

## **Solar Project Operation and Maintenance Plan**

### **391 Durham Rd, Madison, CT**

This Operation and Maintenance Plan is intended to outline the required work expected to keep the 1.975 MW solar-based electric generating facility ("Facility") operating as designed throughout its lifecycle.

#### Daily System Monitoring

The Facility will be monitored remotely 24 hours a day 7 seven days a week for system performance. Any alerts and/or alarms that are received will be reviewed and technicians will be dispatched as required.

#### Annual Inspections and Maintenance

The Facility will be inspected four times per year to determine if there are any issues with the system and perform preventative maintenance that maybe required. The inspections will include the following:

##### Site Inspection

- Condition of access drive leading to the Facility (free of obstructions and stable)
- Condition of fencing and gates
- Condition of equipment pads and supports
- Condition of tracker arrays and motors
- Ground cover, both within and outside the Facility, are checked for erosion

##### Electrical and Racking Equipment

- Visual inspection of all electrical equipment including but not limited to modules, wiring, conduit, mounting system, switchgear, trackers, and transformers
- Inspect ground connections
- Inspect and test all electrical terminations, including thermography
- Inverter cleaning, testing, and preventative maintenance as required by manufacturer
- Tracker motor preventative maintenance as required by manufacturer
- Transformer cleaning, testing, and preventative maintenance as required by manufacturer
- Check proper operation of all AC and DC disconnect switches
- Electrical testing of DC strings

## Landscaping

The area beneath and between the solar panels will be mowed once or twice per year with precautions noted below to protected State-listed turtle species and as required to keep panels from shading and promote the growth of the pollinator plants that are part of the seed mix.

### Turtle Protection Measures – Mowing Requirements

- a) Perform mowing during the turtle dormant period – November 1st through March 31st when possible.
- b) If mowing is required outside of the turtle dormant period, avoid mowing during May 15th through August 30th when turtles may be located within the facility (and away from forested habitat), if possible, understanding that some vegetation maintenance is necessary for operational and electrical safety purposes.
- c) If mowing is required during the turtle active season (April 1st through October 31st), mowing should be performed as follows.
  - i. Mowing style: Avoid flail mower heads with guide bars that ride along the ground. Sickle bar mowers will have the least impact if mowing every 1-5 years. In areas with more woody vegetation >1-2" diameter Brontosaurus-style mower will likely have the least impact on turtles.
  - ii. Mowing height: If mowing during active season, retention of mowing stubble to 7-12 inches will reduce mortality, reduce blade wear, and will leave important cover for animals.
  - iii. Directionality: If mowing during the active season is necessary, start mowing from the center of the field and use a back-and-forth approach, or large circular pattern, to avoid concentrating fleeing animals where they may be killed or stranded. In addition, leave an un-mowed 30 ft strip around the perimeter of the field and mow this area last. Most turtles are found in these areas and this provides time for them to react to the mowing activity and move out of the area.
  - iv. Mower Speed: Mowing in low gear or at slow speeds will allow turtles to react and move out of the field.
  - v. Un-mowed Edge: Leave field edge in high turtle use areas unmowed until after September 15th. Wood turtles are often in field edges closest to nearby streams.

## Maintenance and Repairs

Any repairs that are identified during the inspections or through dispatched alarm visits will be reviewed with the asset management team and a priority and timeline for repair will be developed for each instance. Once repairs are completed those work orders will be closed out.