

Appendix B

2012 Issued Site Permit

Community Wind South Repower Project
Nobles County, Minnesota

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BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

Acting Chair
Commissioner
Commissioner
Commissioner

Mark Willers
Community Wind South, LLC
800 Kniss Avenue, Suite 2
Luverne, Minnesota 56156

SERVICE DATE: May 1, 2012

DOCKET NO. IP-6871/WS-11-863

In the Matter of the Site Permit Application of Community Wind South, LLC for a 30.75 MW Large Wind Energy Conversion System in Nobles County

The above entitled matter has been considered by the Commission and the following disposition made:

Adopted the attached Findings of Fact, Conclusions of Law and Order proposed for the 30.75 MW Large Wind Energy Conversion System in Nobles County.

Issued the proposed LWECS Site Permit for the Community Wind South, LLC Wind Farm to Community Wind South, LLC.

The Commission agrees with and adopts the recommendations of the Department of Commerce which are attached and hereby incorporated in the Order. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION



Burl W. Haar
Executive Secretary

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BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

DOCKET NO. IP-6871/WS-11-863

EFP Staff: Larry B. Hartman.....Tel: 651-296-5089

In the Matter of the Application of CWS Wind Farm, LLC for a Large Wind Energy Conversion System Site Permit for the 30.75 MW Community Wind South Project in Nobles County.

Issues Addressed: these comments, recommendations, and documents attached address the question of whether the Public Utilities Commission should issue or deny a Site Permit.

Documents Attached

1. Figure 1 — Project Vicinity
2. Figure 2 — Site Map
3. Figure 3 — Map of Existing Wind Turbines in Project Vicinity
4. Exhibit List
5. Proposed Findings of Fact, Conclusions of Law and Order
6. Proposed Site Permit with Turbine Layout Map

Additional documents and information are available on eDockets at:
<https://www.edockets.state.mn.us/EFiling/search.jsp> (See eDocket filings (11-863).

The enclosed materials are work papers of the Department of Commerce 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) 296-0391 (Voice). Persons with hearing or speech disabilities may call us through Minnesota Relay at 1-800-627-3529 or by dialing 711.

Introduction and Background

The applicant, Community Wind South, LLC (“CWS, LLC”), has now identified CWS Wind Farm, LLC as the Permittee for the proposed 30.75 MW Community Wind South Project (“CWS Project”) in Nobles County and the entity responsible for complying with all site permit requirements.¹ CWS Wind Farm, LLC is a Delaware limited liability company formed in 2011 and is representing the interests of Zephyr Wind LLC; Moriah Wind, LLC; Chinook Wind, LLC; and Summit Transmission, LLC.

The CWS Project is intended to fulfill obligations of a 2003 Commission order approving a Certificate of Need for four high-voltage transmission lines in the Buffalo Ridge area and requiring Xcel to purchase small, locally owned wind generation.² CWS, LLC was formed to develop approximately 30 MW of the required 60 MWs of locally owned wind energy generation facilities as defined in an Order of the Commission. See Order Granting Certificates of Need (MPUC Docket No. E002/CN-01-1958, March 11, 2003). Subsequently, CWS, LLC created three ownership entities: Zephyr Wind, LLC (Zephyr), Moriah Wind, LLC (Moriah) and Chinook Wind, LLC (Chinook), each of which will own approximately 10 MW of the overall generating facility. In addition, CWS, LLC created Summit Transmission, LLC (Summit) as the entity that will design, install and operate the necessary transmission and interconnection facilities between each of the turbine transformers and the interconnection point at the NSP Nobles Substation.³

Each of the three wind entities (Moriah, Zephyr, and Chinook) have identical (with the exception of entity name) power purchase agreements (PPAs) for 20 years from the facility’s commercial operation date. The Moriah, Zephyr, and Chinook, LLCs will own one third of the entity known as Summit, which is the counter party to the MISO/NSP Generator Interconnect Agreement (GIA). Moriah, Zephyr and Chinook also have identical ownership structures. All three wind entities are owned 95% by CWS Wind Farm, LLC and 5% by the CWS, LLC. The 5% ownership of CWS, LLC will be offered later to local investors. Similarly, CWS, LLC (and future local investors), through its ownership position in the three entities, will maintain a 5% ownership in Summit Transmission, LLC.⁴

Project Location

The Project is in central Nobles County, approximately two miles south of the community of Wilmont and approximately 10 miles northwest of the city of Worthington (See Figure 1 in the Commissioner’s packet). The project site includes lands in the townships of Summit Lake (sections 17-20 and 30) and Larkin (13, 23-24). CWS Wind Farm, LLC currently has approximately 3,080 acres under lease for the Project, which includes all lands within the site except 11 acres. CWS Wind Farm, LLC has secured 23 leases with 36 landowners within the site boundary⁵ (See Figure 2 in the Commissioner’s packet).

¹ *Name Change of Applicant* (See eDoc. # [20123-73053-01](#)).

² In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Certificates of Need for Four High Voltage Transmission Line Projects in Southwestern, Minnesota, MPUC Docket No. E-002/CN-01-1958, Order Granting Certificate of Need Subject to Conditions, March 11, 2003.

³ *Site Permit Application* (See eDoc # [201110-67420-01](#)).

⁴ Id. at p.1.

⁵ Id. at p.5.

Project Description

The CWS Project expects to use 15 REpower 2.05 MW turbines (model MM92) yielding a total nameplate capacity of 30.75 MW. The hub height of the turbines is 328 feet (100 meters), with a rotor diameter of 303.5 feet (92.5 meters).⁶

The Project's associated facilities will include:

- gravel access roads (approximately 3.5 miles);
- turbine tower foundations
- 34.5 kV underground electrical collector lines to collect power from each of the turbines and deliver it to the collector yard;
- a collector yard and metering equipment;
- 34.5 kV underground feeder lines to deliver power from the collector yard to the NSP Nobles Substation;
- installation of a Supervisory, Control And Data Acquisition (SCADA) system for communication purposes; and
- one permanent meteorological tower with a height of 328 feet.

As proposed, the Project expects to achieve initial synchronization by August 1, 2012, and commercial operation by October 1, 2012.⁷

Regulatory Process and Procedures

A site permit from the Commission is required to construct a Large Wind Energy Conversion System (LWECS), which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. The Minnesota Wind Siting Act is found at Minnesota Statutes chapter 216F and rules to implement the permitting requirements are found in Minnesota Rules chapter 7854. The following provides an overview of the CN and Site Permit processes.

Certificate of Need Process

A site permit cannot be granted before a Certificate of Need (CN) is issued if a CN is required. CWS noted in its application that a CN from the Commission for a large electric power generating plant is not required because the Project is less than 50 MW in size and, therefore, does not meet the definition of large energy facility in Minnesota Statutes section 216B.2421.

Each of the three wind generation LLC's (Chinook, Moriah and Zephyr) have a 20 year power purchase agreement with Northern States Company for the CWS Project.

⁶ Id at p. 2-5.

⁷ Id. at p.46.

In an order dated November 15, 2011, the Commission determined that a certificate of need is not required based on the information in the record.⁸

Site Permit Process

A site permit from the Commission is required to construct an LWECS, which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. The Minnesota Wind Siting Act is found at Minnesota Statutes Chapter 216F. The rules to implement the permitting requirements for LWECS are in Minn. Rule 7854.

CWS Wind Farm, LLC, filed a site permit application for the wind Project with the Commission on October 17, 2011.⁹ The Commission accepted the application as complete in its November 14, 2011 order.¹⁰ Notice of Application Acceptance and Comment period complied with notice, distribution and publication requirements of Minn. Rules 7854.0600.¹¹ A public comment period was open through December 30, 2011, and three comments were received and eFiled. On February 6, 2012, a Commission order made a preliminary determination that a site permit should be issued and released a Draft Site Permit for public comment.¹² The Notice of Availability of Draft Site Permit and Public Meeting complied with the notice, distribution and publication requirements of Minn. Rules 7854.0900.¹³ A public comment period was open through March 23, 2012 and four comments were received and eFiled. A public meeting was held in Reading, Minnesota on Monday, March 5, 2012. A court reporter prepared a record of the public meeting.¹⁴

Standard for Permit Issuance

The test for issuing a site permit for an LWECS is to determine whether a project is compatible with environmental preservation, sustainable development, and the efficient use of resources. Pursuant to Minnesota Statute 216F.02, certain sections of Minnesota Statutes 216E (Minnesota Power Plant Siting Act) apply to siting LWECS, including 216E.03, subdivision 7 (considerations in designating sites and routes). Minnesota Statutes section 216F.04 (d) allows the Commission to place conditions in LWECS permits.

County Ordinance Standards for LWECS

Minnesota Statutes section 216F.08 authorizes counties to assume responsibility for processing permit applications for LWECS with a combined nameplate capacity of less than 25,000 kilowatts. Minnesota Statutes 216F.081 states counties may assume more stringent standards than Commission rules or permits.

⁸ *Commission Order* (See eDoc. # [201111-68337-01](#)).

⁹ *Site Permit Application* (See eDoc. #'s [201110-67420-01](#) through [201110-67420-09](#) and [201110-67424-01](#) through [20111067424-05](#)).

¹⁰ *Commission Order* (See eDoc. # [201111-68337-01](#)).

¹¹ *Notice of Application Acceptance & Comment Period* (See eDoc #'s [201111-68441-01](#), [20123-73048-01](#), [201112-68902-01](#), [201111-68723-01](#)).

¹² *Commission Order* (See eDoc. # [20122-71240-01](#)).

¹³ *Notice of Availability of Draft Site Permit and Public Meeting* (See eDoc. #'s [20122-71772-01](#), [20123-73049-01](#), [20122-71874-01](#), [20122-71753-01](#), [20122-71732-02](#)).

¹⁴ *Record of Public Meeting & Oral Comments* (See eDoc. # [20123-72784-01](#)).

Nobles County has not assumed responsibility for processing permit applications for LWECs with a combined nameplate capacity of less than 25,000 kilowatts, pursuant to Minnesota Statutes section 216F.08, and has not adopted ordinance standards for LWECs, pursuant to Minn. Stat. 216F.081. However, Nobles County Zoning Ordinance, section 729.4, has established setbacks for wind energy conversion systems (non-commercial and commercial) and meteorological towers. Certain standards adopted by ordinance by Nobles County are more stringent than the Commission's General Permit Standards as set forth in Docket No. E- G-999/M-07-1102.

EFP Staff Analysis and Comments

During the two comment periods, seven comments were received and eFiled. Commenters included the Minnesota Department of Transportation, the Minnesota Department of Natural Resources (three (3) comments), the Minnesota Historical Society, Robert Schreiber and the Southwest Regional Commission. No significant issues or topics were identified.

The following EFP analysis summarizes the seven comments by resource topic or category (roads, natural resources, noise, and archaeological resources), responds to the comments and identifies appropriate site permit conditions. The analysis concludes with a review of the Nobles County Wind Regulations, the Wind Access Buffer requirements, a summary of other comments and the public meeting summary.

Roads

Minnesota Department of Transportation. The letter from MnDOT requests that compliance with MnDOT's Utility Accommodation Policy, and similar policies of other road authorities, be included as a condition of the site permit.¹⁵

EFP Response: MnDOT's concern, as well as other federal and state agency permit and/or other requirements are addressed in the proposed site permit as follows: Section 10.5.1 [Compliance with Federal and State Agency Permits]. MnDOT's concern regarding other road authorities is addressed in the proposed site permit at Section 10.5.2 [Compliance with County, City or Municipal Permits] and at Section 7.8 [Roads].

Section 10.5.2 requires the Permittee to comply with all terms and conditions of permits or licenses issued by the counties, cities and municipalities affected by the Project that are not preempted by federal or state requirements.

Section 7.8 [Roads] provides general guidance on the use of public roads and directs the Permittee to make satisfactory arrangements with the appropriate state, county, or township governmental body having jurisdiction over the roads to be used. It is now common practice for a LWECs Permittee and a county and/or townships to enter in to a "Development Agreement" that address road use, maintenance, repair, ditches and damages.

¹⁵ *MnDOT Comments (See eDoc. # [201112-69810-01](#)).*

CWS anticipates obtaining all necessary road permits required by MnDOT, as well as Nobles County, and the townships of Larkin and Summit Lake. CWS has indicated that they will enter into a “development agreement” with Nobles County and “road agreements” with the townships of Larkin and Summit. On January 23, and March 23, 2012, EFP staff spoke with Steve Schnieder, Nobles County Public Works Office. Mr. Schnieder indicated that the development agreement between Nobles County and the Permittee is very similar to the development agreement between Nobles County and enXco for the 201 MW Nobles Wind Project (Docket No. 09-584). Mr. Schnieder also indicated that the Permittee and the townships of Larkin and Summit Lake would enter into road agreements.

Natural Resources

DNR. The Minnesota Department of Natural Resources provided three (3) separate comments. Their first comment, December 30, 2011, states that: “The project developers sited the project well and the content of their application indicates that they reviewed the DNR Wind Guidance and included suggested analyses in the Site Permit Application.” In closing, DNR states, “the DNR does not recommend surveys at this time.”¹⁶

DNR’s second comment, March 14, 2012, was in response to the Applicant’s request for a crossing permit in the NE ¼ of Section 24, T103N-R42W, Larkin Township, in Nobles County. DNR’s response states: “Based on our review of the notification form, data and maps of the area, we have determined that the wetland(s)/watercourse are not under DNR protected waters jurisdiction and therefore the project does not require a DNR Public Waters permit.”¹⁷

DNR’s third comment, March 23, 2012, was a request “to review the bat acoustic results in the Fall of 2012.”¹⁸

EFP Response: The Permittee will provide DNR and EFP staff with the bat acoustic results.

Natural resource features are identified, discussed, and evaluated in terms of impact mitigation in the site permit application in Sections 8.13 through 8.19 the results of its “Avian and Bat Assessment: Review of Potential Avian and Bat Mortality” in Appendix F.

Comments from the DNR and the United States Fish and Wildlife Service (USFWS) in Appendix B of the site permit application have indicated that no occurrences of state or federally threatened or endangered species occur within the Project Area. Overall, the potential for impacts to rare or unique species within the Project Area is low. It is worth noting that wind turbines and access roads will be sited to avoid any wetlands, creeks and wooded areas. There are no documented communities of native prairie within the Project Area; therefore, impacts to native prairie are not anticipated.¹⁹

¹⁶ DNR Comment (See eDoc. # [20121-70633-01](#)).

¹⁷ DNR Comment letter on Channel Crossing (See eDoc. # [20123-72645-01](#)).

¹⁸ DNR Comment request for acoustic bat data (See eDoc. # [20123-73051-01](#)).

¹⁹ Native Prairie Site Review (See eDoc. # [20122-71818-01](#)).

Because turbines and access roads will be sited to avoid wetlands and creeks, impacts to Topeka Shiner are not anticipated. Additionally, there are no Waterfowl Feeding and Resting Areas present within the Project Area.

EFP staff believes the need for pre-construction surveys and post-construction surveys should be based on factors unique to each wind project. The tiered approach outlined by USFWS in its Wind Advisory Committee Recommendations (WCAR) for assessing impacts to wildlife, which is a risk-based evaluation, implements this concept. The tiered approach allows decisions to be made based on the information gathered at each tier, which provides an opportunity for developers and agencies to evaluate a site based on specific questions and associated data.

Appendix F provides Tier 1 and Tier 2 results and summarizes field visit results by biologists in July 2011. Based on the Tier 1 and 2 results, field visit result, and agency review, the Applicant states: “The DNR considers the Project to be low risk for impacts to birds or bats and, as such, does not recommend pre-construction surveys. As a result, no Tier 3 studies were completed.”²⁰

Since there were no special concerns coming out of Tier 1 and 2 results, coupled with DNR’s comments, the proposed Draft Site Permit only requires a standard Avian and Bat Protection Plan. See site permit, Section 6.7[Avian and Bat Protection Plan]. CWS Wind Farm has prepared an ABPP in consultation with EFP staff to ensure that the ABPP complies with the requirements of Section 6.7. A standard ABPP addresses steps to be taken to identify and mitigate impacts to avian and bat species during the construction and operation phase of the Project. These would include formal and informal monitoring, training, wildlife handling, documentation (e.g., photographs), and reporting protocols for each phase of the Project.²¹ No comments were received on the ABPP filed on February 17, 2012.

On March 23, 2012, the U.S. Fish and Wildlife Service issued new Land-Based Wind Energy Guidelines. In these guidelines, the USFWS has elected to modify their reference to Avian and Bat Protection Plans (ABPPs) for wind energy projects by now referring to them as Bird and Bat Conservation Strategies (BBCS); whereas, for USFWS, ABPPs will now only refer to transmission projects.

Noise

Robert Schreiber. EFP Staff received a written comment from Robert J. Schreiber (Reading, Minn.), stating: “...I do not want any more towers erected to the east or north of my property. I am currently seeking legal resolution to the current towers. If additional towers are to be erected, I wish to be included in any and all meetings, correspondence, notices, plans, discussions and any pertinent information and data.”²²

EFP Response: Staff contacted the NSP Nobles Wind Project site manager, Nathan Svobda, to determine the nature of Mr. Schreiber’s complaints. Mr. Svobda indicated that he was not familiar with any complaints filed by Mr. Schreiber. EFP staff has also reviewed the monthly

²⁰ Site Permit Application, Appendix F, page 3 (See eDoc. # [201110-67424-03](#)).

²¹ Draft Avian and Bat Protection Plan (See eDoc. # [20122-71732-01](#)).

²² Letter from Robert J. Schreiber, (See eDoc. # [20121-70631-01](#)).

compliance filings on eDockets (09-584) submitted by both enXco (the project developer) and NSP, the Project owner. This search revealed that Mr. Schreiber has not filed any formal complaints with enXco or NSP. However, EFP staff did find similar comments and concerns submitted by Mr. Schreiber during the comment period on the Draft Site Permit phase of the Nobles Wind Project (See Edockets 09-584, document id # 20099-42091-01, page 1 of 28, filed on September 14, 2009). EFP staff contacted Mr. Schreiber, by phone on January 23, 2012, and discussed with him his concerns. Mr. Schreiber indicated he has not contacted NSP, the owner of the Nobles Wind Project, to express his concerns about noise, primarily during nighttime low wind conditions, and shadow flicker. EFP staff has reviewed the project mailing list and Mr. Schreiber's name, address and email are now included. Therefore, he will receive Commission notices and mailings for the CWS Project.

The turbines for the CWS Project will be located about three miles to the west of Mr. Schreiber's residence. Cumulative noise modeling results in Appendix E of the Site Permit Application indicate that cumulative turbine noise from the project will be below PCA's most stringent noise requirement. The proposed site permit Section 6.6 [Noise] requires a post-construction noise survey.

Archaeological Resources

Minnesota Historical Society. Comments from the Historical Society, February 28, 2012, noted "...one new archaeological site was identified as a result of this survey. We agree with the consultant's recommendation that this small lithic scatter (21NO0071) is **not eligible** for the National Register of Historic Places. Therefore, we concur that no further archaeological work is necessary."²³

EFP Response: No response is necessary. See proposed Site Permit Section 6.3 [Archaeological Resources].

Nobles County Wind Regulations

Nobles County Zoning Ordinance (729) covers Wind Energy Conversion System Regulations. This ordinance at part 729.4 establishes setbacks for wind turbines and meteorological towers. Setback requirements are different for non-commercial and commercial turbines. Greater setbacks are required for commercial turbines. The Nobles County regulations do not apply to LWECS.

Based on information in its application, it appears that CWS has also designed the project to meet or exceed the setback requirements adopted by Nobles County for commercial turbines in its wind energy conversion system regulations (section 729.4 Setbacks). On January 21, 2012, EFP staff spoke with Wayne Smith, Environmental Services Director for Nobles County, regarding their setbacks for wind facilities. Mr. Smith acknowledged that the Applicant has met with the county regarding setbacks and that the project design complies with the county setback requirements.

²³ Letter from Minnesota Historical Society (See eDoc. # [20123-72542-01](#)).

Several of the requirements in the Nobles County Wind Energy Conversion System Regulations are similar to those reflected in the Commission's General Permit standards set forth in Docket No. E-G-999/M-07-1102. However, the standards adopted by Nobles County for commercial turbines and meteorological tower setbacks to property lines, road rights-of-way, and wetlands (USFWS Types III, IV and V) are more stringent than the Commission's. Since the project as proposed is intended to comply with these setbacks, they are incorporated as Special Conditions in Section 13.1 of the Site Permit.

Wind Access Buffers

On January 26, 2012, EFP staff filed its Comments and Recommendations on the issuance of a draft site permit for the CWS Project.²⁴ Those comments provide analysis supporting site permit conditions for wind access buffers, turbine spacing requirements, wake loss, prevailing winds and non-prevailing winds, and Minnesota's laws on wind rights. The footnote above provides a link to that document.

The CWS Project design and layout complies with the requirements of the proposed site permit at Section 4.1 [Wind Access Buffer] and Section 4.10 [Turbine Spacing].

CWS Wind Farms sought assurances from NSP, the owner of the Nobles Wind Farm that the proposed CWS turbine locations do not interfere with the existing turbine locations in the Nobles Project.

The buffer setback requirement of five by three RD for each of the two projects provides for a combined setback of 10 by six RD between the two projects, thereby reducing or limiting the potential for wake loss from one project to affect the energy production and performance of the other project. The two combined buffer setbacks provide for efficient use of the wind resource.

The CWS Project design and layout also appears to satisfy all site permit setback requirements, including the Nobles County setback requirements identified in Section 13 [Special Conditions].

Other Comments and Public Meeting Summary

Southwest Regional Development Commission. Annette Bair, SRDC Physical Development Director submitted comments on March 22, 2012, that provides a history of the CWS Project going back to 2003 and Commission Docket No. E-002/CN-01-1958. Ms. Bair's comments also note:²⁵

- 1) there is strong community support for the project;
- 2) more than 150 residents, primarily from southwest Minnesota are invested in the project;
- 3) CWS has invited all landowners (approximately 250) along the four Xcel Energy high voltage transmission line to participate in the ownership of the CWS project; and

²⁴ EFP C&R (See eDoc. #[20121-70712-01](#)).

²⁵ SRDC Comments (See eDoc. #[20123-73050-01](#)).

- 4) EFP staff has encouraged the use of Development Agreements that not only assist the local unit of governments but also help the developer understand what is expected and what costs are likely to be.

Public Meeting Summary

Approximately twenty five (25) people attended the public information meeting on the draft site permit held in Reading, Minnesota on March 5, 2012 and included CWS representatives and board members, Nobles County officials, project participants and landowners. After introductions, a statement from David Benson, Nobles County Commissioner, was read into the record focusing on the contribution of individuals and community members for their work that has gone into the CCWS project and how Nobles and other counties have benefitted from wind energy development in their area.

EFP staff provided an overview of the permitting process for LWECS in Minnesota. The primary purpose of the meeting was to receive comments on the draft site permit; therefore, EFP staff covered all aspects of the site permit requirements.

Several questions were directed to CWS representatives and EFP staff. Questions covered project timing, construction schedule, and turbine delivery, drain tiles, production taxes paid to the county and townships, and setbacks. No significant issues were identified.

This project will pay an annual production tax of about \$155,000 per year for the life of the project. The county receives 80 % and the townships receive 20% of the taxes paid. The project will also pay landowners an annual fee for hosting the wind facilities. Investors will also share in the proceeds. Other community benefits include providing assistance to 4H members for travel to the State Fair, funding of school projects and leaning opportunities for high school physics classes on field trips to wind energy facilities. As noted earlier a court reporter prepared a record of the public meeting.²⁶

* * * * *

EFP staff has used the information in the site permit application, compliance with procedural requirements, comments received in development of the record, and experience with other LWECS projects as a guide for evaluating whether a site permit may be issued for this project.

Based on the record of this proceeding, EFP staff concludes that the Community Wind South Project meets the procedural requirements and the considerations and standards for issuance of a site permit identified in Minnesota Statutes and Rules. The Site Permit Application and the record have been reviewed pursuant to the requirements of Minnesota Statutes chapter 216F and Minnesota Rules 7854.

EFP staff has prepared for Commission consideration an Exhibit List, proposed Findings of Fact, Conclusions of Law and Order, and a proposed Site Permit for the 30.75 MW Community Wind South project.

²⁶ *Record of Public Meeting & Oral Comments (See eDoc. # [20123-72784-01](#)).*

Exhibit List

EFP staff has prepared and attached an exhibit list of documents that are part of the record in the site permit proceeding.

Proposed Findings of Fact

The attached proposed Findings 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 site considerations addressed in the proposed 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, wildlife, and surface water) track the factors described in the Commission's rules for other types of power plants that are pertinent to wind projects.

Proposed Site Permit

EFP Staff has prepared a site permit for the Commission's consideration. See the attached document. The conditions in this proposed Site Permit are consistent with conditions included in other LWECS site permits issued by the Commission.

The proposed site permit is not significantly different from the draft site permit issued by the Commission, except for three minor modifications. For consistency purposes, all references to "ten (10) working days" in the draft site permit have been changed to "14 days". This modification makes the proposed site permit language consistent with a recently issued draft site permit in another Commission docket and pending permits in other dockets. The other two modifications are in Sections 5.6 [Pre-Construction Meeting] and 5.7 [Pre-Operation Compliance Meeting]. The language in these two conditions was modified to provide clarity on how the two meetings are arranged and scheduled. No substantive language changes have been made to the proposed site permit.

Commission Decision Options

A. Community Wind South Project Findings of Fact, Conclusions and Order

1. Adopt the attached Findings of Fact, Conclusions of Law and Order proposed for the 30.75 MW CWS Project 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 30.75 MW CWS Project

1. Issue the proposed LWECS Site Permit for the Community Wind South Project to CWS Wind Farm, LLC.
2. Amend the proposed LWECS Site Permit as deemed appropriate.

3. Deny the proposed LWECS Site Permit.
4. Make some other decision deemed more appropriate.

EFP Staff Recommendation: Staff recommends options A1 and B1.

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FIGURE 1

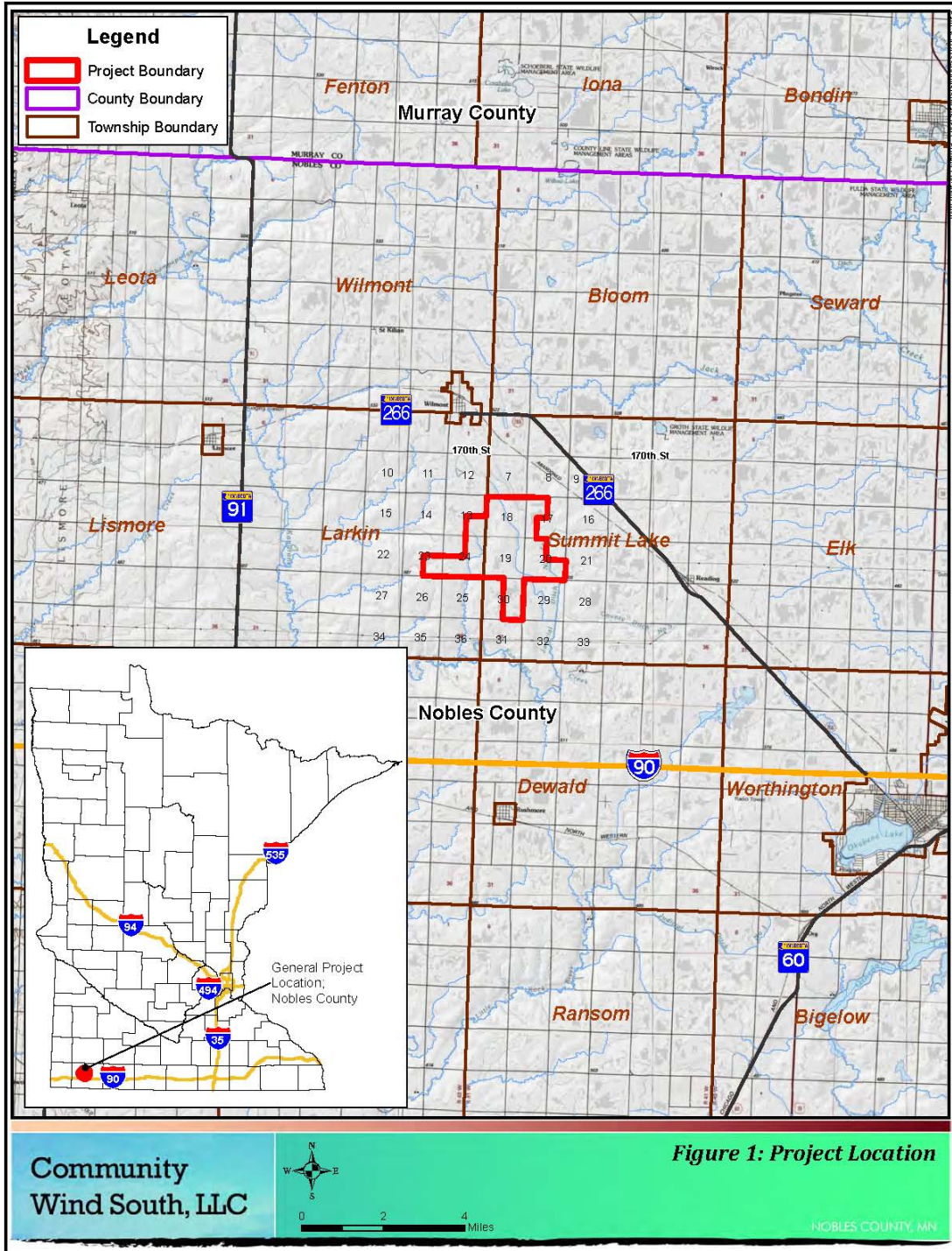


FIGURE 2

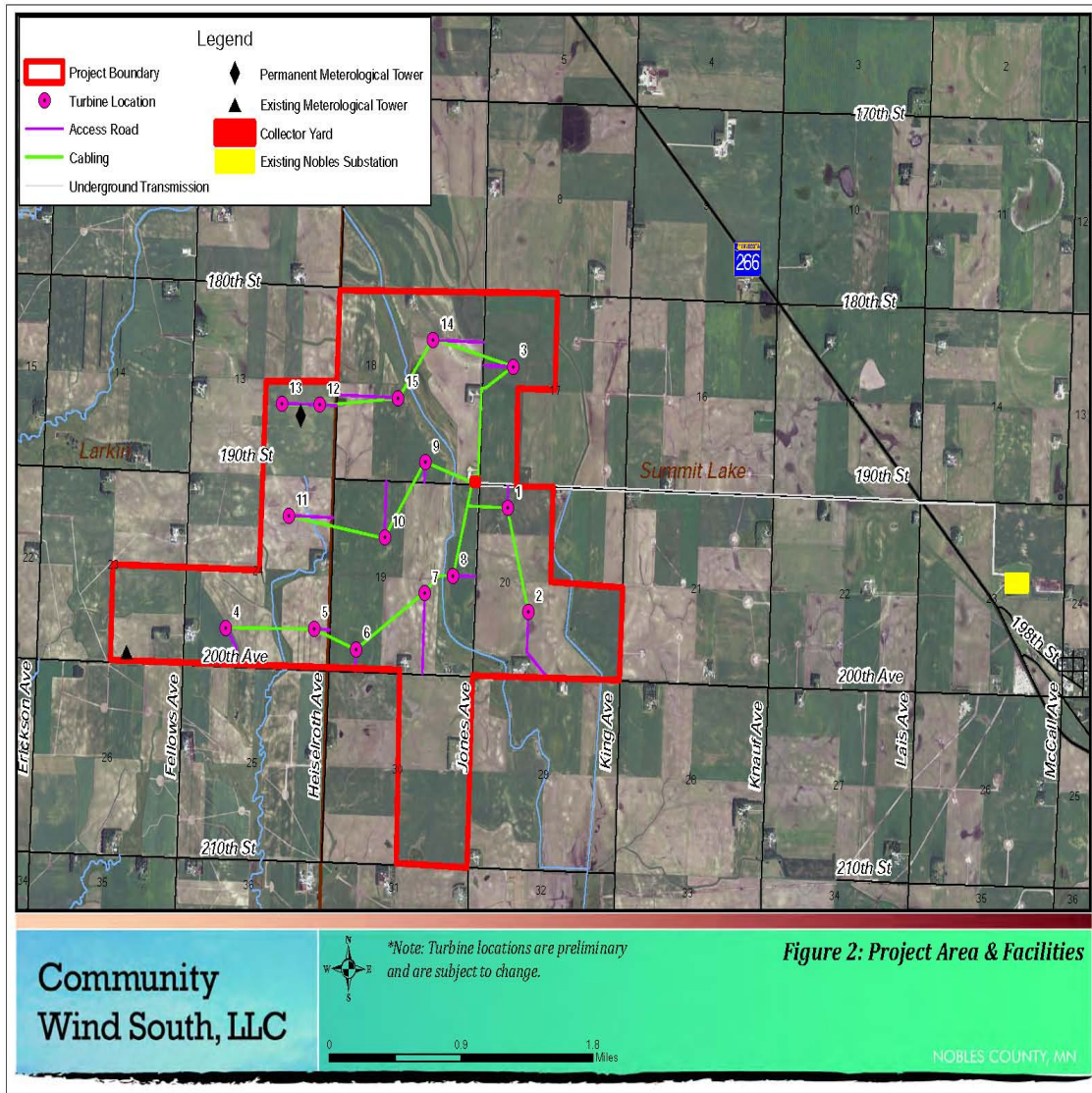
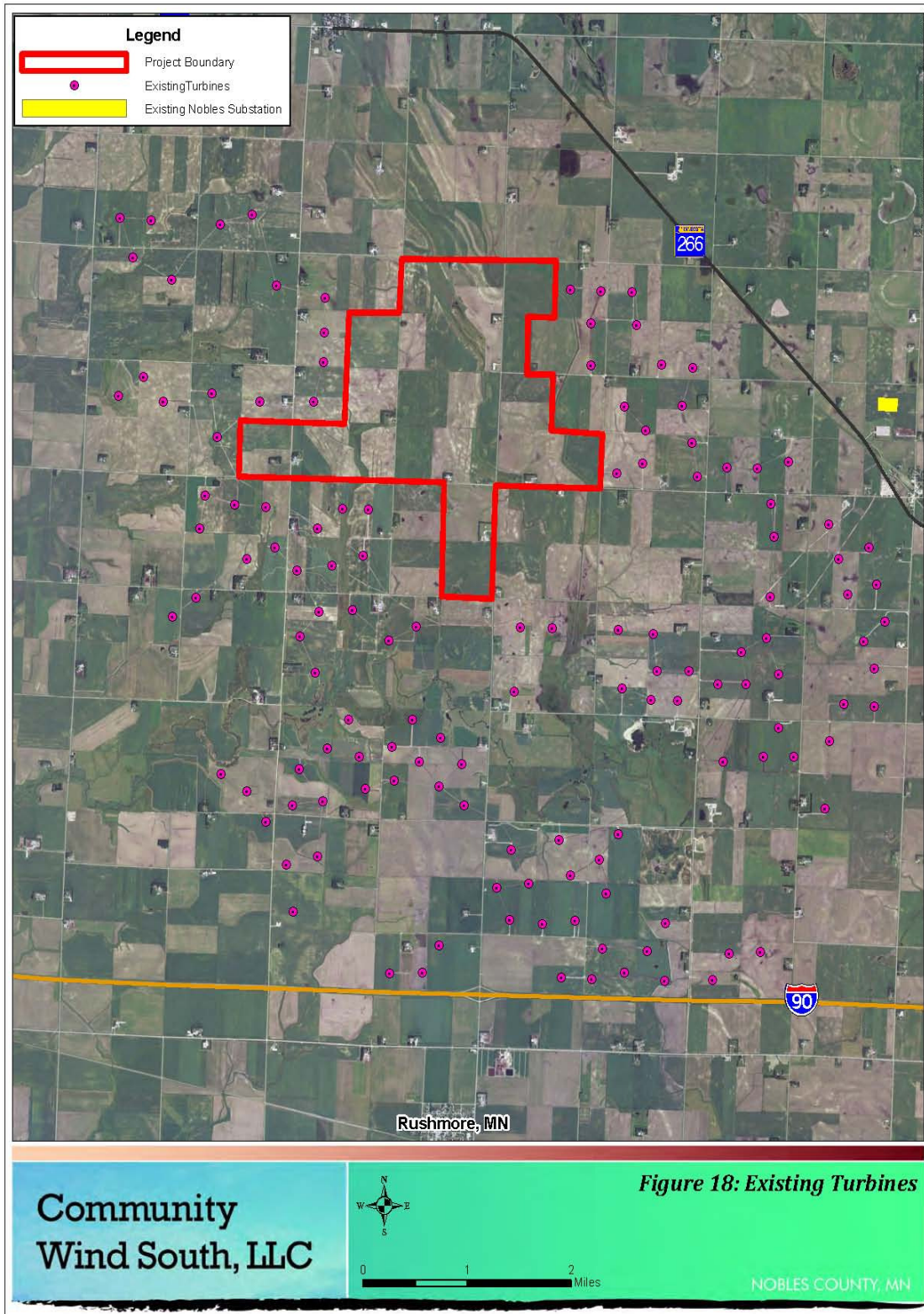


FIGURE 3



In the Matter of the Application of
 CWS Wind Farm, LLC for a Large
 Wind Energy Conversion System
 Site Permit for the 30.75 Community
 Wind South Project in Nobles County

Exhibit List

PUC Docket No. IP-6871//WS-11-863

EFP Exhibit No.	Exhibit	eDocket Date	eDocket Document Number
1	Community Wind South, LLC Site Permit Application and Appendices A – I, for a 30.75 Large Wind Energy Conversion System in Nobles County.	10-17-2011	201110-67420-01 201110-67420-02 201110-67420-03 201110-67420-04 201110-67420-05 201110-67420-06 201110-67420-07 201110-67420-08 201110-67420-09 201110-67424-01 201110-67424-02 201110-67424-03 201110-67424-04 201110-67424-05
2	Name Change of Applicant Submitted to EFP Staff	03-28-2012	20123-73053-01
3	EFP Comments and Recommendations to the PUC on Application Acceptance	11-02-2012	201111-68053-01
4	PUC Order accepting the Application as complete and granting a variance to Minnesota Rule 7854.0800 to extend the period for the PUC to make a preliminary determination on whether a site permit may be issued.	11-14-2011	201111-68337-01
5	Notice of Application Acceptance & Comment Period.	11-18-2011	201111-68441-01

EFP Exhibit No.	Exhibit	eDocket Date	eDocket Document Number
6	Notice of Application Acceptance & Comment Period published in <i>EQB Monitor</i> , Vol. 35. No. 24, on 11-28-11	03-28-2012	20123-73048-01
7	Affidavit of Publication: Notice of Application Acceptance & Comment Period appeared in the <i>Worthington Daily Globe</i> 11-29-11.	12-02-2011	201112-68902-01
8	Applicant's Affidavit of Service of mailing Notice of Application Acceptance and Site Permit Application to landowners and government officials (mailed 11-29-11).	11-29-2011	201111-68723-01
9	Public and government agency comments on issues to consider in developing the draft site permit. a. Robert Schreiber b. MnDOT c. DNR	12-27-2011 12-30-2011 01-25-2012	20121-70631-01 201112-69810-01 20121-70633-01
10	EFP Comments and Recommendations to the PUC on issuance of the Draft Site Permit.	01-26-2012	20121-70712-01
11	PUC Order issuing Draft Site Permit for public review and comment.	02-06-2012	20122-71240-01
12	Draft Avian and Bat Protection Plan for Community Wind South	02-17-2012	20122-71732-01
13	Notice of Availability of Draft Site Permit and Public Meeting	02-21-2012	20122-71772-01
14	Notice of Availability of Draft Site Permit and Public Meeting published in <i>EQB Monitor</i> , Vol. 36. No. 4, on 02-20-12.	03-28-2012	20123-73049-01
15	Affidavit of Publication: Notice of Availability of Draft Site Permit and Public Meeting in the <i>Worthington Daily Globe</i> on 02-21-2012.	02-24-2012	20122-71874-01

EFP Exhibit No.	Exhibit	eDocket Date	eDocket Document Number
16	Applicants Affidavit of Service for: <ul style="list-style-type: none"> a. Notice of Availability of Draft Site Permit; b. Commission Order issuing Draft Siting Permit; c. Draft Site Permit; and d. Draft outline of Avian and Bat Protection Plan. 	02-21-2012	20122-71753-01 20122-71732-02
17	Record of Public Meeting & Oral Comments in Reading, MN on March 5, 2012.	03-21-2012	20123-72784-01
18	Letter from Minnesota Historical Society (February 28, 2012).	03-13-2012	20123-72542-01
19	DNR Comment letter on Channel Crossing, No Permit Required.	03-15-2012	20123-72645-01
20	Southwest Regional Development Commission, Annette Bair (March 22, 2012).	03-28-2012	20123-73050-01
21	Memo from DNR, Jamie Schrenzel on CWS Project (March 23, 2012).	03-28-2012	20123-73051-01
22.	Native Prairie Site Review	02-23-2012	20122-71818-01

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

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

Acting Chair
Commissioner
Commissioner
Commissioner

In the Matter of the Application of CWS
Wind Farm, LLC for a Large Wind Energy
Conversion System Site Permit for the
30.75 MW Community Wind South Project
in Nobles County

ISSUE DATE: May 1, 2012

DOCKET NO. IP-6871/WS-11-863

**FINDINGS OF FACT, CONCLUSIONS
OF LAW AND ORDER, ISSUING A
SITE PERMIT TO CWS WIND FARM,
LLC FOR THE COMMUNITY WIND
SOUTH PROJECT**

The above-entitled matter came before the Minnesota Public Utilities Commission (Commission) on April 19, 2012, pursuant to an application submitted by CWS Wind Farm, LLC (Applicant or CWS) for a site permit to construct, operate, maintain, and manage the Community Wind South Project (Project), a 30.75 Megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS), including associated facilities, in Nobles County.

A public meeting was held on March 5, 2012, in Reading, Minnesota. The meeting was presided over by the Department of Commerce (DOC) Energy Facility Permitting (EFP) staff. The meeting continued until all persons who desired to speak had done so. The public comment period closed on March 23, 2012.

STATEMENT OF ISSUE

Should the Applicant be granted a site permit under Minn. Stat. § 216F.04 to construct a 30.75 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

<u>Category</u>	<u>Findings</u>
Background and Procedure	1 – 14
Certificate of Need	15
Permittee	16
Interconnection Agreement.....	17
Project Description.....	18 – 25
Project Location	26 – 27
Wind Resource Considerations.....	28 – 31
Wind Rights and Easement/Lease Agreements	32 – 33
Site Considerations	34
Human Settlement.....	35 – 40
Noise	41 – 46
Shadow Flicker	47 – 50
Visual Values	51 – 54
Public Health and Safety.....	55 – 64
Public Services and Infrastructure	65 – 71
Recreational Resources	72 – 73
Community Benefits	74
Effects on Land Based Economics	75 – 78
Property Values.....	79
Archaeological and Historical Resources	80 – 82
Air and Water Emissions	83
Wildlife	84 – 89
Rare and Unique Natural Resources	90 – 92
Vegetation	93
Soils.....	94
Geologic and Ground Water Resources.....	95
Surface Water and Wetlands.....	96
Future Development and Expansion.....	97 – 99
Operations and Maintenance.....	100 – 101
Decommissioning and Restoration	102 – 103
Site Permit Conditions	104 – 106

Background and Procedure

1. On October 17, 2011, CWS Wind Farm, LLC (formerly Community Wind South, LLC) (CWS) filed an application with the Public Utilities Commission for up to 30.75 megawatts of nameplate wind power generating capacity identified as the Community Wind South Project in Nobles County.¹
2. CWS Wind Farm, LLC is a Delaware limited liability company formed in 2011.² CWS is representing the interests of Zephyr Wind LLC; Moriah Wind, LLC; Chinook Wind, LLC; and Summit Transmission, LLC. Each of the three wind entities (Moriah, Zephyr, and Chinook) have identical (with the exception of entity name) power purchase agreements (PPAs) for 20 years from the facility's commercial operation date. The Moriah, Zephyr, and Chinook, LLCs will own one third of the entity known as Summit, which is the counter party to the MISO/NSP Generator Interconnect Agreement (GIA). Moriah, Zephyr and Chinook also have identical ownership structures. All three-wind entities are owned 95% by CWS Wind Farm, LLC and 5% by the CWS, LLC. The 5% ownership of CWS, LLC will be offered later to local investors. Similarly, CWS, LLC (and future local investors), through its ownership position in the three entities, will maintain a 5% ownership in Summit Transmission, LLC.³
3. Department of Commerce Energy Facility Permitting (EFP) staff reviewed and recommended that the application complied with the application requirements of Minn. Rules, part 7854.0500.⁴
4. On November 14, 2011, the Commission issued an Order accepting the application for the Community Wind South Project as complete and granting a variance to Minn. Rules, part 7854.0800, to extend the period for the Commission to make a preliminary determination on whether a draft site permit may be issued.⁵
5. On November 18, 2011, EFP staff issued a notice of application acceptance and opportunity to comment on the permit application and issues to consider in the development of a draft site permit.⁶ The published notice provided: a) description of the proposed project; b) deadline for public comments on the application; c) description of the site permit review process; and d) identification of the public advisor. The notice published and distributed met the requirements of Minn. Rules, part 7854.0600, subp. 2.
6. The notice of application acceptance appeared in the *EQB Monitor*, Volume 35, No. 24 on November 28, 2011,⁷ and was published in the *Worthington Daily Globe* on

¹ Exhibit 1, Site Permit Application, October 17, 2011

² Exhibit 2, [20123-73053-01](#)

³ Exhibit 1, at p. 1.

⁴ Exhibit 3, [201111-68053-01](#)

⁵ Exhibit 4, [201111-68337-01](#)

⁶ Exhibit 5, [201111-68441-01](#)

⁷ Exhibit 6, [20123-73048-01](#)

November 29, 2011.⁸ The published notice meets the requirement of Minn. Rules, part 7854.0600, subp. 2.

7. On November 28, 2011, the Applicant distributed copies of the Notice of Application Acceptance and Comment Period, and a copy of site permit application to government agencies and landowners within the Project area.⁹ The application distribution met the requirements of Minn. Rules, part 7854.0600, subp. 3. County officials and all township boards and city councils within the project area were served.
8. Public comments on the site permit application and issues to consider in the development of a draft site permit were accepted through December 30, 2011. EFP staff received comments from Robert Schreiber, the Minnesota Department of Transportation (Mn/DOT), and the Minnesota Department of Natural Resources (DNR).¹⁰
9. On January 26, 2012, EFP staff recommended that a draft site permit may be issued and distributed for public comment.¹¹ On February 6, 2012, a Commission Order made a preliminary determination that a draft site permit may be issued.¹²
10. On February 21, 2012, EFP staff issued a notice of issuance of a draft site permit and public information meeting.¹³ The notice content met the requirements of Minn. Rules, part 7854.0900, subp. 1.
11. Published notice of the issuance of a draft site permit appeared in the *EQB Monitor*, Vol. 36, No. 4 on February 20, 2012,¹⁴ as required by Minn. Rules, part 7854.0900, subp. 2, and in the Worthington *Daily Globe* on February 21, 2012.¹⁵ The deadline for submitting comments on the draft site permit was March 23, 2012.
12. On February 21, 2012, the Applicant distributed copies of: a) the Notice of Availability of the Draft Site Permit; b) the Commission Order issuing Draft Site Permit; c) the Draft Site Permit; and d) the draft outline of Avian and Bat Protection Plan.¹⁶ County officials and all township boards and landowners within the project area were served. Notice and distribution of these documents met the requirements of Minn. Rules, part 7854.0900, subp. 2.
13. A public meeting was held in the afternoon of March 5, 2012, in Reading, Minnesota, to provide the public with an overview of the Commission's review and permitting process for LWECS and to receive comments on the CWS Project and the draft site permit. EFP staff provided of the permitting process and reviewed the requirements of the draft site permit with the public. The Applicant also provided an overview of the project,

⁸ Exhibit 7, [201112-68902-01](#)

⁹ Exhibit 8, [201111-68723-01](#)

¹⁰ Exhibits 9a, 9b and 9c, [20121-70631-01](#); [20121-69810-01](#); [20121-70633-01](#)

¹¹ Exhibit 10, [20121-70712-01](#)

¹² Exhibit 11, [20122-71240-01](#)

¹³ Exhibit 13, [20122-71772-01](#)

¹⁴ Exhibit 14, [20123-73049-01](#)

¹⁵ Exhibit 15, [20122-71874-01](#)

¹⁶ Exhibit 16, [20122-71753-01](#) & [20122-71732-02](#)

tentative schedule and responded to questions about the proposed project. Approximately 25 people attended the public meeting and several people offered comments.¹⁷

14. Two written comments were received by the close of the March 23, 2012, comment period, one from the Southwest Regional Development Commission in Slayton, Minnesota, and the other from Minnesota Department of Natural Resources. Both comments are addressed at the appropriate place in these findings.

Certificate of Need

15. No Certificate of need is required for the Project. The Project is not a “large energy facility” as defined in Minn. Stat. Section 216B.2421 because it is less than 50,000 kW in size and its only transmission lines will be a 34.5 kV. See Minn. Stat. Section 216B.2421, Subd. 2(1) (2010).¹⁸

Permittee

16. CWS Wind Farm, LLC (CWS) is the entity now responsible for development of the Project and all aspects of site permit compliance.

Interconnection Agreement

17. The CWS Project has a generator interconnection agreement with the Midwest Independent Transmission System Operator and Northern States Power Company.

Project Description

18. CWS anticipates that the Project will consist of 15 Repower 2.05 MW turbines (model MM92) for a rated nameplate capacity of 30.75 MWs. The turbines will have a hub height of 100 meters (328 feet) standing on tubular tower steel towers. The three bladed rotor assemblies will be 92.5 meters (303.5 feet) in diameter. The rotor swept area will be 6,717 square meters (72,308 square feet). Associated facilities will include pad mounted step-up transformers, underground electrical cables for delivery of the power generated by the turbines, communication cables for the supervisory control and data acquisition (SCADA) system for monitoring purposes, a collector yard, turbine access roads, tower foundations, and one permanent meteorological tower.¹⁹
19. A pad mounted step-up transformer located near the base of each turbine will accompany each wind turbine.²⁰ The purpose of the step-up transformer is to raise the voltage from 575 volts to a power collection line voltage of 34.5 kilovolts (kV).
20. The underground electrical collection system will be a 34.5 (kV) underground three (3) phase collection system. The underground trench will house three separate

¹⁷ Exhibit 17, [20123-72784-01](#)

¹⁸ Exhibit 1, Site Permit Application at Section 2

¹⁹ *Id.* at 6, p.5

²⁰ *Id.* at 6, p. 5

appropriately sized fully shielded direct bury medium voltage (MV) cables, a bare copper ground wire, and an appropriately sized armored fiber optic cable for transmittal of supervisory control and data acquisition (SCADA) information. A clean fill material such as sand or fine gravel will cover the cable before the native soil is backfilled to the top of the trench. The collection lines may require an above ground junction box when the collection lines from separate spools need to be spliced together. Separate collection systems will connect the Chinook, Moriah and Zephyr facilities and then converge at a common connection point. A fenced-in collector yard, comprised of appropriate protection and metering equipment will be located at the southeast corner of the SE ¼ of Section 18 in Summit Lake Township. Power will be sent approximately 19,908 feet by two sets of underground 34.5 kV cables to the existing Nobles County Substation owned by Northern States Power just north and west of Reading, Minnesota.²¹ A Project substation is not necessary because all facilities will be included in NSP's Nobles County Substation.

21. Each wind turbine will communicate directly with the Supervisory Control and Data Acquisition (SCADA) system for the Project. The SCADA system will connect all turbines with the collector/protection and any operations and maintenance facilities using armored fiber optic cables. This system will transmit data from the turbines back to the responsible maintenance party, MISO, NSP, and others, as well as transmit commands from the maintenance party to the turbines to ensure real time management of all wind turbines within the facility and integration with the existing transmission grid.²² The Permittee will maintain a computer program and database for tracking each wind turbine's maintenance history and energy production.
22. Construction of the Project will require approximately three to four miles of turbine access roads. The access roads will be located to facilitate construction of the turbines as well as operation and maintenance activities. The permanent turbine access roads will be comprised of graded dirt overlaid with geotechnical fabric, if necessary, and class-5 gravel cover, which will be adequate to support the size and width of maintenance vehicles. Turbine access roads will meet local county and township requirements. For purposes of construction, the turbine access roads will be approximately 28 feet in width to allow for passage of large construction equipment. A temporary gravel pad for crane operation is also necessary and will be installed near the turbine location. These pads are typically 40 by 100 feet in size. In addition, an approximately 400 by 400 foot area will be graded near the turbine location, if necessary, to allow for assembly of the turbine blades and nacelle components. Following construction, both the crane pad and assembly area will be restored to contour and all turbine access roads will be return to their permanent 16 foot width. The permanent turbine access roads will have a low profile design to allow for crossing by farming equipment.²³
23. A licensed engineer in accordance with the manufacturer's specifications and code requirements based on site-specific conditions and applicable load criteria will design

²¹ *Id.* at 5, p. 4

²² *Id.* at 10, p. 45

²³ *Id.* at 10, p. 45-46

individual turbine foundations. It is anticipated that a standard spread footer design will be used for each turbine location and have an approximately 50 foot diameter octagonal base approximately 4 feet deep with an approximately 18 foot circular pedestal at an additional four (4) foot depth for a total depth of 8 feet. Each turbine foundations will require approximately 300 to 400 cubic yards of concrete and 80,000 pounds of reinforcing steel. However, the design assumption is subject to modification based on the final geotechnical reports.²⁴

24. One temporary anemometer tower is currently located in Larkin Township in the SE ¼, Section 23. This met tower was permitted by Nobles County and has been in operation since 2007. This temporary met tower will be decommissioned and removed prior to turbine assembly. The new permanent tower will be sited in accordance with International Electrotechnical Commission (IEC) guidelines for power performance testing of wind turbines and is currently proposed for placement in the SE ¼, Section 13 of Larkin Township.
25. Construction is scheduled to begin in the second quarter of 2012 and completion is expected by October 1, 2012. The total cost of the Project is estimated at 55 to 60 million dollars.²⁵

Project Location

26. The Project is located in Nobles County in southwestern Minnesota, approximately two miles south of Wilmont, Minnesota, and includes portions of Summit Lake and Larkin townships as follows:²⁶

County	Township Name	Township	Range	Section
Nobles	Summit Lake	103N	41W	17-20, 30
Nobles	Larkin	103N	42W	13, 23-24

The Project area is located within the Prairie Parkland Providence near the border of the Coteau moraines and Inner Coteau subsection. The site topography consists of gently rolling hills. Elevations range from 1648 feet above mean sea level (AMSL) in the southeast near the East Branch of Kanananzi Creek to 1748 feet AMSL near the southwestern portion of the Project area. The Project area is rural with an agricultural-based economy. Approximately 91 percent of land use within the Project area is primarily comprised of agricultural land, primarily corn and soybeans.²⁷

27. The CWS Project site is also located within the footprint of the Nobles Wind Project on three sides. The existing 201 MW Nobles Wind Farm (Docket No. 09-584, permitted by an Order of the Commission on December 11, 2009) is comprised of 134 GE 1.5 MW turbines on 80 meter (262 foot) towers.²⁸

²⁴ *Id.* at 10, p. 45

²⁵ *Id.* at 10, p. 46

²⁶ *Id.* at 4, p. 2

²⁷ *Id.* at 5, p.4

²⁸ *Id.* at 4, p.2

Wind Resource Considerations

28. Based on the correlation and terrain modeling, the long-term estimate at the CWS Project site is 19.58 mph (8.9 meters per second) at the 100 meter hub height.²⁹ Prevailing wind directions are generally from the northwest to north in the winter months and southerly in the warmer weather months at the CWS Project site. The seasonal cycle of the mean wind speed shows lower wind speeds during the warmer weather months and higher wind speeds during the winter and spring period with a maximum in April. The highest wind speeds occur during nighttime and in mid afternoon. Lower wind speeds typically occur during the early morning and in the late afternoon.
29. For this Project, turbines have been sited to have good exposure to winds from all directions with emphasis on exposure to the prevailing wind directions while considering site topography, natural resource features, setbacks, and wind resources. The turbines are typically oriented west to east, which is roughly perpendicular to the prevailing warmer southerly and colder northwest-north 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 northerly and southerly winds, turbine 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. Sufficient spacing between the turbines is utilized to minimize wake losses when the winds are blowing parallel to the turbines. Wake loss occurs when a turbine is spaced too close downwind of another turbine, and therefore, produces less energy and is less cost-effective. Section 4.10 of the site permit addresses turbine spacing.
30. All turbines will be located 5 rotor diameters (RD) from the edge of the leased area along prevailing wind direction (generally the northern and southern edge) and 3 RD from the edge of the leased area along non-prevailing direction (generally the eastern and western edge) to accommodate for disruption of the normal wind flow and protect the wind rights of non-participating landowners. Similarly, internal turbine spacing will follow a general rule of 5 or more RD in predominant wind direction (generally north-south) and 3 RD in non-prevailing direction (generally east-west) with no more than 20 percent of the project turbines closer than the prescribed setback.³⁰
31. According to site permit application, projected average net annual output will be approximately 113,135 to 126,000 megawatt hours (MWh) for a net capacity factor ranging from 42 to 47 percent.³¹

Wind Rights and Easement/Lease Agreements

32. In order to build a wind facility, a developer needs to secure leases or easement 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

²⁹ *Id.* at 9

³⁰ *Id.* at 5.1

³¹ *Id.* at 10, p. 46.

that might interfere with the execution of the proposed Project. Land and wind rights will need to encompass the proposed LWECS, including all associated facilities such as access roads, meteorological towers, and electrical collection system.

33. The Applicant has executed easement agreements that grant CWS the necessary wind rights for the construction and operation of the Project. CWS has site control of approximately 3,070 acres within the Project area boundaries of 3,080 acres. CWS has secured wind rights through 23 leases with 36 landowners within the site to accommodate the turbines, associated facilities and setback requirements.³² Section 10.1 of the site permit requires the Applicant to demonstrate it has obtained the wind rights necessary to construct and operate the Project at least fourteen days before the pre-construction meeting.

Site Considerations

34. Minn. Stat. Chap. 216F and Minn. Rules Chap. 7854 apply to the siting of LWECS. The rules require an applicant to provide a substantial amount of information to allow the Commission 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.³³ Pursuant to Minn. Stat. § 216F.02, certain sections in Minn. Stat. Chap. 216E (Minnesota Power Plant Siting Act) apply to siting LWECS, including § 216E.03, subd. 7 (considerations in designating sites and routes). The analysis of the environmental impacts required by Minn. Rules, part 7854.0500, subp. 7, satisfies the environmental review requirements; no environmental assessment worksheet or environmental impact statement is required for a proposed LWECS project.³⁴ Therefore, environmental review is based on the application and the record. The following analysis addresses the relevant criteria that are to be applied to a LWECS project.

Human Settlement

35. The Project area located in central Nobles County is rural and sparsely populated, which is characteristic of rural areas throughout southwestern Minnesota. The nearest incorporated city is Wilmont, approximately 2 miles north of the Project area.³⁵
36. Nobles County Zoning Ordinance (729) covers Wind Energy Conversion Systems Regulations. This ordinance at part 729.4 establishes setbacks for wind turbines and meteorological towers. Setback requirements are different for non-commercial and commercial turbines. Greater setbacks are required for commercial turbines. The Nobles County regulations do not apply to LWECS.
37. Based on information in its application, it appears that CWS has also designed the project to meet or exceed the setback requirements adopted by Nobles County for commercial

³²*Id.* at 4., p. 2

³³ Minn. Statute 216F.03 and Minn. Rules, part 7854.0500

³⁴ Minn. Rules, part 7854.0500, subp. 7

³⁵ Exhibit 1 at 8.1

turbines in its wind energy conversion system regulations (section 729.4 Setbacks). On January 21, 2012, EFP staff spoke with Wayne Smith, Environmental Services Director for Nobles County, regarding their setbacks for wind facilities. Mr. Smith acknowledged that the Applicant met with the county regarding setbacks and that the project design complies with the county setback requirements. This was confirmed again with Mr. Smith on March 23, 2012.

38. Several of the requirements in the Nobles County Wind Energy Conversion System are similar to those in the Commission's General Permit standards set forth in Docket No. E-G-999/M-07-1102. However, the standards adopted by Nobles County for commercial wind turbines and meteorological tower setbacks to property lines, road rights-of-way, and wetlands (USFWS Types III, IV, and V) are more stringent than the Commission's. Because the Project site layout as proposed complies with these setbacks, they are incorporated as Special Conditions in Section 13.1 of the site permit.
39. CWS has committed to a setback of at least 1,200 feet (366 meters) to all residences.³⁶ Section 4.2 of the site permit incorporates this setback. CWS will also be required to setback its turbines a minimum of five rotor diameters on prevailing wind direction from non-participating landowners' property lines and three rotor diameters on non-prevailing wind direction, which can be found in section 4.1 of the site permit.
40. There will be no displacement of existing residences or structures in siting the wind turbines and associated facilities.

Noise

41. Wind turbines generate sound or noise when in motion. The level of sound (noise) varies with the speed of the wind, the turbines operating parameters and characteristics, the distance of the listener or receptor from the turbine, and surface characteristics of the site, as well as the time of the year. Based on Applicant's review of ambient noise levels measured in rural settings with high quality wind resources, typical noise levels range from 35 dBA to 45 dBA on an hourly equivalent sound pressure level (Leq) basis.³⁷ Noise levels near roads tend to be higher (45 to 60 dBA).
42. Noise impacts to nearby residents and other potentially affected parties have been factored into the turbine micro-siting process. The Applicant must demonstrate the Project can meet the noise standard pursuant to Minn. Stat. Chap. 7030 (site permit, sections 5.1 and 6.6). Noise levels have been predicted by a noise modeling program and will be verified per Section 5.1 to be compliant with the PCA Daytime and Nighttime L₁₀ and L₅₀ Limits as stated in Minn. Rules, part 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

³⁶ *Id.* at 5, p. 4

³⁷ *Id.* at 8.3.2, p. 12

established in Minn. Rules, part 7030.0050. The NAC-1 was chosen for receivers in the Project area since this classification includes farm houses as household units. The nighttime L₅₀ limit of 50 dBA is the most applicable stringent state limit.

43. CWS's proposed Project design must comply with the Minnesota Pollution Control Agency (PCA) noise standards pursuant to Minn. Rules Chapter 7030. Sections 4.2 and 4.4 of the site permit contain conditions for setbacks from residences and roads. The proposed wind turbine layout will meet or exceed those requirements.
44. A single turbine within the Project Area is warranted to generate a maximum apparent sound power level of no greater than 104 decibels immediately adjacent to the turbine at hub height (328 feet). The decibel level decreases with increased distance from the turbine. Generally, a setback of 1,000 feet from all receptors is necessary to insure that the noise generated by multiple turbines will be less than 50 decibels at any receptor.
45. WindPRO 2.7 software was used to model the wind turbine noise analysis. The analysis used the ISO-9613-2 general noise model and assumed a ground attenuation factor of 0.5 throughout the area. A ground attenuation factor represents the ability of the ground and surrounding area to absorb sound. It is represented by a number between 0 and 1 where 0 represents an urban area with all hard surfaces where sound is reflected by these surfaces. A ground attenuation factor of 1 represents a densely vegetated area where sound is absorbed by the surrounding surfaces, such as a densely wooded area. A factor of 0.5 was used for the analysis to indicate the existing conditions of not completely vegetated and not completely hard surfaces. This is a commonly used factor as an industry standard for analyses to reflect the existing ground cover in rural agricultural area. A total of 36 potential receptors (e.g. residences) were modeled. Figure 6 in the Site Permit Application (SPA) shows the anticipated noise impact caused by the proposed wind turbines. The analysis estimates the maximum noise impact caused when all 15 proposed turbines are operating simultaneously under normal conditions. The analysis estimates that the noise impact from the proposed turbines on any receptor within the Project Area will not be greater than 42.7 d(B)A.³⁸
46. Therefore, any increase in noise levels is expected to be minimal due to the distance (1,200 feet) between the turbines and receptors. Noise modeling indicates that CWS Project will meet the PCA noise standards. As a result, the impact of the proposed Project on human settlement and public health and safety will be minimal. CWS will conduct a post-construction noise study. The purpose of the post-construction noise study is to confirm that PCA noise standards have been met. See section 6.6 of the site permit.

Shadow Flicker

47. Shadow flicker occurs when the rotating blades of a wind turbine repeatedly pass in front of the sun to create recurring shadows or a repeating cycle of changing light intensity. Shadow flicker is described as a moving shadow on the ground resulting in alternating

³⁸ *Id.* at Appendix E.

changes in light intensity. Shadow flicker computer models are used to 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 shadow flicker model are useful in the design phase of a wind farm. Generally, 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. Shadow flicker is also influenced by many conditions, including the amount of cloud cover, time of day, the portion of the time the turbine is operating, the orientation of windows, ambient lighting conditions, sun path across the sky (various with seasons), orientation of turbine blades. 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.

48. 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.³⁹ Evidence of shadow flicker effects is hard to find, which indicates it is more of a nuisance issue. No standard of acceptable hours has been adopted by the State of Minnesota. To date there are no examples of turbines causing photosensitivity related problems. Several jurisdictions in other countries have established guidelines for acceptable levels of shadow flicker based on certain assumptions.
49. The Applicant has provided a preliminary shadow flicker analysis. WindPro software was used to model the anticipated shadow flicker from the turbines on receptors within the site. Two flicker scenarios were developed. The worst-case scenario estimates shadow flicker while assuming no shadow cover, and that the turbines are always directly perpendicular to the sun. The real-case scenario uses the estimated operating hours per direction and meteorological data to estimate the most likely flicker scenario. Since the flicker impacts to any residence will vary based on which direction the turbine is pointing (which depends on the direction the wind is blowing), assumptions were made about the number of hours per year the turbines will be operating in each direction. When evaluating the wind farm collectively, in the worst case scenario, four of the 35 receptors had more than 40 shadow flicker hours a year. In the realistic scenario, one receptor was above 30 hours (31.25 hours) per year, four between 10 and 30 hours, and 30 receptors were below 10 hours per year.⁴⁰
50. As directed by section 6.2 of the site permit, at least fourteen (14) days prior to the pre-construction meeting, the Permittee shall provide data on shadow flicker impacts on each

³⁹ Environmental Health Division, Minnesota Department of Health, *Public Health Impacts of Wind Turbines*, May 22, 2009, at 14, available at http://energyfacilities.puc.state.mn.us/documents/Public_Health_Impacts_of_Wind_Turbines_5.22.09_Revised.pdf

⁴⁰ Exhibit 1 at Appendix E

residence of non-participating landowners and participating landowners. Information shall include the results of modeling used, assumptions made, and the anticipated levels of impact from turbine shadow flicker on each residence. The Permittee shall provide documentation on its efforts to minimize shadow flicker impacts.

Visual Values

51. The installation of the Project will alter the visual quality of the site. The topography in the vicinity is agricultural fields (row crops), farmsteads, gently rolling hills, interspersed with drainage ways, small-scattered wetlands and grasslands. Homesteads are scattered throughout the Project area and are often bordered by small groves of deciduous and coniferous trees planted as windbreaks. The turbines will be visible to residents in and near the Project.⁴¹
52. 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 (site permit, section 7.18). 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 turbines and associated facilities necessary to harvest the wind for energy are not inconsistent with existing agricultural practices.
53. Wind facilities can be perceived as a visual intrusion on the natural aesthetic value on the landscape or having their own aesthetic quality. Existing wind facilities have altered the landscape elsewhere in Minnesota from agricultural to wind plant/agricultural. This Project will modify the visual character of the area. This Project is also within the footprint of the existing Nobles Wind Farm, which consists of 134 GE 1.5 MW turbines mounted on 262 foot (80-meter) towers.
54. Visually, the Community Wind South Project will be similar to other LWECS projects in Nobles and adjacent counties.

Public Health and Safety

55. There are no public airports within the Project boundary. The nearest registered airport is in Worthington, located approximately 11 miles southeast of the Project.⁴²
56. Air traffic may be present near the Project for crop dusting of agricultural fields. Crop dusting is typically carried out during the day by highly maneuverable airplanes or helicopters. The installation of wind turbine towers in active croplands will create a potential for collisions with crop-dusting aircraft. The turbines themselves will be visible from a distance and lighted according to Federal Aviation Administration (FAA) guidelines (see section 7.18 of the site permit).

⁴¹ *Id.* at 8.4, p. 13

⁴² *Id.* at 8.8, p. 24-25

57. Crop dusters can rely on GPS for locations of obstacles. All wind turbines in the Project will be registered with the FAA. All meteorological towers in the area will be free-standing, so there will be no guy wires, a serious issue for vision and avoidance. The Minnesota Aeronautical Chart produced by the Minnesota Department of Transportation is available and shows wind turbine locations throughout the state. This chart is updated annually and will include the Community Wind South Project turbine after construction is complete. An FAA Determination of No Hazard (DNH) has been provided for each of the turbine locations.⁴³
58. Possible health concerns associated with wind turbines and transmission of electricity generally include those from electric and magnetic fields (EMF). The term EMF refers to electric and magnetic fields that are present around electrical devices. Electric fields arise from the voltage or electrical charges and magnetic fields arising from the flow of electricity or current that travels along transmission lines, power collection (feeder) lines, substation transformers, house wiring and electrical appliances. The intensity of the electric field is related to the voltage of the line and the intensity of the magnetic field is related to the current flow through the conductors. When operating, the proposed Project will generate electromagnetic fields.
59. EMF from underground electrical collection lines dissipates very close to the line because they are installed below ground within insulated shielding. The electrical fields are negligible, and there is a small magnetic field directly above the lines that, based on engineering analysis, dissipates within several feet on either side of the installed cable.
60. EMF associated with the transformers at the base of each turbine completely dissipates within a relatively short distance from the transformer, so the 1,200-foot turbine setback from residences will be adequate to avoid any EMF exposure to homes.
61. While the general consensus is that electric fields pose no risk to humans, the question of whether exposure to magnetic fields potentially can cause biological responses or even health effects continues to be the subject of research and debate. Based on the most current research on electromagnetic fields, and the distance between any turbines or collector lines and houses, the Project will have no impact to public health and safety due to EMF.
62. 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 setback requirements in Section 4 of the site permit provide further assurance that the turbines will be placed an adequate distance from residences, roads and other areas of human activity.

⁴³ *Id.* at 8.8, p 24-25

63. CWS will prepare an emergency response plan (fire protection and medical emergency plan) in consultation with the emergency responders having jurisdiction over the Project area (site permit, section 7.16). As with any large construction project, some risk of worker or public injury exists during construction. CWS and its construction representatives and workers will prepare and implement work plans and specifications in accordance with applicable worker safety requirements during construction of the Project. CWS will also control public access to the Project during construction and operation. CWS will provide security during construction and operation of the project, including fencing, warning signs, and locks on equipment and facilities. CWS will also provide landowners, interested persons, public officials, and emergency responders with safety information about the project and its facilities (see site permit sections 7.15 and 7.16).
64. 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 emergency response plan (site permit, sections 7.17 and 7.16).

Public Services and Infrastructure

65. The proposed project is expected to have minimal effects on existing public infrastructure. The proposed Project would not generate an increase in traffic volumes or daily human activity, except for a short period of time during construction and occasionally during operation and maintenance activities. Some damage to roads is anticipated during the construction phase of the Project. Examples of the type of damage expected include rutting, heaving, and the development of potholes on roadway surfaces. CWS will enter road development agreements with Nobles County and the townships of Summit Lake and Larkin to address road damages and repair. Any damage to the roadways as a result of the Project will be repaired or reimbursed based on the road development agreements between CWS and Nobles County or affected townships.⁴⁴ (see site permit, section 7.8).
66. Other than short-term impacts, no significant permanent changes in road traffic patterns or volume are expected. The busiest traffic would occur when the majority of the foundation and tower assembly is taking place. Township and county officials will receive advance notice of the construction schedule, including the timing of the delivery of towers and turbines and arrival of the crane to erect project equipment (site permit, section 5.6). CWS will work with all parties involved to address concerns related to roadway use, and adhere to state, county, and township requirements for transportation infrastructure.
67. Access roads will be built adjacent to the towers, allowing access both during and after construction. The total length of these access roads would be approximately 4 miles.⁴⁵ The roads will be approximately 16 ft wide and have gravel as cover, adequate to support the size and weight of maintenance vehicles. These roads will meet state and local

⁴⁴ *Id.* 8.5, p. 16-17

⁴⁵ *Id.* at 10.2, p. 44

requirements. The specific turbine locations will determine the amount of roadway that will be constructed for this Project. Temporary disturbances during construction of the Project include crane pads at each turbine site, temporary travel roads for the cranes, temporary lay down areas around each turbine, trenching in the underground electrical collection system, and storage/stockpile area.

68. If access roads are installed across streams or drainage ways, the Applicant, in consultation with 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 Minnesota Department of Natural Resources. See section 10.5 of the site permit for a list of other permits that may be required.
69. Prior to construction, Gopher State One Call will be contacted to locate underground facilities so they can be avoided. Further, section 7.15 of the site permit requires the Applicant to submit the location of all its underground cables and collector and feeder lines to Gopher State One Call. CWS will also coordinate with the local telecommunication providers to ensure that any collection or transmission lines installed as part of the Project will not disrupt, and are compatible with, the existing telephone communication systems. If any disruption occurs, CWS will work with the local providers to return service and then coordinate with the local provider to identify and agree upon further necessary improvements.⁴⁶ CWS will also work with the rural water system provider to avoid interference with their facilities.
70. Comsearch was retained by the Applicant to complete an analysis of the Project's potential impacts on: a) microwave beam paths; b) AM/FM radio stations; c) land-mobile stations; and d) off-air television station signals. For the CWS Project, 15 turbines were considered in the analysis, each with a rotor diameter of 303.5 feet (92 meters) and a turbine height of 328 feet (100 meters). The microwave analysis indicated one of the turbine locations (No. 4) could have a potential conflict with one microwave path. Therefore, the turbine was relocated to avoid a potential microwave conflict. The AM/FM analysis concluded that the presence of the proposed turbine locations will not impact AM/FM reception. The land-mobile analysis identified five land mobile sites near the project. Four of the land mobile sites are licensed to Nobles County and the State of Minnesota. Land mobile sites are sites typically unaffected by the presence of wind turbines. Therefore, impacts on land mobile radios are not anticipated. A total of nine licensed and operating television stations occur within 40 miles of the Project Area. Of these, six are full-power digital stations and three are low-power digital stations. If issues arise during the construction or operation of the Project, the permittee will work with the affected residents to determine the cause of the interference and reestablish acceptable reception. CWS will work with specific landowner to reach an agreeable solution. Potential mitigation strategies include having alternative television service installed, such as satellite reception.⁴⁷ The Applicant will not operate the wind farm so as to cause microwave, television, radio, telephone, or navigation interference contrary to FCC regulations or other law. In the event the wind farm or its operation causes such

⁴⁶ *Id.* at 8.5, p. 17

⁴⁷ *Id.* at 8.5, p. 18-20 & Appendix D

interference, the Applicant will take the steps necessary to correct the problem. Section 6.4 of the site permit requires the Applicant to submit a plan to conduct an assessment of television signal reception and microwave signal patterns in the Project area.

71. Construction, operation, and maintenance of the proposed wind plant will comply with all of the required federal, state, and local permit requirements. See section 10.5 of the site permit.

Recreational Resources

72. There are no public recreation opportunities within the Project boundary. However, there are five Wildlife Management Areas (WMAs) and one Waterfowl Production Area (WPA) located within five miles of the Project area. The nearest public land is located one mile away from the Project area. The proposed turbines may be visible from some of these areas; however, there are 134 existing wind turbines within the current view shed from the Nobles Wind project that border the CWS Project on three sides. Therefore, the additional visual impact of the 15 additional turbines is minimal.⁴⁸
73. Scientific and Natural Areas (SNAs) are areas designated to protect rare and endangered species habitat, unique plant communities, and significant geologic features that possess exceptional scientific or educational values. There are no SNAs within the Project area.⁴⁹

Community Benefits

74. CWS will pay a Wind Energy Production Tax to the county and townships each year expected to be approximately 155,000 per year.⁵⁰ Landowners with wind turbines on their property will also receive payments from the Applicant. The Project is expected to create new job opportunities within the local community, both during construction and operation.

⁴⁸*Id.* at 8.7, p. 21-24

⁴⁹*Id.* at 8.7

⁵⁰*Id.* at 8.12

Effects on Land-Based Economies

75. CWS estimates the total acreage of agricultural land permanently impacted by wind facilities to be about 5.2 acres within the 3,080 acre site, or less than 1 percent of the project area.⁵¹ Overall, impact to agricultural lands as a result of the Project is anticipated to be short term and is not expected to significantly alter crop production. Agricultural activity is anticipated to continue between the turbine sites. Once in operation, it may be occasionally necessary for CWS to complete repairs or clear vegetation around a turbine or facility, which could result in additional temporary impacts to agricultural operations. These interruptions are expected to be infrequent and short term.
76. CWS will hold discussions with property owners to identify features on their property, including drain tile, that should be avoided. Impacts to drain tile due to Project construction and operation are not anticipated. However, in the event that there is damage to drain tile as a result of construction activities or operation of the LWECs, the tile will be repaired according to the agreement between CWS and the owner of any damaged tile.⁵² Section 7 of the site permit addresses mitigation measures for agricultural lands.
77. According to the Applicant's February 23, 2012, filing, there is no native prairie within the Project site.⁵³
78. There are no mining or forestry resources within the Project Area. Construction of the Project will provide an economic benefit to the owners and operators of this facility⁵⁴

Property Values

79. A study conducted by the Lawrence Berkley National Laboratory found an absence of negative impacts to property values from wind farms within a project view shed.⁵⁵ On June 1, 2010, the Stearns County Assessor's Office prepared "A Study of Wind Energy Conversion System in Minnesota," which did not find any changes in property valuation to properties hosting a wind tower based on information provided by assessors from Dodge, Jackson, Lincoln, Martin, Mower, and Murray counties. However, the study acknowledged that there is insufficient data to allow for a reasonable analysis of the development of wind facilities on property values. The Stearns County study also cited studies completed by the Renewable Energy Policy Project, which analyzed 25,000 sales inside and outside of view sheds of a wind facility and concluded that property values appear not be affected, and a study conducted by the Royal Institute of Chartered Surveyors, which examined the impact of wind facilities on property values in the United Kingdom and found that almost 30 percent of the respondents reported a decrease in property values.

⁵¹ *Id.* at 8.10, p. 26-27

⁵² *Id.*

⁵³ Exhibit 22, Native Prairie Site Review.

⁵⁴ Exhibit 1 at 8.10.

⁵⁵ Ben Hoen et al., *The Impact of Wind Power Projects on Residential Property Values in the United States*, Lawrence Berkeley National Laboratory (Dec. 2009).

Archaeological and Historical Resources

80. The CWS Project area is near the border of two archeological regions. The western portion of Nobles County is within the Southwest Riverine archeological region and the eastern portion is within the Prairie Lakes region. The Rock River is the major drainage way of the Southwest Riverine region. Blondo Consulting, LLC was retained to perform a preliminary investigation of previously identified archeological resources within the Project area and within a 0.5 mile buffer surrounding the Project area. Subsequent to the preliminary investigation, Blondo also recommended that a Phase I Cultural Resource Reconnaissance Survey be undertaken. The State Historic Preservation Office (SHPO) was also contacted regarding the presence of any archaeological, architectural, or historic sites within the Project area. No historic structures were identified within the Project area, however many of the historic architectural properties in the State have not been identified, so an absence of properties in does not preclude their existence. Two archaeological sites were identified; however, these are designated as security information and cannot be disclosed under Minn. Statute 307.08, subd. 11.⁵⁶
81. Section 6.3 of the site permit requires the Applicant to conduct an archaeological reconnaissance survey (Phase I). A Phase I archaeological was prepared and submitted to the SHPO. A February 28, 2012, letter from the SHPO to WSB & Associates states: “We agree with the consultant’s recommendation that this small lithic scatter (21N00071) is not eligible for the National Register of Historic Places. Therefore, we concur that no further archaeological work is necessary.”⁵⁷
82. In the event that an archeological site is found during construction, the integrity and significance of the site will be addressed in terms of the potential of the site to be eligible for listing in the National Register of Historic Places (NRHP). If such sites are found to be eligible for listing in the NRHP, mitigation measures will be developed in consultation with SHPO, the State Archeologist, and any relevant American Indian communities. If previously unknown archaeological resources are encountered during construction and/or operation, the discoveries will be reported to SHPO. Section 6.3 of the site permit also requires the Applicant to stop work and notify the SHPO and the Commission if any unrecorded cultural resources are found during construction.

Air and Water Emissions

83. No harmful air or water emissions are expected from the construction and operation of the Project.

⁵⁶ Exhibit 1 at 8.6, p. 20-21

⁵⁷ Exhibit 18

Wildlife

84. The Project area is used primarily for agricultural purposes, with cropland contributing the vast majority of disturbed vegetative cover (89.6 percent).⁵⁸ In examining impacts on wildlife, the United States Fish and Wildlife Service's Wind Turbine Advisory Committee Recommendations (March 2010) were used to conduct a preliminary site assessments for the Project. The Recommendations consists of a tiered approach. Tier 1 involves a preliminary evaluation or screening of potential project sites. This was completed by performing a desktop evaluation of the Project area to determine if species or habitat of concern was present in the immediate vicinity of the Project area. Publically available databases were used to qualify the site for potential development. Tier 2 is site characterization, which involves determining if any site-specific risks to wildlife could occur as a result of wind development. This was completed by contacting Federal, State, and local authorities to determine if any risks to wildlife resources existed within the Project area. A site visit was also conducted to assess the quality and availability of habitat within the Project Area. Tier 3 consists of field studies to document the wildlife conditions on site and predict project impacts. To date, the Applicant has completed Tier 1 and 2 of the Recommendations.⁵⁹
85. A December 30, 2011, memorandum from DNR staff to EFP staff noted that: "The project developers sited the project well and the content of their application indicates that they reviewed the DNR Wind Guidance and included suggested analysis in the Site Permit Application. Also, due to the siting for this project and based on available information, the DNR does not recommend surveys at this time."⁶⁰ As a result, no additional Tier 3 studies are anticipated.
86. Wildlife habitat impacts are expected to be minimal because turbines and access roads will be placed exclusively on cropped land. 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 greatest impact of concern to wildlife would primarily be to avian and bat populations. The Project will minimize avian impacts by using tubular towers to minimize perching and placing electrical collection lines underground.
87. CWS will continue to collect Anabat acoustic bat data until September 2012. DNR's comments on the Draft Site Permit, dated March 23, 2012, requested that the department be given the opportunity to review the 2012 bat acoustic results when available.⁶¹
88. On March 23, 2012, the U.S. Fish and Wildlife Service (USFWS) issued new Land-Based Wind Energy Guidelines. In these guidelines, the USFWS has elected to modify the reference to Avian and Bat Protection Plans (ABPPs) for wind energy projects by now referring to them as Bird and Bat Conservation Strategies (BBCS); USFWS will use ABPP's for transmission projects.

⁵⁸ Exhibit 1, 8.18, p. 1.

⁵⁹ *Id.* at 8.19, p. 34 & Appendix F

⁶⁰ Exhibit 9c

⁶¹ Exhibit 21

89. Section 6.7 of the site permit requires the Applicant to prepare an avian and bat protection plan (ABPP) or BBCSs, submit quarterly avian and bat reports, and report five or more dead or injured non-protected avian or bat species or a single dead or injured migratory, state threatened, endangered, species of special concern, and federally listed species discovered within 24 hours of discovery. Section 6.1 requires the Applicant to conduct pre-construction desktop and field inventories of potentially impacted native prairies, wetlands, and any other biologically sensitive areas within the site and assess the presence of state threatened, endangered, or species of special concern or federally listed species. Section 6.1 also requires the Applicant to submit any biological survey or studies conducted. Section 4.5 requires that turbines and associated facilities will not be constructed in wildlife management areas, state scientific and natural areas or parks, and a setback of five rotor diameters in prevailing wind and three rotor diameters in non-prevailing wind is applied to such public lands.

Rare and Unique Natural Resources

90. Special consideration is often given to raptor species at wind farms because diurnal raptors are generally at higher risk for collision with turbines than are many other avian species (National Wind Coordinating Collaborative [NWCC], 2010). Mean use of raptor species within the Project area was low and observed flight behavior did not indicate high risk of collision mortality. Based on projected low use of the Project area, overall risk to raptor species as a result of Project development is expected to be low.⁶²
91. Waterfowl mortality has been reported at wind farms in the United States, though fatalities of other avian groups are much more common. Several post construction studies have shown reduced use of flight paths near wind turbines by migrating waterfowl. There are no waterfowl feeding and resting areas present with the Project area. The nearest waterfowl feeding and resting Area is 24 miles to the east on Heron Lake in Jackson County.⁶³
92. Both the DNR and USFWS have indicated that no occurrences of state or federally threatened or endangered species occur within the Project area. Overall, the potential for impact to rare or unique species in the Project area is low.⁶⁴

Vegetation

93. No public waters, wetlands, or forested land are expected to be adversely affected by the Project. No groves of trees or shelterbelts will need to be removed to construct and operate the system. Native prairie will also be avoided. Section 4.7 of the site permit will require a prairie protection and management plan if native prairie could be impacted, including areas temporarily affected by construction.

⁶² Exhibit 1 at 8.19 p. 34 - 41.

⁶³ *Id.* at 8.19.2 p. 39.

⁶⁴ *Id.* at 8.20.2, p. 41

Soils

94. 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. The Project will be subject to the requirements of the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) stormwater permit for construction activity. 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 (site permit, section 7.11).

Geologic and Ground Water Resources

95. The project is located on deposits of glacial till more than 300 feet thick. The underlying bedrock is Cretaceous shale and sandstone. The glacial sediments are mostly unsorted till that is primarily clay and silt. The eastern half of the project is located on till that was deposited beneath glacial ice. The western half of the project is located on till that was deposited as a moraine or sediment piled up by the edge of the moving ice. Both of these tills are locally stream-washed and coarser grained than typical for the area. Finally, there is sand and gravel deposited by melting ice, located generally in the center of the area. No unusual geological conditions, such as sinkholes, are expected at the site. Construction impacts to geologic and groundwater resources are not anticipated. Operationally, water supply needs will be quite limited and local supplies are adequate.⁶⁵

Surface Water and Wetlands

96. Wind turbines and associated facilities will not be located in public water wetlands, except that collector and feeder lines may cross if authorized by the appropriate permitting agency (site permit, section 4.6). A permit may be required if surface waters are impacted (see section 10.5.1 of the site permit).

Future Development and Expansion

97. Current information suggests windy areas in this part of the state are large enough to accommodate more wind facilities. Other large wind projects, such as the Nobles Wind project, have been permitted in Nobles County.
98. 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. EFP staff will continue to monitor for impacts and issues related to wind energy development.

⁶⁵ *Id.* 1 at 8.15 p. 29.

99. The Commission is responsible for siting of LWECS “in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.”⁶⁶ Section 4.1 of the site permit provides for buffers between adjacent wind generation projects to protect wind production potential.

Operations and Maintenance

100. Each wind turbine will communicate directly with the Supervisory Control and Data Acquisition (SCADA) system. The SCADA system will connect all turbines with the collector/protection and any operations and maintenance facilities using armored fiber optic cables. This system will transmit data from the turbines back to the responsible maintenance party as well as transmit commands from the maintenance party to the turbines so as to ensure real time management of all wind turbines within the facility as well as integration with the existing transmission grid.⁶⁷
101. On-site turbine maintenance will involve routine inspections and regular and unscheduled maintenance of the turbines and associated facilities.⁶⁸

Decommissioning and Restoration

102. A decommissioning plan outlining the anticipated means and cost of removal will be completed in accordance with the Nobles County permitting and zoning requirements. At the time turbines are no longer operated physically or the Project is not viable economically, turbines will be decommissioned. Restoration of the area will be completed according to Nobles County permitting and zoning requirements, leases and the Commission’s site permit. At the time turbines are decommissioned, they will be removed from site and either refurbished or salvaged depending on condition. All subsurface infrastructure will be removed to four feet below ground level and reclaimed as specified in the land leases, and all surface infrastructure will be removed and reclaimed to pre-construction conditions.⁶⁹ Section 9.2 of the site permit requires removal of wind facilities to a depth of four feet and restoration and reclamation of the site to the extent feasible. The Project site would be restored within 18 months after Project expiration.
103. Section 9.1 of the site permit, requires the Applicant to carry out its obligations to provide for the resources necessary to fulfill its requirements to decommission the Project at the appropriate time. Section 9.1 requires the applicant to submit a Decommissioning Plan to the Commission prior to the pre-operation meeting.

⁶⁶ Minn. Statute 216F.03

⁶⁷ Exhibit 1 at 10.6, p. 45

⁶⁸ *Id.* at 10.6

⁶⁹ *Id.* at 10.10 at p. 46.

Site Permit Conditions

104. All of the above findings pertain to the Applicant's requested permit for a 30.75 MW LWECS project.
105. Most of the conditions contained in the site permit were established as part of the site permit proceedings of other wind turbine projects permitted by the Public Utilities Commission. Comments received by the Commission have been considered in development of the site permit. Minor changes that provide for clarification of site permit conditions have been made.
106. The site permit contains conditions that apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning, and all other aspects of the Project.

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

CONCLUSIONS OF LAW

1. Any of the foregoing findings, which more properly should be designated as conclusions, are hereby adopted as such.
2. The Minnesota Public Utilities Commission has jurisdiction over this matter pursuant to Minn. Stat. § 216F.04.
3. The Applicant has substantially complied with the procedural requirements of Minn. Stat. Chap. 216F and Minn. Rules Chap. 7854.
4. The Minnesota Public Utilities Commission has substantially complied with all procedural requirements required of Minn. Stat. Chap. 216F and Minn. Rules Chap. 7854.
5. The Minnesota Public Utilities Commission has considered all the pertinent factors relative to its determination of whether a site permit should be approved.
6. The Community Wind South Project is compatible with the policy of the state to site LWECS in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources under Minn. Stat. § 216F.03.
7. The Minnesota Public Utilities Commission has the authority under § 216F.04 to place conditions in a permit and may deny, modify, suspend, or revoke a permit. The conditions in the site permit are reasonable and appropriate.

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

ORDER

An LWECS Site Permit is hereby issued to CWS Wind Farm, LLC to construct and operate the up to 30.75 MW Community Wind South Project in Nobles County in accordance with the conditions contained in the site permit and in compliance with the requirements of Minn. Stat. § 216F.04 and Minn. Rules Chap. 7854 for Docket No. IP-6871/WS-11-863.

The site permit is attached hereto, with maps showing the approved site and preliminary turbine layouts.

BY THE ORDER OF THE COMMISSION



Burl W. Haar
Executive Secretary

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STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

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

**IN
NOBLES COUNTY MINNESOTA**

**ISSUED TO
CWS WIND FARM, LLC**

PUC DOCKET NO. IP-6871/WS-11-863

In accordance with Minn. Stat. § 216F.04 this site permit is hereby issued to:

CWS Wind Farm, LLC

CWS Wind Farm, LLC is authorized to construct and operate up to a 30.75 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 thirty (30) years from the date of this approval.

Approved and adopted this 1st day of May 2012

BY ORDER OF THE COMMISSION



BURL W. HAAR
Executive Secretary

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Table of Contents

1.	PROJECT DESCRIPTION	1
2.	DESIGNATED SITE	1
2.1	PROJECT BOUNDARY	1
2.2	TURBINE LAYOUT	1
3.	APPLICATION COMPLIANCE	2
4.	SETBACKS AND SITE LAYOUT RESTRICTIONS	2
4.1	WIND ACCESS BUFFER	2
4.2	RESIDENCES	2
4.3	NOISE	2
4.4	ROADS	3
4.5	PUBLIC LANDS	3
4.6	WETLANDS	3
4.7	NATIVE PRAIRIE	3
4.8	SAND AND GRAVEL OPERATIONS	4
4.9	WIND TURBINE TOWERS	4
4.10	TURBINE SPACING	4
4.11	METEOROLOGICAL TOWERS	4
4.12	AVIATION	4
4.13	FOOTPRINT MINIMIZATION	5
4.14	COMMUNICATION CABLES	5
4.15	ELECTRICAL COLLECTOR AND FEEDER LINES	5
5.	ADMINISTRATIVE COMPLIANCE PROCEDURES	6
5.1	SITE PLAN	6
5.2	PERMIT DISTRIBUTION TO LOCAL GOVERNMENTS & RESIDENTS	6
5.3	NOTICE OF PERMIT CONDITIONS	7
5.4	FIELD REPRESENTATIVE	7
5.5	SITE MANAGER	7
5.6	PRE-CONSTRUCTION MEETING	7
5.7	PRE-OPERATION COMPLIANCE MEETING	7
5.8	COMPLAINTS	7
6.	SURVEYS AND REPORTING	8
6.1	BIOLOGICAL AND NATURAL RESOURCE INVENTORIES	8
6.2	SHADOW FLICKER	8
6.3	ARCHAEOLOGICAL RESOURCES	8
6.4	INTERFERENCE	9
6.5	WAKE LOSS STUDIES	9
6.6	NOISE	10
6.7	AVIAN AND BAT PROTECTION PLAN	10

6.8	PROJECT ENERGY PRODUCTION.....	10
6.9	WIND RESOURCE USE	11
6.10	EXTRAORDINARY EVENTS.....	11
7.	CONSTRUCTION AND OPERATION PRACTICES	
7.1	SITE CLEARANCE	11
7.2	TOPSOIL PROTECTION	11
7.3	SOIL COMPACTION	12
7.4	LIVESTOCK PROTECTION	12
7.5	FENCES.....	12
7.6	DRAINAGE TILES.....	12
7.7	EQUIPMENT STORAGE.....	12
7.8	ROADS	12
7.9	CLEANUP.....	13
7.10	TREE REMOVAL.....	13
7.11	SOIL EROSION AND SEDIMENT CONTROL.....	13
7.12	RESTORATION.....	14
7.13	HAZARDOUS WASTE	14
7.14	APPLICATION OF HERBICIDES.....	14
7.15	PUBLIC SAFETY	14
7.16	EMERGENCY RESPONSE	15
7.17	TOWER IDENTIFICATION	15
7.18	FEDERAL AVIATION ADMINISTRATION LIGHTING	15
8.	FINAL CONSTRUCTION	15
8.1	AS-BUILT PLANS AND SPECIFICATIONS	15
8.2	FINAL BOUNDARIES	15
8.3	EXPANSION OF SITE BOUNDARIES	15
9.	DECOMMISSIONING, RESTORATION, AND ABANDONMENT.....	16
9.1	DECOMMISSIONING PLAN	16
9.2	SITE RESTORATION	16
9.3	ABANDONED TURBINES.....	16
10.	AUTHORITY TO CONSTRUCT LWECS.....	16
10.1	WIND RIGHTS	16
10.2	POWER PURCHASE AGREEMENT	17
10.3	FAILURE TO COMMENCE CONSTRUCTION	17
10.4	PREEMPTION OF OTHER LAWS.....	17
10.5	OTHER PERMITS	17
11.	COMMISSION POST-ISSUANCE AUTHORITIES	18
11.1	PERIODIC REVIEW.....	18
11.2	MODIFICATION OF CONDITIONS.....	18
11.3	REVOCATION OR SUSPENSION OF PERMIT	18

11.4	MORE STRINGENT RULES	19
11.5	TRANSFER OF PERMIT	19
11.6	RIGHT OF ENTRY	19
11.7	PROPRIETARY INFORMATION	20
12.	EXPIRATION DATE	20
13.	SPECIAL CONDITIONS	20
13.1	APPLICATION OF NOBLES COUNTY SETBACK REGULATIONS	20
ATTACHMENT 1:	Site Permit Map	1
ATTACHMENT 2:	Complaint and Handling Procedures for Large Wind Energy Conversion Systems	1-3
ATTACHMENT 3:	Compliance Filing Procedure for Permitted Energy Facilities	1
ATTACHMENT 4:	Permit Compliance Filings	1-3

SITE PERMIT

This Site Permit for a Large Wind Energy Conversion System (LWECS) authorizes CWS Wind Farm, LLC (Permittee) to construct and operate the Community Wind South Project (Project), a 30.75 Megawatt (MW) nameplate capacity LWECS and associated facilities in Nobles County, on a site of approximately 3,080 acres in accordance with the conditions contained in this permit.

SECTION 1 PROJECT DESCRIPTION

The up to 30.75 MW nameplate capacity LWECS Project authorized to be constructed in this permit will be developed and constructed by the Permittee. The Community Wind South Project will consist of up to 15 REpower 2.05 MW turbines (model MM92) with a hub height of up to 328 feet (100 meters) and a rotor diameter of 303.5 feet (92.5 meters). The Permittee may modify the turbine selection with the approval of the Minnesota Public Utilities Commission (Commission). Associated facilities include pad mounted transformers at the base of each turbine, compacted gravel engineered access roads, a 34.5 kilovolt (kV) underground three (3) phase electrical collection system, a fiber optic cable for transmittal of supervisory control and data acquisition (SCADA) information, a fenced-in collector yard, and one (1) permanent meteorological tower. From the collection yard power will be sent by underground cable for approximately 19, 908 feet by two sets of underground 34.5 kV cables to the existing Nobles County Substation owned by Northern States Power.

SECTION 2 DESIGNATED SITE

2.1 PROJECT BOUNDARY

The Project boundary is shown on the map at **Attachment 1**. The Project is located in Nobles County in the following townships and sections:

Township Name	Sections	Township	Range
Summit Lake	17, 18, 19, 20 and 30	T103N	R41W
Larkin	13, 23 and 24	T103N	R42W

2.2 TURBINE LAYOUT

Preliminary wind turbine and associated facility layouts are shown on the map at Attachment 1. The preliminary layout represents the approximate location of wind turbines and associated facilities within the Project boundary and identifies a layout that minimizes the overall potential

human and environmental impacts, which were evaluated in the permitting process. The final layout depicting the location of each wind turbine and associated facility shall be located within the Project boundary. The Project boundary serves to provide the Permittee with the flexibility to do minor adjustments to the preliminary layout to accommodate landowner requests, unforeseen conditions encountered during the detailed engineering and design process, and federal and state agency requirements. Any modification of the location of a wind turbine and associated facility to a preliminary layout shall be done in such a manner to have comparable overall human and environmental impacts and shall be specifically identified in the site plan pursuant to Section 5.1. The Permittee shall submit the final site layout in the site plan pursuant to Section 5.1.

SECTION 3 APPLICATION COMPLIANCE

The Permittee shall comply with those practices set forth in its Site Permit Application, dated October 17, 2011, and the record of this proceeding unless this Permit establishes a different requirement in which case this Permit shall prevail. All filings required under this permit shall be submitted to the Commission's eDocket filing system.

Attachment 4 contains a summary of compliance filings required under this permit. Attachment 4 is provided solely for the convenience of the Permittee and shall not be construed as a substitute for the conditions contained in this permit.

SECTION 4 SETBACKS AND SITE LAYOUT RESTRICTIONS

4.1 WIND ACCESS BUFFER

Wind turbine towers shall not be placed less than five (5) rotor diameters (RD) on prevailing wind directions and three (3) RD on 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. This section does not apply to public roads and trails.

4.2 RESIDENCES

Wind turbine towers shall not be located closer than 1,200 feet (366 meters) from all residences or the distance required to comply with the noise standards pursuant to Minn. Rules, part 7030.0040, established by the Minnesota Pollution Control Agency (PCA), whichever is greater.

4.3 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 PCA at all times at all appropriate locations. The noise standards are found in Minn. Rules Chap. 7030. Turbine operation shall be modified or turbines shall be removed from service if necessary to comply with these noise standards. The Permittee or its contractor may install and operate turbines, as close as the minimum setback required in this permit, but in all cases shall comply with 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.

4.4 ROADS

Wind turbine and meteorological towers shall not be located closer than 250 feet or as specified by special conditions in this permit at Section 13.1 [Nobles County Setback Regulations], whichever is more stringent, from the edge of the nearest public road right-of-way.

4.5 PUBLIC LANDS

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in public lands, including Waterfowl Production Areas, Wildlife Management Areas, Scientific and Natural Areas, or in county parks, and wind turbine towers shall also comply with the setbacks of Section 4.1.

4.6 WETLANDS

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be placed in public waters wetlands, as defined in Minn. Stat. § 103G.005, subdivision 15a, except that electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to permits and approvals by the Minnesota Department of Natural Resources (DNR) and the United States Army Corps of Engineers (USACE). See Special Condition (Section 13.1) for additional wetland setback requirements.

4.7 NATIVE PRAIRIE

The Permittee shall, in consultation with the DNR and the Minnesota Department of Commerce (DOC), prepare a Prairie Protection and Management Plan and submit it to the Commission and DNR at least fourteen (14) days prior to the pre-construction meeting if native prairie, as defined in Minn. Stat. § 84.02, subdivision 5, is identified in any biological and natural resource inventories conducted pursuant to Section 6.1. The plan shall address steps to avoid impacts to native prairie and mitigation to unavoidable impacts of native prairie by restoration or management of other native prairie areas that are in degraded condition, by conveyance of conservation easements, or by other means agreed to by the Permittee and Commission.

Wind turbines and associated facilities including foundations, access roads, collector and feeder lines, underground cable, and transformers shall not be placed in native prairie unless addressed in a prairie protection and management plan and shall not be located in areas enrolled in the Native Prairie Bank Program. Construction activities, as defined in Minn. Stat. § 216E.01 Subd. 3, shall not impact native prairie unless addressed in a Prairie Protection and Management Plan.

4.8 SAND AND GRAVEL OPERATIONS

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

4.9 WIND TURBINE TOWERS

Structures for wind turbines shall be self-supporting tubular towers. The towers may be up to 328 feet (100 meters).

4.10 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 five (5) RD on prevailing wind directions and three (3) RD in non-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.

4.11 METEOROLOGICAL TOWERS

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

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

4.12 AVIATION

The Permittee shall not place wind turbines or associated facilities in a location that could create an obstruction to navigable airspace of public and licensed private airports (as defined in Minn. Rules, part 8800.0100, subp. 24a and 24b) in Minnesota, adjacent states, or providences. The Permittee shall apply the minimum obstruction clearance for licensed private airports pursuant to Minn. Rules, part 8800.1900, subpart 5. Setbacks or other limitations shall be followed in accordance with the Minnesota Department of Transportation (DOT), Department of Aviation, and FAA. The Permittee shall notify owners of all known airports within six (6) miles of the Project prior to construction.

4.13 FOOTPRINT MINIMIZATION

The Permittee shall design and construct the LWECS so as to minimize the amount of land that is impacted by the LWECS and associated facilities. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, step-up transformers, and monitoring systems shall, to the greatest extent feasible, be located within the foundation footprint for each turbine tower or inside the tower unless otherwise negotiated with the affected landowner(s).

4.14 COMMUNICATION CABLES

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

4.15 ELECTRICAL COLLECTOR AND FEEDER LINES

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

Feeder lines that carry power from an internal project interconnection point to the Project substation or interconnection point on the electrical grid shall be buried underground. Feeder line locations shall be negotiated with the affected landowner(s).

Any feeder lines that parallel public roads shall be placed within the public rights-of-way or on private land immediately adjacent to public roads. If feeder lines are located within public rights-of-way, the Permittee shall obtain approval from the governmental unit responsible for the affected right-of-way.

Collector and feeder line locations shall be located in such a manner to minimize interference with agricultural operations, including, but not limited to, existing drainage patterns, drain tile, future tiling plans, and ditches. Safety shields shall be placed on all guy wires associated with overhead feeder lines. The Permittee shall submit the engineering drawings of all collector and feeder lines in the site plan pursuant to Section 5.1.

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 [Recommended Practice for Inductive Coordination of Electric Supply and Communication Lines], IEEE 519 [Harmonic Specifications], IEEE 367 [Recommended Practice for Determining the Electric Power Station Ground Potential Rise and Induced Voltage from a Power Fault], and IEEE 820 [Standard Telephone Loop Performance Characteristics] 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.

SECTION 5 ADMINISTRATIVE COMPLIANCE PROCEDURES

The following administrative compliance procedures shall be executed in accordance with the Permit Compliance Filings at Attachments 3 and 4.

5.1 SITE PLAN

At least fourteen (14) days prior to the pre-construction meeting, the Permittee shall submit to the Commission:

- (a) a site plan for all turbines, roads, electrical equipment, collector and feeder lines, and other associated facilities to be constructed;
- (b) engineering drawings for site preparation, construction of the facilities; and
- (c) a plan for restoration of the site due to construction.

Construction is defined under Minn. Stat. § 216E.01 Subd. 3. The Permittee may submit a site plan and engineering drawings for only a portion of the Project if the Permittee intends to commence construction on certain parts of the Project before completing the site plan and engineering drawings for other parts of the Project. The Permittee shall document, through GIS mapping, compliance with the setbacks and site layout restrictions required by this permit, including compliance with the noise standards pursuant to Minn. Rules Chap. 7030. In the event that previously unidentified environmental conditions are discovered during construction that 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 site. 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 this permit.

5.2 PERMIT DISTRIBUTION TO LOCAL GOVERNMENTS & RESIDENTS

Within fourteen (14) days of permit issuance, the Permittee shall 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, within fourteen (14) days of permit 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 thirty (30) days of permit issuance of this permit, the Permittee shall send a copy of the permit to each landowner within the Project boundary. In no case shall the landowner receive this site permit, the complaint procedures, and contact information for complaints less than five (5) days prior to the start of construction on their property. The Permittee shall timely eFile with the Commission an affidavit certifying issuance of the mailings.

5.3 NOTICE OF PERMIT CONDITIONS

Prior to the start of construction, the Permittee shall inform all employees, contractors, and other persons involved in the construction and ongoing operation of the Project of the terms and conditions of this permit.

5.4 FIELD REPRESENTATIVE

At least fourteen (14) days prior to the pre-construction meeting and continuously throughout construction, including site restoration, the Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this permit during the construction phase of this Project. This person (or a designee) shall be accessible by telephone during normal working hours. This person's address, phone number, and emergency phone number shall be provided to the Commission, which 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 by eFiling.

5.5 SITE MANAGER

The Permittee shall designate a site manager responsible for overseeing compliance with the conditions of this permit during the commercial operation and decommissioning phases of this Project. The Permittee shall provide the Commission with the name, address, and phone number, and emergency phone number of the site manager fourteen (14) days prior to placing any turbine into commercial operation. This information shall be maintained current by informing the Commission of any changes by eFiling, as they become effective.

5.6 PRE-CONSTRUCTION MEETING

Prior to the start of any construction, representatives of the Permittee, the Field Representative, and the Department of Commerce State Permit Manager for this project shall participate in a pre-construction meeting to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. The Permittee shall submit to the Commission within fourteen (14) days following the pre-construction meeting a summary, list of attendees and topics discussed. The Permittee shall indicate in the filing the project's construction start date.

5.7 PRE-OPERATION COMPLIANCE MEETING

At least fourteen (14) days prior to commercial operation, representatives of the Permittee, the Site Manager and the Department of Commerce State Permit Manager shall participate in a pre-operation compliance meeting to review compliance reporting requirements. The Permittee shall submit to the Commission within fourteen (14) days following the pre-construction meeting a summary, list of attendees and topics discussed. The Permittee shall indicate in the filing the project's construction start date.

5.8 COMPLAINTS

At least fourteen (14) days prior to the pre-construction meeting, 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 Project in accordance with the procedures provided in Attachments 2 and 3 of this permit.

SECTION 6 SURVEYS AND REPORTING

6.1 BIOLOGICAL AND NATURAL RESOURCE INVENTORIES

The Permittee, in consultation with DNR and other interested parties, shall conduct pre-construction desktop and field inventories of potentially impacted native prairies, wetlands, and any other biologically sensitive areas within the site and assess the presence of state threatened, endangered, or species of special concern or federally listed species. The results of any surveys shall be submitted to the Commission and DNR at least fourteen (14) days prior to the pre-construction meeting to confirm compliance of conditions in this permit.

The Permittee shall provide to the Commission any biological surveys or studies conducted on this Project, including those not required under this permit.

6.2 SHADOW FLICKER

At least fourteen (14) days prior to the pre-construction meeting, the Permittee shall provide data on shadow flicker exposure on each residence of non-participating landowners and participating landowners. Information shall include the results of modeling used, assumptions made, and the anticipated levels of exposure from turbine shadow flicker on each residence. The Permittee shall provide documentation on its efforts to avoid, minimize and mitigate shadow flicker exposure. The results of any surveys shall be submitted to the Commission at least fourteen (14) days prior to the pre-construction meeting to confirm compliance of conditions in this permit.

6.3 ARCHAEOLOGICAL RESOURCES

The Permittee shall work with the State Historic Preservation Office (SHPO) 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 shall contract with a qualified archaeologist to complete such surveys, and shall submit the results to the Commission, the SHPO, and the State Archaeologist at least fourteen (14) days prior to the pre-construction meeting.

The SHPO and the State Archaeologist will make recommendations for the treatment of any significant archaeological sites that 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 SHPO as soon as possible in the planning process to coordinate section 106 (36 C.F.R. part 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 SHPO about the discovery. The Commission and the SHPO shall have three (3) working days from the time the agency is notified to conduct an inspection of the site if either agency chooses to do so. On the fourth day after notification, the Permittee may begin work on the site unless the SHPO has directed that work shall cease. In such event, work shall not continue until the SHPO determines that construction can proceed.

6.4 INTERFERENCE

At least fourteen (14) days prior to the pre-construction meeting, 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. 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 Project so as to cause microwave, television, radio, telecommunications, or navigation interference in violation of Federal Communications Commission regulations or other law. In the event the Project or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

6.5 WAKE LOSS STUDIES

At least fourteen (14) days prior to the pre-construction meeting, the Permittee shall provide to the Commission the pre-construction 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.

6.6 NOISE

The Permittee shall submit a proposal to the Commission at least fourteen (14) days prior to the pre-operation compliance meeting for the conduct of a post-construction noise study. Upon the approval of the Commission, the Permittee shall carry out the study. The study shall be designed to determine the operating LWECS noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds. The Permittee shall submit the study within eighteen (18) months after commercial operation.

6.7 AVIAN AND BAT PROTECTION PLAN

The Permittee shall prepare an Avian and Bat Protection Plan in consultation with the DNR and DOC and submit it to the Commission at least fourteen (14) days prior to the pre-construction meeting. The plan shall address steps to be taken to identify, avoid, minimize and mitigate impacts to avian and bat species during the construction phase and the operation phase of the Project. The plan shall also include formal and informal monitoring, training, wildlife handling, documentation (e.g., photographs), and reporting protocols for each phase of the Project.

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

The Permittee shall notify the Commission, U.S. Fish and Wildlife Service, and DNR within twenty-four (24) hours of the discovery of any of the following:

- (a) five or more dead or injured non-protected avian or bat species within a reporting period;
- (b) one or more dead or injured migratory avian or bat species;
- (c) one or more dead or injured state threatened, endangered, or species of special concern;
or
- (d) one or more dead or injured federally listed species.

6.8 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 Project;

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

This information shall be considered public and must be submitted by eFiling.

6.9 WIND RESOURCE USE

The Permittee shall upon 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.

Section 11.7 shall apply to data provided pursuant to this section.

6.10 EXTRAORDINARY EVENTS

Within twenty-four (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, and injured LWECS worker or private person. The Permittee shall, within thirty (30) days of the occurrence, file a report with the Commission describing the cause of the occurrence and the steps taken to avoid future occurrences.

SECTION 7 CONSTRUCTION AND OPERATION PRACTICES

7.1 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.

7.2 TOPSOIL PROTECTION

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

7.3 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.

7.4 LIVESTOCK PROTECTION

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

7.5 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.

7.6 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.

7.7 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 as defined in Sections 4.6 and 4.7.

7.8 ROADS

7.8.1 PUBLIC ROADS

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

The Permittee shall, prior to the use of such roads, make satisfactory arrangements by development and/or road agreements with the appropriate state, county, or township governmental body having jurisdiction over roads to be used for construction of the Project for maintenance and repair of roads that will be subject to extra wear and tear due to transportation of equipment and Project components. The Permittee shall notify the Commission of such arrangements upon request of the Commission.

7.8.2 TURBINE ACCESS ROADS

The Permittee shall construct the least 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 five gravel or similar material. Access roads shall not be constructed across streams and drainage ways without required permits and approvals from the DNR, USFWS, and/or USACE. 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.

7.8.3 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.

7.9 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.

7.10 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(s).

7.11 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 at least fourteen (14) days prior to the pre-construction meeting. This Plan may be the same as the Storm Water Pollution Prevention Plan (SWPPP) submitted to the PCA as part of the National Pollutant Discharge Elimination System (NPDES) permit application.

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 implemented prior to construction and maintained throughout the Project's life.

The Permittee shall develop an invasive species prevention plan to prevent the introduction of invasive species on lands disturbed by project construction activities. This requirement may be included as an element of the Soil Erosion and Sediment Control Plan.

7.12 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 Project activities to the condition that existed immediately before construction began, to the extent possible. The time period may be no longer than twelve (12) months after completion of construction of the turbine, unless otherwise negotiated with the affected landowner(s). Restoration shall be compatible with the safe operation, maintenance, and inspection of the Project.

7.13 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.

7.14 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 property, including crops, orchards, tree farms, or gardens. The Permittee shall also, at least fourteen (14) 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.

7.15 PUBLIC SAFETY

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

the location of all underground facilities, as defined in Minn. Stat. § 216D.01, subdivision 11, to Gopher State One Call.

7.16 EMERGENCY RESPONSE

The Permittee shall prepare an emergency response plan (fire protection and medical emergency plan) in consultation with the emergency responders having jurisdiction over the area prior to LWECS construction. The Permittee shall submit a copy of the plan to the Commission at least fourteen (14) days prior to the pre-construction meeting and a revised plan, if any, at least fourteen (14) days prior to the pre-operation compliance meeting. The Permittee shall also register the LWECS with the local governments' emergency 911 services.

7.17 TOWER IDENTIFICATION

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

7.18 FEDERAL AVIATION ADMINISTRATION LIGHTING

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

SECTION 8 FINAL CONSTRUCTION

8.1 AS-BUILT PLANS AND SPECIFICATIONS

Within sixty (60) days after completion of construction, the Permittee shall submit to the Commission and the Department of Commerce a copy of the as-built plans and specifications. The Permittee must also submit this data in a GIS compatible format to the Commission and the Department of Commerce so that the Department of Commerce can place it into the Minnesota Geospatial Information Office's geographic data clearinghouse located in the Department of Administration.

8.2 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.

8.3 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 Project. The Commission will respond to the requested change in accordance with applicable statutes and rules.

SECTION 9 DECOMMISSIONING, RESTORATION, AND ABANDONMENT

9.1 DECOMMISSIONING PLAN

At least fourteen (14) days prior to the pre-operation compliance meeting, 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 Minn. Rules, part 7854.0500, subpart 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.

9.2 SITE RESTORATION

Upon expiration of this permit, or upon earlier termination of operation of the Project, or any turbine within the Project, the Permittee shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables and lines, foundations, buildings, and ancillary equipment to a depth of four feet. To the extent feasible, 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(s) 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, or upon earlier termination of the Project, or any turbine within the Project.

9.3 ABANDONED TURBINES

The Permittee shall advise the Commission of any turbines that are abandoned prior to termination of operation of the Project. A Project, or any turbine within the Project, shall be considered abandoned after one (1) year without energy production and the land restored pursuant to Section 9.2 unless a plan is developed and submitted to the Commission outlining the steps and schedule for returning the Project, or any turbine within the Project, to service.

SECTION 10
AUTHORITY TO CONSTRUCT LWECS

10.1 WIND RIGHTS

At least fourteen (14) days prior to the pre-construction meeting, the Permittee shall demonstrate that it has obtained the wind rights and any other rights necessary to construct and operate the Project within the boundaries of the LWECS authorized by this permit.

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

10.2 POWER PURCHASE AGREEMENT

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

10.3 FAILURE TO COMMENCE CONSTRUCTION

If the Permittee has not completed the pre-construction surveys required under Section 5 and commenced construction, as defined in Minn. Stat. § 216E.01, of the LWECS within two years of permit issuance, 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 Minn. Rules, part 7854.1300.

10.4 PREEMPTION OF OTHER LAWS

Pursuant to Minn. Stat. § 216F.07, this site permit shall be the only site approval required for the location of this Project, and this permit shall supersede and preempt all zoning, building, and land use rules, regulations, and ordinances adopted by regional, county, local, and special purpose governments. Nothing in this permit shall release the Permittee from any obligation imposed by law that is not superseded or preempted by law.

10.5 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.

10.5.1 COMPLIANCE WITH FEDERAL AND STATE AGENCY PERMITS

The Permittee shall comply with all terms and conditions of permits or licenses issued by Federal, State, or Tribal authorities including, but not limited to, the requirements of the PCA (Section 401 Water Quality Certification, National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) stormwater permit for construction activity, and other site specific discharge approvals), DNR (License to Cross Public Lands and Water, Public Water Works Permit, and state protected species consultation), SHPO (Section 106 Historic Consultation Act), FAA determinations, and DOT (Utility Access Permit, Highway Access Permit, Oversize and Overweight Permit, Aeronautics Airspace Obstruction Permit, and the Mn/DOT Utility Accommodation Policy).

10.5.2 COMPLIANCE WITH COUNTY, CITY OR MUNICIPAL PERMITS

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

SECTION 11 COMMISSION POST-ISSUANCE AUTHORITIES

11.1 PERIODIC REVIEW

The Commission shall initiate a review of this permit and the applicable conditions at least once every five (5) years. The purpose of the periodic review is to allow the Commission, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of this permit. No modification may be made except in accordance with applicable statutes and rules.

11.2 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.

11.3 REVOCATION OR SUSPENSION OF PERMIT

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

- (a) A false statement was knowingly made in the application or in accompanying statements or studies required of the Permittee, and a true statement would have warranted a change in the Commission's findings;
- (b) There has been a failure to comply with material conditions of this permit, or there has been a failure to maintain health and safety standards; 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 determines that it is appropriate to consider revocation or suspension of this permit, the Commission shall proceed in accordance with the requirements of Minn. Rules, part 7854.1300, to determine the appropriate action. Upon a finding of any of the above, the Commission may require the Permittee to undertake corrective measures in lieu of having this permit suspended or revoked.

11.4 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.

11.5 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.

11.6 RIGHT OF ENTRY

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

- (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;

- (d) To sample and monitor upon the facilities easement of the property; and
- (e) To examine and copy any documents pertaining to compliance with the conditions of this permit.

11.7 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.

**SECTION 12
EXPIRATION DATE**

This permit shall expire thirty (30) years after the date this permit was approved and adopted.

**SECTION 13
SPECIAL CONDITIONS**

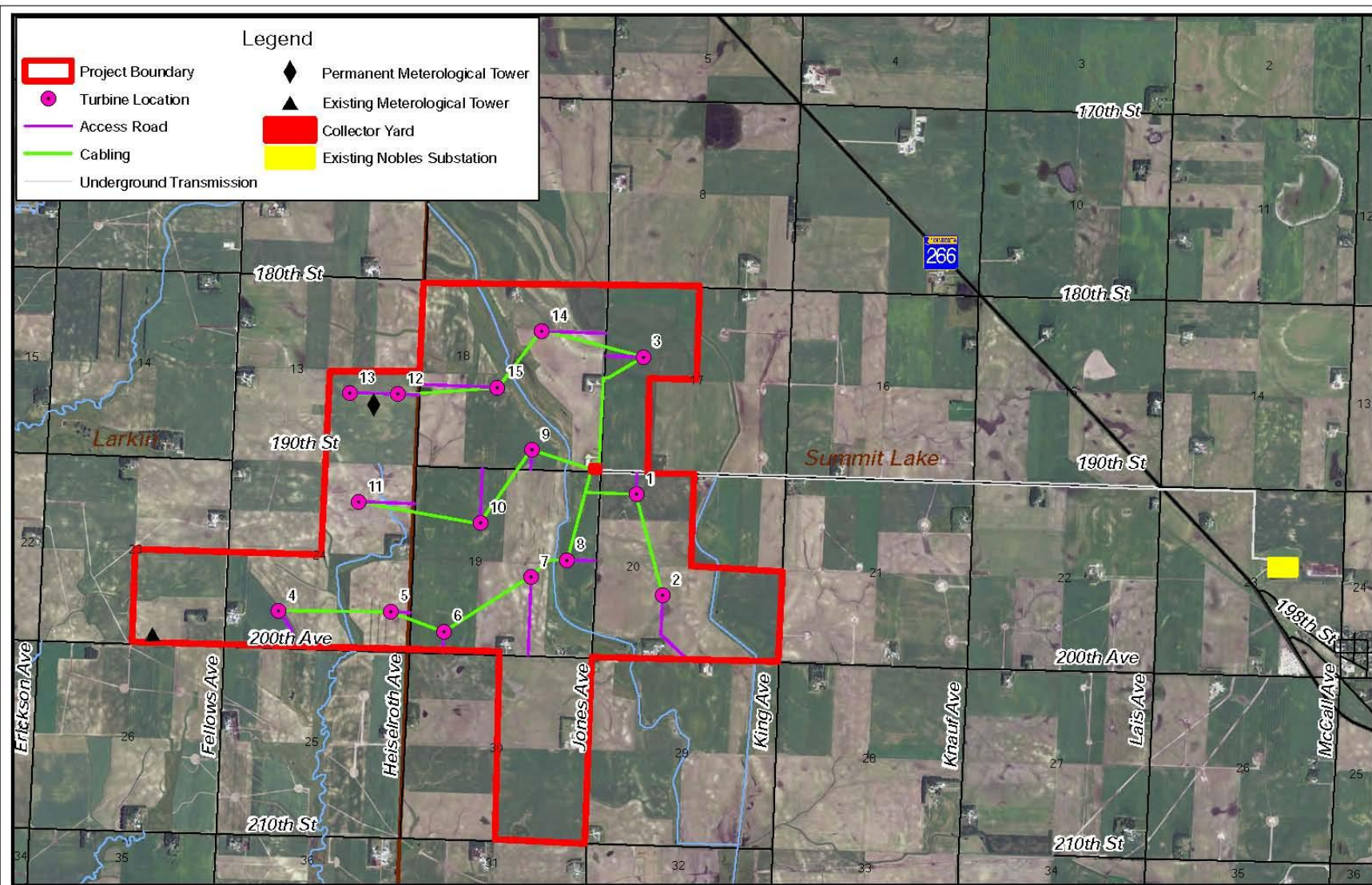
Special conditions shall take precedence over any of the other conditions of this Permit if there should be a conflict between the two.

13.1 APPLICATION OF NOBLES COUNTY SETBACK REGULATIONS

The Permittee shall site all wind turbines and associated facilities in accordance with the following Nobles County Wind Energy Conversion System Regulations, (Section 729.4 Setbacks for Wind Turbines (Commercial) and Meteorological Towers:

Resource	Wind Turbines – Commercial WECS	Meteorological Towers
Property Lines	1.25 times the total height	The fall zone, as certified by a professional engineer + 10 feet or 1.1 times the total height
Road Rights-of-Way* [*The setback shall be measured from future rights-of-way if a planned change or expanded right-of-way is known.]	1 times the height, may be reduced for minimum maintenance roads or a road with an Average Daily Traffic Count of less than 10. (Or equivalent to centerline).	The fall zone, as certified by a professional engineer + 10 feet or 1 times the total height.* *Total height means from the base of the turbine to the tip of the blade at its highest point.
Wetlands, USFWS Types III, IV, and V	600 feet	600 feet

ATTACHMENT 1: SITE PERMIT MAP



**Community
Wind South, LLC**



**Note: Turbine locations are preliminary and are subject to change.*



Figure 2: Project Area & Facilities

NOBLES COUNTY, MN

**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 and all complaints received by the Commission under Minn. Rules, part 7829.1500 or 7829.1700, relevant to this Permit.

D. Definitions:

Complaint: A verbal or written statement presented to the Permittee by a person expressing dissatisfaction or concern regarding site preparation, cleanup or restoration or other 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 designate an individual to summarize complaints for the Commission. This person's name, phone number and e-mail address shall accompany all complaint submittals.

2. A Person presenting the Complaint should to the extent possible, include the following information in their communications:
 - a. Name of Complainant, address, phone number, and e-mail address.
 - b. Date of complaint
 - c. Tract or parcel number
 - d. Whether the complaint relates to (1) a Site Permit matter, (2) an LW ECS and associated facility issue, or (3) a compliance issue.
3. The Permittee shall document all Complaints by maintaining a record of all applicable information concerning the Complaint, including the following:
 - a. Docket Number and Project Name
 - b. Name of complainant, phone number and e-mail address.
 - c. Precise property description or parcel number.
 - d. Name of Permittee representative receiving Complaint and date of receipt.
 - e. Nature of Complaint and the applicable Site Permit conditions(s).
 - f. Activities undertaken to resolve the Complaint.
 - g. Final disposition of the Complaint.

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 the Commission's Consumer Affairs Office at 1-800-657-3782 or consumer.puc@state.mn.us. 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.

Permittee shall commence complaint reporting at the beginning of project construction and continue through the term of the permit.

G. **Complaints Received by the Commission or the Department of Commerce:**

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. The Complaint will be presented to the Commission for a decision as soon as practicable.

I. Permittee Contact for Complaints:

Permittee will eFile the Project's Complaint Contact information within 14 days of the Order granting a site permit and will include the Project's Complaint Contact information in the mailing to landowners and local governments.

**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 Commission's eDocket system. The system is hosted by the Department of Commerce at:

<https://www.edockets.state.mn.us/EFiling/home.jsp>

General instructions are provided on the website. To eFile a document a Permittee must be registered and obtain a User ID and Password.

- 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: Community Wind South, LLC
PERMIT TYPE: LWECS Site Permit
PROJECT LOCATION: Nobles County
COMMISSION DOCKET: IP-6871/WS-11-863

PRE-CONSTRUCTION MEETING

Permit Section	Description	Due Date	Notes	eDocket Doc. ID	Date Filed
4.7	Native Prairie Protection Plan	14 days prior to pre-construction meeting, if required.	Develop in consultation with DNR and the DOC		
5.1	Site Plan	14 days prior to pre-construction meeting.			
5.4	Field Representative	14 days prior to pre-construction meeting.			
5.8	Complaint Reporting Procedures	14 days prior to pre-construction meeting.			
6.1	Biological & Natural Resource Inventories	14 days prior to pre-construction Meeting.	Results may trigger need for a Native Prairie Protection Plan.		
6.2	Shadow Flicker Analysis	14 days prior to pre-construction meeting.			
6.3	Archaeological Resources	14 days prior to pre-construction meeting and as recommended by the State Historic Preservation Office.			
6.4	Interference	14 days prior to pre-construction Meeting.			
6.5	Wake Loss	14 days prior to 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.

PRE-CONSTRUCTION MEETING (Cont.)

Permit Section	Description	Due Date	Notes	eDocket Doc. ID	Date Filed
6.7	Avian and Bat Protection Plan	14 days prior to pre-construction meeting.	Develop in consultation with DNR and DOC.		
7.8	Road Identification	14 days prior to pre-construction meeting.			
7.11	Soil Erosion & Sediment Control Plan	14 days prior to pre-construction meeting.	May be the same as NPDES SWPPP.		
7.16	Emergency Response	14 days prior to pre-construction meeting. Must register in 911 Program.			
10.1	Wind Rights	14 days prior to pre-construction meeting.			

PRE-OPERATION COMPLIANCE MEETING

Permit Section	Description	Due Date	Notes	eDocket Doc. ID	Date Filed
5.7	Pre-operation compliance meeting	14 days prior to commercial operation.	Follow-up report required.		
6.6	Noise Study Protocol	14 days prior to pre-operation compliance meeting.	Noise study protocol requires Commission approval.		
9.1 & 9.3	Decommissioning Plan	14 days prior to pre-operation compliance meeting.			

OTHER REQUIREMENTS

Permit Section	Description	Due Date	Notes	eDocket Doc. ID	Date Filed
5.2	Notice to Government Units & Landowners	Government Units (within 14 days of permit issuance). Landowners (within 30 days, but no less than 5 days prior to construction on their property).	Submit proof of mailing.		
5.5	Site Manager	14 days prior to prior to placing any turbine into commercial operation.	Update contact information as necessary by eFiling.		
5.8	Complaints	Complaint submittals on the 15 th of each month or within 24 hours. Filings to commence with the start of construction. See site permit (Attachment 2)	Must eFile monthly report even if there are no complaints.		
6.6	Noise Study Results	Within 18 months after Commercial Operation.	Noise study protocol requires Commission approval.		
6.7	Avian and Bat Reporting Requirements	Quarterly reports due and within 24 hours of discovery of certain species.	Quarterly Reports due 15 th of each January, April, July & October		
6.8	Project Energy Production	Due February 1 st following each complete year of Project operation.			
6.9	Wind Resource Use	Upon request of the Commission.			
6.10	Extraordinary Events	Within 24 hours and report on occurrence of event within 30 days.			
8.1	As Builts	Within 60 days after completion of construction.			
10.2	PPA or Enforceable Mechanism	Within 2 years of permit issuance.	If no PPA or other enforceable mechanism at time of permit issuance.		
10.3	Failure to Start Construction	Within 2 years of permit issuance.			