

# Delaware River Solar, LLC

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## Decommissioning Plan

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**30 Morris Road  
SBL: 24.1-4  
5MW Solar Facility**

Prepared for:  
**Town of Dryden  
Tompkins County, New York**

Prepared by:  
NY Dryden III, LLC  
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## **1. Introduction**

NY Dryden III, LLC (“Project Owner”), an affiliate of Delaware River Solar, LLC, proposes to build a photovoltaic (PV) solar facility (“Solar Facility”) at 30 Morris Road in the Town of Dryden (“Town”) under New York State’s Community Solar initiative. The Solar Facility is planned to have a nameplate capacity of approximately 5 megawatts (MW) alternating current (AC) total, to be constructed on private land (“Project Site”) leased by the Project Owner from the property owner (“Property Owner”).

This Decommissioning Plan (“Plan”) is being submitted to the Town as part of the application with respect to Town of Dryden code Section 270-13.12 (“Solar Law”). The Solar Facility is considered a ground-mounted large scale solar energy system as set forth in the Solar Law. The decommissioning requirement for a ground mounted large-scale solar energy system set forth in Section § 270-13.12, J, of the Solar Law reads as follows:

### *J. Abandonment and decommissioning*

*(1) At the time of submittal of the application for a special use permit for a ground mounted large-scale solar energy system, the solar energy applicant shall submit and agree to the performance of a decommissioning plan that includes the removal of the solar energy system and all associated equipment, driveways, structures, buildings, equipment sheds, lighting, utilities, fencing, and gates. If such system becomes technologically obsolete or ceases to perform its originally intended function for more than six consecutive months, the Town may require its removal in accordance with the decommissioning plan. The Town shall provide the solar energy system owner 30 days' prior written notice of a request for decommissioning. Upon removal of a ground-mounted large-scale solar energy system, the land shall be restored to its previous condition, including but not limited to the seeding and sodding, as appropriate depending upon the season of the work, of exposed soils.*

*(2) At the time of obtaining a building permit, the solar energy applicant may be required to provide a financial security bond or other form of financial security acceptable to the Town for removal of the ground-mounted large-scale solar energy system and property restoration, with the Town of Dryden as the obligee, in an amount approved by the Town Board. Upon any amendment of the special use permit, the Town Board may adjust the required amount of the financial security bond to adequately cover increases in the cost of removal of the ground-mounted large-scale solar energy system and property restoration. If the ground-mounted large-scale solar energy system is not decommissioned after being considered abandoned, the Town may remove the system and restore the property and impose a lien on the property pursuant to § 270-18.3B to recover these costs to the Town.*

*(3) All other solar energy systems shall be considered abandoned after six consecutive months without electrical energy or thermal energy generation and must be removed from the property. The Town Board may consider and grant, for good cause shown, an application for one extension not exceeding 24 months for solar energy systems other than ground-mounted large-scale solar energy systems.*

This Plan provides an overview of activities that will occur during the decommissioning phase of the Solar Facility, including activities related to the restoration of land, management of materials and waste, and responsibility of removal.

The Solar Facility is expected to have a useful life of thirty (30) years.

This Plan assumes the Solar Facility will be dismantled, and the Project Site restored to a state similar to its pre-construction condition, at the thirty (30) year anniversary of the Solar Facility’s commercial operation date (“Expected Decommissioning Date”). This Plan also covers the case of the abandonment of the Solar Facility, for any reason, prior to the Expected Decommissioning Date.

Decommissioning of the Solar Facility will include the disconnection of the Solar Facility from the utility electrical grid and the removal of all Solar Facility components, including:

- Photovoltaic (PV) modules, module racking and supports
- Inverter units, substation, transformers, and other electrical equipment, including wiring cables
- Access roads and perimeter fence
- Inverter pad concrete foundations.

This Plan is based on current best management practices and procedures. This Plan may be subject to revision based on new standards and emergent best management practices at the time of decommissioning. Permits will be obtained as required and notification will be given to stakeholders prior to decommissioning.

## **2. The Proponent**

The Project Owner will manage and coordinate the decommissioning process. The Project Owner will obtain all necessary regulatory approvals that may vary depending on the jurisdiction, project capacity, and site location. The Project Owner will be committed to the safety, health, and welfare of the hosting community.

The conditions and obligations of this Plan shall be bound upon the Project Owner, its heirs, executors, administrators, successors or assigns.

Contact information for the proponent is as follows through the permitting process. An agent of the project company will be identified prior to construction of the Solar Facility:

|                  |  |
|------------------|--|
| <b>Company:</b>  | <b>NY Dryden III, LLC</b>                    |
| <b>Contact:</b>  | <u>Brian Dunleavy</u>                        |
| <b>Address:</b>  | <u>PO Box 384 Callicoon, NY 12723</u>        |
| <b>Telephone</b> | 646-998-6429                                 |
| <b>Email:</b>    | <u>brian.dunleavy@delawareriversolar.com</u> |

### **2.1 Project Information**

|                        |  |
|------------------------|--|
| <b>Address:</b>        | <b>30 Morris Road, Dryden NY 13068</b> |
| <b>Tax ID:</b>         | <u>24.-1-4</u>                         |
| <b>Project Size:</b>   | <u>5 MW</u>                            |
| <b>Property Owner:</b> | <u>Delaware River Solar, LLC</u>       |
| <b>Site Agreement:</b> | <u>Lease</u>                           |

## **3. Decommissioning of the Solar Facility**

At the time of decommissioning, the installed components will be removed, reused, disposed of, and recycled, where possible. All removal of equipment will be done in accordance with any applicable laws and regulations, including without limitation, the local laws of the Town applicable to solar energy systems, and manufacturer recommendations. All applicable permits will be acquired.

The decommissioning process of the Solar Facility may commence for the following reasons: (a) Project Owner provides written notice to the Town of its intent to retire or decommission the Project (“Owner Decommissioning Notice”) for any reason, including the Solar Facility is damaged and will not be repaired or replaced, (b) the Solar Facility ceases to be operational for more than twelve (12) consecutive months, or (c) the expiration of the lease agreement with the Property Owner. In event the Project Owner fails to decommission the Solar Facility within three hundred sixty (360) days after providing Owner Decommissioning Notice or fails to respond with a reasonable explanation for cessation of operation of the Project within 60 days of the Town Decommissioning Notice, the Town may commence the decommissioning of the Project. The Town shall provide Project Owner sixty (60) days written notice (“Town Decommissioning Notice”) prior to the commencement of any decommissioning of the Solar Facility by the Town. For the purposes of this Agreement, “ceases to be operational” shall mean no generation of electricity, other than due to repairs to the Project or causes beyond the reasonable control of the Project Owner.

#### **4.1 Equipment Dismantling and Removal**

Generally, decommissioning of a Solar Facility proceeds in the reverse order of the installation.

1. The Solar Facility shall be disconnected from the utility power grid.
2. PV modules shall be disconnected, collected, and disposed at an approved solar module recycler or reused / resold on the market.
3. All aboveground and underground electrical interconnection and distribution cables shall be removed and disposed off-site at an approved facility.
4. Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site at an approved facility.
5. Electrical and electronic devices, including transformers and inverters shall be removed and disposed off-site by at approved facility.
6. Concrete foundations shall be removed and disposed off-site at an approved facility.
7. Fencing shall be removed and will be disposed off-site at an approved facility.

#### **4.2 Environmental Effects**

Decommissioning activities, particularly the removal of project components, could result in environmental effects similar to those of the construction phase. For example, there is the potential for disturbance (erosion/sedimentation) to adjacent watercourses or significant natural features. Mitigation measures similar to those employed during the construction phase of the Solar Facility will be implemented. These will remain in place until the site is stabilized to mitigate erosion and silt/sediment runoff and any impacts on the significant natural features or water bodies, if any, located adjacent to the Project Site.

Road traffic will temporarily increase due to the movement of decommissioning crews and equipment. There may be an increase in particulate matter (dust) in adjacent areas during the decommissioning phase. Decommissioning activities may lead to temporary elevated noise levels from machinery and an increase in trips to the Project Site. Work will be undertaken during daylight hours and conform to any applicable restrictions.

### **4.3 Site Restoration**

Through the decommissioning phase, the Project Site will be restored to as natural a condition as possible within one year of removal and as close to its original state as reasonably possible. All project components (see Appendix 1) will be removed. Rehabilitated lands will be seeded with a low-growing species to help stabilize soil conditions, enhance soil structure, and increase soil fertility. After decommissioning, the Project Site will be primarily meadows with soil conditions in an improved state for agricultural use by allowing the land time to fallow over the life of the Project.

### **4.4 Managing Materials and Waste**

During the decommissioning phase a variety of excess materials and wastes (see listed in Appendix 1) will be generated. Most of the materials used in a Solar Facility are reusable or recyclable and some equipment may have manufacturer take-back and recycling requirements. Any remaining materials will be removed and disposed of off-site at an approved facility. The Project Owner will establish policies and procedures to maximize recycling and reuse and will work with manufacturers, local subcontractors, and waste firms to segregate material to be disposed of, recycled, or reused.

The Project Owner will be responsible for the logistics of collecting and disposing or recycling the PV modules. Currently, some manufacturers and new companies are looking for ways to recycle and/or reuse solar modules when they have reached the end of their lifespan. Due to a recent increase in the use of solar energy technology, a large number of panels from a variety of projects will be nearing the end of their lifespan in 25-30 years. It is anticipated there will be more recycling options available for solar modules at that time. The Project Owner will dispose of the solar modules using best management practices at the time of decommissioning.

### **4.5 Decommissioning During Construction or Abandonment Before Maturity**

In case of abandonment of the Solar Facility during construction or prior to the Expected Decommissioning Date, the same decommissioning procedures as for decommissioning after ceasing operation will be undertaken and the same decommissioning and restoration program will be honored. The Solar Facility will be dismantled, materials removed and disposed, the soil that was removed will be graded and the site restored to a state similar to its preconstruction condition.

### **4.6 Decommissioning Notification**

Decommissioning activities may require the notification of stakeholders given the nature of the works at the Project Site. The local municipality will be notified prior to commencement of any decommissioning activities. Prior to decommissioning, Project Owner will update their list of stakeholders and notify appropriate municipalities of decommissioning activities. Federal, county, and local authorities will be notified as needed to discuss the potential approvals required to engage in decommissioning activities.

### **4.7 Approvals**

Well-planned and well-managed renewable energy facilities are not expected to pose environmental risks at the time of decommissioning. Decommissioning of the Solar Facility will follow standards of the day. Project Owner will ensure that any required permits are obtained prior to decommissioning.

This Decommissioning Plan may be updated as necessary in the future to ensure that changes in technology and site restoration methods are taken into consideration.

**5. Cost of Decommissioning and Responsibility of Removal**

The current estimated costs indicated on Appendix 2 are the costs, that the contractor anticipates to install and commission the Solar Facility. During the Special Permit review process, the Project Owner will revise the estimated costs to the extent any site plan changes are made.

While the salvage value of valuable recyclable materials (aluminum, steel, copper, etc.) is not factored into the decommissioning costs, the salvage value of such materials (determined on market rates at the time of salvage) is expected to be an amount that could substantially cover the estimated decommissioning cost.

**APPENDIX I**

**Management of Excess Materials and Waste**

| Material / Waste                              | Means of Managing Excess Materials and Waste  |
|---|---|
| PV Modules                                    | If there is no possibility for reuse, the panels will either be returned to the manufacturer for appropriate disposal or will be transported to a recycling facility where the glass, metal and semiconductor materials will be separated and recycled.   |
| Metal array mounting racks and steel supports | These materials will be disposed off-site at an approved facility.  |
| Transformers and substation components        | The small amount of oil from the transformers will be removed on-site to reduce the potential for spills and will be transported to an approved facility for disposal. The substation transformer and step-up transformers in the inverter units will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices. |
| Inverters, fans, fixtures                     | The metal components of the inverters, fans and fixtures will be disposed of or recycled, where possible. Remaining components will be disposed of in accordance with the standards of the day.   |
| Gravel (or other granular)                    | It is possible that the municipality may accept uncontaminated material without processing for use on local roads, however, for the purpose of this report it is assumed that the material will be removed from the project location by truck to a location where the materials can be processed for salvage. It is not expected that any such material will be contaminated.   |

|   |   |
|---|---|
| Geotextile fabric                         | It is assumed that during excavation of the components, a large portion of the geotextile will be “picked up” and sorted at the reprocessing site. Geotextile fabric that is remaining or large pieces that can be readily removed from the excavated aggregate will be disposed of off-site at an approved disposal facility.  |
| Concrete inverter/transformer Foundations | Concrete foundations will be broken down and transported by a certified and licensed contractor to a recycling or approved disposal facility.   |
| Cables and wiring                         | The electrical line that connects the utility electrical grid to the point of common coupling will be disconnected and disposed of at an approved facility. Support poles, if made of untreated wood, will be chipped for reuse. Associated electronic equipment (isolation switches, fuses, metering) will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices. |
| Fencing                                   | Fencing will be removed and recycled at a metal recycling facility.   |
| Debris                                    | Any remaining debris on the site will be separated into recyclables/residual wastes and will be transported from the site and managed as appropriate.   |



## APPENDIX 2

### Estimated Decommissioning Costs <sup>(1)</sup>

| Tasks                                | Estimated Cost (\$) <sup>(1)</sup> |
|--------------------------------------|------------------------------------|
| Remove Panels                        | \$6,500                            |
| Remove Racking Wiring                | \$6,000                            |
| Dismantle Racks                      | \$30,000                           |
| Remove and Load Electrical Equipment | \$4,000                            |
| Break up Concrete Pads               | \$4,000                            |
| Remove Racks                         | \$20,000                           |
| Remove Cable                         | \$14,000                           |
| Remove Ground Screws and Power Poles | \$34,000                           |
| Remove Fence                         | \$10,000                           |
| Grading                              | \$7,500                            |
| Seed Disturbed Areas                 | \$2,000                            |
| Truck to Recycling Center            | \$7,000                            |
| Administration                       | \$5,000                            |
| Decommissioning Cost – Current       | \$150,000                          |

(1) Does NOT include salvage value.