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November 25, 2009

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
127 7th Place East, Suite 350
St. Paul, MN 55101-2147

**RE: Comments and Recommendation of the Office of Energy Security Energy
Facility Permitting Staff
Docket No. IP-6646/WS-09-584**

Dear Dr. Haar:

Attached are the Comments and Recommendation of the Office of Energy Security Energy
Facility Permitting Staff in the following matter:

In the Matter of the Application of enXco for a Large Wind Energy Conversion
System (LWECS) Site Permit for the 201 MW Nobles Wind Farm in Nobles
County.

The OES EFP staff is also providing you with:

- A. Proposed Findings of Fact
- B. Exhibit List
- D. Proposed Site Permit

OES EFP Staff is available to answer any questions the Minnesota Public Utilities Commission
may have.

Sincerely,

/s/ LARRY B. HARTMAN
OES EFP Staff

LBH/sm
Attachments



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BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

**COMMENTS AND RECOMMENDATIONS OF THE
MINNESOTA OFFICE OF ENERGY SECURITY
ENERGY FACILITY PERMITTING STAFF**

DOCKET NO. IP-6646/WS-09-584

Meeting Date: December 2, 2009.....Agenda Item # _____

Company: enXco Development Corporation (enXco/eDC)

Docket No. **PUC Docket Number: IP-6646/WS-09-584**

In the Matter of the Application of enXco for a Large Wind Energy Conversion System (LWECS) Site Permit for the 201 MW Nobles Wind Farm in Nobles County.

Issue(s): Should the Commission grant a site permit to enXco for the 201 MW Nobles Wind Farm?

OES EFP Staff: Larry B. Hartman651-296-5089

Relevant Documents

Site Permit Application for enXco.....August 22, 2008

The enclosed materials are work papers of the Office of Energy Security (OES) Energy Facility Permitting (EFP) 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:

1. enXco Nobles Wind Farm Project Site Map
2. Wind Schematic
3. Proposed Findings of Fact and Conclusions
4. OES EFP Staff Exhibit List
5. Proposed Site Permit

Note: see eDockets (09-584) or the PUC Facilities Permitting website for additional documents:
<http://energyfacilities.puc.state.mn.us/Docket.html?Id=24616>.

Statement of the Issue

Should the Commission grant a site permit to enXco for the 201 MW Nobles Wind Farm?

Introduction and Background

enXco applied for a site permit to the Commission on June 25, 2009, to develop the proposed 201 Megawatt Nobles Wind Farm in Nobles County. The Project is scheduled for construction in 2010 with an expected in-service date of December 31, 2010.

enXco has entered into agreements with Northern States Power Company (NSP) to develop, construct, and transfer ownership of the project to NSP. enXco is coordinating this LWECs Site Permit Application filing with NSP, A Minnesota Corporation and wholly owned subsidiary of Xcel Energy.

Project Location and Land Control

The proposed Nobles Wind Project will be located in central Nobles County on agricultural land in Larkin, Summit Lake, Olney, and Dewald Townships about seven miles west of Worthington, MN and north of I-90, as shown on the accompanying site map (Attachment 1). enXco began development of this site in 1999. enXco has over 18,000 acres under easement agreement within the proposed 25,000 acre project boundary. The site is sufficiently large to provide flexibility in the micro-siting process.

Within the project boundary there are approximately 250 parcels of land. enXco has approximately 177 parcels of land under easement. enXco's land and wind rights will need to encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads, meteorological towers, electrical collection system and electric lines located on or along public road rights-of-way. If necessary, additional wind rights and buffers may need to be obtained to comply with site permit setback requirements.

The proposed site of the Community Wind South Wind Farm is located within the project boundary proposed by enXco for the Nobles Wind Farm. However, there are separate wind rights (easements) for each project and the turbines from the two proposed projects will be located so as not to interfere with each other.

Project Description

The Project for which a permit is being requested includes the following associated facilities:

1. A wind turbine layout consisting of up to 134 General Electric 1.5 MW wind turbine generators mounted on 80 meter (262.5 foot) towers with a rotor diameter of 77 meters (252.6 feet);
2. Gravel access roads;
3. Electrical collection system, project substation and permanent meteorological towers (up to 5); and
4. Operations and maintenance building located next to the project substation.

The Applicant's goal is to complete the construction of the Project and achieve commercial operation prior to December 31, 2010.

Regulatory Process and Procedures

Certificate of Need

On December 3, 2008, Xcel Energy filed a petition for the approval of two wind energy projects under Minn. Stat. 216B.243, subd.9 as renewable energy standard facilities. They are the Nobles project in Minnesota and the Merricourt project in North Dakota. Excel was granted approval of its filing on May 28, 2009.

Therefore, a Certificate of Need (CN) from the Commission is not required because renewable energy standard facilities are exempt from the Certificate of Need Process. (See Commission Order dated June 10, 2009 in Docket 08-1437.)

Site Permit

A site permit from the Commission is required to construct a Large Wind Energy Conversion System, 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. The Minnesota Wind Siting Act is found at Minnesota Statutes Chapter 216F. The rules to implement the permitting requirement for LWECs are in Minnesota Rules Chapter 7854.

Permit Application, Determination on Draft Site Permit

On June 25, 2009, enXco filed a site permit application with the Commission. On August 11, 2009, a Commission Order accepted enXco's site permit application for the Nobles Wind Farm. Upon acceptance of the application OES EFP staff initiated the review and notice requirements of Minnesota Rules Chapter 7854 (See Attachment 2 in the Commissioner's packet). On October 2, 2009, a Commission Order issued a "Draft Site Permit" for the Nobles Wind Farm. Following issuance of a draft site permit, notice was provided and a public meeting was held to receive comments on both the application and the draft site permit. Comments were due on November 4, 2009.

Public Participation Process

The rules provide opportunities for the public to participate in deliberations on the LWECS site permit application. Governmental agencies and the public were advised of the submission of the site permit application after the application was accepted and they were provided with an opportunity to comment on the completeness of the application.

OES EFP staff held two public information meetings in Reading, MN on October 15, 2009, to provide the public with an overview of the permitting process for LWECS and to receive comments from the public on the site permit application and draft site permit. Representatives of enXco and NSP were available to describe the project and answer questions.

Comments made and questions asked covered a broad spectrum of topics relating to wind energy. These included questions about setbacks (homes and roads), transmission, taxes, effects on wildlife, noise, shadow flicker, property values, and stray voltage. About 60 people attended the two public meetings.

Public Comments

Three written comments were received by the November 4, 2009. The three comment letters were from Yvonne and Donald Sieve of Worthington, the Nobles County Public Works Department and the Minnesota Department of Natural Resources. enXco also submitted additional project documentation.

OES EFP Staff Comments and Analysis

OES EFP staff has reviewed the written comments received during the comment period, the “Transcripts of Public Comments” and exhibits introduced into the record of this proceeding. The following EFP staff comments and analysis address several concerns or comments.

Yvonne and Donald Sieve commented about the proposed wind turbine in section 20 in Summit Lake Township that relocated because of Federal Aviation Administration (FAA) height limitations within the restricted airspace of the Worthington airport. They wanted to know if the turbine could be lowered or moved elsewhere on their property.

OES EFP Response: Section 20 of Summit Lake Township is no longer within the project study area because of airspace restrictions associated with the Worthington airport; therefore, portions of the project were shifted to the west side of Highway 266 to comply with FAA requirements.

Nobles County Public Works commented about: 1) training for local responders to high aerial rescues; 2) transmission line setbacks from road rights-of-way; 3) tower setbacks from residences and road rights-of-way; pre-construction meetings; 4) noise minimization; and 5) E-911 addressing.

OES EFP Response: 1) according to enXco all wind turbine technicians receive training in tower rescue and first aid. In the event a worker is injured, enXco staff will get the person to the ground and then let first responders take over from that point. enXco will provide training to local EMS staff if they are willing to participate in training activities. 2) All collector and feeder

lines for the Nobles Wind Farm will be located underground. 3) The proposed turbine setbacks from residences are greater (1000 foot minimum) than the Nobles County requirement of 750 feet to account for noise, shadow flicker and ice throw. 4) The site permit (III.B.16) requires the Permittee to register all LWECs with E-911 addressing.

Minnesota Department of Natural Resources comments noted the following: 1) due to the site specific relevance of biological information DNR believes that that each project should be evaluated independently to determine the specific requirements that are needed as part of the biological inventory. 2) the project layout setbacks should incorporate some of the Nobles County setbacks, specifically the 600 foot setbacks from publically owned conservation lands and US Fish and Wildlife Service Type 3, 4, and 5 wetlands; 3) the presence of a complex of habitats within sections 4 and 5 of Dewald Township that include the Bluebird Prairie Wildlife Management Area (WMA), CRP lands, wetlands and Kanaranzi Creek where turbine placement should be avoided.

OES EFP Response: 1) Condition III.D.1 of the site permit has been tailored to the specific information that should be included as part of the biological inventory. 2) The site permit does incorporate the Nobles County publically owned conservation lands setback requirements. See site permit at III.M.2. The site permit at III.M.3 also incorporates “Topeka Shiner (*Notropis topeka*) Habitat: Construction Recommendations.” 3) Turbines will not be located in sections 4 and 5 of Dewald Township and enXco will provide for a five by three setback from those properties.

Public Meeting Comment Topics

Shadow Flicker

OES EFP Response: Shadow flicker is described as “a moving shadow on the ground resulting in alternating changes in light intensity.” Shadow flicker computer models simulate the path of the sun over the year and assess at regular time intervals the possible shadow flicker across a project area. The outputs of the model are useful in the design phase of a wind farm. Other than within approximately two rotor diameters from the base of a turbine, shadow flicker usually occurs in the morning and evening hours when the sun is low in the horizon and the shadows are elongated. Shadow flicker does not occur when the turbine rotor is oriented parallel to the receptor, or when the turbine is not operating. In addition, no shadow flicker will be present when the sun seen from a receptor is obscured by clouds, fog, or other obstacles already casting a shadow such as buildings and trees.

Shadow intensity, or how “light” or “dark” a shadow appears at a specific receptor, will vary with the distance from the turbine. Closer to a turbine, the blades will block out a larger portion of the sun’s rays and shadows will be wider and darker. Receptors located farther away from a turbine will experience much thinner and less distinct shadows since the blades will not block out as much sunlight. Shadow flicker will be greatly reduced or eliminated within a residence when buildings, trees, blinds or curtains are located between the turbine and receptor. Shadow flicker consultants generally agree that flicker is not noticeable beyond about 10 rotor diameters from a wind turbine. Evidence of flicker effects is hard to find, it is more of a nuisance issue.

There are no published standards for shadow flicker and no examples of turbines causing photosensitivity related problems. In Germany, 30 hours of shadow flicker per year is acceptable. The 30 hour number is based on the premise that the sun is shining, the building affected is occupied, the occupants are awake and the turbine is operating. The proposed site permit does not address shadow flicker limits. However, the setback requirement from residences takes into account shadow flicker.

Noise

OES EFP Response: enXco has considered noise during the planning stages of the Nobles Wind Farm to make informed decisions about turbine placement. The permit (III.E.3.) requires the Permittee to comply with noise standards established by the Minnesota Pollution Control Agency.

Non Participating Landowner Setbacks

OES EFP Response: Turbines and associated facilities will be placed on the properties of persons who have leased their wind and land rights to the enXco for the proposed Nobles Wind Farm. Non-participants who have not leased land or wind rights to enXco will not have turbines or associated facilities on their properties. Wind turbines will be set back from the property lines of non-participating landowners by a minimum 1,260 feet on the prevailing wind axis and 756 feet on the non-prevailing wind axis. enXco has stipulated that all turbines will be 1,000 feet or more from homes (Site Permit III.M.1). enXco will also comply with Minnesota's noise standards (Site Permit III.E.3).

In summary, there are numerous site permit requirements that protect natural resource features as well as public health and safety. Minnesota has close to two thousand megawatts of operating wind energy facilities in place. Prior to July of 2005 those facilities were permitted by the Minnesota Environmental Quality Board. Since July 2005, LWECS have been permitted by the Minnesota Public Utilities Commission. Many of the permit conditions in this proposed site permit have been LWECS site permit conditions since 1995. In the past 14 years, wind farm participants in Minnesota have not filed any public health or safety concerns with the EQB or the Commission, the responsible governmental unit; nor have comprehensive avian and bat studies demonstrated significant fatality or mortality impacts.

Site Permit Transfer Request

On November 24, 2009, filed a request with the Commission approve and grant the transfer of the LWECS Site permit Docket No. IP6646/WS-09-584 from enXco Development Corp to Northern States Power Company. enXco requests that such transfer be made effective upon receipt of notice from enXco and Northern States Power that both parties agree that the contractual provisions necessary for the transfer have occurred.

As stated in the LWECS Site permit application enXco and Northern States Power have entered into agreements for the development, construction and transfer of the Nobles Wind Farm project. These agreements provide for Northern States Power to take possession of the development

assets including permits prior to the start of construction. These agreements bind enXco and its subcontractors to adhere to the terms, conditions and requirements of the LWECS Site Permit.

The date for the transfer of the development assets is subject to several conditions including the issuance of the LWECS Site permit. As such a date certain for the transfer cannot yet be set. However, it is anticipated that the contractual provisions necessary for the transfer will take place in early 2010 (Exhibit 19).

OES EFP Response: As noted in enXco's letter, permit condition III.K.6 provides for transfer of a site permit. Minn. Rules 7854.1400 also provide for permit transfer. OES EFP staff believes enXco and NSP have substantially satisfied the requirements of rule that allow the Commission to transfer a permit. OES EFP have provided proposed findings 91 through 94, conclusion 9 and language in the Order that provides for site permit transfer from enXco to NSP for the Commission's consideration. A similar site permit transfer was done for the Grand Meadow Farm in Commission Docket No. 07-839, which NSP purchased enXco.

The OES EFP staff believes the record in this matter is sufficiently robust to allow the Commission to make a decision on the site permit application. OES EFP also believes the proposed site permit provides sufficient measures to provide necessary guidance regarding project design, construction, restoration, monitoring and operation of the proposed Nobles Wind Farm.

Standard for Permit Issuance

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 Chapter 216F. The wind statutes incorporate certain portions of the Power Plant Siting Act, including the environmental considerations. Minnesota Rule 7850.4000. Also, the law allows the PUC to place conditions in LWECS permits. See Minnesota Statutes 216F.04 (d).

Based on the record of this proceeding, OES EFP staff concludes that the Nobles Wind Farm project meets the procedural requirements and the criteria and standards for issuance of a site permit identified in Minnesota Statutes and Rules. The site permit application has been reviewed pursuant to the requirement of Minnesota Rules Chapter 7854 (Wind Siting Rules).

In accordance with Minnesota Rule 7854.0500 Subp.2, the Commission may not issue a site permit for an LWECS, for which a certificate of need is required, until an applicant obtains such a certificate from the Commission. As noted earlier a Certificate of Need is not required for the Nobles Wind Farm. (See Commission Order dated June 10, 2009 in Docket 08-1437.)

OES EFP staff has prepared for Commission consideration proposed Findings of Fact, Conclusions and Order, and an Exhibit List for the Nobles Wind Farm.

The site criteria addressed in the Findings of Fact (such as human settlement, public health and safety, noise, recreational resources, community benefits, effects on land based economies, archaeological and historical resources, animals and wildlife and surface water) track the factors described in the PUC’s rules for other types of power plants that are pertinent to wind projects. The conditions in this proposed Site Permit are essentially similar to other conditions included in other LWECS site permits issued by the Environmental Quality Board and the Commission.

Proposed Findings of Fact

The proposed Findings (see Attachment 3 in the Commissioner’s packet) address the procedural aspects the process followed, describe the project, and address the environmental and other considerations of the project. The proposed Findings of Fact reflect some findings that were also made for other LWECS projects. The following outline identifies the categories of the Findings of Fact.

<u>Category</u>	<u>Findings</u>
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The Permittee	15 – 16
Project Description	17 – 25
Site Location and Characteristics	26 – 28
Wind Resource Considerations	29 – 31
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Exhibit List

OES EFP staff has prepared an exhibit list of documents that are part of the record in this permit proceeding. See Attachment 4 in Commissioner’s packet.

Proposed Site Permit

The OES EFP Staff has prepared a site permit for the Commission’s consideration. See Attachment 5 in the Commissioner’s packet.

Commission Decision Options

A. Nobles Wind Farm Findings of Fact and Conclusions

1. Adopt the attached Findings of Fact, Conclusions of Law and Order prepared for the 201 MW Nobles Wind Farm and associated facilities in Nobles County.
2. Amend the Findings of Fact and Conclusions of Law as deemed appropriate.
3. Make some other decision deemed more appropriate.

B. LWECS Site Permit for the 201 MW Nobles Wind Farm

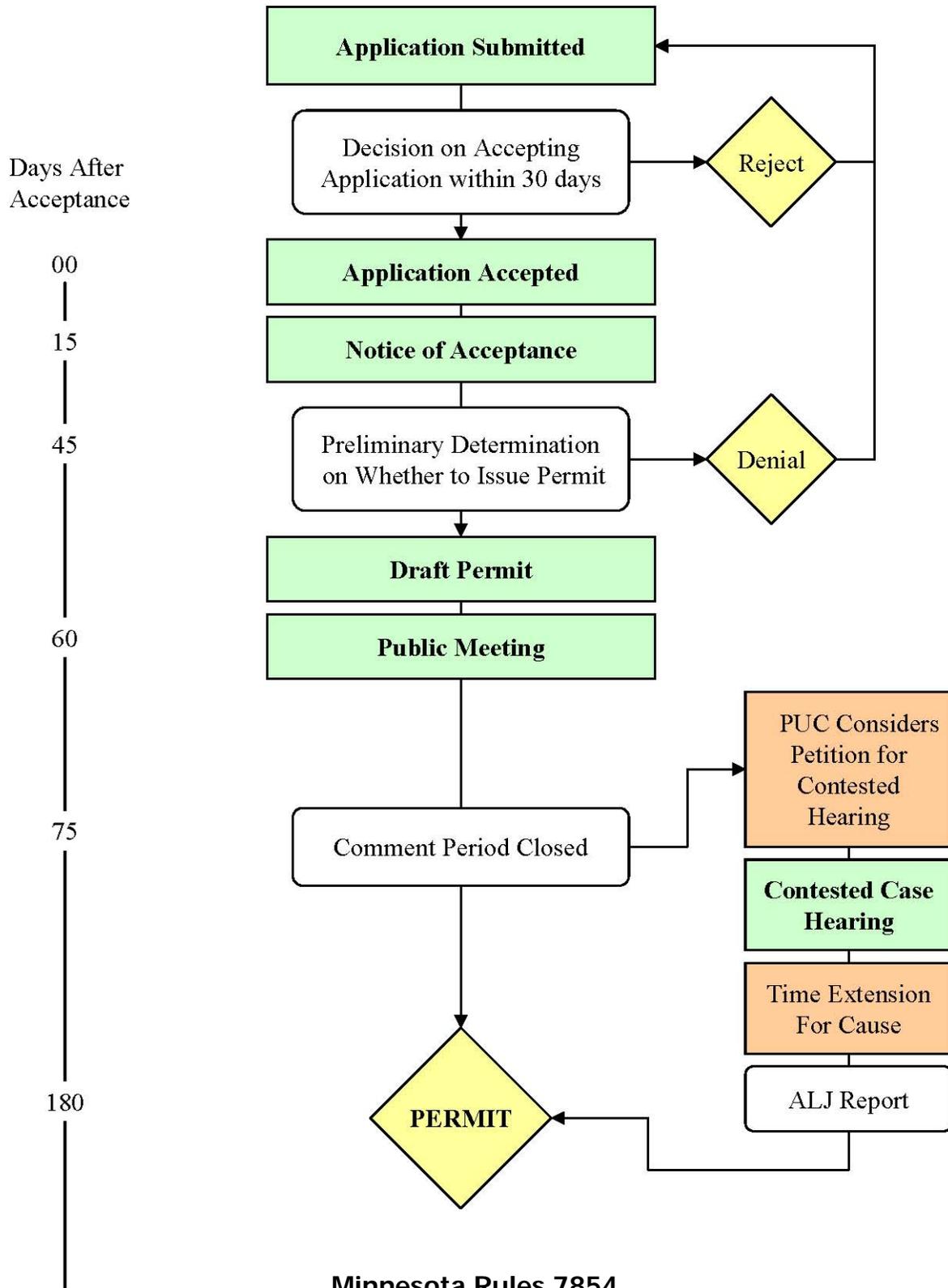
1. Issue the proposed LWECS Site Permit for the 201 MW Nobles Wind Farm to enXco.
2. Amend the proposed LWECS Site Permit as deemed appropriate.
3. Deny the LWECS Site Permit.
4. Make some other decision deemed more appropriate.

C C. LWECS Site Permit Transfer from enXco to NSP

1. Pursuant to Section III.K.6 Transfer of Permit, of the LWECS Site Permit, the Public Utilities Commission hereby approves the transfer of the permit from enXco to NSP, effective upon notification to the Commission by enXco and NSP that NSP has assumed ownership of the Nobles Wind Farm development assets.
2. File a separate permit transfer request pursuant to the requirements of Minnesota Rules 7854.1400 at a later date.
3. Make some other decision deemed more appropriate.

OES EFP Staff Recommendation: The staff recommends Options A1, B1 and C1.

Permitting Process for Large Wind Energy Conversion Systems



**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

David Boyd
J. Dennis O'Brien
Tom Pugh
Phyllis Reha
Betsy Wergin

Chair
Commissioner
Commissioner
Commissioner
Commissioner

In the Matter of the Application of
enXco Development Corporation
for a Site Permit for a 201-Megawatt
Large Wind Energy Conversion
System and Associated Facilities in Nobles
County

ISSUE DATE:

DOCKET NO.

IP-6646/WS-09-584

**FINDINGS OF FACT, CONCLUSIONS
OF LAW AND ORDER, ISSUING A
SITE PERMIT TO ENXCO
DEVELOPMENT CORPORATION,
FOR THE NOBLES WIND PROJECT**

The above-entitled matter came before the Minnesota Public Utilities Commission (Commission) pursuant to an application submitted by enXco Development Corporation (enXco) for a site permit to construct, operate, maintain and manage a 201-Megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS) and associated facilities in Nobles County.

All of the proposed wind turbines and associated facilities will be located in Nobles County. Associated facilities will include pad mounted step-up transformers for each wind turbine, access roads, an electrical collection and feeder system, project substation, and up to five permanent meteorological towers. The energy from the proposed 201 MW project will be delivered from the project substation to the electrical grid at the existing Nobles substation located west of Reading, MN.

STATEMENT OF ISSUE

Should enXco be granted a site permit under Minnesota Statutes section 216F.04 to construct a 201 MW Large Wind Energy Conversion System in Nobles County?

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

FINDINGS OF FACT

Background and Procedure

1. On June 25, 2009, enXco filed a site application with the Public Utilities Commission for up to 201 megawatts of nameplate wind power generating capacity, identified as the Nobles Wind Farm project in Nobles County. (Exhibit 1, p.1).
2. Office of Energy Security (OES) Energy Facility Permitting (EFP) staff reviewed and determined that the June 25, 2009, application complied with the application requirements of Minnesota Rules, part 7854.0500. In its comments and recommendations to the Commission, dated July 24, 2009, OES EFP staff recommended that the Commission accept the application (Exhibit 2).
3. On August 11, 2009, a Commission Order accepted enXco's application for the Nobles Wind Project Wind and associated facilities (Exhibit 3).
4. On August 14, 2009, OES EFP staff issued a "Notice of Application Acceptance" and sought comments on issues that should be considered in development of a draft site permit for the project and application completeness (Exhibit 4).
5. On August 24, 2009, enXco distributed copies of the "Site Permit Application" and "Notice of Application Acceptance" for the Nobles Wind Farm to government agencies and residences (Exhibit 5).
6. Published notice of site permit application acceptance appeared in the *Nobles County Review*, on August 26, 2009, and *Daily Globe*, on August 20, 2009 (Exhibit 6). Notice of Application Acceptance was also posted on the energy facilities permitting web site and on eDockets on August 14, 2009. The published notice provided: a) description of the proposed project; b) deadline for public comments on the application; c) description of the Commission site permit review process; and d) identification of the public advisor. The notice published meets the requirements of Minnesota Rules, Part 7854.0900 subp2.
7. Public Comments on the completeness of the site permit application were accepted until September 4, 2009. OES EFP staff received four (4) public comments on the site permit application and they are summarized in the OES Comments and Recommendations presented to the Commission at its October 1, 2009, meeting in conjunction with the request for issuance of a "Draft Site Permit" for the Nobles Wind Farm (Exhibit7).
8. On October 2, 2009, the Commission Order issued a "Draft Site Permit" for the Nobles Wind Farm (Exhibit 8).

9. On October 2, 2009, OES EFP staff issued a “Notice of Application Acceptance, Draft Site Permit Issuance and Public Information Meeting” for the Nobles Wind Farm. This notice was posted on eDockets on October 9, 2009 and posted on the energy facilities permitting web site on October 12, 2009 (Exhibit 9).
10. On October 5, 2009, OES EFP staff published in the *EOB Monitor* notice of the October 2, 2009, application acceptance, public information meeting, and opportunity to comment on the permit application and the draft site permit, Volume 33, No. 20 (Exhibit 10, pages 6-9). The published notice contained all of the information required by Minnesota Rules part 7836.0900 subp. 1.
11. On October 2, 2009, enXco’s representative mailed copies of the “Notice of Application Acceptance, Draft Site Permit Issuance and Public Information Meeting” to residents and governmental agencies and residents in the vicinity of the project (Exhibits 11 & 12).
12. Published “Notice of Site Permit Application Acceptance, Draft Site Permit Issuance and Public Information Meeting” appeared in the *Nobles County Review*, on October 7, 2009. The notice published meets the requirements of Minnesota Rules, Part 7854. 0900 subp2 (Exhibit 13).
13. The OES EFP staff held two public information meetings on October 15, 2009, (in Reading at the Reading Community Center at 1 and 6:30 p.m.) to provide an overview of the Commission permitting process and to receive comments on the site permit application and draft site permit. Approximately 60 people attended the two meetings. Representatives from the enXco were also present. OES EFP staff provided an overview LWECs site permitting processes and reviewed the proposed site permit conditions. OES EFP staff and enXco responded to project specific questions and general questions about wind energy. Questions were asked about project timing, setbacks from homes and roads, noise setbacks, taxes, road impacts and avian impacts, county permitting requirements, substation landscaping and the operations and maintenance facility. Several questions were also asked about Xcel’s recently construction transmission lines and the Nobles substation and unpaid damages to affected landowners. See meeting transcript for a complete record of all comments, questions and answers (Exhibit 14). The deadline for submitting comments on the site permit application and draft site permit was November 4, 2009.
14. Three additional written comments were received by November 4, 2009, deadline for submitting comments. The three comment letters were from Yvonne and Donald Sieve of Worthington, the Nobles County Public Works Department, and the Minnesota Department of Natural Resources (Exhibit 15). These comment letters are addressed elsewhere in the findings. However, the comments received did not raise any significant questions or unresolved issues.

Permittee

15. enXco Development Corporation (enXco) filed a site permit application for the proposed 201 megawatt (MW) Nobles Wind Farm on June 25, 2009. At this time, enXco has entered into agreements with Northern States Power Company, a Minnesota Corporation and wholly owned subsidiary of Xcel Energy to develop, construct and transfer ownership of the project to NSP.
16. On December 3, 2008, Xcel Energy filed a petition for the approval of two wind energy projects under Minn. Stat. 216B.243, subd.9 as renewable energy standard facilities. They are the Nobles project in Minnesota and the Merricourt project in North Dakota. Xcel was granted approval of its filing on May 28, 2009. Therefore, a Certificate of Need (CN) from the Commission is not required because renewable energy standard facilities are exempt from the Certificate of Need Process. (See Commission Order dated June 10, 2009 in Docket 08-1437.)

Project Description

17. The Nobles Wind Project involves construction of up to 134 GE 1.5 sle MW wind turbines and associated facilities representing 201 megawatts of nameplate capacity.
18. The towers will be 80 meters (262.5 feet) in height. The rotor diameter will be 77 meters (252.6 feet). The blades on the GE 1.5 MW turbines are approximately 125 feet long. Total height of the tower and blade (12 o'clock position) will be 118.5 meters (388.8 feet). The rotor diameter will have a swept area of 4,654 square meters (50,095 square feet). A final site plan will be submitted prior to the start of construction. The rotor speed varies from 11.1 to 20.2 revolutions per minute corresponding to a maximum rotor tip speed of approximately 185 miles per hour (Exhibit 1, pages 4 through 9).
19. The project will also include an underground automated supervisory control and data acquisition system (SCADA) for communication purposes. Up to five 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 energy collection system and a project substation.
20. The General Electric (GE) 1.5 MW wind turbine is a three bladed, 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.

21. Each turbine is interconnected through an underground electrical collection system at 34.5 kV. The feeder lines from the project collection system feed the power to the independent breaker positions at the proposed project substation. The project substation steps up the voltage from the 34.5 kV collection systems to the transmission system level. All of the proposed feeder lines would connect to the proposed project substation within the site permit boundaries.
22. The blades are made of fiberglass with a smooth layer of gel coat that provides ultraviolet protection. The blades will be either white or grey in color. The blades will be equipped with lightning protection. The entire turbine is also grounded and shielded to protect against lightning.
23. 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.
24. All turbines and up to 5 permanent meteorological towers will be interconnected with fiber optic communication cable 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.
25. Housed inside the fiberglass nacelle that sits on the top of the tower are the generator, brake system, yaw drive system and other miscellaneous components.

Site Location and Characteristics

26. The 201 MW Nobles Wind Farm, will be located in central Nobles County, approximately seven miles west and north of Worthington. The Project site includes portions of Larkin (sections 10-15, 22-27,34-36), Summit Lake (sections 15-17, 19-23,25-28, 31-35, Olney (sections 1, 2, 11, 12), and Dewald (sections 2-10, 15-18) Townships. These townships are zoned agricultural, except for the town of Reading, located on the east side of the site. The topography within the site varies from flat to rolling. Elevation varies from 1,570 in the south to 1,740 feet above mean sea level in the northern part of the site. The dominant land use is agricultural, comprised of corn and soybeans. Alfalfa and pasture are other crops located within the site permit boundary. There are also numerous windbreaks within the proposed site boundaries, typically around farmsteads. The Project boundary encompasses approximately 25,000 acres.

27. Construction of the turbines sites and access roads will involve temporarily disturbing at the most approximately five to ten acres of land per turbine or approximately 670 to 1,340 acres for contractor staging areas, foundation construction, underground power lines, and tower and turbine assembly. Permanent roads are expected to be about 16 feet wide. The permanent displacement for turbine access roads and for towers and transformers and areas around them is about 150 acres for the Nobles Wind Farm.
28. Wind turbine and road access will be sited to take into account the contours of the land and prime farmland locations to minimize impact. The Project will be subject to the requirements of the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater Permit. An erosion and sediment control plan and Storm Water Pollution Prevention Plan (SWPPP) will also be prepared for the Project and the disturbed areas will be seeded after construction to stabilize the area.

Wind Resource Considerations

29. Wind speeds in the Project Area average from 7 to 9 meters per second or 15.7 to 20.2 miles per hour (mean average annual). Wind speeds are generally greater in the night and early morning hours and decline at midday. Regionally, the prevailing wind directions are generally south/southwest and west northwest. Of the annual energy budget, a higher percentage results from southerly winds, which are most frequent in the warmer weather months. The northerly winds typically occur in winter.
30. For this project, turbines will be sited in short strings or clusters along hilltops and ridgelines 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 northwesterly wind directions. The turbine spacing, according to enXco's application, maximizes use of the available wind and minimizes wake and array losses within the topographical context of the site. The turbines are typically oriented west-southwest to north-northeast, which is roughly perpendicular to the prevailing southerly and northwest winds. Turbine placement, aside from other resource features where setbacks or wind access buffers are required, will be designed to provide sufficient spacing between the turbines to minimize internal wake losses. Given the prevalence for southerly and northerly winds, the spacing is widest in the north-south direction. Greater or lesser spacing between the turbines or turbine strings may be used in areas where the terrain dictates the spacing. This is addressed in the permit at III.E.5. Individual, isolated turbine sites are also utilized to minimize Project impacts. Sufficient spacing between the turbines is utilized to minimize wake losses when the winds are blowing parallel to the turbines.
31. The net annual energy production from the project, assuming various losses aggregating to roughly 14.5 percent, is estimated at approximately 700,000 MWh (Megawatt hours) or approximately 5,223 MWh per turbine (Exhibit 1, p 30) The base energy calculation presented 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.

Land Rights and Easement Agreements

32. 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.
33. enXco has obtained lease and easement option agreements and/or rights to such agreements with landowners for more than 18,000 acres of land within the project site boundary necessary for installation of the components of the wind farm. These rights and easements will be used to site the turbines and all associated facilities and provide the necessary wind access buffers and setbacks.
34. Within the project boundary there are approximately 250 parcels of land. enXco has approximately 177 parcels of land under easement. enXco's land and wind rights will need to encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads, meteorological towers, electrical collection system and electric lines located on or along public road rights-of-way. If necessary, additional wind rights and buffers may need to be obtained to comply with draft site permit setback requirements.
35. The proposed site of the Community Wind South Wind Farm is located within the project boundary proposed by enXco for the Nobles Wind Farm (Exhibit 20). However, there are separate wind rights (easements) for each project and the turbines from the two proposed projects will be located so as not to interfere with each other (Exhibit 21).

Site Criteria

36. Minnesota Rules chapter 7854 applies to the siting of Large Wind Energy Conversion Systems. The rules require an applicant 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 7854.0500 through 7854.0600. The following analysis addresses the relevant criteria that are to be applied to a LWECs project.

Human Settlement, Public Health and Safety

37. The site is in an area of relatively low population density, characteristic of rural areas throughout southwestern Minnesota. Within the 18,000 acres under easement within the site there are approximately 72 farmsteads or occupied residences, which equates to about one farmstead or occupied residence for every 250 acres. enXco has established a minimum setback of 1,000 feet to any resident, irrespective of whether that landowner is a participating or a non-participating landowner. See Site Permit III.M.1. enXco will also be required set back its turbines a minimum of five rotor diameters (1,260 feet) on the prevailing wind axis from non-participating landowners property lines and three rotor diameters (756 feet) on the non-prevailing wind axis. The impact of the proposed

LWECS on human settlement, public health and safety will be minimal. The site permit, at part III.C has conditions for setbacks from residences and roads. The proposed wind turbine layout will meet or exceed 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. The Commission setbacks from residences are greater than the setbacks required by Nobles County for noise, shadow flicker and ice throws (Exhibit 15, p. 2.).

38. There will be no displacement of existing residences or structures in siting the wind turbines and associated facilities.
39. There are four public use airports and no heliports located within 20 nautical miles (23 statute miles) of the geographic center of the proposed site. They are the Worthington Municipal, Slayton Municipal, and Quentin Aanenson Field Airports in Minnesota and Sibley Municipal Airport in Iowa. Long range radars, NEXDRAD weather surveillance radar and military operations areas could be impacted by proposed development (Exhibit 1, p 16). enXco's original turbine location potentially impacted the Worthington Municipal Airport; consequently proposed turbine sites were relocated. A written comment from Yvonne and Donald Sieve of Worthington expressed disappointment that a tower location on their property was relocated due to FAA requirements (Exhibit 15, p. 1). The project will comply with the Federal Aviation Administration requirements with respect to lighting. See site permit condition III.E.4. The FAA will require obstruction lighting according to FAA AC 70/7460-1K, Obstruction Marking and Lighting. In addition, the Mn/DOT Aeronautics Office may require a permit for each turbine.
40. enXco's analysis has determined that locating the wind turbines, as now proposed, within the site will not impact any airport Part 77 surfaces (Exhibit 1, p 16). Long-range radar consists of Air Defense and Homeland Security radars. A preliminary evaluation determined that there are no anticipated impacts to Air Defense and Homeland Security radars within the proposed development. Further aeronautical study will be required. NEXRAD consists of Weather Surveillance Radar -1988 Doppler radars. A preliminary evaluation determined that there is minimal to no impact to Weather Surveillance Radar - 1988 Doppler (WSR-88D) weather radar operations. Further aeronautical study will be undertaken. National Telecommunications and Information Administration (NITA) notification will also be undertaken (Exhibit 1, p 16).
41. The addition of 134 turbines within the project area may affect local crop dusting activities. The Minnesota Aeronautical Chart produced by the Minnesota Department of Transportation is available and show wind turbine locations throughout the state. This chart is updated annually and will include the Nobles Wind Farm after construction is complete. This chart is available at www.mndot.gov (Exhibit 1, p 17).
42. The Permittee will provide security during construction and operation of the project, including fencing, warning signs, and locks on equipment and facilities. The Permittee will also provide landowners, interested persons and public officials and emergency responders with safety information about the project and its facilities. See site permit conditions III.B.15 and 16.

43. 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 during the winter months. The turbine setbacks from residences and roads will minimize impacts from ice throw. See site permit conditions III.C.2 and 3.
44. 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. See permit condition III.B.15, 16 and 17.

Noise

45. Background noise levels in the Project Area are typical of those in a rural setting, where existing nighttime noise levels are commonly in the low to mid-30 dBA. The dBA scale represents A-weighted decibels based on the range of human hearing. Higher levels exist near roads and other areas of human activity. Wind conditions in the Project Area tend to increase ambient noise levels compared to other rural areas. An assessment of noise levels at residences (i.e. receivers) across the Project Area was performed twice. enXco's two separate "Noise Mapping and Analysis for the Proposed Nobles Wind Farm" reports dated August 13, 2009 and October 8, 2009 demonstrate that enXco's proposed project design will comply with the Minnesota Pollution Control Agency (PCA) noise standards (Exhibit 16, Attachments 3,4,and 7). Noise levels were calculated using the Windfarmer program and the GE 1.5sle wind turbine for the site. The program assumes all turbines in the Project Area are operating simultaneously and winds speed of 8 m/s (17.9 mph) are occurring and represents the wind speed when maximum noise levels are expected.
46. Noise levels predicted by Windfarmer were compared to the Minnesota Pollution Control Agency Daytime and Nighttime L10 and L50 Limits as stated in Minn. Rule 7030.0040. These standards describe the limiting levels of sound established on the basis of present knowledge for the preservation of public health and welfare. These standards are consistent with speech, sleep, annoyance, and hearing conversation requirements for receivers within areas grouped according to land activities by the Noise Area Classification (NAC) system established in Minn. Rule. 7030.0050. The NAC-1 was chosen for receivers in the Project Area since this classification includes farm houses as household units. Daytime and nighttime limits for this classification are (1) L50 limit of 60 dBA and L10 limit of 65 dBA in daytime, and (2) L50 limit of 50 dBA and L10 limit of 55 dBA at nighttime. The nighttime L50 limit of 50 dBA is the most stringent limit.
47. Wind turbines, when in motion, do generate sound or noise. The level of sound (noise) varies with the speed of the turbine and the distance of the listener or receptor from the turbine. On relatively wind days, the turbines create more noise; however, the ambient or natural wind noise levels tend to override the turbine noise as distance from the turbine increases.

48. Noise impacts to nearby residents and other potentially affected parties will be factored into the turbine micro-siting process. enXco must ensure compliance with PCA noise standards. See permit condition III.E.3.
49. enXco has evaluated both noise and shadow flicker concerns during the planning stages of the Nobles Wind Farm Project to make informed decisions about turbine placement.

Visual Values

50. The placement of up to 134 turbines for the Nobles Wind Farm, will affect the appearance of the area. The wind turbines will be mounted on tubular towers that are 262.5 feet tall. The rotor blades will have a diameter of 252.5 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 highways I-90, just south of the project site, Trunk Highway 266 and Highways 13, 14, 15, 16 and local roads. Motorists and drivers on local township and county roads may travel within 300 feet of some turbines.
51. The visual impact of the wind turbines will be reduced by the use of a neutral paint color. The only lights will be those required by the Federal Aviation Administration. All site permits issued by the Commission require the use of tubular towers; therefore, the turbine towers will be uniform in appearance. Blades used in the proposed project will be white or grey. 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 not inconsistent with existing agricultural practices in the project area.
52. 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 134 tubular steel structures approximately 262.5 feet high, standing on formerly undisturbed high-ground, with 126.5 foot long blades, for an overall height of 389 feet or more when one blade is in the vertical position. Wind plants have their own aesthetic quality, distinguishing them from other non-agricultural uses. Existing wind plants have altered the landscape elsewhere in Minnesota from agricultural to wind plant/agricultural. This project will modify the visual character of the area. Because wind generation development is likely to continue in Nobles County, this visual presence will continue to increase as wind development occurs. To date, the presence of the wind turbines in other parts of Minnesota has been well accepted by the people who live and work in those areas.
53. Visually, the Nobles Wind Farm will be similar to other LWECS projects located in Nobles County, elsewhere on Buffalo Ridge and southeastern Minnesota.

Recreational Resources

54. Recreational opportunities in Nobles County include hiking, fishing, camping, snowmobiling, hunting, and nature viewing. The Bluebird Prairie Wildlife Management Area (WMA) a 78 acre site is located within section 4 of Dewald Township. This WMA

is primarily former cropland that has been planted with native prairie vegetation, woody cover and food plots. The East Branch of Kanaranzi Creek flows through the southern part of the WMA and hunting is allowed (Exhibit 1, p 15). Other WMA's are located outside of, but in proximity to the project study area. WMAs are managed to provide wildlife habitat and improve wildlife production. These MnDNR lands were acquired and developed primarily with hunting license fees. WMAs are closed to all-terrain vehicles and horses because of detrimental effects on wildlife habitat.

55. The turbines will be noticeable to persons using the Bluebird Wildlife Management Area located in section 4 of Dewald Township. (Exhibit 15, p. 4). Turbines will be at least five rotor diameters (RD) on the prevailing wind axis and at least 3 RD on the non-prevailing wind from WMAs or local parks. See permit condition III.C.4. Turbine operations are not expected to directly affect the natural areas in any material way and no adverse impact on wildlife management areas or practices is expected.
56. As noted by the comment letter from the Minnesota Department of Natural Resources, Nobles County requires a 600 foot setback from any publically owned conservation lands, including the Bluebird Prairie WMA (Exhibit 15, p.4). The proposed turbines locations will be more than 600 feet away from the boundaries of the Bluebird WMA. See permit conditions III.C.4 and III.M.2.

Public Services and Infrastructure

57. The primary transportation arteries through the project Area include Highways 13, 14, 15, and 16. According to MnDOT the average daily traffic (ADT) for I-9- within the study area is 8,600 and 9,500 vehicles. The ADT for TH 266 located on the northeast side of the study area is 1,100 to 1,250 vehicles per day. Other roads within the site average 30 to 600 vehicles per day (Exhibit 1, p 12).
58. Microwave beam path analysis work will avoid conflicts with the Fresnel zones. Turbines will be site towers so as to avoid interfering with land mobile facilities (Exhibit 1, p12).
59. The proposed project will have many miles of underground cables for the collector lines on private property within the wind farm. The underground cables will be installed in a trench that is at least 48 inches in depth. Most of the underground electric circuits will parallel existing turbine maintenance roads or public road rights-of-way. However, some of these underground circuits will cross private rights-of-way. enXco's application indicates that the underground cable layout will be completed in a manner that meets affected landowner requirements, minimizes impact to the environment and achieves required economics. Above ground cable vaults measuring 48 inches by 60 inches will be installed where underground cable circuits intersect. The vaults will be installed in a manner to minimize visual impact, avoid interference with intended land use, and ensure the public is protected. Where appropriate, posts will be installed adjacent to the underground cable vaults to minimize damage by farm equipment or vehicles. Cable circuits will be installed underneath public rights-of-way in compliance with road permits

received from appropriate public authorities. Placement of collector and feeder lines is addressed in the site permit at III.E.7 and 8. The proposed wind farm is expected to have a minimal effect on the existing infrastructure.

60. 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. 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. Construction of the project requires the addition 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 15 to 20 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 and maintenance activities will be used to maintain road integrity. The Permittee may do this work or contract it out.
61. If access roads are 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. See site permit at III.K.7.
62. 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. The Permittee will address the concerns of residents in the area of the project site before and after project construction to document and mitigate any television reception impacts that might occur. This is addressed in the site permit at III.D.3.
63. Construction, operation, and maintenance of the proposed wind plant will comply with all of the required federal and state permit requirements. See site permit at III.K.7.

Community Benefits

64. The Nobles Wind Farm will pay a Wind Energy Production Tax to the county and townships of several hundred thousand dollars per year. Landowners with turbine(s) and/or wind easements on their property will also receive payments from the Permittee (Exhibit 1, p 19).
65. To the extent that local workers and local contractors are capable, qualified, and available, the Permittee 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 site technicians and a wind plant supervisor.

Effects on Land-Based Economies

66. 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 phase will displace approximately 134 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 adversely affect any sand or gravel operations.

Archaeological and Historical Resources

67. enXco retained the 106 Group to complete a preliminary review of the cultural and archaeological features within the project area. Their full report is included as Appendix E (Exhibit 1). Four recorded archaeological sites were identified within the project area and four were identified adjacent (within one mile) of the project area. One historical structure was recorded within the area. A Phase I Archaeology survey was recommended and completed for all the proposed wind turbine locations, access roads, junction boxes and area of construction impact for the transmission line to document previously unrecorded archaeological sites within the project area. The proposed turbine layout will not directly impact any known archaeological and historical resources.
68. The site permit at III. D.2. requires the Permittee to conduct an archaeological reconnaissance survey (Phase I) archaeology survey consists of the following tasks: consultation, documentation, and identification. A Phase I survey provides enough information to allow consideration of avoidance if a site is to be impacted by an undertaking and to gather enough information to allow for reasonable recommendations for more detailed work should it be necessary.
69. When archaeological sites are found during a Phase I survey, their integrity and significance is 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 be developed in consultation with the Minnesota State Historic Preservation Officer (SHPO), the State Archaeologist, and consulting American Indian communities. The site permit (III.D.2.) also requires the Permittee to stop work and notify the Minnesota Historical Society and Commission if any unrecorded cultural resources are found during construction.

Air and Water Emissions

70. No harmful air or water emissions are expected from the construction and operation of the LWECS.

Animals and Wildlife

71. With proper planning neither construction nor operation of the Project is expected to have a significant impact on 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:
- 71a. 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)
- 71b. 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)
- 71c. 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 or dispersing bats occur in the fall. Fatality estimates at Buffalo Ridge indicate that the population of bats susceptible to turbine collisions is large, and that the observed number of fatalities “is possibly not sufficient to cause significant, large-scale population declines.” (p. 6-1)
72. Mitigation measures are 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 (Site Permit III.D.1); b) turbines and associated facilities will not be constructed in wildlife management areas, recreation and state scientific and natural areas or parks (Site Permit III.C.4) and a 5 by 3 rotor diameter setback is provided (Site Permit III.C1). In its permit application, enXco outlined practices it will take to implement and minimize impacts to federal and state-listed species and rare or sensitive habitat in the Project Area during micrositing of the turbines and access roads and the subsequent development and operation of the Project (Exhibit 1, pages 20 through 26). The site permit has requirements to implement sound

water and soil conservation practices during construction and operation of the project throughout the Project's life in order to protect topsoil and adjacent resources and to minimize soil erosion (Site Permit III.B.9). This also applies to any work in proximity to watercourses (Site Permit III.C.5).

73. OES is not recommending implementation of any study requirements until PUC and OES staff and DNR staff determine what types of studies may necessary or appropriate.

Vegetation

74. No public waters, wetlands or forested land are expected to be adversely affected by the project (Exhibits 16, Attachment 1 and Exhibit 17). No groves of trees or shelterbelts will need to be removed to construct and operate the system. Native prairie, if present, 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

75. Construction of the wind turbines and access roads in farmland increases the potential for erosion during construction. 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

76. Access roads or utility lines will not be located in surface water or wetlands, unless authorized by the appropriate permitting agency. See site permit at III.C.5.

Future Development and Expansion

77. Current information suggests windy areas in this part of the state are large enough to accommodate more wind facilities. In the future, wind turbines used in Nobles and surrounding counties will consist of several types and sizes supplied by different vendors and installed at different times.
78. While large-scale projects have occurred elsewhere (Texas, Iowa and California), little systematic study of the cumulative impact has occurred. Research on the total impact of many different projects in one area has not occurred. OES EFP staff continues to monitor for impacts and issues related to wind energy development.
79. The Commission anticipates more site permit applications under Minnesota Statutes section 216F.04 (a). The Commission 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.
80. 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.

81. 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.
82. 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.
83. For this project, turbine spacing maximizes use of the available wind resources and minimizes wake and array losses within the topographical context of the site. Site topography, natural resource features and wind resources did lead to a layout involving isolated turbine placement or short strings of turbines running perpendicular to the prevailing wind. The objective is to capture the most net energy possible from the best available wind resource. Allowing for setbacks from roads and residences and avoiding sensitive areas, enXco arrived at a nominal turbine spacing of 3 rotor diameters in the non-prevailing wind directions and five or more rotor diameters in the prevailing wind directions, northwest-southerly direction, with respect to the predominant energy production directions. Given the prevalence for southerly winds, the spacing between turbines will be greater in the prevailing winds in the northwest-southerly direction for the Nobles Wind Farm. Wake loss is expected to be around 4.4 percent (Exhibit 1, p.30).
84. Other factors that lead to energy production discounts include turbine availability, blade soiling, icing, high wind hysteresis, cold weather shutdown, electrical efficiency and parasitic. Total losses typically range from 13 to 16 percent.

Maintenance

85. Maintenance of the turbines will be on a scheduled, rotating basis with one or more units normally off for maintenance each day, if necessary. Maintenance on the interconnection points will be scheduled for low wind periods. The Nobles Wind Farm Wind Project will be staffed with several wind technicians and a wind plant supervisor. An operations and maintenance facility will also be built near Reading. The operation and maintenance facility will be permitted by the local unit of government.

Decommissioning and Restoration

86. The expected life of the Project will be 30 years and the Permittee reserves the right to re-apply for a LWECS site permit and continue operation of the Project. LWECS site permit renewal may be under a new long-term power purchase agreement (PPA), merchant operation of the Project, or replacement and re-powering of the Project.
87. Decommissioning activities will include (1) removal of all wind turbine components and towers; (2) removal of all pad mounted transformers; (3) removal of all above-ground distribution facilities; (4) removal of foundations; and (5) removal of surface road material and restoration of the roads and turbine sites to previous conditions to the extent feasible (Exhibit 1, p. 30). The Permit (III.G.1.) requires the Permittee to submit a Decommissioning Plan to the Commission prior to commercial operation. The Permit (III.G.2.) addresses site restoration and paragraph (III.G.3.) addresses turbines abandoned prior to termination of operation of the LWECS.

Site Permit Conditions

88. All of the above findings pertain to the Applicant's requested permit for a 201 megawatt wind project.
89. Most of the conditions contained in this 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. Comments received by the Commission have been considered in development of the site permit. Minor changes and additions that provide for clarification and requirements of the site permit conditions have been made regarding the biological inventory/survey, energy reporting requirements and the addition of special conditions reflected in the record of this proceeding.
90. The site permit contains conditions that apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning and all other aspects of the Project.

Transfer of Site from enXco to NSP

91. In its application, enXco indicated that it has entered into agreements with Northern States Power Company, a Minnesota Corporation and wholly owned subsidiary of Xcel Energy for the development, construction and transfer of the Nobles Wind Farm project to develop, construct and transfer ownership of the project to NSP (Exhibit 1, p. 1). These agreements provide for Northern States Power to take possession of the development assets including permits prior to the start of construction. These agreements bind enXco and its subcontractors to adhere to the terms, conditions and requirements of the LWECS Site Permit.
92. In a letter filed with the Commission on November 24, 2009, enXco requested, pursuant to Section III.K.6 of the Large Wind Energy Conversion System ("LWECS") Site Permit, that the Commission approve and grant the transfer of the LWECS Site permit Docket

No. IP6646/WS-09-584 from enXco Development Corp to Northern States Power Company. enXco further requested that such transfer be made effective upon receipt of notice from enXco and Northern States Power that both parties agree that the contractual provisions necessary for the transfer have occurred (Exhibit 19).

93. The date for the transfer of the development assets is subject to several conditions including the issuance of the LWECS Site permit. As such a date certain for the transfer cannot yet be set. However, enXco and NSP anticipate providing notice that the contractual provisions necessary for the transfer to occur will have taken place in early 2010.
94. Minn. Rule 7854.1400 Subp. 1 allows for a permittee of a site permit for an LWECS to apply to the Commission for the transfer of its permit. Subpart 1 also provides that the permittee provide information to the Commission to determine whether the new permittee can comply with the conditions of the permit. Subpart 2 also provides that the Commission shall approve the transfer if the Commission determines that the new permittee will comply with the conditions of the permit; that the Commission, in approving the transfer of a permit, may impose reasonable additional conditions in the permit as part of the approval; and that the Commission may hold a public meeting to provide the public with an opportunity to comment on the request for transfer prior to making a decision. As noted in enXco's site permit application and the draft site permit, it was clear that NSP would assume ownership of the project. The procedural requirements of the permit transfer request have been substantially complied with and the public may comment on this transfer at the Commission meeting on December 2, 2009. No additional conditions in the permit are required as part request for transfer of the site permit from enXco to NSP.

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 Statute 216F.04 over the site permit applied for by enXco for the 201 megawatt Nobles Wind Farm.
3. enXco's application for a site permit was properly filed and noticed as required by Minnesota Statutes 216F.04 and Minnesota Rules 7854.0600 subp 2 and 7854.0900 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 Chapter 216F and Minnesota Rules Chapter 7854.
5. 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 201 megawatt LWECS Nobles Wind Project will not create significant human or environmental impacts and is compatible with environmental preservation, sustainable development, and the efficient use of resources.
6. The Minnesota Public Utilities Commission has the authority under Minnesota Statutes section 216F.04 to establish conditions in site permits relating to site layout, construction and operation and maintenance of an LWECS. The conditions contained in the site permit issued to enXco for the Nobles Wind Farm are appropriate and necessary and within the Minnesota Public Utilities Commission's authority.
7. In accordance with Minnesota Rule 7854.0500 Subp.2., a site permit may not be issued until the certificate of need or other commitment requirement has been satisfied.
8. The Certificate of Need requirement was addressed by the Commission in an Order dated June 10, 2009 (See Docket No. 08-1437); which granted an exemption to Xcel Energy pursuant to Minn. Stat. 216B.243, subd. 9.
9. Authorization of a site permit transfer is provided for in Minn. Rule 7854.1400 and in the Site Permit at III.K.6. Notification of a request for a site permit transfer has been provided by enXco with supporting reasons as provided for in Minn. Rule 7854.1400 Subp.1. Minn Rule 7854 Subp 2 provides for Commission approval if the Commission determines that the new permittee will comply with the conditions of the permit. Agreements that provide for Northern States Power to take possession of the development assets including permits prior to the start of construction also bind enXco and its subcontractors to adhere to the terms, conditions and requirements of the LWECS Site Permit.

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

ORDER

A LWECS Site Permit is hereby issued to enXco Development Corporation, to construct and operate the 201 megawatt Nobles Wind Farm and associated facilities in Nobles County in accordance with the conditions contained in the site permit and in compliance with the requirements of Minnesota Statute 216F.04 and Minnesota Rules Chapter 7854 for PUC Docket No. IP-6646/WS-09-584.

Upon a filing by enXco Development Corporation and Northern States Power Company, a Minnesota Corporation and wholly owned subsidiary of Xcel Energy (“Xcel Energy” or “NSP”) that NSP has assumed ownership of the Nobles Wind Farm development assets, the site permit for the Nobles Wind Farm is transferred to Northern States Power as the Permittee for construction and operation of the Nobles Wind Farm project and associated facilities in accordance with the conditions contained in the site permit and in compliance with the requirements of Minnesota Statute 216F.04 and Minnesota Rules Chapter 7854.

The site permit is attached hereto, with a map showing the approved site.

BY THE ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

(S E A L)

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Office of Energy Security
 Energy Facility Permitting
 85 7th Place East, Suite 500
 St. Paul, MN 55155-2198
 Minnesota Department of Commerce

In the Matter of the Application of
 enXco Development Corporation,
 for a Site Permit for up to 201 MW
 of Wind Generation in Nobles County

EXHIBIT LIST
 PUC Docket No. IP-6646/WS-09-584

EXHIBIT NO.	DATE	DESCRIPTION	e-DOCKET LOCATION
1	06/25/2009	enXco Development Corporation, LWECS Site Permit Application for the Nobles Wind Farm	20096-38909-01
2	07/24/2009	OES EFP Comments & Recommendations to the PUC on acceptance of enXco site permit application for the Nobles Wind Farm	20097-40110-01
3	08/14/2009	Commission Order accepting enXco Site Permit Application for Nobles Wind Farm	20098-40703-01
4	08/14/2009	OES EFP Notice of Application Acceptance,	20098-40805-01
5	09/23/2009	Applicant's Service Distribution List for Application and Notice of Application Acceptance	20099-42107-01
6	09/23/2009	Affidavit of Publications: Notice of PUC's acceptance of the Nobles Wind Project site permit appearing in the <i>Nobles County Review</i> and <i>DAILY GLOBE</i>	20099-42106-01
7	09/23/2009	OES EFP Comments & Recommendations to Commission on Issuance of Draft Site Permit for Nobles Wind Farm and Comments Received on Application	20099-42129-01
8	10/02/2009	Commission Order issuing Draft Site Permit for Nobles Wind Farm	200910-42461-01
9	10/02/09	OES Notice of Public Information Meeting and Availability of Draft Site Permit and Opportunity for Commenting	20099-42027-01
10	11/19/2009	Notice of Application Acceptance, Public Information Meeting Published in <i>EQB Monitor</i> , Volume 32, No. 20, October 5, 2009	20099-42027-02

EXHIBIT NO.	DATE	DESCRIPTION	e-DOCKET LOCATION
11	11/06/09	Applicant's Service Distribution List for Notice of Public Information Meeting and Draft Site Permit	200911-43700-01
12	11/25/2009	Applicant's Service Distribution List for Notice of Public Information Meeting and Draft Site Permit (October 2, 2009)	200911-44450-01
13	11/25/2009	Affidavit of Publication: Notice of PUC's Public Information Meeting and Issuance Draft Site Permit appearing in the <i>Nobles County Review</i> (October 7, 2009)	200911-44449-01
14.	11/19/2009	Transcript of Public Comment from October 15, 2009 Public Information Meetings	200911-44219-01
15	11/19//2009	Public comments submitted close of comment period: Yvonne and Donald Sieve, Nobles County Public Works and MN DNR	200911-44222-01
16	11/05/2009	Additional Information Requested Part 1: Attachment 1-Wetlands Assessment and Appendices A-E Attachment 2-Supplemental to Wetlands Assessment Attachment 3- Cumulative Noise Study Based on 155 Turbine Locations Attachment 4-Cumulative Noise Study Based on 134 of the original 155 Turbine Locations Attachment 5- Map of Draft Layout Attachment 6- Map of Wind Access Buffer Attachment 7- Map of Occupied Residences and Buffer Attachment 8- DNR Index Report	200911-43684-02
17	11/05/2009	Additional Information Requested Part 2: Wetlands Assessment	200911-43684-01
18	11/25/2009	Nobles Wind Environmental Agency Review and Field Visit	200911-44451-01
19	11/25/2009	Letter from enXco regarding request for	200911-44458-02

		transfer of permit	
20	11/25/2009	Community Wind South Land Control Map	200911-44456-01
21	11/25/2009	Memo regarding setbacks between enXco and Community Wind South	200911-44449-01

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

LARGE WIND ENERGY CONVERSION SYSTEM

SITE PERMIT

FOR THE

NOBLES WIND FARM

IN

NOBLES COUNTY

ISSUED TO

ENXCO DEVELOPMENT CORPORATION

COMMISSION DOCKET NO. IP-6646/WS-09-584

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

enXco Development Corporation

The Permittee is authorized to construct and operate up to a 201 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, 2040.

Approved and adopted this ____ day of _____
BY ORDER OF THE COMMISSION

BURL W. HAAR
Executive Secretary

(S E A L)

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I. SITE PERMIT

This Site Permit for a Large Wind Energy Conversion System (LWECS) authorizes enXco Development Corporation (enXco), (hereinafter “Permittee”) to construct the Nobles Wind Farm, a 201 Megawatt (MW) nameplate capacity LWECS and associated facilities in Nobles County, on a site of approximately 25,000 acres in accordance with the conditions contained in this Permit. The project boundary is shown on the map that is attached hereto as Attachment 1.

II. PROJECT DESCRIPTION

The 201 MW nameplate capacity LWECS authorized to be constructed in this Permit (Nobles Wind Farm) will be developed and constructed by the Permittee. The Permittee has entered into agreements with Northern States Power (NSP) to develop, construct, and transfer ownership of the project to NSP. The Project will consist of up to 134 General Electric 1.5 MW wind turbine generators having a combined nominal nameplate capacity of approximately 201 MW. Associated facilities will include wind turbine access roads, underground collection lines, SCADA wiring, feeder lines, pad mounted turbine transformers, and meteorological towers. Turbines are interconnected by communication and underground electrical power collection facilities within the wind farm that will deliver wind-generated power to the collection substation. Power will ultimately be delivered from the collection substation to the Nobles substation located in the northeast corner of the project boundary.

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 Commission 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 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 shall document compliance with the setbacks and site layout restrictions required by the permit. 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. In the event that previously unidentified environmental conditions are discovered during construction which by law or pursuant to conditions outlined in this Permit would preclude the use of that site as a turbine site, the Permittee shall have the right to move or relocate turbine sites. The Permittee shall notify the

Commission of any turbines that are to be relocated before the turbine is constructed on the new site and demonstrate compliance with the setbacks and site layout restrictions required by the permit.

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 Commission, 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 Commission.

3. PRECONSTRUCTION MEETING

Prior to the start of any construction, the Permittee shall conduct a preconstruction meeting with the person designated by the Commission 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. SOIL COMPACTION

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

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 TILES

The Permittee shall take into account the location of drainage tiles during project layout and construction. 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 on lands under its control unless negotiated with 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 Commission and the state, county or township governing body having jurisdiction over the roads to determine if the governmental body needs to inspect the roads prior to use of these roads. Where practical, existing roadways shall be used for all activities associated with the 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 Commission of such arrangements upon request of the Commission.

(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. Access roads shall not be constructed across streams and drainage ways without required permits and approvals from the Minnesota Department of Natural Resources (DNR), United States Fish and Wildlife Services (USFWS), and/or United States Army Corps of Engineers (USACOE). 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. Access roads shall also be constructed in accordance with all necessary township, county or state road requirements and permits.

(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 Commission. This Plan may be the same as the Storm Water Pollution Prevention Plan (SWPP) submitted to the Minnesota Pollution Control Agency (MPCA) as part of the National Pollutant Discharge Elimination System (NPDES) 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 Commission and the approval of the affected landowner.

12. RESTORATION

The Permittee shall, 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, to the extent possible. The time period may be no longer than twelve months after completion of construction of the turbine, unless otherwise negotiated with the landowner. 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. The Permittee shall submit the location of all "underground facilities," as defined in Minnesota Statute 216D.01, Subdivision 11, to Gopher State One Call.

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 Commission upon request. The Permittee shall also register the LWECS with the local governments' emergency 911 services.

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 (RD) on the prevailing wind directions and 3 RD on the non-prevailing wind directions from the perimeter of the lands where the Permittee does not hold the wind rights, without the approval of the Commission.

2. RESIDENCES

Wind turbine towers shall not be located closer than 500 feet from the nearest residence, or the distance required to comply with the noise standards for Noise Area Classification 1, established by the MPCA (paragraph III.E.3), whichever is greater.

3. ROADS

Wind turbine and meteorological 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 Production Areas, State Wildlife Management Areas or Scientific and Natural Areas or in county parks and shall also comply with the setbacks of III.C.1.

5. WETLANDS

Wind turbines and 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. However, electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to DNR, United States Fish and Wildlife Service (FWS) and/or United States Army Corps of Engineers (USACE) permits and approvals.

6. NATIVE PRAIRIE

Upon request of the Commission, the Permittee shall, with the advice of the DNR, Commission and any others selected by the Permittee, prepare a prairie protection and management plan and submit it to the Commission 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 Commission.

7. SAND AND GRAVEL OPERATIONS

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

D. PRECONSTRUCTION SURVEYS

1. BIOLOGICAL INVENTORY/SURVEY

The Permittee, in consultation with DNR and Commission, shall conduct a pre-construction inventory of existing Bluebird Prairie Wildlife Management Area, native prairies, wetlands, Kanaranzi Creek, CRP lands, publically owned (county, state and federal) conservation lands 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 Commission 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. The Permittee shall carry out a Phase 1 or 1A Archaeology survey for all proposed turbine locations, access roads, junction boxes and other areas of project construction impact to determine whether additional archaeological work is necessary 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 Commission, 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 the Commission 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 Commission of such discovery. The Permittee shall not excavate at such locations until so authorized by the Commission 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 Commission and the MHS about the discovery. The Commission 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. INTERFERENCE

Prior to beginning construction, the Permittee shall submit a plan to the Commission 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 installation 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 may be up to 100 meters (328 feet) above grade measured at the hub.

2. METEOROLOGICAL TOWERS

Permanent towers for meteorological equipment shall be free standing. Temporary meteorological towers, which are those that will be removed no more than one year after the Project in-service date, may be guyed if the landowner has given written permission and the guys are properly marked with safety shields.

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

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

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. The noise standards are found in Minnesota Rules Chapter 7030. Turbine operation shall be modified or turbines shall be removed from service if necessary to comply with 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 noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

4. 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 boundary as shown in Attachment 1. The turbine towers shall be spaced no closer than 3 RD in the non-prevailing wind directions and 5 RD on the prevailing wind directions. 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 or underground electric lines, known as feeders, within public rights-of-way or on private land immediately adjacent to public rights-of-way if a public right-of-way exists, except as necessary to avoid or minimize human, agricultural, or environmental impacts. 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 easements negotiated with the affected landowner. In all cases, the Permittee shall avoid routing feeder lines in locations which may interfere with agricultural operations. 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 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 Commission, the Permittee shall report to the Commission on compliance with these standards.

F. STUDIES

1. WAKE LOSS STUDIES

The Permittee shall provide to the Commission 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 Commission any operational wake loss studies conducted on this Project.

2. NOISE

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

G. DECOMMISSIONING/RESTORATION/ABANDONMENT

1. DECOMMISSIONING PLAN

Prior to commercial operation, the Permittee shall submit to the Commission a Decommissioning Plan documenting the manner in which the Permittee anticipates decommissioning the Project in accordance with the requirements of Minnesota Rules part 7836.0500, 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 Commission may at any time request the Permittee to file a report with the Commission 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 four feet. A LWECS shall be considered a discontinued use after one year without energy production, unless a plan is developed and submitted to the Commission outlining the steps and schedule for returning the LWECS to service. 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 Commission 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 Commission of any turbines that are abandoned prior to termination of operation of the LWECS. The Commission may require the Permittee to decommission any abandoned turbine.

H. REPORTING

1. PROJECT ENERGY PRODUCTION

The Permittee shall submit a report no later than February 1st following each complete year of project operation. The report shall include: a) the rated nameplate capacity of the permitted LWECS project; b) the total monthly energy generated by the LWECS in Megawatt Hours; c) the monthly capacity factor; d) yearly energy production and capacity factor; e) the total energy curtailed in Megawatt Hours; and f) any other information reasonably requested by the Commission. This information will be considered public and must be submitted electronically.

2. WIND RESOURCE USE

The Permittee shall upon the request of the Commission report to the Commission on the monthly energy production of the Project and the average monthly wind speed collected at one permanent meteorological tower selected by the Commission during the preceding year or partial year of operation. The Permittee shall report to the Commission 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 Commission. That data entails:

(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 Commission.

The report shall include copies of any project production reports filed with the Midwest Renewable Energy Tracking System (M-RETS), Midwest Independent System Operator (MISO), 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.

The provisions of paragraph III.K.5 shall apply to the Commission's review of data provided pursuant to III.H.2.

3. EXTRAORDINARY EVENTS

Within 24 hours of an occurrence, the Permittee shall notify the Commission of any extraordinary event. Extraordinary events include but shall not be limited to: fires, tower collapse, thrown blade, collector or feeder line failure, injured LWECS worker or private person, kills of migratory, threatened or endangered species, or discovery of a large number dead birds or bats of any variety on site. In the event of 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 Commission 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 Commission the company's procedures to be used to receive and respond to complaints. The Permittee shall report to the Commission all complaints received concerning any part of the LWECS in accordance with the procedures provided in Attachments 2 and 3 of this Permit.

I. FINAL CONSTRUCTION

1. AS-BUILT PLANS AND SPECIFICATIONS

Within 60 days after completion of construction, the Permittee shall submit to the Commission 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 Commission can place it into the Minnesota Geospatial Information Office's (MnGEO) geographic data clearinghouse located in the Department of Administration.

2. FINAL BOUNDARIES

After completion of construction, the Commission shall determine the 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 Commission. The Permittee may submit to the Commission a request for a change in the boundaries of the site for the LWECS. The Commission 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 Commission 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 Commission.

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 Minnesota Statute 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

The Permittee has entered into agreements with Northern States Power (NSP) to transfer ownership of the project to NSP. The power produced by the project will be utilized by NSP.

K. MISCELLANEOUS

1. PERIODIC REVIEW

The Commission shall initiate a review of this Permit and the applicable conditions at least once every five years. The purpose of the periodic review is to allow the Commission, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of 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 two years of the issuance of this Permit, the Permittee must advise the COMMISSION of the reason construction has not commenced. In such event, the Commission shall make a determination as whether this Permit should be amended or revoked. No revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minnesota Statute 216F.05 and Minnesota Rule 7854.1300.

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

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

In the event the Commission shall determine that it is appropriate to consider revocation or suspension of this Permit, the Commission shall proceed in accordance with the requirements of Minnesota Statute 216F.05 to determine the appropriate action. Upon a finding of any of the

above, the Commission may require the Permittee to undertake corrective measures in lieu of having the Permit suspended or revoked.

5. PROPRIETARY INFORMATION

Certain information required to be submitted to the Commission 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 Commission. 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 Commission. If the Permittee desires to transfer this Permit, the holder shall advise the Commission in writing of such desire. The Permittee shall provide the Commission with such information about the transfer as the Commission requires to reach a decision. The Commission 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 Commission upon request.

8. SITE MANAGER

The Permittee shall designate a site manager who shall be the contact person for the Commission to contact with questions about the LWECS. The Permittee shall provide the Commission with the name, address, and phone numbers of the site manager prior to placing any turbine into operation. This information shall be maintained current by informing the Commission 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 and complaint procedure less than five days prior to the start of construction on their property.

10. RIGHT OF ENTRY

The Permittee shall allow representatives of the Commission 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 Commission's issuance of this Site Permit does not prevent the future adoption by the Commission of rules or orders more stringent than those now in existence and does not prevent the enforcement of these more stringent rules and orders against the Permittee.

12. PERMIT COMPLIANCE MEETING

Prior to the start of commercial operation, the Permittee shall conduct a permit compliance meeting with the person designated by the Commission to coordinate permit compliance activities.

L. EXPIRATION DATE

This Permit shall expire on December 31, 2040.

M. SPECIAL CONDITIONS

Special conditions shall take precedence over any of the other conditions of this Permit if there should be a conflict between the two.

1. SETBACK FROM RESIDENCES

The Permittee shall fulfill its commitment to provide a minimum setback of 1,000 feet for all turbine towers to any resident, irrespective of whether that landowner is a participating or non-participating landowner. Adoption of this special condition is based on facts associated with this docket and provides no precedent regarding the size of set back that the Commission may deem appropriate and reasonable to require in future dockets.

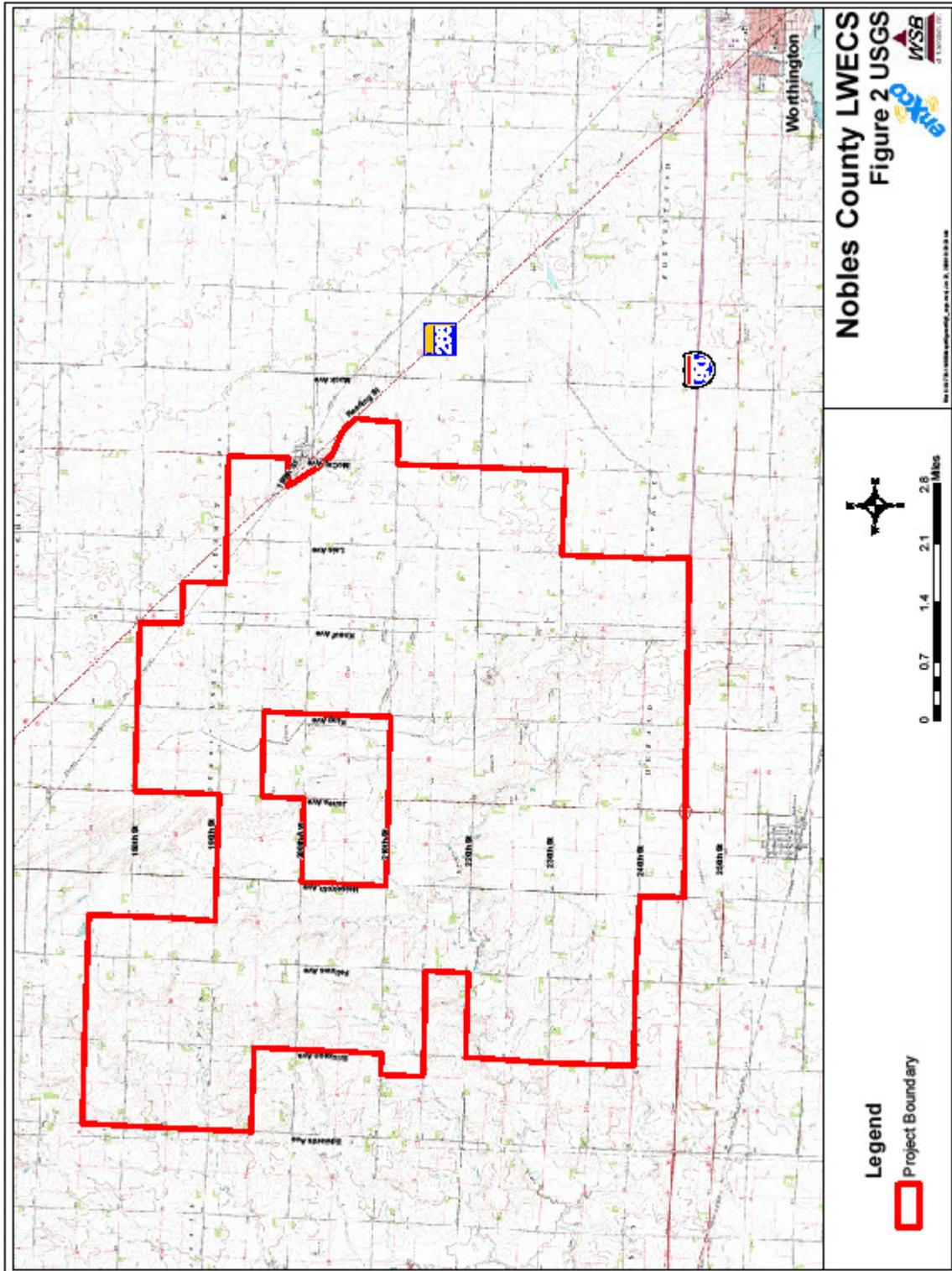
2. INCORPORATION OF PNOBLES COUNTY SETBACKS

The final turbine and meteorological tower siting will incorporate the Nobles County Wind Energy Conversion System (WECS) Regulations (729.4) setback requirements of 600 feet from publically owned (county, state, federal) conservation lands and Type III, IV and V wetlands.

3. FEDERALLY ENDANGERED TOPEKA SHINER

To prevent sedimentation in streams inhabited by the federally-endangered (state special concern) Topeka shiner (*Notropis topeka*), the Permittee shall employ the US Fish and Wildlife Ecological Services recommendations in the document titled, *Recommendations of Construction Projects Affecting Waters Inhabited by Topeka Shiners in Minnesota (Revised 5/12/2005)*, when working in project area waters.

ATTACHMENT 1: SITE PERMIT MAP



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

A. Purpose:

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

B. Scope:

This document describes Complaint reporting procedures and frequency.

C. Applicability:

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

D. Definitions:

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

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

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

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

E. Complaint Documentation and Processing:

1. The Permittee shall document all Complaints by maintaining a record of all applicable information concerning the Complaint, including the following:

- a. Name of complainant, address, phone number, and e-mail address.
 - b. Precise property description or parcel number.
 - c. Name of Permittee representative receiving Complaint and date of receipt.
 - d. Nature of Complaint and the applicable Site Permit conditions(s).
 - e. Activities undertaken to resolve the Complaint.
 - f. Final disposition of the Complaint.
2. The Permittee shall designate an individual to summarize Complaints for substantial to the Commission. This person's name, phone number and e-mail address shall accompany all complaint submittals.
 3. A Person presenting the Complaint should to the extent possible, include the following information in their communications:
 - a. Name, address, phone number, and e-mail address.
 - b. Date
 - c. Tract or parcel
 - d. Whether the complaint relates to (1) a Site Permit matter, (2) a LWECS and associated facility issue, or (3) a compliance issue.

F. Reporting Requirements:

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

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to Wind Permit Compliance, 1-800-657-3794, or by e-mail to: DOC.energypermitcompliance@state.mn.us, or. 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 preceding month, shall be Filed to Dr. Burl W. Haar, Executive Secretary, Public Utilities Commission, using the Minnesota Department of Commerce eDocket system (see eFiling instructions attached to this permit).

If no Complaints were received during the preceding month, the permittee shall submit (eFile) a summary indicating that no complaints were received.

G. Complaints Received by the Commission or OES:

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

H. Commission Process for Unresolved Complaints:

Initial Screening: Commission staff shall perform an initial evaluation of unresolved Complaints submitted to the Commission. Complaints raising substantial LWECS Site Permit issues shall be processed and resolved by the Commission. Staff shall notify Permittee and appropriate person(s) if it determines that the Complaint is a Substantial Complaint. With respect to such Complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the Staff notification. Staff shall present Briefing Papers to the Commission, which shall resolve the Complaint within twenty days of submission of the Briefing Papers.

I. Permittee Contacts for Complaints:

Mailing Address: Complaints filed by mail shall be sent to:

ATTN: Nobles Wind Project
enXco Development Corporation
10 Second St NE, Ste 107
Minneapolis, MN 55413

Tel: 612-746-0770

Email Address:

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

1. Purpose

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

2. Scope and Applicability

This procedure encompasses all compliance filings required by permit.

3. Definitions

Compliance Filing – A sending (filing) of information to the Commission, where the information is required by a Commission site or route permit.

4. Responsibilities

- A) The permittee shall eFile all compliance filings with Dr. Burl Haar, Executive Secretary, Public Utilities Commission, through the Department of Commerce (DOC) eDocket system. The system is located on the DOC website:
<https://www.edockets.state.mn.us/EFiling/home.jsp>

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

- B) All filings must have a cover sheet that includes:

- 1) Date
- 2) Name of submitter / permittee
- 3) Type of Permit (Site or Route)
- 4) Project Location
- 5) Project Docket Number
- 6) Permit Section Under Which the Filing is Made
- 7) Short Description of the Filing

- C) Filings that are graphic intensive (e.g., maps, plan and profile) must, in addition to being eFiled, be submitted as paper copies and on CD. Copies and CDs should be sent to: 1) Dr. Burl W. Haar, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN, 55101-2147, and 2) Department of Commerce, Energy Facility Permitting, 85 7th Place East, Suite 500, St. Paul, MN, 55101-2198. Additionally, the Commission may request a paper copy of any eFiled document.

PERMIT COMPLIANCE FILINGS¹

PERMITTEE: enXco Development Corporation
PERMIT TYPE: LWECS Site Permit
PROJECT LOCATION: Nobles County
COMMISSION DOCKET NUMBER: ET-6646/WS-09-584

Filing Number	Condition	Description	Due Date	Notes
1	A.1.	Site Plan	Prior to starting construction	
2	A.2.	Field Representative	Prior to and throughout construction	
3	B.8.	Roads	Identify access roads and obtain road damage agreements before starting construction	
4	B.9.	Soil Erosion and Sediment Control Plan	NDPES Stormwater Runoff Control Permit	
5	B.15	Educational Materials	Submit Upon Request	
6	B.16	Fire Protection Plan	Submit Upon Request. Must Register in 911 Program	
7	C.6.	Native Prairie Protection Plan	60 days prior to the start of construction, if required	
8	D.1.	Biological Survey	Pre-construction Meeting	
9	D.2	Archaeological Resources	Pre-construction Meeting and as Recommended by the State Historic Preservation Office	
10	D.3.	Electromagnetic Interference	Pre-construction Meeting	

¹ This compilation of permit compliance filings is provided for the convenience of the permittee and the Commission. However, it is not a substitute for the permit; the language of the permit controls.

Filing Number	Condition	Description	Due Date	Notes
11	F.1	Wake Loss	Include with site plan or operation studies if performed	
12	F.2	Noise Study	Upon Request	
13	G.1.	Decommissioning Study	Prior to commercial operation	
14	H.1	Project Energy Production	Due 7/15 each year or quarterly	
15	H.2	Wind Resource Use	Within 3 months after Operation or SCADA Access	
16	I.1.	As Builts	Within 60 days of Completions of Construction	
17	J.1.	Wind Rights	Within 30 days of Acquiring. Upon Request.	
18	K.2.	Failure to Start Construction	Within 2 years of Permit Issuance	
19	K.8	Site Manager	Prior to Operation	
20	Complaints	Report	Due Each Month or within 24 hours	