



June 8, 2018

Daniel Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101-2147

**Re: In the Matter of the Application of Freeborn Wind Energy LLC for a Large Wind Energy Conversion System Site Permit for the 84 Megawatt Freeborn Wind Farm Freeborn County, MN  
Docket No. IP-6946/WS-17-410**

Dear Mr. Wolf:

On Behalf of Clean Energy Economy Minnesota (CEEM), Fresh Energy (FE), and the Center for Energy and Environment (CEE), Wind on the Wires (WOW) respectfully submits these comments and exceptions to the Administrative Law Judge's May 14, 2018 Findings of Fact, Conclusions of Law and Recommendations in Docket No. IP-6946/WS-17-410 ("Report").

Wind on the Wires (WOW) is a non-profit organization headquartered and working in Minnesota plus eight additional states in the Midwest. WOW members include wind and solar developers and manufacturers, non-profit environmental, public interest and clean energy advocacy organizations, farmer organizations, and other businesses that support the advancement of renewable energy throughout the Midwest. WOW has a long track record of participating in matters before the Minnesota Public Utilities Commission.

CEEM is an industry-led, non-profit organization dedicated to strengthening Minnesota's clean energy business ecosystem providing a unified voice for clean energy business across the state. CEEM's mission is to provide educational leadership, collaboration, and policy analysis that accelerates clean energy market growth and smart energy policies.

FE is an independent energy policy nonprofit that has helped lead Minnesota's transition to a clean energy economy through policy analysis and advocacy in the Minnesota legislature and Public Utilities Commission over the past twenty-six years.

CEE is a clean energy non-profit organization with special expertise in energy efficiency that stretches back nearly 40 years. CEE employs approximately 140 staff in the areas of technology research; energy programs and services; and clean energy policy and engagement.

Our organizations provide comments in this docket because of the gravity of the issues under consideration in the Freeborn Wind Farm permit application. The disposition of the issues has the potential to affect both existing and future wind farms.

### **Noise-related Findings Misinterpret Minnesota Law**

The noise-related findings of the Report should be rejected because they misinterpret Minnesota law and fail to rely on the best scientific evidence in the record. The findings suggest that Minnesota's Noise Standard regulates "total noise" at a receptor such that noise from all sources cannot exceed a nighttime L50 within the Noise Area Classification 1. This interpretation is inconsistent with Minn. Stat. §§ 116.07, subd. 2(c) and 116.06, subd. 15, and guidance from the Minnesota Pollution Control Agency ("MPCA").

Minnesota law establishes limits on sources of noise. Noise is defined "as any sound not occurring in the natural environment, including, but not limited to, sounds emanating from aircraft and highways, and industrial, commercial, and residential sources." The limit on noise created by a source excludes background, or ambient, noise which is defined as "all noise sources other than the noise source of concern."

To date, Minn. Rule 7030.0040, subp. 2, has been applied as requiring a wind farm project layout to adhere to a 50 dB(A) L50 maximum noise limit at residences. The 50 dB(A) L50 does not include background noise but is limited to the source. A wind farm developer does not have the ability to control background noise, but can design a wind turbine layout that meets the 50 dB(A) L50 requirement. Minnesota wind farms have been found to be in compliance with Minnesota Noise Standards when the wind farm noise levels have been at or below the standards required by Minn. Rule 7030.0040, subp. 2.

Moreover, it is entirely impractical to apply the Noise Standards to limit "total noise" since background noise fluctuates hour-to-hour and day-to-day. Such an interpretation also presents an impractical regulatory scheme where it is nearly impossible to determine which "source" is the cause of an exceedance. Effectively regulating noise sources requires a methodology and standard that isolates the noise source of concern from other sources of noise. Utilizing the noise standard as suggested by the Administrative Law Judge (ALJ) Report is inconsistent with how the standard has been applied to date. "Reinterpreting" the noise standard could have a detrimental effect on all current and future wind energy generating systems.

### **Reliance on Non-Expert, Non-Testifying Evidence is Inappropriate for Findings of Fact**

In addition to the noise standard findings, WOW takes exception with the Report's heavy reliance on materials submitted through public comment that were not sponsored by experts and whose authors were not available for cross-examination. Work produced by these individuals commonly appear on internet sites opposed to wind energy development. For example, when discussing infrasound, the Report cites extensively from Keith Stelling, Michael Nissenbaum, Alec N. Salt, Jeffery Lichtenhan, Jerry Punch, Richard James, and Paul Schomer. None of these individuals testified at the hearing, nor was their work relied upon by an expert witness. Freeborn Wind witnesses Dr. Ellenbogen, Dr. Roberts and Mr. Hankard provided credible scientific evidence and were available for cross-examination by Parties in the proceeding.

While the Administrative Law Judge properly identified that non-expert, non-testifying hearsay evidence is afforded less weight under the administrative and evidentiary rules governing these

proceedings, and even excluded similar evidence in a pre-hearing order, the Report nonetheless contains numerous citations to such unsubstantiated and unqualified material in support of substantive factual findings on technical issues. Given this clear departure from evidentiary standards, and internal inconsistencies regarding the weight to be provided to types of evidence, WOW asks that the Commission examine the underlying record evidence and view findings based on non-expert, non-testifying witnesses with skepticism.

### **Ice Throw Findings Ignore Modern Wind Turbine Technology**

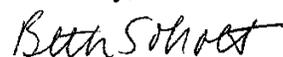
Finally, WOW takes exception to findings regarding ice throw. The Report relies on anecdotal, non-expert, non-testifying comments and articles to propose inefficient, unworkable measures to mitigate potential ice throw. The proposed mitigation would require on-site personnel to monitor all turbines located within 1,200 feet of a road, trail or building during conditions when ice is possible. This is troubling because the ALJ relies on second-hand accounts of a single alleged incident of ice throw, and a 2006 report involving different turbine technology (General Electric turbines) as the basis for the recommended condition.

More credible evidence was provided by Freeborn Wind and the Department of Commerce Energy Environmental Review & Analysis Unit (EERA). Freeborn Wind intends to use Vestas turbines for their project, not General Electric turbines. Vestas turbines are equipped with modern technology that remotely monitors the turbines for icing conditions. In the event the turbine detects an imbalance on the turbine blades due to ice accumulation, the turbine shuts down. In addition, EERA reviewed public reports during the scoping period and concluded that the risk for ice throw was remote, particularly at the distance the Freeborn Wind turbines are setback from roads, trails and buildings.

Minnesota is a national leader in clean energy and has tripled its renewable energy supply since 2007. Minnesota's leadership has been driven by strong state policies and a balanced regulatory regime. These policies have driven significant investments in Minnesota providing economic benefits to communities across the state. Wind development continues to show strong growth with 1,200 megawatts in advanced development. Adherence to the Findings of Fact as stated in the ALJ's Report and the ALJ's recommendations would be detrimental to Minnesota's clean energy commitments and decarbonization goals, potentially deprive Minnesota consumers of cost effective energy resources and ultimately divert wind investment to other Midwestern states.

Thank you for the opportunity to submit these comments and exceptions to the Administrative Law Judge's May 14, 2018 Findings of Fact, Conclusions of Law and Recommendations in Docket No. IP-6946/WS-17-410.

Sincerely,



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