

## **SELECTED SECTIONS OF SMART REGULATIONS: Areas of potential feedback**

### **20.01: PURPOSE AND APPLICATION**

The purpose of 225 CMR 20.00 is to establish a statewide solar incentive program to encourage the continued use and development of generating units that use solar photovoltaic technology by residential, commercial, governmental and industrial electricity customers throughout the Commonwealth. The continued use and development of these generating units has the potential to reduce peak demand, system losses, the need for investment in new infrastructure, and distribution congestion; increase grid reliability; improve public health and safety; and diversify the Commonwealth's energy supply. Further, it will also contribute to the Commonwealth's environmental protection goals concerning air emissions including, but not limited to, those required by the Global Warming Solutions Act, M.G.L. c. 21N, §§ 19, by displacing non-renewable generating resources. Owners of generating units that choose to participate in the statewide solar incentive program pursuant to 225 CMR 20.00 do so on a voluntary basis, but must comply with the terms and requirements of 225 CMR 20.00. Nothing in 225 CMR 20.00 should be read as requiring Owners of generating units to participate in this statewide solar incentive program.

#### Michael comments

- *Purpose should be expanded to align with findings of new reports and contextualized to recognize solar as part of multi-pronged approach which should be complementary with protection of carbon sequestration/storage and resilience, protection of environment*

### **20.02: DEFINITIONS**

**Public Entity Solar Tariff Generation Unit.** A Solar Tariff Generation Unit that is:

- (a) Sited on property owned by a Municipality or Other Governmental Entity and is either:
  - (i) owned or operated by a Municipality or Other Governmental Entity; or
  - (ii) the Owner has assigned 100% of its output to Municipalities or Other Governmental Entities; or
- (b) Sited on privately owned property and is either:
  - (i) Owned or operated by the Municipality in which the Solar Tariff Generation Unit is sited; or
  - (ii) the Owner has assigned 100% of its output to the Municipality or Other Governmental Entities in the Municipality in which the Solar Tariff Generation Unit is sited.

#### Michael comments

- *Public Entity status creates a loophole for developers to game the system – avoiding local permitting before SMART approval and allowing development on sites otherwise not allowed, as well as jumping to the front of the line for a subsidy*

## 20.05: TARIFF BASED INCENTIVE PROGRAM FOR SOLAR PHOTOVOLTAIC GENERATION UNITS

### 7. Land Use and Siting Criteria Effective after the Publication Date.

A Solar Tariff Generation Unit must meet the performance standards and will be placed into one of three categories with respect to the land or property on which it is sited as enumerated in 225 CMR 20.05(5)(e) 1 through 6, except as noted herein.

- a. Category 1 Non-Agricultural. Solar Tariff Generation Units not located on Land in Agricultural Use or Important Agricultural Farmland that are a Public Entity Solar Tariff Generation Unit will be designated as Category 1 Non-Agricultural as in 20.05(5)(e)2b.
- b. Category 2 Land Use. Solar Tariff Generation Units not otherwise designated Category 1 that are ground-mounted with a capacity greater than 500 kW and less than or equal to 5,000 kW that are sited within a solar overlay district or that comply with established local zoning that explicitly addresses solar or power generation, shall be designated as Category 2 Land Use as in 20.05(5)(e)3.
- c. Ineligible Land Use. Solar photovoltaic Generation Units that meet one or more of the following criteria shall not be eligible to qualify as Solar Tariff Generation Units under 225 CMR 20.00:
  1. One or more of the criteria established in 225 CMR 20.05(5)(e)5; or
  2. Solar photovoltaic Generation Units sited on land designated as Priority Habitat or Core Habitat, that do not meet the criteria of Category 1 Land Use; or
  3. Solar photovoltaic Generation Units sited on a parcel with 50% or more of its area designated as Priority Habitat and/or Core Habitat, that do not meet the criteria of Category 1 Land Use.
- d. Ineligible Land Use for Additional Capacity. Solar photovoltaic Generation Units seeking to obtain a Statement of Qualification for the 1,600 MW of additional capacity available following the Publication Date pursuant to 20.05(1) and that meet one or more of the following criteria shall not be eligible to qualify as Solar Tariff Generation Units under 225 CMR 20.00:
  1. One or more of the criteria established in 225 CMR 20.05(5)(e)7.c.; or
  2. Solar photovoltaic Generation Units sited on land designated as Critical Natural Landscape that do not meet the criteria of Category 1 Land Use; or
  3. Solar photovoltaic Generation Units sited on a parcel with 50% or more of its area designated as Priority Habitat, Core Habitat, and/or Critical Natural Landscape, that do not meet the criteria of Category 1 Land Use.

#### Michael comments

- *Categories should be re-designed to align with the Massachusetts Technical Potential of Solar Report and the Growing Solar, Protecting Nature reports.*
- *Eligibility and ineligibility should be made clear with no exemptions, as currently exist.*
- *As written, the categories are confusing since they reference pre and post publication date definitions*
- *Remove public entity*
- *Remove loopholes that allow for development in BioMap land (see ineligible land)*
- *Remove loopholes that create Category 1 if comply with local zoning (which is relatively powerless)*

## 20.07 COMPENSATION RATES

### Adders:

Community Shared Solar Tariff Generation Unit	\$0.05
Low Income Property Solar Tariff Generation Unit	\$0.03
Low Income Community Shared Solar Tariff Generation Unit	\$0.06
Public Entity Solar Tariff Generation Unit	\$0.04

### (c) Energy Storage Adder.

A Solar Tariff Generation Unit that co-locates with an Energy Storage System shall be eligible to receive a variable adder to its Base Compensation Rate.

1. Energy Storage Adder Multiplier. The energy storage adder multiplier shall be \$0.045/kWh and shall decline pursuant to 225 CMR 20.07(2).

### Michael comments

- *Remove Adder for agriculture*
- *Add Adder for canopies*
- *Add Adder for building on disturbed land, especially brownfields and landfills*
- *Add Adder for building rooftops*
- *Reduce amount of adder for low-income since this is easy way for developers to build in bad places; using this adder to remain competitive. Documentation for and oversight of this Adder is minimal*

### Subtractors: (g) Greenfield Subtractors

A Solar Tariff Generation Unit that is classified as Category 2 Land Use or Category 3 Land Use, as prescribed in 225 CMR 20.05(5)(e)2. or 3., shall have value subtracted from its Base Compensation Rate as follows:

1. Category 2 Land Use Solar Tariff Generation Units. A Solar Tariff Generation Unit that is classified as a Category 2 Land Use, as prescribed in 225 CMR 20.05(5)(e)3. or that meets the exception established in 20.05(5)(e)1.c, shall have its Base Compensation Rate reduced by a Greenfield Subtractor of \$0.0005/kWh per acre of land that the Solar Tariff Generation Unit occupies.
2. Post Publication Date Category 2 Land Use Solar Tariff Generation Units. A Solar Tariff Generation Unit that is classified as a Category 2 Land Use, as prescribed in 225 CMR 20.05(5)(e)3 and 20.05(5)(e)7.b, after the Publication Date shall have its Base Compensation Rate reduced by a Greenfield Subtractor of \$0.00125/kWh per acre of land that the Solar Tariff Generation Unit occupies.
3. Category 3 Land Use Solar Tariff Generation Units. A Solar Tariff Generation Unit that is classified as a Category 3 Land Use, as prescribed in 225 CMR 20.05(5)(e)4., or that meets the exception established in 20.05(5)(e)1.c, shall have its Base Compensation Rate reduced by a Greenfield Subtractor of \$0.001/kWh per acre of land that the Solar Tariff Generation Unit occupies.
4. Post Publication Date Category 3 Land Use Solar Tariff Generation Units. A Solar Tariff Generation Unit that is classified as a Category 3 Land Use, as prescribed in 225 CMR

20.05(5)(e)4 after the Publication Date shall have its Base Compensation Rate reduced by a Greenfield Subtractor of \$0.0025/kWh per acre of land that the Solar Tariff Generation Unit occupies.

5. Exceptions to Greenfield Subtractors. A Solar Tariff Generation Unit that is classified as Category 2 Land Use or Category 3 Land Use, as prescribed in 225 CMR 20.05(5)(e)3. or 4., or 225 CMR 20.05(5)(e)7 shall not have its Base Compensation Rate reduced by a Greenfield Subtractor, as prescribed in 225 CMR 20.07(4)(g), if it can demonstrate to the Department's satisfaction that:
  - a. documentation required to meet the criteria set forth in 225 CMR 20.06(1)(c) was obtained prior to June 5, 2017; or
  - b. it should be granted an exception to the provisions of 225 CMR 20.07(4)(g) for good cause.
6. Determination of Acreage of Land Occupied. For the purposes of 225 CMR 20.07(4)(g)1 through.4, the acreage of land that a Solar Tariff Generation Unit occupies shall be determined by calculating the square footage occupied by the solar photovoltaic modules that are part of the Solar Tariff Generation Unit.

Michael comments

- *Increase rate of Subtractors so that they actually outweigh the Adders to discourage bad siting*
- *Remove exemption for good cause*

**10. Confidentiality.**

The Distribution Company and the Department, to the extent authorized by law, will treat all proposals received from prospective Solar Tariff Generation Units in a confidential manner and will use reasonable efforts, except as required by law, not to disclose such information to any third party or use such information for any purpose other than in connection with the evaluation of a Solar Tariff Generation Unit's participation in the procurement process described in 225 CMR 20.07(3).

Michael comments

- *Needs to be relaxed so that there is allowances for transparency for the public and information sharing with host municipalities*

**20.06: QUALIFICATION AND BLOCK RESERVATION PROCESS FOR SOLAR TARIFF GENERATION UNITS**

**(d) Special Provisions for Agricultural Solar Tariff Generation Units.**

1. 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. An Agricultural 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.

2. the Solar Tariff Generation Unit will not interfere with the continued use of the land beneath the canopy for agricultural purposes;
3. 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;
4. 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;
5. 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.;
6. 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;

Michael comments

- *Dual use should be limited to grazing, if it is subsidized at all. Maybe also for clearly non-actively used land on perimeters?*
- *Need more specific and objective measures – currently only say solar shouldn't "interfere" with continued use of the land*
- *Annual reporting requirement shows that the impact on this is unknown and DOER only has "after the fact" data to evaluate. This is basically a large-scale subsidized experiment the Commonwealth cannot risk*

**(j) Special Provisions for Canopy Solar Tariff Generation Units.** In order to qualify as a Canopy Solar Tariff Generation Unit, a Solar Tariff Generation Unit must submit documentation itemized in 225 CMR 20.06(1)(j) below. All final determinations regarding the eligibility of such facilities will be made by the Department, in consultation with other state agencies, including but not limited to the Massachusetts Department of Transportation, MassDEP, Massachusetts Department of Conservation and Recreation, and the Massachusetts Department of Fish and Game, as necessary.

1. The Solar Tariff Generation Unit will have 100% of its nameplate capacity of the solar photovoltaic modules used for generating power installed on top of a parking surface, pedestrian walkway, or canal; or
2. The Solar Tariff Generation Unit will have 100% of its nameplate capacity of the solar photovoltaic modules used for generating power installed over certain roadways or highways or adjacent parcels owned or controlled by the Massachusetts Department of Transportation; and
3. The Solar Tariff Generation Unit will maintain the function of the area beneath the canopy.

Michael comments

- *All canopies should be eligible and should get a more sizable Adder to further incentivize*
- *Especially incentivize along publicly roadways*

**(i) Special Provisions for Floating Solar Tariff Generation Units.**

In order to qualify as a Floating Solar Tariff Generation Unit, a Solar Tariff Generation Unit must submit documentation itemized in 225 CMR 20.06(1)(i) below. All final determinations regarding the eligibility of such facilities will be made by the Department, in consultation with MassDEP and the Massachusetts Department of Fish and Game, or other state agencies as necessary.

1. the Solar Tariff Generation Unit will not interfere with the continued use of the water body for its designed purposes;
2. the racking system shall be made of materials that have been tested for water quality impact;
3. the Solar Tariff Generation Unit will not be permitted in wetland resource areas and natural waterbodies such as salt ponds, or freshwater lakes and great ponds, as defined in M.G.L. c. 91; 18
4. The ratio of the total surface area covered by the Floating Solar Tariff Generating Unit divided by the total surface area of the water body under standard conditions shall not exceed 50%;
5. the Solar Tariff Generation Unit shall be designed to minimize potential interaction with native species;
6. the Solar Tariff Generation Unit is a floating structure allowing for continued use and maintenance of the water body while generating electricity; and other system design information, which shall include, but not be limited to:
  - a. total gross acres of open water to be integrated with the project;
  - b. designated function of water body;
  - c. anchoring system design and materials; and
  - d. design drawing including mounting system type, panel tilt, panel row spacing, individual panel spacing, etc.

Michael comments

- *Needs to include prohibition of PFAS on solar panels, generally, but definitely for floating deployments*

**(e) Special Provisions for Energy Storage Systems.**

Solar Tariff Generation Units co-located with an Energy Storage System will be eligible to receive an energy storage adder under 225 CMR 20.07(4)(c), provided it meets the following eligibility criteria:

1. **Minimum and Maximum Nominal Rated Power.** The nominal rated power capacity of the Energy Storage System paired with the Solar Tariff Generation Unit must be at least 25%. The nominal rated power capacity of the Energy Storage System paired with the Solar Tariff Generation Unit may be more than 100% of the rated capacity, as measured in direct current, of the Solar Tariff Generation Unit, but the Solar Tariff Generation Unit will receive credit

for no nominal rated power capacity greater than 100% in the calculation of its Energy Storage Adder, pursuant to 225 CMR 20.07(4)(c).

2. Minimum and Maximum Nominal Useful Energy. The nominal useful energy capacity of the Energy Storage System paired with the Solar Tariff Generation Unit must be at least two hours. The nominal useful energy capacity of the Energy Storage System paired with the Solar Tariff Generation Unit may be more than six hours, but the Solar Tariff Generation Unit will receive credit for no nominal useful energy capacity greater than six hours in the calculation of its Energy Storage Adder, pursuant to 225 CMR 20.07(4)(c).
3. Minimum Efficiency Requirement. The Energy Storage System paired with the Solar Tariff Generation Unit must have at least a 65% round trip efficiency in normal operation.
4. Data Provision Requirements. The Owner of the Energy Storage System must provide historical 15-minute interval performance data in a manner established by the Department for the first year of operation, and upon request, for the first five years of operation.
5. Operational Requirements. The Energy Storage System must discharge at least 52 complete cycle equivalents per year, or must participate in a demand response program, and must remain functional and operational in order for the Solar Tariff Generation Unit to continue to be eligible for the energy storage adder. If the Energy Storage System is decommissioned or non-functional for more than 15% of any 12-month period, the Department may disqualify the Solar Tariff Generation Unit from continuing to receive the energy storage adder.
6. Metering and Reporting Requirements. The Department shall develop a Guideline Regarding Metering of Solar and Energy Storage Systems that shall include acceptable metering and reporting capabilities for Solar Tariff Generation Units co-located with Energy Storage Systems.

Michael comments

- *Lithium-ion energy storage needs to be prohibited*
- *If not prohibited, protections against fire, air and water contamination need to be required*
- *Require liability bonds for private drinking wells and municipal water systems*

**(1) Special Provisions for Public Entity Solar Tariff Generation Units.**

A Public Entity Solar Tariff Generation Unit may apply for a Statement of Qualification pursuant to 225 CMR 20.06 (1)(c) by providing satisfactory evidence to the Department that a Municipality or Other Governmental Entity has awarded a contract to develop a Solar Tariff Generation Unit.

Michael comments

- *Remove Public Entity status*
- *Create a mechanism for municipalities to own the developments and get their own Statement of Qualification without opening up loopholes for bad siting and exemptions to standard rules*

**(2) Application Review Procedures**

- a. The Solar Program Administrator will notify the applicant when the Statement of Qualification Application is administratively complete or if additional information is required pursuant to 225 CMR 20.06(2).

- b. The Department may, at its sole discretion, provide an opportunity for public comment on any Statement of Qualification Application.

**(3) Issuance or Non-issuance of a Statement of Qualification**

- a. If the Department finds that a Generation Unit meets the requirements for eligibility as a Solar Tariff Generation Unit pursuant to 225 CMR 20.00, the Solar Program Administrator will provide the Owner of such Unit or the Authorized Agent of the Owner with a Statement of Qualification.
- b. The Statement of Qualification shall include any applicable restrictions and conditions that the Department deems necessary to ensure compliance by a particular Solar Tariff Generation Unit with the provisions of 225 CMR 20.00.
- c. If a Generation Unit does not meet the requirements for eligibility as a Solar Tariff Generation Unit under 225 CMR 20.00, the Solar Program Administrator shall provide written notice to the Owner or to the Authorized Agent of the Owner, including the reasons for such finding.

Michael comments

- *Need to change the process to require community engagement prior to DOER granting a Statement of Qualification to a project*
- *Need to change the process so host municipalities automatically receive information about application submission, approval and key process milestones*
- *Need to develop a publicly accessible website where all applicant materials are easily accessible for review (and comment?)*