



July 11, 2017

Judith Judson, Commissioner
Massachusetts Department of Energy Resources
100 Cambridge Street 10th Floor
Boston, MA 02116

Re: Solar Massachusetts Renewable Target (SMART), 225 CMR 20.00

Dear Commissioner Judson:

Please accept these comments in response to the Solar Massachusetts Renewable Target (SMART) emergency regulations filed with the Secretary of State on June 5, 2017. We are BlueWave Solar (BlueWave), a Massachusetts based renewable energy company founded on a mission to make solar available to everyone, everywhere. BlueWave employees fifty employees here in Massachusetts and has developed and built over 100 MW of solar across the Commonwealth to date.

We appreciate the hard work and leadership from Department of Energy Resources (DOER) staff, the Executive Office of Energy and Environmental Affairs (EEA) staff, and Department of Agricultural Resources (MDAR) staff in developing these regulations. For more than a year, DOER staff have engaged in the difficult tasks of developing proposals, refining their ideas, listening to stakeholder feedback, and attempting to balance diverse interests. We further appreciate the open dialogue with you and your staff throughout this process. We look forward to working with DOER to ensure the final regulations help achieve the Baker-Polito Administration's clean energy goals. We also look forward to working with the Department of Public Utilities (DPU) to ensure the tariff proposals filed by the utilities – including the tariffs associated with the SMART program and other tariffs needed to allow the program to be fully implemented, such as the critical alternative on-bill credit mechanism – are approved quickly and are effective in supporting the next generation of solar development in the Commonwealth.

The stakes are very high. As currently written, the SMART program will not be sufficient to support continued solar development. The program – already six months delayed -- has been calibrated around optimistic expectations of cost reductions while imposing costly new restrictions on solar development, at a time when external factors are increasing costs further across the solar industry.

By adopting the following recommendations proposed in these comments, we believe SMART can fulfill its obligation under Chapter 75 of the Acts of 2016, *An Act Relative to Solar Energy* ("the Act"), to create a stable and sustainable solar market at a reasonable cost to ratepayers, while supporting diverse installation types that provide unique benefits. We believe these amendments will ensure that the SMART program will continue to create jobs in Massachusetts, support local economies, and help businesses, homeowners, schools, hospitals, and local governments save on their electricity bills.

BlueWave is committed to maintaining the Commonwealth's national leadership position in solar, but are also concerned that if the following recommendations are not adopted, the SMART program will create a downturn in the solar market, and fail to meet the Baker-Polito Administration's solar goals, as well as the goals of the enabling legislation they are meant to support.

SUMMARY OF KEY ISSUES

1. Set compensation rates at levels that will ensure robust and diverse solar development

BlueWave remains concerned that the competitive procurement mechanism used to set the overall tariff rates for the program will result in compensation levels that are too low to ensure economic viability of projects. We urge DOER to revisit aspects of the initial 100 MW auction mechanism itself and ensure that any auction design encourages broad participation and produces market-representative results, which will support continued solar development to meet the 1,600 MW goal. Solar Industry analysis shows that a ceiling price of \$0.175 per kWh will allow for a competitive, robust auction – a price target supported by the Department’s own consultant study. Current proposed ceiling prices are 20% below that threshold and can significantly impact the economics of projects and their ability to materialize. We further urge DOER to closely monitor movement through the capacity blocks to determine whether adjustments in tariff rates may be needed to maintain the solar industry’s forward momentum.

2. Replace the hard cap on adders with a MW threshold that when crossed would trigger a decline in adder value

While the regulations include “adders” to incentivize certain kinds of solar projects, such as projects that serve low income neighborhoods, community shared solar projects, and governmental projects, the regulations also include a new cap on adder capacity set at 320 MW per category. The concept of a hard adder cap, which has never been publicly advanced until now, is a stark departure from the intent of the enabling legislation. Over-segmentation of the program will frustrate project development, and the caps will restrict adders that promise to deliver benefits across all market segments, such as energy storage. The proposed adder caps should be eliminated altogether or modified to establish adder-specific thresholds that would trigger a decline in adder value.

3. Modify new land use & siting criteria, performance standards, special provisions, and greenfield subtractions

As written, the current regulations lack sufficient clarity and specificity regarding land use performance standards for ground-mounted projects. Because all ground-mounted Solar Tariff Generation Units with a capacity greater than 500 kW must comply with the standards introduced under 225 CMR 20.05(5)(e)5, the definitions used to establish these standards must be made explicit to provide clarity for developers, engineers, and construction professionals. In general, performance standards must be defined in such a way as to not unreasonably hinder the development of ground-mounted projects. Moreover, the special provisions established for Agricultural Solar Tariff Generation Units should be revised or clarified as it relates to a unit’s maximum rated capacity, the minimum system heights, and shading limitations. Furthermore, Greenfield Subtractions should not be applied to projects on previously developed land.

4. Alternative on-bill credit process uncertainty highlights need for net metering cap raise

The regulations introduce the concept of an Alternative On-Bill Credit, as expected, but otherwise provide no guidance on the timing, structure, or energy compensation rate for Alternative On-Bill Credit Generation Units. While we understand that any alternative on-bill crediting mechanism must be filed as a tariff and approved by the DPU, no draft of such a tariff has been proposed to date, raising serious concerns about the timing, mechanics, and implementation of any eventual alternative mechanism. Coupled with the fact that net metering caps have once again been reached in National Grid, Unitil, and WMECO service territories,¹ representing most of the Commonwealth, the near-term viability of the solar industry in Massachusetts remains at risk, if it has no alternative mechanism for giving customers value for these solar projects. While outside the purview of DOER, we support the solar industry’s renewed call for the Legislature to raise the net metering caps this year and for Governor Baker,

¹ Massachusetts System of Assurance for Net Metering Eligibility: Accessed 7/5/2017, available at: <https://app.massaca.org/allocationreport/report.aspx>.

EEA, and DOER to support such legislative action, while also supporting action by the utilities and DPU to establish the alternative bill crediting mechanism.

5. Establish a price floor in Block 1 to provide consistent support for small systems

We share the concerns of others in our industry that the current program design exposes projects in the under 25kW market segment and low income under 25 kW market segment to the results of a Competitive Procurement designed for projects that share little resemblance in size or overall cost structure. To ensure that residential and small commercial project economics can meet customer payback-period requirements for the duration of the SMART program, we recommend establishing a backstop in the form of a price floor on Base Compensation Rates of \$0.34/kWh for Solar Tariff Generation Units of 25 kW or less, and \$0.40/kWh for Low Income Solar Tariff Generation Units of 25 kW or less, in Block 1. This backstop will ensure a consistent level of support for residential and small commercial projects and maintain momentum for meeting the 1600 MW solar goal.

DETAILED DISCUSSION

SECTION 1 – COMPETITIVE PROCUREMENT DESIGN & SETTING BASE RATES

As the initial 100 MW procurement for larger scale solar projects sets the base compensation rate incentive for the entire program, it is crucial to ensure that this procurement produces a result that will drive continued solar development in the Commonwealth.

There are certain design elements that BlueWave strongly support exclusively allowing projects seeking only the base compensation rate to bid into the competitive procurement. This will allow an apples-to-apples comparison of bids and help ensure a more accurate base rate. We also support the addition of project maturity standards for units that seek to participate in the procurement. Requiring projects to have a performance guarantee, an interconnection agreement or System Impact Study, proof of site control, and non-ministerial permits will help ensure that only advanced-stage projects are participating in the initial procurement and helping to set the base rate.²

However, we believe further improvements to the procurement design should be made to ensure the initial procurement sets a reasonable Base Compensation Rate.

1) Modify the procurement design by establishing a ceiling price of \$0.175 per kWh

As was written in the solar associations' joint letter dated February 15, 2017 (included as Attachment A), which BlueWave concurs with, we have serious concerns about the ability of the proposed auction to accomplish the objective of setting a base compensation rate that accurately reflects market conditions in the absence of appropriate auction parameters. The current auction design protects only against high bids, but a fairer auction design would set a reasonable range of values on both the high and low end of the bidding spectrum.

It is particularly important to consider that the auction results will directly impact the indices that were established to set base compensation rates for all projects under 1 MW and those seeking adders. A below-market auction

² Although we support including interconnection as one of the project maturity requirements for bidders, we recommend DOER modifies its requirement for projects to provide an *executed* ISA. Based on the considerable uncertainty around when SMART tariffs would be approved, utilities should require bidders to provide either a completed System Impact Study or an executed ISA to satisfy this requirement.

clearing price will have a cascading effect through the entire program, and indices that were predicated on DOER's original research and analysis on cost ratios may need to be increased to ensure a viable market.

We remain concerned that the current ceiling prices of \$0.15 per kWh for projects between 1-2 MW and \$0.14 per kWh for projects between 2-5 MW are too conservative and will artificially limit development. In other words, as drafted, there is significant risk that the current ceiling price would set a base compensation rate below current market conditions and could undermine the entire program. There is also a significant risk that the Department will not receive a robust number of bids that can meet its low ceiling price, which would compromise the competitiveness of the auction.

Once again, we believe the methodology establishing the current base rate did not appropriately account for the high cost environment in Massachusetts³ or for the impact of the new land use restrictions and performance standards. The use of Sustainable Energy Advantage's (SEA) "base case" cost projection for "medium cost" projects to establish the ceiling price will, by definition, preclude more than half of all potential projects from responsibly bidding into the auction.⁴ In addition, by selecting SEA's "base case" projection rather than the "high case," DOER is ignoring the very real possibility overall project costs in Massachusetts will not decline as quickly as its consultant's estimate – especially given that interconnection and other costs outside of developers' control are rising.

Industry data from Bloomberg shows price declines across cost categories have been slowing and are projected to flatten out through 2021.⁵ Current market-wide EPC costs for the commercial and industrial sector are approximately \$2.00 per watt. When accounting for these slowing cost declines, as well as taking into consideration the value proposition for customers, and factoring in a reasonable internal rate of return, our analysis (Attachment B) shows that an initial base rate at \$0.15 per kWh results in few projects that would be economic, even before accounting for the additional costs associated with the new land use restrictions, performance standards, and the notable increases in interconnection costs in a mature Massachusetts market. At current cost levels, an average auction-eligible project becomes feasible at a base tariff of about \$0.175 per kWh— particularly in higher-cost areas of the Commonwealth. Setting a ceiling price below this level would necessarily result in auction participation only from those projects able to build or operate at below market prices, and would therefore set an unrepresentative result for the entire industry.

Instead, DOER should use the midpoint between the high case and the base case for medium cost ground mounts. Using this approach would yield a new ceiling of 17.55 cents. We recommend DOER revisit the procurement design, establish our recommended revisions, and set a price ceiling based on levels that will drive responsible solar development.

2) Promulgate guidance on procurement review: Establish specific metrics to evaluate competitiveness of procurement and rerun the auction as soon as possible

³ Neighboring states offer revealing comparisons: under the 2017 Renewable Energy Growth (REG) program in Rhode Island, ceiling prices are \$0.1875/kWh for systems up to 1MW and \$0.1505/kWh for systems between 1-5 MW. Most projects in Rhode Island are customer-sited rather than greenfield, removing another \$0.01-0.02/kWh in Massachusetts lease costs. In addition, prevailing wage costs add a premium in Massachusetts. With these realities, it would be reasonable to expect that the Massachusetts ceiling prices would be higher than those in Rhode Island.

⁴ In October 2016, DOER released the report, *Developing a Post-1,600 MW Solar Incentive Program: Evaluating Needed Incentive Levels and Potential Policy Alternatives*, prepared by Sustainable Energy Advantage. Available online at: <http://www.mass.gov/eea/docs/doer/rps-aps/developing-a-post-1600-mw-solar-incentive-program.pdf>.

⁵ Detailed cost data from Bloomberg is proprietary but can be provided to the DOER upon request.

The emergency regulations contain a provision that allows DOER, in consultation with the distribution companies, to terminate the solicitation, if DOER deems the procurement results to be uncompetitive or “unreasonable.” While we recognize DOER’s desire to avoid a flawed auction result, we recommend that DOER provide more upfront guidance specifying the metrics it would use to determine whether the procurement is uncompetitive. In the absence of such guidance, it will be difficult for developers and their financing partners to continue to confidently develop projects for auction participation.

Solar developers are depending on this procurement to be successful and are investing to prepare for the transition from SREC II to SMART. Any delay in the procurement will only hurt businesses’ ability to operate efficiently and contain costs, and any such outcome will make development more expensive within the Commonwealth. We recognize DOER’s interest in ensuring a fair and proper auction process, but as the language currently reads, DOER maintains the ability to challenge any result and terminate the auction. This overly broad provision casts a shadow over the procurement outcomes and adds uncertainty to the program generally.

Therefore, we strongly recommend that DOER provide formal guidance, with further consultation from the distribution companies and solar stakeholders, describing the metrics the Department would use to determine whether the auction is uncompetitive. Specifically, we suggest that DOER revise the regulations or issue subsequent guidance stating that the solicitation shall only be terminated in the event that the Department determines that the result would threaten solar development in the Commonwealth and the ongoing viability of SMART program.

DOER guidance should also affirm that a revised auction (along with adjustments to auction structure/ceiling prices) will be held as soon as possible in the case of any determination of un-competitiveness. Furthermore, upon two determinations of unreasonable results, DOER should leave itself the flexibility to administratively establish the base rate, if necessary. These provisions are critical to ensuring that an uncompetitive auction doesn’t hold up the program for an indefinite amount of time.

3) Review compensation rates six months after program effective date of the tariff: Assess program for movement through the blocks and the diversity of projects being completed

While we support the concept of including a review of compensation rates, BlueWave recommends that DOER adopt a modified review provision. We note that based on circumstances beyond the agency’s control, DOER may need to provide an early review of compensation rates soon after the SMART program takes full effect.

Most significantly, the Suniva trade case pending with the International Trade Commission (ITC) has the potential to shift the cost structure for solar projects in the Commonwealth.⁶ In the event the Suniva petition is approved, and relief is granted in the form requested, a tariff of \$0.40 per watt for solar cells produced outside the U.S. could be established, as well as a floor price of \$0.78 per watt for panels. These are significant cost increases. Based on the timing of the case, these increases would come into play after the initial procurements have been completed, potentially upending the auction result. In the event the Suniva petition is approved and tariffs or similar measures are imposed, DOER should be prepared to adjust the indices as soon as possible.⁷ But other exogenous factors, such as rising interest rates, rising interconnection costs, or potential changes to the federal tax code, may also require additional review of the program’s performance.

⁶ Honeyman, Cory (2017). *Suniva and SolarWorld trade dispute could halt two-thirds of US solar installations through 2022*. June 26, 2017. Greentech Media. Available at: <https://www.greentechmedia.com/articles/read/suniva-dispute-could-halt-two-thirds-of-us-solar-installations>.

⁷ Based on the current estimates of the case, we expect action on the petition by the end of calendar year 2017.

Over the long-term, DOER's existing authority to review and adjust the program, even without an explicit review process, will be important for ongoing monitoring of market conditions and the rate of movement through the blocks themselves, as well as the diversity of projects being completed under the program. At the onset of the program, however, we would strongly recommend DOER consider moving the current one-time review up from 400 MW, as stipulated in 20.07(6), to six months following the effective date of the SMART program. Adopting such a time-based review will ensure that DOER is authorized to conduct a timely review of program performance in the event of stifled development driven by exogenous factors.⁸

4) Establish a price floor in Block 1 to provide consistent support for small systems

According to the Production Tracking System published by the Massachusetts Clean Energy Center, over 40 percent of all solar capacity that was placed in service in 2015 and 2016 came from systems no greater than 25 kW (DC).⁹ Therefore it is critical to properly calibrate SMART for the realities of this sector of the industry.

To reiterate our previous recommendation, the first step toward ensuring continued solar development across all market segments is raising the procurement ceiling price to \$0.175 per kWh. Given the importance of the initial procurement in setting base compensation rates, revising the upper limit on bidding will encourage more robust participation in the procurement and encourage bidding consistent with current market conditions. This would ensure more appropriate compensation rates for all projects and is crucial to establishing a viable solar market across sectors.

For the under 25 kW market segment, we continue to support the 10-year tariff term for projects as DOER has proposed. Based on that market segment's experience, residential customers seek at most a 10-year payback on their investment and the current SMART term length is set based on customer expectations. Depending on the results of the initial procurement, however, and considering the indexing of the procurement results to each sector, most customer payback periods are greater than 10 years under the current program design.¹⁰ And, because residential installation costs decline less rapidly than larger projects, these results become more acute as the capacity blocks are filled and compensation declines. In the end, these results reinforce the need for a higher ceiling price, but also the need for an additional backstop mechanism.

To ensure that residential project economics can meet customer payback-period requirements for the duration of the SMART program, we recommend establishing a price floor on Base Compensation Rates of [\$0.34]/kWh for Solar Tariff Generation Units of 25 kW or less, and [\$0.40]/kWh for Low Income Solar Tariff Generation Units of 25 kW or less, in Block 1. This backstop for the residential sector not only allows continued small system development throughout the blocks, but also recognizes the special circumstances of customer needs.

SECTION 2: COMPENSATION RATE ADDERS

BlueWave strongly supports DOER's inclusion of the compensation rate adders in the regulations. The availability of these adders in the SMART program will be essential to the program's ability to fulfill its statutory mandate to "support diverse installation types and sizes."¹¹

⁸ After any DOER Review, whether it is based on an installed capacity threshold or as a result of major external factors, DOER should not reduce compensation rates for projects that have already submitted applications.

⁹ "Solar PV Systems in MA Report" <http://www.masscec.com/get-clean-energy/production-tracking-system>. Visited 29 June 2017.

¹⁰ See comments of Sunbug Solar et al.

¹¹ Available online at <https://malegislature.gov/Laws/SessionLaws/Acts/2016/Chapter75>.

The project diversity that these adders are designed to encourage will help the Commonwealth derive a wide range of benefits unique to particular installation characteristics, such as location, offtakers, and technology pairings. Without these adders, the program would fall short of the statutory directive for project diversity and be unable to tap the unique benefits provided by a variety of installation types, such as community shared, low-income, municipal, storage-paired, building mounted, canopy, and other solar systems.

5) Replace MW adder caps and declines with a MW threshold that, when crossed, would trigger decline in adder value

Because of the importance of these adders, BlueWave opposes DOER's inclusion of hard "adder caps" in 20.07(5) as proposed. This provision would cap each individual compensation rate adder at 320 MW for the duration of the SMART program. As proposed, these caps place arbitrary limits on the market segments the program is designed to encourage and support. The imposition of adder caps would introduce yet another variable of uncertainty and risk – and therefore cost – for a market that is already stunted by net metering caps. Furthermore, as proposed, the adder cap would likely result in a "rush to the door" during the first part of the program to secure the available adders, while projects in the later years of the program could prove difficult to develop due to the combination of the declining base price and unavailability of market-enabling adders.

For developers, the arrival of a new set of solar caps would represent a major source of regulatory uncertainty and administrative complexity as they pursue potential projects across the state. Developers and host customers would have no assurance, especially after the initial blocks of the program are subscribed, that their project(s) would qualify for the adders. This uncertainty would also be borne by host customers like municipalities, who – even with an ideal site and/or off-take arrangement – could find their projects unworkable as the result of a failure to qualify under an adder cap. This uncertainty would also be elevated for financing partners, who may feel compelled to add a substantial risk premium to the capital they lend or simply chose to back out of uncertain deals. The prospect of adder caps being hit mid-project development could result in permanently unrecoverable costs.

We also disagree with DOER's proposal to reduce all adders at the same rate as the base rate (4% per block step down), regardless of the number of projects that use those adders and without review of whether those adders are sufficient to encourage the type of project diversity called for in the Act. As we have previously noted, the additional costs associated with pursuing adder-based projects are, in most cases, not declining at the same rate as the underlying costs of developing solar projects. In fact, some of these costs – such as customer acquisition costs for community solar, landfill and brownfield costs, agricultural production costs, and roofing costs – are increasing as labor costs rise and the low-hanging fruit for site development becomes unavailable. We also have concerns that the initial levels of some adders are too low, such that an automatic decline in adders over time would make some adder-based projects that are currently marginal entirely uneconomic. For these reasons, we reiterate our strong opposition to adder caps and declines in adder value by block.

However, we recognize and support DOER's goal of reducing the costs of the program over time. We note that there are many factors incorporated into the design of the declining block program that are likely to lead to cost reductions, including the automatic declines in base compensation rates, the auction mechanism, the low ceiling price (relative to previous SREC levels),¹² the already low value of certain adders, the proposed cap on overall project compensation, and other mechanisms. BlueWave recognizes and is sensitive to DOER's concern with ensuring that a diverse range of project types is developed, and that one project type does not dominate the market.

¹² Industry analysis finds that overall project compensation has declined 67%-69% from SREC I (market sector A) + net metering to SMART + market net metering (under base rate of \$0.14 for projects 2-5 MW) in National Grid and NSTAR service territories.

To address both these concerns, we recommend either eliminating the adder caps or modifying the concept such that the adder levels step down gradually at pre-determined capacity *thresholds* rather than a hard limit on individual adder capacity. DOER could determine an Adder Capacity Threshold of “X” megawatts and an Adder Reduction Rate of “Y” percent such that a given adder value steps down in regular intervals as each capacity threshold is reached. For example, where X equals 320 MW and Y equals a percentage reduction, the first 320 MW in capacity for each category of adder would receive 100% of the adder value; the next 320 MW of capacity in that adder category (MW 321-640) would receive a Y reduction in the adder value, and the final 320 MW would receive a further reduction in adder value. We believe this mechanism satisfies DOER’s interest in cost control, while avoiding many of the problems associated with a hard cap.

6) Revise the storage adder threshold based on the power rating of the storage device, not the capacity of the solar project

We question the rationale for capping the amount of solar that can be paired with energy storage, a combination that the state’s own *State of Charge* report identified as being laden with “value to both the system owner and ratepayer.”¹³ As the *State of Charge* report points out, storage can be applied to help alleviate problems related to reverse power flows, which will provide significant reliability benefits and lower interconnection costs for all distributed energy resources. Furthermore, aggressive deployment of storage results in \$2.3 billion in ratepayer savings alone, and more than \$1 billion in direct revenue to the owners of storage systems. Given these benefits, establishing a hard cap on storage capacity would seem to leave considerable value on the table for all customers. In addition, we note that unlike the other adders, the storage adder is available to both <25 kW and >25kW projects, which will likely mean that this adder will decline even more rapidly than the other adders. As recommended above relating to all adder caps, our primary recommendation is to eliminate the storage adder cap. Alternatively, we recommend either greatly enlarging it, or modifying it such that the cap (or threshold as recommended above) would be established based on the power rating of the storage system, rather than on the size of the solar system itself. This approach would be more in line with the intent behind DOER’s adder cap proposal, would result in a significant increase in the amount of storage that could be installed, and would help capture the many benefits that paired solar and storage systems provide.

SECTION 3: LAND USE & SITING PROVISIONS

BlueWave commends the Department’s efforts for taking steps to ensure that sustainable solar development can continue harmoniously with the state’s land-use and conservation priorities. The land-use framework incorporated by the Department in these emergency regulations represents a substantial improvement from the straw proposal advanced last September. Despite the positive refinements made by the Department since then, several key issues of importance remain and need to be remedied.

7) Eliminate or modify project segmentation restrictions

The proposed regulations place an undue restriction on the number and type of solar projects that can be installed in a single location. The project segmentation section in 20.05(5)(f) would disallow commercial customers occupying campuses from maximizing their solar potential. The exceptions outlined in 20.05(5)(f) would not provide sufficient relief. For example, a complex of low-income multifamily buildings could easily consist of multiple building-mounted systems over 25 kW. It could also preclude solar development at university campuses, agricultural properties, municipal office parks, and corporate headquarters by preventing combination systems that include building-

¹³ State of Charge report, p. xxi, prepared for the Massachusetts Executive Office of Energy and Environmental Affairs. 2016. Available at: <http://www.mass.gov/eea/docs/doer/state-of-charge-report.pdf>.

mounted, solar canopy, and ground-mounted systems from being installed. Solar development on campuses require creativity in order to maximize the available square footage with adequate solar potential in order to develop projects that off-set a meaningful portion of the on-site electric load. The industry has proposed and we support that the project segmentation restrictions be removed.

In addition, BlueWave, objects to the Department's decision to prevent more than one ground-mounted project on contiguous parcels of land from qualifying for SMART in 20.05(5)(f). Even though the regulations specify that project(s) on contiguous parcels can qualify if they submit a statement of qualification application (SQA) at least 12 months after the commercial operation date (COD) of the original system, the prohibition is unnecessarily restrictive. With developers already well into the process of identifying project sites for SMART, the restriction will add additional complexity and uncertainty. Developers may be left in the dark as to whether other unaffiliated developers are pursuing adjacent parcels and, if so, whether a bid or successful SQA from those projects could jeopardize their ability to stay on a reasonable development timeline. The restriction is a needless barrier for development, with implications for companies' ability to attract low-cost capital and deliver beneficial projects in a timely manner. As such, we urge the Department to remove the contiguous parcels restriction.

8) Remove reference to federal prime agricultural farmland designations

As currently drafted, the definition of "prime agricultural farmland" would seem to create a regulatory framework that is ambiguous, subjective, and extremely difficult to administer. The Natural Resources Conservation Service (NRCS) definition 7 C.F.R. §657.5(a) is very difficult to interpret. The definition below, and its reference in Section 20.05(5)1a and b (for determining whether a project is in Category 1), would seem to require a soil scientist be contracted for an opinion on all such potential Category 1 projects. Subsequently, the program administrator, who will not be technically equipped to make sure determinations, would have to be tasked with assessing the validity of the soil scientists' opinion.

Prime Agricultural Farmland. Means those soils identified by the United States Department of Agriculture Natural Resources Conservation Service to be prime farmlands pursuant to 7 C.F.R. §657.5(a).

Instead of moving ahead with this construct, it should be sufficient to qualify under "Category 1 Non-Agricultural" (and perhaps "Category 1 Agricultural" as well) to be not located on Land in Agricultural Use. The reference in these provisions to "Prime Agricultural Farmland" should be removed (sections a. and b. on page 9 of the regulations).

9) Adjust special provisions for Agricultural Solar Tariff Generation Units

BlueWave additionally recommends the Department remedy several issues contained in the special provisions Agricultural Solar Tariff Generation Units. First, DOER should remove the 1 MW AC size cap for these projects. It is an arbitrary cap that limits the policy goal of retaining and expanding productive agricultural use of the Commonwealth's farmland. Larger projects should not be treated as inherently incompatible with the new project category. In fact, larger projects, subject to the same size limitations as those for other sites, will provide economies of scale that will enhance the ability of farmers and developers to achieve the dual benefits intended by the Administration.

Second, we recommend that DOER reduce the fixed-tilt minimum from six feet to three feet, as well as reduce the horizontal tracking canopy from ten feet to six feet. We believe that productive agricultural use can be achieved under lower canopy heights. Moreover, this restriction does not consider the design, performance, or costs of fixed-tilt or tracking canopy systems. Both of these proposals, if left un-adjusted, will be overly burdensome to development and threaten the viability of projects under this framework; the proposed system heights would be at

best cost-prohibitive and in many cases not technically feasible, especially coupled with the restriction on the use of concrete.

Finally, we urge the Department to provide additional clarity on the meaning of the 50% shading requirement. If this language is meant to require projects to not shade the overall solar field by more than 50%, then this provision appears reasonable. However, if this language is meant to restrict projects from creating more than 50% shade impact directly underneath panels, then this provision would effectively prohibit solar on agricultural lands, save for a small few specialty panels. We believe that productive agricultural use, including but not exclusively grazing, can be achieved under greater shading conditions.

From a broader perspective, BlueWave is concerned that the special provisions for this new project category were not developed with adequate opportunity for input from stakeholders. Because these provisions were introduced after the Department's January presentation, stakeholder working groups – comprising important voices from industry, environmental, and distribution company perspectives – did not have a chance to discuss and develop feedback on this proposal. Because of these concerns, we recommend the Department consider removing all special provisions from the emergency regulations and issue them (with needed revisions, including those discussed above) as guidelines after there is a public process. Moreover, because these special provisions are setting a new standard that will impact the agricultural industry and the solar industry, it is important to provide the MDAR and the DOER the flexibility to make needed adjustments based on actual project impacts. Guidelines provide this flexibility both from a timing and implementation perspective where the regulatory process does not.

10) Clarify performance standards for ground-mounted projects

In addition, BlueWave recommends the Department provides further clarity around the performance standards incorporated for large ground-mounted projects. As currently drafted, these standards lack requisite precision and specificity for interpretive consistency. Key terms need to be defined and potentially subjective criteria need to be made more explicit to allow developers to understand with certainty the requirements that are expected of their projects.

We recommend that DOER provide additional clarity around certain key provisions, namely the prohibition on stripping soils and the use of concrete. With regard to stripping soils, DOER should specify that the temporary relocation of topsoil for grading should be allowed as long as topsoils are replaced and no topsoil or other soils are removed from the site. Uncertainty about what the definition of “stripping of soils” means creates confusion and makes it difficult to assess how the standards will be enforced. Additionally, any racking solution should be allowed as long as the project owner is required to remove all equipment from the site when the solar array is decommissioned. As for the proposed restriction on concrete or asphalt in the mounting area, we request that the Department restrict this standard to projects being built on farmland. Requiring a guarantee or contract to remove all concrete at decommissioning, perhaps with some form of financial accountability, would be a much more workable model than a blanket prohibition.

In the case of brownfields and landfills, with caps that cannot be penetrated, or in the case of sites with significant rocky ledges or boulders, racking systems using concrete or concrete blocks for ballasts should be considered appropriate and allowable under the program. These systems sit on the surface and are easily removed at decommissioning without disturbing the soils below. Importantly, the regulations as drafted appear to make no exception for major electrical equipment, such as transformers and inverters, which require concrete pads for proper and safe installation or may otherwise rely on concrete to meet building code or specification requirements.

Finally, regarding the proposed requirement for “ballasts or screw-type pilings that do not require footings or other permanent penetration of soils for mounting,” we interpret the language as to exclude standard post-driven (i.e. “non-screw type”) pilings. This exclusion creates several issues. First, standard post-driven pilings are temporary in nature, as they can be and are typically removed from the soil upon the conclusion of a solar project. Second, they are low-impact, as they do not require concrete or other substances to fix them in place. The racking designed for standard pilings also typically requires two pilings per table, versus four screws per table as with screw-type pilings. As such, less soil penetrations are typically required for standard pilings than for screw-type pilings. While we support development practices that lower the overall land impacts of the industry, the exclusion of standard post-driven pilings is arbitrary in nature and works directly against this goal.

11) Modify 61A ‘Land in Agricultural Use’ restriction

BlueWave is concerned about the Department’s decision to define Land in Agricultural Use as inclusive of lands enrolled in Chapter M.G.L. c. 61A in the past five years – effectively overriding land use decisions that have already been made by landowners and approved by local governments. DOER should not be penalizing landowners and projects located in areas already designated by the municipality as appropriate for solar use. Under the previous generations of solar policy in the Commonwealth, many small family farmers have removed a portion of their land from 61A protection for the purposes of solar development to help supplement their income. In many cases, a long-term solar lease can be a lifeline that allows the continued operation of the remaining land. Unlike selling land for development – which does not have a 5-year restriction – land used for solar can be returned to productive agricultural use after the lease term ends and equipment is removed. We urge the department to eliminate the 5-year look-back in the definition of “land in agricultural use” to allow farmers to continue to benefit from solar while maintaining the integrity of their land. Land that has already been removed from the 61A program should not be subject to the “Land in Agricultural Use” restriction, and land that a local government has zoned for solar development or for commercial/industrial use should not be penalized or off-limits for solar because of its status under 61A.

We also ask the Department to consider allowing land that hasn’t been in agricultural use in the last 5 years to be eligible for the tariff/agricultural adder if substantial agricultural benefits can be demonstrated.

12) Exempt projects in the competitive procurement from the greenfield subtractors

Finally, along with the industry, BlueWave had previously urged the Department to exempt projects that have reached a mature stage of development (ISA, permits, site control, etc.) from being subjected to any greenfield subtractors in the SMART program. We reiterate this recommendation again and hope that the Department will be able to make this accommodation. Additionally, since zoning treatment varies substantially between local jurisdictions, we reiterate our and the industry’s position that greenfield subtractors should not be applicable to projects on previously developed land, regardless of whether they are zoned commercial or industrial.

SECTION 4: TECHNICAL CONSIDERATIONS

13) Advance alternative on-bill crediting mechanism

The regulations introduce the concept of an Alternative On-Bill Credit, as expected, but otherwise provide no guidance on the timing, structure, or energy compensation rate for Alternative On-Bill Credit Generation Units. While we understand that any alternative on-bill crediting mechanism must be filed as a tariff and approved by the DPU, no draft of such a tariff has been proposed to date, raising serious concerns about the timing, mechanics, and implementation of any eventual alternative mechanism. We are also highly concerned that the administration of

the on-bill crediting mechanism may be shifting away from the responsibility of the third-party administrator to the distribution companies.

To expedite this process and work towards resolution in a timely manner, DOER should issue a straw proposal for a tariff establishing an alternative on-bill credit for solar generation as soon as practicable. If the Department determines that it would not be appropriate for it to do so, it should require distribution companies to release their draft tariff(s) in advance of filing with the DPU. This is needed to ensure that stakeholders have the opportunity to review the substance of the tariffs, provide input on the optimal administrative arrangement, and negotiate the structure and design of the mechanism, perhaps in a forum convened by DOER.

Substantively, it is essential that the on-bill crediting mechanism incorporate several core elements to be effective as an alternative compensation structure. First and foremost, DOER and the distribution companies need to provide certainty that the on-bill credit rate will be set at a minimum at the basic service rate, specifying how exactly this rate would be calculated across distribution companies and how it would or would not be adjusted over time. In addition, the mechanism should enhance projects' ability to allocate credits to offtakers across load zones. The removal of such restrictions, a substantial barrier to many offtake arrangements today, would unlock cost-reducing efficiencies achieved through reduced site-acquisition development costs. Additionally, the mechanism must allow projects to designate and allocate a portion of the all-in SMART compensation as a bill credit to offtakers, but to receive the rest of the compensation as a payment from the utility or the third-party program administrator (see below).

14) Clarify the role of the Solar Program Administrator

As outlined in the straw proposals for the SMART program, the Solar Program Administrator was responsible for reviewing applications, qualifying facilities, managing block reservations as well as calculating and issuing bill credits and incentive payments for offtakers and facility owners. Under the emergency regulations, that billing and crediting function is not listed under the responsibilities of the proposed Solar Program Administrator. Presumably this would leave that function to the utilities. As evidenced by the testimony in the DPU inquiry 17-22,¹⁴ with utilities managing the allocation of net metering credits, the solar industry has experienced a number of significant delays in applying credits, misallocation of credits to customers' bills, major issues with processing of Schedule Z, and general communication issues between utility, solar providers and customers.

Also in the 17-22 inquiry, utilities testified to the understandably long and expensive process of updating their billing systems. We are concerned that if the utilities were responsible for the billing and crediting processes, the required updates could significantly delay the implementation of the program and come at significant higher cost to ratepayers. In the interest of ensuring the smoothest possible transition to the new program at the best cost to ratepayers, we recommend that the RFP for the solar administrator include the responsibility to manage crediting and incentive payments, or allow respondents to include that capability as an option.

15) Amend the community solar definitions

The definitions of "Community Shared Solar Tariff Generation Unit" and "Low Income Community Shared Solar Tariff Generation Unit" define both as units that provide energy "or net metering credits" to their customers. We ask that the Department replace references to "net metering credits" with "bill credits," consistent with related definitions and the rest of the regulation.

¹⁴ See comments by the Coalition for Community Solar Access, Ampion, the Solar Coalition, Vote Solar.

Conclusion

We appreciate the hard work by DOER, EEA, and MDAR to design an innovative successor solar incentive program. We join our colleagues in the solar industry in strongly recommend that DOER make these essential changes to the program. Without these modifications, we believe a critical industry that is already in decline – as a result of the more than six-month delay of these regulations, the net metering caps being reached and the lack of an alternative bill credit mechanism – will fail to meet to the Administration's laudable goal of 1,600 MW of new solar capacity. Adopting our recommendations should help ensure that Massachusetts maintains its place as a national leader in clean energy. Thank you for considering these recommendations.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark D. Sylvia', with a stylized flourish at the end.

Mark D. Sylvia
Managing Director for External Affairs

cc: Matthew Beaton, Secretary of Energy and Environmental Affairs
Ned Bartlett, Undersecretary of Energy and Environmental Affairs
Patrick Woodcock, Assistant Secretary of Energy
Michael Judge, Director of Renewable and Alternative Energy, DOER
Sen. Michael Barrett, Senate Chair, Joint Committee on Telecommunications, Utilities and Energy
Rep. Thomas Golden, House Chair, Joint Committee on Telecommunications, Utilities and Energy