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April 15, 2009

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

**RE: Comments and Recommendation of the Office of Energy Security Energy  
Facility Permitting Staff  
Docket No. IP-6629/WS-07-297**

Dear Dr. Haar:

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

In the Matter of the Application of Bear Creek Wind Partners, LLC, for a Large Wind Energy Conversion System Site Permit for the Bear Creek Wind Project in Todd and Otter Tail counties.

The OES EFP staff is also providing you with:

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

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

Sincerely,

Deborah R. Pile  
Supervisor  
Energy Facility Permitting

Attachments



**BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION**

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

**DOCKET NO. IP-6629/WS-07-297**

Meeting Date: April 23, 2009 Agenda Item # \_\_\_\_\_

Company: Bear Creek Wind Partners, LLC

Docket No. IP-6629/WS-07-297

**In the Matter of the Application of Bear Creek Wind Partners, LLC,  
for a Large Wind Energy Conversion System Site Permit for the Bear  
Creek Wind Project in Todd and Otter Tail counties**

Issue(s): Should Bear Creek Wind Project, LLC, be granted a site permit to construct and operate the proposed up to 47.5 MW Large Wind Energy Conversion System and Associated Facilities in Todd and Otter Tail counties?

OES Staff: Deborah R. Pile.....651-297-2375

**Relevant Documents**

Application of Bear Creek Wind Partners, LLC.....May 22, 2007  
 Public Comment (Various parties).....July 20, 2007  
 Minnesota Department of Natural Resources.....July 22, 2007  
 Minnesota Department of Transportation.....August 28, 2007  
 Applicant's Letter Describing Changed Circumstances.....January 24, 2008  
 Applicant's Supplemental Filing.....March 30, 2009

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

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

**Attached Documents:**

1. Proposed Findings of Fact and Conclusions of Law
2. Exhibit List
3. Proposed Site Permit

(Note: see eDockets (07-297) or the Commission’s Facilities Permitting website for additional documents <http://energyfacilities.puc.state.mn.us/Docket.html?Id=19150>)

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**Statement of the Issue**

Should Bear Creek Wind Project, LLC, be granted a site permit to construct and operate the proposed up to a 47.5 MW Large Wind Energy Conversion System and Associated Facilities in Todd and Otter Tail counties?

**Introduction and Background**

PlainStates Energy, a Minnesota based wind development company, submitted a site permit application on behalf of Bear Creek Wind Partners (Bear Creek), LLC, for the 47.5 MW Bear Creek Wind Project. Bear Creek Wind Partners, LLC, does not own any other wind facilities in Minnesota; however, several of its principals and PlainStates Energy have developed or have ownership interests in other wind projects, including a single 2.5 MW wind turbine within the proposed project boundary.

***Project Location***

The Bear Creek Wind Project is located approximately 3 to 5 miles west of the towns of Hewitt and Bertha. The site includes the portions of the following townships: Bartlett, Stowe Prairie, Oak Valley, and Woodside in Otter Tail and Todd counties.

The area is comprised primarily of agricultural and forested lands. The Applicant has easements and options for approximately 3,100 acres of land and wind rights within the project boundary to develop the Bear Creek Wind Project. Wind and land rights will encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads and a 34.5 kV electrical feeder and collection system in or adjacent to public road rights-of-way and private lands.

***Bear Creek Wind Project Description***

The proposed 47.5 MW Bear Creek project is proposed to be built in 2 separate phases. Phase I is proposed to be 30 MW, in-service in 2010. Phase II is proposed to be 17.5 MW, has a 2011 in-service date. In total, the applicant proposes to use a total of 19 Nordex N100, 2.5 MW wind turbine generators.

The project was initially proposed as a two-phase 55 MW project, but was reduced to 47.5 MW with the removal of three turbines from Phase II, as noted on the March 30, 2009, Supplemental Filing. This reduction was made to insure that the project does not require a Certificate of Need (CN) determination from the Commission. Projects of 50 MW or more require a CN, unless they qualify for an exemption. This project had been exempt from CN requirements pursuant to

Minnesota Statute 216B.243 Subd. 8 (7), since it was a C-BED project and had a Power Purchase Agreement (PPA) with Minnesota Power for Phase I. However, that PPA is no longer in place.

In addition, the applicant had initially proposed to use Nordex N90 wind turbine generator with 80 meter (262 feet) tubular towers measured at the hub height. The rotor diameter of these turbines is 90 meters (296 feet). The maximum overall height of the Nordex N90 wind turbines is approximately 125 meters (410 feet) above grade when one blade is in the vertical position.

However, due to market and financial issues described in the Applicant's January 24, 2008, letter describing changed circumstances, utility scale wind turbine generators between 1.5 – 3.0 MW are being considered for the project. Specifically, the Applicant is focusing on wind turbine generators 80 – 100 meters tall measured at the hub and with rotor diameters 90 – 100 meters, with preference toward the Nordex N100.

The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. The rotor will make between 9.6 and 16.0 revolutions per minute, depending on the wind speed. The electrical collector and feeder system will consist of overhead and underground 34.5 kV lines and facilities providing step-up transformation prior to interconnecting to the high voltage transmission system.

Other project components include: all-weather class 5 access roads of gravel or similar materials, pad-mounted step-up transformers, concrete and steel tower foundations, a supervisory control and data acquisition system, and a permanent meteorological tower.

Energy from the project will be delivered to the Bear Creek Wind Project substation in Stowe Prairie Township Section 17. The electricity will be stepped up to 115 kV at the project substation.

The electricity generated by the Project will be delivered via a 5.5 mile 115 kV high voltage transmission line (HVTL) under development by the Applicant to a Minnesota Power 115 kV HVTL tap point in Bartlett Township. Bear Creek indicates that it will apply for a route permit from the PUC or the appropriate local unit of government for the proposed 115 kV transmission line under the Power Plant Siting Act, Minnesota Statute Chapter 216E.

### **Regulatory Process and Procedures**

A site permit from the PUC is required to construct a LWECS, which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. The rules to implement the permitting requirements for LWECS are in Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7836.

#### ***Site Permit Application, Preliminary Determination and Draft Site Permit***

On May 24, 2007, PlainStates Energy, a Minnesota-based wind development company, submitted a site permit application on behalf of Bear Creek Wind Partners, LLC, for the 55 MW Bear Creek Wind Project. The Commission accepted the Application as complete and issued a draft site permit for the Project at its agenda meeting on June 14, 2007. The Commission's Order was issued on June 19, 2007.

A public meeting was held in Hewitt, Minn, on July 19, 2007, and the public comment period closed on August 15, 2007. The Commission has reviewed and approved the Bear Creek Wind Partners, LLC, power purchase agreement (PPA) with Minnesota Power for the 30 MW Phase I of the Project in PUC docket E-015/M-07-536. Phase II does not have a PPA at this time.

### ***Public Participation Process***

The wind siting process provides the public a number of opportunities to obtain information about and comment on the project. Landowners and governments within the Project boundary were provided copies of the Application, a draft site permit was available for review and comment, the public was afforded a period of time to submit written comments, and a public information meeting was held.

The OES EFP noticed and staff hosted a public information meeting on July 19, 2007, at the Hewitt Community Center. Representatives of the EFP staff and Bear Creek Wind Project, LLC, made presentations and addressed questions at the meeting. Approximately 10 people asked questions or made verbal comments. A public comment period on the draft site permit remained open until August 15, 2007.

On August 9, 2007, a request for a contested case hearing was received from Bob and Nyla Woetzel. The PUC denied a request for a contested case hearing on October 4, 2007.

### ***Summary of Public Comments***

Most of the verbal comments made at the July 19, 2007, public meeting were focused on a 5.5 mile, 115 kV HVTL discussed in the Bear Creek Wind Project site permit application. EFP staff explained to the members of the public at the meeting that while the site permit application discusses the potential HVTL, the transmission line is required to be permitted separately under Minnesota Statutes Chapter 216E, Minnesota Rules Chapter 7849, and will not be permitted as part of the wind site permit process.

Gerry Lipinski submitted written comments and questions about property tax impacts, issues related to the turbine manufacturer's ability to remotely access turbine SCADA systems, correcting several typos, and providing information about a possible future home site on his property.

Carla Nelson submitted written comments raising concerns about the potential 115 kV HVTL route, which appeared to cross her property based on the maps contained in the Bear Creek Wind Project site permit application.

Dale McBrady submitted written comments indicating that one of the proposed turbines appeared to be proposed less than the required wind access buffer setback from his property and that he had not assigned wind nor land rights to the applicant. He requested that the applicant contact him.

Robin Viste submitted written comments raising questions about property value and taxation, wind rights, final turbine locations, visual appearance, and impact on her ability to sell the property in the future.

Robert Vanbatavia submitted written comments raising questions about television and radio reception, impacts on trees on his property, and questions about the proposed 115 kV transmission line.

Bob and Nyla Woetzel submitted a contested case hearing request and written comments. The Woetzel's are concerned about the proposed wind project's impact on the value of their property and the view from their deck and yard.

Ron Hansch submitted comments and questions about the impact of the project on local real estate values. Hansch suggested that all property owners in the area receive compensation from the wind project developer.

Dave and Dusty Krause submitted written comments supportive of the Bear Creek Wind Project, raising concerns about and suggesting potential alternate routes for the 115 kV HVTL line discussed in the site permit application.

Mr. and Mrs. Dean Weber submitted written comments raising concerns about property values, bird migration and other issues. The Webers indicate that they have started a petition in opposition to the project and had legal help to stop the project.

The Minnesota Department of Natural Resources submitted written comments suggesting use of Swan Flight Diverters to reduce avian collision potential on the overhead electric lines associated with the Bear Creek Project.

The Minnesota Department of Transportation submitted written comments indicating that several MDOT utility crossing and right of way permits were required for the project.

EFP staff responses to these comments can be found below and in the proposed Findings of Fact and Conclusions of Law (Attachment 1).

### ***Standards for Permit Issuance & Site Permit***

Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7836 apply to the siting of Large Wind Energy Conversion Systems. The rules require applicants to provide a substantial amount of information to allow the PUC to determine the potential environmental and human impacts of the proposed project and whether the project is compatible with environmental preservation, sustainable development, and the efficient use of resources. Minnesota Rule 7836.0500 and 7836.1000.

### **OES EFP Staff Analysis and Comments**

The EFP staff has investigated the questions and concerns raised in public comments about the Bear Creek Wind Project during the course of this proceeding. The issues raised relevant to siting have been addressed in the proposed site permit, or will be addressed in pre-construction, post-construction, and/or ongoing compliance filings. Staff also reviewed the information provided in the Applicant's Supplemental Filing and concluded that the reduction in project size (elimination of three turbines) will result in the same or less potential environmental and human impacts and that the record in this proceeding covers the project as currently proposed since the project boundary remains unchanged.

Based on the record, EFP staff concludes that the Bear Creek Wind Project meets procedural requirements and the criteria and standards for issuance of a site permit found in Minnesota Statutes and Minnesota Rules.

The EFP staff has prepared for the Commission's consideration proposed Findings of Fact and Conclusions of Law, a proposed Site Permit, and Exhibit List.

***Staff Responses to Comments and Issues Raised***

EFP staff provide the following analysis listing the categories of issues raised and how the proposed site permit or other jurisdictions will address these issues.

*Potential 115 kV Transmission Line:* PlainStates Energy and the Bear Creek Wind Partners understand no person may build a 115 kV transmission line in Minnesota without a route permit issued pursuant to Minnesota Statutes Chapter 216E by the PUC or a local unit of government. PlainStates Energy has verbally indicated to EFP staff that it is finalizing its transmission line plans and will apply for all necessary permits.

*Visual Impacts and Property Values:* Several written comments were received raising concerns that the visual impact of the proposed Project on may reduce local property values. Wind turbines have visual impacts. The visual impact of a wind facility is highly subjective. Some people like the view of wind turbines, others do not. The primary mitigation measures available for reducing visual impacts are avoidance of highly scenic areas (site selection), use of neutral turbine paint colors, and minimizing above ground infrastructure. In addition, the site permit prohibits turbine lighting beyond what is required by the Federal Aviation Administration (FAA) which will minimize nighttime visual impacts. See Site Permit at: III.E.4.

Property value impacts have been studied in the Kenyon Wind site permit docket (PUC Docket: IP 6605/WS-06-1445), which generally found no negative impacts from wind turbine development on property values based on analysis in Dodge Center and Northfield, Minn.

*Property Taxes:* It is difficult to determine if the Project will have any impacts on local property taxes, as local property taxation and local government spending are largely locally determined issues. Wind facilities must pay a production tax described in Minnesota Statute 272.029. The counties, townships and school districts where a wind project is built will receive revenue from any wind production taxes generated by the Project and local jurisdictions have the ability to choose how to spend those revenues.

*Avian Impacts:* Several comments raised general concerns about avian impacts from the Project. The Project design incorporates many of the design recommendations from the United States Fish and Wildlife Service's *Interim Guidelines to Avoid and Minimize Impacts to Wildlife from Wind Turbines* (USFWS, 2003). The USFWS indicated that the proposed Project would have no effect on federally-listed threatened or endangered species, and pointed out known locations of sandhill crane nesting areas. The Minnesota Department of Natural Resources requested and the developer has accepted several changes in the site layout provided to the DNR. In addition, the DNR suggests using swan flight diverters on any overhead electric lines for the project. Avian impacts are further addressed at Findings 74 and 75.

*Tree Removal:* Some tree clearing is necessary to ensure continued safe and efficient operation of the Project. Tree removal will not be done without the consent of the landowner. Tree Removal is addressed in Finding 77 and in the Permit at III.B.1 and III.B.11.

*Wind Rights:* PlainStates Energy and the Bear Creek Wind Partners indicate that they have acquired a sufficient amount of wind and land rights within the Project boundary for installation of wind turbines and associated facilities. PlainStates indicates that it has approximately 3,100 acres of wind rights under its control for the Project.

In no case will a wind turbine be placed on a person's land without permission. Minnesota Rule 7836.1100 states that:

Subpart 1. **Wind rights.** Nothing in a site permit for an LWECS shall be construed to convey the right to install a wind turbine in an area within the boundaries of the project for which the permittee does not hold the wind rights.

Subp. 2. **Other LWECS construction.** Nothing in a site permit for an LWECS shall be construed to preclude another person from seeking a site permit to construct an LWECS in an area within the boundaries of the project covered by the permit if the permittee does not hold exclusive wind rights for the areas.

In addition, the site permit requires a 3 rotor diameter by 5 rotor diameter turbine setback from lands outside the control of the Permittee to protect the wind rights of adjacent landowners. See Site Permit at III.C.1.

### ***Proposed Findings of Fact***

The proposed Findings address the procedural aspects of the process followed, describe the Project, respond to the written comments, and address the environmental and other considerations. See Attachment A. The Findings of Fact are similar to findings made in several other LWECS projects. The following outline identifies the categories of the Findings.

<b><u>Category</u></b>	<b><u>Findings</u></b>
Background and Procedure	(Findings Nos. 1 – 12)
The Permittee	(Finding No. 13)
Project Description	(Findings Nos. 14 – 24)
Wind Resource Considerations	(Findings Nos. 25 – 27)
Land Rights and Easement Agreements	(Findings Nos. 28 – 31)
Public Comments	(Findings Nos. 32 – 43)
Site Criteria	(Findings Nos. 44 – 91)
Site Permit Conditions	(Findings Nos. 92 – 94)

### ***Proposed Site Permit***

The EFP Staff has prepared a site permit for the Commission's consideration. Staff made minor administrative changes to the draft site permit. Several substantive changes have been made including those discussed above, as noted in the attached Proposed Site Permit.

***Exhibit List***

An exhibit list of the written comments and other documents that are part of the record in this permit proceeding also is attached. The exhibit list provides direct links to each document in the eDockets web site.

**Commission Decision Options**

- A.** Adopt the attached Findings of Fact, Conclusions of Law and Order and issue the attached site permit to Bear Creek Wind Partners, LLC, for up to a 47.5 MW Large Wind Energy Conversion System in Todd and Otter Tail counties. The site permits issued by the PUC authorize Bear Creek Wind Partners, LLC, to construct and operate the proposed large wind energy conversion system and associated facilities in accordance with the conditions contained in the site permit, in compliance with Minnesota Statute 216F.04 and with Minnesota Rules Chapter 7836.
  
- B.** Amend and adopt the Findings of Fact and Conclusions and the site permit as deemed appropriate.
  
- C.** Deny the site permit.
  
- D.** Make some other decision deemed more appropriate.

**EFP Staff Recommendation:** The staff recommends Option A.

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

Chair  
Commissioner  
Commissioner  
Commissioner  
Commissioner

In the Matter of the Application of  
Bear Creek Wind Partners, LLC, for a  
Large Wind Energy Conversion  
System Site Permit for the Bear Creek  
Wind Project in Todd and Otter  
Tail counties

ISSUE DATE:

DOCKET NO. IP-6629/WS-07-297

FINDINGS OF FACT, CONCLUSIONS  
OF LAW AND ORDER ISSUING A  
LARGE WIND ENERGY CONVERSION  
SYSTEM SITE PERMIT TO BEAR  
CREEK WIND PARTNERS, LLC, FOR  
THE UP TO 47.5 MW BEAR CREEK  
WIND PROJECT

The above-entitled matter came before the Minnesota Public Utilities Commission (the Commission) on April 23, 2009, acting on an application by Bear Creek Wind Partners, LLC, for a Large Wind Energy Conversion System (LWECS) site permit to construct and own a 47.5 Megawatt (MW) combined nameplate capacity LWECS and associated facilities in Todd and Otter Tail counties, Minnesota.

**STATEMENT OF ISSUE**

Should Bear Creek Wind Partners, LLC, be granted a site permit under Minnesota Statutes Chapter 216F to construct and operate up to a 47.5 MW LWECS in Todd and Otter Tail counties?

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

**FINDINGS OF FACT**

**Background and Procedure**

1. On May 24, 2007, PlainStates Energy, on behalf of Bear Creek Wind Partners, LLC, filed an application with the Commission for a LWECS site permit to construct, operate,

- maintain and manage a 55 MW combined nameplate capacity wind facility and associated facilities in Otter Tail and Todd counties, Minnesota. (Exhibit 1).
2. Comments and Recommendations to the Commission, dated June 14, 2007, the Department of Commerce (DOC) Energy Facilities Permitting (EFP) staff recommended that the Commission accept the application as complete under Minnesota Rule 7836.0500, appoint a public advisor, and make a preliminary determination to issue a draft site permit and approve a draft site permit for the Project.
  3. At its agenda meeting on June 14, 2007, the Commission accepted the application as complete, made a preliminary determination to issue a permit and issued a draft site permit and authorized initiation of the public comment and review process. The Commission issued its Order on June 19, 2007. (Exhibit 2).
  4. EFP staff published on the Commission Energy Facilities Permitting web page the Notice of Public Information Meeting and the availability of the draft site permit on June 26, 2007.
  5. On July 2, 2007, pursuant to Minnesota Rule 7836.0900, the EFP staff mailed the Notice of Public Information Meeting and Public Comment Period to persons on the project mailing list to solicit comments on the site permit application, draft site permit and to review the permitting process for the Bear Creek Wind Project. (Exhibit 3).
  6. On July 4, 2007, the *Independent News Herald* and on July 5, 2007, the *Fergus Falls Daily Journal*, published the Notice of Public Information Meeting as required by Minnesota Rule 7836.0900. (Exhibit 4 and 5).
  7. On July 3, 2007, the Jeffrey C. Paulson Law Office, on behalf of Bear Creek Wind Project, LLC, distributed copies of the site permit application and Notice of Public Information Meeting by U.S. Mail to each landowner within the Project boundary, as well as, township, county and other required governmental officials. Minnesota Rule 7836.0600. (Exhibit 6).
  8. On July 16, 2007, Notice of Public Information Meeting and Public Comment Period was published in the *EQB Monitor*, Volume 31, No. 15. The published notice contained all of the information required by Minnesota Rule 7836.0900, subp. 1. (Exhibit 7).
  9. The EFP staff held a public information meeting on July 19, 2007, in Hewitt, Minn., as required by Minnesota Rule 7836.0900 to describe the Project, the permitting process and to take public comments. Approximately 60 people attended the meeting. EFP staff provided an overview of the permitting process, the draft site permit and responded to questions about the permitting process. Representatives from PlainStates Energy reviewed the proposed Bear Creek Wind Project and responded to questions.
  10. The public comment period closed on August 15, 2007. Written comments were received from 12 members of the public and two governmental agencies and are

discussed in Findings 32 – 43. (Exhibit 8, 9 and 10) Bob and Nyla Woetzel submitted a contested case hearing request, which was considered by the Commission and denied in an Order issued on October 4, 2007. (Exhibit 11).

11. On January 24, 2008, Bear Creek Wind Partners, LLC, filed a letter with the Commission describing changed circumstances and the necessity to consider utility scale wind turbine generators between 1.5 – 3.0 MW for the project. (Exhibit 12)
12. On March 30, 2009, Bear Creek Wind Partners, LLC, filed a Supplemental Filing with the Commission reducing the proposed project size to 47.5 MW by removing three turbines from Phase II in order to insure that the project did not require a Certificate of Need (CN) determination from the Commission. (Exhibit 13 and 14)

### **The Permittee**

13. Bear Creek Wind Partners, LLC, is the permittee and will be responsible for development, management, procurement, construction, commissioning, operation, and long-term ownership of the Project. Bear Creek Wind Partners, LLC, will own the Project including all equipment up the Bear Creek Wind Project Substation.

### **Project Description**

14. The application provides a preliminary layout and site plan, which is subject to change. (Exhibit 1).
15. The Bear Creek Wind Project is proposed in two separate phases. Phase I is proposed to be 30 MW in nameplate capacity and Phase II is proposed to be 17.5 MW in nameplate capacity. (Exhibit 1 and 13).
16. The proposed Project will use up to 22 Nordex N90 2.5 MW utility scale wind turbine generators with a combined nameplate capacity of up to 47.5 MW. The wind turbines will be 80 to 100 meters (m) in hub height and will have a 90 to 100 m rotor diameter. (Exhibit 1 and 13).
17. Most of the land within the Project site is either actively farmed or is forested. (Exhibit 1). Lands within the Project boundary in Todd County is zoned Agriculture/Forestry 1, Agriculture/Forestry 2, and Rural Townsite.
18. The Project boundary as proposed includes the townships of Bartlett, Stowe Prairie, Oak Valley, and Woodside in Otter Tail and Todd counties. The proposed facilities will result in the permanent, direct disturbance of less than 40 acres of land depending on turbine model, size and final site layout. (Exhibit 1).
19. All wind turbines, towers and blades under consideration will be in a neutral, off-white color. (Exhibit 1).

20. Each tower will be secured by a concrete foundation that will vary in size and design depending on site soil conditions. A control panel that houses communication and electronic circuitry is placed in each tower. A step-up, pad-mounted transformer will be located adjacent to each turbine to collect the power from the turbine and transfer it to a 34.5 kV collection system via underground and overhead cables. (Exhibit 1).
21. The Project will include an underground-automated supervisory control and data acquisition system (SCADA) for communication purposes. Temporary meteorological towers will be removed from the site no longer than one year after the Project in-service date. One permanent meteorological tower is permitted and will be used as part of the Project's SCADA system. Other associated facilities will include a concrete and steel foundation for each tower, pad-mounted step-up transformers, electrical junction boxes, all weather class 5 roads of gravel or similar material, a project substation, and an underground and overhead 34.5 kilovolt (kV) electric energy feeder and collection system. (Exhibit 1).
22. Each turbine will be interconnected through an underground electrical collection and feeder system at 34.5 kV. The Permittee will place the 34.5 kV collection and feeder lines primarily on private rights-of-way and limit use of public rights-of-way. Feeder lines may be underground or overhead depending on local conditions. All of the proposed collection and feeder lines would connect to a new Project substation developed exclusively for the Bear Creek Wind Project located in Stowe Prairie Township Section 17 or 20. Electricity collected from the 34.5 kV collection system will be delivered to and stepped up to 115 kV at the Bear Creek Wind Project Substation. (Exhibit 1).
23. The 5.5 mile 115 kV high voltage transmission line discussed in the Bear Creek Wind Project site permit application is required to be permitted separately under Minnesota Statutes Chapter 216E, Minnesota Rules Chapter 7849, and will not be permitted as part of the wind site permit process.
24. Each wind turbine will be interconnected with fiber optic communication cables that will be installed underground. The communication cables will run to a central host computer which will be located either at the Project substation or at the operations and maintenance facility where a SCADA system will be located. Signals from the current and potential transformers at each of the delivery points will also be fed to the central SCADA host computer. The SCADA system will be able to give status indications of the individual wind turbines and the substation and allow for remote control of the wind turbines locally or from a remote computer. The SCADA system will provide detailed operating and performance information for each wind turbine. The Permittee will maintain a computer program and database for tracking each wind turbine's maintenance history and energy production. The Commission will have viewer access to the SCADA system. (Exhibit 1).

### **Wind Resource Considerations**

25. The wind resource in the Project area is documented by the Applicant and the Department of Commerce. The Applicant indicates that its studies indicate that the

annual average wind speed at the proposed site is 7.99 meters/second, with the highest monthly average wind speeds occurring during the months of October through January. (Exhibit 1).

26. For Bear Creek Wind Project, wind turbines shall be sited so as to have good exposure to winds from all directions with emphasis on exposure to the prevailing southeasterly and northwesterly winds. The turbine spacing, according to site permit application, will maximize use of the available wind and minimize wake and array losses within the topographical context of the site. Turbine placement has been designed to provide a minimum of 3 rotor diameter spacing in the northeast-southwest (crosswind) direction and 5 rotor diameter spacing in the northwest-southeast (downwind) direction, with respect to the predominant energy production directions. Given the prevalence of southeasterly and northwesterly winds at this site, the spacing is widest in the northwest-southeast direction. Greater spacing between the turbine may be used in areas where the terrain requires greater spacing. This is addressed in the permit at III.E.5. Individual, isolated turbine sites are avoided to minimize interconnection and access costs. Sufficient spacing between each turbine is utilized to minimize wake losses when the winds are blowing from southwest or northeast (crosswind) directions. (Exhibit 1)
27. Bear Creek estimates that the Project will operate at approximately 41 percent capacity factor (gross) and 35.8 percent net capacity factor when losses are considered. Based on this, Phase I of the Project is expected to annually generate 94,000 megawatt hours (MWh), Phase II is expected to annually generate 78,400 MWh, and combined the Project is expected to generate 172,500 MWh of electricity per year at 35.8 percent capacity factor when factoring in losses. Final Project output is subject to final size, layout, design, equipment selected and wind resources. (Exhibit 1).

### **Land Rights and Easement Agreements**

28. In order to build a large wind energy conversion system, a developer needs to secure wind rights, site leases and easement option agreements to ensure access to the site for construction and operation of a project. These lease or easement agreements generally also prohibit landowners from undertaking any activities that might interfere with execution of a proposed project.
29. The Applicant has obtained lease and easement option agreements with landowners for approximately 3,100 acres of land and wind rights within portions of the Project site boundary necessary for installation of the components of the Project. Bear Creek Wind Partners, LLC, may only develop its facilities on lands within the Project boundary where it holds or acquires development rights, subject to permit conditions. (Exhibit 1).
30. The wind access buffer set-back of 3 RD on the northeast-southwest (cross-wind) axis and set-back of 5 RD on the northwest-southeast (down-wind) axis have been established to protect the wind rights of adjacent landowners or others not participating in the Bear Creek Wind Project. (Exhibit 1).

31. The Permittee will be required to meet the 3 RD northeast-southwest and 5 RD northwest-southeast wind turbine set-backs from properties outside of the Project boundary described in the application and from properties inside the boundary for which Bear Creek Wind Partners, LLC, does not hold wind development easements or rights. This is addressed in the permit at III.C.1.

### **Public Comments and Letters Received**

32. Most of the verbal comments made at the July 19, 2007, public meeting were focused on a 5.5 mile, 115 kV HVTL discussed in the Bear Creek Wind Project site permit application. DOC EFP staff explained to the members of the public at the meeting that while the site permit application discusses the potential HVTL, the transmission line is required to be permitted separately under Minnesota Statutes Chapter 216E, Minnesota Rules Chapter 7849, and will not be permitted in the Commission docket reviewing the LWECS site permit application.
33. On July 20, 2007, Gerry Lipinski submitted written comments and questions about property tax impacts, issues related to the turbine manufacturer's ability to remotely access turbine SCADA systems, correcting several typos, and providing information about a possible future home site on his property. (Exhibit 8).
34. On July 23 and 24, 2007, Carla Nelson submitted written comments raising concerns about the potential 115 kV HVTL route, which appeared to cross her property based on the maps contained in the Bear Creek Wind Project site permit application. (Exhibit 8).
35. Dale McBrady submitted written comments indicating that one of the proposed turbines appeared to be proposed less than the required wind access buffer setback from his property and that he had not assigned wind nor land rights to the applicant. He requested that the applicant contact him. (Exhibit 8).
36. Robin Viste submitted written comments raising questions about property value and taxation, wind rights, final turbine locations, visual appearance, and impact on her ability to sell the property in the future. (Exhibit 8).
37. On August 8, 2007, Robert Vanbatavia submitted written comments raising questions about television and radio reception, impacts on trees on his property, and questions about the proposed 115 kV transmission line. (Exhibit 8).
38. On August 9, 2007, Bob and Nyla Woetzel submitted a contested case hearing request and written comments. The Woetzel's are concerned about the proposed wind project's impact on the value of their property and the view from their deck and yard. (Exhibit 8).
39. On August 10, 2007, Ron Hansch submitted comments and questions about the impact of the project on local real estate values. Mr. Hansch suggested that all property owners in the area receive compensation from the wind project developer. (Exhibit 8).

40. On August 13, 2007, Dave and Dusty Krause submitted written comments supportive of the Bear Creek Wind Project, raising concerns about and suggesting potential alternate routes for the 115 kV HVTL line discussed in the site permit application. (Exhibit 8).
41. On August 15, 2007, Mr. and Mrs. Dean Weber submitted written comments raising concerns about property values, bird migration and other issues. The Webers indicate that they have started a petition in opposition to the project and had legal help to stop the project. (Exhibit 8).
42. On August 15, 2007, the Minnesota Department of Natural Resources submitted written comments suggesting use of Swan Flight Diverters to reduce avian collision potential on the overhead electric lines associated with the Bear Creek Wind Project. (Exhibit 9).
43. On August 16 and 24, 2007, the Minnesota Department of Transportation submitted written comments indicating that several MnDOT utility crossing and right-of-way permits were required for the Project. (Exhibit 10).

#### **Site Criteria**

44. Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7839 apply to the siting of Wind Energy Conversion Systems. The rules require applicants 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. Minnesota Rules 7836.0500 and 7836.1000. The following analysis addresses the relevant criteria that are to be applied to a LWECS project.

#### **Human Settlement, Public Health and Safety**

45. The Project area is low in population density, with some farm and rural residential development on or near the site. As a result, impacts of the proposed LWECS on human settlement, public health and safety can be avoided. Permit condition III.C. specifies conditions for setbacks from residences and roads.
46. 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 and has not been identified as a safety hazard to date in Minnesota, it remains important that the turbines are not sited in areas where regular human activity is expected below the turbines or in the immediate proximity during the winter months. See site permit condition III.C. requiring a 500 foot minimum setback from residences and a 250 foot setback from public road rights-of-way.

47. There will be no displacement of existing residences or structures in siting the wind turbines and associated facilities. (Exhibit 1).
48. The Permittee is required to comply with the Federal Aviation Administration (FAA) requirements with respect to turbine lighting, marking and aviation safety. See site permit condition III.E.4.
49. Bear Creek Wind Partners, LLC, is required to provide security during construction and operation of the Project, including fencing, warning signs, and locks on equipment and facilities. The Permittee will also provide landowners and interested persons with safety information about the Project prior to construction. See site permit conditions III.B.15-16.
50. Each wind turbine will be clearly marked to identify each unit and a map of the site shall be provided to local public safety authorities. The site permit requires the Permittee to prepare a fire protection and medical emergency plan in consultation with the local fire department prior to construction. See site permit conditions III.B.15 - 17.

#### **Noise**

51. Wind turbines generate noise. The Permittee is required to meet the Minnesota Noise Standards applicable to residential receivers. The Minnesota Noise Standards are enforced by the Minnesota Pollution Control Agency (MPCA) and are found in Minnesota Rule 7030.0040. See site permit condition III.E.3.
52. The site permit requires that wind turbine generators are sited at least 500 feet from occupied dwellings and at a sufficient distance from residential receivers to ensure the Project meets the requirements of the Noise Standards in Minnesota Rules Chapter 7030. See site permit condition III.E.3.
53. Final wind turbine placement will take into account the locations of residential receivers during the micrositing process to ensure compliance with Minnesota Noise Standards. (Exhibit 1). See site permit condition III.E.3.

#### **Visual Values**

54. Wind turbines, towers and rotor blades have visual impacts. The visual impacts of wind facilities are highly subjective. Some people like the view of wind turbines, others do not. The Bear Creek Wind Project will be visible to area residents and passing motorists on local, county and state highways. (Exhibit 1).
55. The visual impact of the proposed Bear Creek Wind Project will be reduced by the use of a neutral paint color. The only exterior lighting installed on the turbines will be those required by the FAA. All site permits issued by the Commission require the use of tubular towers; therefore, the turbine towers will be uniform in appearance.

56. Wind turbines will be a visual feature on the landscape near the Project. The project site will retain its rural, agricultural character. The turbines and associated facilities necessary to convert the wind for energy are consistent with existing zoning, land use, wind energy production, and agricultural practices.
57. The Bear Creek Wind Project wind turbines will be the only wind turbines visible from the site upon construction, with the exception of an existing single Nordex N90 wind turbine associated with the Project's developer PlainStates Energy. Other wind energy facilities may be proposed, permitted or built in the area in the future.
58. The Project will alter the landscape from agricultural to wind plant/agricultural. The Project will increase the visual impacts associated with the wind facility. The cumulative effect of the proposed Project will increase both the industrial appearances of the wind plants in the area and the areas from which they will be seen. Because wind generation development is likely to continue in Otter Tail and Todd counties, this visual impact will continue to increase the size of the wind plant/farm footprint as the turbines harvest the wind resources of the area for energy. In other parts of the state, such as the Buffalo Ridge, the presence of numerous wind turbines on Buffalo Ridge has been well accepted by the people who live and work in the area.
59. The proposed Project's use of some of the largest wind turbine generator rotor sizes and rotor diameters available in the market will result in greater turbine spacing to minimize wake loss. Therefore the Bear Creek turbines will be spaced further from one another and existing turbines than in several older existing projects in other parts of Minnesota. See site permit condition III.C.

### **Recreational Resources**

60. Recreational opportunities in Otter Tail and Todd counties include: hunting, fishing, snowmobiling, bird and wildlife watching, campgrounds and trails. Hunting, fishing and wildlife observation is permitted in designated Minnesota Department of Natural Resources Wildlife Management Areas (WMA's), Fish and Wildlife Service lands and other lands inside and outside of the Project boundary, in public waters, and on private property in the area unless otherwise posted. There are no designated state WMAs located within the Project boundary, and no WMAs within one mile of the Project boundary. The proposed Project will not impact public access to public waters in the area. (Exhibit 1).
61. The proposed turbines will be visible to persons using the lands inside and close to the Project area. Turbines will not be located on public lands, WMA's, Scientific and Natural Areas (SNA) or in any local parks. There are no designated SNAs or public parklands within the Project boundary. Wind turbine operations are not expected to affect the natural areas in any material way and no adverse impact on wildlife areas is expected. (Exhibit 1).

## Facilities

62. The Bear Creek Wind Project is expected to have a minimal effect on the existing facilities. The Project will use underground and/or overhead cables for the collector and feeder lines primarily on private property or along public rights-of-way within the wind farm. Any above ground 34.5 kV feeder lines, if used, would be wood or steel poles typical of wind project feeder lines used in other wind projects in Minnesota. The feeder lines will deliver the energy from the wind farm to the Project substation on a route on public road rights-of way, on private land easements or a combination thereof. The Permittee is required to obtain right-of-way use permits from the governmental unit controlling each right-of-way. (Exhibit 1). See site permit at III.E.7. and 8.
63. The Project will require the use of public roads to deliver construction supplies and materials to the work site, which will require the Permittee to obtain road use, right-of-way use, and driveway access permits from the governmental jurisdiction controlling each road. Construction of turbine access roads will be located primarily on private property. The access roads will be routed in a manner that minimizes disturbance of agricultural activities while maintaining a short, direct route. The typical permanent access road will be 16 feet in width and covered in Class 5 gravel (or similar material). The access roads will be low profile roads to allow for the movement of agricultural equipment. See site permit at III.B. 8 (b). During operation and maintenance of the wind plant, operation and maintenance crews, while inspecting and servicing the wind turbines, will use the access roads. Periodic grading or other methods are necessary to maintain road integrity. The Permittee may do this work or contract it out. (Exhibit 1).
64. The Bear Creek Wind Project is not expected to affect railroads, telecommunication facilities, and radio reception. The Application indicates that a microwave beam path crosses from the northeast to the southwest through the project site and that the Applicant has maintained adequate distance from the beam path to prevent interference. (Exhibit 1)
65. The presence or operation of the wind plant could potentially impact the quality of television reception in the area. Previous work on television reception issues indicates that in some cases new antennas or relocation of existing antennas can restore television signal strength reception. The Permittee is required to initiate a study to assess the strength of communications and television reception in the Project area before project construction to document and mitigate any impacts that might occur. The Permittee shall be responsible for alleviating any disruption or interference to communications systems caused by the turbines or associated facilities. See site permit at III.D.3.
66. Construction, operation, and maintenance of the proposed wind plant shall comply with all of the required local, state and federal permit requirements. See site permit at III.J.2-3 and III.K.7.
67. If access roads must be installed across waterways that are considered Minnesota Public Waters or Public Water Wetlands, the Permittee in consultation with the Minnesota Department of Natural Resources will design, shape and locate the road so as not to alter

the original water flow or drainage patterns. Any work required below the ordinary high water line, such as road crossings or culvert installation, will require permits from the Minnesota Department of Natural Resources, as well as, consultation with the U.S. Fish and Wildlife Service. Additional permits may be required to be issued under the Minnesota Wetlands Conservation Act. See site permit at III.B.8., III.C.5., III.J.3 and III.K.7.

### **Community Benefits**

68. The Bear Creek Wind Project will provide local tax revenues from a production tax on the wind energy produced by the turbines. Minnesota Statute 272.028 - 272.029. In addition, the Application indicates that the Bear Creek Wind Project will share Project profits with the community. (Exhibit 1). No significant adverse impact on public services is expected. Wear and tear on roads will occur as a result of the transport of heavy equipment and other materials, and the Permittee is responsible for any necessary repairs. See site permit at III.B.8. Landowners with turbine(s) or associated facilities on their property will receive payments from the Permittee for wind rights and land easements.
69. To the extent that local workers and local contractors are capable, qualified, and available, the Permittee or its contractors may hire them to construct the Project. The hiring of local people will expand employment opportunities in this area of the state and keep money in the local economy. Once constructed, the Project will be staffed with site technicians and a wind plant supervisor. Short term construction spending will provide local economic benefits. Long term operations, maintenance, production taxes, and lease payments will also have positive local economic benefits. (Exhibit 1).

### **Effects on Land-Based Economies**

70. The Project will permanently displace less than 40 acres of agricultural and forested land. Site permit conditions III.B. 2., 3., 4., 5., 6., 7., 8(c), 9., and 10 address mitigation measures for agricultural lands. The Project does not affect any sand or gravel operations. (Exhibit 1).

### **Archaeological and Historical Resources**

71. The site permit at III.D.2. requires the Permittee, to consult with the SHPO prior to construction regarding archeological and cultural resources. The site permit Application indicates that the Applicant has consulted with and reviewed the Minnesota State Historic Preservation Office (SHPO) computer database, which indicate that three historic structures or archaeological resources have been documented inside the boundaries of or within 1 mile of the Project. SHPO has not recommended a cultural resources field survey for the proposed turbine locations, access roads, and other construction elements. (Exhibit 1).

72. If any archaeological sites are found during surveys or construction, their integrity and significance would be addressed in terms of the site's potential eligibility for placement on the National Register of Historic Places (NRHP). If such sites are found to be eligible for the NRHP, appropriate mitigation measures will be developed in consultation with SHPO, the State Archaeologist, and consulting American Indian communities. The site permit also requires the Permittee to stop work and notify the Minnesota Historical Society and Commission if any unrecorded cultural resources are found during construction. See the site permit at III.D.2. (Exhibit 1).

### **Animals and Wildlife**

73. The Applicant has consulted with the Minnesota Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (FWS) about the Project's design and mitigation measures on natural communities, fish and wildlife. The DNR Natural History Database was reviewed to determine if any rare plant or animal species are known to occur within the Project boundary. The DNR indicated that there is 1 known occurrences of rare or protected species within 1 mile of the Project boundary. However, the DNR indicates that several freshwater mussel species are present and have been documented in the Wing River upstream from the Project site, and underscored the need to use accepted sediment control practices during construction and operation of the Project. (Exhibit 1).
74. On January 27, 2007, the DNR Regional Environmental Assessment Ecologist provided comments to the Applicant on natural resource issues and recommended mitigation measures. In its letter, the DNR recommended specific mitigation measures to address the agency's concerns. The Bear Creek permit application indicates that it has integrated these recommendations into its site plan and will continue to work with the DNR on natural resource issues. (Exhibit 1).
75. Neither construction nor operation of the project is expected to significantly impact wildlife. Based on studies of existing wind power projects in the United States and Europe, the only impact of concern to wildlife would primarily be to avian and bat populations. The final report on avian monitoring studies at Buffalo Ridge, Minnesota, "Final Report-Avian Monitoring Studies at the Buffalo Ridge, Minnesota Resource Area: Results of a 4-Year Study" (September 2000) identified the following impacts:
- a) Following construction of the wind turbines, there is a reduction in the use of the area within 100 meters of the turbines by seven of 22 species of grassland breeding birds. It was hypothesized that lower avian use may be associated with avoidance of turbine noise, maintenance activities, and less available habitat. The researchers stated "on a large scale basis, reduced use by birds associated with wind power development appears to be relatively minor and would not likely have any population consequences on a regional level."(p. 44)
  - b) Avian mortality appears to be low on Buffalo Ridge, compared to other wind facilities in the United States, and is primarily related to nocturnal migrants. Resident bird mortality is very low and involves common species. The researchers

stated that "based on the estimated number of birds that migrate through Buffalo Ridge each year, the number of wind plant related avian fatalities at Buffalo Ridge is likely inconsequential from a population standpoint." (p. iv)

76. Bat mortality was also studied at Buffalo Ridge, instigated by bat collision victims found during the avian monitoring studies. The bat study was conducted in 2001 and 2002. ("Bat Interactions with Wind Turbines at the Buffalo Ridge, Minnesota Wind Resource Area," November 2003). The overall conclusion is that bat activity at turbines and the numbers of bat fatalities do not share a statistical relationship. Bat collisions were found to be very rare, given the amount of bat activity documented at the turbines. Most fatalities involved migrating bats, a wind-plant related mortality "is possibly not sufficient to cause significant, large-scale population declines." (p. 61)
77. Mitigation measures are also prescribed in the site permit and include but are not limited to: a) a pre-construction inventory of existing biological resources, native prairie, state listed and threatened species and wetlands in the Project area; b) landowner approval will be negotiated prior to any removal of trees during construction; c) sound water and soil conservation practices will be implemented during construction and operation of the Project to protect topsoil and adjacent resources and to minimize soil erosion. See site permit conditions III.B.9, 11, 12, 14, III.C.4-6 and III.D.1.

### **Vegetation**

78. While forest land is present on site and an undetermined number of trees will be removed to accommodate the Project, removal of trees will be minimized and no groves of trees or shelterbelts will be removed without notification of the Commission and approval of the affected landowner. See site permit conditions III.B.11 Native prairie is not known to be present at the site; however, it will be avoided if encountered. The site permit, at III.C.6. provides for preparation of a prairie protection and management plan if prairie remnants are discovered on the site.

### **Soils**

79. Construction of the wind turbines and access roads increases the potential for erosion during construction and converts small amounts of farmland to industrial use. The site permit at III.B.9. requires a soil erosion and sediment control plan, which can be the same as the Storm Water Pollution Prevention Plan (SWPPP) submitted to the MPCA for the Permittee's storm water runoff permit application. See site permit at III.B.9.

### **Wetlands**

80. No towers, access roads or utility lines will be located in or will cross Public Waters or Public Waters Wetlands, unless permitted by the DNR. Any additional work in wetlands, including wetlands subject to the Minnesota Wetlands Conservation Act, will require review and permits from the local unit of government, soil and water conservation district, or the U.S. Army Corps of Engineers. See site permit at III.C.5.

81. The Permittee will work with landowners and drain tile contractors to determine or predict the location of drain tile lines. Impacts to drain tile will be avoided. Any impacts to drain tile will be promptly repaired by the Permittee, unless otherwise negotiated with the landowner. See site permit at III.A.6.

### **Future Development and Expansion**

82. While large-scale wind energy projects have occurred elsewhere (California and Iowa), 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 continues to monitor for cumulative impacts and issues related to wind energy development.
83. The Commission and DOC anticipate more LWECS site permit applications under Minnesota Statutes Chapter 216F. The Commission is responsible for siting of LWECS "in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources." Minnesota Statute 216F.03.
84. Minnesota Statute 216E.03, subd. 7, requires consideration of design options that might minimize adverse environmental impacts. Turbines must also be sited to minimize noise and aesthetic impacts. Buffers between strings of turbines are designed to protect the turbines' production potential. The site permit also provides for buffers between adjacent wind energy projects to protect production potential. See site permit at III.C.1.
85. The location and spacing of the turbines are critical to the issues of orderly development and the efficient use of wind resources. Turbines are likely to be located in the best winds, and the spacing dictates, among other factors, how much land area a project occupies.
86. One efficiency issue is the loss of wind in the wake of turbines. Wind flow behind the turbine is not as fast and is more turbulent than the free-flowing wind. This condition persists for some distance behind the turbine as normal wind flow is gradually restored. If a turbine is spaced too close downwind of another turbine, it produces less energy and is less cost-effective. This is the wake loss effect. If the spacing is too far, wind resources are wasted and project footprints on the land is unnecessarily large.
87. For this Project, turbine spacing will maximize use of the available wind resources and minimize wake and array losses within the topographical context of the site. The objective is to capture the most net energy possible from the best available wind resource. Given the predominant southerly and northwesterly winds at this site, the spacing between turbines will be greatest in the northwest-southeast axis for the Bear Creek Wind Project. (Exhibit 1).

## **Maintenance**

88. Maintenance of the turbines will be on a scheduled, rotating basis. Additional unscheduled maintenance will be conducted on an as needed basis. Maintenance on the interconnection points will be coordinated with Minnesota Power. The Bear Creek Wind Project will be staffed with site technicians and a wind plant supervisor and may build or expand an existing facility to house the operation and maintenance efforts for the Project. (Exhibit 1).

## **Site Restoration**

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

## **Decommissioning Economics**

90. Bear Creek Wind Partners, LLC, will be responsible for all costs to decommission the Project and associated facilities. Decommissioning will be completed within 18 months from the time this site permit expires or the facility ceases to operate whichever is earlier. (Exhibit 1). See site permit at III.G.
91. The site permit requires Bear Creek Wind Partners, LLC, to submit a decommissioning plan to the Commission prior to construction describing how the Permittee will ensure that the resources are available to pay for decommissioning the Project at the appropriate time. The Commission may request a compliance filing from the Permittee at anytime describing how it is fulfilling its decommissioning obligations. See site permit at III.G.

## **Site Permit Conditions**

92. Nearly all of the conditions contained in the site permit were established as part of the site permit proceedings of other wind turbine projects permitted by the Environmental Quality Board and the Public Utilities Commission. Minor changes that provide for clarifications of the draft site permit conditions have been made.
93. The proposed Bear Creek Wind Project shall meet the site permit setback requirements from existing wind turbines and lands to which it does not hold wind development rights.
94. 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 Findings of Fact, the Commission makes the following:

### **CONCLUSIONS OF LAW**

1. Any of the foregoing Findings more properly designated as Conclusions of Law are hereby adopted as such.
2. The Bear Creek Wind Project Application for a site permit was properly filed and noticed as required by Minnesota Statute 216F.04 and Minnesota Rule 7836.0600, subp. 2 and 7836.0900, subp. 2.
3. The Minnesota Public Utilities Commission has afforded all interested persons an opportunity to participate in the development of the site permit and has complied with all applicable procedural requirements of Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7836.
4. The Commission has jurisdiction under Minnesota Statutes section 216F.04 over the site permit applied for by Bear Creek Wind Partners, LLC.
5. The Bear Creek Wind Project will not create significant human or environmental impacts and is compatible with environmental preservation, sustainable development, and the efficient use of resources.
6. The Minnesota Public Utilities Commission has the authority under Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7839 to establish conditions in site permits relating to site layout, construction, operation and maintenance of an LWECS. The conditions contained in the site permit issued to Bear Creek Wind Partners, LLC, are appropriate, necessary and within the Minnesota Public Utilities Commission's authority.

Based on the Findings of Fact and Conclusions of Law contained herein and the entire record of this proceeding, the Commission hereby makes the following:

### **ORDER**

The attached site permit is hereby issued to Bear Creek Wind Partners, LLC, for up to a 47.5 MW Large Wind Energy Conversion System in Todd and Otter Tail counties, Minnesota. The site permit authorizes Bear Creek Wind Partners, LLC, to construct and operate the proposed LWECS and associated facilities in accordance with the conditions contained in the site permit and in compliance with Minnesota Statutes Chapter 216F and with Minnesota Rules Chapter 7839.

BY ORDER OF THE Commission

---

Burl W. Haar,  
Executive Secretary

(S E A L)

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**EXHIBIT LIST: PUC Docket NO.: IP-6629/WS-07-297**

<b>EXHIBIT NO.</b>	<b>DATE</b>	<b>DESCRIPTION</b>	<b>e-DOCKET LOCATION</b>
1.	5/22/2007	Bear Creek Wind Partners, LLC's application for a LWECS site Permit for the Bear Creek Wind Project	<a href="#">4061177</a>
2.	6/19/2007	PUC Order accepting Bear Creek Wind Partners, LLC's LWECS Site Permit Application and Issuing Draft Site Permit	<a href="#">4217715</a>
3.	7/2/2007	Affidavit of Service: EFP Notice of PUC's acceptance of the LWECS application and public information meeting	<a href="#">4486079</a>
4.	7/4/2007	Affidavit of Publication: Notice of PUC's acceptance of the LWECS application and public information meeting in <i>Independent News Herald</i> .	<a href="#">4804246</a>
5.	7/5/2007	Affidavit of Publication: Notice of PUC's acceptance of the LWECS application and public information meeting in <i>Fergus Falls Daily Journal</i> .	<a href="#">4804245</a>
6.	7/4/2007	Affidavit of Service: Applicant's Notice and distribution of copies of application	<a href="#">4736947</a>
7.	7/16/2007	Notice of Public Information Meeting published in <i>EQB Monitor</i>	<a href="#">20094-36234</a>
8.	7/20/2007	Public Comments	<a href="#">4755358</a>
9.	8/22/2007	Comments of the Minnesota Department of Natural Resources	<a href="#">4761316</a>
10.	8/28/2007	Comments of the Minnesota Department of Transportation	<a href="#">4760320</a>

11.	10/4/2007	PUC Order denying contested case hearing	<a href="#">4791442</a>
12.	1/24/2008	Applicant letter describing changed circumstances	<a href="#">4919340</a>
13.	3/30/2009	Bear Creek Wind Partners, LLC's Supplemental Filing	<a href="#">5843239</a>
14.	3/30/2009	Bear Creek Wind Partners, LLC's Supplemental Filing Map	<a href="#">5843260</a>

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION**

**SITE PERMIT FOR CONSTRUCTION OF A LARGE WIND  
ENERGY CONVERSION SYSTEM  
IN**

**TODD AND OTTER TAIL COUNTIES, MINNESOTA**

**ISSUED TO  
BEAR CREEK WIND PARTNERS, LLC**

**DOCKET NO. IP-6629/WS-07-297**

In accordance with Minnesota Statutes Section 216F.04 and Minnesota Rules Chapter 7836 this Site Permit is hereby issued to:

**BEAR CREEK WIND PARTNERS, LLC**

Bear Creek Wind Partners, LLC, is authorized to construct and operate up to a 47.5 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 will expire on: May 1, 2039.

Approved and adopted this \_\_\_\_\_ day of April, 2009  
BY ORDER OF THE COMMISSION

---

Burl W. Haar,  
Executive Secretary

(S E A L)

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## **I. SITE PERMIT**

This site Permit for a Large Wind energy Conversion system (LWECS) authorizes Bear Creek Wind Partners, LLC, to construct up to 47.5 megawatt (MW) LWECS and associated facilities in Todd and Otter Tail counties, on a site of approximately 3,100 acres in accordance with the conditions contained in this Permit. The site boundary is shown on the maps that are attached hereto.

## **II. PROJECT DESCRIPTION**

The up to 47.5 MW LWECS authorized to be constructed by this Site Permit will be owned and operated by Bear Creek Wind Partners, LLC (hereinafter "Permittee"). The Project will consist of 1.5 to 3.0 MW capacity wind turbines with a combined nominal nameplate capacity of no more than 47.5 MW. Associated facilities will include one permanent meteorological tower and wind turbine access roads. The wind turbines are to be interconnected by communication and electrical power collection facilities within the wind farm. These facilities will include junction boxes, transformers, overhead and underground collector and feeder lines that will deliver wind-generated power to the Bear Creek Wind Project substation. All of the proposed collection and feeder lines would connect to a new Project substation developed exclusively for the Bear Creek Wind Project located in Stowe Prairie Township Section 17 or 20. Electricity collected from the 34.5 kV collection system will be delivered to and stepped up to 115 kV at the Bear Creek Wind Project Substation.

## **III. CONDITIONS**

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

### **A. GENERAL CONSTRUCTION CONDITIONS**

#### **1. SITE PLAN**

Prior to commencing construction, the Permittee shall submit to the Commission a site plan for all turbines, roads, electrical equipment, collector and feeder lines and other associated facilities to be constructed and engineering drawings for site preparation, construction of the facilities, and a plan for restoration of the site due to construction. The Permittee may submit a site plan and engineering drawings for only a portion of the LWECS if the Permittee is prepared to commence construction on certain parts of the Project before completing the site plan and engineering drawings for other parts of the LWECS. In the event that previously unidentified environmental conditions are discovered during construction which by law or pursuant to conditions outlined in this Permit would preclude the use of that site as a turbine site, the Permittee shall have the right to move or relocate turbine sites. The Permittee shall notify the Commission of any turbines that are to be relocated before the turbine is constructed on the new site.

#### **2. FIELD REPRESENTATIVE**

Prior to the start of construction and continuously throughout construction and site restoration, the Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this Permit. This person (or a designee) shall be accessible by telephone during

normal business hours. This person's address, phone number and emergency phone number shall be provided to the Commission, who may make the number available to local residents and officials and other interested persons. The Permittee may change the field representative by notification to the Commission.

### 3. PRECONSTRUCTION MEETING

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

### 4. NOTICE OF PERMIT CONDITIONS

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

## **B. MITIGATION MEASURES**

### 1. SITE CLEARANCE

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

### 2. TOPSOIL PROTECTION

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

### 3. SOIL COMPACTION

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

### 4. LIVESTOCK PROTECTION

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

### 5. FENCES

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

### 6. DRAINAGE TILES

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

## 7. EQUIPMENT STORAGE

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

## 8. ROADS

### (a) Public Roads

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

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

### (b) Turbine Access Roads

The Permittee shall construct the smallest number of turbine access roads it can. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with Class 5 gravel or similar material. Access roads shall not be constructed across streams and drainage ways without required permits and approvals from DNR, FWS and/or USACOE. When access roads are constructed across streams and drainage ways, the access roads shall be designed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed. Access roads shall also be constructed in accordance with all necessary township, county or state road requirements and permits.

### (c) Private Roads

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

## 9. SOIL EROSION AND SEDIMENT CONTROL

The Permittee shall develop a Soil Erosion and Sediment Control Plan prior to construction and submit the Plan to the Commission. This Plan may be the same as the Storm Water Pollution Prevention Plan (SWPPP) submitted to the Minnesota Pollution Control Agency (MPCA) as part of the National Pollutant Discharge Elimination System (NPDES) permit application. The goal of the Soil Erosion and Sediment Control Plan is to minimize soil erosion, to re-vegetate non-cropland and range areas disturbed by construction with wildlife conservation species, and wherever possible, to plant appropriate native species in cooperation with landowners.

The Soil Erosion and Sediment Control Plan shall address what types of erosion control measures will be implemented during each Project phase, and shall at a minimum identify plans

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

#### 10. CLEANUP

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

#### 11. TREE REMOVAL

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

#### 12. RESTORATION

The Permittee shall, as soon as practical following construction of each turbine, considering the weather and preferences of the landowner, restore the area affected by any LWECS activities to the condition that existed immediately before construction began, to the extent possible. The time period may be no longer than eight months after completion of construction of the turbine. Restoration shall be compatible with the safe operation, maintenance, and inspection of the LWECS.

#### 13. HAZARDOUS WASTE

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

#### 14. APPLICATION OF HERBICIDES

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

## 15. PUBLIC SAFETY

The Permittee shall provide educational materials to landowners within the site boundaries and, upon request, to interested persons, about the Project and any restrictions or dangers associated with the LWECS Project. The Permittee shall also provide any necessary safety measures, such as warning signs and gates for traffic control or to restrict public access. The Permittee shall submit the location of all “underground facilities,” as defined in Minnesota Statute 216D.01, Subdivision 11, to Gopher State One Call.

## 16. FIRE PROTECTION

The Permittee shall prepare a fire protection and medical emergency plan in consultation with the fire department having jurisdiction over the area prior to LWECS construction. The Permittee shall submit a copy of the plan to the Commission upon request. The Permittee shall also register the LWECS with the local governments’ emergency 911 services.

## 17. TOWER IDENTIFICATION

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

# C. SETBACKS

## 1. WIND ACCESS BUFFER

Wind turbine towers shall not be placed less than 5 rotor diameters (RD) on the prevailing wind directions and 3 RD on the non-prevailing wind directions from the perimeter of the lands where the Permittee does not hold the wind rights, without the approval of the Commission.

## 2. RESIDENCES

Wind turbine towers shall not be located closer than 500 feet from the nearest occupied dwelling, or the distance required to comply with the noise standards established by the MPCA at paragraph III.E.3, whichever is greater.

## 3. ROADS

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

## 4. WILDLIFE MANAGEMENT AREAS

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in Waterfowl Protection Areas, State Wildlife Management Areas or Scientific and Natural Areas or in county parks.

## 5. WETLANDS

Wind turbines and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in public waters wetlands, as defined in Minnesota Statutes section 103G.005, subp. 15a. However, electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to DNR, United States Fish and Wildlife Service (FWS) and/or United States Army Corps of Engineers (USACE) permits and approvals.

## 6. NATIVE PRAIRIE

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

## 7. SAND AND GRAVEL OPERATIONS

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

### **D. PRECONSTRUCTION SURVEYS**

#### 1. BIOLOGICAL PRESERVATION SURVEY

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

#### 2. ARCHAEOLOGICAL RESOURCES

The Permittee shall work with the State Historic Preservation Office (SHPO) at the Minnesota Historical Society (MHS) and the State Archaeologist during the detailed site plan development to determine whether an archaeological survey is recommended for any part of the proposed Project. The Permittee will contract with a qualified archaeologist to complete such surveys, and will submit the results to the Commission, the SHPO and the State Archaeologist. The SHPO and the State Archaeologist will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by the Commission in consultation with the SHPO and the State Archaeologist. In addition, the Permittee shall mark and preserve any previously unrecorded archaeological sites that are found during construction and shall promptly notify the SHPO, the State Archaeologist, and the Commission of such discovery. The Permittee shall not excavate at such locations until so authorized by the Commission in consultation with the SHPO and the State Archaeologist.

If human remains are encountered during construction, the Permittee shall immediately halt construction at that location and promptly notify local law enforcement authorities and the State

Archaeologist. Construction at the human remains location shall not proceed until authorized by local law enforcement authorities or the State Archaeologist.

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

Prior to construction, construction workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If any archaeological sites are found during construction, the Permittee shall immediately stop work at the site and shall mark and preserve the site and notify the Commission and the MHS about the discovery. The Commission and the MHS shall have three working days from the time the agency is notified to conduct an inspection of the site if either agency shall choose to do so. On the fourth day after notification, the Permittee may begin work on the site unless the MHS has directed that work shall cease. In such event, work shall not continue until the MHS determines that construction can proceed.

### 3. ELECTROMAGNETIC INTERFERENCE

Prior to the start of construction, the Permittee shall submit a plan to the Commission for conducting an assessment of television signal reception and microwave signal patterns in the Project area prior to commencement of construction of the Project. The assessment shall be designed to provide data that can be used in the future to determine whether the turbines and associated facilities are the cause of disruption or interference of television reception or microwave patterns in the event residents should complain about such disruption or interference after the turbines are placed in operation. The assessment shall be completed prior to operation of the turbines. The Permittee shall be responsible for alleviating any disruption or interference of these services caused by the turbines or any associated facilities.

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

## **E. SITE LAYOUT RESTRICTIONS**

### 1. WIND TURBINE TOWERS

Structures for wind turbines shall be self-supporting tubular towers. The towers shall not be more than 328 feet (100 meters) above grade at hub height.

### 2. METEOROLOGICAL TOWERS

Permanent towers up to 100 feet high for meteorological equipment shall be free standing. Temporary meteorological towers, which are those that will be removed no more than one year after the Project's in-service date, and all meteorological towers over 100 feet high may be guyed

if the landowner has given written permission and the guys are properly marked with safety shields.

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

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

### 3. NOISE

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

### 4. FEDERAL AVIATION ADMINISTRATION

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

### 5. TURBINE SPACING

The turbine towers shall be constructed within the site boundaries as shown in the attached map. The turbine towers shall be spaced no closer than 3 RD in the non-prevailing wind directions and 5 RD on the prevailing wind directions. If required during final micro siting of the turbine towers to account for topographic conditions, up to 20 percent of the towers may be sited closer than the above spacing but the Permittee shall minimize the need to site the turbine towers closer.

### 6. FOOTPRINT MINIMIZATION

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

## 7. ELECTRICAL CABLES

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

## 8. FEEDER LINES

The Permittee shall place overhead or underground 34.5 kV electric lines, known as feeders, within public rights-of-way or on private land immediately adjacent to public rights-of-way if a public right-of-way exists, except as necessary to avoid or minimize human, agricultural, or environmental impacts. A change in feeder line locations may be made as long as feeders remain on public rights-of-way and approval has been obtained from the governmental unit responsible for the affected right-of-way. When placing feeders on private property, the Permittee shall place the feeder in accordance with easements negotiated with the affected landowners. In all cases, the Permittee shall avoid routing feeder lines in locations which may interfere with agricultural operations. Notwithstanding any of the requirements in paragraph III.D. to conduct surveys before any construction can commence, the Permittee may begin immediately upon issuance of this permit to construct the 34.5 kV feeder lines that will be required as part of this Project. The Permittee shall submit the site plan and engineering drawings required under paragraph III.A.1. for the feeder lines before commencing construction. Any guy wires on the structures for feeder lines shall be marked with safety shields.

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

## F. STUDIES

### 1. WAKE LOSS STUDIES

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

### 2. NOISE

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

## G. DECOMMISSIONING/RESTORATION/ABANDONMENT

### 1. DECOMMISSIONING PLAN

Prior to commencement of construction, the Permittee shall submit to the Commission a Decommissioning Plan describing the manner in which the Permittee anticipates

decommissioning the Project in accordance with the requirements of Minnesota Rules part 7836.0500, subp.13. The Permittee shall ensure that it carries out its obligations to provide for the resources necessary to fulfill its requirements to properly decommission the Project at the appropriate time. The Commission may at any time request the Permittee to file a report with the Commission describing how the Permittee is fulfilling this obligation.

## 2. SITE RESTORATION

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

## 3. ABANDONED TURBINES

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

# H. REPORTING

## 1. PROJECT ENERGY PRODUCTION

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

## 2. WIND RESOURCE USE

Beginning the first full quarter following the commercial operation of the wind farm, the Permittee shall file a quarterly report (due January 15, April 15, July 15, and October 15) with the Commission with the following average hourly data for each hour of commercial operation in printed format or electronic format capable of computerized analysis as specified by the Commission. That data entails:

- (a) The power output of each turbine;

(b) The wind speed and direction measured at all monitored heights at any temporary and permanent meteorological towers, connected to the SCADA system, owned or operated by the Permittee, in or within three miles of the Project site boundary; and

(c) Temperature and any other meteorological parameters recorded at one permanent meteorological tower selected by the Commission.

After two years of commercial operation, the Commission may reduce or eliminate the requirements of this condition. The provisions of paragraph III.K.5. shall apply to the Commission's review of this data.

### 3. EXTRAORDINARY EVENTS

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

### 4. COMPLAINTS

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

## I. FINAL CONSTRUCTION

### 1. AS-BUILT PLANS AND SPECIFICATIONS

Within 60 days after completion of construction, the Permittee shall submit to the Commission a copy of the as-built plans and specifications. The Permittee must also submit this data in a geographic information system (GIS) compatible format so that the Commission can place it into the Land Management Information Center's geographic data clearinghouse located in the Office of Geographic and Demographic Analysis.

### 2. FINAL BOUNDARIES

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

### 3. EXPANSION OF SITE BOUNDARIES

No expansion of the site boundaries described in this Permit shall be authorized without the approval of the Commission. The Permittee may submit to the Commission a request for a

change in the boundaries of the site for the LWECS. The Commission will respond to the requested change in accordance with applicable statutes and rules.

## **J. AUTHORITY TO CONSTRUCT LWECS**

### **1. WIND RIGHTS.**

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

### **2. OTHER PERMIT APPLICATIONS.**

Nothing in this Permit shall be construed to preclude any other person from seeking a site permit to construct a large wind energy conversion system in any area within the boundaries of the Project covered by this Permit if the Permittee does not hold exclusive wind rights for such areas.

### **3. PREEMPTION OF OTHER LAWS**

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

### **4. POWER PURCHASE AGREEMENT**

This Permit does not authorize construction of the Project until the Permittee has obtained a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the Project. In the event the Permittee does not obtain a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the Project within two years of the issuance of this Permit, the Permittee must advise the Commission of the reason for not having such 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 Minnesota Statute 216F.05 and Minnesota Rule 7836.1300.

## **K. MISCELLANEOUS**

### **1. PERIODIC REVIEW**

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

### **2. FAILURE TO COMMENCE CONSTRUCTION**

If the Permittee has not completed the pre-construction surveys required in paragraph III.D., and commenced construction of the LWECS within two years of the issuance of this Permit, the

Permittee must advise the Commission of the reason construction has not commenced. In such event, the Commission may determine whether this Permit should be revoked. No revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minnesota Statute section 216F.05 and Minnesota Rule 7836.1300.

### 3. MODIFICATION OF CONDITIONS

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

- (a) Violation of any condition in this Permit;
- (b) Endangerment of human health or the environment by operation of the facility: or
- (c) Existence of other grounds established by rule.

### 4. REVOCATION OR SUSPENSION OF THE PERMIT

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

- (a) A false statement was knowingly made in the application or in accompanying statements or studies required of the applicant, 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 or rule or an order of the Commission.

In the event the Commission shall determine that it is appropriate to consider revocation or suspension of this Permit, the Commission shall proceed in accordance with the requirements of Minnesota Statute section 216F.05 to determine the appropriate action. Upon a finding of any of the above, the Commission may require the Permittee to undertake corrective measures in lieu of having the Permit suspended or revoked.

### 5. PROPRIETARY INFORMATION

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

### 6. TRANSFER OF PERMIT

The Permittee may not transfer this Permit without the approval of the Commission. If the Permittee desires to transfer this Permit, the holder shall advise the Commission in writing of

such desire. The Permittee shall provide the Commission with such information about the transfer as the Commission requires to reach a decision. The Commission may impose additional conditions on any new Permittee as part of the approval of the transfer.

#### 7. OTHER PERMITS

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

#### 8. SITE MANAGER

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

#### 9. NOTICE TO LOCAL RESIDENTS

The Permittee shall, within ten working days of receipt of this Permit, send a copy of the Permit to the office of the auditor of each county in which the site is located and to the clerk of each city and township within the site boundaries. If applicable, the Permittee shall also, within 10 working days of issuance, send a copy of this Permit to each regional development commission, local fire district, soil and water conservation district, watershed district, and watershed management district office with jurisdiction in the county where the site is located. Within 30 days of issuance of this Permit, the Permittee shall send a copy of the Permit to each affected landowner within the site. In no case shall the affected landowner receive the site permit less than five days prior to the start of construction on their property.

#### 10. RIGHT OF ENTRY

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

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

#### **11. MORE STRINGENT RULES**

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

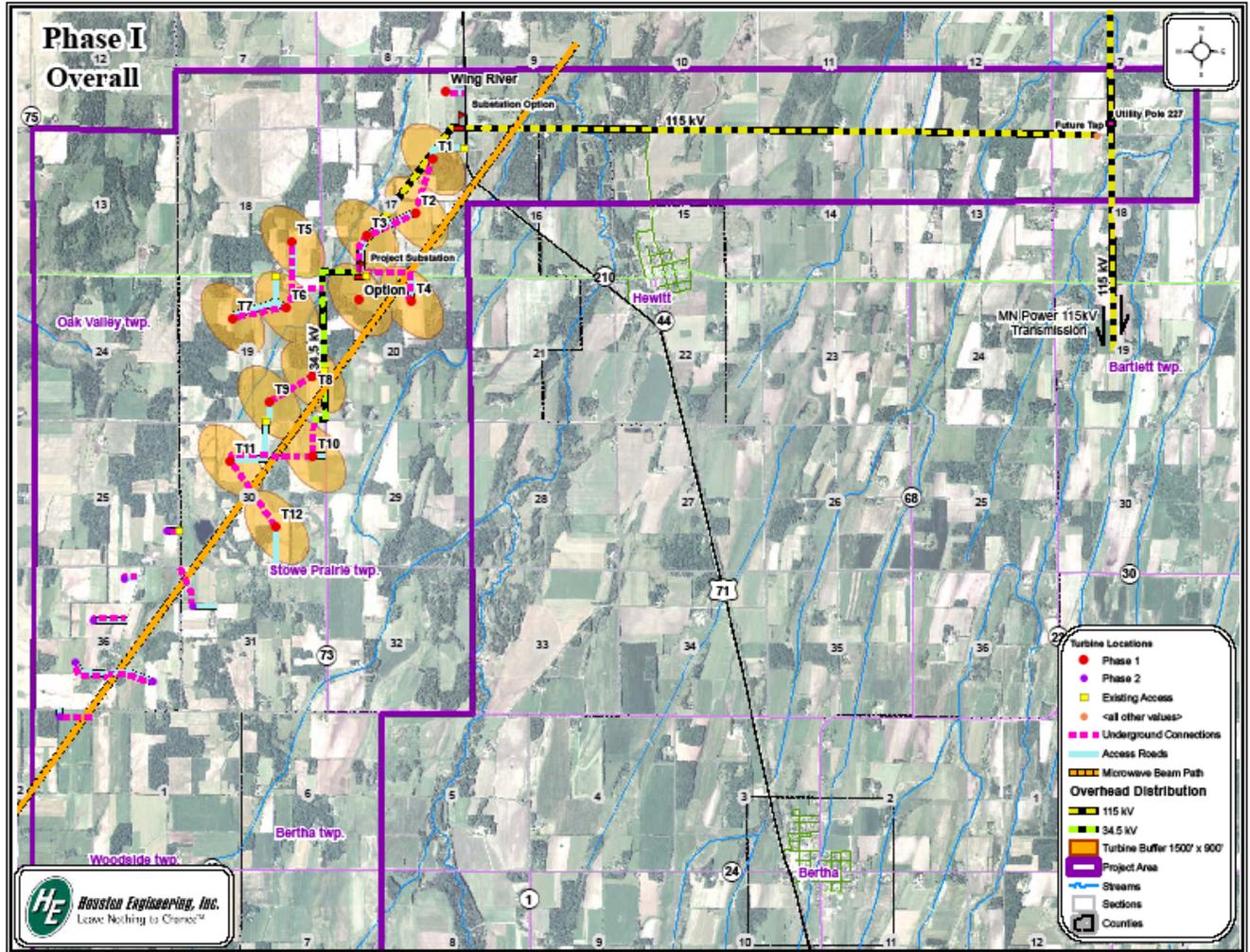
#### **L. EXPIRATION DATE**

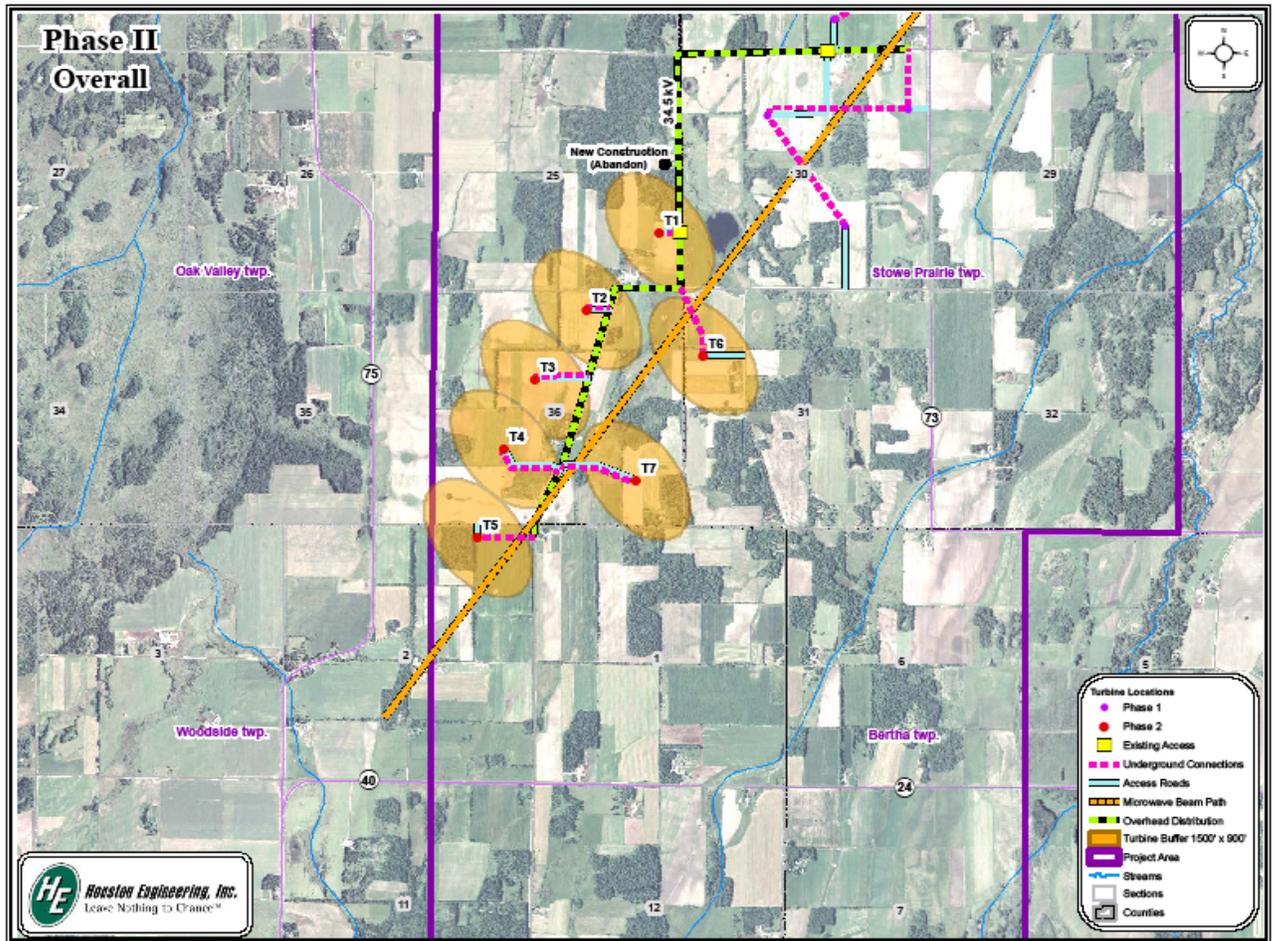
This Permit shall expire on May 1, 2039.

#### **M. SPECIAL CONDITIONS**

Special conditions shall take precedence over any of the other conditions of this Permit if there should be a conflict between the two. No special conditions have been identified.

# SITE BOUNDARY MAPS





**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 (Bear Creek Wind Partners, LLC) concerning Permit conditions for site preparation, construction, cleanup and restoration, operation and resolution of such complaints.

**B. Scope:**

This document describes Complaint reporting procedures and frequency.

**C. Applicability:**

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

**D. Definitions:**

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

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

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

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

**E. Complaint Documentation and Processing:**

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

**F. Reporting Requirements:**

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

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to Wind Permit Compliance, 1-800-657-3794, or by e-mail to: [DOC.energypermitcompliance@state.mn.us](mailto:DOC.energypermitcompliance@state.mn.us), or. Voice messages are acceptable.

Monthly Reports: By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be Filed to Dr. Burl W. Haar, Executive Secretary, Commission using the Minnesota Department of Commerce eDocket system (see eFiling instructions attached to this permit).

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

**G. Complaints Received by the Commission or OES**

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

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

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

**I. Permittee Contacts for Complaints:**

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

ATTN: Bear Creek Wind Partners, LLC  
PlainStates Energy  
27451 S. Hwy 34  
Barnesville, MN 56514

Tel: 701-232-4948

Email Address: [ljihle@rrt.net](mailto:ljihle@rrt.net)

**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 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, Commission, through the Department of Commerce (DOC) eDocket system. The system is located on the DOC website:  
<https://www.edockets.state.mn.us/EFiling/home.jsp>

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

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

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

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

PERMIT COMPLIANCE FILINGS<sup>1</sup>

**PERMITTEE:** Bear Creek Wind Partners, LLC  
**PERMIT TYPE:** LWECS Site Permit  
**PROJECT LOCATION:** Todd and Otter Tail counties  
**PUC DOCKET NUMBER:** IP-6629/WS-07-297

<b>Filing Number</b>	<b>Condition</b>	<b>Description</b>	<b>Due Date</b>	<b>Notes</b>
1	A.1.	Site Plan	Prior to starting construction	
2	A.2.	Field Representative	Prior to and throughout construction	
3	B.8.	Roads	Identify access roads and obtain road damage agreements before starting construction	
4	B.9.	Soil Erosion and Sediment Control Plan	NDPES Stormwater Runoff Control Permit	
5	B.15	Educational Materials	Submit Upon Request	
6	B.16	Fire Protection Plan	Submit Upon Request. Must Register in 911 Program	
7	C.6.	Native Prairie Protection Plan	60 days prior to the start of construction, if required	

<b>8</b>	D.1.	Biological Survey	Pre-construction Meeting	
<b>9</b>	D.2	Archaeological Resources	Pre-construction Meeting and as Recommended by the State Historic Preservation Office	
<b>10</b>	D.3.	Electromagnetic Interference	Pre-construction Meeting	

<b>11</b>	F.1	Wake Loss	Include with site plan or operation studies if performed	
<b>12</b>	F.2	Noise Study	Upon Request	
<b>13</b>	G.1.	Decommissioning Study	Part of Application	
<b>14</b>	H.1	Project Energy Production	Due 7/15 each year or quarterly	
<b>15</b>	H.2	Wind Resource Use	Within 3 months after Operation or SCADA Access	
<b>16</b>	I.1.	As Builts	Within 60 days of Completions of Construction	
<b>17</b>	J.1.	Wind Rights	Within 30 days of Acquiring. Upon Request.	
<b>18</b>	K.2.	Failure to Start Construction	Within 2 years of Permit Issuance	

<b>19</b>	K.8	Site Manager	Prior to Operation	
<b>20</b>	Complaints	Report	Due Each Month or within 24 hours	

<sup>1</sup> 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.