



DRAFT DECOMMISSIONING PLAN

for
Varano Solar Farm
270 & 276 Maple Avenue
Town of Goshen, Orange County, NY

March 18, 2020

Prepared For



**FOREFRONT
POWER**

Mr. Brian Maliszewski
Project Manager, Development
Forefront Power, LLC
100 Montgomery Street, Suite 1400
San Francisco, CA 94104

Prepared By

Maser Consulting P.A.
18 Computer Drive, Suite 203
Albany, NY 12205
518.459.3252

MC Project No.18001895A



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BACKGROUND

On behalf of Forefront Power (Operator/Owner), Maser Consulting PA has prepared this Decommissioning Plan (Plan) for the Varano Solar Farm. The 127.7+/- acres combined parcels are owned by Hans Parsoon (103+/- acres) and A. Varano (24.7+/- acres) located at 270 & 276 Maple Road, Goshen NY (the “Property”). The Facility consists of approximately 27 +/- acres where a 7.1 megawatt (MW) Direct Current (DC) and 5.0 MW Alternative Current (AC) solar electrical facility will be installed (the “Facility”).

The purpose of this Decommissioning Plan is to provide the general scope of decommissioning work as well as for a decommissioning assurance mechanism.

Facility Description

The Facility will include ground-mounted, “fixed-tilt” solar panel arrays, concrete equipment pads, battery containers and battery gravel pad, perimeter security fencing, conveyance swale, stormwater management facilities, and a gravel access road. The facilities, excluding most access roads will be secured within security fence surrounding the solar panels and equipment. The facility can be accessed via gates located off of the proposed access route. The Facility will generally include the following site features:

- 19,062+ PV Panels
- Area within fence-26+ Acres. Staging area and interconnection trenching 1+- Acre.
- Seven (7)-foot chain-link security fence
- Underground conduit and wires
- Three (3) Battery Containers measuring approximately 8-ft x 40-ft each.
- Two (2) Inverter and Transformer Pads
- A 15-foot wide internal gravel access road with various turnarounds
- Stormwater management facilities

The Facility will produce electricity delivered to Orange & Rockland’s local distribution system utilizing existing lines along Maple Avenue. Interconnection to Orange & Rockland’s system will include both underground and overhead wires along with new utility poles located on the Property.

The solar PV modules will be installed on fixed metal racking structures secured to the ground utilizing direct push/driven pile foundations. Direct Current (DC) wiring with the Facility will be secured behind the modules, collected at a common point and transition underground at the end of each PV row where wiring will be connected to the batteries and inverters. From the inverter/transformer pad, AC wiring will run underground until a point where it will surface and connect to a series of utility poles on the Property with equipment necessary for connecting to Orange & Rockland’s system.

The inverters and transformer skid will be mounted on a concrete pad located within the array. The two (2) separate pad used for this equipment will be approximately 34-feet x 13-feet each.

Decommissioning Activities

The Facility will be decommissioned by completing the following major steps:

- Dismantlement and Demolition;
- Disposal or Recycle; and
- Site Stabilization.



SECTION 1 – Decommissioning Plan

1.1 Introduction:

The Decommissioning Plan (the “Plan”) describes anticipated activities and process for decommissioning of the proposed facility following its useful life. The purpose of decommissioning is to restore the property to a clean, safe and, usable condition for continued use by the landowner.

Decommissioning consists of the removal of above-ground and below-ground facility components, management of excess materials and waste as well as the restoration of Facility lands, as applicable. Potential negative environmental effects from decommissioning of the facility will be mitigated through use of erosion and sediment control measures, limiting the use of heavy machinery (where possible), and maintaining a buffer from natural features. These control measures, as well as other mitigation measures used during construction will be re-implemented during the decommissioning phase and until the site is stabilized.

Future consultation will occur with the municipality prior to decommissioning to discuss preferences and commitments to restore the Facility to its pre-construction condition or a similar state. All decommissioning and restoration activities will adhere to the requirements set forth by Occupational Health and Safety Administration (OSHA) and will be in accordance with all applicable federal, state and local permitting requirements. As with the construction phase, an onsite manager responsible for safety will be present onsite (generally the contractor’s project manager) while decommissioning activities are taking place.

The decommissioning plan is based on current procedures and experience. These procedures may be subject to revision based on new experiences and requirements over time. At the time of decommissioning, various options and procedures will be re-evaluated to ensure that decommissioning is safe and beneficial to the environment.

1.2 Equipment Removal:

A significant amount of the components in the Facility could be recycled or sold, including copper, aluminum, galvanized steel, and modules. The Town of Goshen prefers any potential salvage value of components be omitted from this Plan. Therefore, costs within this Plan shall estimate demolition and disposal of equipment. However, this does not preclude the decommissioning contractor from salvaging and recycling components in order to promote a more environmentally considerate dismantling of the Facility.

Following coordination with the local utility company regarding timing and required procedures for disconnecting the Facility from the private utility, all electrical connections to the system will be disconnected and all connections will be tested locally to confirm that no electric current is running through them before proceeding. All electrical connections to the panels will be cut at the panel and then removed from their framework by cutting or dismantling the connections to the supports. Modules will be removed. However, in the event of a total fracture, the interior materials are silicon-based and are not considered hazardous materials and will be disposed of at a landfill as non-hazardous waste.

The photovoltaic mounting system framework will be demolished. The metal piles will be removed from their approximated depth of four-to-six feet.

Finally, all associated structures will be demolished and removed from the site for recycling or disposal within 90 Days, in accordance with Town Code Section 97-55(G)(6). This will include the site fence and



gates. Grade slabs will be demolished and removed to a depth of one foot below grade, and clean concrete will be crushed and disposed of off-site or recycled (reused either on- or off-site). Sanitary facilities will be provided on-site for the workers conducting the decommissioning of the Facility.

Any above-ground utility poles owned by Forefront Power will be completely removed and disposed of off-site in accordance with utility best practices. Any overhead wires will be removed from the area of the solar modules and terminated at the utility-owned (Orange & Rockland) utility.

A final site walkthrough will be conducted to remove debris and/or trash generated within the site during the decommissioning process and will include removal and proper disposal of any debris that may have been wind-blown to areas outside the immediate footprint of the facility being removed.

1.3 Site Stabilization:

The areas of the Facility that are disturbed during decommissioning will be regraded to establish a uniform slope and stabilized via hydroseeding with the ground treatment approved by the Building Inspector/Planning Board, including application of a drought-tolerant, local grass seed mix to surfaces disturbed during the decommissioning process. It is assumed that the regrading of the site to remove diversion dikes, swales and detention pond(s) is not required. Earth-moving required to remove these features will likely trigger additional permits.

SECTION 2 – PERMITTING

Approvals will be required prior to initiation of ground-disturbing activity. Noting, however, that because the decommissioning is expected to occur at a later date, the permitting requirements listed below will be reviewed and updated based on current local, state, and federal regulations at the time. Possible and trigger thresholds and required permits are listed below:

State Pollutant Discharge Elimination System (SPDES) Construction General Permit

- New York State Department of Environmental Conservation - Ground disturbance of greater than 1 acre requires preparation of a Storm Water Pollution Prevention Plan, including erosion and sedimentation controls.

Special Permit/Site Plan Approval

- Town of Goshen - Anticipated decommissioning requirements listed in the Special Use Permit and Site Plan Approval conditions of approval.

Building Permit

- A building permit (and/or demolition permit) will likely be required to construct the facility. A building permit must also be obtained for any construction, alteration, repair, demolition, or change to the use or occupancy of a building.

Permitting Requirement Assumptions

- No ground disturbance associated with decommissioning, including temporary laydown areas, is required within areas subject to additional local, state or federal permitting beyond what was originally permitted for this project.



SECTION 3 – SCHEDULE

The decommissioning process is estimated to take approximately six to eight (6-8) weeks, but no longer than six (6) months, subject to approval by the Town Board in accordance with Section 97-55(G)(6). The process is intended to occur outside of the winter season.

SECTION 4 – DECOMMISSIONING COST & ASSURANCE

4.1 Form of Decommissioning Assurance:

The financial security will be provided prior to issuance of Building Permit. Every five (5) years from the period of commencement of construction of the Facility through completion of decommissioning activities at the Facility.

Forefront Power shall provide a cash bond as deemed acceptable by the Town of Goshen.

4.2 Amount of Decommissioning Assurance:

The initial amount of the decommissioning assurance shall be determined concurrently with the design and engineering documents that will be submitted for building and electrical permits. Decommissioning Cost Estimate (attached) is prepared by Registered Professional Engineer in the New York State.

4.3 Use of Decommissioning Assurance:

In the event that Forefront Power fails to undertake decommissioning activities within one year of discontinued operations, the Town of Goshen shall have the right to undertake decommissioning activities and make a claim against the decommissioning assurance. Forefront Power agrees that in such circumstances that the Town of Goshen shall have such access to the site as may be necessary to allow its qualified contractors to conduct decommissioning activities. For purposes hereof,

Forefront Power #NY-17-0036 - Varano Solar Farm a.k.a. “FFP NY Goshen Project 2, LLC”

and the Town of Goshen agree that the “date of discontinued operations” shall be (i) the date of discontinued operations designated by Forefront Power in its notice to the Town of Goshen or (ii) in absence of such notice, the last day of a continuous period of twelve (12) months in which the Facility has not operated and where such inactivity is not the result of a casualty, equipment problem, permitting matter, financial matter or other issue that Forefront Power or the owner/operator is in good faith attempting to remedy.

Forefront Power agrees to indemnify and hold the Town of Goshen harmless from and against all net loss, cost and expenses, including court costs and reasonable attorney’s fees, related to and arising out of the Town of Goshen’s decommissioning activities, except to the extent such loss, cost or expenses relate to or arise out of the negligence, willful misconduct or violation of the law by the Town of Goshen, its officials, employees, contractors or agents.



SECTION 5 – ACKNOWLEDGEMENT AND APPROVAL

5.1 Town Acknowledgement:

The Town of Goshen Planning Board and Town Board hereby acknowledges receipt of this Decommissioning Plan and affirms that the Decommissioning Plan (assuming establishment of the escrow fund in the amount agreed on upon by the Town of Goshen and Forefront Power) satisfies the conditions of the Special Use Permit and Site Plan Approval relevant thereto.

The Town of Goshen

Date: _____

Signature

Signature

Print

Print

Title

Title

Signature

Signature

Print

Print

Title

Title

Signature

Signature

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Print

Title

Title



5.2 Property Owner Acknowledgement:

The Property Owner hereby acknowledges receipt of this Decommissioning Plan and affirms that the Decommissioning Plan (assuming establishment of the escrow fund in the amount agreed on upon by the Town of Goshen and Forefront Power) satisfies the conditions of the Special Use Permit and Site Plan Approval relevant thereto.

The Property Owner

Date: _____

Signature

Signature

Print

Print

Title

Title

SECTION 6 – DECOMMISSIONING ESTIMATE

Please see attached.

DECOMMISSIONING COST ANALYSIS for VARANO SOLAR FARM

	DESCRIPTION OF ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COST (2020)	DATA SOURCE
	I. DISASSEMBLY & DISPOSAL		EA			
2	Inverter(s)	2	EA	\$298.00	\$596.00	* Assume crews can remove 4/day.
3	Transformer(s)	2	EA	\$298.00	\$596.00	* Assume crews can remove 4/day.
4	Racking Frame (Fixed Tilt) and posts	794	EA	\$60.00	\$47,640.00	* Assume crews can remove 4/hour.
7	Battery Containers	3	EA	\$1,150.00	\$3,450.00	* Assume crews can remove 3/day.
8	MV Wiring	7,800	LF	\$1.00	\$7,800.00	* Assume crews can remove 3000 LF/day.
9	Fence	8,150	LF	\$2.00	\$16,300.00	* Assume crews can remove 500 LF/day.
11	Hard Surface Removals (gravel, concrete)	600	SY	\$4.00	\$2,400.00	* Assume crews can remove 50 CY/day.
13	Removal of 7 utility poles	7	EA	\$2,000.00	\$14,000.00	Estimate include labor and all required tools and vehicles
				SUBTOTAL	\$92,782.00	
	II. SITE RESTORATION					
16	Re-Seeding (includes seed)	1.5	AC	\$2,400.00	\$3,600.00	* Cost includes:(Seed: 4-7 species (native types)
17	Re-Grading	2,162	SY	\$4.00	\$8,648.00	* Assume crews can grade 900 SY/day.
				SUBTOTAL	\$12,248.00	
				TOTAL	\$105,030.00	
		TOWN Requirement 150% Value of 1st Year =			150%	
		CASH BOND VALUE=			\$157,545.00	Or as agreed by the Town of Goshen Planning Board