

# **Hoffman Falls Wind Project**

**Matter No. 23-00038**

**900-2.24 Exhibit 23**

## **Site Restoration and Decommissioning**

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## EXHIBIT 23 SITE RESTORATION AND DECOMMISSIONING

### (a) Decommissioning and Site Restoration Plan

In the event the Facility reaches its end of life (anticipated lifespan up to 30 years) and ceases operations without expectation of repowering, or if initial construction cannot be completed, the Facility will be decommissioned per the Decommissioning and Site Restoration Plan, a draft of which is provided in this Application as Appendix 23-A. Decommissioning may also be triggered if the Facility is non-operational for a continuous period of 12 months or more, with the understanding that if the Applicant demonstrates to the Office of Renewable Energy Siting (ORES) a good faith effort to restore the wind turbine(s) to operable condition, that such a time limit shall not apply. During periods when the Facility is not operational for maintenance, repair, or due to catastrophic events beyond the Applicant's control, the Applicant will work diligently to return the Facility to normal operating status.

The Plan assumes that the following Facility components will be removed during decommissioning:

- Wind turbines
- Meteorological (MET) tower
- Aircraft Detection Lighting System (ADLS) tower
- Electrical collection/transmission system
- Access roads and gates
- Collection substation and security fencing
- Operations and Maintenance (O&M) facility

The Applicant will remove all above-ground Facility components and will remove all underground Facility components to a depth of 4 feet below grade in agricultural areas and 4 feet below grade in non-agricultural areas. Underground collection cabling will be buried at a depth of more than four feet below grade and will be abandoned in place. See the Decommissioning and Site Restoration Plan (Appendix 23-A) for a detailed description of the procedures that will be followed and the engineering techniques that will be employed to remove Facility components and restore the site during decommissioning.

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

As outlined in the Decommissioning and Site Restoration Plan, the decommissioning will be supervised and carried out by trained personnel familiar with the risks associated with decommissioning of similar facilities. During the decommissioning process, all cooling, heating, and lubrication fluids will be drained, stored, and such materials will be disposed of off-site at appropriate facilities and in accordance with applicable federal, state, and local requirements.

Table 23-1 provides a list of typical waste materials and modes of disposal, recycling, or reuse. Although portions of wind turbines may be able to be recycled at the time the Facility is decommissioned (i.e., the wind turbine blades), for the purposes of the decommissioning cost estimate, it was assumed that these components will be disposed of at a local or regional landfill.

**Table 23-1. Typical Facility Decommissioning Waste Materials and Modes of Disposal**

<b>Component</b>	<b>Typical Mode of Disposal</b>
Concrete foundations	Crush and recycle as granular material
Wind turbines and MET and ADLS towers	Dispose, sell for scrap, recycle, reuse
Aboveground Structures	Dispose, sell for scrap, recycle, reuse
Cabling	Recycle, sell for scrap, reuse
Granular material	Reuse or dispose of in landfill
Oils/lubricants	Recycle
Hazardous materials, if applicable	Dispose of through licensed hauler
Geotextile material	Dispose of in landfill
Miscellaneous non-recyclable materials	Dispose of in landfill

The Applicant will ensure that hazardous and potentially hazardous materials are transported, stored, and handled in accordance with applicable regulations. These materials include oil used in the turbines that may be stored on-site to fuel equipment used during decommissioning activities. None of the components, wind turbines, foundations, or access road materials are considered hazardous. Hazardous materials will be disposed of at licensed waste disposal facilities. Hazardous wastes will not be disposed of in any other fashion such as unpermitted burying or burning.

**(2) Environmental Impact**

Decommissioning activities could result in environmental effects like those that occur during the construction phase. For example, there is the potential for disturbance (erosion/sedimentation/fuel spills) to adjacent watercourses or environmental sensitive features. Prior to any removal of equipment, temporary erosion and sedimentation control measures will be installed prior to decommissioning and in accordance with any specific erosion and sediment control plans developed for the decommissioning phase. As such, many of the mitigation measures, management practices, and permitting requirements applied during construction will be applied during decommissioning. This will include, as appropriate, erosion and sediment control plans, dust control, and noise mitigation requirements, traffic management plans, and spill prevention control and containment plans.

Erosion control and stormwater management will utilize similar measures and best management practices outlined in the Facility’s Preliminary Stormwater Pollution Protection Plan (SWPPP) provided in Exhibit 13 and in accordance with New York State Standards and Specifications for Erosion and Sediment Control applicable at the time in order to maintain downstream water quality and manage stormwater runoff during decommissioning. Selection and design of erosion and sedimentation controls will account for climate, topography, soils, and vegetative cover to be re-established at the Facility Site following decommissioning.

Commonly used best management practices that may be employed during restoration will include the following:

- Minimize disturbed areas and protect natural features of the site (native soil, topsoil, vegetation, topography, and drainage areas).
- Control stormwater runoff and flow to and from disturbed areas.
- Stabilize soils as quickly as possible following disturbance of work areas.
- Protect slopes and exposed soil.
- Protect culvert inlets, drainage structures, and nearby surface water features.
- Establish perimeter controls around areas to be restored.
- Retain sediment to prevent transport off-site in stormwater runoff.
- Maintain controls including removal or accumulated sediment during re-establishment of vegetation.

Environmental protection plans, permitting requirements, and other measures will remain in place, as needed, until the Facility Site is stabilized to mitigate erosion and silt/sediment runoff and any impacts to natural features or waterbodies located within and adjacent to the Facility Site. Assuming the regulatory requirements for stormwater management are similar at the time of decommissioning, the Applicant will require a stormwater discharge permit for clearing, grading, and excavation, of 5 acres or greater.

The Applicant will hire an environmental monitor (EM) with an understanding of agricultural practices. Former agricultural lands will be returned to their former state where suitable conditions exist. Restoration of agricultural land will be performed in accordance with landowner agreements. The Decommissioning Site Manager will coordinate with the EM to ensure compliance with applicable requirements during the decommissioning phase. Decommissioning and restoration activities will be performed as per the requirements of applicable regulations and laws in effect at the time of decommissioning.

Although strict spill prevention and spill response procedures will be in place throughout the lifespan of the Facility, including decommissioning, small spills could occur. Spill control and countermeasures will be outlined in the Facility's Spill Prevention Control and Countermeasures Plan.

Any proposed decommissioning activities that could result in impacts to wetlands or surface waters (e.g., culvert removal) will be coordinated with the appropriate agencies, as necessary, to determine applicable guidelines, permitting, and site-specific mitigation and/or remediation plans. Similar mitigation and monitoring measures implemented during construction will be used during the decommissioning.

### **(3) Aesthetics**

The Applicant will remove aboveground features and restore areas previously utilized for agricultural purposes. The Facility Site will resemble the aesthetic character prior to construction. Activities to return the Facility Site to its prior character may include the following to the extent appropriate and not otherwise requested by landowners:

- Minimize ground disturbance to the extent practical.
- Conduct restoration to meet adjacent ground contours to the extent practical. This may include regarding access roads and other features in specific areas to restore drainage patterns and reestablish preexisting contours.
- Remove culverts and drainage infrastructure and restoring streams or drainage channels to preexisting elevations and stabilized in accordance with New York State erosion control standard practices.
- Use soils stockpiled in the restoration and not transported off-site. Excess soils will be used for balancing and distributing across various locations during restoration.
- De-compact access roads and other areas where applicable.
- Seed disturbed areas with the appropriate species to prevent topsoil erosion unless seeding is immediately applied by the landowner. In the event the land is intended to return to agricultural production, the re-seeding of the land will be coordinated with the landowner or agriculture producer.
- Use plant material and seeds appropriate for the Facility Site or allowing natural revegetation.
- Leave erosion and sediment control measures in place, as needed, until the site is stabilized.

### **(4) Recycling**

Major pieces of equipment may be recyclable, reusable, resalable, or salvageable, and the Applicant will pursue recycling, resale, reuse, and salvaging of decommissioned equipment to the extent practicable, and as required or allowed by law. It is reasonable to assume that it may become easier to recycle various Facility components within the 30-year lifespan of the Facility; however, for the purpose of estimating the decommissioning costs, the Applicant assumed that wind turbine blades will be disposed. The Applicant will update this assumption if market conditions change.

Wind turbine towers, electrical cabling, substation structures and other similar components that are substantively composed of copper, steel, aluminum, and other readily recyclable components have an established scrap value. Concrete from foundations will be crushed and recycled as granular fill material. Spent oils, if any, will be recovered for recycling through existing oil reprocessing companies. Table 23-1 in Section (a)(1) presents typical waste materials and modes of disposal, recycling, or reuse.

See the Decommissioning and Site Restoration Plan for a further discussion of scrap values and anticipated component recycling.

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

At the end of the Facility lifespan, the Applicant anticipates decommissioning the Facility and restoring the site. Although the future land use of the Facility Site cannot be known, it is most probable that after decommissioning former agricultural lands within the Facility Site will be returned to agricultural production. However, if economics and need remain viable, the Facility may be “repowered” with new technology and continue operating for an extended period subject to relevant permitting requirements and the renewal of landowner agreements.

### **(6) Funding**

Financial assurance will be provided prior to the start of construction in the form of a letter of credit (LOC) or other form of security reasonably acceptable to the Towns of Eaton, Fenner, Nelson, and Smithfield. The amount of security will be the net decommissioning and site restoration estimate, which will include projected salvage value and a 15 % contingency. See Exhibit 24 for a discussion on compliance with local law decommissioning requirements.

### **(7) Schedule**

When the Applicant decides that the Facility will be decommissioned, the decommissioning program would last approximately eighteen months. After preliminary steps occur such as mobilization, it is assumed that foundation removal, underground collection systems disassembly, substation disassembly and reclaiming of roads, and other excavations will be done simultaneously with the turbine dismantling and crane process. The Applicant anticipates that permits required for stormwater run-off management at the time of decommissioning will be similar to current requirements for monitoring of areas restored by seeding to reestablish vegetation.

### **(b) Agreements with Landowners and Municipalities**

Facility components will be located on private land under lease or easement agreements with the landowners, and leases and easements with private landowners will contain a provision on decommissioning and site restoration. All landowner agreements stipulate decommissioning of sites; the Decommissioning Plan is consistent with the requirements specified within those respective agreements. Although the specific terms of lease agreements are confidential, decommissioning will involve removing aboveground Facility components consistent with the discussion in Section (a) and the Decommissioning and Site Restoration Plan. Where requested by landowners, the Applicant will leave in place any property improvements associated with the Facility, including access roads, driveway entrance, fences, gates, buffer plantings, culverts, buildings, or fencing, as may be allowed by federal, state, and local laws at the time of decommissioning. The 115 kV point of interconnection (POI) switchyard and associated loop-in and loop-

out transmission lines will remain in place as they will be transferred to National Grid upon completion of Facility construction and will not be owned by the Applicant at the time of decommissioning.

The Applicant intends to enter into an agreement with the Towns of Eaton, Fenner, Nelson, and Smithfield to address decommissioning. If the Applicant and the host municipalities cannot come to an agreement, the Applicant may request that the Office make the final determination per 19 NYCRR 900-10.2(b).

**(c) Estimate of Decommissioning and Site Restoration Costs**

See the Decommissioning and Site Restoration Plan for a detailed estimate of decommissioning and site restoration costs.