

Riley Road Solar Project DG New York CS IV, LLC Project Decommissioning Plan

Introduction

NextEra Energy Resources (“NextEra”) proposes to build a ground-mounted photovoltaic (PV) Solar Facility (“Solar Facility”) in the Town of Cortlandville in Cortland County. The Solar Facility will have a nameplate capacity of approximately 5 megawatts (MW) alternating current (AC). The Project will be installed on approximately 36 acres of an approximately 52 acre parcel located at Riley Road (Tax Parcel ID: 87.00-03-08.112) by NextEra’s subsidiary company, DG New York CS IV, LLC (“DG”).

Battery storage is proposed for the Project, and the Solar Facility will feature two battery energy storage systems with a capacity of 1.875 MW-AC each.

The Plan provides an overview of activities that will occur during the decommissioning phase of the Solar Facility, including: activities related to the restoration of land, the management of materials and waste, projected costs, and a decommissioning fund agreement overview. The Solar Facility will have a maturity date of 30 years; however, it is expected that the Solar Facility may have an estimated useful lifetime of 35 years or more. This Plan assumes that the Solar Facility will be dismantled and the Facility Site restored to a state similar to its pre-construction condition. The Plan also covers the case of the abandonment of a Solar Facility, for any reason, prior to the 30-year maturity date. It is designed to provide a level of financial protection for the Town of Cortlandville.

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

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

*Note that access roads may be left in place at the discretion of the local landowner.

This Decommissioning Plan is based on current best management practices and procedures and has been prepared in compliance with the most recent guidance from New York State Department Of Agriculture And Markets (NYSDAM) “Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands” [Revision 10/18/2019]. This Decommissioning Plan may be subject to revision based on new standards and emergent best management practices at the time of decommissioning. Permits will be obtained as required and notification will be given to stakeholders prior to decommissioning.

Decommissioning of the Solar Facility

The Project may be decommissioned under the following circumstances:

[1] DG or any entity that may own or operate the facility in the future (“the future owner-operator”) decides to retire the Solar Facility; or

[2] The Solar Facility becomes technologically obsolete or ceases to perform its original intended function for more than six consecutive months. Town of Cortlandville Town Code 178-123.3 (K)(1).

DG or the future owner-operator will provide a financial guarantee to the Town of Cortlandville prior to undertaking construction in the form of a bond to guarantee that monies are available to perform the Solar Facility decommissioning. Although DG intends to perform the decommissioning, unforeseen circumstances such as the Project being sold to another entity or DG going out of business are possible. The bond will be renewed annually and will remain available to any party performing the decommissioning, such as a municipality or a landowner.

At the time of decommissioning, the installed components will be removed, reused, disposed of, and recycled, where possible. The Facility Site will be restored to a state similar to its pre-construction condition, as further described in the Site Restoration sub-section below. Removal of equipment will be done in accordance with any applicable regulations and manufacturer recommendations. All applicable permits will be acquired, and compliance with the State Environmental Quality Review (SEQR) requirements will be achieved.

In the unlikely scenario that DG or the future owner-operator cannot execute the decommissioning, the Town of Cortlandville may commence the decommissioning, through the bonds established to cover the expenses.

Equipment Dismantling and Removal

During the decommissioning phase, project components (Exhibit 1) will be removed. Generally, the decommissioning of the Solar Facility proceeds in the reverse order of the installation.

- The Solar Facility shall be disconnected from the utility power grid.
- PV modules shall be disconnected, collected, and disposed at an approved solar module recycler or reused / resold on the market. Although the PV modules will not be cutting edge technology at the time of decommissioning, they are estimated to still produce 80% of the original electricity output at year 25 and add value for many years.
- All aboveground electrical interconnection and distribution cables shall be removed and disposed off-site at an approved facility.

- In accordance with NYSDAM guidelines, all underground direct buried electrical conduits and conductors with less than 48-inches of cover shall be removed by means causing the least amount of disturbance possible.
- Underground electric conduits and direct buried conductors with 48-inches or more of soil cover shall be abandoned in place. In accordance with NYSDAM guidelines, applicable conduit risers shall be removed, and abandoned conduit must be sealed or capped to avoid the potential to direct subsurface drainage onto neighboring land uses.
- Underground electric conduits and direct buried conductors shall be abandoned in place. These will be sealed or capped in accordance with best practices at the time of decommissioning.
- Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site at an approved facility.
- Concrete foundations shall be removed and disposed off-site at an approved facility.
- In accordance with NYSDAM guidelines, access roads in agricultural areas shall be removed, unless otherwise specified by the landowner. If access is to be removed, access areas should be regraded with topsoil from recorded excess native topsoil disposal areas. If suitable topsoil from these areas is unavailable, imported topsoil may be used as long as it is free of invasive species and consistent with top soil quality on the affected site.
- Electrical and electronic devices, including transformers, inverters, battery storage, switchgear, and support structures shall be removed and disposed off-site at an approved facility.
- Concrete foundations shall be removed and disposed off-site by an approved facility.
- Fencing shall be removed and will be disposed off-site at an approved facility.

Environmental Effects

Decommissioning activities, particularly the removal of project components could result in environmental effects like those of the construction phase. As with any construction activity, there is the potential for ground disturbance, erosion/sedimentation, soil compaction, spills, and related impacts to adjacent watercourses or significant natural features. Construction best management practices and mitigation measures, similar to those employed during the construction phase of the Solar Facility, will be implemented. These will remain in place until the site is stabilized and the ground cover has been reestablished.

Road traffic will temporarily increase due to the movement of decommissioning crews and equipment. There may be an increase in particulate matter (dust) in adjacent areas during the decommissioning phase. Decommissioning activities may lead to temporary elevated noise levels from heavy machinery and an increase in vehicle trips to the project location. Work will be undertaken during daylight hours and will conform to applicable restrictions. Recycling of structural components will be maximized to the extent possible to reduce solid waste disposal.

Site Restoration

The Project Site is located in Cortland County Agricultural District 1. It contains active agricultural land, and hay and corn are grown at the site. Following decommissioning and removal of project components, the Facility Site will be restored to a state similar to its pre-construction condition in accordance with Town Code Section 178-123.3 (K)(1). As such, site restoration activities will focus on restoring this land to active agricultural use. The Project Site's pre-construction condition has been documented in the photos at Exhibit 2.

If at the time of decommissioning, the site or portions of the site are intended to be restored for agricultural production, DG or the future owner-operator will coordinate further with the landowner, the Soil and Water Conservation District, and the Department of Agriculture and Markets. DG or the future owner-operator also will follow the environmental monitoring and restoration requirements of the NYS DAM guidelines (see Exhibit 4).

Finally, if access roads in agricultural areas are removed in accordance with landowner wishes, topsoil shall be returned from recorded project excess native topsoil disposal areas, if present, or topsoil shall be imported which is free of invasive species and consistent with the quality of topsoil on the affected site.

Managing Materials and Waste

Through the decommissioning phase, a variety of excess materials and wastes will be generated (Exhibit 1). DG or the future owner-operator will establish policies and procedures to maximize recycling and reuse and will work with manufacturers, local subcontractors, and waste firms to segregate material to be disposed of, recycled, or reused.

Most of the materials used in a Solar Facility are reusable or recyclable and some equipment may have manufacturer take-back and recycling requirements. Batteries and battery containers will be transported off-site and recycled at a certified facility that specializes in commercial battery disposal. Any remaining materials will be removed and disposed of off-site at an appropriate facility.

DG or the future-owner operator will be responsible for the logistics of collecting and recycling the PV modules in order to minimize the potential for modules to be discarded in the municipal waste stream. Currently, some manufacturers and new companies are looking for ways to recycle and/or reuse solar modules when they have reached the end of their lifespan. It is anticipated there will be more recycling options available for solar modules in 30 years when this Solar Facility reaches the end of its lifespan. DG or the future owner-operator will determine the best way of disposing of the solar modules using best management practices at the time of decommissioning. DG or the future owner-operator will coordinate with the municipality if the disposal of any project component at the municipal waste facility is necessary.

Decommissioning Notification

Decommissioning activities generally require the notification of stakeholders given the nature of the work at the Facility Site.

Notification activities will be initiated six months prior to decommissioning. At that time, DG or the future owner-operator will update their list of stakeholders and notify appropriate jurisdictions and overseeing agencies of decommissioning activities. Federal, county, and local authorities, including the utility company, will be notified as needed to discuss the potential approvals required to engage in decommissioning activities.

The Town of Cortlandville will be notified prior to commencement of any decommissioning activities. Additionally, pursuant to Town Code Section 178-123.3(K)(1), the Town shall provide the solar energy system owner 30 days' prior written notice of a request for decommissioning.

In accordance with NYSDAM guidelines, DG or the future owner-operator will also notify NYSDAM prior to decommissioning.

Approvals

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

This Decommissioning Report will be updated as necessary in the future but not less than every five years, to ensure that changes in technology and site restoration methods are taken into consideration.

Decommissioning During Construction or Abandonment Before Maturity

In case of abandonment of the Solar Facility during construction or before its 30 year maturity, the same decommissioning procedures as for decommissioning after ceasing operation will be undertaken and the same decommissioning and restoration program will be honored, in as far as construction proceeded before abandonment. The Solar Facility will be dismantled, materials will be recycled/disposed, the soil that was removed will be graded, and the site will be restored to a state similar to its preconstruction condition.

Of note, if the ground-mounted large-scale solar energy system is not decommissioned after being considered abandoned, the Town may remove the system and restore the property and impose a lien on the property to recover these costs to the Town. Town Code Section 178-123.3 (K)(2).

Costs of Decommissioning & Decommissioning Bond

The current cost to decommission a 5 MW-AC Solar Facility has been estimated on behalf of DG by their engineering consultants and construction contractors, using guidance from NYSERDA, at \$267,000. It is important to acknowledge that decommissioning of solar arrays has not been undertaken to any significant extent in New York State (or other States), and therefore, actual data and cost estimating models are not available. Moreover, there is great uncertainty in many factors that will come into play at the time of future decommissioning, such as the regulatory climate, changes in technology, repowering opportunities etc. The cost estimate, as a result, is based upon the best available information and engineering and demolition experience with other types of construction projects. In addition, the salvage values of valuable recyclable materials (aluminum, steel, copper, etc.) have not been factored into the decommissioning cost estimate, and the scrap value will be determined on current market rates at the time of salvage.

At the start of construction, DG will post a bond in the amount of approximately \$267,000. After every year of operation, DG or the future owner-operator will increase the bond amount 2% of the previous balance to keep up with inflation and expected decommissioning costs – for a total amount of approximately \$474,151 at the project's 30-year maturity (see Exhibit 3).

Exhibit 1
Schedule of Materials

Material/Waste	Means of Managing Excess Materials and Waste
PV Modules	If there is no possibility for reuse, the panels will either be returned to the manufacturer for appropriate disposal or will be transported to a recycling facility where the glass, metal, and semiconductor materials will be separated and recycled.
Metal Racking	These materials will be disposed off-site at an approved facility.
Transformer components	The small amount of oil from the transformers will be removed on-site to reduce the potential for spills and will be transported to an approved facility for disposal. The substation transformer and step-up transformers in the inverter units will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Battery energy storage system, inverters, fans, switchgear, and fixtures	The batteries will be transported off-site and recycled at a certified facility that specializes in commercial battery disposal. The metal components of the battery storage container, inverters, fans, and fixtures will be disposed of or recycled, where possible. Remaining components will be disposed of in accordance with the standards of the day.
Gravel (or other granular)	It is possible that the municipality may accept uncontaminated material without processing for use on local roads; however, for the purpose of this report it is assumed that the material will be removed from the project location by truck to a location where the aggregate can be processed for salvage. It will then be reused as fill for construction. It is not expected that any such material will be contaminated.
Geotextile Fabric	It is assumed that during excavation of the aggregate, a large portion of the geotextile will be “picked up” and sorted out at the aggregate reprocessing site. Geotextile fabric that is remaining or large pieces that can be readily removed from the excavated aggregate will be disposed of off-site at an approved disposal facility.
Concrete inverter/BESS/transformer foundations	Concrete foundations will be broken down and transported by certified and licensed contractor to a recycling or approved disposal facility.
Cables and Wiring	The aboveground electrical line that connects the substation to the point of common coupling will be disconnected and disposed of at an approved facility. Support poles, if made of untreated wood, will be chipped for reuse. Associated electronic equipment (isolation switches, fuses, metering) will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.

	Underground conduits, conductors, and other facilities originally installed at depth will remain in place to avoid ground disturbance and potential soil erosion.
Fencing	Fencing will be removed and recycled at a metal recycling facility.
Utility Poles	Customer-owned utility poles will be dismantled and transported to a licensed treated wood recycling facility to be assessed for reuse for operational use or for secondary use in construction projects.
Debris	Any remaining debris on the site will be separated into recyclables/residual wastes and will be transported from the site and managed as appropriate.

Exhibit 2

Photo Documentation of Pre-Construction Conditions



Photos of Pre-Existing Site Conditions—Riley Road Solar

Riley Road (Tax Parcel ID: 87.00-03-08.112)



Nov 4, 2020 at 9:33:39 AM



Nov 4, 2020 at 10:08:24 AM



Exhibit 3 - Bond Value

Decommissioning Bond Value with Escalation Rate of 2%	
Year	Amount
1	\$267,000
2	\$272,340
3	\$277,787
4	\$283,343
5	\$289,009
6	\$294,790
7	\$300,685
8	\$306,699
9	\$312,833
10	\$319,090
11	\$325,472
12	\$331,981
13	\$338,621
14	\$346,393
15	\$352,301
16	\$359,347
17	\$366,534
18	\$373,864
19	\$381,342
20	\$388,969
21	\$396,748
22	\$404,683
23	\$412,777
24	\$421,032
25	\$429,453
26	\$438,042
27	\$446,803
28	\$455,739
29	\$464,853
30	\$474,161

Exhibit 4 – NYSDAM Guidelines

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands (Revision 10/18/2019)

The following are guidelines for mitigating construction impacts on agricultural land during the following stages of a solar energy project: Construction, Post-Construction Restoration, Monitoring and Remediation, and Decommissioning. These guidelines apply to project areas subject to ground disturbance¹ within agricultural lands including:

- Lands where agriculture use will continue or resume following the completion of construction (typically those lands outside of the developed project's security fence);
- Lands where the proposed solar development will be returning to agricultural use upon decommissioning, (typically those lands inside of the developed project's security fence);
- Applicable Area under review pursuant to Public Service Law Article 10 Siting of Major Electric Facilities.

The Project Company will incorporate these Guidelines into the development plans and applications for permitting and approval for solar projects that impact agricultural lands. If the Environmental Monitor, hereafter referred to as EM, determines that there is any conflict between these Guidelines and the requirements for project construction that arise out of the project permitting process, the Project Company and its EM, will notify the New York State Department of Agriculture and Markets (NYSDAM), Division of Land and Water Resources, and seek a reasonable alternative.

Environmental Monitor (EM)

The Project Company (or its contractor) shall hire or designate an EM to oversee the construction, restoration and follow-up monitoring in agricultural areas. The EM shall be an individual with a confident understanding of normal agriculture practices² (such as cultivation, crop rotation, nutrient management, drainage (subsurface and/or surface), chemical application, agricultural equipment operation, fencing, soils, plant identification, etc.) and able to identify how the project may affect the site and the applicable agricultural practices. The EM should also have experience with or understanding of the use of a soil penetrometer for compaction testing and record keeping. The EM may serve dual inspection roles associated with other Project permits and/or construction duties, if the agricultural workload allows. The EM should be available to provide site-specific agricultural information as necessary for project development through field review and direct contact with both the affected farm operators and NYSDAM. The EM should maintain regular contact with appropriate onsite project construction supervision and inspectors throughout the construction phase. The EM should maintain regular contact with the affected farm operator(s) concerning agricultural land impacted, management matters pertinent to the agricultural operations and the site-specific implementation of agricultural resource mitigation measures. The EM will serve as the agricultural point of contact.

¹Ground Disturbance is defined as an activity that contributes to measurable soil compaction, alters the soil profile or removes vegetative cover. Construction activities that utilize low ground pressure vehicles that do not result in a visible rut that alters soil compaction, is not considered a Ground Disturbance. Soil compaction should be tested using an appropriate soil penetrometer or other soil compaction measuring device. The soil compaction test results within the affected area will be compared with those of the adjacent unaffected portion of the agricultural area.

² An EM is not expected to have knowledge regarding all of the listed agricultural practices, but rather a general understanding such that the EM is able to perform the EM function.

1. For projects involving less than 50 acres of agricultural land within the limits of disturbance (LOD),³ the EM shall be available for consultation and/or on-site whenever construction or restoration work that causes Ground Disturbance is occurring on agricultural land.
2. For projects involving 50 acres or more of agricultural land within the (LOD) (including projects involving the same parent company whether phased or contiguous projects), the EM shall be on site whenever construction or restoration work requiring or involving Ground Disturbance is occurring on agricultural land and shall notify NYSDAM of Project activity. The purpose of the agency coordination would be to assure that the mitigation measures of these guidelines are being met to the fullest extent practicable. The Project Company and the NYSDAM will agree to schedule inspections in a manner that avoids delay in the work. NYSDAM requires the opportunity to review and will approve the proposed EM based on qualifications or capacities.

Construction Requirements

- Before any topsoil is stripped, representative soil samples should be obtained from the areas to be disturbed. The soil sampling should be consistent with Cornell University's soil testing guidelines, and samples should be submitted to a laboratory for testing PH, percent organic material, cation exchange capacity, Phosphorus/Phosphate (P), and Potassium/Potash (K). The results are to establish a benchmark that the soil's PH, Nitrogen (N), Phosphorus/Phosphate (P), and Potassium/Potash (K) are to be measured against upon restoration. If soil sampling is not performed, fertilizer and lime application recommendations for disturbed areas can be found at https://www.agriculture.ny.gov/ap/agservices/Fertilizer_Lime_and_Seeding_Recommendations.pdf.
- Stripped topsoil should be stockpiled from work areas (e.g. parking areas, electric conductor trenches, along access roads, equipment pads) and kept separate from other excavated material (rock and/or sub-soil) until the completion of the facility for final restoration. For proper topsoil segregation, at least 25 feet of additional temporary workspace (ATWS) may be needed along "open-cut" underground utility trenches. All topsoil will be stockpiled as close as is reasonably practical to the area where stripped/removed and shall be used for restoration on that particular area. Any topsoil removed from permanently converted agricultural areas (e.g. permanent roads, etc.) should be temporarily stockpiled and eventually spread evenly in adjacent agricultural areas within the project Limits of Disturbance (LOD) ; however not to significantly alter the hydrology of the area. Clearly designate topsoil stockpile areas and topsoil disposal areas in the field and on construction drawings; changes or additions to the designated stockpile areas may be needed based on field conditions in consultation with the EM. Sufficient LOD (as designated on the site plan or by the EM) area should be allotted to allow adequate access to the stockpile for topsoil replacement during restoration.
 - Topsoil stockpiles on agricultural areas left in place prior to October 31st should be seeded with Aroostook Winter Rye or equivalent at an application rate of three bushels (168 lbs.) per acre and mulched with straw mulch at rate of two to three bales per 1000 Sq. Ft.
 - Topsoil stockpiles left in place between October 31st and May 31st should be mulched with straw at a rate of two to three bales per 1000 Sq. Ft. to prevent soil loss.
- The surface of access roads located outside of the generation facility's security fence and constructed through agricultural fields shall be level with the adjacent field surface. If a level road design is not

³ The Limits of Disturbance (LOD) includes all project related ground disturbances and all areas within the project's security fencing.

feasible, all access roads should be constructed to allow a farm crossing (for specific equipment and livestock) and to restore/ maintain original surface drainage patterns.

- Install culverts and/or waterbars to maintain or improve site specific natural drainage patterns.
- Do not allow vehicles or equipment outside the planned LOD without the EM seeking prior approval from the landowner (and/or agricultural producer), and associated permit amendments as necessary. Limit all vehicle and equipment traffic, parking, and material storage to the access road and/or designated work areas, such as laydown areas, with exception the use of low ground pressure equipment.⁴ Where repeated temporary access is necessary across portions of agricultural areas outside of the security fence, preparation for such access should consist of either stripping / stockpiling all topsoil linearly along the access road, or the use of timber matting.
- Proposed permanent access should be established as soon as possible by removing topsoil according to the depth of topsoil as directed by the EM. Any extra topsoil removed from permanently converted areas (e.g. permanent roads, equipment pads, etc.) should be temporarily stockpiled and eventually spread evenly in adjacent agricultural areas within the project Limits of Disturbance (LOD); however not to significantly alter the hydrology of the area.
- When open-cut trenching is proposed, topsoil stripping is required from the work area adjacent to the trench (including segregated stockpile areas and equipment access). Trencher or road saw like equipment are not allowed for trench excavation in agricultural areas, as the equipment does not segregate topsoil from subsoil. Horizontal Directional Drilling (HDD) or equivalent installation that does not disrupt the soil profile, may limit agricultural ground disturbances. Any HDD drilling fluid inadvertently discharged must be removed from agricultural areas. Narrow open trenches less than 25 feet long involving a single directly buried conductor or conduit (as required) to connect short rows within the array, are exempt from topsoil segregation.
- Electric collection, communication and transmission lines installed above ground can create long term interference with mechanized farming on agricultural land. Thus, interconnect conductors outside of the security fence must be buried in agricultural fields wherever practicable. Where overhead utility lines are required, (including Point(s) of Interconnection) installation must be located outside field boundaries or along permanent access road(s) wherever possible. When overhead utilities must cross farmland, minimize agricultural impacts by using taller structures that provide longer spanning distances and locate poles on field edges to the greatest extent practicable.
- All buried utilities located **within** the generation facility's security fence must have a minimum depth of 18-inches of cover if buried in a conduit and a minimum depth of twenty-four inches of cover if directly buried (e.g. not routed in conduit).⁵
- The following requirements apply to all buried utilities located **outside** of the generation facility security fence:
 - In cropland, hayland, and improved pasture buried electric conductors must have a minimum depth of 48-inches of cover. In areas where the depth of soil over bedrock is less than 48-inches, the

⁴ low ground pressure vehicles that do not result in a visible rut that alters soil compaction.

⁵ Burial of electrical conductors located within the energy generation facility may be superseded by more stringent updated electrical code or applicable governing code.

electric conductors must be buried below the surface of the bedrock if friable/rippable, or as near as possible to the surface of the bedrock.

- In unimproved grazing areas or on land permanently devoted to pasture the minimum depth of cover must be 36-inches.
- Where electrical conductors are buried directly below the generation facility's access road or immediately adjacent (at road edge) to the access road, the minimum depth of cover must be 24-inches. Conductors must be close enough to the road edge as to be not subject to agricultural cultivation / sub-soiling.
- When buried utilities alter the natural stratification of soil horizons and natural soil drainage patterns, rectify the effects with measures such as subsurface intercept drain lines. Consult the local Soil and Water Conservation District concerning the type of intercept drain lines to install to prevent surface seeps and the seasonally prolonged saturation of the conductor installation zone and adjacent areas. Install and/or repair all drain lines according to Natural Resources Conservation Service conservation practice standards and specifications. Drain tile must meet or exceed the AASHTO M-252 specifications. Repair of subsurface drains tiles should be consistent with the NYSDAM's details for "*Repair of Severed Tile Line*" found in the pipeline drawing A-5 (<http://www.agriculture.ny.gov/ap/agsservices/Pipeline-Drawings.pdf>).
- In pasture areas, it may be necessary to construct temporary fencing (in addition to the Project's permanent security fences) around work areas to prevent livestock access to active construction areas and areas undergoing restoration. For areas returning to pasture, temporary fencing will be required to delay the pasturing of livestock within the restored portion of the LOD until pasture areas are appropriately revegetated. Temporary fencing including the project's required temporary access for the associated fence installations should be included within the LOD as well as noted on the construction drawings. The Project Company will be responsible for maintaining the temporary fencing until the EM determines that the vegetation in the restored area is established and able to accommodate grazing. At such time, the Project Company should be responsible for removal of the temporary fences.

Post-Construction restoration requirements applicable to continued use agricultural areas that suffered ground disturbance due to construction activities (typically lands outside of the developed project's security fence).

- All construction debris in active agriculture areas including pieces of wire, bolts, and other unused metal objects will need to be removed and properly disposed of as soon as practical to prevent mixing with any topsoil.
- Excess concrete will not be buried or left on the surface in active agricultural areas. Concrete trucks will be washed outside of active agricultural areas. Remove all excess subsoil and rock unearthed from construction related activities occurring in areas intended to return to agricultural use. On-site disposal of such material is not permissible in active agricultural lands. Designated spoil disposal locations should be specified in the associated construction plans. If landowner agreements, LOD boundary, or Project's land use approvals do not allow for on-site disposal, material must be removed from the site.⁶

⁶ Any permits necessary for disposal under local, State and/or federal laws and regulations must be obtained by the facility operator, with the cooperation of the landowner when required.

- Excess stripped topsoil shall not be utilized for fill within the project area. Any extra topsoil removed from permanently impacted areas (e.g. roads, equipment pads, etc.) should be evenly spread in adjacent agricultural project areas, however not to significantly alter the hydrology of the area.
- Regrade all access roads outside of the security fencing (as determined necessary by the EM), to allow for farm equipment crossing and restore original surface drainage patterns, or other drainage pattern incorporated into the design.
- Repair all surface or subsurface drainage structures damaged during construction as close to preconstruction conditions as possible, unless said structures are to be removed as part of the project design. Correct any surface or subsurface drainage problems resulting from construction of the solar energy project with the appropriate mitigation as determined by the Environmental Monitor, Soil and Water Conservation District and the Landowner.
- On agricultural land needing restoration because of ground disturbance, postpone any restoration practices until favorable (workable, relatively dry) topsoil/subsoil conditions exist. Restoration must not be conducted while soils are in a wet or plastic state of consistency. Stockpiled topsoil must not be regraded, and subsoil must not be decompacted until plasticity, as determined by the Atterberg field test, is adequately reduced. No permanent project restoration activities shall occur in agricultural areas between the months of October through May unless favorable soil moisture conditions exist.
- In all continued use agricultural land where the topsoil was stripped, subsoil decompaction shall be conducted prior to topsoil replacement. Following construction, all such areas will be decompacted to a depth of 18 inches with a tractor mounted deep ripper or heavy-duty chisel plow. Soil compaction results shall be no more than 250 pounds per square inch (PSI) throughout the decompacted 18 inches as measured with a soil penetrometer. Following decompaction, all rocks 4 inches and larger in size unearthed from decompaction will be removed from the surface of the subsoil prior to replacement of the topsoil. The topsoil will be replaced to original depth and the original contours will be reestablished where possible. All rocks 4 inches and larger from topsoil shall be removed from the surface of the topsoil. Subsoil decompaction and topsoil replacement must be avoided after October 1, unless approved on a site-specific basis by the landowner in consultation with NYSDAM. All parties involved must be cognizant that areas restored after October 1st may not obtain sufficient growth for stabilization⁷ to prevent erosion over the winter months. If areas are to be restored after October 1st, necessary provisions must be made to prevent potential springtime erosion, as well as restore any eroded areas in the springtime, to establish proper growth. Excess stripped topsoil shall be evenly spread in the adjacent project areas, or adjacent agricultural areas (within the LOD), however, not to significantly alter the hydrology of the area.
- In all continued use agricultural areas where the topsoil was not stripped, including timber matted areas, the EM shall determine appropriate activities to return the area to agricultural use. These activities may include decompaction, rock removal, and revegetation. Soil compaction should be tested in the affected areas and the affected area's adjacent undisturbed areas using an appropriate soil penetrometer or other soil compaction measuring device as soon as soils achieve moisture equilibrium with adjacent unaffected areas. Compaction tests will be made at regular intervals of distance throughout the affected areas, including each soil type identified within the affected areas. Soil compaction results shall be measured with a soil penetrometer not exceeding more than 250 pounds per square inch (PSI), by

⁷ Sufficient growth for stabilization should be determined by comparison with unaffected crop production. Annual crops restored after normal planting window (as determined by the landowner or associated producer) should be stabilized with Aroostook Winter Rye at the rate of 150/100 lbs. per acre (broad cast/drill seeder).

comparing probing depths of both the affected and unaffected areas. Where representative soil density of the affected area's collective depth measurements present compaction restrictions exceeding an acceptable deviation of no more than 20% from the adjacent undisturbed area's mean soil density, additional decompaction may be required to a depth of 18-inches with a tractor mounted deep ripper or heavy-duty chisel plow. Following decompaction, remove all rocks unearthed from decompaction activities 4 inches and larger in size from the surface. Revegetation shall be performed in accordance with the instructions below.

- Seed all agricultural areas from which the vegetation was removed or destroyed with the seed mix specified by the landowner/agriculture producer or as otherwise recommended in the Department's fertilizer, lime and seeding guideline: [https://www.agriculture.ny.gov/ap/agservices/Fertilizer_Lime_and_Seeding_Recommendations.pdf]. Soil amendments should be applied as necessary so that restored agricultural areas' soil properties, at minimum, reasonably reflect the pre-construction soil test results or as otherwise agreed to by the involved parties to ensure continued agricultural use. All parties must be cognizant that areas restored after October 1st may not obtain sufficient growth to prevent erosion over the winter months. If areas are to be restored after October 1st, necessary provisions must be made to restore and/or re-seed any eroded or poorly germinated areas in the springtime, to establish proper growth.

Monitoring and Remediation

Project Companies shall provide a monitoring and remediation period of one complete growing season following the date upon which the desired crop is planted. All projects subject to NYS Public Service Law Article 10 will provide a monitoring period of two complete growing seasons following the date upon which the project achieves the establishment of the desired crop.

On site monitoring shall be conducted seasonally at least three times during the growing season (Spring, Summer, Fall). Monitoring is required to identify any remaining impacts directly associated with the construction of the project on agricultural lands proposed to remain or resume agriculture production, including the effects of climatic cycles such as frost action, precipitation and growing seasons to occur, from which various monitoring observations can be made. NYSDAM expects the Project Company (or its contractor) to retain the EM for follow-up monitoring and remediation (as needed) in agricultural areas. Monitoring is limited to the restored agricultural area. Non-project related impacts affecting the restored project area will be discussed with NYSDAM staff and considered for omission from future monitoring and remediation. The EM is expected to record the following observations from onsite inspections:⁸

- **Topsoil Thickness and Trench Settling** – The EM observations may require small hand dug holes to observe the percentage of settled topsoil in areas where the topsoil was stripped, or trenching was performed without stripping topsoil. Observations concerning depth of topsoil deficiencies shall require further remediation by re-appropriating additional topsoil. Acceptable materials for remediation are: known areas of native excess topsoil (according to records of project specific excess topsoil disposal spread within the original LOD) or imported topsoil free of invasive species that is consistent with the quality of topsoil on the affected site.

⁸ The activities that follow are not necessary for restored agricultural lands on which the farmer or landowner has commenced activities, including agricultural activities or other use that tend to reverse restoration or create conditions that would otherwise trigger restoration. Should NYSDAM contend upon inspection that conditions indicate that post-construction restoration activities were improperly performed or insufficient, NYSDAM may inform the project company and NYSERDA for further investigation and remediation.

- **Excessive Rock (>4-inches)** - Determined by a visual inspection of disturbed areas as compared to unaffected portions of the same field located outside the construction area. Observations concerning excess stone material in comparison to off-site conditions shall require further remediation including removal and disposal of all excess rocks and large stones.
- **Soil Compaction** - Project affected agricultural soils should be tested using an appropriate soil penetrometer or other soil compaction measuring device. Compaction tests will be made at regular intervals of distance throughout the access or work areas, including each soil type identified on the affected agricultural areas. Where representative soil density of the affected area exceeds the representative soil density of the unaffected areas, additional decompaction may be required. Consultation with NYSDAM staff and the agricultural producer(s) should be conducted prior to scheduling additional decompaction. If warranted, decompaction to a depth of 18-inches with a tractor mounted deep ripper or heavy-duty chisel plow. Restoration of displaced topsoil to original depth and re-establish original contours where possible. Decompaction deep shattering will be applied during periods of relatively low soil moisture to ensure the desired mitigation and to prevent additional soil compaction. Oversized stone/rock (Four-inches) material that is uplifted/unearthed to the surface as a result of the deep shattering will be removed.
- **Drainage** – The EM shall visually inspect the restored agricultural areas in search of pervasive stunted crop growth due to seasonal saturation, not previously experienced at the site and not resulting from the agricultural producer’s irrigation management or due to excessive rainfall. Identified areas of stunted crop growth shall be compared to the nearest undisturbed adjacent areas under a substantially equivalent terrain and crop management plan. Drainage observations should be evaluated to determine if the project affected surface or sub-surface drainage during construction or restoration. Project caused drainage issues affecting or likely to reduce crop productivity of the adjacent areas will have to be remediated via a positive surface drainage, sub-surface drainage repair or an equivalent.
- **Agriculture Fencing and Gates** – The EM shall inspect Project associated fencing and gates (installed, altered or repaired) within the Project’s LOD associated with agricultural activities for function and longevity. The Project Company is responsible during the Monitoring and Remediation Phase for maintaining the integrity of Project associated fencing and gates.

The Project Company (or its contractor) shall consolidate each applicable growing season’s observations into an annual report during the monitoring period and shall be provided upon request to NYSDAM. Annual reports should include date stamped photographs illustrating crop growth in comparison with unaffected portions the agricultural areas.

The EM shall record observations of the establishment of the desired crop and subsequent crop productivity within restored agricultural areas and shall be evaluated by comparing its productivity to that of the nearest adjacent undisturbed agricultural land of similar crop type within the same field. If a decline in crop productivity is apparent the Project Company as well as other appropriate parties must determine whether the decline is due to project activities. If project activities are determined to be the primary detrimental factor, the project EM will notify NYSDAM concerning unsuccessful restoration and to potentially schedule a NYSDAM staff field visit. If project restoration is determined to be insufficient, the Project Company will develop a plan for appropriate rehabilitation measures to be implemented. NYSDAM staff will review and approve said plan prior to implementation. Additional monitoring may be required depending on additional restoration activities needed.

The Project Company is not responsible for site conditions and/or potential damages attributable to the agricultural producer's land use management or others' land use management.

Decommissioning

If the operation of the generation facility is permanently discontinued, remove all above ground structures (including panels, racking, signage, equipment pad, security fencing) and underground utilities if less than 48-inches deep. All concrete piers, footers, or other supports must be removed to a minimum depth of 48-inches below the soil surface. The following requirements apply to electric conductors located at the respective range of depth below the surface:

- 48-inches plus: All underground electric conduits and direct buried conductors may be abandoned in place. Applicable conduit risers must be removed, and abandoned conduit must be sealed or capped to avoid a potential to direct subsurface drainage onto neighboring land uses.
- Less than 48-inches: All underground direct buried electric conductors and conductors in conduit and associated conduit with less than 48-inches of cover must be removed, by means of causing the least amount of disturbance as possible.

Access roads in agricultural areas must be removed, unless otherwise specified by the landowner. If access is to be removed, topsoil will have to be returned from recorded project excess native topsoil disposal areas, if present, or imported topsoil free of invasive species that is consistent with the quality of topsoil on the affected site. Restore all areas intended for agricultural production, according to recommendations by the current landowner or leasing agricultural producer, and as required by any applicable permit, the Soil and Water Conservation District, and NYSDAM.

Monitoring and restoration requirements in accordance to the prior sections of these guidelines, will be required for the decommissioning restoration. NYSDAM requires notice before the Project Company undertakes decommissioning.

_____ (Project Company) hereby agrees to use best efforts to adopt and employ the provisions of the NYSDAM Guidelines for Agricultural Mitigation for Solar Energy Projects in all material aspects of the construction, post construction and decommissioning of this project. Where Project Company determines that it cannot perform an activity in a manner that meets the material terms of any provision of the Guidelines, the Project Company or its Environmental Monitor will notify NYSDAM and make good faith efforts to devise an alternative solution that will mitigate adverse agricultural impacts.

Signature

Date