



A DECOMMISSIONING AND SITE RESTORATION PLAN FOR

Hoffman Falls Wind Project

Madison County, New York

JANUARY 30, 2024

PREPARED FOR:

Hoffman Falls Wind, LLC

PREPARED BY:

Westwood

Decommissioning and Site Restoration Plan

Hoffman Falls Wind Project

Prepared for:

Hoffman Falls Wind, LLC
90 State Street, Suite 700
Albany, NY 12207

Prepared by:

Westwood Surveying & Engineering
12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343
(952) 937-5150

Project Number: R0042618.01
Date: January 30, 2024

Table of Contents

1.0	Introduction / Project Description	4
2.0	Proposed Future Land Use.....	4
3.0	Engineering Techniques.....	4
3.1	Decommissioning of Project Components.....	5
3.1.1	Public Road Improvement and Access Road Modifications and Removal	5
3.1.2	Crane Path and Crane Pad Preparation and Removal	5
3.1.3	Wind Turbine Felling.....	5
3.1.4	Wind Turbine Removal.....	6
3.1.5	Turbine Foundation Removal and Restoration	6
3.1.6	MET and ADLS Towers	6
3.1.7	Access Roads	7
3.1.8	Underground Electrical Collection Lines.....	7
3.1.9	Overhead Electrical Collection / Transmission Lines.....	7
3.1.10	Substation.....	8
3.1.11	Operations and Maintenance Building	8
3.2	Reclamation.....	8
4.0	Best Management Practices (BMPs)	9
4.1	Erosion Control	9
4.2	Sediment Control	9
4.3	Controlling Stormwater Flowing onto and through the Project	9
4.4	Permitting.....	9
4.5	Health and Safety Standards	10
5.0	Timeline	10
6.0	Decommissioning Costs	10

Attachments

Attachment A: Decommissioning Cost Estimates

1.0 Introduction / Project Description

The Hoffman Falls Wind Project (Facility) is a wind power generation project proposed by Hoffman Falls Wind, LLC (Applicant) in Madison County, New York. The Facility includes the construction of permanent facilities of 24 Vestas V150 4.5-megawatt (MW) wind turbines with 150-meter rotor diameters and a combination of 90 and 105-meter hub heights, access roads, one meteorological (met) tower, one aircraft detection lighting system (ADLS) tower, a substation, underground and overhead collection lines, and an operations and maintenance (O&M) facility.

This Decommissioning and Site Restoration Plan (Plan) has been prepared in accordance with the New York State Senate Statute 94-C (Statute). The purpose of the Plan is to describe the means and methods that can be used to remove project facilities and reclaim, restore, and return the land altered during the construction and operation of the wind project to its predevelopment condition to the extent feasible. The Plan identifies components which may be removed and the areas that may be restored once the Facility has not operated for twelve consecutive months or has surpassed the useful lifespan of the turbines and facilities.

The useful life of commercial size turbines is generally considered to be 30 years. At that time, the project will either be decommissioned or repowered with newer technology. This decommissioning plan reflects the full decommissioning of the Facility, including removal of all infrastructure and equipment and reclamation of the site to match previous land use, unless otherwise specified.

2.0 Proposed Future Land Use

Prior to the development of the Facility, the land use of the project area was primarily agricultural production and forested areas. After the developed areas of the Facilities are decommissioned, they will be returned to their predevelopment condition, either tilled to a farmable condition or revegetated to match-pre-construction conditions. Please refer to Section 3.2 for a detailed description of reclamation activities.

3.0 Engineering Techniques

Decommissioning of the wind farm Facility includes multiple phases and activities such as:

- Application of necessary sediment and erosion controls during and following decommissioning activities.
- Public road modifications (if required) and access road improvements to accommodate heavy equipment traffic during decommissioning.
- Removal of aboveground components (turbines, towers, transformers, overhead transmission lines, and substation) for either resale or scrap.
- Removal of turbine foundations to a depth of four feet below grade in agricultural land and three feet below grade in non-agricultural land.
- Removal of other underground components (junction boxes, transformer, and substation foundations) to a depth of four feet below grade in agricultural land and three feet below grade in non-agricultural land.

- Removal of access roads (unless the landowners request the roads to remain as may be allowed by federal, state, and local laws at the time of decommissioning) and decompaction.
- Reclamation, re-grading, and restoration of disturbed areas including topsoil reapplication and decompaction of soils.
- Repair and/or restoration of public roads and culverts to pre-decommissioning conditions, as required.

During decommissioning, the Applicant shall consult landowners to identify the extent and type of work to be completed. Some Facility infrastructure, such as the access roads, may be left in place at the landowners' requests as may be allowed by federal, state, and local laws at the time of decommissioning. Underground utility lines, if deeper than four feet below ground surface elevation in agricultural land and three feet below ground surface elevation in non-agricultural land, may be left in place to minimize land disturbance and associated impacts to future land use.

Decommissioning will include the removal and transportation of all turbine components from the Facility site. Decommissioning will also include the removal of electrical components, foundations, and any other associated facilities in the manner described in the Plan, unless otherwise agreed upon by Applicant and the applicable landowner(s) as may be allowed by federal, state, and local laws at the time of decommissioning. All dismantling, removal, recycling, and disposal of materials generated during decommissioning will comply with rules, regulations, and prevailing Federal, State, and local laws at the time decommissioning is initiated and will use approved local or regional disposal or recycling sites as available. Recyclable materials will be recycled to the furthest extent practicable. Non-recyclable materials will be disposed of in accordance with State and Federal law.

3.1 Decommissioning of Project Components

3.1.1 Public Road Improvement and Access Road Modifications and Removal

As the cost estimate is based on scrapping and recycling turbine components where possible, sections of public roads that have insufficient strength to accommodate the construction traffic necessary for decommissioning will need to be improved prior to the start of hauling operations. Intersection turning radius modifications are not anticipated since turbine components will be cut to fit on standard semitrailer trucks. The roads subjected to decommissioning traffic will be restored to a condition equal to or better than the condition of the road prior to decommissioning activities. Aggregate removed from the Facility access roads is a potential source for the public road restoration material. A pre-decommissioning road survey, similar to a pre-construction survey, may be prepared so that road conditions pre- and post-decommissioning can be accurately assessed.

3.1.2 Crane Path and Crane Pad Preparation and Removal

This cost estimate is based on the felling of all turbines, which eliminates the need for large industrial cranes and the associated crane paths and crane pads.

3.1.3 Wind Turbine Felling

This cost estimate assumes that the turbines not being resold will be brought to the ground using the technique of "felling." Once on the ground, the turbines will be disassembled and

processed for recycling. The felling technique has been used on numerous wind decommissioning projects and has several advantages over disassembly using large crawler cranes. Felling of a turbine eliminates the use of crane paths and crane pads that are otherwise necessary to disassemble the components of a turbine. In addition to avoiding costs associated with preparing crane paths and pads, this method will reduce the total disturbed area that needs to be reclaimed and restored during the decommissioning process. The elimination of the use of large cranes also reduces the number of trucks delivering and removing equipment and reduces the time required for decommissioning. Felling consists of disconnecting electrical connections and draining oil, hydraulic fluid, and any other liquids from the turbine. A long cable is attached from the nacelle to a heavy piece of equipment, such as a bulldozer, positioned on the access road. Wedge shaped areas are then cut out of the tower steel using cutting torches to create a hinge that will direct the turbine to fall on the access road when pulled by the dozer.

3.1.4 Wind Turbine Removal

Each wind turbine consists of steel tower segments, a nacelle, a rotor and hub assembly, and three blades. These modular components can be disassembled and then processed into pieces small enough (less than 40 feet by eight feet by eight feet and less than 20 tons) to be loaded onto standard semitrailer trucks and transported off site. The components of the wind turbines that are not designated for resale will be cut into pieces sized to meet recycling requirements so the scrap value may be maximized. The components will then be loaded on tractor-trailers and transported to a licensed recycling facility. If there are facilities for recycling of turbine blades at the time the turbines are decommissioned, the blades will be transported to the facility for recycling, if cost effective. At this time, blade recycling facilities are not operating at the scale necessary for the volume of waste that will be generated from decommissioning this project. As a result, this cost estimate assumes the blades and other components that cannot be recycled will be disposed of at a licensed landfill.

3.1.5 Turbine Foundation Removal and Restoration

The turbine foundations are constructed from concrete and rebar. Little topsoil stripping will be required since the portion of the foundation less than five feet deep is within the gravel ring around each turbine. The foundation will first be exposed using backhoes or other earth moving equipment. The pedestal (upper part of the turbine foundation) will then be removed to a depth of at least four feet below grade using hydraulic vibratory hammers to break up the concrete. The rebar can be cut with torches or cutoff saws. The concrete will be broken into pieces sized for transport. The foundation debris will be hauled off site to be recycled or disposed of, depending on market prices for aggregate at the time of decommissioning. The rebar will be recycled.

Following removal of the turbine foundation, the resulting void will be backfilled with native subsoils and compacted to at least 90% of the fill material's standard Proctor density. Topsoil will be reapplied to the site and graded to match surrounding grade to preserve existing drainage patterns. The topsoil and subsoil will be decompacted to a minimum depth of 18 inches and revegetated to match pre-construction conditions.

3.1.6 MET and ADLS Towers

Following disconnection of electrical components, the MET and ADLS towers will be gradually lowered to the ground for disassembly. The steel structures will be cut into pieces sized to meet

recycling requirements so the scrap value may be maximized. The components will then be loaded on tractor-trailers and transported to a metal recycling facility.

The concrete pads, along with any anchoring components, will be excavated to a depth of 4 feet. Concrete will be broken into transportable pieces and hauled off site. Following removal of the foundations, subsoil will be decompacted to a minimum depth of 18 inches. Topsoil will be reapplied to match the surrounding grade.

3.1.7 Access Roads

Removal of access roads will entail removal of the road base aggregate and any other materials used for constructing the roads. During removal, the topsoil adjacent to both sides of the roads will be stripped and stockpiled in a windrow paralleling the road. The road base materials will then be removed by bulldozers, wheeled loaders, or backhoes and hauled off site in dump trucks to be recycled or disposed of at an off-site facility. On-site processing may allow much of the aggregate to be re-used to improve public roads. The aggregate base can often be used by local landowners for driveway or clean fill. Another option is to use the aggregate base as “daily cover” at a landfill, where it is usually accepted without cost. If geotextile fabric was utilized under the aggregate base, it will be removed and disposed of in a landfill off site. The access road removal will proceed from the turbine area to the public roads to limit tracking and provide stable access during removal. Following removal, topsoil will be reapplied and graded to blend with surrounding contours to promote pre-construction drainage patterns. Topsoil to cover the access roads, turbine rings, and met tower rings will be acquired from the areas where it was stockpiled (or wasted) during the original construction. Since topsoil is intended to stay with landowner during the construction of the Facility, there will be adequate topsoil to restore each area to its pre-construction condition. The soil and topsoil will then be decompacted to a minimum depth of 18 inches and restored to pre-construction tillable conditions or revegetated.

3.1.8 Underground Electrical Collection Lines

The electrical cables and fiber optic conduits contain no material known to be harmful to the environment and will be left in place, non-functional. Any cables at a depth of less than four feet below ground surface elevation in agricultural land and three feet below ground surface elevation in non-agricultural land, such as cables entering and exiting the turbine foundations, junction boxes, or substation components, will be removed. Following any necessary removal, the area affected will be restored by reapplication of topsoil to match the surrounding grade and preserve existing drainage patterns. The topsoil and subsoil will be decompacted to a minimum depth of 18 inches and tilled to farmable conditions.

3.1.9 Overhead Electrical Collection / Transmission Lines

The overhead electrical lines associated with the Facility connect the project substation, located within the project footprint, to the voltage step-up substation at the point of interconnection north of the project. All poles, conductors, switches, and lines associated with the overhead electrical will be removed and hauled off site to a recycling facility or disposal site. Underground infrastructure such as pole foundations will be removed down to four feet below grade. Most transmission line poles are direct burial, so there is no foundation remaining after removal. Pole foundation holes will be filled with a suitable clean compactable material. Topsoil will be applied, and the areas will be tilled to a farmable condition or revegetated to pre-construction conditions, depending on the pre-construction land use of that area. Transmission line work

requires specialized equipment including man lifts, cable reels, pole removal/installation lifts, etc.

3.1.10 Substation

Decommissioning of the project substation will be performed with the rest of the Facility. All steel, conductors, switches, transformers, and other components of the substation will be disassembled and taken off site to be recycled or reused. Foundations and underground components will be removed to a depth of four feet. The rock base will be removed using bulldozers and backhoes or front loaders. The material will be hauled from the site using dump trucks to be recycled or disposed at an off-site facility. Additionally, any permanent stormwater treatment facilities (e.g., infiltration ponds and engineered drainage swales) will be removed. It has been assumed that the retaining wall bordering the substation and adjacent switchyard will not be removed during decommissioning activities and will remain with the utility switchyard. Topsoil will be reapplied to match surrounding grade to preserve existing drainage patterns. Topsoil and subsoil will be decompacted to a minimum depth of 18 inches and the site will be revegetated to match pre-construction conditions.

3.1.11 Operations and Maintenance Building

The O&M building is a sturdy, general purpose steel building. If the building is not repurposed, decommissioning will include disconnection of the utilities and demolition of the building structure, foundation, rock base parking lot, and associated vegetated/stormwater handling facilities. All associated materials will be removed from the Facility using wheeled loaders or backhoes and bulldozers and hauled off site in dump trucks. All recyclable materials will be brought to appropriate facilities and sold; the remaining materials will be disposed of at an approved landfill facility. Subgrade soils will be decompacted and graded to blend with the adjacent topography. Topsoil will be reapplied to match existing surrounding grade to preserve existing drainage patterns, and the site will be tilled either to a farmable condition or revegetated, depending upon location.

3.2 Reclamation

In addition to the reclamation activities described above for each decommissioning activity, all unexcavated areas compacted by equipment and activity during the decommissioning will be decompacted to a depth of 18 inches or to a depth as needed to ensure proper density of topsoil consistent and compatible with the surrounding area and associated land use. All materials and debris associated with the Facility decommissioning will be removed and properly recycled or disposed of at off-site facilities.

As necessary, the topsoil will be stripped and isolated prior to removal of structures and facilities for reapplication to promote future land use activities. Preservation of topsoil will be key for re-establishing vegetation at the site. The topsoil will be reapplied following backfill, as necessary, and graded to blend with adjacent contours to maintain pre-construction drainage patterns. Decompaction of the soil and topsoil will be applied to a minimum depth of 18 inches.

Areas formerly used for agriculture shall be re-tilled to a farmable condition. In areas not to be used for crops, the topsoil will then be revegetated using seed mixes approved by the local Farm Service Agency, Soil and Water Conservation District, Natural Resource Conservation Service, or other state agency. The selected seed mix must be suitable for the site's annual precipitation and elevation. Temporary erosion protection such as nurse crop (annual grass to aid in

establishment of permanent species), mulch, hydromulch, or erosion control blanket will be applied in accordance with the requirements of the project Stormwater Pollution Prevention Plan (SWPPP) until permanent vegetation has been established.

4.0 Best Management Practices (BMPs)

During decommissioning, erosion and sediment control BMPs will be implemented to minimize potential for erosion of site soils and sedimentation of surface waters and waters of the state. Because decommissioning will entail disturbance of more than one acre of soil, the Applicant will prepare a SWPPP and obtain coverage under the state-specific National Pollutant Discharge Elimination System (NPDES) permit prior to initiating soil disturbing activities. Potential BMPs to be implemented during decommissioning activities are described below and will be subject to refinement in the SWPPP. The decommissioning team will review the permitting requirements at the time of decommissioning and obtain any other necessary permits, which may include a US Army Corps of Engineers (USACE) Section 404 Permit to Discharge Dredged or Fill Material.

4.1 Erosion Control

Erosion control measures will be refined based on the standard of practice current at the time the SWPPP is developed for decommissioning. All disturbed areas without permanent impermeable or gravel surfaces, or planned for use as crop land, will be vegetated for final stabilization. All slopes steeper than 4:1 should be protected with erosion control blankets. Restoration should include seed application prior to application of the blanket. All slopes 4:1 or flatter should be restored with seed and mulch, which will be disc anchored.

4.2 Sediment Control

Sediment controls, such as silt fence, fiber logs, dewatering practices, construction entrances, and sedimentation traps and/or basins will be implemented during construction to prevent the transport of sediment off-site during decommissioning activities. Street sweeping/scraping will also be implemented to mitigate potential tracking of sediment onto public roadways.

4.3 Controlling Stormwater Flowing onto and through the Project

Given the low gradient of the slopes in the project area, controlling stormwater flow that enters the project area will likely require minimal effort during decommissioning activities. Only newly disturbed areas may require new, temporary stormwater control.

4.4 Permitting

All decommissioning and reclamation activities will comply with Federal and State permit requirements. Decommissioning activities that will disturb more than one acre of soil will require coverage under the New York State Pollutant Discharge Elimination System (SPDES) permit for construction stormwater. The permits will be applied for and received prior to decommissioning construction activities commencing. A SWPPP will be developed prior to filing for construction stormwater permit coverage.

Wetlands and waters permits will be obtained from the USACE or New York State Office of Renewable Energy Siting (ORES). A Spill Prevention, Control, and Countermeasures (SPCC) Plan for decommissioning will likely also be required for decommissioning work. Transportation permits through the New York DOT or Madison County may also be necessary as well for any public road improvements or turning radii.

4.5 Health and Safety Standards

Work will be conducted in strict accordance with the Applicant's health and safety plan. The construction contractor hired to perform the decommissioning will also be required to prepare a site-specific health and safety plan. All Facility workers, including subcontractors, will be required to read, understand, and abide by the plans. A Facility safety office will be designated by the construction contractor to ensure compliance. This official will have stop-work authority over all activities at the Facility, should unsafe conditions or lapses in the safety plan be observed.

5.0 Timeline

Decommissioning of the wind farm Facility will be initiated if the Facility has not produced electricity for a period of up to 12 months, with the understanding that if the Applicant demonstrates to the ORES a good faith effort to restore the wind turbine(s) to operable condition, that such a time limit shall not apply. It is anticipated that the decommissioning activities for the Facility can be completed in an 18-month period. The estimated costs for decommissioning are tied to assumptions about the amount of equipment mobilized, the crew sizes, weather and climate conditions, and the productivity of the equipment and crews.

6.0 Decommissioning Costs

The cost estimate for decommissioning and reclamation of the Facility was prepared in current dollars, with the salvage value of equipment or materials calculated separately. The estimate includes:

- (i) An analysis of the physical activities necessary to implement the approved reclamation plan, with physical construction and demolition costs based on applicable Department of Transportation unit bid prices from surrounding states and RS Means material and labor cost indices;
- (ii) The level of effort or number of crews required to perform each of the activities; and
- (iii) An amount to cover contingencies above the calculated cost.

The following information was used to develop the cost estimate:

1. Project quantities for the Facility are based on 60% Civil Plans prepared by Westwood Surveying & Engineering dated 11/03/2023.
2. A project of this size and complexity requires a half-time project manager with full-time support staff.
3. Common labor will be used for the majority of tasks, supplemented by electricians, steel workers, and equipment operators where labor rules may require. The labor rates reflect union labor rates.

4. The Estimate is shown on a total cost and a per-turbine basis. The decommissioning plan and cost estimate will be revised periodically.
5. Turbines that are not resold will be assumed to have all applicable components recycled as scrap. The estimate uses a current structural steel scrap price of \$305 per ton, in the East Coast, based on prices posted on scrapmonster.com (11/08/23). The posted prices are three months old. The posted spot prices used in the cost estimate were discounted by twenty-five percent (25%) to reflect the difficulty of realizing spot prices from local recyclers.
6. Electrical transformers have significant value due to aluminum or copper used in the windings and the steel used in other parts of the transformer. Newer transformers can be resold. Older transformers are recycled as scrap. Few companies accept used transformers for resale or recycling, so finding pricing is difficult. For this estimate, we used pricing posted on scrapmonster.com of \$0.37 per pound for used copper transformer scrap. We assumed the posted price is similar to the price offered by Metalico Buffalo located in Buffalo, NY, which was identified as the regional transformer recycling location.
7. Spot prices for insulated copper wire (85% recovery) are \$1.42 per pound, scrap electrical motors are \$0.35 per pound, and E.C. aluminum wire is \$0.98 per pound. The posted spot prices used in the cost estimate were discounted by twenty-five percent (25%) to reflect the difficulty of realizing spot prices from local recyclers.
8. The Town of Eaton and Town of Smithfield require a 50% contingency be added to the cost estimate for calculating the bond amount. The Town of Fenner and Town of Nelson use a 15% contingency per ORES requirements.
9. Waivers have been requested for Eaton and Smithfield to default from the local contingency requirement of 50% to the 94-C requirement of 15%. As a result, the decommissioning cost tables below show the net decommissioning costs with both the 15% and 50% contingencies.

The total estimated cost of the decommissioning of the Hoffman Falls Wind Project is approximately \$5,427,645 (\$226,152 per turbine) accounting for local permitting requirements without waivers. Estimated salvage/scrap value of the turbines, transformers, and other materials is approximately \$2,790,995. The net decommissioning costs after accounting for resale and salvage values is approximately \$2,636,649 (\$109,860 per turbine) without waivers. Please see the following tables for a summary of decommissioning costs per town. See Attachment A for the detailed cost estimates per town.

Table 1: Decommissioning Costs - Fenner

Item	94-C Method	Local Law Method
Decommissioning Cost	\$ 2,117,505	\$ 2,117,505
Contingency	15%	15%
Decommissioning Cost with Contingency	\$ 2,435,131	\$ 2,435,131
Minus Salvage Value	\$ 1,638,739	\$ 1,638,739
Net Decommissioning Cost	\$ 796,392	\$ 796,392

Table 2: Decommissioning Costs - Nelson

Item	94-C Method	Local Law Method
Decommissioning Cost	\$ 139,324	\$ 139,324
Contingency	15%	15%
Decommissioning Cost with Contingency	\$ 160,223	\$ 160,223
Minus Salvage Value	\$ 95,948	\$ 95,948
Net Decommissioning Cost	\$ 64,274	\$ 64,274

Table 3: Decommissioning Costs - Eaton

Item	94-C Method	Local Law Method	
		Without Waiver	With Waiver
Decommissioning Cost	\$ 1,317,766	\$ 1,317,766	\$ 1,317,766
Contingency	15%	50%	15%
Decommissioning Cost with Contingency	\$ 1,515,431	\$ 1,976,649	\$ 1,515,431
Minus Salvage Value	\$ 767,588	\$ 767,588	\$ 767,588
Net Decommissioning Cost	\$ 747,843	\$ 1,209,061	\$ 747,843

Table 4: Decommissioning Costs -Smithfield

Item	94-C Method	Local Law Method	
		Without Waiver	With Waiver
Decommissioning Cost	\$ 570,428	\$ 570,428	\$ 570,428
Contingency	15%	50%	15%
Decommissioning Cost with Contingency	\$ 655,992	\$ 855,642	\$ 655,992
Minus Salvage Value	\$ 288,720	\$ 288,720	\$ 288,720
Net Decommissioning Cost	\$ 367,272	\$ 566,922	\$ 367,272



Attachment A

Decommissioning Cost Estimates

Hoffman Falls Wind - Fenner - Decommissioning Cost Estimate

	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	\$137,000.00	\$137,000
Permitting				
Local, State, and Federal Permits (SWPPP, Local and State Highway Work Permits, Section 404 Permits, etc.)	1	Lump Sum	\$17,500.00	\$17,500
Subtotal Permits				\$17,500
Wind Turbine Generators				
Disconnect Turbine Wiring	12	Each	\$2,883.20	\$34,598
Fell Turbine	12	Each	\$1,797.65	\$21,572
Process to Size and Load Turbine Components	4,316	Tons	\$154.78	\$667,991
Haul Turbine Components Offsite for Recycling (except blades)	4,316	Tons	\$5.01	\$21,623
Haul Turbine Components For Disposal (except blades)	841	Tons	\$10.82	\$9,106
Turbine Component Disposal (except blades)	841	Tons	\$50.00	\$42,071
Haul Fiberglass Blades For Disposal	346	Tons	\$26.05	\$9,010
Fiberglass Blades Disposal	346	Tons	\$50.00	\$17,291
Excavate Around Turbine Foundation	12	Each	\$17.45	\$209
Remove Turbine Foundation and Load	504	Cubic Yards	\$240.09	\$121,015
Backfill Excavation Area from Turbine Foundation Removal	12	Each	\$183.19	\$2,198
Haul Concrete (Turbine Foundation)	1,021	Tons	\$10.82	\$11,046
Disposal of Concrete from Turbine Foundation	504	Cubic Yards	\$10.00	\$5,041
Decompact Wind Turbine Generator Site	12	Each	\$64.21	\$771
Grade Wind Turbine Generator Site	12	Each	\$2,655.38	\$31,865
Erosion and Sediment Control at Turbine/Transformer Site	12	Each	\$1,316.33	\$15,796
Topsoil and Revegetation at Turbine/Transformer Sites	12	Each	\$2,591.81	\$31,102
Till to Farmable Condition	9	Acres	\$158.78	\$1,374
Subtotal Wind Turbine Generators				\$1,043,678
ADLS Towers				
Disconnect Tower Wiring	1	Each	\$1,441.60	\$1,442
Dismantle, Disassemble, and Load Tower Components	1	Each	\$5,096.00	\$5,096
Haul Tower Components Off Site	5	Tons	\$5.01	\$27
Excavate Around Tower Foundation	1	Each	\$8.12	\$8
Remove Tower Foundation and Load	24	Cubic Yards	\$240.09	\$5,821
Haul Concrete (Tower Foundation)	49	Tons	\$10.82	\$531
Disposal of Concrete from ADLS Tower	49	Tons	\$10.00	\$491
Grade ADLS Tower Site	1	Each	\$1,491.27	\$1,491
Erosion and Sediment Control at ADLS Tower Site	1	Each	\$419.00	\$419
Topsoil and Revegetation at ADLS Tower Site	0.06	Acre	\$3,593.70	\$206
Subtotal ADLS Towers				\$15,533
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables Shallower than 4 feet	16	Locations	\$400.00	\$6,400
Haul Underground Collector System Cables	1	Tons	\$5.01	\$6
Disposal of Removed Cables (See Salvage Value)	0	Tons	\$0.00	\$0
Removal of Junction Box	4	Each	\$100.00	\$400
Removal of Overhead Transmission Line Cables	466	Feet	\$7.90	\$3,681
Loadout Overhead Cables	0.9	Tons	\$37.00	\$33
Haul Overhead Cables	0.9	Tons	\$5.01	\$4
Disposal of Overhead Cables (See Salvage Value)	0.9	Tons	\$0.00	\$0
Remove and Load Steel Transmission Poles	1	Each	\$835.94	\$836
Haul Steel Poles for Disposal	1	Each	\$16.10	\$16
Haul Hardware, Bracing, and Attachments for Disposal	1	Each	\$11.07	\$11
Transmission Tower Component Disposal	1	Each	\$42.10	\$42
Erosion and Sediment Control at Junction Box Location	160	Feet	\$4.19	\$670
Topsoil and Revegetation at Junction Box Locations	0.04	Acres	\$3,593.70	\$132
Erosion and Sediment Control for Transmission Removal	23	Feet	\$4.19	\$98
Topsoil and Revegetation at Transmission Pole Locations	0.01	Acres	\$3,593.70	\$33
Subtotal Electrical Collection/Transmission System				\$12,362

Access Roads				
Remove and Load Gravel Surfacing from Access Roads	18,978	Cubic Yards	\$2.91	\$55,216
Haul Gravel Removed from Access Roads	30,744	Tons	\$10.82	\$332,713
Disposal of Gravel Removed from Access Roads	30,744	Tons	\$0.00	\$0
Remove and Load Geotextile Fabric	71,167	Square Yards	\$0.88	\$62,967
Haul Geotextile Fabric	16	Tons	\$10.82	\$169
Dispose of Geotextile Fabric	16	Tons	\$50.00	\$783
Remove and Load Culvert from Beneath Access Roads	45	Each	\$448.00	\$20,160
Haul Culvert Removed from Access Roads	14	Tons	\$10.82	\$156
Disposal of Culverts	14	Tons	\$50.00	\$720
Remove Low Water Crossing from Access Roads	4	Each	\$3,400.00	\$13,600
Haul Low Water Crossing Materials Removed from Access Roads	4	Each	\$10.82	\$43
Disposal of Low Water Crossing Materials	4	Each	\$100.00	\$400
Decompact Access Road Corridor	32,025	Linear Feet	\$0.03	\$1,047
Erosion and Sediment Control Along Access Roads	24,019	Linear Feet	\$4.19	\$100,639
Topsoil and Revegetation on Removed Access Road Area	18	Acres	\$3,593.70	\$63,410
Subtotal Access Roads				\$652,023
Substation				
Disassembly and Removal of Main Power Transformer(s)	1	Each	\$4,500.00	\$4,500
Freight Transformer(s) Offsite	1	Each	\$450.92	\$451
Disposal of Transformer (Including Oil; Assume Salvage Value)	1	Each	\$0.00	\$0
Excavate Around Transformer Foundation(s)	1	Each	\$1,667.35	\$1,667
Remove Complete Transformer Foundation(s)	1	Each	\$17,536.68	\$17,537
Backfill Excavation Area from Transformer Foundation Removal	1	Each	\$266.94	\$267
Haul Concrete (Transformer, Switch Gear, etc. Foundations)	170	Tons	\$10.82	\$1,841
Disposal of Concrete from Transformer Foundation	170	Tons	\$10.00	\$1,701
Demolish Substation Site Improvements (fences, etc.)	1	Lump Sum	\$3,500.00	\$3,500
Demolish Control Building and Foundation	1	Lump Sum	\$12,000.00	\$12,000
Remove Medium/High Voltage Equipment	1	Lump Sum	\$3,500.00	\$3,500
Remove Structural Steel Substation Frame	1	Lump Sum	\$3,500.00	\$3,500
Haul - Demolition Materials, Removed Equipment & Structural Steel	1	Lump Sum	\$1,002.04	\$1,002
Disposal of Demolition Materials, Removed Equipment and Structural Steel (Salvage)	1	Lump Sum	\$0.00	\$0
Remove and Load Gravel Surfacing from Substation Site	379	Cubic Yards	\$2.91	\$1,103
Haul Gravel Removed from Substation Site	614	Tons	\$10.82	\$6,647
Disposal of Gravel from Substation Site	614	Tons	\$0.00	\$0
Decompact Substation Site	0.47	Acre	\$89.03	\$42
Grade Substation Site	0.47	Acre	\$4,276.59	\$2,010
Erosion and Sediment Control at Substation Site	429	Linear Feet	\$4.19	\$1,799
Topsoil and Revegetation at Substation Site	0.47	Acre	\$3,593.70	\$1,689
Subtotal Substation				\$64,755
O&M Building				
Demolish O&M Building and Foundation	1	Lump Sum	\$5,000.00	\$5,000
Demolish O&M Site Improvements (fences, etc.)	1	Lump Sum	\$3,000.00	\$3,000
Haul Concrete (O&M Building Foundation)	690	Ton	\$10.82	\$7,467
Crush Concrete	690	Ton	\$28.00	\$19,320
Disposal of Concrete from O&M Building Foundation	690	Ton	\$10.00	\$6,900
Cap and Abandon Well	1	Lump Sum	\$1,000.00	\$1,000
Remove & Restore Septic and Drainfield area	1	Lump Sum	\$3,000.00	\$3,000
Disposal of O&M Building Demolition and Removed Site Improvements	1	Lump Sum	\$2,500.00	\$2,500
Remove and Load Gravel Surfacing of O&M Site	355	Cubic Yards	\$2.91	\$1,033
Haul Gravel Removed from O&M Site	355	Cubic Yards	\$10.82	\$3,841
Disposal of Gravel from O&M Site	355	Cubic Yards	\$0.00	\$0
Decompact O&M Building Site	0.44	Acre	\$89.03	\$39
Grade O&M Building Site	0.44	Acre	\$4,276.59	\$1,882
Erosion and Sediment Control at O&M Building Site	415	Linear Feet	\$4.19	\$1,740
Topsoil and Revegetation at O&M Building Site	0.44	Acres	\$3,593.70	\$1,581
Subtotal O&M Building				\$58,303

Project Management				
PM (half-time), Superintendent, FE's, Clerk, Environmental Monitor	26	Weeks	\$4,475.00	\$116,350
Subtotal Project Management				\$116,350
Total Direct Costs				\$2,117,505
Contingency (15%)	15%	Percent		\$317,626
Total Demolition Costs				\$2,435,131
Salvage/Recycle				
Turbine Towers (Structural Steel)	3946	Tons	\$228.75	\$902,609
Turbine Nacelles (Structural Steel)	841	Tons	\$228.75	\$192,475
ADLS Towers (Structural Steel)	5	Tons	\$228.75	\$1,186
Substation (Structural Steel)	10	Tons	\$228.75	\$2,288
Transmission Towers (Structural Steel)	1864	Tons	\$228.75	\$426,390
Turbine Generators	321698	Pounds	\$0.18	\$56,297
Transformers (copper windings)	169349	Pounds	\$0.28	\$46,994
Transformers (oil)	15000	Gallons	\$0.70	\$10,500
Subtotal Salvage				\$1,638,739
Total Demolition Minus Resale and Salvage Value				\$796,392

Hoffman Falls Wind - Nelson - Decommissioning Cost Estimate

	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	\$9,000.00	\$9,000
Permitting				
Local, State, and Federal Permits (SWPPP, Local and State Highway Work Permits, Section 404 Permits, etc.)	1	Lump Sum	\$1,458.33	\$1,458
Subtotal Permits				\$1,458
Wind Turbine Generators				
Disconnect Turbine Wiring	1	Each	\$2,883.20	\$2,883
Fell Turbine	1	Each	\$1,797.65	\$1,798
Process to Size and Load Turbine Components	360	Tons	\$154.78	\$55,666
Haul Turbine Components Offsite for Recycling (except blades)	360	Tons	\$5.01	\$1,802
Haul Turbine Components For Disposal (except blades)	70	Tons	\$10.82	\$759
Turbine Component Disposal (except blades)	70	Tons	\$50.00	\$3,506
Haul Fiberglass Blades For Disposal	29	Tons	\$26.05	\$751
Fiberglass Blades Disposal	29	Tons	\$50.00	\$1,441
Excavate Around Turbine Foundation	1	Each	\$17.45	\$17
Remove Turbine Foundation and Load	42	Cubic Yards	\$240.09	\$10,085
Backfill Excavation Area from Turbine Foundation Removal	1	Each	\$183.19	\$183
Haul Concrete (Turbine Foundation)	85	Tons	\$10.82	\$921
Disposal of Concrete from Turbine Foundation	42	Cubic Yards	\$10.00	\$420
Decompact Wind Turbine Generator Site	1	Each	\$64.21	\$64
Grade Wind Turbine Generator Site	1	Each	\$2,655.38	\$2,655
Erosion and Sediment Control at Turbine/Transformer Site	1	Each	\$1,316.33	\$1,316
Topsoil and Revegetation at Turbine/Transformer Sites	1	Each	\$2,591.81	\$2,592
Till to Farmable Condition	0.7	Acres	\$158.78	\$115
Subtotal Wind Turbine Generators				\$86,973
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables Shallower than 4 feet	1	Locations	\$400.00	\$400
Haul Underground Collector System Cables	0.1	Tons	\$5.01	\$0
Subtotal Electrical Collection/Transmission System				\$400
Access Roads				
Remove and Load Gravel Surfacing from Access Roads	977	Cubic Yards	\$2.91	\$2,843
Haul Gravel Removed from Access Roads	1,583	Tons	\$10.82	\$17,132
Disposal of Gravel Removed from Access Roads	1,583	Tons	\$0.00	\$0
Remove and Load Geotextile Fabric	3,664	Square Yards	\$0.88	\$3,242
Haul Geotextile Fabric	0.8	Tons	\$10.82	\$9
Dispose of Geotextile Fabric	0.8	Tons	\$50.00	\$40
Remove and Load Culvert from Beneath Access Roads	0	Each	\$448.00	\$0
Haul Culvert Removed from Access Roads	0	Tons	\$10.82	\$0
Disposal of Culverts	0	Tons	\$50.00	\$0
Remove Low Water Crossing from Access Roads	0	Each	\$3,400.00	\$0
Haul Low Water Crossing Materials Removed from Access Roads	0	Each	\$10.82	\$0
Disposal of Low Water Crossing Materials	0	Each	\$100.00	\$0
Decompact Access Road Corridor	1,649	Linear Feet	\$0.03	\$54
Erosion and Sediment Control Along Access Roads	1,237	Linear Feet	\$4.19	\$5,182
Topsoil and Revegetation on Removed Access Road Area	0.9	Acres	\$3,593.70	\$3,265
Subtotal Access Roads				\$31,767
Project Management				
PM (half-time), Superintendent, FE's, Clerk, Environmental Monitor	26	Weeks	\$372.92	\$9,696
Subtotal Project Management				\$9,696
Total Direct Costs				\$139,324
Contingency (15%)	15%	Percent		\$20,899
Total Demolition Costs				\$160,223

Salvage/Recycle				
Turbine Towers (Structural Steel)	329	Tons	\$228.75	\$75,217
Turbine Nacelles (Structural Steel)	70	Tons	\$228.75	\$16,040
Turbine Generators	26808	Pounds	\$0.18	\$4,691
Subtotal Salvage				\$95,948
Total Demolition Minus Resale and Salvage Value				\$64,274

Hoffman Falls Wind - Eaton - Decommissioning Cost Estimate

	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	\$85,000.00	\$85,000
Permitting				
Local, State, and Federal Permits (SWPPP, Local and State Highway Work Permits, Section 404 Permits, etc.)	1	Lump Sum	\$11,666.67	\$11,667
Subtotal Permits				\$11,667
Wind Turbine Generators				
Disconnect Turbine Wiring	8	Each	\$2,883.20	\$23,066
Fell Turbine	8	Each	\$1,797.65	\$14,381
Process to Size and Load Turbine Components	2,877	Tons	\$154.78	\$445,327
Haul Turbine Components Offsite for Recycling (except blades)	2,877	Tons	\$5.01	\$14,415
Haul Turbine Components For Disposal (except blades)	561	Tons	\$10.82	\$6,071
Turbine Component Disposal (except blades)	561	Tons	\$50.00	\$28,047
Haul Fiberglass Blades For Disposal	231	Tons	\$26.05	\$6,006
Fiberglass Blades Disposal	231	Tons	\$50.00	\$11,527
Excavate Around Turbine Foundation	8	Each	\$17.45	\$140
Remove Turbine Foundation and Load	336	Cubic Yards	\$240.09	\$80,677
Backfill Excavation Area from Turbine Foundation Removal	8	Each	\$183.19	\$1,465
Haul Concrete (Turbine Foundation)	680	Tons	\$10.82	\$7,364
Disposal of Concrete from Turbine Foundation	336	Cubic Yards	\$10.00	\$3,360
Decompact Wind Turbine Generator Site	8	Each	\$64.21	\$514
Grade Wind Turbine Generator Site	8	Each	\$2,655.38	\$21,243
Erosion and Sediment Control at Turbine/Transformer Site	8	Each	\$1,316.33	\$10,531
Topsoil and Revegetation at Turbine/Transformer Sites	8	Each	\$2,591.81	\$20,735
Till to Farmable Condition	6	Acres	\$158.78	\$916
Subtotal Wind Turbine Generators				\$695,785
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables Shallower than 4 feet	11	Locations	\$400.00	\$4,400
Haul Underground Collector System Cables	0.8	Tons	\$5.01	\$4
Disposal of Removed Cables (See Salvage Value)	0	Tons	\$0.00	\$0
Removal of Junction Box	3	Each	\$100.00	\$300
Erosion and Sediment Control at Junction Box Location	120	Feet	\$4.19	\$503
Topsoil and Revegetation at Junction Box Locations	0.03	Acres	\$3,593.70	\$99
Subtotal Electrical Collection/Transmission System				\$5,306
Access Roads				
Remove and Load Gravel Surfacing from Access Roads	13,257	Cubic Yards	\$2.91	\$38,573
Haul Gravel Removed from Access Roads	21,477	Tons	\$10.82	\$232,426
Disposal of Gravel Removed from Access Roads	21,477	Tons	\$0.00	\$0
Remove and Load Geotextile Fabric	49,716	Square Yards	\$0.88	\$43,988
Haul Geotextile Fabric	11	Tons	\$10.82	\$118
Dispose of Geotextile Fabric	11	Tons	\$50.00	\$547
Remove and Load Culvert from Beneath Access Roads	17	Each	\$448.00	\$7,616
Haul Culvert Removed from Access Roads	5	Tons	\$10.82	\$59
Disposal of Culverts	5	Tons	\$50.00	\$272
Remove Low Water Crossing from Access Roads	1	Each	\$3,400.00	\$3,400
Haul Low Water Crossing Materials Removed from Access Roads	1	Each	\$10.82	\$11
Disposal of Low Water Crossing Materials	1	Each	\$100.00	\$100
Decompact Access Road Corridor	22,372	Linear Feet	\$0.03	\$732
Erosion and Sediment Control Along Access Roads	16,779	Linear Feet	\$4.19	\$70,304
Topsoil and Revegetation on Removed Access Road Area	12	Acres	\$3,593.70	\$44,297
Subtotal Access Roads				\$442,442

Project Management					
PM (half-time), Superintendent, FE's, Clerk, Environmental Monitor	26	Weeks	\$2,983.33	\$77,567	
Subtotal Project Management				\$77,567	
Total Direct Costs				\$1,317,766	\$1,317,766
Contingency (50%)	50%	Percent		\$658,883	
Contingency (15% - Waiver)	15%	Percent			\$197,665
Total Demolition Costs				\$1,976,649	\$1,515,431
Salvage/Recycle					
Turbine Towers (Structural Steel)	2631	Tons	\$228.75	\$601,739	
Turbine Nacelles (Structural Steel)	561	Tons	\$228.75	\$128,317	
Turbine Generators	214466	Pounds	\$0.18	\$37,531	
Subtotal Salvage				\$767,588	\$767,588
Total Demolition Minus Resale and Salvage Value				\$1,209,061	\$747,843
				Without Waiver	With Waiver

Hoffman Falls Wind - Smithfield - Decommissioning Cost Estimate

	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	\$37,000.00	\$37,000
Permitting				
Local, State, and Federal Permits (SWPPP, Local and State Highway Work Permits, Section 404 Permits, etc.)	1	Lump Sum	\$4,375.00	\$4,375
Subtotal Permits				\$4,375
Wind Turbine Generators				
Disconnect Turbine Wiring	3	Each	\$2,883.20	\$8,650
Fell Turbine	3	Each	\$1,797.65	\$5,393
Process to Size and Load Turbine Components	1,079	Tons	\$154.78	\$166,998
Haul Turbine Components Offsite for Recycling (except blades)	1,079	Tons	\$5.01	\$5,406
Haul Turbine Components For Disposal (except blades)	210	Tons	\$10.82	\$2,276
Turbine Component Disposal (except blades)	210	Tons	\$50.00	\$10,518
Haul Fiberglass Blades For Disposal	86	Tons	\$26.05	\$2,252
Fiberglass Blades Disposal	86	Tons	\$50.00	\$4,323
Excavate Around Turbine Foundation	3	Each	\$17.45	\$52
Remove Turbine Foundation and Load	126	Cubic Yards	\$240.09	\$30,254
Backfill Excavation Area from Turbine Foundation Removal	3	Each	\$183.19	\$550
Haul Concrete (Turbine Foundation)	255	Tons	\$10.82	\$2,762
Disposal of Concrete from Turbine Foundation	126	Cubic Yards	\$10.00	\$1,260
Decompact Wind Turbine Generator Site	3	Each	\$64.21	\$193
Grade Wind Turbine Generator Site	3	Each	\$2,655.38	\$7,966
Erosion and Sediment Control at Turbine/Transformer Site	3	Each	\$1,316.33	\$3,949
Topsoil and Revegetation at Turbine/Transformer Sites	3	Each	\$2,591.81	\$7,775
Till to Farmable Condition	2	Acres	\$158.78	\$344
Subtotal Wind Turbine Generators				\$260,919
Met Towers				
Disconnect Tower Wiring	1	Each	\$1,441.60	\$1,442
Dismantle, Disassemble, and Load Tower Components	1	Each	\$5,096.00	\$5,096
Haul Tower Components Off Site	4	Tons	\$5.01	\$20
Excavate Around Tower Foundation	1	Each	\$4.86	\$5
Remove Tower Foundation and Load	1	Cubic Yards	\$240.09	\$278
Haul Concrete (Tower Foundation)	2	Tons	\$10.82	\$25
Disposal of Concrete from Met Tower	2	Tons	\$10.00	\$23
Grade Met Tower Site	1	Each	\$1,491.27	\$1,491
Erosion and Sediment Control at Met Tower Site	1	Each	\$419.00	\$419
Topsoil and Revegetation at Met Tower Site	0.06	Acre	\$3,593.70	\$206
Subtotal Met Towers				\$9,006
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables Shallower than 4 feet	4	Locations	\$400.00	\$1,600
Haul Underground Collector System Cables	0.3	Tons	\$5.01	\$1
Disposal of Removed Cables (See Salvage Value)	0	Tons	\$0.00	\$0
Removal of Junction Box	1	Each	\$100.00	\$100
Erosion and Sediment Control at Junction Box Location	40	Feet	\$4.19	\$168
Topsoil and Revegetation at Junction Box Locations	0.01	Acres	\$3,593.70	\$33
Subtotal Electrical Collection/Transmission System				\$1,902
Access Roads				
Remove and Load Gravel Surfacing from Access Roads	6,831	Cubic Yards	\$2.91	\$19,874
Haul Gravel Removed from Access Roads	11,066	Tons	\$10.82	\$119,756
Disposal of Gravel Removed from Access Roads	11,066	Tons	\$0.00	\$0
Remove and Load Geotextile Fabric	25,616	Square Yards	\$0.88	\$22,664
Haul Geotextile Fabric	6	Tons	\$10.82	\$61
Dispose of Geotextile Fabric	6	Tons	\$50.00	\$282
Remove and Load Culvert from Beneath Access Roads	13	Each	\$448.00	\$5,824
Haul Culvert Removed from Access Roads	4	Tons	\$10.82	\$45
Disposal of Culverts	4	Tons	\$50.00	\$208
Remove Low Water Crossing from Access Roads	0	Each	\$3,400.00	\$0
Haul Low Water Crossing Materials Removed from Access Roads	0	Each	\$10.82	\$0
Disposal of Low Water Crossing Materials	0	Each	\$100.00	\$0
Decompact Access Road Corridor	11,527	Linear Feet	\$0.03	\$377
Erosion and Sediment Control Along Access Roads	8,645	Linear Feet	\$4.19	\$36,224
Topsoil and Revegetation on Removed Access Road Area	6	Acres	\$3,593.70	\$22,823
Subtotal Access Roads				\$228,138

Project Management					
PM (half-time), Superintendent, FE's, Clerk, Environmental Monitor	26	Weeks	\$1,118.75	\$29,088	
Subtotal Project Management				\$29,088	
Total Direct Costs				\$570,428	\$570,428
Contingency (50%)	50%	Percent		\$285,214	
Contingency (15% - Waiver)	15%	Percent			\$85,564
Total Demolition Costs				\$855,642	\$655,992
Salvage/Recycle					
Turbine Towers (Structural Steel)	986	Tons	\$228.75	\$225,652	
Turbine Nacelles (Structural Steel)	210	Tons	\$228.75	\$48,119	
Met Towers (Structural Steel)	4	Tons	\$228.75	\$874	
Turbine Generators	80425	Pounds	\$0.18	\$14,074	
Subtotal Salvage				\$288,720	\$288,720
Total Demolition Minus Resale and Salvage Value				\$566,922	\$367,273
				Without Waiver	With Waiver