Berkshire Photovoltaic Services

Massachusetts Incentives

Renewable Energy Certificates (RECs) and Solar Renewable Energy Certificates (SRECs I and SRECs II and SRECs II Extension and the SMART Program Incentive)

Revised- March 15, 2018

Preface

Welcome to our fourteenth version of this report since 2010. It is the most popular feature of our website. Usually we begin with a discussion of current market values for SRECs and RECs but this time we need to discuss solar incentive policy changes in the works during 2018. If you are new to these policies and programs it is best to read the "Basic Facts" section on page 3 first.

Legislation written and staged by the large investor owned utilities and ushered to vote by the House Leadership in league with the Baker Administration, passed in 2016. Despite hoopla in the media that this was a pro solar bill it has reduced the value of Net Metering for solar electric facilities and confers policy decisions for settling Massachusetts solar electric development to the Department of Public Utilities. In many ways the Governor signed into law a radical restructuring that ceded control of solar capacity development and the feasibility of the technology to the states' largest utilities: Eversource and National Grid. Rather than encourage a transparent solar market this change cushions and increases utility shareholder profit during the transition to a renewable de- centralized electricity supply[1]. Formerly account holders served by most Municipal Electric utilities (MUNIs) in Massachusetts had the opportunity to access RECs and SRECs incentives; this new law prevents their inclusion. The Department of Energy Resources (DOER) has released a solar program design meant to capture the intent of the legislation. The new program called "Solar Massachusetts Renewable Target" (SMART) will take at least until July 2018 to come into effect and not really be complete until 2019. Until then, the SRECs II program will continue at reduced rates per certificate. We'll detail those SRECs II reductions below.

One salient feature of the pro utility legislation is already established.

- For all new Solar Systems over 25 kW[2] (except those serving city or town, state and federal govt. accounts) and for all PV systems (including those already installed) after their 20th year of operation, net metering credits will be valued at 60% of their retail value.

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[1] Despite declining sales of electricity caused by a variety of forces, investor owned utilities will be assured the same and possibly increased gross revenue amounts from a variety of new sources. The Baker Administration and Democratic led legislature is merely continuing generous accommodations begun by the Patrick administration to Eversource (aka NSTAR & WMECO), National Grid (aka Mass Electric and Nantucket Electric and UNITIL (aka Fitchburg Gas and Electric). Please see our Afterword in this white paper on page 10 discussing energy policy and climate change.

[2] Any new three phase PV system under 25 kW and any new single phase (or *split* single phase for those well versed in electrical specs.) under 10 kW will still receive near full Net Metering value for export credits. Any new solar PV system on a single phase circuit (such as most residences) over 10 kW in size will be subject to this 40% 'haircut' too.

The next change in a related DPU docket (DPU 16-64) decided how to target Solar PV customers who zero out their electric bill in any month.

- The utilities will levy a new charge to customer's bills. Called the Minimum Monthly Reliability Contribution (MMRC) . It is expected the MMRC will be a catch all category and go far beyond discouraging solar development. Because the charge can be modified in future, complicated, rate cases and could be applied to all ratepayers, the utilities worked very hard to get this part of the law enacted and written in vague language. *Reliability* can be interpreted many ways. The important regulations to understand are 220 C.M.R. §18:00 and the SMART program regulation- 225 C.M.R. §20:00
- As of this date the National Grid, MMRC request has been denied but the Eversource MMRC has been approved with a unique feature calling for demand charges on all residential solar accounts installed after Jan. 1 , 2019. The Demand Charge aspect is under challenge in court by Vote Solar and other pro solar organizations.
- So far in policy pronouncements, the expansion of an existing PV system in Eversource territory will not be subject to the MMRC.
- In Eversource territory the MMRC will be a fixed charge of $10.52 per month – again applied to new PV systems installed after Jan 1, 2019.

BPVS has been active in the DPU dockets for many years and will continue to advocate for sensible regulations. Regarding the new DOER "SMART "program- now in the DPU tariff process {Docket 17-140}, hearings in mid- late March will be followed by studies and legal maneuvers which will certainly take until the end of June. BPVS will be submitting additional comments in this docket.

Meanwhile DOER and the utilities are pressing ahead to set up SMART Program forms and a bureaucracy as if the program was ready to go. On the legislative side the Senate is taking up an Omnibus Energy bill to correct some of the problems with the SMART solar program, solar policy generally and many other matters including DPU rules.

Summary for 2018

- **SRECs II Extension program will continue until *New* Solar Massachusetts Renewable Target (SMART) program is in effect probably Late Summer 2018 or put off until January 2019**
- **Federal Tax Credit will continue through December 2020- Massachusetts tax credit has no sunset.**
- **Near Retail Net Metering Credit values will continue for most residential customers**
- **Market Net Metering Credit (40% lower than near retail) is in effect for most commercial and institutional customers**
- **It is still prudent for large system plans to go forward in Eversource territory and get on the Net Metering Allocation wait list for National Grid territory**

SREC Market Prices .

SRECs I from the third quarter of 2017 will sell or are selling for bid prices of $300.00 each on the open market, thus small SREC facilities can expect remuneration ~$275.00 each . The closed SREC 1 tranche will mean the market is slightly under supplied for the remainder of the term. Thus SREC 1 prices in the next few years will trade near the $285.00 Auction Clearing price bench mark. The almost guaranteed high

value for SRECs 1 in coming years is one reason the utilities in Massachusetts have been fighting solar on every front they can. SREC 1 program payments will end in 2024.

Depending on your contract with your aggregator you may receive a bit better or a bit worse for either SRECs I or for SRECs II.

SRECs II from the third quarter - solar production of 2017 will sell or are selling on the open market for around $260.00 each. Now it is likely SRECs II will never earn their Auction Clearing price which ranges from $285.00 this year down to $199.00 in year 2024. **We expect an average price of $200. each per SREC II for their term life for those PV system owners whose systems were installed prior to January 8th, 2017.** The last SREC II of this vintage should be created and sold in 2027.

SRECs II Extension (Continuing) Program

As noted above, until the new SMART solar program is in effect, SRECs II will continue in an Extension program at a reduced factor. That means if you install a PV system early this year your PV production for the next ten years will be eligible for this continuing program. You will be grandfathered in but not at the same rate as those who were eligible for the program in 2016 and early 2017. The new SREC II Extension Certificates will be at 80% of the value for the original SREC II certificates for most residential applications . That is, your solar kWh tally will need to be 1200 kWh to "mint" a late "vintage" SRECs II Extension certificate. **We expect this new "vintage" of Extension Program SRECs II will average in value over the next ten years at ~ $120.00 each for residential and small commercial size systems <25kW.** DOER has set a table of discount factors on SRECs II Extension certificates for large systems and specialty systems; their rates range from 70% to 55 % of the base value.

RECS THE SAME OLD STORY

For pre -2010 owners of small PV systems, you're only eligible to sell production attributes as RECS and there is a glut and will continue to be soft demand . Formerly they sold at $20.-$40.00 each. Now they are selling for $15.-25.00 each. Keep in mind RECs can be sourced from multiple states and renewable energy sources. The near term projection is that they will drop to ~$5.00 unless Renewable Portfolio Standards in New England states are increased. Policy consultants and state officials predicted RECs would trade for "hundreds of dollars" each when they first were introduced in the late 1990s and their initial values were at $40-50.00 each. Small system PV owners of RECS will find few brokers interested in opening a RECs account because of transaction costs. BPVS regrets repeating this same message to early adopters of PV, our customers and others who have looked to us and a few progressive, brave legislators for trying to correct the inequity. In every policy discussion on Solar and net metering this year and in years past we have asked that SREC status be granted to eligible early PV owners. How is it possible to incentivize one solar kilowatt hour made today ten times more than another? Those who built the first eighteen Megawatts of PV capacity in the state deserve better.

Basic Facts

RECs & SRECs use the same metric as electricity, a MWh (megawatt hour). 1,000 kilowatt hours (kWh) equals 1 MWh. Thus every 1000 kWh produced represents both energy and one Renewable Energy Certificate or Solar Renewable Energy Certificate. 1 MWh is slightly less than the average yearly output of a 1 kilowatt

(kW) photovoltaic system in our region[3]. Generally, a Massachusetts SREC can only be produced by a PV system on line after Jan 1, 2010 although waivers were given by Patrick administration officials to many projects installed in 2008 and 2009. RECS are far less valuable and result from various 'attribute(s)' defined technologies: wind, low impact hydro, biomass and from any solar PV system installed prior to 2010 and generally no earlier than Jan.1st 1998[4]. Variations and factors are applied on an ad hoc basis usually as a result of DOER policy changes thus there are SREC II's and SREC II Extension certificates and SREC *factors* which can further define value of the certificate. Other solar devices: for hot water, air heating cooking etc. are ineligible however to make things even more complex, in 2014 solar hot water systems became eligible for Alternative Energy Credits. DOER has set rules and values for them as *solar thermal devices*. You should also note even Natural Gas use at Combined Heat and Power facilities is eligible for Alternative Energy Credits (AECs). It is possible, battery storage, generated electricity may be eligible for AECs.

Traded as if they were real electricity, measured as a MWh, a REC or SREC or SREC II or SREC II Extension Certificate represents the associated renewable energy "generation attribute" separated from the energy. A Generation Attribute is defined in Massachusetts regulation- 225 CMR§14.00 as " a non-price characteristic of the electrical energy output of a Generation Unit including, but not limited to, the Unit's fuel type, emissions, vintage, and Renewable Portfolio Standard eligibility."[5] Often the plural of attribute is used when denoting what comprises the value of a PV system MWh as separated into a tradable certificate. Because officials and others have been unclear in their usage of terms and the definition contradicts itself, we write the word as *attribute(s)*. Some solar old timers disparagingly call them *Vapor Watts* but we have to recognize that the *bureaucratese*- 'generation attribute 'and 'SREC'- hides societal and especially utility denial of the true state of electricity generation. The cleanliness of solar energy is assigned an arbitrary separate value but dirty electricity is just electricity. There are no penalizing ugly energy certificates for cancer causing, climate changing, respiratory system compromising, toxic attribute(s) of the conventional fossil fuel and nuclear power mix. In fact one of the contentious issues in the SMART program docket is the broadening definition of attribute(s) implied in utility language which states they will own the "RECs and/or environmental attributes" from solar facilities. Financial incentives from the energy supply sector and ratepayers for encouraging solar development should follow a simpler – capacity related model.

The 'C' in REC or SREC stands for *C*ertificate once sold, although Credit is commonly used to mean either the attribute(s) or their transmutation into an official certificate. There is a lucrative market for these digital (not paper) certificates of renewable generation *goodness* exchanged within the New England Power Pool Generational Information System (NE-GIS or NEPOOL -GIS) . Utilities and electricity suppliers must meet a state regulated Renewable Portfolio

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[3] Between 11:30AM and 12:30PM, on a bright sunny day a 1 kW (kilowatt) PV system will generate 1,000 watthours or 1 kWh(kilowatt hour). If you leave a 100 watt light bulb on for ten hours it will use 1 kWh. The average New England home without an electric hot water heater uses 650 kWhs per month. In twelve months it will use 7,800 kWhs, or 7.8 MWhs and need a 7 kW PV system to offset its' utility purchases of electricity. Thus a 7 kW PV system also will earn between 7 and 8 RECs or SRECs or SRECs II or SRECs II Extension certificates each year. The type of certificate depends on when the system came on line from 1998 to the present .

[4] Certain PV systems installed in 2008 & 2009 may be eligible if those system owners did not receive rebates or grants from the Commonwealth Solar I program or its predecessors funded by the Massachusetts Renewable Energy Trust (MRET) or received a waiver from DOER officials. Pre -2008 installed photovoltaic generation systems are not eligible for the SRECs program. All post 1997 PV systems are still eligible to produce and trade their RECs as Class I RECs . Solar PV systems installed before January,1998 are not retroactively included within the RPS (Renewable Portfolio Standard) legislated incentives for Class I RECs even though they have been and are generating solar kWh on the grid today. With DOER special permission they can qualify to sell attributes as Class II RECs. Class II RECs are even less valuable . The Classifications of RECs, SRECs II , SREC factors and AECs (Alternative Energy Credits) by class, vintage, and technology is labyrinthine.

[5] How this definition is constructed, construed and then confounded in communications by officials, REC and SREC brokers, utility executives and then in the marketplace by solar salespeople would make a very informative example for graduate level students in Semiotics and Logic….Course title: *Massachusetts Solar Incentives – A Contemporary Semantic Maelstrom.*

Standard (RPS). RPS compliance allows their purchase of RECs or SRECs in lieu of real renewable electricity. While utilities are the primary buyers of RECs and SRECs, there are also voluntary purchasers who wish to lighten their carbon imprint and financiers who buy their potential future value. Often, large scale solar developers use them as collateral.

Aggregators are SREC/REC traders listed by the state as eligible brokers to sell these certificates on behalf of PV system owners or certificate owners. Only Massachusetts utilities have to purchase Massachusetts SRECs. RECs can be purchased by Massachusetts utilities from anywhere in the New England Power Pool. New products based on environmental attributes or renewable generation attributes are creeping into the *vapor watts* business model. There is at least one cryptocurrency based on solar generation and the 'blockchain' data sharing model is touted as the next big thing in energy trading.

Don't Confuse RECs & SRECs with Net Metering

The actual energy from a PV system measured on the solar kWh meter at the site reduces your electric bill[6]. This is the primary value of solar PV as electricity or the flow of electrons. Let us summarize the last page - a different financial benefit as RECs or SRECs represents the separate clean attribute(s) of solar or the *vapor watts, separate from the flow of electrons*. Real electricity flows through wires not spread sheets.

Once a PV system owner sells the attribute(s) as RECs or SRECs, however, the energy from their PV system is just as "dirty" or unsustainable as the conventional electricity mix. This may surprise some people because it is not widely known. In 2012 the Federal Trade Commission stepped in to clarify fact and fiction in the clean energy claims made in the marketplace. See page 34 example 5 in the Federal Trade Commission's Green Guide for specifics on PV . If you sell the RECs or SRECs you can say you generate and sell clean energy not that you use it. The Vermont Law School in 2015 won a case against Green Mountain Power, their state's largest utility, because of claims the utility made to their customers that it was supplying renewable *solar* clean energy in their mix . The law suit indicates they were selling the attribute(s) from their customer's solar PV systems as RECs in the Massachusetts RPS market! Many solar marketers and developers will give the impression to consumers they can sell their PV system RECs or SRECs and still pat themselves on the back for using green clean electricity at their site but that is not true[7].

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[6] The electricity is used within your building as it is generated and this defers you buying its equivalent from the utility. Often enough, the the PV system generation can exceed your needs at the moment and the extra is automatically exported to the grid. That is called Net Metering . Since Jan.1st 2010 every exported kWh you send to the utility grid is compensated at almost the same retail rate you pay for electricity. Formerly, exported power was credited at the utilities wholesale rate -approx. $0.03-$0.06 per kWh. Under true net metering in MA the value of your exported kWh is at the retail rate (approx. $0.126 -$0.285 per kWh) minus system benefit charges per kWh for the Massachusetts Renewable Energy Trust administered by DOER, & for the Energy Conservation & Energy efficiency funds controlled by the various utilities. The rate changes as utilities' de-couple' electricity pricing, and as seasonal and new rates go into effect. Consider~ $0.20 a safe , deferred kWh value for 2018 for Eversource and National Grid customers until the new SMART Program comes into effect. When BPVS examines your site and electric bill history we'll estimate benefits based on your actual costs. Some people are paying exorbitant per kWh energy rates through private suppliers and group buys so part of our service is guidance on supplier choice.

[7] Again, if the RECs or SRECs I or SRECS II are sold, whether you are the system owner or if you leased a PV system or have just a power purchase agreement for the PV system output, then electricity is used in your building or exported to reduce your electric bill. But the solar – clean energy attribute(s) of that electricity is not; it has been separated and sold through an aggregator or the utility will take it as part of the new SMART program bundled incentive. In truth the real electricity you use is the dirtiest power: coal, oil or

How can I sell my SRECS or RECS ?

You need to sell your attribute(s) as RECs or SRECs or SRECs II or SRECs II Extension certificates through an aggregator /broker. It is not cost effective for small PV system owners to trade on the NEPOOL –GIS or other markets. If you are a new PV owner then it will be the SRECs II Extension certificates to sell.

DOER has compiled a list of aggregator/brokers you can contact for detailed offers. It tends to move around on their website and that of the Massachusetts Clean Energy Center; best to use a search engine to find it. If you are our customer, we will send you the current list and our detailed guidance on selecting an aggregator.

To enable the sale of SRECs/RECs your PV system production must report monthly to the Massachusetts Clean Energy Center Production Tracking System (MassCEC-PTS). Formerly BPVS made sure your system was registered on the PTS. Now DOER will only allow aggregators to register a system on the PTS. If you do not wish to sell your RECs or SRECs we will still advocate to get your system(s) registered. The MassCEC –PTS has features which are a benefit to all.

We'll present options to manually report or to provide automatic reporting equipment installed with your PV system. Automatic reporting is required if your PV system is over 10 kW in capacity. With either choice, BPVS installs a revenue –grade, properly calibrated, solar, kWh meter identical to the best meters utilities use.

Manual reporters will receive a username and a password from the PTS administrator. Each month the PTS system sends you email notices to enter your production tally from the solar kWh meter. You'll have a ten day window to access your PV system page on the PTS and enter the total number of solar kWh registered on your meter. If you ignore notices or forget to make the entry, you can catch up the following month. We do not advise you skip months often however because the PTS system is wary of production entries that appear high and will sometimes challenge you for an explanation.

Automatic reporting equipment uses a datalogger (Data Acquisition System or DAS) interfaced to the solar kWh meter and hooked into your computer network or to direct internet access. There are many bells and whistles with automatic reporting equipment and brands and they range in cost from a few hundred dollars to several thousand. The key part of any DAS is the PTS reporting service. Most customers choose a ten year service plan; the device manufacturer is designated as your PTS reporting representative and is obligated to update your PTS tally each month for ten years.

If you're only eligible to sell RECS from your PV system there are conflicting rules from the MassCEC –PTS and DOER [8]. If you do not have high speed internet or cell phone access at your site

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natural gas fueled – not solar and not a mix of hydro or wind or anything remotely clean. The money received for the RECs or SRECs is payment for "sin eating" if you will. This type of transaction is a direct descendant of papal indulgences sold in the Middle Ages in Europe. Functionally the logic behind the transmutation of attribute(s) is much closer to Scholasticism than financial derivatives.

[8] MassCEC- PTS has suggested that pre -2010 PV systems, which now want to qualify to sell RECs and report to the PTS monthly must have automatic reporting even if their PV system is under 10 kW in capacity. BPVS has tried to have this policy changed as it is a costly burden for small PV owners, some of whom do not have reliable internet access. Pre 2010 PV owners who wish to increase their PV capacity now face unnecessary complications. Expansion capacity has to be separately metered so REC and SREC tallies are isolated which involves greater expense in power conditioning units, switchgear and solar kWh reporting. We now have customers who've expanded their systems several times and have three separate solar kWh meters: one for their original RECs eligible increment, a second for their SRECs I increment and a third for their SRECs II capacity.

(you are not alone in Western Mass) and/or if you simply prefer not to use email, BPVS can still provide custom PTS reporting services for you.

Once you choose an aggregator, you will give them permission for coded access to your production tally on the PTS. A degree of fraud protection is part of the PTS software; it can identify outliers and request clarification if you report more production than is possible or likely given the weather and the tally from comparable PV systems in any given month. There is also a degree of quality control; the PTS alerts you if your PV system is producing below par. Whether you manually report your tally each month to the PTS or it is automatically reported, you too have access to the PTS production tally page on their website. Massachusetts should improve the PTS to make data available to all including academics and to quantify production in a user friendly way to show emissions deferral. Once the SMART program starts, as of this writing, it is unknown how the PTS system will continue and whether it will be available to new PV system owners who choose not to participate in the utility controlled SMART program.

The aggregator will submit to NEPOOL –GIS and DOER a statement of qualification for your PV system[9]. All of the technical details you and they need for this document are included in our contract and system design documentation. It is often the case that an aggregator will send you a form, then tell you to ask us to fill in the technical sections for you; we're happy to do this at any time at no charge. Sometimes our customers switch aggregators after awhile. Our documentation help is still a free service.

At this point and after your solar system has made at least 1000 kWh or 1 MWh[10], you're ready to sell SRECs or RECs. The aggregator you select will have a variety of "plans" you can option to sell the SRECs or RECs and how you are paid. Unfortunately, neither DOER nor the Massachusetts Clean Energy Center nor the Office of Consumer Affairs and Business Regulation present any detailed guidance on these important plan variables.

At BPVS, we know that it is a conflict of interest for us to recommend any aggregator/broker, advise you on their offers or be both an aggregator and design /installation firm. Please read on to understand our policy.

BPVS POLICY on RECSs/SRECs/ SRECs II/SRECs II Extension Certificates & Advice

1. Our contracts for PV installation, service or repair do not include a clause or clauses with conditionals or duplicitous language that takes ownership of SRECs, SRECs II or RECs from you , or takes implied equivalents such as 'Carbon Credits' , 'Emissions Credits' , 'Pollution Offsets', 'Clean Energy Attributes', 'attributes', credits', 'Environmental Financial Incentives', separated benefits, " environmental attributes" or ' Green Tags'. All of these are synonyms for what the DOER means by 'generation attribute' or ' renewable generation attribute' however what the utilities and the Baker

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[9] DOER publishes on its website a list of all SREC eligible PV systems copying information from this statement of qualification that identifies your site by name, by town, by installer, the aggregator representing you, system costs and technical details. This list changes format and location on the DOER website and may also sometimes be found at the MassCEC website. Contact BPVS if your search is not producing the list.

[10] An SREC II Extension Certificate will be modified by a factor of 0.8 for small PV systems thus an SREC II Extension Certificate represents 1200 kWh.

Administration DOER call 'environmental attributes' may be shifting in meaning as the SMART program develops.

2. BPVS cannot recommend any particular firm or aggregator/broker to you. It is common practice for PV firms including solar developers , lead generators, and consultants to represent aggregator/broker firms, and receive commissions from them. Neither the PV firm nor the aggregator/broker is required to disclose such relationships. Some PV firms are also aggregators. [11] When shopping for a PV system if the PV installation firm, coordinating service firm, solar coach or leasing salesperson did not or does not disclose your eligibility for RECs or SRECs or SRECs II or Extension certificates or the SMART Program incentive and /or suggests that they will "take care" of that for you...be careful. You may unwittingly sign away a significant amount of money. A 5 kW PV system can produce 50 or more SREC II certificates in 10 years; at $200.00 Per SREC II, that is $10,000.00. We supply you with the full list of MA eligible aggregator /broker firms to select one for yourself. Several of our past customers experienced in shopping for and switching aggregator/brokers (and who respect our hands off policy) have volunteered to offer objective guidance on the process of qualifying and selecting an aggregator.

3. It is not that hard to research offers yourself; the sign-up process with an aggregator is easy. We always are ready to help you fill in the PV technical sections of the sign-up process once you have made your choice, and should you switch later. And if the research seems daunting we're happy to refer you to those who have expertise in the process.

4. BPVS supplies calibrated solar kWh meters identical to the best meters utilities use; our meters are digital, that is, easy to read and supplied with tamper –indicating, unbroken seals, and 0 kWh registered at start. We register the solar kWh meter serial number in our files and add a tamper indicating seal to the meter base hasp. Automatic DAS equipment we supply is from a third-party provider unassociated with us or any aggregator/broker. Should DOER, or the Department of Public Utilities (DPU) ever challenge the meter readings or DAS reports from your site we're happy to verify the equipment installed is **revenue grade and the wiring is properly routed and connected for revenue grade integrity**.

5. **You do not have to sell the SRECs/RECs from your PV system**. Not selling them means you have retained the clean energy benefits with the electricity. The BPVS website includes a table to calculate deferred emissions from your personal or "on site" solar energy use. The official DOER manner of retiring RECs and SRECs will actually cost you money so all our customers self-retire their attribute(s) before they are minted[12]. Some customers sold their RECs or SRECs for only a few

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[11] . Most Solar Lease or Power Purchase Agreement firms are, or control, aggregators/brokers. Some solar contractors are also aggregators.

12 Minting: The process of depositing attribute(s) on the NEEPOOL GIS to turn them into immediately tradable RECs or SRECs SRECs II or SRECs II Extension Certificates. Only aggregators can perform this task. Re- minting: Depositing attributes in the DOER Clearinghouse Auction to create extended life SRECs. Again the rules and details of the SRECs and RECs program are labyrinthine and change often.

years to make their expense for PV more reasonable. Others never sell them. Some businesses and institutions do not sell them so they can authentically tell their patrons -the electricity on site, used to grow or make a product or perform a service- is green. At BPVS we're here to help you no matter what you choose.

6. Aggregator/Brokers typically charge a fee ranging from 2% to 10% of the sale price they get for your SRECs/RECs. For small PV systems, the aggregator bundles their certificates with those of others to trade in large blocks. Consult your tax advisor; generally, proceeds to you from SRECs/RECs sales are considered taxable income even though the aggregator does not send you an IRS form 1099. A low commission percentage does not mean you'll get the best per SREC/REC price from that aggregator. Sometimes brokers with high fees have provided the best overall return to PV owners.

7. This report includes values for SRECs and RECs based on public information at the time of the report date. BPVS provides this price information, projections and analysis in a conservative light as a service to our customers assessing risk. Some solar sales pitches present SRECs II Extension values at their highest possible price in their financial analyses. RECs history, SRECs recent history causes us to refrain from such charming optimism for this complex market.

Afterword

The nearly fifty-year-old, transition to clean energy needs to accelerate. It is shameful how much time has wasted. It is unconscionable to luxuriate in electricity usage here while 2 billion world citizens have no consistent electricity for fundamental needs like lighting and water pumping.

In Massachusetts, we cannot allow the utilities to put solar development on pause so they can promote greater reliance on natural gas in the region. Preserving their scale of revenue and profit through higher service costs and arbitrary fees is too much of a burden as society capitalizes privately the transition to solar and other renewable electricity generation. All sectors must make sacrifices to assure sustainability including publicly sanctioned monopoly enterprises.

Without question, solar opportunists have discredited the solar effort and some critics have good cause to complain that solar incentives have been too generous for some developers including those who push solar leases in the residential sector and Power Purchase Agreements (PPAs) in the municipal sector. Massachusetts has done a poor job on consumer protection in this arena and in establishing solar as a licensed trade. The new DOER SMART program is more like a temporary, separate peace treaty between large solar developers and the utilities than a strategic program to encourage real quality and durable new volumes of solar generation capacity in the state.

This new program once again gets incentives wrong by continuing to feed to RPS mandates for just the Investor Owned Utilities (IOUs). We need to establish a statewide Renewable Portfolio owned by the people that all electricity distributors and suppliers must adhere to including Municipal Electric departments. Solar capacity incentives should be reasonable and consistent and financed by penalties on dirty power. Environmental and Grid support benefits of solar are real and can be detailed and valued. A true Value of Solar study is needed not more vagaries about " attribute(s)" ..which cheapen the value paid to solar owners but enhances their worth to financiers and utilities.

Please Contact us , we welcome your comments and questions. **info@bpvs.com**