

Massachusetts SMART Emergency Regulations Comments
Solar Energy Business Association of New England
(SEBANE)
June 1, 2020

INTRODUCTION

The Solar Energy Business Association of New England (“SEBANE”), a clean energy business association that promotes the expansion of solar investments throughout New England, submits the following joint comments on *the 225 CMR 20.00* Solar Massachusetts Renewable Target (“SMART”) Program Emergency Regulations. SEBANE’s membership represents more than 85 clean energy businesses throughout the industry including commercial and residential solar developers. Collectively, these businesses support thousands of jobs and millions in investments throughout the Commonwealth.

Furthermore, SEBANE applauds Massachusetts’ Department of Energy Resources (“DOER”) push to increase the SMART program capacity targets to 3,200 MW. The Department’s willingness to engage with stakeholders through consistent dialogue is greatly appreciated. Specifically, DOER’s SMART Emergency Public “Tutorial” presented SEBANE members and solar businesses throughout Massachusetts the opportunity to seek clarifications and context for policy changes impacting the SMART program.

Although several critical topics were covered during this conversation, SEBANE believes additional steps could be taken to further improve SMART and the economic benefits associated with solar growth. This effort will certainly move the Commonwealth another step closer to accomplishing clean energy investments and climate change mitigation goals as established by the Baker Administration. To protect the economic and societal gains Massachusetts registered to date, SEBANE recommends comprehensive policy solutions that encourage investments in a diverse portfolio of solar technologies.

Despite the solar industry's success in Massachusetts, the market has been negatively impacted by uncertainties, delays, and unforeseen business operations and supply chain disruptions prompted by COVID-19. To recapture the momentum lost due to these challenges and set the Commonwealth on a successful path, SEBANE appreciates the consideration of the following critical pieces to continue solar growth: 1) Review of Base Compensation Rates and Prevent Negative Incentive Values, 2) Land Use Regulations, Siting Requirements, and Agricultural Adders, 3) Eliminate the Storage Adder Inequity, 4) Protect Against Unnecessary Project Delays by Granting Extension for Cause, 5) Broaden and Balance Access to Low Income Solar Generation, and 6) Alternate On-Bill Credits for Behind the Meter (BTM) Solar. These comments intend to capture the full benefits of the SMART program – creating jobs, supporting local economies, and providing consumers with savings throughout Massachusetts.

In Massachusetts, COVID has claimed more than 4,200 solar jobs – accounting for nearly 52 percent of solar jobs through June 2020, according to SEIA.¹ Adding to the economic hardship, the Commonwealth's 4.4% March unemployment rate is expected to climb in April as COVID's effects deepen. While the Baker administration has taken crucial steps to limit the economic blow to businesses throughout Massachusetts, more needs to be done to ensure the damage being done to clean energy businesses is temporary – as the fate of meeting the Commonwealth's Clean Energy and Climate goals requires companies like the ones represented by SEBANE continue operating at optimal levels.

1) REVIEW OF BASE COMPENSATION RATES TO PREVENT NEGATIVE INCENTIVE VALUES WHICH HARM BUSINESS CERTAINTY AND LONG-TERM SOLAR GROWTH

Since the inception of SMART, delays and pent up demand caused a rush of projects to immediately oversubscribe capacity blocks, exacerbating project backlogs and eroding Base Compensation Rates. The rush of projects triggered a substantial backlog that could repeat itself following DOER's announcement of an additional 1,600 MW capacity block.

¹ Attachment 1. Solar Energy Industries Association. "COVID 19 Impacts on the Massachusetts Solar Industry." May 2020.

Despite dramatic year-over-year decreases in solar costs as technology improves, other aspects of solar including installation and material costs, interconnection costs, and combative federal policies have worked to undermine or slow development.

The solar industry continues to face significant hurdles and challenges that have threatened jobs and investments in Massachusetts and across the country. Despite these challenges, the industry continued to show signs of positive future growth but without Base Compensation Rates adequately reflecting economic realities this growth will be limited. Now, facing unprecedented economic disruptions solar companies are having to make difficult decisions to furlough staff and eliminate development pipelines. All the while, SMART Base Compensation Rates are declining.

Despite declining solar costs, interconnection costs are increasing while delays in studies and approvals have threatened project viability. SEBANE urges DOER to weigh these potential obstacles and elevated costs when considering declining compensation rates. Interconnection solutions are urgently needed to provide businesses and customers with certainty regarding project costs, certainty regarding which type of interconnection study will be administered, and when those studies will be approved or acted upon.

Additionally, DOER should reconsider the BTM incentive calculation in order to prevent negative incentive value from being triggered after a capacity block threshold has been reached. Once the Value of Energy (VoE) component of the calculation is greater than the Capacity-Based Compensation rate, the result is a negative incentive. The timing of when this will happen is dependent on the initial Total Compensation Rate, as well as the underlying growth in the utilities' VoE costs.

For National Grid, Until and Eversource West residential customers served under the R-1 tariffs, a negative based incentive rate will be reached in the first few expansion blocks (in 2021), regardless of whether the reduction in the Total Compensation Rate is 4% or 2%. At that point, customers will opt out of the SMART program unless there are Adders that would cause the total

incentive rate to be worth more than zero, and worth more than opting to simply claim the Class I RECs for themselves.

For most residential customers, after the SMART Incentive Rate declines to less than \$0.02/kWh, they may find it in their economic interest to not participate in SMART due to its added costs and the potential to earn an equivalent—though not certain—income stream from the sale of Class I RECs. Only BTM systems have their Adders decreased due to a decline in base compensation rates that is allowed to go negative. This creates an inherent bias towards the development of Standalone STGUs, especially for BTM systems over 25 kWac where there are *already* negative base compensation rates (before Adders).

By allowing Base Compensation rates to be negative, DOER effectively diminishes the value of the Adders that it is using to induce certain favorable types of development. This could be easily fixed by updating the BTM incentive calculation to stipulate that the base compensation rate, before adders, cannot be less than zero.

SEBANE recommends DOER consider engaging an independent, third-party administrator to review and revise calculations to the Base Compensation Rates, establishing a systematic approach to solar development in the Commonwealth. Base Compensation Rate reviews must also consider changes to fundamental economics of solar, obstacles to siting, impacts from state policies, and other criteria that would encourage or hinder solar development.

2) LAND USE REGULATIONS, SITING REQUIREMENTS, AND PROPOSED ADDERS

Sustainable and responsible land use and siting requirements are critically important to SEBANE members. Protecting the most vulnerable of habitats while developing clean, renewable resources has a multiplier effect on combating climate change while strengthening economic opportunities for all communities.

Striking a balanced approach will be challenging but is crucial in establishing Massachusetts as a solar and climate leader. Unfortunately, DOER's land use and siting guidance missed the mark.

Instead, regulations went beyond initial proposals. These restrictions specifically single out solar, since other types of development would still be allowed on the same land. SEBANE believes these proposed regulations would have a negative economic impact on the solar industry and its customers, landowners, local towns and counties benefitting from the projects, and other stakeholders throughout the supply chain.

DOER's regulations roll out three new MASSGIS layers, "Priority Habitat," "Core Habitat," and "Critical Natural Landscape," outlining land ineligible for development. Solar advocates estimate that this approach would eliminate nearly 4 million new acres of land throughout the Commonwealth. These newly proposed land use and siting barriers would eliminate solar development throughout much of Massachusetts, robbing not only farmers and rural communities of the economic and social benefits of solar energy, but also preventing communities from receiving a substantial injection of tax benefits that pay for schools, community centers, and first responders. In a time of significant economic disruption, DOER should be encouraging streamlined development of solar to replenish depleted county and municipal dollars while ensuring a family-sustaining jobs state in Massachusetts.

Though responsible siting to protect the environment is important to SEBANE, policies should strive to protect the most vulnerable land rather than creating additional barriers and hurdles to meeting ambitious climate and clean energy goals. Moreover, the Department should consider expanding the SMART 400 MW Emergency regulations to 1) include the Dual Axis Solar Trackers into the Canopy Adder and 2) consider the Agricultural Adder on a case-by-case basis to ensure the additional regulations and requirements adequately value impacts to agricultural lands.

Including Dual Axis Solar Tracker in the Canopy Adder would allow the project with favorable siting to generate energy from sunrise to sunset. Based on solar industry estimates, Dual Axis Trackers could increase energy output by nearly 40%, maximizing economic benefits and increasing consumer savings.

SEBANE recommends that DOER include 1) the Dual Axis Tracker into the Canopy adder tranche for projects smaller than 25kW as a method of improve project economics, consumer savings, and energy production values and 2) open a separate docket to consider potential ratepayer, economic, and societal impacts of proposed land use requirements on a wider population of stakeholders like industry, farmers, and counties.

3) ELIMINATE THE STORAGE ADDER INEQUITY FOR SMALL SOLAR TARIFF GENERATION UNIT SYSTEMS BY ESTABLISHING A 1.67X MULTIPLIER FOR THE SMALL ENERGY STORAGE ADDER

Eliminating the Storage Adder inequality will bring parity between the 10-year NPV of the Storage Adder for Small systems and the 20-year NPV for systems over 25 kW.

The Energy Storage Adder for STGUs over 25 kWac (non-“Small”) has a Net Present Value that is at least 1.6x the NPV for Small systems because the Storage Adder for systems larger than 25 kW is for 20 years, while the same incentive lasts for only 10 years for Small systems with relatively similarly sized storage installed with the PV system.

The Storage Adder \$/kWh rate is based on the size of the energy storage system relative to the size of the co-located PV system, regardless of the PV system’s capacity. For example, let’s compare the Storage Adder for the current Storage Capacity Block 6 for a 10 kW PV system and a 1 MW PV system, paired with an ESS that has half the rated power output compared to the PV system, and 2-hours of duration at that power. The following output from the SMART Energy Storage Calculator worksheet demonstrates that each will receive a rate of \$0.0392/kWh for every PV kWh generated. The difference is that for the Small system, the participation in the SMART program is only for 10 years, while the larger system receives the same Adder incentive for 20 years of PV generation.

ENTER INFORMATION IN BLUE CELLS ONLY	
Energy Storage Adder Block Tranche #	6
Solar PV Capacity (kW DC)	10
Storage Nominal Rated Power Capacity (kW)	5
Storage Hours at Rated Capacity	2
Adder Multiplier	0.0367
Storage Adder (\$/kWh)	\$0.0392

ENTER INFORMATION IN BLUE CELLS ONLY	
Energy Storage Adder Block Tranche #	6
Solar PV Capacity (kW DC)	1000
Storage Nominal Rated Power Capacity (kW)	500
Storage Hours at Rated Capacity	2
Adder Multiplier	0.0367
Storage Adder (\$/kWh)	\$0.0392

When comparing the Net Present Value of those two incentive streams, it becomes clear that the NPV of the 20-year income stream is at least 1.6x greater than the 10-year incentive stream. Given the low risk associated with future PV generation and negligible counterparty risk, a discount rate lower than the ones used below could be argued, which would increase the size of the multiplier required to make the 10- and 20-year NPVs equivalent. Currently, 20-year high-quality corporate bond yields are 3.50%.

The relatively modest ESS incentive available to Small PV systems explains why less than 5% of Small systems have opted to add an ESS to date. By adding an ESS multiplier of 1.67x, the attachment rate of ESS for Small systems would increase significantly. Finally, DOER should also apply this multiplier to systems that have already qualified for the Energy Storage Adder.

4) PROTECT AGAINST UNNECESSARY PROJECT DELAYS BY GRANTING EXTENSION FOR CAUSE

Provided that an applicant can demonstrate that all governmental permits and approvals were valid and in good standing at the time of the original submission for qualification under the SMART program, applicants should be allowed extension for cause. These extensions should

certainly be made for projects experiencing long interconnection delays from the distribution utilities.

SEBANE recommends exemptions be made for projects that could demonstrate accurate filing and approved permitting should be granted an extension for cause and maintain the ability to receive the designated SMART allowances without being penalized for poor interconnection process delays, as these delays are clearly outside the control of the solar company.

5) BROADEN AND BALANCE ACCESS TO LOW-INCOME SOLAR GENERATION

SEBANE appreciates DOER's thoughtfulness regarding how solar might better serve low-income (LI) customers through SMART. However, SEBANE believes attention to LI issues should be increased. As DOER continues to make incremental progress, SEBANE encourages the Department to expand what constitutes LI solar and to create a minimum set-aside for LI-related projects.

As the Department considers the expansion of solar eligibility for LI customers, an effort should be made to ensure access for the most vulnerable and those who would stand to benefit most from demonstrated energy savings. These at-risk customers include 1) customers on a low-income discounted rate of a Distribution Company, 2) low- or moderate- income housing, as defined under M.G.L. c. 40B, and 3) residents of LI communities as defined under the environmental justice framework.

SEBANE supports an amendment to the Emergency Regulations and Guidelines to ensure customers: 1) receive meaningful and transparent savings, 2) experience a streamlined transaction, and 3) are actively included in the market in part because of streamlined transactions. Achieving equity within solar access could require revisions to definitions in statute for Low income Solar Tariff Generation Unit, Low Income Community Shared Solar Tariff Generation Unit, and Low-Income Property Solar Tariff Generation Unit.

Low Income Solar Tariff Generation Unit. To qualify as a Low Income Solar Tariff Generation Unit, the STGU must be $\leq 25\text{kW}$, and the Owner or the Authorized Agent of the STGU must provide evidence satisfactory to the Department that demonstrates either a) 100% of the Generation Unit's output is provided to a Low Income Customer; *or b) electricity or bill credits equal in value to at least 67% of the difference between 230% of the Generation Unit's Base Compensation Rate and 200% of its Base Compensation Rate is allocated to a Low Income Customer at no cost to the Customer.*

Low Income Community Shared Solar Tariff Generation Unit. A Community Shared Solar Tariff Generation Unit with (a) at least 50% of its energy output allocated to Low Income Customers in the form of electricity or bill credits; *or b) allocates value in the form of electricity or bill credits equal to at least 67% of the Generation Unit's Low Income Community Shared Solar Off-Taker Based Adder Rate to End-use Customers on a low-income discounted rate of a Distribution Company; this value must be allocated at no cost to the End-use Customers.*

Low Income Property Solar Tariff Generation Unit. A Solar Tariff Generation Unit with a rated capacity greater than 25 kW that provides (a) all of its generation output in the form of electricity or bill credits to low or moderate income housing, as defined under M.G.L. c. 40B; *or b) allocates value in the form of electricity or bill credits equal to at least 67% of the Generation Unit's Low Income Property Off-Taker Based Adder Rate to low or moderate income housing as defined above; this value must be allocated at no cost to the End-use Customers.*

The upfront calculation and guidelines for determining qualification under the above definitions are relatively straightforward and proposed edits to the Guidelines are attached. In summary, below is an example of how this could occur.

Bill Credit Allocation = 67% x (Low Income Community Shared Solar Off-Taker Based Adder in \$ per kWh / value of Bill Credit in \$ per kWh)

For example, the Bill Credit Allocation to End-use Customers on a low-income discounted rate of a Distribution Company for a facility located in Eversource NEMA based on the first tranche of the Low Income Community Shared Solar Off-Taker Based Adder and assuming market net metering credits valued at \$0.12 per kWh would be equal to $(67\% \times \$0.06 \text{ per kWh}) / \$0.12 \text{ per kWh} = 33.5\%$. To be eligible for the Low-Income Community Shared Solar Off-Taker Based Adder, this example project would need to submit a Schedule Z in which at least 33.5% of the NMCs are allocated to End-use Customers on a low-income discounted rate of a Distribution Company at no cost. This same calculation would be applied to other credit values as needed.

6) ALTERNATE ON-BILL CREDITS FOR BEHIND THE METER SOLAR

Alternate On-Bill Credit (AOBC) as designed in the 2018 version of the SMART regulations mirrors virtual net metering. However, on-site commercial customers who wish to place the solar behind the meter are left out of this provision in SMART. This oversight, and the net metering caps, has suppressed the on-site commercial solar market and storage adoption.

In 2019, the Department stated its intentions to allow new regulations for BTM solar projects to be compensated with the AOBC. However, the definition of AOBC in the emergency regulations continued to only apply to standalone systems. SEBANE members recommend that the Department expand the definition of AOBC to allow for BTM systems to receive those credits.

While this regulatory change alone cannot solve the broader issue, the AOBC could be structured in a way that mimics net metering for BTM customers, namely that system generation is netted against the customer's consumption in each billing cycle, typically on a monthly basis. If the Department does not specify this structure in regulations, it will be up to the Department of Public Utilities to resolve in an undetermined amount of time – and only if they decide to structure the AOBC to the billing cycle netting period.

Conclusion

SEBANE thanks the Department for its work on SMART Emergency Regulations and greatly appreciates the opportunity to provide comments and recommendations that further strengthen the growth of the solar industry, accelerate economic benefits, and consistent customer savings. DOER's undertaking will certainly move the Commonwealth another step closer to accomplishing clean, renewable energy investment and climate change mitigation goals as established by the Baker Administration.

Respectfully submitted,

Mark Sylvia,
President, SEBANE

Nick d'Arbeloff
Vice-Chair, SEBANE