**Commonwealth of Massachusetts**

# Executive Office of Energy and Environmental Affairs

**DEPARTMENT OF ENERGY RESOURCES**

**SOLAR MASSACHUSETTS RENEWABLE TARGET PROGRAM**

**(225 CMR 20.00)**

**GUIDELINE**

**Guideline Regarding the Definition of Agricultural Solar Tariff Generation Units**

**Effective Date: TBD**

This document provides guidance regarding the manner in which a solar photovoltaic facility may qualify as an Agricultural Solar Tariff Generation Unit under the Department of Energy Resource’s (Department) Solar Massachusetts Renewable Target (SMART) Program.

## BACKGROUND AND PURPOSE

On April 11, 2016 Governor Baker signed Chapter 75 of the Acts of 2016 into law. The Act directs the Department to create a long-term sustainable solar incentive program to promote cost-effective solar in the Commonwealth. The Act further directed the Department to “…differentiate incentive levels to support diverse installation types and sizes that provide unique benefits...” In developing the SMART Program, the Department established six types of location based Compensation Rate Adders, one of which is provided for Agricultural Solar Tariff Generation Units.

Given the relative lack of solar facilities that meet the criteria outlined in definition of Agricultural Solar Tariff Generation Unit in the Commonwealth today, but the desire to see the installation of such systems that can provide the dual-use benefits, the Department, in consultation with the Massachusetts Department of Agricultural Resources (MDAR), has developed this Guideline to clarify additional eligibility criteria not prescribed in regulation.

Adopting these provisions via Guideline, as was requested by many commenters in the initial stakeholder process that led to the promulgation of the regulation, will provide the necessary flexibility for the Department, in consultation with MDAR, to make modifications to key eligibility criteria as lessons are learned in constructing and operating Agricultural Solar Tariff Generation Unit.

Any modifications to this Guideline will only be made following an opportunity for public comment that shall remain open for at least two weeks. All capitalized terms in this Guideline are defined in 225 CMR 20.02.

***225 CMR 20.00 Regulatory Provisions Specific to Agricultural Solar Tariff Generation Units***

Under the SMART program, Solar Tariff Generation Units are eligible to qualify as an Agricultural Solar Tariff Generation Unit, which is defined under 225 CMR 20.02 as follows:

Agricultural Solar Tariff Generation Unit. A Solar Tariff Generation Unit located on Land in Agricultural Use, Prime Agricultural Farmland, or land that otherwise has the potential to meet definitions in M.G. L. c. 61A, §§ 1 & 2, as determined by the Department in consultation with MDAR, that allows the continued use of the land for agriculture.

Additionally, 225 CMR 20.06(1)(d) contains special provisions pertaining specifically to the eligibility of Agricultural Solar Tariff Generation Units as follows:

(d) Special Provisions for Agricultural Solar Tariff Generation Units. In order to qualify as an Agricultural Solar Tariff Generation Unit, a Solar Tariff Generation Unit must submit documentation itemized in 225 CMR 20.06(1)(d) below. All final determinations regarding the eligibility of such facilities will be made by the Department, in consultation with MDAR. A Solar Tariff Generation Unit must also submit satisfactory documentation to the Department as detailed in the Department’s *Guideline Regarding the Definition of Agricultural Solar Tariff Generation Units*.

1. the Solar Tariff Generation Unit will not interfere with the continued use of the land beneath the canopy for agricultural purposes;

2. the Solar Tariff Generation Unit is designed to optimize a balance between the generation of electricity and the agricultural productive capacity of the soils beneath;

3. the Solar Tariff Generation Unit is a raised structure allowing for continuous growth of crops underneath the solar photovoltaic modules, with height enough for labor and/or machinery as it relates to tilling, cultivating, soil amendments, harvesting, *etc.* and grazing animals;

4. crop(s) to be grown to be provided by the farmer or farm agronomist in conjunction with UMass Amherst agricultural extension services, including compatibility with the design of the agricultural solar system for such factors as crop selection, sunlight percentage, *etc.*;

5. annual reporting to the Department and MDAR of the productivity of the crop(s) and herd, including pounds harvested and/or grazed, herd size growth, success of the crop, potential changes, *etc.*, shall be provided after project implementation and throughout the SMART incentive period; and

6. other system design information, which shall include, but not be limited to:

a. dual-use type, *e.g.*, ground mount racking, pole towers, tracking, *etc.*;

b. total gross acres of open farmland to be integrated with the project;

c. type of crop(s) to be grown, including grazing crops;

d. pounds of crop(s) projected to be grown and harvested, or grazed;

e. animals to be grazed with herd size(s); and

f. design drawing including mounting system type (fixed, tracking), panel tilt, panel row spacing, individual panel spacing, for pole towers tower spacing and mounting height, *etc.*

***Additional Provisions for Agricultural Solar Tariff Generation Units***

Provided a Solar Tariff Generation Unit meets all program eligibility criteria in 225 CMR 20.00, in particular the provisions relating to Agricultural Solar Tariff Generation Units prescribed in 225 CMR 20.02 and 20.06(1)(d) a Solar Tariff Generation Units must also satisfy the following provisions to qualify as an Agricultural Solar Tariff Generation Unit- Note these provisions take into account the entire useful life of the solar photovoltaic array with consideration for the variety of possible agricultural activities and crops that typically can take place on farm land over that timeframe. In other words, they do not simply consider present use.

1. for fixed tilt Agricultural Solar Tariff Generation Units, the minimum height of the lowest panel point shall be eight (8) feet above ground;
2. for tracking Agricultural Solar Tariff Generation Units, the minimum height of the panel at its horizontal position shall be 10 feet above ground;
3. 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;
4. 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;
5. fixed tilt designs shall include a minimum four feet distance between each panel(s) in order to avoid full shade beneath and behind each row of panels; single- and double-axis tracking systems must demonstrate the 50% sunlight reduction maximum can be achieved without the minimum four feet distance; and
6. 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.