

Commissioner Judith Judson  
Massachusetts Department of Energy Resources  
100 Cambridge Street  
Suite 1020  
Boston, MA 02114

via email: [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov)

November 6, 2019

Re: Comments on the Proposed Agricultural Solar Tariff Generation Unit Guideline Changes

Dear Commissioner Judson:

Thank you for the opportunity to comment on the proposed changes to the Massachusetts Department of Agricultural Resources (MDAR) SMART Agricultural Solar Tariff Generation Unit (ASTGU) guidelines. We applaud the Department of Energy Resources (DOER) for incorporating the ASTGU option into the SMART program and believe that dual-use projects will have incredibly positive impacts on the Commonwealth and help the Commonwealth to achieve several of its most critical goals: greater deployment of solar energy generation and energy storage, revitalizing and protecting agricultural communities, and minimizing land use impacts associated with renewable energy development.

As you are aware, a broad coalition of stakeholders, including the solar industry trade groups, agricultural industry representatives and land conservation advocates, responded to DOER's request for comments on its proposed changes to the SMART program as part of its 400MW review process. This coalition spoke overwhelmingly in favor of the ASTGU component of the SMART program and strongly against the proposed changes to the ASTGU guidelines which were identified in the 400MW process. We are disturbed and disappointed that these comments were entirely disregarded in the release of the proposed changes to the ASTGU guidelines on October 15, 2019. The proposed changes are poorly written, confusing and unjustified. Unfortunately, the proposed changes indicate that MDAR is either unable or unwilling to understand the science that has been presented to them and create a set of guidelines that consider the varying needs of different crops and the practical considerations of farming and solar development.

We are resubmitting the same comments that we submitted as part of the 400MW review process as all of these comments still apply to the proposed changes released on October 15, 2019. We wish to emphasize the need for a working group comprised of agricultural industry representatives, farmers, crop physiology experts (e.g. UMASS Cranberry Research Station) and solar developers to craft a reliable and evidence based ASTGU guideline that is flexible enough to accommodate the varying needs of different crops and farms. This is possible with the scientific evidence and tools we currently have available and NextSun Energy is happy to dedicate time and resources to this effort. We hope that DOER and MDAR are willing to take advantage of this opportunity to improve the dual-use program and be a worldwide leader in this promising method for combating climate change and maintaining agricultural viability.

Sincerely,

A handwritten signature in blue ink, appearing to read 'AS', with a long horizontal flourish extending to the right.

Adam Schumaker  
VP, Development  
NextSun Energy LLC

Enclosed: Comments submitted by NextSun Energy to DOER on September 27, 2019

Agricultural Solar Tariff Generation Unit (ASTGU) projects are an important mechanism for providing farmers with a meaningful economic opportunity and to maintain Massachusetts farmland in agricultural production. This is particularly important given the severe financial difficulties being faced today in many agricultural commodity markets, especially the Massachusetts cranberry industry. The ASTGU component of the SMART program is a brilliant tool to advance multiple goals of the Commonwealth: helping to protect and maintain farmland, supporting struggling farmers, reducing the environmental impacts of solar development, increasing solar power generation and deploying energy storage. In order to promote these aspects of the SMART program, we urge you to consider the following comments:

**I. Predictability, objectivity and stability in rulemaking is critical for program success.**

- a. Farmers and solar developers have invested significant planning and resources to advance ASTGU projects at great expense and risk in response to the initial SMART regulations released on April 26, 2018 – in other words, 17 months ago. Changing important guiding principles now (i.e. imposing a MWDC cap and increasing sunlight requirements), particularly when no ASTGU projects have yet been built and when many have reached a critical juncture in their interconnection, permitting, and business planning, will undercut much of the work to date and harm both industries in the process.
- b. Changing guiding principles in the eleventh hour before the first set of projects are built will erode trust in an emerging asset class already viewed as more complex than standard solar, and in a regulatory process trending toward further subjectivity and unpredictability. The proposed rule changes jeopardize our existing arrangements with farmers because projects will not be built as planned, if at all. The \$0.06 / kWh adder is significant, and the proposed rule changes will cap the financial benefit available to farmers and decrease solar production and energy storage deployment. They also jeopardize the \$1.5 million that NextSun has invested to date to fund interconnection studies, engineering, permitting, and site control for ASTGU projects in the year and a half since April 26, 2018.
- c. NextSun has a significant number of dual-use projects under development, all of which have been sized and planned around the current 2.0 MWAC cap. Standard

interconnection study timelines can extend to 12 months or more, and because interconnection costs across MA are trending upward, projects with the DC-sizing and storage flexibility required to defray costs and take advantage of emerging storage markets are the ones that will remain financially viable. These larger projects also benefit more farmers, in some cases involving three farmers on a single project. Imposing an arbitrary DC size cap reduces the number of farmers that can participate in the program and will render many projects nonviable.

**II. The proposed guideline changes (i.e. size cap and sunlight requirements) create uncertainty and are arbitrary because they do not consider existing data or input from the agricultural community.**

- a. Every crop has different sunlight requirements, rendering the “one-size-fits-all” approach inherently inaccurate and impractical for program implementation. Proposing to increase the sunlight requirements and impose a DC size cap only exacerbates this problem.
- b. Substantial research and data exist demonstrating that many crops can remain agriculturally viable even in high shade environments.
- c. It is possible to estimate the impact to crop yield by comparing the amount of photosynthetically active radiation (PAR) received by the plant with and without the dual-use canopy present.
- d. There is no reason (and no evidence was presented by DOER to substantiate) to increase the sunlight requirement or limit project size given the available research and tools available for assessing yield impacts.

**III. A working group should be established that includes farmers, crop experts and solar developers in order to develop improved ASTGU guidelines that provide clarity and certainty to program participants.**

- a. We support DOER’s efforts to improve the ASTGU guidelines and thereby improve the ASTGU pre-certification process. To date, the pre-certification process has been unclear, slow and highly subjective.
- b. DOER and MDAR have denied ASTGU projects which fully comply with the ASTGU guidelines, rendering those guidelines useless – if a project meets the guidelines but is denied pre-certification then the guidelines serve no purpose.

- c. Farmers, crop physiology experts (e.g. UMASS Cranberry Research Station) and solar developers were not involved in crafting the current ASTGU guidelines, which has resulted in uncertain and impractical guidance. It appears that none of these stakeholders are being consulted now as part of drafting the proposed revisions to the ASTGU guidelines, which will result in the same problems.
- d. It should be the goal of the working group to develop a new methodology that accounts for the varying sunlight needs of different crops in an objective manner while providing certainty to program participants. This can be accomplished by analyzing the PAR needs of a given crop and the impact to PAR from the proposed ASTGU shading profile.

**IV. Crop yield is not the appropriate metric to determine program success.**

- a. There are more important factors than yield to assess when evaluating the success of the ASTGU program, including:
  - i. Maintaining land in agricultural use;
  - ii. Supporting farmers financially amidst low commodity prices;
  - iii. Supporting broader agricultural economies and communities;
  - iv. Increasing solar generation to protect farming communities and the Commonwealth as a whole from negative effects of climate change; and
  - v. Mitigating the development of greenfield areas for solar projects.
- b. Focusing on maintaining as high of a yield as possible can actually be detrimental to farmers amidst low commodity pricing driven by over-supply (such as the cranberry and dairy markets). For example, during times of oversupply, the federal government employs price support policies in which farmers are paid to not plant crops.

**V. Program qualification requirements and ongoing eligibility should be based on clear guidelines that are consistent with other Commonwealth policy and programs.**

- a. Other state-sponsored agricultural programs, such as Chapter 61A property tax subsidy or the APR program, place either minimal requirements on farmers to maintain production, or no requirements at all in exchange for financial benefits. These programs recognize the wide-ranging benefits to the Commonwealth of maintaining land in agricultural use.

- b. Ongoing yield-based eligibility requirements that are outside of the farmer/owner's control will prevent dual-use projects from being able to access critical project financing.
- c. Ongoing eligibility should be based on clear and simple requirements that ensure the farmer is making a best effort to perform under the program. We suggest that the following two conditions be used to determine ongoing eligibility:
  - i. Adherence to relevant best management practices for the crop (e.g. UMASS Cranberry Chartbook); and
  - ii. Meeting the requirements for the Chapter 61A agricultural property tax subsidy program.

Thank you for considering these comments and we hope that DOER will incorporate these suggestions for the benefit of the agricultural community, the solar industry and the environment.

Sincerely,



Adam Schumaker  
VP, Development  
NextSun Energy LLC