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December 12, 2013

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

RE: Comments and Recommendations of the Department of Commerce Energy Environmental Review and Analysis Staff
Docket No. IP-6828/WS-09-1197

Dear Dr. Haar:

Attached please find the initial comments and recommendations of the Department of Commerce Energy Environmental Review and Analysis staff in the following matter:

> Application of Pleasant Valley Wind, LLC for a Site Permit for the 300 MW Pleasant Valley Project in Dodge and Mower Counties

The petition for modification or amendment to the site permit for the Pleasant Valley Wind Farm was filed on November 25, 2013, by:

Brian M. Meloy Leonard, Street and Deinard 150 South Fifth Street, Suite 2300 Minneapolis, MN 55402	Andrew J. Gibbons Leonard, Street and Deinard 150 South Fifth Street, Suite 2300 Minneapolis, MN 55402

DOC EERA may submit reply comments by December 19, 2013, if warranted, and is available to answer questions the Commission may have.

Sincerely,

/s/ LARRY B. HARTMAN
DOC EERA Staff

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BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS AND RECOMMENDATIONS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
ENERGY ENVRIONMENTAL REVIEW AND ANALYSIS STAFF

DOCKET NO. IP-6828/WS-09-1197

Date: December 12, 2013

EFP Staff: Larry B. Hartman…….651-539-1839

In the Matter of the Application of Pleasant Valley Wind, LLC for a Site Permit for a 301 MW Large Wind Energy Conversion System in Dodge and Mower Counties.

Issues Addressed: Department of Commerce, Energy Environmental Review and Analysis (EERA) staff's comments on the Pleasant Valley Wind, LLC's petition for modification or amendment of the site permit at Sections 1, 2.2, and 4.9. EERA staff is also proposing a minor modification at Section 6.7.3 [Immediate Incident Reports], for the Pleasant Valley Wind Project in Dodge and Mower counties.

Document Attached:

Attachment 1 – Site Map

INTRODUCTION AND BACKGROUND

On October 27, 2010, the Minnesota Public Utilities Commission (Commission) issued a site permit to Pleasant Valley Wind, LLC (Pleasant Valley Wind) to construct the 301 MW Pleasant Valley Wind Project in Dodge and Mower Counties. On February 20, 2013, the Commission issued an amendment to the Site Permit to allow Pleasant Valley additional time to secure an "enforceable mechanism for sale of the electricity to be generated by the project," complete pre-construction surveys, and commence construction of the Pleasant Valley Wind Project (as amended, the "Site Permit."[1]

[1] Commission Order Amending Site Permit for Pleasant Valley Wind Project. See eDockets, Document ID 20132-83965-01

Since the amended Site Permit was issued, Pleasant Valley Wind has continued its efforts to develop the Project. Subsequently, Northern States Power company d/b/a Xcel Energy (Xcel Energy) has agreed to purchase the Project from Pleasant Valley Wind upon completion of construction. Construction is now anticipated to begin by June 2014.

The amended site permit specifies in Section 1, the project description, two types of wind turbine generators and associated tower heights. They were the GE 1.5 MW and Siemens 2.3 MW wind turbine generators.

On November 25, 2013, Pleasant Valley Wind filed with the Commission a petition to amend the Site Permit to specify use of an alternative wind turbine (Vestas V100 2.0 MW wind turbine) and other associated changes to the amended Site Permit for the Pleasant Valley Wind Project.[2]

On November 27, 2013, the Commission issued notice soliciting comments on an amendment to the site permit to specify a different type of wind turbine model, a different total number of turbines and a different preliminary turbine layout.[3]

REGULATORY PROCESS AND PROCEDURES

Siting of Large Wind Energy Conversion Systems are governed by Minnesota Statutes, §216F. Minnesota Statutes 216F.03 states:

"The legislature declares it to be the policy of the state to site LWECS in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources."

Minnesota Rules, part 7854.1000, subpart 1, directs the Commission to make a final site permit decision based on the record that has been compiled in the matter. Minnesota Rule, part 7854.1000, subpart 3, requires that the Commission determine that:

"…the project is compatible with environmental preservation, sustainable development, and the efficient use of resources, and the applicant has complied with this chapter."

Minnesota Rules, part 7854.1300, subpart 2, states that:

"The Commission may amend a site permit for an LWECS at any time if the commission has good cause to do so."

[2] See eDockets, Document ID # 201311-94016-01
[3] See eDockets, Document ID # 201311-94128-02

EERA STAFF ANALYSIS AND COMMENTS

Because the Commission found in both its initial permit and amended permit decision that the proposed project is compatible with environmental preservation, sustainable development and the efficient use of resources, it would appear that any other permit amendment should also meet those standards. To that end, EERA staff focused its analysis on Project changes that would substantially change the findings accompanying the Commission's original permit decision, and potentially change the Commission's determination that the project is compatible with the standards set out in Statute and Rule.

In additional, staff suggests a potential permit amendment not requested by the applicant.

PROJECT CHANGES

Pleasant Valley Wind in its November 25, 2013, petition proposes to amend the site permit to specify a different type of turbine, a different total number of turbines and a different preliminary turbine layout. Pleasant Valley Wind is also requesting that the Certificate of Need (CN) for the Project (Docket # 09-937) be reduced from 301 MW to 200 MW. Pleasant Valley Wind is not proposing any other changes to the project or the site permit.

Turbine Model. Pleasant Valley Wind has selected the Vestas V100 2.0 MW wind turbine generator on 311.7 foot (95 meter) towers with a rotor diameter of 328.1 feet (100 meters). This turbine selection requires a modification to the amended site permit in the introductory paragraph and at Sections 1, 2.2, and 4.9, as described below.

Proposed Introductory Paragraph Modification

The petition noted that the introductory paragraph in the amended site permit should be modified to reflect the reduced size of the project from 301 MW to 200 MW. Staff believes that a change to this paragraph is appropriate and proposes the following introductory language to reflect this requested change in the size of the project and to provide the correct county location of the Pleasant Valley Wind Project.

> This **SITE PERMIT** for a Large Wind Energy Conversion System (LWECS) authorizes Pleasant Valley Wind, LLC ("Permittee") to construct and operate the Pleasant Valley Wind Project ("Project"), up to a ~~301~~ 200 Megawatt (MW) nameplate capacity LWECS and associated facilities in ~~Stearns County~~ Mower and Dodge counties, on a site of approximately 70,000 acres in accordance with the conditions contained in this permit.

ERRA Staff Comments. EERA staff notes that the proposed modification to the introductory paragraph reduces the project size from 301 MW to 200 MW and replaces "Stearns County" with the two correct counties, "Mower and Dodge counties." This modification is necessary if the other requested amendments are adopted by the Commission.

Section 1 Project Description

Because Pleasant Valley Wind has selected the Vestas V100 2.0 MW wind turbine for this project, rather than the GE 1.5 MW or Siemens 2.3 MW wind turbine as stated in the amended permit, Pleasant Valley Wind suggests modifying Section 1 [Project Description] to reflect the wind turbine model that will be used and offered the following language:

> The up to ~~301~~ 200 MW nameplate capacity LWECS authorized to be constructed in this permit will be developed and constructed by the Permittee. The Project will consist of up to ~~188 General Electric 1.5 MW wind turbine generators with Wind BOOST Control System on 262.5 foot (80 meter) towers with a rotor diameter of 270 feet (82.5 meters) or 130 Siemens 2.3 MW wind turbine generators on 262.5 foot (80 meter) towers with a rotor diameter of 331 feet (101 meters) one hundred Vestas V100 2.0 MW wind turbine generators on 311.7 foot (95 meter) towers with a rotor diameter of 328.1 feet (100 meters)~~ one hundred Vestas V100 2.0 MW wind turbine generators on 311.7 foot (95 meter) towers with a rotor diameter of 328.1 feet (100 meters) having a combined nominal nameplate capacity of up to ~~301~~ 200 MW. Associated facilities will include. . . .

EERA Staff Comments. Selection of the Vestas V100 2.0 MW wind turbine for the project, although on a taller tower and with a larger rotor diameter (RD) does not affect the ability of the project to comply with site setback requirements and site layout restrictions in the amended site permit. Staff believes the turbine modification request is appropriate and reflects an industry trend towards towers taller than 80 meters in height and the use of turbines with a larger rotor diameter. In Minnesota, examples of this trend include the recently permitted and constructed Big Blue Project in Faribault County and the Community Wind South Project in Nobles County.

Based on a staff review of all the major project characteristics, permit requirements and other factors staff believes use of the Vestas V100 2.0 MW wind turbine on a 95 meter tower remains compatible with environmental preservation, sustainable development, and the efficient use of resources as noted in comments under Sections 2.2 and 4.9.

Section 2.2 Turbine Layout

The proposed amendment to Section 2.2 references the revised preliminary turbine and associated facility layout (included as Attachment 1 to this document).[4] In its petition, Pleasant Valley Wind suggested modifying Section 2.2 [Turbine Layout] and offered the following language:

> ~~Two preliminary wind turbine and associated facility layouts are shown on maps at Attachments 1A and 1B~~. The preliminary layout of wind turbine generators and associated facilities is shown in Attachment 1. ~~Each~~ This preliminary layout represents

[4] See eDockets, Document ID 201311-94016-01, Attachment 1

> the approximate location of wind turbines and associated facilities within the Project boundary. . . .

EERA Staff Comments. Staff has reviewed the preliminary turbine layout provided for the Vestas V100 wind turbine and finds that all turbines are within the project boundary as identified in the amended site permit. The Vestas V100 turbine layout also complies with and meets all setback requirements and site layout restrictions identified in the site permit.

Staff also reviewed the sound (noise) modeling results provided with the petition filed on November 25, 2013, for the Vestas V100 turbine and finds that the sound pressure levels modeled at each of the 551 receptors within the Project area are within the allowable limits under the Minnesota Pollution Control Agency (MPCA) Noise Standards (Minnesota Rules, Chapter 7030). [5]

Staff also reviewed the Shadow Flicker Assessment filed with the petition for permit amendment.[6] Shadow flicker is defined as the modulation of light levels result from the periodic passage of a rotating wind turbine blade between the sun and a viewer. The duration of shadow flicker experience at a specific location can be determined using a purely geometric analysis which takes into account the relative positions of the sun throughout the year, the wind turbines at the site, and the viewer. Shadow flicker was calculated at 448 receptors located within 1,450 meters (4,750 feet) or (10 times tip height). The analysis provided isopleths for 100, 50 and 25 hours / year of potential shadow flicker. Figure 4-1 in Attachment 3 presents the shadow flicker duration isopleths for each turbine. The participating receptor that is predicted to experience the most hours of shadow flicker in one year is receptor 72. The predicted duration of shadow flickers is 50 hours per year, taking into account annual cloud cover.

Section 4.9 Wind Turbine Towers

The proposed amendment to Section 4.9 [Wind Turbine Towers] allows for use of a taller turbine tower to support the Vestas V100 2.0 MW wind turbine. In its petition, Pleasant Valley Wind suggested modifying Section 2.2 [Turbine Layout] and offered the following language:

> Structures for wind turbines shall be self-supporting tubular towers. The Towers may be up to ~~80~~ 95 meters (~~262.5~~ 311.7 feet) above grade, measured from the foundation to ~~at~~ hub height.

EERA Staff Comments. The petition for permit amendment also requested authorization to use a taller tower. Rather than an 80 meter tower, they are requesting use of a 95 meter tower, which is an increase of 15 meters or approximately 49.2 feet. Staff also believes this is a reasonable request and because of turbine spacing requirements based on rotor diameters (RD), the project

[5] See eDockets, Document ID 201311-94016-01, Attachment 2
[6] See eDockets, Document ID 201311-94016-01, Attachment 3

will not be visibly different from other wind farms in the area (Wapsipinicon and Grand Meadow).

The petition also noted that the wind turbine foundations may be slightly above grade, such that the hub height may be up to two (2) feet higher than the tower specification. The amended permit language suggested by the permittee, above, includes "from the foundation to" for clarifying purposes. Although staff believes this is an appropriate modification, it is also believed that additional clarity could be provided by modifying Section 4.9 to read as follows:

> Structures for wind turbines shall be self-supporting tubular towers. The towers may be up to ~~80~~ 95 meters (~~262.5~~ 311.7 feet) above grade, measured from the top of the foundation to ~~at~~ hub height.

ADDITIONAL SUGGESTED AMENDMENT

Since issuance of a site permit on October 27, 2010, and as amended on February 20, 2013, Pleasant Valley Wind's site permit is current with all other conditions and requirements.

However, ongoing discussions between EERA and DNR staff on avian and bat reporting requirements have resulted in a proposed minor modification to the language in Section 6.7.3 [Immediate Incident Report], in another docket (Stoneray Power Partners (13-216)), currently before the Commission. The proposed language in the Draft Site Permit for the Stoneray Project reads as follows:

> 6.7.3 Immediate Incident Reports
>
> The Permittee shall notify the Commission, USFWS, and DNR within twenty-four (24) hours of the discovery of any of the following:
>
> (a) five or more dead or injured non-protected or migratory avian or bat species within a five-day period; or
> (b) an incident of one or more dead or injured state threatened, endangered, or species of special concern;
> (c) one or more dead or injured federally listed species; or
> (d) one or more bald eagles.

ERRA Staff Comment. In an August 30, 2013, DNR letter filed for the Stoneray Project[7] (Docket No. IP-6646/WS-13-216), the DNR commented that the notification requirement (6.7.3) would likely be over burdensome on both a permittee and the DNR. The DNR also commented that "other reporting frequency/methods could capture trends in fatalities in a more efficient manner" and suggested the site permit language be modified. Consequently, this section of the permit was modified to read as illustrated above.

[7] See eDockets, Document ID 20138-90818-01, p.3.

EERA staff suggests editing the site permit language at Section 6.7.3 [Immediate Incident Report], for the Pleasant Valley Permit to increase the count for immediate incidence reports for migratory birds from one to five and the time period for reporting. This suggested change, if adopted, is consistent with the site permit language proposed for the Stoneray Project, and also presents the opportunity to consider this modification in conjunction with the other requested amendments. The reporting for threatened or endangered, federally-listed species or bald eagles would remain as per each incident. ERRA staff proposes modifying Section 6.7.3 as follows:

> 6.7.3 Immediate Incident Reports
>
> The Permittee shall notify the Commission, USFWS, and DNR within twenty-four (24) hours of the discovery of any of the following:
>
> (a) five or more dead or injured non-protected or migratory avian or bat species within a ~~reporting~~ five-day period; or
> ~~(b) one or more dead or injured migratory avian or bat species;~~
> (~~c~~b) an incident of one or more dead or injured state threatened, endangered, or species of special concern;
> (~~d~~c) one or more dead or injured federally listed species; or
> (~~e~~d) one or more bald eagles.

Staff discussed this language modification with representatives of the Pleasant Valley Wind Farm Project and they are supportive of this unsolicited site permit amendment.

EERA STAFF RECOMMENDATIONS

Staff recommends that the Commission approve of the proposed permit amendments requested by the Permittee and as modified or proposed by staff as described above for: the Permit Introduction, Section 1 [Project Description], Section 2.2 [Project Description], Section 4.9 [Wind Turbine Towers] and Section 6.7.3 [Immediate Incident Reports].