



*Building Healthy Communities
Where Low-Income
People Live and Work*

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Mark Sylvia, Commissioner
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, Massachusetts 02114

RE: SREC-II Updated Proposed Design

Dear Commissioner Sylvia,

Please accept the following in response to the Department of Energy Resources' ("DOER") request for written comments on the proposed Solar Carve-Out SREC-II Program ("SREC-II Program"). BCC Solar Energy Advantage ("SEA") is pleased to use this opportunity to express our support for the expansion of the solar carve-out program to 1600 MW, the continued use of the SREC platform as the primary incentive for solar in the Commonwealth and the proposed design improvements for the SREC-II Program. We also outline a couple of adjustments to the Program that will ensure equitable access to solar in Massachusetts.

BCC Solar Energy Advantage is a wholly owned subsidiary of Boston Community Capital, a twenty seven year old community development financial intermediary whose mission is to create and preserve healthy communities where low-income people live and work. In line with that mission, SEA develops, owns, and installs solar photovoltaic systems for affordable housing, nonprofit organizations, and community and municipal facilities. Today, with 12,000 panels installed, SEA serves 1,873 affordable housing units and generates 2.7 million kWhs of solar electricity annually- equivalent to the energy needed to power 500 homes. This makes SEA one of the largest non-utility owners of solar PV systems in Massachusetts, as well as one of the largest owners of solar on affordable housing in the nation.

Solar provides a range of benefits to Massachusetts ratepayers, projects hosts and installers

Under Governor Patrick's leadership, the amount of solar energy installed in the Commonwealth has increased 80 times from the 3 MW installed in 2007. On top of that, the DOER's implementation of forward-thinking policies, including the SREC Program will ensure that Massachusetts businesses and residents will reap the benefits of clean energy for years to come.

Maintaining a robust solar market in Massachusetts will not only be an economic driver for the solar industry but will position the Commonwealth as a leader in innovating and developing new applications for solar while driving down costs. Solar offers a range of indirect benefits to residents and ratepayers as well as direct benefits to project hosts and installers, including energy cost savings, price suppression and price hedging. In addition, solar is a clean, local resource; its distributed deployment serves as a basis for increasing resiliency of the grid while reducing reliance on imported fossil and nuclear fuels.

Such benefits are often overlooked in policy, regulatory and rate discussions. This risks over-estimating the ratepayer impact of incentive programs, such as the SREC-II Program, because the ways in which increased deployment of solar can and does save ratepayers money is not taken into account. As such, SEA notes that while it is critical for DOER to ensure that incentive levels for the SREC-II program don't create a windfall for solar project developers and financiers, it is equally important to consider the cost to ratepayers in an appropriate context.

Price suppression is a particularly compelling benefit of distributed solar that cannot be understated, especially in light of this summer's multiple heat waves, which caused electricity prices in the Boston region to hover for a brief period around \$1.00 per kWh.¹ As you are well aware, price suppression works by reducing generation costs to all ratepayers during periods of high electricity demand. The more solar on the grid during peak demand, the greater the price suppression impact. In Germany, a study by the Institute for Future Energy Systems demonstrated that solar power has reduced the price of electricity by 10% on average, with reductions peaking at 40% in the early afternoon when solar generation is greatest.²

Expansion of the solar market is key to realizing price suppression as well as the other benefits of solar, thus, the decision to increase the solar carve-out to 1600 MW was the right one. This new goal will allow solar to continue developing at a reasonable pace and on a time horizon that is long enough that solar should be able to complete without subsidies by the time the program closes in 2030. Significantly, 1600 MW of solar equals almost 90% of the incremental increase in peak summer load in Massachusetts out to 2020. Combined with the projected growth of other renewable energy resources and energy efficiency, the Commonwealth is set to meet the entire increase with renewable energy.³

Summary of SEA's comments

Based on SEA's analysis, low income communities are likely to be underserved under the SREC-II Program. To remedy this risk and ensure equitable access to the solar market for all Massachusetts residents across all solar market sectors, SEA makes the following comments:

- Incentive levels for the types and sizes of projects typically located on affordable housing, nonprofit, and community facilities are inadequate. As a result, projects will be uneconomic and/or have difficulty attracting financing. To address this issue, SEA recommends a higher SREC factor for such projects. SEA is also calling on DOER to put in place a comprehensive program aimed at lowering the soft costs for solar in the Commonwealth.
- To increase the likelihood that low income residents can participate in the solar market, Community Supported Solar ("CSS") projects should be included in the non-managed, non-competitive sector.
- To the extent projects in the managed growth sector will be evaluated on the basis of non-price criteria, the "public good" criteria should be defined in a way that rewards projects which directly serve low income communities.

The SREC-II Program should promote equitable access to solar and its benefits

SEA's focus on developing solar projects in communities where low income people live and work means that, from a policy perspective, we are most concerned with issues of equity and access. Towards that end, SEA believes the SREC-II program, at a minimum, should:

¹ See Real Time Locational Marginal Pricing ("RT-LMP") for NEMASSBOSTON on July 19, 2013. Prices hit \$988.60 per MWh at 2 PM. The energy component of the RT-LMP amounted to \$765.04/MWh.

² See "Merit order effect of PV in Germany," Renewables International (Feb. 2, 2012), <http://www.renewablesinternational.net/merit-order-effect-of-pv-in-germany/150/510/33011/>.

³ According to ISO New England, the increase in summer peak load between 2010 and 2020 is estimated to be 1,800 MW. See CELT Forecasting Details, Forecast Data 2013 (May 3, 2013), http://www.iso-ne.com/trans/celt/fscst_detail/.

- Support a diversity of ownership structures, projects sizes and applications;
- Be stable and predictable, allowing for long-term planning and avoiding boom and bust cycles;
- Ensure that incentives don't create a windfall for solar project developers and financiers and drive reductions in installed costs over time;
- Consider ratepayer impact in an appropriate context (see discussion above);
- Support development of solar in a manner that is consistent with appropriate land use;
- Be flexible enough to allow for innovation and accommodate future applications of solar; and
- Ensure that the direct benefits of solar are available to all sectors of the Commonwealth.

The SREC-II Program should achieve most of the above. As currently structured, for example, the DOER has better control over supply and demand, minimizing the risk of a boom and bust solar market; the SREC factor calibrates incentives levels on the basis of project benefits; and the creation of the managed growth sector will ensure that there's room in the market for a range of project sizes. However, there are a few ways in which the Program falls short of ensuring equitable access to the solar market for low income communities, primarily by inadequately recognizing and incentivizing projects of a certain type and structure, namely medium-scale (i.e. 50-500kW) third party projects and community supported solar. How these omissions impact low income communities is discussed in greater detail below.

Maintaining the viability of the third party market for medium-scale projects is critical to ensuring that solar development continues in low income communities.

Many of the affordable housing, nonprofit organizations and community facilities that SEA works with cannot afford to internally subsidize the cost of solar and require a third party investor in order to take advantage of federal tax incentives. But for the third party model, these organizations would almost certainly not be able to install solar on their buildings.

Based on SEA's analysis most solar market sectors remain viable under the incentive levels proposed by DOER. That does not appear to be the case for medium-sized projects (i.e. 50-500kw), particularly those that require a third party investor to monetize tax incentives. Under our set of assumptions, these projects only begin to approach the breakeven point when SRECs trade exclusively at the Alternative Compliance Payment price. This risks leaving low income communities behind.

The benefits of solar to low income communities cannot be understated. In addition to the price suppression and other benefits of solar already discussed, solar can deliver direct costs savings to a project host. One example is a SEA project SEA being developed in partnership with the Greater Boston Food Bank. By installing solar on the Food Bank's roof, while leveraging federal tax incentives the organization could not monetize on its own, SEA will deliver \$20,000 a year in energy cost savings to an institution dedicated to serving Boston's low income and homeless populations. The Commonwealth has an interest in continuing to incentivize such projects, not only to help public housing and service organizations save money, but to ensure that chronically underserved communities aren't denied access to the solar market simply because they lack adequate resources.

SEA suggests two solutions. The first is to increase the SREC factor to a level that makes these types of projects economic. This would likely be an SREC factor above 1. The second is to endeavor to lower installed costs for these projects, tend to have higher soft costs than other types of projects for any number of reasons. While there is certainly room for innovation on the project development side to lower these costs, there is also a role for DOER to play. As such, SEA is also calling on DOER to put in place a comprehensive program aimed at lowering the soft costs for solar projects in the Commonwealth. A reduction in the soft costs for solar will not only benefit low income communities, but stands to benefit every solar customer and position the technology to successfully compete in the Class I REC market once the SREC-II Program ends in 2030.

Community Supported Solar is another way to increase access to ownership and benefits of solar for low income communities.

CSS is an important tool to expand access to solar energy for utility customers who otherwise would be unable to benefit from solar. This includes renters, individuals lacking an appropriate site for solar on their property and those that lack the financial resources to cover the up-front costs associated with installing a solar system. As such, SEA encourages DOER to add community supported solar to the non-managed, non-competitive sector.

A possible definition for community supported solar projects can be found in “Community Shared Solar: Implementation Guidelines for Massachusetts Communities.”⁴ In these guidelines, CSS projects have the following attributes:

- One or more residential or business utility customers residing in the community are project participants;
- The project is located in the territory of a Massachusetts investor-owned utility;
- Project participants benefit from net metering credits generated by the PV system and/or receive a return on a financial investment in the project; and
- The site owner receives lease payment for hosting the PV system.⁵

The “public good” non-price criteria should reward projects that deliver benefits to low income communities.

To the extent projects in the Managed Growth Sector will be evaluated on the non-price criteria, such as “benefits to the public good,” DOER should clearly define the public good to include those projects which deliver direct benefits to low income residents, communities and organizations. This would allow projects that, for example, do not meet the definition of CSS but deliver substantial direct benefits to low income communities to be recognized and increase the likelihood that the project is selected in the competitive solicitation process.

In summary, SEA believes that in deciding to continue the SREC Program, with certain improvements, DOER is building upon a predictable and proven market-based solution. Overall, SREC-II will deliver the market stability and certainty that is key to securing project financing and continued growth in the renewable industry. Adoption of the suggested changes outlined above, will further improve upon the program design by providing greater access to low income communities and ratepayers. SEA thanks the DOER for the opportunity to participate in the SREC-II Program development process and looks forward to continuing the dialogue as the process moves forward.

Sincerely Yours,

A handwritten signature in blue ink, appearing to read "DeWitt Jones".

DeWitt Jones, President
BCC Solar Energy Advantage

⁴ See, Community Shared Solar: Implementation Guidelines for Massachusetts Communities, <http://www.mass.gov/eea/docs/doer/renewables/solar/community-shared-solar-implementation-guidelines-with-contracts-032913.pdf>

⁵ *Id.* at 5.