



Via email to DOER.SREC@state.ma.us

January 29, 2014

Dwayne Breger
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 100
Boston, MA 02114

Re: Comments on DOER's SREC2 draft regulation

Dear Mr. Breger:

Thank you once again for your outstanding work in guiding the Massachusetts Solar Carve-Out, most recently with the release of the draft SREC2 regulation, and for the opportunity to provide comment. Everything we said in the first paragraph of our August comments bears repeating here: you have run an excellent public policy-making process. Though no one could have foreseen all the twists and turns that Massachusetts solar took in 2013, your commitment to transparency, public input, patience, and creativity – and most of all, your commitment to clean, renewable, distributed generation – anchors our confidence for 2014. Even if 2014 holds many more surprises, as it surely does.

While we have several comments below, and some of them include substantial detail, we feel it is important to start with this: it's good, and it is critical for the industry that it be implemented without further delay. Nothing in these comments is intended to detract from that primary focus or delay this regulation's final implementation. Thank you for continuing to push this process as quickly as possible.

The balance of our comments can be divided into two sections. First, and most substantively, we want to address some issues related to the Managed Growth Sector. In particular, we are suggesting here that the annual capacity targets be changed from upward-sloping to flat, at 200 MW per year for six years; that DOER give itself the discretion to change the SREC Factor targets sooner, but that a reduction in SREC Factors be accompanied by a commensurate increase in the future capacity targets; and we are proposing a detailed framework for the SREC Assurance of Qualification system. We understand that an opportunity for comment on DOER's draft Assurance of Qualification Guideline will be provided, but because we believe that this process is so critical, we are providing this proposal in advance of the guideline. Second, after addressing those Managed Growth Sector issues, we offer additional comments on details of the draft regulation.

Comments addressing the Managed Growth Sector

We recognize DOER's intention with respect to the Managed Growth Sector. DOER is trying to design a policy that will balance several objectives: deliver 1600 MW of solar generation by 2020; locate that solar generation where it is most useful and where it is not in competition with other uses; do it at the lowest possible cost to ratepayers; and do it in a way that helps grow and maintain a solar industry in the Commonwealth that, at the end of the program, can stand on its own. We understand DOER's desire to protect Sectors A-C from being crowded out by Managed Growth-type projects, which is an accurate description of how SREC1 unfolded. But we also want to highlight, as we did in our comments on DOER's last presentation, the vital role that these types of projects have played in accelerating the Massachusetts solar market over the past four years. It is not in spite of, but because of these projects that Massachusetts has become the most vibrant solar market in the northeast, attracting investment, creating jobs, and lightening our environmental footprint.

It is evident that DOER has tried, with this draft regulation, to shift solar development onto the roof, behind the meter, towards land with few other uses, but to do so methodically, to allow some runway for the existing pipeline, and to allow time for all of the businesses that are geared toward that kind of development activity to adjust. But we nevertheless fear that this draft regulation cuts the cord too quickly. Change inevitably involves some pain, but with 106 MW of capacity available in 2014 and 2015, and no certain future for these types of projects after that, we worry that this approach fails to take advantage of the economic, environmental, and social value that SREC1 has created, and threatens real damage to a vibrant but still fragile local industry.

With DOER's 1/21/14 release of an updated qualified project list, it now seems likely that the final SREC1 capacity will exceed 500 MW, and possibly be as high as 600 MW. In June, we advocated strongly for some flexibility in the original 400 MW SREC1 program cap. At the time, we suggested that the final SREC1 program size would likely not be greater than 500-550 MW, depending on the gates that DOER defined for projects to remain qualified under that program. We continue to believe that DOER handled that situation extremely well, and took the best steps that it could under the circumstances. We agree with DOER's decision to amortize the SREC1 overage, whatever that ends up being, over six years, subtracting 1/6th of that amount from each year's capacity target under SREC2, so as to minimize the impact in any one year while still targeting 1600 MW of installed capacity by 2020.

We hesitate to suggest structural changes to the regulation; as we said first, the most important thing is to stabilize the SREC2 marketplace by getting this regulation implemented. That said, if the final SREC1 capacity is 550 MW, the capacity targets for 2015-2017 will be 120 MW, 135 MW, and 149 MW, respectively. Those are annual totals that we exceeded in 2012, exceeded by a healthy margin in 2013, and will exceed again in 2014. On the one hand, we do not want or intend to argue that DOER's plan needs to fully accommodate the surge in Managed Growth Sector-type projects that we've seen. But after carefully contemplating these numbers, the curve simply seems to slope the wrong way. Why contract the market so severely in order to get to an annual capacity target from which we can grow again? Wouldn't it be better to start SREC2 from closer to where we are now? Doing so would necessitate a flat or downward-sloping curve for the annual capacity targets on the road to 1600 MW by 2020. But if the solar industry then continues to strain at the leash in coming years – strong growth in Sectors A-C, Managed Growth Sector applications far in excess of annual capacity blocks – that would be a credible signal that the industry is ready to do more with less, and it would make good sense to allow the capacity targets to continue growing while diminishing the SREC subsidy more quickly than is currently contemplated.

Again, we recognize the important public policy objectives that are fostered with the approach DOER has taken: better siting of projects; better support to the existing electrical infrastructure; more control over the rate of solar adoption, so that the policy, not the industry, decides the growth rate. But projects in the Managed Growth Sector meet important public interest objectives too: watt-for-watt, SREC-dollar-for-SREC-dollar, they are the most economically efficient; there is a segment of the local industry, and a pipeline, that has been built around these types of projects; and most importantly, they are solar generation at scale. They have been, and can continue to be a major source of clean, local, renewable electricity.

Given the set of constraints DOER is dealing with, we acknowledge that the Managed Growth Sector must be limited. We suggest the following adjustments, in the interest of balancing the need to put limits on these types of projects without shutting down this market sector entirely right away.

- 1) Increase the near term capacity targets.

Though we recognize that DOER is attempting to provide a smoothly growing path to 1600 MW, it seems counterproductive to dramatically slow the pace of the Commonwealth's solar growth in order to grow it again. Instead, we propose even capacity targets of 200 MW per year, less 1/6th of any overage from SREC1. For clarity, if the 2014 target remains 85 MW, then we are advocating for a 200 MW target in each of 2015-2019, with the remaining 115 MW in 2020.

- 2) Allow for SREC Factor changes sooner. If the SREC Factor comes down, increase the capacity targets by the same percentage.

We think it is possible that the industry will be able to hit the annual capacity targets even with the lower SREC2 SCCA and ACP curves and the SREC Factors. We don't know, but we certainly think it's possible. While we are grateful for DOER's expressed intention in 14.05(9)(l)(4) to provide stability and a clear development pathway in advance of any future change to the SREC Factor Guideline, we think a modification of this provision could help protect ratepayers and the stability of the industry at the same time. We propose that DOER accelerate the SREC Factor review to March 31, 2015, that subsection (4) call for that review annually on March 31, that any changes to the SREC Factors resulting from an annual review take effect no sooner than January 1 of the subsequent year, and that no SREC Factor can be adjusted downward by more than 0.2 in a given year. However, we also propose that DOER further amend subsection (4) to provide that, in the event that the SREC Factors are reduced in a given year – or more specifically, because it is possible that some SREC Factors could be reduced at the same time as others are increased, that the SREC Factors are reduced overall, after accounting for DOER's estimates of the weighted capacity and SREC Factor of each Market Sector – the annual capacity targets from that point forward are coincidentally automatically increased by the same percentage as the SREC Factor reduction. The end result is that there would be no change to the Minimum Standard, and thus no change to the ratepayer impact.

Taken together, these two suggestions would provide for more near-term stability in the Managed Growth Sector by reducing the extent of the market contraction proposed in the draft regulation, and would also allow for future growth if the industry is able to do more with fewer public incentive dollars. In other words, we have tried to think of a proposal that is less draconian with respect to the current development pipeline and business environment, but without being overly protective of a market sector that DOER is clearly trying to reign in, and without asking for additional public support. This is what we've come up with.

Our two other comments on the Managed Growth Sector specifically address the SREC Assurance of Qualification system.

- 3) Set a strict time limit for holding a statement of qualification in the Managed Growth Sector, with a limited extension that is available only with a sizeable deposit, and enforce those time limits.

When the Joint Proponents of the Net Metering System of Assurance proposed a nine-month reservation period with a six-month extension that could be secured by placing a deposit, the idea was that the deposit should be large enough to discourage developers from continuing to hold their cap allocation unless their project had advanced to the point where there was no longer any real doubt that it would be completed in short order – post-financing, post-procurement, in construction. This would be in the range of \$50-\$100 per kW, or \$50,000-\$100,000 for a 1 MW system. A 1 MW system costs between \$2,000,000 and \$3,500,000, and the cost of \$50,000 for six months, with very little risk, is in the \$1000-\$3000 range, so if the project is truly into procurement and construction, the owner should be able to place that deposit, and to do so without really impairing the project's economics. But on the other hand, it's not an amount of money that any developer will be ready to lose unless they are very confident that their project will be complete in six months.

Some may object that \$50-\$100 per kW will restrict solar development activity to only those with deep pockets and strong balance sheets, and it is true that a healthy, competitive development environment includes some developers who don't have deep pockets or strong balance sheets, as we've seen in SREC1. But that is nevertheless a false argument: the objective is to design a system wherein the extension will only be sought by those who have already committed millions of dollars to the project itself – modules and inverters, not just interconnection studies and engineering – and anyone who has already committed millions of dollars has both the incentive and the ability to place a substantial deposit to protect that investment, if it would be smart to do so.

This logic is reflected in successful programs in other states that depend on allocating scarce program capacity. The successful California Solar Initiative, as well as California's Renewable Auction Mechanism, require refundable deposits of between \$20,000 and \$60,000 per MW along with the initial reservation of program capacity. In contrast, programs that require no financial security, such as the NYSEERDA-administered program for projects between 200 kW and 2 MW, consistently struggle with high attrition rates, with viable projects being crowded-out by failed projects.

Somehow this point got lost in implementation of the System of Assurance. Instead we have a deposit of \$3.15 per kW, or \$3150 per MW. That is not a meaningful deposit; relative to the cost of a project, it is nearly a free extension. This issue should be addressed in the Net Metering System of Assurance, and it is not a mistake that DOER should make in designing the System of Qualification for the Managed Growth Sector. We recognize that DOER faces a challenge in figuring out how to take deposits like this, but it's critical to the smooth functioning of the program, and it is therefore a challenge worth tackling.

Because DOER has specified the same criteria for the Assurance of SREC Qualification system in 14.05(9)(o) as the criteria that are used in the Net Metering System of Assurance, we suggest that DOER use the same reservation time periods, so that those two systems are aligned – nine months for the initial reservation period, and then a six-month extension that is available only with a sizeable deposit, which will be returned when the project is completed, but forfeited if the project is not complete in six

months. Critically, we strongly urge DOER to set a deposit amount that is impactful in the developer's decision-making process about whether to go for the extension or not – \$50 to \$100 per kW. Separately, we intend to argue for an increase to the Net Metering System of Assurance extension deposit in the coming months, so that it is also in this more meaningful range.

- 4) Design a system that is as transparent and predictable as possible, and that is likely to allow for hitting the capacity targets while accounting for the fact that some projects will drop out after going through the SREC Assurance of Qualification process.

DOER has set the 2014 and 2015 annual capacity blocks at 26 MW and 80 MW, respectively. Assuming DOER's intention is in fact that 106 MW of capacity in the Managed Growth Sector will actually be installed in 2014 and 2015, the SREC System of Assurance must account for the probability that some projects that meet the criteria for an AQ will not be built. One way – the simplest way – to account for that would be for DOER to make some estimate of the project drop-out rate, and then qualify enough projects to account for it. For example, if DOER estimates the drop-out rate as 25%, and the annual capacity block (ACB) for a given year is 100 MW, then DOER would grant AQs to 125 MW of projects. Of course, to the extent that DOER is wrong about the drop-out rate, the Managed Growth Sector capacity would deviate from the capacity target on one direction or the other. This does not seem like a terrible problem to us, but we understand that DOER may be eager to avoid that.

Here is a better system:

DOER begins by ranking all projects that initially meet the criteria set for the SREC System of Assurance. Given the probability that more than 106 MW of projects will seek an Assurance of Qualification initially, DOER should put in place a set of criteria for rank-ordering all projects that apply within an initial window. The most straightforward way we can think of to distinguish between two projects, both of which meet the criteria for an Assurance of Qualification in 14.05(9)(o), would be to give priority to the project that can demonstrate that it had met those criteria first.

After rank-ordering all projects that meet the Assurance of Qualification criteria, DOER assigns projects first to the 26 MW 2014 ACB and then to the 2015 ACB, until 106 MW of projects are assigned. From the 107th MW onward, DOER simply queues all projects.

On June 30th, 2014, DOER announces the 2016 ACB, per 14.05(9)(m), at which time DOER assigns projects in the queue to that ACB, leaving all remaining projects queued. For example, if on June 30th there is a 150 MW queue, and the 2016 ACB is announced to be 80 MW, then the first 80 MW in the queue are assigned to the 2016 ACB, leaving a queue of 70 MW. Over time, as some projects that have an AQ drop out, everyone's queue position improves. Sometimes, for some projects, this will mean that they advance from one ACB to the next, or from the un-assigned queue into the last ACB.

The nine-month reservation period should start as soon as the project has an AQ, but that clock should pause after six months, with three months remaining, if that moment occurs prior to the start of the year for which the project holds an AQ. The clock should then start again at the start of the year for which the project holds an AQ. In other words, if a project holds an AQ for at least six months before the year for which it is qualified, that project must be completed in the first quarter of the year for which it holds an AQ, or secure the six-month extension by paying the sizeable deposit discussed above. Projects that are in the queue waiting for assignment to an ACB or that have been assigned to an ACB but have a stopped clock should be required to make quarterly update filings and place a small deposit

to remain in the system, in order to make sure that abandoned projects are able to be cleared from the queue – in other words, make sure there's a pulse. We also suggest that, in the event that DOER changes the SREC Factors at any point, SREC Factor changes apply only to those projects that have not yet been assigned to an ACB.

Projects can only begin generating SRECs in the year for which they have an AQ, but there will be some cases where developers choose to move forward with their projects even if it means that they will come online slightly ahead of their SREC qualification period. This system will give developers the needed transparency and predictability about when their project will begin to generate SRECs, allowing them in turn to make their own decisions about when to move forward, and it will allow for the annual capacity targets to be hit with some precision.

Additional comments address other details of the draft regulation

5) 14.05(9)(l)

- a. This comment applies to both the definition of Emergency Power Generation Unit and to its inclusion in Market Sector A. The language of the definition suggests that the primary purpose, under normal operating conditions, must be to power the critical facility. However, there is also a subset of projects that are installed adjacent to critical infrastructure, and while the critical load may not be contractually linked to the generation facility during normal operation, the system could be designed and installed with the capability to switch over and power the critical load in an emergency. Of course, this capability would require additional costs that are specific to the function of providing emergency power during an outage, principally some storage capability, so the inclusion in Market Sector A is warranted. We propose an amended definition to accommodate this concept: "A solar photovoltaic Generation Unit that can be utilized for the purpose of providing power to critical infrastructure in the event of an emergency or power outage." We also suggest that DOER publish a list of facility-types that meet the definition of critical infrastructure, and a guideline governing the determination that the facility meets the standard.
- b. We are having trouble understanding this sentence in Market Sector A, which re-appears in Market Sector C: "For the purposes of Market Sector A, a Unit's capacity shall be measured as the total nameplate capacity of the qualified Solar Carve-Out II Renewable Generation Units on a single parcel of land or on a roof of a single building, whichever is less." We request clarification.
- c. Regarding Market Sector C, though we recognize that references to kW capacities in the regulation are DC, we suggest that the reference to 500 kW in Market Sector C only be changed to AC, for two reasons. One, the market for third-party financing is significantly more robust for projects towards 1 MW and above, and third-party financing is an important option at the 500 kW scale, because host-ownership is rare in that segment. By setting this bar at 500 kW AC, projects in the 600-700 kW DC range become possible, which would enable more third-party investment. Two, because inverters at 500 kW are common, it would be a more efficient use of the component market to set the bar at 500 kW AC.

6) 14.05(9)(m)

- a. In subsection (1), the statement "No later than June 30 of each subsequent Compliance Year..." is a little confusing. We believe that the phrase "No later than June 30 of each

year..." would be better, since the word "subsequent" seems to be the offender. Furthermore, while we recognize that DOER may want to take a conservative posture, we urge DOER to provide updates in advance of the June 30th deadline. For example, when DOER announces the 2016 ACB on June 30th 2014, we suggest that it also make a statement like "we currently estimate the 2017 ACB to be at least XX MW." We further suggest that DOER provide an update on that number on or around January 1 – of 2015 in this example.

- d. Later in that paragraph, where you have "so that the projected installed capacity of all Solar Carve-Out II Renewable Generation Units does not exceed the cumulative installed capacity target for that Compliance Year," we suggest replacing "does not exceed" with "is estimated to not exceed." We are trying to avoid confusion about taking away capacity from a block that has already been calculated in the event that growth in Sectors A-C exceeds expectations.
 - e. This is covered in our comments above about the Assurance of Qualification system, but for clarity, we hope it is DOER's intention to qualify 106 MW for 2014 and 2015 as soon as the regulations are final, rather than doing the 2014 qualifications now and the 2015 qualifications at some later date.
- 7) 14.07(3)
- f. 14.07(3)(d) states that "the total compliance obligation is 161,958 MWh calculated as the amount of Solar Carve-Out II Renewable Attributes generated by 230 MW of capacity installed across market sectors differentiated by SREC Factors as provided in 225 CMR 14.05(9)(l) and (m) during the course of the first two compliance years..." DOER presumably uses this 230 MW capacity target to set the Managed Growth Sector annual capacity block for 2015 at 80 MW. However, 14.07(3)(e)(3) states that the 2015 Cumulative Installed Capacity Target will be less than 230 MW, by an amount equal to 16.7% of the difference between the final SREC1 capacity and 400 MW. Does DOER intend to maintain the Capacity Target of 230 MW and the Managed Growth Sector capacity block of 80 MW for 2015 irrespective of the final SREC1 capacity?
 - g. Regarding 14.07(3)(e)(3), we are concerned that this sentence creates ambiguity in the event that the Cumulative Installed Capacity Target for a given year is exceeded even if the Managed Growth Sector annual capacity block is zero. We believe that DOER should clarify that no constraints will be placed on Sectors A-C under this circumstance, but rather that this would lead DOER to follow the process described in 14.05(9)(l) to review and reduce the various SREC Factors.

Thank you again for your careful consideration of all the public input you are receiving on this issue.

Sincerely,

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