



## **FLAT CREEK SOLAR**

**Permit Application No. 23-00054**

### **Appendix 23-1 Decommissioning and Site Restoration Plan**

**August 2024**

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Attachment A. Cost Estimate

## **Appendix 23-1 Decommissioning and Site Restoration Plan**

### **23(a) Background**

On behalf of Flat Creek Solar NY LLC (Flat Creek), TRC has prepared this preliminary Decommissioning and Site Restoration Plan (the Plan) for the proposed Flat Creek Solar Project (Facility) located in the Town of Root and Canajoharie, Montgomery County, New York. The Facility is a utility-scale photovoltaic (PV) solar generating facility capable of generating 300 megawatts (MW). Project construction is expected to begin in 2026 with commercial operation commencing in 2028.

The Applicant's goal for decommissioning the Facility is to ensure the safest and most efficient removal of Facility components while restoring the land to its pre-construction condition to the greatest extent practicable. The same safety measures and protocols utilized during construction and operation of the Facility will be applied during the decommissioning and restoration process to ensure the safety of on-site personnel and the public.

The purpose of this Plan is to provide a general overview of the Facility's decommissioning as well as a cost estimate to act as a mechanism for decommissioning financial assurance. This Plan outlines the decommissioning activities required to remove Facility components and associated electrical and interconnection equipment, restore disturbed soil and vegetation, and return the site to a condition consistent with pre-development conditions, to the maximum extent practicable.

A Professional Engineer (PE) licensed in the State of New York prepared the decommissioning cost estimate, included as Attachment A. The cost estimate is based on experience in the design and construction of solar energy facilities and is subject to revision based on the final engineering design (Issued for Construction) to be prepared and submitted as a Compliance Filing prior to construction. Costs assume the work will be performed by a contractor experienced in the decommissioning and deconstruction of solar facilities.

#### ***(1) Facility Description***

The Facility will be constructed primarily on existing, previously disturbed agricultural land in areas with existing topography suitable for solar development. The limits of disturbance (LOD) for the Facility is 1,637 acres within land leased and/or purchased from private landowners.

Facility components will be enclosed in an agricultural style security fencing and are planned to consist of the following site features:

- 224,184 linear feet of perimeter security fence encompassing approximately 1,339-acres
- 77,654 linear feet or 14.7 miles of permanent access roads,
- 550,732 PV solar modules mounted on single-string single-axis tracker racking frames,
- 126,803 linear feet of collection line routing with a total of 279,890 linear feet of underground collection line (multiple cables may be placed in a single trench),
- 1.9-acre collection substation,
- 3.6-acre switchyard, and
- Seventy-nine (79) equipment skids, each supporting an alternating current (AC)/direct current (DC) inverter, a pad mount step-up transformer, and associated equipment and controls.

### **23(b) Decommissioning and Restoration**

Decommissioning of the Facility will include the disconnection of the Facility from the electrical grid, then the removal of Facility components. For decommissioning the Applicant shall:

- Be responsible for decommissioning costs,
- Commence decommissioning, removal, and legal disposal of Facility components,
- Remove and dispose of all aboveground infrastructure, such as solar panels, racking, inverters, etc.,
- Remove and dispose of qualifying underground infrastructure, such as underground medium voltage AC cables,
- Acquire permits not supplanted by Article VIII,
- Develop a Stormwater Pollution Prevention Plan (SWPPP) for construction activities related to the removal of access roads, equipment skids, fencing, and other soil disturbing activities (Exhibit 13, Appendix 13-2),

- Perform grading and completion of ground stabilization by revegetating or other means, in accordance with permits and in compliance with all applicable rules and regulations then in effect governing, and
- Recycle and/or salvage materials to the extent practicable and manage all waste streams in accordance with Federal, State, and local requirements.

In accordance with New York State Department of Agricultural and Markets (NYSDAM) Guidance (2019), all underground utilities and conduits installed at depths exceeding 48-inches below grade will be abandoned in-place to minimize disturbance of soils. There are no permanent stormwater facilities or detention basins proposed as part of the Facility.

### ***(1) Anticipated Operational Life of the Facility***

The Applicant anticipates that the Facility will be operational for a useful life of 35-years. If the Facility were to cease electric generation for a period of 12 consecutive months, decommissioning shall commence, unless the following conditions occur within the 12-month period:

- Repair, restoration, or improvement of a Facility component that affects electricity generation and that the repair, restoration, or improvement activity is diligently being pursued by the Applicant, or
- A Force Majeure event occurs. Force Majeure events include but are not limited to: causes or events beyond the reasonable control of, and without the fault or negligence of the party claiming Force Majeure, including acts of God; sudden actions of the elements such as floods, earthquakes, hurricanes, or tornadoes; sabotage; terrorism; war; riots; explosion; blockades; and insurrection.

### ***(2) Site Decommissioning Activities***

The Applicant will provide notice by mail to participating landowners, adjacent landowners, the Town of Root and Canajoharie, NYSDAM and the Office of Renewable Energy Siting and Electric Transmission (ORES), at least two weeks prior to the commencement of decommissioning.

The Applicant will coordinate with New York Power Authority (NYPA) to determine the schedule and procedure for disconnecting Facility infrastructure from the POI switchyard.

Once disconnection is completed, all Facility electrical connections will be disconnected and tested to confirm the system is de-energized prior to starting removal. The contractor will establish erosion and sedimentation controls before on-site decommissioning activity commences.

Following removal of all aboveground Facility components, including solar PV arrays, access roads, inverters, and the collection substation, the Facility Site will be restored to as close to pre- construction conditions as possible. Underground collection lines deeper than four (4) feet below grade will be abandoned in place in accordance with NYSDAM guidelines. Most underground collection lines will be buried less than 48 inches below ground and will be fully removed at decommissioning.

Decommissioning activities will include the following:

- Mobilization and Erosion and Sediment Control Best Management Practice (BMP) installation,
- Disassembly and removal of aboveground structures,
- Removal of subsurface structures to a minimum depth of 48 inches,
- Abandonment of underground collection lines greater than or equal to 48 inches below ground surface (BGS), and
- Disposal and/or recycling of removed Facility components,
- Re-grading and revegetating disturbed areas.

Most of the PV system components are recyclable or re-saleable, including copper, aluminum, galvanized steel, and electric motors. Due to their resale value, components will be dismantled and disassembled rather than being demolished and disposed of.

Perimeter erosion and sedimentation controls shall be installed in accordance with the current version of *New York State Standards and Specifications for Erosion and Sediment Control* (NYS Department of Environmental Conservation, 2016), prior to any earth disturbance.

All decommissioning activities shall be performed by qualified individuals. Electrical connections to PV modules will be cut and modules will be removed from the framework by cutting or dismantling the bolted connections to the supports. Modules will then be removed. The internal

materials of the selected PV modules are silicon-based and are not considered hazardous material. The decommissioning contractor will be responsible for assessing the condition of PV modules and managing proper disposal throughout the removal procedure.

Facility components such as PV module frames, racking systems, and other metal components, including driven support posts, perimeter fencing, and gates, will be removed from the site for recycling or disposal. Concrete slabs on grade will be broken on-site and removed for disposal. Culverts installed on Facility access roads will also be removed.

Aboveground utility poles and overhead conductors owned by the Applicant will be removed and disposed of off-site in accordance with utility best management practices (BMPs), and as required by the local utility. Underground utilities and conduits below grade at a depth of 48 inches or less will be located and removed. Components deeper than 48 inches will be abandoned in place, as detailed further above. Once equipment is removed from the site, access roads will be excavated to a depth that matches adjacent site grades. Removed aggregate will be hauled off-site and may be sold as clean fill. Geotextile fabric, geogrid, and geoweb will be removed for disposal.

### **(3) *Proposed Restoration Activities***

Decommissioning and removal of equipment will not result in excessive earth disturbance; however, some restoration and site stabilization will be required upon completion of decommissioning. Restoration activities will include back-filling of pile/foundation sites and detention basins, grading of surfaces to approximate pre-construction land contours and revegetation of disturbed areas. If required, site soils will be de-compacted by disking, tilling, or chisel-plowing to restore land to pre-construction characteristics. All access roads will be removed, as well as any geotextile material and culverts beneath the roads. During road removal activities, culverts and drainage infrastructure will also be removed; streams or drainage channels will be restored to preexisting elevations and stabilized in accordance with *New York State Standards and Specifications for Erosion and Sediment Control* (NYS Department of Environmental Conservation, 2016). Areas with access road, equipment skid, or detention basin removal will have topsoil redistributed post decommissioning. Disturbed areas will be seeded with a native grass seed mix to prevent topsoil erosion unless seeding is planned by the landowner. Effective site drainage will be maintained throughout the course of restoration activities.

Agricultural restoration will be completed in accordance with NYSDAM *Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands* (Revision 10/18/2019) to the maximum extent practicable and as applicable. An Environmental Monitor will be present on-site throughout the decommissioning and restoration process on agricultural land, as required by the NYSDAM Guidelines. Areas used for agricultural production prior to the construction and operation of the Facility will be identified by the landowner, the Montgomery County Soil and Water Conservation District, and/or the NYSDAM. Agricultural restoration has been further detailed in the Agricultural Plan included as Appendix 15-3 of this Application.

### **23(c) Safety and Environmental Impacts**

As stated above, the goal of decommissioning is to ensure the safe and efficient removal of Facility components while restoring occupied land to its pre-construction conditions to the greatest extent practicable. This reclamation effort may include, but is not limited to, restoration of native vegetation, habitat, and/or land use. Erosion and sediment controls and stormwater management measures will be utilized to maintain downstream water quality and prevent soil erosion and sedimentation and/or adverse impacts that may result from stormwater runoff. Any hazardous fluids or materials will be removed in accordance with the Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and/or State standards. Additionally, the safety protocols used during construction and operation of the Facility will be applied for the decommissioning and restoration efforts. Following the removal of all applicable aboveground and underground facilities, revegetation of the Facility Site will take place.

#### **(1) Safety and the Removal of Hazardous Conditions**

Decommissioning includes the removal of Facility components and any associated hazardous conditions. The safety protocols used during construction and operation of the Facility will be applied for the decommissioning and restoration efforts. During the decommissioning process fuels and lubricating oils may be present on-site, and when encountered will be managed in accordance with the Spill Prevention, Control, and Countermeasure (SPCC) Plan. Any hazardous fluids or materials will be removed in accordance with the OSHA, EPA and/or State standards.



## **(2) Environmental Impacts**

As stated previously, restoration efforts may include, but are not limited to, restoration of native vegetation, habitat, and/or land use (i.e., agricultural use). Erosion control and stormwater management measures will be utilized to maintain downstream water quality and prevent soil erosion and/or adverse impacts that may result from stormwater runoff. Environmental impacts will be minimized to the maximum extent practicable during decommissioning of the Facility and land restoration activities. Following the removal of the Facility components, select grading and revegetation will occur.

## **(3) Aesthetics**

All Facility-owned above ground features such as PV arrays, inverters, collection substation, and gen-tie line will be removed during the decommissioning process, and the site will be restored according to the Plan. Access roads and Project landscaping will be removed. Disturbed areas will be revegetated using a native seed mix.

## **(4) Recycling**

Facility components and materials will be sold, salvaged, and/or recycled to the maximum extent practicable by approved facilities, with preference given to local recycling/salvage facilities, if available. Facility components may be relocated or reused if feasible. Metal components (steel, copper, and aluminum), including solar array racking, will be salvaged and sold for scrap metal if not reused. Gravel removed from the access roads may be removed or reused.

Components with no resale value will be salvaged and sold as scrap for recycling or disposed of at an approved off-site licensed solid waste disposal facility. Most of the materials to be removed have salvage value, although there are some components that will likely have none at the time of decommissioning. All recyclable materials with no salvage value will be recycled to the extent possible. All other nonrecyclable waste materials will be disposed of in accordance with state and federal law in an approved licensed solid waste facility. See Attachment A for details related to salvage price of Facility components.

### **(5) Potential Future Uses for the Site**

The Facility Site has multiple potential future uses, including continued solar generation. At operating solar facilities with access to transmission facilities, solar resources, and interested landowners, the Applicant prefers to redevelop or repower solar facilities, as opposed to decommissioning. The Facility Site primarily consists of agricultural and residential uses, and vacant land. If decommissioning is determined to be the most optimal option for the site, as opposed to repowering as previously discussed, lands previously used for agricultural production may resume upon decommissioning. Operation and decommissioning of the Facility will not restrict future uses of the land for agricultural or alternate uses.

### **(6) Funding**

#### *(i) Estimated Cost of Decommissioning*

A decommissioning cost estimate was prepared under the direction of a PE licensed in the State of New York and is included as Attachment A.

The Applicant will provide financial assurance in an amount equal to the net decommissioning cost estimate included as Attachment A. The amount of the initial assurance to cover Facility decommissioning shall be the value estimated in Attachment A. The initial amount of the financial assurance also includes estimated costs, expenses, and disbursements likely to be incurred by the Towns in connection with the enforcement, oversight, and administration of the decommissioning of the Facility should the Applicant fail to decommission the Facility. This includes reasonable engineering fees, attorney's fees, and other costs related to decommissioning the Facility in accordance with this Decommissioning & Site Restoration Plan.

The estimated cost of decommissioning the Facility is approximately **BEGIN CONFIDENTIAL INFORMATION < [REDACTED] > END CONFIDENTIAL INFORMATION**. A detailed cost analysis for the decommissioning efforts is provided as **Attachment A**. The financial assurance will be reevaluated after one (1) year of operation and every fifth year thereafter and adjusted for inflation/cost increases. The evaluation will be performed by a PE licensed in the State of New York.

The following assumptions were made to estimate the cost of decommissioning the Facility:

- Costs derived from the 2024 RS Means Site Work & Landscaping Costs estimating manual.
- Post removal includes backfilling holes.
- POI switchyard is owned and operated by the utility company and will not be decommissioned as part of this Plan.
- Collection line buried greater than 48 inches below grade will be abandoned in-place.
- Salvage costs obtained from <http://rockawayrecycling.com/> using 30-Day Average price (6/2024).

(ii) *Financial Assurance*

Financial assurance will be provided by the Applicant in the form of a letter of credit (LOC) or other financial assurance approved by ORES (e.g., surety bond or performance bond) to be held by the Towns of Root and Canajoharie covering the estimated decommissioning and restoration activities (plus a 15 percent contingency cost) less the total projected salvage value of Facility components. The Applicant is seeking waivers from the Towns of Canajoharie and Root regarding decommissioning security requirements.

The Town of Canajoharie’s decommissioning requirement that a decommissioning security be 150% of the cost of removal, updated every three years, and prohibiting the inclusion of salvage value are all significantly more burdensome than the Uniform Standards and Conditions (USCs) established by ORES. Additionally, the Town of Root’s decommissioning requirement that a decommissioning security be 125% of the cost of removal, with an escalator of two percent, and which prohibits the inclusion of salvage value are all significantly more burdensome than the USCs established by ORES. The justification for the Applicant to seek a waiver of these provisions is based on factors of costs and economics and is further outlined in Exhibit 24 (*Local Laws and Ordinances*). Additional information regarding each type of potential financial assurance and justification can be found below.

**Letter of Credit:** A standby LOC is a form of collateral/credit support issued by a bank (issuer) to guarantee timely payment to a creditor (LOC beneficiary) on behalf of an obligor (LOC applicant). The LOC is evidenced by a letter provided by the issuer and has a maximum dollar value. In the event the obligor becomes unable to satisfy its obligation or perform under a

contract, the creditor has the right to present the letter to the bank which will satisfy the obligation up to an amount that does not exceed the maximum dollar value. The Applicant then becomes obligated to pay the bank for the amount of the draw. LOCs are used when payment can satisfy decommissioning and restoration obligations.

**Surety Bond:** A Surety Bond is a form of collateral/credit support backed by a three-party agreement whereby a surety company assures the obligee (recipient of an obligation) that the principal (in this case, the Applicant) will perform a contract obligation or responsibility. Surety Bonds are typically used when a customer requires support for decommissioning and restoration, performance of a task to a certain requirement, and other requirements.

**Performance Bond:** A Performance Bond is a type of Surety Bond, where the obligee requires security that a task is completed in a satisfactory manner, typically applying to construction activities. A Performance Bond could also apply to a decommissioning obligation of the Applicant's contractor; however, a Decommissioning Bond is more applicable for the purposes of this section of the Application. A Decommissioning Bond is another type of Surety Bond. It is a financial guarantee that ensures proper removal of equipment and restoration of the environment to its pre-existing state. A decommission bond relieves the burden from landowners and taxpayers and puts the responsibility of proper decommissioning on the Facility owner. The Applicant will consult with the Towns and ORES Staff to determine an acceptable form of financial assurance. Use of a LOC or bond would remain in effect for the life of the Facility until decommissioning concludes.

### **(7) Schedule**

Decommissioning shall begin once the Facility has ceased operating as a solar energy facility, meaning it is no longer collecting, transferring, or distributing energy to the electrical grid, for a continuous period of 12 months. If the Facility is temporarily non-operational due to maintenance, repair, or catastrophic events beyond the Applicant's control, and efforts are being made to restore the Facility to operating status, these periods shall not count towards the 12-month threshold for triggering the decommissioning requirements herein. Prior to the commencement of decommissioning activities, the Facility will be shut down, de-energized, and disconnected from the generation tie line at the collection substation. The Applicant will coordinate with the Utility for de-energization efforts to ensure disruption to the overall electric utility system does not occur.

Written notice will be provided to the Towns, landowners, and ORES no less than 14 days prior to commencement of decommissioning activity.

Decommissioning, dismantling, and demolition of the Facility is anticipated to occur within 12 months to ensure that each phase of decommissioning and restoration is conducted under appropriate conditions, ensuring effective results. This timeline may be extended if there is a delay beyond the control of Applicant including, but not limited to, inclement weather conditions, planting requirements, equipment failure, or the availability of equipment or personnel to support decommissioning. Soil disturbance will not take place during months when the soil is typically frozen, but removal of above ground equipment may occur during winter months.

The Applicant is requesting a waiver from the Town of Root's requirement of the six-month decommissioning time frame, and the Town of Canajoharie's 150-day timeframe, as these time frames are unreasonably restrictive. Specifically, decommissioning activities cannot effectively take place during the winter months when soils are typically frozen. Frozen ground presents significant challenges for removal of underground equipment, for example. Furthermore, the restoration phase of decommissioning is heavily dependent on seasonal conditions to ensure proper vegetative growth. Attempting to restore vegetation outside the optimal growing seasons would likely result in poor establishment, potentially leading to increased erosion risk. Therefore, these short decommissioning timeframes would not allow sufficient time to align these activities with the necessary environmental conditions, ultimately compromising the quality and sustainability of decommissioning and restoration efforts. Refer for Exhibit 24. Local Laws and Ordinances for additional information of waiver requests.

## References

NYDEC (2016). New York State Standards and Specifications for Erosion and Sediment Control. Available: [erosionsediment\\_bluebook.pdf \(ny.gov\)](#). Accessed June 2024.

DESCRIPTION OF ITEM	QUANTITY	UNIT	UNIT RATE	TOTAL COST (2024)	LOGIC
<b>I. DISASSEMBLY &amp; DISPOSAL</b>					
1 PV Modules	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2 Central Inverters	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3 MV Transformers	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
4 Racking Frame (Single Axis Tracker)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
5 Racking Posts	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6 Tracker Motors	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
7 LVDC Wiring	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
8 MV AC Wiring	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
9 Fence	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
10 Fence Post Foundation Removal	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
11 Equipment Pad Removal	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
12 Gravel Eq. Pad Area	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
13 Gravel Access Drive	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
14 Culverts	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
15 General Demolition	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
16 Landscaping Removal	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
			SUBTOTAL	\$ [REDACTED]	
<b>II. COLLECTION SUBSTATION</b>					
17 Collector Substation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
18 Substation Transformer	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
19 34.5kV Breaker	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
20 34.5kV Cap Bank	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
21 345kV Breaker	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
22 OH transmission - 7/16" 7 strand E.H.S. Steel shield wire	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
23 OH transmission - 1351.5 MCM 45/7 ACSR conductor	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
24 Foundation Excavation/Hauling	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
25 Pad Excavation/Hauling	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
26 Substation Fence	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
27 Tipping Fees	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
			SUBTOTAL	\$ [REDACTED]	
<b>III. SITE RESTORATION</b>					
28 Re-Seeding	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
29 Re-Grading	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
			SUBTOTAL	\$ [REDACTED]	
<b>IV. INDIRECT COSTS</b>					
30 Engineering Fees	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
31 Permitting Fees	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
32 Public Road Damage Repair	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
33 Temporary Office Trailer	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
34 Toilet, Portable Chemical	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
35 Field Management - Superintendent	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
36 Field Management - Foreman	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
37 Environmental Monitor	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
			SUBTOTAL	\$ [REDACTED]	





**DECOMMISSIONING COST ANALYSIS  
FLAT CREEK SOLAR PROJECT PER TOWN OF CANAJOHARIE LOCAL LAW**

REDACTED – Matter No. 23-00034

Item	Quantity	Unit	Rate	Amount
<b>V. SALVAGE</b>				
38 PV Modules	█	█	█	█
39 Inverter(s)	█	█	█	█
40 Transformer(s)	█	█	█	█
39 Equipment Pad	█	█	█	█
40 Substation Transformer	█	█	█	█
41 Module Trim (Aluminum)	█	█	█	█
42 Frame Torque Tube (Steel)	█	█	█	█
43 Racking Posts (Steel)	█	█	█	█
44 Substation Steel	█	█	█	█
45 Tracker Motors	█	█	█	█
46 LVDC Wiring (Insulated Cable)	█	█	█	█
47 MV Wiring (Insulated Cable)	█	█	█	█
48 HV Wiring (Bare Cable)	█	█	█	█
50 Perimeter Security Fence (Steel)	█	█	█	█
51 Trucking Cost	█	█	█	█
<b>SUBTOTAL</b>				<b>\$ █</b>

  

<b>TOTAL 2024 DEMOLITION COST (Items I - IV)</b>	<b>\$ █</b>
<b>CONTINGENCY (50%)</b>	<b>\$ █</b>
<b>GROSS DECOMMISSIONING COST</b>	<b>\$ █</b>
<b>2024 SALVAGE VALUE CREDIT (ITEM V)</b>	<b>\$ █</b>
<b>TOTAL DECOMMISSIONING AMOUNT</b>	<b>\$ █</b>
<b>DECOMMISSIONING BOND AMOUNT</b>	<b>\$ █</b>

  

Legend:

References:

\* = Costs derived from RS Means manual Sitework & Landscape Costs  
 \*\* = Assumes no annual increase in labor costs and no annual increase in salvage value (the estimate will be re-evaluated every 5 years)  
 ATRI = American Transportation Research Institute

- The decommissioning cost estimate was prepared under the supervision of a professional engineer licensed in the State of New York. The opinion of probable costs is based on our experience in the design and construction of solar energy facilities and is subject to final engineering design. Costs assumes the work will be performed by a contractor experienced in the decommissioning and deconstruction of solar facilities.





**DECOMMISSIONING COST ANALYSIS  
FLAT CREEK SOLAR PROJECT PER TOWN OF ROOT LOCAL LAW**

REDACTED – Matter No. 23-00034

DESCRIPTION OF ITEM	QUANTITY	UNIT	UNIT RATE	TOTAL COST (2024)	LOGIC
<b>I. DISASSEMBLY &amp; DISPOSAL</b>					
1 PV Modules					
2 Central Inverters					
3 MV Transformers					
4 Racking Frame (Single Axis Tracker)					
5 Racking Posts					
6 Tracker Motors					
7 LVDC Wiring					
8 MV AC Wiring					
9 Fence					
10 Fence Post Foundation Removal					
11 Equipment Pad Removal					
12 Gravel Eq. Pad Area					
13 Gravel Access Drive					
14 Culverts					
15 General Demolition					
16 Landscaping Removal					
			SUBTOTAL	\$	
<b>II. COLLECTION SUBSTATION</b>					
17 Collector Substation					
18 Substation Transformer					
19 34.5kV Breaker					
20 34.5kV Cap Bank					
21 345kV Breaker					
22 OH transmission - 7/16" 7 strand E.H.S. Steel shield wire					
23 OH transmission - 1351.5 MCM 45/7 ACSR conductor					
24 Foundation Excavation/Hauling					
25 Pad Excavation/Hauling					
26 Substation Fence					
27 Tipping Fees					
			SUBTOTAL	\$	
<b>III. SITE RESTORATION</b>					
28 Re-Seeding					
29 Re-Grading					
			SUBTOTAL	\$	
<b>IV. INDIRECT COSTS</b>					
30 Engineering Fees					
31 Permitting Fees					
32 Public Road Damage Repair					
33 Temporary Office Trailer					
34 Toilet, Portable Chemical					
35 Field Management - Superintendent					
36 Field Management - Foreman					
37 Environmental Monitor					
			SUBTOTAL	\$	



**DECOMMISSIONING COST ANALYSIS  
FLAT CREEK SOLAR PROJECT PER TOWN OF ROOT LOCAL LAW**

REDACTED – Matter No. 23-00034

Item Description	Quantity	Unit	Rate	Total Cost
<b>V. SALVAGE</b>				
38 PV Modules	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
39 Inverter(s)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
40 Transformer(s)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
39 Equipment Pad	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
40 Substation Transformer	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
41 Module Trim (Aluminum)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
42 Frame Torque Tube (Steel)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
43 Racking Posts (Steel)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
44 Substation Steel	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
45 Tracker Motors	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
46 LVDC Wiring (Insulated Cable)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
47 MV Wiring (Insulated Cable)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
48 HV Wiring (Bare Cable)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
50 Perimeter Security Fence (Steel)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
51 Trucking Cost	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>SUBTOTAL</b>				<b>\$ [REDACTED]</b>

  

<b>TOTAL 2024 DEMOLITION COST (Items I - IV)</b>	<b>\$ [REDACTED]</b>
<b>CONTINGENCY (25%)</b>	<b>\$ [REDACTED]</b>
<b>GROSS DECOMMISSIONING COST</b>	<b>\$ [REDACTED]</b>
<b>2024 SALVAGE VALUE CREDIT (ITEM V)</b>	<b>\$ [REDACTED]</b>
<b>TOTAL DECOMMISSIONING AMOUNT</b>	<b>\$ [REDACTED]</b>
<b>DECOMMISSIONING BOND AMOUNT</b>	<b>\$ [REDACTED]</b>

  

Legend:

\* = Costs derived from RS Means manual Sitework & Landscape Costs

\*\* = Assumes no annual increase in labor costs and no annual increase in salvage value (the estimate will be re-evaluated every 5 years)

ATRI = American Transportation Research Institute

References:

- The decommissioning cost estimate was prepared under the supervision of a professional engineer licensed in the State of New York. The opinion of probable costs is based on our experience in the design and construction of solar energy facilities and is subject to final engineering design. Costs assumes the work will be performed by a contractor experienced in the decommissioning and deconstruction of solar facilities.

**DECOMMISSIONING COST ANALYSIS -TOWN OF ROOT, NY  
PER TOWN OF ROOT, NY LOCAL LAW  
CORDELIO POWER LP- FLAT CREEK SOLAR NY,LLC  
Net Decommissioning and Financial Security Schedule**

Project Year	TOWN 125% TOTAL COST	TOWN 125%+2% TOTAL COST
1	\$ [REDACTED]	\$ [REDACTED]
2	\$ [REDACTED]	\$ [REDACTED]
3	\$ [REDACTED]	\$ [REDACTED]
4	\$ [REDACTED]	\$ [REDACTED]
5	\$ [REDACTED]	\$ [REDACTED]
6	\$ [REDACTED]	\$ [REDACTED]
7	\$ [REDACTED]	\$ [REDACTED]
8	\$ [REDACTED]	\$ [REDACTED]
9	\$ [REDACTED]	\$ [REDACTED]
10	\$ [REDACTED]	\$ [REDACTED]
11	\$ [REDACTED]	\$ [REDACTED]
12	\$ [REDACTED]	\$ [REDACTED]
13	\$ [REDACTED]	\$ [REDACTED]
14	\$ [REDACTED]	\$ [REDACTED]
15	\$ [REDACTED]	\$ [REDACTED]
16	\$ [REDACTED]	\$ [REDACTED]
17	\$ [REDACTED]	\$ [REDACTED]
18	\$ [REDACTED]	\$ [REDACTED]
19	\$ [REDACTED]	\$ [REDACTED]
20	\$ [REDACTED]	\$ [REDACTED]
21	\$ [REDACTED]	\$ [REDACTED]
22	\$ [REDACTED]	\$ [REDACTED]
23	\$ [REDACTED]	\$ [REDACTED]
24	\$ [REDACTED]	\$ [REDACTED]
25	\$ [REDACTED]	\$ [REDACTED]
26	\$ [REDACTED]	\$ [REDACTED]
27	\$ [REDACTED]	\$ [REDACTED]
28	\$ [REDACTED]	\$ [REDACTED]
29	\$ [REDACTED]	\$ [REDACTED]
30	\$ [REDACTED]	\$ [REDACTED]

\* Financial security to be reevaluated after one year of operation and every fifth year thereafter, and adjusted for inflation/cost increases.