

215 South Cascade Street
PO Box 496
Fergus Falls, Minnesota 56538-0496
218 739-8200
www.otpc.com (web site)



November 5, 2019

Mr. Steve Kahl
Director of Administration/Executive Secretary
North Dakota Public Service Commission
State Capitol
600 East Boulevard, Dept. 408
Bismarck, ND 58505-0408

**RE: Luverne Wind Farm, Steele County, North Dakota
Case Nos. PU-18-343 & PU-08-766
Wind Decommissioning Plan**

Dear Mr. Kahl:

This report has been electronically filed. Enclosed in the above-referenced matter are an original and seven (7) copies of an updated Decommissioning Plan for Otter Tail Power Company's Luverne Wind Farm (a/k/a Ashtabula II). This filing includes a decommissioning plan, cost estimate and financial assurance. The initial Decommissioning Plan for the Luverne Wind Farm was filed on September 4, 2009 in Case No. PU-08-766.

Please contact me at (218) 739-8956, or cstephenson@otpc.com should you have any questions with respect to this filing.

Very truly yours,

/s/ CARY STEPHENSON
Cary Stephenson
Associate General Counsel

rah
Enclosure
By electronic filing

4 PU-18-343 Filed 11/05/2019 Pages: 13
Updated Decommissioning Plan, Cost Estimate, and Financial Assurance
Otter Tail Power Company
Cary Stephenson, Assoc. General Counsel

An Equal Opportunity Employer

20 PU-08-766 Filed 11/05/2019 Pages: 13
Updated Decommissioning Plan, Cost Estimate, and Financial Assurance
Otter Tail Power Company
Cary Stephenson, Assoc. General Counsel

AN  OTTER TAIL COMPANY

**STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION**

Otter Tail Power Company)
Decommissioning Plan for)
Luverne (Ashtabula II) Wind Farm)

Case. No. PU-18-343

Decommissioning Plan

In accordance with N.D. Administration Code Chapter 69-09-09, Otter Tail Power Company (Otter Tail) presents an updated Decommissioning Plan for the 49.5 MWh Luverne Wind Farm (a/k/a Ashtabula II), owned by Otter Tail in Griggs and Steele Counties, North Dakota.

Otter Tail’s Luverne Wind Farm consists of 33 General Electric 1.5 MW wind turbines. The facility was commissioned and began commercial operations in September 2009. A Decommissioning Plan was presented at that time in Docket PU-08-766.

This updated Decommissioning Plan is provided in accord with revised decommissioning rules approved in Docket PU-17-023 and the Commission’s Notice in Docket PU 17-251 requesting owners of wind conversion facilities to provide updated decommissioning plans.

This updated Decommissioning Plan is premised on proper protocol and implementation of the ARO (asset retirement obligation) and in accordance to generally accepted accounting principles.

Anticipated Life of the Facility - N.D. Admin. Code 69-09-09-01 (6)(a)

The Luverne Wind Farm 1.5 MW turbines have an anticipated useful life of at least 40 years (of which approximately 30 years remain). Anticipated technological updates allow the possibility for the wind site to continue to operate in an efficient manner beyond this time. In accordance with N.D. Admin. Code 69-09-09-04, decommissioning Otter Tail’s Luverne Wind Facility shall begin within twelve months after the end of the useful life of the facility. Decommissioning shall be completed within twenty-four months after the end of the facility’s useful life.

N.D. Administration Code 69-09-09-01 (6b.)—Decommissioning Cost Estimate.

The total estimated cost of decommissioning and restoration at the end of useful life for the facility is \$7,326,000.00 or \$222,000.00 per turbine. These are gross figures exclusive of salvage value. When salvage value is considered, the total estimated net cost of decommissioning the facility is \$4,125,000.00 or \$125,000.00 per turbine. In accordance to N.D. Admin. Code 69-09-09-06 the decommissioning plan was made by a licensed North Dakota professional engineer. Additional details are provided in the attached **Exhibit A**.

Decommissioning Cost Estimate Method -N.D. Administration Code 69-09-09-01 (6)(c)

The methodology used to prepare the cost estimate is discussed in the attached **Exhibit A**.

Decommissioning Anticipated Activity - N.D. Administration Code 69-09-09-01 (6)(d)

Otter Tail will decommission the Luverne Wind Farm in accordance with N.D Admin. Code 69-09-09-05. Decommissioning shall include disassembly of turbines and removal of components, access roads, and the associated collection system. All costs associated with these decommissioning activities have been evaluated individually, as follows:

1. Turbine Components. Wind turbines are GE 1.5 MW mounted on steel tower sections. Estimation for the disassembly includes the steel tower sections, the wind turbine nacelle and components, and the hub and turbine blades. The turbine pad mount transformer and all associated wiring with the turbine is included as well. The estimation is based on the requirement that all materials be removed from site.
2. Foundations. Tower and transformer foundations, along with all connections to the turbine from the foundations, will be removed to a depth of three feet below grade. All site restoration will be reclaimed to the approximate topography that existed prior to construction.
3. Access Roads. Access roads will be removed and returned to pre-existing condition according to Natural Resource Conservation Service (NRCS) recommendations. The exception being a Commission-approved landowner request that the road features remain in place.

Collection System. The underground collection system will be removed to a depth of twenty-four inches near the transformers. The remaining underground collection system shall be left in place at a minimum of forty-eight inches below grade to the top of the cables. Any disturbed areas requiring restoration will be reclaimed to the approximate topography that existed prior to construction according to NRCS recommendations. Best recommended practices will be followed for any unspecified restoration

Effects of Present and Future Natural Resource Development -- N.D. Administration Code 69-09-09-01 (6)(e).

Otter Tail is committed to providing our customers with reliable renewable energy from wind resources at its Luverne facility. At the end of the facility's useful life Otter Tail will return the site to its pre-existing condition in accordance with the N.D. Admin. Code Chapter 69-09-09 and this decommissioning plan. Otter Tail does not anticipate that Luverne Wind Facility will materially impact present or future natural resource development with respect to both existing operations or decommissioning.

Detailed Financial Assurance or Self-Guarantee -- N.D. Admin. Code 69-09-09-01 (6)(f)

Otter Tail directly owns the Luverne Wind Farm as described in this filing. Attached as **Exhibit B** is Otter Tail's financial assurance for the decommissioning of the Luverne Wind Farm.

Harvey McMahon
Manager, Renewable Energy Construction
and Operations Wind Generation
Development Otter Tail Power Company

Signed: /s/ HARVEY MCMAHON

Date: November 5, 2019



August 13, 2019 (revised)

North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

Regarding: *Decommissioning Estimate*
Ashtabula Wind II / Otter Tail Power Co.

North Dakota Public Service Commission,

Per the request of Otter Tail Power Co., the team of DEMCO Inc. and AE2S is pleased to submit the following *Decommissioning Cost Estimate* for the existing *ASHTABULA WIND II Facility* located in Griggs & Steele County, North Dakota. The estimate is based on information gathered from DEMCO's historical data from the past 28 years of experience in the demolition and decommissioning industry, and AE2S's experience in engineering and environmental services throughout North Dakota over the last 25 years. Our team believes that the estimate is a conservative budgetary cost to complete this work.

Background: DEMCO Inc.

DEMCO, Inc. is a twenty eight year old, privately held, nationally recognized decontamination & decommissioning firm that specializes in environmental remediation, deconstruction and salvage for the US Government and commercial sector. DEMCO's management team is comprised of individuals with a total of over 200 years' worth of experience in environmental remediation and deconstruction services. To date, the total dollar volume of projects that DEMCO has safely and successfully performed is in excess of \$850 million. DEMCO has successfully performed over 600 remediation and deconstruction projects, including numerous fossil power plants, nuclear power plants, wind farms, and other industrial facilities.

Background: AE2S

AE2S offers a total solution by providing master planning, capital improvement planning, study and report, design, bidding administration, surveying, mapping, general civil engineering, structural engineering, electrical engineering, and site development. With over 25 years of experience in the North Dakota area, AE2S is familiar with the environment, work force, and rules/regulations involved with working in the state. With eighteen locations located within the Midwest, AE2S has a vast pool of resources and equipment that are relative to the area.

The Team:

DEMCO and AE2S partnered to help prepare a decommissioning cost estimate for the Langdon Wind Facility. DEMCO has experience in decommissioning wind farms throughout the country, while AE2S has experience regarding North Dakota's specific conditions, regulatory requirements, work force, hazards,



etc. With DEMCO's national decommissioning experience, and AE2S's experience in engineering and environmental services specifically in the state of North Dakota, our team is confident that our estimates are reasonable and all encompassing.

The Process:

DEMCO and AE2S worked hand in hand to prepare the attached estimate. During an initial planning phase, personnel from both parties conversed, shared notes, and had discussions about past experience, historical data, and other similar projects. Responsibilities were then assigned, and each company set out to obtain additional data and resources to assist in preparing the final document. Next, a draft version of the estimate was distributed and each team member reviewed and made notes. The final decommissioning estimate was created through a collaborative process which included discussion and agreement from all parties.

Methodology:

The cost estimate was developed on a per turbine basis. DEMCO has historical data for the man power, equipment, schedule, and respective costs for each phase of wind turbine decommissioning. Each phase of decommissioning was discussed during the estimate development process. AE2S provided input on how the timing, equipment, and man power could be specifically impacted by performing this work in the state of North Dakota.

Recent discussion has focused on topsoil restoration practices. It is feasible that the landowners may elect to leave the access roadways in place in lieu of removal during decommissioning. The decommissioning plan and costs assume that access roadways will be completely removed and the site restored to its native predevelopment surface profile condition.

The cost estimates assume that the aggregate surface road material will be stripped, and removed from the site to an appropriate disposal location. In practice, the land owner will almost always request that the aggregate surface material be stockpiled on the site for the land owner's future use. The avoided cost of hauling the material is inherent in the cost estimates.

Typical practice to construct the access roads and aggregate surface pads is to fold the existing topsoil to the side and then to blend it into the existing grade. In theory, there is sufficient, recoverable quantities of topsoil on the site to completely restore the roads and foundation pad. An allowance for imported topsoil would thus be needed. However, the salvage value of the aggregate materials more than compensates for this seemingly necessary expense and additional costs for topsoil materials are thus offset and are not included.

DEMCO's data originated from the decommissioning of turbines at wind farm sites with similar scopes of work. During the development of the cost estimate, DEMCO and AE2S compared labor, equipment, and material costs and made adjustments to reflect the regional rates in the North Dakota area. Additionally DEMCO/AE2S are familiar with existing site conditions and how the varying terrain would affect the cost.

Please see the attached *Exhibit A*, providing a detailed cost breakdown of the work required which is presented in current 2017 dollars. This breakdown shows the costs for each phase of work required to



safely decommission the turbines. The decommissioning cost estimate is reasonable and it is our conclusion that the costs include the scope of work and project management needed to properly decommission the ASHTABULA WIND II Facility.

Sincerely,
DEMCO Inc

AE2S, Inc.

A handwritten signature in blue ink, appearing to read "Patrick Callahan".

Patrick Callahan
President



Jay Kleven, PE (ND PE-4685)
Senior Project Manager



EXHIBIT A



Ashtabula Wind II / Otter Tail Power Co. Decommissioning Cost Estimate - Ashtabula Wind II / Otter Tail Power Co. Griggs & Steele Counties, ND

UPDATED 190813

Ashtabula Wind II - Griggs & Steele Counties, ND

FACILITY INFORMATION:

Facility Location:	Griggs and Steele
Facility Size:	Counties, ND 49.5 MW
Technology:	GE 1.5 XLE
Number of Turbines:	33

TURBINE COST BREAKDOWN

For (1) GE 1.5 XLE Wind Turbine & Associated Equipment

Removal Activity	Percentage of Cost (%)	Cost
Removal of Oil/Grease	4%	\$5,000.00
Nacelle & Hub Removals	35%	\$43,750.00
Tower Removal	15%	\$18,750.00
Down Tower Equipment Removal	3%	\$3,750.00
Removal of Underground Cables (24")	6%	\$7,500.00
Foundation Removals (to base of pier, ~ 4' Below Grade)	25%	\$31,250.00
Removal of Contaminated Soil	1%	\$1,250.00
Backfill, Topsoil, Seed	10%	\$12,500.00
Removal of Communication Tower	1%	\$1,250.00
Net Cost Per 1 Turbine (2018) ^{Note 1}		\$125,000.00
Scrap value credit ^{Note 2}		\$26,000.00
Prep/ transportation / disposal of materials ^{Note 3}	\$97,000.00	
Differential Cost disposal in lieu of scrap ^{Note 4}		\$71,000.00
Gross cost per turbine, disposal		\$222,000.00

TOTAL DECOMMISSIONING GROSS COST - COMPLETE FACILITY

Gross Cost Per Turbine	Number of Turbines	Total Gross Cost
\$222,000.00	33	\$7,326,000.00

TOTAL DECOMMISSIONING NET COST - COMPLETE FACILITY

Net Cost Per Turbine ^{Note 1}	Number of Turbines	Total Net Cost
\$125,000.00	33	\$4,125,000.00

Notes:

Note 1 - Past experience, net cost inclusive of scrap sales

Note 2 - The value of the scrap would be between \$18,000 and \$35,000 based on fluctuating market conditions, used \$26,000 as a median. This scrap value was not deducted from the \$125K number.

Note 3 - This is the value of transportation and disposal including onsite additional segmentation/processing, loading, permitting, trucking and landfill tipping fees. Material going to a landfill requires significantly more sizing and configuration control than that going to a scrap yard. The scrap is now a waste liability and not a credit.

Note 4 - This is the differential cost of disposal and preparation, relative to scrap

OTTER TAIL POWER COMPANY
SELF-GUARANTY
(Luverne Wind Farm)

THIS SELF-GUARANTY (this "**Guaranty**"), dated as of October 25, 2019 (the "**Effective Date**"), is made by OTTER TAIL POWER COMPANY, a Minnesota corporation ("**Guarantor**"), in favor of the NORTH DAKOTA PUBLIC SERVICE COMMISSION ("**Commission**").

RECITALS

WHEREAS, Guarantor is the owner of 33 General Electric 1.5 MW wind turbines and associated equipment at its Luverne Wind Farm (a/k/a Ashtabula II), as more fully described in Case No. PU-08-766 and Case No. PU-18-343.

WHEREAS, obligor is required to provide the financial assurance to the Commission supporting the decommissioning of the Luverne Wind Farm pursuant to Section 69-09-09-08 of the North Dakota Administrative Code (the "**Rule**"); and

WHEREAS, Guarantor wishes to issue the Guaranty to Commission in compliance with the Rule.

NOW THEREFORE, in consideration of the foregoing premises, and for other good and valuable consideration, the receipts and sufficiency of which is hereby acknowledged, Guarantor hereby agrees for the benefit of Commission as follows:

1. **GUARANTY.** Subject to the terms and conditions hereof, Guarantor hereby absolutely and irrevocably guarantees the timely payment when due of all obligations owing to Commission under the Rule on or after the Effective Date (the "**Obligations**"). This Guaranty shall constitute a guarantee of payment and not of collection. The liability of Guarantor under the Guaranty shall be subject to the following limitations:

- (a) Notwithstanding anything herein to the contrary, the maximum aggregate obligation and liability of Guarantor under the Guaranty, and the maximum recovery from Guarantor under this Guaranty, shall in no event exceed Seven Million Three Hundred Twenty Six Thousand Dollars (U.S. \$7,326,000) (the "**Maximum Recovery Amount**").
- (b) The obligation and liability of Guarantor under this Guaranty is specifically limited to payments due and owing, as well as costs of collection and enforcement of this Guaranty (including attorney's fees) to the extent reasonably and actually incurred by the Commission (subject in all instances, to the limitations imposed by the Maximum Recovery Amount as specified in *Section 1(a)* above). In no event, however, shall Guarantor be liable for or obligated to pay any consequential, indirect, incidental, lost profit, special, exemplary, punitive, equitable or tort damages.

2. **DEMANDS AND PAYMENT.**

- (a) If obligor fails to pay any Obligation to Commission when such Obligation is due and owing (an "**Overdue Obligation**"), Commission may present a written demand to Guarantor calling for Guarantor's payment of such Overdue Obligation pursuant to the Guaranty (a "**Payment Demand**").
- (b) Guarantor's obligation to pay any particular Overdue Obligation(s) to Commission is conditioned upon Guarantor's receipt of a Payment Demand from Commission satisfying the following requirements: (i) such Payment Demand must identify the specific Overdue Obligation(s) covered by such demand and the specific date(s) upon which such Overdue Obligation(s) became due and owing; (ii) such Payment Demand must be delivered to Guarantor in accordance with Section 9 below; and (iii) the specific Overdue Obligation(s) addressed by such Payment Demand must remain due and unpaid at the time of such delivery to Guarantor.
- (c) After issuing a Payment Demand in accordance with the requirement specified in Section 2(b) above, Commission shall not be required to issue any further notices or make any further demands with respect to the Overdue Obligation(s) specified in that Payment Demand, and Guarantor shall be required to make payment with respect to the Overdue Obligation(s) specified in that Payment Demand within five (5) Business Days after Guarantor receives such demand. As used herein, the term "**Business Days**" shall mean all weekdays (i.e. Monday through Friday) other than any weekdays during which commercial banks or financial institutions are authorized to be closed to the public in the State of North Dakota.

3. **REPRESENTATIONS AND WARRANTIES.** Guarantor represents and warrants that:

- (a) it is a corporation duly organized and validly existing under the laws of the State of Minnesota and has the corporate power and authority to execute, deliver and carry out the terms and provisions of the Guaranty;
- (b) no authorization, approval, consent or order of, or registration of filing with, any court or other governmental body having jurisdiction over Guarantor is required on the part of Guarantor for the execution and delivery of the Guaranty; and
- (c) this Guaranty constitutes a valid and legally binding agreement of Guarantor, enforceable against Guarantor in accordance with the terms hereof, except as the enforceability thereof may be limited by the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditor's rights generally and by general principles of equity.

4. **RESERVATION OF CERTAIN DEFENSES.** Without limiting Guarantor's own defenses and rights hereunder, Guarantor reserves to itself all rights, setoffs, counterclaims and other defenses to which it is or may be entitled.

5. **AMENDMENTS.** No term or provision of this Guaranty shall be amended, modified, altered, waived or supplemented except in a writing signed by Guarantor and Commission.

6. **WAIVERS AND CONSENTS.** Subject to and in accordance with the terms and provisions of Guaranty:

- (a) Except as required in Section 2 above, Guarantor hereby waives (i) notice of appearance of this Guaranty; (ii) presentment and demand concerning the liabilities of Guarantor; and (iii) any right to require that any action or proceeding be brought against any other person, or to require that Commission seek enforcement of any performance against any other person, prior to any action against Guarantor under the terms hereof.
- (b) No delay by Commission in the exercise of (or failure by Commission to exercise) any rights hereunder shall operate as a waiver of such rights, a waiver of any other rights or a release of Guarantor from its obligations hereunder (with the understanding, however, that the foregoing shall not be deemed to constitute a waiver by Guarantor of any rights or defenses which Guarantor may at any time have pursuant to or in connection with any applicable statutes of limitation).
- (c) Without notice to or the consent of Guarantor, and without impairing or releasing Guarantor's obligations under this Guaranty, Commission may; (i) change the manner, place or terms for payment of all or any of the Obligations (including renewals, extensions, or other alterations of the Obligations); (ii) release any person (other than Guarantor) from liability for payment of all or any of the Obligations; or (iii) receive, substitute, surrender, exchange or release any collateral or other security for any or all of the Obligations.

7. **TERMINATION.** Unless terminated earlier, this Guaranty and the Guarantor's obligations hereunder will terminate automatically and immediately at 11:59:59 p.m. Central Time September 1, 2049; provided, however, that no such termination shall affect Guarantor's liability with respect to any Obligation incurred prior to the time the termination is effective, which Obligation shall remain subject to the Guaranty.

8. **FINANCIAL CONDITION.** Guarantor will promptly provide the Commission a copy of any notice it is required to provide to Guarantor's lenders under its credit facility agreement as then in effect related to a default or event of default as defined in such agreement.

9. **NOTICE.** Any Payment Demand, notice, request, instruction, correspondence or other document to be given hereunder (herein collectively called ("Notice")) by Commission to Guarantor, or by Guarantor to Commission, as applicable, shall be in writing and may be delivered either by (i) U.S. Certified mail with postage prepaid and return receipt requested, or (ii) recognized nationwide courier service with delivery receipt requested, in either case to be delivered to the following address (or to such other U.S. address as may be specified via Notice provided by Guarantor or Commission, as applicable, to the other in accordance with the requirements of this Section 9):

<p>TO GUARANTOR: Otter Tail Power Company 215 South Cascade Street Fergus Falls, MN 56538-0496 Attn: Treasurer</p>	<p>TO COMMISSION: North Dakota Public Service Commission 600 East Boulevard Avenue Bismarck, North Dakota 58505 Attn: Dept. 0408</p>
--	--

Any Notice given accordance with this Section 9 will (i) if delivered during the recipient's normal business hours on any given Business Day, be deemed received by the designated recipient on such date, and (ii) if not delivered during the recipients' normal business hours on any given Business Day, be deemed received by the designated recipient at the start of the recipient's normal business hours on the next Business Day after such delivery.

10. **MISCELLANEOUS.**

- (a) This Guaranty shall in all respects be governed by, and construed in accordance with, the law of the State of North Dakota, without regard to principles of conflicts of laws thereunder.
- (b) This Guaranty shall be binding upon Guarantor and its successors and permitted assigns and inure to the benefit of and be enforceable by Commission and its successors and permitted assigns. Guarantor may not assign this Guaranty in part or in whole without the prior written consent of Commission. Commission may not assign its rights or benefits under the Guaranty in part or in whole without the prior written consent of Guarantor.
- (c) This Guaranty embodies the entire agreement and understanding between Guarantor and Commission and supersedes all prior agreements and understandings relating to the subject matter hereof.
- (d) The headings in the Guaranty are for purposes of reference only, and shall not affect the meaning hereof. Words importing and singular number hereunder shall include the plural number and vice versa, and any pronouns used herein shall be deemed to cover all genders. The term "person" as used herein means any individual, corporation, partnership, joint venture, limited liability company, association, joint-stock company, trust, unincorporated association, or government (or any agency or political subdivision thereof).
- (e) Wherever possible, any provision in this Guaranty which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective only to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any one jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.
- (f) Commission (by its acceptance of this Guaranty) and Guarantor each hereby irrevocably:
 - (i) consents and submits to the exclusive jurisdiction of the North Dakota District Court, Burleigh County for the purpose of any suit, action or other proceeding arising out of this Guaranty or the subject matter hereof or any of the transaction contemplated hereby brought by Commission, Guarantor or their respective successors or assigns; and
 - (ii)

waives (to the fullest extent permitted by applicable law) and agrees not to assert any claim that it is not personally subject to the jurisdiction of the above-named court, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Guaranty or the subject matter hereof may not be enforced in or by such court.

IN WITNESS WHEREOF, the Guarantor has executed this Guaranty on ~~October~~ ^{November} 1, 2019, but it is effective as of the Effective Date.

OTTER TAIL POWER COMPANY

By: 

Name: Timothy J. Rogelstad

Its: President