



June 29, 2018

Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission
600 East Boulevard Avenue, Dept. 408
Bismarck, ND 58505



Dear Mr. Nitschke:

RE: Wind Energy Facility Decommissioning Plan

Basin Electric Power Cooperative (Basin Electric) owns and operates two wind energy facilities in North Dakota. Minot Wind consists of two (2) NORDEX 1.3 megawatt (MW) turbines on 60-meter steel towers installed in 2002 and three (3) 1.5 MW General Electric (GE) turbines on 80-meter steel towers installed in 2009. PrairieWinds ND1 consists of seventy-seven (77) 1.5 MW GE turbines on 80-meter steel towers installed in 2009. PrairieWinds ND1 was permitted by the North Dakota Public Service Commission (Commission) Energy Conversion Site Compatibility Certificate No. 14. For purposes of the decommissioning plan, the two facilities will be considered together, collectively as "PrairieWinds".

A decommissioning plan for the two facilities was submitted to the Commission in 2010. In June 2014, the Commission issued an order that delayed the financial assurance requirement for the turbines installed in 2002 until financial assurance was required for the adjacent 77-turbine project. The enclosed decommissioning plan is filed in response to the Commission's rulemaking in PU-17-023, and is filed to update the existing decommissioning plan in the above-referenced matter.

If you have any questions or concerns regarding this matter, please contact me at 701.557.5495.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin L. Solie".

Kevin L. Solie, P.E.
Senior Environmental Compliance Administrator

/ser
Enclosures
cc: Casey Jacobson

3 **PU-10-78** Filed: 6/29/2018 Pages: 30
Revised Decommissioning Plan and Cost Estimate

Basin Electric Power Cooperative
Kevin Solie, Sr. Env. Analyst

BASIN ELECTRIC POWER COOPERATIVE

STATE OF NORTH DAKOTA PUBLIC SERVICE COMMISSION

**Basin Electric Power Cooperative
PrairieWinds and Minot Wind - Ward County, ND**

Case No. PU-17-023

DECOMMISSIONING PLAN

In accordance with North Dakota Administrative Code (NDAC) Chapter 69-09-09, Basin Electric Power Cooperative (Basin Electric) provides this decommissioning plan for the PrairieWinds ND1 and Minot Wind Projects in Ward County, North Dakota (collectively "PrairieWinds").

Basin Electric Power Cooperative Facilities

Basin Electric owns and operates two wind energy facilities in North Dakota. Minot Wind consists of two (2) NORDEX 1.3 megawatt (MW) turbines on 60-meter steel towers installed in 2002 and three (3) 1.5 MW General Electric (GE) turbines on 80-meter steel towers installed in 2009. PrairieWinds ND1 consists of seventy-seven (77) 1.5 MW GE turbines on 80-meter steel towers installed in 2009. PrairieWinds ND1 was permitted by the North Dakota Public Service Commission (Commission) Energy Conversion Site Compatibility Certificate No. 14. A decommissioning plan for the two facilities was submitted to the Commission in 2010. In June 2014, the Commission issued an order that delayed the financial assurance requirement for the turbines installed in 2002 until financial assurance was required for the adjacent 77-turbine project.

This decommissioning plan is filed in response to the Commission's rulemaking in PU-17-023, and is filed to update the existing decommissioning plan in the above-referenced matter as required under NDAC 69-09-09-07. The decommissioning plan is based on the proper treatment of the asset retirement obligation, consistent with generally accepted accounting principles or "GAAP" implemented by Basin Electric. Exhibit A, entitled "A Decommissioning Plan and Decommissioning Obligation Cost Evaluation" prepared by Burns and McDonnell and dated January 6, 2017 forms the basis for this document and is attached. The required elements for a decommissioning plan are presented below.

NDAC § 69-09-09-01(6)(a) - Anticipated Facility Life.

PrairieWinds turbines have an anticipated useful life of thirty (30) years or more. Upgrades based on new technology may allow the wind facility to produce efficiently and successfully well beyond this period of time. Within twelve (12) months after the facility or turbine reaches the end of its useful life, decommissioning shall begin and will be completed within twenty-four (24) months after the facility or turbine reaches the end of its useful life.

NDAC § 69-09-09-01(6)(b) - Decommissioning Cost Estimate.

In accordance with GAAP, Basin Electric Power Cooperative will assess, maintain, and recognize its asset retirement obligation, which includes decommissioning and restoration. The asset retirement obligation does not assume the recoupment of the salvage value associated with PrairieWinds components. The total cost of decommissioning and restoration at the end of

the asset's life is estimated to be approximately \$6,895,000. The attached Table 1 provides additional detail on estimated costs.

NDAC § 69-09-09-01(6)(c) - Decommissioning Cost Estimate Method.

See attached Exhibit A.

NDAC § 69-09-09-01(6)(d) - Anticipated Manner of Decommissioning.

Decommissioning of turbines and towers includes dismantling of turbine components and transporting offsite. The costs and activities for the removal of the tower and wind turbine components, the substation, access roads, and the collection system have been evaluated, as follows:

Tower and Wind Turbine Components. The turbines are General Electric 1.5 MW (80 turbines) and NORDEX 1.3 MW (two turbines) on steel towers. Activities have been estimated for dismantling the turbines, the tower sections and wind turbine blades. Removal of the tower wiring and transformer is also included. All components would be removed from the property.

Tower and Transformer Foundations. Tower and transformer foundations, conduits and connections will be removed to a minimum depth of three (3) feet below existing grade. The foundation sites will be graded to match surrounding contours and be restored to conditions that will support surrounding vegetation.

Balance of Plant. Aggregate base roads will be scarified, loaded, and removed from site to an appropriate location. The interconnection substation and operations and maintenance building would also be removed. Remaining subgrade will be decompacted and graded into the adjacent soils to the approximate original topography. This area will be covered with topsoil from the site and vegetation re-established.

Collection System. The collection system terminations near the transformer will be removed to a minimum depth of twenty-four (24) inches below existing ground line. The underground collection system cabling is presumed to be left in place at its current depth of at least 48 inches below grade to the top of the lines.

Disturbed areas would be restored and reclaimed to the approximate original topography. Topsoil will be spread over the disturbed area at a depth similar to that in existence prior to the disturbance. The disturbed areas would be graded, top-soiled, and reseeded according to National Resource Conservation Service guidelines, unless the Commission approves otherwise.

NDAC § 69-09-09-01(6)(e) - Effects on Present and Future Natural Resource Development.

PrairieWinds will continue operating during the project's useful life until which time the site will be restored in accordance with to the Commission's rules through the decommissioning process. PrairieWinds is not anticipated to materially impact present or future natural resource development during operations or decommissioning.

N.D. Admin. Code § 69-09-09-01(6)(f) - Detailed Plan of Financial Assurance to Ensure Decommissioning.

Basin Electric is a regional, consumer-owned, generation and transmission cooperative formed in 1961 to supply supplemental power to a consortium of rural electric distribution cooperatives. Basin Electric serves approximately 3 million consumers through 141 rural electric cooperatives across nine states. Basin Electric has assets of more than \$7.3 billion and equity of approximately \$1.4 billion.

Consistent with NDAC § 69-09-09-08, Basin Electric will provide financial assurance documentation after the tenth year of operation (no later than December 2019) to ensure sufficient resources for the decommissioning of PrairieWinds. Basin Electric meets the criteria for self-guarantee as allowed under NDAC § 69-09-09-08(5) and will utilize the self-guarantee financial assurance mechanism when required in December 2019.

Basin Electric's self-guarantee will meet the requirements of NDAC § 69-09-09-08(5) because:

- Basin Electric has been in continuous business operation for at least five years.
- Basin Electric has a current rating in the "A" category rating as issued by Standard and Poor Corporation's Global Ratings.

Consistent with NDAC § 69-09-09-08(6), the total amount of an outstanding self-guarantee for decommissioning does not exceed 25 percent of the owners' tangible net worth in the United States.

NDAC § 69-09-09-08(7) does not apply because no parent guarantee for decommissioning will be implemented.

Table 1. Estimated Decommissioning Costs for Basin Electric Wind Facilities

Decommissioning Activity PrairieWinds ND1 (77 turbines)	Burns and McDonald Cost Estimate in 2016 Dollars
Wind Turbine, Nacelle, Tower, and Electric Removal	\$2,667,000
Blade and Foundation Removal	\$1,502,000
Hauling	\$59,000
Disposal	\$147,000
Removal and Disposal of Oils and Chemicals	\$52,000
Total Estimated Cost	\$4,427,000
Owner Indirect Cost (5%)	\$211,000
Contingency (10%)	\$443,000
Total Net Cost	\$5,091,000
Per Turbine Average Cost	\$66,000

Decommissioning Activity Minot Wind (5 turbines)	Estimate in 2016 Dollars
Five (5) Wind Turbines at \$66,000 average cost	\$330,000
Total Net Cost	\$330,000

Decommissioning Activity Balance of Plant (Substation, Operations and Maintenance (O&M) Building and Access Roads)	Burns and McDonald Cost Estimate in 2016 Dollars
Mobilization and Demobilization	\$50,000
Substation Removal	\$290,000
O&M Facility Removal	\$71,000
Crushed Rock Road Surface Removal	\$388,000
Removal and Disposal of Oils and Chemicals	\$7,000
Grading and Seeding Costs	\$294,000
Total Estimated Cost	\$1,100,000
Owner Indirect Cost (5%)	\$55,000
Contingency (10%)	\$110,000
Total Net Cost	\$1,265,000

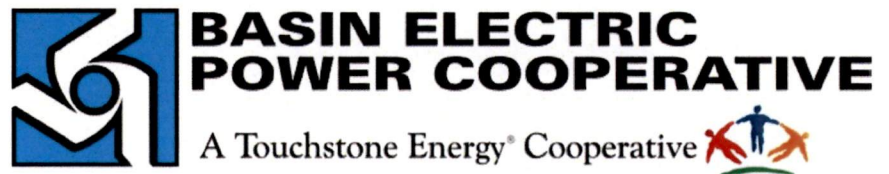
Decommissioning Grand Totals	Estimate in 2016 Dollars
PrairieWinds ND1 (77 turbines)	\$5,091,000
Minot Wind (5 turbines)	\$330,000
Balance of Plant	\$1,265,000
Grand Total	\$6,686,000

Adjustment for Inflation

Year	Annual Inflation	Adjusted Decommissioning Cost Estimate
2017	1.013	\$6,773,000 in 2017 dollars
2018	1.018	\$6,895,000 in 2018 dollars

Decommissioning Plan and Decommissioning Obligation Cost Evaluation

PrairieWinds Wind Project



Basin Electric Power Cooperative

Decommissioning Cost Evaluation
Project No. 96138

January 20, 2017

Decommissioning Plan and Decommissioning Obligation Cost Evaluation

PrairieWinds Wind Project

prepared for

**Basin Electric Power Cooperative
Decommissioning Cost Evaluation
Bismark, North Dakota**

Project No. 96138

January 20, 2017

prepared by

**Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri**



January 20, 2017

Mr. Bob Nasset
Senior Civil Engineer
Basin Electric Power Cooperative
1717 E Interstate Avenue
Bismark, ND 58503-0564

Re: Decommissioning Cost Evaluation for PrairieWinds Wind Project

Dear Mr. Nasset,

Burns & McDonnell is pleased to present its report to Basin Electric on the Decommissioning Cost Evaluation ("Study") for the PrairieWinds Wind Project located in Ward County, North Dakota.

The objective of the Study was to review the facility and to make a recommendation to Basin Electric regarding the total cost in 2016 dollars to decommission the facility at the end of its useful life.

Burns & McDonnell appreciates the opportunity to provide our professional consulting services to Basin Electric. Please feel free to contact me at any time to discuss questions that may arise during your review of the Study. You may reach me by phone at (816) 822- 4239 or via email at jkopp@burnsmcd.com. We look forward to working with you again on any future projects.

Respectfully Submitted,
BURNS & MCDONNELL

A handwritten signature in black ink that reads "Jeff T Kopp".

Jeff Kopp, PE
Project Manager

JTK/kps

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
Basin Electric	Basin Electric Power Cooperative
BMcD	Burns & McDonnell Engineering Company, Inc.
BMP	Best Management Practices
GE	General Electric
kV	kilovolts
Lease Agreement	Agreement for Land Lease, Access and Wind Easement
MW	Megawatts
Newman CUP	Newman Township Conditional Use Permit
O&M	Operations and Maintenance
Project	PrairieWinds Wind Project
ROW	Right-of-Way
Study	Decommissioning Cost Evaluation

1.0 EXECUTIVE SUMMARY

1.1 Introduction

Burns & McDonnell Engineering Company, Inc. (“BMcD”) was retained by Basin Electric Power Cooperative (“Basin Electric”) to conduct a decommissioning cost evaluation (“Study”) for the PrairieWinds Wind Project (“Project”) located in Ward County, North Dakota, approximately 8.5 miles northeast of Douglas, North Dakota and approximately 20.0 miles south of Minot, North Dakota. The Project includes 77-General Electric (“GE”) 1.5 megawatt (“MW”) wind turbine generators and has a total nominal rating of approximately 115.5 MW.

The purpose of the decommissioning cost evaluation was to review the wind Project and to make a recommendation regarding the decommissioning cost and plan for retiring the facility at the end of its useful life.

1.2 Results

BMcD estimates that the Project should have an expected useful life of 30 years or more. When it is determined that the Project should be retired, the above-grade steel structures and turbine nacelles are assumed to have significant scrap value to a salvage contractor. Removal of the turbine nacelles, towers, and associated equipment is assumed to have sufficient scrap value to offset the removal costs of these items. However, the Project will also incur costs for removal and disposal of the blades, foundations and other Project facilities as well as for the restoration of the site following the removal of salvageable equipment.

The decommissioning costs include the costs to return the site to a condition compatible with the surrounding land, similar to the conditions that existed before development of the Project. Included are the costs to retire the power generating equipment that is part of the Project as well as the costs to retire the Project’s balance of plant facilities. All equipment, structures, and supporting facilities will be removed to a depth of four (4) feet below grade, as per the requirement of the Agreement for Land Lease, Access and Wind Easement provided for review. At plant construction, underground cable for the power collection system is assumed to be buried at a depth below four (4) feet below grade and, therefore, will be abandoned in place at decommissioning.

Based on the results of this evaluation, the estimated decommissioning cost for the Project (including 10 percent contingency and 5 percent indirects) is estimated to be approximately \$1,733,000 (\$22,506 per turbine) for wind turbine decommissioning plus \$1,153,000 (\$14,974 per turbine) for balance of plant

decommissioning costs, resulting in total decommissioning costs of approximately \$2,886,000 (\$37,480 per turbine).

2.0 INTRODUCTION

Burns & McDonnell Engineering Company, Inc. (“BMcD”) was retained by Basin Electric Power Cooperative (“Basin Electric”) to conduct a decommissioning cost evaluation (“Study”) for the PrairieWinds Wind Project (“Project”) located in Ward County, North Dakota, approximately 8.5 miles northeast of Douglas, North Dakota and approximately 20.0 miles south of Minot, North Dakota. The Project includes 77-General Electric (“GE”) 1.5 megawatt (“MW”) wind turbine generators and has a total nominal rating of approximately 115.5 MW.

The purpose of the decommissioning cost evaluation was to review the wind Project and to make a recommendation regarding the decommissioning cost and plan for retiring the facility at the end of its useful life.

2.1 Wind Turbine Units

The Project consists of 77- GE 1.5SLE wind turbines resulting in a total nominal rating of approximately 115.5 MW. Each wind turbine includes an 80 meter (or 262 feet) conical tubular steel tower which supports the turbine nacelle mounted on top. The nacelle of each turbine includes three (3) blades mounted to the nacelle rotor with a total rotor diameter of approximately 77 meters (or 252 feet). The turbine tower and nacelle weigh approximately 138 metric tons (or 152 net tons) and 42 metric tons (46 net tons), respectively, with individual blade weights of approximately 6.3 metric tons (or 7.0 net tons) for this turbine model.

Each wind turbine tower is supported by a concrete foundation. Foundation design drawings specific to the Project indicated a 17-foot diameter circular concrete pedestal, approximately four (4) feet in depth, which is situated atop an octagonal spread footing with a total foundation depth of approximately 9.0 feet.

Each wind turbine has an access road and beauty ring surrounding each foundation to support construction and allow for vehicle access to facilitate inspections and maintenance of the turbines and associated equipment. These access roads are assumed to be crushed rock surfaced roads (e.g. gravel) with a reduced width of approximately 16 feet following the completion of construction period.

2.2 Substation and Interconnection

The Project site includes an underground 34.5 kilovolt (“kV”) electrical power collection system that collects the electrical power from the wind turbines and routes it to the Project substation. The Project substation increases the voltage from 34.5 kV to 115 kV. Project substation is connected to the point of

interconnection via a jumper line to the ring bus switchyard owned by the local transmission utility. The point of interconnection and the Project substation are separated by a shared fence.

The Project substation also includes a control building within the substation boundary.

2.3 Maintenance/Warehouse Facility

The Project includes an operation and maintenance (“O&M”) facility on the Project site which includes a warehouse side to the east and an office section to the west. This building has a complete dimension of 135 feet by 50 feet (or 6,750 square-feet)

The overall Project configuration is shown in Appendix A.

3.0 LOCAL DECOMMISSIONING REQUIREMENTS

3.1 Lease Agreement Review

BMcD performed a review of the Agreement for Land Lease, Access and Wind Easement (“Lease Agreement”) provided by Basin Electric to determine the extent of any lease-based decommissioning requirements. The following are key findings associated to the removal and decommissioning of material owned by the Project found within this agreement:

- Basin Electric will disassemble, dismantle and removal all personal property, fixtures and improvements placed or constructed for the Project.
- In accordance with generally accepted industry practices, Basin Electric shall reclaim and re-establish the property to a condition substantially similar to the condition prior to the Project within 18 months following the termination of lease agreement.
- Basin Electric shall pay landowner for any crop damage associated to the removal and decommissioning of the Project.
- Foundations are to be removed to a depth of four (4) feet below grade.
- Areas disturbed shall be reseeded or prepared for cultivation per landowner’s request.
- Any wind turbines not yet removed following the 18 month period shall be considered abandoned and may be disposed of by the landowner at their discretion and shall be reasonably reimbursed by Basin Electric less any salvage values.
- All hazardous material must be disposed of offsite if such material is considered harmful to the property of crops grown unless such disposal is in full compliance with all applicable laws.

BMcD notes that the removal of access roads and the method of repairing disturbed land is typically negotiable with the local landowner and vary depending on the Project and landowner discussions. For the purpose of this Study, BMcD assumes the cost to remove all access roads and to reseed all disturbed property using local vegetation.

3.2 State and Local Decommissioning Requirements

BMcD notes that most of the local requirements are at the discretion of the landowner. Requirements may differ at the time of decommissioning depending on discussions with landowner. However, to be conservative, BMcD used the following local requirements, per the Newman Township Conditional Use Permit (“Newman CUP”), as the base for the decommissioning estimate:

- Access roads should be built to be 25 feet wide for use during construction, however, upon completion of construction the roads may be reclaimed and narrowed to the extent allowing routine maintenance of the equipment.
- All underground utilities must be buried at a depth of four (4) feet or greater so as to not constitute a hazard to normal farming or general county maintenance.

4.0 DECOMMISSIONING

4.1 Decommissioning Plan

BMcD estimates the Project should have an expected useful life of approximately 30 years. When it is determined that the Project should be retired, the above-grade steel, aluminum and copper equipment is assumed to have significant scrap value to a salvage contractor. Removal of the turbine nacelles, towers, and associated equipment is assumed to have sufficient scrap value to offset cost for the removal of these items. The basis of this decommissioning cost evaluation is that the Project will incur costs for removal and disposal of the blades, foundations and other Project facilities and for the restoration of the site following the removal of equipment. All recyclable materials will be recycled to the extent possible. All other non-recyclable waste materials will be disposed of in accordance with state and federal law.

The wind turbine blades will be removed from the wind turbine nacelle rotors using a crane, cut into manageable sized sections, loaded onto a trailer, and hauled to a local landfill for disposal. The wind turbine blades are constructed from a composite material that is assumed to have no salvage value at the time of decommissioning. The turbine nacelles will be removed from the towers with a crane. The towers and nacelle will then be dismantled and cut onsite and hauled off to the scrap yard.

All concrete wind turbine foundations will be removed to a depth of four (4) feet below grade. The concrete will be demolished, loaded into a dump truck and hauled to a local landfill for disposal. The portions of the concrete foundation that are greater than four (4) feet below grade will be abandoned in place. The 17-foot diameter circular concrete pedestal, situated on top of the octagonal spread footing, will be completely removed. The remainder of the spread footings associated with the wind turbines remain in place. Voids left from the removal of the concrete footings will be backfilled with surrounding subsoil and topsoil and fine graded to ensure suitable drainage.

The Project step-up transformer, substation equipment and O&M building, are assumed to be removed as part of this cost estimate. This includes the dead-end structure, high-voltage side of the Project substation, crushed rock surface and fencing, however, the utility side of the substation shall remain in place following the Project's decommission.

To the extent required, crushed rock surfacing will be removed. Areas where crushed rock surfacing has been removed will be fine graded to ensure suitable drainage. In right-of-way ("ROW") and non-agricultural areas, the ground will be seeded to prevent erosion. The removed crushed rock will be loaded into dump trucks and hauled offsite. The cost to remove the crushed rock and load it into dump trucks will be at the expense of the Project at which point the ownership of the crushed rock will be transferred

4.2 Decommissioning Costs

The decommissioning cost estimate includes the cost to return the site to a condition compatible with the surrounding land, similar to the conditions that existed before development of the Project. Included are the costs to retire the Project's wind turbines as well as the cost to retire the Project's balance of plant facilities. Table 4-1 and Table 4-2 present the decommissioning costs for the wind turbines and balance of plant, respectively, for the Project.

Table 4-1: Summary of Estimated Cost for Wind Turbine Decommissioning (2016\$)

Estimated Cost	\$ 4,427,000	
Owner Indirects (5%)	\$ 221,000	
Contingency (10%)	\$ 443,000	
Scrap Value	\$ (3,358,000)	
Total Cost	\$ 1,733,000	(\$22,506 per turbine)

Table 4-2: Summary of Estimated Cost for Balance of Plant Decommissioning (2016\$)

Estimated Cost	\$ 1,100,000	
Owner Indirects (5%)	\$ 55,000	
Contingency (10%)	\$ 110,000	
Scrap Value	\$ (112,000)	
Total Cost	\$ 1,153,000	(\$14,974 per turbine)

In summary, the allocated cost to Basin Electric for decommissioning the Project is \$2,886,000 (\$37,480 per turbine).

Breakdowns of the above costs are included in Appendix B.

4.3 Decommissioning Assumptions

The following assumptions were made as the basis for the cost estimates:

1. All costs are in 2016 dollars using the nearest site cost index from the Project.
2. The decommissioning estimate is based on the requirements specified in the lease agreement and permitting requirements provided by Basin Electric.
3. An offsite landfill is assumed to be used for disposal of demolition waste. Based on discussions with a local landfill (City of Minot Landfill in Minot, North Dakota), the cost for disposal of debris and concrete is \$20.00. The hauling distance to this local landfill is approximately 23.1 miles (or 46.2 miles roundtrip) from Project.
4. Where applicable, scrap values are based on the American Metal Market prices for December 2016. These values include the cost to haul the scrap via truck and/or rail to the best major market which provides the best price. Based on hauling and rail prices, the best market at the time of this study is Chicago. Prices used include:
 - Steel scrap value is \$184 per gross ton (or \$164 per net ton).
 - Copper scrap value is \$1.94 per pound.
 - Aluminum scrap value is \$0.41 per pound.
5. Fluids located within the turbine nacelle including oils, fuels, solvents and process chemicals are assumed to be drained and disposed of offsite as part of the decommissioning.
6. It is assumed that all containers and chemical storage tanks owned by the Facilities will be drained and the material disposed of prior to demolition. These costs are excluded from the estimate.
7. All underground equipment including structures and foundations will be removed to a depth of four (4) feet as specified in both the Lease Agreement.
8. All non-hazardous structures or foundations greater than four (4) feet below grade will remain and are excluded from the decommissioning estimate.
9. Collector and communication cables are assumed to be located at least four (4) feet below grade and will be left in place.
10. Access roads, onsite roads, parking areas, storage yards, crane pads and all other areas constructed from asphalt, concrete, gravel or compactable fill will be removed, recycled and reclaimed.
11. Crushed rock from roads, BOP areas, and turbine foundation areas is assumed to have value as a commodity for reuse. The cost to remove the crushed rock and load it into dump trucks will be at the expense of the Project at which point the ownership of the crushed rock will be transferred to the demolition contractor. Crushed rock is assumed to have a salvage value as a commodity equal to or

- greater than the cost to haul to an end user. The cost of hauling and disposal is excluded and are assumed to be the responsibility of the demolition contractor.
12. Waste material and crushed concrete will be properly disposed of offsite.
 13. No discussions with landowner have occurred regarding the condition of the land after decommissioning. Therefore it is assumed that all project specific access roads, fences, gates and building will be removed as part of the decommissioning. Additionally, disturbed areas will be restored to original grade, reclaimed with native soils, seeded and replanted with native vegetation consistent with surrounding land use.
 14. Transformers will be removed and processed onsite. The cost to drain and dispose of the Project transformer oil offsite is included in the decommissioning cost estimate.
 15. The padmounts are assumed to be oil-cooled. The disposal of oil within all 77 active padmounts is included in the decommissioning cost estimate. Additionally, the Project is assumed to have two (2) spare padmount transformers which are assumed to be stored without oil and are excluded from the drainage estimate.
 16. The Project substation is assumed to have five (5) active grounding transformers and one (1) spare. The removal and salvage of these transformers are included in the decommissioning cost estimate, however, all spare transformers are assumed to have no oil and no disposal costs are associated with these transformers.
 17. The removal of the Project substation and substation equipment is included in the decommissioning cost estimate.
 18. The Project substation fence will be removed except for the length of fence shared by the neighboring point of interconnection ring bus switchyard.
 19. The Project is assumed to have no permanent meteorological towers.
 20. The Project has one (1) O&M building which includes a warehouse side and an office area with a total dimension of 135 feet by 50 feet (6,750 square-feet). O&M building include one (1) entrance assumed to be of concrete and a gravel parking area included in the decommissioning cost estimate.
 21. The laydown yard is assumed to consist of a seeded area. No cost has been included for the grading and seeding of the laydown yard.
 22. Cost estimates include five (5) percent indirects and ten (10) percent contingency.
 23. Market conditions may result in cost variations at the time of contract execution.

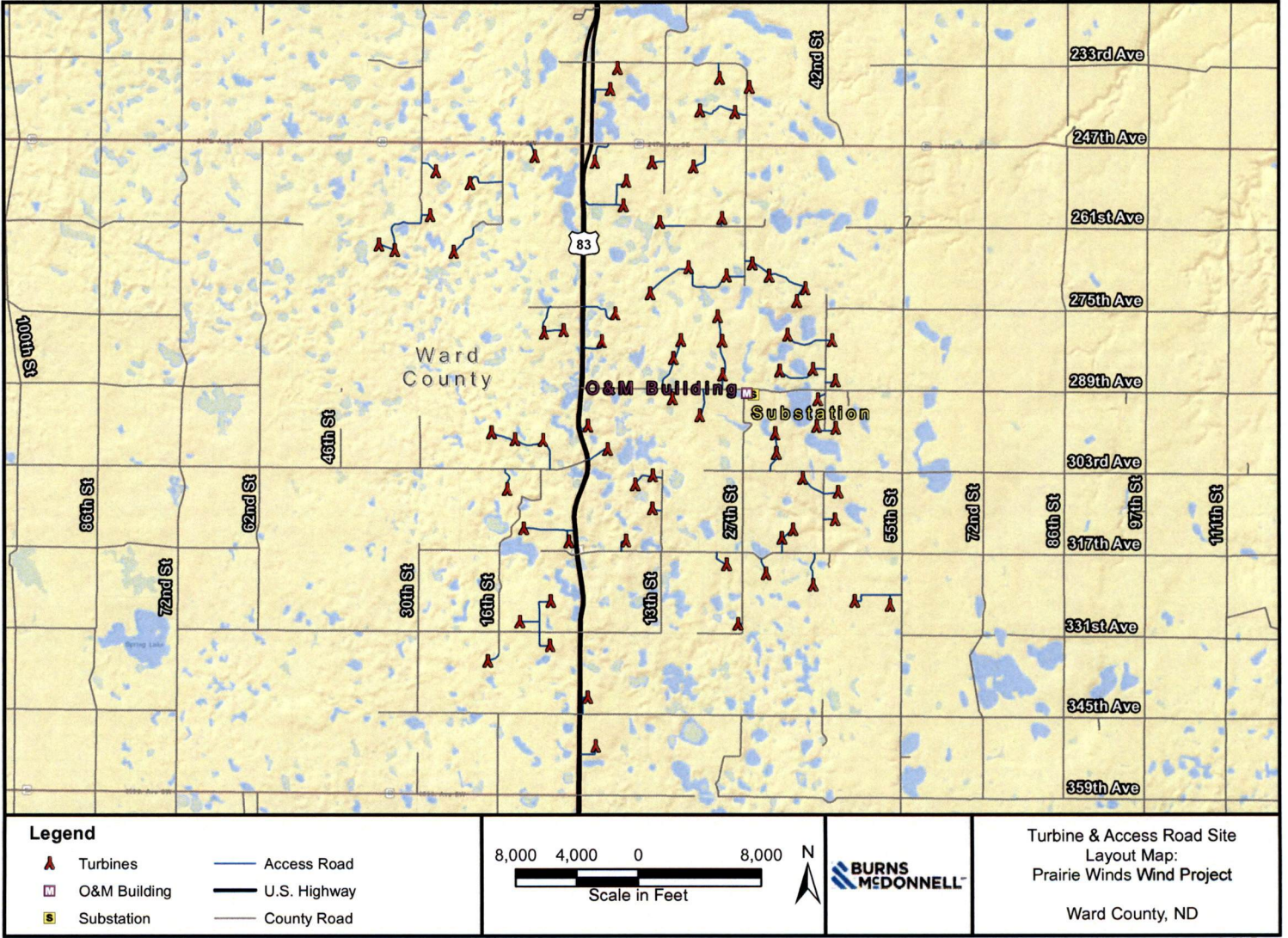
5.0 STATEMENT OF LIMITATIONS

In preparation of this decommissioning obligation cost evaluation, BMcD has relied upon information provided by the Basin Electric. While BMcD has no reason to believe that the information provided to BMcD, and upon which BMcD has relied, is inaccurate or incomplete in any material respect, BMcD has not independently verified such information and cannot guarantee its accuracy or completeness.

Engineer's estimates and projections of demolition costs are based on Engineer's experience, qualifications and judgment. Since Engineer has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction contractors' procedures and methods, and other factors, Engineer does not guarantee the accuracy of its estimates and projections.

The cost estimates were prepared based on current knowledge of site conditions, current regulations, and current hazardous material classifications. Engineer has no evidence or reason to believe that the cost estimate will be inaccurate in 30 years; however, Engineer's estimates do not include allowances for unforeseen environmental liabilities associated with unexpected environmental contamination due to events not considered part of normal operations, such as fuel tank ruptures, oil spills, etc. Estimates also do not include allowances for environmental remediation associated with changes in classification of hazardous materials.

APPENDIX A - SITE LAYOUT AND CONFIGURATION



APPENDIX B - DECOMMISSIONING COST BREAKDOWN

Table B-1: Estimated Cost for Wind Turbine Decommissioning (2016\$)

PrairieWinds Wind Project

Decommissioning Cost Evaluation

Project Number 96138

Cost Estimate Breakdown (77 General Electric 1.5SLE Turbines)

Wind Turbine Nacelle, Tower, & Electrical Removal Cost

Nacelle, Tower, & Electrical Removal	\$ 2,667,000	
Total	\$ 2,667,000	
Total Nacelle & Tower Scrap Value	\$ (3,358,000)	[1]

Wind Turbine Blade & Foundation Removal Cost

Blade & Foundation Removal	\$ 1,502,000
Hauling	\$ 59,000
Disposal	\$ 147,000
Total	\$ 1,708,000

Environmental Cost

Hazardous Material Removal & Disposal	\$ 52,000	[2]
Total	\$ 52,000	

Total Estimated Cost	\$ 4,427,000	
Owner Indirects (5%)	\$ 221,000	
Contingency (10%)	\$ 443,000	
Gross Cost with Contingency	\$ 5,091,000	
Total Turbine Scrap Value	\$ (3,358,000)	[1]
Total Net Cost	\$ 1,733,000	

[1] Scrap values are based on steel value of \$164 per ton, copper value of \$1.94 per pound, and aluminum value of \$0.41 per pound.

[2] Quantity of uptower fluids is based on quantities from similar type turbines.

Table B-2: Estimated Cost for Balance of Plant Decommissioning (2016\$)

PrairieWinds Wind Project

Decommissioning Cost Evaluation

Project Number 96138

Cost Estimate Breakdown (77 General Electric 1.5SLE Turbines)

Mobilization & Demobilization

Mobilization/Demobilization	\$50,000
Total	\$ 50,000

Substation Removal Cost

Above Ground Equipment Removal	\$ 161,000
Demolition (Foundations, Fencing, Crushed Rock Removal)	\$ 95,000
Demolition Hauling	\$ 10,000
Disposal	\$ 24,000
Total	\$ 290,000

Transformer Copper Scrap Value \$ (106,000) [1]

O&M Facility Building Removal Cost

Building & Foundation Demolition	\$ 54,000
Fencing and Crushed Rock Surface Removal	\$ 4,000
Hauling	\$ 4,000
Disposal	\$ 9,000
Total	\$ 71,000

Building Scrap Value \$ (6,000)

Crushed Rock Road Surface Removal Cost

Surfacing Removal	\$ 388,000	
Hauling	\$ -	[2]
Disposal	\$ -	[2]
Total	\$ 388,000	

Crushed Rock Scrap Value \$ -

Environmental Cost

Hazardous Material Removal & Disposal	\$ 7,000
Total	\$ 7,000

Grading & Seeding Costs

\$ 294,000 [3]

Total Estimated Cost	\$ 1,100,000
Owner Indirects (5%)	\$ 55,000
Contingency (10%)	\$ 110,000
Gross Cost with Contingency	\$ 1,265,000
Total BOP Scrap Value	\$ (112,000) [1]
Total Net Cost	\$ 1,153,000

[1] Scrap values are based on steel value of \$164 per ton, copper value of \$1.94 per pound, and aluminum value of \$0.41 per pound.

[2] At the end of its useful Life, crushed rock from access roads are assumed to be removed and the ownership of material to be transferred to the contractor resulting in zero hauling or disposal costs to the Project.

[3] All crushed rock areas are to be removed and seeded upon decommissioning.



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