

FILE

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Public Utilities Commission of Ohio

Docketing Division 13<sup>th</sup> floor

180 East Broad Street

Columbus, Ohio 43215-3793

**Reply comments to: Case # 08-1024EL-ORD, Rules for Certification of Electric Generation Wind Facilities.**

I respectfully submit the following concerns, comments and questions regarding wind turbine siting regulations for Ohio. The establishment of industrial wind turbines in Ohio has ecological, cultural, economic and social significance. Ohio's citizens deserve, if not demand, that the government agencies that our tax dollars support give this issue the time and careful consideration required to craft regulations that protect the health, safety and welfare of every Ohio citizen.

Regarding section: 4906-17-08. Social and ecological data.

A. 2. B. Evaluate and describe the operational noise levels expected at the nearest property boundary, under both day and night time conditions. The applicant shall use generally-accepted computer modeling software or similar methodology, including consideration of broadband, tonal, and low-frequency noise levels.

The setback regulations need to include a limit for noise emissions from the operation of industrial wind turbines to protect neighboring properties from unduly being physically or financially harmed due to excessive noise emissions. This is a heavily populated rural residential area (79 homes per square mile). Wind turbine sounds are not comparable to the more common noise sources of occasional vehicles, aircraft, rail and industry. Several scientific studies have shown that annoyance to wind turbine sounds begins at levels as low as 30 dBA. This is especially true in quiet rural communities that have not had previous experience with industrial noise sources. The western Ohio county in which I live (Logan), has documented long term background sound levels in the range from less than 20 dBA (L90) to about 30 dBA (L90), with background levels generally in the low 20 dBA range. Noise in these hills travels for miles under the right weather conditions, and there are no other ambient noises to mask or otherwise ameliorate the sound emissions from the proposed wind turbine projects.

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I ask that the following recommendation be considered as maximum allowable noise emissions requirements to be measured from the nearest property line:

International Standards Organization (ISO) in ISO 1996-1971 recommends 25 dBA as the maximum night-time limit for rural communities. As can be seen in the table below sound levels of 40 dBA and above are only appropriate in suburban communities during the day and urban communities during day and night. There are no communities where 45 dBA is considered acceptable at night.

ISO 1996-1971 Recommendations for Community Noise Limits			
District Type	Daytime <sup>Limit</sup>	Evening Limit 7-11pm	Night Limit 11pm-7am
Rural	35dB	30dB	25dB
Suburban	40dB	35dB	30dB
Urban residential	45dB	40dB	35dB
Urban mixed	50dB	45db	40dB

For noise reference see also the George W. Kamperman and Richard R. James report presented at the Noise Conference 2008, "Simple Guidelines for Siting Wind Turbines to Prevent Health Risk."

Regarding section: 4906-17-08 Social and ecological data.

(C) Economics, land use and community development. 1) Land uses. The applicant shall: C. Economics, land use and community development. (ii) The wind turbine shall be at least seven hundred fifty feet in horizontal distance from the tip of the turbine's nearest blade at ninety degrees to the exterior of the nearest, habitable, residential structure, if any, located on adjacent property at the time of the certification application.

This regulations needs to be changed to coincide with several scientific studies recommendations, most notably the National Academy of Science's recommendation that no industrial wind turbine be sited closer than 3200' of a neighboring property line. In any case, the distance must be measured from the property line and not from the dwelling. To measure from the adjacent dwelling would essentially rob the neighboring and owner full potential and use of his property at the expense of the wind turbine lease/landowner.

The measurement of 3200' should also be applied to other sections of Chapter 4906-17 that reference setback or distances; and request a technical justification for any

request for consideration of reduction in written safety guidelines.

Additional areas of concern that I do not believe have been adequately addressed and need requirements prescribed are:

1. Protection of ground water wells from blasting (glacial ridge of limestone and karst in this area)
2. Protection of streams and adjacent properties and ponds from runoff during construction and as a result of permanent deforestation and removal of vegetation.
3. How will the OPSB use alternative site data in their analysis? Are equal or better winds in a less populated area to be factored into the application approval determination?
4. Will OPSB acquire a database of manufacturer/model or documentation to have on file for comparison to those turned in with project siting applications? If recommended distances change, will the OPSB (and OSHA) further analyze the reasons for the change, perhaps through an independent (and unbiased) mechanical engineering firm?
5. If it is found that safety distances were not disclosed during permitting, and inappropriate sites are permitted, what is the statutory recourse/penalty after the turbines are built?
6. What criteria/determinant will be used for noise sensitive-areas within one-mile of the proposed facility? And who will monitor to ensure compliance? Can permits be revoked for non-compliance?
7. To within what distance from the wind facility are applicants required describing equipment and procedures to mitigate the effects of noise emissions from the proposed facility during construction and operation?
8. We understand that OPB has stated that any safety distance (i.e. "do not linger" zone) guidelines in a turbine manufacturer's documentation will SUPERCEDE any state mandated minimum setbacks. Please include language to ensure the manufacturer(s) and their insurer(s) guarantee they will provide any such safety references in their applications.
9. Do not permit turbine siting to cause shadow flicker on adjacent properties.
10. This area is a haven for wildlife, and they need to be considered with regard to protecting the adjacent lands to ensure their native wildlife will not be disturbed, including the many commercial hunting, fishing and recreational properties.
11. Please tell me how the non-turbine properties will be protected from indiscriminate public domain seizure for transmission lines to transport questionable wind energy production.
12. For application requirements under land uses – regarding the map of 1:24,000 scale indicating general land uses, depicted as areas on the map, within a five-mile radius of the site, including such uses as residential and urban, manufacturing and commercial, mining, recreational, transport, utilities, water and wetlands, forest and woodland, pasture and cropland, who will determine

current and potential future land uses? Who verifies the accuracy of that information?

13. Considering blade shear and ice throw, that measurement should be increased substantially – to the NAS's suggested 3200' setback.
14. Under section C,1. Land uses—please explain more fully how these are to be audited before and after construction for content and accuracy:

(a) estimate the annual total and present worth of construction and operation payroll.

(b) estimate the construction and operation employment and estimate the number that will be employed from the region.

(c) estimate the increase in county, township, and city tax revenue accruing from the facility.

(d) estimate the economic impact of the proposed facility on local commercial and industrial activities.

15. Should the proximity of wind turbines cause our property values to decline – can the state guarantee we will be reimbursed for the difference...or a buyout if four homes cannot be sold within a reasonable amount of time? Many in our area are having their homes appraised in advance of wind turbines. Please add a requirement for a site-specific study of home sales – past and projects values and for permits for new home construction and remodeling – past and projected
16. Under C, 1, D – G, please explain what impacts are to be estimated, and how that data's content will be validated.
17. Permit no communications or any type of communications signal receiving devices to be attached to these structures at any times.
18. Please answer questions regarding the following:

Section e. Public responsibility. The applicant shall:

(1) describe the applicant's program for public interaction for the siting, construction, and operation of the proposed facility, i.e., public information programs. Who will verify?

(2) describe any insurance or other corporate programs for providing liability compensation for damages to the public resulting from construction or operation of the proposed facility. Who will monitor, enforce or mediate?

(3) evaluate and describe the potential for the facility to interfere with radio and tv reception, and if warranted, describe measures that will be taken to minimize interference. Who will monitor, enforce or mediate?

**(4) evaluate and describe the potential for the facility to interfere with military radar systems, and if warranted, describe measures that will be taken to minimize interference. Who will monitor & enforce or mediate?**

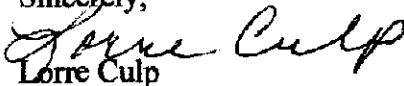
**(5) evaluate and describe the anticipated impact to roads and bridges associated with construction vehicles and equipment delivery. Describe measures that will be taken to repair roads and bridges to at least the condition present prior to the project. Who will enforce or mediate?**

**(6) describe the plan for decommissioning the proposed facility, including a discussion of any financial arrangements designed to assure the requisite financial resources. Who will monitor, enforce or mediate?**

Instead of having the wind companies provide their own versions of the proof/evidence the OPSB requires, and since studies such as those done by NREL are clearly defective, why does the State of Ohio not conduct their own independent studies on impacts on the environment, community health, property use, property values, enjoyment of chosen lifestyle, wildlife, preservation of roadways, non-interference with adjacent properties, nuisance, damages to people & their properties before any wind turbines are permitted or erected?

Before these draft regulations become law, please visit our community to try to better understand my reasons for concern.

Sincerely,

  
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