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Re: House Bill No. 5362: An Act Concerning Renewable Energy

Good Afternoon, Chairman Nardello, Chairman Fonfara and members of the Energy & Technology Committee. My name is Mike Silvestrini. I am the President of a solar energy company in Middletown, CT and I would like to offer the following comments on Raised Bill 5362: An Act Concerning Renewable Energy. I offer these comments as a solar professional that has been unable to conduct business in Connecticut and have instead, conducted business elsewhere in search of adequate financial support for renewable energy.

It is my belief, as a professional and an expert in the solar industry, that 5362 would be improved by considering the following three recommendations:

1. Add a price ceiling to the SREC marketplace.
2. Add a price floor to the SREC marketplace.
3. Prevent utility companies from developing solar projects that meet their renewable energy obligations.

Solar developers need clearly defined financial parameters in an SREC market in order to finance and construct solar projects in any state. Without a clearly defined price ceiling and price floor, the financial metrics of a project are shrouded in uncertainty thus reducing the bankability of a solar project and the effectiveness of this Bill. By establishing clearly defining the parameters of the SREC market, Connecticut legislators can empower the DPUC to manage the SREC market in real-time, while providing the price security measures that solar companies need to conduct business and create jobs here.

These price security measures are bookended by a price ceiling, commonly referred to as a Non-Compliance Price, and a price floor, commonly called a "Price Support Mechanism". These

defined parameters set the boundaries of the market, or a “price ribbon”. In essence, this “price ribbon” guarantees that all SRECs will be sold by the solar companies to the utilities for a price somewhere between the ceiling and the floor. By protected these price boundaries, this legislation responds to the need for project financing while allowing for market mobility which allows the utilities to take advantage of real-time SREC market conditions.

A price ceiling is the teeth behind an SREC program and is absolutely critical for successful industry development. The utility companies are required to purchase a certain amount of SRECs, but without a price ceiling, solar integrators have no sense of the value of those SRECs making projects difficult to finance. A specialized price ceiling requires that the utilities purchase SRECs produced by solar projects or be subject to a fee. This fee creates the demand for SRECs and launches the competitive market to acquire them.

Meanwhile the market needs to have a price floor to secure the lowest possible value for SRECs. A price floor ensures that the SRECs have a pre-established, lowest possible price for the entire SREC generation term, which is 15 years according to this Bill. In other words, while the price ceiling determines the highest cost for an SREC, providing price security to the ratepayer, the price floor determines the lowest cost for an SREC, providing security to the solar investment. By including language that supports the lowest possible price for SRECs, solar developers can bank on a certain income stream generated by the sale of SRECs for the entire 15-year term. To create a price floor, a Solar Clearing House should be created where SRECs sell at a minimum of \$350/SREC for the 15 years.

Lastly, it is critical for the price stability of the SREC market that utility distribution companies be prohibited from developing solar projects that meet their SREC requirements. If utility companies are allowed to meet their own SREC requirements by constructing solar facilities, the job-creating component of the Bill will be greatly reduced. Currently, according to Section 6(C), Utility companies are allowed to construct 100MW of solar generating capacity on their own. Under this scenario, the solar industry would be sidelined while SREC values collapse as a result of utility companies flooding the market with their own SRECs and eliminating the incentive for them to buy the SRECs produced by the private sector. The value of SRECs could drop so low due to reduced demand as a result of utility project development, that project developers would be unable service the debt on their own solar projects which depend on revenue generated by the sale of SRECs. Thank you for your time, it has been a pleasure speaking to you all.

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Massachusetts

Incentives/Policies for Renewables & Efficiency

Massachusetts DOER - Solar Renewable Energy Credits (SRECs)

Last DSIRE Review: 02/22/2010

Program Overview:

State:	Massachusetts
Incentive Type:	Production Incentive
Eligible Renewable/Other Technologies:	Photovoltaics
Applicable Sectors:	Commercial, Industrial, Residential, Nonprofit, Schools, Local Government, State Government, Tribal Government, Fed. Government, Agricultural, Institutional
Amount:	Minimum price via Solar Credit Clearinghouse Auction: \$300/MWh
Maximum Incentive:	2010 compliance year: Alternative Compliance Payment Rate is \$600 per MWh (~\$0.600 per kWh)
Eligible System Size:	2 MW (DC) or less
Web Site:	http://www.mass.gov/?pageID=eoeasubtopic&L=5...
Authority 1:	M.G.L. ch. 25A, § 11F
Date Enacted:	1997 (subsequently amended)
Authority 2:	225 CMR 14.00
Date Enacted:	06/2009 (subsequently amended)

Summary:

Massachusetts' renewables portfolio standard (RPS) requires each regulated electricity supplier/provider serving retail customers in the state* to include in the electricity it sells 15% qualifying renewables by December 31, 2020. The RPS was significantly expanded by legislation enacted in July 2008 (S.B. 2768), which established two separate renewable standards -- a standard for "Class I" renewables, and a standard for "Class II" renewables. The Massachusetts Department of Energy Resources (DOER) regulates the RPS and developed corresponding rules. In January 2010, DOER issued emergency rules for the state's Solar Carve-Out program, regulating the portion of the required renewable energy under the Class I Standard that must come from qualified, in-state, interconnected solar facilities.

Solar Renewable Energy Certificates (SRECs) represent the renewable attributes of solar generation, bundled in minimum denominations of one megawatt-hour (MWh) of production. Massachusetts' Solar Carve-Out provides a means for SRECs to be created and verified, and allows electric suppliers to buy these certificates in order to meet their solar RPS requirements. All electric suppliers must use SRECs to demonstrate compliance with the RPS. The price of SRECs is determined primarily by market availability, although the DOER has created a certain amount of market stability by establishing a state Solar Credit Clearinghouse Auction (where prices are fixed at \$300/MWh), as well as the Solar Alternative Compliance Payment (SACP) for the state RPS (set at \$600/MWh for 2010). The Solar Credit Clearinghouse will only be utilized if or when SREC generators cannot sell their SRECs on the open market; the fixed price of

\$300/MWh effectively acts as price floor. The SACP, on the other hand acts, acts as a ceiling on the value of SRECs because it is the per-MWh payment that electricity suppliers must make if they fail to obtain enough SRECs to cover their RPS obligation.

Only solar-electric facilities built after January 1, 2008, may be qualified to generate SRECs. SRECs are generated on or after January 1, 2010, since that is the date the Solar Carve-Out program took effect. Generators must apply and receive a statement of qualification (SQ) from the DOER and must establish an account with NEPOOL GIS in order to participate in this program. Facilities that received funding prior to the effective date of the Solar Carve-Out from the Massachusetts Renewable Energy Trust or the Massachusetts Clean Energy Center, or received more than 67% of project funding from the American Recovery and Reinvestment Act of 2009, are ineligible.

Solar facilities are encouraged to sell their SRECs on the market (either spot market or through long-term contracts). Utilities may use SRECs for compliance under the state RPS for the year in which they are generated. Utilities may purchase up to 10% more SRECs than they require for compliance and "bank" those surplus SRECs for compliance during the following two years. To support solar facilities and market prices, the DOER has created the Solar Credit Clearinghouse Auction. In the solar facility's statement of qualification, the DOER specifies the "opt-in" term, which grants the facility the right to participate in the Solar Credit Clearinghouse Auction for a certain number of years. For 2010, the opt-in term is set at 10 years. The term will be adjusted down in future compliance years, depending on market conditions (the first seven years of the program will provide at least a five-year opt-in term, and the term will not drop by more than two-years in any annual adjustment). Solar facilities may deposit unsold SRECs into the DOER Solar Credit Clearinghouse and participate in an annual auction. SRECs sold through this mechanism are re-minted and have a shelf-life of two years (initially). The annual auction is held in August (30 days after utility compliance reports are received), but **only** if solar facilities have deposited SRECs into the Solar Credit Clearinghouse account. Any SRECs sold in this way are sold for \$300/MWh minus 5% administrative fee.

The SACP is set at \$600 (2010). The SACP will decrease only if DOER determines this is necessary based on market conditions; it will not be reduced by more than 10% in any year.

The Solar Carve-Out program is intended to support approximately 400 MW of solar facilities in Massachusetts. Once the state reaches that goal, and the opt-in term for all solar facilities has expired, SRECs will no longer be generated. Solar facilities will at that time generate renewable energy credits (RECs) and will be able to sell those for compliance under the Class I standard.

** This does not include municipal light districts.*

Contact:

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Boston, MA 02114
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Web Site: <http://www.Mass.Gov/DOER>

RPS Solar Carve-Out – Solar Credit Clearinghouse

Answers to Questions from the 12/18/09 Webinar

Qualification of PV Projects and the RPS Statement of Qualification Application (SQA)

Q: Will solar facilities have to go through the DOER certification (and get assigned a state ID for GIS) process just as all other Class I and II?

A: Yes. All projects will need to be qualified by DOER and registered at the NEPOOL GIS. Small scale project owners will find it useful to contract with an aggregator who can fill out the application on behalf of multiple owners, establish the necessary NEPOOL GIS account, and sell the SRECs for the project.

Q: Does the DOER have an application form for generators to use to submit to the DOER to qualify for participating in the Solar Credit Clearinghouse program?

A: Yes, there will be an online application available for the launch of the program in January. It will be the same Statement of Qualification Application (SQA) as RPS Class I with a new section added for SREC eligibility.

Q: When in the project development timeline can an application for qualification be completed?

A: As soon as you can answer all, or nearly all, of the questions in the application form except for the NEPOOL GIS Asset ID #. You must have selected your site, know the total MW capacity, have at least a tentative choice of make and model of PV equipment, and begun the utility interconnection process.

Q: Is there an application deadline for the project qualification process, or can this process be initiated any time during the year?

A: There is no deadline for the application; they are accepted on a rolling basis.

Q: Can you expand on eligibility of SRECs? Do you just need a parasitic load "onsite" to meet "onsite" requirements?

A: Yes, but this will be clarified in the Regulations.

Q: Can the project be sized larger than the onsite demand?

A: Yes.

Q: Must the project be grid tied to qualify?

A: Yes.

Q: Will Green Affordable Housing Initiative or Green Schools Initiative funded projects be eligible for SRECs?

A: No.

Q: Are state and federal entities qualified to apply?

A: Yes.

Q: Are non-profit entities qualified to apply?

A: Yes.

Q: Will thin film integrated roof PV be eligible for the SREC program?

A: Yes.

NEPOOL GIS, SRECs, and Trading

Q: What is NEPOOL GIS?

A: The NEPOOL Generation Information System (GIS) is an on-line database that records and reports (a) all electricity that enters New England power grid (managed by the Independent System Operator New England (ISO-NE) from generation units ("GIS Generators") and (b) all electricity that the "retail load serving entities" (LSEs) deliver from the grid to their end-use (retail) customers. It also records other electric generation-related information that is required by New England state regulatory authorities, including air emissions from power plants, and whether the output of a generation unit is qualified for one or more state energy portfolio standards (RPS, APS, etc.).

Q: What are the mechanics of actually generating SREC's and getting paid?

A: In very simple terms: the project submits an application to DOER. If approved its metered production is recorded at the NEPOOL GIS, and the GIS mints SRECs. SRECs are sold to other entities, including retail suppliers with compliance obligations under RPS, and the owner, operator, or authorized agent of the project (possibly an aggregator) collects payment for SRECs through those sale agreements.

Q: Is there a limit to the number of years a project will generate SRECs, beyond the opt-in term?

A: There is no pre-set number of years during which a project will generate SRECs. However, the Regulation at 225 CMR 14.07(2)(i) and (j) specify the process by which DOER will determine when the Solar Carve-Out Minimum Standard and the auction process will come to an end. The determination will be based on the achievement of 400 MW of Carve-Out qualified PV installation in Massachusetts and the longest remaining auction Opt-In Term for any Carve-Out qualified Units but will be lengthened to accommodate the shelf-life on any re-minted SRECs.

Q: Do projects generate SRECs beyond the opt-in term, which can be sold on the market (not in the auction)?

A: Yes. However, the generation of SRECs will end eventually. That end will not occur before the Opt-In Term of *all* PV projects has ended (see the answer to the previous question). After the termination of the SREC program, solar projects will continue to generate RECs for compliance in the RPS Class I market.

Q: For SRECs not opted into the Auction Account, what is the normal "shelf life" for the SREC?

A: An SREC can be used by a Retail Electricity Supplier (regulated utility or competitive supplier) for its compliance with the RPS Solar Carve-Out Minimum Standard for the year during which the generation occurred. Under the SREC program, retail electricity suppliers can purchase up to 10% SRECs above their compliance obligation, and "bank" those SRECs for compliance in the following two years. Only Retail Electric Supplier can bank SRECs in this manner.

Q: Will metering be mandatory to have production verified by a third party meter reader?

A: Metering is mandatory, as with all projects qualified for RPS. If a project's meter is not read and reported to the NEPOOL GIS by the ISO New England, then an independent Third Party Meter Reader must perform that function. Such a Meter Reader must be chosen by the project owner, operator, or authorized agent (including aggregators), be approved by DOER, and register an account at the NEPOOL GIS. DOER will provide additional guidance on metering and independent third party meter readers, especially as it pertains to small PV installations and aggregations.

Q: If a project is planning to sell its SRECs to providers exclusive of the Auction, does the project need to be qualified through the DOER-GIS application process?

A: Yes. All projects need to be qualified through the DOER Statement of Qualification Application process and also need to be registered at the NEPOOL GIS (either directly or through an Aggregation).

Q: Would this program not allow over the counter trading of long term solar REC deals? Do competitive suppliers and anyone else with an RPS mandate have to use the auction platform to procure their obligation?

A: Bilateral trading and long term contracts are not only allowed, but encouraged. Use of the auction is not mandatory, in fact the auction process should be viewed as an option of last resort for SRECs.

Q: Do utilities and competitive suppliers get compensated for the SRECs they purchase through the auction or through contracts?

A: The regulated utility companies that provide Basic Service to customers recover the cost of SRECs in their rates approved by the Department of Public Utilities. Competitive suppliers decide based on their individual business strategies how to absorb the cost of compliance.

Q: Can you show a typical example of what a REC transaction might look like and the range of possible SREC value that could be expected

A. DOER regulations provide the market rule and structure for private transactions to take place. DOER does not participate in the private transactions. The SREC transaction itself is performed electronically within the NEPOOL GIS system where both parties must approve the transfer of SRECs from one account to another. The financial transaction is separately executed. We would anticipate that a broad range of transactions will emerge in the marketplace including: spot market, one-time transactions involving a volume and price; bilateral contract specifying volume, term, and price; contract arrangements with brokers to offer SRECs over a term and price, etc.

Q: What is the maximum price that REC's may be sold for during 2010?

A: The ceiling price that a compliance entity or other party would conceivably spend for an SREC would be slightly less than the Alternative Compliance Payment Rate, which for 2010 would be \$600.

Auction Process

Q: Who exactly will manage the auction?

A: DOER, or its agent, will manage the Solar Credit Clearinghouse auction account. DOER will establish the detailed auction rules and procedures and may contract with an external firm to run the auction. The earliest an auction will be held is July 2011, and DOER will prepare the necessary rules and procedures well in advance.

Q: How is Extended Shelf Life different from banking? During its Extended Shelf Life, is an SREC considered a "current"/non-banked REC?

A: Banking of SRECs is only allowed by retail electric suppliers, and only for up to 10% of their compliance obligation in any year. The SRECs deposited in the Auction will be re-minted into Auction SRECs (previously referred to as Extended Life SRECs) and can be bought at the auction and held by any party and any quantity. Similar to banked SRECs, the Auction SRECs can be used by retail electricity suppliers for compliance in either of the following two years, and possibly for a third year in the case of Auction SRECs if the first auction does not clear. Exactly how the Auction SRECs will be electronically tracked by the NEPOOL GIS is currently being established by DOER and the NEPOOL GIS Rules Committee.

Q: How will the allocation of SRECs be determined after the Auction clears? Suppose bidders offer to purchase more SRECs than are available?

A: The SRECs will be allocated to Auction bidders proportionally, based on the volume of SRECs for which bids are received.

Q: Is there a minimum number of SRECs that needs to be deposited in the auction account in order to have an auction?

A: No. As long as there is any volume in the account, an auction will be held.

Q: How much are the auction fees?

A: 5% of \$300, or \$15 per SREC deposited and sold.

Q: Has DOER made any agreement w/ NEPOOL GIS to accommodate this program?

A: No formal agreement between DOER and NEPOOL GIS is needed. Rather, DOER has begun discussions with the appropriate GIS stakeholders to draft modifications of the NEPOOL GIS Operating Rules in order to accommodate the opening of the Solar Credit Clearinghouse Auction and the re-minting of SRECs deposited therein. DOER expects to reach a positive conclusion to these discussions well in advance of the initial minting of the 2010 Quarter 1 SREC at the GIS. Note that the auction account will not be required until May of 2011.

Q: Can any owner of an SREC with access to a particular auction make the deposit or must it be the generator?

A: Only the owner or operator of the eligible facility, or its authorized agent (possibly an aggregator) – but not traders or load-serving entities – shall be eligible to deposit SRECs into the Solar Credit Clearinghouse Auction Account.

Q. Assume a business owner installs a PV system in Jan 2010. Is the business owner able to "opt-in" all 10 years of his SREC's during the 2010 SREC auction in July? Or only the SREC's that the business has created from time of installation to July (about half a year).

A. There will be no auction in July 2010; the auction for any unsold SRECs generated in 2010 and deposited into the auction account will be held in July 2011 (after all the SRECs from the Compliance Year are generated on the NEPOOL GIS). Only SRECs generated in the current Compliance Year can be deposited in the auction account in the following July. Future SRECs may be sold through bilateral long-term contracts between willing parties but are not applicable for the auction.

Q: What is motivating a utility to buy an SREC ahead of the auction for a price higher than \$300/MWh when they can wait and buy one with a longer term for the fixed price of \$300?

A: SRECs purchased at the auction can only be used in future years; they cannot be used for the current year's obligation. There is no guarantee that there would be any volume in the auction account at the end of the year, so the compliance entity would have an interest in purchasing SRECs that are priced less than the applicable Alternative Compliance Payment rate.

Q: How is the ratepayer impact reduced with the Solar Credit Clearinghouse model?

A: Unlike other RPS programs, the SREC program minimum standard will be adjusted annually, maintaining market balance between SREC supply and demand. This will mitigate the condition of an extended short market with SRECs trading at near the ACP rate for multiple years. The program design encourages both buyers and sellers to hedge price risks and engage in long term contracts thereby also protecting ratepayers from high SREC prices. DOER maintains the ability to reduce the ACP rate, within bounds, if the rate is deemed unnecessarily high for continued project development. Finally, the design assures a minimum price for the SRECs through the auction only for a limited and adjustable opt-in term, after which point SRECs may be settled at below this price.

Q: What happens when the market is constantly long?

A: A long market will result in an appropriately greater increase to the next year's minimum standard such that the excess supply is met with additional obligated demand. Additionally, the opt-in term for projects qualified in the following year will be reduced, reducing the financial support and retarding development growth. In an extreme case where solar PV costs are reduced so significantly that development proceeds irregardless of public support, then the minimum standard cap of 400 MW will be quickly reached, the opt-in terms will be substantially reduced, and the SREC program will reach its termination relatively quickly. However, even in this case, only the amount of SRECs needed for compliance will be generated annually, so any unsold SRECs eligible to be deposited in the auction will still be in demand by retail electricity suppliers, and only available at the fixed auction price.

Q: The auction will be conducted starting on July 25, of CY+1 from when the SRECs are generated. How soon after that time can a solar generator expect to receive payment for the SRECs that were deposited in the auction account?

A: Shortly thereafter; it is a matter of certifying the auction results, receiving the payments from the entities that purchase the SRECs at the auction, and turning that around and paying the generators that deposited them into the account. The required time for payments to be received (or possibly up front payment) will be specified in the auction rules, and will be as short as reasonably possible.

Minimum Standard, ACP Rate, and SREC Values

Q: Is the solar carve-out (est. @ 0.068%) a carve-out of the current RPS Class 1 total 5% (2010) requirement?

A: Yes. The total RPS Class I minimum standard for 2010 will be 5%. A very small portion of that standard must be met by SRECs.

Q: Will the 13% capacity factor for calculating the Minimum Standard be stipulated in the regulations, i.e, fixed for all utilities for the life of the program?

A: Yes.

Q: Why is new MinStd = Old MinStd + (Old MinStd * 1.3) [this would double the Old MinStd and add 30%]? Holding aside the adjustments for auction volume, etc., did you intend to have the equation simply be New MinStd = Old MinStd * 1.3 OR perhaps New MinStd = Old Min Std + (Old MinStd*0.3)?

A: The formula you question above is the proper formula only for the calculation of the minimum standard for 2011. In terms of MWs, and given the initial 2010 minimum standard of 30 MW, the formula would result (holding aside adjustments due to auction volume, etc.) in a 2011 minimum standard of 69 MW. This is correct, because we would anticipate that the solar industry that installed 30 MW in 2010, can grow by 30% and install 39 MW in 2011 – producing a total installed capacity of 69 MW.

In subsequent years (2012 and on) the formula for the minimum standard is different from what is cited in the question. The correct formula is $\text{MinStd} = \text{Old MinStd} + [(\text{Old MinStd} - 2\text{-yrOld MinStd}) * 1.3]$. In this case, the minimum standard again is determined (holding aside adjustments due to auction volume, etc.) such that the annual growth rate of new solar installations is 30%. For 2012, this formula would result in $\text{Min Std} = 69 + (69-30)*1.3 = 119.7$ MW (requiring additional installation of 50.7 MW).

Q: Are you expecting to meet the min standard cap of 455,520 MWh in year 2020?

A: There is no way of knowing what year we will hit the 400 MW cap.

Q: Can ACP be reduced 10% per year in multiple years?

A: Yes.

Other

Q: What month do you expect 30A public hearings will happen?

A: February 2010. The entire 30A process should be completed by the end of May, when a final regulation will replace the Emergency Regulation. In the meantime, the Emergency Regulation is fully effective in governing the Solar Carve-Out.

Q: Fee based training or free?

A: Free. Watch for a notice of the training.

Q: Who are the local aggregators that could represent residential customers and other small PV generators?

A: DOER will host a list of Aggregators, Third Party Meter Readers and Brokers on the Solar Credit Clearinghouse website. However, DOER will not recommend any particular entities for the use of Solar Carve-Out participants. Also, DOER will not limit anyone's choice to those currently listed. As the market develops new companies will be added to the list. See answer to the next question.

Q: How do I add my name to be listed as an Aggregators / Third Party Meter Readers / Broker?

A: Brokers need to register as such at the NEPOOL GIS in order to transact business as such using the GIS. Some Third Party Meter Readers (a.k.a., Verifiers) are already listed in a public report at the NEPOOL GIS website, and DOER will post a list at its own website of those that have been qualified by MA RPS by means of the standard RPS Statement of Qualification Application (SQA) process for particular PV projects or aggregations of projects. Aggregators are approved by DOER for a particular aggregation of multiple projects by means of the standard RPS SQA process. Owners or Operators of PV projects need to establish private arrangements with these types of entities.

Q: Can I claim I am powering my house with solar power if I sell my SRECs?

A: No, if you sell your SRECs, you have sold the claiming rights for consuming the *solar* energy. However, you can state that you are “hosting” the generation of solar energy on your roof. If you retire your SRECs within your NEPOOL GIS account without offering them for sale, you are then retaining ownership of the environmental attributes of the system and can claim your own electricity consumption is solar energy.

Q: What happens to the people who installed a project under Commonwealth Solar I or another program and are ineligible for SRECs? What do they do with their RECs?

A: Projects that were built under previous incentive programs presumably went forward based on the economics at that time. They will continue to be eligible for conventional MA RPS Class I RECs, just not for SRECs.

Q: What other incentives are available to residential customers for solar PV?

A: There are solar tax credits on the state and federal level. There is also a new Commonwealth Solar II program that will provide rebates for residential (and other small) projects.

Q: How is the ratepayer impact calculated?

A: For Compliance Year 2010, the compliance obligation is 34,164 MWh or SRECs. The maximum cost of compliance assumes that all compliance is met with SRECs purchased at the Alternative Compliance Payment rate of \$600/MWh, or by ACP payments. Hence, this total maximum cost would be $34,164 \text{ MWh} * \$600/\text{MWh} = \20.5 million . The total retail load served in MA (in 2008) that is under RPS obligation is 50,243,788 MWh, so distributing the total maximum cost across the load ($\$20.5 \text{ million} / 50,243,788 \text{ MWh}$) results in an incremental maximum cost of \$0.41/MWh, or \$0.00041/kWh, or 0.041 cents/kWh. Again, this represents the maximum cost. Additionally, not all this cost would necessarily be recovered from ratepayers – competitive suppliers may bear some of the costs themselves.

DSIRE

Database of State Incentives for Renewables & Efficiency



3/4/10



New Jersey

Incentives/Policies for Renewables & Efficiency

New Jersey Board of Public Utilities - Solar Renewable Energy Certificates (SRECs)

Last DSIRE Review: 02/12/2010

Program Overview:

State: New Jersey

Incentive Type: Production Incentive

Eligible Renewable/Other Technologies: Photovoltaics

Applicable Sectors: Commercial, Industrial, Residential, Nonprofit, Schools, Local Government, State Government, Tribal Government, Fed. Government, Agricultural, Institutional

Amount: Approximately \$560/MWh as of December 2009; however, trades of up to \$700/MWh have been recorded

Maximum Incentive: 2009-2010 compliance year: ~\$693 per MWh (~\$0.693 per kWh)

Terms: Systems must be registered with NJ Board of Public Utilities; facilities qualify to generate SRECs for 15 years after the date of interconnection

Web Site: <http://www.njcep.com/srec>

Authority 1: N.J. Stat. § 48:3-87

Date Effective: 1999 (subsequently amended)

Authority 2: N.J.A.C. 14:8-2.2 et seq.

Date Effective: 03/01/2004 (subsequently amended)

Authority 3: NJ BPU Solar Transition Board Order

Date Enacted: 09/12/2007

Date Effective: 06/01/2008

Authority 4: NJ BPU Solar Financing Board Order

Date Enacted: 07/30/2009

Authority 5: A.B. 3520

Date Enacted: 01/17/2010

Date Effective:

07/01/2010 (the first day of the sixth month following enactment)

Summary:

Note: The Solar Energy Advancement and Fair Competition Act (A.B. 3520) enacted in January 2010 makes certain changes to the New Jersey renewable portfolio standard and the accompanying renewable energy credit system. Among the changes made by the new legislation are: (1) a restructuring of the solar carve-out target from a percentage-based goal to an energy based goal; (2) the extension of both renewable energy credit and solar renewable energy credit lifetimes to the year of generation and the following two years; and (3) a requirement that the Board of Public Utilities (BPU) extend the solar alternative compliance payment schedule from 8 years to 15 years. These changes are not yet effective and will need to be addressed in future BPU rule makings.

New Jersey's renewable portfolio standard (RPS) -- one of the most aggressive in the United States -- requires each electricity supplier/provider serving retail customers in the state to include in the electricity it sells 22.5% qualifying renewables by 2021. The New Jersey Board of Public Utilities (BPU) made extensive revisions to the RPS in April 2006, significantly increasing the required percentages of "Class I" and "Class II" renewable energy, as well as the required separate percentage of solar electricity (2.12% by 2021). The solar portion of the standard has since been revised again by A.B. 3520 enacted in January 2010 to have an ultimate goal of 5,316 gigawatt-hours (GWh) of solar generation in 2026.

Solar Renewable Energy Certificates (SRECs) represent the renewable attributes of solar generation, bundled in minimum denominations of one megawatt-hour (MWh) of production. New Jersey's SREC program provides a means for SRECs to be created and verified, and allows electric suppliers to buy these certificates in order to meet their solar RPS requirements. All electric suppliers must use the SREC program to demonstrate compliance with the RPS. New Jersey's on-line marketplace for trading SRECs, launched in June 2004, is the first such operation in the world. The price of SRECs is determined primarily by their market availability and the price of the Solar Alternative Compliance Payment (SACP) for the state RPS. The SACP is effectively a ceiling on the value of SRECs because it is the per MWh payment that electricity suppliers must make if they fail to obtain enough SRECs to cover their RPS obligation.

SRECs accrue from participating solar-electric facilities beginning March 1, 2004. Generators must register with the BPU in order to participate in this program. Participants who install solar energy systems with assistance from the New Jersey Renewable Energy Incentive Program (REIP) are registered upon completion of REIP process. Non-REIP participants must enroll through the separate SREC Registration Program. Ambiguous wording in the administrative rules initially appeared to limit the creation of SRECs for compliance with the state RPS to net-metered systems located on a customer-generator's premises. In January 2008, S.B. 2936 specifically extended the right to generate RPS-eligible SRECs to non-net metered systems and in May 2008 the BPU adopted temporary amendments consistent with the change (subsequently replaced by permanent amendments).

Solar facilities have a 15-year "qualification life", meaning that they are eligible to generate SRECs for 15 years after they connected to the grid. The qualification life ends on the first May 31 (the end of the RPS compliance year) that is *at least 15 years* after the interconnection date. An annual engineering estimate will be used to calculate the monthly SREC generation for systems with a capacity less than 10 kilowatts (kW). If a generator has accumulated a fraction of an MWh by the end of a reporting year (May 31), the fraction may be carried over and combined with energy generated in one or more subsequent reporting years in order to make a full MWh that is eligible for sale.

SRECs generated prior to June 1, 2009 could only be used for compliance during the compliance year in which they were generated. Effective June 1, 2009 SRECs have a trading lifetime of two years, meaning that an SREC can be used for by an electric supplier for RPS compliance during the year it is issued or during the next compliance year. This lifetime has been further extended to 3 years -- the year of generation plus the following two compliance years -- by A.B. 3520 (2010). The effective date of this law ("the first day of the sixth month following enactment") would seem to preclude the amendment having any effect on SRECs generated prior to compliance year 2010-2011. The necessary clarification should be addressed in BPU rule making.

Under current rules the SACP is determined according to an eight-year schedule, although the BPU may soon be adopting a 15-year schedule as a result of the A.B. 3520 requirements enacted in January 2010. Each year the BPU reviews the SACP and adds one additional year to the back end of the schedule. The initial eight year schedule (June - May reporting year) is as follows:

Reporting Year	SACP(\$/MWh)
2008-2009	\$711
2009-2010	\$693

2010-2011	\$675
2011-2012	\$658
2012-2013	\$641
2013-2014	\$625
2014-2015	\$609
2015-2016	\$594

The price for an SREC is expected to average approximately \$100 per MWh lower than the SACP during a given year, although actual prices will vary with market demand. According to the New Jersey Office of Clean Energy (OCE), in December 2009 the weighted average price of 2009 SRECs was approximately \$565/MWh (\$0.565/kWh), with some trades approaching \$700/MWh.

SREC-based Financing Programs

In April 2008, Public Service Electric and Gas (PSE&G) received approval from the BPU to offer a loan program to help its customers finance PV systems. The PSE&G Solar Loan Program allows customers to take a loan from the utility for up to 40-60% of the cost of the PV system. Customers may then repay the loan using SRECs produced by their system at a basement price of \$475 per SREC. The initial \$105 million program is scheduled to last two years. [Click here for further information on this program.](#)

In July 2008 the BPU issued an order requiring the state's other electric distribution utilities (Jersey Central Power and Light, Atlantic City Electric, and Rockland Electric) to submit plans for purchasing SRECs from solar facilities through long-term contracts. The order contains several mandatory design requirements, including: (1) contract terms of 10-15 years; (2) separate market segments for projects of 50 kW or less and those between 50 and 500 kW (the upper limit); and, (3) an initial 3-year program period ending with the May 31, 2012 compliance year. So called "legacy" projects that received rebates through 2008 will not be eligible for long-term contracts, but projects smaller than 50 kW that receive rebates during 2009 are eligible to participate.

The order also permits PSE&G to continue to offer its Solar Loan Program through its close, but to subsequently develop a similar SREC purchasing program for implementation in the 2011 and 2012 RPS compliance years. Atlantic City Electric and New Jersey Central Power and Light issued their first request for bids on July 30, 2009 and Rockland Electric began participating in the second solicitation issued October 1, 2009. [Click here for further details on the individual utility programs and an FAQ on how the programs will generally operate.](#)

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