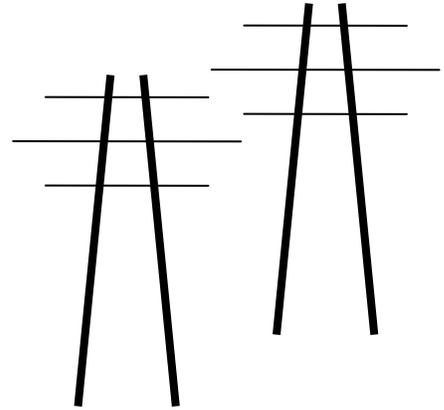


# Legalelectric, Inc.

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August 2, 2016

Commissioner John Linc Stine  
Minnesota Pollution Control Agency  
520 Lafayette Road N  
St. Paul, MN 55155-4194

RE: Petition for Rulemaking for Wind Turbine Noise Standards, Minn. R. Ch. 7030

Dear Commissioner Stine:

Enclosed for filing please find **Petition for Rulemaking**. The Public Utilities Commission has recently initiated wind turbine noise studies that can be utilized to develop MPCA wind turbine noise standards.

I am making this Petition as an individual, and not in the course of representation of any specific party, although for at least 12 years I have been representing landowners and citizen groups in wind project siting dockets where wind turbine noise has been at issue, and have gleaned these concerns from that extensive experience.

At this time, I request that a rulemaking advisory committee be appointed, as provided by Minnesota statute:

## **14.101 ADVICE ON POSSIBLE RULES.**

Subd. 2. Advisory committees.

Each agency may also appoint committees to comment, before publication of a notice of intent to adopt or a notice of hearing, on the subject matter of a possible rulemaking under active consideration within the agency.

Please refer to the testimony of Rick James, INCE, which he provided live and in writing in the

Goodhue Wind Project docket (PUC Docket 08-1233).<sup>1</sup> This testimony explains why the MPCA’s noise standards are not applicable to wind projects, and why wind turbine specific noise standards are needed.

It is my understanding that you’ve also had the opportunity to meet with concerned citizens who have raised these issues at the Public Utilities Commission while participating in various siting dockets, including some who live within a project and are suffering from wind turbine noise. A docket was initiated seven years ago by the Minnesota Department of Public Health (PUC Docket 09-845) based on the DoH report, “Public Health Impacts of Wind Turbines,” but the Commission has taken no action regarding that report. Please note that wind turbines are inexplicably exempted from environmental review under Minn. Stat. Ch. 216F and associated Minn. R. Ch. 7854.

If you have any questions or require anything further, please let me know.

Very truly yours,



Carol A. Overland  
Attorney at Law

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<a href="#">20107-52680-09</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBIT RJ 14	07/19/2010
<a href="#">20107-52680-13</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBITS RJ 6-7	07/19/2010
<a href="#">20107-52680-03</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBITS RJ 16 TO 23	07/19/2010
<a href="#">20107-52680-07</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBIT RJ 11	07/19/2010
<a href="#">20107-52680-01</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--DIRECT TESTIMONY OF RICHARD R JAMES INCE	07/19/2010
<a href="#">20107-52680-15</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBITS RJ 1-5	07/19/2010
<a href="#">20107-52680-05</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBITS RJ 8 TO 14	07/19/2010
<a href="#">20107-52680-11</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	TESTIMONY--EXHIBIT RJ 15	07/19/2010
<a href="#">20108-53310-09</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	COMMENTS--PROPOSED SOUND STANDARDS	08/06/2010
<a href="#">20108-53310-07</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	COMMENTS--RJ-16 - PHILLIPS REFUTATION OF CMOH REPORT	08/06/2010
<a href="#">20108-53310-05</a>	PUBLIC	08-1233	<input type="checkbox"/>	WS	GOODHUE WIND TRUTH	COMMENTS--- ADDITIONAL TESTIMONY OF RICK JAMES	08/06/2010

**PETITION FOR RULEMAKING**  
**TO THE**  
**MINNESOTA POLLUTION CONTROL AGENCY**

**Name:** Carol A. Overland

**Group Represented or Title:** Petition made as an individual

**Address:** Legalectric, 1110 West Avenue, Red Wing, MN 55066

I request that the Minnesota Pollution Control Agency amend Minnesota Rules Chapter 7030 by adopting a new rule section, i.e., Minn. R. 7030.2000, et seq., regarding Noise Pollution Control setting standards for regulating wind turbine noise.

The need or reasons for the wind turbine noise rulemaking are detailed in the testimony of Rick James, INCE, at the Goodhue Wind public hearing and written testimony, attached, with specific issues to be addressed including, but not limited to the following specific concerns:

1. MPCA Noise Standards are not applicable to wind turbine noise. Public Utilities Commission has acknowledged this and has begun studies of wind noise.
2. There is no basis or supporting data to show that L50 is acceptable for night time noise, and there is no basis or supporting data to show any acceptable level for infrasound.
3. Modeling assumptions for noise perception is inappropriate for rural areas, where a quiet bedroom at night is 20dB in summertime.
4. Data shows that 40 dB is the point at which adverse health effects start to occur.
5. Cadna-A model software, often used for modeling wind turbine noise, was designed for modeling traffic noise, and is not appropriate for wind turbine noise.
6. Modeling based on ISO 9613.2 standards is not appropriate for wind turbine noise as it excludes any noise sources more than 30 meters above the ground.
7. ISO 9613.2 has known errors or tolerances for distances beyond 1,000 feet and many “receptors” are at a distance greater than 1,000 feet.
8. A 3dB tolerance at this distance is often added in, and a 3dB difference is a doubling in sound levels. The tolerance range should be more narrow.
9. Turbine manufactures often allows a 2dB tolerance variable which is not identified or disclosed in modeling results.

10. Wind turbine noise must address turbulent weather conditions, where sound levels can be 10-15dB higher than “normal.”
11. Consideration of the above issues in modeling means that a 43dBA estimate, adding in known tolerances (arguably 5dbA) and adding for weather conditions (arguably 10-15dbA) to noise model estimates, results in levels of 58dbA-63dbA. These levels have been confirmed in after construction and during operation of wind turbines.
12. Wind turbine modeling should not be modeled presuming area as flat and using the turbine as the “point source.” Such models do not include topography of the land.
13. Because a NASA study which identifies **low frequency noise** from wind turbines, and found that it does not propagate spherically, but instead cylindrically, point source modeling for wind turbines is inappropriate, and modeling must be designed to address this characteristic.
14. In the case of wind turbine noise, low frequency noise must be identified and regulated, which, as PUC noted, is different than the regulation found in Minn. R. 7030.
15. Wind turbine noise standards must also address ground absorption, in varying conditions, where a model such as that for AWA Goodhue Wind used assumption of .7 for ground absorption of sound, where frozen ground the assumption should be “0”, which would raise levels another 2-3 dBA, doubling the expected sound levels.

This new rule will require testing, review of modeling, and consulting with experts to draft rule language to address these concerns.

**Proposed language** – Proposed language should be formatted based on existing noise rules, as below, and expanded to incorporate the specifics, to be based on sound studies and testimony.

7030.0020 DEFINITIONS

(new) **C Weighted.** “C Weighted” means...

(new) **Infrasound.** Infrasound means

7030.2020 DEFINITIONS.

7030.2030 NOISE CONTROL REQUIREMENT.

7030.2040 NOISE STANDARDS.

7030.2050 NOISE AREA CLASSIFICATION.

7030.2060 MEASUREMENT METHODOLOGY.

7030.2070 SOUND ATTENUATION MEASUREMENT METHODOLOGY.

7030.2080 VARIANCE.

This petition is being filed via email and is also filed as required by Minn. R. 1400.2020 and 1400.2500 to you, as the Commissioner of the Minnesota Pollution Control Agency, by United States mail.



Date: August 2, 2016

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