Section 1. **[216F.10] NOISE COMPLAINTS; PERMIT AMENDMENTS.**

Subdivision 1.**Complaints; forwarding.** By September 1, 2016, the Health Department, Commerce Department, Pollution Control Agency, and any political subdivision of the state must forward to the commission a copy of each complaint received before August 1, 2016, alleging noise ~~pollution~~ impacts from a large wind energy conversion system, as defined in section 216F.01, subdivision 2, that was filed with those agencies by a person whose primary residence is located within 1.5 miles of a large wind energy conversion system. The commission must assemble all complaints it has received.

Subd. 2.**Complaints; evaluation; investigation.** The commission must review and evaluate the complaints (1) forwarded to it under subdivision 1, and (2) originally filed with the commission that meet the requirements of subdivision 1. The commission must contact the complainant to ascertain whether the situation alleged in the complaint is still ongoing, and must conduct a site investigation and noise testing for ongoing complaints. Pollution Control Agency staff must accompany commission staff to a site investigation and measure the level of noise, including low-frequency noise, at the residence at multiple times under differing conditions to obtain representative samples.

Subd. 4. **Noise measurements and rulemaking.** The commission must provide the noise measurements to the Minnesota Pollution Control Agency for use in its Noise Standard rulemaking.

Subd. ~~3~~4.**Temporary permit amendment.** When Noise Standard is enacted, those the siting permits shall be brought before the commission where complaint investigations demonstrate non-compliance, (a) The commission must evaluate the results of the investigation and noise tests and may, if warranted and after providing notice and affording due process to the permit holder, consider an amendment to the large wind energy conversion system's site permit that would temporarily cease operation, for a period not to exceed 30 days, of one or more of the large wind energy conversion systems contributing to the complaint.

(b Commission action is warranted where Noise Standard has been violated.

(~~b~~c) Pollution Control Agency staff must conduct a second test of noise at the residence during the temporary cessation period.

(~~c~~d) The commission must contact the complainant at the end of the temporary cessation period to obtain the complainant's assessment of the cessation's impact on noise levels. ~~If the complainant reports that noise levels have been significantly reduced during the temporary cessation, t~~The commission may consider ~~permanently~~ amending the site permit under subdivision 4 by ordering conditional, temporary, or permanent cessation. If the complainant reports that noise levels have not been significantly reduced during the temporary cessation, the commission must investigate cause of noise impacts (this section is unenforceable, too arbitrary) ~~may consider whether a large wind energy conversion system other than the large wind energy conversion system whose operations were temporarily ceased is contributing to noise levels, and may decide to amend the permit under the procedures in this subdivision by temporarily ceasing operations at the large wind energy conversion system.~~

Subd. 4.**~~Permanent~~ permit amendment.** After considering the results of the noise tests, the Noise Standard and the complainant's assessment regarding the extent to which the temporary cessation significantly reduces or eliminates the noise, the commission may decide, after providing notice and affording due process to the permit holder, to conditionally, temporarily, or permanently amend the permit if it determines that there is good cause to do so. (ACK – NO! This invites another "good cause" mess!)

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 2. **RULEMAKING; NOISE STANDARD FOR WIND ENERGY CONVERSION SYSTEMS.**

No later than August 1, 2016, the Pollution Control Agency, using its authority under Minnesota Statutes, section 116.07, subdivision 4, paragraph (e), must begin to develop and adopt rules under Minnesota Statutes, chapter 14, to define, prevent, abate, and control noise ~~pollution~~impacts from wind energy conversion systems, as defined in Minnesota Statutes, section 216F.01, that may affect nearby residents. In developing the rules, the agency must consult with the commissioner of health and must address issues that specifically pertain to low-frequency noise ~~pollution~~ impacts created by wind energy conversion systems, including but not limited to:

(1) the effectiveness of the atmosphere in attenuating low-frequency noise as the distance between the noise source and a receptor increases;

(2) the effectiveness of building walls and windows in attenuating low-frequency noise, and whether low-frequency noise may be amplified by resonance within a building;

(3) the degree to which shaking, vibration, rattling, throbbing, and rumbling characteristics reported in association with low-frequency noise serve to increase the annoyance experienced at any given sound level;
(4) whether conventional scales developed to measure noise levels, such as dB(A) and others, are appropriate for measuring the impact of low-frequency noise, and whether use of a linear nontransformed scale may produce more accurate estimates;
(5) the degree to which noise from wind energy conversion systems is underestimated as a result of the common practice of measuring wind speeds at ten meters above the ground and using modeling relationships to estimate the speed at higher elevations, compared with actual wind speed measurements taken at the hub;
(6) the extent to which rhythmic modulation, or pulsing, of low-frequency noise can arise from:
(i) the difference in sound pressure between the tip of the blade at its furthest and nearest points to a fixed receptor;
(ii) a blade angle that is not properly tuned to wind speed or direction in order to minimize noise; or
(iii) the blade passing through atmospheric layers experiencing different wind speeds that stabilize in the atmosphere at different heights, particularly at night; and
(7) the degree to which low-frequency noise from wind energy conversion systems affects the vestibular system and contributes to annoyance.

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 3. **PUBLIC UTILITIES COMMISSION DOCKET; WIND SITING SETBACKS.**

Within 30 days of the completion of the rulemaking conducted under section 2, the commission must open a docket to reexamine the minimum setback from residences required in site permits for large wind energy conversion systems issued by the commission and by counties that have assumed the responsibility to process applications and issue site permits under Minnesota Statutes, chapter 216F, taking into consideration the noise ~~pollution~~ impact rules adopted by the Pollution Control Agency under section 2. If the commission determines that the minimum setback needs to be amended, it must do so in an order issued within 180 days of opening the docket.

EFFECTIVE DATE. This section is effective the day following final enactment.

Need wind rulemaking petition to MPCA!

From the bill, these issues could be the substance of it:

(1) the effectiveness of the atmosphere in attenuating low-frequency noise as the distance between the noise source and a receptor increases;
(2) the effectiveness of building walls and windows in attenuating low-frequency noise, and whether low-frequency noise may be amplified by resonance within a building;
(3) the degree to which shaking, vibration, rattling, throbbing, and rumbling characteristics reported in association with low-frequency noise serve to increase the annoyance experienced at any given sound level;
(4) whether conventional scales developed to measure noise levels, such as dB(A) and others, are appropriate for measuring the impact of low-frequency noise, and whether use of a linear nontransformed scale may produce more accurate estimates;
(5) the degree to which noise from wind energy conversion systems is underestimated as a result of the common practice of measuring wind speeds at ten meters above the ground and using modeling relationships to estimate the speed at higher elevations, compared with actual wind speed measurements taken at the hub;
(6) the extent to which rhythmic modulation, or pulsing, of low-frequency noise can arise from:
(i) the difference in sound pressure between the tip of the blade at its furthest and nearest points to a fixed receptor;
(ii) a blade angle that is not properly tuned to wind speed or direction in order to minimize noise; or
(iii) the blade passing through atmospheric layers experiencing different wind speeds that stabilize in the atmosphere at different heights, particularly at night; and
(7) the degree to which low-frequency noise from wind energy conversion systems affects the vestibular system and contributes to annoyance.