New York Community Solar

Operations and Maintenance Plan

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Prepared For:

Town of Farmington

Prepared By:

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Content

1. Introduction

Delaware River Solar, LLC ("**DRS**"), and its affiliates NY Farmington I, LLC, NY Farmington II, LLC, and NY Farmington III, LLC ("**Project Owner**"), have prepared this operation and maintenance plan ("**O&M Plan**") for the proposed installation of three 2.338 MW solar photovoltaic facilities ("**Solar Facilities**") located at the southwest corner of Yellow Mills and Fox Roads, within the jurisdiction of the Town of Farmington ("**Project Site**").

The Project Owner will enter into an Operation and Maintenance Contract ("**O&M Contract**") with an operations and maintenance provider(s) ("**O&M Contractor**"), the scope of which shall include essential works and services needed for the (a) proper operation and maintenance of the Solar Facility and (b) maintenance of the Project Site, each as further described herein.

2. General Requirements of the O&M Plan

- All scheduled Solar Facility maintenance and all Landscaping and Vegetation will occur during normal business hours (8:00 A.M. and 5:00 P.M. Eastern Standard Time).
- Commercially reasonable efforts will be used to ensure minimal limits of disturbance when performing any maintenance work of the Solar Facility or Project Site.
- The Project Owner will not use any pesticides to manage vegetation. In the event the use of pesticides becomes necessary, the Project Owner will provide the Code Officer with the proposed pesticide type, manufacturer and application details for approval before any application is made. Application will only be made by licensed professionals with New York State Department of Environmental Conservation (NYSDEC) certification.
- In the event there is any damage to ground cover, vegetation or vegetative screening due to maintenance activities (other than caused by normal maintenance activities), the affected areas and vegetation will be repaired in the next appropriate season such repair can be made.
- Corrective maintenance may require specialists outside the abilities and responsibility of the Project Owner.
- Project Owner (or O&M Contractor) will provide preventative vegetative maintenance site visit reports to the Code Officer of the Town of Farmington.

3. Solar Facility (Components) Maintenance

3.1 Scheduled Service Visits: Preventative Maintenance and Inspections

- Semi-Annual interim maintenance visit
- Annual full maintenance visit, which can include:
    - System testing and verification of data acquisition systems, at least once per calendar year
    - Module cleaning once a year, or as determined by Project Owner
    - Solar Facility field inspection: visual, electrical and mechanical once per month, or as determined by Project Owner
    - Data acquisition system maintenance as needed
    - Inverter cleaning and servicing to ensure proper operation. Scheduled maintenance and testing as required to maintain manufacturer's warranties.
- Scheduled maintenance and testing required to maintain all manufacturers' warranties on Solar Facility components.

3.2 Unscheduled Service Visits: Corrective Maintenance and Repairs

Unscheduled maintenance visits will generally occur during "Emergency Situations" that would endanger the health and/or safety of surrounding area or "Major Disruptions" to the Solar Facility that degrades electricity generation that does not create an Emergency Situation, such as failure of Solar Facility components, vandalism, or fallen trees.

In the event of an Emergency Situation, the O&M Contractor and/or the Project Owner will contact the appropriate Town of Farmington personnel (fire department, police department) to inform them of the emergency. The O&M Contractor will then dispatch appropriate personnel to the Project Site as soon as possible.

In the event of a Major Disruption to the Solar Facility, the O&M Contractor will schedule a corrective maintenance visit as soon as possible with all reasonable effort to schedule any such maintenance activities between 8:00 A.M and 5:00 P.M.

3.3 O&M Contract

The scope of the O&M Contract shall include essential works and services needed for the proper operation and maintenance of the Solar Facility. The scope of work shall include at least, but not limited to, the following items:

- Compliance with the Local, State and Federal Rules, Codes, Regulations and Laws regarding the health and safety of any operation and maintenance works.
- Performance of a preventive and corrective maintenance plan.
- Control and monitoring of the Solar Facility 24/365, including, CCTV alarms and system failures, and coordination with the local fire department and law enforcement.
- Maintain and operate all the infrastructures, equipment and facilities related to the Solar Facility required for the proper operation.
- Provide reports to Project Owner (monthly and yearly) of any major unexpected event.

- Administer and manage supplier's guarantees and warranties.
- Management and paperwork involved with third party site visits such as insurance, governmental agencies and others related.
- On site annual peak power and degradation performance testing of modules to a representative sample of modules.
- Annual IR thermography field test of modules and connections of the electrical panels. The test will be done in the appropriate weather conditions taking into account that the main purpose is to detect hot spot events.
- Spare parts stock management, including all cost associated like insurance, security or transportation.

3.3 Preventative and Corrective Maintenance Plan

The O&M Contractor shall comply with the preventive and corrective maintenance programs in order to maintain and operate the Solar Facility in the proper way. These actions shall include:

- Inspect, test, and clean equipment, including a periodically cleaning of the modules.
- Replace all spare parts, supplies and consumables necessary for performance of the O&M Contract according to the Preventive and Corrective Maintenance Program and the manufacturer's user manual.
- Perform annual field tests and fix any potential failures that arise due to the test.
- Provide Project Owner, a monthly report including at least the following information: energy estimate, energy production, onsite weather station information, preventive maintenance services performed, corrective maintenance services performed including spare parts and consumables used. Monthly reports should also include a detailed description of:
  1. Any material failure covered by any warranties, action plan and expected timeframe to cover the incident;
  2. Any violation of any applicable law ,applicable permit or prudent industry practice due to the O&M practices, including environmental laws, rules, or regulations enforced by governmental agencies;
  3. Any adverse events or conditions that may affect normal Solar Facility operation.
  4. Record of all tests and reviews performed to maintain systems in compliance with the manufacturer user manual, including name of company involved and nature of service.
- Guaranties and warranties of the manufacturers that arise, including without limitation any claims or remedies against any subcontractors or suppliers; and
- Comply with all permits and maintain in effect all permits required for operation and maintenance of the Solar Facility.
- Maintenance of access road, including snow removal.

4. Vegetative Screening Maintenance

Vegetative screening of the Project Site will be performed, after receiving permission to operate from the utility, at the next recommended planting date for such selected species, which depends on the seasonal weather patterns and location. In general, the best time to plant trees is early spring (March through early May) or in the fall (October) when temperatures are cooler and trees are dormant or nearly dormant. Screening vegetation will be planted according to the final site plans approved by the Town of Farmington.

Vegetative plantings have both an establishment phase (critical period for establishing healthy vegetation) and a long-term maintenance phase.

4.1 Screening Vegetation Establishment Phase (Year 1)

At Planting Time:

- Mulching individual plantings with a layer of wood mulch.
- Pruning to remove damaged branches and to correct structural defects.
- Water trees, plants and ground cover beds within the first 24 hours of initial planting, and not less than twice per week until final acceptance.

Remainder Year 1:

- Monthly visual inspection of plantings.
- Tighten and repair guy wires and stakes as required.
- Reset settled plants to proper grade and position. Restore planter saucer and adjacent material, and remove dead material.
- Correct defective work as soon as possible after deficiencies become apparent and weather season permits.

4.2 Screening Follow-Up Phase (2 yrs after completion and acceptance of the Solar Facility)

- Remove and renew mulch saucer
- Remove stakes and guy wires from trees
- Fertilize trees, shrubs and ground cover
- Remove and replace dead trees of like kind and height to the adjacent trees or as otherwise required to maintain complete and continuous visual screening.

4.3 Screening Long Term Maintenance Phase (Year 3 and later)

- Semi-Annual visual inspection of screening vegetation
- Prune and trim, as needed, if trees shade the Solar Facility

4.4 Replacement of Dead Trees (All Maintenance Phases)

- Dead trees will be replaced with similar species and size as the original planting.
- Dead trees will be replaced the later of (i) 60 days following an inspection that reveals any dead trees and (b) the next recommended seasonal planting date for such selected species.

5. General Vegetative Maintenance

Vegetation may need to be trimmed or cut back to avoid shading of the solar arrays. Shading inspections will be done semi-annually and trimming will occur as needed. This would include ground cover, existing vegetation and screening vegetation. Ground cover will be either mowed, as needed, or sheep may be utilized to graze the array area.