

June 24, 2021

Will Seuffert  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101-2147

RE: EERA Comments and Recommendations on Application Completeness  
Grand Meadow Wind Farm – Site Permit Amendment Application  
Docket No. WS-07-839

Dear Mr. Seuffert,

Attached are comments and recommendations of Department of Commerce, Energy Environmental Review and Analysis (EERA) staff in the following matter:

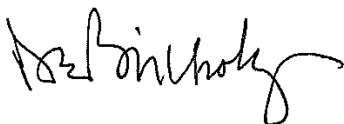
In the Matter of the Site Permit Amendment Application of Northern States Power  
Company for the Grand Meadow Wind Farm Repower Project in Mower County

The site permit amendment application was filed on May 27, 2021, by:

Matt Langan, Principal Agent  
Northern States Power Company, dba Xcel Energy  
414 Nicollet Mall  
Minneapolis, MN 55401  
612.330.6954 | [matthew.a.langan@xcelenergy.com](mailto:matthew.a.langan@xcelenergy.com)

EERA staff recommends acceptance of the site permit amendment application as complete. Further, staff recommends use of the attached draft site permit for public comment. Staff is available to answer any questions the Commission may have.

Sincerely,



David Birkholz, EERA Staff  
651.539.1838 | [david.birkholz@state.mn.us](mailto:david.birkholz@state.mn.us)

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## BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

### ENERGY ENVIRONMENTAL REVIEW AND ANALYSIS COMPLETENESS COMMENTS AND RECOMMENDATIONS

#### Grand Meadow Wind Farm Repower Project *Docket No. WS-07-839*

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Date: June 24, 2021

Staff: David Birkholz | david.birkholz@state.mn.us | 651-539-1838

#### **In the Matter of the Site Permit Amendment Application of Northern States Power Company for the Grand Meadow Wind Farm Repower Project in Mower County**

Issues Addressed: These comments and recommendations address the completeness of the site permit amendment application, the application review process, and a draft site permit for project.

Documents Attached: Project Overview, Draft Site Permit

Additional documents and information, including the permit amendment application, can be found on the EERA webpage: <https://mn.gov/eera/web/project/289/> or eDockets by searching “09” for year and “584” for number: <https://www.edockets.state.mn.us/EFiling/search.jsp>.

This document can be made available in alternative formats, that is, large print or audio, by calling (651) 539-1530 (voice).

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## **Introduction and Background**

On January 15, 2008, the Commission issued an order<sup>1</sup> approving a site permit to enXco Development Corporation to construct the 100.5 megawatt (MW) Grand Meadow Wind Farm, with a provision authorizing the Executive Secretary to transfer and reissue the site permit to Northern States Power Company (Xcel Energy) upon receipt of a joint compliance filing by the two companies under the transfer provisions of the site permit. The compliance filing was essentially to confirm that Northern States Power Company had purchased the wind farm and intended to operate it.

On December 8, 2008, the Commission issued an order<sup>2</sup> transferring and reissuing the wind site permit for the completed project to Northern States Power Company d/b/a Xcel Energy.

The wind farm includes 67 GE 1.5 sle MW wind turbines and has been in operation for approximately 11.5 years.

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<sup>1</sup> Order Granting Site Permit to enXco, Commission, January 15, 2008, eDockets No. [4897848](#)

<sup>2</sup> Order Transferring and Reissuing Wind Site Permit, Commission, December 8, 2008 eDockets No. [5660971](#)

On May 27, 2021, the applicant filed an application<sup>3</sup> to amend its site permit for the wind farm. The applicant proposes to retrofit the existing wind farm by installing new, larger rotors and replacing components within the wind turbine nacelles.

## Project Purpose

The purpose of the repowering project is to improve turbine technology, maximize energy yield, and extend the service life of the turbines. New blades provide an increase in the rotor swept area, which, when coupled with the upgraded generators, results in a corresponding increase in the nominal production capacity of the Project.<sup>4</sup>

## Project Description

The applicant proposes to repower the wind farm's existing GE wind turbines by:<sup>5</sup>

- Replacing the turbine blades, increasing the rotor diameter from 77 meters to 91 meters for 15 turbines and to 97 meters for 52 turbines;
- Replacing equipment within the wind turbine nacelles, including gearboxes; and
- Installing a lighting mitigation system.

There would be no changes to turbine locations, turbine towers, meteorological towers, the underground electrical connection system, the project substation, or the connecting Pleasant Valley Substation. Construction of the project would use existing turbine access roads; the applicant indicates that some roads may need to be temporarily widened. There would be an increase in the electrical capacity of individual wind turbines; the nameplate capacity of the wind farm would improve from 100.5 MW to 107.2 MW. However, the overall capacity at the point of interconnection would remain at 100.5 MW per the existing MISO GIA. The repower project boundary would be reduced to 8,088 acres.

The applicant anticipates that construction of the project will begin in the second quarter of 2023, with an in-service date of December 2023.<sup>6</sup>

## Regulatory Process and Procedures

A site permit from the Commission is required to construct and operate a large wind energy conversion system (LWECS), which is any combination of wind turbines and associated facilities with the capacity to generate five MW or more of electricity.<sup>7</sup> Once issued, a site permit may be amended by the Commission if, after providing due process, it finds good cause to do so.<sup>8</sup> The Commission may amend the site permit on its own initiative or upon request.<sup>9</sup>

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<sup>3</sup> Site Permit Amendment Application for a Large Wind Energy Conversion System, Xcel Energy, May 27, 2021, <https://mn.gov/eera/web/file-list/14486/>

<sup>4</sup> Amendment Application, Section 1.2

<sup>5</sup> Amendment Application, Section 1.2, 1.4

<sup>6</sup> Amendment Application, Section 1.2

<sup>7</sup> Minnesota Statute 216F.04

<sup>8</sup> Minnesota Rule 7854.1300

<sup>9</sup> Id.

The Commission has, in recent dockets, considered LWECS site permit amendments to facilitate repowering of wind farms. Repowering can take many forms – from a “full repowering” where existing turbines are decommissioned and replaced with fewer, larger turbines, to a “partial repowering” where existing turbines are retrofitted in some manner.

To afford due process, and based on recent Commission practice, a permittee seeking to repower a wind farm must apply for a site permit amendment and have the application reviewed through a public meeting and comment period (Table 1). Amendment applications must have the same information as would be required for an LWECS site permit application.<sup>10</sup>

**Table 1. Review Process for LWECS Repowering Permit Amendment**

Approximate Day	Process Step
---	Filing of Site Permit Amendment Application
20	EERA Comments on Application Completeness and Proposed Draft Site Permit
30	Notice of Public Information Meeting and Comment Period
50	Public Information Meeting
60	End of Public Comment Period
74	EERA Comments on Site Permit Amendment
95-115	Commission Meeting for Decision

LWECS repowering projects do not require a certificate of need from the Commission if the repowering does not change the nameplate capacity of the project.<sup>11</sup>

## EERA Staff Analysis and Comments

### Application Completeness

EERA staff has conferred with the applicant about the proposed repowering and had reviewed a draft permit amendment application. EERA staff believes that staff comments on the draft application have been addressed in the amendment application submitted to the Commission. Also at staff’s request, the applicant has included in the application a table addressing the completeness requirements of Minnesota Rule 7854.0500.<sup>12</sup> Staff finds that the application contains appropriate and complete information with respect to these requirements, including descriptions of the proposed repowering and potential human and environmental impacts and mitigation measures. Accordingly, staff believes that the permit amendment application is substantially complete.

<sup>10</sup> Minnesota Rule 7854.0500.

<sup>11</sup> Minnesota Statute 216B.243.

<sup>12</sup> Amendment Application, pp. x-xiii

### *Draft Decommissioning Plan*

EERA staff notes that the amendment application includes a description of the project's decommissioning and a draft decommissioning plan.<sup>13</sup> Unlike independent power producers, Xcel Energy is required to perform a comprehensive dismantling study on all electric generation plants. The most recent study was filed in in the 2020 Annual Review of Remaining Lives (Docket No. E,G002/D-19-723) and included all plants in-service as of April 2020. The next dismantling study will be performed in 2025.<sup>14</sup> More immediate updates will be clarified by record development prior to the applicant's pre-construction filing of their Grand Meadow decommissioning plan, keeping project specific information readily accessible in the project docket.

### *Pre-construction Noise Modeling*

Xcel Energy filed a study of anticipated sound impacts of the repowering with its application.<sup>15</sup> RSG conducted the assessment using a ground absorption factor of  $G=0.7$ , a receptor height of 4 meters, and an uncertainty of 2 dBA for comparing modeled results to the  $L_{50}$  standards in Minnesota Rule 7030. While RSG noted a factor of 0.5 is "generally accepted wind turbine modeling procedure,"<sup>16</sup> RSG states their parameters were selected based on "standards, documented guidance," and their own professional judgement and experience.

EERA concedes this is an improvement from many project studies in the past that used a factor of 1.0. However, EERA is currently investigating how well models with higher ground factors have proven out in actual post-construction noise monitoring in Minnesota. Since there is some disagreement among consultants, EERA requests that the applicant and RSG provide detailed documentation into the record prior to the hearing describing their "standards" and "documented guidance". If projects' modeling does not effectively represent post-construction noise levels, there is a risk of detecting exceedances *post facto*. EERA notes that compliance corrections have a possibility of being rather restrictive, leading to an inefficient outcome, e.g., curtailment at certain hours or wind speeds.

### *Draft Site Permit*

Commission practice for LWECS repowering permit amendments has been to issue a complete, updated site permit for the repowered LWECS, as opposed to amendment language that must be interpreted by reference to the original site permit. In keeping with this practice, EERA staff has prepared and attached a draft site permit for a repowered Grand Meadow Wind Farm. Staff has prepared this draft site permit based on the Commission's LWECS site permit template and on recent LWECS permit amendments. Staff has modified the permit template to reflect the proposed repowering, including portions of the template where variances may be required for the project. These modifications are discussed further here.

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<sup>13</sup> Amendment Application, Section 11 and Appendix J

<sup>14</sup> Amendment Application, Section 11.3

<sup>15</sup> Amendment Application, Appendix E

<sup>16</sup> *Id.*, p. 6

### *Wind Access Buffer Setback*

Commission LWECS permits require a wind access buffer setback from properties where permittees do not hold wind rights. The purpose of this setback is to ensure the economic efficiency of the project and to protect against infringement of wind development rights on adjacent properties. The permit for the Grand Meadow Wind Farm requires a three-rotor diameter setback on non-prevailing wind direction and five-rotor diameter (3 RD x 5 RD) on prevailing wind direction from non-participating property lines.<sup>17</sup>

The applicant discusses wind access buffer setbacks in its permit amendment application.<sup>18</sup> The applicant notes that it is negotiating with affected landowners and attempting to obtain wind rights consistent with the expanded rotor diameters. The applicant also notes that if it cannot obtain wind rights for a 3 RD X 5 RD setback from specific landowners in the project area, it will request a waiver of the setback for these properties, i.e., for specific turbine locations.<sup>19</sup> The applicant continues to negotiate with landowners over affected parcels and anticipates minimizing the number of waiver requests before the Commission considers permit issuance.

EERA staff has included the possibility of varying the 3 RD X 5 RD wind access buffer setback for select turbine locations in the draft site permit but supports applicant's efforts to further minimize the number of waiver requests.<sup>20</sup>

### *Turbine Tower Lighting*

Commission LWECS permits require lighting on turbine towers that is approved by the Federal Aviation Administration (FAA).<sup>21</sup> This lighting functions as a collision avoidance measure for aircraft in the project area. Typically, this lighting has consisted of a flashing red beacon on each turbine tower. Recently, the FAA has approved a lighting system which does not flash unless and until an aircraft is detected by radar near the project area. This lighting system is referred to as an aircraft detection lighting system (ADLS). The goal of an ADLS is to provide safety for aircraft flying in or near the project area while minimizing the negative aesthetic impact of multiple, flashing red lights for persons living near the project.

The applicant is proposing to install an ADLS lighting mitigation system as part of the repowering project.<sup>22</sup> Recent permits have included the possibility of installing a different lighting mitigation system – for example a light intensity dimming solution (LIDS) – if such a system obtains FAA approval. A LIDS system varies the intensity of turbine tower beacons based on visibility in the project area.

Formerly permitted as a special condition, EERA staff has now included a standard permit condition requiring a lighting mitigation system for the project in the draft site permit.<sup>23</sup>

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<sup>17</sup> Draft Site Permit, Section 4.1; Original Site Permit, Section III.C.1

<sup>18</sup> Amendment Application, Sections 5.1 and 7

<sup>19</sup> Amendment Application, Appendix C

<sup>20</sup> Draft Site Permit, Section 4.1

<sup>21</sup> Draft Site Permit, Section 5.3.28

<sup>22</sup> Amendment Application, Section 6.3.3

<sup>23</sup> Draft Site Permit, Section 5.3.28

### *Avian and Bat Fatality Monitoring*

Commission LWECS permits require monitoring of avian and bat fatalities associated with wind farm operations. The extent of this monitoring depends on the estimated risks to birds and bats associated with a specific site and proposed turbines. Based on pre-application meetings with the applicant and the Minnesota Department of Natural Resources, EERA staff has included two years of avian and bat fatality monitoring in the draft site permit.<sup>24</sup>

### *Applicant Requested Site Permit Changes*

The applicant made several requests for specific changes in draft permit conditions<sup>25</sup> from the original (2008) permit. EERA has incorporated the following items into the draft site permit. A number of these are now considered standard permit language for wind projects.

- Updated the cover to increase the nameplate capacity to 108 MW and the expiration date for the permit to 25 years following issuance of the amended site permit.
- Reduced the acreage of the project area to 8,088 acres.<sup>26</sup>
- Added request for 22 wind access buffer waivers for turbines 101-104, 106, 112, 115-119, 124, 126, 129-131, 133-135, 158-159, and 165.<sup>27</sup>
- Included an ADLS requirement for FAA lighting requirement.<sup>28</sup>
- Updated Noise Studies requirement consistent with language in current permits.<sup>29</sup>
- Updated Project Energy, Wind Resource Use, and Extraordinary Events compliance reporting requirements consistent with language in current permits.<sup>30</sup>

### *Other Amendments and Clarifications*

EERA staff has amended and clarified additional items in the draft site permit to reflect the Commission's LWECS site permit template, recent LWECS permit amendments, and the specifics of the Grand Meadow Wind Farm. These items include:

- **Project Description.** EERA staff has included an appropriate project description.<sup>31</sup>

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<sup>24</sup> Draft Site Permit, Section 7.5.1

<sup>25</sup> Amendment Application, Section 1.4

<sup>26</sup> Draft Site Permit, Sections 1.2 and 3

<sup>27</sup> Draft Site Permit, Section 4.1

<sup>28</sup> Draft Site Permit, Section 5.3.28

<sup>29</sup> Draft Site Permit, Section 7.4

<sup>30</sup> Draft Site Permit, Sections 10.8, 10.9 and 10.11

<sup>31</sup> Draft Site Permit, Sections 2 and 4.9



- **Designated Site.** EERA included the downsized project area. As the wind farm is already sited and constructed, EERA staff has removed discussion of the acreage within the project boundary that may be converted to wind farm use.<sup>32</sup>
- **Turbine Layout.** EERA staff has amended the description of the turbine layout to note that it is not a preliminary layout. No turbines will be moved during the repowering; thus, the project's turbine layout is final.<sup>33</sup>
- **Other Permits and Regulations.** EERA staff has clarified that the permittee must submit a filing with a detailed status update of all permits, authorizations, and approvals required for the project via a filing with the Commission prior to the pre-construction meeting. The permittee must demonstrate that it has obtained all necessary permits, authorizations, and approvals by filing an affidavit stating as much prior to commencing construction.<sup>34</sup>
- **Biological and Natural Resource Inventories.** As the wind farm is already sited and constructed, EERA staff has amended this inventory requirement to include only new surveys conducted for the repowering project.<sup>35</sup>
- **Wake Loss Studies.** Because the project's wind turbine towers are already sited and constructed, EERA staff has removed any discussion of micro-siting from this study requirement.<sup>36</sup>
- **Noise Studies.** Because the wind farm is currently operational, EERA staff has clarified that the completed post-construction noise study must be filed within 18 months of the completion of the repowering project.<sup>37</sup>
- **Pre-Operation Meeting and Decommissioning Plan.** Because the wind farm is currently operational, EERA staff has removed the requirement for a pre-operational meeting. A project's decommissioning plan is typically filed in advance of a pre-operational meeting. Because such a meeting will not occur, EERA staff has amended the plan's filing date to 14 days prior to the pre-construction meeting.<sup>38</sup>
- **Site Plan.** Commission LWECS permits require permittees to submit their proposed site plans to the Commission prior to a pre-construction meeting. A permittee may not begin construction until the Commission has advised them in writing that the permittee's proposed site plan is consistent with the site permit or until 30 days has expired. EERA staff has clarified that this 30-day period begins with the pre-construction meeting.<sup>39</sup>

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<sup>32</sup> Draft Site Permit, Section 3

<sup>33</sup> Draft Site Permit, Section 3.1

<sup>34</sup> Draft Site Permit, Section 5.6.2

<sup>35</sup> Draft Site Permit, Section 7.1

<sup>36</sup> Draft Site Permit, Section 7.3

<sup>37</sup> Draft Site Permit, Section 7.4

<sup>38</sup> Draft Site Permit, Section 11.1

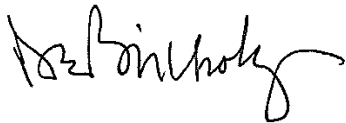
<sup>39</sup> Draft Site Permit, Section 10.2

Since the wind farm is sited and constructed, EERA staff has removed language allowing movement of a turbine site based on previously unidentified human and environmental conditions.<sup>40</sup>

- ***In-Service Date.*** As the wind farm is already operational, EERA staff has clarified that the requirement for notice of the project being in service refers to completion of the repowering project.<sup>41</sup>

## EERA Staff Recommendation

EERA staff recommends acceptance of the permit amendment application as complete. EERA staff recommends that the application be reviewed according to the Commission's process for LWECS repowering permit amendments (Table 1 above), beginning with noticing and holding a public information meeting as soon as arrangements can be made. Further, EERA staff recommends that the attached draft site permit be used as a starting point for public comment on the proposed repowering.



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David Birkholz, Environmental Review Manager  
Energy Environmental Review and Analysis  
Department of Commerce

June 24, 2021

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Date

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<sup>40</sup> Draft Site Permit, Section 10.2

<sup>41</sup> Draft Site Permit, Section 10.5

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION**

**AMENDED SITE PERMIT FOR A  
LARGE WIND ENERGY CONVERSION SYSTEM**

**IN  
MOWER COUNTY**

**ISSUED TO  
NORTHERN STATES POWER COMPANY**

**PUC DOCKET NO. WS-07-839**

In accordance with the requirements of Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7854 this site permit is hereby issued to:

**NORTHERN STATES POWER COMPANY (D/B/A XCEL ENERGY)**

The Permittee is authorized by this site permit to construct and operate the Grand Meadow Wind Farm, a Large Wind Energy Conversion System of up to 108 megawatts (MW) consisting of 67 turbines. The Large Wind Energy Conversion System and associated facilities shall be built within the site identified in this permit and as portrayed on the site maps and in compliance with the conditions specified in this permit.

This site permit shall expire twenty-five (25) years from the date of this approval.

Approved and adopted this \_\_\_\_ day of \_\_\_\_\_

BY ORDER OF THE COMMISSION

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Will Seuffert, Executive Secretary

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## ATTACHMENTS

Attachment 1 – Complaint Handling Procedures for Permitted Energy Facilities

Attachment 2 – Compliance Filing Procedure for Permitted Energy Facilities

Attachment 3 – Site Map

Attachment 4 – DNR Flyers

## **1 SITE PERMIT**

The Minnesota Public Utilities Commission (Commission) hereby issues this site permit to Northern States Power Company (Permittee) pursuant to Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7854. This permit authorizes the Permittee to construct and operate the Grand Meadow Wind Farm, an up to 108 megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS) and associated facilities in Mower County. The LWECS and associated facilities shall be built within the site identified in this permit and as identified in the attached site maps, hereby incorporated into this document.

### **1.1 Preemption**

Pursuant to Minn. Stat. § 216F.07, this permit shall be the sole site approval required for the location, construction, and operation of this project and this permit shall supersede and preempt all zoning, building, and land use rules, regulations, and ordinances adopted by regional, county, local, and special purpose governments.

## **2 PROJECT DESCRIPTION**

The project is a repowering of the existing Grand Meadow Wind Farm's GE 1.5 sle wind turbines to 1.6 sle turbines. The repowering includes (1) replacing 52 turbines with 97-meter rotors and 15 turbines with 91-meter rotors; (2) replacing equipment within the turbine nacelles; and (3) installing a lighting mitigation system.

There are no changes to existing turbine locations, turbine towers, meteorological towers, the underground electrical connection system, or the project substation. The nameplate capacity of the wind farm increases from 100.5 MW to 107.2 MW (up to 108 MW), but generation at the interconnection point remains at 100.5 MW per MISO agreement.

The project area includes approximately 8,088 acres of land, and the Permittee currently holds easements and participation agreements on up to **XX,XXX** acres of land within the project area. Upon completion of Project construction and restoration, the project site will include no more than **XXX** acres of land converted to wind turbines and associated facilities approved by this site permit.

## **2.1 Associated Facilities**

Associated facilities include the following:

- a. gravel access roads
- b. underground collection lines
- c. underground communication line system
- d. one permanent meteorological tower
- e. a Project substation facility
- f. an operations and maintenance (O&M) facility
- g. a lighting mitigation system

Temporary disturbance areas to allow for the construction of the Project will include, crane paths, pull sites, access roads, a concrete batch plant, and a laydown yard.

## **2.2 Project Location**

The project is located in the following:

<b>County Name</b>	<b>Township Name</b>	<b>Township</b>	<b>Range</b>	<b>Sections</b>
Grand Meadow	Clayton	102N	15W	5, 6
	Dexter	103N	16W	24-25, 36
	Grand Meadow	103N	15W	7-9, 17-21, 28-33
	Dexter (city)	103N	16W	24

## **3 DESIGNATED SITE**

The site designated by the Commission for the Grand Meadow Wind Farm is the site depicted on the site maps attached to this permit. The project area encompasses approximately 8,088 acres. Within the project boundary, the LWECS and associated facilities shall be located on lands for which the Permittee has obtained wind rights.

### **3.1 Turbine Layout**

The wind turbine and associated facilities layout is shown on the site maps attached to this permit. The layout represents the location of wind turbines and associated facilities within the project boundary and identifies a layout that minimizes the overall potential human and environmental impacts of the project.



## **4 SETBACKS AND SITE LAYOUT RESTRICTIONS**

### **4.1 Wind Access Buffer**

Wind turbine towers shall not be placed less than five rotor diameters on the prevailing wind directions and three rotor diameters on the non-prevailing wind directions from the perimeter of the property where the Permittee does not hold the wind rights, without the approval of the Commission. This section does not apply to public roads and trails.

*[The Commission authorizes a variance of the wind access buffer setback for the following turbine locations: 22 turbines, including turbines: 101-104, 106, 112, 115-119, 124, 126, 129-131, 133-135, 158-159, and 165. Update prior to permitting following continuing negotiations.]*

### **4.2 Residences**

Wind turbine towers shall not be located closer than 1,000 feet from all residences or the distance required to comply with the noise standards pursuant to Minn. R. 7030.0040, established by the Minnesota Pollution Control Agency (MPCA), whichever is greater.

### **4.3 Noise**

The wind turbine towers shall be placed such that the Permittee shall, at all times, comply with noise standards established by the MPCA as of the date of this permit and at all appropriate locations. The noise standards are found in Minnesota Rules Chapter 7030. Turbine operation shall be modified, or turbines shall be removed from service if necessary to comply with these noise standards. The Permittee or its contractor may install and operate turbines as close as the minimum setback required in this permit, but in all cases shall comply with MPCA noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

### **4.4 Roads**

Wind turbines and meteorological towers shall not be located closer than 250 feet from the edge of the nearest public road right-of-way.

#### **4.5 Public Lands**

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in publicly-owned lands that have been designated for recreational or conservation purposes, including, but not limited to, Waterfowl Production Areas, State Wildlife Management Areas, Scientific and Natural Areas or county parks, except in the event that the public entity owning those lands enters into a land lease and easement with the Permittee. Wind turbines towers shall also comply with the setbacks of Section 4.1.

#### **4.6 Wetlands**

Wind turbines and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in public waters wetlands, as shown on the public water inventory maps prescribed by Minnesota Statutes Chapter 103G, except that electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to permits and approvals by the Minnesota Department of Natural Resources (DNR) and the United States Army Corps of Engineers (USACE), and local units of government as implementers of the Minnesota Wetlands Conservation Act.

#### **4.7 Native Prairie**

Wind turbines and associated facilities including foundations, access roads, collector and feeder lines, underground cable, and transformers shall not be placed in native prairie, as defined in Minn. Stat. § 84.02, subd. 5, unless addressed in a prairie protection and management plan and shall not be located in areas enrolled in the Native Prairie Bank Program. Construction activities, as defined in Minn. Stat. § 216E.01, shall not impact native prairie unless addressed in a Prairie Protection and Management Plan.

The Permittee shall prepare a Prairie Protection and Management Plan in consultation with the DNR if native prairie, as defined in Minn. Stat. § 84.02, subd. 5, is identified within the site boundaries. The Permittee shall file the plan 30 days prior to submitting the site plan required by Section 10.3 of this permit. The plan shall address steps that will be taken to avoid impacts to native prairie and mitigation to unavoidable impacts to native prairie by restoration or management of other native prairie areas that are in degraded condition, by conveyance of conservation easements, or by other means agreed to by the Permittee, the DNR, and the Commission.

#### **4.8 Sand and Gravel Operations**

Wind turbines and all associated facilities, including foundations, access roads, underground cable, and transformers shall not be located within active sand and gravel operations, unless otherwise negotiated with the landowner.

#### **4.9 Wind Turbine Towers**

Structures for wind turbines are self-supporting tubular towers. The wind turbine specifications in the table below were provided in the Permittee's May 27, 2021, Site Permit Amendment Application:

<b>Design Feature</b>	<b>GE 1.6 sle</b>	<b>GE 1.6 sle</b>
Capacity	1.6 MW	1.6 MW
Number of Turbines	15	111
Total Height (ground to tip)	125.5 m (411.7 ft)	128.5 m (421.6 ft)
Hub Height	80 m (262 .5 ft)	80 m (262.5 ft)
Rotor Diameter	91 m (298.6 ft)	97 m (318.2 ft)

#### **4.10 Turbine Spacing**

The turbine towers shall be constructed within the site boundary as shown on the site maps. The turbine towers shall be spaced no closer than three rotor diameters in the non-prevailing wind directions and five rotor diameters on the prevailing wind directions. If required, up to 20 percent of the towers may be sited closer than the above spacing, but the Permittee shall minimize the need to site the turbine towers closer.

#### **4.11 Meteorological Towers**

Permanent towers for meteorological equipment shall be free standing. Permanent meteorological towers shall not be placed less than 250 feet from the edge of the nearest public road right-of-way and from the boundary of the Permittee's site control, or in compliance with the county ordinance regulating meteorological towers in the county the tower is built, whichever is more restrictive. Meteorological towers shall be placed on property the Permittee holds the wind or other development rights.

Meteorological towers shall be marked as required by the Federal Aviation Administration (FAA). There shall be no lights on the meteorological towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

#### **4.12 Aviation**

The Permittee shall not place wind turbines or associated facilities in a location that could create an obstruction to navigable airspace of private and public airports (as defined in Minn. R. 8800.0100, subp. 24(a) and 24(b)) in Minnesota, adjacent states, or provinces. The Permittee shall apply the minimum obstruction clearance for private airports pursuant to Minn. R. 8800.1900, subp. 5. Setbacks or other limitations shall be followed in accordance with the Minnesota Department of Transportation (MnDOT), Department of Aviation, and the FAA. The Permittee shall notify owners of all known airports within six miles about the project's anticipated construction start date at least 14 days prior to the pre-construction meeting.

#### **4.13 Footprint Minimization**

The Permittee shall design and construct the LWECS so as to minimize the amount of land that is impacted by the LWECS. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers, and monitoring systems shall, to the greatest extent feasible, be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.

### **5 GENERAL CONDITIONS**

The Permittee shall comply with the following conditions during construction and operation of the LWECS and associated facilities over the life of this permit.

#### **5.1 Permit Distribution**

Within 30 days of permit issuance, the Permittee shall send a copy of the permit and the complaint procedures to any regional development commission, county auditor and environmental office, and city and township clerk in which any part of the site is located.

Within 30 days of permit issuance, the Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures. In no case shall the landowner receive this site permit and complaint procedures less than five days prior to the start of construction on their property. An affected landowner is any landowner or designee that is within or adjacent to the permitted site.

## **5.2 Access to Property**

The Permittee shall contact landowners prior to entering private property or conducting maintenance within the project site, unless otherwise negotiated with the affected landowner.

## **5.3 Construction and Operation Practices**

The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the May 27, 2021, Site Permit Amendment Application, and the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.

### **5.3.1 Field Representative**

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this permit during construction of the project. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative 14 days prior to the pre-construction meeting. The Permittee shall provide the field representative's contact information to affected landowners, residents, local government units and other interested persons 14 days prior to commencing construction. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, LGUs and other interested persons.

### **5.3.2 Site Manager**

The Permittee shall designate a site manager responsible for overseeing compliance with the conditions of this permit during the commercial operation and decommissioning phases of the project. This person shall be accessible by telephone or other means during normal business hours for the life of this permit.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the site manager 14 days prior to commercial operation of the facility. The Permittee shall provide the site manager's contact information to affected landowners, residents, local government units and other interested persons 14 days prior to commercial operation of the facility. The Permittee may change the site manager at any time upon notice to the Commission, affected landowners, local government units and other interested persons.

### **5.3.3 Employee Training and Education of Permit Terms and Conditions**

The Permittee shall inform and educate all employees, contractors, and other persons involved in the construction and ongoing operation of the LWECS of the terms and conditions of this permit.

### **5.3.4 Public Services and Public Utilities**

During construction, the Permittee shall minimize any disruption to public services and public utilities. To the extent disruptions to public services or public utilities occur these will be temporary, and the Permittee will restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate mitigation measures if not already considered as part of this permit.

### **5.3.5 Topsoil Protection**

The Permittee shall implement measures to protect and segregate topsoil from subsoil on all lands unless otherwise negotiated with the affected landowner.

### **5.3.6 Soil Compaction**

The Permittee shall implement measures to minimize soil compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable. Soil decompaction measures shall be utilized on all lands utilized for project construction and travelled on by cranes, heavy equipment, and heavy trucks; even when soil compaction minimization measures are used.

### **5.3.7 Soil Erosion and Sediment Control**

The Permittee shall implement those erosion prevention and sediment control practices recommended by the MPCA Construction Stormwater Program. If construction of the facility disturbs more than one acre of land, or is sited in an area designated by the MPCA as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater Permit from the MPCA that provides for the development of a Stormwater Pollution Prevention Plan (SWPPP) that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

### **5.3.8 Wetlands and Water Resources**

Construction in wetland areas shall occur during frozen ground conditions to minimize impacts, to the extent feasible. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and managed in accordance with all applicable wetland permits. Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts.

Wetland and water resource areas disturbed by construction activities shall be restored to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements. All requirements of the U.S. Army Corps of Engineers, Minnesota Department of Natural Resources, Minnesota Board of Water and Soil Resources, and local units of government shall be met.

### **5.3.9 Vegetation Removal**

The Permittee shall disturb or clear vegetation on the project site only to the extent necessary to assure suitable access for construction, and for safe operation and maintenance of the project. The Permittee shall minimize the number of trees removed in selecting the site layout specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and other vegetation, to the extent that such actions do not violate sound engineering principles.

### **5.3.10 Application of Pesticides**

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture (MDA), DNR, and the U.S. Environmental Protection Agency (EPA). Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

### **5.3.11 Invasive Species**

The Permittee shall employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by project construction activities. The Permittee shall develop an Invasive Species Prevention Plan to prevent the introduction and spread of invasive species on lands disturbed by project construction activities and file with the Commission 14 days prior to the pre-construction meeting.

### **5.3.12 Noxious Weeds**

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil, the Permittee shall select site appropriate seed certified to be free of noxious weeds. The Permittee shall consult with landowners on the selection and use of seed for replanting. To the extent possible, the Permittee shall use native seed mixes.



### **5.3.13 Public Roads**

At least 14 days prior to the pre-construction meeting, the Permittee shall identify all state, county, or township roads that will be used for the project and shall notify the Commission and the state, county, or township governing body having jurisdiction over the roads to determine if the governmental body needs to inspect the roads prior to use of these roads. Where practical, existing roadways shall be used for all activities associated with the project. Where practical, all-weather roads shall be used to deliver cement, turbines, towers, assembled nacelles, and all other heavy components to and from the turbine sites.

The Permittee shall, prior to the use of such roads, make satisfactory arrangements (approved permits, written authorizations, road use agreements, development agreements, etc.) with the appropriate state, county, or township governmental body having jurisdiction over roads to be used for construction of the project, for maintenance and repair of roads that may be subject to increased impacts due to transportation of equipment and project components. The Permittee shall notify the Commission of such arrangements upon request.

### **5.3.14 Turbine Access Roads**

The Permittee shall construct the least number of turbine access roads necessary to safely and efficiently operate the project and satisfy landowner requests. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with Class 5 gravel or similar material. Access roads shall not be constructed across streams and drainage ditches without required permits and approvals. When access roads are constructed across streams, drainage ways, or drainage ditches, the access roads shall be designed and constructed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed. Any access roads that are constructed across streams or drainage ditches shall be designed and constructed in a manner that maintains existing fish passage.

Access roads that are constructed across grassed waterways, which provide drainage for surface waters that are ephemeral in nature, are not required to maintain or provide fish passage. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

#### **5.3.15 Private Roads**

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.

#### **5.3.16 Archaeological and Historic Resources**

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the facility. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office (SHPO) and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with SHPO and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction at such location and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement and the State Archaeologist.

#### **5.3.17 Interference**

At least 14 days prior to the pre-construction meeting, the Permittee shall submit to the Commission an assessment of television and radio signal reception, microwave signal patterns, and telecommunications in the project area. The assessment shall be designed to provide data that can be used in the future to determine whether the turbines and associated facilities are the cause of disruption or interference of television or radio reception, microwave patterns, or telecommunications in the event residents should complain about such disruption or interference after the turbines are placed in operation. The Permittee shall be responsible for alleviating any disruption or interference of these services caused by the turbines or any associated facilities.

The Permittee shall not operate the project so as to cause microwave, television, radio, telecommunications, or navigation interference in violation of Federal Communications Commission (FCC) regulations or other law. In the event the project or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

#### **5.3.18 Livestock Protection**

The Permittee shall take precautions to protect livestock during all phases of the project's life.

#### **5.3.19 Fences**

The Permittee shall promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner. When the Permittee installs a gate where electric fences are present, the Permittee shall provide for continuity in the electric fence circuit.

#### **5.3.20 Drainage Tiles**

The Permittee shall take into account, avoid, promptly repair or replace all drainage tiles broken or damaged during all phases of project's life unless otherwise negotiated with the affected landowner.

#### **5.3.21 Equipment Storage**

The Permittee shall not locate temporary equipment staging areas on lands under its control unless negotiated with affected landowner. Temporary equipment staging areas shall not be located in wetlands or native prairie as defined in Sections 4.6 and 4.7.

#### **5.3.22 Restoration**

The Permittee shall, as soon as practical following construction of each turbine, restore the areas affected by construction to the condition that existed immediately before construction began, to the extent possible. The time period to complete restoration may be no longer than 12 months after the completion of construction, unless otherwise negotiated with the affected landowner. Restoration shall be compatible with the safe operation, maintenance and inspection of the project. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

#### **5.3.23 Cleanup**

All waste and scrap that is the product of construction shall be removed from the site and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

#### **5.3.24 Pollution and Hazardous Waste**

All appropriate precautions to protect against pollution of the environment shall be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction, site restoration and operation of the facility.

#### **5.3.25 Damages**

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

#### **5.3.26 Public Safety**

The Permittee shall provide educational materials to landowners adjacent to the site and, upon request, to interested persons about the project and any restrictions or dangers associated with the project. The Permittee shall also provide any necessary safety measures such as warning signs and gates for traffic control or to restrict public access. The Permittee shall submit the location of all underground facilities, as defined in Minn. Stat. § 216D.01, subd. 11, to Gopher State One Call following the completion of construction at the site.

#### **5.3.27 Tower Identification**

All turbine towers shall be marked with a visible identification number.

#### **5.3.28 Federal Aviation Administration Lighting**

Towers shall be marked as required by the FAA. There shall be no lights on the towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

The Permittee shall install and employ an FAA-approved lighting mitigation system. Such a system shall use aircraft detection (aircraft detection lighting system, ADLS), dimming (light intensity dimming solution, LIDS) or other FAA-approved mitigation method. The Permittee shall describe the lighting mitigation system used for the project in its site plan.

#### **5.4 Communication Cables**

The Permittee shall place all communication and supervisory control and data acquisition cables underground and within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner.

#### **5.5 Electrical Collector and Feeder Lines**

Collector lines that carry electrical power from each individual transformer associated with a wind turbine to an internal project interconnection point shall be buried underground. Collector lines shall be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner.

Feeder lines that carry power from an internal project interconnection point to the project substation or interconnection point on the electrical grid may be overhead or underground. Feeder line locations shall be negotiated with the affected landowner. Any overhead or underground feeder lines that parallel public roads shall be placed within the public rights-of-way or on private land immediately adjacent to public roads. If overhead feeder lines are located within public rights-of-way, the Permittee shall obtain approval from the governmental unit responsible for the affected right-of-way.

Collector and feeder line locations shall be located in such a manner as to minimize interference with agricultural operations including, but not limited to, existing drainage patterns, drain tile, future tiling plans, and ditches. Safety shields shall be placed on all guy wires associated with overhead feeder lines. The Permittee shall submit the engineering drawings of all collector and feeder lines in the site plan pursuant to Section 10.3.

## **5.6 Other Requirements**

### **5.6.1 Safety Codes and Design Requirements**

The LWECS and associated facilities shall be designed to meet or exceed all relevant local and state codes, Institute of Electrical and Electronics Engineers, Inc. (IEEE) standards, the National Electric Safety Code (NESC), and North American Electric Reliability Corporation (NERC) requirements. The Permittee shall report to the Commission on compliance with these standards upon request.

### **5.6.2 Other Permits and Regulations**

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. A list of the permits known to be required is included in the permit application. At least 14 days prior to the pre-construction meeting, the Permittee shall submit a filing with a detailed status update of all permits, authorizations, and approvals that have been applied for specific to the project. The detailed status update shall include the permitting agency or authority, the name of the permit, authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

The Permittee shall demonstrate that it has obtained all necessary permits, authorizations, and approvals by filing an affidavit stating as such, prior to commencing project construction. The Permittee shall provide a copy of any such permits, authorizations, and approvals upon Commission request.

The Permittee shall comply with all terms and conditions of permits or licenses issued by the counties, cities, and municipalities affected by the project that do not conflict with or are not preempted by federal or state permits and regulations.

## **6 SPECIAL CONDITIONS**

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

## **6.1 Soil and Water Conservation District (SWCD) and Landowner Review of Plans**

The Permittee shall provide the local SWCD and participating landowners with the opportunity to review and comment on detailed access road, and all other infrastructure plans and designs in order to minimize the potential to pond and/or divert water creating gully erosion or the potential to cause damage or failure to existing conservation practices, such as terrace(s), sediment control basin(s) or diversion(s) prior to finalization and installation. The Permittee shall file documentation that condition 6.1 of this permit has been complied with at least two weeks prior to the pre-construction meeting.

## **7 SURVEYS AND REPORTING**

### **7.1 Biological and Natural Resource Inventories**

The Permittee shall file with the Commission, any biological surveys or studies conducted for the repowering of the Grand Meadow Wind Farm, other than those studies included in the May 27, 2021, Site Permit Amendment Application, including those not required under this permit.

### **7.2 Shadow Flicker**

At least 14 days prior to the pre-construction meeting, the Permittee shall provide data on shadow flicker for each residence of non-participating landowners and participating landowners within and outside of the project boundary potentially subject to turbine shadow flicker exposure. Information shall include the results of modeling used, assumptions made, and the anticipated levels of exposure from turbine shadow flicker for each residence. The Permittee shall provide documentation on its efforts to avoid, minimize and mitigate shadow flicker exposure. The results of any modeling shall be filed with the Commission at least 14 days prior to the pre-construction meeting to confirm compliance with conditions of this permit.

### **7.3 Wake Loss Studies**

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission its wake loss analysis for the repowering and an estimate of total project wake losses. As part of the annual report on project energy production required under Section 10.8 of this permit, the Permittee shall file with the Commission any operational wake loss studies conducted on this project during the calendar year preceding the report.

## **7.4 Noise Studies**

The Permittee shall file a proposed methodology for the conduct of a post-construction noise study at least 14 days prior to the pre-construction meeting. The Permittee shall develop the post-construction noise study methodology in consultation with the Department of Commerce. The study must incorporate the Department of Commerce Noise Study Protocol to determine the operating LWECs noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds. The Permittee must conduct the post-construction noise study and file with the Commission the completed post-construction noise study within 18 months of completion of the repowering project.

## **7.5 Avian and Bat Protection**

### **7.5.1 Operational Phase Fatality Monitoring**

The Permittee shall utilize a qualified third party to conduct a minimum of two full years of avian and bat fatality monitoring following the commencement of the operational phase of the project. Monitoring activities and results will be coordinated directly with the Minnesota Department of Natural Resources, U.S. Fish and Wildlife Service, and the Commission. Detailed monitoring protocols, agency coordination, and any avoidance and minimization measures will be detailed in the project's Bird and Bat Conservation Strategy (BBCS).

### **7.5.2 Avian and Bat Protection Plan**

The Permittee shall comply with the provisions of the April 2021, Bird and Bat Conservation Strategy submitted for this project as part of the May 27, 2021, Site Permit Amendment Application, and all necessary revisions that occur during the permit issuance process will be incorporated into a Permit Version. The Permit Version of the BBCS will be filed with the Commission 14 days before the preconstruction meeting and revisions will include any updates associated with final construction plans. The BBCS must address steps to be taken to identify and mitigate impacts to avian and bat species during the construction phase and the operation phase of the project. The BBCS shall also include formal and incidental post-construction fatality monitoring, training, wildlife handling, documentation (*e.g.*, photographs), and reporting protocols for each phase of the project.

The Permittee shall, by the 15th of March following each complete or partial calendar year of operation, file with the Commission an annual report detailing findings of its annual audit of BBCS practices. The annual report shall include summarized and raw data of bird and bat



fatalities and injuries and shall include bird and bat fatality estimates for the project using agreed upon estimators from the prior calendar year. The annual report shall also identify any deficiencies or recommended changes in the operation of the project or in the BBCS to reduce avian and bat fatalities and shall provide a schedule for implementing the corrective or modified actions. The Permittee shall provide a copy of the report to the Minnesota Department of Natural Resources (DNR) and to the U.S. Fish and Wildlife Service (USFWS) at the time of filing with the Commission.

### **7.5.3 Quarterly Incident Reports**

The Permittee shall submit quarterly avian and bat reports to the Commission. Quarterly reports are due by the 15th of January, April, July, and October commencing the day following commercial operation and terminating upon the expiration of this permit. Each report shall identify any dead or injured avian and bat species, location of find by turbine number, and date of find for the reporting period in accordance with the reporting protocols. If a dead or injured avian or bat species is found, the report shall describe the potential cause of the occurrence (if known) and the steps taken to address future occurrences. The Permittee shall provide a copy of the report to the DNR and to the USFWS at the time of filing with the Commission.

### **7.5.4 Immediate Incident Reports**

The Permittee shall notify the Commission, EERA, the USFWS, and the DNR within 24 hours of the discovery of any of the following:

- (a) five or more dead or injured birds or bats, at an individual turbine location, within a five day reporting period;;
- (b) twenty or more dead or injured birds or bats, across the entire facility, within a five day reporting period;;
- (c) one or more dead or injured state threatened, endangered, or species of special concern
- (d) one or more dead or injured federally listed species, including species proposed for listing; or
- (e) one or more dead or injured bald or golden eagle(s).

In the event that one of the four discoveries listed above should be made, the Permittee must file with the Commission within seven days, a compliance report identifying the details of what was discovered, the turbine where the discovery was made, a detailed log of agencies and individuals contacted, and current plans being undertaken to address the issue.

#### **7.5.5 Turbine Operational Curtailment**

The Permittee shall operate all facility turbines so that all turbines are locked or feathered up to the manufacturer's standard cut-in speed from one-half hour before sunset to one-half hour after sunrise of the following day from April 1 to October 31 of each year of operation. All operating turbines at the facility must be equipped with operational software that is capable of allowing for adjustment of turbine cut-in speeds.

### **8 AUTHORITY TO CONSTRUCT LWECS**

#### **8.1 Wind Rights**

At least 14 days prior to the pre-construction meeting, the Permittee shall demonstrate that it has obtained the wind rights and any other rights necessary to construct and operate the project within the boundaries authorized by this permit. Nothing in this permit shall be construed to preclude any other person from seeking a permit to construct a wind energy conversion system in any area within the boundaries of the project covered by this permit if the Permittee does not hold exclusive wind rights for such areas.

#### **8.2 Power Purchase Agreement**

In the event the Permittee does not have a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project at the time this permit is issued, the Permittee shall provide notice to the Commission when it obtains a commitment for purchase of the power. This permit does not authorize construction of the project until the Permittee has obtained a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project. In the event the Permittee does not obtain a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project within two years of the issuance of this permit, the Permittee must advise the Commission of the reason for not having such commitment. In such event, the Commission may determine whether this permit should be amended or revoked. No amendment or revocation of this permit may be undertaken except in accordance with Minn. R. 7854.1300.

### **8.3 Failure to Commence Construction**

If the Permittee has not completed the pre-construction surveys required under this permit and commenced construction of the project within two years of the issuance of this permit, the Permittee must advise the Commission of the reason construction has not commenced. In such event, the Commission shall make a determination as to whether this permit should be amended or revoked. No revocation of this permit may be undertaken except in accordance with applicable statutes and rules, including Minn. R. 7854.1300.

## **9 COMPLAINT PROCEDURES**

Fourteen (14) days prior to the pre-construction meeting,, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

## **10 COMPLIANCE REQUIREMENTS**

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

### **10.1 Pre-Construction Meeting**

Prior to the start of any construction, the Permittee shall participate in a pre-construction meeting with the Department of Commerce and Commission staff to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. Within 14 days following the pre-construction meeting, the Permittee shall file with the Commission, a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the construction start date.

## **10.2 Site Plan**

At least 14 days prior to the pre-construction meeting, the Permittee shall provide the Commission, the Department of Commerce, and the Mower County Environmental Services Office with a site plan that includes specifications and drawings for site preparation and grading; specifications and locations of all turbines and other structures to be constructed including all electrical equipment, collector and feeder lines, pollution control equipment, fencing, roads, and other associated facilities; and procedures for cleanup and restoration. The documentation shall include maps depicting the site boundary and layout in relation to that approved by this permit. The Permittee shall document, through GIS mapping, compliance with the setbacks and site layout restrictions required by this permit, including compliance with the noise standards pursuant to Minnesota Rules Chapter 7030. At the same time, the Permittee shall notify affected landowners and city and town clerks that the site plan is on file with the Commission and the Mower County Environmental Services Office. The Permittee may submit a site plan and engineering drawings for only a portion of the project if the Permittee intends to commence construction on certain parts of the project before completing the site plan and engineering drawings for other parts of the project.

The Permittee may not commence construction until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes to its site plan or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission, the Department, the Mower County Environmental Services Office, city and town clerks, and the affected landowners at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

## **10.3 Status Reports**

The Permittee shall file status reports with the Commission on progress regarding site construction. The Permittee need not report more frequently than monthly. Reports shall begin with the commencement of site construction and continue until completion of restoration. Reports shall describe construction activities and progress and activities undertaken in compliance with this permit. Reports shall include text and photographs.

#### **10.4 Labor Statistic Reporting**

The Permittee shall file quarterly reports with the Commission within 45 days of the end of the quarter regarding construction workers that participated in the construction of the project. The reports shall (a) detail the Permittee's efforts and the site contractor's efforts to hire Minnesota workers, and (b) provide an account of: (i) the gross number of hours worked by or full-time equivalent workers who are Minnesota residents, as defined in Minn. Stat. § 290.01, subd. 7; (ii) the gross number of hours worked by or full-time equivalent workers who are residents of other states, but maintain a permanent residence within 150 miles of the project; and (iii) the total gross hours worked or total full-time equivalent workers. Permittee shall work with its contractor to determine the suitable reporting metric. The report may not include personally identifiable data.

#### **10.5 In-Service Date**

At least three days before the final, repowered turbine is placed into service, the Permittee shall notify the Commission of the date on which the final, repowered turbine will be placed into service and the date on which construction was completed.

#### **10.6 As-Built**

Within 90 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

#### **10.7 GPS Data**

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (*e.g.*, ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the LWECS.

#### **10.8 Project Energy Production**

The Permittee shall, by February 1st following each complete or partial year of project operation, file a report with the Commission on the monthly energy production of the project including:

- (a) the installed nameplate capacity of the permitted project;
- (b) the total monthly energy generated by the project in MW hours;
- (c) the monthly capacity factor of the project;
- (d) yearly energy production and capacity factor for the project;
- (e) the operational status of the project and any major outages, major repairs, or turbine performance improvements occurring in the previous year; and
- (f) any other information reasonably requested by the Commission.

The permittee shall file this information in a format recommended in the Department's guidance on energy production reporting. This information shall be considered public and must be filed electronically. This information shall be considered public and must be filed electronically.

#### **10.9 Wind Resource Use**

The Permittee shall, by February 1st following each complete or partial calendar year of operation, file with the Commission the average monthly and average annual wind speed collected at one permanent meteorological tower during the preceding year or partial year of operation. This information shall be considered public and must be filed electronically.

#### **10.10 Emergency Response**

The Permittee shall prepare an Emergency Response Plan in consultation with the emergency responders having jurisdiction over the facility prior to project construction. The Permittee shall submit a copy of the plan, along with any comments from emergency responders, to the Commission at least 14 days prior to the pre-construction meeting and a revised plan, if any, at least 14 days prior to the pre-operation meeting.

The Permittee shall provide as a compliance filing confirmation that the Emergency Response Plan was provided to the emergency responders and Public Safety Answering Points (PSAP) with jurisdiction over the facility prior to commencement of construction. The Permittee shall obtain and register the facility address or other location indicators acceptable to the emergency responders and PSAP having jurisdiction over the facility.

### **10.11 Extraordinary Events**

Within 24 hours of discovery of an occurrence, the Permittee shall notify the Commission of any extraordinary event. Extraordinary events include but shall not be limited to fires, tower collapse, thrown blade, acts of sabotage, collector or feeder line failure, and injured worker or private person. The Permittee shall, within 30 days of the occurrence, file a report with the Commission describing the cause of the occurrence and the steps taken to avoid future occurrences.

## **11 DECOMMISSIONING, RESTORATION, AND ABANDONMENT**

### **11.1 Decommissioning Plan**

The Permittee shall comply with the provisions of the most recently filed and accepted Decommissioning Plan. The initial version of the Decommissioning Plan was submitted for this project as part of the May 27, 2021, Site Permit Amendment Application. The Permittee shall file an updated decommissioning plan, incorporating comments and information from the permit issuance process and any updates associated with the final construction plans, with the Commission 14 days before the pre-construction meeting. The decommissioning plan shall be updated every five years following the commercial operation date.

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.

### **11.2 Site Restoration**

Upon expiration of this permit, or upon earlier termination of operation of the project, or any turbine within the project, the Permittee shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables and lines, foundations, buildings, and ancillary equipment to a depth of four feet. Any agreement for removal to a lesser depth or no removal shall be recorded with the county and shall show the locations of all such foundations. To the extent feasible, the Permittee shall restore and reclaim the site to pre-project conditions, including topography and topsoil conditions. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. All such agreements between the Permittee and the affected landowner shall be submitted to the Commission prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within 18 months of termination.

### **11.3 Abandoned Turbines**

The Permittee shall advise the Commission of any turbines that are abandoned prior to termination of operation of the project. The project, or any turbine within the project, shall be considered abandoned after one year without energy production and the land restored pursuant to Section 11.2 unless a plan is submitted to and approved by the Commission outlining the steps and schedule for returning the project, or any turbine within the project, to service.

## **12 COMMISSION AUTHORITY AFTER PERMIT ISSUANCE**

### **12.1 Final Boundaries**

After completion of construction, the Commission shall determine the need to adjust the final boundaries of the site required for this project in accordance with Minn. R. 7854.1300, subp. 1.

### **12.2 Expansion of Site Boundaries**

No expansion of the site boundaries described in this permit shall be authorized without the approval of the Commission. The Permittee may submit to the Commission a request for a change in the boundaries of the site for the project. The Commission will respond to the requested change in accordance with applicable statutes and rules.



### **12.3 Periodic Review**

The Commission shall initiate a review of this permit and the applicable conditions at least once every five years. The purpose of the periodic review is to allow the Commission, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of this permit. No modification may be made except in accordance with applicable statutes and rules.

### **12.4 Modification of Conditions**

After notice and opportunity for hearing, this permit may be modified or amended for cause, including but not limited to the following:

- (a) violation of any condition in this permit;
- (b) endangerment of human health or the environment by operation of the project; or
- (c) existence of other grounds established by rule.

### **12.5 More Stringent Rules**

The issuance of this permit does not prevent the future adoption by the Commission of rules or orders more stringent than those now in existence and does not prevent the enforcement of these more stringent rules and orders against the Permittee.

### **12.6 Right of Entry**

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

- (a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.
- (b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.
- (c) To sample and monitor upon the facilities easement of the property.
- (d) To examine and copy any documents pertaining to compliance with the conditions of this permit.

## **12.7 Proprietary Information**

Certain information required to be filed with the Commission under this permit may constitute trade secret information or other type of proprietary information under the Data Practices Act or other law. The Permittee must satisfy requirements of applicable law to obtain the protection afforded by the law.

## **13 PERMIT AMENDMENT**

This permit may be amended at any time by the Commission in accordance with Minn. R. 7854.1300, subp. 2. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

## **14 TRANSFER OF PERMIT**

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new permittee, and interested persons such process as is required. The Commission may impose additional conditions on any new permittee as part of the approval of the transfer.

Within 20 days after the date of the in-service notice provided in Section 10.5, the Permittee shall file a notice describing its ownership structure, identifying, as applicable:

- (a) the owner(s) of the financial and governance interests of the Permittee;
- (b) the owner(s) of the majority financial and governance interests of the Permittee's owners; and
- (c) the Permittee's ultimate parent entity (meaning the entity which is not controlled by any other entity).

The Permittee shall immediately notify the Commission of:

- (a) a change in owner(s) of the majority\* financial or governance interests in the Permittee;
- (b) a change in owner(s) of the majority\* financial or governance interests of the Permittee's owners; or
- (c) a sale which changes the parent entity of the Permittee.

*\*When there are only co-equal 50/50 percent interests, any change shall be considered a change in majority interest.*

The Permittee shall notify the Commission of:

- (a) the sale of a parent entity or a majority interest in the Permittee;
- (b) the sale of a majority interest of the Permittee's owners or majority interest of the owners; or
- (c) a sale which changes the entity with ultimate control over the Permittee.

## **15 REVOCATION OR SUSPENSION OF PERMIT**

The Commission may take action to suspend or revoke this permit upon the grounds that:

- (a) a false statement was knowingly made in the application or in accompanying statements or studies required of the Permittee, and a true statement would have warranted a change in the Commission's findings;
- (b) there has been a failure to comply with material conditions of this permit, or there has been a failure to maintain health and safety standards;
- (c) there has been a material violation of a provision of an applicable statute, rule, or an order of the Commission; or
- (d) the Permittee has filed a petition with the Commission requesting that the permit be revoked or terminated.

In the event the Commission determines that it is appropriate to consider revocation or suspension of this permit, the Commission shall proceed in accordance with the requirements of Minn. R. 7854.1300 to determine the appropriate action. Upon a finding of any of the above, the Commission may require the Permittee to undertake corrective measures in lieu of having this permit suspended or revoked.

## **16      EXPIRATION DATE**

This permit shall expire 25 years after the date this permit was approved and adopted.

**Attachment 1**

**Complaint Handling Procedures for Permitted Energy Facilities**

**MINNESOTA PUBLIC UTILITIES COMMISSION  
COMPLAINT HANDLING PROCEDURES FOR  
PERMITTED ENERGY FACILITIES**

**A. Purpose**

To establish a uniform and timely method of reporting and resolving complaints received by the permittee concerning permit conditions for site preparation, construction, cleanup, restoration, operation, and maintenance.

**B. Scope**

This document describes complaint reporting procedures and frequency.

**C. Applicability**

The procedures shall be used for all complaints received by the permittee and all complaints received by the Minnesota Public Utilities Commission (Commission) under Minn. R. 7829.1500 or Minn. R. 7829.1700 relevant to this permit.

**D. Definitions**

**Complaint:** A verbal or written statement presented to the permittee by a person expressing dissatisfaction or concern regarding site preparation, cleanup or restoration or other route and associated facilities permit conditions. Complaints do not include requests, inquiries, questions or general comments.

**Substantial Complaint:** A written complaint alleging a violation of a specific permit condition that, if substantiated, could result in permit modification or suspension pursuant to the applicable regulations.

**Unresolved Complaint:** A complaint which, despite the good faith efforts of the permittee and a person, remains unresolved or unsatisfactorily resolved to one or both of the parties.

**Person:** An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

## **E. Complaint Documentation and Processing**

1. The permittee shall designate a representative responsible for filing complaints to the Commission's eDocket system. This person's name, phone number and email address shall accompany all complaint submittals. The name and contact information for the representative shall be kept current in eDockets.
2. A person presenting the complaint should to the extent possible, include the following information in their communications:
  - a. name, address, phone number, and email address;
  - b. initial date of complaint;
  - c. tract, parcel number, or address of the complaint;
  - d. a summary of the complaint; and
  - e. whether the complaint relates to a permit violation, a construction practice issue, or other type of complaint.
3. The permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:
  - a. docket number and project name;
  - b. name of complainant, address, phone number and email address;
  - c. precise description of property or parcel number;
  - d. name of permittee representative receiving complaint and date of receipt;
  - e. nature of complaint and the applicable permit condition(s);
  - f. activities undertaken to resolve the complaint; and
  - g. a statement on the final disposition of the complaint.

## **F. Reporting Requirements**

The permittee shall commence complaint reporting at the beginning of project construction and continue through the term of the permit, unless otherwise required below. The permittee shall report all complaints to the Commission according to the following schedule:

**Immediate Reports:** All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to the Commission's Public Advisor at 1-800-657-3782 (voice messages are acceptable) or [publicadvisor.puc@state.mn.us](mailto:publicadvisor.puc@state.mn.us). For e-mail reporting, the email subject line should read "PUC EFP Complaint" and include the appropriate project docket number.

**Monthly Reports:** During project construction, restoration, and operation, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be filed by the 15th of each month to Will Seuffert, Executive Secretary, Public Utilities

Commission, using the eDockets system. The eDockets system is located at: <https://www.edockets.state.mn.us/EFiling/home.jsp>. If no complaints were received during the preceding month, the permittee shall file a summary indicating that no complaints were received.

If a project has submitted twelve consecutive months of complaint reports with no complaints, monthly reports can terminate by a letter to eDockets notifying the Commission of such action. If a substantial complaint is received (by the company or the Commission) following termination of the monthly complaint report, as noted above, the monthly reporting should commence for a period of one year following the most recent complaint or upon resolution of all pending complaints.

If a permittee is found to be in violation of this section, the Commission may reinstate monthly complaint reporting for the remaining permit term or enact some other commensurate requirement via notification by the Executive Secretary or some other action as decided by the Commission.

#### **G. Complaints Received by the Commission**

Complaints received directly by the Commission from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the permittee.

The permittee shall notify the Commission when the issue has been resolved. The permittee will add the complaint to the monthly reports of all complaints. If the permittee is unable to find resolution, the Commission will use the process outlined in the Unresolved Complaints Section to process the issue.

#### **H. Commission Process for Unresolved Complaints**

Complaints raising substantial and unresolved permit issues will be investigated by the Commission. Staff will notify the permittee and appropriate persons if it determines that the complaint is a substantial complaint. With respect to such complaints, the permittee and complainant shall be required to submit a written summary of the complaint and its current position on the issues to the Commission. Staff will set a deadline for comments. As necessary, the complaint will be presented to the Commission for consideration.

#### **I. Permittee Contacts for Complaints and Complaint Reporting**

Complaints may be filed by mail or email to the permittee's designated complaint representative, or to the Commission's Public Advisor at 1-800-657-3782 or [publicadvisor.puc@state.mn.us](mailto:publicadvisor.puc@state.mn.us). The name and contact information for the permittee's designated complaint representative shall be kept current in the Commission's eDocket system.



## **Attachment 2**

### **Compliance Filing Procedures for Permitted Energy Facilities**

**MINNESOTA PUBLIC UTILITIES COMMISSION  
COMPLIANCE FILING PROCEDURE FOR  
PERMITTED ENERGY FACILITIES**

**A. Purpose**

To establish a uniform and timely method of submitting information required by Commission energy facility permits.

**B. Scope and Applicability**

This procedure encompasses all known compliance filings required by permit.

**C. Definitions**

**Compliance Filing:** A filing of information to the Commission, where the information is required by a Commission site or route permit.

**D. Responsibilities**

1. The permittee shall file all compliance filings with Daniel P. Wolf, Executive Secretary, Public Utilities Commission, through the eDockets system. The eDockets system is located at: <https://www.edockets.state.mn.us/EFiling/home.jsp>

General instructions are provided on the eDockets website. Permittees must register on the website to file documents.

2. All filings must have a cover sheet that includes:
  - a. Date
  - b. Name of submitter/permittee
  - c. Type of permit (site or route)
  - d. Project location
  - e. Project docket number
  - f. Permit section under which the filing is made
  - g. Short description of the filing
2. Filings that are graphic intensive (e.g., maps, engineered drawings) must, in addition to being electronically filed, be submitted as paper copies and on CD. Paper copies and CDs should be sent to: 1) Will Seuffert, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN 55101-2147, and 2) Department of Commerce, Energy Environmental Review and Analysis, 85 7th Place East, Suite 280, St. Paul, MN 55101-2198.

The Commission may request a paper copy of any electronically filed document.

**PERMIT COMPLIANCE FILINGS<sup>1</sup>****PERMITTEE:** NORTHERN STATES POWER COMPANY**PERMIT TYPE:** LARGE WIND ENERGY CONVERSION SYSTEM**PROJECT LOCATION:** GRAND MEADOW COUNTY**PUC DOCKET NUMBER:** WS-09-584

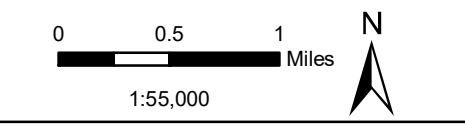
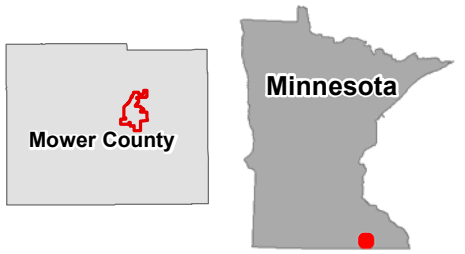
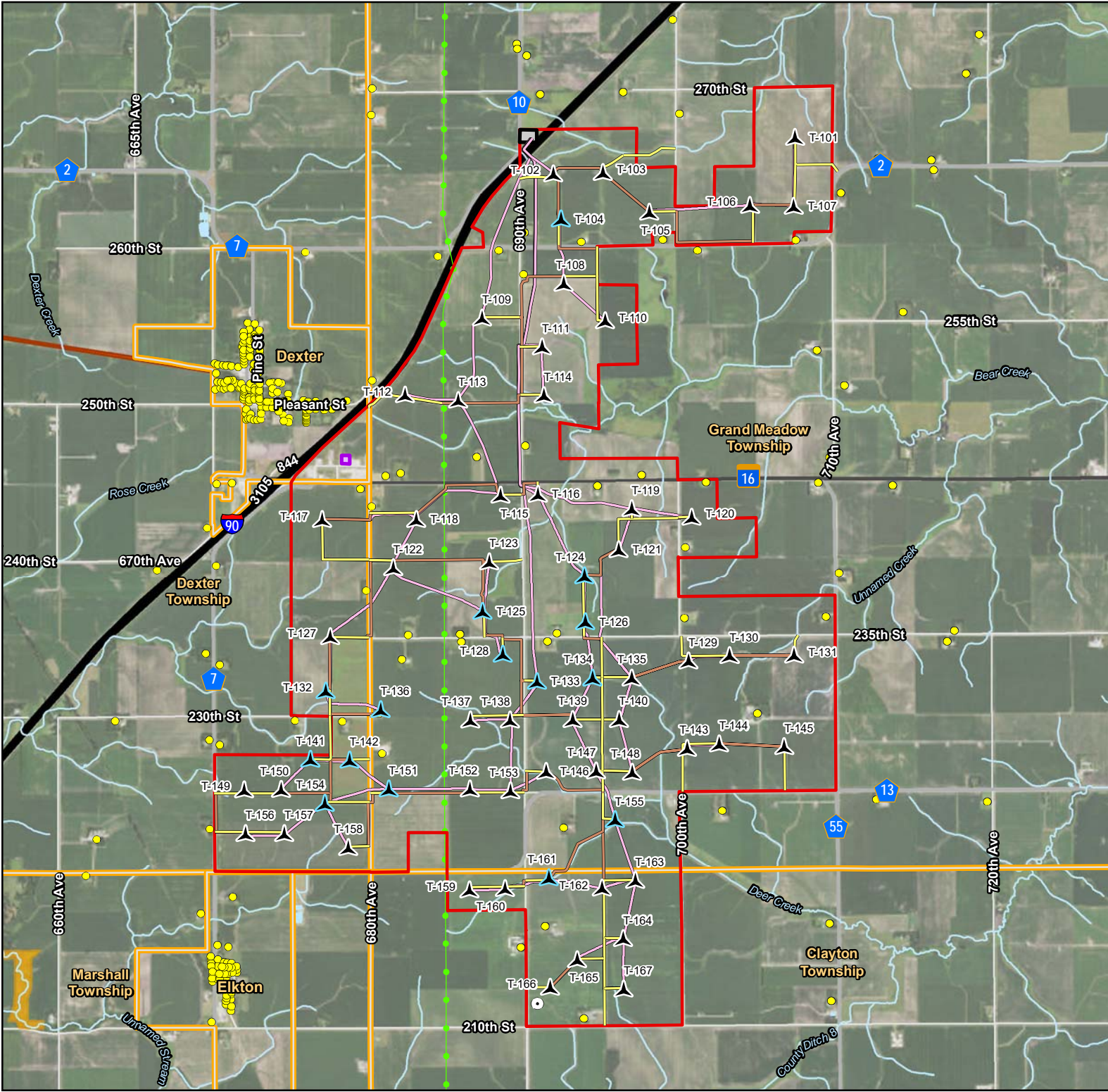
<b>Filing Number</b>	<b>Permit Section</b>	<b>Description of Compliance Filing</b>	<b>Due Date</b>
1	4.7	Prairie Protection and Management Plan	30 days prior to submitting site plan, as necessary
2	4.12	Notification to Airports	Prior to project construction
3	5.1	Distribution of Permit and Complaint Procedures	Within 30 days of permit issuance
4	5.3.1	Field Representative	14 days prior to pre-construction meeting
5	5.3.2	Site Manager	14 days prior to pre-construction meeting
6	5.3.7	NPDES/SDS and SWPPP Permits	In accordance with the Minnesota Pollution Control Agency
7	5.3.10	Landowner Notification of Pesticide Application	14 days prior to application
8	5.3.10	Invasive Species Protection Plan	14 days prior to pre-construction meeting
9	5.3.13	Identification of Roads and Road Agreement	14 days prior to pre-construction meeting
10	5.3.17	Assessment of Interference with Electronic Communications	14 days prior to pre-construction meeting
11	5.3.22	Site Restoration	60 days after completion of restoration
12	5.3.26	Public Safety / Education Materials	Upon request
13	5.6.2	Other Permits and Regulations	14 days prior to pre-construction meeting

<sup>1</sup>This compilation of permit compliance filings is provided for the convenience of the permittee and the Commission. It is not a substitute for the permit; the language of the permit controls.

<b>Filing Number</b>	<b>Permit Section</b>	<b>Description of Compliance Filing</b>	<b>Due Date</b>
14	6.1	Lighting Mitigation	With site plan; 14 days prior to pre-construction meeting
15	7.1	Biological and Natural Resource Inventories	Upon completion
16	7.2	Shadow Flicker Data	14 days prior to pre-construction meeting
17	7.3	Wake Loss Studies	14 days prior to pre-construction meeting and with annual report
18	7.4	Post-Construction Noise Methodology	14 days prior to pre-construction meeting
19	7.4	Post-Construction Noise Study	Within 18 months of completion of the repowering project
20	7.5.1	Avian and Bat Fatality Monitoring Results	Upon completion of monitoring
21	7.5.1	Avian and Bat Protection Plan Audits	14 days prior to pre-construction meeting, and 15th of March each year or partial year
22	7.5.3	Quarterly Incident Reports	15th of January, April, July and October
23	7.5.4	Immediate Incident Reports	Within 24 hours of discovery and a report within 7 days
24	8.1	Demonstration of Wind Rights	14 days prior to pre-construction meeting
25	8.2	Power Purchase Agreement Notification	Within 60 days of the expiration of the PPA
26	9.0	Complaint Procedures	14 days prior to pre-construction meeting
27	10.1	Pre-Construction Meeting Summary	Within 14 days following the meeting
28	10.3	Site Plan	14 days prior to pre-construction meeting

<b>Filing Number</b>	<b>Permit Section</b>	<b>Description of Compliance Filing</b>	<b>Due Date</b>
29	10.3	Construction Status Reports	Monthly
30	10.4	Labor Statistic Reporting	Within 45 days of the end of each quarter
31	10.5	Notice of In-Service Date	3 days before final, repowered turbine is placed into service
32	10.6	As-Builts	Within 90 days of completion of construction
33	10.7	GPS Data	Within 90 days of completion of construction
34	10.8	Project Energy Production	February 1st of each year
35	10.9	Wind Resource Use	February 1st of each year
36	10.1	Emergency Response Plan	14 days prior to pre-construction meeting
37	10.11	Extraordinary Event	Within 24 hours of discovery
38	11.1	Decommissioning Plan	14 days prior to pre-construction meeting
39	14	Ownership Structure	Within 20 days of in-service notice

**Attachment 3**  
Map



- Turbine (91m rotor diameter)
- Turbine (97m rotor diameter)
- Residence (within 1 mile of Project Boundary)
- Permanent Met Tower
- Proposed Crane Path
- Access Road
- Collection Line
- River/Stream
- Existing 345 kV Transmission Line
- Project Boundary
- O&M Area
- Project Substation
- City/Township
- Lake, Pond or Reservoir
- Wildlife Management
- Scientific & Natural

Data Source: Xcel Energy, US Census, MDOT, MDNR, 2019 NAIP

## Figure 2 Project Area and Facilities

### Grand Meadow Repower Project

Mower County, Minnesota

RESPONSIBLE BY NATURE

For Environmental Review Purposes Only

**Attachment 4**

DNR Erosion Control and Invasive Species Prevention



## Standard Erosion Control and Invasive Species Prevention Best Practices

Take precautions when working near waterbodies to prevent sedimentation and erosion:

- Erodible surfaces should not be left exposed for greater than one day. For example, work should not commence late in the week if it will be left unfinished over a weekend.
- Work should not commence if rain is predicted.
- All wheeled or tracked construction equipment should be restricted to work areas above the stream bank.
- Fill material should not be stockpiled in the floodplain.
- Backfill placed below Ordinary High Water (OHW) should consist of clean granular material free of fines, silts, soils, and mud.
- Use [Best Practices for DNR General Public Waters Work Permit GP 2004-0001: Species Protection](#). Refer to pages: 3, 11, 14, 16, 25, 33, and 34 as relevant to a particular project.
- Vegetative “grout” should be incorporated with any installed rip rap (see page 33 of above link).
- [Native species planting/seeding](#) should be used.
- DNR Public Waters Work Permit may be required. Permit requirements must be followed.

Use wildlife friendly erosion control:

- Biodegradable netting should be used, preferably natural materials with short degradation periods.
- Erosion control blankets should be limited to bio-netting or natural netting types due to the risk of entanglement and death of small animals. [2018 MnDOT Standards Specifications for Construction](#) identify acceptable materials in Category 3N or 4N mulches.
- Do not use products that require UV-light to degrade (also called “photodegradable”), as they do not degrade properly when covered/shaded.
- Do not use products containing plastic mesh netting or other plastic components.
- Do not use mulch products that contain synthetic (plastic) fiber additives near waterbodies.
- See [Wildlife Friendly Erosion Control](#) for more information.

Take active steps to prevent invasive species introduction and spread:

- Clean all equipment (including but not limited to: vehicles, clothing, and gear) at a site prior to moving to another site. All soil, aggregate material, mulch, vegetation, seeds, animals, etc. need to be removed using a hand tool, brush, compressed air, pressure washer, or otherwise.
- If equipment is not cleaned before arriving to a work site, then clean the equipment in the parking or staging area, ensuring no material is deposited at the new site. Material cleaned from equipment should be disposed of legally.
- All equipment (including but not limited to: waders, tracked vehicles, barges, boats, turbidity curtain, sheet pile, and pumps) used for work in an “infested water” must be adequately decontaminated. See [Watercraft Decontamination Manual](#) for more information.
- See [Come Clean, Leave Clean](#) for more detailed guidance. This guidance is required for those working on DNR lands as part of grant or contract or are working under a permit, your grant, contract, or permit.

### Referenced Links

[https://files.dnr.state.mn.us/waters/watermgmt\\_section/pwpermits/gp\\_2004\\_0001\\_chapter1.pdf](https://files.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_chapter1.pdf)

<https://bwsr.state.mn.us/seed-mixes>

<https://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf>

<http://www.dot.state.mn.us/pre-letting/spec/2018/2018-spec-book-final.pdf>

<https://www.dnr.state.mn.us/invasives/dnrlands.html>

<https://www.dnr.state.mn.us/invasives/dnrlands.html>

[https://files.dnr.state.mn.us/natural\\_resources/invasives/mndnr\\_ais\\_decontamination\\_handbook.pdf](https://files.dnr.state.mn.us/natural_resources/invasives/mndnr_ais_decontamination_handbook.pdf)