

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

SOLAR MASSACHUSETTS RENEWABLE TARGET PROGRAM

(225 CMR 20.00)

GUIDELINE

SMART Land Use and Siting Guideline

Effective Date: TBD

BACKGROUND AND PURPOSE

The Solar Massachusetts Renewable Target (SMART) Program incorporates land use and siting criteria into the design of the program. When siting a Solar Tariff Generation Unit (STGU), multiple aspects of the site must be taken into account, including, but not limited to: zoning, existing use and development, STGU design, STGU size, and STGUs sited on the same or contiguous parcels. [Unless otherwise noted, all capitalized terms are defined in 225 CMR 20.00.](#)

Land Use Categories

In SMART, STGUs are placed into three different Categories pursuant to 225 CMR 20.05(5)(e), or they are found to be ineligible for qualification. Certain land use Categories have an associated [greenfield Greenfield](#) Subtractor applied to a STGU's Base Compensation Rate, pursuant to 225 CMR 20.07(3)(f).

The Greenfield Subtractors apply as follows:

- Category 1: ~~Agricultural/ Non-Agricultural~~: No Greenfield Subtractor
- Category 2: \$0.0005/kWh
- Category 3: \$0.001/kWh

CATEGORY 1

Category 1 Land ~~Use~~ is divided into two parts, Agricultural or Non Agricultural.

~~Is the STGU sited on active agricultural land~~ [Land in Agricultural Use or Prime Agricultural Farmland](#) ~~or land that is currently, or has in the past five years, enrolled in the Chapter 61A tax benefit program?~~

If yes— Only the following types of projects are Category 1

- Agricultural Solar Tariff Generation Units (for more information, please refer to the *Agricultural Solar Tariff Generation Unit Guideline*)
- Building Mounted Solar Tariff Generation Units
- Solar Tariff Generation Units sized to meet no greater than 200% of the annual operation load of an agricultural facility

If no— The following types of projects are eligible for Category 1

- Ground mounted STGU ≤500 kW AC
- Building Mounted STGU

EXHIBIT A (DRAFT REDLINE)

- Canopy STGU
- STGU sited on a Brownfield (for more information, please refer to the *Brownfields Guideline*)
- STGU sites on a Landfill
- Ground mounted: 500kW AC < STGU size ≤ 5000kW AC and sited on land that has been previously developed
- Ground mounted : 500kW AC < STGU size ≤ 5000kW AC and sited within a solar overlay district or on land that complies with established local zoning that explicitly addresses solar or power generation

How can I determine if a parcel is considered Prime Agricultural ~~land~~ Farmland?

The definition of Prime Agricultural Farmland means those soils identified by the United States Department of Agriculture Natural Resources Conservation Service to be prime farmlands pursuant to 7 CFR § 657.5(a).

MassGIS Oliver can be used [as a reference](#) to see land that ~~is~~ [may be](#) categorized as Prime Agricultural using the data layer for Prime Farmland Soils.

http://maps.massgis.state.ma.us/map_ol/oliver.php

However, because the MassGIS Oliver data set is not designed for use as a primary regulatory tool is permitting or siting decisions, the Department, in consultation with MDAR, will establish a pathway for appeals for STGUs that may be incorrectly or inadvertently classified as sited on Prime Agricultural Farmland.

If I'm building on a site that has an Agricultural Preservation Restriction held by the Commonwealth, can I build a project that serves more than 200% of the of the annual operational load of the farm? What if I plan to build an Agricultural Solar Tariff Generation Unit?

The rules of the SMART program do not supercede the existing terms of the APR and the rules in existence at the time of application. Any renewable energy project built on ~~APR~~ land [in current APR status](#) must be sized to serve no more than 200% of the annual operational load of the structures on the land protected by the APR, regardless of any adders it may be eligible to receive. Prior to the construction of any Agricultural Solar Tariff Generation Unit the APR landowner must apply for and receive approval from the Massachusetts Department of Agricultural Resources [or otherwise remove the land from APR](#).

How is previously developed defined?

STGU seeking to qualify as Category 1 with the claim that the selected site has been previously developed must show to the Department's satisfaction that the site has pre-existing paving, construction, or altered landscapes. Landscapes altered from current agricultural use, forestry, ~~deforestation~~, or use as a preserved natural area, per 225 CMR 20.05(5)(e), will **not** be considered previously developed.

Examples of documentation the Department may accept to demonstrate previous development may include, but are not limited to site plans, zoning, picture, or satellite imagery. ~~The site must have existing development at the time the STGU submits a Statement of Qualification Application.~~

EXHIBIT A (DRAFT REDLINE)

For the purposes of determining previously developed, the Department will be reviewing the characteristics of the site, not simply the characteristics of the larger parcel. For example, if a parcel has a portion that has been developed, but the site of the Solar Tariff Generation Unit is ~~forested or~~ undeveloped open space, the project would not be considered to be installed on a 'previously developed' site.

What is a solar overlay district? What is meant by complying with established local zoning that explicitly addresses solar?

Per 225 CMR 20.05(5)(e)1.b.vi. Category 1 Non-Agricultural can apply to Solar Tariff Generation Units 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.

Per this rule, projects located in a solar overlay district or sited by as of right siting ~~may would~~ fall under this categorization. ~~If, even if~~ a project needs to seek a variance, special permit, waiver or other discretionary approval, ~~it would not qualify under this categorization to comply with established local zoning that explicitly addresses solar or power generation.~~

CATEGORY 2

Category 2 Land use applies to projects: 500kW AC < STGU size ≤ 5000kW AC; and sited on land that

- Does not qualify for Category 1;
- Has not been previously developed; and,
- Is not zoned for ~~commercial-residential and or industrial-agricultural~~ use

CATEGORY 3

Category 3 Land use applies to projects: 500kW AC < STGU size ≤ 5000kW AC and do not meet the criteria for Category 1 or 2

How is the Greenfield Subtractor calculated and applied?

Per 225 CMR 20.07(3)(f), the value of the total Greenfield Subtractor applied to a STGU is measured as the acreage of land that a STGU occupies, represented by the square footage of the solar photovoltaic modules.

If you install a facility with 5,000 panels measuring 5ftx4ft then the impact of the project will be calculated as, with the understanding that 1acre=43,560ft²:

$$5,000 \times 20\text{ft}^2 = 100,000 \text{ ft}^2$$

$$100,000 / 43,560 = 2.296 \text{ acres}$$

If this project is determined to be under Category 2 land use, the subtractor would be:

\$0.0005/kWh per acre of land

$$\text{\$0.0005} \times 2.296 = \text{\$0.00115 kWh reduction to all in compensation rate}$$

If this project is determined to be under Category 3 land use, the subtractor would be:

\$0.001/kWh per acre of land

$$\text{\$0.001} \times 2.296 = \text{\$0.00230 kWh reduction to all in compensation rate}$$

EXHIBIT A (DRAFT REDLINE)

The Statement of Qualification will identify the applicable land use category for the Solar Tariff Generation Unit, and the Greenfield Subtractor will be confirmed by the Solar Program Administrator prior to the Commercial Operation Date.

INELIGIBLE

STGU sited on the following types of land are ineligible for the SMART program

- Permanently protected open space, categorized under Article 97 of the Massachusetts Constitution, provided it does not fall under Category 1 Land Use
- A Wetland Resource Area, unless authorized by the regulatory body, such as the Order of Conditions issued by the local Conservation Commission
- Properties in the *State Register*, unless authorized by the regulatory body, such as a local Historic Commission

Project Segmentation

Per 225 CMR 20.05(5)(f), limits are placed on the number of STGU qualified on a single parcel or contiguous parcels, unless allowed per an exception in 225 CMR 20.05(5)(g). In all instances, the total capacity of STGU qualified on a single parcel may not exceed 5MW AC. If a generation unit previously qualified as a Solar Carve-out I or Solar Carve-out II subject to 225 CMR 14.00, that capacity and qualification shall not impact the qualification of any STGU qualified on the same parcel or a contiguous parcel.

Eligible STGU Projects

One Building Mounted Unit on a single building, *unless*

- The STGU is $\leq 25\text{kW}$ AC, is installed on the same building as another Building Mounted Unit, and is separately metered from the first, and is connected to the meter of a separate end-use customer as the original STGU; or,
- A second Building Mounted Unit is installed on the same building as another Building Mounted Unit, and is separately metered from the first, and is connected to the meter of a separate end-use customer as the original STGU

One Ground Mounted STGU on a single parcel or contiguous parcels, *unless*

- The STGU is $\leq 25\text{kW}$ and is located on a continuous-contiguous parcel, provided the contiguous parcel of land was not the result of a subdivision performed for the purpose of qualifying for SMART; or,
- A Canopy STGU is qualified and is separately metered from the original STGU; or,
- A, or a Building Mounted Unit is qualified, or a STGU $\leq 25\text{kW}$ is qualified, and is separately metered from the original STGU; or,
- A STGU submits a Statement of Qualification Application at least 12 months after the Commercial Operation Date date of the Statement of Qualification Application of the original STGU; or,

EXHIBIT A (DRAFT REDLINE)

- ~~For contiguous parcels, a~~ A STGU ~~that~~ can demonstrate to the Department's satisfaction that the ~~Owner-owner of the parcel~~ is unaffiliated ~~from-with~~ the ~~Owner-owner~~ of the ~~original STGU~~ contiguous parcel containing a STGU
- A STGU is physically located across multiple parcels of land, provided it is behind a single interconnection point and production meter, and its capacity does not exceed 5MW AC
- A STGU can demonstrate to the Department's satisfaction the documentation required to submit a Statement of Qualification Application, pursuant to 225 CMR 20.06(5)(f) was obtained prior to June 5, 2017

Any STGU may apply directly to the Department for a good cause exception to the project segmentation rules set forth in 225 CMR 20.05(5)(f), which the Department will review on a case by case basis.

What is required to demonstrate to the Department the Owner of one STGU is unaffiliated from the Owner of another STGU?

~~An application must demonstrate to the Department's satisfaction that the owners of Solar Tariff Generation Units located on contiguous parcels are unaffiliated parties.~~ [TBD – see comments]

What does contiguous mean?

Contiguous land shall be parcels ~~with the same fee owner which sharing share~~ a border boundary. Land shall be deemed contiguous if it is separated from other land under the same ownership only by a ~~public~~ ~~or private way or waterway~~ non-exclusive easement. Land under the same ownership shall ~~also not~~ be deemed contiguous if ~~it connected to other land under the same ownership~~ separated by ~~an a public right of way, public right of way reservation, exclusive easement, or waterway~~ easement for a water supply.

Performance Standards

All ground mounted STGU greater than 500 kW must provide certification from a professional engineer that the construction of the STGU meets the Performance Standards set forth 225 CMR 20.05(5)(e)5 if the project is installed on any pervious open space.