Exhibit 8

Fenton Wind Project

PERMIT COMPLIANCE FILING

Date:	**August 5, 2020**
Permittee:	**Fenton Power Partners I, LLC**
Permit:	**Amended LWECS Site Permit**
Project Location:	**Murray and Nobles Counties, Minnesota**
Docket No.:	**IP-6499/WS-05-1707**
Permit Section:	**Section 11.1**
Description:	**Decommissioning Plan**

Fenton Power Partners I, LLC ("Fenton") respectfully submits this compliance filing in accordance with Section 11.1 of the large wind energy conversion system ("LWECS") Site Permit issued on March 8, 2019 (the "2019 Amended Site Permit") by the Minnesota Public Utilities Commission ("Commission"):

> **11.1 Decommissioning Plan**
>
> The Permittee shall submit a decommissioning plan to the Commission within 90 days of the site permit issuance and provide updates to the plan every five years thereafter. The plan shall provide information identifying all surety and financial securities established for decommissioning and site restoration of the project in accordance with the requirements of Minn. R. 7854.0500, subp. 13. The decommissioning plan shall provide an itemized breakdown of costs of decommissioning all project components, which shall include labor and equipment. The plan shall identify cost estimates for the removal of turbines, turbine foundations, underground collection cables, access roads, crane pads, substations, and other project components. The plan may also include anticipated costs for the replacement of turbines or repowering the project by upgrading equipment.
>
> The Permittee shall also submit the decommissioning plan to the local unit of government having direct zoning authority over the area in which the project is located. The Permittee shall ensure that it carries out its obligations to provide for the resources necessary to fulfill its requirements to properly decommission the project at the appropriate time. The Commission may at any time request the Permittee to file a report with the Commission describing how the Permittee is fulfilling this obligation.

On September 16, 2013, Fenton filed a decommissioning plan for the Fenton Wind Project ("Project") pursuant to the site permit issued for the Project on April 13, 2006. *See* Compliance Filing (eDocket No. 20139-91286-04). Attached hereto is an updated Decommissioning Plan for the Project. Fenton has provided the updated Decommissioning Plan to the local units of government having direct zoning authority over the area in which the Project is located. A copy of the correspondence and certificate of service is attached.

DNV·GL

FENTON WIND FARM

Decommissioning Plan & Costs Analysis

Fenton Power Partners I, LLC

Document No.: 10200440-HOU-R-02
Issue: B**, Status:** Final
Date: 29 July 2020

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List of abbreviations

Abbreviation	**Meaning**
BOP	Balance of Plant
BMPs	Best Management Practices
COD	Commercial Operation Date
DNV GL	DNV GL Energy USA, Inc.
GRP	Glass Reinforced Plastic/Polymer
O&M	Operations and Maintenance
OPGW	Optic Ground Wires
WTG	Wind Turbine Generator

EXECUTIVE SUMMARY

At the request of Fenton Power Partners I, LLC ("FENTON PPI"), DNV GL Energy USA, Inc. ("DNV GL") prepared a decommissioning plan and cost analysis of the Fenton Wind Project (the "Project"). The study estimates the costs associated with the dismantling, removal, and salvage or disposal of the equipment; all costs in this study are given in 2020 U.S. dollars.

The Project consists of 137 GE 1.5 sle wind turbine generators (WTG) with an aggregate rated output of 205.5 MW, and associated infrastructure. The Project began commercial operations on October 2007. All of Fenton's power output is sold under a 25 year Renewable Energy Purchase Agreement (REPA) with Northern States Power Company (aka Xcel Energy) through 2032.

Per FENTON PPI's request, it is assumed that decommissioning of the Project will take place 30 years after the start of commercial operations (i.e. in 2037).

The net decommissioning value is determined from the difference of 1) the sum of the disassembly and removal cost and 2) the sum of the salvage value and resale. The net decommissioning costs of the Project assuming no resale (Scenario 1) and with partial resale of the Project's major components (Scenario 2) are presented in Table ES-1 and Table ES-2.

Table ES-1 Net decommissioning costs

	Scenario 1 No Resale	Scenario 2 Partial Resale
Total per WTG	$52,340	$35,890
Total Project (137 WTGs)	$7,171,200	$4,917,200

Note: per WTG amount is rounded to nearest $10

As it is considered to be the more likely option, a breakdown of Scenario 2 is shown below.

Table ES-2 Project net decommissioning cost with partial resale (Scenario 2)

Item	A	B	C	D	E	F
	Disassembly [$]	Removal [$]	Disposal [$]	Total Costs [$] (A+B+C)	Salvage/Resale [$]	Net [$] (D+E)
WTG	9,590,000	7,878,000	411,000	17,879,000	(16,502,000)	1,377,000
Collection System	1,944,000	329,000	35,000	2,308,000	(1,245,000)	1,063,000
High voltage substation	122,000	63,000	16,000	201,000	(17,000)	184,000
Access roads & Crane Pads	660,000	611,000	6,000	1,277,000	(528,000)	749,000
Met Masts	35,000	3,000	2,900	40,900	(5,700)	35,200
Mobilization/Soft Costs	1,509,000	0	0	1,509,000	0	1,509,000
Project Totals	*13,860,000*	*8,884,000*	*470,900*	*23,214,900*	*(18,297,700)*	*4,917,200*
Total per WTG [$]						**35,890**
Total Project (137 WTGs) [$]						**4,917,200**

1 INTRODUCTION AND PROJECT DESCRIPTION

Fenton Power Partners I, LLC ("FENTON PPI") retained DNV GL Energy USA, Inc. ("DNV GL") to perform a decommissioning plan and cost analysis of the Fenton Wind Project (the "Project"). DNV GL assumes that there are strong parallels between wind power project construction and decommissioning programs and consequently bases the estimates for decommissioning costs on its broad experience of wind power project construction programs and the associated costs of labor, plant, and materials. The complete decommissioning cost is calculated as the sum of the cost of disassembly, removal, and disposal of the turbines and balance of plant (BoP), as may be offset by gains from salvage or resale of materials and components. It is noted that crane costs are the most dominant cost item in disassembly while transportation of the large turbine components dominates the costs of removal.

Assessments of salvage opportunities are based on the bill of quantities identified in this report. The average material weights, masses, and volumes for turbine components are derived from previous DNV GL studies, FENTON PPI's documentation, and/or turbine supplier technical specification sheets. Although DNV GL assumes certain commodity prices and disposal service rates based on present day estimates, it does not forecast such future values. The reader is free to make those adjustments. The salvage value is calculated as the difference between the sum of parts resale and scrap revenue, less the landfill cost of the remaining material. Two salvage/disposal scenarios are presented: Scenario 1 considers that all equipment is sold as scrap while Scenario 2 assumes partial resale of some of the Project's major components.

It is stressed that this report is based on broad assumptions regarding the Project, the approach to the decommissioning, and the market conditions for contracting costs, scrap value, and resale options. It is recommended that the net costs of decommissioning be reviewed closer to the end of the operating period (e.g., at the 25th year of operation for an assumed 30-year operating life).

1.1 Location

The Project is located in Murray and Nobles Counties, MN, approximately 40 miles northeast of Sioux Falls, SD. It consists of 137 GE 1.5 sle wind turbine generators (WTG) with a total rated power of 205.5 MW. The WTGs are mounted on 80 m tubular steel towers.

FENTON PPI has indicated that the Project also includes one switching station and four met towers.

Figure 1 presents the Project location.

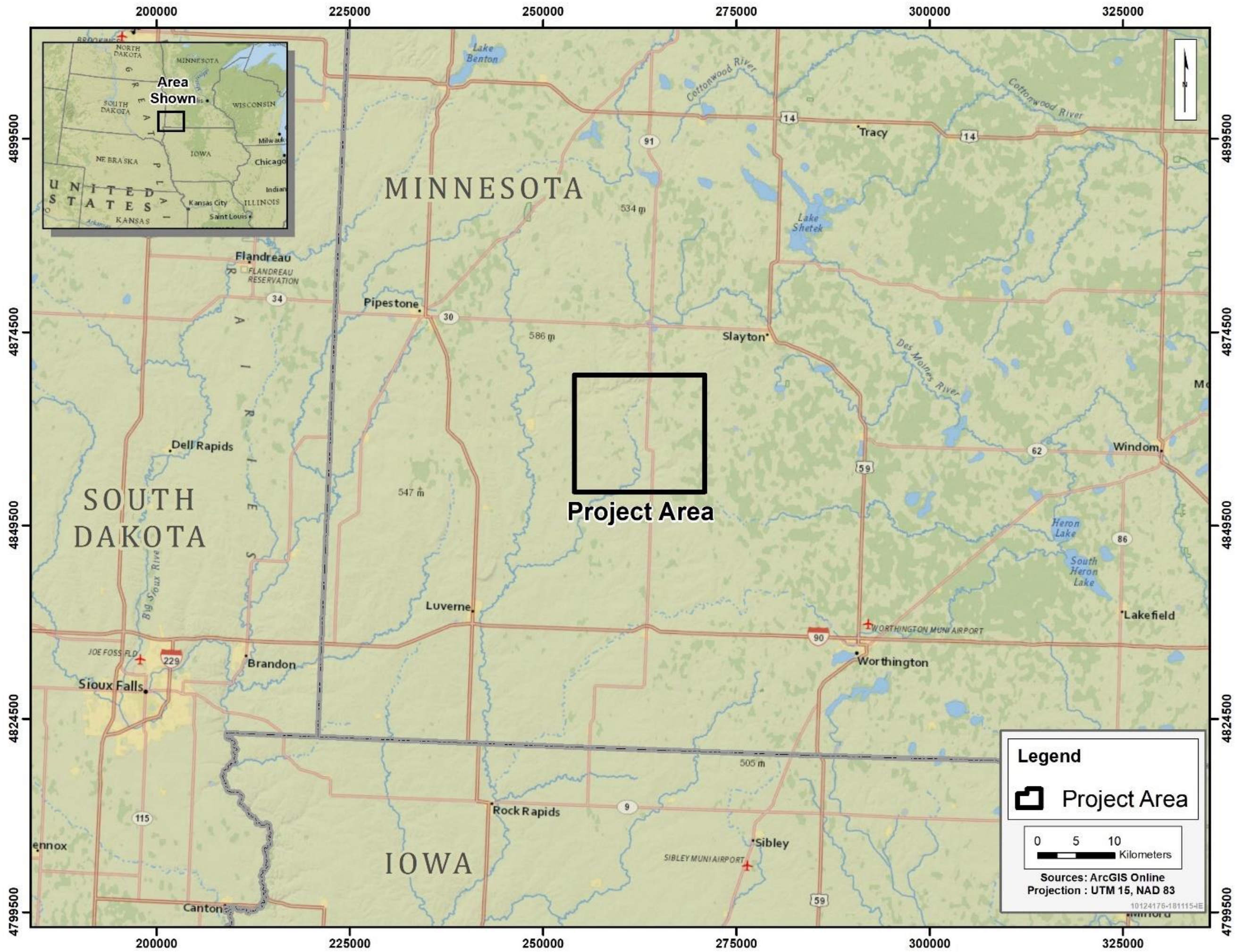


Figure 1 Approximate location of the Fenton Wind Project

1.2 Decommissioning objectives

The purpose of this Decommissioning Plan is to address future activities to remove the Project. The objectives include compliance with Minnesota PUC regulations, compliance with Murray and Nobles County and other applicable laws, satisfaction of removal requirements in the land leases, and financial obligations of FENTON PPI. FENTON PPI has advised DNV GL that the required decommissioning activities will include the removal of all towers, WTGs, switching station, underground collection lines, ancillary equipment, other physical material owned by and pertaining exclusively to the Project, and restoration of the property, including the Project roads.

The Project began commercial operations on October 2007. Per FENTON PPI's request, it is assumed that decommissioning of the Project will take place 30 years after the start of commercial operations (i.e. in 2037).

The Project is connected to the XCEL Fenton substation, which contains the main step up transformer and does not belong to FENTON PPI. FENTON PPI has advised DNV GL to exclude the XCEL-owned Fenton substation and any associated transmission line from the scope of the decommissioning work considered in this report.

1.3 Applicable regulations

The Project is located within both Murray County and Nobles County, Minnesota and is subject to the decommissioning requirements contained within the Site Permit recommended by the Department of Commerce on 6 April 2006 and subsequently issued by the Minnesota Public Utilities Commission (PUC) on 13 April 2006 [1][2]. The Site Permit indicates that the Project is obligated to:

- Dismantle and remove all Project infrastructure including turbines, transformers, overhead and underground cables, foundations, buildings and ancillary equipment to a depth of four feet;
- Restore and reclaim the site to conditions that existed prior to construction;
- Remove all Project access roads, unless written approval is obtained from the affected landowner; and
- Complete the decommissioning and restoration activities within 18 months of permit expiration [1].

The PUC also released a memo in March 2020 [3] that outlines recommendations pertaining to the desired content of decommissioning reports for wind and solar projects in the state of Minnesota.

In addition, the lease agreement provided by FENTON PPI includes an addendum entitled "Turbine Removal" which directly aligns with the Site Permit conditions and states that the Project will remove all physical material to a depth of four feet and restore the land to conditions that existed prior to construction [4].

DNV GL investigated local permitting requirements for Murray and Nobles County [5] and did not find any decommissioning requirements. Thus, the requirements and recommendations noted above from the Site Permit and the PUC memo form the basis of this study's decommissioning activity assumptions.

2 STUDY ASSUMPTIONS

DNV GL's decommissioning study methodology assumes there are strong parallels between wind power project construction and decommissioning programs. DNV GL has used an internal bottom-up decommissioning model it developed from its experience in the wind industry to formulate these study results.

2.1 General inputs and assumptions

The following assumptions have been used in the decommissioning assessment and analysis contained within this report:

- Decommissioning will start soon after the end of Project operating life (assumed to be 30 years after commissioning for purposes of this study), and all decommissioning work is performed in generally conducive weather conditions;
- The WTG foundation pedestals and transformer pad foundations have 4 feet of concrete removed, and the remainder of the foundation is abandoned in place;
- The Project switching station will be entirely removed, as will the underground collection system cabling, with a total length of approximately 61 miles;.
- All Project roads (approximately 27.3 miles) will be decommissioned. DNV GL considers this a conservative assumption as many landowners may find such roads a benefit to their land and request to keep them; and
- Decommissioning cost of the operations and maintenance (O&M) building has been included.

This report does not consider the time value of money; the results should therefore be adjusted to represent the inflated costs at the time of decommissioning (e.g., annual escalation). It should also be noted that commodity values are volatile and difficult to predict over the study horizon.

This report also does not consider the decommissioning scenarios from a legal or commercial perspective, which should be assessed by FENTON PPI.

All costs are quoted in 2020 U.S. dollars. While no specific quotes from third-party vendors were obtained in relation to this study, DNV GL's past experience preparing and reviewing wind power project construction budgets and the Project's location have been considered in the assessment. The study is broken down into three sections: disassembly, removal, and salvage/disposal. Due to the uncertainty associated with the majority of cost categories assumed and modeled, DNV GL has rounded costs to the nearest $1,000, unless otherwise noted.

2.2 Crane assumptions

DNV GL has assumed that, on average, one main tracked crane can dismantle one WTG every day while on site (including time for crane movements from WTG to WTG and some minor weather delays). The number of main cranes used determines the approximate time to complete the job. The Project was assumed to require the number of main and base cranes and total teardowns presented in Table 2-1.

2.3 Initiation and mobilization

Before executing any decommissioning work, it is necessary to plan the work carefully, secure the appropriate permits and insurance, and manage the program of work and associated health and safety risks in order to ensure successful completion of the work. It is assumed that mobilization and soft costs are overhead.

Soft costs, for the purposes of this study, include costs not specifically accounted for in the derivations presented later in this report, including environmental studies, obtaining permits, environmental protection plans, hazardous material disposal, on-site administrative infrastructure and staff, utilities, off-site project management and insurance/legal services. DNV GL assumed 5% of the total disassembly and removal costs will be required for soft costs coverage.

In addition to soft costs, DNV GL also assumed that an additional 1% of the total disassembly and removal costs will be needed for contractor mobilization. DNV GL accounted for a lay-down yard of 6 acres, located just south of the substation, to house the office trailers and staff parking and facilities for mobilizations and demobilizations.

Table 2-1 summarizes the crane, mobilization, and soft cost assumptions used in this report, as well as the total cost estimate for such activities.

Table 2-1 Mobilization, Crane, and soft costs assumptions

Item	Quantity
Number of main cranes needed	3
Total number of main crane full teardowns (1)	3
Number of base cranes needed	6
Number of base crane tear-downs needed	6
Decommissioning contractor's lay-down yard size [acres]	6
Additional mobilization as percent of total hard costs (2)	1%
Decommissioning soft costs as percent of total hard costs (3)	5%
Total Mobilization and soft costs [$]	**$1,509,000**

(1) Between turbines, while on site, likely due to power line crossings
(2) Represents the costs of contractor’s mobilization/demobilization
(3) For soft costs, it is assumed that the decommissioning would be done for the entire project at once.

2.4 Schedule

It is assumed that the decommissioning program would be 15 to 17 weeks, with 3 active main cranes. This timeline is based on the assumption that the dismantling rate of the WTGs is approximately one WTG per workday per crane pair and that 7 to 9 workdays of mobilization and demobilization (each) are allowed before and after WTG dismantling. During construction of wind power projects, it is typical that the time for erection across the entire project schedule averages about one WTG per day per main crane on a simple site. While disassembly could in theory be done with slightly less care than during assembly (damage to turbines not as much of a concern), safety and resale considerations will likely dictate that disassembly be accomplished in much the same fashion as erection, although in reverse order.

It is also assumed that other works across the site such as foundation removal, underground collection systems disassembly, switching station disassembly and reclaiming of roads, crane pads, and other excavations will be done simultaneously and/or in concert with the turbine dismantling and crane progress.

3 DISASSEMBLY

The disassembly of the Project pertains to all work just prior to physical transportation of the infrastructure from the site. In the case of the WTGs, it includes the dismantling and loading of the tower sections, nacelles, and blade scraps onto trucks for transport. In the case of concrete foundations or roads and crane pads, it pertains to the tear down, aggregate stripping, excavation and backfilling, and all reclaiming as necessary. Reseeding of removed roads and WTG areas is included in these costs.

Although certain activities must be sequenced appropriately, based on DNV GL's knowledge of wind project construction considerations, it is assumed that many activities (e.g. WTG, collection system, and switching station disassembly) may be undertaken in parallel, facilitating an efficient decommissioning process.

3.1 Turbines

Once the site is mobilized, it is assumed that the decommissioning of WTGs would start immediately and sequentially. This typically entails the individual removal of the rotor assembly followed by the nacelle enclosure. The tower internals are stripped of lifts, cables, cabinets, lighting, and other miscellanea and are then dismantled, section by section, down to the foundation surface.

For the Project, 137 WTGs are to be removed. More specifically, 137 GE 1.5 sle nacelles, with three-section, 80-m steel towers and three 37-m blades will be removed. It is assumed that the scope of the disassembly works includes the cost of labor, machinery, and tools required to perform the tasks and the loading of the dismantled material onto transport vehicles for removal from site. The main cranes would be required on site for at least ten weeks during the WTG dismantlement activities. The base cranes may be required a slightly longer period in order to assist with the transport loading activities and switching station dismantling.

It is also assumed that aside from the possible removal of the drive train to aid lifting, the nacelle and its contents will remain fully intact for purposes of transport. All cooling, heating, and lubrication fluids will be drained, stored, and appropriately disposed of before the nacelle is removed from site. Blades, however, will be cut into sections for easier transport to a recycling or incineration plant.

The costs presented below include the cost of a main crane to handle the hub/rotor, nacelle, and top tower section (or top sections, depending on base cranes hired). They also include the cost of a lower crane for lower tower sections as well as aid in loading the components onto transport trucks. The costs take into consideration the rental of special tools needed from the manufacturer as well as the fact that the GE WTGs have an external pad mounted transformer.

DNV GL has assumed that the site be remediated to 4 ft below grade, and it is assumed that the concrete structures are to be cut and crushed. It is assumed that about 930 ft^3 of crushed concrete will result from removing each WTG's foundation pedestal and pad-mount transformer foundation essentially in their entirety, thus achieving these criteria. Table 3-1 summarizes the WTG disassembly costs for Project.

Table 3-1 Summary of turbine disassembly costs

Cost item	Costs per WTG [$]
Dismantle hub and blades (3 blades per WTG)	21,000
Dismantle nacelle (drive train and generator included)	21,000
Dismantle tower sections, internals included	21,000
Dismantle pad-mounted transformer	3,000
Remove turbine foundation (1)	4,000
Total per WTG	**70,000**
Total Project (137 WTGs)	**9,590,000**

(1) 4 ft below grade.

DNV GL notes that the disassembly costs of WTGs are highly dependent on crane costs (which include crane plus crane crew and tools/equipment): approximately 90% of the total per-WTG disassembly cost is associated with crane-related costs. DNV GL estimated this cost based on experience from various projects in North America. It is noted that crane availability may greatly influence crane costs, and that it is difficult to accurately predict crane costs given the long study horizon.

3.2 Collection system

According to documentation provided by FENTON PPI, the Project collection system will be composed of approximately 61 miles of three-phase buried lines along with bare copper grounding cable. Underground collection disassembly includes trenching, winding triplex with ground wire, and reclaiming. The conductors would then need to be re-reeled for transport.

It is assumed that the scope of the disassembly includes the cost of labor and the loading of the dismantled material onto transport vehicles for removal from site. It is assumed that the disconnection work at the terminals would be performed as part of turbine removal or substation removal. The results are reported in Table 3-3.

3.3 High-voltage substation, switching station, and O&M building

FENTON PPI has advised that the Project substation and step up transformer will not require decommissioning, because they are owned by XCEL. Thus, DNV GL has assumed the switching station alone will be decommissioned. The switching station is assumed to include typical equipment seen in North American wind power project switching stations for projects of this size, but without a main power transformer or associated equipment. DNV GL has assumed the switching station includes aluminum bus bars, medium voltage electric circuit breakers, air disconnect switches, steel bus support structures, steel reinforced concrete equipment foundations, and a control building with electronic equipment including relays, computers, telecommunications equipment, batteries and charging system, and HVAC equipment.

The Project's O&M building is located on a separate parcel but is being considered to be part of the switching station for the purpose of this calculation.

It is assumed that the scope of the disassembly work includes the cost of labor and machinery required to perform the disassembly tasks, including disconnection work at the terminals, and the loading of the dismantled material onto transport vehicles for removal from site. The following table summarizes the costs to disassemble the Project's interconnection switchyard.

Table 3-2 Costs to disassemble Project switching station and O&M building

Item	Cost [$]
Preparation	3,000
Dismantle HV equipment	12,000
Remove control and O&M buildings	90,000
Large machinery hire	7,500
Small machinery hire	6,500
Reclaim and reseed	3,000
Total	**122,000**

3.4 Site access roads

In practice, it is probable that most of the roads will be kept after the completion of the Project, with the exception of the dead-end access roads that lead to the WTGs. However, for purposes of the study, DNV GL has assumed that the entirety of the approximately 27.3 miles of roads will be remediated, in accordance with permitting requirements. The lay-down yard reclamation is accounted for in the mobilization/demobilization costs.

Decommissioning of the site access roads will typically include stripping back the surfaces of project roads connecting the WTGs and replacing them with topsoil in keeping with the surrounding environment. In the case of the Project, this phase also includes stripping and piling geotextile material used in the road base. The costs additionally include reseeding with native grasses. A secondary reseeding may be required if the initial work proves inadequate.

The results are reported in Table 3-3. Note the cost of aggregate transport off site is captured in removal costs.

3.5 Meteorological masts

Four permanent 260 foot, (80-meter) met masts are located on the Project site. It is assumed that these met masts will be disassembled at an appropriate time during the decommissioning activities so as not to interfere with other ongoing work. This typically involves the use of a base crane to dismantle the masts, section by section, down to the foundation surface. The instrumentation and booms would be either removed before the sections are laid down or removed from the sections once on the ground.

It is assumed that the scope of the disassembly works includes the cost of labor, machinery, and tools to perform the dismantling tasks, including foundation removal to appropriate below grade level, and the loading of the dismantled material onto transport vehicles for removal from site. It is also assumed that only one crane is needed for removal of each mast. Based on experience installing and removing met towers in the United States, DNV GL has included an allowance for disassembly of the met masts. The results are reported in Table 3-3.

3.6 Disassembly conclusion

The cost of the disassembly of the Project is summarized in Table 3-3.

Table 3-3 Summary of Project disassembly costs

Item	Cost [$]
WTG	9,590,000
Collection system	1,944,000
Switching Station (incl. O&M building)	122,000
Access roads	660,000
Met Masts	35,000
Mobilization and soft costs	1,509,000
Total Project Disassembly Cost	**13,860,000**

4 REMOVAL FROM SITE

Removal of the Project in this study refers strictly to the transporting of the equipment from the site to the appropriate landfill, aggregate rework facility, or scrap yard. Various distances and truck sizes are applied in the DNV GL decommissioning model, depending on which Project component is being calculated. Removal costs also include the costs of unloading the material once it reaches its destination. DNV GL assumes that appropriate landfills and scrap yards are located in the general region of the Project, close to the nearest cities.

4.1 Turbines

It is assumed that the scope of the removal of the WTGs includes the cost of labor and vehicles required to transport the dismantled material to an appropriate disposal, salvage, or rework facility. It is assumed that the transport distances for general waste would be within a radius of 50 miles whereas the more complex and valuable material, tower internals, and main WTG and switching station components are assumed to be transported within a radius of 200 miles. DNV GL additionally notes the presence of rail transport in the relative vicinity could decrease costs for removal of turbine components. While most of the main turbine components are modeled to be removed much as they were initially transported to the site during construction, the turbine blades will be sectioned to limit oversize transport.

Table 4-1 summarizes the costs for the removal of each of the turbine components from the site.

Table 4-1 Turbine removal costs

Turbine component	Cost [$]
Blades (cut up prior to loading)	5,000
Hub	10,000
Nacelle	10,000
Tower sections	30,000
Internals	1,000
Transformer	1,000
Crushed foundation	500
Total per WTG	**57,500**
Total for Project (137 WTGs)	**7,878,000**

4.2 Collection system

It is assumed that the scope of the removal works includes the cost of labor and vehicles required to transport the dismantled material to an appropriate salvage facility. The material will mainly include the wound reels and/or cut cables removed by trucks. The results are reported in Table 4-3.

4.3 Switching station

It is assumed that the transport distances for foundation rubble and general waste would be within a radius of 50 miles whereas the more complex and valuable material is assumed to be transported within a radius of 200 miles. It is assumed that local dump truck loads are 17 yd^3 in capacity.

The following table summarizes removal costs for the Project substation.

Table 4-2 Project switching station removal costs

Substation component	Cost [$]
HV equipment	10,000
Control/O&M buildings	25,000
Dead-end structures	10,000
Yard gravel (local transport)	18,000
Total removal costs	**63,000**

4.4 Site access roads

For the purpose of removal calculations, the Project's 27.3 miles of roads to be removed were assumed to be all 16 feet wide and about 1 foot deep and underlain by geotextile. While this width attempts to capture any shoulder material as well, the assumption that all roads to be removed are 16 feet wide is likely conservative with respect to the Project design and is expected to therefore cover the cost of decompaction and reclamation of any additional width required due to crane walking. Dump truck capacity is assumed to be 17 yd^3 and all load trips are assumed to be local. The results are reported in Table 4-3.

4.5 Meteorological masts

It is assumed that the scope of the removal works includes the cost of labor and vehicles required to transport the dismantled material to an appropriate disposal, salvage or rework facility. The results are reported in Table 4-3.

4.6 Project removal conclusions

Table 4-3 summarizes the total anticipated costs for removing the turbines, collection system, switching station, roadways, and met masts from the Project.

Table 4-3 Project removal conclusions

Item	Cost [$]
WTG	7,878,000
Collection system	329,000
Switching station	63,000
Access roads	611,000
Met masts	3,000
Total Project removal cost	**8,884,000**

5 SALVAGE – DISPOSAL

While it is impossible to predict the exact evolution of an industry 17 years into the future, it is not unreasonable to assume that there may exist by that time consolidated centers that will fully recycle a WTG given that many project "decommissionings" or "repowerings" will have been undertaken prior to that time. For example, DNV GL notes that significant attention is being placed by industry and academia alike into possible uses or methods for recycling the WTG blades.

DNV GL notes that in this section only, gains are shown as positive and costs to the Project are shown as negative.

While it may become easier to recycle WTGs in the future, DNV GL performed this study assuming only the application of present day means. Following the disassembly and removal of all materials from the Project site, four potential destinations for the remediated material are typically envisaged by DNV GL when performing decommissioning studies. These scenarios may add extra cost to the decommissioning budget or offer an opportunity to reclaim some value from the wind power project components to offset against the cost of decommissioning.

1. Low-grade material such as contaminated aggregate, concrete rubble, wood, non-recyclable materials and other mixed general waste may be sent to landfill or incineration at cost to the Project. DNV GL notes that there is a relatively large volume of waste associated with the glass reinforced plastic (GRP) which composes most turbine blades today. It is likely that in 17 years recycling blade GRP into cement fill, roofing shingles or other useful industrial raw materials may be a net positive for the Project, or at least an offset to the cost, but no such projections have been made in the present study: blade GRP has been considered waste.
2. Medium-grade materials such as small- and medium-gauge cabling, small motors, cabinets of mixed electronics, and lighting may be sent to salvage centers to be stripped for parts and sold for re-use or re-processing. This may be done at a nominal, neutral, or negative cost (positive return) to the Project. However, this material may also be sent to landfill if an appropriate third party cannot be found. DNV GL notes that it is difficult to predict future returns of salvage due to the unpredictability of commodity prices.
3. High-grade materials such as large steel components (tower sections, bedplates, hub castings, gearboxes, and steel cables), large-gauge copper and aluminum cabling, aluminum flooring and ladders will be sent to reprocessing centers at a net neutral cost or positive return to the Project. DNV GL notes that it is difficult to predict future returns of reprocessing due to the unpredictability of commodity prices.
4. Reusable components that are deemed to be undamaged, functional, and have not fulfilled their design life could be sold for a modest second-hand price for refurbishment. Some electrical infrastructure equipment as well as recently replaced WTG components could fall into this category.

Applying a conservative approach, DNV GL only considered items 1, 3, and 4 in this study. No resale gains were assumed for item 2—only scrap/disposal value. Furthermore, item 4 was limited only to certain main components within a conservative age range.

5.1 Pricing assumptions

The following assessment is based on DNV GL's decommissioning model which estimates bill of quantities, typical material weights/masses, and volumes for WTG components acquired from the manufacturer's technical specifications or from DNV GL experience when such is not available. The model uses commodity prices and disposal service rates as inputs.

For the Project decommissioning, the following scrap commodity prices are assumed:

- Steel and cast iron: $250/ metric ton
- Copper: $5,782/ metric ton
- Aluminum: $1,937/ metric ton

It should be noted that the commodity price of metals is volatile and 17-year values are impossible to predict with any degree of certainty. The assumed prices are based on DNV GL's analysis of U.S. Geological Survey historical scrap metal costs statistics [6].

Because landfill costs are expected to keep rising, DNV GL used a different cost variable for the incineration, recycling, or disposal of GRP. Although it is likely that in 17 years technology will be available to extract the fibers from the epoxy laminate for high-grade industrial reuse at a net benefit, DNV GL assumed a worst-case net cost to incinerate or low-grade recycle the GRP as a separate cost to landfill. The following landfill costs are assumed:

- GRP disposal (incineration or recycling): $150/$m^3$
- Class 2 landfill, Industrial/toxic waste: $90/$m^3$
- Class 3 landfill, General waste: $45/$m^3$

5.2 Turbines

5.2.1 Salvage and disposal

There should be considerable opportunity to reclaim scrap value from the WTGs from the copper in the low voltage cabling, transformer, and generator; steel from the tower, hub, drive train, and bedplate; and aluminum from the tower internals. The blades and nacelle housing are made from GRP and would have to be disposed.

Table 5-1 summarizes the salvage and disposal costs per each WTG. Component weights have been estimated by DNV GL, and/or obtained directly from manufacturer's documentation.

Table 5-1 WTG salvage and disposal values

Component	Estimate [$]
Blades	(1,500)
Hub + blade steel	4,500
Nacelle/hub GRP	0
Nacelle bedplate	14,500
Main shaft	1,500
Gearbox	4,000
Generator	25,500
Tower steel sections	31,500
Internals	13,500
Transformer	8,500
Crushed foundation	(1,000)
Total per WTG	**101,000**
Total for Project (137 WTGs)	**13,837,000**

Note: Negative values (those in parenthesis) are costs to the Project which represent disposal. Positive values are salvage associated revenue.

5.2.2 Resale of components

DNV GL considers that at the end of the Project's 30-year operating life, many of the components of the GE 1.5 sle WTGs will still be serviceable and have positive value in the secondary parts market. DNV GL considers that the towers and nacelle shells could be sold as scrap, as well as the rest of the major components that were not resold.

WTGs, like all mechanical equipment, are subject to stresses, such as thermal changes, vibration, or corrosion that affect the life cycle of various equipment components, such as engines, gears, metals, and composite materials. While WTGs are structurally designed to meet a fatigue life of 20 years plus some margin, DNV GL expects a significant number of components will need to be replaced or refurbished during the operating life of the WTGs, such as the blades, gearboxes, and generators. DNV GL continually tracks and models the various failure rates for each of the main components across all major WTG model types, and has, for purposes of this study, modeled the fatigue life of the various WTG components over the Project's 30-year life, while considering the log of historical issues and component replacements that have occurred at the Project since it began operating in 2007. DNV GL considers that a number of other considerations apply to the actual potential for the WTGs to economically operate 10 years past their 20-year design life, but notes that such discussion is outside the scope of this report.

It is assumed that other North American wind power projects with GE WTGs (either owned by FENTON PPI or not) will be nearing or will have reached at their 20-year design life at the time of decommissioning of the Project, and some will have chosen to operate beyond it. Therefore, a secondary parts market may be assumed to exist that would demand some of the major components being decommissioned from the

Project. Using a conservative approach, and with the exception of the transformer, only the major components that are no more than five years old (i.e. replaced or refurbished during Project years 25 through 30) are considered candidates for resale. The transformer is assumed to have a higher design life, therefore approximately half of the total (137÷2) are considered candidates for resale. The major components considered for resale are the gearbox, generator, blades, pitch system, main yaw system, power converter, main bearing, and transformer.

Table 5-2 summarizes the WTG partial resale valuations performed by DNV GL for the Project's decommissioning scenario. The calculations account for the lost scrap opportunities that will be subtracted from Table 5-2 and presented in Section 6.

Table 5-2 WTG component resale valuations

Component	Qty. to Resale [$] (1)	Assumed Resale Value [$] (2)	Scrap Loss [$] (3)
Gearbox	8	507,000	32,000
Generator	14	724,000	357,000
Blades	4	201,000	(6,000)
Pitch bearing	8	276,000	0
Main yaw	1	44,000	0
Power converter	37	156,000	0
Main bearing	15	690,000	0
Transformer	68	617,000	578,000
Gross Resale Total [$]		**3,215,000**	
Scrap Loss Total [$]			**(961,000)**
Net Resale Total [$]			**2,254,000**

(1) Component assumed to be resold based on DNV GL engineering judgment.
(2) Represents aggregate resale value of all components eligible for resale.
(3) Partial resale of WTG components means scrap opportunities need to be subtracted from previous calculations; this is taken into account in this column, and therefore the net resale value of WTG components includes this loss of scrap. Negative scrap loss represents avoided disposal cost, for blades only.

5.3 Collection system

The underground three-phase conductor and ground cabling reels from the Project will be sold for scrap. Based on Project information, DNV GL has estimated at total of approximately 183 miles of total conductor (3 phases) along with 61 miles of bare copper ground wire. The results are reported in Table 5-3.

5.4 Switching station

There should be opportunity to reclaim metal scrap value from electrical equipment. Yard equipment such as bus work, circuit breakers, and grounding transformers, contain a significant amount of conductive material such as copper and aluminum. Dead-end and other steel structures contain a significant amount of steel. The switching station yard and access road also contains aggregate fill that would be sold. Rubble from the foundation demolition and all other materials would be sent to landfill at cost. The scrap value of the substation is presented in Table 5-3.

5.5 Site access roads

For the purpose of removal calculations and at FENTON PPI's request, the Project's 27.3 miles of roads to be removed were assumed to be 16 feet wide and ~1 foot deep and underlain by geotextile. Resulting amounts of salvage aggregate are presented in Table 5-3. It is assumed that only temporary crane pads (compacted area with crane mats) will be utilized for decommissioning, with no residual value.

5.6 Meteorological masts

Although it is possible that the met masts could be dismantled, resold, and reused at a different location, 30-year old masts may have limited reinstallation value (although they could very well be a candidate to remain for a repowering scenario). For the purpose of conservatism in this study, DNV GL assumes a dismantling and removal cost with the intent of scrapping the material.

The results of this valuation are presented in Table 5-3.

5.7 Salvage – disposal conclusions

Table 5-3 summarizes the opportunities from the salvage/disposal analysis. Please note that this table does not incorporate the resale scenarios of Table 5-2. These will be included in Section 6.

Table 5-3 Salvage/disposal value (without resale of WTG components)

Item	Disposal ($)	Salvage ($)
WTG	(411,000)	14,248,000
Collection system	(35,000)	1,245,000
Switching substation	(16,000)	17,000
Access roads	(6,000)	528,000
Met masts	(2,900)	5,700
Total Project Salvage Return	**(470,900)**	**16,043,700**

Notes:
Negative values, those in parenthesis, are costs to the Project.

6 NET DECOMMISSIONING COST

The net decommissioning cost for the Project is calculated by subtracting the salvage value from the total of the disassembly and removal costs. This report presents two net decommissioning cost breakdowns: Scenario 1 assumes no resale of Project components, and Scenario 2 takes the more likely scenario for the possibility of partial resale of some of the components mentioned in Section 5.2.2.

6.1 Net decommissioning cost – no resale

Table 6-1 summarizes the Project's net decommissioning costs assuming no resale of any Project components other than for scrap value (Scenario 1).

Table 6-1 Project Net decommissioning cost – no resale (Scenario 1)

Item	A	B	C	D	E	F
	Disassembly [$]	Removal [$]	Disposal [$]	Total Costs [$] (A+B+C)	Salvage [$]	Net [$] (D+E)
WTG	9,590,000	7,878,000	411,000	17,879,000	(14,248,000)	3,631,000
Collection system	1,944,000	329,000	35,000	2,308,000	(1,245,000)	1,063,000
Switching station	122,000	63,000	16,000	201,000	(17,000)	184,000
Access roads	660,000	611,000	6,000	1,277,000	(528,000)	749,000
Met masts	35,000	3,000	2,900	40,900	(5,700)	35,200
Mobilization/soft costs	1,509,000	0	0	1,509,000	0	1,509,000
Project Totals	*13,860,000*	*8,884,000*	*470,900*	*23,214,900*	*(16,043,700)*	*7,171,200*
Total per WTG [$]						**52,340**
Total for Project (137 WTGs) [$]						**7,171,000**

Note: negative values in parenthesis are positive returns to the Project.

6.2 Net Decommissioning Cost – Partial Resale of Selected Components

Table 6-2 summarizes the Project's net decommissioning costs for Scenario 2 which includes some plausible and conservative resale assumptions.

Table 6-2 Project Net decommissioning cost – partial resale of selected components (Scenario 2)

Item	A	B	C	D	E	F
	Disassembly [$]	Removal [$]	Disposal [$]	Total Costs [$] (A+B+C)	Salvage/Resale [$]	Net [$] (D+E)
WTG	9,590,000	7,878,000	411,000	17,879,000	(16,502,000)	1,377,000
Collection system	1,944,000	329,000	35,000	2,308,000	(1,245,000)	1,063,000
Switching station	122,000	63,000	16,000	201,000	(17,000)	184,000
Access roads	660,000	611,000	6,000	1,277,000	(528,000)	749,000
Met masts	35,000	3,000	2,900	40,900	(5,700)	35,200
Mobilization/soft costs	1,509,000	0	0	1,509,000	0	1,509,000
Project Totals	*13,860,000*	*8,884,000*	*470,900*	*23,214,900*	*(18,297,700)*	*4,917,200*
Total per WTG [$]						**35,890**
Total for Project (137 WTGs) [$]						**4,917,200**

Note: negative values in parenthesis are positive returns to the Project.

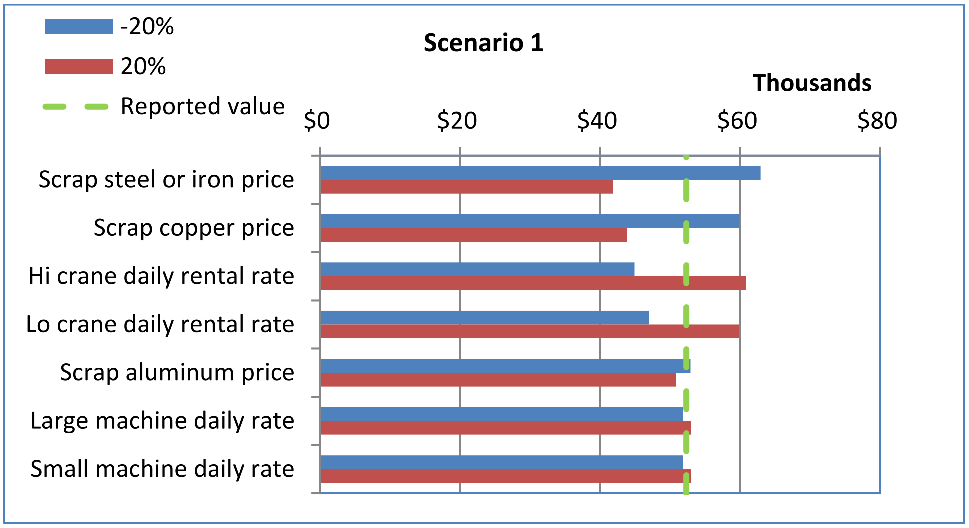
6.3 High-level sensitivity analysis

DNV GL notes that net decommissioning cost estimates are highly dependent on the price of metal, equipment and labor. Figure 6-1 presents a high-level sensitivity analysis of net decommissioning costs per wind turbine where the main input costs/price assumptions were varied by +20% (red bars) and -20% (blue bars).

Scrap steel is the most sensitive cost driver and is explained by the large amount of steel in the GE 1.5 sle WTG components.

The sensitivity analysis shows that, in Scenario 1 (no partial resale), a 20% decrease in the assumed price of scrap steel could increase the net decommissioning cost to over $60,000 per WTG – given the level of uncertainty of cost projections.

For the same 20% decrease, Scenario 2 (partial resale), is expected to result in a per WTG cost of approximately $46,000, for the range of input cost/price variations examined. However, it is noted that this simple sensitivity analysis does not consider combined variations of costs/prices.



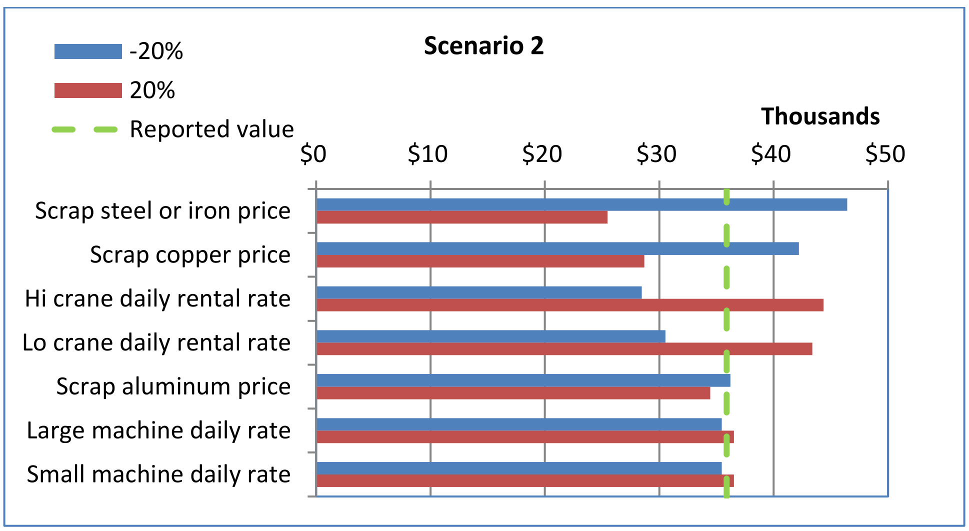


Figure 6-1 Sensitivity Analysis – Variation of decommissioning costs per WTG.

6.4 Recommendations

It is stressed that this report is based on broad assumptions regarding the Project; the approach to the decommissioning; the market conditions for contracting costs; and scrap value and resale options. DNV GL recommends that the net costs of decommissioning be reviewed closer to the end of the operating period (e.g., 2 to 3 years prior to the end of operations) when better visibility on these factors would be possible. The value of decommissioning after 30 years of operation could be reviewed at this time as well as the value of decommissioning at another point in the future, taking into consideration potential extended operational revenue as well as Project operations beyond the design life.

6.5 Notifications and Financial Surety

FENTON PPI will notify landowners, local governments, and the Minnesota Public Utilities Commission (PUC) in writing by e-filing a letter in eDockets and by mail in the form of a "notification of decommissioning" letter that will include estimated timeframe and general description of the decommissioning activities.

All parties will also be informed in writing when restoration is complete.

The Project has assessed the decommissioning costs and has recorded the asset retirement obligation (ARO) in the financial statements for the Project. The Project will reassess the decommissioning costs later in the project life closer to the decommissioning date in years 25 – 30 (2032 -2037) and will provide financial surety in the form of funds from the project or a performance bond to fund its future obligation. Based on current forecasts, FENTON PPI could fund the decommissioning obligation in 6 to 12 months by holding off distributing project cash flows net of debt.

7 REFERENCES

[1] Minnesota Public Utilities Commission, Site Permit for Large Wind Energy Conversion System in Murray and Nobles Counties Issued to Fenton Power Partners, LLC., 6 April 2006, https://web.archive.org/web/20070721221656/http://energyfacilities.puc.state.mn.us/documents/18236/Hartman-Fenton-Site%20Permit.pdf.

[2] Minnesota Public Utilities Commission, Order Granting Site Permit, 13 April 2006, https://web.archive.org/web/20070721221636/http://energyfacilities.puc.state.mn.us/documents/18236/Fenton%20Order.pdf.

[3] Minnesota Public Utilities Commission, *Subject: EERA Recommendations on Review of Solar and Wind Decommissioning Plans (Commission Docket Number E999/M-17-123),* 16 March 2020

[4] Fenton Power Partners, LLC, Wind Energy Ground Lease Agreement with Margie and Henry Baker, 10 November 2006.

[5] Fenton Power Partners, LLC., Site Permit Application for Fenton Wind Power Plant – A Large Wind Wind Energy Conversion System, November 2005, https://web.archive.org/web/20070721221524/http://energyfacilities.puc.state.mn.us/documents/18236/Fenton%20PUC%20Application%20FINAL.pdf.

[6] USGS web site: http://minerals.usgs.gov/minerals/pubs/commodity/

APPENDIX A – MAIN ASSUMPTIONS

1000	**Special requirements**	
1001	Decommissioning requirements applicable to the Project	Per lease agreements and permit
1100	**Project Basics**	
1101	Wind Power Plant Name	Fenton Wind Farm
1102	Construction Status	Operational
1103	General Location	Nobles and Murray county
1104	No. Wind Turbines	137
1105	Make and Model of Wind Turbine	GE 1.5 sle
1106	Hub Height [m]	80
1107	Project Capacity [MW]	205.5
1108	Project Design Life (civil, turbine, electrical and financial) [yr]	20
1109	Decommissioning to Occur After Which Project Year	30
1110	No. of Substations to Remove	1 switching station
1111	No. of main project transformers	0
1112	No. of O&M buildings to Remove	1
1113	Length of Underground Collection System to Remove [mi]	61
1114	Length of Overhead Collection System to Remove [mi]	0
1115	Length of Transmission Line to Remove [mi]	0
1116	Length of Project Access Roads to Reclaim [mi]	27.3
1117	No. of Meteorological Towers to Remove	4
1118	Average Height of Met Towers [m]	80
1119	Met tower type	Self Support
1120	Depth of removal [ft]	4
1200	**Additional Information**	
1201	Commercial Operation Date	October 2007
1202	Estimated Annual P50 Production Capacity Factor [%]	Confidential
1203	Main step-up transformer voltage [kV/kV]	N/A
1204	Main step-up transformer rating [MVA]	N/A
1205	No. of Transmission Line Steel Poles	0
1206	No. of Transmission Line Wood Poles	0
1207	Project Layout (including turbines and electrical layout)	Fenton Layers.kmz
1208	Number of tower sections per Wind Turbine	3
1209	Turbine components weights	Customer / Spec sheets

About DNV GL

Driven by our purpose of safeguarding life, property, and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification, technical assurance, software, and independent expert advisory services to the maritime, oil & gas, and energy industries. We also provide certification services to customers across a wide range of industries. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide our customers and society with operational and technological foresight. Operating in more than 100 countries, we are dedicated to helping our customers make the world safer, smarter, and greener.

CERTIFICATE OF SERVICE

I, Katlyn Benz, hereby certify that I have this day, served a true and correct copy of the following documents to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at Minneapolis, Minnesota.

- Letter to Murray County enclosing updated Decommissioning Plan.
- Letter to Nobles County enclosing updated Decommissioning Plan.

Docket No. IP-6499/WS-05-1707
Dated this 5th day of August, 2020

/s/ ______________________

Mailing List:

Mark Koster
Nobles County Environmental Services Department
315 10th Street
Worthington, MN 56187

Jean Christoffels
Murray County Environmental Services Department
2500 28th Street
Slayton, Minnesota 56172

August 5, 2020

Jean Christoffels
Murray County Environmental Services Department
2500 28th Street
Slayton, Minnesota 56172

Re: ***In the Matter of the Site Permit Amendment Application for Repowering the Fenton Wind Project in Murray and Nobles Counties***

PUC Docket No. IP-6499/WS-05-1707

To Whom It May Concern:

You are receiving this letter in your capacity as a representative of Murray County Environmental Services Department. Fenton Power Partners I, LLC ("Fenton") has submitted an updated Decommissioning Plan for the Fenton Wind Project ("Project") located in Murray and Nobles Counties, Minnesota to the Minnesota Public Utilities Commission eDockets, Docket No. IP-6499/WS-05-1707. A copy of that updated Decommissioning Plan is enclosed with this letter.

Please feel free to contact me with any questions you may have.

Sincerely,

David Sturges

Enclosure

August 5, 2020

Mark Koster
Nobles County Environmental Services Department
315 10th Street
Worthington, MN 56187

Re: ***In the Matter of the Site Permit Amendment Application for Repowering the Fenton Wind Project in Murray and Nobles Counties***

PUC Docket No. IP-6499/WS-05-1707

Dear Mr. Koster:

You are receiving this letter in your capacity as a representative of Nobles County Environmental Services Department. Fenton Power Partners I, LLC ("Fenton") has submitted an updated Decommissioning Plan for the Fenton Wind Project ("Project") located in Murray and Nobles Counties, Minnesota to the Minnesota Public Utilities Commission eDockets, Docket No. IP-6499/WS-05-1707. A copy of that updated Decommissioning Plan is enclosed with this letter.

Please feel free to contact me with any questions you may have.

Sincerely,

David Sturges

Enclosure