

Judith Judson, Commissioner
Department of Energy Resources
100 Cambridge Street , Suite 1020
Boston, MA 02114
Re: SMART COMMENTS

Christopher Derby Kilfoyle, President
BPVS, Berkshire Photovoltaic Services Inc.
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Adams, MA 01220
Tel: 413 743 0152
July 9,2017

Dear Commissioner Judson,

Thank you for the opportunity to submit these comments on the Solar Massachusetts Renewable Target (SMART) Program and regulation, 225 CMR 20.00. Since 1985, BPVS, Berkshire Photovoltaic Services Inc. has designed, installed and serviced solar electric systems in Massachusetts and throughout the region. Ours and our customers concerns and questions on this major change in solar policy hopefully will be answered by the department's detailed guidance on this program and new regulation.

1. Voluntary Participation

We at BPVS sincerely appreciate the respect given to solar electric net metering customers who will choose not to separate the attribute(s) of their generation from the electrons. By declaring upfront that the SMART program is voluntary, DOER avoids the legal issues involved when participants have to surrender the Class 1 Renewable Generation Attributes of their generation to their distribution utility. Many of our customers whose PV systems are producing today have never sold the clean energy , renewable energy or environmental attribute(s) of their generation but did participate in the various Massachusetts solar programs since 1998 : Solar Avenue , MECO Solar , Solar to Market Initiative (SMI), Small Renewables Initiative(SRI), Large Onsite Renewables Initiative (LORI), Commonwealth Solar, Commonwealth Solar 1 and Commonwealth Solar II, as well as complied with the non -attribute transaction aspects of the SRECs and SRECs II programs. Throughout these programs the process of tallying solar kilowatt hours (kWh) and selling RECS, SRECs, or SRECs II did not involve the distribution utility. All of these environmentally mindful customers also chose to self- retire the attribute(s) rather than pay a third- party aggregator to first mint then retire a certificate. They chose not to recognize attribute(s) separation as part of the physics of high energy solar photons producing an electron flow and by the same logic, they can authentically claim they generate and also use solar electricity at their site.

Before the SMART program starts DOER needs to assure solar stakeholders when planning the PV design and modeling financials for new customers who choose not to participate that they will not suffer delays or arbitrary burdens or any distribution utility bias when applying for interconnection and net metering. The utilities must adhere to the provisions of 220 CMR 18 and particularly , 18.09 (1) . In summary, we suggest DOER issue a written guideline that states if a new solar electric facility wishes to forego the SMART program and it's compensation for attribute(s) none of the requirements in 225 CMR 20. shall apply and further:

- A solar generation facility owner may change his or her mind and opt for SMART program participation at the compensation level of that later application acceptance date or a new owner of a non-participating facility may opt for SMART program participation at the compensation level of that later application acceptance date.
- Conversely, a solar generation facility owner may change his or her mind and opt out of SMART program participation at any time during the program period with due notice.
- Suppose a middle or later block of the program entails a very low compensation level at the same time other venues for solar attributes develop. A new solar facility in the Commonwealth should be able to qualify its attributes for sale in another states' RPS or a private Green Tag program.
- A solar net metering facility not participating in the SMART program shall provide a signed notice to that effect and receive an official notice or certification from their Distribution Utility or the SMART Program administrator that acknowledges non-participation and states that any and all Net Metering Export credits associated with the account (*viz.* assigned by the account's Schedule Z) are wholly solar electric credits with clean energy, renewable energy and environmental benefits and qualities intact.

2. SMART Program Compensation

Despite the emergency extension of SREC II into 2018, a '*now or never*' mantra has enveloped the tone of serious solar investor and adopter leads. Anticipation of the SMART program is one factor but the general Electric Utility and Associated Industries of Massachusetts backlash against solar in 2016 has had lingering affects into 2017. The consumer weariness of offensive solar sales tactics from large national solar firms is another problem in the solar market. The latter has also diminished solar leasing projects in the residential sector and helped local firms like BPVS attract serious solar prospects.

Unfortunately this uncertainty and wariness in the Massachusetts Solar Market will continue as SMART gets underway.

The SMART program compensation values for the <25 kW market have been objectively analyzed by other similar local based PV firms in their comment submissions. We agree with their assessment that after the first block, simple energy payback durations will exceed the 10 year mark and that kills the viability of many projects: those reliant on financing, those which utilize high quality equipment and careful installation techniques and small systems under 3 kW. If the monthly minimum reliability contribution comes in at the levels Eversource has asked in its rate case then small systems under 3 kW may see an energy savings payback in 15 years. If Eversource is allowed to levy demand charges against residential solar accounts then there will never be a payback for these <10 kW projects. The comments of the solar industry make an excellent case for increasing the compensation base and adders and reducing the rate of decline as blocks are exhausted for the <25kW category.

Our firm notes the Declining Block model with compensation managed through the utility tariff process has been the consistent framework preferred by utility stakeholders since before the Net Metering Task Force was formed. Despite many thoughtful challenges and several objective and fair alternative models for encouraging Massachusetts sited solar capacity, DOER and to an extent the

legislature have come down hard in favor of a restrictive structure that limits growth in this SMART Program. The policy comments since 2013 of BPVS and many other stakeholders including environmental policy experts should be referenced as this SMART program knots up solar progress.

One further point on the compensation structure of this tariff needs repetition. Over these years, DOER and its consultants studiously avoided a “value of solar” study. There are “value of solar” studies for other states and regions to serve as examples of an empirical, objective methodology to apply to Massachusetts. Instead the SMART program bases compensation in an arbitrary formula on a contrived auction for the cheapest utility scale project capacity price as its benchmark. The utilities will jointly conduct the auction and thus set the “value of solar” to solar investors and ratepayers at a low and lowering rate. Not only do the individual Investor Owned Utilities (IOUs) dictate the acceptance and pace of solar project development in their territories, they are the paymasters for attribute(s) acquisition and the official registrant of NEPOOL -GIS certificates in the transaction. Yet the “value of solar” to the Distribution Utilities and their shareholders, on the compliance side, is replete with increasing returns. They can satisfy their own RPS obligations or sell into other RPS compliance markets. They get to count aggregated PV toward the Forward Capacity Market and of course collect displaced distribution revenue for every solar kWh made whether the electricity was exported to the grid or used on site.

3. Attribute(s)

Regulation 225 CMR 20.00 should be recognized for extending the monopoly franchise of IOU Distribution Electric utilities to also control solar electric development. Solar technology and solar with storage technology is developing faster than preemptory bureaucratic and legislative controls can marginalize it. Everything takes time however. At present there are adversarial moves preventing cost effective grid connect solar with storage being installed in one utilities jurisdiction despite a MassCEC announcement of funding solar with storage demonstration projects. The progress of solar technology has been delayed and quashed before. Environmental motivation is the key force to help the technology thrive.

This is why environmentalists should pay close attention to the widening definition of generation attribute(s)¹ in this tariff and utility control of market based -environmental compliance. For the first time in the network of Massachusetts regulations² concerned with clean energy attributes and certificates the definition of “Environmental Attribute” is proffered in 225 CMR 20.02 on page 3 as “ All GIS Certificates and any other environmental benefits associated with the energy generation of a Solar Tariff Generation Unit. “ Again in 225 CMR 20.05 (5) (d) and in 20.05 (6) (d) – pages 8 then 12, proscribing the duration and ownership of attributes and minting of certificates, Environmental

¹ For brevity sake, we won’t repeat our policy comments since the late 1990’s analyzing the conceptual concerns and paradoxes of trading attribute(s) as if they were blocks of energy. Spelling the term as “attribute(s)” is our way of alluding to that body of comments and the ambiguity of official policy statements and reports since the singular and the plural are used in ways that prompt questions of vintage, emission(s) , fuel source, non- price pricing, essence(s) and existence(s) and so on. Does a fossil fuel GIS certificate contain dirty energy attributes? Can there be attributes of an attribute?

² 220CMR 18.00, 225 CMR 14.00 & 15.00 & 16.00

Attributes and RPS Class I Renewable generation attributes are differentiated. The phrasing used hints that the same solar MWh may be used in separate GIS certificates.

The concern, rightly might be that the utility is getting a compliance year and compliance venue ‘two-fer’ and under-compensating the solar facility. An improved regulation 225 CMR 20.00 should require the Distribution utility to detail a transaction receipt or statement for the solar facility owner showing the compensation per kWh (or MWh as the metric may be) and all revenues or compliance deferrals with their dollar values for all GIS certificate(s) transaction after the utility takes ownership of RPS Class 1 Generation Attributes and any Environmental Attributes. The whole scheme of attribute(s) separated from electrons depends on accurate tracking through these certificates. In addition the statute should also require the utility to detail any and all non- NEEPOOL GIS certificate transaction of the attribute(s) sourced from the solar facility participating as a SMART Solar Tariff Generation Unit.

In Massachusetts, the largest IOU Electric Distribution Utilities also are the largest Natural Gas utilities and the largest contributors to the regional Independent System Operator. It is a natural strategy to assure profits, given the exigencies of energy companies on environmental matters, and to exert leverage and influence on the metrics and management of environmental compliance transactions. Chapter 75 of the Acts of 2016: An Act Relative to Solar Energy and this regulation from DOER are enabling their control of environmental values and compliance structure. How will the progressive community remedy this?

The Massachusetts environmental and legal community should be deeply concerned with green marketing. The educational and disclosure work of the Vermont AG’s office³ for its state is exemplary. In part, it was the result of confusion there on: solar marketing claims, attribute ownership, and sales into the Massachusetts RPS compliance market by a Vermont based utility. In Massachusetts, the same confusion is rampant whether in presentations to homeowners or to City and Town officials by solar marketers and developers. Generally, the confusion results from solar facility owners or recipients of solar net metering credits believing and claiming they are providing or using solar or green or clean electricity when in fact the attribute(s) have been separated and sold.

Although Massachusetts has done little to straighten out market place confusion on attribute(s) there is in the regulations a party charged with assuring to DOER- that *only one entity* can claim the clean or green or solar or RPS eligible attribute(s). 225 CMR 14.08 (1.) Standard Compliance states the Retail Electricity Supplier (meaning also, the IOU Distribution utilities):

“shall demonstrate to the satisfaction of the Department that RPS Class I Renewable Generation Attributes, Solar Carve-Out Renewable Generation Attributes, or Solar Carve-Out II Renewable Generation Attributes used for compliance have not otherwise been, nor will be, sold, retired, claimed, used or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Massachusetts. “

Whether to ‘the satisfaction of DOER’ means the load serving entities had to demonstrate they served notice to correct a solar marketer’s advertisement, or a news story featuring a Solarize Coach or solar homeowner making mistaken representations is a matter for lawyers. Certainly, the utility cannot

³ “Guidance for Renewable Energy Marketing Claims” State of Vermont , Office of the Attorney General www.ago.vermont.gov This excellent 5 page report also references the Federal Trade Commission -FTC Green Guides

take on being the 'Green Police' but the regulation is there in RPS Class I regulations so there was some intent to cover this issue.

This requirement in 225 CMR 14.00 is not repeated or echoed in 225 CMR 20.00. The concept of separate Environmental Attributes and or possible separate Environmental GIS Certificates is one reason to put in a similar statement and harmonize regulations. The changes that now make the IOU Distribution Utility, the registrant and compensation source for RPS Class I Renewable Generation Attributes is another good reason. We suggest DOER confer with the AG's office to develop a disclosure statement on attribute(s), all solar marketers must present to solar prospects thus going beyond the sensible provisions included in section 225 CMR 20.06 (1) (a) & (b) . This disclosure statement should also be referenced in the Solar Program Administrator application and Distribution Utility documentation to SMART Program Solar Generation Tariff account holders.

4. Metering

Again we wish to thank DOER for the SMART Program " Final Design " presentation on January 31, 2017 which highlighted a major change on metering that affects how small PV systems are designed and installed and what expectations to prepare for customers.

The regulation text gives no indication that utilities will own the solar production meter and presumably be responsible for monthly readings, or that a Data Acquisition System (DAS) may be required for all systems. This omission from the regulation, 225 CMR 20.00 is understandable since every requirement or aspect cannot be detailed. However, because this is a tariff regulation the metering revelation gives us pause as we wonder what details DOER has not reported to stakeholders that utilities may have discussed and what detailed rules and requirements each utility will separately try to establish in further proceedings at the DPU that they did not bring up to DOER. In western Massachusetts where Eversource and National Grid utility territories form a patch work of irrational boundaries, the existing different interconnection requirements confuse wire inspectors who serve several towns. And it offends sensible referrals (who want us to emulate the same equipment and plan we installed for their friend from a neighboring town) to learn that their town's service utility arbitrarily disallows that certain design element or feature. Each utility has different completion approval and labeling protocols and we expect that metering requirements will be very different if solar stakeholders and DOER are silent.

With that in mind we suggest DOER/DPU convene a stakeholders meeting to decide the same metering specifications for this new program across the three participating Distribution Utilities. Green Mountain Power in Vermont has an excellent metering guideline to serve as precedent.

Requiring DAS systems for small systems <10 KW is a financial burden that eats away at the customers deferred, electricity purchase, savings and system payback. In many parts of Berkshire, Hampden, Hampshire and Franklin counties there is no reliable cell service or high speed internet. Often, internet access when available is more expensive and has less bandwidth here to share with 24/7 data uploads from DAS systems. Under no circumstances should utilities be allowed to require SMART customers provide analog phone access for phone home meters the utility just might have in storage ready to deploy for Solar Tariff Generation units. Tapping into a phone line is problematic for technical and privacy reasons and some customers no longer have land lines. To segue into the next section there should be a set process the customer can follow to address metering disputes with a third party.

5. Solar Program Administration

We appreciate the inclusion of a Solar Program Administrator and urge DOER to assign this important set of tasks to the Massachusetts Clean Energy Center (MassCEC) rather than have the utilities issue RFPs for a private contractor. The continuation and improvement of the Mass CEC Production Tracking System as Independent Verifier is part of that recommendation.

There will be a successor program to SMART. Maintaining the MassCEC is an assurance to existing solar PV owners who participated in earlier programs and will be to SMART participants.

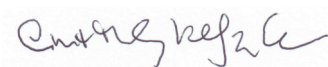
Ideally the MassCEC or a govt. agency by another name will morph into the peoples' green utility where the exchange of whole, green energy credits will be certified and made simpler on-line, outside of the NEPOOL-GIS. The RPS has been confined to the IOU Distribution Utilities and retail Electricity Suppliers and it has proven to be quite imperfect and complex. The last published RPS and APS compliance report is for Compliance Year -2014 ! Compliance entities frequently seeking waivers and challenging its provisions contribute to its problems.

In essence, the Renewable Portfolio Standard is the obligation of all Massachusetts energy users including Municipal Electric customers. Restructuring the regulated energy monopolies and bringing unregulated sectors into harmony to cost effectively reach Global Warming Solution aims is needed. One key change that restructuring must make is: never to allow the separation of attributes from their generation or energy supplier. Lesson learned - apply clean energy bonus discount or dirty energy penalty adders at the source.

Miscellaneous

- The regulation does not cover how a PV system in existence prior to the start of the SMART program could expand and participate as a partial Solar Tariff Generation Unit.
- In the same vein how would production be metered and compensation be calculated for a Solar Tariff Generation Unit installed under an early block which expanded capacity in a later block?
- There are two sections 20.05 (5) (g) within the regulation on page 11. The second section (g) 1. and 2. Special Provisions for Relocated and Replacement Generation Units mirrors similar language which has appeared in various iterations of 225 CMR 14 over the years. The relocation of a generation unit into Massachusetts seems like a very special case. Would it that there could be a special provision in place for the low income community housing PV transaction problems now or for pre-2010 PV systems in Massachusetts which never received the level of production compensation SRECs and SRECs II participants received. Even as Class I RPS eligible units, their RECs value is lower than the level the incipient block of the SMART program may pay. We note this because we are now seeing retrofit tasks -mostly inverter replacements for pre 2007 PV systems. These early adopters never received the level of benefits both the technology and Massachusetts programs have offered in recent years yet they paved the way for net metering and PV acceptance. Eligibility and Acceptance into the SMART program would go a long way to heal that divide these PV pioneers experience daily.
- Will DOER initiate an online FAQ page where stakeholders can submit questions on the many facets of the new program?

Sincerely,



CC. Michael Judge – Director of Renewable and Alternative Energy Programs, DOER