



February 9, 2024

Ms. Samantha Meserve
Director of the Renewable and Alternative Energy Division
Massachusetts Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA, 02114

Dear Ms. Meserve,

The Solar Energy Business Association of New England (SEBANE) is pleased to provide the following feedback in response to the Massachusetts Department of Energy Resources' (DOER's) review of the Solar Massachusetts Renewable Target (SMART) program.

SEBANE's mission is to advance the New England solar industry through informed policy intervention, coalition building, the establishment of best practices, and stakeholder education.

We applaud the Healey administration's ambitious climate goals to reduce emissions across the Commonwealth, and embrace the governor's stated goal to see 10 GW of solar deployed by 2030. That said, reaching the solar goal will be a challenge. Solar companies, not unlike companies in any other industry, will focus on states where the opportunities are greatest. **With interconnection delays, siting pressure, and the newly implemented fire code, the reality is that a sizable number of solar companies no longer see Massachusetts as an optimal state for solar deployment, and have moved their resources accordingly. Fortunately, an opportunity exists to address this negative trend through positive changes to the SMART program.**

SEBANE believes that restoring Massachusetts as a top state for solar will require rethinking our incentive framework. **Our comments are intended to serve as a menu of options for the Department to consider; in some areas we have offered multiple solutions to address the same challenge, resulting in some recommendations contradicting others.** This is intentional; our objective is to offer up a range of thoughtful possibilities for how the SMART program can make Massachusetts more attractive for solar deployment.

We are confident that a strengthening of the SMART program will pay for itself many times over, not just in terms of MW deployed, but with tangible, quantifiable economic and environmental benefits, such as the reduction of greenhouse gas emissions, increased resiliency, and job growth.

To achieve our shared goals, it is the position of SEBANE that the SMART program must adjust its rates, adders and structure on an ongoing basis to ensure the solar industry is able to develop and complete projects that make economic sense. We welcome the current programmatic review; and—since changing market forces will, over time, cause some solar sectors to advance successfully while others are left behind—we **urge DOER to consider executing similar reviews in conjunction with a third-party energy consultant every two years.**

SEBANE believes that we can meet the ambitious goals set by the legislature and the administration, but recognize that, to do so, we will need significant changes in the SMART program—and we will need them as soon as possible. As such, **we ask DOER and the administration to seek appropriate changes to the program through emergency regulations.** We have no time to lose.

Our comments are organized by objectives which correlate to the key issues that the solar industry is now facing in Massachusetts:

Objective: Maximize solar within the built environment

- Increase the Base Compensation Multiplier for all systems 250-500 kW AC. The utilities are increasingly requiring Impact Studies for systems over 250 kW, and the additional interconnection cost (vs. an Expedited Process) can be significant. Also, many of the projects are being included in Group Studies, creating additional expenses and delays. This makes projects within this size category very challenging to sell and develop. SEBANE recommends a Base Compensation Multiplier of 150% for projects 25 – 500 kW AC (essentially, eliminate the 250-500 kW tier). Any economy-of-scale benefit for projects in the 250-500 kW capacity tier is more than offset by the added interconnection costs, time delays and risks. This medium-scale commercial project size has seen a significant slowdown in sales and development; increasing the base compensation multiplier could help significantly.
- Increase the Canopy Location-based Adder for all qualifying systems from \$0.06/kWh to \$0.09/kWh. Because of the cost of steel and proper foundations, as well as the high cost of mobilization for all required equipment, solar canopies too often fall short of economic viability. This is one of the primary reasons that only a modest number of canopies have been constructed under SMART. Increasing the adder will, in many cases, allow the project to “pencil” and better incentivize parking lot owners to engage in canopy development.
- SEBANE also recommends that a Canopy Adder be extended to Small systems up to 25 kW AC to promote the development of residential carports and other residential shade structures (see

below for how to adjust the incentives for Small and BTM systems). See separate comment on additional applications for canopies.

- Increase the Rooftop System Adder from \$0.0192/kWh to \$0.04/kWh for all systems over 25 kW. The Technical Potential of Solar study informed us that there exists tremendous potential to build solar capacity on commercial rooftops. However, the pace of solar deployment is falling way behind stated goals. Higher prices for components and labor, in conjunction with declining block rates have made solar uninteresting to a large percentage of small, medium and large businesses. In short, there is not enough margin in most projects to offset expenses and make projects economically attractive. The additional \$0.02/kWh would help significantly to overcome those extra expenses.
- Or, as an alternative to the above, we ask that DOER consider providing a Rooftop System Adder of \$0.04/kWh for all systems over 25 kW that require structural upgrades and/or roof replacement.
- The development of SMART projects has largely stalled in Massachusetts, with many developers exiting the state and no longer pursuing new PV projects. This is due to a combination of lower compensation rates, as well as the added costs and risks of interconnection in Massachusetts. To ensure that the State meets its aggressive goals for 2030, SEBANE urges DOER to consider eliminating declining blocks entirely for rooftop and canopy solar systems, and peg the rate to Eversource 25 kW to 250 kW—or at the very least freeze rates where they are today. (The declining block structure was predicated on the assumption that costs would go down in a linear fashion; they have not).
- In Stakeholder Question #8, DOER asks if canopies should be allowed in other areas beyond the currently specified areas above parking surfaces, pedestrian walkways and canals. SEBANE encourages a much broader use of canopy structures where the dual use of the area beneath can be maintained, including:
 1. Above storage yards where materials and equipment other than vehicles may be stored, without regard to whether the surface below the canopy is paved.
 2. As shade structures in parks (including over grass areas) and yards (e.g., picnic areas, event venues; outdoor classrooms) and over other developed areas (e.g., waiting areas; basketball courts; skating rinks; riding areas; tennis courts, bicycle parking, pools, recreation areas, visitor kiosks).
 3. As shade structures for livestock (e.g., “cowports”) that still allow grass to grow underneath them (e.g., with a minimum elevation to the low side, perhaps 10 feet).

Objective: Increase fairness with regard to interconnection applications

- Solar customers, installers and developers have no control over the duration of interconnection approval, since the approval process is uncertain and controlled entirely by the utilities. SEBANE believes that it should be possible for BTM systems to lock in a SMART block (PSOQ) at the time of the initial interconnection application (IA) and not at application approval. To prevent frivolous applications, it is understood that any BTM project seeking to lock in a PSOQ at IA might have to meet certain criteria (i.e. site control) and to pay an appropriate and non-refundable fee.

Objective: Increase deployment of—and value of—energy storage

- SEBANE encourages DOER to increase the adders for battery storage, provided that the systems meet designated criteria (i.e. will be used for peak relief and/or to defer required infrastructure upgrades).
 1. The cost of installing batteries has not decreased swiftly. With new MA fire code requirements, the cost of many battery installations have actually increased. In order to encourage the co-location of batteries when they are not required by SMART, DOER needs to increase the ESS adder to make the incremental investment more attractive. Currently, for most projects, the incremental costs associated with adding batteries is dilutive to the owner's return on investment. Current compensation rates from the ESS Adder and Clean Peak, especially at Tranche 12 and beyond, are simply insufficient. At Tranche 12, the ESS Adders are already more than 30% below their initial values. SEBANE recommends either holding them at Tranche 12, or reducing them 4% based on the calendar year, and not per 80 MW. A more aggressive approach would be to reset and hold the ESS Adder at its initial base value of \$0.045/kWh before adjustments for capacity and duration to encourage storage development. Storage is a critical component of a stable renewables-based grid; current rates of deployment must be increased.
 2. The Charging Forward report notes the importance of longer-duration energy storage (i.e., more kWh of energy storage capacity). Currently, DOER's Energy Storage Adder compensation extends only to 6 hours of duration. SEBANE recommends that DOER remove the duration cap of 6 hours, and make it unlimited. Allow developers to determine the most appropriate duration for the site and the battery's applications. This will help the Commonwealth encourage further investment in the energy storage necessary to support the grid as the energy mix evolves to include a higher percentage of solar.
 3. DOER should also increase the Clean Peak multiplier for batteries that are also receiving the SMART Energy Storage Adder (SEBANE acknowledges that this change would require an update to the Clean Peak Energy Standard). The low rate of CPS compensation for SMART batteries does not induce batteries to optimize their charging and discharging schedules for maximum Clean Peak performance. As CPEC prices decline, the additional compensation

from CPS does not offset the SMART opportunity cost (i.e. the round-trip efficiency losses of charging the battery multiplied by the SMART compensation rate is higher than the value of potential CPECs generated).

4. DOER should consider removing or greatly simplifying the annual reporting requirement associated with the battery storage system adder to show that the system met the minimum cycling/exporting requirement to the grid. The reporting is challenging and requires that the contractor expend considerable time and resources on a deliverable that may or may not ever be reviewed. Perhaps a simple attestation form in conjunction with random audits might serve as a suitable substitute for the current requirement.
 5. SEBANE recommends that DOER provide a special provision for solar-powered, DC Fast Charging (DCFC) stations: DOER should allow the same compensation for DC kWh used to charge electrical vehicles as it does for AC energy production. Currently, SMART only compensates for AC energy production. The ideal solar-powered DCFC system would take PV power and store it in a battery for direct rapid DC discharging to an electrical vehicle without having to go through a DC:AC:DC conversion process. To encourage solar-powered DCFC sites, DOER should provide equal DC kWh compensation for energy used to charge the integrated battery. For days without sufficient power to meet the demand of the DCFC stations, the battery would also be allowed to import energy from the grid to serve the EVs. For days when there is more solar power supply than DCFC demand, the site would be able to export energy to the grid. In all cases, the SMART compensation shall be based on the combination of the DC output of the PV system used to charge the battery and any energy exported to the grid through an inverter. This solar-powered DCFC station incentive would complement the utilities' current EVSE "make ready" programs (helping to offset interconnection costs), as well as the Commonwealth's federally supported NEVI program to increase charging stations along key alternative fuel corridors (i.e., highways) across the state.
- SEBANE recommends removing the battery requirement for building-mounted systems over 500 kW AC. After the Commonwealth adopted the current version of the Comprehensive Fire Safety Code, effective December 9, 2022, it has become extremely difficult to locate large batteries (over 600 kWh) near buildings ("Exposures"), including "buildable lot lines". Also, 1000V PV systems with rapid shutdown requirements (required for commercial rooftops) are largely incompatible with the 1500V large battery systems typically available in this size range. There are very few 1000V 3-phase battery inverters available, and almost none are designed for DC-coupled PV systems or for systems over 500 kW AC in size. We urge DOER to revert to the SMART 1.0 program, which exempted building-mounted systems from this requirement, as well as any 1000V canopy systems.

Alternatively, SEBANE suggests that DOER consider removing the battery requirement **entirely** for **all** systems over 500 kW AC, and allow the developers and system owners to assess where to employ batteries in a manner that makes economic sense.

Objective: Increase the deployment of dual-use systems

- Expand the allowed agricultural uses under dual-use systems, to include grazing and other agricultural activities (see also the suggestion to expand canopy applications to livestock shading).

Objective: Increase the deployment of solar for new construction and municipalities

- Create a new location-based adder for new construction and for municipal new construction (since new construction is typically a multi-year project, solar system providers tend to incur more costs working /consulting with the client; a higher adder would offset these costs).

Objective: Increase the deployment of Behind the Meter Systems

- SEBANE recommends that DOER establish a “Minimum Offer” for BTM systems that effectively equates to a fixed price for the Class I REC value of the BTM PV generation for the entire SMART tariff term. At the same time, SEBANE recommends that all Small STGUs be allowed to participate in the SMART program for 20 years, not 10 years. SEBANE believes that a fixed Minimum Offer amount of at least \$0.03/kWh for 20 (or more) years could entice BTM customers to participate in the SMART program again, providing greater visibility to the EDCs and DOER into the solar kWh generated by BTM systems. SEBANE believes that, to accelerate solar to levels required to meet stated goals may call for a Minimum Offer of at least \$0.05/kWh. Currently, those systems are simply participating in the Class I REC market directly, bypassing SMART. The current Class I REC price has been trading above \$0.03/kWh recently, but once the planned Offshore Wind facilities interconnect to the grid, the price of Class I RECs is expected to decline. Removing that risk of volatile prices for 20 years for all BTM customers could convince many of them to accept a Minimum Offer through the SMART program. SEBANE also notes that when DOER recently established the current Class I REC ACP of \$40 by DOER, it did not assess the value of the incremental attributes of clean energy to the Commonwealth, which SEBANE believes well exceeds \$0.04/kWh.
- If DOER does introduce SEBANE’s Minimum Offer proposal, then SEBANE also recommends that it make it easier for those participants to expand their SMART systems, especially given the need to increase generation to offset new electrification loads. If the incentive rate is fixed, there should be no need for a new SMART meter to expand the system size. An amended or new ISA and a notice to SMART about the increased size (but without new SMART application fees) should be all that is required.

- In addition, for Small Solar Tariff Generation Units, SEBANE believes that an additional location-based adder for non-rooftop systems (such as residential ground-mounts) is appropriate, and recommends an adder of \$0.09/kWh. Our modeling using the BTM VoE Calculator demonstrates that even if DOER extended the Canopy Adder (\$0.06/kWh or even \$0.09/kWh) to Small systems it still would result in a fixed SMART incentive of less than \$0.03/kWh for nearly all R-1 customers in Massachusetts: an insufficient amount to induce SMART participation. SEBANE recommends that DOER allow adding the non-rooftop adder to the Minimum Offer compensation rate that SEBANE recommends for all Small BTM systems as an option.
- Finally, to ensure access to all of the state's residents, SEBANE recommends the allowance of third-party metering through PTS for BTM systems, especially for rural installations where distances make it nearly impossible to connect inverters to utility locations over 500 feet away from a subpanel. Third-party metering and manual reporting via PTS would be great additions as options for all BTM projects that opt for the proposed DOER Minimum Offer. In our experience, the shift to utility-owned meters has added installation complications and costs to projects, despite what the EDCs argued in the initial SMART Tariff proceedings at the DPU.

Objective: Simplify and accelerate the deployment of CSS and LICSS projects

- SEBANE recommends that the DPU instruct the EDCs to offer "Net Credit Billing" for Community Shared Solar and Low Income Community Shared Solar STGUs. Under this arrangement, the EDCs would credit off-takers based on their subscribed discount rate, and allocate the complementary proceeds to the system owner. Currently, Community Shared Solar that is not Low Income has flat-lined because the cost of acquiring off-takers and administering the revenue collection process is more expensive than the adder given today's basic service rates (e.g. a 10% discount on a \$0.15/kWh basic service rate is \$0.015/kWh, or approximately half of the current CSS offtaker adder value at tranche 13). The remaining value is insufficient for acquiring off-takers and administering revenue collection (not to mention the management of non-payment and stranded AOBs due to attrition). In addition, DOER might consider reducing the decline in the tranche value for off-taker based adders in order to keep those types of solar projects viable.

Objective: Align SMART programs with Siting Commission recommendations to relieve land use pressure

- In September 2023, Governor Healy established a Commission on Clean Energy Infrastructure Siting and Permitting to make recommendations in the Spring of 2023 for regulatory (and legislative) reform to streamline clean energy siting. It is critical such recommendations are both aligned and incorporated into the SMART program to ultimately achieve the Governor's goal of delivering clean, affordable energy to Massachusetts communities and delivering the economic growth such development brings. There is a common understanding that the built environment

will not be sufficient to site and deliver the solar energy necessary for achievement of the state's codified energy goals, and thus such recommendations and their programmatic implementation are crucial to resolve one of the greatest barriers to solar deployment.

Objective: To ensure that the State meets its solar goals by 2030

- In order for DOER to have sufficient flexibility to alter SMART's adders and blocks as necessary, we suggest that a review of the SMART program be conducted every 2 years to ensure that it is on track to drive solar installations to or beyond the State's ambitious goals for solar, and to address unforeseen issues.

SEBANE and its members would like to thank DOER for advancing the cause of solar and clean energy in the Commonwealth, and for allowing us this opportunity to provide input as the SMART program evolves. We applaud the ambitious goals of the Healey administration, and we wish to be as helpful as possible in collaborating with DOER to reach these goals.

Respectfully submitted,

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