

**AGENDA**  
**Next steps in the Solar Transition**  
**September 15, 2011**  
**NJDEP Public Hearing Room – 1<sup>st</sup> floor**  
**401 E. State St Trenton, NJ**  
**1:00 PM to 5:00 PM**

- 1. Review of Board's direction and current status**
- 2. Status of the 15 year SACP**
- 3. Discussion on the EDC SREC programs**
- 4. Discussion on SREC floor price or other mechanisms to address an oversupplied SREC market**
- 5. Discussion of the 15- year qualification life**
- 6. Improvements to data reporting – tracking system**

## Linda Wetzel

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**From:** Winka, M <M.Winka@bpu.state.nj.us>  
**Sent:** Friday, September 09, 2011 2:30 PM  
**To:** Winka, M; Renewable Energy Committee (Notification); renewables@njcep.com  
**Cc:** Hunter, B; Babette Tenzer; Sarmentero-Garzon, Andrea; Alex.Moreau@dol.lps.state.nj.us; Sheehan, Kenneth; Dembia, Andrew; Brenner, Mary Beth; Brekke, Rhea; Linda Wetzel; Mike Ambrosio; Jackson, Ronald; Teague, John  
**Subject:** RE: Next steps in the SREC transition  
**Attachments:** Solar Transition Whitepaper 9-9-11 AD.doc

As note below in this email thread below the initial meeting to discuss "Next Steps" for the solar transition and the evaluation of the EDC SREC programs is scheduled for Thursday September 15, 2011 in the NJDEP Public Hearing Room from 1 to 5 PM. NJDEP is located at 401 E State St Trenton, NJ 08625 and the NJDEP PHR is on the 1<sup>st</sup> floor of their building. You will be required to go through security and sign in so allow for time for that process. At this point the DEP PHR does not have conference call in capabilities.

Attached is a white paper on the solar transition next steps to assist in the discussion process and is similar to the process we initiated for the start of the solar transition in 2006. It is solely intended to assist in the discussion and does not reflect staff's position on any of the issues but more so does not reflect the Board's position on any issue.

We have set the meeting up as an extension of the RE Committee meeting process. Any interested stakeholder can participate in the discussion and comment on the process and issues but it may be a more productive meeting and process if the associations and organizations that plan on attending could set forth their positions in regard to the attached white paper or other areas of concern for discussions at the meeting. We will provide an opportunity for those associations/organizations to present their discussion points.

We would appreciate those positions in writing if possible before the meeting and you can submit those comments or any comment on this issue to [OCE@bpu.state.nj.us](mailto:OCE@bpu.state.nj.us). You should put "next steps – solar transition" in the subject heading for the email which allows us to sort through the emails in a more efficient manner.

Have a good weekend

Linda Wetzel Can you post the white paper and the notice for the meeting on the website thanks

*Michael Winka*

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-----Original Message-----

**From:** Winka, M

**Sent:** Thursday, September 08, 2011 4:34 PM  
**To:** Winka, M; 'Renewable Energy Committee (Notification)'; 'renewables@njcep.com'  
**Cc:** Hunter, B; 'Babette Tenzer'; Sarmentero-Garzon, Andrea; 'Alex.Moreau@dol.lps.state.nj.us'; Sheehan, Kenneth; Dembia, Andrew; Brenner, Mary Beth; Brekke, Rhea  
**Subject:** RE: Next steps in the SREC transition  
**Importance:** High

This meeting is still on for next Thursday Sept 15, 2011 at 1 to 5 PM in the DEP Public Hearing room at 401 E State St Trenton NJ 08625.

And while it is in NJDEP's Public Hearing Room it is not a public hearing but just an initial public meeting to discuss next steps in the solar transition and EDC SREC programs as directed by the Board. The discussions are to assist staff's evaluation of the EDC SREC programs and the solar transition to provide recommendations to the Board.

*Michael Winka*

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-----Original Message-----

**From:** Winka, M  
**Sent:** Tuesday, August 23, 2011 5:03 PM  
**To:** 'Renewable Energy Committee (Notification)'; renewables@njcep.com  
**Cc:** Winka, M; Hunter, B; 'Babette Tenzer'; Sarmentero-Garzon, Andrea; 'Alex.Moreau@dol.lps.state.nj.us'; Sheehan, Kenneth; Dembia, Andrew; Brenner, Mary Beth; Brekke, Rhea  
**Subject:** Next steps in the SREC transition

We have been asked by the Board to establish a stakeholder process/meetings to discuss next steps, if any, as needed to the NJCEP SREC Financing Programs with the EDCs. We have termed these various EDC solar programs as the "structured market" vs the open market.

As you know we have started a process with the parties to the various EDC Solar Filings/Stip to discuss the current programs, the results and any next steps if needed in the structured SREC market (the EDC RGGI filings including the PSE&G Solar loan program and Solar for All; and the JCPL, ACE and RECo EDC SREC Financing program). Currently this is not a proceeding and we are not negotiating or renegotiating any solar Stipulations. The Board has directed staff to report back to the Board on recommendations on next steps, if any, before the last EDC SREC solicitation. At that point the Board may direct staff to initiate a proceeding. This is more akin to information gathering to present to the Board for their consideration.

As that process continues we are setting up a public meeting process (not hearings) to compliment that discussion with the parties to those Stipulations. We decided to do these separate from the RE Committee meetings but in the same format. In addition, at the last Board agenda meeting there was a discussion to seek input from stakeholders on the need for a floor in the SREC programs or any other mechanism to work in conjunction with the SACP to bound the movement of the SRECs.

We have tentatively set September 15 at 1PM to 5PM in the NJDEP 401 E State St Trenton 1<sup>st</sup> Floor Public Hearing Room as the first meeting in this regard. Please hold the date.

We will provide more on this forum and as with the initiation of the solar transition we will provide some goals and objectives, evaluated the current market condition and data and seek position papers on various options for the SREC program from the stakeholders.

*Michael Winka*

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**NJBPU Staff white paper**  
**Next steps in the Solar Transition – September 9, 2011**

The Board has directed staff to evaluate, through a stakeholder process, the current Electric Distribution Company (EDC) Solar Renewable Energy Certificate (SREC) incentive programs as well as the overall solar transition including the potential for a floor price for SREC or other mechanisms to support SREC in an oversupplied market. Based on this evaluation, staff will report back to the Board with recommendations for next steps, if any, in the solar transition including the EDC SREC programs. Staff has initiated this public stakeholder process with a meeting set for September 15, 2011 in the NJDEP Public Hearing room at 401 E State St. Trenton at 1:00 to 500 PM.

Almost 4 years ago on September 22, 2006, Board staff initiated the solar transition with a white paper series entitled “Solar Market Transition to a Market-Based REC Financing System”. The initial papers were developed with the input from the Solar Transition Working Group, a sub-committee of the Renewable Energy Committee which included the four EDC, Suppliers and Providers, Rate Counsel, solar industry associations, business associations and environmental organizations. You can view these papers and all the documents of the solar transition including all staff straw proposals and analysis at <http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-transition/solar-transition> . It is appropriate, as we begin the evaluation and discussion to present recommendations to the Board on next steps for the EDC SREC programs and solar transition, to review the initial objectives of the solar transition as a starting point for this current evaluation.

The key point of the solar transition white papers was to develop a more cost effective means for incentivizing solar than through rebates. The initial finding of the Solar Transition white paper was that with an increase in the annual solar RPS though Energy Year (EY) 2021 and with an expectation for increasing annual electricity usage, a solar rebate system funded on a capacity basis would cost ratepayers over \$10 billion through 2021 with a significant annual rate input. The clear statement of the staff’s white paper was: it is not an option to simply “buy” our way with rebates to the solar RPS goals.

The white paper proposed that a more cost effective system was to transition to a market-based financing system through SREC. The object of the solar transition was to increase the solar SREC value and reduce or eliminate solar rebates which would lower the annual rate impact related to solar incentives. That step in the solar transition to an SREC based incentive system has been achieved.

Solar rebates for all customers have been eliminated and the annual rate impact for EY 10 the SREC only incentive program is lower than if there were a solar rebate only incentive program in EY 2010. See Tables 1 - 4 and Figure 1 attached for data on rebate costs, SREC costs, solar systems installed per calendar year and energy year and projections for solar capacity and SREC supply in EY 2012. Given the

achievement of the initial objective of the solar transition in terms of SREC incentive system replacing the solar rebate incentive system, it is appropriate to establish a process to evaluate the current SREC programs, discuss next steps in the solar transition and any improvements to the SREC system, if needed.

The statement that we simply can not buy our way to the solar RPS goals was correct four years ago and is true even more so today. We need a detailed next step evaluation of today's SREC market based on the past 4-year solar transition. The Board has directed staff to initiate that evaluation process and this stakeholder meeting is one of the first steps in that process. We have initiated discussions with the parties to the EDC SREC program Orders including the four EDCs – PSE&G, JCP&L, ACE and RECo; Rate Counsel; Solar Alliance and Mid-Atlantic Solar Energy Industries Association. These meetings have focused on data collection to be able to appropriately analyze and evaluate the different EDC SREC programs. Board staff is working with Rutgers Center for Economics, Energy and Environmental Policy (CEEPP) to develop model to appropriately analyze the data to be able to compare the two different EDC SREC programs. This data will be available to all stakeholders.

In order to initiate the stakeholder discussion staff has developed a series of questions. The questions below are meant only to start a discussion on the next steps for the solar transition and in no way reflect the Board's position on any EDC SREC program or the solar transition. Nor should they be viewed as a limitation of the stakeholder discussion for next steps.

The process is to initiate a discussion with stakeholders, gather information and make recommendations to the Board on next steps for the EDC SREC programs as well as the solar transition. The Board, in an Order, will decide and provide further direction to staff on what are the next steps for the EDC SREC programs and the solar transition. Staff expects to make its recommendations on the EDC SREC program before the final EDC SREC solicitation.

The initial white paper sets out several objectives that the trading instrument, the SREC, needed to have in order to implement a market based solar program. The objectives for development of the SREC programs were: verifiable, traded freely in the market, certainty and vintage. Staff has developed the questions below for the initial discussion on next step for the EDC SREC programs and the solar transition based on the initial objectives in the initial white papers. The questions for the next step follow a short status on the current process/programs as they related to the objectives.

1. **Verifiable:** The SREC financing system must be able to report actual data for all SREC trades. The SREC market utilizes the PJM-EIS Generator Attributes Tracking System (GATS) with services provided by the NJCEP Market Managers for SREC registration and the electric distribution companies (EDC) for net metering and interconnection. Based on the amount of funds transferred in this system it is important that there be an accurate measurement of when the system is generating SREC and a record of that generation. The recent

proposed RPS regulations require SREC meters for all installations and will eliminate estimated calculations.

**Verification Questions:** What improvements in the overall reporting and tracking system including in GATS are needed? What data from the EDC SREC programs and the overall SREC program could and should be available without providing market sensitive data? What other systems for reporting data should be in place?

2. **Traded freely on the open-market:** This objective raised the issue of SREC trading from other states into New Jersey's market and from New Jersey into other markets/states. Per the Solar Energy Advancement and Fair Competition Act (Solar Advancement Act- SAA) all solar system must be connected to the distribution system in New Jersey to receive SREC.

**Traded freely on the open-market Questions:** What changes to the system could and should be made to improve the openness of SREC trades? Should solar certificates trade beyond New Jersey into other states and from other states beyond New Jersey into New Jersey? If there are changes to the market trading geographic size when and how should these changes be made? Should residential systems trade in the market at a different rate or manner than grid supply systems? Should grid supply solar systems depending on their location or benefits trade at a different rate or manner? Should solar systems that are utility rate based trade in the SREC market? Should they trade at a different rate or manner? Should the EDC solar financing SREC trade in a centralized market with all EDCs or be supplied to the EDC's Basis Generation Providers? If so at what rate and manner should they trade?

3. **Certainty:** The solar alternate compliance payment (SACP) is one mechanism for establishing a degree of certainty in the solar market. The SACP was set by Board order and through regulations through 2016. The Solar Advancement Act (SAA) requires the SACP schedule to be set for 15 years. Per the SAA once the SACP is set it can not be lowered. The Board is set to act on staff's recommendations for a 15 year SACP developed through the ACP Advisory Committee.

Based on the July 30, 2008 Solar Transition Order, the Board has established SREC programs for the four EDCs for a portion of the solar RPS market. We call these programs the "structured market" and everything else the "open market". Since we are in the third year of the 3-year EDC SREC programs, the Board has requested that staff evaluate these programs and develop a recommendation to the Board about how to proceed with these programs prior to the last EDC solicitation.

The initial solar transition white papers called for the establishment of a floor price below which all buyers must buy SREC at a certain price and no lower. This

would in effect bound the SREC values within a specific range of costs. Initially the floor price was linked to the establishment of a SREC safety value. The safety value was an overall total cost above which the solar cost to the ratepayer was capped. The safety value if triggered by the cost cap would implement measures to slow down the solar market and lower costs. These measures included freezing the solar RPS at a specific level until costs were below the cap and the solar RPS would then continue to increase.

**Certainty Questions:** Should the structured market programs continue as is; be modified by expanding, decreasing; be eliminated; or allow to expire with not further action. If they are to continue why? If not why not? Which EDC SREC financing programs within the structured market should continue and which should not? If the programs are to be continued what changes, if any, should be made to the structured market - EDC SREC financing programs? Should the Board establish a floor price or other mechanisms to bound the SREC value? If so why? If not why not? How would the floor mechanism work? What other programs should the Board consider that would operate in the same manner as a floor price? The solar transition white paper series listed a range of potential options. Should any of these options be developed? What other options are available that the board should consider that would assist in adding certainty to the market? Should the board implement any other cost controls within the program?

4. **Vintage:** At some point the solar system is paid for by the market-based SREC incentive system. It was true in 2006 and it is true today that it is not an option to “buy” our way to the RPS goals. Currently we have a 15 year qualification life and a 3 year trading life. A high SREC value for 15 years with the full retail cost of electricity is as unsustainable as is an extremely low or no SREC value and just the wholesale cost or no value for electricity.

**Vintage Questions:** At what point, after the system is paid for, do or should the SREC revert to Class 1 REC? As system costs decrease should the qualification life also decrease? Should the qualification life for large projects be different than for small projects? Should the qualification life for large project depend on their location and benefits? What is the balance of the benefits between the retail and wholesale value for the electricity to and from the solar systems? Should these benefits be provided based on the size of the system, the type of system (residential, commercial, public, industrial) or the location and benefits of the system?



Table 1

<b>New Jersey Solar Installations by Year As of 07/31/11</b>			
<b>All Projects</b>			
<b>Year <sup>1</sup></b>	<b># Projects</b>	<b>Total kW</b>	<b>Actual Total Rebate \$</b>
2001	3	7.5	\$ 37,145.00
2002	37	623.5	\$ 2,424,694.07
2003	95	1,176.6	\$ 5,323,410.81
2004	289	2,037.1	\$ 10,581,974.70
2005	729	9,908.1	\$ 46,235,896.76
2006	867	18,320.4	\$ 78,086,786.34
2007	693	15,258.3	\$ 58,122,386.02
2008	834	22,714.3	\$ 44,934,471.58
2009	1350	57,254.7	\$ 56,027,417.06
2010	3135	132,423.4	\$ 46,020,291.21
2011 <sup>2</sup>	2709	139,936.6	\$ 9,935,490.95
<b>Total</b>	<b>10,741</b>	<b>399,660.3</b>	<b>\$357,729,964.50</b>

1. The data is on a calendar year basis
2. The 2011 data is year to date through July 31, 2011

Table 2

### New Jersey Solar Installations by Program As of 07/31/11

<b>Program</b>	<b># Projects</b>	<b>Installed Capacity (KW dc)</b>	<b>Total Rebate \$</b>	<b>% of Installed Capacity</b>
CORE Solar	4,282	88,312.4	\$ 314,578,262.95	22.1%
REIP Solar	3,391	34,083.0	\$ 43,151,701.55	8.5%
SREC Solar	3,068	277,264.9		69.4%
<b>Total</b>	<b>10,741</b>	<b>399,660.3</b>	<b>\$ 357,729,965</b>	<b>100%</b>

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

Table 3

Solar Renewable Energy Certificate Compliance EY 2001 through 2012 - 7/31/11									
Energy Year	RPS	RPS Required	RPS Actual	SREC Traded	SREC wt avg	SACP	Total SREC value	Projects Installed	Installed Capacity
	%	MWh	MWh	% of RPS	\$/MWh	\$/MWh	\$ M	#	MW
2005	0.01	5,714	3,329	58.26	\$200	\$300	\$1.459		
2006	0.017	10,450	10,723	102.61	\$215	\$300	\$2.335		
2007	0.0393	32,743	31,541	96.33	\$220	\$300	\$7.317	2177 <sup>1</sup>	36.441
2008	0.0817	65,384	49,617	75.89	\$246	\$300	\$16.944	931	19.456
2009	0.16	130,266	75,532	57.98	\$255	\$711	\$80.072	807	31.301
2010	0.221	171,095	123,717	72.31	\$615	\$693	\$108.975	2,123	81.482
2011 <sup>2</sup>		306,000	TBD	TBD	TBD	\$675	TBD	3,527	171.067
2012		442,000							

1. Projects and Capacity Installed through Energy Year 2007
2. Energy Year true up period through September 30, 2011

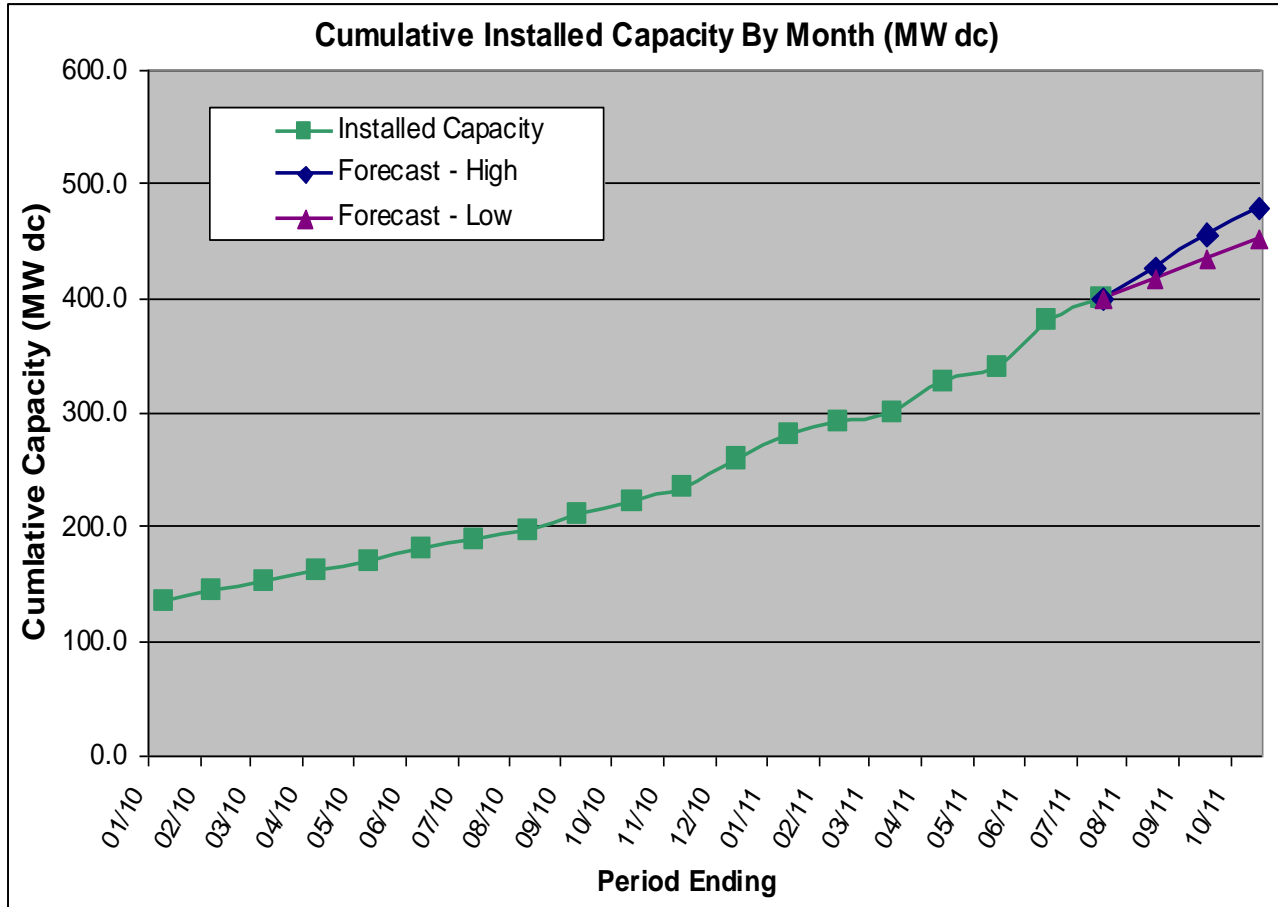
Table 4

NJCEP Solar Project Pipeline as of 7/31/11		
NJCEP Program & Status	Project Qty	System Size (KW dc)
CORE Data Entry	-	-
CORE Approved	22	6,352.6
REIP Data Entry	14	350.8
REIP Approved	800	6,819.3
SRP Data Entry	164	17,867.3
SRP Approved	3,704	433,930.6
<b>Totals</b>	<b>4,704</b>	<b>465,320.5</b>

Note 1: The projects summarized above and contained in the Project List tab are all NJCEP approved solar projects that have not yet reached the "Installed Project" status. The approved projects listed in this report are NOT included in the installed project report for the same period.

Figure 1

**NJCEP Solar Project Installations  
Installed Capacity Forecast As Of 7/31/11**



Cumulative Installed Capacity (MW dc)													
End Date	10/31/10	11/30/10	12/31/10	01/31/11	02/28/11	03/31/11	04/30/11	05/31/11	06/30/11	07/31/11	08/31/11	09/30/11	10/31/11
Forecast - Low	222.7	234.7	259.7	280.4	291.7	300.7	328.0	339.5	380.4	399.9	419.0	438.0	456.0
Forecast - High	222.7	234.7	259.7	280.4	291.7	300.7	328.0	339.5	380.4	399.9	430.8	454.9	478.9