

February 9, 2024

ECA Solar respectfully submits these comments in response to the Department of Energy Resources request for comments on the Solar Massachusetts Renewable Target (SMART) program. We thank you for the opportunity to provide this input, and greatly appreciate the hard work of the DOER in expanding our clean energy future. ECA Solar develops, engineers, installs, and operates large scale solar facilities across the US. ECA Solar takes an institutional approach to the solar energy industry. Our goal is to deploy the highest quality of solar power and energy storage projects to diversify the electric grid, while remaining risk averse and prioritizing safety. We value diversity and creativity to achieve the common goal of making solar energy more accessible to everyone. We're proud to have developed hundreds of acres of ground - mounted solar and over 6 million square feet of rooftop solar in 7 states.

1. The SMART program currently provides added incentives for certain project types, including building mounted, canopy mounted, landfill, brownfield, agricultural, floating, community solar, and projects serving low income or public entities, projects with energy storage, and axis tracking. DOER seeks additional feedback on changes or improvements that will advance achievement of the Commonwealth's 2050 GWSA mandates while balancing land use, equity, and economic considerations.

a. What project type incentive changes could improve program outcomes?

The review that is currently being conducted on behalf of the DOER by Sustainable Energy Advantage will be informative, particularly in regards to market conditions for specific project types. Specifically, the Building Mounted Adder and Solar Canopy Adder are insufficient to help cover the cost of those project types in current market conditions. However, broadly speaking the challenges facing specific adders and project type criteria lie in the general inflexibility of the SMART program with the declining block design. ECA will expound on this point further in questions 2 and 11, but the rigidity of the declining block model, and the inability to 1) react to market conditions and 2) respond to increasing costs, particularly related to interconnection, makes the SMART program a challenging structure to finance projects with.

In regards to the storage requirement, ECA urges DOER to consider removing the energy storage requirement for projects over 500kW. The Commonwealth of Massachusetts will need more solar and more storage capacity to hit its 2050 Climate targets. However, integrating storage technology is an ongoing, and evolving conversation. The addition of battery storage to a solar project, and the value of those paired assets, is oftentimes location specific. The reality is the storage requirement usually just adds cost and complexity to an interconnection application, and we have seen many solar projects fail to be financeable because of the added cost of the battery. We recommend restructuring the existing battery storage incentive to allow for optimization of energy storage assets and removing the requirement. That way storage may be able to be built, and deployed, in the best use cases.

b. Should other project types also be prioritized?

ECA has no comment on additional project types to be prioritized.

2. The current SMART program structure includes a declining block model. Is a structure with fewer blocks and a greater decline between blocks preferable to a greater number of blocks with a smaller decline between blocks? Are there any other modifications to the declining block model structure that could more effectively support solar development?

As proposed by Northeast Clean Energy Council (NECEC) and the Solar Energy Industry Association (SEIA), ECA supports the idea of moving away from a declining block structure towards an adjustable block structure. The challenge of a declining block structure is that the market is not necessarily continuing its downward trend. We have witnessed a number of historic changes to the solar market in the six years since the start of the SMART program, which include the good (the passage of the Inflation Reduction Act) and the bad (worldwide pandemic and war). In addition, the costs related to the installation of solar projects have not continued their predictable downward trend, as interconnection costs and timelines have significantly increased in Massachusetts. Allowing DOER the ability to react to changing market conditions will provide a greater chance for the successful buildout of the remainder of the SMART program. In moving to an adjustable block design, DOER should have the authority to set both the size and value of those blocks.

3. Are any eligibility criteria in the SMART program a barrier to participation? What are they, and how would you address these barriers? How would you streamline these eligibility criteria?

The land use criteria for SMART is a significant challenge, particularly when combined with the existing siting challenges that may be associated with local zoning, as well as the interconnection viability of a certain site. ECA Solar recommends the removal of the prohibition of ground mounted projects from the installation on parcels with 51% or more of the land located in Priority Habitat, Core Habitat, or Critical Natural Landscape. Furthermore, we recommend that the prohibition on these types of land be removed, instead working to minimize environmental impact. The Commonwealth is currently undertaking a number of formal discussions related to the future of clean energy siting, including the filing of the Electric Sector Modernization Plans, and the forthcoming report from the Commission on Clean Energy Infrastructure Siting and Permitting. There are currently a multitude of barriers to ground mounted solar development in the Commonwealth, and the removal of significant restrictions imposed by the SMART program is an action which would help further progress towards the Commonwealth's clean energy goals. Projects would still be subject to the Greenfield Subtractor, as well the construction performance standards, to ensure that soil disturbance is minimized. As highlighted in the 2050

Decarbonization Roadmap, at least 60,000 acres of additional ground mounted solar is necessary to reach out 2050 net zero goal. A more holistic approach to site selection is necessary to reach that goal.

4. Is the current SMART reservation period (excluding any blanket extensions) adequate given current development and construction timelines? If possible, please provide a representative project timeline inclusive of key project milestones, such as permitting, procurement, and interconnection, to help inform DOER's understanding of the development process and current project timelines.

The entire development timeline for Massachusetts projects takes on average 6-8 years in the current market, with some variations depending on utility service territory and project location.

For example, in 2019 ECA Solar signed a lease option with a property for a project that is located on a roof and is sized to be less than 1MW. We then submitted our interconnection application. Since that time, it has sat in the interconnection queue, and we are currently waiting for it to go into a group study.

Upgrades associated with the group study have been submitted to the Department of Public Utilities as part of a Capital Investment Project (CIP). If that CIP is approved by the DPU, upgrades are estimated to be completed by 2027, pending no further delays from the DPU in reviewing and approval of the CIP, and no construction delays from the utility.

Based upon these project details, ECA will be able to apply for SMART soon after the approval of the CIP, and the issuance of the ISA. However, the project will have to wait for the completion of the necessary transmission level upgrades on the substation, as well as the necessary distribution level upgrades, before being able to be commercially operational.

As a roof mounted project that is less than 1MW, the timeline challenges facing this project are entirely due to interconnection hurdles. Ground mounted projects that may face permitting challenges could have further timeline challenges.

Due to these market conditions, ECA Solar recommends that the minimum Reservation Period be set at 2 years, with an option to extend the reservation for a fee for 1 year. Projects that are in an approved CIP area should have automatically adjusted Reservation Periods to match the construction timeline of the CIP, or the plan approved by the Electric Sector Modernization Plan.

5. Are there any emerging technologies or project types that are not currently eligible for SMART that DOER should consider making eligible for the program? Please describe potential project applications, any suggestions for eligibility requirements, and what level of incentives if any would be needed spur project development of the project type.

ECA Solar has no comment on additional project types in regards to new technology, but as stated by NECEC and SEIA's comments, we support the development of SMART for standalone storage.

6. Are program compliance requirements clear prior to program enrollment? What are the key challenges with satisfying the data and/or documentation requirements for various program compliance checks, such as compliance with the energy storage, low-income, or community solar requirements? Are there any modifications you would suggest to DOER's compliance processes, or alternative data/documentation you believe could satisfy the requirements?

ECA has no comment, SMART compliance requirements are clear.

7. Are SMART application processes and requirements clear? Is communication between applicants, the Solar Program Administrator, and DOER clear and effective? Please describe any improvements you believe could be made to the SMART application process.

While the 'good cause' process is meant to be more open ended to allow for greater flexibility in reviewing a project's case specific request, it would be helpful to provide a kind of 'best practices' guidance for good cause requests. ECA recommends DOER provide broad guidance regarding how applicants should structure their requests, as well as what kind of information and supporting documentation might be submitted. While DOER obviously cannot advise on what would produce a favorable outcome, they might produce guidance to streamline the process for all parties involved.

While DOER obviously cannot tell applicants whether their case would or would not be successful, it would be helpful to establish some broad-based exceptions that are allowable. After six years of the program, if there are any commonalities between granted extensions, it would either be helpful to communicate those types of situations in guidance, or perhaps create new types of extensions, such as the ones created for ASO studies and CIPs. If there are any opportunities to create efficiencies, then we urge DOER to take them.

8. Are there solar canopy project types that currently fall outside the SMART program's definition of Solar Canopy that you believe should be eligible for the Canopy adder? Please provide example project types and describe their benefits.

ECA Solar has no comments to provide on this question.

9. Are there examples of dual use agrivoltaics policies in other jurisdictions that align with Massachusetts' solar and agricultural objectives? Please provide citations and summaries of those policies.

ECA Solar has no comments to provide on this question.

10. What modifications to SMART incentive payment calculations, as currently set forth in 225 CMR 20.08, if any, are needed? Please provide examples formulas or calculations for DOER review.

As has been noted by DOER, as well as others, the calculation for behind the meter projects should be adjusted in response to current market conditions. Spiking natural gas prices generated very high electricity prices, in response to the supply chain constraints brought on by the pandemic and the war in Ukraine. The challenge is that due to the calculation of the value of energy for behind the meter systems, including the valuation of a three year average of basic service, the impacts of high energy prices are felt not only in the moment, but for years of behind the meter projects that receive their Statement of Qualification. Many behind the meter projects are now receiving an incentive value of \$0 due to high energy prices in the past couple of years, meaning that projects are not even receiving the market rate for Class I RECs. The formula is flawed, and ECA Solar recommends two major adjustments:

- 1) Ensure a minimum REC payment of the Class I ACP; and
- 2) Enable real time deductions of the energy value from the SMART value for behind the meter projects, in the same way the SMART incentive is calculated for standalone projects.

At this point in time, all behind the meter projects are allowed by law to be exempt from the net metering cap, pursuant to the 2021 and 2022 Climate Laws¹. By enabling a minimum payment equivalent to the ACP value, these projects will continue to be applied to the SMART program, while also ensuring they have a viable financial model to construct the project.

The current model either encourages projects that would otherwise be built as behind the meter to be built as front of the meter, losing out on possible on site demand management opportunities, or they will simply apply for Class I RECs. It would be a shame to lose on the benefits of behind the meter projects in the SMART program, and by ensuring that they have an opportunity to be built alongside front of the meter projects requires major changes to the calculation of their SMART incentive.

The second major issue that DOER can address with behind the meter systems may not be able to be fully accomplished until the Department of Public Utilities (DPU) has fully promulgated the net metering changes directed in the 2021 and 2022 Climate Laws. However, enabling all behind the meter systems to net meter eliminates the need to apply the Alternative On Bill Credit (AOBC) to behind the meter generation units, and also eliminates the need for the Value of Energy for Alternative On-bill Credit Generation Units and Non-net metered Generation Units in calculating the SMART Incentive Payment

¹ Chapter 8 of the Acts of 2021 and Chapter 179 of the Acts of 2022

for Behind the Meter Generation Units. It's an opportunity to streamline the regulations in accordance with the existing law. While regulations are not yet in place², the laws have been passed and DOER has an opportunity to simplify the process.

11. How could the program be designed to insulate projects and participants from unforeseen market circumstances that materially impact the value of the SMART program incentive? For example, global events impact supply chain and energy costs.

As stated in questions 1 and 2, the current program design does not allow for DOER to adjust the program year to year or block to block. Enabling DOER this type of programmatic flexibility could have a huge impact on the success of the program. For example, look to the NYSun program, or the Illinois Adjustable Block Program. Each state program allows the energy authority to make changes to the price of the incentive, rather than setting pre-set prices for all blocks. Structurally, there are differences between SMART, the NYSun, and the ABP program. The NYSun is a cash incentive program, with upfront grants paid out over the first three years of commercial operation. The ABP program is a 15 or 20 year REC contract. However, they are similar in their responsiveness to market conditions. Allowing DOER to adjust the SMART program blocks in real time, instead of in pre-set declines, allows DOER to both ensure that the solar industry can continue to flourish in the Commonwealth, while ensuring costs are maintained.

The statutory authority of the SMART program lies in An Act Relative to Solar Energy ("the Act") of 2016³. In that Act, DOER is directed to create a new solar program to "lower the cost of the commonwealth's solar incentive programs for ratepayers". In its first order on the SMART program, the DPU contextualized this on the basis of net costs per MWh. As stated in the order on DPU 17-140, the costs should not be higher than "an estimated net cost of \$308.78 per MWh and \$197.29 per MWh for the solar renewable energy certificate ("SREC") I and SREC II programs."⁴ These provide very clear guardrails for the DOER to work within to set any variable rates in an adjustable block program, while at the same time being able to be responsive to both market headwinds and tailwinds.

12. What additional consumer protection measures or modifications to existing measures should the SMART program incorporate to ensure such protections are achieving their objectives, especially as they pertain to low-income customers?

ECA Solar supports the comments submitted by the Coalition for Community Solar Access, NECEC, and SEIA on this topic.

² Awaiting 21-100 and a second rulemaking to implement the 2022 Climate Law by the DPU

³ Chapter 75 of the Acts of 2016

⁴ Order 17-140-A, p.10

13. Are there any Commonwealth policies (e.g., renewable energy goals, land use priorities, housing policy) that you believe the SMART program inadvertently conflicts with? Please describe any potential modifications to SMART that would alleviate these conflicts.

The best use of land will always be subject to debate, particularly in regards to the benefits of conservation of open space versus any type of development. However, we must find a way to build out the way for our clean energy future. From a carbon perspective, it has been established that one acre of solar power sequesters more carbon than one acre of forest.⁵ Obviously, there are more factors to consider, but the science is clear. Land use is a deeply divisive and personal issue- but we urge the DOER to weigh all factors equally in its consideration on siting, including the fact that we are not on track to meet our 2050 Net Zero target. We must ensure that our future includes plenty of food, natural resources, clean energy, and affordable housing, for our Commonwealth to thrive. However, one critical component is that utilizing open space for solar development still maintains ecological value while generating clean power. This is especially true with the use of an agrivoltaic design. Ground mounted solar is not inherently in opposition to conservation and ecological goals, and Commonwealth policies should not treat them as so.

While not applicable in the Commonwealth- nor in the northeast- the fact is that utilizing agricultural resources for fuel is well established in our country. According to the USDA, almost 50% of domestic corn production is used for ethanol.⁶ Furthermore, a recent study by Clean Wisconsin finds that from a power vs land use efficiency metric, an acre of solar generation is on average 84x more efficient than an acre of corn grown for ethanol.⁷ From a power generation perspective, solar power is far more effective on a per acre basis than corn. This not only compounds the carbon benefits of solar generation from a land use perspective, it also could open up more land for alternative crops. Solar power aligns our agricultural and clean energy goals.

The comparison of the large scale industrial monoculture agricultural activities in America's heartland is not immediately relevant to the Commonwealth, but the point is that we need power, and our primary fuel sources are derived in some way or other from natural resources. The change we make now is that we are, and we must, focus on carbon free fuel sources. Solar development represents a significant carbon free fuel that is available to us, and the SMART program can enable this by easing restrictions on greenfield development.

14. Is there any additional feedback you wish to provide to DOER?

ECA Solar appreciates all the work that DOER is doing to support solar development through this SMART programmatic review. The fact is that the Commonwealth is now facing these challenges because we

⁵ <https://www.synapse-energy.com/carbon-dioxide-emissions-tradeoffs-forests-or-solar-panels>

⁶ <https://www.ers.usda.gov/topics/crops/corn-and-other-feed-grains/feed-grains-sector-at-a-glance/>

⁷ Clean Wisconsin "Corn vs Solar Land Use Comparison" July 2023. <https://www.cleanwisconsin.org/wp-content/uploads/2023/02/Corn-Ethanol-Vs.-Solar-Analysis-V3-12-compressed.pdf>



have been national leaders in creating successful solar programs. These are the sticky problems that we are working through. But with some adjustments to reflect market realities, the Commonwealth will remain a national leader in solar development.