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TOWN OF YORKTOWN

Jacob's Road Solar Project

Freestone Renewables, LLC

Project Decommissioning Plan

Jan 2025

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1. Introduction

Freestone Renewables proposes to build a ground-mounted photovoltaic (PV) solar facility (“Solar Facility”) in the Town of Yorktown, Westchester County, New York, referred to as the “Jacob’s Road Solar.” The Solar Facility is planned to connect to the Buchanan Network of Con Edison’s electrical grid and will have a nameplate capacity of 3,125.00 kilowatts (kW) alternating current (AC). The Solar Facility is proposed to occupy approximately 11.52 acres located at 1805 Jacob Road, Yorktown, Westchester County, NY (the “Facility Site”).

This Plan assumes that the Solar Facility will have a useful life of thirty (30) years. Upon decommissioning, the Solar Facility will be dismantled, and the Facility Site restored to a state similar to its pre-construction condition as abandoned agricultural land. The Plan also accounts for the possibility of early abandonment of the Solar Facility, for any reason, prior to the project’s 30-year maturity date. It is designed to provide a level of financial protection for the Town of Yorktown.

This Decommissioning Plan (“Plan”) provides an overview of activities during the decommissioning phase of the Solar Facility, including:

- Restoration of land,
- Management of materials and waste,
- Projected costs, and
- A decommissioning cost and surety bond.

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

- Photovoltaic (PV) modules, panel racking, and supports.
- Inverter units, transformers, and other electrical equipment.
- Roads within fenced areas of the solar facility, wiring cables, and perimeter fencing; and
- Concrete foundations.

This Decommissioning Plan is based on current best management practices and procedures and has been prepared in compliance with the most recent guidance provided in the NYSERDA "Solar Guidebook for Local Governments" on decommissioning solar panel systems. The plan incorporates recommendations for removing project components, restoring the site to its original condition, and ensuring appropriate financial mechanisms are in place to cover decommissioning costs.

This plan is intended to evolve alongside advancements in decommissioning standards and best practices. Any future revisions to the plan will be subject to review and approval by the Town of Yorktown to ensure continued compliance with applicable guidelines and local requirements.

2. The Project Developer

Freestone Renewables, or any future owner-operator of Jacob's Road Solar Facility, will manage and coordinate the decommissioning process. The project developer will ensure compliance with all applicable local, state, and federal regulations during the decommissioning process. The company is committed to maintaining the safety, health, and welfare of the hosting community throughout the project lifecycle and during decommissioning activities.

The conditions and obligations outlined in this Decommissioning Plan shall be binding upon Freestone Renewables, its successors, assigns, or any future owner-operators of the Solar Facility.

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2.1 Project Information:

- **Project Name:** Jacob's Road Solar
- **Address:** 1805 Jacob Road, Yorktown, Westchester County, NY
- **Coordinates:** 41.275597, -73.850042
- **Tax ID:** 35.16-1-4
- **Project Size:** 3.125 MW AC
- **Property Ownership:** Lease agreement with Featherbed Properties, Inc.

Freestone Renewables has secured a lease agreement with Featherbed Properties, Inc. to develop Jacob's Road Solar Facility on approximately 11.52 acres of land. The property was historically used as agricultural land and is currently classified as vacant.

3. Decommissioning of the Solar Facility

Decommissioning of Jacob's Road Solar Facility may be initiated under the following circumstances:

1. Freestone Renewables, or any future owner-operator, decides to decommission and retire the Solar Facility; or
2. The Town of Yorktown revokes the Special Use Permit issued for the project.

To ensure funding is available for decommissioning, Freestone Renewables or any future owner-operator will provide the Town of Yorktown with a financial guarantee before construction begins. This guarantee, in the form of a surety bond, will ensure decommissioning costs are covered, even in unforeseen situations such as a change in project ownership or the dissolution of Freestone Renewables. The bond will be renewed annually and made available to any party, including the municipality or landowner, that may undertake the decommissioning.

During the decommissioning process, all project infrastructure will be dismantled and removed from the site. Where possible, materials such as photovoltaic modules, racking systems, and inverters will be reused or recycled. The Facility Site will be restored to a condition comparable to its original state prior to construction, as detailed in the Site Restoration section. All work will comply with applicable regulations and manufacturer guidelines for safe removal.

Freestone Renewables, or any future owner-operator, will obtain the necessary permits and ensure adherence to State Environmental Quality Review Act (SEQR) requirements during decommissioning.

If Freestone Renewables or any future owner-operator is unable to complete the decommissioning, the Town of Yorktown may access the financial guarantee to ensure the safe and proper removal of the Solar Facility and site restoration. The financial guarantee is intended to cover the full scope of decommissioning costs, providing security for the Town without additional burden on local resources.

3.1 Equipment Dismantling and Removal

The decommissioning process for Jacob's Road Solar Facility will generally follow a reverse order of the installation process. The steps include:

1. **Stakeholder Notification:** Notify all relevant stakeholders, including the Town of Yorktown, NYSDEC, US Army Corps of Engineers, and any other applicable authorities.
2. **Grid Disconnection:** Disconnect the Solar Facility from the utility power grid in coordination with the local utility provider.
3. **Permits and Approvals:** Obtain all required permits and approvals, including preparation of a Stormwater Pollution Prevention Plan (SWPPP), if necessary.
4. **Module Removal:** Remove PV modules, ensuring they are collected and either sent to an approved solar module recycler or resold/reused in accordance with applicable regulations. Modules are expected to retain residual value, as they will likely still produce 80% of their original electricity output after 25 years.

5. **Site Protection:** Identify and mark areas requiring special care, such as wetlands, to ensure they are protected during decommissioning activities.
6. **Erosion and Sediment Controls:** Install temporary erosion and sediment control measures as required to prevent soil disturbance.
7. **Above-Ground Electrical Components:** Remove all above-ground electrical interconnection and distribution cables, poles, and associated equipment. These will be transported off-site to approved recycling or disposal facilities.
8. **Underground Electrical Conduits:** Underground conduits will not be removed by Freestone Renewables or any future owner-operator and will remain in place as per the lease agreement. These conduits will become the property of the Landlord upon decommissioning. All conduits will be sealed or capped following best practices to prevent any subsurface drainage issues and to ensure compliance with applicable regulations. The site will be restored to a reasonably level and stabilized condition, suitable for planting or reforestation, as specified in the lease.
9. **Racking and Supports:** Galvanized steel PV module support and racking system posts will be dismantled and sent to approved facilities for recycling or salvage.
10. **Electrical Equipment:** Transformers, inverters, switchgear, and other electrical equipment will be removed and recycled or disposed of in compliance with all applicable regulations. Any equipment not required for return to the utility will also be handled at approved facilities.
11. **Concrete Foundations:** Remove all concrete foundations and transport them off-site to approved disposal or recycling facilities.
12. **Access Roads:** Remove access roads, if required by the Town of Yorktown, and restore the land to its pre-construction condition.
13. **Vegetative Screening:** Remove any vegetative screening installed for the project.
14. **Soil Restoration:** Perform additional soil restoration as needed to ensure the land is suitable for its pre-construction use.
15. **Seeding and Stabilization:** Apply proper seeding, mulching, and fertilizing to stabilize the soil and encourage vegetation growth.
16. **Erosion Control Removal:** Remove all temporary erosion and sediment controls after site stabilization is achieved.
17. **Fencing:** Remove fencing and gates, transporting materials off-site for recycling or disposal.
18. **Permit Closure:** Close out all permits and provide the required documentation to the relevant authorities.

These activities will adhere to applicable regulations and best management practices at the time of decommissioning. The sequence and methodologies may be updated to reflect advances in technology or changes in regulatory requirements.

3.2 Environmental Effects

The decommissioning of Jacob's Road Solar Facility has the potential to create environmental effects similar to those experienced during the construction phase. These may include ground disturbance, erosion and sedimentation, soil compaction, spills, and potential impacts to adjacent watercourses or significant natural features.

To mitigate these effects, decommissioning activities will employ construction best management practices (BMPs) and mitigation measures. Temporary erosion and sediment controls will be installed in accordance with the latest New York State Department of Environmental Conservation (NYSDEC) standards and specifications. These controls will remain in place until site stabilization is achieved, and vegetation or ground cover is successfully reestablished, minimizing erosion and runoff impacts to nearby natural features and water bodies.

Additional potential environmental impacts include:

1. **Road Traffic and Dust:** There will be a temporary increase in road traffic due to the transportation of crews, equipment, and materials. This may also result in elevated levels of particulate matter (dust) in nearby areas. Dust suppression measures, such as water spraying, will be employed as necessary.
2. **Noise:** Elevated noise levels may occur temporarily from the use of heavy machinery and increased vehicle traffic. To mitigate this, all work will be conducted during daylight hours and will adhere to applicable noise restrictions or ordinances.
3. **Solid Waste Management:** Recycling of decommissioned components will be prioritized to minimize solid waste. Structural materials such as steel and aluminum, along with PV modules, inverters, and other equipment, will be reused or recycled where feasible.

Throughout the decommissioning process, all activities will conform to applicable local, state, and federal regulations to ensure minimal disruption to the environment and the community. The implementation of these measures aims to restore the site while safeguarding nearby natural and community resources.

3.3 Site Restoration

During the decommissioning phase, all components of the Jacob's Road Solar Facility will be removed (refer to Appendix 1), and the Facility Site will be restored to a condition similar to its pre-construction state as vacant agricultural land. The pre-construction condition has been documented in the photos included in Appendix 2.

Freestone Renewables, or any future owner-operator, will collaborate with the landowner, the Soil and Water Conservation District, the New York State Department of Agriculture and Markets (NYSDAM), and other relevant authorities to ensure that site restoration adheres to applicable guidelines. This includes following the environmental monitoring and restoration requirements outlined in the NYSDAM guidelines (see Appendix 4).

Key steps for site restoration include:

1. **Soil Restoration:** Disturbed areas, including locations where soil compaction has occurred, will undergo soil restoration in accordance with the most current NYSDEC standards. This may involve loosening compacted soil, adding amendments to improve fertility, and grading to restore proper contours.
2. **Seeding and Stabilization:** All disturbed areas will be re-seeded with appropriate vegetation to stabilize soil conditions, enhance soil structure, and increase fertility. Mulching and fertilizer applications will be employed as needed to support vegetation growth and site stabilization.
3. **Access Road Removal:** If access roads are removed as required by the Town of Yorktown, these areas will be restored to their original state with appropriate grading and soil treatment.
4. **Environmental Safeguards:** Any additional measures necessary to protect adjacent natural resources or wetlands will be implemented during site restoration.

The goal of site restoration is to leave the land in a state suitable for its pre-construction use as agricultural land. Freestone Renewables or the future owner-operator will ensure compliance with all local, state, and federal requirements throughout the restoration process.

3.4 Managing Materials and Waste

During the decommissioning phase, a variety of materials and waste will be generated as components of the Jacob's Road Solar Facility are dismantled and removed (see Appendix 1). Many materials, such as steel, aluminum, and certain electronic components, are reusable or recyclable. Additionally, some equipment may fall under manufacturer take-back or recycling programs. Any remaining materials will be transported off-site for disposal at licensed and approved facilities.

Freestone Renewables, or any future owner-operator, will establish policies and procedures to maximize the recycling and reuse of decommissioned materials. The company will collaborate with manufacturers, local subcontractors, and waste management firms to sort materials for proper disposal, recycling, or reuse.

Specific efforts will include:

1. **Photovoltaic Modules:** Freestone Renewables will oversee the logistics of collecting and recycling PV modules, aiming to prevent them from entering the municipal waste stream. The company will adhere to any applicable manufacturer recycling programs or industry best practices available at the time of decommissioning.
2. **Future Recycling Innovations:** As the solar industry evolves, it is anticipated that recycling and reuse options for solar modules will expand. Freestone Renewables or the future owner-operator will explore these opportunities to ensure environmentally responsible disposal or recycling of solar modules and other project components.

3. **Coordination with Authorities:** If any components require disposal at a municipal waste facility, Freestone Renewables will coordinate with the Town of Yorktown to ensure proper handling and compliance with local regulations.

Freestone Renewables or the future owner-operator will be responsible for ensuring all materials and waste are managed in an environmentally responsible manner, with an emphasis on reducing landfill disposal and minimizing the overall environmental footprint of the decommissioning process.

3.5 Decommissioning Notification

Decommissioning activities for the Jacob's Road Solar Facility may necessitate stakeholder notification due to the scope and nature of the work at the Facility Site. The Town of Yorktown will be informed prior to the commencement of any decommissioning activities. Additionally, Freestone Renewables or any future owner-operator will notify the New York State Department of Environmental Conservation (NYSDEC) and other relevant agencies before decommissioning begins, especially if activities may impact nearby wetlands or other environmentally sensitive areas.

Notification procedures will begin at least six months before decommissioning activities are scheduled to commence. Notifications may be delivered in writing via mail or email, or communicated verbally, depending on the circumstances and the preferences of each stakeholder. During this period, Freestone Renewables or the future owner-operator will:

1. Update the list of stakeholders to ensure all relevant parties are identified.
2. Notify appropriate jurisdictions and overseeing agencies about planned decommissioning activities.
3. Engage with federal, state, county, and local authorities, as well as the utility company, to discuss necessary approvals and coordinate activities.

Stakeholders to Be Notified:

- Town of Yorktown Planning and Development Office
- Management Team at Freestone Renewables or the future owner-operator
- Property Owner (Featherbed Properties, Inc.)
- Consolidated Edison (Con Edison)
- Westchester County Sheriff's Office
- Local Fire Department

Freestone Renewables or the future owner-operator will ensure all communications are conducted in a timely and thorough manner, addressing any concerns raised by stakeholders to ensure a smooth decommissioning process.

4. Costs of Decommissioning & Decommissioning Bond

The estimated cost to decommission the 3.125 MW Jacob's Road Solar Facility has been calculated by Freestone Renewables' engineering consultants, following industry standards and guidance provided by NYSERDA. The estimated cost is \$XXX, XXX (see Appendix 3). This estimate reflects the best available information and draws on engineering expertise and demolition experience from similar projects.

The calculation does not include potential salvage values for recyclable materials such as aluminum, steel, and copper, which may help offset decommissioning costs. The actual salvage value will depend on prevailing market rates at the time of decommissioning.

To ensure sufficient funds are available for decommissioning, Freestone Renewables will post a surety bond at the start of construction. The bond amount will be adjusted for inflation over the project's lifespan and is expected to total approximately \$XXX, XXX at the project's 30-year maturity (see Appendix 3). This financial guarantee provides security for the Town of Yorktown and ensures that the decommissioning process will be fully funded, regardless of circumstances.

5. Estimated Timeline

Freestone Renewables has developed an estimated timeline for the major activities associated with the decommissioning of Jacob's Road Solar Facility. As specific approvals and protocols may evolve by the time decommissioning is initiated, this timeline is based on the best available information and current industry practices:

- **Notifications to Stakeholders:** Months 0 to 6
Stakeholders, including the Town of Yorktown, will be notified at least six months prior to the commencement of decommissioning activities.
- **Permitting and Environmental Review:** Months 2 to 6
Necessary permits will be secured, and any required environmental reviews will be completed during this period.
- **Physical Decommissioning and Equipment Removal:** Months 6 to 9
The dismantling and removal of project components, including PV modules, racking, inverters, and other equipment, will take place during this time.
- **Site Restoration:** Months 6 to 15 (dependent on growing season)
Restoration activities, such as soil remediation, re-seeding, and erosion control, will be conducted following equipment removal. The timing may vary depending on weather conditions and the growing season.

APPENDIX A

Means of Managing Excess Materials and Waste

Materials/ 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 of off-site at an approved facility
Transformers and substation components	The substation transformers, step-up transformers and the inverter units will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed of off-site in accordance with current standards and best practices.
Inverters, fans, switch gear and fixtures	The metal components of the inverters, fans, and fixtures will be disposed of or recycled, where possible. The remaining components will be disposed of in accordance with the standards of the day.
Gravel (or other granular)	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 or roads. 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 and 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	Underground conduits, conductors, and other facilities originally installed at less than 36” in depth will be removed and recycled or safely disposed of in accordance with current standards and best practices.
Fencing	Fencing will be removed and recycled at a metal recycling facility.
Debris	Any remaining debris on the site will be separated into recyclables/ residual waste and will be transported from the site and managed as appropriate.

APPENDIX B

Photo Documentation of Pre-Construction Conditions



Photo 1: North of array (looking south)



Photo 2: East of array (looking west)



Photo 3: South of array (looking north)



Photo 4: West of array (looking east)

APPENDIX C

Estimated Decommissioning Costs

Decommissioning Cost Analysis in progress. Pending final site plan approval.