NORTH SENECA
SOLAR PROJECT

APPENDIX 23-A
Decommissioning and Site Restoration Plan
ORES Permit Application No. 23-00036

REVISION 1

Decommissioning and Site Restoration Plan
North Seneca Solar Project
Seneca County, New York

February 2024
Revision 1: August 2024
ECT No. 230590-0300

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Document Review

The dual signatory process is an integral part of Environmental Consulting & Technology, Inc.'s (ECT's) Document Review Policy. All ECT documents undergo technical/peer review prior to dispatching these documents to any outside entity.

This document has been authored and reviewed by the following employees:

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Signature 	Signature 
08-16-2024	08-16-2024
Date	Date

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1.0 Introduction

North Seneca Solar Project, LLC (the Applicant) contracted Environmental Consulting & Technology, Inc. (ECT) to prepare a Decommissioning and Site Restoration Plan (Plan) for the North Seneca Solar Project (Project). The Project includes the construction and operation of an up to 90-megawatt alternating current (MW AC) solar electric generating facility (the Facility) located on approximately 940 acres in the towns of Junius and Waterloo, Seneca County, New York (the Facility Site). This Plan was prepared to ensure proper decommissioning and restoration of the Project and to meet the requirements of Title 19 New York Codes, Rules, and Regulations (19 NYCRR) §900-2.24, and applicable substantive local law provisions contained in the Town of Waterloo Town Code, Chapter 134: Solar Energy Systems, and its associated decommissioning standards, which the Owner of the Facility (i.e., the Applicant or its successors or assignees) will adhere to. For additional details regarding applicable substantive local law provisions, and waivers sought by the Applicant from certain decommissioning requirements, refer to Exhibit 24.

The Project is a commercial solar energy system (CSES) capable of providing up to 90-MW AC, enough to generate clean, renewable electricity for approximately 12,140 New York homes. The Facility components will include photovoltaic (PV) solar panels that will be mounted on a single-axis tracking system, along with associated infrastructure of electric inverters, transformer, underground electrical collection system, collection substation, point of interconnection (POI) switchyard, private access roads with gated ingress/egress points, security fencing, a storage trailer, and any other associated facilities. Temporary facilities associated with construction will include construction laydown yards.

The Facility Site is situated on approximately 940 acres total of participating and private lands that are primarily rural in character and located in the towns of Junius and Waterloo. Within the Facility Site, approximately 390 acres will be occupied by Facility components contained within security fencing. The up-to-90-MW AC CSES will connect to the National Grid-owned 115-kilovolt (kV) transmission line that runs through the Facility Site. The Facility's collection substation, which will be owned and operated by the Applicant, will be collocated with the POI substation. The Facility layout has been developed to optimize the solar resource while minimizing impacts on natural resources and other existing infrastructure. While some tree clearing will be necessary for installation of portions of Facility components, the majority of the Facility components are concentrated on open, agricultural fields requiring minimal to no clearing or grading during construction.

1.1 Purpose of the Plan

The purpose of this Plan is to ensure that, in the event the Project cannot be completed, after the expiration of the operational life of the Facility, or abandonment of the Facility, the Facility components will be removed, and the Facility Site will be restored by implementing the Decommissioning and Site Restoration Plan, as approved by the New York Office of Renewable Energy Siting (ORES) and as consistent with the requirements of 19 NYCRR §900-6.6. Facility decommissioning and restoration will abide by town requirements, with the exception of those from which the Applicant has obtained waivers from ORES.

The Plan also acknowledges the requirement for the Applicant to provide financial security in the form of a letter of credit, performance surety bond, or such other form of financial assurance as approved by ORES, prior to the commencement of civil construction and equal to the net cost to decommission the Project and reconstitute the land, which considers the gross cost plus 15% contingency, less the salvage value of decommissioned equipment. Consistent with the Town of Waterloo's local law requirements applicable to financial security, the Applicant will establish financial security for the Town of Waterloo in the form of a performance surety bond. See Exhibit 24 for additional information regarding compliance with applicable local laws. The financial security will remain in place for the life of the Facility and the completion of decommissioning and restoration of the Facility Site. The net amount will be allocated between the towns of Junius and Waterloo, based on the estimated cost associated with the removal and restoration of the facilities located in each town.

This Plan provides a description of the decommissioning activities for all Facility components, including removal procedures, schedules, and planned restoration of the land. Estimated costs are provided based on the proposed 90-MW AC Facility design. This Plan will be updated as necessary in the future to reflect changes in market rates and prices, regulatory requirements, and to consider any new developments in technology and site restoration methods.

1.2 Facility Components

Table 1 indicates the estimated primary components and associated infrastructure of the Facility. Further cost assessments, units, and values associated with the Facility components are described in Section 2.5 of this Plan.

Table 1. Primary Facility Components to be Decommissioned (Townships Combined)

Component	Quantity (approximate)	Unit of Measure
Solar Modules	174,000	EA
Tracking System (equivalent full trackers)	2,700	EA
Steel Piles	26,352	EA
Inverters	24	EA
Fencing	70,444	Linear Ft
Access/Internal Roads	451,216	Ft^2
Collection Substation	1	EA
Main Transformer (at Collection Substation)	1	EA

1.3 Anticipated Project Life

The Owner of the Facility is responsible for the decommissioning and restoration of the Facility. Commercial-scale solar facilities are designed to operate for approximately 35 years. The Applicant will provide financial assurance to ensure that sufficient funds will be available for decommissioning and site restoration in the event the Facility cannot be completed, after the Facility has reached the end of its useful life, or if the Facility is abandoned. The expected operational life of the Facility is approximately 35 years, and the Applicant shall establish financial security for the towns of Waterloo and Junius in the form (letter of credit, performance surety bond, etc.), of security acceptable to the towns, prior to the commencement of civil construction, which will be in place for the life of the Facility and until decommissioning and restoration activities are completed.

As further detailed in Exhibit 24, the Applicant has requested a waiver of the Town of Waterloo's 6-month abandonment time period. Should the Facility cease electric generation activities for a period of 12 consecutive months, decommissioning shall commence, unless the following scenarios occur during the 12-month period:

- Repair, restoration, or improvement of a Facility component that affects electricity generation and 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 unforeseeable or unavoidable catastrophes or natural disasters such that it makes the performance impracticable or impossible.

2.0 Site Decommissioning and Restoration Performance Criteria

The Applicant acknowledges that all above-ground Facility components and any underground structures located within four (4) feet below grade in agricultural land and three (3) feet below grade in non-agricultural land shall be removed offsite and disposed of or recycled. Potential exceptions to removal of Facility components may include: (i) access roads or driveways that are located on private property and if the property owner requests in writing to the Applicant for such to remain, as may be allowed by federal, state, and local laws at the time of decommissioning, and (ii) the POI substation and its associated generation interconnection infrastructure not owned by the Applicant at the time of decommissioning, including any stormwater control measures or visual screening necessary to remain on-site for operation of the facilities not owned by the Applicant.

Engineering estimates include the work and costs for the removal of all permanent and temporary Facility components. These components are herein defined as all man-made items and roadway materials imported for the use of the property to support the Facility. The exception to this statement is if the Facility landowner(s) elects to retain portions of fencing and/or roadways to help support the land for future agricultural production. These items will be denoted in an agreement signed between the Facility landowner(s) and the Facility's Operations Management. Otherwise, all materials will be removed as proposed within this Plan.

To note, the Facility's collector substation and related main transformer and all other associated infrastructure such as foundations, fencing, and other electrical components will be removed and restored as part of this Plan and are calculated into this Plan's costs. However, the POI substation and its associated generation interconnection infrastructure, including generation tie-line, will be deeded to National Grid at the start of Facility operation and therefore will not be owned by the Applicant at the time of decommissioning are not included in this Plan and associated cost estimates.

2.1 Safety and Removal of Hazardous Conditions

The Applicant will ensure that any tasks associated with decommissioning of the Project will be supervised and completed by trained contractors who are qualified and familiar with the risks associated with decommissioning of electrical and potentially hazardous materials. The contractor(s) commissioned to commence the decommissioning activities will be required to provide a safety plan

for all on-site workers prior to mobilization for conducting such activities. The contractor(s) will also be required to establish a Spill Prevention Control and Countermeasure (SPCC) Plan.

The only hazardous materials anticipated to be used by the Facility components are cooling oils and lubricants contained within transformers, which will be drained and recycled or disposed of in accordance with applicable federal, state, and local requirements.

2.2 Noticing

Prior to decommissioning, the Applicant will notify the ORES, the New York State Department of Agriculture and Markets (NYSDAM), Facility landowners, Seneca County, the towns of Junius and Waterloo, and other required parties of its intent to begin the decommissioning and restoration process at least two (2) weeks prior to the commencement of activities. Prior to this notification, the Applicant will consult with Facility landowners to determine their preference for the removal of certain Facility components, including those described in Section 2.0 of this Plan, and as may be allowed by federal, state, and local laws at the time of decommissioning.

2.3 Environmental Impacts, Protection Measures, and Approvals

The decommissioning and restoration activities are not expected to have significant environmental impacts. However, decommissioning activities will involve ground disturbance, which may result in a similar level of impact to adjacent resources as during construction of the Facility. Stormwater and erosion control measures will be installed and remain in place until the restored Facility Site is stabilized. As stated in Section 2.1 of this Plan, contractor(s) will be required to establish an SPCC Plan. Additionally, a qualified Environmental Monitor (EM) will be on-site and work together with the on-site construction manager to monitor compliance with the environmental permits and regulations pertaining to the Facility Site. Additional potential impacts from typical decommissioning activities include temporary elevated noise as a result of deconstruction efforts, similar to levels anticipated during the Facility's construction phase. However, these activities are temporary and will take place during ORES established construction hours from 7 a.m. to 8 p.m., Monday through Saturday, and 8 a.m. to 8 p.m. on Sundays and national holidays. These hours are also consistent with the Town of Waterloo's noise requirements for construction activities.

The Applicant commits to obtaining all required approvals prior to the start of decommissioning and implementing responsible Best Management Practices (BMPs) to the greatest extent practicable which may include, but are not limited to the following:

- United States Army Corps of Engineers permits for activities such as, but not limited to the placement of fill, dredging of material, draining surface water, or removing a structure within a regulated wetland, stream, or floodplain.
- A Stormwater Pollution Prevention Plan (SWPPP) will be prepared to include BMPs for construction and decommissioning that might include construction entrances, silt fencing, temporary seeding, permanent seeding, mulching (in non-agricultural areas), erosion control matting, filter berms, and filter socks, in accordance with New York State Standards and Specifications for Erosion and Sediment Control.
- Minimizing disturbed areas and stabilizing work area soils as quickly as possible.
- Protect slopes and exposed soils.
- Establishing, controlling, and maintaining perimeter controls around disturbed areas and areas that are to be restored.
- Retaining sediment to prevent off-site transportation in stormwater runoff.

2.4 Aesthetics

Once decommissioning efforts are completed, site restoration efforts will begin. Agricultural lands used for the Facility will be returned to their former state, where suitable conditions exist. Restoration of agricultural land will be performed in accordance with landowner agreements and NYSDAM's Solar Energy Project's - Construction Mitigation for Guidelines for Agricultural Lands. Suitable conditions are those areas of the Facility where topsoil nutrient level and volume of land supporting agricultural use before solar development currently exist. Development of the land to support the Facility will not remove the topsoil from properties. Restoration activities will include re-grading to restore land contours. The disturbed areas that are currently utilized for agricultural purposes will be restored for potential agricultural purposes to the highest extent practicable, utilizing the NYSDAM guidelines to ensure increased agricultural viability and aesthetics. If disturbed areas previously used for agricultural purposes are identified at the time of decommissioning to not be utilized for future agricultural use, these areas will be revegetated with an appropriate seed mix based upon regional conditions and will consist of native or naturalized plant species. An appropriate seed mix will also be planted in areas where tree clearing has occurred, resulting in a grassy/meadow condition.

Once decommissioning and restoration efforts are complete, the land will resemble its pre-development state to provide the opportunity to resume any prior agricultural use or other permitted uses at the discretion of the landowner.

The Applicant will comply with the conditions agreed upon by the ORES and/or as directed by other federal, state, or local regulations applicable to the Project at the time of decommissioning and restoration.

2.5 Salvage and Recycling

To complete decommissioning, Facility components will be dismantled on-site and removed safely by use of conventional construction equipment. Reselling valuable scrap materials is a common practice in the demolition and decommissioning of facilities because the resale of valuable materials can offset the cost of decommissioning. Materials such as steel, aluminum, copper, glass, and semiconductor materials have well-established recycling market values. Components that are anticipated to have resale value at the time of decommissioning include fencing, tracking systems, steel piles, inverters, and some cabling. These materials are expected to be recycled off-site by an approved recycling facility/contractor. Materials that have lesser or no value at the time of decommissioning will be recycled when possible or hauled offsite to an appropriate licensed solid waste disposal facility. Gravel and aggregate will be broken up and transported off-site to be recycled and/or disposed of prior to regrading and restoration of these areas. Disposing PV panels at an appropriate disposal facility is a last resort measure, not anticipated by the Applicant.

2.6 Potential Future Uses

Lease agreements between the Applicant and participating landowners, approved prior to construction, provide adequate provisions guaranteeing that the Applicant must return the land to pre-construction conditions to the maximum extent practicable upon lease agreement termination. The lease agreements also provide parties with other options to consider at the Facility's end of life, if agreed upon. If the Facility is operating effectively, parties may choose to extend leases between the landowner and the Owner of the Facility. The parties may also consider repowering Facility components in accordance with any required federal, state, or local requirements. Alternatively, and upon Facility termination, the landowners may choose to implement a variety of approved land uses, including any previously conducted agricultural uses or other land uses permitted by the ordinances and codes of the host municipalities. For the purposes of this Plan, it is assumed that potential future

uses of the lands used for the Facility will be agricultural and/or grassland, with lands being returned to their existing use to the highest extent practicable as described in this Plan.

2.7 Funding

In accordance with 19 NYCRR §900-2.24 applicants must calculate gross and net cost estimates, with the net cost estimate including projected salvage value (including reference to the salvage value data source), and the gross cost estimate with a 15 percent (%) contingency cost based on overall estimated decommissioning and restoration estimates. The Applicant is required to provide the decommissioning financial security to the towns of Junius and Waterloo, with a prorated amount provided to each town based upon the estimated cost associated with the removal and restoration of Facility components located in each town.

This Plan provides procedures for decommissioning and restoration activities in the event that the Facility cannot be completed, has reached the end of its useful life, or if the Facility is abandoned, as described in Section 1.3, and provides a gross decommissioning and restoration cost estimate with a 15 % contingency that may be used to allocate financial guarantees to each town in which the Facility is situated. The Applicant will also review the net decommissioning costs and financial security amount at least every five (5) years to reflect current market conditions, salvage value estimates, and to protect against price fluctuations.

2.8 Decommissioning Schedule

The Applicant anticipates decommissioning and restoration efforts to be completed within twelve (12) months from the start of decommissioning activities. Once the decommissioning phase is completed, the restoration phase will begin and is expected to occur within a maximum of six (6) months from the date that the decommissioning phase is completed. While the decommissioning period is stated at a maximum of 12 months, and weather conditions (snow/frost/wet conditions) have the potential to present schedule delays, restoration will be completed within 6 months of the completion of the decommissioning activities. An anticipated schedule for the decommissioning and restoration process in each township is provided in **Appendix A**, and with favorable weather conditions, it is expected that all work will be completed within 12 months from the start of decommissioning activities.

To ensure proper decommissioning and restoration, the Applicant has requested a waiver of the Town of Waterloo's requirement for decommissioning and restoration activities to be completed within thirty (30) days of commencement. See Exhibit 24, Section C. The Applicant will coordinate with the towns of Junius and Waterloo, Seneca County, landowners, the ORES, and any other required parties as may be applicable and necessary, prior to the start of any decommissioning activities.

The anticipated sequence of decommissioning, removal, and restoration is anticipated to occur over a 12-month period and will follow the timeline described below; however, an overlap of activities is expected. Please refer to **Appendix A** for additional information.

1. The following sequence is anticipated to occur over an approximately 4 to 12-week time period:
    - Mobilization to Facility Site.
    - Reinforce access roads, if needed, and prepare the Facility Site for component removal. Adequate staging areas will be planned and prepared prior to the removal of any Facility components.
    - Install temporary fencing, erosion, and sediment controls (ESCs), and follow BMPs to protect sensitive resources. All measures will be implemented in accordance with federal, state, and local requirements and will be implemented with consideration of industry-standard practices.
    - De-energize solar arrays, substation, and all other electrical components, if not already de-energized.
2. Thereafter, the following sequence is anticipated to occur over an approximately 16 to 20-week time period:
    - Dismantle panels and racking.
    - Remove frame and internal components.
    - Remove portions of structural foundations to a minimum of four (4) feet below the surface for agricultural areas and a minimum of three (3) feet for non-agricultural areas and backfill sites.
    - Remove inverters and transformer, including those associated with the Facility's collection substation. All electrical components will be isolated from external electrical lines and applicable Facility components.
        - The POI substation, its associated foundation, fencing, and other electrical components and related generation interconnection infrastructure, including the generation tie-line, not owned by the Owner at the time of decommissioning is not scheduled for removal as part of this Plan and schedule.

- If and where applicable, remove electric cables and conduits to a minimum of four (4) feet below the surface for agricultural areas and a minimum of three (3) feet for non-agricultural areas and backfill sites.
- Remove access roads, where appropriate, and grade the site where necessary.

3. Final site restoration activity is anticipated to occur over an approximately 12 to 16-week time period:
   - De-compact subsoils from equipment usage, additional grading and backfilling of site where necessary.
   - Replace topsoil (if required), restore, and revegetate (if desired by the landowner at the time of decommissioning) disturbed land to pre-construction conditions to the extent practicable.

3.0 Decommissioning Cost Estimate Summary

Decommissioning, site restoration, and material recovery costs were completed by an ECT staff decommissioning expert, with expertise in land development, decommissioning, and site remediation who used criteria including recent actuals, wage rates, transportation costs and fees, local disposal and recycling rates, and equipment rates. A detailed summary of units costs, labor, and equipment are provided in **Tables 2** Junis Township and **Table 3** Waterloo Township.

Table 2. Junius Township Estimated Gross Decommissioning, Restoration, and Contingency Costs

TABLE 2 - JUNIUS TOWNSHIP
NORTH SENECA SOLAR PROJECT, LLC.
Estimated Gross Decommissioning, Restoration & Contingency Costs (53,000 PV Panels)
(Total Summary of Costs - 2024)

The anticipated sequence of decommissioning and removal is described below; however, an overlap of activities is expected.
De-energize solar arrays, if not already de-energized.
Dismantle panels, racking & frame.
Remove inverters, transformer and electrical cables and conduits below the surface (as recoverable).
Remove Fencing & Misc. Equipment.
Remove Structural Foundations - Access and Internal Roads (if not retained by owner)
De-compact sub-soils (if required), restore, and revegetate disturbed land to be returned to pre-construction conditions to the extent practicable (if desired by landowner at the time of decommissioning).

Construction Acres w/ Laydown: ~4,835,160 ft²

Solar Modules: TOPBiHIKu7 675-700 W or CSI 695 W @ 37.8Kg ea. ~(53,000)
Steel Piles (7,382) TBD and Rack - NX Horizon - Nexttracker 125 - 375 lft
Fencing (Chain-Link): ~1,475 lft @7 ft OC 10 lft
Fencing (Agricultural 12 ga): ~16,092 lft OC 12 lft

7 Inverters/ 1 Transformer/ ~823 Trackers
Electric Cabling: ~12,175 lft ~Al 5.8 Tons
Internal Acc. Roads: ~ 156,976 ft² /~ 2,091 Tons Gravel Base
All building structures are considered - temporary structures (to be removed at end of use)

De-energize solar arrays, if not already de-energized.					**Summary Sub Total Cost**
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Electrician	Hr.	53	$125.00	$6,625.00	$6,625.00
Dismantle Panels and Racking 53,000 PV & Frame					**Summary Sub Total Cost**
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Labor (PV)	Hr.	2,319	$65.12	$151,013.28	Based Upon 2023/2024 Rates (100% Loss of Equipment)
Labor (PV)(30%- Lb. to Recycle PV w/Equip.)	Hr.	995	$60.83	$60,525.85	
Equipment (PV)	Day	59	$5,022.00	$296,298.00	
35% Recycle Metal (Al)	Ton	688	$400.00	**$275,200.00**	
Trucking	Hr.	80	$135.00	$10,800.00	
65% Disposal	Ton	1,278	$50.60	$64,666.80	
Trucking	Hr.	160	$135.00	$21,600.00	
Labor (Racking)	Hr.	528	$65.12	$34,383.36	
Equipment (Racking)	Day	39	$7,780.00	$303,420.00	
100% Recycle Metal (Racking)/Piles Rack and Piles (support/Frame)	Ton	1,212	$108.00	**$130,896.00**	
Trucking	Hr.	152	$135.00	$20,520.00	
				Cost:	**$963,227.29**
				Recovery:	**$406,096.00**
				Sub Total:	**$557,131.29**

Remove inverters, electrical cables and conduits below the surface (as recoverable).					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Labor	Hr.	46	$65.12	$2,995.52	*Based Upon 2023/2024 Rates (100% Loss of Equipment)*
Equipment	Day	3	$1,780.00	$5,340.00	
Recycle w/ Limited Disposal Inverters/trackers	tons	23	$215.00	$4,945.00	
Trucking	Hr.	16	$135.00	$2,160.00	
Electrical Cables & Conduit (Al)	Ton	5.8	$400.00	**$2,320.00**	
Trucking	Hr.	8	$135.00	$1,080.00	
				Cost:	**$16,520.52**
				Recovery:	**$2,320.00**
				Sub Total:	**$14,200.52**

Remove Fencing & Misc. Equipment/Grading Mods.					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Labor	Hr.	212	$65.12	$13,805.44	*Based Upon 2023/2024 Rates - Recycle Only*
Equipment	Day	21	$920.00	$19,320.00	
Limited Disposal	Tons	45	$50.60	$2,277.00	
Trucking	Hr.	8	$135.00	$1,080.00	
Recycle Fence/Posts (chain-link)	Ton	11	$54.00	**$594.00**	
Recycle Fence/Posts (Ag Fencing)	Ton	7.8	$54.00	**$421.20**	
Trucking	Hr.	28	$135.00	$3,780.00	
				Cost:	**$40,262.44**
				Recovery:	**$1,015.20**
				Sub Total:	**$39,247.24**

Remove Structural Foundations & Optional - Access and Internal Roads & Misc. Controls (retain by owner)					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
(Foundations & Misc. Solid Surface Cover)					*Based Upon 2023/2024 Rates*
Labor	Hr.	28	$65.12	$1,823.36	
Equipment	Day	3	$1,780.00	$5,340.00	
Trucking /Recycle w/Misc. Concrete	Hr.	8	$135.00	$1,080.00	
(General Cover - Roads - 156,976 ft²)					
Labor	Hr.	122	$65.12	**$7,944.64**	
Equipment	Day	12	$1,780.00	**$21,360.00**	
Trucking /Recycle of Gravel	Hr.	350	$135.00	**$47,250.00**	
				Cost:	**$84,798.00**
				Optional:	**$76,554.64**
				Sub Total:	**$8,243.36**

De-compact subsoils (if required), restore, and revegetate (if desired by landowner at the time of decommissioning) disturbed land to pre-construction conditions to the extent practicable.					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
[4,835,160 ft² DE compact @ 15% Restoration] (grading) w/Seeding (general site) or 725,274 ft²					
DE compact					*Based Upon 2023/2024 Rates*
Labor	Hr.	36	$65.12	**$2,344.32**	
Equipment	Day	5	$1,350.00	**$6,750.00**	
(General Grading Areas Subject to Grading and Seeding - 80,586 yds²)					
Labor	Hr.	70	$65.12	**$4,558.40**	
Equipment	Day	9	$1,350.00	**$12,150.00**	
Fill Graded - from On-Site Net Gain or Loss 0%					
Seeding	yrd²	80,486	$0.37	**$29,779.82**	
				Cost:	**$55,582.54**
				Optional:	**$55,582.54**
				Sub Total:	**$0.00**

Gross Total Estimated Decommission Cost:		**$1,167,015.79**
Gross Contingency Factor 15%:		$175,052.37
Gross - Total Estimated Decommission Cost + 15% Contingency Factor:		**$1,342,068.16**
Material Cost Recovery:		**$409,431.20**
Net Cost with Contingency Factor :		$932,636.96
Cost Reductions to be Determined by the Landowners:		**$132,137.18**
Net Estimated Cost - Actual Less Cost Reductions Determined by the Landowners:		$800,499.78
Eng./Env./Ag. Monitoring Costs are Incorporated in the Project Units at 2%:		$23,340.32

Michael T. Hebert
Sr. Consultant, CPG, CHMM, PG,
8/16/2024
PN - 230590
This Decommissioning Cost is based on preliminary design diagram and information provided to ECT, to be updated prior to construction based on the issued-for-construction engineering design. Construction Year - Start 2026

The use of complex formulas using (% at 0.00) will result in minor cost changes at +/- 0.01%.

NORTH SENECA SOLAR PROJECT, LLC.
JUNIUS TOWNSHIP
Calculation Considerations

2024 Landfill - Gate Rate + 10%, Seneca
Meadows, Inc., Waterloo, N.Y. 585 303
5881
2024 Scape Metal - Available, Franklin Iron & Metal Co., Inc. Waterloo, N.Y.
Metal 2023 Costs per/ton at 2023 U.S.A. Average Rates (9/2023)
The actual metal weight will be determined by manufacturers shipping receipts at time of construction.
Projected Labor Rate Based Upon Prevailing Wage Rate Seneca County 7/1/2023
Road Gravel - Option to Remain on Site at the Landowners Request
Costs Subject Level of Restoration
Requested by the Landowners
Transformer - Owned by utility company can be reclaimed $0.00 for disposal by Emerald Transformer Co.
The Project LLC is not responsible for the
utility - owned infrastructure.
State regulations prevent direct disposal of steel (support steel) unless contaminated.
Solar PV - Non-Hazardous Waste Stream - Municipal Waste w/Al Housing Recovered.

Note: Check - (QA/QC)

Net Cost w/o Contingency Per PV = $14.29 ea. (Average Cost Projected in U.S.A. 2020 - 2023, Cost: $10.50 - $14.50 ea.)
w/ 4.12% Inflation 2023 -2024 = ($10.93 - $15.10)

General Summary of Costs and Units (formulas/calculation modify per site conditions)

These summary sheets are formula generated cost that are based upon multiple conditions that modify the costs to determine the cost for the site-specific project demolition/recycling and restoration activities. These formulas are modified based upon location, wage rates, equipment costs-loaded w/labor and transport/disposal/recycle values found local to the project location. They also take into consideration the lack or gain of efficiency's based upon the size /topography of the site. These formulas are based upon 100's of proposed projects and completed solar demolition projects w/multiple contractors in multiple states/regions with the U.S.A.

Electrician Lbr is based upon 1 unit per 1,000 PV, or disconnection from transmission line, and separating PV per region
1) Bulk disconnection of PV from rack 22.85 PV/per hour. (unbolt from frame and place in roll-off)
2) Recovering Lbr of Al per PV is based upon 30% of the Lbr 2) calculation.
3) 65% of PV weight scheduled for TD
4) Racking removal is based upon equip.& Lbr at per day = 1,344 PV supports per day as calculations.
5) Trucking (per hour) based upon load time, distance to transport/return and weight per load weight of material.
6) Recycled materials are based upon calculated weight of materials, example:
   Agr Fencing: 16,092 linear ft at 97 lbs. per 100 ft = 15,609.24 Lbs. or 7.8 tons
   Chain-link Fencing w/Posts = 0.00745 tons per linear ft
   Electric cabling is calculated by linear ft of propose wiring at specified gauge of wire/type.
7) Removal of 16 ft gravel roads is calculated at 80 linear ft per hour, + equipment + transport.
   While grading and restoration is accounted for under other scheduled activities

These calculations are based upon the current site volumes/measurements and/or minor changes to the design. This Decommissioning Cost is based on preliminary design diagram and information provided to ECT, to be updated prior to construction based on the issued-for-construction engineering design. Construction Year - Start 2026

Table 3. Waterloo Township Estimated Costs for Decommissioning, Restoration, and Contingency Cost

TABLE 3 - WATERLOO TOWNSHIP
NORTH SENECA SOLAR PROJECT, LLC.
Estimated Gross Decommissioning, Restoration & Contingency Costs (121,000 PV Panels)
(Total Summary of Costs - 2024)

The anticipated sequence of decommissioning and removal is described below; however, an overlap of activities is expected.
De-energize solar arrays, if not already de-energized.
Dismantle panels, racking & frame.
Remove inverters and electrical cables and conduits below the surface (as recoverable).
Remove Fencing & Misc. Equipment.
Remove Structural Foundations - Access and Internal Roads (if not retained by owner)
De-compact sub-soils (if required), restore, and revegetate disturbed land to be returned to pre-construction conditions to the extent practicable (if desired by landowner at the time of decommissioning).

Construction Acres w/Laydown: ˜ 14,069,880 ft²

Solar Modules: TOPBiHIKu7 675-700 W or CSI 695 W @ 37.8Kg ea. ˜(121,000)

Steel Piles (18,970) TBD and Rack - NX Horizon - Nexttracker 125 - 375 lft

Fencing (Agricultural 12 ga): ~63,680 lft OC 12 lft

17 Inverters/ 0 Transformer/ ˜1,877 Trackers

Electric Cabling: ˜33,113 lft ~Al 11.1 Tons

Internal Acc. Roads: ~ 294,240 ft² /~ 4,035Tons Gravel Base

All building structures are considered - temporary structures (to be removed at end of use)

De-energize solar arrays, if not already de-energized.					**Summary Sub Total Cost**
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Electrician	Hr.	121	$125.00	$15,125.00	$15,125.00
Dismantle Panels and Racking 121,000 PV & Frame					**Summary Sub Total Cost**
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Labor (PV)	Hr.	5,297	$65.12	$344,940.64	Based Upon 2023/2024 Rates (100% Loss of Equipment)
Labor (PV)(30%- Lbr to recycle PV w/Equip.)	Hr.	2,269	$60.83	$138,023.27	
Equipment (PV)	Day	135	$5,022.00	$677,970.00	
35% Recycle Metal (Al)	Ton	1,762	$400.00	**$704,800.00**	
Trucking	Hr.	202	$135.00	$27,270.00	
65% Disposal	Ton	3,166	$50.60	$160,199.60	
Trucking	Hr.	395	$135.00	$53,325.00	
Labor (Racking)	Hr.	1,205	$65.12	$78,469.60	
Equipment (Racking)	Day	90	$7,780.00	$700,200.00	
100% Recycle Metal (Racking)/Piles	Ton	3,101	$108.00	**$334,908.00**	
Rack and Piles (support/Frame)					
Trucking	Hr.	387	$135.00	$52,245.00	
				Cost:	**$2,232,643.11**
				Recovery:	**$1,039,708.00**
				Sub Total:	**$1,192,935.11**

Remove inverters, electrical cables and conduits below the surface (as recoverable).					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Labor	Hr.	133	$65.12	$8,660.96	*Based Upon 2023/2024 Rates (100% Loss of Equipment)*
Equipment	Day	6	$1,780.00	$10,680.00	
Recycle w/ Limited Disposal Inverters/trackers	Ton	52	$215.00	$11,180.00	
Trucking	Hr.	32	$135.00	$4,320.00	
Electrical Cables & Conduit (Al)	Ton	11.1	$400.00	**$4,440.00**	
Trucking	Hr.	8	$135.00	$1,080.00	
				Cost:	**$35,920.96**
				Recovery:	**$4,440.00**
				Sub Total:	**$31,480.96**

Remove Fencing & Misc. Equipment/Grading Mods.					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
Labor	Hr.	638	$65.12	$41,546.56	*Based Upon 2023/2024 Rates - Recycle Only*
Equipment	Day	71	$920.00	$65,320.00	
Limited Disposal	Ton	135	$50.60	$6,831.00	
Trucking	Hr.	30	$135.00	$4,050.00	
Recycle Fence (Agr Fencing)	Ton	25.64	$54.00	**$1,384.56**	
Trucking	Hr.	32	$135.00	$4,320.00	
				Cost:	**$122,067.56**
				Recovery:	**$1,384.56**
				Sub Total:	**$120,683.00**

Remove Structural Foundations & Optional - Access and Internal Roads & Misc. Controls (retain by owner)					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
(Foundations & Misc. Solid Surface Cover)					*Based Upon 2023/2024 Rates*
Labor	Hr.	60	$65.12	$3,907.20	
Equipment	Day	6	$1,780.00	$10,680.00	
Trucking /Recycle w/Misc. Concrete	Hr.	10	$135.00	$1,350.00	
(General Cover - Roads - 294,240 ft²)					
Labor	Hr.	230	$65.12	**$14,977.60**	
Equipment	Day	23	$1,780.00	**$40,940.00**	
Trucking /Recycle of Gravel	Hr.	675	$135.00	**$91,125.00**	
				Cost:	**$162,979.80**
				Optional:	**$147,042.60**
				Sub Total:	**$15,937.20**

De-compact subsoils (if required), restore, and revegetate (if desired by landowner at the time of decommissioning) disturbed land to pre-construction conditions to the extent practicable.					Summary Sub Total Cost
Description	**Unit**	**Units**	**Rate**	**Sub Total**	
[14,069,880 ft² DE compact @ 15% Restoration] (grading) w/Seeding (general site) or 2,110,4820 ft²					
DE compact					*Based Upon 2023/2024 Rates*
Labor	Hr.	106	$65.12	**$6,902.72**	
Equipment	Day	13	$1,350.00	**$17,550.00**	
(General Grading Areas Subject to Grading and Seeding - 234,498 yds²)					
Labor	Hr.	202	$65.12	**$13,154.24**	
Equipment	Day	27	$1,350.00	**$36,450.00**	
Fill Graded - from On-Site Net Gain or Loss 0%					
Seeding	yrd²	234,498	$0.37	**$86,764.26**	
				Cost:	**$160,821.22**
				Optional:	**$160,821.22**
				Sub Total:	**$0.00**

Gross Total Estimated Decommission Cost:	**$2,729,557.65**
Gross Contingency Factor 15%:	$409,433.65
Gross - Total Estimated Decommission Cost + 15% Contingency Factor:	**$3,138,991.30**
Material Cost Recovery:	**$1,045,532.56**
Net Cost with Contingency Factor :	$2,093,458.74
Cost Reductions to be Determined by the Landowners:	**$307,863.82**
Net Estimated Cost - Actual Less Cost Reductions Determined by the Landowners:	$1,785,594.92
Eng./Env./Ag. Monitoring Costs are Incorporated in the Project Units at 2%:	$54,591.15

Prepared By:

Michael T. Hebert
Sr. Consultant, CPG, CHMM, PG, CUSTP
8/16/2024
PN – 230590

This Decommissioning Cost is based on

preliminary design diagram and information provided to ECT, to be updated prior to construction based on the issued-for-construction engineering design.
Construction Year - Start 2026

The use of complex formulas using (% at 0.00) will result in minor cost changes at +/- 0.01%.

NORTH SENECA SOLAR PROJECT, LLC.
WATERLOO - TOWNSHIP
Calculation Considerations

2024 Landfill - Gate Rate + 10%, Seneca Meadows, Inc., Waterloo, N.Y. 585 303 5881
2024 Scape Metal - Available, Franklin Iron & Metal Co., Inc. Waterloo, N.Y.
Metal 2023 Costs per/ton at 2023 U.S.A. Average Rates (9/2023)
The actual metal weight will be determined by manufacturers shipping receipts at time of construction.
Projected Labor Rate Based Upon Prevailing Wage Rate Seneca County 7/1/2023
Road Gravel - Option to Remain on Site at the Landowners Request
Costs Subject Level of Restoration Requested by the Landowners
Transformer - Owned by utility company can be reclaimed $0.00 for disposal by Emerald Transformer Co.
The Project LLC is not responsible for the utility - owned infrastructure.
State regulations prevent direct disposal of steel (support steel) unless contaminated.
Solar PV - Non-Hazardous Waste Stream - Municipal Waste w/Al Housing Recovered.

Note: (QA/QC)

Net Cost w/o Contingency Per PV = $13.91 ea. (Average Cost Projected in U.S.A. 2020 - 2023, Cost: $10.50 - $14.50 ea.)
w/ 4.12% Inflation 2023 -2024 = ($10.93 - $15.10)

These summary sheets are formula generated cost that are based upon multiple conditions that modify the costs to determine the cost for the site-specific project demolition/recycling and restoration activities. These formulas are modified based upon location, wage rates, equipment costs-loaded w/labor and transport/disposal/recycle values found local to the project location. They also take into consideration the lack or gain of efficiency's based upon the size /topography of the site. These formulas are based upon 100's of proposed projects and completed solar demolition projects w/multiple contractors in multiple states/regions with the U.S.A.

General Summary of Costs and Units (formulas/calculation modify per site conditions)

1) Electrician Lbr is based upon 1 unit per 1,000 PV, or disconnection from transmission line, and separating PV per region
2) Bulk disconnection of PV from rack 20.4 PV/per hour. (unbolt from frame and place in roll-off)
3) Recovering Lbr of Al per PV is based upon 30% of the Lbr 2) calculation.
4) 65% of PV weight scheduled for TD
5) Racking removal is based upon equip.& Lbr at per day = 1,344 PV supports per day as calculations.
6) Trucking (per hour) based upon load time, distance to transport/return and weight per load weight of material.
7) Recycled materials are based upon calculated weight of materials, example:
   Agr Fencing: 52,876 linear ft at 97 lbs. per 100 ft = 51,289 Lbs. or 25.64 tons
   Electric cabling is calculated by linear ft of propose wiring at specified gauge of wire/type.
8) Removal of 16 ft gravel roads is calculated at 80 linear ft per hour, + equipment + transport.
   While grading and restoration is accounted for under other scheduled activities

These calculations are based upon the current site volumes/measurements and/or minor changes to the design. This Decommissioning Cost is based on preliminary design diagram and information provided to ECT, to be updated prior to construction based on the issued-for-construction engineering design. Construction Year - Start 2026

Decommissioning activity costs detailed in **Tables 2** and **3** include labor and material expenses for the removal and restoration of Facility components in the Townships, including solar modules, tracking system, steel racking, transformer and inverters, access roads, perimeter fencing, collection substation, storage trailer, and foundation and cabling up to a minimum of four (4) feet below the surface for agricultural areas and a minimum of three (3) feet for non-agricultural areas. Labor effort is calculated based on estimated hours and days for associated decommissioning activities, and labor rates are estimated on the applicable 2023 prevailing wage rate class for Seneca County, New York, available at the time of preparing this report. Restoration activities include soil decompaction, restoration, revegetation (seeding), and the overall restoration of the land to pre-development characteristics to the highest degree practicable.

Total tons of fencing/post are listed in **Tables 2 and 3** for each township. Based upon unplanned potential changes in fencing types, the recycled value/credit for the tonnage of recycled fencing is set at 50% of the normal rate for said metal. Utilizing the 50% recyclable value for the value therein does not over inflate its credit value to the project. In addition, an estimated 180 tons of debris is added to the cost estimate to cover volumes of non-recyclable materials, such as wood posts. Aluminum (Al) value is based upon a weight percentage of the solar panel Al, frame supports, and Al wiring scheduled for use on the project. Miscellaneous items such as trailers will be recycled, are considered incidental to the salvage values of the whole project, (i.e., minor metal volumes/weight are not included in the calculations to prevent overinflating the recyclable values or salvage credits). Labor for recycling Al is defined separately per Township and for a total of 3,224 hours. Reference **Tables 2** and **3** .

The inputs in the salvage value calculations are based on current and best information and the professional opinion of the preparing decommissioning expert. Local and federal scrap metal average rates were utilized for calculations. Inputs are subject to re-assessment based on the anticipated evolution of PV modules and associated infrastructure technology, re-use, recycling, and salvage market conditions.

Ultimately, the cost estimate for decommissioning and restoration activities has been broken out by each township. As typical with dividing a large-scale project into smaller portions, some efficiency changes were recognized furthermore, road layouts, fencing changes, and general site modification have been recognized. As such, when comparing the cost estimates prepared (February 2024-townships combined vs. August 2024-townships separated), a total combined cost difference of ~$73,000 was observed. **Table 4** provides a summary of the total cost to decommission and restore the Facility in each Township and thereafter combined.

All estimates are based on applicable 2023 and 2024 rates, with no market fluctuations or inflation considered.

Table 4. Summary of Estimated Costs, Decommissioning, Restoration, and Contingency Activities, North Seneca Solar Project, LLC/Junius and Waterloo Townships

Junius Township, NY

Gross Total Estimated Decommission Cost:	**$1,167,015.79**
Gross Contingency Factor 15%:	**$175,052.37**
Gross - Total Estimated Decommission Cost + 15% Contingency Factor:	**$1,342,068.16**
Material Cost Recovery:	$409,431.20
Net Cost with Contingency Factor:	$932,636.96
Cost Reductions to be Determined by the Landowners:	$132,137.18
Net Estimated Cost - Actual Less Cost Reductions Determined by the Landowners:	$800,499.78
Eng./Env./Ag. Monitoring Costs are Incorporated in the Project Units at 2%:	$23,340.32

Waterloo Township, NY

Gross Total Estimated Decommission Cost:	**$2,729,557.65**
Gross Contingency Factor 15%:	**$409,433.65**
Gross - Total Estimated Decommission Cost + 15% Contingency Factor:	**$3,138,991.30**
Material Cost Recovery:	$1,045,532.56
Net Cost with Contingency Factor:	$2,093,458.74
Cost Reductions to be Determined by the Landowners:	$307,863.82
Net Estimated Cost - Actual Less Cost Reductions Determined by the Landowners:	$1,785,594.92
Eng./Env./Ag. Monitoring Costs are Incorporated in the Project Units at 2%:	$54,591.15

Combined - Junius & Waterloo Townships, NY

Gross Total Estimated Decommission Cost:	**$3,896,573.44**
Gross Contingency Factor 15%:	**$584,486.02**
Gross - Total Estimated Decommission Cost + 15% Contingency Factor:	**$4,481,059.46**
Material Cost Recovery:	$1,454,293.76
Net Cost with Contingency Factor:	$3,026,095.70
Cost Reductions to be Determined by the Landowners:	$440,001.00
Net Estimated Cost - Actual Less Cost Reductions Determined by the Landowners:	$2,585,811.74
Eng./Env./Ag. Monitoring Costs are Incorporated in the Project Units at 2%:	$77,931.47

All Facility components will be salvaged, recycled, or hauled offsite to a licensed solid waste disposal facility. Facility components that are anticipated to have a resale or salvage value that may be used to offset the cost of decommissioning include solar modules, tracking systems, steel piles, inverters, and transformer. For the purposes of this Plan, only salvageable/recyclable metal materials from panel frames and other metal objects have been used for material recovery cost estimates. Materials that have no value at the time of decommissioning will be recycled when possible or hauled offsite to a licensed solid waste disposal facility, in compliance with all state laws and regulations in effect at the time of decommissioning.

While the above salvage value considers the scrap value of parts for the Project, it does not contemplate the market value of modules or other parts that could be sold in the secondary market.

4.0 Financial Assurance

Decommissioning, site restoration, and material recovery costs are based on the preparing decommission expert's experience and consideration of the Facility components based on the current design and layout, as well as current market and other geographic considerations. It is assumed that decommissioning and restoration effort will be conducted by an experienced contractor of the Owner's choosing, who possesses experience in solar facility decommissioning and restoration work.

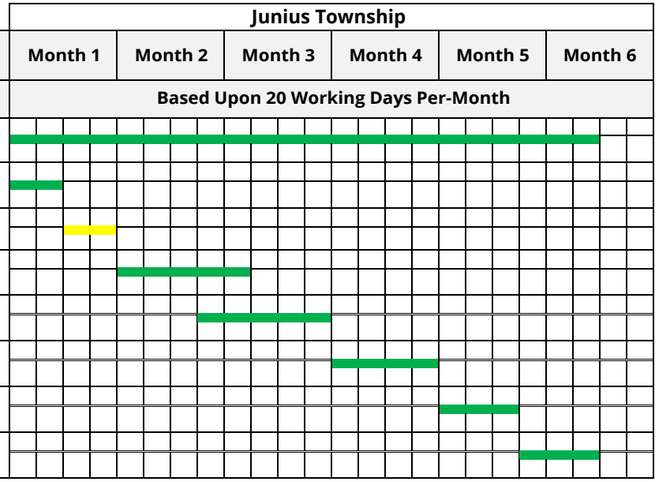
The Owner of the Facility will coordinate with the towns of Junius and Waterloo, as well as the ORES, to post financial security in the form of a performance surety bond for the Town of Waterloo, and a letter of credit, performance surety bond, or such other form of financial assurance for the Town of Junius, as approved by ORES, based upon the net decommissioning cost, which includes a 15% contingency, and the portion of Facility components located in each town.

The amount of security provided in any decommissioning plan will be reviewed every five (5) years after the submittal of initial financial assurances and will be updated to reflect any changes due to inflation, costs, recycling values, and other pertinent costing details.

Appendix A Decommissioning Schedule Times

IMPLEMENTATION DECOMMISSION & RESTORATION SCHEDULE

Phase Description	Duration of Task (Working Days)	Milestones	Junius Township
	(Duration)		Based Upon 20 Working Days Per-Month
Phase 1 thru Phase 6	**110**	**Decommission Schedule**	
Phase 1 De-Energize Solar Arrays	10	TBD	
(Site Decommissioning Prep)	10	TBD	
Phase 2 RTD/Rec. of Panels (100% Loss)	25	TBD	
Phase 3 RTD/Rec. of Racking Systems	25	TBD	
Phase 4 RTD/Rec. of Fencing & General Grade Mods.	20	TBD	
Phase 5 RTD/Rec. of Misc. Structures & Roads-Sub Station Base	15	TBD	
Phase 6 De-Compact Soils/Grading & Restoration	15	TBD	

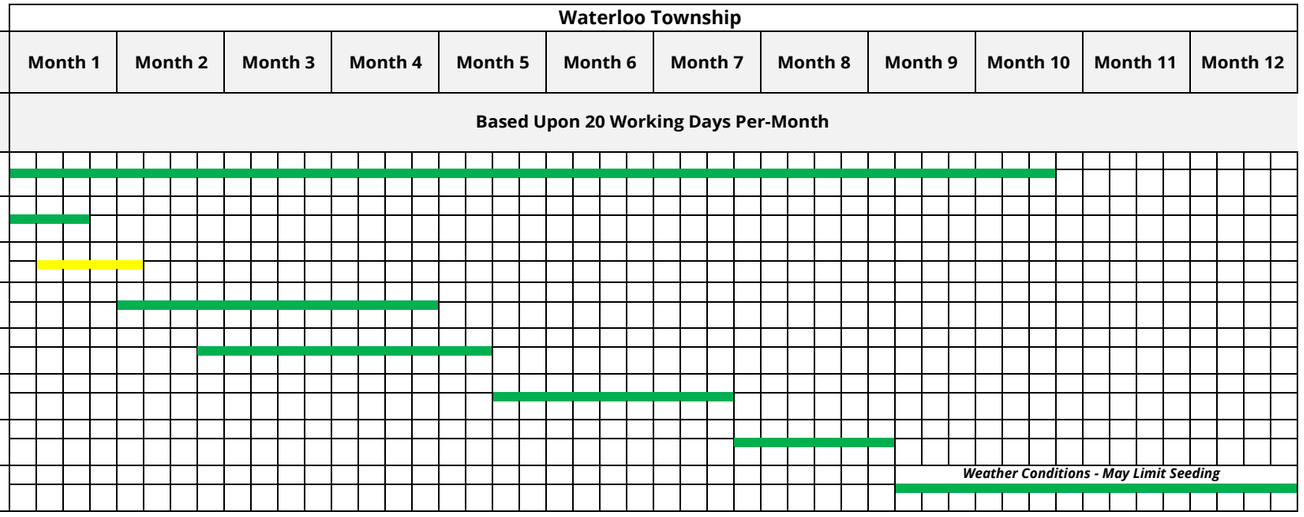


RTD/Rec. - Removal, Transport & Disposal / Recycle

Note: Crew size(s) will change to complete the work as scheduled.

IMPLEMENTATION DECOMMISSION & RESTORATION SCHEDULE

Phase/Task Description	Duration of Task (Working Days)	Milestones	Waterloo Township
	(Duration)		Based Upon 20 Working Days Per-Month
Phase 1 thru Phase 6	**195**	**Decommission Schedule**	
Phase 1 De-Energize Solar Arrays	15	TBD	
(Site Decommissioning Prep)	20	TBD	
Phase 2 RTD/Rec. of Panels (100% Loss)	57	TBD	
Phase 3 RTD/Rec. of Racking Systems	57	TBD	
Phase 4 RTD/Rec. of Fencing & General Grade Mods.	45	TBD	
Phase 5 RTD/Rec. of Misc. Structures & Roads-Sub Station Base	30	TBD	
Phase 6 De-Compact Soils/Grading & Restoration	30	TBD	



RTD/Rec. - Removal, Transport & Disposal / Recycle

Note: Crew size(s) will change to complete the work as scheduled.