

Comments on Post-400 MW Solar Program Policy Design

SRECTrade appreciates this opportunity to provide additional comments on the post-400MW program. We believe the DOER did a great job of incorporating the initial stakeholder comments to narrow down the post-400 MW options, and especially feel the decision to separate the initial program and the follow-on was the right one. There are some areas of the revised proposal that we'd like to comment on primarily from a complexity and realistic implementation perspective that we feel we have significant insight into given our position in the market representing a significant percentage of Massachusetts's solar system owners.

SREC Factor

The SREC Factor concept is extremely complex. For the commercial sector, this additional complexity will make it harder to finance systems in what is already the most difficult solar finance segment. In the residential market segment, it puts full understanding of the SREC mechanism out of reach of the vast majority of consumers, both discouraging adoption and increasing cost.

1. The SREC Factor complexity adds to what is already the most complex SREC market in the country. As the largest SREC aggregator in MA, our experience has shown that the current program pushes the limit on complexity that can be reasonably explained to a typical commercial or residential customer who is not immersed in the solar industry. The addition of the SREC Factor pushes it well out of reach of easy understanding by the general public. We believe the benefits of the SREC Factor are far outweighed by creating a system so complex that only industry experts understand it.
2. This system will result in small systems creating a single Class 1 REC at odd, multi-month or even multi-year intervals. Class 1 RECs are historically sold in large blocks, and it will be difficult for even the largest aggregators to obtain the necessary scale to sell these randomly created, "one at a time" residential Class 1 RECs at an efficient transaction cost. It is very possible that the tracking and transaction costs would be significantly greater than the actual market price of these RECs if MA Class 1 RECs approach the recent \$2/REC price of PJM market RECs. Even at today's MA Class 1 REC prices, the cost to transact a single REC would be a significant portion of that RECs price.
3. SREC and REC markets are separate and distinct. This system requires a solar generator to not only master the existing SREC program and market, but also learn the entire REC program and market. The REC market is arguably even more complex, because supply can come from, and be sold in, other NE-ISO states. This makes the modeling of prices exponentially more complex and far out of reach of the average commercial or residential system owner.

4. Small systems may only generate an SREC every month as it is. This system makes their SREC production even more lumpy, stretching out the time between SREC production and occasional REC production. This makes it more difficult for self-financed systems that depend on making loan payments based on their system revenues and runs counter to the stated goal of addressing financial barriers to direct ownership.
5. The factor system requires that one believe in the assumption that solar system total costs decrease monotonically, although this assumption is never stated or examined for accuracy. In fact, solar component prices have recently increased slightly, and labor, which is a large part of total solar system installed cost, historically fluctuates up and down based on the local construction economy. A strength of REC markets is their ability to respond equally well to increases and decreases in prices. Just because solar markets haven't had to react to an increase in price in the past 5 years doesn't mean it's prudent to assume that this will never happen in the future. The factor system will require constant intervention by the DOER, as well as constant pressure to intervene, running counter to the stated goal of reducing financial uncertainty.
6. The factor system relies on a non-market based guess at the difference in costs between different market segments. In Delaware's recent market-based state-wide long-term SREC procurement (<http://www.srecdelaware.com/final-results-announced/>), the weighted average price of SRECs in the residential tier was lower than both the commercial and large ground segments. This was contrary to prevailing expert opinion and contrary to the DOER's current line of thought that residential is the most expensive segment. Any system with administratively determined factors is subject to this type of error, which can easily be avoided by using a purely market based system.
7. Requiring large projects to bid their factor addresses issue 6, but again at the expense of extreme complexity. Project developers would now need to model variable factor bids and variable SREC prices, as well as Class 1 REC market prices.

In general, any increase in complexity should provide a significant benefit to a program, especially in a program already as complex as the Massachusetts SREC market. We believe this increase in complexity provides only marginal benefit over the straight 1 MWH = 1 SREC program of the original program, while adding significant additional overhead costs that will end up outweighing any minor benefits.

Forward Minting of SRECs

The current difficulty in developing market based up-front payments for SREC streams from small systems primarily stems from the requirement for monthly meter readings. The SREC buyer is required to pay their cash out up-front, but takes on the risk that the system owner will continue to ensure meter readings go in every month for many years. Past experience has shown that without the incentive of payment dependent on a meter reading or fixing metering issues, these become a very low priority for a small system owner and they may take several

months or longer to correct them. The potential SREC buyer has to price this risk into their offering, making it unattractive to the seller.

Because of this risk pricing, much of the benefit gained from forward minting of SRECs could be obtained now by simply eliminating the complexity of the Production Tracking System for small systems and allowing them to use production estimates that don't require monthly meter reading entry, as is currently allowed in states like Maryland, Pennsylvania, and Washington D.C. The current system costs far more in administrative overhead than the questionable benefit it provides over production estimates, and this proposal implicitly endorses the concept of using production estimates. If this is the case, why not eliminate the Production Tracking System now for all small systems and allow them to use production estimates both in the existing and the new program?

Auction Mechanism

The powerpoint presentation was silent as to how the level of the Clearinghouse Auction price would be determined. Given the crucial role this price pays and the importance of getting it right, the method used to determine this price should be published and open for public comment.

The auction mechanism should also be examined for the potential to provide windfall risk-free profits to well financed bidders in situations where the past year was in oversupply but the current year is in undersupply. For example, in 2016 there could be an oversupply with 10,000 SRECs deposited in the Clearinghouse Auction. By July, 2017 when the 2016 auction is held, there may be an undersupply with the SREC spot market trading at the alternate compliance payment. At this point, a rational financial player will place as large a bid as possible to buy the SRECs at the low fixed price, which they can then immediately turn around and sell at the ACP for a risk free profit. This profit is at the expense of the original owner, who's only option was to sell in the fixed auction price and who probably doesn't have the financial security to put in a bid to buy back their own SREC when competing against well financed buyers. One solution to this is to allow the original SREC owners the right of first refusal to buy back their own SRECs in the auction at the fixed price.

Move to Monthly SREC creation and Quarterly Compliance Obligation

The current system of creating SRECs only quarterly, a quarter in arrears, creates a needless 6 month delay in the price signals provided to the market. When added to the annual compliance requirement, the true market price for SRECs generated in Jan, 2013 may not be known until as late as June, 2014! This allows the market to build based on stale price signals exaggerating both over and under-build situations. Every other registry in the U.S. creates SRECs monthly, creating a much more responsive market. In the short term, we would suggest that NEPOOL be directed by the DOER to switch to a monthly vice quarterly SREC creation cycle.

In the longer term, we would encourage the DOER to revoke the unregulated monopoly that has been granted to NEPOOL-GIS and either license alternate registries or run an RFP to select a registry that the DOER contractually controls but is still self-supporting through user fees. The current registry system may have made sense when there were a few large renewable

generators, all owned by NE-ISO members. The system now, however, has several thousand solar generators for which NE-ISO membership is cost prohibitive and/or not allowed. NEPOOL has flatly refused to provide these users, which make up over 70% of NEPOOL generators, any input into NEPOOL rules or system technical upgrades without first becoming NE-ISO members. The current system is clearly unable to handle the post-400MW program from both a technical and bureaucratic standpoint. It has placed the DOER in the unfortunate position of limiting its potential program design based on the whims of an unregulated monopoly with a byzantine rule-making process that neither regulators nor the vast majority of stakeholders control.

In addition to switching to monthly SREC creation, we would suggest that those entities subject to compliance be required to retire their SRECs on a quarterly basis based on the previous quarter's retail sales. This would again mitigate the current lag in price signals which leads to a market that under or over builds for up to 18 months. It would also avoid the artificial volatility which is currently caused by compliance buyers who wait until the last month to purchase an entire year's worth SRECs.

Sincerely,



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