

**Commonwealth of Massachusetts**  
**Executive Office of Energy and Environmental Affairs**  
**DEPARTMENT OF ENERGY RESOURCES**  
**DEPARTMENT OF AGRICULTURAL RESOURCES**

**SOLAR MASSACHUSETTS RENEWABLE TARGET PROGRAM 3.0**  
**(225 CMR 28.00)**

**GUIDELINE**

**Guideline Regarding the Definition of Dual-use Agricultural Solar Tariff**  
**Generation Units**

1) Purpose and Background

The Department of Energy Resources (Department), in consultation with the Massachusetts Department of Agricultural Resources (MDAR), has developed this document to provide additional guidance regarding the manner in which a Solar Tariff Generation Unit (STGU) may qualify as a Dual-use Agricultural Solar Tariff Generation Unit (ASTGU) under the Department's Solar Massachusetts Renewable Target (SMART) Program 3.0.

All capitalized terms in this Guideline are defined in 225 CMR 28.02.

2) Guidance on Regulatory Provisions for ASTGUs

Note that the provisions in 225 CMR 28.07(5)(b)3 take into account the entire useful life of the solar photovoltaic array with consideration for the variety of possible agricultural activities and crops that could take place on farmland over that timeframe. In other words, they do not simply consider present use.

The project design and specification requirements will allow for the variety and flexibility of potential farming operations throughout the life of the solar photovoltaic array. These parameters provide farms the flexibility to adjust agricultural activities over time due to a variety of reasons, including different crops and machinery requirements.

a) Shading Analysis Tool

To demonstrate compliance with the Sunlight Requirements under 225 CMR 28.07(5)(b)3.b.ii., Applicants shall use the Shading Analysis Tool provided on the Department's website. a shading analysis tool approved by the Department, in consultation with MDAR, may offer an alternative shading analysis tool in the future. Any approved shading analysis tool shall:

- i) assist in the design of an ASTGU by understanding the shading impact on all the land beneath, behind, and throughout the farmed area, of various dual-use array system designs and layouts; and

ii) provide a farm plan template to be used by the ~~farm operator~~landowner to propose their active agricultural production plan consistent with the array configuration and shading profile.

b) Exception from Project Specification Requirements

The Department recognizes the variety and, in some cases, the uniqueness of farming operations where some of the ASTGU project specification requirements may not be required to achieve the objectives of the ASTGU. To address these specific cases, an Applicant may request that the Department, in consultation with MDAR, issue an exception from any of the project specification requirements in 225 CMR 28.07(5)(b)3.b. All exception requests should be submitted to [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov). The Department will not approve an exception if it is contrary to the intent of the regulations.

An exception request shall include the following:

i. An alternative plan that:

1. details how the applicant will integrate the ASTGU into their farming operation;
2. demonstrates that the alternative plan does not result in a diminishment in the agricultural production capacity of the land; and
3. demonstrates that the primary use of the land is for agricultural or horticultural production, as defined by M.G. L. c. 61A.

ii. Justification

An applicant shall provide justification as to why an alternative ASTGU design is necessary for the proposed agricultural operations on the relevant parcel of land with supporting documentation

iii. Additional Documentation

An applicant shall provide documentation for each specific aspect of the project specification requirements set forth below for which the ASTGU is requesting an exception:

1. Panel Height Requirements:

Provide documentation demonstrating how the proposed design will allow for flexibility and a variety of potential farming operations at the farm throughout the entire SMART tariff term.

2. Sunlight Requirements

- a. demonstrate how the proposed dual-use design will provide equal or greater total agricultural yields than if both the agricultural crop and solar array were grown and installed

separately, utilizing the same amount of total land area for the comparison;

- b. demonstrate how each square foot of land will be used for agriculture production, including at least 51% of the area directly beneath the solar modules; and
- c. demonstrate how the design will be able to accommodate a variety of potential agricultural products throughout the SMART tariff term.

3. Growing Season Hours Considerations:

Provide documentation on how the time of season and time of day data in the project specification requirements are not relevant to the farming practice and operation, currently, and for the term of the SMART Tariff.

4. Maximum Direct Current (DC) Rating:

Provide documentation on the reasoning for the maximum DC rating being exceeded, if the design will result in a larger Project Footprint, and how the design will meet the intent of the ASTGU requirements in the SMART Regulation and Guideline.

5. Other:

For all other requirements for which an exception is being sought, please describe the exception(s) requested, why the proposed alternatives require an exception, and how these alternatives will meet the intent of the ASTGU requirements in the SMART Regulation and Guideline.

3) Guidance on Eligible Farmland

- i. Pursuant to 225 CMR 28.07(5)(b)3.c.i., all land intended to be Newly Created Farmland shall be deemed eligible farmland if the Applicant has demonstrated the viability of agricultural production and developed an agricultural business plan at the time a Pre-Determination Application is submitted to the Department and MDAR. Applicants shall~~may~~ demonstrate the viability of agricultural production through soil tests, water availability, site history, farm business plans, established crop production, ~~and~~/or other relevant evidence.
- ii. Pursuant to 225 CMR 28.07(5)(b)3.d., Applicants shall complete an agricultural plan detailing the crop(s) to be grown and/or animals to be grazed on the project site. A template for the agricultural plan is provided in the Pre-Determination Application posted on the Department website.

iii. Pursuant to 225 CMR 28.07(5)(b)3.d.i., if an agricultural plan is proposing to transition greater than 10 acres of farmland to grazing or hay production that has not been used for those agricultural purposes during the five crop years prior to the Pre-Determination Application, the agricultural plan shall demonstrate that there will be concurrent growing of Comparable Crops to the existing operation for at least the first five years of the STGU operation, consistent with the following practices:

(1) For grazing projects, a rotational plan should be included with at least 33 percent of the ASTGU footprint devoted to Comparable Crops.

(2) For hay projects, at least 50 percent of the ASTGU footprint shall be devoted to Comparable Crops.

#### 4) Pre-Determination Process

Applicants shall complete the Pre-Determination Form posted on the Department's website for any project seeking eligibility as an ASTGU. Applicants should first send the completed form to the UMass Clean Energy Extension (CEE) at [energyextension@umass.edu](mailto:energyextension@umass.edu). CEE will review the application with the Agricultural Extension staff and respond to the Applicant with any recommendations or comments. After making any revisions in response to CEE's feedback, the Applicant should submit the completed Pre-Determination Form, comment letter from CEE, and any supporting documentation to the Department at [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov). If the Applicant did not make any revisions to the Pre-Determination Form in response to CEE's feedback, the Applicant should provide an explanation and any supporting documentation to demonstrate why the feedback was not incorporated. The Department will review all Pre-Determination requests in collaboration with MDAR and issue a Pre-Determination Letter to the Applicant.

#### 5) Annual Report

Each year, ASTGUs shall submit an annual report to the Department and MDAR pursuant to 225 CMR 28.11(1) demonstrating that the land continues to be retained and used primarily and directly for agricultural purposes pursuant to M.G.L. c. 61A §§1 and 2.

The annual report is due to the Department and MDAR by 5:00 PM on February 1<sup>st</sup> of each calendar year for the previous year's production during the life of the ASTGU. The annual report should be emailed to [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov). The annual report template is posted on the Department website. All annual reports will be published on the Department website.

##### i. Waiver for Decreased Yield

Due to unforeseen circumstances, such as but not limited to weather events, pests, or change in crops, the projected agricultural yield for any given year may be lower than anticipated in the agricultural plan. While no pre-approval of crop changes or production practices is required, continuous, good faith efforts at commercial agricultural or

horticultural production is a requirement for continued incentive eligibility. In circumstances when production of planned crops falls below 70 percent of anticipated yields, or below 50 percent of typical yields for the soils and production practices under open-field conditions in the case of a new crop, an applicant can request a waiver from the Department for the decreased yields. The applicant shall demonstrate to the satisfaction of the Department, and in consultation with MDAR, that a waiver is warranted for good cause. Waiver requests shall be submitted by December 1<sup>st</sup> of the applicable calendar year and sent to [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov).

ii. Failure to Report

If an ASTGU fails to submit an annual report, the Department may place the ASTGU in non-compliance pursuant to 225 CMR 28.17. The Department may temporarily suspend the project's Statement of Qualification for failure to report, and if an ASTGU repeatedly fails to file an annual report, the Department may revoke the project's Statement of Qualification for the remainder of the tariff term pursuant to 225 CMR 28.17(3).