



JON ERPENBACH

STATE SENATOR

November 30, 2010

Public Service Commission
Eric Callisto, Chairperson
Mark Meyer, Commissioner
Lauren Azar, Commissioner
PO Box 7854
Madison WI 53707-7854

RECEIVED

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Commissioners' Office

Public Service Commission of Wisconsin
RECEIVED: 12/03/10, 3:07:49 PM

Dear Commissioners Callisto, Meyer and Azar:

I am writing to today regarding Clearinghouse Rule # 10-057 – PSC Wind Siting Rules proposed Chapter 128. Having voted for the rule's return to the PSC with the majority of the Senate Committee on Commerce, Utilities, Energy and Rail, I wanted to share some perspective as to why.

In the committee hearing that was held on October 13, 2010, we received a number of suggestions regarding the rules that resonated with committee members. I am including copies of that testimony for your consideration and will summarily list them in outline fashion for your use.

1. Wisconsin Towns Association Memo

- A. Setback of large wind turbines from nonparticipating residences – at a minimum having the setback from the property line of a nonparticipating property, not the residence.
- B. Decrease the maximum noise limits from 50 dBA during daytime and 45 dBA during nighttime hours.
- C. Eliminate the authority of PSC to approve lesser standards than the minimum standards to protect the public under PSC 128.02 (4) Individual Consideration
- D. Increase the 25% limit that a local government is allowed to require a large wind turbine owner to compensate the owner of a nonparticipating residence. PSC 128.33 (3) Monetary Compensation.
- E. Require the owner of the wind turbine to reimburse the emergency personnel who train them in safety and emergency procedures. PSC 128.14 (4) (e) under Emergency Procedures
- F. Change of ownership should not be valid until the new owner has shown proof of compliance with all specific requirements of the original owner.

2. Wisconsin Realtor Association

- A. Setback
- B. Attorney review of contracts
- C. Informational brochure for property owners
- D. Clarification that lease negotiators must have a WI Real Estate License
- E. Additional health impact research
- F. Time period for addressing complaints
- G. Define the term "affected" in "affected nonparticipating residence"

3. DATCP

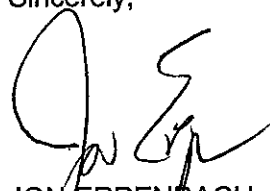
Incorporate the use of DATCP guidelines that intend to maintain the productivity of the farmland associated with wind energy projects.

4. Midwest Food Processors Association, Inc. & WI Potato & Vegetable Growers Assoc. Inc.
Address the concerns regarding aerial application of farmland and compensation for conflict that arises.
5. The concerns raised by countless individuals that the health concerns or wind turbines are not being addressed adequately, that the setbacks need revision, that the "takings" issue needs to be addressed, that dBA levels need to be reduced both day and night, that shadow flicker must be addressed in the rule, that the health aspects of Wind Turbines have to be studied and taken into consideration. I have not included the reams of paper that was shared with the committee by all of these individuals – I know much of it has already been shared with the PSC.

In closing, I think the above outline gives the Commission a number of particular issues to re-examine within the rule.

I would be happy to discuss further the return of the rule by the Senate Committee with the Commission.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jon Erpenbach', with a large, stylized initial 'J' and 'E'.

JON ERPENBACH
State Senator
27th District

JE.tk

Wisconsin Towns Association

Richard J. Stadelman, Executive Director

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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.



Memorandum

To: Members, Senate Committee on Commerce, Utilities, Energy and Rail
From: Tom Larson, Chief Lobbyist and Director of Legal and Public Affairs
Date: October 25, 2010
Re: Wind Siting Rule – Clearinghouse Rule 10-057

The Wisconsin REALTORS® Association supports the creation of statewide standards for the siting of wind turbines and was actively involved in the wind energy system enabling legislation (2009 Wis. Act 40).

However, we oppose the proposed wind siting rules as currently drafted because they fail to adequately protect the interests of Wisconsin property owners. Specifically, we are concerned that the proposed rules (1) will allow wind turbines to be located too close to neighboring homes and buildings, and (2) fail to adequately protect the interests of property owners from a consumer-protection standpoint.

1. Proposed setback is inadequate to protect human health, property values and use and enjoyment of property

The proposed rules establish the following setbacks from homes and property lines:

Medium and Large Wind Energy Systems

Participating residences	1.5 times the maximum blade tip height
Nonparticipating residences	3.1 times the maximum blade tip height
Participating property lines	None
Nonparticipating property lines	1.1 times the maximum blade tip height

Small Wind Energy Systems (wind energy system up to 300 kw that consists of individual turbines up to 100 kw (can be up to 150 ft))

Participating residences	None
Nonparticipating residences	1.0 times the maximum blade tip height
Participating property lines	None
Nonparticipating property lines	1.0 times the maximum blade tip height

For example, if a wind turbine is 300 ft high, the setback is 930 ft from a home or building on a neighboring piece of property, and only 450 ft from the home or building of the owner who has agreed to allow wind turbines on his/her property.

These distances were chosen, in part, for safety considerations (in case the turbine falls over) and fail to adequately address the following possible impacts of wind turbines on human health, use and enjoyment of property, and neighboring property values:

- **Health problems** – After wind farms have located in the area, some residents have complained of insomnia, anxiety, headaches and nausea. They have blamed their health problems on the pulsing noise coming from spinning turbines near their homes. (See "Turbines Too Loud? Take \$5000," <http://www.nytimes.com/2010/08/01/us/01wind.html?ref=wind-power>)
- **Noise** – Depending on the turbine model and wind speed, wind turbines can create a constant "whooshing" or pulsating noise that can be heard both inside and outside a home (day and night), if located too close. Studies have shown that an "average-size" turbine (2 megawatts, 100 meters high) located 1,000 feet away can produce the same amount of noise as a suburban area during the day (51 decibels). Many studies show that repeated noise levels of 45 dBA can have adverse consequences on human health. (See "For Those Near, The Miserable Hum of Clean Energy," <http://www.nytimes.com/2010/10/06/business/energy-environment/06noise.html?ref=wind-power>)
- **Excessive shadows on neighboring property** -- Depending upon the number of clouds and angle of the sun, wind turbines can create a "shadow flicker" (a term used to describe the shadow of the turning blades as it hits the ground) on nearby property. Some property owners have described the shadow effect on their home as being like "someone turning lights on and off inside the house at a rate of 80 times a minute" and lasting for almost an hour on sunny days. (See Wind Siting Council Final Recommendations to the Public Service Commission, August 6, 2010, Appendix E, Minority Report, pg. 12)
- **Property values** – A recent study of several Wisconsin wind farms showed that prospective buyers had a negative perception of nearby wind turbines. While the exact impact is difficult to quantify, the study indicated an average decrease in vacant residential property values ranging from 12% to 40%, depending on the size of the lot and the distance from the wind turbine. (See "Wind Turbines & Property Value," presentation by Kurt C. Kielisch, President/Sr. Appraiser – Appraiser Group One)

Similarly, a survey of REALTORS® working in a wind turbine area indicated that the impact on neighboring vacant land ranges from a 43% decrease if the wind turbine is located very close (within 600 ft) to 29% if the turbine is located in near proximity (½ mile away). With respect to the impact on improved property, the impacts are believed to be similar, but slightly lower (39% and 24%, respectively). (See "Wind Turbines & Property Value," presentation by Kurt C. Kielisch, President/Sr. Appraiser – Appraiser Group One)

Moreover, the proposed setback limits fail to meet setback limits (a) established by European countries, (b) recommended by wind turbine manufacturers, and (c) that are necessary to adequately protect against noise disturbance.

- In Europe, turbines are commonly located over 1200 ft away from residences. Moreover, many countries have adopted a setback of 4 x the height of the turbine or a maximum of 40 dBA at any time during the day. See Letter from Professor Jon McGowan, Renewable Research Energies Laboratory, March 14, 2008, http://www.notuscleanenergy.com/images/UMass_RERL_Letter.pdf
- Wind turbine manufacturers recommend a safety zone of at least 1300 feet from a turbine. See Mechanical Operating and Maintenance Manual for the V90-3.0 MW turbine published by Vestas (<http://www.windaction.org/documents/16496>)
- According to a survey of residents living near wind turbines in Kewaunee County, individuals living within 2400 feet found noise to be problematic, 32% within 4800 feet and 4% greater than 1 mile were disturbed, and 67% reported disturbed sleep if they lived within 1200 feet. (Kabas 2001) (<http://www.windaction.org/documents/28688>)

Recommendation – To adequately address the negative impacts of wind turbines on neighboring property owners, we recommend that the proposed setback be increased to a more reasonable distance, such as to a minimum distance of at least (a) 3.1 times blade height from neighboring property lines), or (b) 1500 feet from a neighboring residence, whichever is greater.

2. Proposed rules fail to contain adequate consumer protections for property owners

In addition to insufficient setbacks, the proposed rules fail to adequately protect the interests of property owners in several other ways, as identified below.

a. Attorney review of contracts – Unlike in most transactions, property owners entering into contracts involving wind energy system easements generally receive very little, if any, independent, professional advice as to how the terms of the contract will impact them. These property owners are often pressured to sign lengthy and sophisticated lease agreements without fully understanding the meaning of the lease terms because they were not given the opportunity to obtain advice from an attorney, REALTOR®, or other knowledgeable professional before entering into the contract. Moreover, the proposed rules allow these lease agreements to contain provisions that would override the minimum state standards designed to protect the health, safety and other interests of the property owners. See e.g., PSC 128.13(5).

Recommendation – Because the terms of these leases could have an adverse impact on the health and safety of the property owners and the value of their property, we recommend that the rules be modified to provide property owners with up to ten days after entering into a contract with a wind energy company to have an attorney review the contract and, if necessary, terminate the contract if the attorney believes that the terms of the contract are not in the best interests of the property owner.

b. Information brochure – Many property owners are unaware of the potential health and safety risks of wind turbines if located too close to their homes or livestock. Moreover, most property owners will be unaware of the specific standards included in the wind energy rules designed to protect their interests. Most importantly, these property owners will be unaware that the proposed wind siting rules allow written lease agreements to include “waiver provisions” which allow wind developers to follow lesser standards if the property owner agrees to them in the writing.

Recommendation -- To better inform property owners about some of the potential risks related to wind energy turbines, we recommend that (a) the state produce an informational brochure that describes wind energy systems, state standards (including the waiver provision) and some of the possible impacts on property owners, and (b) wind developers be required to provide property owners with this pamphlet prior to entering into a contract. This requirement would be similar to the informational brochure given to property owners neighboring a proposed large livestock facility, as required by Wis. Stats. s. 93.90 and Wis. Adm. Code ch. ATPC 51.

c. Clarification that lease negotiators must have a Wisconsin real estate license – Under Wisconsin law, anyone who negotiates an interest in real estate for another person (including leases) and receives compensation must be licensed in Wisconsin as a real estate broker. See Wis. Stat. §452.01(2)(a). Real estate brokers owe certain fiduciary obligations to the public (e.g., must provide services honestly and fairly, prohibited from giving false information, must disclose all material adverse information) and are regulated by the Wisconsin Department of Regulation and Licensing. See Wis. Stat. § 452.133.

Recommendation -- To ensure that those who are responsible for negotiating leases on behalf of wind developers are aware that they must be licensed as Wisconsin real estate brokers and have certain fiduciary obligations to the public, we recommend that the proposed rules be modified to specifically state that anyone who negotiates a lease on behalf of wind developer for the purpose of siting a wind turbine must have a real estate license, as set forth under Chapter 452 of the Wisconsin Statutes.

d. Additional research – The rule fails to include a requirement for the state to perform additional research on the health impacts of wind energy systems or the impacts of wind energy systems on neighboring property values. This information is important to better understand the true impacts of wind energy systems on human health and property values and whether any future modifications to the rules may be necessary.

Recommendation -- We recommend that the rules be modified to require the state to gather information and conduct further studies about the true impacts of wind energy systems on neighboring property owners.

e. Time period for addressing complaints – The proposed rules provide owners of wind turbines with 30 days to respond to a complaint and up to 45 days to make a good faith effort to resolve complaints related to the wind turbine. See PSC 128.40(2). These time periods could cause property owners to be subject to unreasonable noise, shadow flicker and disruptions in cable and cell phone service for excessive periods of time.

Recommendation -- We recommend that the rules be modified to require owners of wind turbines to resolve all issues related to complaints within 14 days after receiving such complaints.

f. Definition of "affected nonparticipating residence" -- The rule requires wind developers to provide notice of the shadow flicker requirements to owners of "affected nonparticipating residences" but the rule does not define the term "affected." See PSC 128.15(5). Other sections of the rule specifically define the distance a nonparticipating residence must be away from the wind energy system. (See e.g., PSC 128.14(6)).

Recommendation -- We recommend that this term be further defined.



State of Wisconsin
Jim Doyle, Governor

Department of Agriculture, Trade and Consumer Protection
Randy Romanski, Secretary

October 12, 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

Re: Proposed Wind Siting Rule - PSC 128

Dear Senator Plale:

This letter provides comments on the proposed wind siting rule that the Legislature is currently considering. Wisconsin must promote homegrown renewable energy to reduce its dependence on out-of-state energy sources, achieve Governor Doyle's goal of 25% renewable energy by 2025, and keep Wisconsin agriculture strong. Our state needs to continue to build upon its strengths to develop this homegrown renewable energy opportunity. Whether it is wind generation, biomass from our fields and forests, biofuels, or biogas from manure digesters or other waste-to-energy opportunities, Wisconsin must go forward in its innovation and development of renewable energy options.

The Department of Agriculture, Trade and Consumer Protection acknowledges the significant efforts made by the Public Service Commission (PSC) to draft the rule, and we are pleased that the rule addresses two concerns that DATCP identified in its earlier comments to the PSC. These are related to stray voltage testing and marking of meteorological towers. However, DATCP raised some additional issues that could still be addressed in the rule:

Aerial Applications on Farmland

DATCP is concerned about the potential impact of some wind turbines on vegetable production in Wisconsin. Aerial applicators have stated that it is not safe to aerially apply within one-half mile of wind turbines because they are a barrier to safe application and create a wind wake that can be dangerous to the pilot.

Vegetable production relies heavily on aerial applications of plant protection products in order to ensure yield and quality products. Multiple aerial applications on high-value vegetable crops are often required and must be applied quickly after a pest problem or disease is identified. Under wet conditions, aerial application is the only alternative.

Agriculture generates \$59 billion for Wisconsin

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Locating wind turbines in intense vegetable production areas exposes these fields to risk of crop revenue loss. It affects not only the growers, but the vegetable processors that depend on reliable production and quality levels to run their processing facilities efficiently. Processing facilities are often located near areas of intense vegetable production and are a significant employer in the local economies.

Aerial application of pesticides on vegetables is concentrated in limited areas of Wisconsin. In general, these are areas not identified as having higher wind energy production potential.

The Wind Siting Council Draft Rule version 1.0 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 Commission has not included this provision in the draft rule submitted to the Legislature. DATCP has been working with UW-Madison on methods to assess these crop losses and believes that a workable process can be established that would provide justifiable compensation. We would be pleased to provide the Committee with updated information on this process.

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 possible land use conflicts. Wisconsin recently enacted major "Working Lands" provisions as part of the state biennial budget act (2009 Wis. Act 28). DATCP has recommended that the PSC should consider these provisions as it proceeds with its wind turbine siting rule and should design the rule to minimize or eliminate any potential inconsistency between the rule and the farmland preservation statute. DATCP has raised this issue with the PSC and is awaiting a response. Given the importance of the recent Working Lands legislation in protecting our state's valuable farmland, we believe this issue needs clarification.

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.

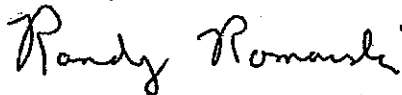
Farmers expect that their cropland restored after construction will be returned to its pre-construction productivity. But there are several soil impacts that can result from wind farm construction:

- 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.

DATCP has developed guidelines that are intended to maintain the productivity of the farmland associated with wind energy projects. These guidelines should be addressed during the planning process by wind energy system developers when siting and constructing these facilities to minimize the negative impacts agriculture.

Thank you for the opportunity to comment on the proposed Wind Siting Rule (PSC 128). DATCP values the Legislature's work in passing Act 40 and the Public Service Commission's efforts in promulgating these important wind siting rules. Promoting renewable energy resources through sensible legislation and rules is crucial to the state's economy and energy independence.

Sincerely,

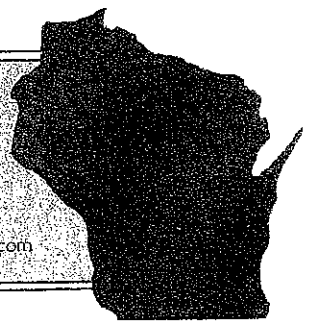


Randy Romanski
Secretary

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

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



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 (MWFP) 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 MWFP 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:

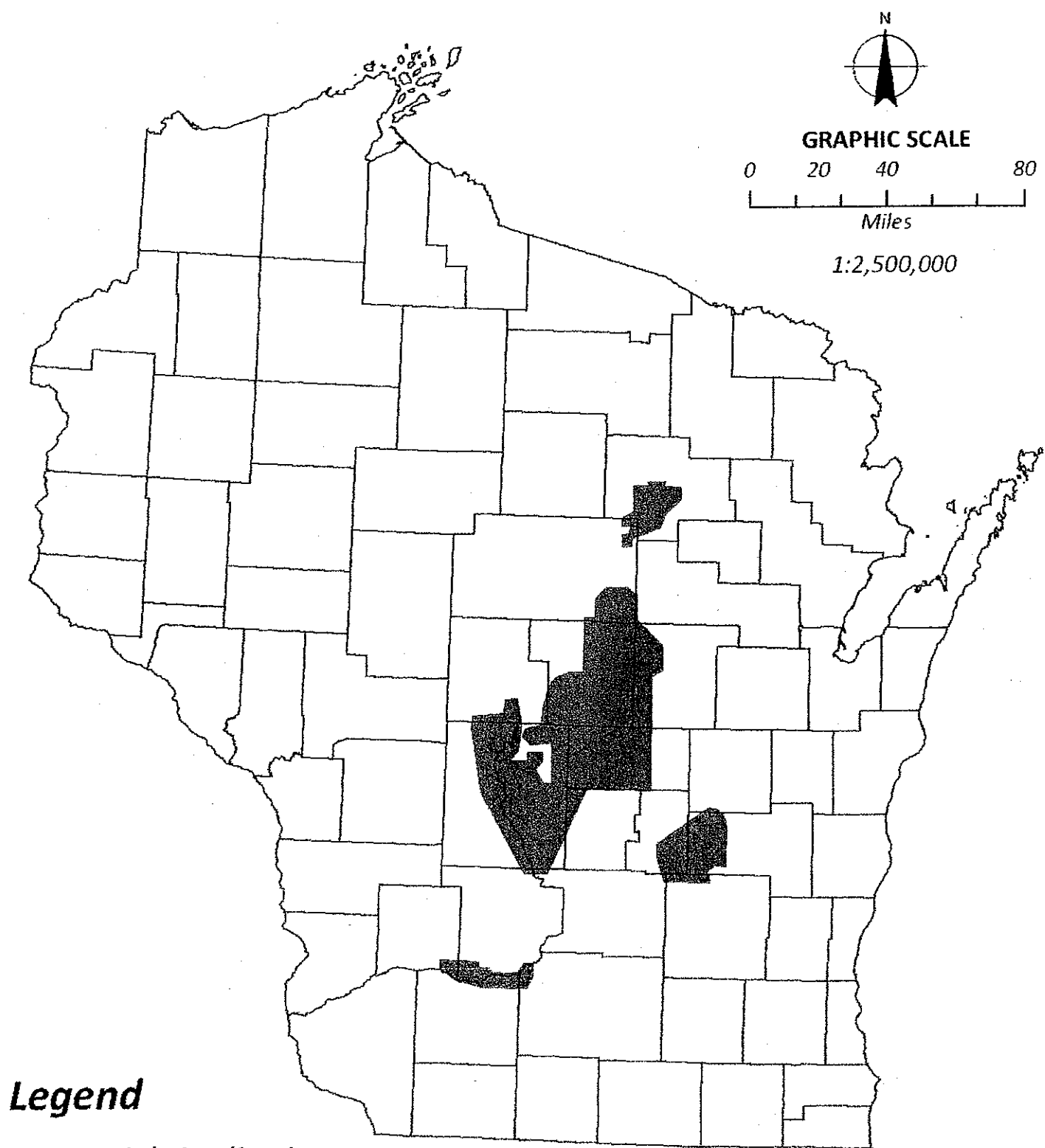
- **Aerial Application Will Be Limited** – Many air applicators refuse to fly within one half mile of a large wind turbine because the turbines are inherently dangerous. Guy wires, wind turbulence, and flight distraction all contribute to increased risk for the pilots. The Wisconsin Agricultural Aviation 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



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 Hart, UW-Stevens Point. Data verified for accuracy by Wisconsin Potato and Vegetable Growers Association. Mapped by A.T. Detelich.