



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 1-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