STATE OF MINNESOTA
BEFORE THE
PUBLIC UTILITIES COMMISSION

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matthew Schuerger	Commissioner
John Tuma	Commissioner
Katie Sieben	Commissioner

In the Matter of the Application of Freeborn Wind Energy LLC for a Large Wind Energy Conversion System Site Permit in Freeborn County	MPUC Docket No. IP-6946/WS-17-410; OAH Docket No. 80-2500-34633

AMERICAN WIND ENERGY ASSOCIATION'S
EXCEPTION TO THE FINDINGS OF FACT AND CONCLUSIONS OF LAW AND RECOMMENDATIONS OF THE ADMINISTRATIVE LAW JUDGE

The American Wind Energy Association[1] ("AWEA") respectfully submits these 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"). The noise-related Finding Nos. 204, 206, and 245 of the Report should be rejected by the Minnesota Public Utilities Commission ("Commission") because they misinterpret Minnesota law and other findings in the report should be rejected or modified because they fail to rely on the best scientific evidence in the record.

I. The Report Misinterprets the Minnesota Noise Standard.

[1] AWEA is a national trade association representing a broad range of entities with a common interest in encouraging the deployment and expansion of wind energy resources in the United States. AWEA members include wind turbine manufacturers, component suppliers, project developers, project owners and operators, financiers, renewable energy supporters, utilities, marketers, customers and their advocates.

AWEA takes exception to the Report Findings No. 204, 206, and 245 related to noise. These findings interpret the Minnesota Noise Standard as regulating "total noise" at a receptor such that noise from all sources cannot exceed a nighttime L50 within the Noise Area Classification 1. However, this interpretation is unreasonable and inconsistent with Minn. Stat. §§ 116.07, subd. 2(c) and 116.06, subd. 15, and guidance from the Minnesota Pollution Control Agency ("MPCA").

Pursuant to Minnesota law, the MPCA has established limits on sources of noise. In setting those limits, it specifically defines "noise" "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."[2] As stated in the MPUC guidance document on noise control in Minnesota, 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."[3] This background, or ambient, noise can include animals, voices, and other sounds.[4]

The MPCA provides guidance on the implementation of its Noise Standards, including, how to measure total noise, and how to separate the "source" noise from "background noise" to determine compliance.[5] The guidance states that "background noise is any ambient noise other than the noise to be measured, including wind, precipitation, traffic, etc." For accurate measuring, the guidance states that "[t]he difference between the sound level of the source being monitored [i.e. the wind farm] and that of the background noise must be less than 10dBa."[6] If the Noise Standards were intended to set a "total noise" level which could not be exceeded, there

[2] Minn. Stat. § 116.06, subd. 15 (emphasis added).
[3] MPUC, *A Guide to Noise Control in Minnesota; Acoustical Properties, Measurement, Analysis and Regulation, MPCA* at 11 (November 2015), *available at* https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf (accessed March 8, 2018) [hereinafter "MPCA Guide"].
[4] *Id.* at 11.
[5] *Id.*
[6] *Id.* at 13.

would be no need for the Rule or MPCA to establish protocols for separating the "noise source" from "background noise."

To date the Minnesota Noise Standard, Minn. Rule 7030.0040, subp. 2, has been applied as requiring a wind farm project to adhere to a 50 dB(A) L50 maximum noise limit at residences. The 50 dB(A) L50 does not include background noise and 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.[7]

Applying the Reports "total noise" interpretation, during wind conditions that are best for the generation of wind power, the turbines would not be permitted to operate because the wind noise alone would be at or exceeding the Minnesota Noise Standards. This does not make sense. It is entirely impractical to apply the Noise Standards to limit "total noise" since background noise fluctuates hour-to-hour and day-to-day. This would present 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.

If the Commission adopted a "total noise" standard, such an interpretation would effectively ban future wind development in Minnesota, and potentially provide anti-wind activists a tool to attempt to adversely affect the operation of existing projects, both of which would have widespread negative impacts throughout the state.

[7] *See In the Matter of the Application of AWA Goodhue Wind, LLC,* Docket No. IP-6701/WS-08-1233 (Aug. 2011)(adopting the ALJ recommendation that the Project met the state's noise standard with a Project maximum noise level of 43 dB and existing ambient sound conditions in the Project area between 33 to 52 dB).

Minnesota is a national leader in the wind energy industry. It ranks as the seventh highest state for wind development in the country with an installed wind capacity of 3,699 MW, representing a total capital investment of $7.1 billion.[8] The state has been successful in attracting investment for wind energy manufacturing, with at least 20 active manufacturing facilities in the state. An investment in wind power is an investment in jobs, including jobs in operations and maintenance, construction, manufacturing, and many support sectors. In 2017, wind power supported 3,000 direct and 4,000 indirect jobs in Minnesota. Annual wind lease payments to Minnesota landowners are $10-15 million. In 2017, wind power generated over 18 percent of Minnesota's electricity, ranking seventh in the nation for wind energy as a share of total electricity generation. Such generation is equivalent to roughly one million homes powered by wind. Wind power in the state has also created huge environmental benefits, as wind generation creates no emissions and uses virtually no water. In 2017, the use of wind power in Minnesota saved roughly 3.5 billion gallons in water consumption as compared to coal and gas plants, which is equivalent to roughly 26 billion water bottles, and avoided 7.0 million metric tons of state carbon dioxide emissions, which is equivalent to emissions from 1.5 million cars.

In addition, wind energy is needed to ensure that Minnesota is able to meet its renewable energy standard ("RES"). Under the standard, Xcel Energy is required to derive 31.5% of its sales from renewables by 2020. Other utilities must derive 25% of their sales from renewables by 2025. Wind energy has historically been the renewable resource of choice to meet these RES requirements.[9]

[8] AWEA, Wind Energy in Minnesota, http://awea.files.cms-plus.com/FileDownloads/pdfs/Minnesota.pdf (last visited June 7, 2018).
[9] *Id.*

Looking forward, Minnesota has tremendous potential to add additional wind energy generation. Project developers have announced 300 MW of new construction and 1,199 MW of new projects in advanced development in the state.[10] AWS Truepower and NREL estimate a potential wind capacity of 182,825 MW.[11] Minnesota has a tremendous wind resource across its millions of acres of farmland. Thousands of additional megawatts of wind generation capacity can be responsibly sited and added, increasing jobs, revenue, and environmental benefits to Minnesotans. However, adoption of the ALJ's misinterpretation of the Minnesota law would significantly and arbitrarily reduce this clean energy opportunity.

II. The Report Fails to Rely on the Best Available Science.

In addition to concerns over the Report's interpretation of the Noise Standards, AWEA takes exception to the Report's failure to rely on the best available science in the record. In the sections discussing noise, among others, the Report relies heavily on anecdotal, non-expert assertions provided by laypersons in comment letters instead of sworn expert testimony that was subject to cross-examination. The Report contains numerous citations to unsubstantiated material in support of substantive factual findings on technical issues, such as infrasound and noise regulation.[12] 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.[13] None of these individuals testified at the hearing, nor was their work relied upon by any expert witness.

[10] AWEA, U.S. Wind Industry First Quarter 2018 Market Report 11-12 (April, 26, 2018).
[11] Office of Energy Efficiency & Renewable Energy, *U.S. Installed and Potential Wind Power Capacity and Generation*, WINDExchange, https://windexchange.energy.gov/maps-data/321 (last visited June 8, 2018).
[12] *See* Report at Finding Nos 181, 182, 185, 190, 191, 192, 195, 196, 197, 207, 235, 237, 309.
[13] *See, e.g.*, Report at Finding Nos 274, 275, 276, 292, 293, 298.

In contrast to the unsubstantiated commentary, the record contains reliable evidence submitted through sworn testimony of qualified, credible experts. Freeborn Wind provided expert witnesses Dr. Ellenbogen, Dr. Roberts, and Mr. Hankard, all of whom provided strong, credible evidence through testimony and accompanying reports and were available for cross-examination. Although the ALJ acknowledges in the Report that such testimony was provided, she failed to give proper weight to this credible scientific evidence in making her findings.[14]

Using the best available evidence is vital to reaching a reasoned, fact and science-based recommendation for this Site Permit application, the enforcement of existing Site Permits, and other potential Site Permits in the future. Heavy reliance on unsupported anecdotal, non-expert assertions instead of credible expert testimony, as was done in the Report, sets a very dangerous precedent. It sends the message that the opinion and commentary of the affected layperson, whether it is supported or not, is valued more than credible, scientific experts and peer-reviewed studies. While community involvement is an important part of the process, the Commission must ensure that all findings are supported by credible science instead of unsubstantiated public comments and online articles. A rigorous, fact-based permitting process has been a hallmark of Minnesota's successful wind energy industry to date, and we look forward to that continuing

III. CONCLUSION

For the reasons stated herein, AWEA respectfully requests that the Commission reject the noise-related Finding Nos. 204, 206, and 245 of the Report and reject or modify other findings in the Report that fail to rely on the best scientific evidence in the record.

[14] Report at para. 178.

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