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PLANNING DEPARTMENT

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TOWN OF YORKTOWN

New York Community Solar Facility Decommissioning Plan

November 2020

Prepared For:
Hemlock Hill Farm

OnForce Solar
9 East 37th St, 12th floor
New York, NY 10016

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1. Introduction

OnForce Solar proposes to build a photovoltaic (PV) solar facility at Hemlock Hill Farm in Yorktown, NY under New York State's Community Solar initiative. This Solar Facility is planned to have a nameplate capacity of 1 megawatt (MW) alternating current (AC) and be built on a 5-6 acre parcel of private land

This Decommissioning Plan ("**Plan**") provides an overview of activities that will occur during the decommissioning phase of a Solar Facility, including; activities related to the restoration of land, the management of materials and waste, projected costs, and a decommissioning fund agreement overview.

The Solar Facility will have a maturity date of twenty (20) to thirty (30) years; however, this Solar Facility has an estimated useful lifetime of 30 years or more. This Plan assumes that a Solar Facility will be dismantled and the Facility Site restored to a state similar to its pre-construction condition at the 20 year maturity date. The Plan also covers the case of the abandonment of a Solar Facility, for any reason; prior to the 20 year maturity date.

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

- Photovoltaic (PV) modules, panel racking and supports;
- Inverter units, substation, transformers, and other electrical equipment;
- Access roads, wiring cables, communication tower, perimeter fence; and,
- Concrete foundations.

This decommissioning 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

ONFORCE Solar will manage and coordinate the approvals process. ONFORCE will obtain all necessary regulatory approvals that vary depending on the jurisdiction, project capacity, and site location. ONFORCE will build a long-term relationship with the community hosting a Solar Facility and ONFORCE will be committed to the safety, health, and welfare of the townships.

Contact information for the proponent is as follows:

Full Name of Company:	<u>OnForce Solar</u>
Contact:	<u>Charles Feit</u>
Address:	<u>9 East 37th St, 12th Floor, New York, NY 10016</u>
Telephone:	<u>(347) 590-5450</u>
Email:	<u>charles.feit@174powerglobal.com</u>

2.1 Project Information

Address:	<u>500 Croton Ave, Cortlandt, NY 10567</u>
Tax ID:	<u>46.-08-01.01</u>
Project Size:	<u>1 MWac</u>
Landowner:	<u>Laura DeMaria</u>
Own / Lease:	<u>Lease</u>

Decommissioning of the Solar Facility

At the time of decommissioning, the installed components will be removed, reused, disposed of, and recycled, where possible. The Facility Site will be restored to a state similar to its pre-construction condition. All removal of equipment will be done in accordance with any applicable regulations and manufacturer recommendations. All applicable permits will be acquired.

2.1 Equipment Dismantling and Removal

Generally, the 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. Although the PV modules will not be cutting edge technology at the time of decommissioning, they are estimated to still produce 80% of the original electricity output at year 20 and add value for many years.
3. All aboveground and underground electrical interconnection and distribution cables shall be removed and disposed off-site by an approved facility.
4. Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site by an approved facility.
5. Electrical and electronic devices, including transformers and inverters shall be removed and disposed off-site by an approved facility.
6. Concrete foundations shall be removed and disposed off-site by an approved facility.
7. Fencing shall be removed and will be disposed off-site by an approved facility.

2.2 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/fuel spills) 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 in order to mitigate erosion and silt/sediment runoff and any impacts on the significant natural features or water bodies located adjacent to the Facility 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 heavy machinery and an increase in trips to the project location. Work will be undertaken during daylight hours and conform to any applicable restrictions.

2.3 Site Restoration

Through the decommissioning phase, the Facility Site will be restored to a state similar to its pre-construction condition.

All project components (discussed in **Table 1**) will be removed. Rehabilitated lands may be seeded with a low-growing species such as clover to help stabilize soil conditions, enhance soil structure, and increase soil fertility.

2.4 Managing Materials and Waste

During the decommissioning phase a variety of excess materials and wastes (listed in **Table 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 appropriate facility. ONFORCE 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.

OnForce will be responsible for the logistics of collecting and recycling the PV modules and to minimize the potential for modules to be discarded in the municipal waste stream. 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 15 - 25 years. It is anticipated there will be more recycling options available for solar modules at that time. OnForce proposes to determine the best way of disposing of the solar modules using best management practices at the time of decommissioning.

Table 1: Management of Excess Materials and Waste

Material / Waste	Means of Managing Excess Materials and Waste
PV panels	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 aggregate can be processed for salvage. It will then be reused As fill for construction. It is not expected that any such material will be contaminated.
Geotextile fabric	It is assumed that during excavation of the aggregate, a large portion of the geotextile will be “picked up” and sorted out of The aggregate at the aggregate 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 certified and licensed contractor to a recycling or approved disposal facility.
Cables and wiring	The electrical line that connects the substation 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.

3.5 Decommissioning During Construction or Abandonment Before Maturity

In case of abandonment of the Solar Facility during construction or before its 20 year maturity, the same decommissioning procedures as for decommissioning after ceasing operation will be undertaken and the same decommissioning and restoration program will be honored, in as far as construction proceeded before abandonment. 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.

3.6 Decommissioning Notification

Decommissioning activities may require the notification of stakeholders given the nature of the works at the Facility Site. The local municipality in particular will be notified prior to commencement of any decommissioning activities. Six months prior to decommissioning, ONFORCE 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.

3.7 Approvals

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

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

