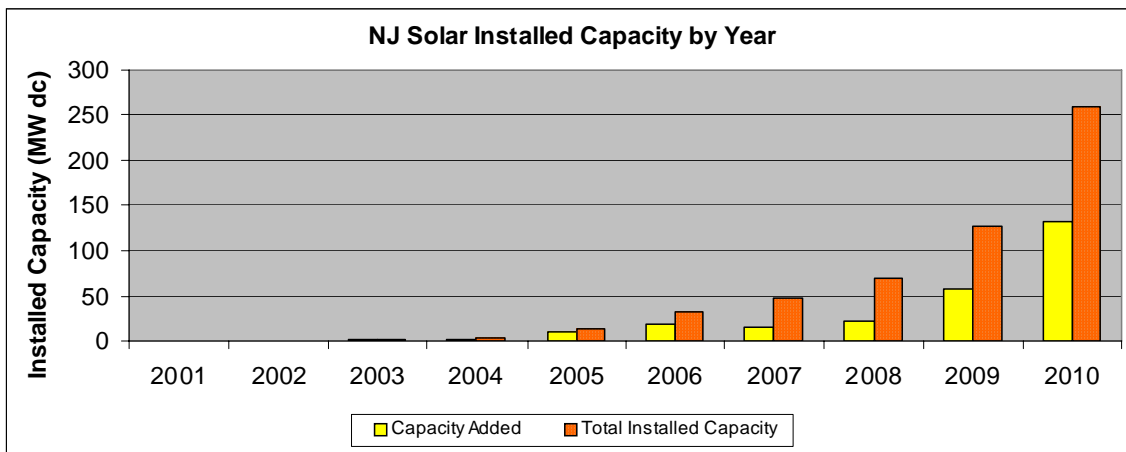


Table 3. NJ RPS-eligible Solar PV Installations; Number, Capacity and Rebates Annually

New Jersey Solar Installations by Year As of 12/31/10									
Year	Projects <= 10 kW			Projects > 10 kW			All Projects		
	# Projects	Total kW	Total Rebate \$	# Projects	Total kW	Total Rebate \$	# Projects	Total kW	Total Rebate \$
2001	3	7.51	\$ 37,145.00	0	-	\$ -	3	7.5	\$ 37,145.00
2002	30	97.89	\$ 481,790.07	7	525.56	\$ 1,942,904.00	37	623.5	\$ 2,424,694.07
2003	88	464.34	\$ 2,487,130.81	7	712.30	\$ 2,836,280.00	95	1,176.6	\$ 5,323,410.81
2004	269	1,561.95	\$ 8,445,045.80	20	475.18	\$ 2,136,928.90	289	2,037.1	\$ 10,581,974.70
2005	593	4,007.09	\$ 21,631,077.38	136	5,900.96	\$ 24,604,819.38	729	9,908.1	\$ 46,235,896.76
2006	717	4,697.60	\$ 24,259,420.13	150	13,622.78	\$ 53,827,366.21	867	18,320.4	\$ 78,086,786.34
2007	586	4,146.97	\$ 19,388,536.32	107	11,111.30	\$ 38,733,849.70	693	15,258.3	\$ 58,122,386.02
2008	645	4,422.84	\$ 18,172,868.32	190	18,297.64	\$ 26,788,695.06	835	22,720.5	\$ 44,961,563.38
2009	977	6,941.50	\$ 17,648,890.34	373	50,313.23	\$ 39,031,140.90	1350	57,254.7	\$ 56,680,031.24
2010	2233	15,531.75	\$ 20,316,104.12	906	116,835.89	\$ 26,808,784.20	3139	132,367.6	\$ 47,124,888.32
Total	6,141	41,879.4	\$132,868,008	1,896	217,794.8	\$216,710,768	8,037	259,674.3	\$349,578,777

Total* = Program to date totals for Paid projects plus projects pending payment; preliminary results subject to true-up based upon inspection results.

Also noteworthy in 2010, the amount of solar capacity originating from the SREC Registration Program and its predecessor, the SREC-only Pilot Program at 145 MWdc, surpassed the amount of capacity of projects that have participated in the NJCEP rebate programs; CORE and REIP combined at 114 MWdc. (Table 4)

Table 4. NJ RPS-eligible Solar by Source Installed through 2010

New Jersey Solar Installations by Program, as of 12/31/10				
Program	# Projects	Installed Capacity (KW dc)	Total Rebate \$	% of Installed Capacity
CORE Solar	4,263	86,132.0	\$ 311,562,408.72	33.2%
REIP Solar	2,701	27,775.9	\$ 38,016,367.92	10.7%
SREC Reg. Pgm.^	1,073	145,766.4	\$ -	56.1%
Total*	8,037	259,674.3	\$ 349,578,777	100%

Total* = Program to date totals for paid projects plus projects pending payment; preliminary results subject to true-up based upon inspection results.

SREC Reg. Pgm.^ = SREC Registration Program participants as well as its predecessor SREC-Only Pilot Program.

b. NJCEP Highlights for 2010

The SREC Registration Program (SRP) was the largest source of newly installed capacity eligible to meet the solar requirements in the New Jersey RPS in 2010. With over 100 MW installed in the past year, non-rebated solar projects supplied over 77% of the new capacity to produce SRECs (Table 5). The relative growth in new supply from the non-rebated programs are the expected result of the decision by the Board in 2007 to reduce the importance of administratively-determined rebates in the transition to a greater reliance on providing incentives through the market-based SREC market. As the NJCEP rebate programs cease making new commitments for solar energy projects, the pipeline of proposed solar capacity continues to become dominated by SRP projects.

Table 5. NJ RPS-eligible Solar by Source Installed in 2010

New Jersey Solar Installed by Program in 2010				
Program Source	# Projects	System Size	Rebate Amount	% of Total kW
CORE Solar	175	8,229	\$17,951,325	6.2%
REIP Solar	2,055	22,118	\$29,173,563	16.7%
SREC Solar	909	102,020	\$0	77.1%
Total	3,139	132,368	\$47,124,888	100.0%

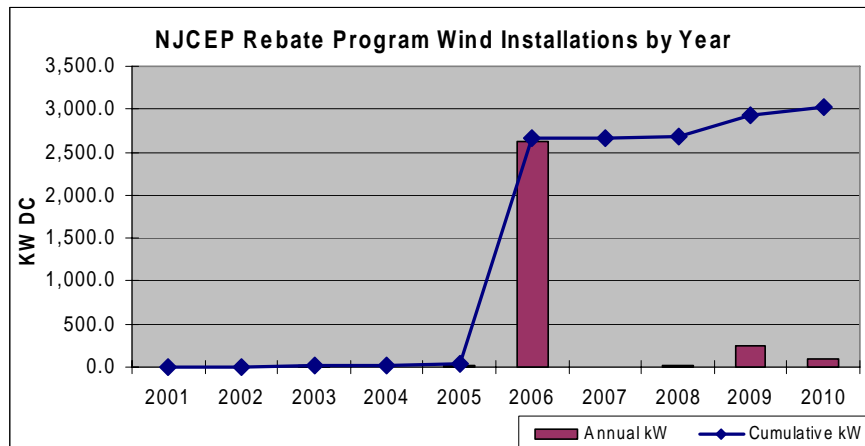
The NJCEP wind rebate program had six new small wind installations complete in 2010 for 100 kW of aggregate capacity and nearly \$300,000 in rebate payments. These six new projects join twenty five other projects less than 50 kW bringing the total capacity of small wind installations to 399 kW (Table 6).

Table 6. NJCEP Rebated Wind Installations by Year through 2010

NJCEP Rebate Program Wind Installations by Year As of 12/31/10							
Year	Projects <= 50 kW			All Projects			
	# Projects	Annual kW	Total Rebate \$	# Projects	Annual kW	Cumulative kW	Total Rebate \$
2001	0	0.0	\$ -	0	0.0	0.0	\$ -
2002	1	0.4	\$ 432	1	0.4	0.4	\$ 432
2003	2	20.0	\$ 63,453	2	20.0	20.4	\$ 63,453
2004	0	0.0	\$ -	0	0.0	20.4	\$ -
2005	1	10.0	\$ 50,000	1	10.0	30.4	\$ 50,000
2006	0	0.0	\$ -	1	2,625.0	2,655.4	\$ 1,819,241
2007	1	1.0	\$ 5,000	1	1.0	2,656.4	\$ 5,000
2008	3	21.8	\$ 92,406	3	21.8	2,678.2	\$ 92,406
2009	17	245.9	\$ 687,050	17	245.9	2,924.1	\$ 687,050
2010	6	100.0	\$ 299,939	6	100.0	3,024.1	\$ 299,939
Total	31	399.1	\$ 1,198,281	32	3,024.1		\$ 3,017,522

The Jersey Atlantic Wind (JAW) facility installed at Atlantic County Utility Authority in 2005 remains the largest project provided a rebate with 2.625 MW of capacity providing electricity onsite. The balance of the JAW facility at 4.875 MW was furnished with a NJCEP grid supply grant. The six new wind projects installed in 2010 brings the state's total wind capacity installed with grants and rebates to nearly 8 MW.

Figure 2. Wind Capacity Provided Rebate in the NJCEP by Year and Cumulative



The NJCEP biopower rebate program had one project complete in 2010 for 280 kW of capacity with \$490,000 provided in rebates. This new project brings the state's total for rebated biopower capacity to nearly 8.3 MW through approximately \$6.6 million in rebates (Table 7). Adding the newly rebated project to the total for all NJCEP biopower projects receiving rebates and grants brings the cumulative capacity to nearly 31 MW through 2010.

Table 7. NJCEP Rebated Biopower Installations by Year through 2010

NJCEP Rebate Program Biopower Installations by Year				
As of 12/31/10				
Year	# Projects	Annual kW	Cumulative kW	Total Rebate \$
2001	-	-	-	\$ -
2002	1	150	150	\$ 560,000
2003	2	150	300	\$ 153,594
2004	-	-	300	\$ -
2005	2	1,850	2,150	\$ 2,390,000
2006	-	-	2,150	\$ -
2007	2	1,150	3,300	\$ 1,170,000
2008	2	1,185	4,485	\$ 732,000
2009	2	3,490	7,975	\$ 1,079,805
2010	1	280	8,255	\$ 490,000
Total	12	8,255		\$ 6,575,399

c. EDC SREC-based Finance Programs

A key element in the Board's 2007 consideration of transitioning New Jersey's solar incentive system from one predominantly reliant upon rebates toward a more market-based system involved bolstering the security of the SREC value in the market for small solar systems. The Board directed a stakeholder proceeding be held to explore the role of Electric Distribution Companies (EDCs) in providing security to the SREC revenue stream. From this proceeding, the EDCs were authorized to develop and implement solar financing programs in an Order signed August 7, 2008 (I/M/O the RPS Amendments to the Minimum Filing Requirements for EE, RE, and Conservation Programs and for Electric Distribution Company Submittals of Filings in Connection with Solar Financing, Docket No.

EO0610074).

This Order summarized the position of interested parties with regard to contract terms, the size of the programs recommended, the market segments to be served, a Developer Cap on participation, treatment of legacy projects, and the program timeframe. Jersey Central Power & Light (JCP&L), Atlantic City Electric (ACE), and Rockland Electric (Rockland) were directed to develop an SREC-based financing plan by September 30, 2008. Each of the EDCs submitted plans for SREC-based financing programs with the JCP&L and ACE plans approved by the Board at the March 27, 2009 Agenda meeting, Rockland's plan was approved on July 29, 2009 and the PSEG Solar Loan II program was approved on November 10, 2009.

Under the JCP&L, ACE and Rockland programs, a solicitation manager is engaged to issue requests for bids for the purchase of solar renewable energy certificates (SRECs) under long-term contracts. Project developers bidding competitive proposals are offered contracts by the EDCs to purchase the SRECs. These contracts are intended to provide a secure revenue stream to facilitate private sector financing through loans or equity for the development and installation of the solar projects. The program was originally limited to residential and commercial systems up to 500 kW in capacity with contract terms that were to run from 10 to 15 years.

A solicitation process is facilitated online using a three step approach including an expression of interest, the submission of a qualification package and a pricing proposal. Pricing proposals are evaluated and ranked on the basis of the net present value (NPV) of one SREC at the proposed price over the proposed term. Once a given solicitation period closes all bids are ranked, the results of the solicitation are presented to the Board for approval and the most competitive are offered the opportunity to execute a contract with the applicable EDC. The solicitation process is described and facilitated at www.njedcsolar.com.

Each of the approved plans differ with respect to several components most notably, the program capacities offered and the time frame. The JCP&L and ACE programs propose to serve 42 MW and 19 MW, respectively according to the following schedule:

Table 8. JCP&L and Atlantic City Electric Company's SREC-based Finance Program

Reporting Year	JCP&L	ACE	Total
2009/10 (06/2009 – 05/2010)	23	10	33
2010/11 (06/2010 – 05/2011)	10	5	15
2011/12 (06/2011 – 05/2012)	9	4	13
Total	42	19	61

For the Rockland SREC financing plan, the program size in megawatts per year is as follows:

Table 9. Rockland Electric Company's SREC-based Finance Program Plan

Reporting Year	Rockland's Plan (MW)
2009/10 (06/2009 – 05/2010)	2.267
2010/11 (06/2010 – 05/2011)	0.803
2011/12 (06/2011 – 05/2012)	0.699
Total	3.769

Through the SREC-Based Financing Program ("Program"), each EDC contracts to purchase solar Renewable Energy Certificates ("SRECs") from solar projects on a long-term basis. The contract is for the purchase of SRECs only and does not include energy or capacity from the Project. The Program selects eligible projects on the basis of the price that a participant to the Program bids for the SRECs as well as the contract duration, which can vary between 10 and 15 years. The eligible project size in 2010 was 500 kW. The project size cap was changed to 2 MW by the Board at its December 2, 2010 agenda meeting.

The Program recognizes two segments: a small segment refers to projects up to 50 kW while the large segment refers to eligible projects above 50 kW. The Program considers Projects from residential and commercial customers, projects from private or public entities, and projects from the non-profit sector. Three solicitations were held under the Program in March, June and October 2010.

Of the sixty-three (63) bids received in the March 2010 solicitation, the Board approved fifty-seven (57) projects for award totaling 9,332.978 kW. The average price was \$424.18/SREC for a ten-year project and the lowest price was approximately \$350/SREC.

Of the twenty-three (23) bids received in the June 2010 solicitation, the Board approved twenty (20) projects for award, totaling 3,931.945 kW. The average price was \$466.21/SREC for a ten-year contract and the lowest price was approximately \$415/SREC.

Of the nineteen (19) bids received for the small segment (50 kW and below) in the October 2010 solicitation, the Board approved eighteen (18) projects for award,

totaling 341.780 kW. Of the thirty-eight (38) bids received for the large segment in the October 2010 solicitation, the Board approved thirty-seven (37) projects for award, totaling 9,170.410 kW. The average price was \$449.85/SREC for a ten-year contract and the lowest price was approximately \$420/SREC. Overall, the Board approved 132 projects for award under the Program, accounting for 22.8 MW.

PSEG's SREC Programs

PSEG began its first solar financing initiative, called Solar Loan I (SLI), with a filing submitted on April 19, 2007 for a 30 MW program. After extensive discovery and settlement meetings, on April 8, 2008 the Board approved the PSEG Solar Loan I program. Under the terms of the proposed pilot, the program would have four segments, with hard caps in the first year. The segment sizes were subject to conversion to "soft" caps in the program's second year depending on market conditions and the status of projects accepted into each segment in the initial year: 9 MW (30%) for municipal/ not-for-profit segment, 9 MW (30%) for residential and multi-family/affordable housing segments combined, and 12 MW (40%) for the commercial and industrial (C&I) segment.

PSEG proposed to loan ratepayers or solar developers a portion of their expected project costs. For purposes of repayment of the solar loan under SLI, SRECs have an established floor value of \$475 for the duration of the loan repayment period. Loans are repaid at the higher of the market value for SRECs or the established floor price at the time the SREC is transferred to PSEG over the appropriate 10 or 15 year loan term. On October 10, 2008, a stipulation was reached by interested parties that established an auction process for disposition of SRECs accrued under the PSEG solar loan program.

On June 18, 2010, the Board of Public Utilities approved amendments to the PSEG Solar Loan II program rules, including the creation of the 500 kW to 2 MW size range ("Very Large Nonresidential segment"). The PSEG Solar Loan I program had 22.2 MW of capacity subscribed before the remaining capacity was assigned to the Solar Loan II program. The primary difference in the Solar Loan II program is an SREC floor price that varies by market segment and by program quarter as opposed to one fixed floor price for all program participants.

The Solar Loan II program, originally filed as a two year, 51 MW program proposed by petition on March 31, 2009 was approved in November 2009 for projects less than 500 kW in three segments; residential, non-residential up to 150 kW and non-residential between 150 kW and 500 kW.

Under Solar Loan Program II, an SREC floor price is set for the life of the loan. The floor price locked in depends on when the loan application is submitted according to the schedule below.

Table 10. PSEG Solar Loan Floor Prices

Segment	Dec 2009- Jun 2010	Jul 2010- Dec 2010	Jan 2011- Jun 2011	Jul 2011- Dec 2011
Residential	\$450	\$435	\$420	\$400
Small Non-Residential (up to 150 kWDC)	\$410	\$395	\$380	\$360
Large Non-Residential (>150 - 500 kWDC)	\$380	\$365	\$350	\$330

For example, a successful PS SLII program applicant in the residential segment that applied between December 1st of 2009 and June 30th of 2010 could lock in a floor price of \$450 when the loan was approved. This floor price will not change over the life of the loan. At closing, PSE&G withholds an administrative fee to offset the costs of managing the program. The fees are 6% for the Residential Segment, 2.5% for the Small Non-Residential Segment, and 1.5% for the Large Non-Residential Segment.

On February 10, 2009, in a petition filed pursuant to N.J.S.A. 48:3-98.1 (a)(3), the Global Warming Response Act, that was otherwise unrelated to the EDC solar financing programs ordered by the Board, a \$514.6 million program over six years which would provide 80 MW in two segments; a “Centralized Solar” and a “Neighborhood Solar” program. The Centralized Solar plan proposed 25 MW on PSEG owned land, 10 MW on third party owned sites, and 5 MW on Urban Enterprise Zone (UEZ) including publicly owned sites. All facilities in this segment of the program are required to exceed 500 kW and provide electricity supplied. The Neighborhood Solar plan proposed 200,000 utility pole mounted solar PV systems rated at 200 watts each. PSEG’s “Solar For All” Program was approved by the Board on August 3, 2009.

PSEG reports “the combined solar capacity installed through 2010 from the Solar 4 All and Solar Loan programs can produce some 45,668MWh of clean, highly distributed solar generated energy annually based on 47.0MW of installed solar capacity”. 28 MW were installed in the Solar 4 All program, all in 2010, and 8.7 MW of the 19 MW in the Solar Loan programs were installed in 2010 (Table 11).

Table 11. PSEG Solar Loan and Solar For All Results; 2010 and Program to Date

PSEG's RES Portfolio In Review				
	2010 Investment (\$MM)	Program to Date (\$MM)	2010 Capacity (MW)	PTD Capacity (MW)
Solar 4 All	\$190.10	\$202.60	28	28
Solar Loan	\$27.00	\$69.90	8.7	19
	\$217.10	\$272.50	36.7	47

2010 solar capacity include accelerated 2009 projects

PSEG In-Service Solar Projects	Location	EPC Solar Firm	Size MWdc	Service Date
Pole-Attached Smart Solar Units	Statewide 72,000 Units	Petra Solar – Supplier Riggs-Distler – Installer	14.7	December 2010
PSEG Yardville Solar Farm	Hamilton, NJ	American Capital Energy	1.1 out of 4.4	December 2010
PSEG Linden Solar Farm	Linden, NJ	Advanced Solar Products	3.2	December 2010
PSEG Silver Lake Solar Farm	Edison, NJ	JF Creamer	2.0	November, 2010
PSEG Trenton Solar Farm	Trenton, NJ	Sun Edison	1.3	September, 2010
NPS Barringer HS Roof Solar	Newark, NJ	Mercury	0.8	October, 2010
NPS Central HS Roof Solar	Newark, NJ	LB Electric	0.5	October, 2010
NPS Park Avenue Elementary School Roof & Car Port Solar	Newark, NJ	Mercury	0.5	October, 2010
NPS Camden Street Schools Roof & Car Port Solar	Newark, NJ	ALM Electric	0.7 out of 0.9	December 2010
PSEG Edison Training Center Roof, Land & Car Port Solar	Edison, NJ	Henkels & McCoy	0.7	December 2010
PSEG Central Div HQ Roof Solar	Somerset, NJ	Solis Partners	0.9	December 2010
WEA Roof Solar	Bayonne, NJ	Advanced Solar Products	1.7	December, 2010
TOTAL SOLAR 4 ALL MW INSTALLED AS OF 12/31/2010			28.0	

All SRECs in each of the EDC SREC-based Finance Programs are required to be auctioned off with the proceeds used to recover program costs. The first three auctions for the SRECs created in the EDC solar finance programs occurred in 2010 (Table 12).

Table 12. 2010 Auction Results from EDC SREC-based Finance Programs

Auction	Number of SRECs Sold	Price per SREC	Generated On or After	Generated Before
October 2010	5,850	\$665.12	June 1, 2010	August 31, 2010
July 2010	5,750	\$688.03	June 1, 2009	--
January 2010	2,800	\$685.06	June 1, 2009	November 30, 2009

(All SRECs auctioned have originated in the PSEG Programs to date)

3. NJ RPS Reporting Year 2010 (RY10) Compliance Results

a. Solar; requirements and results

The RPS percentage requirement for solar electricity in RY10 was 0.221% of retail sales. Table 13 shows retail sales of 77,418,756 megawatt hours reported in RY10 resulted in an obligation to provide 171,094 SRECs or their equivalent in Solar Alternative Compliance Payments (SACPs). Regulated entities retired 123,717 SRECs, reported 47,373 SACPs at the RY10 level of \$693 per MWh and paid \$32,829,548 to the NJBPU. The Solar Advancement Act of 2010 requires that SACP funds be refunded to ratepayers. On March 30, 2011, the Board approved amendments to the RPS which provide a methodology for refund to ratepayers through the EDCs.

Table 13. NJ RPS Solar Compliance by Third Party Suppliers and BGS Providers RY10

NJ RPS Solar Compliance by TPS and BGS Summarized: Reporting Year 2010 (06/01/09-05/31/10)						
#	LSE	Load	Obligation	SREC Retired	SACP Paid (#)	SACP Paid (\$)
22	TPS's	25,167,650	55,621	44,839	10,780	\$7,470,544
13	JCPL BGS Winners	15,464,463	34,176	15,619	18,558	\$12,860,496
7	ACE's BGS Winners	6,914,497	15,281	13,869	1,410	\$977,130
13	PSEG's BGS Winners	28,551,307	63,098	47,071	16,027	\$11,106,964
6	RECO's BGS Winners	1,320,839	2,917	2,319	598	\$414,414
-	Total	77,418,756	171,094	123,717	47,373	\$32,829,548

The Office of Clean Energy estimates the total cost of compliance with the solar portion of the RPS requirements in 2010 at slightly over \$108 million; \$32.8 million from SACP payments plus more than \$76 million from SRECs purchased for retirement estimated by multiplying 123,717 SRECs by the \$615.50 cumulative weighted average price of SRECs traded (Table 14). GATS reported creating over 130,000 SRECs in 2010. As a result of the two year SREC life in effect with NJ's RPS in RY10, the unretired SRECs generated in RY10 will be eligible for use toward compliance with NJ RPS EY11 requirements.

Table 14. New Jersey SREC Creation, Trade and Price Data in RY10

SREC Trading Statistics Reporting Year 2010								
For SRECs from electricity produced June 1, 2009- May 31, 2010. Includes transactions during the true-up period through September 30, 2010.								
Month	Year	Active kW DC	SREC Quantity		Monthly		Cumulative	
			Issued in Month	Traded in Month	High (\$/MWh)	Low (\$/MWh)	# of SRECs Traded	Weighted Avg Price (\$/MWh)
Sept	2010	168,254	2,978	63,249	\$693	\$215	248,030	\$615.50
Aug	2010	157,129	1,107	49,872	\$693	\$175	184,781	\$617.01
Jul	2010	151,850	5,024	43,358	\$691	\$170	134,909	\$605.97
Jun	2010	140,709	26,275	15,636	\$690	\$170	91,551	\$588.96
May	2010	132,956	16,504	8,737	\$700	\$170	75,915	\$578.80
Apr	2010	123,892	12,546	6,773	\$700	\$170	67,178	\$573.95
Mar	2010	119,829	5,814	9,522	\$700	\$209	60,405	\$568.66
Feb	2010	113,770	6,784	9,720	\$685	\$170	50,883	\$552.69
Jan	2010	103,857	5,249	11,731	\$675	\$110	41,163	\$533.15
Dec	2009	100,086	7,862	7,582	\$700	\$195	29,432	\$566.91
Nov	2009	97,491	6,191	7,292	\$688	\$170	21,850	\$559.45
Oct	2009	93,412	8,085	7,004	\$680	\$170	14,558	\$549.84
Sept	2009	92,032	8,796	5,119	\$700	\$170	7,554	\$524.90
Aug	2009	89,660	10,320	2,435	\$685	\$170	2,435	\$492.18
Jul	2009	83,807	6,626	Due to low trade volume, the July trades are reported with the cumulative pricing data starting in				
	Total		130,161	248,030				

b. Class I; requirements and results

The RPS percentage requirement for Class I electricity in RY10 was 4.685% of retail sales. Retail sales of 77,418,756 megawatt hours in RY10 resulted in an obligation to provide 3,627,069 RECs or their equivalent in Alternative Compliance Payments (ACPs). Regulated entities retired 3,627,074 RECs and paid for three ACPs at \$50 per MWh. (Table 15). RY10 was the second consecutive year since RY05 that little or no ACPs were paid by regulated entities.

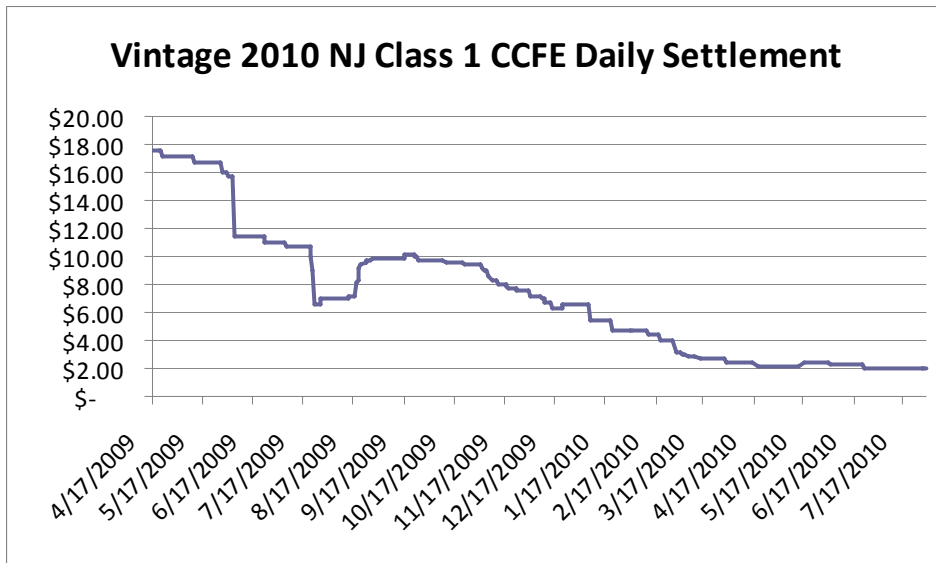
Table 15. NJ RPS Class I Compliance by Suppliers/Providers in RY10

NJ RPS CLASS I Compliance by TPS (Suppliers) and BGS (Providers) Summarized: Reporting Year 2010 (06/01/09-05/31/10)						
#	LSE	Load	Obligation	REC Retired	ACP Required	ACP Paid (\$)
22	TPS's	25,167,650	1,179,104	1,179,107	3	\$150
13	JCPL BGS Winners	15,464,463	724,510	724,511	0	0
7	ACE's BGS Winners	6,914,497	323,944	323,945	0	0
13	PSEG's BGS Winners	28,551,307	1,337,629	1,337,630	0	0
6	RECO's BGS Winners	1,320,839	61,881	61,881	0	0
-	Total	77,418,756	3,627,069	3,627,074	3	\$150

New Jersey Class I REC pricing data for every transaction is not collected by the PJM-EIS GATS system as it is with SREC transactions. GATS does record the price of the last transaction occurring immediately before a REC is retired, but not all REC retirement is accompanied with a recorded price. Since PJM GATS does not collect price data for every transaction of a NJ Class I REC, accurately estimating the total cost of compliance with the Class I portion of the RPS requirements is challenging. The Office of Clean Energy has historically relied upon alternative sources of REC price data to substantiate the GATS data.

The Chicago Climate Exchange reported monthly average NJ Class I REC values for RY10 ranging from \$18 per REC in April 2009 to \$2 per REC in July 2010 (Table 16). The Office of Clean Energy estimates the Class I requirements cost NJ ratepayers at approximately \$9.9 million calculated by multiplying 3,627,074 Class I RECs retired by an estimated average Class I REC price of \$2.75 per MWh and \$150 from ACP payments (Appendix 3).

Table 16. NJ Class I REC Prices Reported by Chicago Climate Exchange



c. Class II; requirements and results

The RPS percentage requirement for Class II electricity in RY10 was 2.5% of retail sales. Retail sales of 77,418,756 megawatt hours in RY10 resulted in an obligation to provide 1,935,469 RECs or their equivalent in Alternative Compliance Payments (ACPs). Regulated entities retired 1,935,478 RECs and paid for no ACPs (Table 17).

Table 17. NJ RPS Class II Compliance by Suppliers/Providers in RY10

NJ RPS CLASS II Compliance by TPS and BGS Providers Summarized: Reporting Year 2010 (06/01/09-05/31/10)						
#	LSE	Load	Obligation	REC Retired	ACP Required	ACP Paid (\$)
22	TPS's	25,167,650	629,191	629,198	1	\$50
13	JCPL BGS Winners	15,464,463	386,612	386,614	0	0
7	ACE's BGS Winners	6,914,497	172,862	172,862	0	0
13	PSEG's BGS Winners	28,551,307	713,783	713,783	0	0
6	RECO's BGS Winners	1,320,839	33,021	33,021	0	0
-	Total	77,418,756	1,935,469	1,935,478	1	\$50

PJM GATS does not collect price data for NJ Class II RECs making accurate estimation of the total cost of compliance with the Class II requirements difficult. The Office of Clean Energy estimates the Class II requirements cost NJ ratepayers at approximately \$2 million calculated by multiplying 2,039,035 Class II RECs retired by an estimated average Class II REC price of \$1 per MWh and \$50 from an ACP payment.

4. NJ Renewable Energy Market Issues and Forecast for 2011

a. Regulatory, Legislative and Administrative Changes

On March 30, 2011, the Board approved amendments for the renewable energy regulations within Title 14 of the New Jersey Administrative Code. Rule proposals were presented at the March 30 Board agenda meeting which will codify legislative directives

from the Solar Advancement Act of 2010 and readopt sections of Chapter 8 that are destined to sunset.

The Solar Advancement Act directed the Board to change key features of the RPS which;

- Increase to the solar RPS requirements
- Change in how the obligation is allocated among electric suppliers and providers from a percentage of retail sales to a market share with a fixed statewide volumetric requirement,
- Lengthen the life of each individual SREC from two to three years, and
- Prohibit the Board from reducing the SACP or volumetric requirements once established.

With the readoption of Chapter 8, the OCE proposed changes to the;

- Interconnection rules which clarify timeframes for processing customer-generator applications by Electric Distribution Companies,
- Environmental Disclosure rules which simplify compliance by third party suppliers, and
- Renewable Portfolio Standard rules which formalize the SREC registration process, eliminate engineering estimates for small solar system creation of SRECs, and define the SREC eligibility requirements for solar facilities with respect to point of interconnection.

Offshore Wind

The Legislature passed the Offshore Wind Economic Development Act P.L. 2010 c. 57, on August 19, 2010. The Act requires the Board establish an OREC in the NJ RPS. On February 10, 2011, the Board adopted RPS Amendments for an Offshore Wind Carve-out (N.J.A.C. 14:8-6). This rule which was effective upon adoption amends the New Jersey's Renewable Portfolio Standards (N.J.A.C. 14:8-1.2 to 2.14) by establishing an application process and framework for an Offshore Wind Renewable Energy Certificate (OREC).

NJ RPS Compliance Reporting

On January 31, 2011, the Office of Clean Energy convened RPS market stakeholders to discuss the preliminary results for RY2010 in New Jersey's RPS. Participants consistently reiterated that reporting accurate REC and SREC price data is essential for the development of the renewable energy market. When RECs or SRECs are transferred or retired, correct price data must be entered in the PJM-EIS Generation Attribute Tracking System (GATS) so all market participants can get an accurate picture of market trends. Since SRECs eligible for retirement in NJ's RPS are predominantly used for that purpose, PJM-EIS is able to report all SREC transactions toward calculation of average prices. However, with NJ Class I and Class II RECs originating from electricity eligible in other states' RPS, PJM-EIS is not able to report accurate pricing information from transactions that will ultimately lead to the retirement of a NJ Class I or Class II REC. Therefore, the GATS administrators do not report NJ Class I and Class II REC transaction prices until the final transaction before retirement. To instill confidence in market participants that the

proper price is entered, the procedures for and highlights of REC price reporting were described by GATS administrators as:

REC/SREC Transfer and Retirement Process

1. Prices are entered into GATS when retiring RECs:
 - a. When an account holder retires a REC for RPS for NJ, the user transfers the RECs to be retired by going to the transfer screen, either “batch” or “single”.
 - b. The system user then selects the “Reserve” radio button and then selects the “RPS” radio button.
 - c. At that point, the system users are required to select a “state” and a “reporting year” range for the RECs they want to retire. There is a field for them to enter a price also.
 - d. If a user does not enter a price, select a state, or select a reporting year, GATS displays an error. The user can either enter in the missing information or Cancel out of the transfer. The account holder can enter a 0 price. PJM EIS only checks that this is a numeric value equal to greater than 0.
 - e. This process also verifies that the REC is certified in NJ, or whatever state is selected.
 - f. If the REC was transferred from another account holder, the price on the transfer screen defaults to the price of the transfer. This can be changed by the account holder but if they do nothing, it will be stored as the retired price.
 - g. Defaulting to the transfer price was implemented on 8/25/2010.
 - h. Included Deposit Date on the My RPS Compliance report began on 8/25/2010.
 - i. Price became a required field for NJ RPS on 9/2/2008.

2. Batch Transfers:
 - a. When transferring RECs, the account holder can either 1) transfer each group of RECs individually or 2) use the batch transfer functionality. The batch transfer functionality allows the account holder to transfer multiple groups of RECs at a time. This functionality can be used to transfer RECs to reserve, to another account holder, to the bulletin board, etc.
 - b. When they select the batch transfer option from the screen, it takes the account holder to a screen with a dropdown at the top. The dropdown defaults to Account Holder. It can be changed to any of the transfer options including transferring to Reserve. Once the transfer target is selected GATS automatically filters the RECs so only valid RECs for the type of transfer selected are displayed on the screen.
 - c. There is a checkbox next to each group of RECs. The account holder checks the boxes of the RECs they want to transfer. A running total is displayed at the top of the screen. Once the account holder has selected all the RECs that want to transfer they click the Batch Transfer button.
 - d. After the Batch Transfer button is clicked, the account holder is moved to the transfer screen. At the top of the screen is a list of the RECs selected on the previous screen. There is also a Price per Certificate field. When Reserve/RPS are the selected transfer options, these field become enterable and are pre-populated with a price if the REC was transferred to the account holder retiring the REC from another account holder and there is a price.
 - e. To ease the transfer of RECs between account holders and because of the large volume of transfers between account holders was causing performance issues, a new report to view and accept/reject/withdraw transfers from account holders was

implemented by GATS on 11/29/2010. This report allows the account holder to accept, reject or withdraw an individual transfer, a subset of all outstanding transfers or all outstanding transfers. This new report has search and filter features. It is only used for transfers between account holders.

Solar Weighted Average Pricing Reporting in GATS

PJM-EIS uses GATS data to calculate the Solar Weighted Average Price (SWAP) based on actual transactions. GATS administrators use the same thresholds for each state discarding any transaction below \$40 or above \$700 in the calculation. They perform this function on a monthly basis. GATS reviews out of range values and verifies any non-zero transactions. Normally, most of the out of range transactions are recorded at \$0. For NJ, since it is unlikely in most cases that a transaction would be less than \$100, GATS also verifies those transactions.

Office of Clean Energy staff is working with GATS administrators and the managers of the EDC SREC-based finance program to ensure that the significantly lower contracted price for each SREC created in the program is recorded in GATS. EDC staff collect metered data from each of the installations participating in the program toward creating SRECs which will ultimately be auctioned. Without the EDCs proactively recording the contracted long-term price for each SREC, the first price recorded for each SREC would be the auctioned price and hence the GATS Solar Weighted Average Price Report will overstate average SREC prices. A similar issue occurs with solar constructed by load serving entities primarily acting to meet their own SREC obligations in the NJ RPS. Staff plans to work with the State Advisory Committee to GATS as well as NJ RPS stakeholders to ensure that SREC prices are adequately captured and the costs to ratepayers are effectively reported.

Class I and Class II REC Price Reporting

Class I and Class II REC price is a required field in GATS when transferring or retiring RECs. However, most of the prices that were entered were \$0. Prices that were entered for Class I RECs range from \$0 to \$23.75 per MWH. There were 831,608 Class I RECs that had a price other than \$0 for a total cost of \$9,968,187.79 and an average price of \$11.99 per REC. For Class II RECs, the range was from \$0 to \$5.50 per MWH. There were 418,624 Class II RECs that had a price other than zero for a total cost of \$462,760.06 for an average price of \$1.11 per REC.

In NJ's RPS, some EDCs own RECs from contracts that predated the implementation of the regulations. This supply, which the EDCs typically allocate the RECs to among the BGS providers, is referred to as "committed supply". Neither GATS administrators nor the OCE received any pricing data for "committed supply" since the generators send this generation data directly to the EDCs and this generation is not converted to RECs or retired using GATS. While the "committed supply" numbers for Class I obligations are small (45,274 MWH), they are much larger for Class II (840,301 MWH out of a total obligation of 1,935,469 MWH).

The Office of Clean Energy participates in the GATS State Advisory Committee managed by PJM-EIS. OCE anticipates discussing price reporting processes with the State Advisory Committee toward better understanding price reporting processes adopted by peer states and greater transparency of REC market prices and ultimately RPS costs.

b. EDC SREC-based Finance Program Planned Capacity for 2011

The PSEG Solar Loan and Solar for All programs have 62 and 52 MW of capacity remaining in their total programs of 81 MW and 80 MW respectively. The other EDCs, JCP&L, Atlantic City Electric and Rockland, have one more year or three solicitations remaining in programs approved by the Board in 2009. On March 30, 2011, the Board approved program capacities for each of the EDCs with one half of the JCPL and ACE capacity to be solicited and all of the remaining capacity in the Rockland territory to be offered in June 2011.

Table 18. Capacity Remaining in the EDC SREC-based Finance Programs

EDC	2012 Reporting Year (kW)
JCP&L	10,901.678
ACE	6,925.359
Rockland	2,275.705

c. NJ RPS Requirements; New Capacity by Source and Technology for 2011

The RPS percentage requirements for EY11 are 5.492% for NJ Class I, and 2.5% for NJ Class II. The Solar RPS requirement for EY11 which had been 0.3050% for solar prior to the Solar Advancement Act is 306 GWh. If the annual retail sales in NJ's four EDC territories for EY11 remain at 77.4 million MWh, then regulated entities (third party electric suppliers and BGS auction winners) will be required to procure approximately 4.25 million NJ Class I RECs and 1.935 million NJ Class II RECs.

As of February 28, 2011 the state had nearly 8,700 solar PV installations totaling over 291 MWdc of installed capacity (Table 19). New Jersey's aggregated solar capacity produces, over twelve months, approximately 1,200 kWh per kWdc installed. The difficulty in forecasting the amount of solar electricity likely to be produced in a given reporting year, and the supply of SRECs available, lies with estimating the contribution from systems which come online throughout the reporting year. In order to estimate the cumulative amount of solar generation and SREC production during the reporting year, it is necessary to estimate the amount of full year generation from systems already installed as of the beginning of the reporting year plus the part year generation from systems anticipated to be installed during the remainder of the reporting year.

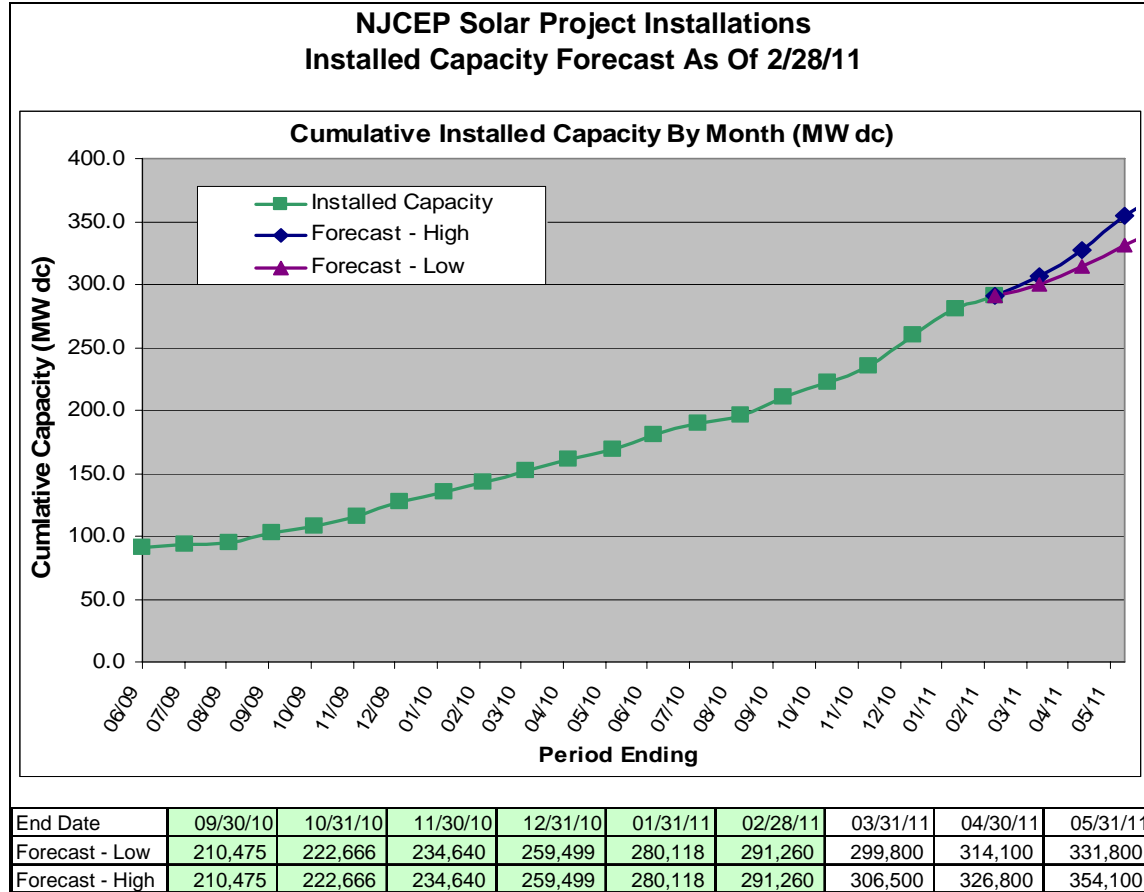
Table 19. NJ's Solar Capacity by Program Source

New Jersey Solar Installations by Program As of 03/31/11				
Program	# Projects	Installed Capacity (KW dc)	Total Rebate \$	% of Installed Capacity
CORE Solar	4,268	87,131.0	\$ 311,406,225.45	28.9%
REIP Solar	3,019	30,895.3	\$ 40,696,064.03	10.3%
SREC Solar	1,613	183,222.5	\$ -	60.8%
Total	8,900	301,248.7	\$ 352,102,289	100%

Total* = Program to date totals for Paid projects plus projects pending payment; preliminary results subject to true-up based upon inspection results.

The total installed capacity on June 1, 2010; the beginning of Energy Year 2011 was 168.6 MWdc. Assuming 1,200 kWh per kWdc the 168.6 MWdc of capacity is expected to produce approximately 202,000 MWh providing 202,000 SRECs in EY11. Using a forecast of approximately 145.4 MW of capacity to be installed and registered throughout EY11 (see Table 20. Installed Capacity Forecast below), it is estimated that these projects will produce approximately 82,000 MWh providing an additional 82,000 SRECs in EY11. Therefore, it is estimated that the total SREC production for EY11 would be 284,000 SRECs. This assumes approximately 202,000 SRECs based on a full year production from installs as of June 1, 2010 plus 82,000 additional SRECs from part year production of projects installed during the Energy Year. This would leave a shortfall of approximately 22,000 SRECs which will have to be met by regulated entities through the purchase of SACPs.

Table 20. NJ RPS-eligible Solar Installed Capacity Forecast



The following example is for illustration purposes only to document the challenges in forecasting SREC supply availability given the variables active in determining actual solar and SREC supply in New Jersey. Many assumptions have been used in this example that are subject to change such as the productivity of solar PV which is based upon solar insolation, system efficiencies, the number of systems and pace at which they become operational or cancel, etc. The Board recommends that any solar marketer, supplier, or installer of solar systems operate consult several sources of information in order to estimate the SREC market supply.

The ability to forecast results for NJ Class I and Class II compliance markets in EY11 is even more challenging than analyzing the NJ SREC market. Unlike the strict SREC requirements of connection to the distribution system serving New Jersey for solar facility eligible, as described earlier, NJ Class I and Class II compliance RECs can be sourced from eligible facilities anywhere throughout the PJM Interconnect region provided the electricity is dynamically scheduled. Appendix 5 shows how the supply of NJ Class I RECs, both by fuel type and source state, have changed since RY06. In RY10, Illinois wind facilities continued to dominate the NJ Class I REC market having overtaken in RY08 the position of top supplier previously enjoyed by Pennsylvania landfill gas facilities. Throughout the PJM territory with each state and in some case to forecast as a result of

the array of RPS regulations in states throughout the PJM territory with each state and in some cases utilities within states on a different timetable.

Unlike the SREC market analysis, the NJ Class I REC supply is not as strongly influenced by the capacity additions from the NJCEP rebate or grant programs. Table 2, on page 6, shows that the NJCEP incentive programs have contributed nearly 40 MW of NJ Class I eligible projects. By comparison, the capacity of NJ certified Class I facilities from the other PJM states was over 6000 MW as of January 1, 2010. Adding further to this challenge, the estimation of MWh production from installed capacity and hence forecasting the NJ Class I REC creation from these resources cannot be accurately accomplished using a protocol for statewide aggregated capacity since each installation and its capacity factor is more widely influenced by site specific variables.

Appendix 6 shows how the supply of NJ Class II RECs, both by fuel type and source state, have changed since RY06. NJ MSW facilities contributed the greatest number of Class II RECs used for RPS compliance again in RY10.

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Appendix 1. Evolution of NJ RPS Requirements

1. Original Interim Standards in EDECA, Adopted by NJBPU

Legislation passed Feb. 1999
Rules effective 2001

Period	Class I	Class II
Beginning		
01/01/01	0.50%	2.50%
2002	0.50%	2.50%
2003	0.75%	2.50%
2004	0.75%	2.50%
2005	0.75%	2.50%
2006	1.00%	2.50%
2007	1.50%	2.50%
2008	2.00%	2.50%
2009	2.50%	2.50%
2010	3.00%	2.50%
2011	3.50%	2.50%
1/1/2012	4.00%	2.50%

2. RPS rule revised in 2004

Rules proposed October 2003
Rules effective April 19, 2004

Period	Solar (if '03 BGS)	Solar for non-exempt	Class I (if '03 BGS)	Class I non-exempt	Class II
CY01	-	-	-	-	-
CY02	-	-	-	-	-
CY03	-	-	-	-	-
CY04	-	-	0.75%	-	-
RY05	0.000%	0.01%	0.75%	0.740%	2.500%
RY06	0.000%	0.0170%	1.000%	0.983%	2.500%
RY07	-	0.0393%	-	2.037%	2.500%
RY08	-	0.0817%	-	2.924%	2.500%
RY09	-	0.1600%	-	3.840%	2.500%
and beyond...	N.J.A.C. 14:4-8.3 "no lower than those required for reporting year 2008 (changed to RY09 by inference of Secretaries letter on reporting year designation)				

3. RPS rule revised in 2006

Rules effective May 15, 2006

Period	Solar (if 03 BGS)	Solar	Class I (if 03 BGS)	Class I	Class II
CY01	-	-	-	-	-
CY02	-	-	-	-	-
CY03	-	-	-	-	-
CY04	-	-	0.75%	-	-
RY05	0.000%	0.01%	0.75%	0.74%	2.500%
RY06	0.000%	0.0170%	1.000%	0.983%	2.500%
RY07	-	0.0393%	-	2.037%	2.500%
RY08	-	0.0817%	-	2.924%	2.500%
RY09	-	0.1600%	-	3.840%	2.500%
RY10	-	0.2210%	-	4.685%	2.500%
RY11	-	0.3050%	-	5.492%	2.500%
RY12	-	0.3940%	-	6.320%	2.500%
RY13	-	0.4970%	-	7.143%	2.500%
RY14	-	0.6210%	-	7.977%	2.500%
RY15	-	0.7650%	-	8.807%	2.500%
RY16	-	0.9280%	-	9.649%	2.500%
RY17	-	1.1180%	-	10.485%	2.500%
RY18	-	1.3330%	-	12.325%	2.500%
RY19	-	1.5720%	-	14.175%	2.500%
RY20	-	1.8360%	-	16.029%	2.500%
RY21	-	2.1200%	-	17.880%	2.500%

4. Solar Advancement Act of 2010

Legislation passed Jan. 17, 2010
Legislation effective July 17, 2010

"Energy Year"	Solar GWh Requirement
EY 2011	306 gwh
EY 2012	442 gwh
EY 2013	596 gwh
EY 2014	772 gwh
EY 2015	965 gwh
EY 2016	1,150 gwh
EY 2017	1,357 gwh
EY 2018	1,591 gwh
EY 2019	1,858 gwh
EY 2020	2,164 gwh
EY 2021	2,518 gwh
EY 2022	2,928 gwh
EY 2023	3,433 gwh
EY 2024	3,989 gwh
EY 2025	4,610 gwh
EY 2026	5,316 gwh
EY 2027+>	5,316 gwh
and for every "energy year" thereafter, at least:	5,316 gwh

Appendix 2. List of Regulated Load Serving Entities with NJ RPS Obligations in RY10

Third Party Suppliers

American PowerNet
Commerce Energy
ConEd Solutions
Constellation New Energy
Direct Energy Business
Direct Energy Services
First Energy Solutions
Gateway Energy
Glacial Energy NJ
Hess
Hudson Energy
IDT Energy
Integrus Energy Services
Liberty Power Holdings
Linde Energy Services
Palmco Power
Pepco Energy Services
Sempra Energy
South Jersey Energy
Valero
GDF Suez Energy Resources
UGI Energy Services

BGS Providers

ConEd Energy
Constellation Power Source
Direct Energy
Dominion Retail
DTE Energy
Exelon Gen Power
NextEra Power
Jersey Central Power and Light
JP Morgan
Rockland Electric CO
NRG Power
PPL EnergyPlus
PSEG ER&T
Macquaire Energy
J. Aron
Connectiv Energy Supply
Constellation Energy Commodities
Hess
Morgan Stanley
Sempra Energy

Appendix 3. NJ RPS Compliance by Reporting Year

NJ RPS Compliance History						
Compliance Period	RY 2005	RY 2006	RY 2007	RY 2008	RY 2009	RY 2010
Notes:	* # @ +	+	^			
Total Retail Sales of Regulated LSEs (MWh)	73,674,845	84,353,329	83,314,518	80,028,793	81,416,156	77,418,756
Class I RPS Percentage Requirement	0.74%	0.983%	2.037%	2.924%	3.84%	4.685%
Class I REC Obligation (MWh)	545,194	834,832	1,697,117	2,340,042	3,126,380	3,627,069
Class I RECs Retired for RPS (MWh)	527,160	845,702	1,697,364	2,341,702	3,127,491	3,627,074
Class I ACPs Submitted (MWh)	0	19	539	200	0	3
ACP Level (\$ per MWh)	\$50	\$50	\$50	\$50	\$50	\$50
Cost of Class I ACPs (\$)	\$0	\$950	\$26,950	\$10,000	\$0	\$150
Estimated NJ Class I RPS Expenditures	<= no Class I price data available =>				\$37,529,892	\$9,974,454
Wind and Biopower Rebates and Grants~	\$ 4,140,000	\$ 3,019,241	\$ 6,575,000	\$ 824,406	\$ 2,266,855	\$789,939
Retail Sales Obligated by RPS for solar (+)	57,140,000	61,470,091	83,314,518	80,028,793	81,416,156	77,418,756
Solar Requirement	0.01%	0.017%	0.0393%	0.0817%	0.16%	0.2210%
SREC Obligation (MWh)	5,714	10,450	32,743	65,384	130,266	171,095
SRECs Retired for RPS (MWh)	3,329	10,723	31,541	49,617	75,532	123,717
Percentage of Obligation met via SRECs	58.26%	102.61%	96.33%	75.89%	57.98%	72.31%
Year End Cumulative Weighted Average Price	\$200.59	\$215.09	\$220.28	\$246.15	\$544.85	\$615.50
Estimated Dollar Value of SRECs Retired	\$667,764	\$2,306,410	\$6,947,851	\$12,213,225	\$41,153,610	\$76,147,814
SACPs Submitted (MWh)	2,653	163	1,232	15,768	54,738	47,373
SACP Level (\$ per MWh)	\$300	\$300	\$300	\$300	\$711	\$693
Percentage of Obligation met via SACPs	46.43%	1.56%	3.76%	24.12%	42.02%	27.69%
SACPs Submitted(\$)	\$792,132	\$48,900	\$369,600	\$4,730,400	\$38,918,718	\$32,829,548
Compliance on a Percentage Basis	104.69%	104.17%	100.09%	100.00%	100.00%	100.00%
Estimated Solar RPS Expenditures (SACP + SREC)	\$1,459,896	\$2,355,310	\$7,317,451	\$16,943,625	\$80,072,328	\$108,977,362
EDC Solar Finance and RGGI Programs	-	-	-	-	\$55,400,000	\$217,100,000
REIP and/or CORE Solar Rebate Expenditures~	\$46,235,897	\$78,086,786	\$58,122,386	\$44,961,563	\$56,680,031	\$47,124,888

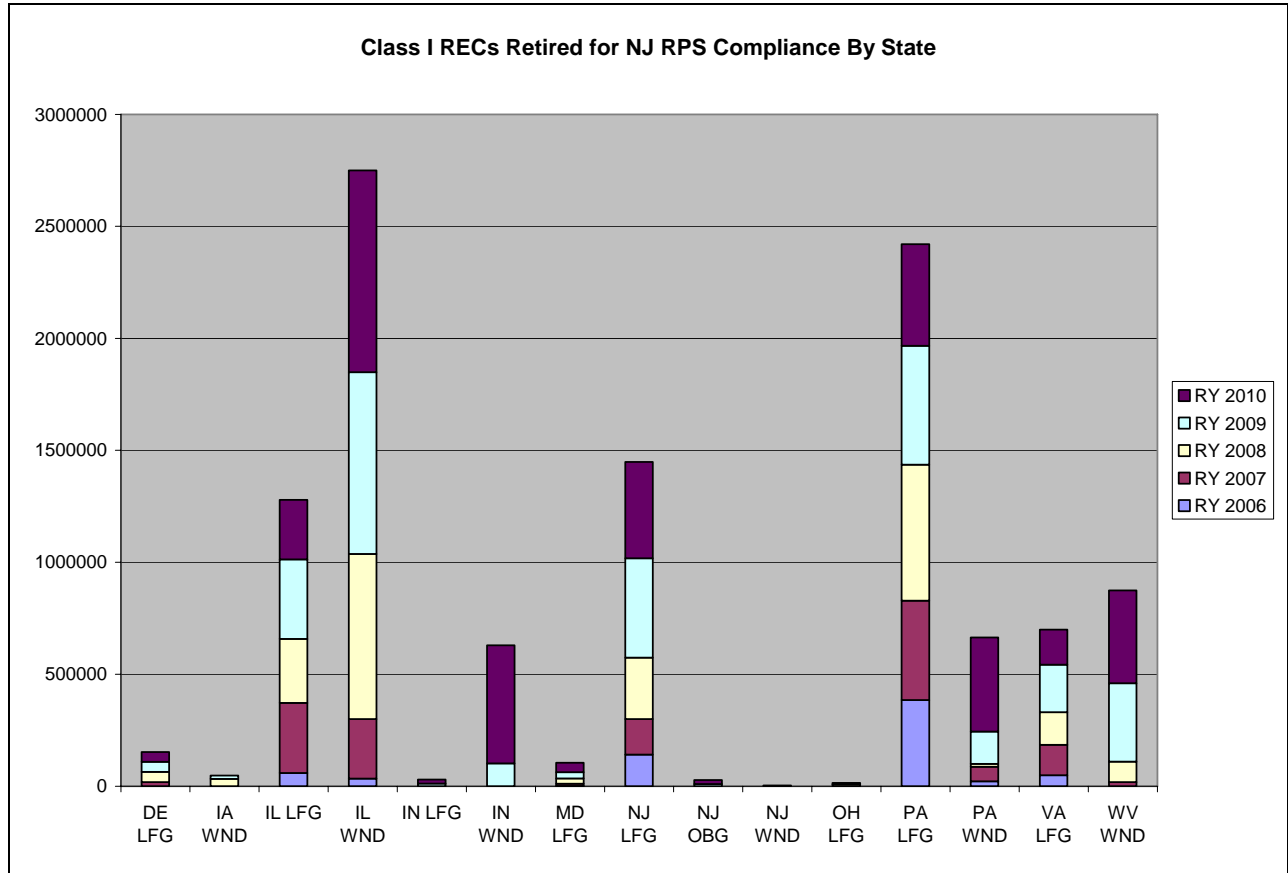
Explanatory Notes on Compliance Reporting, Results and Data Issues:

1. NJ's RPS rules have evolved from legislation signed 02/01/99 with rule revisions to N.J.A.C. 14:8-2 made in 2004, 2006, 2008, 2009 and legislation 1/17/10.
2. (*) The RPS compliance period classification has changed three times with compliance originally based on a Calendar Year. A Reporting Year classification was proposed via rulemaking in October 2003 and became effective April 19, 2004. A Reporting Year covered the twelve month period from June 1 until the following May 31st, denoted by the year in which it ends; i.e., RY06 was 06/01/05 to 05/31/06.
3. The RPS rule changes proposed October 2003 also treated the gap from 01/01/04 to 5/31/04 which resulted from the transition from a Calendar Year to a Reporting Year basis and also revised the compliance reporting deadline to September following a three month true-up period.
4. (#) Eligibility to create SRECs from solar MWhs for use in NJ's RPS began 03/01/04 with RY05 (via Board Order dated 1/26/04).
5. (@) No aggregated compliance reports were produced for the NJ RPS prior to RY05.
6. (+) The Board grandfathered BGS auction winners with pre-existing contracts by exempting their load from the new solar carve-out requirements.
7. (^) Reporting Year 2007 Compliance Reports, ACP and REC requirements were deferred by Board Action from 09/01/07 until 02/29/08.
8. With the period beginning June 1, 2010, NJ RPS compliance period classification will change from Reporting Year (RY) to Energy Year (EY) with the Solar Advancement Act of 2010.
9. (~) NJCEP rebates and grants are reported on a calendar year basis.

Appendix 4. NJ RPS REC Generation and Retirement in the GATS Trading Platform

NJ Program	Location	Fuel Type	RY 2006	RY 2007	RY 2008	RY 2009	RY 2010
Solar	NJ	SUN	0	0	0	14,071	130,805
Class I	DE	DE LFG	0	17,625	46,360	44,584	44,126
	IA	IA WND	0	0	33,300	15,000	0
	IL	IL LFG	59,209	312,995	285,017	356,590	265,146
		IL WND	33,762	266,536	736,743	811,827	900,917
	IN	IN LFG	0	0	0	12,298	17,259
		IN WND	0	0	0	101,620	527,602
	MD	MD LFG	882	9,890	23,962	27,879	41,850
	NJ	NJ LFG	140,701	159,408	274,360	444,090	429,602
		NJ OBG	0	0	0	9,652	18,729
		NJ WND	0	3,098	0	0	0
	OH	OH LFG	0	0	7,885	7,390	0
	PA	PA LFG	384,929	443,175	607,835	530,800	453,635
		PA WND	21,509	65,169	13,173	143,880	420,680
	VA	VA LFG	48,953	135,676	146,404	211,310	157,519
WV	WV WND	0	18,374	91,731	349,557	414,803	
Class II	MD	MD MSW	381,180	508,546	581,542	460,390	493,390
		MD WAT	21,106	13,028	13,514	13,005	8,361
	NJ	NJ MSW	556,111	413,344	402,486	815,047	694,543
		NJ WAT	12,059	27,393	20,813	18,693	29,852
	PA	PA MSW	161,305	132,249	71,509	500,930	385,019
		PAWAT	86,735	52,153	21,255	40,652	123,837
	VA	VA WAT	12,000	3,687	16,070	20,480	97

Appendix 5. Class I REC's retired for NJ RPS compliance by State and Fuel Type



Appendix 6. Class II RECs retired for NJ RPS compliance by State and Fuel Type

Class II RECs Retired for NJ RPS Compliance by State

