

ASTGU ANNUAL REPORT

PURPOSE

This Annual Report form is required to be completed and submitted annually by February 1st for all projects with the MA Department of Energy Resources (DOER) which received qualification as an Agricultural Solar Tariff Generation Unit (ASTGU) under the SMART program. The form is provided to demonstrate conformance with the general provisions required for ASTGUs in 225 CMR 28.00; in particular pertaining to Section 28.07(5)(b)3. therein as well as associated ASTGU Guidelines; and specifically pertaining to annual reporting requirements.

The completed form will be reviewed by DOER and the MA Department of Agricultural Resources (MDAR) to determine that the farm is in conformance with all ASTGU provisions in general under the SMART Program, although more specifically to the annual production requirements.

BASIC FARM INFORMATION

Farm Contact Person Name: _____ ☐ Farm Owner ☐ Farm Operator

Farm Name: _____

Legal Structure: ☐ Sole Proprietor ☐ LLC ☐ Corporation
☐ Partnership ☐ Other _____

Mailing Address: _____

Street Address (if different): _____

Contact Phone: _____ Contact E-mail: _____

Check all that apply: ☐ Solar facility owner ☐ Landowner ☐ Applicant

Current Type of ASTGU Farm Operation (Check all that apply):

☐ Vegetables ☐ Fruit ☐ Livestock ☐ Poultry ☐ Hay
☐ Nursery ☐ Other _____

Total Acreage in ASTGU Farm Production: _____

Gross Annual Revenue for ASTGU Farm Production: Total \$s _____

Are any major modifications to the farm business expected in the next 5 years? ☐ Yes ☐ No
(Check all that apply.)

☐ Business Legal Structure ☐ Operation Type ☐ Expansion ☐ Diversification
☐ Retirement ☐ Sale ☐ Subdivision ☐ Other _____

BASIC SOLAR PROJECT INFORMATION

Solar System Company Owner: _____

Solar System Company Address: _____

Solar Company Contact Person/email/tel#: _____

ASTGU Project Start-Up/History Information:

Date ASTGU Approved by DOER: _____

Date Solar Portion of ASTGU Project Commenced Construction: _____

Date Solar Portion of ASTGU Project was Completed & Operational: _____

Date Original Agricultural Portion of the ASTGU Project Commenced: _____

Date Original Agricultural ASTGU Portion of Project Harvested/Sowed Products: _____

How many complete years, that is both solar and agricultural production, has the ASTGU been in operation? _____

SOLAR ARRAY DESIGN – PLEASE PROVIDE AS-BUILT SYSTEM INFORMATION

Please provide the following information regarding the solar array design:

Nameplate capacity AC (in MW): _____ (Note: 1 MW=1000 kW)

Expected annual generation AC (MWh): _____ (Note: 1 MWh=1000 kWh)

Acreage of farmland over which array is ~~to be~~ installed: _____

System type: ☐ Fixed ☐ Tracking ☐ Other _____

Height of lowest panel edge (in feet): _____

Height of lowest elevated horizontal mounting (in feet): _____

Type of mounting (mono poles, racking, etc.): _____

Description of materials and process ~~to be~~ used for ground penetration: _____

Number of panels, capacity per panel, and panel spacing: : _____

If you wish to provide additional descriptive information regarding the solar array design, including any system changes since original completion, you may include this information below, or in a typed attachment labeled "Solar Array Design."

AGRICULTURAL PLAN FOR DUAL-USE AREA

Planned agricultural use, Year 1. Check all that apply.

- ☐ Vegetable, fruit, grains, for human consumption
- ☐ Hay
- ☐ Livestock production
- ☐ Poultry production
- ☐ Horticulture
- ☐ Floriculture
- ☐ Aquaculture
- ☐ Other, please describe: _____

Please fill the Crop Table results following this section for horticulture, flowers, vegetable, fruit, grain, and hay crops for your present year of operation. Fill out one Crop Narrative for each crop, detailing anticipated crop management (planting, irrigation, soil amendments, harvesting) and equipment to be used. **Crop Table – Current Season** follows this section. Also, please also fill out a **Crop Table – Next Season** and corresponding narrative at the end of this section with your best information available.

Please fill out the Grazing Table results following this section for livestock and poultry production for your present year of operation. Please also fill out the Grazing Narrative, detailing anticipated pasture and animal management and equipment to be used. **Grazing Table – Current Season** follows the Crop Table section. Also please fill out a **Grazing Table – Next Season** and corresponding narrative at the end of this section with your best information available.

Additional comments regarding agricultural production for Year 1:

How did the Agricultural Production perform versus expectations? Please explain why/why not if you can:

Did you plant the crops/graze the animals as you originally intended when your Pre-Determination Application was approved? If not please explain.

Were the products marketable as anticipated? Please explain how the production values (weight/bushels etc) were determined.

What occurred during the current season that wasn't anticipated? Positive & Negative.

What Changes/Modifications do you expect to make to improve on production if needed?

Do you expect to grow the same crops on the land in years 2 and 3? Briefly describe your crop rotation plan and what you expect to be growing on the land for the next 5 years. Will the same equipment be used? If not, is current array design compatible with future crop management needs and equipment? _____

Table A: Crop Production – Current Season					
Crop	Area planted (Row length and width or acreage, as appropriate)	Planting date(s) (approximate)	Harvest date(s) (approximate)	Expected productivity, total pounds harvested with dual use	Actual productivity, pounds, with dual use

CROP NARRATIVE – Current Season

*Please detail the crop management for this past season, including approximate **dates** and **equipment** used. The purpose of this form is to provide empirical data regarding compatible equipment usage and crop management needs. If you need additional space, please include a typed attachment labeled “Crop Narrative.”*

Crop: _____

Planting Plan: _____

Soil Amendment Plan: _____

Cultivation Plan: _____

Irrigation Plan: _____

Pesticide/Herbicide Plan: _____

Harvest Plan: _____

Table B: Grazing Production – Current Season							
Type(s) of animal grazed	Area grazed (acreage)	Grazing pressure # animals per acre	Purpose (e.g. meat, dairy, eggs)	Grazing period(s)	Harvest date(s) if applicable	Expected productivity with solar array	Actual productivity with solar array

GRAZING NARRATIVE – Current Season

*Please detail the past season animal and pasture management, including **dates** and **equipment** used. The purpose of this form is to provide empirical data regarding compatible equipment usage and production needs. If you need additional space, please include a typed attachment labeled “Grazing Narrative.”*

Type(s) of Animals Grazed: _____

Pasture Management Plan: List any anticipated seeding, soil amendment, irrigation, pesticide, mowing, etc., including approximate dates and equipment used.

Animal Management Plan:

For each type of animal grazed, describe management regarding housing/shelter, water source, fencing, movement, disease treatment, harvest, etc. that was carried out within the solar array area. Describe equipment used in these activities.

Describe any modifications to the solar array design that were made in order to reduce the risk of animal damage to the solar array, or risk of electrocution to animals.

Table A: Crop Production – Next Season					
Crop	Area planted (<i>Row length and width or acreage, as appropriate</i>)	Planting date(s) (<i>approximate</i>)	Harvest date(s) (<i>approximate</i>)	Expected productivity, total pounds harvested without dual use	Expected productivity, total pounds, with dual use

CROP NARRATIVE – Next Season

*Please detail the crop management planned for next season, including approximate **dates** and **equipment** used. The purpose of this form is to provide planned data for the upcoming season regarding compatible equipment usage and crop management needs. If you need additional space, please include a typed attachment labeled “Crop Narrative.”*

Crop: _____

Planting Plan: _____

Soil Amendment Plan: _____

Cultivation Plan: _____

Irrigation Plan: _____

Pesticide/Herbicide Plan: _____

Harvest Plan: _____

Table B: Grazing Production – Next Season							
Type(s) of animal grazed	Area grazed (acreage)	Grazing pressure # animals per acre	Purpose (e.g. meat, dairy, eggs)	Grazing period(s)	Harvest date(s) if applicable	Expected productivity without solar array	Expected productivity with solar array

GRAZING NARRATIVE – Next Season

*Please detail the next season animal and pasture management, including **dates** and **equipment** used. The purpose of this form is to provide planned data for the upcoming season regarding compatible equipment usage and production needs. If you need additional space, please include a typed attachment labeled “Grazing Narrative.”*

Type(s) of Animals Grazed: _____

Pasture Management Plan: List any anticipated seeding, soil amendment, irrigation, pesticide, mowing, etc., including approximate dates and equipment used.

Animal Management Plan:

For each type of animal grazed, describe management regarding housing/shelter, water source, fencing, movement, disease treatment, harvest, etc. that was carried out within the solar array area. Describe equipment used in these activities.

Describe any modifications to the solar array design that were made in order to reduce the risk of animal damage to the solar array, or risk of electrocution to animals.

Waiver for Decreased Yield

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 crop⁵, an applicant can request a waiver from the Department for the decreased yields. The applicant must demonstrate to the satisfaction of the Department, and in consultation with MDAR, that a waiver is warranted for good cause. Waiver requests must be submitted by December 1st of the applicable calendar year and sent to DOER.SMART@mass.gov.

ii. Failure to Report

If the 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).

Has the applicant previously requested a waiver for decreased yields for this ASTGU?

☐ Yes

☐ No

If yes, in which year(s) did the applicant request a waiver?

In which year(s) did the Department grant a waiver?

SIGNATURES AND ATTESTATIONS

Prior to submitting the Pre-Determination Form, please read and sign as directed below.

Landowner

I hereby certify that I have personally examined and am familiar with the information submitted herein, and, based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Signature of Landowner

Date

Farm Operator and Landowner

I/we hereby certify that the information submitted regarding the current farm conditions and practice and the Agricultural Plan for the Dual-Use Area is accurate and complete to the best of my/our knowledge and intentions, and that I/we have engaged with the University of Massachusetts Amherst Clean Energy Extension and thereby its agricultural extension service to review the Agricultural Plan and its compatibility with the solar array structures and shading. Further, I/we agree, conditional on being provided eligibility to the SMART program as an ASTGU, to submit a report, through a template provided by the University of Massachusetts Clean Energy Extension, annually throughout the duration of the SMART incentive with ASTGU adder, on the operations and productiveness of the solar array and agriculture along with any changes to the Agricultural Plan for the following year. I/we understand that failure to maintain productive agricultural activities and annual reporting may result in the disqualification of the facility as an ASTGU in the SMART program.

Signature of Farm Operator

Date

Signature of Landowner

Date

Solar Facility Owner

I hereby certify that the information submitted regarding the Solar Array Description and inputs and outputs of the Shading Analysis is accurate and complete to the best of my/our knowledge and intentions.

Signature of Solar Facility Owner

Date