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Christopher Derby Kilfoyle
March 1, 2013

Re: 225 CMR- 14.00 Amendments

Dear Mr. Judge,

Thank you for the opportunity to present these comments on the Solar Carve Out Provisions of the regulation. My firm has a 28 year record of PV installation services in Massachusetts. These comments reflect my concerns and those of our customers, particularly the early adopters of PV and small system owners. Over the years we have supported the concept of a production incentive for PV but have been disappointed in lack of value consistency. The initial paragraphs below review the contradictions in the present policy which separates the attribute(s) from the energy. The piece ends with bulleted, suggestions to radically change the production incentive for PV. I look forward to review of these points and am happy to discuss their implications and the procedural hurdles to carry them forward before the stakeholder meeting.

Separating green attributes from the energy of solar electricity was bound to be messy but the model is now in place in several states along with Renewable Portfolio Standards (RPS) . It has to evolve to be replaced.

An enduring principle in formal logic is the ‘attribute’ of a thing lags behind it. Just a shadow of ‘reality’, it is not supposed to have a life of it’s own. When it does, paradoxes multiply. The Massachusetts Regulation 225 CMR 14.00 defines a “Generation Attribute” as “A non-price characteristic of the electrical energy output of a Generation Unit including, but not limited to, the Units fuel type, emissions, vintage and RPS eligibility.” We have to assume that something without a price value will form the basis of a market in which it is monetized and becomes an instrument in a specialized financial sector. *Attribute* is correctly denoted to mean *characteristic*. *Property* would be another synonym. A part of the definition is the word *output* meaning that it can be measured as if it was electricity. The singular, *attribute* is not *limited* in the definition; the plural *attributes* in the market and in the text of the regulation is used interchangeably for: qualities of the generation and, quantity of the price- added, megawatt hours of the attributes. This begs the question: How many attributes can dance on the head of a NEPOOL –GIS certificate?

It is tempting to digress and compare this model with the excesses of Scholasticism and then discuss the financial similarity of RECS/SRECS to medieval indulgences. Marrying the obligation of environmental healing to a volatile speculative market is also not a match made in heaven. The win –win deal is the signature utopian concept of our times. This attribute program is not immune to that background belief; in the foreground are some disenchanting facts.

PV systems produce their electricity and thus attribute(s) daily. Whether RECS or SRECS eligible their energy is equal. Age discrimination, that is, age of the PV

installation makes a REC as much as ten times less valuable than a SREC. This duality was excused by stating that pre -2010 PV installations received more generous rebates. The SRECS higher value is supposed to make up for that. In fact pre-2010 PV costs were dearer, equipment costs have come down since. Many owners were not eligible for the present 30% federal tax credit favor in 2008. Policymakers waived the SRECS eligibility calendar for some PV systems built with federal ARRAS grants in 2008 and 2009 so long as that funding was less than 67% of the PV system's total cost. Very, very few of the pre 2010 or pre- 2008 nearly fourteen megawatts of PV systems installed in the state received more than a 40% subsidy. The SRECS quota in Massachusetts is a 'carve- out' from the original RECS quota. Thus the total renewable energy in MWhs required of Massachusetts electricity suppliers did not increase, only the cost utilities pass on to all ratepayers ratcheted up, albeit, slightly for any account holder's individual bill.

Other consequences were more serious. RECS having lost value, aggregators/brokers abandoned serving small pre 2010 PV system owners. Their transaction costs were too high to handle RECS selling for less than \$30.00. The introduction of SRECS meant that value was subtracted from RECS. What's worse, pre 2010 PV system owners who planned to add increments of new capacity as they could afford it, were faced with added costs, in some instances to duplicate power conditioning equipment, but in all cases of new array capacity, to install a separate solar kWh meter circuit. Further reporting and transaction costs to assure SRECS eligibility have been their burden too. Imagine explaining this policy change, consider how absurd it is for a PV owner to have two identical solar kWh meters in their basement, the pre -2010 one pays \$0.03 per kWh the new one pays as much as \$0.55 per kWh. One meter was sufficient to measure the clean electricity generating any day. Vintage, a characteristic the regulation reserves for some non -PV generation units became a determining price attribute of the generation attribute for PV.

What we understand by attributes of PV renewable energy are environmental, societal and technical excellencies of the same order. One important sub set is deferred kilograms of CO₂, NO_x and SO_x, grams of mercury and a host of other heavy metals and particulates affecting all organisms, disrupting climate progressively. Real price values calculated for human health, local jobs, and grid reliability, to name just a few, are inherent. The emissions index from conventional grid electricity did not get suddenly worse in 2010 when SRECS were introduced nor did it get much better in the summer of 2012 when their value crashed. Maybe we mean that clean energy goodness is not part of the attribute sold at all. Its' either a valueless, fleeting appearance of no urgency or the opposite; it's one of enduring usefulness. Green status value and bragging rights - many people who've sold RECS/SRECS believe its' a win-win deal wherein they can claim the environmental virtues of their PV production and the money.

The metric of a megawatt hour for the attribute however is the same. Whatever is being sold, when Massachusetts policy changes, history proves the market complexion for PV will frown on the old and smile on the new. The lesson to RECS eligible PV early adopters (pre 1998 PV pioneers fare even worse) and then to SRECS eligible PV owners and leasers and power purchase parties and those contemplating PV development since the price crash in 2012 is that buyers' regret and wariness is not only one of missteps in market timing but trusting policy changes to not be disruptive .

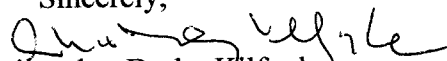
This polemic is not questioning the sincerity of policy intent or the earnestness of policymakers. Contrition is due of all stakeholders since the late 1990s' for not thinking of alternate ways to reward PV production. We need to recognize that the renewable generation technology has within itself, the genome, if you will, for it's 'attribute(s)' consistent market value. PV succeeds as no other in that appraisal but...

225 CMR 14.00 has to evolve to be progressive, here are suggestions to signal market consistency through those changes:

- Subsume all ineligible MA PV capacity since 1970 under the SREC Classification effective Jan 1, 2013.
- Apply any upward combination of adjustments in the SRECS Cap tally(from capacity factor review or use of ACP funds in market support) to accommodate early adopter inclusion first. Honor the trailblazers in policy pronouncements.
- Set a goal to differentiate PV production incentives tiered to Interconnection Capacity class by the end of the SRECS term.
- The first step, by 2015 require all utility owned net meters to register and utilities to record , export solar kWhs from interconnection sites 25 kW or less.
- Begin to allow in 2014 , customers who already have this regimen of metering from their utility to receive a positive solar bonus credit on their billing equal to deferred kWh price $\times 2 + \frac{1}{2}$ the kWh value of the net metering recovery surcharge for any site exported solar kWh in addition to the SREC for the total solar kWh tally. Follow up in 2015 to extend the bonus to all utility PV customers in this capacity class.
- Require utilities to compensate by check upon request of any PV owner in this capacity class for carry over billing credits that exceed \$500.00.
- This could be called the Transitional Production Incentive, that is, the transition to re-uniting the energy and the attribute(s). It will foster conservation during PV peak production hours and seasons and relief for some PV Host accounts. Obviously some reckoning should prohibit lessees and PPA payers from having to hand over this incentive to the PV equipment owner.
- These changes to increase the incentive in this class during the SRECS term should be funded by a combination of ACP credits and the rate base.
- Beginning in 2023 a utility direct bonus credit will be the single state incentive for PV generation (exports and used on site kWhs) in this class representing the energy and attribute(s).

Other PV Interconnection Capacity Classes need a different schedule and program to transition to a unified incentive formulated as a bonus credit and may welcome valuation consistency. Thank you for your review of these comments.

Sincerely,


Christopher Derby Kilfoyle