

## Appendix 23-1

# **Site Decommissioning and Restoration Plan**



Highest standards



# BROOKSIDE SOLAR, LLC

Matter No. 21-00917

Towns of Burke and  
Chateaugay  
Franklin County, NY

Appendix 23-1  
Site Decommissioning and  
Restoration Plan

February 2022

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## Attachment

Attachment A. Cost Estimate

## 1.0 Introduction

Brookside Solar, LLC (Brookside) has prepared this Site Decommissioning and Restoration Plan (the Plan) to address the decommissioning process and associated costs in relation of the Brookside Solar Facility (the Facility) located in the Towns of Burke and Chateaugay in Franklin County, New York. The Plan includes a detailed decommissioning budget outlining the decommissioning costs and activities for each major Facility component including, but not limited to, solar arrays, collection lines, fencing, inverters, the collection substation, and haul roads.

The Facility Site will be located on 1,471 acres of land leased and/or purchased from private landowners. The Facility components identified above will occupy 645 acres of the overall Facility Site. The Applicant's goal for decommissioning of the Facility is the safe and efficient removal of Facility components while striving to restore occupied land to its pre-construction condition to the greatest extent practicable. Restoration activities may include, but are not limited to, revegetation with native plants and grass, habitat restoration, and re-establishing land use. The safety measures and protocols utilized during construction and operation of the Facility will be applied during the decommissioning and restoration process to ensure the safety of Facility personnel and the public.

For decommissioning, the Applicant shall:

- Be responsible for decommissioning costs;
- Commence decommissioning, removal, and legal disposal of Facility components;
- Remove and dispose of all aboveground infrastructure, such as solar arrays and inverters;
- Acquire permits not supplanted by Section 94-c;
- Develop a Stormwater Pollution Prevention Plan (SWPPP) for construction activities related to the removal of concrete foundations, haul roads, equipment pads, fencing, and other soil disturbance activities;
- Perform grading and completion of ground stabilization using revegetating or other means in accordance with permits and in compliance with all applicable rules and regulations then in effect governing; and
- Recycle and/or salvage materials to a reasonable extent practical and manage all waste streams in accordance with the State's and local authority's waste hierarchy.

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## **2.0 Decommissioning and Restoration**

### **2.1 Anticipated Operational Life of the Facility**

Facility decommissioning will be initiated when the Facility reaches the end of its operational life. Brookside Solar, LLC will be responsible for the decommissioning of the Facility. The solar arrays used have an approximate useful operational life of a minimum of 25 years, therefore the Facility is anticipated to be operational for at least 30 years. The Facility Site has been selected for its ability to harness superior solar energy in tandem with landowners willing to participate, and ease of access to transmission facilities. While the Plan outlines standard procedures for decommissioning the Facility, the Applicant intends for the Facility to be operational for several decades.

Should the Facility cease electric generation activities for a period of 12 consecutive months, decommissioning shall commence, unless the following occurs during the 12-month period:

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

### **2.2 Site Decommissioning Activities and Schedule**

Decommissioning will be initiated once the Facility has reached the end of its useful economic life. Prior to the start of decommissioning activities, the Facility shall be shutdown, de-energized, and disconnected from the electric generation tie-in at the collection substation. The Applicant shall consult with New York State Electric and Gas (NYSEG) to complete the de-energization efforts and ensure there is no disruption to the electric grid. In addition, the Applicant will provide notice by mail to landowners and the Towns of Burke and Chateaugay prior to commencing decommissioning work.

As part of the decommissioning process, the Facility Site will be restored to as close to pre-construction conditions as possible. During the decommissioning process, the solar modules,

collection substation, and associated aboveground infrastructure will be removed. Underground collection lines will be abandoned in place in accordance with the New York State Department of Agriculture and Markets (NYSAGM) guidelines.

Decommissioning activities will include the following:

- Disassembly and removal of aboveground structures;
- Removal of subsurface structures to a minimum depth of 36 inches below grade in non-agricultural land and 48 inches below grade in agricultural land;
- Abandonment of underground collection lines greater than or equal to 48 inches below ground surface (BGS); and
- Regrading and revegetating disturbed areas.

### **2.3 Proposed Restoration Activities**

Restoration activities will include back-filling of pile and foundation sites; de-compaction of subsoils; grading of surfaces to pre-construction land contours and revegetation of the disturbed areas. Soils compacted during decommissioning and restoration activities will be de-compacted, as required, to restore the land to pre-construction land use and characteristics. Haul roads will be removed, unless requested by the landowner to remain in place. Effective site drainage will be maintained during the life of the Facility. The site will be graded during the restoration phase of decommissioning to maintain appropriate drainage. Topsoil will be placed on disturbed areas, as needed, and seeded with appropriate vegetation or in coordination with the current landowner, and in compliance with regulations in place at the time of decommissioning.

Agricultural restoration will be completed in accordance with NYSAGM Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands (Revision 10/18/2019) to the maximum extent practicable and as applicable. An Environmental Monitor will be present onsite throughout the decommissioning and restoration process on agricultural land, as required by the NYSAGM Guidelines. Areas used for agricultural production prior to the construction and operation of the facility will be determined by the landowner, the Franklin County Soil and Water Conservation District, and the NYSAGM. In areas determined to be agricultural land, posts will be removed to a depth of 48 inches below the soil surface, underground electric collection lines will be abandoned in place, and haul roads will be removed unless otherwise specified by the landowner. Agricultural restoration has been further detailed in the Agricultural Restoration Plan included as Appendix 15-1 of the Application.

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### **3.0 Safety and Environmental Impacts**

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

#### **3.1 Safety and the Removal of Hazardous Conditions**

As discussed in Exhibit 6, safety is one of the Applicant's most important performance metrics. Meeting that goal includes the removal of all aboveground facilities and any associated hazardous conditions upon Facility decommissioning. The safety protocols used during construction and operation of the Facility will be applied for the decommissioning and restoration efforts in order to protect Facility personnel and the public. Any hazardous fluids or materials will be removed in accordance with the OSHA standards.

#### **3.2 Environmental Impacts**

As discussed in the Plan, the goal of decommissioning is to ensure the safe and efficient removal of Facility components while striving to restore the Facility Site to its pre-construction condition to the greatest extent practicable. As stated previously, this reclamation effort may include, but is not limited to, restoration of native vegetation, habitat, and/or land use (i.e., agricultural use). Erosion control and stormwater management measures will be utilized to maintain downstream water quality and prevent soil erosion and/or adverse impacts that may result from stormwater runoff. Environmental impacts will be minimized to the maximum extent practicable during decommissioning of the Facility and land restoration activities. Following the removal of all aboveground facilities, reseeded of the Facility Site will take place.

### **3.3 Aesthetics**

Aboveground Facility components will be removed and the site will be restored according to the Plan. Haul roads will be removed unless the landowner requests the haul road(s) remain. Disturbed areas will be seeded using a native seed mix. Underground collection lines will be abandoned in place in accordance with NYSAGM guidelines.

### **3.4 Recycling**

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

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

### **3.5 Potential Future Uses for the Site**

The Facility Site has multiple potential future uses, including future solar generation. When and where possible, the Applicant prefers to redevelop or repower solar facilities, as opposed to decommissioning, in areas with access to transmission facilities, solar resources, and interested landowners. The Facility Site is currently primarily active agriculture and forested land. If decommissioning is determined to be the most optimal option for the site, as opposed to repowering as previously discussed, lands previously used for agricultural production may resume upon decommissioning. The Applicant is not aware of any limitations on future land uses that landowners may consider at that time. Operation of the Facility and subsequent decommissioning of the facilities will not restrict future uses of the land for agricultural or alternate uses.



## 3.6 Funding

### 3.6.1 *Estimated Cost of Decommissioning*

The estimated cost of decommissioning the Facility is approximately \$8,473,000 after 30 years. A detailed cost analysis for the decommissioning efforts is provided as Attachment A. The estimated cost will be updated periodically as price trends fluctuate.

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

- Costs derived from 2018 RS Means Site Work & Landscaping Costs estimating manual.
- Assumes 2% annual cost increase from decommissioning and 1.0% annual cost increase from salvage value.
- Post removal includes backfilling holes.
- We assume the switchyard is owned and operated by the utility company and will not be decommissioned as part of this project.
- We assume the native soils from excavation of roads and infiltration trenches will be side-cast then graded during construction and will be available as backfill when the roads and infiltration trenches are removed.
- We assume collector conductors will be abandoned in-place (>48" below grade).
- Salvage costs obtained from <http://rockawayrecycling.com/> using 30-Day Average price (3/31/2021).
- Salvage costs obtained from Empire Recycling phone quotation (3/31/2021).

### 3.6.2 *Financial Assurance*

Financial assurance will be provided by the Applicant in the form of a letter of credit (LOC) or other financial assurance approved by The Office of Renewable Energy Siting (ORES) (e.g. surety bond or performance bond) to cover the estimate of decommissioning and restoration activities (plus a 15 percent contingency cost) less the total projected salvage value of Facility components. This financial assurance will be approved by ORES and established by the Applicant to be held by the Towns of Burke and Chateaugay. See below for additional information regarding each type of potential financial assurance and justification:

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

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

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

**Performance Bond:** A Performance Bond is a type of Surety Bond, where the obligee requires security that a task is completed in a satisfactory manner, typically applying to construction activities. A Performance Bond could also apply to a decommissioning obligation of the Applicant's contractor; however, a Decommissioning Bond is more applicable for the purposes of this section of the Application. A Decommissioning Bond is another type of Surety Bond. It is a financial guarantee that ensures proper removal of equipment and restoration of the environment to its pre-existing state. A decommission bond relieves the burden from landowners and taxpayers and puts the responsibility of proper decommission on the Facility owner.

The Applicant will consult with the Towns and ORES Staff to determine an acceptable form of financial assurance. Use of an LOC or bond would remain in effect for the life of the Facility until decommissioning concludes.

### 3.7 Schedule

Decommissioning shall begin after the Facility has ceased operating as a solar energy facility collecting and storing energy and then transferring and distributing it to the electrical grid for a period of 12 months. Periods during which the Facility is not operational for maintenance, repair, or due to catastrophic events beyond the Applicant's control, during which the Applicant will work diligently to return the Facility to full operating status, shall not trigger the decommissioning requirement herein. Prior to the commencement of decommissioning activities, the Facility will be shut down, de-energized, and disconnected from the generation tie line at the collection

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substation. The Applicant will coordinate with NYSEG and the local utilities, if applicable, for de-energization efforts to ensure disruption to the overall electric utility system does not occur.

Written notice will be provided to the Towns and adjacent property holders no less than 30 days prior to commencement of decommissioning activity.

Removal of the equipment will take approximately three to five months, and completion of the reclamation will take an additional three to four months. This timeline may be extended if there is a delay beyond the control of Applicant including, but not limited to, inclement weather conditions, planting requirements, equipment failure, or the availability of equipment or personnel to support decommissioning.

**ATTACHMENT A**

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**Cost Estimate**





