



March 25th, 2013

Via Email and Original as Testimony

Dear Michael Judge,

First and foremost we would like to highlight the initial success of the SREC market in accelerating the adoption of solar technology in the Commonwealth. The promise of a robust SREC market has been instrumental in diversifying the grid and providing consumers with real energy choice. Locally produced clean energy such as solar not only reduces the billions of dollars we send out of the state for oil, natural gas and coal, but reduces expensive peak demand and reduces unnecessary transmission expenditures. A robust SREC market will continue to be fundamental to the success of solar in Massachusetts today and going forward as well. SREC system owners have no doubt put an enormous amount of trust in the promise of sufficient returns. Much of that investment has been by citizens of the Commonwealth and the vast majority of solar installations, nearly 90%, are small systems. Hundreds of local small businesses and thousands of families have invested their limited resources in this important clean energy infrastructure for the Commonwealth. The investment that SREC owners have made already is close to \$1 Billion and only highlights the importance of delivering on the promise of the SREC market - especially if the Commonwealth intends to attract future funds for clean energy investment.

Current State of the SREC Market

Even with the early success of the program current market dynamics have challenged project economics of installed systems and the precipitous pricing decline of over 60% has pushed pro formas to territory unforeseen by a significant number of market participants. Many solar projects utilized the 'floor price', communicated strongly by official literature (see attached),

"If second auction does not clear, minimum standard is increased to force LSE's to buy remaining SREC's" (DOER RPS-Solar-Carve-Out-Program-Overview PDF)

as a conservative 'base case' and market pricing today stands at about 25% below that figure. The current situation is a negative not only for current system owners but also for the future of renewable energy in Massachusetts.

Deliver on the Commitment of the SREC Market

Balancing the necessity of providing a reasonable return to projects under development as well as those already built is paramount to a viable market. Current SREC owners, the multitude of local community members, have helped the Commonwealth towards meeting its important and laudable clean energy and environmental goals in uncertain times. It is in the self-interest of the Commonwealth to treat these projects such that investment will

be attracted to and made in future projects. The foundation of the current program relies on a solid floor price. In the case of local citizens investing their limited resources in these systems, community opinion, positive or negative, can be a significant determinant in whether a particular clean energy technology is adopted. Lack of confidence or results divergent from expectations can threaten the market success of an otherwise beneficial clean energy resource.

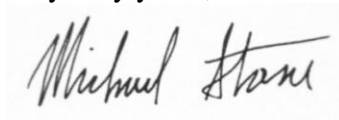
We believe that measures to fully ensure honoring the commitment of the current program and support the goals of the Commonwealth regarding system owners in the future years of the current program exist for the Department's consideration and should be implemented. As the regulatory agency directed by the Green Communities Act to oversee the Carve-Out we believe the DOER should:

- **Require compliance entities to make a minimum demonstration of quarterly compliance within the context of the annual compliance requirement.** This will ensure compliance entities are making regular purchases of SRECs and avoids the negative impact of utilities waiting until the last possible moment to buy SRECs. Even if utilities were required to purchase a portion of SRECs below a quarter of their annual obligation every 3 months it would help to improve the market equilibrium with more liquidity.
- **Use its authority to inspect utility purchase activities.** This will increase DOER information with regards to the timing of market transactions and help to flag potential market irregularities or imbalances such as those mentioned above.
- **Endorse and enact legislative changes such as House Bill 2915 with the Massachusetts General Court.** This will provide the needed assurance to investors, small businesses and community members that if the auction fails, the Commonwealth's commitment to the SREC program, and to its citizens who have invested in clean energy infrastructure for this state, is intact.
- **Under 225 CMR 14.07(2)(h) add to the compliance formula generated in 225 14.07(2)(d) through (g) twice the number of Solar Carve-Out Renewable Generation Attributes deposited into the Solar Credit Clearinghouse Auction Account such that the number of Attributes deposited is counted three times.** This change would significantly increase the assurance that the third stage within the clearinghouse auction would clear and would incentivize compliance entities to purchase SRECs earlier in the clearinghouse auction because of the potential of a more significant upward adjustment in their future compliance obligation if they don't purchase deposited SRECs in either of the first two auction stages.
- **Adjust the methodology for calculating 'Total SRECs Generated (projected)cy-1'.** Changing how this figure is calculated would help to ensure greater accuracy, and therefore a more responsive

compliance formula, as projections have consistently been below actual output to the detriment of SREC system owners.

We strongly believe these changes are reasonable and equitable considering the significant downward deviation from market expectations and the necessity for a stable investment environment to honor current system owners and the future of the program. Although starting from a small base in terms of end-use generation each step in the market development of solar is critical considering the potential community benefits as well as the number of barriers that still exist.

Very truly yours,

A handwritten signature in black ink, reading "Michael Stone", is displayed within a light gray rectangular box.

Michael T. Stone,
Policy & Regulations Manager
My Generation Energy, Inc.

Dear Massachusetts Department of Energy Resources,

Solar energy is growing in Massachusetts. Businesses, homes, and non-profits like ours are using solar energy to reduce the billions of dollars that are sent out of the state every year for energy. As the Commonwealth is moving toward its clean energy goals, and will likely be setting new ones, it is important to ensure that the Department of Energy Resources (DOER) balances the necessity of providing reasonable support of projects under development as well as a sufficient return to those that made some of the first investments in local clean energy infrastructure. Local SREC producers such as ourselves have furthered the Commonwealth towards its energy and environmental goals in uncertain times. We believe that the DOER, using its regulatory authority, should do everything necessary to ensure that the SREC program honors its full commitment to current solar owners.

Sincerely,

Joseph M. Scavone	W. Yarmouth	David Abel	Orleans
Jennifer Scavone	W. Yarmouth	Andrea Hibbert	E. Orleans
Scott Lindell	Falmouth	David Doolittle	Sandwich
Alison Leschen	Falmouth	Ann Stone	E. Falmouth
Elizabeth Levy	Eastham	Thomas Stone	E. Falmouth
Milt Levy	Eastham	Shirley Knowles	Harwich
Robin Clarke	Dennis	Thomas Kowalski	Brewster
Robert Thomas	Chatham	Peter Wade	Eastham
Jane Rabesa	Falmouth	Gary Rabesa	Falmouth
Elizabeth Bruen	Brewster	Richard Bruen	Brewster
Charlie Sumner	Brewster	Karen O'Connor	Brewster
Dot Murray	S. Dennis	Diane Fontaine	E. Orleans
Barry Knowles	S. Harwich	James Mangan	E. Harwich
Jon Moulding	E. Dennis	Robert Harvey	Sandwich
Bill Saltonstall	Marion	Robert Musik	Orleans
Paulette Di Angi	Barnstable	Carole Bell	Dennis

RPS Solar Carve-Out Program Overview

What is the RPS Solar Carve-Out?

The RPS Solar Carve-Out is specifically designed to facilitate the development of solar photovoltaic (PV) energy and mandates that a certain percentage of the state's total electricity supply must be provided by solar PV. This percentage is designed to increase each year until 400 Megawatts (MW) of PV is installed, providing approximately 1% of the state's total electricity supply.

The RPS Solar Carve-Out is a part of the larger Massachusetts Renewable Portfolio Standard (RPS) that was established in regulations issued by the Massachusetts Department of Energy Resources (DOER) in 2002. The regulations required that 1% of the state's electricity supply come from new renewable sources by 2003. This percentage would increase by 0.5% each year until it reached 4% in 2009. Following 2009, it would increase by 1% each year, reaching 15% by 2020, and continuing until the DOER suspends the annual increase.

Percentages for the RPS are applied to the total load served by all of the state's Load Serving Entities (regulated utilities and competitive electric suppliers) or LSEs. This load is expressed in Megawatt hours (MWh). For example, the estimated total statewide load served in 2009 was 50,243,788 MWh. The percentage of that total statewide load that needed to be met by renewable sources in 2009 would then be 4% of that total, or 2,009,751 MWh. All LSEs were required to meet their RPS obligation by demonstrating that 3% of the load they serve comes from renewable sources. The primary way they are able to accomplish this is through purchasing Renewable Energy Certificates (RECs).

What are RECs?

Electricity produced by new renewable energy generators qualified for the RPS program is broken into two products:

- 1) The electricity production that is used on-site or delivered to the grid
- 2) The positive environmental attributes associated with this clean energy production.

RECs represent the second product. One REC is created each time a qualified system generates 1 MWh (or 1000 kWh) of electricity. In order for LSEs to meet their compliance obligations as set by the RPS, they must purchase a number of RECs equal to the percentage for that particular compliance year. For example, in 2010 all LSEs are required to purchase an amount of RECs equal to 5% of the total load they served in Massachusetts.

RECs are created on the New England Power Pool Generation Information System (NEPOOL GIS). However, before a REC can be created on NEPOOL GIS, a generator unit must first apply for and receive a Statement of Qualification to sell RECs from DOER. Currently, eligible technologies include solar PV, solar thermal electric, wind, ocean thermal electric, wave/tidal energy, fuel cell, landfill methane gas, low impact small hydroelectric, low-emission advanced biomass, marine or hydrokinetic energy, and geothermal energy projects.

In order to determine the prices for RECs, DOER has set an Alternative Compliance Payment (ACP) Rate, which is currently approximately \$60/MWh. This rate serves as a ceiling price and exists as a penalty payment that LSEs must pay if they do not meet their RPS compliance obligation in a given year. Essentially, for every MWh they are short of meeting their obligation, they must provide an alternative payment of \$60 to the DOER. Thus, the incentive is for LSEs to purchase RECs from qualified projects for something less than \$60 each in order to meet their compliance obligation and avoid ACP payments.

What are SRECs?

SRECs are essentially the same as RECs in how they are created, how they function, and how they are bought and sold. The difference lies in that SRECs are RECs specifically created from energy generated by solar PV systems, and that they are likely to have a significantly higher market value. This is because DOER has set a ceiling price with an ACP rate of \$600/MWh, as well as a price support auction account at \$300/MWh, which serves as a floor price.

RPS Solar Carve-Out Program Overview

Who is eligible for the RPS Solar Carve-Out?

To participate in the RPS Solar Carve-Out, solar PV Generation Units must meet the following eligibility criteria:

- Have a capacity of 2 MW DC or less
- Be located in the Commonwealth of Massachusetts
- Use some of its generation on-site and be interconnected to the utility grid
- Have a Commercial Operation Date of January 1, 2008 or later

Solar projects owned by the regulated utility companies as provided in the Green Communities Act of 2008 are eligible.

Projects that have received funding from programs administered by the Massachusetts Clean Energy Center or Renewable Energy Trust prior to the start date of the Solar Carve-Out Program (January 1, 2010) and those that received substantial funding (over 67% of total installed cost) from the American Recovery and Reinvestment Act (ARRA) federal stimulus programs are not eligible.

How do I participate?

If you own or are planning to install a solar PV project that meets the eligibility requirements, you may submit a Statement of Qualification Application located on DOER's website (www.mass.gov/doer). You may apply as a single unit or as a member of an aggregation of multiple units (lists of qualified and potential aggregators can be found on the program's website). Once your application has been received, DOER will review it and then issue a Statement of Qualification allowing you to generate SRECs on the NEPOOL GIS. This Statement of Qualification will state the unit's eligibility and specify an Opt-In Term, in calendar quarters, of the eligibility of the unit to participate in the Solar Credit Clearinghouse Auction.

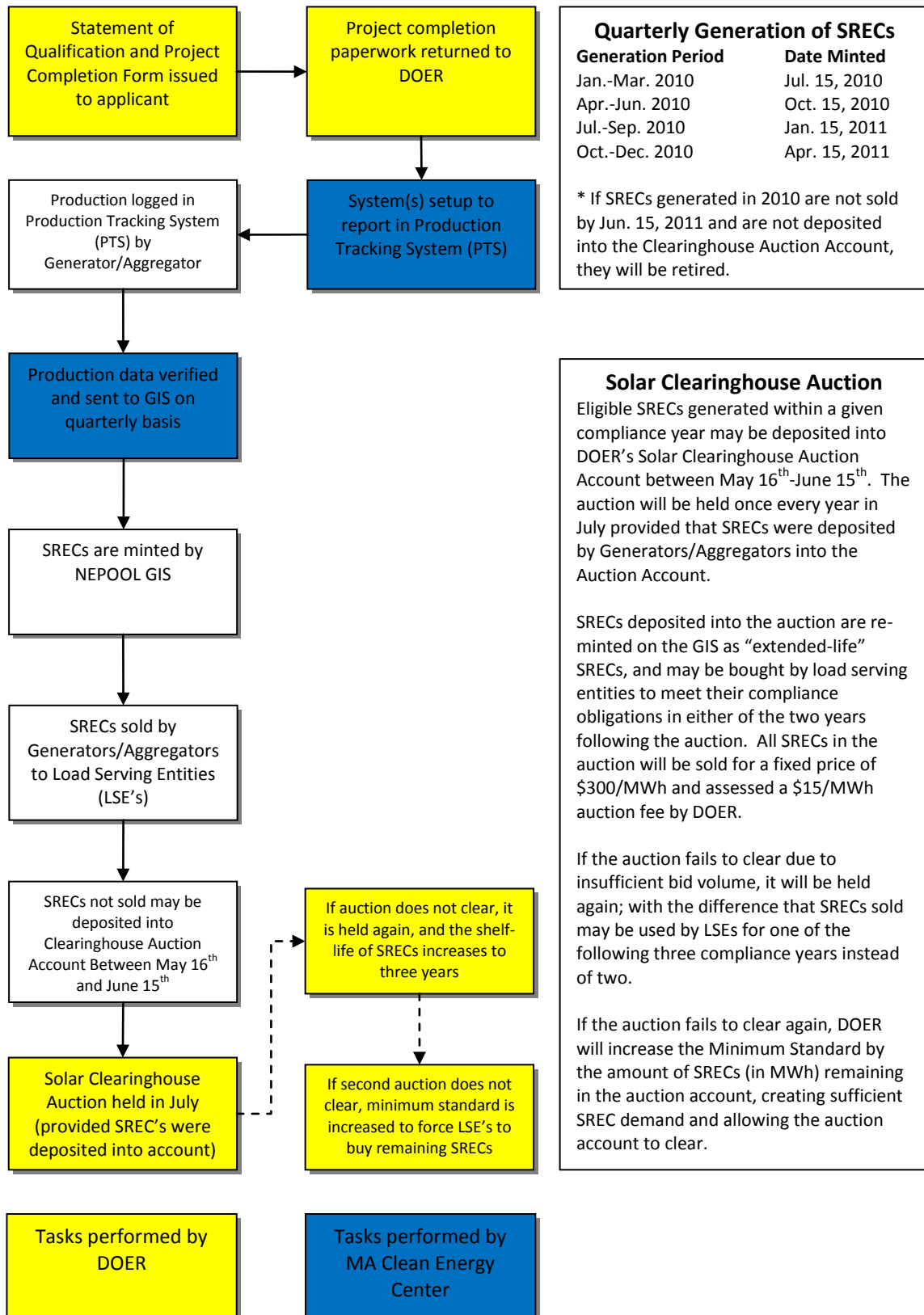
Generating and Selling SRECs

At the time you receive a Statement of Qualification from DOER, you will also receive a Project Completion Form. You will need to fill out and sign this form before you can begin reporting your monthly production. Once DOER has received this form, your system will be registered in the Massachusetts Clean Energy Center's Production Tracking System (PTS). You will be notified of this via email and given a username, password, and instructions on how to report your system's production data. If your system is larger than 10 kW, you will be required to install a Data Acquisition System that will automatically upload your production data to the PTS. If your system size is smaller than 10 kW (most residential systems), you may enter your production data manually.

At the end of each month, you or your Data Acquisition System Provider will be required to enter the information on your PV system's production meter into the PTS. The Clean Energy Center will then verify this data and submit it to NEPOOL GIS on a quarterly basis for the purposes of generating SRECs. The NEPOOL GIS will then mint these SRECs on a predetermined quarterly schedule. As soon as the first SRECs you generate are minted at the NEPOOL GIS, you or your aggregator may begin marketing them to LSEs.

RPS Solar Carve-Out Program Overview

Generation and Selling of SRECs



Quarterly Generation of SRECs

Generation Period	Date Minted
Jan.-Mar. 2010	Jul. 15, 2010
Apr.-Jun. 2010	Oct. 15, 2010
Jul.-Sep. 2010	Jan. 15, 2011
Oct.-Dec. 2010	Apr. 15, 2011

* If SRECs generated in 2010 are not sold by Jun. 15, 2011 and are not deposited into the Clearinghouse Auction Account, they will be retired.

Solar Clearinghouse Auction

Eligible SRECs generated within a given compliance year may be deposited into DOER's Solar Clearinghouse Auction Account between May 16th-June 15th. The auction will be held once every year in July provided that SRECs were deposited by Generators/Aggregators into the Auction Account.

SRECs deposited into the auction are re-minted on the GIS as "extended-life" SRECs, and may be bought by load serving entities to meet their compliance obligations in either of the two years following the auction. All SRECs in the auction will be sold for a fixed price of \$300/MWh and assessed a \$15/MWh auction fee by DOER.

If the auction fails to clear due to insufficient bid volume, it will be held again; with the difference that SRECs sold may be used by LSEs for one of the following three compliance years instead of two.

If the auction fails to clear again, DOER will increase the Minimum Standard by the amount of SRECs (in MWh) remaining in the auction account, creating sufficient SREC demand and allowing the auction account to clear.

RPS Solar Carve-Out Program Overview

Price Support Mechanisms

There are several price support mechanisms built in to the Solar Carve-Out that may be changed over time based upon certain market conditions. Among these are the Opt-In Term, the ACP Rate, and the Minimum Standard.

Opt-In Term

The Auction Opt-In Term is defined as the number of years (expressed in calendar quarters) that a project is eligible to deposit SRECs into the Solar Credit Clearinghouse Auction Account. For all projects qualified in 2010, this is set at 10 years, or 40 quarters. Any SRECs generated in this span of 40 quarters will be eligible to participate in an auction that will potentially be held each July, where they will be assured a price of \$300/MWh for their SRECs (minus a \$15 auction fee assessed by DOER). This mechanism sets a floor price for SRECs and gives projects long-term price assurance should they be unable to sell them directly to LSEs or there be an oversupply of SRECs.

Once a project's Opt-In Term has expired, its owner may continue to sell their SRECs until the program officially ends, but will not have the price assurance guaranteed by the ability to Opt-In to the auction. The Opt-In Term may be adjusted on a yearly basis based upon triggers and formulae provided in regulations. More information on how changes to the Opt-In Term are made can be found on the RPS Solar Carve-Out page, which is located on DOER's website (www.mass.gov/doer).

ACP Rate

The ACP rate is set at \$600/MWh and helps to define the ceiling price of SRECs, which could be approached in the event that there are not enough SRECs in the market for LSEs to meet their compliance obligations. This rate can be decreased by up to 10% on a yearly basis at the discretion of the DOER.

Minimum Standard

The Minimum Standard is the percentage of their total load served that LSEs will need to meet each year to fulfill their compliance obligations for the RPS Solar Carve-Out. For 2010, the Minimum Standard is set at 34,164 MWh, or the amount of solar PV equivalent to approximately 30 MW DC of installed capacity. To calculate the percentage of their total load served that each LSE must meet in 2010, the Minimum Standard (in MWh) is divided by the total load served in the previous compliance year (in MWh). The calculation for the estimated percentage for 2010 is shown below.

$$\text{MinStd}\%, 2010(\text{estimated}) = 34,164 \text{ MWh} / 50,243,788 \text{ MWh} = 0.0680\%$$

The Minimum Standard will be calculated each year to account for growth in solar installations. The standard is adjusted each year by a base new installation growth rate of 30%, but is also adjusted to account for the previous year's over or under supply of SRECs.

When does the program end?

The Minimum Standard is capped at 455,520 MWh (sufficient to enable the installation of approximately 400 MW DC capacity of solar PV). When DOER determines that sufficient applications have been qualified to meet this cap, qualification of all additional solar installations will be transferred back to the RPS Class I Program. Once the cap has been met, the Minimum Standard for the RPS Solar Carve-Out remains constant at the Minimum Standard cap of 455,520 MWh.

The RPS Solar Carve-Out program remains in effect until all the Auction Opt-In Terms of existing qualified projects and the full shelf-life years of any auction SRECs have expired, thereby maintaining the price certainty promised to all solar generators. Once the last of these Opt-In Terms/shelf-life years has ended, all projects previously qualified to sell SRECs will be transferred to the RPS Class I Program as well.

For more information please consult the RPS Solar Carve-Out page located on DOER's website at www.mass.gov/doer. If you have any questions or concerns please contact DOER via email at DOER.SREC@state.ma.us.