Wind Project Decommissioning Plan

Buffalo Ridge II Wind Project

Prepared for
Buffalo Ridge II Wind, LLC
a subsidiary of
Avangrid Renewables, LLC

AVANGRID RENEWABLES

March 2021

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March 30, 2021

Joel Bahma, PE

Date

1.0 Introduction

Buffalo Ridge II, LLC (Buffalo Ridge) a subsidiary of Avangrid Renewables, LLC (Avangrid) operates the Buffalo Ridge II Wind Project (Project) in Brookings and Deuel County, South Dakota. The Project consists of 105 Gamesa G87 2.0-megawatt (MW) wind turbine generators (WTG or turbine) with a total nameplate capacity of 210 MW. (Figure 1).

The decommissioning objective is, to the extent feasible, to restore and reclaim the site to its preconstruction condition. The Public Utility Commission of South Dakota (Commission) issued Buffalo Ridge II, LLC an Energy Conversion Facility Permit on April 23, 2009.

Section XIV, paragraph 5 of the permit states.

> Decommissioning will involve removal of all wind facilities including towers, turbine generators, transformers, overhead and underground cables, foundations, buildings, and ancillary equipment down to a depth of 4 ft below grade. All access roads will be removed unless the affected landowner provides written notice that the road or portions of the road will be retained. Any exceptions to complete removal of the Project components will be recorded with the Brookings and Deuel (if applicable) County Zoning Offices. Additionally, any disturbed surface will be graded, reseeded, and restored as nearly as possible to its preconstruction condition within eighteen months of Project decommissioning.

Section 24, of the Terms and Conditions of the permit states.

> In addition to the terms, conditions and requirements regarding decommissioning set forth in Findings of Fact XIV. Decommissioning of Wind Energy Facilities, within 90 days following the date ten years after the project commences operation, the Applicant shall submit a Project status report, updated decommissioning plan for the Project and financial information for Applicant in accordance with ARSD 20: 10:22: 13.01 for the Commission's review and approval. At such time, the Commission will determine whether Applicant shall be required to provide a bond, letter of credit, guarantee or other security to assure adequate funding is available to fully perform decommissioning obligations as provided in ARSD 20:10:22:13.01.

The Buffalo Ridge II Wind Project started operation on December 31, 2010. This decommissioning plan is the update following 10 years of operation. The facility is fully operational.

Avangrid Renewables, LLC, is the parent company of Buffalo Ridge II, LLC. Avangrid Renewables, LLC, a subsidiary of AVANGRID, Inc. and part of the IBERDROLA Group. IBERDROLA, S.A., is an international energy company with the largest renewable asset base of any company in the world. Avangrid Renewables, LLC, headquartered in Portland, Oregon, has more than $10 billion of operating assets totaling more than 6,000 MW of owned and controlled wind and solar generation in 22 U.S. states. In 2015, Iberdrola Renewables, LLC changed its legal name to Avangrid Renewables. Avangrid Renewables owns and operates approximately 310 MW of wind energy in South Dakota including the 50.4 MW Buffalo Ridge I Wind Project, the 210 MW Buffalo Ridge II Wind Project, and the 150 MW MinnDakota Wind Project (50 MW in South Dakota, 100 MW in Minnesota). Avangrid Renewables, LLC also has ownership interests with WEC Energy Group in the 97 MW Coyote Ridge Wind and 155 MW Tatanka Ridge Wind Projects located in South Dakota.

This Decommissioning Plan provides a description of the decommissioning and restoration phase of the Project, including a list of the primary wind farm components, dismantling and removal activities, and disposal of or recycling materials. A summary of estimated costs and revenues associated with the decommissioning phase is also included.

1.1 Wind Farm Components

The main components of the proposed Project include:

- Turbines (tower, nacelle, hub, rotor, and three rotor blades per WTG)
- Turbine foundations
- Access roads
- Crane pads
- Underground electrical collection system
- Overhead electrical collection system
- Operations and Maintenance Building
- 115 kilovolt (kV) Gen-tie cable and structures
- Project substation
- Meteorological (MET) tower

1.2 Expected Lifetime and Triggering Events

The anticipated project life is 40 years from the date of construction. Depending on market conditions and Project viability, the Project may be repowered with new turbines, updated components, such as nacelles, towers and/or blades to extend the life of the Project. If the project is not repowered or updated, then at the end of the Project's useful life, the turbines and associated components will be decommissioned and removed from the site.

Section XIV, paragraph 3 of the Energy Conversion Facility Permit states.

> If Buffalo Ridge II LLC decides to decommission the Buffalo Ridge II Wind Project versus repowering, it will advise the Brookings and Deuel (if applicable) County Zoning Offices of the planned decommissioning activities. Buffalo Ridge II LLC will begin decommissioning the facility within 8 months from the time the facility ceases to operate. Decommissioning will be completed within 18 months from the time the facility ceases to operate.

Turbine components that have resale value may be sold in the wholesale market. Components with no wholesale value will be salvaged and sold as scrap for recycling or disposed of at an offsite licensed solid waste disposal facility (e.g., landfill). Decommissioning activities will include removal of the turbines and associated components as listed in Section 1.1 and described in Section 2.

1.3 Decommissioning Sequence

Decommissioning activities are anticipated to be completed in an 18-month timeframe. Monitoring and site restoration may extend beyond this period to ensure successful revegetation and rehabilitation. The anticipated sequence of decommissioning and removal is described as follows; however, overlap of activities is expected:

- Conduct site investigation
- Contact landowners
- Public road condition assessment
- Site access road assessment
- Prepare site by site decommissioning sequence and schedule
- Negotiate decommissioning contractor terms and conditions
- Obtain necessary permits and approvals
- Provide Notice to Proceed for Decommissioning Contractor
    - Mobilize and prepare field staff yard and offices
    - Implement erosion control measures and site plans
    - Mobilize construction equipment (cranes, lowboys, graders, utility trucks, etc.)
    - Begin site access road maintenance and, where necessary, apply crushed rock to facilitate equipment access
    - Identify and secure laydown area at each site to process decommissioned equipment and material
    - De-energize facility, locate, disconnect, and secure electrical equipment from public power grid
    - Secure rotating machinery in preparation of disassembly
    - Begin fluid removal and processing
    - Mobilize crane(s)

- Remove blades and place in laydown area for site processing
- Remove nacelle and place in laydown area for processing. or alternately, load directly to shipping and move to remote site for processing
- Disassemble tower and place in laydown area for site processing
- Mobilize crane to next site (this may be overland if possible, to negotiate with landowners to speed disassembly and avoid multiple over road transport and erection operations)
- Process blades and load for disposal/recycle
- Process tower and load for transport to scrap yard
- Remove tower foundation to a depth of 4 feet below final grade using approved means and methods
- Haul tower foundation material to disposal site for reprocessing (concrete to be crushed, rebar for recycle)
- Remove overhead 34.5 and 115 kV structures and cable
- Remove underground cable were surfaced to a depth of 4 feet below final grade
- Remove O&M and maintenance building and foundations
- Remove MET tower
- Remove access road and surfacing (gravel) where required
- Haul surfacing material to approved stockpile for reclaim or sale
- Regrade site to blend into adjacent contours
- Add topsoil as needed at turbines
- Prepare soil for seeding
- Seed site
- Site restoration, final clean up

2.0 Decommissioning

The wind farm components and decommissioning activities necessary to restore the Project area, as near as practicable, to pre-construction conditions are described within this section. Buffalo Ridge will dismantle and remove all towers, turbine generators, overhead and underground cables, foundations, buildings, and ancillary equipment to a depth of 4 feet.

Estimated quantities of materials to be removed and salvaged or disposed are included in this section. Public roads damaged or modified during the decommissioning and reclamation process shall be repaired to a level equivalent to pre-decommissioning activities.

2.1 Wind Farm System Overview

Table 1 presents a summary of the primary components included in this decommissioning plan.

Table 1 Primary Components of Wind Farm to be Decommissioned

Component	Quantity	Unit of Measure
Wind Turbines (including 1 tower, 1 nacelle, 1 hub, and 1 rotor with 3 rotor blades, per turbine)	105	Each
Wind Turbine Foundations	105	Each
Crane Pads or Mats	105	Each
Access Roads	106,200	Lineal Foot (estimated)
Overhead gen-tie cable and structures	24,300	Lineal foot (estimated)
Underground collection lines	260,000	Lineal foot (estimated)
Overhead 34.5 kV collection	48,000	Lineal foot (estimated)
Substation	1	Each
Operations & Maintenance Building	1	Each
Met Tower	1	Each

2.2 Wind Turbine Generators

The Gamesa G87 2.0 MW model wind turbine generators are primarily comprised of a modular steel tower, nacelle, and rotor with three rotor blades attached to a hub. The hub height of the turbines is 78 meters with an 87-meter rotor diameter. The components are modular in design, allowing for ease of construction, replacement, and disassembly during decommissioning. Turbine components in working condition may be refurbished and sold in a secondary market yielding greater revenue than selling as salvage material. For the purposes of this report, estimates will be based on the salvage value, as this will be the most conservative estimate of revenue.

Turbine Tower - The turbine towers are painted modular monopole steel structures approximately 78 meters tall. Each tower contains approximately 220 tons of salvageable steel. It is estimated that the tower sections will be cut down to transportable size and sent to a scrap metal facility for processing.

Nacelle - The nacelle sits at the top of the turbine tower and is assumed to have an overall weight of approximately 65 tons including the bedplate. The nacelle is comprised of approximately 80%

salvageable steel along with other non-salvageable materials. Non-salvageable material within the nacelle will be disposed of in a landfill.

Hub, Rotor, and Rotor Blades - The rotor and hub (without blades) are assumed to have a total weight of approximately 40 tons. It is mainly comprised of steel that will be salvaged along with the tower and nacelle. The rotor blades are constructed of non-metallic materials such as fiberglass, carbon fibers, and epoxies. These materials will likely have no salvage value and will be recycled for a cost or hauled to a landfill.

Other Turbine Components - In addition to the main components previously described, each WTG contains other items such as ladders and platforms, anchor bolts and internal electrical wiring that will have additional salvage value.

Decommissioning Activity - The wind turbines will be deenergized from the surrounding electrical system and made safe for disassembly. Improvements to access roads and crane pads will be completed to allow crane access to turbines for removal of components. Liquid wastes, including gear box oil and hydraulic fluids will be removed and properly disposed of or recycled according to regulations current at the time of decommissioning. Control cabinets, electronic components, and internal electrical wiring will be removed and salvaged. The hub and rotors will be lowered to the ground as a unit for disassembly. The nacelle and turbine sections will be disassembled and removed in the reverse order of assembly.

2.3 Wind Turbine Foundations

Typical spread footing foundations utilized for the Project turbines are underground. Below the foundation pedestal is the foundation base, an octagonal-shaped concrete structure. The entire foundation sits on supporting sub-grade typically around 10 feet below the ground surface.

Concrete demolition will be completed on the upper 4 feet of the foundation. This will include the anchor bolts, rebar, conduits, cables, and concrete to the required depth. The site will be backfilled with clean fill and graded, and the land contours restored as near as practicable to preconstruction conditions. Topsoil will be placed on the disturbed area and revegetated. Concrete would be crushed and hauled to a landfill, rebar removed and recycled.

2.4 Collection System

The Project's underground collection system would not interfere with farming activities when placed 4 feet or more below ground surface. Hence, complete cable removal is not required at decommissioning to restore the wind farm site to its former use. Cables 4 feet or more below ground surface will be completely deactivated and abandoned in place. Some of the collection system is comprised of overhead poles and power lines. The poles will be removed from the ground and brought to a landfill. Power lines would likely be recycled at a scrap yard. If, at the time of decommissioning, the salvage value of the underground cable exceeds the cost of extraction and restoration, the cables may be removed and salvaged.

Buffalo Ridge II shares overhead gen-tie lines with the Coyote Ridge wind farm. Approximately 4.9 miles of the gen-tie lines are isolated to the Buffalo Ridge II project and would be removed upon decommissioning. Material from removal of the gen-tie structures will be taken to an off-site landfill or recycled at a scrap facility.

2.5 Crane Pads

Crane pads are located at the base of each turbine to support the large cranes necessary for assembly and disassembly of the turbines. Pads consist of compacted native soils and approximately one-half foot of base fill. After decommissioning activities are completed, the crane pad aggregate will be removed and the areas filled with native soil, as necessary. Land will be graded, and pre-construction contours restored to the extent practicable. Restoration will likely be performed in conjunction with the turbine foundation and/or access road restoration. Soils compacted during decommissioning construction activities will be de-compacted, as necessary, to restore the land to preconstruction land use. Labor for trucking and equipment is the primary expense for the crane pad removal.

2.6 Access Roads

Access roads are located at each turbine providing access from public roads to the turbine site. The typical width of the roads is approximately 16 feet, widening near the turbine base. The total length of Project access roads is approximately 106,200 linear feet (20.10 miles). The estimated quantity of these materials is provided in Table 2.

Table 2 Typical Access Road Construction Materials

Item	Number	Unit
Aggregate Base Course	11,150	Square Yards
Aggregate Subbase Course	44,600	Cubic Yards

Buffalo Ridge will remove all access roads unless an affected landowner requests otherwise. Buffalo Ridge will record any agreement for removal to a lesser depth or for no removal with the County and show the locations of all such foundations. Buffalo Ridge will submit all such agreements with affected landowners to the County prior to completion of restoration activities. Buffalo Ridge will restore the Project within 18 months after expiration of the issued permit, or upon earlier termination of operation of the Project. The estimate assumes 75% of the roads are to be removed and returned to preconstruction state. Decommissioning activities include the removal and stockpiling of aggregate materials onsite for salvage preparation. Local townships or farmers may accept the material prior to processing for use on local roads or field access roads; however, for the purpose of this estimate it is conservatively assumed that all materials will be removed from the Project area.

Following removal of aggregate, the access road areas will be graded, de-compacted, backfilled with native soils, as needed, and land contours restored as near as practicable to preconstruction conditions.

While there would likely be some salvage value for the aggregate surface material, this estimate assumes any costs of material to be removed from the site to be offset by those gained by secondary sales. Therefore, no salvage value for aggregate has been estimated.

2.7 Project Substation

All equipment, conductors, transformers, steel, wiring, and fencing is to be removed. Footings, underground cabling, and aggregate will be removed from the substation site to a depth of 4 feet. Electrical equipment may have value on the secondary market for refurbishment or scrap. Steel and foundations are to be removed and brought to the landfill. Cost of demolishing the substation was based on crews and a scheduled timeframe. No salvage cost was given to the substation.

2.8 Operations and Maintenance Buildings (O&M)

The project includes an operations and maintenance building as well as a warehouse building sharing the same parking area. Building structures, foundations, utilities, fencing, and parking area are to be removed. Footings and underground utilities will be removed to a depth of 4 feet below grade. Materials would then be recycled at a scrap yard or brought to a landfill.

The building and land could have value to commercial or industrial markets and may be sold in such a case. No salvage cost was given to the O&M or warehouse buildings.

2.9 MET Tower

The site contains a single met tower built of structural steel atop concrete foundations. The steel towers will be removed by crane or toppled and scrapped. Footings and underground utilities connections will be removed to a depth of 4 feet below grade. Concrete will be crushed and hauled to a landfill. Rebar will be separated and recycled.

2.10Topsoil Restoration and Revegetation

Erosion control measures, SWPPP and environmental compliance will be followed during site decommissioning. Project sites that have been excavated and backfilled will be graded as previously described to restore land contours as near as practicable to preconstruction conditions. Topsoil will be replaced and seeded with appropriate vegetation to reintegrate with the surrounding environment. Soils compacted during decommissioning activities will be de-compacted, as necessary, to restore the land to preconstruction land use.

3.0 Decommissioning Cost Estimate Summary

Expenses and revenues associated with decommissioning the Project will be dependent on labor costs and market value of salvageable materials at the time of decommissioning. Fluctuations and inflation of the salvage values or labor costs were not factored into the estimates.

3.1 Decommissioning Expenses and Revenues

Project decommissioning will incur costs associated with the disassembly, removal, excavation, and restoration of the proposed wind turbine sites and support infrastructure as described in Section 2. Table 3 summarizes the estimates for activities associated with the major components of the Project.

Revenue from decommissioning the Project will be realized through the sale of wind farm components and construction materials. Turbine components may be sold within a secondary market or as salvage. For purposes of this report, estimated recovery values were based on the salvage value, as this is the more conservative estimate of revenue.

The salvage markets are highly variable. Salvage value estimates were based on a current average price of steel, copper, and aluminum derived from online sources (scrapmonster.com) and reflect an 8yr price average. The price to value the steel used in this report is $170 per ton and accounts for scrap yard handling and processing to mill size. The price used for copper is $2.37 per pound ($4,740 per ton) and the price used for aluminum is $.59 per pound ($1,170 per ton). The nacelle is assumed to have approximately 80 percent salvageable steel content; the hub and tower 90 percent. Table 4 summarizes the potential salvage value for the wind turbine components, transformer, and construction materials.

Table 3 Estimated Decommissioning Expenses and Revenues

Activity	Decommission or Salvage	Unit	Number	Cost or Salvage Price per Unit	Total
Overhead and management (includes estimated permitting required; 12%)	Decommission	Lump Sum	1	$1,612,000	$1,612,000
Mobilization and demobilization (6%)	Decommission	Lump Sum	1	$806,000	$806,000
Access Road Prep	Decommission	Lump Sum	1	$161,000	$161,000
Crane Mob and Operations	Decommission	Each	105	$18,571	$1,950,000
Tower Disassembly	Decommission	Each	105	$54,235	$5,694,675
Blade Demo & Recycling	Decommission	Each	105	$18,090	$1,899,450
Turbine Foundation Removal	Decommission	Each	105	$12,182	$1,279,157
Collector Line Removal	Decommission	Lump Sum	1	$658,232	$658,232
Site Restoration (Roads, Turbine & Aux Sites)	Decommission	Lump Sum	1	$1,524,400	$1,524,400
O & M Removal	Decommission	Lump Sum	1	$178,223	$178,223
Substation Removal	Decommission	Lump Sum	1	$75,000	$75,000
MET Tower Removal	Decommission	Lump Sum	1	$15,000	$15,000
Taxes	Decommission	Percent		$495,411	$495,411
Contingency	Decommission	Percent	10%	$1,585,314	$1,585,314
Turbine tower (steel) (total per 105 turbines)	Salvage	Tons per turbine	198	($170)	($3,534,300)
Nacelle (steel) (total per 105 turbines)	Salvage	Tons per nacelle	52	($170)	($928,200)
Rotor hub (steel) (total per 105 turbines)	Salvage	Tons per hub	36	($170)	($642,600)
Transformer (total per 105 turbines)	Salvage	Per turbine	1	($4,103)	($430,815)
Copper (total per 105 turbines)	Salvage	Tons per turbine	1.9	($4,740)	($949,114)
Aluminum (total per 105 turbines)	Salvage	Tons per turbine	2.3	($1,170)	($282,555)
Oil disposal	Salvage	Per turbine	1	$1,000	$105,000
Collector line (aluminum)	Salvage	Lump Sum	1	($96,407)	($96,407)
Taxes	Salvage	Per turbine		($304,348)	($304,348)

3.2 Net Decommissioning Cost Summary

The following is a summary of the net estimated cost to decommission the Project, using the information detailed in Sections 3.2 and 3.3. Estimates are based on 2021 prices, with no market adjustments or inflation considered.

Table 4 Net Decommissioning Summary

Item	Cost
Decommissioning expenses	$17,933,862
Potential revenue - salvage value of turbine components and recoverable materials	($7,063,339)
Net Decommissioning Cost	**$10,870,523**
Per Turbine Decommissioning Cost (based on 105 turbines)	**$103,529**

Class IV, per AACEI cost estimate classification system 17R-97

3.3 Salvage Value

Salvage values are considered to be the most variable component of the decommissioning study. Depending on the material, equipment, and salvage opportunities, the means and methods used by the contractor would vary from scrapping materials completely to selling equipment in the secondary market and processing materials and equipment, onsite or at a facility, for future use or scrap value.

Assumptions in the salvage values were based on current conditions and processing applications. Many materials that are non-recyclable will likely be sent to a landfill, such as concrete debris, wood, or turbine blades.

3.3.1 Pricing assumptions

Material salvage pricing is derived from online scrap pricing (scrapmonster.om) and is representative of an 8-year average. In order to capitalize on these prices, material would need to be shipped to a mill and be cut to size prior to shipment. For decommissioning, most components were assumed to be disassembled in a process similar to erection and cut to shippable size onsite. Ability to reclaim all scrap at full pricing is not likely. Factors were taken to account for handling, processing, and grade of scrap.

The following pricing assumptions were used to calculate scrap and waste value. Weights are in gross tons:

- Steel $170/ton
- Copper $4,740/ton
- Aluminum $1,170/ton

Salvage weight has been estimated, scaled, or has been taken from manufacturer's technical data sheets. Some resale value of components is likely. In this case, certain transformers and electrical components would be considered to have immediate value on the market because of their longer design life. It is likely that newer components may be installed during the lifetime of the wind farm due to maintenance or failure of older components. This estimate does not make attempts to quantify resale of equipment to a secondary market, rather it assumes that all salvage costs will come from scrapping of raw materials.

3.4 Markups

The following typical contractor markups were applied to the Demolition Cost Estimate only:

- Contractor Project Management/Overhead 12%
- Mobilization/Bond/Insurance 6%

3.5 Escalation Rate

Barr Engineering Co. (Barr) has not changed, scaled, or accounted for escalation of costs in the future. Considering the volatility of several markets, construction, energy, and labor, an update to this cost estimate prior to actual decommissioning is recommended. This study quantifies the Project in today's current market and estimates cost in 2021 dollars.

3.6 Estimate Classification

This concept-level (Class IV, per AACEI cost estimate classification system 17R-97) cost estimate is based on current drawings and material takeoffs and is meant for budgeting and feasibility uses. Costs will change with further scope or design changes. Class IV estimates are typically used for project screening, determination of feasibility, concept evaluation, and preliminary budget approval. The estimated accuracy range for the Total Project Cost as the project is defined is -20% to +30%. The accuracy range is based on professional judgment and understanding of the project, the complexity of the project and the uncertainties in the decommissioning project as scope.

3.7 Cost Resources

The following is a list of the various cost resources used in the development of the cost estimate:

- R.S. Means
- scrapmonster.com
- Barr historical data
- Vendor quotes on scrap and shipping associated costs
- Estimator judgment

3.8 Estimate Methodology

Costs were built up from crews and equipment over an estimated schedule as well as contacting industry professionals for quotes and pricing. Some items, such as the MET tower costs, were lump sum allowances based on similar decommissioning studies.

3.9 Labor Costs

The estimate is based upon national labor rates.

3.10 Tax

The estimate includes state sales tax of 4.5% on services and materials and a 2% contractor excise tax on gross cost.

3.11 Soft Costs

The cost estimate does not include any soft costs. Soft costs that would likely be associated with the Project would be engineering, design, permitting, land, legal, and other fees.

3.12 Major Assumptions

The estimate assumes the work will be done on a competitive bid basis and the contractor will have a reasonable amount of time to complete the work. All contractors are equal, with a reasonable project schedule, no overtime, work performed as under a single contract, and no liquidated damages.

This estimate was prepared in March 2021. As with all estimates, it represents a snapshot in time of what is known about the Project and expected to occur. The commodities and energy markets are highly variable. Changes in either could have dramatic effects on this estimate. Therefore, this estimate should be viewed in that light and if more than 180 days have passed or there have been significant changes in the commodity markets, this estimate should be updated and reevaluated.

- Commodity prices for steel, copper, and aluminum were sourced from scrapmonster.com cost index and adjusted based on discussions with scrap vendors.
- The Project site is readily accessible.
- Only minor repairs to access roads will be necessary to accommodate crane access.
- Turbine blades will be disposed or recycled. Materials will be brought to an approved disposal site within 60 miles.
- Only turbine foundation pedestal sections and a portion of the footing is to be removed to 4 feet below grade.
- 90% of tower steel was estimated to be recoverable.
- .5% of the wind turbine generator weight is salvageable copper.

- .75% of the wind turbine generator weight is salvageable aluminum/alloys.
- Contractor will be allowed to stage construction to obtain the most efficient workflow possible.
- Contractor will not be required to perform work using the same means or methods used to produce this estimate.
- Contractor will be allowed to use the most appropriate, safest, and efficient methods available to them at the time of performing the work.
- Contractor will secure and provide any required demolition permits or certificates.
- Demolition contractor will load salvage materials in appropriate sizes and weights at each site to recycling buyer's vehicle.
- Assumed 106,200 linear feet (20.10 miles) of access road, 16 feet in nominal width.
- Turbine and tower dismantling production is 1.5 workdays per turbine.
- Crane movement and setup is separate from dismantling operation.
- Site restoration includes roadway removal and regrading of site, including deep tilling to remove compaction of soils at the road and tower site. 75% of the road will be removed, 25% will remain.
- Salvaged roadway material is stockpiled or delivered within a 20-mile radius of each turbine site. Assumed resale value offsets freight fees.
- One day of decommissioning preparation per site, including oil removal, is allocated prior to crane dismantling.
- All recycled material is processed to manageable sizes for transport from site.
- Sales tax (4.5%) is applied to services and materials, estimated to be 25% of construction costs

3.13 Excluded Costs

The cost estimate excludes the following costs:

- Non-construction or soft costs for design, services during construction, land, legal, and owner administration costs.

4.0 Financial Assurance

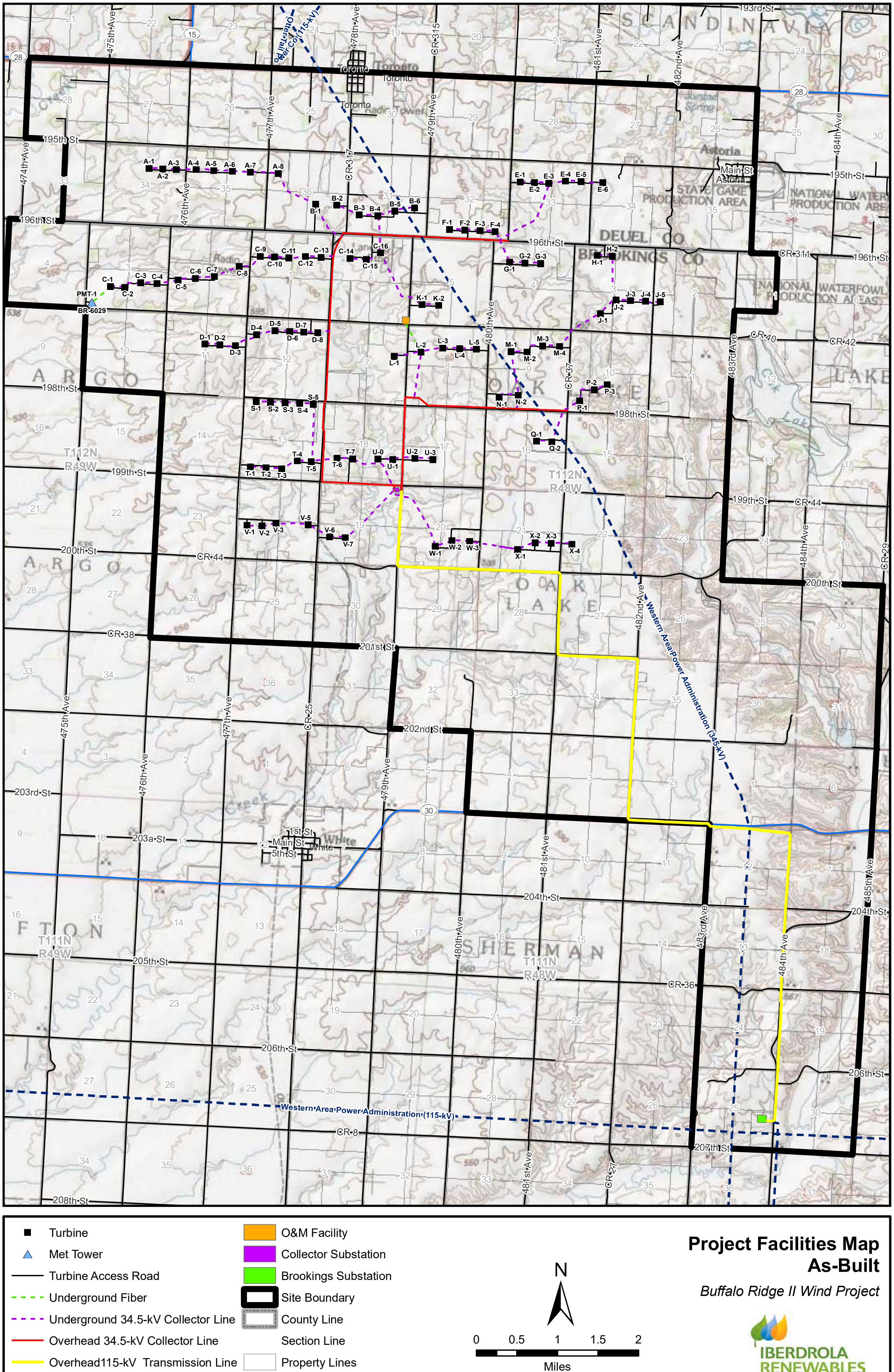
Buffalo Ridge will establish the necessary financial surety to ensure decommission funds are available at the time of decommissioning.

5.0 Reference Documents

This estimate is based upon the following documents:

- Avangrid Renewables "Buffalo Ridge II As-Built Drawings" *Buffalo Ridge II (As0Built)_Shapefiles_KMZ_2020100303.zip*
- Barr Engineering "Buffalo Ridge II Wind Project, Spread footing foundation plan, elevation, section & details. S-01 Rev 0" *October 7, 2009 Buffalo Ridge II S-01 Rev 0.pdf PDF File.*
- Gamesa "G87 2.0MW Platform, Characteristics and general operation of the G87-2.0 MW 50/60Hz Wind Turbine" PDF File.
- Scrap Monster. "#1 HMS Scrap Price" *March 2021*. *https://www.scrapmonster.com/scrap-metal-prices/steel/1-hms/44*
- Westwood Professional Services, Inc. "Typical Road Construction drawings" *December 4, 2009 Buffalo Ridge II_IFC_Road Typical.pdf* PDF File.

Figure 1



Project Facilities Map
As-Built

Buffalo Ridge II Wind Project

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