

### ASTGU ANNUAL REPORT

#### PURPOSE

This Annual Report form is required to be completed and submitted annually 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 20.00; in particular pertaining to Section 20.06(1)(d) 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: Joe Czajkowski  Farm Owner  Farm Operator

Farm Name: Joe Czajkowski Farm, LLC

Legal Structure:  Sole Proprietor  LLC  Corporation  
 Partnership  Other \_\_\_\_\_

Mailing Address: 86 Comins Rd. Hadley, MA 01035

Street Address (if different): \_\_\_\_\_

Contact Phone: 413-237-2615 Contact E-mail: jcfarm86@gmail.com

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: 2.2

Gross Annual Revenue for ASTGU Farm Production: Total \$ 7,850.00

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: Sunwealth Project Pool 48 LLC

Solar System Company Address: 2067 Massachusetts Ave Suite 540, Cambridge, MA 02140

Solar Company Contact Person/email/tel#: Sam Burrington/projects@sunwealth.com/(617) 752-7322

**ASTGU Project Start-Up/History Information:**

Date ASTGU Approved by DOER: 8/3/2022

Date Solar Portion of ASTGU Project Commenced Construction: 5/3/23

Date Solar Portion of ASTGU Project was Completed & Operational: 7/2/24 Array area construction completed 7/18/23.

Date Original Agricultural Portion of the ASTGU Project Commenced: 7/20/23

Date Original Agricultural ASTGU Portion of Project Harvested/Sowed Products: 8/3/23

How many complete years, that is both solar and agricultural production, has the ASTGU been in operation? 1 (really 6 months, 7/2/24 operational date)

**SOLAR ARRAY DESIGN – PLEASE PROVIDE AS-BUILT SYSTEM INFORMATION**

Please provide the following information regarding the solar array design:

Nameplate capacity AC (in MW): 0.375 (Note: 1 MW=1000 kW)

Expected annual generation AC (MWh): 630.386 (Note: 1 MWh=1000 kWh)

Acreage of farmland over which array is to be installed: 2.2 acres

System type:  Fixed  Tracking  Other \_\_\_\_\_

Height of lowest panel edge (in feet): 10' module horizontal, 7.3' maximum tilt

Height of lowest elevated horizontal mounting (in feet): 9.5'

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

This array uses Solar Flex Rack single axis tracker mounting system. The racking is supported by steel I-beams.

Description of materials and process to be used for ground penetration: \_\_\_\_\_

I-beams were driven using a tracked post driver.

Number of panels, capacity per panel, and panel spacing: : \_\_\_\_\_

832 panels

535 W per panel

Panel rows are spaced 26' apart E-W.

*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:

The broccoli did very well. We had some beautiful broccoli. Yield was good. Quality was great.

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

Yes.

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

Yes, marketed as hoped for. UMass Dining, our expected market, was a little slow in starting to take product.

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

Performed as expected.

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

Hope to get a special sprayer to perfectly match the space between the posts.

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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?

This year was broccoli. Next year is expected to be sweet corn. If the sweet corn does well we will be growing sweet corn in the following year. Year 4 and 5 may be squash.

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<b>Table A: Crop Production – Current Season</b>					
<b>Crop</b>	<b>Area planted (Row length and width or acreage, as appropriate)</b>	<b>Planting date(s) (approximate)</b>	<b>Harvest date(s) (approximate)</b>	<b>Expected productivity, total pounds harvested with dual use</b>	<b>Actual productivity, pounds, with dual use</b>
Broccoli	2.2 acres	July 24th into the field.	Sept. 18-Oct 15	7,000lbs *estimate from New England	7,281 lbs.
				Vegetable Report, 2022 Crop	

**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: Broccoli

Planting Plan: Seeded into 128 speedling trays June 30th. Trays were planted outside of the greenhouse due to summer heat in greenhouses being too hot for brassica germination. Broccoli was transplanted using tractor and 6 row planter.

Soil Amendment Plan: Spread 400lb 18-8-18 with micros using a drop sower to sow evenly. Topdress using Lilliston cultivator 120lbs 18-8-18 two weeks later. Conditions were dry.

Cultivation Plan: Cultivated 2x.

Irrigation Plan: Only natural rain.

Pesticide/Herbicide Plan: 1 1/4 Qt Devinol Liquid herbicide with light rain.  
9/14 first spray - fungicide 10 oz Priaxar, 1 Qt. Bravo, 3 oz Tombstone, 2 oz Cohere,  
10/1 second spray - 16 oz inspire, 1 lb mangate, 4 oz Tombstone

Harvest Plan: Harvested by hand directly into boxes.

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

**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: N/A

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

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**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.

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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.

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<b>Table A: Crop Production – Next Season</b>					
<b>Crop</b>	<b>Area planted (Row length and width or acreage, as appropriate)</b>	<b>Planting date(s) (approximate)</b>	<b>Harvest date(s) (approximate)</b>	<b>Expected productivity, total pounds harvested without dual use</b>	<b>Expected productivity, total pounds, with dual use</b>
Sweet Corn	2.2 acres	Mid May	Early August	16,650 ears of corn per acre. 36,630 ears of corns for the 2.2 acres.	13,819 ears of corn per acre. 30,402 ears of corn for the 2.2 acres.

**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: Sweet corn.

Planting Plan: \_\_\_\_\_

Expected to be planted middle of May. This parcel is not especially early ground

Soil Amendment Plan: \_\_\_\_\_

Liquid starter, 12-15 gallons per acre. Top dressed with 30-O-20.

140 lbs per acre of nitrogen

Cultivation Plan: \_\_\_\_\_

400 lbs of 30-O-30. Spun on and cultivated in. One time cultivate.

Irrigation Plan: \_\_\_\_\_

Natural rain water is only irrigation.

Pesticide/Herbicide Plan: \_\_\_\_\_

2 1/2 quarts of Acuron per acre herbicide. No pesticide.

Harvest Plan: \_\_\_\_\_

Hand harvested early August. Bagged in the field, truck picks up the bags.

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

**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: N/A

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

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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.

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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.

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## **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 stated in the agricultural plan or previous year's annual report. In these instances, an applicant can request a waiver to 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 November 1st of the applicable calendar year and sent to [DOER.SMART@mass.gov](mailto:DOER.SMART@mass.gov).

### **ii. Failure to Report**

If the ASTGU fails to submit an annual report, the Department may declare the project ineligible for the ASTGU adder for one year. If the annual report is not completed for a second year, then the Department may permanently disqualify the ASTGU from continuing to receive the ASTGU Adder for the remainder of the STGU's tariff term.

### 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 aDnd atae m 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.

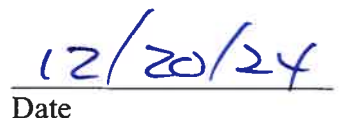
  
\_\_\_\_\_  
Signature of Landowner


  
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Date

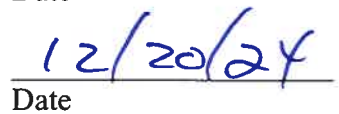
#### Farm Operator and Landowner

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.

Signed by:  
  
\_\_\_\_\_  
Signature of Solar Facility Owner

12/30/2024  
\_\_\_\_\_  
Date