SMART PROGRAM SUMMARY AND REVIEW

June 27, 2017

On June 5, 2017, the Massachusetts Department of Energy Resources (DOER) issued emergency regulations establishing the Solar Massachusetts Renewable Target (SMART) program. These regulations were promulgated as a result of legislation passed in April 2016, which requires DOER to establish a new solar incentive program. This memo briefly outlines the key program design elements of the SMART program. It then assesses the program with respect to its potential to make solar available to a range of communities and constituencies across the Commonwealth, highlighting the following key concerns:

- SMART program compensation levels could be too low and decline too quickly to support a diverse range of projects throughout the program.
- The 320 MW cap on the availability of incentive adders (e.g., 2 cents per kWh for building mounted projects) introduces uncertainty and acts as an arbitrary barrier to project development.
- Incentive adders should not decline over time, because they are based on incremental costs that are not reasonably expected to decline over time.
- The draft regulation fails to specify a new on-bill crediting mechanism that could reasonably serve as an alternative to net metering credit allocation, from a procedural perspective, a substantive perspective or a legal perspective.

Although the SMART program may work for some categories of projects, the above flaws jeopardize the future investment in solar that Massachusetts needs and deserves. In particular, **the SMART program fails to demonstrate a real commitment to equity.** The program design issues highlighted in this document will create new barriers that greatly endanger the development of community shared and low-income solar projects, further limiting access to solar for renters, low-income households and those who do not own a sunny rooftop. In some regions of the state, recent net metering cuts and uncertainty due to net metering caps have already stalled community solar development, halting any progress being made to equitably distribute the benefits of solar programs.

With regards to the SMART program, DOER has failed to adopt numerous constructive suggestions on these points from a range of parties, including an "equity carveout" to go along with the 20% set-aside proposed by DOER for projects under 25 kW. **These program design flaws should be addressed in the final regulations, and additional legislation will be needed be to fully address barriers to solar in low-income communities.** In addition, solar projects in towns and cities served by a Municipal Light Plant (MLP) are excluded from participating in the SMART program and this should be addressed separately by DOER or the legislature.

SMART PROGRAM OVERVIEW

The SMART Program is designed to support the development of an additional 1,600 MW of solar. It pivots from the Solar Renewable Energy Credit (also known as SREC) framework to a declining block compensation mechanism. The compensation paid through the SMART program will ultimately be administered through a tariff approved by the Department of Public Utilities (DPU). Solar projects less than or equal to 25 kW will receive the SMART program tariff for a period of ten years. Larger projects, up to 5 MW in size, will receive the tariff for twenty years.

The 1,600 MW of capacity in the program is divided up between the utilities and further divided into eight capacity blocks with set compensation levels that decline with each block (i.e. "declining

blocks"). The first 100 MW of the SMART program is reserved for a competitive solicitation (also known as an "auction") that will set the initial a base compensation rate for the program. As a result, it's impossible to know now exactly how much compensation solar projects will receive until the competitive solicitation takes place. However, the regulations set a ceiling price for the competitive solicitation, so it is possible to know the maximum base compensation rate at the start of the program: $0.15 per kWh for solar projects less than 2 MW and $0.14 per kWh for larger projects. This rate will be enhanced, through a base compensation rate factor, for certain types of projects. For example, small-scale solar projects (i.e. 25 kW or less) will receive a base compensation rate that is 200% of the clearing price for projects between 1 and 2 MW in the competitive solicitation.

The SMART program also includes "adders" for different projects based on their location, e.g. rooftop versus parking canopy, and offtaker-type, e.g. community shared solar (CSS) versus low-income. For example, a community shared solar project developed on a landfill in the first block of the program would receive a CSS adder of $0.05 cents per kWh and a landfill adder of $0.04 cents per kWh. Adders are also included for solar projects that include energy storage or solar trackers. All adders are capped at 320 MW per adder type, meaning adders may not be available for the duration of the SMART program. The regulations specify limits on how many and what kinds of adders solar projects can use, and include an overall compensation cap that is equivalent to 230% of the clearing price for the competitive solicitation.

Critically, both the compensation level and adders automatically decline by 4% per capacity block, so the compensation available to new solar projects will decrease as more solar is built. Greenfield subtractors can further reduce the total amount of compensation a solar project would receive, when located on certain types of land. In addition, solar projects must comply with a number of land use criteria and siting restrictions in order to be eligible for the program.

Finally, the program outlines an Alternative On-Bill Crediting Mechanism (AOBCM), which could, in theory, allow non-net-metered projects to assign bill credits to different electricity accounts in a manner similar to virtual net metering and avoid net metering cap constraints. However, the draft regulations provide no detail on how the mechanism will work in practice. For example, it's currently not clear if the AOBCM will allow credits to be shared across utility territories and load zones, something which would make it easier for urban and low-income residents that don't own a sunny rooftop to benefit from solar. Addressing the load zone issue is crucial: to give one example, Eversource customers who live in densely populated Eastern Massachusetts communities like Boston would be able to access solar built in nearby National Grid communities in less dense suburban communities where solar is more easily sited. The draft regulations also do not provide a clear legal foundation for such a mechanism or specify how credits will be valued.

SMART PROGRAM REVIEW

SMART program compensation levels could be too low and decline too quickly to support a diverse range of projects throughout the program. Initial compensation levels under the SMART program for certain project categories will be significantly lower than compensation under the current net metering and SRECII framework. Many stakeholders, including solar developers, have expressed concern that compensation levels are likely to be too low for many CSS and low-income solar projects. DOER should increase the compensation available for these market segments.

Even if initial compensation levels were high enough, these levels are set to decline quickly as each capacity block fills up. The automatic 4% decrease results in an overall reduction of 25% in total compensation levels over the eight capacity blocks, assuming adders are available throughout the

program. This rate of reduction is steep. Recent experience shows that solar costs only decline by about 20% for every doubling in capacity.[1]

In addition, while DOER can review the adequacy of compensation levels, such review can only occur after 400 MW of new solar projects have qualified for the SMART program. Program review should occur more frequently and allow DOER to adjust rates for new projects along the way to respond to market conditions. This is critical to ensure success of the program, particularly because the SMART program does not account for external factors that would increase the costs of solar, such as rising interconnection costs, import tariffs for solar panels as a result of the *Suniva* case currently before the International Trade Commission, rising interest rates, changes to the federal Investment Tax Credit, and changes in rate design. Additional measures for transparency would also be invaluable for all stakeholders, such as a frequently updated website summarizing the available capacity in each block for each distribution company, and information on the adoption of incentive adders.

Adders should not be capped at 320 MW. Arbitrary adder caps increase the complexity and uncertainty of the SMART program as there's no guarantee a specific adder would be available, by the time a project is ready to submit its SMART program application. These elements of the program would have a chilling effect on CSS and low-income solar projects, which often have long lead times and are more complicated to develop than other types of solar projects. The loss of an adder for one of these projects would almost certainly stop the development process in its tracks.

Crucially, projects can be eligible for more than one adder, allowing a low-income rooftop project, for example, to combine two adders (i.e. building mounted adder and low-income adder) to receive the compensation necessary to be built. However, the rooftop adder is available to any rooftop solar project over 25kW and the cap for this adder could easily be reached during the SMART program. In this case, such a low-income rooftop project would not succeed if, during the development process, the rooftop adder is no longer available. Instead of achieving any intended purpose, the adder caps add an unnecessary barrier and layer of uncertainty to project development.

Adders should not decline over time. Decreasing the value of the adders over time fails to recognize that the increased costs and complexity that necessitate higher compensation rates for CSS and low-income solar projects. These projects, for example, usually have higher site development, customer acquisition and administrative costs than other types of projects. More specifically, low-income rooftop solar in the private affordable housing sector is often owned and maintained by third parties. There are a number of reasons for this, including the fact that many affordable housing developments are unable to accept non-rental income and the terms of their financing make it difficult or impossible to own solar.

Third party owned solar has higher costs simply because an additional party is participating in the project. That increases transactional costs, such as legal and insurance fees. There is no reason to believe these costs will diminish over time so reducing the value of the adders will only make it more difficult to develop these projects as the program progresses. As with the adder caps, decreasing the value of adders runs counter to ensuring equitable access to solar and will undermine the SMART program's ability to "support diverse installation types and sizes," as required by the legislation directing DOER to create this solar incentive program.

The draft regulations fail to demonstrate that a new alternative on-bill credit mechanism could serve as a reasonable substitute for net metering, either procedurally, substantively, or legally. The absence of any detail or guidelines on the tariff that will implement the SMART program means the

[1] As noted by the Solar Energy Industries Association in its letter, dated October 28, 2016, to DOER on proposed SMART program design.

AOBCM needs to be created from scratch at the Department of Public Utilities. There are numerous uncertainties about whether an alternative credit mechanism can be effective and the legal foundation of that mechanism. This process will take a significant amount of time, and SMART does nothing to address net metering caps and related issues in the short-term. What is clear is that an appropriately designed AOBCM has the potential to significantly expand the benefits of solar electricity to low-income ratepayers, tenants and communities, who have not been able to substantially benefit from earlier solar programs. But without any detail, it's impossible to assess if this mechanism will work as needed. Recognizing that the DPU has jurisdiction over the tariff, DOER missed an important opportunity in issuing the regulations to provide further detail, clarity and guidance on how the AOBCM should be administered to ensure expanded access to solar, especially for CSS and low-income solar.

CONCLUSION

In its current form, the SMART program fails to demonstrate a commitment to equity and runs a significant risk of curtailing access to solar in urban and low-income communities. The critical issues identified above should be fixed for all categories of projects, however each of these issues will impact on community shared solar and low-income solar the most. These categories of projects have additional complexities and barriers that lead to longer development times and greater uncertainty. The Commonwealth of Massachusetts has an opportunity in the SMART program to address many of these, and DOER should not be creating new ones.

In addition to specific fixes for the above issues, DOER should create an "equity carveout" for projects that benefit disadvantaged communities, similar to the 20% set-aside DOER has proposed for projects under 25 kW. **Addressing key complexities and barriers may require significant work from entities other than DOER and DPU as well, and will require the passage of new legislation to raise net metering caps and address other issues.**

Lastly, Municipal Light Plants and their customers are excluded from the SMART program because of the tariff-based nature of the program. MLPs have been established in 41 communities across the Commonwealth. They serve all or part of 50 municipalities and deliver 13% of the electricity in the state. DOER and the legislature should promptly create a partner program to SMART so that these communities are not left out and so all residents of Massachusetts can enjoy the benefits of solar energy.