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Details:

(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2009-10

(session year)

Senate

(Assembly, Senate or Joint)

Committee on ... Commerce, Utilities, Energy, & Rail (SC-CUER)

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
(**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
(**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

C-Rule 10-057?

October 13, 2010

Committee on Commerce, Utilities, Energy, and Rail
411 South State Capital
Madison Wisconsin

My name is Jim Mueller. I have been living in the Town of Marshfield since 1962. I came here to speak in regards of the new rules for the siting of wind turbines.

We have been living with turbines in our neighborhood for nearly two years. The noise at times is like a jet engine roaring above your house. Nighttime is the worst. Air is heavier and noise comes to the ground. We are awakened at night and even with windows closed the noise will come thru the walls. This goes on for 4 to 6 hours an evening. I have gone to the basement to try and get away from the noise.

A train will make noise for 10 to 20 minutes when passing through, airports quiet down later in evenings as flights lessen. In our area as the night goes on the noise get louder. We should have a right to have a night's sleep like anyone else.

Noise limits proposed are 50 dBA during daylight and 45 dBA at night. Sounds realistic but need to understand how tested is done and what this truly is. If a complaint is received the wind turbine companies have up to 2 years, up to 2 years, up to 2 years to do an accurate test to see if noise is within compliance. The owners of the turbines can pick a time and control the turbines during testing to make sure they comply during the test. If the turbines are compliant during this test there is nothing we as citizens can do. Why are such rules being made that cannot be enforced. Who is going to enforce this? How can such noise limits even be enforced? What kind of a joke is this?

Last Saturday night there was no wind but the wind turbines where turning and grinding trying to find wind. That noise is almost as loud as when the wind is blowing. Wind Turbines do not produce electricity until wind speeds reach 8 miles an hour. Now we are awake at night by the turbines and they are not even producing electricity!

The wind turbines distort the digital and analog signals for television and radio. We no longer can get television off our antennas. Public television and many other digital stations are not on cable. We can no longer watch shows we were able to watch before the turbines were constructed. My wife has a problem with motion sickness. The

flickering caused by the turbines is nauseating for her. The property values of our homes are less because people do not want to live in our area.

With all the problems we are having in our township a citizens wind turbine standing committee was formed to try and resolve these problems. I am on this committee. The only problems that We Energies has attempted to resolve are TV and radio and this has been a battle. The only reason We Energies is working on this is because they have to. It is in the joint development agreement contract between We Energies and the Town of Marshfield.

Each month We Energies is to give our committee a report on complaints regarding the wind turbines. We Energies has been giving only a partial list of complaints in the last several months. In September even one of our town supervisors called about the noise of one of the turbines. This was not listed on the report.

There was a turbine that whistled like an old time police siren. Residents were complaining. We Energies determined that it was not a health hazard and kept the turbine running for 6 months. Who gives We Energies the right to determine what amount of whistle or screeching that is allowed?

How can our citizens compare to a company that has a complete legal department on staff? Who can afford to hire legal counsel that can represent us? And to top this off our township is not included in the revised rules due to the wind turbines being constructed before these hearings. Who is going to help us with our current problems?

I have suggested not having the wind turbines turning until wind speeds reach 6 miles an hour. The technology is available. This would give us some temporary relief as follows:

1. Eliminate Flicker.
2. Eliminate noise from the wind turbines operating.
3. Eliminate TV and Radio reception problems.
4. Lower wear and tear on the mechanics of the turbines.
5. For summertime activities especially. Having a quiet day is like a little bit piece of heaven. You don't realize what you had until it is taken away.

We are pleading for this committee to not only change some of these proposed rules, but to also include our township in these rules. I am not against wind energy, it just does not belong where people reside.

Sincerely,

James Mueller

N8710 Pine Road

St. Cloud WI 53079

Phone 920-753-5211

Blue Sky /Greenfield Wind Farms
Hotline Phone Log

Date	City / Village	Question/Concern/Notes	Follow-up completed (date)	Notes:
9/16/10	Mt. Calvary	Customer called with questions about service agreement he received in mail regarding television service.	Bob Servais spoke with customer and answered all questions.	
9/18/10	Mt Calvary	Customer called with questions about DISH. Customer called with questions about service agreement he received in mail regarding television service.	Dale called & received voicemail; R Servais got in touch with her on 9/18 and answered all questions	
9/21/10	Malone	Customer called with questions about service agreement he received in mail regarding television service.	Bob Servais spoke with customer and answered all questions.	
9/23/10	Mt Calvary	Customer is having television interference every day, especially bad on weekends. Customer called for help with TV Interference. He recently cancelled his DirecTV account and when his antenna did not work called a local Antenna Company only to find out that his line-of-sight is cutting out Local broadcast.	Testing has showed no interference. Another test is planned. If no significant interference is found we may upgrade the antenna.	
9/30/10	Malone	Customer is having television interference every day, especially bad on weekends. Customer called for help with TV Interference. He recently cancelled his DirecTV account and when his antenna did not work called a local Antenna Company only to find out that his line-of-sight is cutting out Local broadcast.	Resident is happy so far with our response.	
9/30/10	Malone	Customer is having television interference every day, especially bad on weekends. Customer called for help with TV Interference. He recently cancelled his DirecTV account and when his antenna did not work called a local Antenna Company only to find out that his line-of-sight is cutting out Local broadcast.	Bob Servais following up with customer.	



C-Rule 10-057?

Testimony for the public hearing of the Committee on Commerce, Utilities, Energy, and Rail on October 13, 2010

My name is Elaine B Strassburg. I am retired, the widow of a Vietnam veteran whose death in 1995 was service-connected and I appreciate the opportunity to give testimony today. I want state legislators and regulators to understand the concerns of an ordinary citizen who might find 400 ft or higher wind turbines within 440 ft of her property. I live in Union Township (Rock Co) on Cty Rd C where EcoEnergy had requested permission to build three wind turbines. My testimony will be a combination of comments and questions of state legislators and regulators for their consideration and response.

I am incredulous at the recommendations of the Wind Siting Council (Council) to the extent I conclude the Council was stacked with proponents of the wind energy industry. I also ask if legislators and regulators feel so pressured to achieve the alternative energy goals by 2015 that they have not given due consideration to the careful work done by townships such as Union in preparing their local ordinances. If local governments are competent to handle local zoning issues and to adopt individualized Smart Growth Plans (SGP), then why are they not competent to address wind turbine siting issues? With one fell swoop, and only after the wind industry complained, state legislators turned face and wasted a year and a half of effort, talent and expense in Union Township in addition to impacting the SGPs. Legislators should be ashamed at this

Wisdom does not reside alone in the industry. Need I say more than "BP" and their earlier assurances of safe practices and, then, our belated recognition that federal legislators and regulators were too cozy with and/or too influenced by the industry? Ditto for the financial investment industry that has left our economy in tatters. Ditto for the pressure applied by the ethanol industry a decade ago and our belated recognition that net energy gain is not great. Ditto for the hoopla in Evansville several years ago over a bio-diesel facility and the significant investment losses by friends.

I support wind turbines where they are economically feasible (as I will be among those paying for them) and where those who will be living in close proximity are protected physically, emotionally, health-wise and financially. I see nothing in the proposed guidelines that provides me assurance of this. In fact, I am incensed at the lack of attention by state government, regulators and the wind industry to the plights of others who already are suffering health effects and loss of property values. Why should I feel other than deeply concerned and frustrated that I could find myself in similar circumstances when state government and wind energy companies have done little, or nothing, to address existing grievances?

As for financial issues, the Council concluded that there is no loss of property value. I have no acquaintances who would prefer a rural, Victorian home close to a 400+ ft turbine. This is bolstered by a recent realtors' association newsletter showing evidence of decreases in values of homes near turbines, over and above the nationwide decrease in values. I am a retiree and one of my significant assets is my home. Union Township

would also suffer decrease in property tax dollars. How can you accept guidelines that provide no protection to individuals and local governments in this regard?

Beyond financial issues, these turbines sling ice during the winter far greater than 440 ft. What compensation do I receive for property damage from ice and to what lengths do I go to get this compensation? What if the work to place the foundation in bedrock affects the quantity and quality of my well water? What if the structure falls over, catches fire, etc.?

With regard to health issues, a single medical expert proclaimed that wind turbines present no adverse health issues. I know from my own readings, in addition to the work of the Union Township committee, that there are dissenting scientists. And, again, how can you ignore those citizens who have been suffering several years from excessive, continual noise and flickering? Isn't this how the problems with stray voltage from power lines started --- by arrogant dismissal of farmers for claiming it harmed their cattle? **Please pay attention to these residents before you proceed further.**

And why would the Public Service Commission rule that any scientific studies must be presented by the originator of the study? Isn't scientific progress built on the work of other scientists and hasn't publication in a reputable journal sufficed? This does not pass either the common sense or the smell test. In fact, did the lone medical expert present other than his own original work?

Excessive noise is clearly a health problem. Based on their 18 months of study, the Union township committee concluded that the noise level should not exceed 35 dbs. We each have different sensitivity to noise so that might still be more than I'd prefer, but 45 and 50 dbs in the country is unacceptable. Further, the repetitive or rhythmic sound of the blades can be especially bothersome.

Achieving an acceptable sound level in the country is a major reason the Union township committee recommended placement no closer than half a mile. Some residents in the Fond du Lac area hear a continual jet-engine noise from turbines over a mile away. And what relief is there for a property owner when the turbine exceeds the noise maximum? Who will bear the burden of proof and the cost of doing so? Should the turbine be torn down because it exceeds the maximum? I was told by EcoEnergy they can't provide complete assurance of sound level before placement; shouldn't placement, then, be at a distance that provides adequate assurance? Why should this risk be on the resident?

With regard to shadow flicker, blinds are offered as a compensation. What thoughtfulness! I have a sunroom facing west toward the potential turbines. I need more afternoon sun, particularly in the winter, so receiving blinds as a remedy is farcical. Blinds on all west windows in my house would be like living in a cave. I'm also aware that in some instances, blinds are insufficient to block the flicker.

As for the density and height of turbines, there is nothing in the guidelines as to limits. I know that 500 ft turbines are now being installed and EcoEnergy would give no

assurance several years ago there would be only three turbines. It is hard to explain the immensity of these structures. As a comparison, at 400 ft they are 40 story structures; they are half again as tall as the state Capitol. They are industrial-size structures and my township has had its authority to control their siting taken away. In essence, the Smart Growth Plan plan has been gutted. That plan, by the way, had the goal of preserving "the rural character of the township."

At 440 ft from my property, a turbine is all I could see if I looked in its direction --- and there is nothing in the guidelines to prevent them from completely surrounding my property. There are probably as many, or more, individual residences in Union as there are farms. Structures of this size, and higher, will destroy the goal of the Smart Growth Plan and will divide this community. Industrial-size turbines should never be in a rural/residential area.

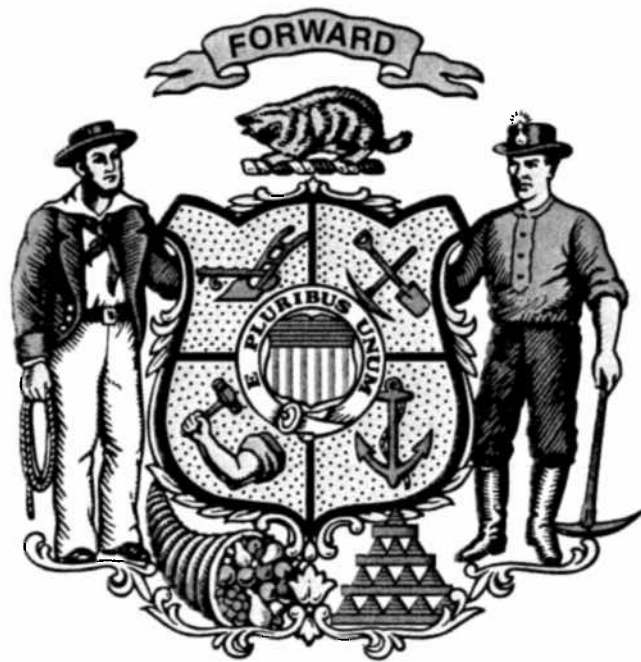
As for community divisiveness, that is occurring elsewhere where turbines are installed and will have a much greater impact on the long-term economic health and the livability of a community than the short-term economic benefit of constructing turbines. As far as leases helping to retain farms, unless the density is such that the farmland is replaced by turbines, I doubt the leases will retain a marginal farmer, nor should they, and I suspect my neighbors, who operate large farms well, are not in need of the level of payments offered.

The goal of achieving more alternative energy is a good one but I hope this hearing gives pause for considering more than just these guidelines. We should look at options more efficient and less divisive. How many individually-owned small turbines could be placed on rural properties for some of the tax benefits and other incentives that the large companies are getting? I'm interested in a small wind turbine but not when there is the possibility of large turbines near me. And wouldn't many small turbines and other options still provide an economic boost? And why not replace corn grown for ethanol with the much more ecologically beneficial perennial grasses such as the switch grass growing in my 3 acres of native prairie? Another way to benefit the environment and help farmers would be incentives for more manure digesters. And shouldn't we have a greater emphasis on energy conservation? I should have 500 ft turbines 550 feet from my property so that others can buy 50" energy—gobbling plasma TVs?

Neighbors have indicated we need to get used to change. I doubt they have accepted the change I've adjusted to --- the drafting of my husband two months after our marriage and the resulting separation and then suffering through a five-year terminal illness from multiple myeloma due to use of Agent Orange. This aging property, at least 126 years old now, was purchased in 1979 because my husband saw it as our dream home in the country. After years of sweat equity renovating it, maintaining it, raising three children in it, being good neighbors and active community participants, it is a home of wonderful memories and I want to live here until I can no longer care for it. It would grieve me to move but living surrounded by these behemoths is one change I cannot accept. I will accept the greater good and move if it's decided turbines of any size and quantity should

be placed here but not without making the comments in this testimony and not without assurance that my sacrifice of my home does not also mean a financial sacrifice.

Elaine Strassburg
16826 W. Cty Tk C
Evansville,
WI 53536
(608) 882-6590



October 13, 2010

To Senate Committee on Commerce, Utilities, Energy, and Rail

Re: Written Public Comments concerning Clearinghouse Rule #10-057; PSC Wind Siting Rules proposed Chapter 128

I am writing to request that the PSC Wind Siting Rules be sent back to the PSC for changes with respect to longer setbacks, stronger noise restrictions and clear mechanisms for the complaint resolution process. I am opposed to revising the Wind Siting Rule so that it is less restrictive for large wind development.

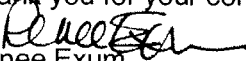
1) The Wind Siting Rules do not contain enforcement mechanisms for local governments to use for non-compliant large wind turbines. As a plan commissioner for my township, I am troubled by this. Our township created a wind siting ordinance with ½ mile setbacks from non-participating residences in order to minimize risks to non-participating landowners and to minimize complaints. The PSC Wind Siting Rules provide for a setback of 1,240 feet for non-participating landowners, which will likely increase complaints that our township will have to process. Yet the PSC did not provide our town and other local governments with the tools to ensure that the wind siting standards are met without unduly burdening the township and the complainant. Commissioner Azar recognized this burden and proposed a solution concerning the complaint process. Douglas Zweizig, the Vice Chair of the Wind Siting Council, provided an example for a complaint resolution process but it was not considered by the Wind Siting Council or the PSC. Further work should be done to provide local governments with clear guidance and tools for enforcing the wind siting standards and administering the complaint resolution process.

2) There is ample, scientific-peer reviewed evidence on the Wind Siting Rules PSC docket in support of setbacks longer than 1,240 feet from a non-participating landowner. Commissioner Azar acknowledged in her opening statement at the PSC hearing that the PSC staffed informed her that in order to reach a nighttime noise limit of 45 dba, setbacks needed to be at least 2,200 feet. I appreciate that the PSC did not follow the Wind Siting Council majority recommendation of a 1,000' setback. Given the evidence presented at the wind siting council meetings, on the docket, and by the experience of non-participating landowners living within 1,240 feet of large wind turbines, the setbacks should be further than 1,240 feet. A further setback would also mitigate complaints with shadow flicker.

3) There are also credible sources that support lower nighttime noise decibel limits than what is proposed in the Wind Siting Rule. The World Health Organization (hardly a big coal-financed NIMBY organization) reviewed the scientific, peer reviewed literature and came to the conclusion that a 40 dba nighttime limit was an appropriate and safe limit. Yet Wind Siting Council member Dr. McFadden and the PSC proposed a higher limit. What is the basis for their conclusions? The nighttime dba limits should be revised to at least match the World Health Organization recommendation.

One of the goals of the Wind Siting Rule should be to protect public health in order for wind development in Wisconsin to be sustainable. The Wind Siting Council majority report and the current PSC Wind Siting Rules fail to protect public health.

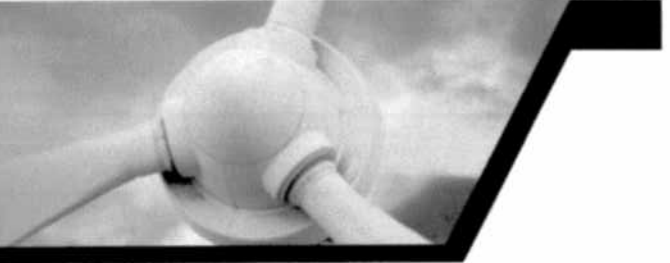
Thank you for your consideration.


Renee Exum
W17532 County Rd. C
Evansville, WI 53536



CWEST

Coalition for Wisconsin Environmental Stewardship



Dedicated to making sure that wind turbines get sited the **RIGHT WAY.**

October 13th, 2010

CRule 10-057?

To: Senate Committee on Commerce, Utilities, Energy and Rail

RE: PSC Wind Siting Rules – Chapter 128

The Coalition for Wisconsin Environmental Stewardship (CWEST) has been integrally involved in the debate surrounding wind turbine siting in Wisconsin for several years. We are the only statewide organized group to represent those people directly affected by wind turbines. We would like to make several important comments on the proposed wind siting rules as they are now before the legislature.

The process to date has not been set up to get a fair and balanced result. As you have heard, the Commission appointed a Wind Advisory Council that was heavily weighted toward members who were active in supporting wind projects. The Public Service Commission itself has been actively involved in promoting wind energy, especially providing vocal support for the Clean Energy Jobs Act. They have hardly carried out their traditional role of protecting the public in this area of wind turbine siting. We ask the legislature to call for 2 very important changes to the rules.

First, **create a setback of one-half mile from the property line**, but allow developers to purchase easements if they wish to locate closer to the property. This solves several problems.

Neighbors located more than a half mile from turbine development report many less problems with noise and health issues. The dB levels at one half mile are significantly reduced compared to those living at the 1200' setback outlined in the rule draft. Shadow flicker issues also diminish with distance.

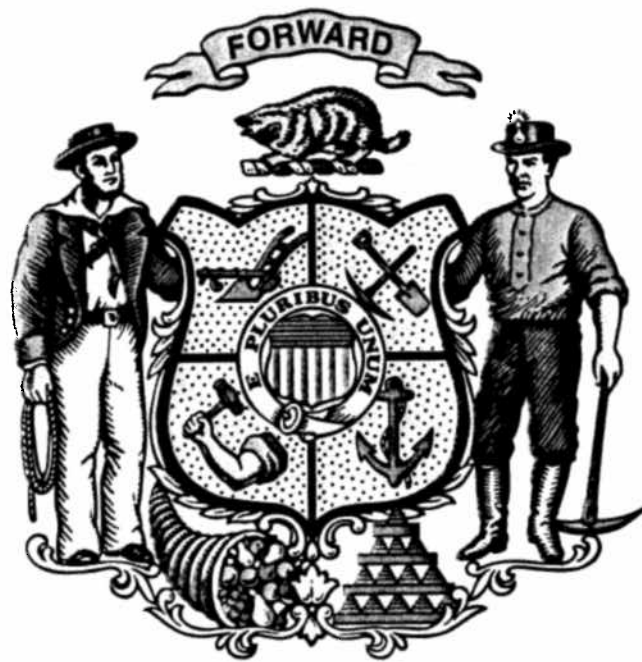
Most importantly, the significant drop in property values that those immediately adjacent to the turbines experience would be ameliorated. This is perhaps the best way to avoid the serious constitutional issues of uncompensated "takings" from neighbors. *If you live inside of one-half mile from a turbine development – you ARE a participant and should either be compensated or have a right to say no.* The PSC has had to at least partially recognize this by authorizing "good neighbor" payments within the half mile radius.

Secondly, **support a noise standard of no more than 40 dB.** Many studies show that repeated noise levels of 45 dBA can have adverse consequences on human health. These studies, done by agencies such as the World Health Organization, have been done most frequently by airports, where the occurrence of the noise is MUCH less frequent than with the turbines. To say that we will build the turbines first and then wait for the studies is irresponsible. Also the current PSC noise protocol referenced in the rule is a classic case of the "fox guarding the henhouse". Once a turbine is up and running is a wind developer really in a position to submit a non-compliance finding to the local government? This is an extreme conflict of interest.

Current setbacks and noise limits are not supported by any scientific study and have no rational basis. The numbers have clearly been selected for the convenience of the developers. Even Vestas, a turbine manufacturer, recommends using ambient background noise levels plus something like 5 dBA.

In conclusion, CWEST finds that the proposed draft rules are completely inadequate to protect the health, safety, and property rights of those living near proposed industrial wind turbine developments. Please act to create a balanced wind siting law by sending this rule back to the PSC for modifications. Thank you!

Coalition for Wisconsin Environmental Stewardship
22 North Carroll Street – Suite 310 – Madison, WI 53703
608.819.0150 | contact@cwestonline.org | cwestonline.org



To: Senate Committee on Commerce, Utilities, Energy and Rail
RE: PSC Wind Siting Rules-Chapter 128

In 2004 the Energy Center of Wisconsin¹ published a report for the State of Wisconsin Department of Administration Division of Energy entitled, "A Study of Wind Development in Wisconsin, A Collaborative Report". On page 48, under "Turbine Placement" it states:

The first generation of wind power projects in Wisconsin (particularly in Kewaunee County) showed that unless developers pay attention to the placement of turbines, noise and blade flicker could become significant issues for nearby residences. The importance of turbine placement and wind farm design cannot be overemphasized. Developers need to make use of visual rendering tools to ensure their project explicitly evaluates the potential effect of noise levels and blade flicker on host landowners and adjacent property owners.

The proposed Wind Siting Rules do very little to ensure the fulfillment of this industry supported recommendation.

Wind development stakeholders will testify that these rules are the strictest wind siting rules in the nation.² Last week, Goodhue County in Minnesota, became the second county in **Minnesota** in the last year to adopt wind siting rules which included a key provision that would impose a wind turbine setback of 10 "rotor-diameters" or about 1/2 mile, from homeowners not participating in a commercial wind project — **unless** those homeowners agree to less stringent standards.³ Some wind siting council members were prepared to discuss other ordinances in the U.S. and internationally as provided in Act 40. The subject wasn't opened for discussion. In fact, Wisconsin is breaking ground by taking away all local control in the development of wind projects.

Shadow flicker modeling and noise modeling standards are left to the discretion of each wind developer. This is one area that should have more uniformity set by the PSC for input parameters. Wind developers are not vetted by the state. There are no consequences for bad actors or modeling errors.

Impacts should be mitigated with proper siting. There is too much emphasis on band aid methods to comply and mitigate after the turbine installation instead of being confident that the PSC has put forth accurate siting rules. Having a rule for notice of process for making complaints sent to all residents within a 1/2 mile before construction just signals the

¹ <http://www.ecw.org/prod/231-1.pdf>

² <http://renewwisconsinblog.org/2010/08/30/vickerman-wisconsin-poised-to-adopt-the-strictest-statewide-siting-rule-on-large-wind-turbines-in-the-nation/>

³ <http://www.republican-eagle.com/event/article/id/69492/>

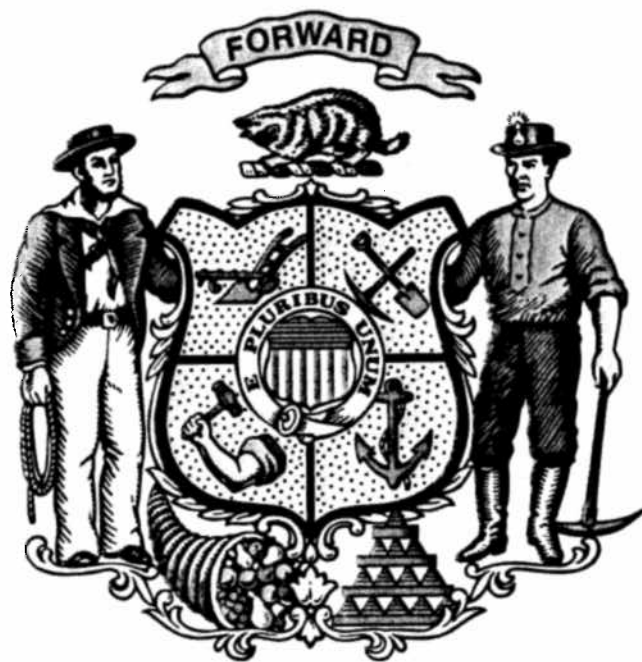
community that problems are most certainly expected.

Under the complaint process in the wind siting rules, the rule states that a complaint shall be made first to the owner of the wind energy system pursuant to a complaint resolution process developed by the owner. The permitting authority is the local government. Complaint resolution should be administered by them. Unlike a wind turbine owner, the town or county boards are elected officials who have the intrinsic responsibility to protect the health, safety and welfare of their constituents. The rules should be clear on what procedural methods and tools the local governments have to investigate complaints. For example how do they determine if noise limits are exceeded? What is the definition of "curtailment" and how shall that be measured? There should be a stipulation for funds to be collected before project construction, and held in escrow to address investigation of complaints after the project is operational, as provided for in the permitting and construction process. In addition there should be a clear procedure for an appeal process to the PSC if the wind turbine owner determines the complaint resolution is unreasonable and refuses to comply.

The rules are silent on mechanisms of enforcement. Local governments need to know what their enforcement authority is. Most towns do not have authority to issue citations for non-compliance in operations in their towns. What tools does a local government have to ensure that the siting standards are met without burdening the community with litigation costs for 25 years?

A wind project may be the single most intrusive development that engulfs a community. Have the Wisconsin legislators carefully reviewed the evidence that wind energy will live up to the marketing rhetoric; reduce our dependency on foreign oil, reduce CO2 emissions, reduce imports of fossil fuels and create jobs? If so, then more lessons need to be learned from our existing installed wind projects to make continuing development sustainable. Accepting the same methods of planning developments as in the past has done nothing but fuel opposition. The wind siting rules as written have done nothing to minimize this.

Cathy Bembinster
18002 W Cty Rd C
Evansville, WI 53536





C-Rule 10-057?

**TESTIMONY TO THE SENATE COMMITTEE ON
COMMERCE, UTILITIES, ENERGY, AND RAIL**
ATTORNEY JEFF VERCAUTEREN ON BEHALF OF
RENEW WISCONSIN, WIND ON THE WIRES, AND WIND FOR WISCONSIN
OCTOBER 13, 2010

Chairman Plale and members of the Committee, thank you for agreeing to hold this hearing on the draft wind siting rules submitted by the Public Service Commission. I would be remiss if I did not begin by first thanking you Senator Plale for your hard work in passing Act 40, and the members of this committee who supported its passage. Act 40 was desperately needed to establish a fair and reasonable approach to regulating wind energy systems in Wisconsin. Far too many wind projects in our state remain stalled because of local ordinances that make such projects infeasible.

Act 40 charged the PSC with drafting the standards local units of government would apply to wind energy system, providing a very clear legal and policy directive to the PSC. While the PSC in many instances did establish the fair and reasonable provision Act 40 was intended to implement, in several key areas the agency has proposed regulations that exceed its statutory authority and that are contrary to legislative intent.

It is important to remember the statutory framework for the draft rules before you. For many years prior to Act 40, Wisconsin law prohibited municipalities from regulating wind energy systems unless the regulation related to health or safety issues or did not increase the cost of the system. Wis. Stat. § 66.0401. Act 40 maintained these restrictions and directed the PSC to operate within their bounds. Therefore, with these rules, it was the duty of the PSC to work within this longstanding regulatory framework. The PSC simply cannot use these rules to give municipalities additional regulatory authority that they are explicitly prohibited from exercising by statute. Unfortunately, the PSC had made this mistake in several instances in these rules, overstepping its statutory authority.

I. GOOD NEIGHBOR PAYMENTS.

The draft rules mandate that wind developers offer to pay landowners within one-half mile of a wind turbine an amount equal to 25 percent of what a landowner receives for hosting a wind turbine. PSC 128.33(3). This proposal has nothing to do with health and safety and obviously significantly increases the cost of projects. It is therefore contrary to Act 40.

As a policy matter, the legislature has shied away from such requirements. In a different context, the legislature has prohibited rate recovery for utilities that enter into similar agreements with municipalities. Wis. Stat. § 196.20(5). Whether it is payments to

municipalities, or payments to affected neighbors, the legislature should not impose such requirements on generators.

II. SETBACKS.

Prior to the PSC adopting these rules, the Wind Siting Council met to review the key issues that the Commission would need to address, including setbacks. This group was a diverse, 15-member body appointed to review existing information on wind energy development. The Council recommended a safety setback of 1.1 times turbine height as sufficient to protect public health and safety.

The rules include a setback of 3.1 times wind turbine height from community buildings and nonparticipating residences. This results in a setback of over 1,500 feet for many newer, more efficient turbines. There is no health or safety justification for a larger setback, which will increase development costs and make many projects infeasible.

III. SOUND AND SHADOW STANDARDS.

The rules establish a sound standard of 50 dBA day and 45 dBA night. The rules require mitigation of shadow impacts exceeding 20 hours per year and require turbine curtailment if shadow impacts exceed 30 hours per year. These standards eliminate otherwise feasible wind turbine sites, even though there are no demonstrated health impacts from wind turbine sound or shadow. We support a sound standard of 50 dBA at all times and a shadow standard of 45 hours per year.

IV. DECOMMISSIONING.

The rules grant political subdivisions substantial control over decommissioning requirements, including the authority to extensively regulate the type and form of financial assurance that must be provided. The rules need to be clarified to ensure that developers can choose the type of financial assurance that is to be provided and the manner in which to decommission their projects, consistent with Act 40.

V. OTHER.

In my testimony, I have attempted to hit the major points that will impact project viability, but there are other changes that should be made as well. We would be happy to work with the Committee to identify these changes and to make the rules consistent with the law and policy of Act 40. Thank you.

For additional information, please contact:

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122 West Washington Ave., Suite 900
Madison, WI 53703
608.251.0101
vercauteren@cwpb.com





To: Senate Committee on Commerce, Utilities, Energy, and Rails
From: Nick George, Midwest Food Processors Association
Date: October 13, 2010
Re: CR 10-057 – Wind Siting Rules

Thank you for agreeing to hear concerns regarding Clearing House Rule 10-057, relating to procedures to site large wind turbines in Wisconsin. The Midwest Food Processors Association (MWFPA) represents the majority of the fruit and vegetable processing industry in Illinois, Minnesota, and Wisconsin. Our members produce and process more vegetables in the Midwest than in any other area of the country with Wisconsin providing the second highest value of vegetables in the nation. Wisconsin's fruit and vegetable industry generates more than \$6 billion in economic activity and provides over 20,000 full-time jobs.

The MWFPA is NOT opposed to wind energy nor are we opposed to land owners opting to site a wind turbine on their property. We believe alternative energy sources can be beneficial to Wisconsin and that a land owner has the right to utilize their property as they see fit. That being said, it is important that growers, processors, landowners, and energy companies understand the impact wind farms will have on the vegetable processing industry.

A combination of growing and processing expertise, horticultural and pest research, geographic location and abundant natural resources, make Wisconsin a great place to grow high value vegetables. Wisconsin ranks first in the production and processing of snap beans, second in sweet corn, third in potatoes, and third in green peas. The success of these crops is due in part to Integrated Pest Management Programs of which wind farms will impact.

Our concern with the siting of wind farms specifically has to do with the availability of aerial applicators to deliver timely pest and disease controls on large areas of vegetable crops. Without aerial application high intensive vegetable production areas like that found in the Central Sands, Antigo Flats, Arena-Spring Green-Wisconsin River area, and Green Lake and Fond du Lac Counties would be compromised. We fear that the siting of wind turbines in these areas will limit the use of aerial application which will negatively impact the production of processing vegetables in the following ways:

- **Aerial Application Will Be Limited** – Many air applicators refuse to fly within one half mile of a large wind turbine because the turbines are inherently dangerous. Guy wires, wind turbulence, and flight distraction all contribute to increased risk for the pilots. The Wisconsin Agricultural Aviation Association adopted a resolution in 2009 refusing any aerial crop protection applications inside a grouping of wind turbines.
- **Timely Application Is Important** – High value vegetable crops rely on timely application which can only be delivered via air. Vegetable crops are not like row crops or grain crops

which rely on air application for fertilizer and not pest and disease control. You cannot compare row crop treatment to vegetable treatment. Timely treatment is essential.

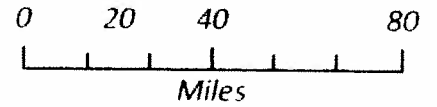
- **Increased Risk Means Increased Costs** – If a pilot chooses to risk flying in a grouping of wind turbines, the costs will reflect the increased risk.
- **Insurance Factors** – Insurance costs will go up once the industry understands the increased risk. In some cases insurance will not be available putting that aerial applicator off limits for most growers and processors.
- **Ground Application is Not an Option** – Some people think that ground treatment is an alternative. It is not. If the ground is too wet (which is the present case) and there is a pest infestation, ground applicators will not be able to apply controls in a timely manner. In addition there is acreage loss with ground treatment which in turn lowers the yield and increases costs.
- **Cost of Vegetable Crops Will Increase** – the inability to use aerial application means yields will be down due to loss by ground rig tracks, pest issues and control tools. There will be losses to disease and insects due to application timing resulting in poor recovery and substandard quality.
- **Vegetables Play a Unique Role in the Agricultural Landscape** – If processors cannot grow enough high quality vegetables for processing they will go to a different area forcing growers to find alternatives for large sections of land. This will have many unintended consequences for them and others such as the dairy and beef industry which rely on certain crops for land spreading, feed, and other uses.
- **Grower Options will be Limited** – Many growers use vegetable production as a rotating option, to keep the land healthy and maximize its use. Taking vegetables out of the growing mix limit's a grower's flexibility and increase costs.
- **Irrigation Options Limited** – In areas that use irrigation, wind turbines could eliminate or obstruct future development of full circle pivots. This could have a devastating impact in some areas of the state.
- **Limitations Extends Beyond the Turbine** – Due to the one-half mile flying restriction, the influence of wind turbines will go well beyond the owner and extend to neighboring land. In the case of a wind farm with several turbines, large areas could be affected and possibly taken out of production even though a turbine is not located on a growers land.
- **Increased Operating Costs for All** – the loss of growing and aerial application options will increase costs for applicators, growers, and processors leading to fewer crops and higher costs.
- **Loss of Land Value** – The loss of cropping options may have a negative impact on the value of production land which could bring down the value of everyone's land.
- **Increased Carbon Footprints** – The ultimate irony of using wind farms as “green energy” may be the increased use of carbon fuels by food processors. The increased use comes in many forms including trucking raw product from locations outside of the wind farm to increased fuel use for ground application. The current system locates processing facilities near growing areas which lowers the amount of fuel needed to bring a crop to processing.

The above comments clarify the vegetable processing industry's thoughts on the siting of wind farms. Wisconsin is home to a large and strong vegetable processing industry which provides thousands of manufacturing and agricultural jobs. The placement of wind turbines for energy purposes in intensive vegetable growing areas will have consequences for the industry. With proper planning and cooperation between growers, processors and energy interests, Wisconsin can continue to provide good jobs while becoming less dependent on carbon based fuels.

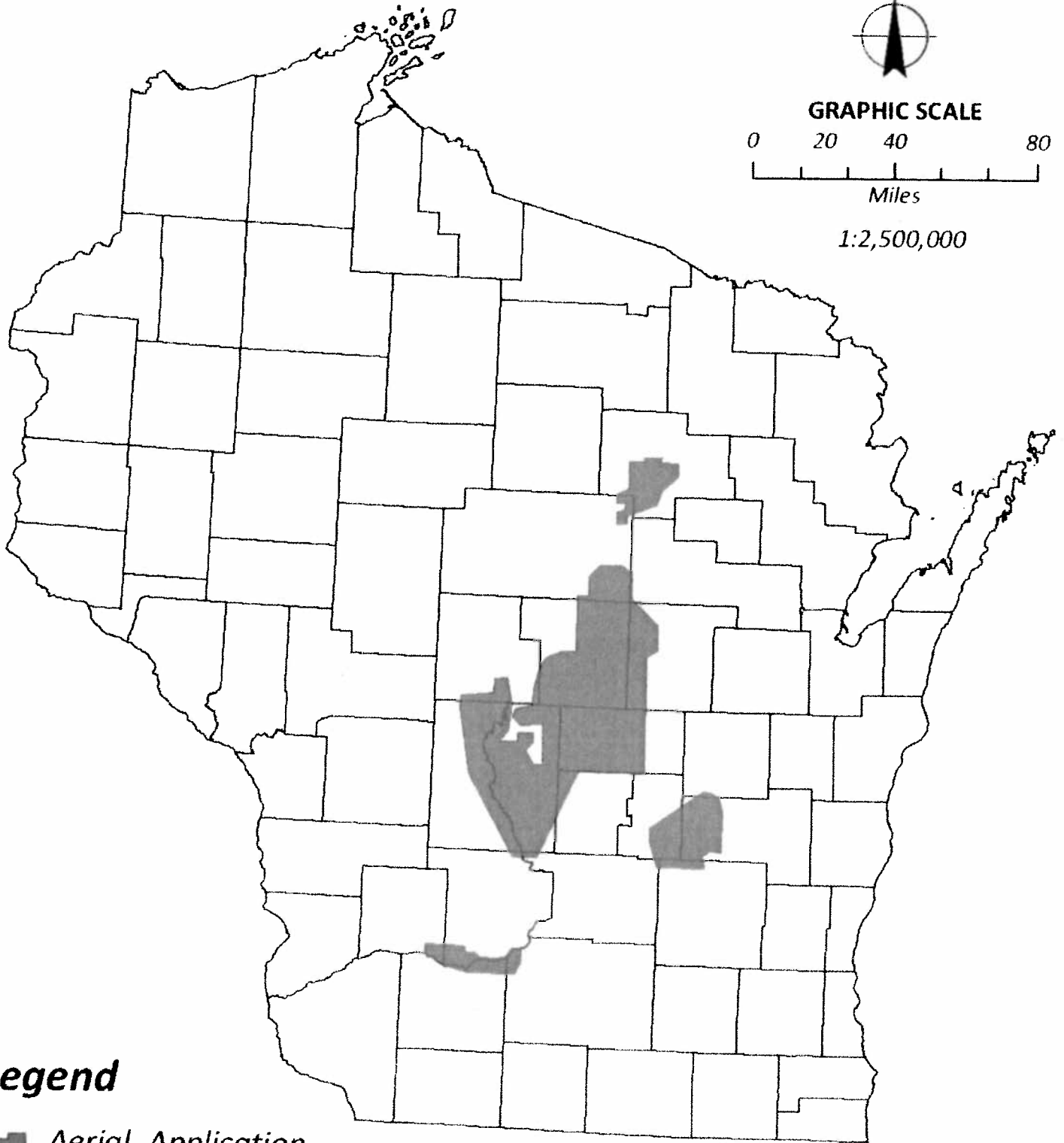
Intense Vegetable Production Areas Reliant on Aerial Application



GRAPHIC SCALE



1:2,500,000

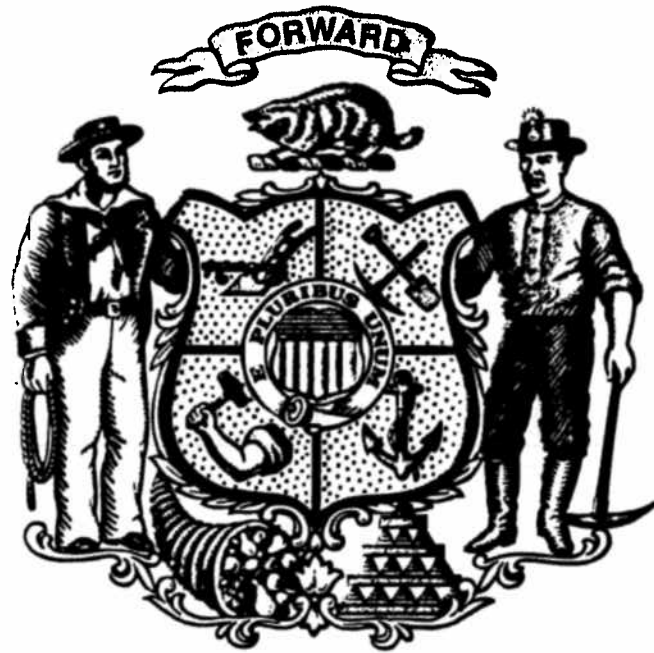


Legend

 Aerial_Application

 county

Source: Wisconsin Vegetable Producers Association. Data provided by Wisconsin Vegetable Producers Association. Intense vegetable production fields identified via high capacity soil data from the George Engelmann-Stevens Farms. Data reviewed for accuracy by Wisconsin Potato and Vegetable Growers Association. Mapped by A.T. Deffenbacher.





October 13, 2010

Senator Jeffrey Plale, Chair
Committee on Commerce, Utilities, Energy, and Rail
Room 313 South
State Capitol
P.O. Box 7882
Madison, WI 53707-7882

C-Rule 10-057?

Senator Plale:

These comments are to inform you of the National Agricultural Aviation Association's (NAAA) concerns regarding the timely and thorough treatments of crop protection products to crops within or near wind energy power plants.

The NAAA, founded in 1966, represents more than 1,600 members in 46 states. NAAA supports the interests of small business owners and pilots licensed as professional commercial aerial applicators that use aircraft to enhance food, fiber and bio-fuel production, protect forestry and control health-threatening pests.

It has come to our attention that Wisconsin is in the process of developing rules regarding the placement of wind energy power plants. As wind energy continues to develop, aerial applicators throughout the country are learning that timely and thorough application of crop protection products to crops within or near wind energy power plants is not possible with aerial application equipment. This is not to say that aerial application within or near wind energy power plants is not possible, simply that complete coverage of parcels within or near wind energy power plants is not possible. The complication is the result of compounding risk factors compromising the safety of the pilot and his ability to either completely or partially access a field requiring treatment. These risk factors include the number of obstructions, the height of the obstructions, turbulence, visual distractions, and the nearly invisible MET towers located near the wind energy power plants. As a result of the above complications, a number of NAAA members that conduct aerial applications in the vicinity of wind turbines and MET towers are advising their customers when timely and thorough application is required, aircraft might not be a possible form of application to use.

The NAAA feels strongly that this is especially significant to Wisconsin. Wisconsin is the second largest producer of vegetables raised for processing. These vegetables require timely and thorough application of crop protection products for two main reasons. One, timely and thorough application prevents unsustainable crop losses, and two, timely and thorough application significantly reduces pesticide usage. With that said, should wind energy power plants be placed in or near intense vegetable production areas in Wisconsin, the result will be significant financial loss and significant increases in pesticide usage due to the inability of these crops to be treated by aircraft.

In summary, due to safety and land accessibility concerns, it is an industry accepted Best Management Practice (BPM) for aerial applicators to deny service to a customer that requires timely and thorough coverage of parcels of land within or near wind energy power plants. Wind energy rulemaking officials in Wisconsin must understand that timely and thorough application to vegetable crops in intense vegetable production areas within Wisconsin is not possible with aerial application equipment with wind turbines and associated MET towers present.

Sincerely,

Andrew D. Moore
Executive Director



July 6, 2010

Public Service Commission of Wisconsin
610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

**RE: Docket Number 1-AC-231
Comments for Wind Siting Rule Development**

To the Public Service Commission of Wisconsin:

These comments are to inform you of the vegetable processing industry's concerns regarding the siting of wind turbines in intense vegetable growing areas of Wisconsin.

The Midwest Food Processors Association (MWFPA) represents the majority of the fruit and vegetable processing industry in Illinois, Minnesota, and Wisconsin. Our members produce and process more vegetables in the Midwest than in any other area of the country with Wisconsin providing the second highest value of vegetables in the nation. Wisconsin's fruit and vegetable industry generates more than \$2 billion in economic activity and provides over 8900 full-time jobs.

A combination of growing and processing expertise, horticultural and pest research, geographic location and abundant natural resources, make Wisconsin a great place to grow high value vegetables. Wisconsin ranks first in the production and processing of snap beans, second in sweet corn, third in potatoes, and third in green peas. The success of these crops is due in part to Integrated Pest Management Programs of which aerial application plays a major role.

High value vegetable production requires timely aerial application of pesticides. The siting of large wind turbines will have a direct impact on a grower or processor's ability to use aerial application due to safety concerns. Without aerial applicators a crops quantity, certainty, and quality could be jeopardized forcing vegetable processors to find alternative acreage.

An aerial applicators concern for safety in and around a wind farm is not unfounded. Many air applicators refuse to fly within one half-mile of a large wind turbine because large turbines are inherently dangerous. Guy wires, wind turbulence, and flight distraction all contribute to increased risk for the pilots. The Wisconsin Agricultural Aviation Association adopted a

resolution in 2009 refusing any aerial crop protection applications inside a grouping of wind turbines. No doubt some applicators may try to fly within a wind farm but that person would be taking undue risks. Once there is one accident within a wind farm insurance companies will be forced to raise rates or deny insurance which will ultimately shut down the use of applicators altogether.

Without the "tool" of areal application in intense vegetable growing areas, Wisconsin's vegetable processing industry will be forced to find new land in which to meet the demands of the national and international processed vegetable market. Finding new growing areas will have unforeseen consequences beyond the immediate industry. For example, the beef and dairy industry rely on vegetable by-product for plentiful and affordable feed. Vegetable fields also provide a valuable crop for rotation purposes for growers who can maximize the use of their land and maintain high nutrient values. The loss of crop flexibility limits a grower's options and ultimately increases costs.

At one time the PSC tried to find a mechanism to compensate growers for their losses due to wind farms. The difficulty of calculating such losses required the commission to remove the language. We believe that such a calculation can be made with cooperation between growers, processors, and the University of Wisconsin. We look forward to participating in those discussions if the commission deems it necessary.

However, compensating growers and processors for something that "could have been" does not minimize the impact of wind farms on the vegetable processing industry. There is room in Wisconsin's energy portfolio for wind energy if siting is done honestly, openly, and with full awareness of the economic and agricultural impacts. We support the right of land owners to use their land as they see fit. We only ask that the commission consider the economic impact wind farms have on Wisconsin's vegetable processing industry when making siting decisions.

Wisconsin is home to a large and strong vegetable processing industry which provides thousands of manufacturing and agricultural jobs. The placement of wind turbines for energy purposes in vegetable growing areas will have negative consequences for the industry. With proper planning and cooperation between growers, processors and energy interests, Wisconsin can continue to provide good jobs while becoming less dependent on carbon based fuels.

Sincerely,

A handwritten signature in black ink, appearing to read "Nickolas C. George, Jr.", written in a cursive style.

Nickolas C. George, Jr.
President


REABE SPRAYING SERVICE, INC.
P.O. BOX 112
WAUPUN, WISCONSIN 53963-0112

WAUPUN 920-324-3510; PLAINFIELD 715-335-6810; PLOVER 715-341-9393

July 6, 2010

 Public Service Commission of Wisconsin
 610 North Whitney Way
 P.O. Box 7854
 Madison, WI 53707-7854

 RE: Docket Number 1-AC-231
 Comments for Wind Siting Rule Development

To the Public Service Commission of Wisconsin:

This letter is intended to inform you of the hazards to aerial applicators when performing aerial applications in or near wind energy power plants, why those hazards will make effective aerial applications to vegetable production fields impossible, the differences between aerial applications to vegetable crops and grain crops, the resolution adopted by the Wisconsin Agricultural Aviation Association to refuse treatment to crops within a wind power plant, and the possible effects this will have on Wisconsin vegetable production.

First I would like to give you a brief background of my aviation and agriculture experiences. I grew up and worked on a 400 acre vegetable production farm and aerial application company in south central Wisconsin. After graduating with a Bachelor of Science degree in Aviation from Mankato State University I pursued a career in corporate aviation. My corporate aviation career lasted fifteen years as an FAA certified Airline Transport Pilot of large corporate jets providing worldwide executive transportation. During that time I also began a part time career as an aerial applicator. I have logged over 10,000 flight hours performing aerial applications and corporate flights. Eighteen months ago I resigned from corporate aviation and accepted a position as President of Reabe Spraying Service, Inc. Reabe Spraying Service is Wisconsin's largest aerial application company and has been a family owned and operated business since 1949.

In 2009 aerial applicators treated one million acres in Wisconsin. Eight percent of those applications were grain crops, eleven percent were forest treatments, and the remaining 81% were to vegetable crops.¹ Given that vegetables raised in Wisconsin are treated on average 3.9 times per season², and that Wisconsin raised 286,400 acres of vegetables³, we can determine that aerial application protected 71% of Wisconsin's vegetable production from insects and disease.⁴ In the publication, "Status of Wisconsin Agriculture," published by the Department of Agriculture and Applied Economics, UW-Madison and UW-Extension, the value of all Wisconsin vegetable crops in 2009 was \$600 million. Using a modest Two-Time economic multiplier, aerial applicators protected \$852 million of Wisconsin's agriculture economy. In a document titled "Clean Energy Wisconsin—A Plan for Energy Independence" outlining Governor Doyle's

¹ Source: DATCP RFP #AG0950239 for gypsy moth control and polling of Wisconsin aerial applicators by Damon Reabe 2/17/10.

² Source: Sample by Damon Reabe of 45% of aerial vegetable treatments to determine average treatments per season. The result was an average of 3.9 applications per season.

³ Source: USDA National Agricultural Statistical Service

⁴ Divided total vegetable acres treated by air in 2009 by 3.9 to determine vegetable acreage protected by air.

renewable energy initiatives, producing 25% of Wisconsin's energy from renewable sources would generate nearly one billion dollars for the Wisconsin economy. Obviously, wind energy will only be a part of the economic impact and has the potential to put \$852 million of vegetable production at risk if measures are not taken to protect it.

It is important to understand the pests that place vegetable yield, quality, and economic returns in jeopardy and the methods used to protect them from pests. Pests such as late blight, early blight, Colorado potato beetle, leafhoppers, aphids, bacterial blights, white mold, European corn borer, earworm, and armyworm are just some of the pests that if allowed to develop can have a devastating effect on the grower and vegetable processor. Timely treatment and thorough treatment of all plant parts is a critical tool utilized by growers and processors to eliminate pests and reduce pesticide usage. When timely treatment is needed and wet soil conditions make ground application impossible, aerial application is the only treatment alternative. Additionally, the speed at which aerial application can cover large acreages allows for control of pests when the crop nears maturity eliminating an area wide outbreak which results in significant increases in pesticide usage. To help illustrate the importance and environmental benefits of timely applications to vegetable crops I have attached a letter from Walter Stevenson, Professor Emeritus of Plant Pathology, University of Wisconsin – Madison. Simply said, access to aerial application is a necessary component of vegetable production. (If it wasn't, we wouldn't be here.)

There are four inherent design elements of a large scale wind power plant that make thorough aerial application of vegetable plants impossible:

- Modern wind turbines are very large structures, measuring approximately 400 feet high with a blade diameter of up to 270 feet. When you combine the physical size of these structures with blade rotation, the result is a visual distraction. Aerial applicators must divide their attention between aircraft systems, treatment volumes, swath spacing, aircraft performance, weather, and obstruction avoidance. When operating within a wind power plant, the visual distraction created by the wind turbines further divides the pilot's attention, exponentially increasing the likelihood of a life threatening error.
- In a typical commercial wind power plant there are approximately 5 or 6 turbines per square mile. In any given aerial application operation, a radius of three quarters of a mile from the target site is utilized for maneuvering between swath runs, clean up passes, and target site surveillance; equating to an operations area of two square miles. This results in 10 to 12 turbines within the operations area. Unlike other obstructions that aerial applicators must avoid, wind turbines are taller than the maximum height achieved during the turnaround. This means that a pilot never reaches a safe altitude allowing the pilot to check aircraft systems, treatment volumes, etc. Simply said, the number and height of wind turbines within an aerial application area, exponentially increase the likelihood of a life threatening error.
- Modern wind power plants utilize small, lightweight towers within the power plant known as MET towers. These towers utilize guy wire type construction and are typically unmarked. Due to their lightweight construction the guy wires are invisible to pilots in many lighting conditions. Obviously, invisible obstructions pose a serious risk to aerial applicators.
- Finally we come to the hazard of wake turbulence. This hazard is the most dangerous because it is invisible. All airfoils in motion create wake turbulence. The turbulence

created is proportional to the weight and angle of attack of the airfoil; the heavier the weight and greater the angle of attack, the greater the wake turbulence. A commercial wind turbine's three blades can weigh as much as 40,000 pounds and operate at a very high angle of attack. The result is turbulence severe enough to induce loss of control to an aerial application aircraft. Again, this hazard is invisible and difficult to avoid while performing all of the other tasks necessary to perform an aerial application safely.

The above four risk elements preclude an aerial applicator from performing thorough treatments required to protect vegetables from pestilence with any degree of precision or safety within a wind power plant. It is important for the Commission to understand that in intense vegetable production areas growers and processors are dependent upon timely and thorough application. These growers and processors utilize aerial application as the primary means to achieve their pest control objectives for both environmental and economic reasons. To help illustrate vegetable producer's reliance upon timely treatments I have attached a letter from the Wisconsin Potato and Vegetable Grower's Association (WPVGA) outlining their concerns. Additionally, I would like to direct the Commissioner's attention to a letter submitted from the Midwest Food Processor's Association (MWFPA), an association that represents Wisconsin vegetable processors. Finally, I have attached a letter from the Wisconsin Crop Production Association (WCPA), an association that represents custom ground applicators in Wisconsin, outlining their concerns and limitations regarding ground application to Wisconsin vegetable crops.

The Public Service Commission of Wisconsin must understand that there is a significant difference between aerial applications of vegetable crops versus aerial application of grain crops. In many parts of the country aerial applicators are treating fields within wind power plants. These are treatments to grain crops. Products applied to grain crops by air are typically used to enhance production. If part of a treatment area becomes inaccessible to aerial application due to large obstructions such as wind turbines, that area of the field can be left untreated without devastating effects. In contrast, areas of a vegetable production field left untreated will host pests leading to area wide outbreaks, increased pesticide usage, and significant crop loss.

Another significant difference between the treatments of grains versus vegetables is timing. Most production enhancement products applied to grain crops have a treatment window that lasts a week or longer where the treatment window for a vegetable field may be as little as 24 hours. Vegetable crops will be treated on average roughly four times per season where a grain crop may only be treated once every other year. In summary, the certainty of treatment, thorough coverage requirements, high crop values, critical timing, frequency of treatments, and the compounding risk factors to aerial application pilots render effective aerial application to vegetable crops within a wind power plant impossible.

In an earlier draft of Wind Siting Standards the PSC had a compensation provision for non participating farm entities that lost access to aerial application. Due to the significant losses that will be incurred by growers and vegetable processors in the event that a wind power plant is constructed in areas of intense vegetable production, I respectfully request the PSC reinsert that provision with the following changes:

- Paragraph "(j)" should be an approval condition instead of a permitted ordinance provision. Farm operators that utilize aerial application in the production of vegetables typically operate in many political subdivisions. The purpose of creating a statewide siting standard is to eliminate "patchwork" standards. Patchwork standards will have little

or no effect in protecting Wisconsin's vegetable producers. I have attached a map that identifies intense vegetable production areas of Wisconsin that rely upon aerial application. This map was developed using planting data provided to me by Wisconsin vegetable processors and other data from University of Wisconsin faculty. The Wisconsin Department of Agriculture, Trade and Consumer Protection has reviewed this map and confirmed these locations to be consistent with their data. I suggest that the operator of any proposed wind energy development that lies within these areas be required to compensate non participating farm operators for their losses as a result of lost access to aerial application.

- Wisconsin vegetable processors can be viewed as "farm operators" with a large financial stake in the vegetable crop. They provide significant inputs to vegetable crop production and rely on aerial application as a crucial management tool. The financial impact on the processors of losing this tool should be reflected in any damages provided due to the limitations wind facilities place on aerial applications.
- The statement "...farm operator has a reduction in crop production or increased application costs..." should be changed to "...farm operator has a reduction in crop production and/or value or increased application costs..." This change ensures vegetable producers would receive compensation for not only a loss of volume, but also loss of quality, i.e. downgraded potatoes due to wheel tracks.
- The distance from a turbine to a non participating land owner's parcel regarding this provision should be one half mile. Meaning any field where all or part of the field is within one half mile is eligible for loss compensation for all of the acreage within that field.

I understand that the above provision was removed due to the concern that quantifying losses would be difficult. While I am not qualified to quantify the value of losses, I am confident that the Wisconsin Department of Agriculture, Trade, and Consumer Protection, the University of Wisconsin, and vegetable production trade associations have the resources to quantify values that could be used to develop a workable compensation system.

Respectfully submitted,



Damon Reabe
President
Reabe Spraying Service, Inc.
PO Box 112
Waupun, WI 53963

Enclosures (5):

Wisconsin Agricultural Aviation Association Resolution
Letter to the Public Service Commission of Wisconsin from Professor Walt Stevenson
Letter to the Public Service Commission of Wisconsin from the WPVGA
Letter to the Public Service Commission of Wisconsin from the WCPA
Map of intense vegetable production areas reliant upon aerial application



WAAA WIND GENERATOR RESOLUTION 5/11/09

WHERE AS; we acknowledge the need for affordable electric power and the efficient distribution of that power to the point of its consumption:

WHERE AS; we acknowledge the environmental benefits of wind generated electrical power:

WHERE AS; the wind generator tower and blade structures are too tall for a loaded ag-aircraft to climb over, forcing the ag-aircraft to fly around them increasing the danger:

WHERE AS; the wind generator's rotating blades generate turbulence which makes controlling a loaded ag-aircraft much more difficult if not dangerous:

WHERE AS; the wind generator's rotating blades create an optical illusion which distracts and often disorients the ag-pilot, increasing the danger:

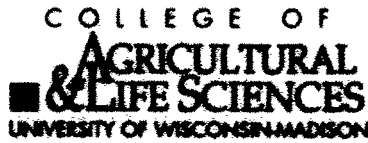
WHERE AS; the grouping of these wind generators, increases the danger to the ag-pilot and forces the ag-pilot to "Run the Gauntlet" in amongst the wind generators while still maintaining management of the cockpit instruments and staying alert for changes to the on going and ever changing situation in and around the field while still maintaining concentration on the many other factors needed to safely make an application:

WHERE AS; the summing and compounding of all these added hazards and distractions makes the risk of aerial crop protection amongst wind generators unacceptably high and dangerous:

WE HEREBY RESOLVE; to refuse any aerial crop protection applications inside a grouping of wind generators.

We also resolve to refuse an aerial crop protection application, which the pilot deems dangerous, due to its proximity to a wind generator.

Jim Kazmierczak, Executive Director WAAA



Department of Plant Pathology

(608) 262-6291

July 5, 2010

Public Service Commission of Wisconsin
610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: Docket Number 1-AC-231
Comments for Wind Siting Rule Development

To the Public Service Commission of Wisconsin:

A focus on using wind energy to reduce Wisconsin's dependence on fossil fuels for energy use has sparked interest in locating wind turbines within economically important potato and vegetable production areas of Wisconsin. Without entering into the pro's and con's surrounding the use of wind turbines for this purpose, I wish to comment on the area of pest and crop management that would likely be indirectly affected by the positioning of the turbine towers in an actively farmed area.

Since 1979, I served the State of Wisconsin as Professor of Plant Pathology and Extension Plant Pathologist at the University of Wisconsin-Madison. I retired in January 2008, but continued to work part time for the University to bridge the gap in coverage between my departure and the hiring of my replacement. My duties focused on the management of plant diseases affecting the production of potatoes and vegetable crops in Wisconsin. I conducted research and extension programs throughout Wisconsin, but because of the intensive production areas in the Central Sands area, Antigo Flats area, Arena-Spring Green-Wisconsin River area, and Mackford and Green Lake Prairies in E. Green Lake County and W. Fond du Lac Counties, I spent a significant part of my career working with potato and vegetable growers in these regions of the state. By working directly with growers, extension agents and agribusiness, we were able to greatly improve the management of plant diseases, reduce the use of pesticides through the adoption of effective Integrated Pest Management Programs, reduce grower losses related to plant disease and improve the profitability of production.

Potatoes and processing vegetable crops are prone to infection by several plant pathogens. One of the important disease control tactics used by growers is to treat with safe and effective fungicides which can be applied by ground and aerial equipment. While most growers have ground-based sprayers on their farm, a significant acreage in Wisconsin is routinely treated with aerial equipment – fixed wing and helicopters. Treatment of fields is done on 5-10 day intervals depending on pest pressure, weather factors and the equipment used. In times of wet soils due to excessive rainfall, aerial application allows growers to treat large acreages quickly and in a timely manner to insure that economically important diseases are managed at their inception, rather than after they've reached epidemic proportions. In the case of potato late blight, growers who have difficulty in treating their fields in a timely manner run the

risk of the development of this disease on their property and the risk is elevated for the entire region to suffer the consequences of a region-wide epidemic. In years when late blight is active and control is insufficient to contain this disease at the earliest stages, it is estimated that this costs the Wisconsin potato industry an additional \$12 million in extra fungicide applications and losses in storage. By working closely with the growers, we now have every grower on the same page and closely following university recommendations. The results are seen in the fact that we have not observed a significant outbreak of potato late blight in our state since 2002, an estimated savings of over \$84 million during this period accompanied by significant reductions in pesticide use. These results are in stark contrast to the situation in neighboring states where late blight has continued to be a significant periodic problem with associated high cost of control.

Another disease where timely application of control measures is critical to control is white mold on snap beans. Control depends on application of fungicides during a narrow 7-10 day interval when the plants begin to bloom. This window is especially critical during seasons when wet soils and frequent rainfall overlap the blooming process. Fields that cannot be treated in a timely fashion run the risk of total field rejection by the vegetable processors. As little as 5% pod infection by the white mold fungus can lead to a total crop loss for the grower, thereby emphasizing the need for the use of timely application of effective fungicides. I could discuss other diseases and pests affecting potato and vegetable crops where the timeliness of control is critical to management and to minimizing the use of pesticides, but I think the late blight and white mold situations clearly illustrate the need for the combined efforts of growers, the university, ground and aerial applicators and agribusiness in timely crop and pest management activities.

The concern I have with the site selection for wind turbine towers is the effect this will have on disease and insect management on a wide range of vegetable crops grown in Wisconsin. When towers are positioned in or near production fields where aerial application of pesticides is currently used for pest management, aerial applicators are justifiably refusing to treat these fields with pesticides due to the enhanced potential for personal and property risk. This potentially leaves significant production areas with one less tool that can be used for timely and safe pest and crop management activities. In short, this increases the risks for pest outbreaks, increased use of pesticides and reduced farm profitability for an industry that are key to the economic success of this region. I hope that these comments help you in your discussions as you consider if and where wind turbines will be located in Wisconsin. If you have questions related to what I've discussed above, please feel free to contact me at 608-231-3163 or wrs@plantpath.wisc.edu.

Sincerely,



Walter R. Stevenson
Professor Emeritus of Plant Pathology
University of Wisconsin - Madison
WRS

Wisconsin Potato & Vegetable Growers Association, Inc.

P.O. Box 327 • Antigo, Wisconsin 54409-0327

Telephone: 715/623-7683 • Fax: 715/623-3176 • e-mail: wpvga@wisconsinpotatoes.com • web: www.wisconsinpotatoes.com



July 1, 2010

Public Service Commission of Wisconsin
610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: Docket Number 1-AC-231
Comments for Wind Siting Rule Development

To the Public Service Commission of Wisconsin:

This letter is intended to inform you of the critical need for aerial application in the potato and vegetable industry of Wisconsin. We hope these comments will be given great consideration when making decisions on the siting of wind energy power plants and the possible effects this will have on Wisconsin vegetable production.

The Wisconsin potato and vegetable industry is very reliant on aerial application of crop protection products. About half of the potato and vegetable growers in the WPVGA (approximately 65 out of 130) use aerial application each year to protect their crops. Roughly 200,000 crop acres are treated aerially, receiving multiple applications per growing season.

Even the growers who don't regularly use this method of application have indicated that the AVAILABILITY of aerial application is extremely important in situations where ground application may be difficult or impossible. These growers see aerial application as an important insurance policy. Large and small growers alike know that their fields must be treated in a timely manner to avoid pest explosions, whether it be insects or diseases. To lose this crop protection service in areas of intense vegetable production would be devastating to the growers and to Wisconsin's economy.

Wisconsin is the nation's third-largest producer of potatoes, raising approximately 63,000 acres annually. With a yield of 460 cwt. / acre, Wisconsin produced 28,980,000 cwt. of potatoes in 2009. With market averages ranging from \$8-\$12/cwt., the Wisconsin potato crop is worth approximately \$250-\$350 million annually. When a very modest, two-time economic impact multiplier is used, that means the value of the potato crop in Wisconsin is between \$500 and \$700 million. When you consider all the farm workers along with the suppliers to the agricultural industry, and factor in all the businesses they support financially, the potato industry has a huge, highly significant impact on the economy in the state of Wisconsin.

The Need for Aerial Application

There are many pest-related risks to a potato crop that place yield, crop quality and economic returns in jeopardy. These include the diseases late blight and early blight as well as infestations of insects such as Colorado potato beetles, leafhoppers and aphids.


The proliferation of any of these pests can have devastating consequences for the grower and/or processor. Potato crops typically receive multiple pesticide applications during a growing season. Treatment is an essential component of producing a high value crop so that the harvested produce is of the highest quality.

The response to pests with pesticide applications is of the utmost importance. There are times when aerial application is the only way to achieve a timely response to pest outbreaks, as well as thorough coverage of affected plant parts. This timely response reduces the risk to other area growers and crops. This timely response can also reduce area-wide pesticide use by containing a pest outbreak to a small area and not exposing the entire region to a pest problem. Proper response can also prevent an outbreak from occurring.

The advantages of aerial application include: (1) the speed to cover large acreages in a short period of time when the weather is conducive to pest outbreaks; (2) the ability to apply crop protection products when ground spraying has been delayed due to weather conditions such as strong winds and heavy rain and there is a great need to catch up; (3) the ability to apply crop protection products at times when ground spraying is simply not possible due to overly wet soils; and (4) safety. There are times when crop maturity and harvest date are advancing more quickly than expected and pest problems are present that must be treated. Most crop protection product labels have a use requirement of a certain number of "days before harvest" that must be carefully followed to avoid pesticide residues on the resulting crop. Thus, to ensure timely pest control, to ensure the safety of the crop grown, safety of the environment, safety of farm workers and safety of the consumers, there are times when aerial application is the only option.

If a large-scale wind energy plant were to be sited in an area of intense vegetable production, the result would be devastating crop losses. The WPVGA feels strongly that there needs to be a compensation provision for vegetable growers and processors as part of a state-wide siting standard. Potato growers invest approximately \$4,000 per acre on average in cost of production; the resulting potato crop is expected to return approximately \$4,500 per acre on average. The WPVGA looks forward to working with the WDATCP, the Midwest Food Processors Association and the University of Wisconsin on developing values for compensation in the event of losses due to the siting of wind energy facilities.

Sincerely,


Tamas Houlihan
Communications Director
WPVGA



2317 International Lane, Suite 102, Madison, WI 53704-3154
Phone: 608 249-4070 Fax: 608 249-5311

July 6, 2010

Public Service Commission of Wisconsin
610 North Whitney Way
P.O. Box 7854
Madison, Wisconsin 53707-7854

RE: Docket Number 1-AC-231; Comments for Wind Siting Rule Development

Dear members of the Public Service Commission of Wisconsin:

I am writing to encourage the PSC to only consider wind energy siting standards that also include a compensation provision for potato and vegetable growers and processors when they are negatively impacted by wind energy systems. Potato and vegetable production is a critical portion of Wisconsin's agricultural economy, and without careful planning, Wisconsin's potato and vegetable growers could suffer considerable losses because the location of wind energy systems may prohibit aerial application of plant health products.

The Wisconsin Crop Production Association represents many sectors of Wisconsin's diverse crop production industry, including agricultural retailers and custom ground applicators of plant health and crop protection products. In areas of the state where there is intense potato and vegetable production, it is not economically feasible to replace aerial application with ground application methods. It would require up to six ground application sprayers to do the work of just one aerial application plane. Additionally, the window for the application of these products is very short for potato and vegetable production. It would not make economic sense for ag retailers to invest in the additional equipment and to hire and train the additional staff that would be necessary to replace the work that is done by aerial applicators.

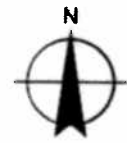
Finally, soil conditions due to excessive rainfall may make ground application difficult or impossible when a particular treatment is necessary during a critical stage of crop development. This complication is not a problem when growers have access to timely aerial application.

For these reasons, I urge you to thoroughly consider the impacts of wind energy systems on Wisconsin's agricultural industry and to also include in the siting standards adequate protections for growers and processors who rely on aerial application for a healthy and abundant harvest.

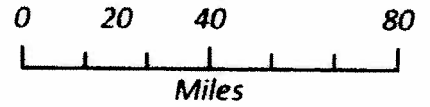
Sincerely,

Rob Poehnelt, CAE
Executive Director

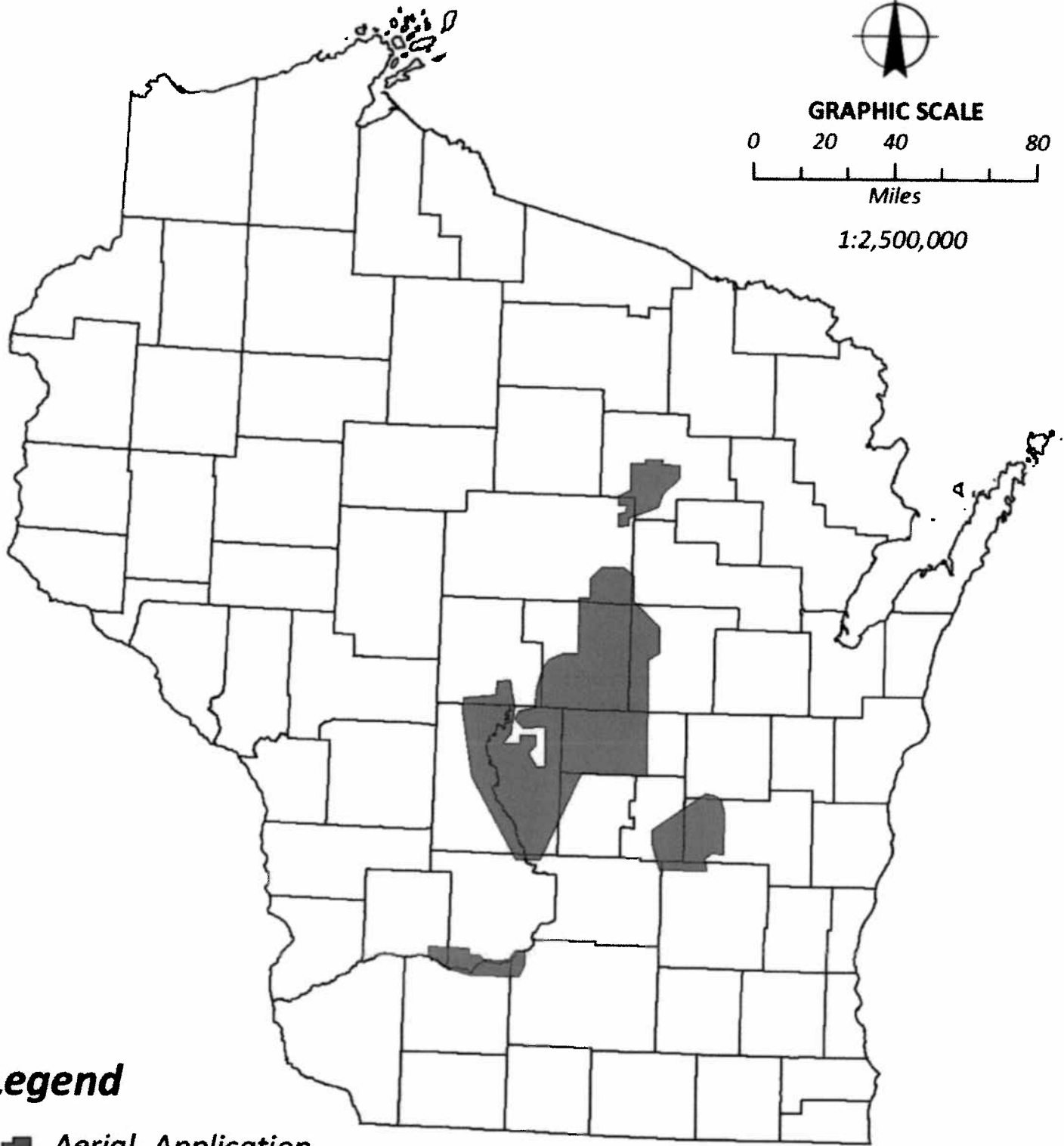
Intense Vegetable Production Areas Reliant on Aerial Application



GRAPHIC SCALE



1:2,500,000



Legend

 Aerial_Application

 county

Sweet corn, green bean, and pea field locations provided by Wisconsin vegetable processors. Potato/Vegetable rotation fields identified via high capacity well data from Dr. George Kraft, UW-Stevens Point. Data reviewed for accuracy by Wisconsin Potato and Vegetable Growers Association. Mapped by W.T. Oehwichen.



State of Wisconsin
Jim Doyle, Governor

Department of Agriculture, Trade and Consumer Protection
Rod Nilsestuen, Secretary

July 7, 2010

Public Service Commission of Wisconsin
610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: Docket Number I-AC-231
Wind Siting Rule

To the Public Service Commission of Wisconsin:

Thank you for the opportunity to comment on the proposed Wind Siting Rule (PSC 128). Wind energy development in Wisconsin can help us reduce our dependence on fossil-based energy sources. It is also a key component of Governor Doyle's efforts to promote the use of homegrown, renewable energy options like biomass, biogas, solar and wind. Wind energy can also be an additional source of income for Wisconsin farmers.

Although the wind is free, capturing the wind is not. Large wind energy systems are land-intensive and can have an impact on the land where they are located - which is primarily on farmland in Wisconsin. These systems should be sited in a way that does not unduly disrupt agricultural production in the areas where they are located.

Working Lands Legislation

Wind turbines can generate clean renewable energy and supplement farm income. But they also have the potential to change the landscape and create land use conflicts. Wisconsin recently enacted major "Working Lands" provisions as part of the state biennial budget act (2009 Wis. Act 28). The new law completely overhauls Wisconsin's 30-year-old farmland preservation program under ch. 91, Wis. Stats. and creates a new program for the purchase of agricultural conservation easements (PACE) under s. 93.73, Wis. Stats. DATCP recommends that the PSC consider the Working Lands law when drafting the Wind Siting Rule.

Under the newly-revised farmland preservation program, farmers may qualify for tax credits if they are covered by a county or local farmland preservation ordinance that is certified by the Department of Agriculture, Trade and Consumer Protection (DATCP). DATCP may certify an ordinance, for tax credit purposes, if the ordinance meets minimum farmland preservation standards in ch. 91, Wis. Stats. A wind energy system with a nameplate capacity of less than 100 MW that generates power primarily for the grid may not be allowed in a certified farmland preservation zoning district, *except* under a conditional use permit issued by the zoning authority. The proposed wind turbine project must meet applicable conditional use permit standards in s. 91.46(4), Wis. Stats. The PSC should consider these provisions as it proceeds with its wind turbine siting rule, and should design the rule

Agriculture generates \$51.5 billion for Wisconsin

to minimize or eliminate any potential inconsistency between the rule and the farmland preservation statute.

Stray Voltage

DATCP supports section 128.17 of the draft rule, which provides for testing for stray voltage prior to wind turbine construction and the requirement to rectify any stray voltage problems arising from the construction and operation of a wind energy system. This would help ensure the wind energy system is not producing stray voltage or would correct the problem if it were identified.

Wind Lease Requirements

DATCP supports the landowner protections included in section 128.11 of the Council Draft Rule. In particular, the wind lease prohibitions in section 3 should be retained.

Aerial Applications on Farmland

Aerial applicators have expressed concerns about the danger associated with applying plant protection products in areas where wind turbines are located. Wind turbines, which can be over 400 feet tall, provide a significant obstacle and a danger to aerial applicators. In addition, the invisible turbulence created by the wind turbines can endanger the applicator. For these reasons, many aerial applicators are indicating that they are not planning to apply pesticides within one-half mile of a wind energy system.

Meteorological towers are installed prior to construction of a wind farm to determine whether local wind speeds meet the criteria for successful operation of a wind farm. These towers can be more dangerous than wind turbines because they are less visible and have guy wires that are difficult to see. Meteorological towers should be painted brightly and the guy wires and supports should be marked and visible.

Aerial applications of plant protection products are an important management tool for Wisconsin agriculture. They are particularly important to the growers and processors of high-value vegetable crops, including potatoes, sweet corn, green peas and snap beans. Wisconsin ranks high nationally in production of these crops: 1st for processing snap beans, 2nd for processing sweet corn, and 3rd for potatoes and green peas for processing. These crops often require more frequent applications of plant protection products to control insects and disease. In addition, the timeliness of the applications to these crops is particularly important. The value of a vegetable crop is more subject to quality concerns than are crops grown for livestock or commodity grain crops where yield is the most important concern. Consequently, timely applications, which can only be provided through aerial application, are crucial to the vegetable industry.

The Council Draft Rule dated 4-13-10 included a provision that allowed a political subdivision to require a developer, owner or operator to provide compensation to farm operators on nonparticipating properties within an unspecified distance from a wind turbine site for reductions in crop production or increased application costs due to the wind energy system's effect on aerial spraying. The farm operator would need to demonstrate a history of aerial application (PSC 128

(1)(j)). This section was removed from the Council Draft Rule dated 5-20-10. DATCP recommends including this section in the final rule.

There is legal precedent for compensating landowners for energy projects that render adjacent lands less accessible. Wisconsin Statutes currently allow compensation for damages when land is rendered less accessible to farm implements and aircraft used in crop production as a result of locating transmission lines and associated facilities. These damages apply to the lands not directly taken for the project (Wis. Stats. s. 182.017 (7)(b)).

Wind turbine development does not currently utilize eminent domain authority (Chapter 32, Wis. Stats.) to acquire property as may be the case with high-voltage transmission lines. However, it is similar in that it can impact landowners by limiting access to aerial pesticide applications on adjacent lands owned by these non-participating landowners. Consequently, there is statutory precedent for compensating for this type of damage resulting from an energy project.

DATCP is working with the University of Wisconsin and vegetable grower and processor trade associations to assemble the data and develop estimates of the damages that could result from restrictions placed on aerial application of plant protection products. The majority of farmers growing vegetable for processing in Wisconsin have contracts with the vegetable processors and a common condition of these contracts is that the processors control application of pesticides. The processors keep extensive data on their pest control applications, the efficacy of these applications, and the associated pest damage and yields. We are currently acquiring these and related crop production data from vegetable processors and farmers to develop these estimates. Dr. Paul Mitchell, Agricultural and Applied Economics at the University of Wisconsin, an expert in estimation of pest damages to crops, will use these data to estimate these losses.

Siting/Construction Issues

Wind turbines, access roads, transmission lines and other structures needed to connect the wind turbines to the transmission system remove cropland from production. These facilities should be sited in a manner that maintains the productivity of farm operations as much as possible. This can be accomplished by locating wind turbines and access roads along field edges or in non-agricultural areas. This would minimize the severance of fields into smaller misshaped remnant parcels that are difficult and less efficient to farm.

Farmers expect that their cropland restored after construction will be returned to its pre-construction productivity. But there are several soil impacts that can result from wind farm construction:

- Topsoil mixing with the underlying soil reduces soil tilth, organic matter and cation exchange capacity, and alters soil structure and distribution of particle sizes. It can also increase rock content and concentrations of harmful salts near the surface. This can lead to reduction in crop yields.

- Compaction of subsoil and topsoil can take place due to the heavy equipment used during construction of the wind projects. Compaction reduces uptake of water and nutrients by crops, restricts rooting depth, decreases soil temperature, increases the proportion of water-filled pore space at field moisture capacity, decreases the rate of decomposition of organic-matter, decreases pore size and water infiltration, and increases surface runoff. The greater the depth to which soil compaction occurs, the more persistent it is. Soil compaction can lead to crop yield reductions that continue for decades.
- Damage to drainage systems can occur during construction of wind energy systems. During construction, drainage tile can be crushed or cut resulting in wet fields that cannot be tilled. In addition to damaging drainage tile, wind energy system construction can permanently alter the soil profile, thereby affecting drainage patterns. The resulting de-stratification, or alteration, of soil horizons may result in ponding or seeps that cause crop yield losses.

Many of these potential impacts can be mitigated through development and implementation of an Agricultural Mitigation Plan. Wisconsin Electric Power Company developed a mitigation plan for the Glacier Hills Wind Farm Project that was reviewed and approved by DATCP. The purpose of the plan was to avoid and minimize both construction impacts and long-term operational impacts. The plan is intended to help ensure that all disturbed agricultural land not used for permanent facilities are restored to a productive state. See Glacial Hills Wind Park Final Environmental Impact Statement, Volume 1, Appendix B.

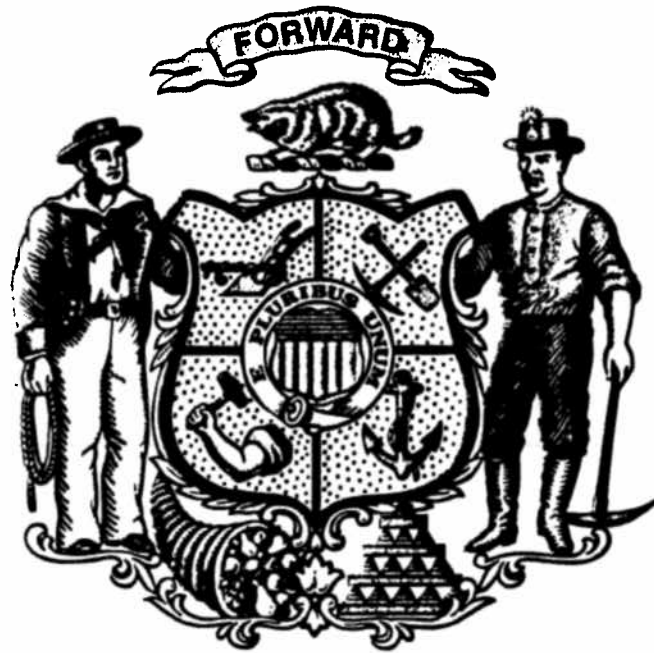
DATCP is developing guidelines that are intended to maintain the productivity of the farmland associated with Wind Energy System projects. These general guidelines will be posted to the DATCP website and can be referenced when siting and constructing wind energy systems.

Thank you for the opportunity to comment on the proposed Wind Siting Rule (PSC 128). If you have any questions about our comments, please contact Peter Nauth at 608.224.4650.

Sincerely,



Rod Nilsestuen
Secretary



CONTACT INFO:
Glen R. Schwalbach
920-680-2436

Hearing on Clearinghouse Rule #10-057
PSCW Wind Siting Rules

Senate Committee on Commerce, Utilities, Energy, and Rail
October 13, 2010

Testimony by Glen R. Schwalbach, P.E.
for
Towns of Glenmore, Morrison, and Wrightstown of Brown County

Thank you, Senator Plale and Committee Members for providing us this opportunity to comment upon the specific wind siting rules as proposed by the Public Service Commission.

Besides my testimony, I have presented your clerk with a letter from Todd Christensen, Chairman of the Town of Morrison. Mr. Christensen wants you to understand the rigorous process the towns have gone through to be sure our comments to the PSCW and, now to you, are as credible as can be.

Certainly, progress has been made but an essential element in the process is still lacking--that is the fact that rules or standards intended to protect the health and safety of people must be based upon scientific fact rather than scientific opinion. We still lack statistically-controlled epidemiological studies to assess wind turbine impacts on humans and animals. There are peer-reviewed scientific studies which say that significant evidence of negative impacts exists and peer-reviewed reports which stress there is no true scientific studies which show that turbines are harmful. Both groups of authors, including our own State Board of Health, are correct. There are no controlled scientific studies, period. This also means we have found no controlled scientific studies which determined that wind turbines are safe.

Wisconsin has an opportunity to do epidemiological studies in their existing wind farms. The University of Wisconsin and the State Board of Health are capable of doing such studies. Such studies could be done in a year or so and still provide time for any Wisconsin utility which needs more wind by 2015 to do so.

We call upon the wind energy industry to help fund such studies because the use of better science would improve their designs, speed their project application process, and help reduce their liability. I, personally, call upon the licensed Professional Engineers in the wind industry to remind themselves that, as P.E.'s, they have an ethical responsibility to the public which goes beyond obligations to their employers or their clients. Their designs and operational procedures must be based on good science. They should voice support for controlled epidemiological studies.

We don't know whether the legislature or the PSCW has a process to delay these rules or delay projects until proper studies are done. Emergency rules may have a role here. It seems the PSCW could delay approvals of the large turbine

complexes of 100 megawatts and larger by determining an application is not complete until the design is based on more adequate science. For projects smaller than 100 megawatts, the PSCW could delay the proposed rules since the legislation has no deadline for issuing them.

We ask you to support Public Service Commissioner Lauren Azar's proposal to address individual hardships from medical problems. This is especially relevant while we lack the results of controlled epidemiological studies.

That said, we offer comments on the proposed rules regarding the most serious issues.

Compared to the PSCW's model ordinance of 2007, the proposed rules have shortened the setbacks for participating residences and lengthened them for non-participating residences. It seems risky to shorten the setbacks for participating residences. The disparity between setbacks for different landowners is strong evidence that the decision lacks a credible scientific basis.

Historically and reasonably, setbacks have been defined as a distance from property lines--until wind turbine projects came along. Ironically, wind turbines which greatly exceeded traditional height restrictions for structures in local ordinances were approved for construction while, at the same time, the state decided to allow wind turbines to have direct impact beyond the property line as to the neighbors' use of their land. The model ordinance and the proposed rules set up the situation where a neighbor to a wind turbine now is excluded from putting up his own turbine, to build a residence, to sell land for a school, or, otherwise, develop the property. For many town landowners, their land represents their retirement fund or their legacy for their children. Adequate setbacks from property lines are necessary to minimize financial impact for non-participating landowners.

The PSCW in its response to public comments states that the proposed rules do not prevent a political subdivision from negotiating a mutually agreeable property value protection plan with the wind energy system owner. Yet that option is not listed in the proposed rules as other options are. Such efforts by a town could be argued by a wind owner as more restrictive than the state allows. The right of a town to broach this subject needs to be in the rules.

Notice periods to towns and landowners are too late in the process for adequately informing the landowners and the public. We had proposed that developers of projects be required to contact the PSCW for a temporary franchise so that the developers are comfortable with notification before they even contact landowners. Along with this, we proposed that the rules require developers to provide a "truth in negotiating wind easements" brochure to any landowner whom they contact. Such information is available but needs to be put in the hands of landowners. Both adequate notice and information would minimize situations which we now see where contract signers for proposed projects want out of their contracts and where the public gets surprised by

projects which seem to be done-deals. [Ref. PSC 128.105(1) and PSC 128.14(6)(b)]

The rules allow owners of nonparticipating residences or such buildings as schools and churches to waive setbacks. Setbacks are to protect health and safety, albeit not yet based upon the best science. For such owners, who are not usually wind turbine experts, to be allowed to waive health and safety protections is not prudent and may cause hazards for other occupants. [Ref. PSC 128.13(1)(d)]

The rules specify a nighttime noise limit of 45 dBA and apply only to a nonparticipating residence or occupied community building. The World Health Organization did a six-year study involving thirty-five experts for the European Union. The report was published last year and sets forth a limit to protect the public of 40 dBA at night at the outside wall of bedrooms. This resource is the best we have seen and should be adopted until better science is available. Support for this nighttime limit has been supported by all the towns of Brown County. The rules should protect participating properties as well. It would be irresponsible to not do so. Also, allowing an owner of a non-participating property to waive the sound limit is questionable since different individuals in a household are likely to be affected differently. [Ref. PSC 128.14(2)(a), (3)(a), and (5)]

The rules should clarify that it is not allowable to consider whines, screeches, etc. as normal sound. [Ref. PSC 128.14(3)(b)]

And, finally, our area of Brown County is an extremely sensitive part of the Niagara Escarpment which is susceptible to ground water impacts. If wind turbine installations with their cable connector trenches create new pathways for surface substances such as manure or chemical treatments to contaminate the groundwater, we are told the law now provides the farmer, who spread the substance as a normal routine, will be the one fined, not the persons or company who created the pathways. Obviously, the rules need to put some of the responsibility upon the wind turbine owners. Also, the rules default this issue to the Department of Natural Resources and don't provide the towns and counties enough authority to disallow a turbine structure or trenches in a weak geological formation or require construction methods which would mitigate the risk.

We commend the PSCW on its proposed rules for stray voltage and decommissioning.

Thank you for your consideration.





Office of the County Executive

Bob Ziegelbauer, County Executive
Manitowoc County Courthouse • 1010 S. 8th Street • Manitowoc WI 54220
Office: 920.683.5107 • Cell: 920.323.7497
bobziegelbauer@co.manitowoc.wi.us • www.bobziegelbauer.com

Accountability • Respect • Customer Service

Senate Committee on Commerce, Utilities, Energy, and Rail Senator Jeff Plale, Chair

Wednesday, October 13, 2010, 11:00 AM
411 South, State Capitol

RE: Opposition to Clearinghouse Rule 10-057, relating to the siting of wind energy systems.

Dear Senator Plale & Committee Members:

As I testified at the public hearing held over a year ago on SB 185/AB 256, I was opposed to the wind siting bills then, and am opposed to Clearinghouse Rule 10-057 now. I continue to strongly support that the siting of wind towers must be made by the local units of government where wind towers will be located. I strongly encourage the Committee to send the rule back to require local input and decisions.

In the Manitowoc County area we are very interested in efficient new energy technologies. We host two valuable highly efficient nuclear plants (and if you're really serious about producing low cost electricity for a long time we would love to put one more between those two). Our workers manufacture the towers that support the wind turbines. And, the City of Manitowoc operates a new clean coal power plant in the middle of town, a block from my house, three blocks from the Courthouse.

We are "all in" on the energy economy.

The issue here is actually a fairly simple one. "Do you trust people in their local communities to make serious land use decisions on important issues?"

Nearly five years ago when it became clear that the demand for wind power sites would include our area, Town and County government embarked on the intense process of trying to make the difficult land use policy decisions contemplated under existing state law. After a failed first attempt to create a suitable county wind power ordinance, the County Board took a "time out" by declaring a moratorium on projects while it convened a special study committee to write a new ordinance. That committee, **a balanced mix of citizen and elected officials encompassing all the principal points of view, took significant public input and agonized over the implications of making wind tower siting decisions.**

- over -

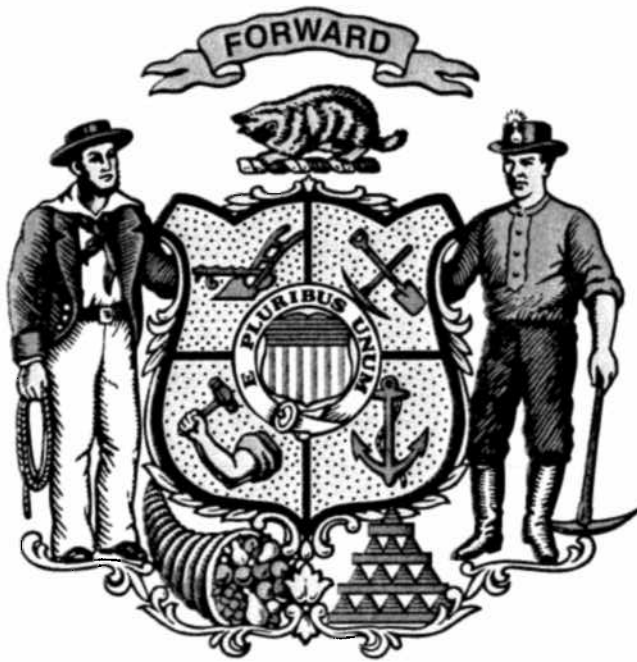
After more than a year of serious deliberation their work product, a comprehensive wind power ordinance was overwhelmingly passed into law by the Manitowoc County Board in 2006. That both sides of the debate came away from the process a little unhappy with the results speaks highly of the quality of the work they did. It continues to be tested, defined, and refined according to the appropriate due process that is available at the local level for these issues. This would throw all that work away.

I encourage you to stand up for those local officials and the process of making local decisions throughout the State. Their work and the work of similar groups of local officials, who took their responsibilities seriously and in good faith waded in to try address controversial issues in their communities should stand; not be washed away because "Monday morning quarterbacks" from 150 miles away don't like the result.

This proposal tells local people to get out of the way, tells local officials to dodge the tough issues, and because people in Madison know better, you'll decide.

I urge you to not support the rule and send it back for modifications.

###



Wisconsin Potato & Vegetable Growers Association, Inc.

P.O. Box 327 • Antigo, Wisconsin 54409-0327

Telephone: 715/623-7683 • Fax: 715/623-3176 • e-mail: wpvga@wisconsinpotatoes.com • web: www.wisconsinpotatoes.com



October 13, 2010

CRule 10-057?

To the Wisconsin Senate, Committee on Commerce, Utilities, Energy and Rail

RE: Comments for Wind Energy Siting Rule Development

My comments are intended to inform you of the critical need for aerial application in the potato and vegetable industry of Wisconsin. We hope these comments will be given great consideration when making decisions on the siting of wind energy power plants and the possible effects this will have on Wisconsin vegetable production.

The Wisconsin potato and vegetable industry is very reliant on aerial application of crop protection products. About half of the potato and vegetable growers in the WPVGA (approximately 65 out of 130) use aerial application each year to protect their crops. Nearly 200,000 crop acres are treated annually.

Even the growers who don't regularly use this method of application have indicated that the AVAILABILITY of aerial application is extremely important in situations where ground application may be difficult or impossible. These growers see aerial application as an important insurance policy. Large and small growers alike know that their fields must be treated in a timely manner to avoid pest explosions, whether it be insects, weeds or diseases. To lose this crop protection service in areas of intense vegetable production would be devastating to the growers and to Wisconsin's economy.

Wisconsin is the nation's third-largest producer of potatoes, raising approximately 63,000 acres annually. With a yield of 460 cwt./acre, Wisconsin produced 28,980,000 cwt. of potatoes in 2009. With market averages ranging from \$8-\$12/cwt., the Wisconsin potato crop is worth approximately \$250-\$350 million annually. Wisconsin ranks second in the US for both harvested acreage and production of processing vegetables and third in production value. Key processing crops in Wisconsin include potatoes, sweet corn, snap beans, green peas, carrots, cucumbers and onions. According to a recent study by the University of Wisconsin Department of Agricultural and Applied Economics, specialty crop production and processing together account for approximately \$6.4 billion in economic activity (which is about 3% of Wisconsin's overall economy) and nearly 35,000 jobs.

The Need for Aerial Application

There are many pest-related risks to a potato crop that place yield, crop quality and economic returns in jeopardy. These include the diseases late blight and early blight as well as infestations of insects such as Colorado potato beetles, leafhoppers and aphids.

The proliferation of any of these pests can have devastating consequences for the grower and/or processor. Potato crops typically receive multiple pesticide applications during a growing season. Treatment is an essential component of producing a high value crop so that the harvested produce is of the highest quality.

The response to pests with pesticide applications is of the utmost importance. There are times when aerial application is the only way to achieve a timely response to pest outbreaks, as well as thorough coverage of affected plant parts. This timely response reduces the risk to other area growers and crops. This timely response can also reduce area-wide pesticide use by containing a pest outbreak to a small area and not exposing the entire region to a pest problem. Proper response can also prevent an outbreak from occurring.

The advantages of aerial application include: (1) the speed to cover large acreages in a short period of time when the weather is conducive to pest outbreaks; (2) the ability to apply crop protection products when ground spraying has been delayed due to weather conditions such as strong winds and heavy rain and there is a great need to catch up; (3) the ability to apply crop protection products at times when ground spraying is simply not possible due to overly wet soils; and (4) safety. There are times when crop maturity and harvest date are advancing more quickly than expected and pest problems are present that must be treated. Most crop protection product labels have a use requirement of a certain number of "days before harvest" that must be carefully followed to avoid pesticide residues on the resulting crop. Thus, to ensure timely pest control, to ensure the safety of the crop grown, safety of the environment, safety of farm workers and safety of the consumers, there are times when aerial application is the only option.

If a large-scale wind energy plant were to be sited in an area of intense vegetable production, the result would be devastating crop losses. The WPVGA feels strongly that there needs to be a compensation provision for vegetable growers and processors as part of a state-wide siting standard. Potato growers invest approximately \$4,000 per acre on average in cost of production; the resulting potato crop is expected to return approximately \$4,500 per acre on average. The WPVGA looks forward to working with the Public Service Commission, the WDATCP, the Midwest Food Processors Association and the University of Wisconsin on developing values for compensation in the event of losses due to the siting of wind energy facilities.

Sincerely,

Tamas Houlihan
Communications Director
WPVGA



Wisconsin Towns Association

Richard J. Stadelman, Executive Director

W7686 County Road MMM

Shawano, Wis. 54166

Tel. (715) 526-3157

Fax (715) 524-3917

Email: wtowns1@frontiernet.net

To Senate Committee on Commerce, Utilities, Energy, and Rail

From: Richard J. Stadelman, Executive Director

Re: Clearinghouse Rule #10-057; PSC Wind Siting Rules proposed Chapter 128

Date: October 13, 2010

On behalf of the Wisconsin Towns Association, I would respectfully request the Senate Committee on Commerce, Utilities, Energy, and Rail refer the draft rule on Wind Siting, proposed Chapter 128, back to the Public Service Commission (PSC) with directions to modify at least two key provisions in the draft rule plus review additional provisions.

First, we want to state that the state legislature by authorizing the PSC to promulgate these rules which will limit the local governments' authority to regulate the siting of wind turbines, the state has preempted local government authority to protect their residents and property owners for public health, safety and welfare to no greater restrictions than as allowed under the rules. Therefore local governments must rely on the PSC rules to ensure that public health, safety and welfare are protected. It is our opinion and many of our members who have followed the rule development that at least two key provisions listed below should be modified by the PSC to provide the needed protections for residents and property owners of the state.

The first provision that warrants modification is the **setback of large wind turbines from nonparticipating residences on Table 1**. The setback should at the minimum be from the property line of a nonparticipating property, not the residence. The draft rule of 3.1 times the maximum blade tip height from a nonparticipating residence results in a "taking" of the nonparticipating property owners use of his or her property between the residence and the property line, without compensation. Increasing this setback to the property line also reduces some of the other impacts of large wind turbines, such as noise and shadow flicker effect. We would also suggest that the PSC consider a greater setback from the nonparticipating property line than 3.1 times the maximum blade tip height or at the minimum conduct more studies on noise before setting the distance as proposed.

The second provision that warrants modification is the **maximum noise limits at 50 dBA during daytime and 45 dBA during nighttime hours**. It is my belief that based upon existing studies that noise levels at these levels will have negative health impacts on many people in the immediate proximity of the large wind turbine (such as living in a nonparticipating residence at 3.1 times the maximum blade tip height distance from a turbine). Decreasing these maximum noise limits in combination with increasing the setback from nonparticipating property lines will better protect public health, safety, and welfare.

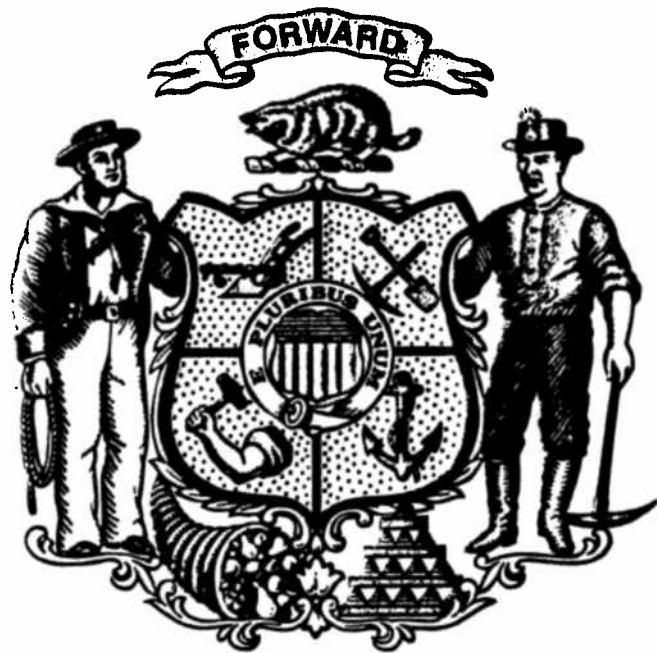
We want to point out that in addition to the health impact upon individuals within the immediate proximity of large wind turbines, when the impacts of setbacks and noise levels that are perceived as insufficient to protect public health, safety, and welfare, the value of properties

adjoining wind turbines will likely decrease, reducing the tax base on the political subdivision, resulting on a shifting of tax burden on local property owners outside of the immediate proximate area of the large turbines. This is a negative impact on the town government that is not sufficiently reimbursed by the municipal aid payments (shared revenue) from the large turbines.

In addition to the two key provisions that we ask the Committee to direct the PSC to modify, we believe some other provisions warrant review and reconsideration by the PSC. These following provisions should be reviewed by the PSC:

- (1) **PSC 128.02 (4) Individual Consideration.** While it may not be the intent of the current PSC to allow the future applicants for large wind turbines to have lesser standards than written in the rule, this section clearly provides the commission the authority to set lesser standards than written in the rule without limitation. This latitude creates uncertainty to local governments and the residents in the immediate proximity of proposed large wind turbines that the minimum requirements can be waived without any recourse or without protection to the public of health, safety, and welfare. This section should be modified to eliminate the authority of PSC to approve lesser standards than the minimum standards to protect the public.
- (2) **PSC 128.33 (3) Monetary Compensation.** While we commend the PSC for allowing the local government to require the large wind turbine owner to compensate the owner of a nonparticipating residence, we question why it is limited to an amount not to exceed 25% paid to the owner of a turbine host property. With a setback maximum from the nonparticipating residence of 3.1 times the height of the maximum blade tip, a nonparticipating property owner could be closer than the owner of a host property's residence and be impacted to a greater extent than a host property owner. The 25% limit should be increased.
- (3) **PSC 128.14 (4)(e) under Emergency Procedures.** While we support the requirement that the owner of the wind turbine should be required to provide annual training for fire, police, and other appropriate first responders, we would assert that the cost of time spent by the appropriate emergency personnel should be reimbursed by the owner. These large wind turbines are unique structures that warrant the special training and time spent by local emergency personnel in such training, but such time should be at the expense of the wind turbine owner.
- (4) **PSC 128.32 (4) Effect of Ownership Change on Approval.** As written this section does not provide for the political subdivision to require the new owner to show proof of compliance with such requirements as general liability, financial assurance for decommissioning, bonds for possible road damage, or other requirements that may have been specific to the original owner but not necessarily the same documents and guarantees available to the new owner. The change of ownership should not be valid until the new owner has shown proof of compliance with all such specific requirements of the original owner. This language should be written into the rule.

In general we commend the work to date of the PSC in proposing the draft rule. However, there are the two major provisions listed above that should be modified and the other sections that need clarification or rewriting to ensure that the preemption of local government authority by setting these state standards does not do harm to public health, safety, and welfare. Again, we respectfully ask your committee to return this rule to the PSC with directions for modification.



C-Rule 10-057?

October 13, 2010

Senator Jeff Plale
Chairman of Senate Committee on Commerce, Utilities, Energy, and Rail
P.O. Box 7882
Madison, WI 53707-7882

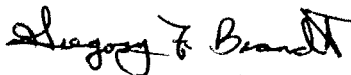
Senator Plale:

I am writing this letter asking you for your help. Please help the residents of the State of Wisconsin who will be living next to a wind farm. There are too many unanswered questions concerning health/safety issues.

Please change the setback of the turbines. It should be measured 1/2 mile from the property line.

Thank you for your time,

Sincerely,



Gregory F. Brandt
1903 County H
Cuba City, WI 53807

Carla M. Hansen
Exp. 9/30/12

608-744
3245



C-Rule 10057?

October 13, 2010

Senator Jeff Plale
Chairman of Senate Committee on Commerce, Utilities, Energy, and Rail
P.O. Box 7882
Madison, WI 53707-7882

Senator Plale:

I am writing to you as a life long resident of the State of Wisconsin. I am not against green energy, but when it causes hardship for residents living next to a wind farm –there is an issue.

Please increase the setback to at least 2500 ft from property line. This is not only to protect residents health/safety issues, but also to ensure the resident's property value will not decrease. If the value does decrease, what effect will it have on property tax income??? Ask yourself, what about State revenue???

I was so glad to hear a Wind Siting Council was created, but when I read the list, I thought, how could this be. Too many council members had a direct link to wind farms and....personal gain.

Please help us, the residents who will be living next to the wind farm.

Sincerely,

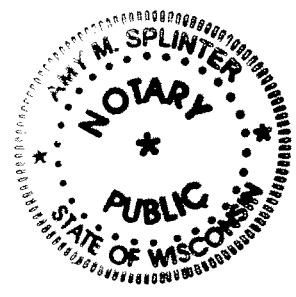
Mary Brandt
Mary Brandt

1903 County H
Cuba City, WI 53807

Oct 12, 2010

Amy M. Splinter
MS 11-11-12

608-744-3245





CRule 10057?

Michael Arndt
Element Power

612 ~~612~~
294 4620

10/13/10

WI Senate Hearing Testimony-Wind Siting Rules

Element Power Background

- US based developer-develop, own and operate utility-scale wind and solar projects
- Management team has built 6000 MW collectively

My Background

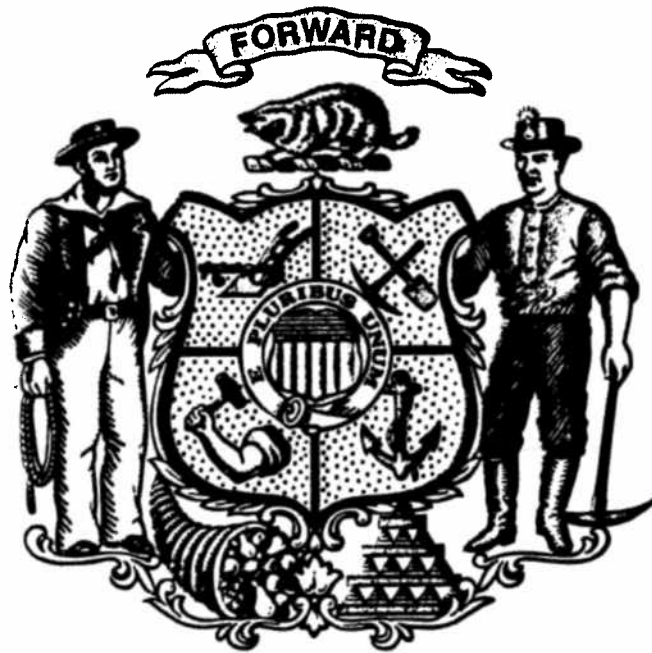
- Farm in Rock County
- Been involved in the development of wind projects in WI since 2003, including Blue Sky Green Field in Fond du Lac County

Currently actively developing a 200 MW project in WI

- 150 construction jobs, likely with a WI based contractor
- 15 ongoing maintenance jobs
- \$300M capital cost
- \$2M/yr in LO revenues
- \$800K/ yr in Shared Rev pmts to host counties and towns
- Project may not be viable if the proposed rules are adopted, which would force us to invest our development \$\$ in neighboring states, taking the economic development opportunity away from WI
- Currently considering other development opportunities in WI, but may not proceed if development climate in WI is more difficult than in neighboring states

Impact of proposed Rules

- Good neighbor payments as currently proposed would increase project costs by approximately \$600K annually
- 3.1 X tip height setback equates to up to 1500 feet, likely making most project areas in WI unviable for large-scale wind development
- Sound and shadow standards as currently proposed include operational curtailment as a means to mitigate the effect. Curtailment risk will likely make any wind project unfinancable by 3rd party banks



C-Rule 10-057?

October 13, 2010

Senator Jeff Plale
Chairman of Senate Committee on Commerce, Utilities, Energy and Rail
P.O. Box 7882
Madison, WI 53707-7882

Senator Plale:

I am writing this letter out of concern for what is happening in our State, our Township and in our communities with regards to wind energy in our state.

I am a Supervisor for Smelser Town in Southwest Grant Co. I am also a Land owner in our township. I have been on both sides of the issue as it relates to a proposed wind energy project that is proposed for our area. Because of this, I have spent hours researching this issue.

I want to express my concern about how ACT 40 and the dominance of wind supporters on the wind siting council. I have followed the council and read the minutes and the follow up reports, especially the Minority Report .

Because of my research and first hand visits that I have made on numerous occasions to wind farms in different states, I have to state that enough people have suffered because of the lack of proper setbacks. The setbacks should be a minimum of ½ mile. This is our responsibility to study this issue and find the answers especially when it is in our power to do so. The state health department should be doing studies or set guidelines that ensure health and safety of our citizens.

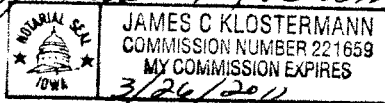
We need to address this issue now.

Thank You for your time and concern .

Rob Droessler
Supervisor, Smelser Township
2288 Hill Rd.
Cuba City, WI 53807
563-581-3163
rtdroess@lagrant.net

Rob Droessler 10/13/10

James C. Klostermann 10/13/2010





Oct. 13, 2010

State of Wisconsin
Wind Siting Rules
Public Hearing
Clearing House Rule 10 - 057
Senators Committee on Commerce, Utilities, Energy and Rail

Dear Senators,

Please consider having greater setbacks than in the current draft rule by the wind turbine siting council and Public Service Commission. As Dr. McFadden has said the World Health Organization has recently changed night time limits to 40 decibels. That 40 decibels should be measured so the neighboring homes would be able to have windows open and not have to run air conditioners. Also ambient noise can make a great deal of difference such as dropping a book in a quiet library compared to dropping a book in a noisy school locker hallway.

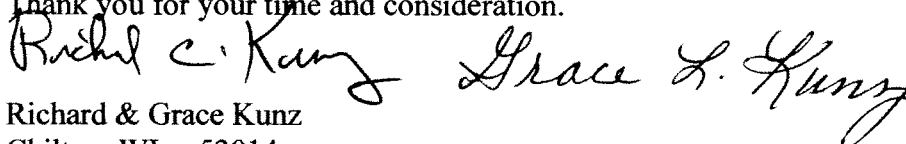
Unfortunately, there are many people in wind turbine farms here in Wisconsin, Nationally and other Countries with major health problems caused once the wind turbines were erected such as sleep deprivation. Please consider that this has caused health problems and individual financial ruin from having wind turbines too close to homes so it is important to have the proper setbacks. Please include a fair property value guarantee. Many adjacent land fill residents have property value guarantee.

I am also concerned about the bats. Ledgeview Nature Center south of Chilton promotes bats and there are bats in the caves yet the wind developers have proposed several wind turbines within approximately one half mile. We Energies study on the 88 turbines in Blue Sky Green Field wind industrial park reported that 7,000 bats were killed in the first two years.

Please listen to the people that will be testifying with the associated health problems because these problems need to be corrected before more people are affected and the 40 decibels of WHO is being ignored. Public or Common good should be for all involved in a wind turbine industrial park especially the ones living next to them.

Would it not be more cost effective to properly site the wind turbines than to have to correct problems by feathering or stopping them resulting in even less than 27% capacity claimed on production? Many areas are just too populated and Wisconsin is not a very windy state. Health & Safety should be the number one priority. Please consider 1/2 mile setback or 5 decibels above ambient and at the very least 40 night time decibels to avoid sleeping problems.

Thank you for your time and consideration.


Richard & Grace Kunz

Chilton, WI 53014

920-849-4894



Senate Committee on Commerce, Utilities, Energy, and Rail
Public Hearing
Clearinghouse Rule 10-057, Relating to Siting Wind Energy Systems

Wednesday, October 13, 2010

By: Richard R. James, INCE

Thank You for the Opportunity to Speak Today,

My name is Richard R. James. I am an acoustical consultant with 40 years of experience. I have been a member of the Institute of Noise Control Engineers (INCE) since 1973. I offer my services through my company, E-Coustic Solutions which is located in Okemos, MI.

I am speaking on behalf of Calumet County Citizens for Responsible Energy (CCCRE), a non-profit organization which supports responsible, efficient renewable energy while protecting the health and safety of people and the environment. I have worked with CCCRE on matters related to siting wind turbines in Wisconsin since 2007. My most recent work was as an expert witness for the hearing held on Glacier Hills Wind Park.

Because time for my comments is limited I will focus on two parts of the proposed requirements in the Public Service Commission's Chapter 128 rules for Wind Energy Systems. I have made extensive comments on proper siting requirements in my testimony for Glacier Hills as part of the official record that I ask be considered as an extension of these brief comments. The requirements I wish to address today are:

- The nighttime sound limit of 45 dBA proposed in PSC 128.14 Noise Criteria, section 3) Noise Limits, part (a), and,
- The setback of 3.1 times the maximum blade tip height to nonparticipating homes and 1.1 times the maximum blade tip height to nonparticipating property lines proposed in the PSC Chapter 128.13 Siting Criteria Section (1) Setback Distance And Height Requirements. Part (A), Table 1.

The turbine dimensions WE Energies used to calculate the setbacks for Glacier Hills set the turbine height to blade tip at 400 feet. Applying the 3.1 setback multiplier yields a setback of 1240 feet from turbine to any home and the 1.1 setback multiplier yields a property line setback of 440 feet.

The problems that are producing complaints and litigation in Fond du Lac county's Blue Sky, Green Fields, and Forward Wind utilities are not unique nor should they be unexpected. Setting a nighttime limit of 45 dBA is not going to change this outcome for future projects. I have seen many wind turbine utilities where sound levels are 45 dBA at the nonparticipating residences and all of them have similar community problems with similar complaints. I have personally observed this at wind projects in Maine, New York, Pennsylvania, West Virginia, Vermont, Illinois, Wisconsin, Iowa, Minnesota, and Ontario. We do not have to wait until new wind turbine projects are constructed in Wisconsin to know whether the Wind Siting Council's and Public Service Commissions

recommendations to permit 45 dBA at night will be acceptable to the non-participants who live near the utility. In each of these states, I have clients who, as a result of wind turbine noise measured at 45 dBA are reporting:

- Ongoing sleep disturbance,
- Other adverse health effects (AHE), and
- Loss of use of their outdoor property for recreation and development.

These homes are located at distances between 1300 feet to 2500 feet.

At 1500 feet a single turbine can produce sound levels of 45 dBA. For people living in areas where there are multiple turbines surrounding their property, a setback of 2200 feet will still result in sound levels of 45 dBA. Table 1's setback of 3.1 times the maximum blade tip height offers no protection against nighttime noise disturbance. Sound levels at that distance will exceed 50 dBA for homes downwind of turbines. This has been confirmed by direct measurement. Even a setback of 5.5 times the maximum blade tip height (2200 feet) will result in nighttime noise levels at the wall of the home being 45 dBA or higher under commonly occurring conditions.

While there may be some nights when the turbine noise is not as loud, studies of wind utilities in New York and Maine show that high levels of wind turbine noise occurs about one out of every three nights during the warm season. These are usually nights with little surface wind to create leaf rustle in trees and vegetation that might mask even part of the wind turbine noise. Wind turbine noise dominates the community on such nights.

Permitting wind turbine utilities to produce noise resulting in sound levels of 45 dBA at night will expose the public to unsafe nighttime noise. The World Health Organization's (WHO) most recent guidelines for nighttime noise sets 40 dBA as the Lowest Observed Adverse Effect Level (LOAEL). This was established in 2007/2009 by WHO as the night-time sound level outside the wall of a home at which adverse health effects are first noticed in the more vulnerable groups. These groups include children, seniors, and others with pre-existing medical conditions that interfere with sleep.

One might think that the difference between 40 and 45 dBA is not a significant increase. However, every 3 dB increase means that the acoustic energy has doubled. A 5 dBA increase from 40 to 45 dBA is almost a quadrupling of the sound energy. This is a very significant increase.

Sleep disturbance and annoyance brought on by the noise of wind turbine installations that are located too close to homes are responsible for the majority of symptoms and negative health effects that are being reported in Wisconsin and other places around the eastern part of the US. Chronic sleep disturbance causes a cascade of pathological responses causing a host of serious diseases that reduce quality of life and affect life expectancy. The link between chronic sleep disturbance and these illnesses is proven and unimpeachable. That is why airports limit flights over residential communities at night and why we are seeing more and more noise barriers along busy sections of

expressways. The link between nighttime noise and adverse health effects is not just a concern when it is wind turbine noise.

Wisconsin needs to reconsider its current position with respect to permitted sound levels during nighttime hours at the homes of non-participating properties. Permitting 45 dBA noise levels will expose people to unnecessary health risks and for non-participating members of the community this risk is not with their consent.

Companies involved in developing and operating wind turbine utilities may be willing to gamble with the health of the residents of the State of Wisconsin by advocating a nighttime limit of 45 dBA. It is necessary for Wisconsin's PSC and the Legislature to protect its citizens against the harm that may come from that gamble.

Responsible planning and siting must use the best available science to set the limits for wind turbine noise and those limits must include adequate margins for error. Permitting 45 dBA at night does not do either of these. It is one thing for private companies and their investors to gamble with the public's health by asking for limits that provide them with the greatest opportunity for profits at the expense of the community's health and welfare, but it is another thing if the public officials who are responsible for protecting both the health and economic welfare of the state's citizens to decide to gamble with them.

The Wisconsin's Legislature and PSC should limit the sound level from turbine noise at nonparticipating homes to no more than 40 dBA. This is based on known health risks. The minimum setback to any home should be increased to at least 5.5 times the height of the blade tip, (2200 feet).

Nighttime sound levels in rural communities, like those in Fond du Lac County, are 20 to 30 dBA. WHO's nighttime noise guidelines say that levels below 30 dBA promote healthy sleep. Even if the goal is to help a new industry, it is not right to promulgate regulations that result in people who are currently safe in their homes having to accept living in mandated conditions that put them at risk of adverse health effects. A nighttime noise limit of 40 dBA will provide room for the wind turbines to raise current background sound levels, but not raise them to the extent that people's health will be at risk.

Thank you for your time.