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November 13, 2012

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

RE: **Reply Comments of the Department of Commerce Energy Facility Permitting Staff**
Docket No. IP-6853/WS-10-1240

Dear Dr. Haar:

Attached please find the reply comments of the Department of Commerce Security Energy Facility Permitting in the following matter:

Site Permit Application for a 42 Megawatt Large Wind Energy Conversion System in Stearns County, Minnesota

The site permit application was filed on December 6, 2010, by:

Patrick Smith
Black Oak Wind, LLC
7650 Edinborough Way, Suite 7250
Edina, MN 55435

Energy Facility Permitting staff has prepared comments replying to Comments and Exceptions received by Black Oak Wind, LLC and by the Department of Natural Resources. EFP staff is available to answer any questions the Commission may have.

Sincerely,

A handwritten signature in black ink that reads "Suzanne Lamb Steinhauer". The signature is written in a cursive, flowing style.

Suzanne Lamb Steinhauer
Energy Facility Permitting

Attachments



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

DOCKET NO. IP-6853/WS-10-1240

EFP Staff: Suzanne Lamb Steinhauer.....651-296-2888
Date: November 13, 2012

In the Matter of the Site Permit Application for a 42 Megawatt (MW) Large Wind energy Conversion System (LWECS) in Stearns County

Issues Addressed: These reply comments address the initial comments received on the Department of Commerce, Energy Facility Permitting (EFP) staff's comments, proposed findings of fact and proposed LWECS site permit for the proposed Black Oak Wind Farm.

Documents Attached:

1. Revised complaint procedure

Additional documents and information can be found on eDockets:

<https://www.edockets.state.mn.us/EFiling/search.jsp> (10-1240), and on the Department's energy facilities permitting website: <http://mn.gov/commerce/energyfacilities/Docket.html?Id=30578>.

This document can be made available in alternative formats; i.e. large print or audio tape by calling (651) 296-0391 (Voice). Persons with hearing or speech disabilities may call us through Minnesota Relay at 1-800-627-3529 or by dialing 711.

Introduction and Background

On December 6, 2010, Black Oak Wind, LLC (Black Oak) filed a site permit application with the Public Utilities Commission for the 42 MW Black Oak Wind Farm (Project).¹ Upon completion of the process prescribed by Minnesota Rule 7854.0900, EFP staff filed with the Commission comments and recommendations, including proposed findings of fact and a proposed permit on October 18, 2012.² On November 2, 2012, Black Oak and the Minnesota

¹ Black Oak Wind, LLC Application for a LWECS Site Permit for the Black Oak Wind Farm, December 6, 2010, eDocket ID: [201012-57165-01](https://www.edockets.state.mn.us/EFiling/search.jsp) – 10 [herein after Site Permit Application]

² EFP staff Comments and Recommendations, Proposed Findings of Fact, and Proposed Permit, October 18, 2012, eDocket ID: [201210-79709-01](https://www.edockets.state.mn.us/EFiling/search.jsp) [herein after, EFP comments of October 18, 2012]

Department of Natural Resources (DNR) filed comments on the EFP comments and recommendations, proposed findings, and proposed permit.³ Comments on the Project were also received during the comment period from David and Barbara Jennissen.⁴

DOC EFP Staff Analysis and Comments

These reply comments address topics raised by the Black Oak and DNR comments, as well as a proposed modification to the Complaint Procedure included as an attachment to the proposed site permit: (1) Wind Access Buffer Setback, (2) Application of County Standards, (3) Local Permitting Requirements, (4) ABPP and Wildlife Reporting Requirements, (5) Energy Production and Wind Resource Use, (6) Shadow Flicker Standards, (7) Wake Loss Studies, (8) Archaeological Sites, (9) Clarifications and Corrections, and (10) Complaint Procedure. Because the Jennissen comments express opposition to the Project and do not address EFP staff's proposed findings or proposed permit, they are not addressed by EFP staff here.

1. Wind Access Buffer Setback

Black Oak proposes amending proposed Finding 41 to acknowledge the joint siting efforts of Black Oak and Getty, the joint agreements between Black Oak and Getty, and the underlying agreements with landowners waiving any setbacks which may apply. Black Oak contends that the turbine spacing requirements found in Section 4.10 of the proposed permit, allowing for spacing of less than 3 by 5 RD for up to 20 percent of turbines constructed within a site boundary, is more appropriate along the shared border between the projects.

EFP staff analysis: With the exception of the clarification that wind rights shared between Black Oak and Getty are shared in areas along the boundary between the projects, EFP staff does not believe that the record supports the majority of Black Oak's proposed changes to Finding 41.

The site boundary shown in the maps attached to the proposed permit, and established by Black Oak in its site permit application, represents the area within which the components of the project will be constructed, and is intended to orient members of the public, agencies, and the Commission to the area of disturbance. The proposed site permit, at Section 4.10, allows for somewhat closer siting of a portion of the turbines within the site boundary:

4.10 TURBINE SPACING

The turbine towers shall be constructed within the site boundary as shown in Attachments 1A, 1B and 1C. The turbine towers shall be spaced no closer than three (3) RD in the non-prevailing wind directions and five (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.

³ Black Oak, LLC Comments and Exceptions, November 2, 2012, eDocket ID: [201211-80342-01](#) [herein after Black Oak Comments and Exceptions]; DNR, Comments on Proposed Findings of Fact and Proposed Site Permit for Black Oak Wind Project, November 2, 2012, eDocket ID: [201211-80358-01](#) [herein after DNR comments]

⁴ Jennissen Comments, eDocket ID: [201211-80277-03](#)

EFP staff agrees very strongly with Black Oak's contention that the record shows substantial evidence of the cooperation between Black Oak and Getty in their siting efforts to make efficient use of the area's wind resource and minimize impacts from the projects. This joint effort has been particularly helpful in efforts to understand avian use of the project area. However, the siting dockets are separate, Black Oak and Getty have established separate site boundaries for each project, and, should the Commission issue site permits for the projects they will be issued to separate entities. EFP staff does not believe that the use of somewhat more flexible turbine spacing requirements established within a site boundary in Section 4.10 of the proposed permit is applicable between projects.

The proposed site permit, at Section 4.1, references setbacks from lands where the permittee holds wind rights.

4.1 WIND ACCESS BUFFER

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

Just as Black Oak does not hold wind rights to all lands within the project boundary, Black Oak's wind rights may extend beyond the site boundary identified on the maps attached to the proposed permit, but that information is not in the record at this time.

In reviewing its comments of October 18, 2012, EFP staff does not see a recommendation to move turbines out of the Wind Access Setback. EFP staff comments noted that Section 10.1 of the proposed permit requires the permittee to demonstrate sufficient wind rights to construct and operate the Project. EFP staff comments also noted that a filing by Black Oak establishing the extent of its wind rights, either exclusive or shared with Getty, overlain with a turbine layout prior to the Commission's decision would be useful.

In the event that Black Oak is unable to demonstrate sufficient wind rights to construct and operate the layout shown in the maps attached to the proposed permit, it may choose to modify the layout using alternate turbine locations (the current maps show two alternate locations for each layout) or using fewer turbines than shown in the proposed layouts and still be in compliance with the site permit as proposed.

There are no filings in the docket establishing either the extent of Black Oak's wind rights or an agreement demonstrating that the wind rights are shared between Black Oak and Getty.

EFP Recommendation: At this time there is insufficient information to support the majority of Black Oak's proposed modifications to Finding 41. EFP staff does believe the clarification provided by Black Oak that the wind lease and easement agreements are shared between the projects along the shared project boundary is helpful in clarifying the area under question, and proposes the following modification to Finding 41:

Finding 41. Black Oak and Getty contend that in cases where turbines are located within the Wind Access Buffer Setback **along the shared boundary of the Black Oak and Getty projects**, wind lease and easement agreements are shared between the two projects via an

agreement as part of Black Oak and Getty's joint development partnership. Black Oak and Getty further contend that because the wind leases and easements are shared, there should be no need for the Commission to vary the 3 ~~x~~ by 5 RD wind access buffer.

2. Application of County Standards

Black Oak proposes changes to proposed Finding 50, addressing more stringent setbacks, and removal of Section 13.1 (d) of the proposed permit, addressing Stearns County's more stringent setbacks from lands where the Permittee does not have wind rights.

EFP staff analysis: The proposed permit, at section 13.1, requires Black Oak to site turbines consistent with the more stringent setbacks set forth in the Stearns County wind energy ordinance. This includes a 5 RD setback from lands for which the Permittee has a wind easement for this Project (see proposed findings 40 and 50). In the case of the adjacent Getty Project, Stearns County filed comments on the LWECs Site Permit Application stating that Getty Wind had demonstrated wake interference of less than 5 RD, and recommending a setback of 5 RD on the prevailing wind axis and 3 RD on the non-prevailing wind access, consistent with the 3 RD by 5 RD Wind Access Buffer identified in the permit.⁵ Stearns County did not file comments in the Black Oak Docket and the 5 RD setback is called for in the proposed site permit at section 13.1(d). Special conditions take precedence over other conditions of the permit (see proposed finding 51); consequently the 5 RD setback takes precedence over the 3 RD by 5 RD setback established at section 4.1 of the proposed permit.

Finding 50, as written in the proposed findings of fact, remains factually correct. The proposed site permit submitted with EFP comments and recommendations on October 18, 2012, did not propose any changes to the language of Section 13.1 of the permit from what was included in the Draft Site Permit, issued for public comment by the Commission on March 11, 2011. No comments were received, from Stearns County, Black Oak, or any person, opposing the more stringent conditions identified in this section of the permit. The language proposed by Black Oak for this finding is inaccurate; although Stearns County did provide a letter at the application acceptance stage for the Getty Project, the county has been silent on the proposed setback in the Black Oak docket.

EFP staff understands that Black Oak has requested a waiver of the 5 RD setback from Stearns County. However, until such time as documentation that the waiver is approved by Stearns County is included in the record, EFP staff does not believe that the record provides good cause not to apply the standards.

EFP Recommendation: EFP staff believes that the record does not support Black Oak's proposed changes to Finding 50 and removal of Section 13.1 (d) of the propose site permit and recommends against these changes.

⁵ Public Comments received on Getty Wind Company, LLC's LWECs Site Permit Application for the 40 MW Getty Wind Project in Stearns County, January 18, 2012, eDockets ID: [20121-70416-01](#), at p. 19

3. Local Permitting Requirements

Black Oak requests striking "located" from Section 7.8.2 of the proposed permit.

EFP staff analysis: EFP staff notes that the proposed permit included in EFP staff's October 18, 2012, comments does not propose any changes to this permit condition from the draft permit, and Black Oak did not provide comments on the permit condition at the draft permit stage. The word "located" was added to the Getty permit to make it consistent with the Black Oak permit.

Black Oak is correct in stating that access roads are included in the definition of "associated facilities." EFP staff's intention in including "located" is with respect to driveway or access road cuts to existing township, county, or state roads. The location of the roads between the turbines and the existing road network is subject to landowner negotiation and any other state or local permits (e.g. stream crossings, wetland permits, driveway access permits) that might be necessary for construction of the road.

EFP Recommendation: EFP staff does not recommend any changes to Section 7.8.2 of the proposed permit.

4. Avian and Bat Impacts and Mitigation

Avian and Bat Impacts and Mitigation

Black Oak requested modifications to EFP staff proposed findings and proposed permit related to three areas: future revisions to the Avian and Bat Protection Plan (ABPP), post-construction monitoring protocols, and the frequency and content of fatality reporting. DNR comments addressed overhead feeder lines, information from the site-specific bat study, and post-construction monitoring protocols. EFP reply to these comments is organized by issue area.

Future Revisions to the ABPP

Black Oak proposes to modify Section 6.7.1 of the proposed permit to allow for future modifications of the ABPP by the Permittee.

EFP staff Analysis: EFP staff agrees with Black Oak that the ABPP will be revised over the up to 30 year life of the Project. However, EFP staff is concerned that the language proposed by Black Oak could be interpreted to mean that the Permittee can modify the ABPP at its own discretion at any time. The second paragraph in Section 6.7.1 of the proposed permit requires a report of an annual audit of the ABPP through the life of the permit. Among other elements, the annual report is to identify deficiencies or recommended changes in the ABPP.

EFP Recommendation: EFP staff proposes the following modification (shown in **bold**) to the first paragraph of Section 6.7.1 of the proposed permit:

6.7.1 AVIAN AND BAT PROTECTION PLAN

The Permittee, ~~in consultation with the Commission and DNR,~~ shall ~~prepare an~~ comply with the provisions of the Revised Avian and Bat Protection Plan ~~and submit it to the Commission at least ten (10) working days prior to the pre-construction meeting submitted for this Project on July 10, 2012~~ **and revisions resulting from the annual**

audit of ABPP practices. The plan ~~shall~~ addresses steps to be taken to identify, avoid, minimize and mitigate impacts to avian and bat species during the construction phase and the operation phase of the Project. The plan ~~shall~~ also address includes formal and informal monitoring, training, wildlife handling, documentation (e.g. photographs) and reporting protocols for each phase of the Project.

Post Construction Monitoring Protocols

Black Oak recommends modifications to proposed finding 108 and to Section 13.4 of the proposed site permit removing reference to DNR's Draft Avian and Bat Monitoring Protocol. Black Oak also proposes removal of monthly reporting during the post-construction monitoring period described in Section 13.4 of the proposed permit. DNR's comments noted that substantial revision of the turbine layout as shown in the proposed site permit may cause DNR to revise their overall avian and bat risk assessment of the Project.

EFP Analysis: EFP staff appreciates Black Oak's point that the DNR Monitoring Protocols are in draft form. EFP staff's intention in including reference to this document and specifics from it was to provide the permittee with guidance on post-construction fatality monitoring expectations. In addition, EFP notes that DNR often shares current versions of the Protocols with wind project developers and references the Protocols when providing consultation regarding ABPPs.

The *Draft Avian and Bat Survey Protocols for Large Wind Energy Conversion Systems in Minnesota*, (Protocols) have been under development for more than a year and are in the final review stage. They provide technical detail regarding wildlife survey protocols for wind energy projects and are intended to standardize data collection across projects to facilitate site specific and statewide understanding of wildlife impacts from wind energy. They will be used by EFP and DNR to evaluate the need for post-construction monitoring at wind projects and review proposed monitoring plans.

In developing the Protocols, DNR staff considered current literature, the final USFWS *Land-Based Wind Energy Guidelines*,⁶ published in March 2012, and input provided to the USFWS in development of those guidelines from the Wind Turbine Advisory Committee, which is comprised of a diversity of stakeholders, including federal and state agencies, tribes, the wind energy industry and conservation organizations. The Protocols have undergone review throughout the DNR, including by DNR Regional Environmental Assessment Ecologists, the Natural Heritage Information System Coordinator, Environmental Review Planners, technical and species specialists, Division of Ecological and Water Resources managers. They also have been shared with the Interagency Energy Working Group, which includes staff from the Commission, Department of Commerce, and DNR and participation from the USFWS, and are currently under review by the Department of Commerce.

The Protocols are not intended to be formally adopted through a rulemaking, but will be used to provide guidance to applicants, similar to such current guidance documents as EFP's *Application Guidance for Site Permitting of Large Wind Energy Conversion System (LWECS) in Minnesota Guidelines*⁷ and DNR's *Final DNR Guidance for Commercial Wind Energy Projects*.⁸ As is

⁶ USFWS, Land-Based Wind Energy Guidelines, March 2012, <http://www.fws.gov/windenergy/>

⁷ http://mn.gov/commerce/energyfacilities/documents/LWECS_APP_Guide_AUG2010.pdf

typical with guidance documents, DNR anticipates that Protocols may be updated periodically to reflect the developing nature of research regarding wind energy and wildlife impacts.

DNR staff has characterized the most current layout of the Black Oak site as of moderate risk to birds and bats. The requirements that were outlined in Section 13.4 of the proposed site permit reflect those recommended for a moderate risk site in the Protocols. Based on conversations with DNR staff, recommendations for extent and level of effort for post-construction monitoring for sites considered to be of moderate risk have remained substantially similar throughout the development of the Protocols. In addition, in its November 2, 2012, comment letter, DNR staff notes that substantial relocation of turbines may change the DNR estimated avian and bat risk level. Thus, EFP believes that the outlined post-construction monitoring recommendations provide a reasonable statement of the minimum effort expected.

With respect to reporting of the post-construction monitoring results, EFP staff notes that the post-construction monitoring period runs for eight months and for a minimum of one year. It is not anticipated that formal post-construction monitoring would occur over the lifetime of the Project. Periodic reporting during the post-construction monitoring allows for early identification of trends, and would assist technical reviewers of the reports in assessing the need for extending formal monitoring, rather than waiting for the results of the annual audit in March, which is expected to be the beginning of the survey season. After consultation with DNR staff, EFP staff believes that, although monthly reporting is preferable, quarterly reporting would suffice, so long as those reports are provided in Excel spreadsheets and include raw and summarized data.

EFP Recommendation: Given the concerns noted throughout the record with minimizing potential impacts to birds and bats, the need for post-construction monitoring is established. EFP staff supports removing reference to the DNR Draft Avian and Bat Monitoring Protocols, but recommends including minimum post-construction monitoring requirements in the permit. EFP staff recommends that Black Oak provide periodic reporting of post-construction monitoring results; although monthly reporting is preferred, quarterly reporting would be acceptable, so long as reports are provided in Excel spreadsheets and include raw and summarized data.

EFP staff proposes the following modifications to Finding 108:

108. Throughout the project record DNR staff reviewed several iterations of the layout of the Project. DNR comments note the presence of public lands, public waters, wetlands, and sensitive species as well as the large tracts of disturbed agricultural lands within the Project, and the efforts taken by Black Oak to avoid demonstrated areas of high avian use. The most recent DNR comments characterize the Project, and the adjacent Getty project, as of moderate risk to birds and bats. **DNR staff also notes that substantial relocation of turbines, particularly near public waters, conservation lands, or in flyways, may change the DNR estimated risk level to avian and bat species for this project.** DNR staff recommends that the Commission require post-construction monitoring for avian fatalities according to the moderate risk protocol. The proposed site permit, at section **13.2**

⁸ DNR, Final DNR Guidance for Commercial Wind Projects, October 2011, <http://www.dnr.state.mn.us/eco/pubs.html>

13.4, requires Black Oak, **in consultation with the USFWS and DNR**, to design and implement a post-construction avian and bat fatality survey ~~consistent with the DNR Draft Avian and Bat Monitoring Protocol~~ for a site considered, **at minimum**, to be of moderate risk to wildlife and to provide the survey design to the Commission at least 90 days prior to the planned commencement of commercial operation.

EFP staff proposes that Section 13.4 of the proposed site permit be modified as follows:

13.4 AVIAN AND BAT POST-CONSTRUCTION FATALITY MONITORING

The Permittee shall, in consultation with **the USFWS and DNR**, design and implement a post-construction avian and bat fatality survey ~~consistent with the DNR Draft Avian and Bat Monitoring Protocol~~ for a site considered to be of, **at minimum**, moderate risk to wildlife. The survey design shall be filed with the Commission no later than ninety (90) days prior to commercial operation of the Project. The survey shall be conducted for a minimum of one complete field season starting March 15 and ending November 15 after the commencement of commercial operation. ~~At a minimum, fatality monitoring must include:~~

- ~~1) Twenty percent of the turbines will be searched (minimum 10 and maximum 25)~~
- ~~2) 160 meter square search plot centered on the base of the turbine (80 meters in each direction from the turbine base)~~
- ~~3) Two search days per week~~
- ~~4) 75 searcher efficiency trials~~
- ~~5) 50 carcass removals~~
- ~~6) Minimum search time of 1-2 hours per turbine~~

Monitoring results shall be submitted to Commission, DNR, and USFWS **at least quarterly** ~~monthly~~. ~~Monthly~~ **Results** shall be provided in an Excel spreadsheet and include summarized and raw data.

Frequency and Content of Fatality Reporting

In addition to the proposed modifications to post-construction monitoring discussed above, Black Oak also proposes modifications to the quarterly reports described in Section 6.2 of the proposed permit.

EFP staff analysis: While acknowledging Black Oak's concerns about its ability to assess the causes and mitigations of individual incidents, EFP notes that this requirement is consistent with the language in previously issued permit and with requests from EFP staff for further information following reports of incidents. If the potential cause is unknown, EFP staff would expect that the report would so note.

EFP Recommendation: EFP staff proposes the following modifications (shown in bold) to Section 6.7.2 of the proposed site permit for clarification.

6.7.2 QUARTERLY INCIDENT REPORTS

The Permittee shall submit quarterly avian and bat reports to the Commission. Quarterly reports are due by the 15th of each January, April, July, and October commencing the day following commercial operation and terminating upon the expiration of this permit. Each report shall identify any dead or injured avian or bat species, location of find by turbine number, and date of find for the reporting period in accordance with the reporting

protocols. If a dead or injured avian or bat species is found the report shall describe the potential cause of the occurrence (if known) and the steps taken to avoid address future occurrences. The Permittee shall provide a copy of the report to DNR and to the U.S. Fish and Wildlife Service at the time of filing with the Commission.

Overhead Feeder Lines

DNR comments noted that specifying underground collector and feeder lines is typical in many permits and is encouraged by DNR as a method to minimize collision risks. Black Oak proposes a modification to Finding 109 to make it consistent with Sections 4.15 and 13.2 of the proposed site permit.

EFP staff analysis: EFP staff concurs with DNR's assessment that underground feeder lines do minimize collision risks to birds. As noted in propose Finding 83, Black Oak anticipates that both collector and feeder lines will be underground, but retains the option to place portions of the feeder lines overhead if conditions exist that would prevent the feeder line from being buried. No specific circumstances or locations that would prevent underground construction for this project have been identified in the record to date.

EFP Recommendation: EFP staff proposes the following modifications to Finding 109, incorporating Black Oak's proposal.:

Finding No. 109. In its comments on the adjacent Getty Wind Project, the United States Fish and Wildlife Service recommended that bird diverters be installed on any above ground collector, feeder, distribution or transmission lines to minimize the potential for bird collisions with above ground electrical lines. The attached proposed site permit contains a special condition, at section 13.3, requiring Black Oak Wind to install bird diverters on any overhead ~~collector, feeder, or distribution~~ line constructed as part of this project.

Site-Specific Bat Study

DNR comments propose modifying the last sentence of Section 13.3 of the proposed site permit to read "Need for additional studies or turbine siting modifications shall be based on review of this compliance filing."

EFP staff analysis: EFP staff supports Black Oak's proposed changes to Section 13.3 of the proposed site permit but does not believe that the modification suggested by DNR staff is necessary. While EFP staff understands DNR's concern that pre-construction surveys are to be used in informing site layout, given the current state of knowledge regarding interaction between bats and wind facilities, discussed in EFP staff's October 18 Comments and Recommendations and in proposed Finding 110, EFP staff does not anticipate that information from the studies would prove useful in informing turbine siting.

EFP staff anticipates that, going forward, any pre-construction surveys on birds or bats would be provided at the time of the site permit application, negating the need for a special condition as proposed here.

EFP Recommendation: EFP staff recommends Black Oak's proposed modifications to Section 13.3 of the proposed permit.

5. Energy Production and Wind Resource Use

Black Oak proposes usage of "installed nameplate capacity" rather than "installed capacity" in Section 6.8 (Project Energy Production) of the proposed permit.

Black Oak wishes to retain the right to seek trade secret or privileged designation for Project Energy Production (Section 6.8) and Wind Resource Use (Section 6.9), and requests that the statement that information be considered public and be submitted electronically be stricken from these sections of the permit.

EFP staff analysis: EFP staff supports the use of "installed nameplate capacity" in Section 6.8 of the permit.

EFP staff, however, disagrees with Black Oak's proposal to strike the statement about the public nature of the information. As a point of clarification, EFP staff notes that the phrase "This information will be considered public and must be submitted electronically," was in Section 6.8 (Project Energy Production) of the Draft Site Permit issued in March 2011; EFP staff proposed adding this clause to Section 6.9 (Wind Resource Use), in its October 18, 2012, proposed permit and explained its inclusion in page 11 of its Comments and Recommendations. Black Oak did not comment on the language designating energy production data as public in Section 6.8 of the Draft Site Permit.

Some type of reporting of energy production and wind resource use has been a LWECS site permit requirement since at least 1998. Earlier permits required reporting of much more detailed information, including access to the permittee's supervisory control and data acquisition (SCADA) system to allow for hourly review of commercial operation data.⁹

Beginning in February 2010, energy production and wind resource reporting requirements for site permits issued by the Commission have been much less detailed.¹⁰ The language on timing and specific reporting requirements has evolved slightly since 2010 to provide for better tracking of compliance filings, and provide the Commission with a level of data that would allow for comparison between projects and over time.

As noted in EFP staff comments and recommendations, at p. 11, the changes proposed to sections 6.8 (Project Energy Production) and 6.9 (Wind Resource Use) are consistent with language adopted by the Commission in its amendment to the Morgan Wind Project, adopted in July 2012.¹¹

⁹ See, for example LWECS Site Permit for Moraine II Wind Project, July 2007, eDocket ID: [47389191](#), at Sections III.H.1 and III.H.2

¹⁰ See, for example LWECS Site Permit for Elm Creek II, February 2010, eDocket ID: [20102-47467-01](#), at Sections III.H.1 and III.H.2

¹¹ Commission Order Amending site Permit In the Matter of Morgan Wind Acquisition Group, ILC's Site Permit for a 31.5 Megawatt Large Wind Energy Conversion System in Redwood and Brown Counties, July 26, 2012, eDocket ID: [20127-77265-01](#)

In EFP staff's opinion, the general nature of the reporting requirements, the existence of substantially similar requirements in other site permits, the ongoing reporting of this information by projects that are currently in operation, and a general interest on the part of the public and of individual Commissioners, make it reasonable to expect that this data should be treated as public information, and not be considered proprietary in nature. Given the summary nature of the information required, EFP staff finds it difficult to see how a competitor could gain competitive advantage through use of the information. EFP staff further notes that wind developers in Minnesota must report their yearly production numbers to the Minnesota Department of Revenue on a M-25 form to determine taxes due to the counties and townships hosting the facilities and that this information is considered to be public information.

EFP Recommendation: EFP recommends that Section 6.8(a) of the proposed site permit be modified as follows:

- (a) The ~~rated nameplate~~ **installed nameplate** capacity of the permitted Project;

EFP staff does not recommend further modification to Section 6.8 of the proposed site permit.

6. Shadow Flicker Standards

Black Oak request that the references to the administrative rules related to shadow flicker adopted by the Wisconsin Public Service Commission and references to shadow flicker standards that have been developed in other jurisdictions be deleted from proposed Finding 60.

EFP staff analysis: EFP staff is unclear on what is meant by Black Oak's statement that standards adopted by non-Minnesota jurisdictions on shadow flicker are outside the scope of the proceeding. EFP staff takes Black Oak's point that Minnesota has not adopted any standard on acceptable hours of shadow flicker. However, the issue of shadow flicker was an issue in the public comments received on the Project, as it has in many recent wind permitting proceedings.

Site permits issued by the Commission began incorporating a condition that a permittee provide the results of shadow flicker modeling for each residence in the project area in 2010.¹²

As noted in EFP's comments of October 18, 2012, the proposed findings incorporate some findings previously made for other LWECS projects. With the introduction of shadow flicker as a permit condition, findings accompanying the adoption of permits began to include statements on shadow flicker standards for jurisdictions outside of Minnesota.¹³ The language in the finding, as proposed by EFP staff, was intended to provide the Commission with a current summary of any standards for shadow flicker, similar to the summary of existing studies on property values in Finding 53.

EFP Recommendation: EFP staff believes that Finding 60 is in keeping with the approach taken by the Commission in previous dockets, but takes no position on the question of what may be "outside the scope of the proceeding." Staff does recommend, however, that if Black Oaks'

¹² See, for example, LWECS Site Permit for Lakefield Wind 205.5 MW LWECS in Jackson County, October 19, 2010, eDocket ID: [201010-55591-01](#)

¹³ Ibid., at Finding 47, see also Commission Order issuing LWECS Site Permit for 200 MW Prairie Rose Wind Farm in Rock and Pipestone Counties, September 16, 2011, eDocket ID: [20119-66430-01](#), at Finding 49

suggested is adopted that it be modified to retain the final sentence of the finding "Several jurisdictions in other countries have established guidelines for acceptable levels of shadow flicker based on certain assumptions," as this sentence has been included in previously issued Commission Findings of Fact on the subject.

7. Wake Loss Studies

Black Oak notes that once the Project becomes operational, Black Oak anticipates that several wake loss studies may be performed and proposes changes to submit a single study and to provide that at the request of the Commission.

EFP Response: EFP staff notes that, other than the change from working days to calendar days, the language proposed in this permit condition has not changed from that of the draft permit. Black Oak did not comment on this permit condition at the draft permit stage.

EFP staff appreciates that the potential requirement of filing multiple wake loss studies may be burdensome on the permittee. The intent of the study is to provide an estimate of whether wake losses experienced during operation of the Project are similar to what had been estimated pre-construction. EFP staff believes the language proposed by Black Oak, "Upon request of the Commission," would require formal action by the Commission and is unclear how such a request would be initiated.

EFP Recommendation: EFP staff proposes the following modifications to the proposed site permit (shown in **bold**):

6.5 WAKE LOSS STUDIES

At least ~~ten (10) working~~ fourteen (14) days prior to the pre-construction meeting, the Permittee shall provide to the Commission the pre-construction micro-siting analysis leading to the final tower locations and an estimate of total Project wake losses. **As part of the annual report on project energy production required under Section 6.8 of the permit** ~~the~~ Permittee shall provide to the Commission any operational wake loss studies conducted on this Project **during the calendar year preceding the report.**

8. Archaeological Sites

Black Oak proposes an amendment to Section 6.3 of the proposed site permit to reference the statutory definition of an archaeological site as defined in Minn. Stat. 138.31 in the phrase requiring the Permittee to mark and preserve any previously undiscovered archaeological sites found during construction of the Project.

EFP staff analysis: The Minnesota Field Archaeology Act of 1963 is found in Minn. Stat. 138.31 to 138.42. Under this act, an archaeological site is defined as follows:

Subd. 13.Site or archaeological site.

"Site" or "archaeological site" has the same meaning as "state site" or "state archaeological site."

Subd. 14.State site or state archaeological site.

"State site" or "state archaeological site" means a land or water area, owned or leased by or subject to the paramount right of the state, county, township, or municipality where there are objects or other evidence of archaeological interest. This term includes all aboriginal mounds and earthworks, ancient burial grounds, prehistoric ruins, historical remains, and other archaeological features on state land or on land subject to the paramount rights of the state. Historical remains do not include bottles or ceramics manufactured after 1875.

The definition found in Minn. Stat. 138.31 is limited to sites on non-federal public lands or waters. This Project is anticipated to be constructed entirely on private land.

EFP Recommendation: Although EFP staff support the use of statutory definitions whenever applicable, EFP staff does not support the addition of this statutory reference.

9. Clarifications and Corrections

Black Oak proposes several clarifications and corrections to findings and permit conditions. EFP supports the corrections as proposed in Black Oak Comments at III for proposed findings 25, 27, 39, 69, 88, 109, 110, and 112 and to the correction of the filing due date for the Biological and Natural Resource Inventories noted in Attachment 4. EFP staff also supports the clarifications as proposed by Black Oak for the proposed site permit at Section 2.1 (Project Boundary), but does not support the proposed change to Section 4.7 (Native Prairie), as noted below. The changes proposed to Section 13.3 are discussed under ABPP and Wildlife Reporting Requirements above.

Native Prairie

Black Oak proposes to modify a portion of Section 4.7 of the proposed site permit by adding "if applicable" to Section 4.7 of the proposed site permit, effectively stating that Black Oak does not need to provide mitigation strategies in any Prairie Protection and Management Plan if Black Oak avoids impacts to native prairie.

EFP staff Analysis: EFP staff notes that this section of the permit has not changed from the Draft Permit issued in March 2011; Black Oak did not comment on this section of the permit during either the comment period established for the Draft Site Permit, or the Public Hearing comment period established in the Certificate of Need Proceeding and open to comments on the siting docket.

The intent of the Prairie Protection and Management Plan is to avoid impacts to native prairie to the extent possible, and if impacts are unavoidable identify appropriate mitigation. This report would only be produced if native prairie is identified through natural resource inventories performed in fulfillment of Section 6.1 of the proposed permit. Based on the record established to date, it is unlikely that areas of native prairie would be identified in areas likely to be impacted by the Project, and therefore unlikely that a Prairie Protection and Management Plan will be required for the Project. However, if native prairie is identified, Black Oak, as any permittee in recently issued wind permits should identify how they intend to avoid native prairie, and provide some guidance on how impacts to native prairie would be mitigated.

EFP Recommendation: EFP staff does not recommend changes to Section 4.7 of the proposed site permit.

10. Correction of Complaint Procedures

After reviewing the Complaint Procedures attached to the proposed site permit filed by EFP Staff on October 18, 2012, EFP staff realized there were some inconsistencies with the complaint procedures in some recently issued site permits, namely the e-mail address where complaints should be filed and the removal of a contact for the permittee. EFP staff recommends that the Complaint Procedure provided as attachment 1 to this document be used in lieu of the October 18 filing.

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

A. Purpose:

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

B. Scope:

This document describes Complaint reporting procedures and frequency.

C. Applicability:

The procedures shall be used for all complaints received by the Permittee and all complaints received by the Commission under Minn. Rule 7829.1500 or 7829.1700 relevant to this Permit.

D. Definitions:

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

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

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

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

E. Complaint Documentation and Processing:

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

ATTACHMENT 1
LWECS COMPLAINT HANDLING PROCEDURES

- 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 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) an 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~~ Commission's Consumer Affairs Office at, 1-800-657-3794 3782, or by e-mail to: DOC.energypermitscompliance@state.mn.us consumer.puc@state.mn.us, Voice messages are acceptable.

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

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

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

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

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

H. Commission Process for Unresolved Complaints:

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

I. Permittee Contact for Complaints:

Mailing Address: ~~Complaints filed by mail shall be sent to the address below:~~

~~———— Patrick Smith
———— Black Oak Wind, LLC
———— 7650 Edinborough Way, Suite 7250
———— Edina, MN 55435~~

~~**Tel:** 952-988-9000~~

~~**eMail:** patrick@geronimowind.com~~

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