



Energy Facility Permitting
85 7th Place East, Ste 500
Saint Paul, MN 55155-2198
Minnesota Department of Commerce

May 2, 2007

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
127 7th Place East, Suite 30
St. Paul, MN 55101-2147

**Re: Comments and Recommendations of the Minnesota Department of Commerce
Energy Facility Permitting Staff
Docket No. PT6556/WS-06-1520**

Dear Dr. Haar –

Attached are the comments and recommendations of the Minnesota Department of Commerce Energy Facility Permitting Staff in the following matter:

In the Matter of the Application for a Site Permit for the 100.65-Megawatt High Prairie Wind Farm II in Mower County.

The Department EFP staff recommends the Commission Adopt the Findings of Fact and Conclusions and issue a Site Permit with the conditions proposed by EFP staff to High Prairie Wind Farm II, LLC, for the 100.65 MW High Prairie Wind Farm II in Mower County, Minnesota. The site permit issued by the PUC authorizes High Prairie Wind Farm II, LLC to construct and operate the proposed large wind energy conversion system in accordance with the conditions contained in the site permit and in compliance with the requirements of Minnesota Statutes section 216F.04 and Minnesota Rules Chapter 4401.

Staff is available to answer any questions the Commission may have.

Sincerely,

Jeffrey T. Haase
Project Manager
Energy Facilities Permitting
651-297-5648

Enclosures



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

**COMMENTS AND RECOMMENDATIONS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
ENERGY FACILITY PERMITTING STAFF**

DOCKET NO. PT 6556/WS-06-1520

Meeting Date: May 10, 2007 Agenda Item # _____

Company: High Prairie Wind Farm II, LLC

Docket No. PUC Docket Number: PT 6556/WS-06-1520

In the Matter of the Site Permit Application for the 100.65-Megawatt High Prairie Wind Farm II in Mower County.

Issue(s): Should High Prairie Wind Farm II, LLC be granted a site permit to construct a 100.65-Megawatt Large Wind Energy Conversion System and Associated Facilities in Mower County, Minnesota?

DOC Staff: Jeff Haase651-297-5648

Relevant Documents (in Commission Packet)

1. High Prairie Wind Farm II LWECS Site Permit Application.....Nov. 21, 2006
2. Comments of Ronald J. Lee submitted at the January 17, 2007 Public Information Meeting.....Jan. 17, 2007
3. Contested Case Hearing Request of Ronald J. Lee.....Jan. 30, 2007
4. Minnesota Department of Natural Resources Comments.....Jan. 31, 2007
5. High Prairie Wind Farm II, LLC Comments RE: Reply Comments of High Prairie Wind Farm II, LLC.....Feb. 28, 2007
6. High Prairie Wind Farm II, LLC Comments RE: Response to Comments of the Minnesota Department of Natural Resources.....Feb. 28, 2007

(Relevant Documents Continued on Next Page)

7. Great River Energy's Reply Comments in the Matter of the Application of High Prairie Wind Farm II, LLC for a Certificate of Need for a Large Energy Facility.....Feb. 28, 2007
8. PUC Order Denying Contested Case, but Expanding Scope of Public Hearing.....March 30, 2007
9. Administrative Law Judge's Summary of Testimony at Public Hearings.....April 16, 2007

The enclosed materials are work papers of the Department of Commerce Energy Facility Permitting Staff. They are intended for use by the Public Utilities Commission and are based on information already in the record unless otherwise noted.

This document can be made available in alternative formats i.e., large print or audio tape by calling (651) 201-2202 (Voice) or 1-800-627-3529 (TTY relay service).

Documents Attached

- Attachment A. Findings of Fact and Conclusions**
- Attachment B. Site Permit**
- Attachment C. Exhibit List**

Note: Relevant documents and additional information is available on eDockets (06-1520) or the PUC Facilities Permitting website <http://energyfacilities.puc.state.mn.us/Docket.html?Id=18884>

Statement of the Issue

Should High Prairie Wind Farm II, LLC be granted a site permit to construct a 100.65-Megawatt Large Wind Energy Conversion System and Associated Facilities in Mower County, Minnesota?

Introduction and Background

High Prairie Wind Farm II, LLC (Applicant) is requesting a site permit from the PUC pursuant to Minnesota Statutes §§ 216F.01 – 216F.07 to construct a 100.65–Megawatt Large Wind Energy Conversion System (LWECS) and associated facilities in Mower County, Minnesota. This is the second phase of the High Prairie Wind Farm. The PUC issued a site permit for the 98.9 MW High Prairie Wind Farm I in May of last year. High Prairie Wind Farm I, LLC, developed the first phase of the High Prairie Wind Farm and sold the Project to FPL Energy Mower County, LLC, prior to construction. Horizon Wind Energy, LLC, does not own any other LWECS located in Minnesota.

A Certificate of Need from the Minnesota Public Utilities Commission (PUC) is also required for this project. The Applicant filed a Certificate of Need Application with the PUC on October 6, 2006 (Docket No. PT6556/CN-06-1428). The Department of Commerce prepared an Environmental Report (ER) for this project pursuant to Minnesota Rules 4410.7020. The Certificate of Need is also being considered at this Commission Meeting and the decision to grant or deny the Certificate of Need must happen prior to the decision to grant or deny a site permit for the facility.

The Applicant

The Applicant will own the Project including all equipment up to the high side of the 161 kV busbar at the Project substation, as well as jointly own, with High Prairie Wind Farm I, LLC, the 161 kV transmission line interconnecting the Project to the Adams Substation.

High Prairie Wind Farm II, LLC is currently a wholly owned subsidiary of Horizon Wind Energy LLC (Horizon), which was recently purchased by Energia de Portugal, S.A.

Project Location

The proposed project site, located in Mower County approximately 15 miles east southeast of Austin, Minnesota, and just east of the city of Elkton, is approximately 10,000 acres in size. The turbines will be placed in the townships of Clayton (Sections 1-4, 8-12, 15-21, 29, 30), Bennington (Sections 3-6), Marshall (Sections 13, 14, 23, 24, 25) and Grand Meadow (Sections 26, 27, 33-35). The proposed site is comprised primarily of agricultural lands. It is anticipated that the area of direct land use for the turbines and associated facilities would be approximately 81 acres and this would include approximately 14 miles of 34 foot wide gravel access roads. The Applicant has easements or options on the land necessary within the site to build the project. Land rights will encompass the proposed wind farm and all associated facilities, including but not limited to, wind and buffer easements, wind turbines, access roads, electrical collection system, and transmission lines.

High Prairie Wind Farm II, LLC Project Description

The proposed project will use up to 61 Vestas 1.65 MW wind turbines for an installed nameplate capacity of 100.65 MW. The turbine has a hub height of 80 meters (262 feet) and a rotor diameter of 82 meters (269 ft). The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. The rotor swept area is 5,281 meters² (56,844 feet²). The rotational speed of the turbine will be 14.4 revolutions per minute. Maximum rotor tip speed is 138 miles per hour.

Two foundation designs are under consideration depending on the geotechnical study results. The first, a spread footing type of foundation would contain approximately 400-500 cubic yards of structural concrete. The second type, a pier foundation, would consist of a 30-35 foot long corrugated metal cylinder (16-18 foot in diameter) placed vertically in the ground and would contain approximately 250-300 cubic yards of structural concrete. The foundation design that is ultimately chosen will be certified by a registered structural engineer who has designed several generations of wind turbine towers and foundations systems.

The electrical collector system will consist of underground 34.5 kV collection lines and facilities providing step-up transformation.

Other project components include:

- Graveled access roads branching from existing graveled section line roads to provide access to the various rows of turbines. In some areas new roads will be designed to allow for the transportation of heavy equipment to the project area. Due to the expected soil conditions in the area it is anticipated that the graveled access roads must cover the full

width of the crane track. The crane track is approximately 31 feet wide requiring road widths of 32-34 feet.

- Two permanent meteorological towers will be installed at the project site to monitor the wind conditions during the operation of the wind farm. These towers will be between 50 and 80 meters (164 – 262 feet) tall.
- An operations and maintenance facility will be constructed to serve as a center for the O&M efforts associated with the project, house the Supervisory Control and Data Acquisition (SCADA) system, and potentially serve as a visitor center/viewing area.

Power from the project will be sold and delivered to Great River Energy at the Adams Substation. For this project, power will flow from the 34.5 kV electrical system to the Phase 2 project substation, where it will be stepped up from 34.5 kV to 161 kV. The applicant has proposed to construct a 3-mile 161 kV line to connect the Phase 2 project substation to the Phase 1 project substation. This 161 kV transmission line project has been reviewed and permitted by Mower County and does not require a route permit from the PUC.

The energy produced by the project will be transmitted from the Phase 1 project substation to the Adams Substation via a 7-mile 161 kV transmission line that was constructed as part of the High Prairie Wind Farm I project.

Regulatory Process and Procedures

On November 22, 2006 the PUC received the site permit application submitted by High Prairie Wind Farm II, LLC. On December 11, 2006 the PUC accepted the application and made a preliminary determination to issue a draft site permit. Upon acceptance of the application and issuance of the draft site permit DOC EFP Staff initiated the review and notice requirements of Minnesota Rules Chapter 4401.

Site Permit Requirement

A site permit from the Public Utilities Commission is required to construct a Large Wind Energy Conversion System (LWECS), which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. Minnesota Statutes, sections 216F.01 through 216F.07. The rules to implement the permitting requirement for LWECS are in Minnesota Rules Chapter 4401.

Public Participation Process

The rules provide opportunities for the public to participate in deliberations on the LWECS permit application. The public was advised of the submission of the permit application after the application was accepted, a draft site permit on the project was provided for the public and the applicants to review, the public was afforded a period of time to submit written comments, and a public meeting was held in Grand Meadow on January 17, 2007. About 20 people attended the public meeting.

During the public meeting, DOC EFP Staff reviewed the permitting process requirements and responded to questions about the draft site permit and the permitting process. Representatives of the applicant were available to describe the project and answer questions.

Public Comments

Minnesota Rules 4401.0550, subp. 3, requires that the public be afforded a minimum of 30 days after publication of the draft site permit notice in the EQB Monitor to submit written comments to the PUC. In addition, Minnesota Rules 4401.0550, subp. 4, requires that the public meeting be held at least 10 days before the end of the public comment period. The public comment period for this proceeding was held open until January 31, 2007. Three comment letters were received during the comment period.

At the public meeting on January 17, 2007, Ron Lee, a landowner in the project area, submitted a comment letter calling for increased compensation for the impacts associated with this project, increased setbacks, and reduced lighting requirements for the wind turbines.

On January 30, 2007, Ron Lee submitted additional comments on the proposed project, which included a Contested Case Hearing Request. Several issues were cited in the comments and the Contested Case Hearing Request, including increased compensation for the impacts associated with this project, increased setbacks, and reduced lighting requirements for the wind turbines.

On January 31, 2007, a letter from the Minnesota Department of Natural Resources (DNR) commented on the site permit application. In its letter the DNR commented on the potential for avian mortality due to habitat degradation associated with the High Prairie Wind Farm II project. The DNR suggested that native grassland be reestablished along roadways and near wind turbines to provide prairie habitat on some of the 81.4 acres proposed to be permanently impacted by the project. In addition, the DNR supports the use of Interim Guidelines to Avoid and Minimize Impacts to Wildlife from Wind Turbines (USF&WS 2003) for mitigating potential impacts to local avian wildlife resources related to this project. The DNR also expressed concern over the potential impacts to several rare mussel species that have been documented in Deer Creek in the project area. The DNR requested that a mussel survey and relocation be conducted if installation of transmission lines will involve disturbance of the riverbed of Deer Creek or any of the major tributary streams.

Responses to Comments

On February 28, 2007, both the Applicant and Great River Energy (GRE) filed comments in response to comments that had been filed by Ron Lee and the DNR. The responses to Mr. Lee's comments have already been brought before the Commission when it considered whether or not Mr. Lee's request for a contested case hearing should be granted.

With respect to the comments that were filed by the DNR, the Applicant points out that many of the recommendations made in the U.S. Fish and Wildlife Service guidelines are proposed as part of the High Prairie Wind Farm II Project. These include:

- The Project Area has been selected, in part, due to the low use of the area by migratory birds and relatively low value of the area for wildlife habitat relative to sites in other portions of the state.
- Facilities have been sited in locations where impacts to locally important habitats (e.g., wetlands and grasslands) are minimized.

- Surface disturbances and above-ground facilities have been minimized to the extent practicable and all temporary disturbances will be promptly reclaimed.

The Applicant states that the site vicinity is in an area predominantly used for agriculture with scattered rural residences. The dominant land cover is row-crop agriculture, with minor amounts of pasture/hayland. There are limited native grasslands within the project area. The majority of the turbine sites within the project area will be placed in agricultural production areas, and access roads and supporting facilities will be designed to minimize impacts to existing grassland vegetation. In the event that grassland areas cannot be avoided during the construction phase of the project, the Applicant will mitigate impacts by replanting grassland species in areas of disturbance as practicable.

High Prairie notes that transmission lines used to serve the Project's turbines will cross Deer Creek in one location and County Ditch No. 8 in a second location. However, the Applicant intends to route the transmission lines beneath both streams by installing an eight-inch diameter casing through which the transmission cables will run. This will be achieved by directional boring beneath both stream beds to install the casing and will leave a minimum of 48-inches of undisturbed soil between the stream bed and the underlying transmission casing, thereby ensuring the health and safety of any freshwater mussels that may be present.

Contested Case Hearing Request

On March 15, 2007, the PUC considered whether or not a contested case hearing should be ordered based on the request that had been submitted by Ronald J. Lee. In its Order Denying Request for Contested Case Hearing, but Expanding Scope of Public Hearing, the Commission stated that many of the issues in Mr. Lee's Contested Case Hearing Request fell outside of the scope of the wind permitting process. However, the Commission did authorize the Office of Administrative Hearings to expand the scope of the Public Hearing required for the Certificate of Need proceeding to include issues related to the siting and permitting process.

Public Hearing

On April 4, 2007, two public hearings were held in Grand Meadow, Minnesota. Administrative Law Judge (ALJ) Steve M. Mihalchick conducted public hearings in the afternoon and evening. Approximately 10 members of the public appeared at the afternoon public hearing and approximately 7 members of the public at the evening hearing. In addition, 10 persons were present at both hearings on behalf of the Applicant or a State agency. The testimony and information presented at the public hearing are summarized in the ALJ's Summary of Testimony at Public Hearings.

DOC EFP Staff Analysis and Comments

Based on the record, DOC EFP Staff conclude that High Prairie Wind Farm II, LLC, and the High Prairie Wind Farm II Project meets the criteria and standards for permit issuance found in Minnesota Statutes and Minnesota Rules. No relevant significant issues were identified during the course of this proceeding. Several issues have been raised that are not covered by the scope of the permitting process. These include compensation, economic development impacts, and government incentives offered. The DOC EFP Staff has prepared for the Commission's considerations proposed Findings of Fact and Conclusions, a proposed Site Permit, and Exhibit List.

The Site Permit includes a modification from the Draft Site Permit at III.E.5. The modification changes the internal downwind (north-south) spacing of turbine strings from 15 rotor diameters to 5 rotor diameters. This change more accurately reflects the proposed layout of the High Prairie Wind Farm II project. The previous language was reflective of the layout of the first phase of the High Prairie Wind Farm that was permitted in May of last year.

In addition, references to the Federally-Endangered Topeka Shiner and Best Management Practices for Topeka Shiner Habitat Protection, which had been included in the Draft Site Permit, have been removed as the project does not impact Topeka Shiner habitat.

Findings of Fact

The staff has prepared proposed Findings of Fact and Conclusions for the project. The proposed Findings address the procedural aspects of the process followed, describe the project, respond to the written comment(s), and address the environmental and other considerations of the project. Most of the findings in the Findings of Fact reflect findings that were also made for other LWECS projects. The following outline identifies the categories of the Findings.

<u>Category</u>	<u>Findings</u>
Background and Procedure	(Findings Nos. 1 – 17)
The Permittee	(Finding No. 18 – 19)
Project Description	(Findings Nos. 20 – 25)
Wind Resource Considerations	(Findings Nos. 26 –30)
Land Rights and Easement Agreements	(Findings Nos. 31 – 32)
Written Comments	(Findings Nos. 33 – 39)
Site Criteria	(Findings Nos. 40 – 84)
Site Permit Conditions	(Findings Nos. 85 – 86)

Record

A DOC EFP staff exhibit list of the written comments and other documents that are part of the record in this permit proceeding is included as Attachment C. The DOC staff can make any of these documents available to a PUC member upon request, and copies will be available at the PUC meeting.

Standard for Permit Issuance

Essentially the test for issuing a site permit for a Large Wind Energy Conversion System is to determine whether a project is compatible with environmental preservation, sustainable development, and the efficient use of resources. Minnesota Statutes section 216F.03. The wind statutes incorporate certain portions of the Power Plant Siting Act, including the environmental considerations. The site criteria addressed in the Findings of Fact (such as human settlement, noise, community benefits, and surface water) track the factors described in the PUC’s rules for other types of power plants that are pertinent to wind projects. Minnesota Rules part 4400.3310. Also, the law allows the PUC to place conditions in LWECS permits. Minnesota Statutes section 216F.04 (d). The conditions in this proposed Site Permit are essentially the same as those conditions included in other LWECS site permits issued by the Environmental Quality Board and the PUC.

Commission Decision Options

- A.** Adopt the Findings of Fact and Conclusions and Order and issue a Site Permit with the conditions proposed by EFP staff to High Prairie Wind Farm II, LLC for the 100.65 MW High Prairie Wind Farm II in Mower County, Minnesota. The site permit issued by the PUC authorizes High Prairie Wind Farm II, LLC to construct and operate the proposed large wind energy conversion system in accordance with the conditions contained in the site permit and in compliance with the requirements of Minnesota Statutes section 216F.04 and Minnesota Rules Chapter 4401.
- B.** Amend the Findings of Fact and Conclusions and Order and Site Permit as deemed appropriate.
- C.** Deny the site permit.
- D.** Make some other decision deemed more appropriate.

DOC EFP Staff Recommendation. The DOC EFP staff recommends option A.

In the Matter of the Application of
High Prairie Wind Farm II, LLC for
a Site Permit for a 100.65-Megawatt
Large Wind Energy Conversion
System in Mower County, Minnesota

**FINDINGS OF FACT AND
CONCLUSIONS AND ORDER**

PUC DOCKET NO. PT6556/WS-06-1520

The above-entitled matter came before the Minnesota Public Utilities Commission (PUC), pursuant to an application by High Prairie Wind Farm II, LLC, for a site permit to construct, operate, maintain and manage a 100.65-Megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS) and associated facilities in the townships of Bennington, Clayton, Grand Meadow and Marshall in Mower County, Minnesota. The Site permit is to be issued to High Prairie Wind Farm II, LLC a limited liability company.

All of the proposed wind turbines, foundations, transformers, feeder lines and collection lines will be located in Mower County, Minnesota. Other associated facilities will include pad mounted step-up transformers for each wind turbine, access roads and a 34.5 kV electrical collection and feeder system. A new project substation, located in Section 10 of Clayton Township and a new 161 kV transmission line, approximately three miles long, will be built to carry power from the High Prairie Wind Farm II project to the Adams Substation. High Prairie Wind Farm II, LLC will sell and deliver power from this project to Great River Energy at the Adams Substation.

STATEMENT OF ISSUE

Should High Prairie Wind Farm II, LLC, be granted a site permit under Minnesota Statutes section 216F.04 to construct a 100.65-megawatt Large Wind Energy Conversion System in Mower County, Minnesota?

Based upon the record and proceedings created in this proceeding, the Public Utilities Commission makes the following:

FINDINGS OF FACT

Background and Procedure

1. On November 22, 2006, Horizon Wind filed a complete site permit application on behalf of High Prairie Wind Farm II, LLC, for the High Prairie Wind Farm II, with the Public Utilities Commission for 100.65- megawatts of nameplate wind power generating capacity. (**Exhibit 1**)
2. Department of Commerce staff determined that the November 22, 2006, application complied with the application requirements of Minnesota Rules, part 4401.0450. In a

- briefing paper to the PUC, dated November 29, 2006, DOC Energy Facility Permitting staff recommended that the PUC accept the application. **(Exhibit 2)**.
3. On December 11, 2006, the PUC issued an order accepting the application for the High Prairie Wind Farm II and associated facilities. The December 11, 2006, PUC Order also made a preliminary determination to issue a draft site permit for review and comment. **(Exhibit 3)**.
 4. DOC EFP staff prepared a notice for the public information meeting (January 17, 2007), to receive comments on the site permit application and the draft site permit. The notice also provided a deadline for submitting comments on the application and draft site permit. The notice was mailed to the project mailing list. **(Exhibit 5)**
 5. On December 18, 2006, the EFP staff published in the *EQB Monitor* notice of the January 17, 2007, public information meeting in Grand Meadow, Minnesota, and the availability of the draft site permit, EQB Monitor, Volume 30, No. 26, December 18, 2006. **(Exhibit 4)** The published notice contained all of the information required by Minnesota Rules part 4401.0550 subp. 1. Notice also appeared on the PUC web site.
 6. Published notice of the site permit application, DOC public information meeting and opportunity to comment on the draft site permit appeared in the *Austin Daily Herald* on January 5, 2007. **(Exhibit 6)**. The published notice provided: a) location and date of the public information meeting; b) description of the proposed project; c) deadline for public comments on the application and draft site permit (January 31, 2007); d) description of the PUC site permit review process; and e) identification of the public advisor. The notice published meets the requirements of Minnesota Rules part 4401.0550 subp2.
 7. High Prairie Wind Farm II, LLC distributed the site permit application, draft site permit and notice of public information meeting to each landowner affected by the proposed project and those persons required by Minnesota Rules Part 4401.0460 subp 3. on December 13, 2006.
 9. The DOC EFP staff held a public information meeting on January 17, 2007, in Grand Meadow, Minnesota, to receive comments on the site permit application and draft site permit. Approximately 20 people attended the meeting. Representatives from High Prairie Wind Farm II, LLC were also present. DOC EFP staff provided an overview of the permitting process and draft site permit and responded to questions about the permitting process. The Applicant reviewed the project and responded to questions about the project. Questions were asked about access roads, project timing, easement agreements and conditions, visual impacts, compensation, location of distribution and feeder lines and the 161 kV transmission line, and project decommissioning. No significant issues or concerns were raised about the permitting process, the proposed project, or conditions in the draft site permit at the public meeting. The public comment period on the project closed on January 31, 2007.

10. A Contested Case Hearing Request was submitted to the PUC on January 30, 2007 by Ronald J. Lee, an affected landowner in proximity to the proposed project. The request cited setbacks, visual impacts, noise levels, compensation, economic impact, and incentives as issues that should be addressed in a contested case hearing. **(Exhibit 8)**
11. In response to the contested case hearing request submitted by Ronald J. Lee both the Applicant and Great River Energy filed response comments requesting that the Commission deny Mr. Lee's request for a contested case hearing. **(Exhibit 11 & 12)**
12. On March 13, 2007 additional comments were filed by Ronald J. Lee due to his expected absence from the Commission meeting to determine whether a contested case hearing request would be granted. **(Exhibit 14)**
13. On March 15, 2007 the PUC considered the contested case hearing Request by Ronald J. Lee.
14. On March 30, 2007 the PUC issued its *Order Denying Request for Contested Case, but Expanding Scope of Public Hearing*, the PUC determined that a contested case was not warranted, but that the scope of the Public Hearing to be held in the Certificate of Need proceeding for the High Prairie Wind Farm II project should be expanded to include issues related to the siting and permitting process. **(Exhibit 17)**
15. On March 23, 2007 the Public Utilities Commission mailed Notice of the April 4, 2007 Public Hearing to members of the High Prairie Wind Farm II project mailing list. **(Exhibit 16).**
16. Publish notice of the April 4, 2007 Public Hearing appeared in the *Austin Daily Herald* on March 23, 2007, *The Leroy Independent* on March 22, 2007, and *The Meadow Area News* on March 28, 2007. Notice also appeared on the PUC website. **(Exhibit 15)**
17. Administrative Law Judge (ALJ) Steve M. Mihalchick presided over public hearings in the afternoon and evening on April 4, 2007. The ALJ's Summary of Testimony at Public Hearings was submitted to the PUC on April 16, 2007. **(Exhibit 19)**

The Permittee

18. The Applicant (High Prairie Wind Farm II, LLC) will own the Project including all equipment up to the high side of the 161 kV busbar at the Project substation, as well as jointly own, with High Prairie Wind Farm I, LLC, the 161 kV transmission line interconnecting the Project to the Adams Substation.
19. High Prairie Wind Farm II, LLC is currently wholly owned subsidiaries of Horizon Wind Energy LLC (Horizon), which was purchased by Energia de Portugal in March, 2007 from the Goldman Sachs Group, Inc.

Project Description

20. The proposed project will use 61 Vestas V82-1.65 MW MKII wind turbines for an installed nameplate capacity of 100.65 MW. The turbine has a hub height of 80 meters (262 feet) and a rotor diameter of 82 meters (269 ft). The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. The rotor swept area is 5,281 meters² (56,844 feet²). The rotor speed will be 14.4 revolutions per minute corresponding to a maximum rotor tip speed of 138 miles per hour.
21. The turbine blades are approximately 131 feet long and will be light grey in color. The overall height of the tower, nacelle and blade will be approximately 397 feet when one blade is in the vertical position. The project will also include an underground-automated supervisory control and data acquisition system (SCADA) for communication purposes. Two permanent meteorological towers will be used as part of the communication system. Other components of the project include a concrete and steel foundation for each tower, pad-mounted step-up transformers, all weather class 5 roads of gravel or similar material, and an underground and overhead electric energy collection system.
22. The Vestas V82-1.65 MW MKII Wind Turbine is a three blade, upwind, active yaw, and active aerodynamic control regulated wind turbine with power/torque control capabilities. The rotor utilizes blade pitch regulation and variable speed operation to achieve optimum power output at all wind speeds. The variable speed operation minimizes power and torque spike delivered from the rotor to the drive train resulting in improved long-term reliability. Each turbine is equipped with a wind direction sensor. The wind direction sensor communicates with the computer system, which evaluates the measured wind parameters, and within a specified time interval, activates the yaw drives to align the nacelle to the wind direction.
23. Each turbine is interconnected through an underground electrical collection system at 34.5 kV. The 34.5 kV feeder lines from the project collection system feed the power to the independent breaker positions at the proposed project substation. The substation steps up the voltage from the 34.5 kV collection system to the transmission system level of 161 kV. The applicant is proposing to place the 34.5 kV feeder lines on public road rights-of-way where possible. Feeder lines will be underground unless conditions require that overhead lines be used. All of the proposed feeder lines would connect to the proposed project Substation in section 10 of Clayton Township.
24. Each tower will be secured by a concrete foundation that will vary in size depending on the soil conditions. A control panel that houses communication and electronic circuitry is placed in each tower. In addition, a step-up, pad-mounted transformer is necessary for each turbine to collect the power from the turbine and transfer it to a 34.5 kV collection system via underground cables.
25. All turbines meteorological tower systems will be interconnected with fiber optic communication cables that will be installed underground. The communication cables

will run back to a central host computer which will be located either at the project substation or at the operations and maintenance facility where a supervisory control and data acquisition (SCADA) system will be located. Signals from the current and potential transformers at each of the delivery points will also be fed to the central SCADA host computer. The SCADA system will be able to give status indications of the individual wind turbines and the substation and allow for remote control of the wind turbines locally or from a remote computer. This computerized supervisory control and data acquisition network will provide detailed operating and performance information for each wind turbine. The Permittee will maintain a computer program and database for tracking each wind turbine's maintenance history and energy production.

Wind Resource Considerations

26. The High Prairie II Wind Farm will be located in Mower County along the central divide at 1,350-1,420 feet above sea level. Land use in the project area is agricultural with intensive farming and some grazing activities and, as a result, there are few trees or structures in the proposed project site to inhibit the wind as it passes over the site. The wind resource in the project area is well documented by the Minnesota Department of Commerce Wind Resource Analysis Program and the Department of Commerce 2006 Wind Maps. The Wind Maps were developed for the Department by WindLogics and show the wind resource at 80 meters above ground level. In the vicinity of the project area, the mean annual wind speed at an elevation of 262 feet above ground level is mapped as 17.2 to 18.1 miles per hour.
27. For this project the wind turbines will be sited in strings within the site boundaries. The wind turbines are sited so as to have good exposure to winds from all directions with emphasis on exposure to the prevailing southerly and northwest wind winds. The turbine spacing, according to site permit application, maximizes use of the available wind and minimizes wake and array losses within the topographical context of the site. The turbine strings are typically oriented west-northeast, which is roughly perpendicular to the prevailing southerly and northwest winds. Spacing between the turbine strings is addressed in the permit at III.E.5. Individual, isolated turbine sites are avoided to minimize interconnection and access costs. Sufficient spacing between the turbines is utilized to minimize wake losses when the winds are blowing parallel to the turbine rows.
28. The Applicant has marked its production estimates as proprietary. DOC EFP Staff and the PUC have Non-Public Versions of the site permit applications, which contain estimates of energy production. These estimates are consistent with other projects that have been sited in the project area as well as other projects that have utilized similar technology. The base energy calculation assumes a normal or average wind year. The maximum variation in energy is within +/- 15 percent. Based on the data, one would expect the annual variation in energy at the project site to be within 10 percent of the mean during most years.
29. Most of the land within the project site is actively farmed. Corn and soybeans are the dominant row crops. Alfalfa and pasture are additional crops within the site boundary.

30. The project site as proposed includes approximately 10,000 acres in the townships of Bennington (Sections 3-6), Clayton (Sections 1-4, 8-12, 15-21, 29, 30), Grand Meadow (Sections 26, 27, 33-35) and Marshall (Sections 13, 14, 23-25) in Mower County. The land is predominately agricultural, with some scattered small woodlots, and wetlands. The proposed wind turbine site layout in the site permit application shows where the proposed facilities, such as towers, roads and the underground electrical lines, could be located. These locations are subject to change. It is estimated that the proposed facilities will result in the permanent disturbance of approximately 81 acres of land, primarily for roads and towers. Approximately 300 to 400 acres of land will be temporarily disturbed during construction of the wind farm for contractor staging areas, foundation construction, underground power lines, and tower and turbine assembly. Roads are expected to be about 32 to 34 feet wide.

Land Rights and Easement Agreements

31. In order to build a wind plant, a developer needs to secure site leases and easement option agreements to ensure access to the site for construction and operation of a proposed project. These lease or easement agreements also prohibit landowners from any activities that might interfere with the execution of the proposed project.
32. The Applicant has obtained lease and easement option agreements and/or rights to such agreements with landowners for land within the project site boundary necessary for installation of the components of the wind farm. These rights and easements will be able to support the proposed project.

Written Comments and Letters Received by January 31, 2007

33. By the close of the comment period on January 31, 2007, the PUC had received three comment letters on the proposed High Prairie Wind Farm II, project.
34. The comment letter from Ronald J. Lee, submitted at the January 17, 2007 Public Information Meeting (**Exhibit 7**) offered several comments on the information presented in the site permit application. Many of the comments were related to the visual impacts that would result from the proposed wind farm, and whether adequate compensation was being offered by the company. Mr. Lee did suggest that the noise impacts would be greater than what has been claimed by the Applicant and that the turbine setbacks should be increased to ½ mile.
35. The Contested Case Hearing Request of Ronald J. Lee, submitted on January 30, 2007 suggested that many of the issues raised in his previous comment letter be addressed in a contested case proceeding. (**Exhibit 8**)
36. The comment letter from the Minnesota Department of Natural Resources, dated January 31, 2007 (**Exhibit 9**) offered several comments related to habitat degradation and habitat loss of beneficial bird species related to the proposed project. The DNR suggests that

native grassland is reestablished along roadways and near wind turbines to provide prairie habitat on some of the 81.4 acres proposed to be impacted by this project. In addition the DNR supports the Applicants use of *Interim Guidelines to Avoid and Minimize Impacts to Wildlife from Wind Turbines (USF&WS 2003)* for mitigating potential impacts to local avian wildlife resources related to this project. While the guidelines are primarily focused on reducing impacts to migratory bird species, bat related wind tower incidents remain a DNR concern. Reseeding is most likely to occur in road rights-of-way and is addressed in the site permit (III.B.9.).

37. On February 28, 2007, the Applicant filed a response to the Minnesota DNR's January 31, 2007 comment letter. The letter states that the Applicant has included many of the recommendations in the USFWS guidelines that were referenced by the DNR comment letter as part of the proposed project. The Applicant has placed a majority of the turbine sites in agricultural production areas and access roads and supporting facility features will be designed to minimize impacts to existing grassland vegetation. However, if impacts to grassland areas cannot be avoided, the Applicant will mitigate impacts by replanting grassland species in areas of disturbance as practicable. **(Exhibit 10)**
38. On February 28, 2007, the Applicant filed a response to Mr. Lee's request for a contested case hearing. In the comment letter the Applicant states that each of Mr. Lee's questions has been addressed in studies performed by the Applicant and its consultants and in the Site Permit Application submitted to the Commission. The Applicant requested that the Commission deny Mr. Lee's request for a contested case hearing. **(Exhibit 11)**
39. On February 28, 2007, Great River Energy (GRE) filed a response to comments made by the Department of Commerce in the Certificate of Need proceeding and a response to the request by Mr. Ronald Lee for a contested case hearing. In the comments GRE suggested that Mr. Lee had not demonstrated that there are material factual disputes and that a contested case hearing would aid the Commission in making a final determination. **(Exhibit 12)**

Site Criteria

40. Minnesota Rules chapter 4401 applies to the siting of Large Wind Energy Conversion Systems. The rules require applicants to provide a substantial amount of information to allow the PUC to determine the potential environmental and human impacts of the proposed project and whether the project is compatible with environmental preservation, sustainable development, and the efficient use of resources. Minn. Rules parts 4401.0450 through 4401.0600. The following analysis addresses the relevant criteria that are to be applied to a LWECS project.

Human Settlement, Public Health and Safety

41. The site is in an area of low population density, with little residential, commercial or industrial development on or near the site. As a result, the impact of the proposed LWECS on human settlement, public health and safety will be minimal. The site permit

condition (III. C.) specifies conditions for setbacks from residences and roads. The proposed wind turbine layout meets or exceeds those requirements. The proposed project is not expected to affect any water wells (used, unused or unsealed) or any rural water system that services the area.

42. There will be no displacement of existing residences or structures in siting the wind turbines and associated facilities.
43. The project will comply with the Federal Aviation Administration requirements with respect to lighting. See site permit condition III.E.4.
44. High Prairie Wind Farm II, LLC will provide security during construction and operation of the project, including fencing, warning signs, and locks on equipment and facilities. High Prairie Wind Farm II, LLC will also provide landowners and interested persons with safety information about the project and its facilities. See site permit condition III.B.15.
45. In winter months ice may accumulate on the wind turbine blades when the turbines are stopped or operating very slowly. Furthermore, the anemometer may ice up at the same time, causing the turbine to shut down during any icing event. As weather conditions change, any ice will normally drop off the blades in relatively small pieces before the turbines resume operation. This is due to flexing of the blades and the blades' smooth surface. Although turbine icing is an infrequent event, it remains important that the turbines are not sited in areas where regular human activity is expected below the turbines or in the immediate proximity during the winter months.
46. Each turbine will be clearly labeled to identify each unit and a map of the site with the labeling system will be provided to local authorities as part of the fire protection plan.

Noise

47. Wind turbines do generate noise. According to sound pressure level tests and estimations provided by High Prairie Wind II, LLC in its application for a site permit, the sound pressure level is expected to be lower than the Pollution Control Agency noise standard of 50 dBA measured at the closest residence. See Minn. Rules part 7030.0040. For this project, the site permit application indicates that at a distance of 466 feet, the noise measured at a home will meet the requirements the Nighttime L50 standard of 50 dB(A). The typical proposed setback of 1,500 feet from occupied residences will ensure that cumulative noise levels resulting from multiple turbines and noise drift resulting from wind will not exceed regulator limits at any residence. See site permit condition III.E.3. & III.F.2.

Visual Values

48. The placement of 61 additional turbines will affect the appearance of the area. The wind turbines will be mounted on tubular towers that are up to 262 feet tall. The rotor blades

will have a diameter of up to 269 feet. The turbine towers and rotor blades will be prominent features on the landscape. There will be intermittent, expansive views of the turbines to passing motorists on local, county and state highways. Motorists and drivers on local, township and county roads will travel within 800 feet of some turbines.

49. The visual impact of the wind turbines will be reduced by the use of a neutral paint color. All site permits issued by the PUC require the use of tubular towers; therefore, the turbine towers will be uniform in appearance. The wind turbines in this project, while prominent on the landscape, also blend in with the surrounding area. The project site will retain its rural character. The turbines and associated facilities necessary to harvest the wind for energy are consistent with existing land use and agricultural practices.
50. From one perspective, the proposed project might be perceived as a visual intrusion on the natural aesthetic value on the landscape, characterized by up to 61 tubular steel structures approximately 262 -feet high, standing on formerly undisturbed ridgelines, with 132-foot blades, having an overall height of 397 feet when one blade is in the vertical position. Wind plants have their own aesthetic quality, distinguishing them from other non-agricultural uses. The existing wind plants in Mower County and on the Buffalo Ridge have altered the landscape in the area from agricultural to wind plant/agricultural. This project will increase the visual impact to the area. The cumulative effect of the proposed project will increase both the industrial appearances of the wind plants in the area and the areas from which they will be seen. Because wind generation development is likely to continue in Mower County, this visual impact will continue to increase the size of the wind plant/farm footprint as the turbines harvest the wind resources of Mower County for energy. To date the presence of numerous wind turbines on Buffalo Ridge has been well accepted by the people who live and work in the area.
51. Several other measures will also be taken to minimize visual intrusion such as: low profile access roads, project access roads will avoid cuts and fill, the areas affected by construction will be restored after construction is completed, turbines will not be illuminated unless required by FAA regulations, and the turbine rotor size will require increased turbine spacing to minimize wake loss, therefore the turbines will be spaced further from one another than in several projects on Buffalo Ridge. The visual scale of the High Prairie II Wind Farm will be similar to those on the Buffalo Ridge.

Recreational Resources

52. Recreational opportunities in Mower County include: hunting, fishing, and snowmobiling, campgrounds and trails. Hunting is permitted in designated state Minnesota Department of Natural Resources Wildlife Management Areas (WMA's), unless otherwise posted.

53. Three WMA's are located within 5-miles of the project area. Rustic Refuge WMA is located 4-miles south of the Project substation. Cartney WMA is located approximately 2-miles east-southeast of the substation and five miles from the nearest proposed turbine. Schwerin Creek WMA is located approximately 2-miles northwest of the Project. Lake Louise is a 1,170 acre State Park located approximately 8-miles southeast of the Project Area. This park is valued for its open landscape and lush hardwood forest.
54. Recreational activities will not be significantly impacted by the Project. Visual impacts would be the most evident impact to people who use the WMAs and SNAs for recreation. The towns of Grand Meadow and Elkton are located within one mile of the Project Area and the turbines will be visible to the residents. The turbines will be noticeable to persons using the WMA's. Turbines will not be located in WMA's or in any local parks. Turbine operations are not expected to affect the natural areas in any material way and no adverse impact on wildlife management areas or practices is expected.

Infrastructure

55. The proposed wind farm is expected to have a minimal effect on the existing infrastructure. The proposed project will use underground cables for the collector lines on private property within the wind farm. The feeder lines associated with the project are currently planned to be underground. Any aboveground feeder lines, if used, would be wood-pole, 34.5 kV typical of wind project feeder lines in the Buffalo Ridge area. The feeder lines will deliver the energy from the wind farm to the project substation. Placement of collector and feeder lines is addressed in the site permit at III.E.7. and 8.
56. The project will require the use of public roads to deliver construction supplies and materials to the work site. Site permit condition III.B.8. addresses this topic. Construction of the project requires the addition of several miles of access roads that will be located on private property. The access roads will be routed along the wind turbine strings, fence lines, and field edges to minimize disturbance to agricultural activities. The typical access road will be 32 to 34 feet in width and covered in Class 5 gravel (or similar material). The access roads will be low profile roads to allow for the movement of agricultural equipment. The site permit at III.B. 8 (b) addresses this topic. During operation and maintenance of the wind plant, operation and maintenance crews, while inspecting and servicing the wind turbines, will use access roads. Periodic grading or other methods will maintain the roads necessary to maintain road integrity. The Permittee may do this work or contract it out.
57. If access roads must be installed across streams or drainage ways, the Permittee in consultation with the Minnesota Department of Natural Resources will design, shape and locate the road so as not to alter the original water flow or drainage patterns. Any work required below the ordinary high water line, such as road crossings or culvert installation, will require a permit from the Minnesota Department of Natural Resources.
58. The proposed wind farm will not affect water supplies, railroads, telecommunication facilities, and radio reception. The presence or operation of the wind plant could

potentially impact the quality of television reception in the area. Previous work on television reception issues indicates that in some cases new antennas or relocation of existing antennas can restore television signal strength reception. High Prairie Wind II, LLC will address the concerns of residents in the area of the project site before and after the project construction to document and mitigate any television reception impacts that might occur. This is addressed in the site permit at III.D.3.

59. Construction, operation, and maintenance of the proposed wind plant will comply with all of the required federal and state permit requirements.

Community Benefits

60. The project will provide local tax revenues from a production tax on the wind turbines. No significant adverse impact on public services is expected. Wear and tear on roads will occur as a result of the transport of heavy equipment and other materials. The site permit at III.B.8. addresses road damages. Landowners will also receive easement payments from the Permittee.
61. To the extent that local workers and local contractors are capable, qualified, and available, High Prairie Wind Farm II, LLC will seek to hire them to construct the proposed project. The hiring of local people will expand employment opportunities in this area of the state and keep money in the local economy. Once constructed, the project will be staffed with several full time site technicians and a wind plant supervisor.

Effects on Land-Based Economies

62. The wind turbines and access roads will be located so that the most productive farmland will be left as intact as possible. However, the project will displace approximately 81 acres of agricultural land. The site permit at III.B. 2., 3., 4., 5., 6., 7., 8(c), 9., and 10. addresses mitigation measures for agricultural lands. The proposed project does not affect any sand or gravel operations.

Archaeological and Historical Resources

63. A review of the Minnesota State Historic Preservation Office (SHPO) computer database indicates 30 cultural sites within five miles of the project Cultural Study Area. Within the Cultural Study Area, the areas that can be singled-out for high probability are the headwaters of Schwerin Creek, Deer Creek, Spring Valley Creek and the South Branch of the Root River. The Cultural Study Area does not contain exposed or near-surface bedrock as does the nearby Grand Meadows site, which reduces the probability of major lithic procurement sites in the area. The proximity of the Cultural Study Area to the Grand Meadows site suggests that the area was heavily trafficked in prehistoric times, and creates a very high probability for small temporary campsites, as well as a variety of lithic reduction sites and scatters. There is enough potential to necessitate a Phase I Field Survey of the Cultural Study Area. A Phase I Field Survey will serve to identify any

additional area of historic interest. The Project, would avoid, when possible, or cause minimal impacts to archaeological and historic sites.

64. A Phase I Archaeology survey is recommended for all the proposed turbine locations, access roads, junction boxes and areas of construction impact for the transmission line to document any previously unrecorded archaeological sites within the project site. The site permit at III. D.2. requires High Prairie Wind Farm II, LLC to consult with the Minnesota Historical Society. A Phase I archaeology survey consists of the following tasks: consultation, documentation, and identification.
65. If any archaeological sites are found during the Phase I survey, their integrity and significance should be addressed in terms of the site's potential eligibility for placement on the National Register of Historic Places (NRHP). If such sites are found to be eligible for the NRHP, appropriate mitigative measures will need to be developed in consultation with the Minnesota State Historic Preservation Officer (SHPO), the State Archaeologist, and consulting American Indian communities. The site permit also requires the Permittee to stop work and notify the Minnesota Historical Society and PUC if any unrecorded cultural resources are found during construction.

Air and Water Emissions

66. No harmful air or water emissions are expected from the construction and operation of the LWECs.

Animals and Wildlife

67. Neither construction nor operation of the project is expected to significantly impact wildlife. Based on studies of existing wind power projects in the United States and Europe, the only impact of concern to wildlife would primarily be to avian and bat populations. The final report on avian monitoring studies at Buffalo Ridge, Minnesota “Final Report-Avian Monitoring Studies at the Buffalo Ridge, Minnesota Resource Area: Results of a 4-Year Study” (September 2000) identified the following impacts:
 - a) Following construction of the wind turbines, there is a reduction in the use of the area within 100 meters of the turbines by seven of 22 species of grassland breeding birds. It was hypothesized that lower avian use may be associated with avoidance of turbine noise, maintenance activities, and less available habitat. The researchers stated "on a large scale basis, reduced use by birds associated with wind power development appears to be relatively minor and would not likely have any population consequences on a regional level."(p. 44)
 - b) Avian mortality appears to be low on Buffalo Ridge, compared to other wind facilities in the United States, and is primarily related to nocturnal migrants. Resident bird mortality is very low and involves common species. The researchers stated that "based on the estimated number of birds that migrate through Buffalo

Ridge each year, the number of wind plant related avian fatalities at Buffalo Ridge is likely inconsequential from a population standpoint." (p. iv)

68. Bat mortality was also studied at Buffalo Ridge, instigated by bat collision victims found during the avian monitoring studies. The bat study was conducted in 2001 and 2002. ("Bat Interactions with Wind Turbines at the Buffalo Ridge, Minnesota Wind Resource Area," November 2003). The overall conclusion is that bat activity at turbines and the numbers of bat fatalities do not share a statistical relationship. Bat collisions were found to be very rare, given the amount of bat activity documented at the turbines. Most fatalities involved migrating bats, a wind-plant related mortality "is possibly not sufficient to cause significant, large-scale population declines." (p. 61)
69. Mitigation measures are also prescribed in the site permit and include but are not limited to: a) a pre-construction inventory of existing biological resources, native prairie, state listed and threatened species and wetlands in the project area; b) turbines and associated facilities will not be constructed in wildlife management areas, recreation and state and scientific natural areas; c) trees and shrubs that are important to the wildlife present in the area will not be disturbed; d) sound water and soil conservation practices will be implemented during construction and operation of the project to protect topsoil and adjacent resources and to minimize soil erosion will be taken. This also applies to any work in proximity to watercourses.

Vegetation

70. No public waters, wetlands or forested land are expected to be affected by the project. No groves of trees or shelterbelts will need to be removed to construct and operate the system. Native prairie will also be avoided. If native prairie cannot be avoided, the site permit at III. C.6. provides for preparation of a prairie protection and management plan.

Soils

71. Construction of the wind turbines and access roads increases the potential for erosion during construction and converts prime farmland to industrial use. The site permit at III. B. 9. requires a soil erosion and sediment control plan. The project will also require a storm water run-off permit from the Minnesota Pollution Control Agency.

Surface Water and Wetlands

72. No towers, access roads or utility lines will be located in surface water or wetlands. See site permit at III.C.5.

Future Development and Expansion

73. Current information suggests that Mower County's windy areas are large enough to accommodate more wind facilities. In the future, turbines used in this area likely will consist of several types and sizes supplied by different vendors and installed at different times.
74. While large-scale projects have occurred elsewhere, little systematic study of the cumulative impact has occurred. Research on the total impact of many different projects in one area has not occurred. DOC EFP staff continues to monitor for impacts and issues related to wind energy development.
75. The PUC anticipates more site permit applications under Minnesota Statutes section 216F.04 (a). The PUC is responsible for siting of LWECs "in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources." Minnesota Statutes section 216F.03.
76. Minnesota Statutes section 216E.03, subd. 7 requires consideration of design options that might minimize adverse environmental impacts. By using larger turbines, fewer turbines are required, reducing siting needs for turbines and related facilities. Turbines must also be designed to minimize noise and aesthetic impacts. Buffers between strings of turbines are designed to protect the turbines' production potential. The site permit also provides for buffers between adjacent wind generation projects to protect production potential. See site permit at III.C.1.
77. The location and spacing of the turbines are critical to the issues of orderly development and the efficient use of wind resources. Turbines are likely to be located in the best winds, and the spacing dictates, among other factors, how much land area the project occupies. There is strong public support for orderly development of wind energy in Minnesota.
78. One efficiency issue is the loss of wind in the wake of turbines. When wind is converted to rotational energy by the blades of a wind turbine, energy is extracted from the wind. Consequently, the wind flow behind the turbine is not as fast and is more turbulent than the free-flowing wind. This condition persists for some distance behind the turbine as normal wind flow is gradually restored. If a turbine is spaced too close downwind of another, it produces less energy and is less cost-effective. This is the wake loss effect. If the spacing is too far, wind resources are wasted and the projects' footprint on the land is unnecessarily large.
79. For this project the wind turbines will be sited in strings within the site boundaries. The wind turbines are sited so as to have good exposure to winds from all directions with emphasis on exposure to the prevailing southerly and northwest wind winds. The turbine spacing, according to site permit application, maximizes use of the available wind and minimizes wake and array losses within the topographical context of the site. The turbine strings are typically oriented west-northeast, which is roughly perpendicular to the

prevailing southerly and northwest winds. Spacing between the turbine strings is addressed in the permit at III.E.5. Individual, isolated turbine sites are avoided to minimize interconnection and access costs. Sufficient spacing between the turbines is utilized to minimize wake losses when the winds are blowing parallel to the turbine rows. The estimated array losses for the proposed High Prairie II Wind Farm Project have been marked as trade secret by the Applicant, but review of these figures by DOC EFP staff find that the estimated array loss is consistent with previous projects permitted by the Environmental Quality Board and the PUC.

80. Other factors that lead to discounts or losses were assumed to be identical for all arrays and include turbine availability loss, warm weather loss, icing loss, high wind cut-out/cycling, electrical efficiency loss, and substation/grid outages.

Maintenance

81. Maintenance of the turbines will be on a scheduled, rotating basis with units normally off for maintenance each day, if necessary. Maintenance on the interconnection points will be scheduled for low wind periods and coordinated with Great River Energy. High Prairie Wind Farm II, LLC will be staffed with site technicians and a wind plant supervisor. The Permittee will construct a facility to house the operation and maintenance efforts for the Project. The approximate 5000 square foot facility will provide office space for the crews, a shop/storage area for spare parts and vehicles, and will house all of the central monitoring equipment for the wind turbines. The building may be built on the Project site, or if the location is convenient, an existing facility may be purchased and modified to function as the operations and maintenance facility.

Site Restoration

82. Decommissioning and site restoration activities will include (1) removal of all turbines and towers; (2) removal of all pad mounted transformers; (3) removal of all above-ground distribution facilities; (4) removal of foundations to a depth of three feet below grade; and (5) removal of surface road material and restoration of the roads and turbine sites to previous conditions to the extent feasible.

Decommissioning Economics

83. The estimated decommissioning cost for the High Prairie Wind Farm II, LLC is approximately \$1.7 million in 2007 dollars, based on decommissioning costs of similar projects. The Permit requires the Permittee to submit a Decommissioning Plan to the PUC that describes how the Permittee will ensure that the resources are available to pay for decommissioning the project at the appropriate time.
84. To assure that the Project will meet its obligation to dismantle the wind Project, the Permittee will either establish a decommissioning fund to be held in escrow for the benefit of landowners, provide the landowners a corporate guaranty of the Project's decommissioning obligations from a company with an investment grade credit rating, or

provide similar security acceptable to the landowners. The Permittee will establish the decommissioning security during the seventh year of the Project. See Exhibit 1, page 74.

Site Permit Conditions

85. Nearly all of the conditions contained in the site permit were established as part of the site permit proceedings of other wind turbine projects permitted by the Environmental Quality Board and the Public Utilities Commission. No significant comments were received concerning the requirements and conditions in the draft site permit distributed for comment on December 11, 2007. Minor changes that provide for clarifications of the draft site permit conditions have been made.
86. The site permit contains conditions that apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning and all other aspects of the project.

Based on the foregoing findings, the Minnesota Public Utilities Commission makes the following:

CONCLUSIONS OF LAW

1. Any of the foregoing findings, which more properly should be designated as conclusions, are hereby adopted as such.
2. The Minnesota Public Utilities Commission has jurisdiction under Minnesota Statutes section 216F.04 over the site permit applied for by High Prairie Wind Farm II, LLC.
3. The High Prairie Wind Farm II, LLC application for a site permit was properly filed and noticed as required by Minnesota Statutes section 116C.94 and Minnesota Rules parts 4401.0460 subp 2 and 4401.0550 subp 2.
4. The Minnesota Public Utilities Commission has afforded all interested persons an opportunity to participate in the development of the site permit and has complied with all applicable procedural requirements of Minnesota Statutes section 216F.04 and Minnesota Rules Chapter 4401.
5. No objections were filed with the Minnesota Public Utilities Commission by any governmental unit during the 30-day comment period. Objections to the project and a Contested Case Hearing Request were filed by Ronald J. Lee, a landowner in proximity to the project area during the 30-day comment period. Most of the issues cited in both the comments and the Contested Case Hearing Request fall outside the scope of the permitting process. Those issues that are within the scope of the permitting process are reflected in permit conditions. The contested case hearing request was denied by the Public Utilities Commission, but the scope of the public hearing for the Certificate of Need proceeding in this matter was expanded to include issues related to the siting and permitting process.

6. The Minnesota Public Utilities Commission is the agency directed to carry out the legislative mandate to site LWECS in an orderly manner compatible with environmental preservation, sustainable development and the efficient use of resources. The proposed High Prairie Wind Farm II 100.65-megawatt LWECS project will not create significant human or environmental impacts and is compatible with environmental preservation, sustainable development, and the efficient use of resources.

8. The Minnesota Public Utilities Commission has the authority under Minnesota Statutes section 216F.04 to establish conditions in site permits relating to site layout and construction and operation and maintenance of an LWECS. The conditions contained in the site permit issued to High Prairie Wind Farm II, LLC are appropriate and necessary and within the Minnesota Public Utilities Commission's authority.

Based on the foregoing Findings of Fact and Conclusions of Law, the Minnesota Public Utilities Commission issues the following:

ORDER

The Attached Site Permit is hereby issued to High Prairie Wind Farm II, LLC, for up to a 100.65-MW Large Wind Energy Conversion System in Mower County, Minnesota. The site permit issued by the PUC authorizes High Prairie Wind Farm II, LLC to construct and operate the proposed Large Wind Energy Conversion System in accordance with the conditions contained in the site permit and in compliance with the requirements of Minnesota Statutes section 216F.04 and Minnesota Rules Chapter 4401.

Approved and adopted this _____ day of May, 2007.

BY ORDER OF THE COMMISSION

Burl W. Haar,
Executive Secretary

**SITE PERMIT FOR
HIGH PRAIRIE II WIND FARM
LARGE WIND ENERGY CONVERSION SYSTEM
IN
MOWER COUNTY**

ISSUED TO

HIGH PRAIRIE WIND FARM II, LLC

PUC DOCKET NO. PT6556/WS-06-1520

In accordance with Minnesota Statutes Section 216F.04 this Site Permit is hereby issued to:

HIGH PRAIRIE WIND FARM II, LLC

High Prairie Wind Farm II, LLC is authorized to construct and operate up to a 100.65-Megawatt Large Wind Energy Conversion System on the site identified in this Site Permit and in compliance with the conditions contained in this Permit.

This Permit shall expire on December 31, 2037

Dated: May _____, 2007

BY ORDER OF THE COMMISSION

BURL W. HAAR
Executive Secretary

(S E A L)

This document can be made available in alternative formats (i.e., large print or audio tape) by calling 651-201-2202 (Voice), 651-297-1200 (TTY).

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**MINNESOTA PUBLIC UTILITIES COMMISSION COMPLAINT
REPORT PROCEDURES FOR LARGE WIND ENERGY CONVERSION
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I. SITE PERMIT

This Site Permit for a Large Wind Energy Conversion System authorizes High Prairie Wind Farm II, LLC, (hereinafter “Permittee”) to construct up to a 100.65-Megawatt LWECS and associated facilities known as the High Prairie II Wind Farm in Mower County, on a site of approximately 10,000 acres in accordance with the conditions contained in this Permit. The site boundary is shown on the map that is attached hereto as Exhibit 1.

II. PROJECT DESCRIPTION

The 100.65-Megawatt LWECS authorized to be constructed in this Permit is referred to as the High Prairie II Wind Farm and will be owned and operated by High Prairie Wind Farm II, LLC. The project will consist of up to 61 Vestas 1.65 MW wind turbines with a nominal nameplate capacity of 100.65-Megawatts. Turbines are interconnected by communication and electrical power collection facilities within the wind farm. These facilities will include transformers and underground collector lines, and feeder lines that will deliver wind-generated power to a new project substation located in Section 10 of Clayton Township in Mower County.

III. CONDITIONS

The following conditions shall apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning and all other phases of the LWECS. The PUC preserves all available remedies for violation of any of these Permit conditions, including revocation or modification of the Permit.

A. GENERAL CONSTRUCTION CONDITIONS

1. SITE PLAN

Prior to commencing construction, the Permittee shall submit to the PUC or Commission a site plan for all turbines, roads, electrical equipment, collector and feeder lines and other associated facilities to be constructed and engineering drawings for site preparation, construction of the facilities, and a plan for restoration of the site due to construction. The Permittee may submit a site plan and engineering drawings for only a portion of the LWECS if the Permittee is prepared to commence construction on certain parts of the project before completing the site plan and engineering drawings for other parts of the LWECS. The Permittee shall have the right to move or relocate turbine sites due to the discovery of environmental conditions during construction, not previously identified, which by law or pursuant to this Permit would prevent such use. The Permittee shall notify the PUC of any turbines that are to be relocated before the turbine is constructed on the new site.

2. FIELD REPRESENTATIVE

Prior to the start of construction and continuously throughout construction and site restoration, the Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this Permit. This person (or a designee) shall be accessible by telephone during normal business hours. This person's address, phone number and emergency phone number shall be provided to the PUC, who may make the number available to local residents and officials and other interested persons. The Permittee may change the field representative by notification to the PUC.

3. PRECONSTRUCTION MEETING

Prior to the start of any construction, the Permittee shall conduct a preconstruction meeting with the person designated by the PUC to coordinate field monitoring of construction activities.

4. NOTICE OF PERMIT CONDITIONS

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

B. MITIGATION MEASURES

1. SITE CLEARANCE

The Permittee shall disturb or clear the site only to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the LWECS.

2. TOPSOIL PROTECTION

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

3. COMPACTION

The Permittee shall implement measures to minimize compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable.

4. LIVESTOCK PROTECTION

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

5. 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.

6. DRAINAGE TILE

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

7. EQUIPMENT STORAGE

The Permittee shall not locate temporary equipment staging areas for site construction and restoration on cultivated land unless otherwise negotiated with the affected landowner. Temporary staging areas shall not be located in wetlands or native prairie.

8. ROADS

(a) Public Roads

Prior to commencement of construction, the Permittee shall identify all state, county or township roads that will be used for the LWECS project and shall notify the PUC 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 LWECS. 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 with the appropriate state, county or township governmental body having jurisdiction over roads to be used for construction of the LWECS for maintenance and repair of roads that will be subject to extra wear and tear due to transportation of equipment and LWECS components. The Permittee shall notify the PUC of such arrangements upon request of the PUC.

(b) Turbine Access Roads

The Permittee shall construct the smallest number of turbine access roads it can. 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. When access roads are constructed across streams and drainage ways, the access roads shall be designed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed.

(c) 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.

9. SOIL EROSION AND SEDIMENT CONTROL

The Permittee shall develop a Soil Erosion and Sediment Control Plan prior to construction and submit the Plan to the PUC. This Plan may be the same plan submitted to the Minnesota Pollution Control Agency as part of a storm water runoff permit application. A goal of the Soil Erosion and Sediment Control Plan is to minimize soil erosion, to revegetate non-cropland and range areas disturbed by construction with wildlife conservation species, and wherever possible, to plant appropriate native species in cooperation with landowners.

The Soil Erosion and Sediment Control Plan shall address what types of erosion control measures will be implemented during each project phase, and shall at a minimum identify plans for grading, construction and drainage of roads and turbine pads; necessary soil information; detailed design features to maintain downstream water quality; a comprehensive re-vegetation plan to maintain and ensure adequate erosion control and slope stability and to restore the site after temporary project activities; and measures to minimize the area of surface disturbance. Other practices shall include containing excavated material, protecting exposed soil, and stabilizing restored material and removal of silt fences or barriers when the area is stabilized. The plan shall identify methods for disposal or storage of excavated material. Erosion and sedimentation control measures shall be installed prior to construction and maintained throughout the project's life.

10. CLEANUP

The Permittee shall remove all waste and scrap that is the product of construction, operation, restoration and maintenance from the site and properly dispose of it upon completion of each task. Personal litter, bottles, and paper deposited by site personnel shall be removed on a daily basis.

11. TREE REMOVAL

The Permittee shall minimize the removal of trees and the Permittee shall not remove groves of trees or shelter belts without notification to the PUC and the approval of the affected landowner.

12. RESTORATION

The Permittee shall, to the extent possible and as soon as practical following construction of each turbine, considering the weather and preferences of the landowner, restore the area affected by any LWECS activities to the condition that existed immediately before

construction began. The time period may be no longer than eight months after completion of construction of the turbine. Restoration shall be compatible with the safe operation, maintenance, and inspection of the LWECS.

13. HAZARDOUS WASTE

The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of hazardous wastes generated during any phase of the project's life.

14. APPLICATION OF HERBICIDES

The Permittee shall restrict herbicide use to those herbicides and methods of application approved by the Minnesota Department of Agriculture and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. The Permittee shall contact the landowner or his designee to obtain approval for the use of herbicide prior to any application on their property. The landowner may request that there be no application of herbicides on any part of the site within the landowner's property. All herbicides shall be applied in a safe and cautious manner so as to not damage crops, orchards, tree farms, or gardens. The Permittee shall also, at least ten days prior to the application, notify beekeepers with an active apiary within one mile of the proposed application site of the day the company intends to apply herbicide so that precautionary measures may be taken by the beekeeper.

15. PUBLIC SAFETY

The Permittee shall provide educational materials to landowners within the site boundaries and, upon request, to interested persons, about the project and any restrictions or dangers associated with the LWECS project. The Permittee shall also provide any necessary safety measures, such as warning signs and gates for traffic control or to restrict public access.

16. FIRE PROTECTION

The Permittee shall prepare a fire protection and medical emergency plan in consultation with the fire department having jurisdiction over the area prior to LWECS construction. The Permittee shall submit a copy of the plan to the PUC upon request.

17. TOWER IDENTIFICATION

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

C. SETBACKS

1. WIND ACCESS BUFFER

Wind turbine towers shall not be placed less than 5 rotor diameters from the perimeter of the site on the north-south axis and 2 rotor diameters on the east-west axis where the Permittee does not hold the wind rights, without the approval of the PUC. Permittee acknowledges that properties within the project boundaries for which Permittee does not hold the wind rights will not be foreclosed from installing wind turbine generators on such property at a later date, even if such turbine generators cannot be installed on such property in compliance with the setbacks set forth in the first sentence of this section.

2. RESIDENCES

Wind turbine towers shall not be located closer than 1000 feet from the nearest occupied dwelling.

3. ROADS

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

4. WILDLIFE MANAGEMENT AREAS

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in Waterfowl Protection Areas, State Wildlife Management Areas or Scientific and Natural Areas or in county parks. These areas may be used in establishing the wind access buffer required by paragraph III.C.1.

5. WETLANDS

Wind turbines and all associated facilities, including foundations, access roads, underground cable, and transformers, shall not be placed in public waters wetlands, as defined in Minnesota Statutes section 103G.005, subp. 15a.

6. NATIVE PRAIRIE

Upon request of the PUC, the Permittee shall, with the advice of the DNR and any others selected by the Permittee, prepare a prairie protection and management plan and submit it to the PUC and DNR Commissioner 60 days prior to the start of project construction. The plan shall address steps to be taken to identify native prairie within the project area, measures to avoid impacts to native prairie, and measures to mitigate for impacts if unavoidable. Wind turbines and all associated facilities, including foundations, access roads, underground cable and transformers, shall not be placed in native prairie unless addressed in the prairie protection and management plan. Unavoidable impacts to native prairie shall be mitigated by restoration or management of other native prairie areas that

are in degraded condition, or by conveyance of conservation easements, or by other means agreed to by the Permittee and PUC.

7. OTHER

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 owner of the sand and gravel operation.

D. PRECONSTRUCTION SURVEYS

1. BIOLOGICAL PRESERVATION SURVEY

The Permittee, in consultation with DNR and other interested parties, shall conduct a pre-construction inventory of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas within the site and assess the presence of state- or federally-listed or threatened species. The results of the survey shall be submitted to the PUC and DNR prior to the commencement of construction.

2. ARCHAEOLOGICAL RESOURCES

The Permittee shall work with the State Historic Preservation Office (SHPO) at the Minnesota Historical Society and the State Archaeologist as early as possible in the planning process to determine whether an archaeological survey is recommended for any part of the proposed project. The Permittee will contract with a qualified archaeologist to complete such surveys, and will submit the results to the PUC, the SHPO and the State Archaeologist. The SHPO and the State Archaeologist will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by PUC in consultation with SHPO and the State Archaeologist. In addition, the Permittee shall mark and preserve any previously unrecorded archaeological sites that are found during construction and shall promptly notify the SHPO, the State Archaeologist, and the PUC of such discovery. The Permittee shall not excavate at such locations until so authorized by the PUC in consultation with the SHPO and the State Archaeologist. If human remains are encountered during construction, the Permittee shall immediately halt construction at that location and promptly notify local law enforcement authorities and the State Archaeologist. Construction at the human remains location shall not proceed until authorized by local law enforcement authorities or the State Archaeologist.

If any federal funding, permit or license is involved or required, the Permittee shall notify the MHS as soon as possible in the planning process to coordinate section 106 (36 C.F.R. 800) review.

Prior to construction, 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 any archaeological sites are found during construction, the Permittee shall immediately stop work at the site and shall mark and preserve the site and notify the PUC and the MHS about the discovery. The PUC and the MHS shall have three working days from the time the agency is notified to conduct an inspection of the site if either agency shall choose to do so. On the fourth day after notification, the Permittee may begin work on the site unless the MHS has directed that work shall cease. In such event, work shall not continue until the MHS determines that construction can proceed.

3. ELECTROMAGNETIC INTERFERENCE

Within 60 days after issuance of this Permit, the Permittee shall submit a plan to the PUC for conducting an assessment of television signal reception and microwave signal patterns in the project area prior to commencement of construction of the project. 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 reception or microwave patterns in the event residents should complain about such disruption or interference after the turbines are placed in operation. The assessment shall be completed prior to operation of the turbines. 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 LWECS and associated facilities so as to cause microwave, television, radio, telecommunications or navigation interference contrary to Federal Communications Commission (FCC) regulations or other law. In the event the LWECS and its associated facilities or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

E. SITE LAYOUT RESTRICTIONS

1. WIND TURBINE TOWERS

Structures for wind turbines shall be self-supporting tubular towers. The towers shall not be more than 262 feet (80 meters) above grade.

2. METEOROLOGICAL TOWERS

Permanent towers up to 100 feet high for meteorological equipment shall be free standing. Temporary meteorological towers, which are those that will be removed after completion of construction, and all meteorological towers over 100 feet high may be guyed if the landowner has given written permission and the guys are properly marked with safety shields.

3. NOISE

The wind turbine towers shall be placed such that the Permittee shall comply with noise standards established as of the date of this permit by the Minnesota Pollution Control Agency at all times at all appropriate locations. Turbines shall be moved or modified or removed from service if necessary to comply with this condition. 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 PCA 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 erection of the towers.

4. FEDERAL AVIATION ADMINISTRATION

Towers shall be marked as required by the Federal Aviation Administration (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.

5. TURBINE SPACING

The turbine towers shall be constructed within the site as shown on the map attached as Exhibit 1. The turbine towers shall be spaced no closer than 3 rotor diameters (RD) for crosswind spacing (distance between turbines) and 5 RD downwind spacing (distance between strings of turbines). If required during final micro siting of the turbine towers to account for topographic conditions, 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.

6. 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.

7. ELECTRICAL CABLES

The Permittee shall place electrical lines, known as collectors, and communication cables underground when located on private property. Collectors and cables shall also be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner. This paragraph does not apply to feeder lines.

8. FEEDER LINES

The Permittee shall place overhead 34.5 kV electric lines, known as feeders, on public rights-of-way if a public right-of-way exists or the Permittee may place feeders on private property. A change in feeder line locations may be made as long as feeders remain on public rights-of-way and approval has been obtained from the governmental unit responsible for the affected right-of-way. When placing feeders on private property, the Permittee shall place the feeder in accordance with the easement negotiated with the affected landowner. Notwithstanding any of the requirements in paragraph III.D. to conduct surveys before any construction can commence, the Permittee may begin immediately upon issuance of this permit to construct the 34.5 kV feeder lines that will be required as part of this project. The Permittee shall submit the site plan and engineering drawings required under paragraph III.A.1. for the feeder lines before commencing construction. Any guy wires on the structures for feeder lines shall be marked with safety shields.

The Permittee must fulfill, comply with, and satisfy all Institute of Electrical and Electronics Engineers, Inc. (IEEE) standards applicable to this project, including but not limited to IEEE 776, IEEE 519, and IEEE 367, provided the telephone service provider(s) have complied with any obligations imposed on it pursuant to these standards. Upon request by the PUC, the Permittee shall report to the PUC on compliance with these standards.

F. STUDIES

1. WAKE LOSS STUDIES

The Permittee shall provide to the PUC with the site plan required by paragraph III.A.1., the preconstruction micro siting analysis leading to the final tower locations and an estimate of total project wake losses. The Permittee shall provide to the PUC any operational wake loss studies conducted on this project.

2. NOISE

On request of the PUC, the Permittee shall submit a proposal to the PUC for the conduct of a noise study. Upon the approval of the PUC the Permittee shall carry out the study. The study shall be designed to determine the noise levels at various distances from the turbines at various wind directions and speeds.

G. DECOMMISSIONING/RESTORATION/ABANDONMENT

1. DECOMMISSIONING PLAN

Prior to commencement of construction, the Permittee shall submit to the PUC a Decommissioning Plan describing the manner in which the Permittee anticipates decommissioning the project in accordance with the requirements of Minn. Rules part

4401.0450, subp.13. 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 PUC may at any time request the Permittee to file a report with the PUC describing how the Permittee is fulfilling this obligation.

2. SITE RESTORATION

Upon expiration of this Permit, or upon earlier termination of operation of the LWECS, the Permittee shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables, foundations, buildings and ancillary equipment to a depth of 48 inches. To the extent possible the Permittee shall restore and reclaim the site to its pre-project topography and topsoil quality. 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. Any agreement for removal to a lesser depth or for no removal shall be recorded with the county and shall show the locations of all such foundations. All such agreements between the Permittee and the affected landowner shall be submitted to the PUC prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within 18 months after expiration.

3. ABANDONED TURBINES

The Permittee shall advise the PUC of any turbines that are abandoned prior to termination of operation of the LWECS. The PUC may require the Permittee to decommission any abandoned turbine.

H. REPORTING

1. PROJECT ENERGY PRODUCTION

The Permittee shall, by July 15 of each year, report to the PUC on the monthly energy production of the project and the average monthly wind speed collected at one permanent meteorological tower selected by the PUC during the preceding year or partial year of operation. The report shall include copies of any project production reports filed with the Midwest Area Power Pool (MAPP), the Federal Energy Regulatory Commission (FERC), or any other public regulatory agency. The Permittee shall describe the operational status and availability of the Project and any major outages, major repairs, or turbine performance improvements occurring in the previous year.

2. WIND RESOURCE USE

Within three months after commercial operation begins, the Permittee shall provide the PUC with viewer access to its supervisory control and data acquisition (SCADA) system to allow the PUC convenient review of the following average hourly data for each hour of commercial operation in printed format or electronic format capable of computerized analysis as specified by the PUC:

- (a) The power output of each turbine;
- (b) The wind speed and direction measured at all monitored heights at any temporary and permanent meteorological towers, connected to the SCADA system, owned or operated by the Permittee, in or within three miles of the project site boundary; and
- (c) Temperature and any other meteorological parameters recorded at one permanent meteorological tower selected by the PUC.

Once the Permittee provides the initial access, the PUC shall be responsible for maintaining the remote viewer connection. The Permittee shall not be in violation of this Permit if remote connection is lost or the SCADA system goes down. In the event the PUC is not provided access to the SCADA system, the Permittee shall file a quarterly report (due January 15, April 15, July 15, and October 15) with the PUC with the same data specified above. After two years of commercial operation, the PUC may reduce or eliminate the requirements of this condition. The provisions of paragraph III.K.5. shall apply to the PUC's review of this data.

3. EXTRAORDINARY EVENTS

Within 24 hours of an occurrence, the Permittee shall notify the PUC of any extraordinary event. Extraordinary events include but shall not be limited to: fires, tower collapse, thrown blade, collector or feeder line failure, injured LWECS worker or private person, kills of threatened or endangered species, or discovery of an unexpectedly large number of dead birds or bats of any variety on site. In the event of extraordinary avian mortality the DNR shall also be notified within 24 hours. The Permittee shall, within 30 days of the occurrence, submit a report to the PUC describing the cause of the occurrence and the steps taken to avoid future occurrences.

4. COMPLAINTS

Prior to the start of construction, the Permittee shall submit to the PUC the company's procedures to be used to receive and respond to complaints. The Permittee shall report to the PUC all complaints received concerning any part of the LWECS in accordance with the procedures provided in Exhibit 2 attached to this Permit.

I. FINAL CONSTRUCTION

1. AS-BUILT PLANS AND SPECIFICATIONS

Within 60 days after completion of construction, the Permittee shall submit to the PUC a copy of the as-built plans and specifications. The Permittee must also submit this data in a geographic information system (GIS) compatible format so that the PUC can place it

into the Land Management Information Center's geographic data clearinghouse located in the Office of Geographic and Demographic Analysis.

2. FINAL BOUNDARIES

After completion of construction, the PUC may determine a need to adjust the final boundaries of the site required for this project. If done, this Permit may be modified, after notice and opportunity for public hearing, to represent the actual site required by the Permittee to operate the project authorized by this Permit.

3. EXPANSION OF SITE BOUNDARIES

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

J. AUTHORITY TO CONSTRUCT LWECS

1. WIND RIGHTS.

The Permittee shall advise the PUC of the obtaining of exclusive wind rights within the boundaries of the LWECS authorized by this Permit within 30 days of receiving such wind rights. The Permittee shall submit documentation of such exclusive wind rights if requested by the PUC.

2. OTHER PERMIT APPLICATIONS.

Nothing in this Permit shall be construed to preclude any other person from seeking a site permit to construct a large 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.

3. PREEMPTION OF OTHER LAWS

Pursuant to Minn. Stat. § 216F.07, this Site Permit shall be the only site approval required for the location 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. Nothing in this Permit shall release the Permittee from any obligation imposed by law that is not superseded or preempted by law.

4. POWER PURCHASE AGREEMENT

This Permit does not authorize construction of the project until the Permittee has obtained a power purchase agreement for the electricity to be generated by the project. In the

event the Permittee does not obtain a power purchase agreement by May 1, 2008, this Permit shall be null and void.

K. MISCELLANEOUS

1. PERIODIC REVIEW

The PUC 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 PUC, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of the Permit. No modification may be made except in accordance with applicable statutes and rules.

2. FAILURE TO COMMENCE CONSTRUCTION

If the Permittee has not completed the pre-construction surveys required in paragraph III.D. and commenced construction of the LWECs within three years of the issuance of this Permit, the Permittee must advise the PUC of the reason construction has not commenced. In such event, the PUC may determine whether this Permit should be revoked. No revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minn. Stat. section 216E.14.

3. 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 facility; or
- (c) Existence of other grounds established by rule.

4. REVOCATION OR SUSPENSION OF THE PERMIT

The PUC 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 applicant, and a true statement would have warranted a change in the PUC'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; or

(c) There has been a material violation of a provision of an applicable statute or rule or an order of the PUC.

In the event the PUC shall determine that it is appropriate to consider revocation or suspension of this Permit, the PUC shall proceed in accordance with the requirements of Minn. Stat. section 216E.14 to determine the appropriate action. Upon a finding of any of the above, the PUC may require the Permittee to undertake corrective measures in lieu of having the Permit suspended or revoked.

5. PROPRIETARY INFORMATION

Certain information required to be submitted to the PUC under this Permit, including energy production and wake loss data, may constitute trade secret information or other type of proprietary information under the Data Practices Act or other law and is not to be made available by the PUC. The Permittee must satisfy requirements of applicable law to obtain the protection afforded by the law.

6. TRANSFER OF PERMIT

The Permittee may not transfer this Permit without the approval of the PUC. If the Permittee desires to transfer this Permit, the holder shall advise the PUC in writing of such desire. The Permittee shall provide the PUC with such information about the transfer as the PUC requires to reach a decision. The PUC may impose additional conditions on any new Permittee as part of the approval of the transfer.

7. OTHER PERMITS

The Permittee shall be responsible for acquiring any other federal, state, or local permits or authorizations that may be required to construct and operate a LWECs within the authorized site. The Permittee shall submit a copy of such permits and authorizations to the PUC upon request.

8. SITE MANAGER

The Permittee shall designate a Site Manager who shall be the contact person for the PUC to contact with questions about the LWECs. The Permittee shall provide the PUC with the name, address, and phone numbers of the project site manager prior to placing any turbine into operation. This information shall be maintained current by informing the PUC of any changes, as they become effective.

9. NOTICE TO LOCAL RESIDENTS

The Permittee shall, within ten working days of receipt of this Permit, send a copy of the Permit to the office of the auditor of each county in which the site is located and to the clerk of each city and township within the site boundaries. If applicable, the Permittee shall also, within 10 working days of issuance, send a copy of this Permit to each regional

development commission, local fire district, soil and water conservation district, watershed district, and watershed management district office with jurisdiction in the county where the site is located. Within 30 days of issuance of this Permit, the Permittee shall send a copy of the Permit to each affected landowner within the site. In no case shall the affected landowner receive the site permit less than five days prior to the start of construction on their property.

10. RIGHT OF ENTRY

The Permittee shall allow representatives of the PUC 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 site 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;
and
- (d) To examine and copy any documents pertaining to compliance with the conditions of this Permit.

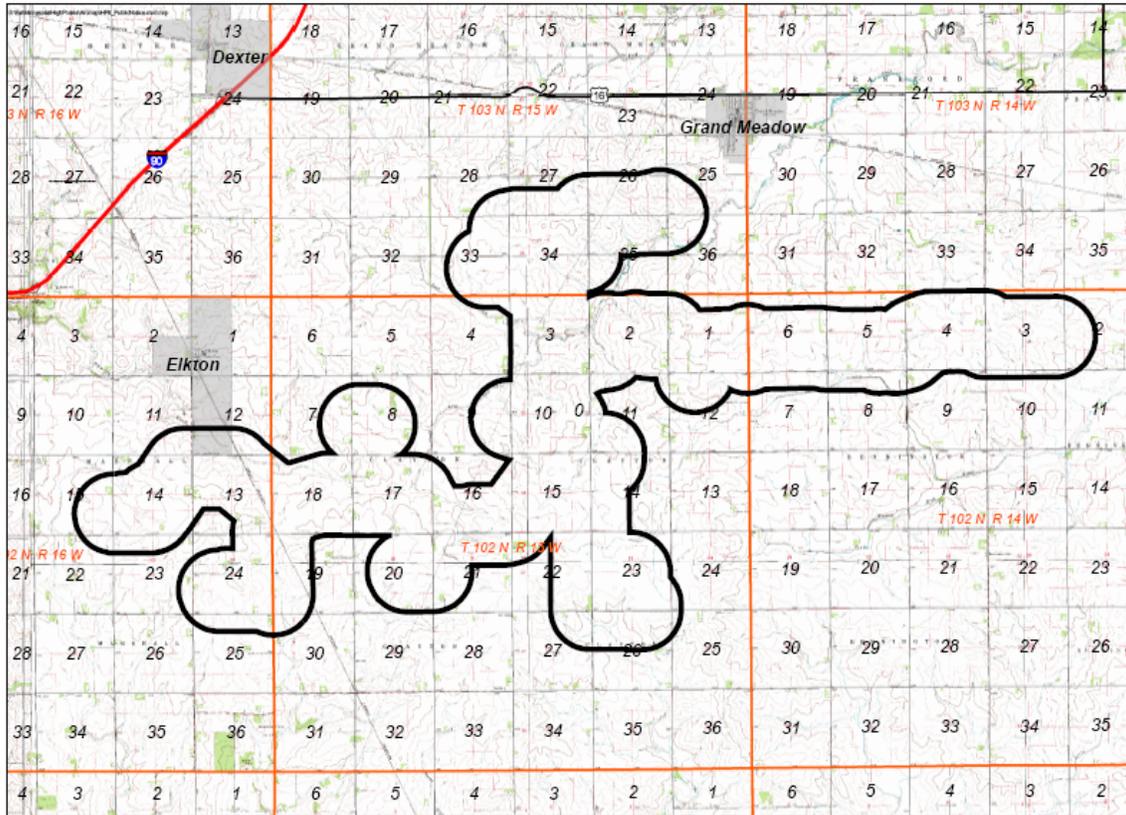
11. MORE STRINGENT RULES

The PUC's issuance of this Site Permit does not prevent the future adoption by the PUC 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.

L. EXPIRATION DATE

This Permit shall expire on December 31, 2037.

PROJECT AREA MAP



High Prairie II Windfarm
Project Area
Mower County, Minnesota

**MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLAINT REPORT PROCEDURES FOR
LARGE WIND ENERGY CONVERSION SYSTEMS**

1. Purpose

To establish a uniform and timely method of reporting complaints received by the Permittee concerning the Permit conditions for site preparation, construction, cleanup and restoration, and resolution of such complaints.

2. Scope

This reporting plan encompasses complaint report procedures and frequency.

3. Applicability

The procedures shall be used for all complaints received by the Permittee.

4. Definitions

Complaint - A statement presented by a person expressing dissatisfaction, resentment, or discontent as a direct result of the LWECS and associated facilities. Complaints do not include requests, inquiries, questions or general comments.

Substantial Complaint - Any complaints submitted to the Permittee in writing that, if substantiated, could result in Permit modification or suspension pursuant to the applicable regulations.

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.

5. Responsibilities

Everyone involved with any phase of the LWECS is responsible to ensure expeditious and equitable resolution of all complaints. It is therefore necessary to establish a uniform method for documenting and handling complaints related to this LWECS project. The following procedures will satisfy this requirement:

- A. The Permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:
 - 1. Name of the Permittee and project.
 - 2. Name of complainant, address and phone number.
 - 3. Precise property description or tract numbers (where applicable).
 - 4. Nature of complaint.
 - 5. Response given.
 - 6. Name of person receiving complaint and date of receipt.
 - 7. Name of person reporting complaint to the PUC and phone number.
 - 8. Final disposition and date.

- B. The Permittee shall assign an individual to summarize complaints for transmittal to the PUC.

6. Requirements

The Permittee shall report all complaints to the PUC according to the following schedule:

Immediate Reports - All substantial complaints shall be reported to the PUC by phone the same day received or on the following working day for complaints received after working hours. Such reports are to be directed to Wind Permit Compliance at the following: 651-296-5089 or 1-800-657-3794. Voice messages are acceptable.

Monthly Reports – By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the proceeding month, and a copy of each complaint shall be sent to Wind Permit Compliance, Minnesota Department of Commerce, 85 7th Place East, Suite 500, St. Paul, MN 55101-2198.

7. Complaints Received by the PUC

Copies of complaints received directly by the PUC from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the Permittee.



In the Matter of the Application of High Prairie Wind Farm II, LLC for a Site Permit for a 100.65-Megawatt Large Wind Energy Conversion System in Mower County, Minnesota

PUC Docket No. PT6556/WS-06-1520
EXHIBIT LIST

Exhibit No.	Document	Date	eDockets URL
1	Site Permit Application	November 22, 2006	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3614832
2	DOC EFP Staff Comments and Recommendations on Application Acceptance	November 29, 2006	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3583255
3	PUC Order Accepting the High Prairie Wind Farm II application as complete and issuing a draft site permit for review and comment	December 11, 2006	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3606355
4	EQB Monitor, Vol. 30, No. 26 including publication of Notice of Application for a Site Permit & Public Information Meeting on January 17, 2007	December 18, 2006	
5	Notice of Application for a Site Permit & Public Information Meeting on January 17, 2007, including affidavit of mailing to project mailing list	January 4, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3679662
6	Printers affidavit of publication in the <i>Austin Daily Herald</i> - Notice of Application for a Site Permit & Public Information Meeting on January 17, 2007	January 5, 2007	
7	Comments of Ronald J. Lee submitted at the January 17, 2007 Public Information Meeting	January 17, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3880331
8	Comments and Contested Case Hearing Request Submitted by Ronald J. Lee	January 30, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3765258
9	Comments of the Minnesota Department of Natural Resources	January 31, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3765256
10	High Prairie Wind Farm II, LLC Response to DNR Comments	February 28, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3869474

Attachment C.

11	High Prairie Wind Farm II, LLC Response to Ronald J. Lee Comments	February 28, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3869475
12	Great River Energy Comments Responding to the Contested Case Hearing Request of Ronald J. Lee	February 28, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3863776
13	DOC EFP Staff Comments and Recommendations on Ronald J. Lee's Contested Case Hearing Request	March 8, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3880332
14	Additional Comments of Ronald J. Lee	March 13, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3921880
15	Affidavits of publication in the <i>Austin Daily Herald</i> (March 23, 2007), <i>The Leroy Independent</i> (March 22, 2007), and <i>The Meadow Area News</i> (March 28, 2007) - Notice of Public Hearing on April 4, 2007	March 23, 2007 - March 28, 2007	
16	Notice of Public Hearing on April 4, 2007	March 23, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3943819
17	PUC Order Denying Request for Contested Case Hearing, but Expanding Scope of Public Hearing	March 30, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3972944
18	High Prairie Wind Farm II Post-Public Hearing Comments	April 11, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=4021031
19	ALJ Summary of Testimony at Public Hearings	April 16, 2007	https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=4033161