



Operations & Maintenance Plan

Operations, Maintenance, and Commissioning of
a Ground Mounted Solar Farm

VERSION 1
MARCH 2023

Project Owner:

Lansing Community Solar, LLC
Genie Solar Energy

Project Address:

Lansingville Road,
Lansing, NY 14882

Municipality:

Town of Lansing
Tompkins County

Operation & Maintenance Plan

1. Overview

In comparison to other generating technologies, solar PV power plants are relatively low maintenance and have limited servicing requirements. Lansing Community Solar, LLC (Project Company) understands that proper maintenance of a PV plant is essential to maximize both energy yield and the plant's useful life and has planned the following scheduled maintenance and procedures to ensure quality operation.

The following Operations and Maintenance Plan (O&M Plan) has been created for the annual maintenance and operation of the solar facility located off Lansingville Road, Lansing, Tompkins County, New York. All reports, maintenance requests, and service calls will be directed to the Project Owner and performed at their discretion and on an as needed basis unless otherwise stated in the plan.

This plan will be updated on as needed basis as directed by the Project Owner. Version history of this report is listed below:

Version	Created Date	Notes
1.0	03/22/2023	AHJ Submittal

2. Service Provider

The Project Company intends to contract with a qualified O&M Provider to monitor the facility, conduct scheduled maintenance, and make repairs as necessary to ensure the guaranteed energy output of the array. A qualified O&M provider shall meet the definition of a qualified person per the National Electric Code described as one who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid the hazards involved. When the O&M provider is selected, their name and contact information will be provided to the Town of Lansing Building Department.

3. Emergency Response and Site Security

The facility is remotely monitored by the selected O&M Provider and Project Owner 24/7/365. The Facility is equipped with remote diagnostics and video surveillance. In general, emergencies and security breaches on site will be identified through system alarms sent to the Provider and their staff to be addressed accordingly. However, The Project Company recognizes that possibilities exist to experience an emergency or security breach outside of the alarm parameters.

In the event of a fire at the Project Site, the general procedure is as follows:

1. Person discovering the fire shall immediately contact 911 to engage local emergency services followed by the Project Company through use of the Emergency Contact Number and Facility Address provided at the Facility entrance gate.

2. Individuals are expected to wait for emergency services and MUST NOT attempt to extinguish fire near electrical equipment (e.g., PV solar arrays or inverters) with water or other chemicals as an electric shock or arc could occur. Qualified Personnel, including the emergency services personnel, may find it necessary to shut off connectivity to the facility through the Main Utility Disconnect. The location of which is posted at the facility entrance gate and will be reviewed during the local fire department walk-through and training upon system construction. The O&M provider may be dispatched to the site to assist in shut off procedure and/or assess damages to the facility.
3. A designated O&M employee may meet fire fighters at the Project Site entrance and direct them to the location of the fire if required.
4. O&M Provider to prepare a summary of the incident as soon as possible after the incident to be supplied to the Project Owner.

The facility is secured by a perimeter fence with locked access gates to prevent unauthorized access. However, Project Owner recognizes that the possibility exists for unauthorized access.

In the event of trespassing within the Project Site, the general procedure is as follows:

1. Person concerned of the unauthorized access shall immediately contact the Project Company through use of the Emergency Contact Number and Facility Address provided at the facility entry gate.
2. Project Company and/or O&M Service Provider will contact local authorities as needed, at their discretion, to resolve the issue.
3. A designated O&M employee may meet local authorities at Project Site entrance as directed by the Project Owner or as needed to re-secure the facility.
4. O&M Provider to prepare a summary of the incident as soon as possible and no later than 24 hours after the incident to be supplied to the Project Owner.

4. Scheduled Maintenance

Provider will service inverters, disconnects, and other components in accordance with all manufacturers recommended intervals and procedures and in accordance with all local laws. Scheduled Maintenance will include but is not limited to the following:

- a) Inverter Servicing
 - i. Visual Inspections
 - ii. Cleaning Filters
 - iii. Removal of Dust
 - iv. Torquing of Connections
 - v. Additional Diagnostic Screens recommended by the Manufacturer.
- b) Connection Integrity
 - i. Visual Inspections
 - ii. Fuse Testing
 - iii. Thermal Imaging for purpose of identify potential faults within the array.

- c) Structural Integrity
 - i. Visual Inspections of Racking and Equipment Pads
 - ii. Torquing of Connections

- d) Site Maintenance
 - i. Vegetation Control to maintain growth to prevent production loss.
 - ii. Any vegetative screening that was required as part of site plan approval will be maintained and replaced as necessary to maintain visual buffer in the spirit of the approved site plan.
 - iii. Erosion Control and Repair as necessary to maintain navigable access to areas of the area unless otherwise required by the SWPPP prepared for the Project. All repair to be performed at direction of Project Owner or the Town on an as-needed basis.
 - iv. All forbs/grass within the fenced perimeter to be maintained at a height not to impede production of or access to the Project Facility. However, excessive mowing will not occur so to encourage the growth of pollinator species and a well-vegetated ground cover beneath the array.

- e) Access Path Maintenance
 - i. Snow Removal as reasonably required to maintain access to essential electrical components. Removal will be performed at the direction of Project Owner on an as-needed basis.
 - ii. Erosion Control and Repair as necessary to maintain navigable access to areas of the area. Repair to be performed at direction of Project Owner or the Town on an as-needed basis.

- f) Balance of System
 - i. The remaining components such as the communication systems and auxiliary power supplies will be tested regularly to ensure the signal strength and connection remains constant.

5. Screening Tree Maintenance and Replacement

The planted screening trees will be inspected periodically to ensure that they are healthy. The maintenance of the screening trees will include but is not limited to the following:

- a) Periodic inspections will be performed to ensure that the screening trees are healthy.
- b) The trees will be watered, pruned (only where necessary), and fertilizer will be applied as needed to ensure that they are healthy and performing/growing as intended.
- c) All sickly trees identified will be treated appropriately to remedy their deficiencies or illnesses.
- d) All dead trees will be replaced by the Project Owner, as needed, to maintain the visual screening.

6. Unscheduled Maintenance

- a) Tightening connections
- b) Replacement of fuses
- c) Repair damaged components
- d) Repairing communication faults
- e) Repair mounting structure

7. Spare Parts

To facilitate a rapid response in the event of equipment failure, a suitable stock of spare parts will be made available at the site by the selected O&M provider. Spare parts may include but are not limited to the following:

- a) Modules
- b) Combiner Boxes
- c) Communication System
- d) DC and AC Cabling Components
- e) Fuses

8. Performance Monitoring and Evaluation

A SCADA system will be implemented to monitor the real-time PV system production to compare to the modeled efficiency to assess if the system is operating optimally. The selected O&M provider will use this information to schedule urgent repairs or maintenance activities.

9. SWPPP Inspections (as Required)

During construction, weekly Stormwater Pollution Prevention Plan (SWPPP) inspections will be performed by a qualified inspector in accordance with the SWPPP Inspection and Maintenance Requirements. The weekly SWPPP inspections will be maintained on-site during construction. No post-construction stormwater controls that would require on-going maintenance or inspection are proposed at this site.