

Massachusetts Department of Energy Resources
100 Cambridge St, Suite 1020
Boston, MA 02114

February 12, 2018

RE: Comments on SMART Program Draft Guidelines

To Whom It May Concern:

We appreciate all of the effort that has gone into developing the SMART Program Guidelines by the Department of Energy Resources (DOER) and other participating organizations, including the Massachusetts Department of Agricultural Resources (MDAR). We believe that the Guidelines can be further clarified and improved in some instances, and respectfully submit these comments for your review.

Statement of Qualification Reservation Period Guideline

1. Section 6(c) Extended Reservation Period Pending Authorization to Interconnect

This section currently states that:

“If a Solar Tariff Generation unit can demonstrate to the Department’s satisfaction that interconnection depends only upon receipt of notice of authorization to interconnect from the Distribution Company, its initial Reservation Period shall be extended indefinitely until such notice is received or denied.”

This sentence should be revised to clarify that the Reservation Period will be extended in the event that the Distribution Company’s interconnection upgrades are still pending or under construction. Otherwise, the sentence could be interpreted to mean that in order to receive an extension, the Distribution Company’s interconnection facilities and upgrades must be completed and only the administrative task of providing notice of authorization to interconnect remains. We suggest revising the sentence as follows:

“If a Solar Tariff Generation unit can demonstrate to the Department’s satisfaction that interconnection depends only upon ***the completion of interconnection facilities or upgrades by the Distribution Company and*** receipt of notice of authorization to interconnect from the Distribution Company, its initial Reservation Period shall be extended indefinitely until such notice is received or denied.”

2. Section 9 Compliance with the SMART Tariffs

This section currently states that:

“A Solar Tariff Generation Unit determined to be non-compliant with the SMART Tariff, may be notified by the Department of Energy Resources that they are found to be non-compliant pursuant to 225 CMR 20.11, which may result in the suspension or revocation of a Statement of Qualification.”

This section should be revised to allow for a 60-day cure period prior to the suspension or revocation of a Statement of Qualification. This is critical for project financing purposes, since as currently written a Statement of Qualification could be revoked without any prior notice and possibly without the owner of the Solar Tariff Generation Unit even being aware that it is out of compliance.

Guideline Regarding the Definition of Agricultural Solar Tariff Generation Unit

In general, we find that the Additional Provisions for Agricultural Solar Tariff Generation Units would institute arbitrary restrictions that will likely end up conflicting with the goals of the program and the provisions contained in 225 CMR 20.06(1)(d).

1. Additional Provision 2

This Provision states that:

“for tracking Agricultural Solar Tariff Generation Units, the minimum height of the panel at its horizontal position shall be 10 feet above ground.”

There should not be a single height requirement for all Agricultural Solar Tariff Generation Units, since the actual height required to prevent interference with ongoing agricultural activity depends on the type of agricultural activity at the site. For example, a height of 10 feet may be appropriate for a corn field or for grazing dairy cows, but is higher than needed for a hay field or grazing sheep. Requiring that all projects be elevated to 10 feet, rather than basing the height requirement on the actual agricultural use of the site, will inhibit the development of Agricultural Solar Tariff Generation Units due to the substantial costs and permitting implications associated with raising a tracker to 10 feet. The costs associated with

increasing the height of a tracker are not linear; raising the tracker height results in greater wind and snow loading, which in turn requires not only longer posts but substantially more expensive foundations. Further, many permitting jurisdictions in the state are very sensitive to the height of a project, while a project raised 7 feet from the ground may be acceptable, a project raised 10 feet from the ground could be deemed to have too great of a visual impact to surrounding properties and be denied a permit. For these reasons, we believe that determining the height requirement for an Agricultural Solar Tariff Generation Unit based on the actual agricultural use of the property is the most reasonable method and more in line with the provisions contained in 225 CMR 20.06(1)(d)1-4 than the arbitrary 10-foot requirement.

We suggest either removing Additional Provision 2 entirely and relying on a case by case determination by DOER and MDAR that the tracking Agricultural Solar Tariff Generation Unit is in compliance with 225 CMR 20.06(1)(d)1-4 or revising Additional Provision 2 as follows:

“for tracking Agricultural Solar Tariff Generation Units, the minimum height of the panel at its horizontal position **must be high enough to allow for the continuous growth of crops underneath the solar photovoltaic modules, with height enough for labor and/or machinery as it relates to the agricultural activity at the site. The Agricultural Solar Tariff Generation Unit must submit documentation demonstrating how the planned height of the panels will allow for ongoing agricultural activity at the site, and the DOER, in consultation with MDAR, will determine if that height is sufficient.**”

2. Additional Provisions 3 and 4

These Provisions state that:

“all Agricultural Solar Tariff Generation Units must demonstrate that the maximum sunlight reduction from the panels on every square foot of land directly beneath, behind and in the areas adjacent to and within the Agricultural Solar Tariff Generation Unit’s design shall not be more than 50% of baseline field conditions;” and

“the typical growing season shall be considered to be March through October, with sunlight hour conditions with maximum 50% sunlight reduction to be between 10AM and 5PM for March and October, and from 9AM to 6PM from April through September.”

We believe that the requirement for sunlight reduction to not exceed 50% of baseline field conditions “on every square foot of land directly beneath, behind and in areas adjacent to and within the Agricultural Solar Tariff Generation Unit’s design” is arbitrary and directly

conflicts with 225 CMR 20.06(1)(d)2 (“the Solar Tariff Generation Unit is designed to optimize a balance between the generation of electricity and the agricultural productivity of the soils beneath”) and will unreasonably prevent the development of Agricultural Solar Tariff Generation Units that could otherwise serve to meet the DOER and MDAR’s goals for this program. As with the height requirement, we believe that the sunlight reduction requirement should be based on the actual agricultural use of the site and evaluated on a case by case basis to determine if the planned design will meet the requirements of 225 CMR 20.06(1)(d)1-4. For example, the 50% reduction requirement for every square foot beneath the array will lead to excessively far row spacing for tracking Agricultural Solar Tariff Generation Units that will substantially reduce the potential for electricity generation at the site and may not even be feasible with commercially available equipment. Array Technologies Inc. (ATI) manufactures the most flexible solar tracker available in terms of row-to-row spacing and drive-train angle; however, even with an ATI tracker row-to-row spacing cannot exceed 25 feet. Although row-to-row spacing of 25 feet can result in the majority of the land beneath the array receiving at least 50% of the baseline sunlight amount and allow for most types of farm machinery to operate easily between rows, it is likely that areas directly beneath the tracker row would receive less than 50% of baseline sunlight. Although the land directly beneath the tracker row would not be as agriculturally productive, this is a moot point because farmers would likely not harvest directly beneath the tracker row due to the tracker posts obstructing the use of farm equipment.

We also believe that the 50% sunlight reduction limitation for the specified hours and months is arbitrary and directly conflicts with 225 CMR 20.06(1)(d)2. Depending on the type of agricultural use at the site, the amount of shading on the land may be more or less important at different times of the growing season. Trackers have the ability to control their tilt angle at any time and therefore the amount of shading on the land; this technology should be utilized to maximize sunlight for the crops when its most needed during the growing cycle and maximize solar production when less sunlight is needed for the crops. Allowing for adjustments in the amount of sunlight reduction throughout the growing season depending on the type of agricultural use at the site will lead to more efficient Agricultural Solar Tariff Generation Units and is in line with 225 CMR 20.06(1)(d)2 and the goals of the program.

We suggest either removing Additional Provisions 3 and 4 entirely and relying on a case by case determination by DOER and MDAR that the Agricultural Solar Tariff Generation Unit is in compliance with 225 CMR 20.06(1)(d)1-4 or revising Additional Provisions 3 and 4 and combining them into a single provision as follows:

“all Agricultural Solar Tariff Generation Units must demonstrate that the **amount of sunlight reaching the land below and surrounding the Agricultural Solar Tariff”**

Generation Unit throughout the course of the growing or grazing season will allow for the successful agricultural operation on that land and for the land to be at least 50% as productive as it was prior to the installation of the Agricultural Solar Tariff Generation unit. The Agricultural Solar Tariff Generation Unit must submit documentation demonstrating the amount of sunlight reduction on the land based on its planned design and how that reduction in sunlight will allow for the land to be at least 50% as productive as it was previously. The DOER, in consultation with MDAR, will determine if the design and shading plan is acceptable for the planned agricultural use of the site and if it will result in the land being at least 50% as productive as it was previously."

3. Additional Provision 6

This Provision states that:

"the maximum AC rated capacity of an Agricultural Solar Tariff Generation Unit shall be two MW in the first two Capacity Blocks of each Distribution Company's service territory. The Department, in consultation with MDAR, will make an evaluation as to whether or not this provision shall be adjusted in subsequent Capacity Blocks."

We believe that this size limitation is arbitrary and see no reason to limit the size of an Agricultural Solar Tariff Generation Unit, in fact, we believe this requirement could end up being detrimental to the goals of program. Although the rate adder increases the cost of electricity from these units, they provide significant other benefits by preserving valuable agricultural land in agricultural use. The dual use aspect of this program provides benefits to both the farmers and the citizens of Massachusetts who rely on these agricultural products and value maintaining a robust agricultural economy within the Commonwealth. Limiting the size of an Agricultural Solar Tariff Generation Unit may lead a developer to designate a portion of an agricultural parcel as an Agricultural Solar Tariff Generation Unit and then designating another portion of the parcel as a Category 3 Solar Tariff Generation Unit. As a Category 3 Solar Tariff Generation Unit, none of the dual use requirements would need to be adhered to and the land could effectively be taken out of agricultural production. Although the Category 3 Solar Tariff Generation Unit would have a lower PPA rate, the higher PPA rate given to the Agricultural Solar Tariff Generation Unit could help to offset that. This would result in a perverse scenario where the Agricultural Solar Tariff Generation Unit is subsidizing a Category 3 Solar Tariff Generation Unit on the same land, which defeats the purpose of the adder by taking agricultural land out of production.

We suggest removing Additional Provision 6 entirely and not restricting the size limit of an Agricultural Solar Tariff Generation Unit beyond the size restrictions in place for a standard Solar Tariff Generation Unit.

We appreciate your consideration of these comments.

Sincerely,



Jacob Laskin
President
NextSun Energy LLC