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Apex Clean Energy 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"). We believe the Report's findings related to noise and ice throw, as well as its reliance on non-scientific, non-expert testimony, will have far-reaching and long-lasting impacts on the development of wind energy facilities in Minnesota.

Apex Clean Energy is a leading developer of utility-scale wind and solar facilities across the country. Although Apex Clean Energy does not currently operate any renewable energy facilities in Minnesota, we are actively developing projects in the state.

Noise-Related Findings

The Report appears to suggest that Minnesota's Noise Standard regulates "total noise" at a receptor such that noise from all sources, including ambient noise, cannot exceed a nighttime 50dBA.¹ This interpretation appears inconsistent with statute, guidance from the Minnesota Pollution Control Agency, and prior Public Utilities Commission ("Commission") practice.

It becomes nearly impossible to control for random fluctuations and short-term events in ambient noise when siting turbines, which is essentially what is suggested by the ALJ report considering the full range of ambient noise rather than a mean value. Further, this suggests that due to ambient noise exceeding the current nighttime limits, turbines must not increase the overall sound levels at all. The established and accepted practice of adding a safety buffer to the turbine sound profile in modeling the impact on residences ensures a controlled and proper siting method to maintain nighttime sound levels. Likewise, adding an ambient noise component would become a determinantal constraint across many industrial operations beyond wind energy.

Should the Commission adopt this recommendation and interpretation of the state's Noise Standard, it would create an incredible amount of regulatory uncertainty, not just in the wind energy sector, but across a variety of segments of the economy, including agricultural, industrial, and transportation. We hope that the Commission will reject this interpretation and confirm that the state's Noise Standard excludes background/ambient noise.

Ice Throw

The Report proposes that the Commission's site permit require on-site personnel to monitor all turbines located within 1,200 feet of a road, trail or structure during conditions when icing is possible.² First, we take exception to the inclusion of this requirement because it appears to be based on anecdotal, non-expert comments, instead of the ample scientific records submitted into the record by several parties, including the Department of Commerce.

With modern turbines, the risk of ice throw is extremely low, especially at current setback distances. Furthermore, the report ignores remote operational monitoring of the turbines, which undergo shutdown during icing conditions, detected by an accelerometer in each blade to

¹ Report's Findings 204, 206, and 245

² Report's Findings Nos. 309-311

determine ice build-up. The turbines then undergo deicing prior to resuming operation. Requiring constant monitoring by staff at each turbine during icing conditions is burdensome and unnecessary.

Reliance on Non-Expert Testimony to Support Findings of Fact

Apex Clean Energy takes exception to the Report's heavy reliance on reports submitted through public comment that were not sponsored by experts and whose authors were not available for cross examination. These exhibits contain hearsay and should be excluded from the record in their entirety.

Understanding that the law governing the admissibility of evidence may differ between states, Apex Clean Energy believes it is worth highlighting a recent decision by the South Dakota Public Utilities Commission ("SD PUC") on this subject in the Dakota Range Wind Energy Facility proceeding.³ Apex Clean Energy is the developer of this project. In this proceeding, the PUC unanimously voted to exclude dozens of exhibits because they were outside of the personal knowledge of the witnesses, were prepared by third parties, and contained inadmissible hearsay. Notably, many of the exhibits submitted by the intervenors in the Dakota Range proceeding and rejected by the SD PUC were authored by the same individuals who authored articles submitted by opponents to the Freeborn Wind project and cited by the ALJ as the foundation for several of the recommendations in the Report.

Interestingly, the reasons to exclude this type of unreliable information are clearly outlined in this very Report, in Finding Number 159, which states that the ALJ gives "little weight" to information provided by an expert witness sponsored by Freeborn Wind, because that information "rests in large part upon the opinion of a non-expert, non-resident, participating landowner who was not subject to cross-examination."⁴ Yet this same type of non-expert, non-resident, third-party information is cited elsewhere in the Report.⁵

Thank you for the opportunity to submit these exceptions to the Report.

³ SD PUC Docket No. EL-18-003

⁴ Report Finding Number 159

⁵ Report Finding Nos. 203, 217, 218, 228, 237, 324