



September 9, 2009

Ms. Susan Leavitt
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Re: Comments on Solar RPS Carve-Out STRAW PROPOSAL

Dear Ms Leavitt,

The New England Clean Energy Council appreciates this opportunity to submit comments regarding the DOER's Solar RPS Carve-Out Proposal.

The Council's mission is to accelerate the region's clean energy economy to global leadership by building an active community of stakeholders and a world-class cluster of clean energy companies. Integral to that mission is the promotion of renewable power project development including solar energy.

The Council represents a diverse set of stakeholders, including clean energy companies, venture investors, financial and educational institutions, industry associations, utilities, labor representatives, and commercial end-users. In developing these comments, the Council consulted principally with its members who are directly involved in developing and financing solar projects.

Summary of Recommendations

As described in detail below, the Council recommends the following:

- **Transition:** Ensure a smooth transition between ComSolar and the carve-out program by:
 - Establishing the carve-out program rules at least six months before the end of ComSolar
 - Increasing the carve-out requirements in 2010 and 2011 to maintain the current industry growth rate and avoid a market disruption
- **Securitization:** In light of the central importance of securitization, immediately convene a stakeholder working group to develop a securitization mechanism that is financeable, low risk, transparent, and easy to deploy in a timely manner.

- **Eligibility:** Provide certainty regarding the program eligibility requirements by clarifying:
 - That the carve out obligation applies to all load
 - That utility- and stimulus-funded projects do not generate solar RECs
 - The definition of “on-site” generation eligible to generate solar RECs

Goals and Objectives

The Council heartily endorses the DOER’s goals and objectives for the carve-out program as articulated at the August 26 stakeholder meeting:

- Sustain long-term growth of solar market
- Develop smooth transition from upfront rebate-only incentives to production-based, market priced S-RECs
- Cultivate solar development across multiple sectors and generator sizes (residential, commercial, and utility-scale)
- Develop a sustainable solar market that reduces dependence on state subsidies
- Minimize ratepayer impacts

A program that accomplishes these goals will produce a robust and successful solar market.

Enabling a Smooth Transition

The Council commends DOER for recognizing the importance of a smooth transition from ComSolar to the carve-out. As DOER noted in its presentation on August 26, a key lesson learned from other states is to “[p]lan for transition to solar carve-out before the rebate money runs out, avoiding boom and bust cycle by planning in sufficient time for next program phase.” Solar markets elsewhere have suffered from just this “boom and bust” cycle.

We offer a few suggested modifications to the straw proposal to help ensure a successful transition.

Notice to Market Participants.

To avoid a “boom and bust” cycle, the new program rules must be known to the market at least six months before they go into effect. This is because of the lengthy solar sales

cycle. The period between the start of the sales process and project construction is typically six months or more for a private, commercial installation. Since program rules must be known in order to price and sell systems, solar firms can only sell projects when the programs rules are known six months out. If there is uncertainty about the program rules, solar firms will have to reduce or end their sales efforts. This will cause the solar market to contract, leading to a loss of companies and jobs.

Recommendation: Fully define and publish the carve-out program rules at least six months before the end of ComSolar. This will require careful planning, recognizing both the length of time that it will take to finalize the carve-out program rules and the remaining ComSolar budget and the current program burn rate. It may well be that the Commonwealth will need to increase the ComSolar budget in order to keep that program running long enough to provide the necessary bridge to the carve-out.

The Carve-Out Requirements in 2010 and 2011.

Another important factor in ensuring a smooth transition is to set the SREC requirement high enough to maintain the level of growth that has been generated by ComSolar. This will require that the SREC requirement in 2010 and 2011 be set higher than in DOER's straw proposal.

It seems likely that ComSolar incentives will support the installation of 10 MW of PV in 2009. However, the incremental SREC requirement in the straw proposal is just 3 MW in 2010 and 1 MW in 2011. This would be a sharp reduction in the market.

It is true that there will be utility and stimulus projects in 2009 and 2010. However, those large, "one-off" projects are very different from the projects being installed through ComSolar and will likely be installed by different firms. They will do nothing to support growth in the residential and smaller commercial markets. To maintain the market, the SREC requirement should build off ComSolar activity, with utility and stimulus projects considered separately.

Recommendation: The SREC requirement in 2010 should be boosted to at least 7 MW and the requirement in 2011 should be boosted to an *additional* 11 MW. We have attached a table setting forth an illustrative example of a modification to the SREC schedule.

Securitization

The Council strongly supports DOER's view that securitization of long-term S-REC revenues is a key component to the effectiveness of the Solar RPS program. The justifications identified in the Straw Proposal are accurate. Recent modeling of tradable green credits in the US has concluded that REC markets are inherently volatile and uncertain even under "idealized assumptions that were selected to give the market the

best possible opportunity to function in a stable market.¹ Several studies have concluded that RPS designs based on short-term tradable credit markets have generally been less effective than markets in which some form of long-term contracting has been present to mute market volatility.² Lawrence Berkeley National Laboratory, for example, concluded that “Uncertain energy and/or REC prices have – in some...cases – impeded renewable project development. In other instances, development has occurred on a quasi-merchant basis, but arguably at higher ratepayer cost because investors in such projects require inflated returns to compensate for the added risk.” Variable and uncertain pricing structures make it difficult for project developers to forecast future revenue flows, and expensive to secure financing. Potential lenders or investors will discount potential S-REC flows significantly without securitization. Such discounts will blunt, if not virtually negate, the financial benefits intended by the S-REC program. In contrast, well-structured securitization mechanisms can help ensure that the Massachusetts state targets will be met and that risk premiums – and therefore policy cost and ratepayer impacts – will be minimized.

The New England Clean Energy Council recognizes the need to develop a consensus about the type of mechanism that could be employed, but also realizes that the timeline to do so is fairly short. Generally, it is the Council’s position that the optimum securitization structure be readily financeable, low risk, transparent, and easy to deploy in a timely manner. Many analysts equate REC securitization with some type of long-term contracting mechanism. There are currently several long-term contracting mechanisms that are in place or under consideration around the US for meeting renewable energy targets. Generally, these include requests for proposals (RFPs), auctions, and standard offer contracts. Of these three broad choices, standard offer contracts seem to match the Council’s criteria most closely. Requests for proposals tend to lack transparency and also can create significant transaction cost barriers for the size of generators the DOER anticipates supporting with the carve-out. Auctions have not yet been successfully deployed in the US to support renewable energy markets, they have previously been rejected in New Jersey³ and New York, and it is unlikely they would be ready in time for the DOER’s proposed January 1, 2010 program launch date.

¹ Ford, A., Vogstad, K., & Flynn, H. (2007). Simulating price patterns for tradable green certificates to promote electricity generation from wind. *Energy Policy*, 35(1), 91-111

² van der Linden, N. H., Uytendinck, M. A., Vrolijk, C., Nilsson, L. J., Khan, J., Åstrand, K., et al. (2005). *Review of international experience with renewable energy obligation support mechanisms*. Petten, Netherlands: Energy research Centre of the Netherlands

³ The New Jersey Board of Public Utilities stated that auctions would be “administratively burdensome” and noted that, “there are no working examples of a renewable energy auction in the country or the world. There are examples of energy auctions but no working REC auctions, and current energy auctions only go out three years. This new infrastructure would need to be developed within the BPU and within the State. Staff estimates that it would take at minimum eighteen months to establish and develop the infrastructure to run the auction. In addition, it is unclear which entities would enter into fifteen-year contracts based on auction setting prices and how this process would function. This could cause higher regulatory and financial risk in the market.” New Jersey Board of Public Utilities. (2007, December 6). Decision and Order Regarding Solar Electric Generation. (Docket No. EO06100744 – In the Matter of the Renewable Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments). Newark, NJ

It is unclear, however, whether DOER has the authority to establish any securitization mechanism that includes long-term contracts. As an alternative, DOER could explore a tradable credit system under which both alternative compliance payments (ACP) and a credit price floor would be established.

Like the ACP, the price floor could track down over time to put downward pressure on prices. In the interest of investor security, however, a generator that comes online in a given year will be guaranteed that year's REC price floor for a period of 10 years. One of several potential mechanisms for establishing a price floor would be for the state to enter into 10 year put option contracts for renewable energy credits. This might be done, for example, in connection with the state's pending investments in new PV capacity on state-owned buildings using ARRA funding. In other states, such as New Jersey, utilities have stepped in to serve as a defacto guarantor of the floor. The Council looks forward to working with DOER to determine which structures are possible from a regulatory perspective, and which structure might feasibly be voluntarily adopted by the utilities if no immediate regulatory solution is currently available.

Recommendation: In light of the central importance of securitization, immediately convene a stakeholder working group to develop a securitization mechanism that is financeable, low risk, transparent, and easy to deploy in a timely manner.

Clarifying the Eligibility Requirements

The scope of the carve-out requirement.

At the stakeholder meeting on August 26, one commenter suggested that competitive suppliers with existing contracts should be exempt from the solar carve out requirement for the duration of those contracts. There is no justification for such an exemption. Equity requires that all customer load face the same obligations, and that no subset of that load receive special treatment. Moreover, given that the enabling legislation was enacted in July 2008, fully 18 months before the carve-out requirement will go into effect, there is no credible argument that the requirement should not have been anticipated by suppliers. The carve-out requirement should apply to all load.

If DOER instead chooses to exempt certain customers from the requirement, the carve-out requirement for the remaining customers will need to be increased. DOER's schedules showing how the carve-out will build the market and achieve the Governor's goal for solar are all predicated on the assumption that the carve-out applies to all load. If instead some load is exempt, the percentage requirement that applies to the remaining customers will have to be increased in order to achieve the planned number of megawatts.

Recommendation: Clarify that the carve-out requirement applies to all load and that load under competitive supply contracts is not exempt.

Utility- and stimulus-funded projects

At the August 26, 2009 stakeholder meeting, DOER representatives explained the derivation of the 2020 solar RPS target as the difference between Governor Patrick's 250 MW by 2017 goal and the solar resources that are expected to be developed through other incentive mechanisms and programs. Annual growth rates in the solar carve-out are set to gradually increase development to satisfy the anticipated "unmet" solar need.

We are concerned, however, that if utility owned and rate based projects qualify for SRECs, this could negatively affect the solar RPS carve-out and frustrate the DOER's laudable objective of creating a sustainable solar market. By enabling utility projects to create SRECs, the DOER would in effect be setting an annual "moving target" for customer owned solar development. Further, the Green Communities Act's authorization granting each of the investor-owned utilities to build up to 50 MW of solar generation by 2012, if even partially exercised, could substantially limit the "headroom" under the solar RPS carve-out required for the development of a robust, vibrant and competitive solar marketplace.

Recommendation: While the DOER should take into account estimated solar development under utility and stimulus programs in initially setting the solar RPS carve-out targets, those projects should not generate Solar RECs and should not "count" towards the solar RPS targets.

Definition of "on-site"

The Green Communities Act SECTION 32, Section 11F(g) states that, "In satisfying its annual obligations under subsection (a) each retail supplier shall provide a portion of the required minimum percentage of kilowatt hour sales from new on-site renewable energy generating sources located in the commonwealth and having a power production capacity of not more than 2 megawatts which began commercial operation after December 31, 2007, including **but not limited to behind the meter generation and other similar categories of generation determined by the department**" (emphasis added). As a general principle, the Council favors consistency across regulatory schemes and believes that the definition of on-site should interplay with other regulations, most particularly with net metering provisions. The Council believes that the definition of "on-site" should be interpreted broadly to the customer's property, not necessarily behind the meter, and as long as it does not require that it be one contiguous property, to the extent such definition will be consistent with net metering regulations. The Commonwealth should allow communities to create renewable generating facilities on properties that provide the best resource areas for renewable generation, regardless of whether they are located on the sites where the largest loads are located (wind projects are most typically mentioned in this context). Specific to solar, we believe there is an unmet desire for projects on landfills and other municipal brownfields and that these projects will be economically feasible only with S-RECs. Since EEA has encouraged such projects, e.g., the DEP-sponsored workshop in June promoting renewable energy on closed landfills, we would

urge that the definition of on-site facilitate such projects. Ultimately, increasing the number of large projects that produce economies of scale will move PV more quickly towards grid parity.

Recommendation: Interpret the definition of “on-site” generation broadly to maximize the number of potential projects.

Thank you for the opportunity to submit these comments. I am of course available if you have any questions or suggestions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Nicholas d'Arbeloff', with a stylized, cursive script.

Nicholas d'Arbeloff
President

CC: Ian Bowles, Secretary, EOEEA
Philip Giudice, Commissioner, DOER