



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

DOCKET No. IP6632/WS-07-389

Meeting Date: April 26, 2007.....Agenda Item # _____

Company: Moraine Wind II, LLC

Docket No. **PUC Docket Number: IP6632/WS-07-389**
In the Matter of a Site Permit Application for the up to 49.9 MW Moraine Wind II Project in the Minnesota Counties of Pipestone and Murray.

Issue(s): 1) Should the Commission accept, conditionally accept, or reject the Site Permit Application?

If the application is accepted, should the PUC:

2) Appoint a public advisor; 3) Make a preliminary determination on whether a draft site permit may be issued or should be denied and authorize a draft site permit for distribution and public comment?

DOC Staff: Adam Sokolski.....651-296-2096

Relevant Documents (in Commission Packet)

Application of Moraine Wind II, LLC.....April 11, 2007

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).

Documents Attached

1. Proposed Draft Site Permit

See eDockets (07-389) or the PUC website at:

<http://energyfacilities.puc.state.mn.us/Docket.html?Id=19093> for project related documents.

Statement of the Issues

- 1) Should the Public Utilities Commission (the PUC or Commission) accept, conditionally accept, or reject the application of Moraine Wind II, LLC?

If the application is accepted, should the PUC:

- 2) Appoint a public advisor?
- 3) Make a preliminary determination on whether a site permit may be issued or denied and authorize a draft site permit?

Introduction and Background

The Applicant and Project Ownership

PPM Energy, an unregulated subsidiary of Scottish Power, has submitted the site permit application on behalf of its affiliate Moraine Wind II, LLC. Moraine Wind II, LLC, a Minnesota based Limited Liability Company, will own the Project including all equipment up to the low side of the 115 kV busbar at the Chanarambie substation.

Moraine Wind II, LLC, is a wholly owned affiliate of PPM Energy, Inc, of Portland Oregon. PPM Energy develops wind projects across the United States and natural gas generation operations in the western U.S. PPM owns and operates the 100 MW Trimont Wind Project in Jackson and Martin counties, the 150 MW MinnDakota Wind Project in Lincoln County, Minn, and Brookings County, SD, and the 51 MW Moraine I Wind Project in Pipestone and Murray counties.

Project Location

PPM Energy controls approximately 16,000 acres of land and wind rights within the proposed 27,000 acre project site. The project site is located in Pipestone and Murray counties, approximately 5 miles north of the towns of Lake Wilson and Woodstock. The site includes the portions of the following townships: Aetna, Ellsborough, Rock, Cameron, and Chanarambie.

The proposed site is comprised primarily of agricultural lands. It is anticipated that the area of direct land use for the turbines, associated facilities, and access roads would be approximately 16 – 27 acres. The Applicant has easements or options on the land and wind rights necessary within

the site to build the project. Land rights will encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads, electrical collection system, and transmission lines located on public roads when necessary.

The project area includes and is immediately adjacent to several existing and permitted, but not yet constructed, wind farms. Existing wind development in the area includes the Buffalo Ridge Phase 3, Woodstock, Chanarambie and Moraine I wind farms. Wind generating capacity from these facilities combined is approximately 245 MW. Two additional projects, Stoneray and Ridgewind, have been permitted and are expected to be built close to the Moraine II site within the next two years. Total wind generation in the area will exceed 430 MW if the Moraine II, Stoneray and Ridgewind projects are built.

Finally, between 2001 and 2003, the EQB issued a series of site permits, permit transfers, and amendments for what is now known as the Moraine I wind energy project. The Moraine I project is owned by PPM Energy. The project was planned for up to 130.5 MW built in three separate phases, however only the 51 MW Phase 1 was built. The site permits for the second and third phases have now expired. The Moraine II project includes most of the Moraine I site as well as additional lands outside of the Moraine I site, which is shown on Figure 5-3 of the Application. PPM Energy is planning, and the draft site permit requires, the Moraine Wind II project maintain considerable separation between the proposed turbines and all other existing and permitted wind turbines to prevent turbulence induced wake losses.

Moraine Wind II, LLC Project Description

The Applicants have not made a final selection of a wind turbine model and size. PPM Energy proposes to use utility grade wind turbines between 1.5 MW – 3.0 MW in nameplate generating capacity for the project. The Application provides data on four representative utility scale wind turbine models in the 1.5 – 3.0 MW range. A total of 16 – 33 turbines may be used depending on the final project design and the model of turbine selected. The towers will be between 80 meters (262 feet) and 105 meters (344 feet) in hub height. The rotor diameter of the turbines will be between 78 – 100 meters. The maximum overall height of the wind turbines is between approximately 119 meters (390 feet) – 150 meters (493 feet) above grade. Table 2-1 of the Application provides a side by side comparison of the turbine models under consideration.

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 5.5 and 20.4 revolutions per minute, depending on the turbine model used.

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

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, meteorological towers, and an operations and maintenance building.

Energy from the project will be delivered to the Chanarambie Substation under the terms of its interconnection agreement with Xcel Energy.

At this time, the Moraine Wind II, LLC, project has not obtained a power purchase agreement for the sale of electricity generated by the project. PPM Energy indicates that the anticipated in-service date for the Moraine Wind II project is in the 2008 – 2009 timeframe.

Regulatory Process and Procedures

A Certificate of Need from the Minnesota Public Utilities Commission (PUC) is not required because the project does not exceed the Certificate of Need project size threshold.

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

Application Acceptance. Minnesota Rule 4401.0460 states that: “Within 30 days after receipt of an application for a site permit, the PUC shall accept, conditionally accept, or reject the application.” On April 11, 2007, PPM Energy, on behalf of Moraine Wind II, LLC, filed a LWECS Site Permit Application with the Public Utilities Commission. The required contents of a site permit application are specified in Minnesota Rule 4401.0450.

Public Advisor. Minnesota Rule 4401.0470 states: “Upon acceptance of an application for a site permit, the PUC shall designate a staff person to act as the public advisor on the project.” The Commission can authorize the Department to name a staff member from the EFP staff as the public advisor or assign a PUC staff member.

Preliminary Determination. Minnesota Rule 4401.0500 Subpart 1. states that: “Within 45 days after acceptance of the application by the PUC, the PUC shall make a preliminary determination whether a permit may be issued or should be denied. If the preliminary determination is to issue a permit, the PUC shall prepare a draft site permit for the project. The draft site permit must identify the permittee, the proposed LWECS, and proposed permit conditions.”

Issuing a draft site permit does not authorize a person to construct an LWECS. The PUC may change, amend or modify the draft site permit in any respect before final issuance or may deny the site permit at a later date. EFP staff will bring this matter back to the Commission for final action upon the conclusion of the public participation process.

DOC EFP Staff Analysis and Comments

The Moraine Wind II site permit application has been reviewed by DOC EFP staff pursuant to the requirements of Minnesota Rules Chapter 4401 (Wind Siting Rules). The application provides all of the information required by Minnesota Rule 4401.0450. Acceptance of the

application will allow staff to initiate the public review and participation process of Chapter 4401.

EFP staff used the information in the application and experience with other LWECS projects as a guide for evaluating whether a permit may be issued for the project or should be denied, pursuant to Minnesota Rules 4401 0500 Subpart 1. EFP staff finds that the available information is sufficient to conclude that it is appropriate to make a preliminary determination that a site permit may be issued for the project. EFP staff has prepared a draft permit identifying the permittee, the proposed LWECS, and proposed permit conditions. The proposed draft site permit is attached to these Comments and Recommendations. Commission approval of the draft site permit will allow for distribution of the draft site permit, initiation of the public review process and begin a formal public comment period.

Commission Decision Options

1) Application Acceptance

- A) Accept the Moraine Wind II, LLC Site Permit Application for up to a 49.9 Megawatt Large Wind Energy Conversion System (LWECS).
- B) Reject the Application as incomplete and issue an order indicating the specific deficiencies to be remedied before the Application can be accepted.
- C) Find the Application complete upon the submission of supplementary information.
- D) Make another decision deemed more appropriate.

2) Public Advisor

- A) Authorize the Minnesota Department of Commerce Energy Facilities Permitting staff to name a public advisor for this project.
- B) Appoint a PUC staff person as public advisor.
- C) Make another decision deemed more appropriate.

3) Preliminary Determination and Authorization of a Draft Site Permit

- A) Make a preliminary determination that a draft site permit may be issued; and approve the attached proposed draft site permit for the Moraine Wind II, LLC, project for distribution and public comment. Authorize EFP staff to initiate the public participation process found in Minnesota Rules 4401.0550.
- B) Make a preliminary determination that a draft site permit may be issued; and amend or modify the attached proposed draft site permit for the Moraine Wind II, LLC, project for distribution and public comment. Authorize EFP staff to initiate the public participation process found in Minnesota Rules 4401.0550.
- C) Make a preliminary determination that a draft site permit should be denied.
- D) Make some other decision deemed more appropriate.

DOC EFP Staff Recommendation: Staff recommends option 1A, 2A, and 3A.