

July 26, 2016

Mr. Daniel P. Wolf, Executive Secretary  
Minnesota Public Utilities Commission  
127 7th Place East, Suite 350  
Saint Paul, MN 55101-2147

RE: Compliance Filing Review  
Post-Construction Noise Study Methodology and Pre-Operation Filings  
Odell Wind Farm  
Docket No. IP-6914/WS-13-843

Dear Mr. Wolf:

Attached are the compliance review and comments of the Minnesota Department of Commerce Energy Environmental Review and Analysis (EERA) staff in the matter of:

Odell Wind Farm in Cottonwood, Jackson, Martin, and Watonwan Counties,  
Minnesota  
Docket No. IP-6914/WS-13-843

Odell Wind Farm, LLC (Permittee) has filed pre-operation compliance documents pertaining to the site permit originally issued by the Public Utilities Commission (Commission) on July 17, 2014, for the up to 200 MW Odell Wind Farm Project in Cottonwood, Jackson, Martin, and Watonwan Counties. The pre-operation compliance documents were filed according to the following permit conditions: 6.6 [Noise] and 9.1 [Decommissioning Plan].

The Compliance Document(s) were filed on February 1, 2016, April 18, 2016, and July 12, 2016, by:

Riley Griffin  
Environmental Planner  
Algonquin Power Co.  
354 Davis Road, Suite 100  
Oakville, ON L6J2X1

EERA staff reviewed the required filings prior to the pre-operation meeting which was held on June 29, 2016, and concluded they are in compliance with the terms and conditions of the Large Wind Energy Conversion Systems Site Permit issued by the Commission in this docket. EERA staff is available to answer any questions the Commission may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Davis". The signature is written in a cursive, flowing style.

Richard Davis  
Environmental Review Manager  
Energy Environmental Review and Analysis

cc: Bret Eknes, Commission Staff  
Mike Kaluzniak, Commission Staff  
John Wachtler, EERA Director



## Permit Compliance Filing Review

### PUC Docket No. IP-6914/WS-13-843

On July 17, 2014, the Commission issued a site permit to Odell Wind Farm, LLC (Odell or the Applicant) for the construction of an up to 200-megawatt wind farm in Cottonwood, Jackson, Martin, and Watonwan Counties.<sup>1</sup> The permittee submitted the following compliance information pursuant to the Commission's site permit for this project and in accordance with the following permit conditions:

| Permit Section | Description                      | eDocket Number                         | Date eFiled |
|----------------|----------------------------------|--|-------------|
| 5.7            | Pre-Operation Compliance Meeting | <u><a href="#">20167-123177-01</a></u> | 7/12/2016   |
| 6.6            | Noise Study Protocol             | <u><a href="#">20164-120233-01</a></u> | 4/18/2016   |
| 9.1            | Decommissioning Plan             | <u><a href="#">20162-117887-01</a></u> | 2/1/2016    |

### Pre-Operation Compliance Meeting

A Pre-Operation Compliance meeting is required under Section 5.7 of Odell's Site Permit:

#### 5.7 Pre-Operation Compliance Meeting

At least 14 days prior to commercial operation, the Permittee shall conduct a pre-operation compliance meeting with the Department of Commerce Environmental Review Manager and Commission Staff to coordinate field monitoring of operation activities. The Permittee shall file with the Commission within fourteen (14) days following the pre-operation meeting a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the project's date of commercial operation.

A Pre-Operation Compliance meeting was held on Wednesday, June 29, 2016, at the Windom Community Center in Windom, Minnesota. Meeting discussion topics consisted of a general project update, site restoration and stabilization, identification of operational staff, the Decommissioning Plan, complaint reporting procedures, the Emergency Response Plan, and post-construction fatality monitoring plans. Additional meeting discussion details, a list of attendees, and the project's anticipated commercial operation date are available in the Permittee's Pre-Operations Compliance Meeting Minutes.<sup>2</sup>

<sup>1</sup> Commission Order Issuing Site Permit, [20147-101580-01](#), July 17, 2014.

<sup>2</sup> Pre-Operations Compliance Meeting Minutes, [20167-123177-01](#), July 12, 2016

## *EERA Comments*

EERA staff was present at the June 29, 2016 Pre-Operation Compliance meeting, and has reviewed the filed Pre-Operations Compliance Meeting Minutes. EERA finds the Pre-Operation Compliance meeting and the filing of the associated Meeting Minutes to be consistent with Condition 5.7 of the Odell Site Permit.

## **Post-Construction Noise Study Methodology**

The topic of turbine noise is an issue of interest in review of wind projects in Minnesota and elsewhere. The Commission, in its review of LWECS site permit proceedings since 2010, has included requirements for noise surveys, in part to address public concerns about wind turbine noise, but also to provide baseline information that allows for review of modeled sound emission levels against actual field measurements for correlation, to assess the modeling as a predictor of probable compliance with Minnesota noise standards, and to provide decision-makers with objective information that will assist them in evaluating noise levels.

Turbine noise is addressed in the Odell Site Permit in three separate conditions:

### **4.3 NOISE**

The wind turbine towers shall be placed such that the Permittee shall comply with noise standards established as of the date of this permit by the MPCA at all times and at all appropriate locations. The noise standards are found in Minnesota Rules, chapter 7030. Turbine operation shall be modified or turbines shall be removed from service if necessary to comply with these noise standards. The Permittee or its contractor may install and operate turbines as close as the minimum setback required in this permit, but in all cases shall comply with MPCA noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

### **5.1 SITE PLAN**

The Permittee shall document, through GIS mapping, compliance with the setbacks and site layout restrictions required by this permit, including compliance with the noise standards pursuant to Minnesota Rules, chapter 7030.

### **6.6 NOISE**

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

Odell performed modeling of turbine sound output on a cumulative basis for both the Site Permit Application in 2013 and the Site Plan in 2015. The report titled “The Noise Analysis for the Proposed Odell Wind Farm in Cottonwood, Jackson, Martin, and Watonwan Counties, Minnesota” is dated January 19, 2015, and was e-filed on February 27, 2015 as a part of the Site Plan.<sup>3</sup>

On March 12, 2015, EERA filed a review letter<sup>4</sup> of initial pre-construction filings and noted that the turbine layout being used in all filed documents has significant turbine location modifications when compared to the Preliminary Layouts as approved in the Site Permit. Odell was instructed to file a revised Site Plan to satisfy Sections 2.2 and 5.1 of the Site Permit. Odell subsequently filed an updated noise filing related to Permit Condition 4.3 on March 13, 2015.<sup>5</sup> The filing includes an updated noise modeling summary completed by a third-party noise consultant. The model results show that sound levels of the modified turbine layout are still predicted to comply with State noise standards at all receptors.

Additionally, a supplemental memorandum<sup>6</sup> was filed that compares the Project’s potential human and environmental impacts due to the preliminary turbine layout as provided for the environmental review in the Site Permit Application compared to the modified pre-construction filing Site Plan turbine layout filed on March 13, 2015. This comparison demonstrates that the Project, as presented in the March 13, 2015 Site Plan, maintains comparable environmental impacts to those described in Site Permit Application, including in relation to noise.

Overall, the noise modeling completed for the Project indicates that the proposed turbine layout will not have noise levels of 60 dB(A) or greater during the daytime conditions or 50 dB(A) or greater during the nighttime conditions on any modeled receptor, nor will the cumulative impact on any residence exceed 60 dB(A) or 50 dB(A) when assuming a 40 dB(A) background sound level. These noise levels are at or below the regulatory limits in Minn. Statute § 116.07 for every modeled receptor.

Odell filed a “Post-Construction Noise Measurement Study Protocol” (Protocol) on April 18, 2016, in compliance with Section 6.6 of the Site Permit.<sup>7</sup> The Protocol was developed following the “Guidance for Large Wind Energy Conversion System Noise Study Protocol and Report” (Guidance) developed by EERA on October 8, 2012, in coordination with the Minnesota Pollution Control Agency, which is the agency responsible for developing the state noise standards (see Minnesota Rule 7030). Prior to e-filing, this Protocol was discussed and revised based on input from the Department of Commerce EERA via email on August 25, 2015, and subsequent input via email on November 24, 2015. Post-construction noise

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<sup>3</sup> See eDocket ID [20152-107782-07](#) and [20152-107782-08](#)

<sup>4</sup> See eDocket ID [20153-108145-01](#)

<sup>5</sup> See eDocket ID [20153-108189-08](#)

<sup>6</sup> See eDocket ID [20154-108986-01](#)

<sup>7</sup> *Post-Construction Noise Study Methodology*, TetraTech, [20164-120233-01](#), April 2016.

monitoring will be completed in order to verify the noise levels predicted by the previously completed noise modeling.

### *EERA Comments*

EERA staff has reviewed Odell's April 18, 2016, "Post-Construction Noise Study Methodology" and concludes that it is fully developed and ready to be presented before the Commission for a decision.

EERA found Odell's Protocol to be consistent with the EERA/MPCA Guidance. Overall, EERA believes that the Permittee's proposed Protocol will produce a noise study consistent with the intent of Permit Condition 6.6, and that will provide standardized sound monitoring methodologies, analysis and presentation of results that will contribute to the Commission's and public's understanding of wind turbine noise. EERA recommends the Commission accept the Permittee's Post-Construction Noise Measurement Study Protocol.

## **Decommissioning Plan**

The Decommissioning Plan is addressed in the Odell Site Permit under the following condition:

### **9.1 DECOMMISSIONING PLAN**

At least fourteen (14) days prior to the pre-operation compliance meeting, the Permittee shall submit to the Commission a Decommissioning Plan documenting the manner in which the Permittee anticipates decommissioning the Project in accordance with the requirements of Minnesota Rules, part 7854.0500, subpart 13. The Permittee shall ensure that it carries out its obligations to provide for the resources necessary to fulfill its requirements to properly decommission the Project at the appropriate time.

The Permittee is required to file a Decommissioning Plan within fourteen (14) days of the pre-operation meeting and provide updates to the plan every five (5) years afterwards. The plan must provide information identifying all surety and financial securities established for decommissioning and site restoration of the Project as required by Minnesota Rules, part 7854.0500, subpart 13. The plan must provide itemized estimates of the costs of decommissioning of all project components including labor and equipment. The plan must identify the disposition and decommissioning cost estimates for turbine removal, turbine foundation removal, underground collection cables, access roads, crane pads, substation(s), and other project components. The plan may also anticipate costs for replacing or repowering the project by upgrading older equipment. The Commission may at any time request additional information on the plan and subsequent updates.

Odell filed a Decommissioning Plan on February 1, 2016, in compliance with Section 9.1 of the Site Permit.<sup>8</sup> Prior to e-filing, this Decommissioning Plan was discussed and revised based on input from EERA via email on January 15, 2016. The Decommissioning Plan was revised to include additional details on the removal of the project substation, and other related infrastructure. Additional revisions were made to the timing of the permittee securing a letter of credit or other form of financial security, and also to more clearly indicate the frequency of updating the Decommissioning Plan.

### *EERA Comments*

EERA finds Odell's Decommissioning Plan to be consistent with Condition 9.1 of the Site Permit.

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<sup>8</sup> See eDocket ID [20162-117887-01](#)

## EERA Conclusions and Recommendations

EERA reviewed the filings in respect to the proposed Site Permit and concludes:

1. The Pre-Operation Compliance Meeting held on June 29, 2016 and Pre-Operations Meeting Minutes e-filed on July 12, 2016 are compliant with Section 5.7 of the Project's LWECS Site Permit.
2. The Post-Construction Noise Measurement Study Protocol e-filed on April 18, 2016 is compliant with Section 6.6 of the Project's LWECS Site Permit.
3. The Decommissioning Plan e-filed on February 1, 2016 is compliant with Section 9.1 of the Project's LWECS Site Permit.

EERA recommends that the Commission should accept the Permittee's Post-Construction Noise Measurement Study Protocol, and advise the Permittee in writing that the Decommissioning Plan pre-operation filing documents are consistent with the terms and conditions of the permit.

|   |   |  |                                    |
|---|---|--|------------------------------------|
| The filing meets applicable permit conditions:                                    | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | <input type="checkbox"/> Partially |
| Permit condition requires an action by the Commission: <b>Noise Protocol only</b> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                                    |
| EERA staff suggests filing be brought to the Commission for discussion:           | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |                                    |
| Response letter to Permittee is recommended:                                      | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                                    |



Richard Davis  
Environmental Review Manager  
Energy Environmental Review and Analysis

July 26, 2016

Date