

## **COVER PAGE FOR WIND ENERGY ORDINANCE**

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## CHAPTER 5

### WIND ENERGY FACILITY

#### **5.00 LARGE WIND ENERGY FACILITIES.**

The following regulations shall apply to all large wind energy facilities, as defined in Section 5.02 of this Ordinance, hereinafter constructed or developed within the Town of New Denmark, Brown County, Wisconsin.

#### **5.01 PURPOSE.**

The purpose of this Ordinance is to provide a regulatory means for the construction and operation of large wind energy facilities in the Town of New Denmark, subject to reasonable restrictions, which will preserve the public health and safety.

#### **5.02 DEFINITIONS.**

As used in this Ordinance, the following terms shall have the meanings indicated:

- A. Commission: The Town of New Denmark Planning Commission.
- B. Decommissioning: The process of use termination and removal of all or part of a large wind energy facility by the owner or assigns of the large wind energy facility.
- C. FAA: The Federal Aviation Administration.
- D. Hub Height: When referring to a wind turbine, the distance measured from ground level to the center of the turbine hub.
- E. Karst Feature: An area or surficial geologic feature subject to bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include areas with soils less than 60 inches thick over bedrock, caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps, swallets, and depressional areas with no surface drainage.
- F. MET Tower: A meteorological tower used for the measurement of wind speed.
- G. Total Height: When referring to a wind turbine, the distance measured from ground level to the blade extended at its highest point.
- H. Town: Town of New Denmark, Brown County, Wisconsin.
- I. Use Termination: The point in time at which a large wind energy facility owner provides notice to the Town of New Denmark that the large wind energy facility or individual wind turbines are no longer used to product electricity unless due to repairs. Such notice of use termination shall occur no less than 30 days prior to actual use termination.

J. Wind Energy Facility, Large: An electricity generating facility consisting of one or more wind turbines under common ownership or operating control, and includes substations, MET towers, cables/wires and other buildings accessory to such facility, whose main purpose is to supply electricity to off-site customers. It includes substations, MET towers, cables and wires and other building accessory to such facility.

K. Wind Energy System, Small: A wind energy system that is used to generate electricity with a total height to 170 feet or less and has a name plate capacity of 100 kilowatts or less. Small-scale wind turbines are regulated within the Town of New Denmark Zoning Ordinance.

L. Wind Turbine: A wind energy conversion system which converts wind energy into electricity through the use of a wind turbine generator, and includes the turbine, blade, tower, base and pad transformer, if any; provided that such a system shall only be a Wind Turbine for purposes of this Ordinance if it both has a total height greater than 170 feet and nameplate capacity of greater than 100 kilowatts.

### **5.03 REGULATORY FRAMEWORK.**

#### A. Zoning

1. Large wind energy facilities may only be constructed in areas that are zoned Exclusive Agriculture with an approved conditional use permit from the Town of New Denmark.

2. Application for a conditional use permit for a large wind energy facility shall be submitted to the Town with the following information:

a. The name, address, legal corporate status and telephone number of the applicant responsible for the accuracy of the application and site plan.

b. The name, address, legal corporate status and telephone number of the owner of the proposed large wind energy facility.

c. A signed statement indicating that the applicant has legal authority to construct, operate, and develop the wind energy system(s) under state, federal and local laws and regulations, including Federal Aviation Administration (FAA), state and local building codes.

d. The applicant shall also provide copies of the Proof of a Certificate of Authority from the Public Service Commission of Wisconsin and the Public Service Commission of Wisconsin Environmental Assessment, if applicable.

e. A description of the number and kind of wind energy system(s) to be installed.

f. A description of the large wind energy system(s)' height and design, including a cross section, elevation, and diagram of how the wind energy system will be anchored to the ground.

g. A site plan, drawn to a scale of not less than 1 inch to 100 feet, showing the parcel boundaries and a legal description, 2-foot contours for the subject site and 100 feet beyond the subject site, karst features, support facilities, access, proposed landscaping and fencing.

h. Photo exhibits visualizing the proposed wind energy system.

i. A statement from the applicant that all wind energy system(s) will be installed in compliance with manufacture's specifications, and a copy of those manufacturer's specifications.

j. A copy of the lease with the landowner if the applicant does not own the land for the proposed large wind energy facility(s). A statement from the landowner of the leased site that he/she will abide by all applicable terms and conditions of the conditional use permit, if approved.

k. A statement indicating what hazardous materials will be used and stored on the site, and, how those materials will be stored.

l. A statement indicating how the large wind energy facility will be lit, if applicable.

m. A non-refundable \$500.00 application fee payable to the Town Treasurer.

3. A site grading, erosion control, and stormwater drainage plan shall be submitted to the Town Engineer for review and approval prior to granting building permit.

4. All other permits, including those for work done in rights-of-way shall be applied for by the applicant to the appropriate agency prior to construction.

5. Wind energy facilities may not include offices, vehicle storage, or other outdoor storage. One accessory storage building may be permitted per wind turbine at Town Board discretion. The size and location of any proposed accessory building shall be shown on the site plan. No other structure or building is permitted unless used for the express purpose of the generation of electricity.

6. Applicant may submit one conditional use permit application for entire large wind energy facility project located in the Town of New Denmark.

7. No grading, filling, or construction may begin until the Town of New Denmark Building Inspector issues a building permit. A separate building permit shall be required for each wind turbine to be constructed.

8. A certificate of insurance with a minimum of \$2,000,000 liability coverage per incidence, per occurrence shall be required. Each renewal period will require a copy of certificate of insurance be provided to the Town of New Denmark. An expired insurance certificate or an unacceptable liability coverage amount is grounds for revocation of the conditional use permit.

9. The Town shall require an irrevocable letter of credit, bond, or cash escrow, held in trust in favor of the Town of New Denmark to recover the costs associated with removal of a use terminated wind generator and appurtenant facilities. The amount of the irrevocable letter of credit, bond, or cash escrow shall be set by the Town of New Denmark prior to conditional use permit approval and shall remain in effect until released by the Town.

10. A large wind energy facility authorized by conditional use permit shall be started within twelve (12) months of conditional use permit issuance and completed within thirty-six (36) months of conditional use permit issuance, or in accordance with a timeline approved by the Town Board. Upon request of an applicant, and for good cause, the Town Board may grant an extension of time.

11. The applicant shall submit a copy of all “as built plans” including structural engineering and electrical plans for all towers following construction to the Town to use for removal of large wind energy facility, if large wind energy facility owner or its assign fails to meet the requirements of this Ordinance.

12. The Town may require additional conditions to ensure safety and a proper land use fit to the surrounding area.

B. Principal or Accessory Use

1. Wind energy facilities may be considered either principal or accessory uses. A different existing use or an existing structure on the same lot shall not preclude the installation of a large wind energy facility or a part of such facility of such lot. Large wind energy facilities that are constructed and installed in accordance with the provisions of this Ordinance shall not be deemed to constitute the expansion of a nonconforming use or structure.

2. A building permit, issued by the Town of New Denmark Zoning Administrator, shall be required for each individual wind turbine prior to construction of said wind turbine.

**5.04 APPLICABILITY.**

A. The requirements of this Ordinance shall apply to all large wind energy facilities proposed after the effective date of this Ordinance. Large wind energy facilities for which a required permit has been properly issued prior to the effective date of this Ordinance shall not be required to meet the requirements of this Ordinance; provided, however, that any such pre-existing large wind energy facility which does not provide energy for a continuous period of twelve (12) months shall meet the requirements of this Ordinance prior to recommencing production of energy. However, no modification or alteration to an existing large wind energy facility shall be allowed without full compliance with this Ordinance.

## **5.05 GENERAL REQUIREMENTS FOR WIND ENERGY FACILITIES.**

### **A. Design and Installation**

1. Wind turbines shall be painted a non-reflective, non-obtrusive color, such as grey, white, or off-white.
2. At large wind energy facility sites, the design of the buildings and related structures shall, to the extent possible, use materials, colors, textures, screening, and landscaping that will blend the large wind energy facility to the nature setting and existing environment.
3. All landscaping must be properly maintained, including grass cutting.
4. Wind energy facilities shall not be artificially lighted, except to the extent required by the FAA.
5. No form of advertising shall be allowed on the pole, turbine, blades, or other buildings or facilities associated with the use, except for reasonable identification of the manufacturer or operator of the large wind energy facility.
6. All wind energy facilities shall be equipped with a redundant braking system. This includes both aerodynamic overspeed controls (including variable pitch, tip, and other similar system) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for overspeed protection.
7. To the extent applicable, the large wind energy facility shall comply with all applicable building codes and standards.
8. Electrical controls, control wiring, and power lines shall be wireless or not above ground except where wind farm collector wiring is brought together for connection to the transmission or distribution network, adjacent to that network.
9. All electrical components of the large wind energy facility shall conform to relevant and applicable local, state, and national codes, and relevant and applicable international standards.
10. The owner of a large wind energy facility shall defend, indemnify, and hold harmless the Town of New Denmark and their officials from and against any and all claims, demands, losses, suits, causes of action, damages, injuries, costs, expenses, and liabilities whatsoever including attorney fees arising out of the acts or omissions of the operator concerning the operation of the large wind energy facility without limitation, whether said liability is premised on contract or tort.
11. The owner of the large wind energy facility (applicant) shall reimburse the Town and/or County for any and all repairs and reconstruction to the public roads, culverts, and natural drainageways resulting directly from the construction of the large wind energy facility. A qualified independent third party, agreed to by the Town and/or County and applicant, and paid

for by the applicant, shall be hired to inspect the roadways to be used during construction. This third party shall be hired to evaluate, document, videotape, and rate road conditions prior to the construction of the large wind energy facility and again within 30 days after the large wind energy facility project is complete. Any road damage done by the applicant or subcontractors shall be repaired or reconstructed at the applicant's expense.

12. Where large wind energy facility construction cuts through a private or public drain tile field, the drain tile must be repaired and reconnected to properly drain the site to the satisfaction of the landowner.

13. Any recorded access easement across private lands to a large wind energy facility shall in addition to naming the large wind energy facility owner as having access to the easement shall also name the Town of New Denmark as having access to the easement for purposes of inspection or decommissioning with 24-hour advance notice to the property owners and large wind energy facility owner.

14. The owner of a large wind energy facility shall reimburse the Town of New Denmark for any and all legal notices, meeting fees, and reasonable fees for consulting, legal advice, and engineering. The Town shall submit copies of all related Town-paid invoices to the large wind energy facility owner for repayment to the Town.

15. Any wind energy turbine or facility that does not produce energy for a continuous period of twelve months, excluding time spent on repairs or improvements, shall be considered abandoned and shall be removed in accord with the removal provisions of Section 5.15 of this Ordinance.

16. The large wind energy facility owner and operator shall maintain a phone number and identify a responsible person for the public to contact with inquiries and complaints throughout the life of the project.

## **5.06 SETBACKS.**

A. The following setbacks and separation requirements shall apply to all wind turbines.

1. **Inhabited Structures.**

a. Each wind turbine shall be set back from the nearest residence, school, hospital, church, or public library a distance of no less than the greater of two (2) times its total height or one thousand five hundred (1,500) feet.

1) The New Denmark Town Board may grant a waiver to this requirement for a participating and/or non-participating landowner to decrease the setback. In no instance shall the setback be decreased to less than 1.1 times the total height of the wind turbine. This waiver shall be signed by the impacted property owner(s) and recorded with the property with the Brown County Register of Deeds.

2. **Property Lines.**

a. Each wind turbine shall be setback from the nearest property line a distance no less than 1.1 times its total height.

1) The New Denmark Town Board may grant a waiver to this provision where strict enforcement would not serve the public interest. This waiver shall be signed by the impacted property owner(s) and recorded with the property with the Brown County Register of Deeds.

3. Public Roadways.

a. Each wind turbine shall be set back from the nearest public road right-of-way a distance of no less than 1.1 times its total height.

1) The New Denmark Town Board may grant a waiver to this provision where strict enforcement would not serve the public interest.

4. Communication and Utility Lines.

a. Large wind energy facility must meet all utility company setbacks and/or easements. Owner of the large wind energy facility is responsible for contacting the appropriate utility to determine the location of all above and underground utility lines including, but not limited to, electricity, natural gas, petroleum, propane, cable television, and fiber optic.

b. Utility line and/or easement locations shall be provided to the Town of New Denmark for verification.

**5.07 NOISE AND VIBRATION.**

A. Audible noise due to large wind energy facility operations shall not exceed forty-five (45) DBA for ten percent of the time over a continuous 24 hour period, when measured at any residence, school, hospital, church, or public library existing on the date of approval of a large wind energy facility building permit.

1. If audible noise exceeds 45 DBA for ten percent of the time over a continuous 24 hour period, the offending wind turbine must be inoperable until repairs are completed, or a waiver is obtained from affected property owners in accordance with 5.07(F).

2. The Town of New Denmark reserves the right to review the repair plan and evaluate its effectiveness.

B. Wind energy facilities shall not create an audible steady, pure tone such as a whine, screech, hum, or vibration.

C. In the event the ambient noise level (exclusive of the development in question) exceeds the applicable standard given above, the applicable standard shall be adjusted so as to equal the ambient noise level. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in DBA, which is succeeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing



residences, schools, hospitals, churches, and public libraries. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of wind-generated noise at the microphone. Ambient noise level measurements may be performed when wind velocities at the proposed project site are sufficient to allow Wind Turbine operation, provided that the wind velocity does not exceed thirty (30) mph at the ambient noise level measurement location.

D. Any noise level emanating from a wind energy facility falling between two whole decibels shall be the higher of the two.

E. Any noise monitoring or measurements, which need to be determined by the New Denmark Town Board, shall be paid for by the applicant or wind turbine facility owner.

F. In the event the noise levels resulting from the wind energy facility exceed the criteria listed above, a waiver to said levels may be granted by the Town provided that the following has been accomplished:

1. Written consent from the affected property owners has been obtained stating that they are aware of the large wind energy facility and noise limitations imposed by this Ordinance, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and

2. A permanent noise impact easement has been recorded in the Brown County Register of Deeds which describes the benefited and burdened properties and which advised all subsequent owners of the burdened property that noise levels in excess of those permitted by this Ordinance may exist on or at the burdened property.

#### **5.08 MINIMUM GROUND CLEARANCE.**

A. The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.

#### **5.09 SIGNAL INTERFERENCE.**

A. The applicant shall mitigate any interference with electromagnetic communications, such as radio, telephone, or television signals caused by any large wind energy facility. If the applicant is a public utility, PSC 113.0707 Wis. Adm. Code also applies.

#### **5.10 SHADOW FLICKER.**

A. The large wind energy facility owner and/or operator shall make reasonable efforts to minimize or mitigate shadow flicker to any occupied building on non-participating landowners' property.

#### **5.11 ICE SHEDDING.**

A. The large wind energy facility owner and/or operator shall ensure that ice from the wind turbine blades does not impact any non-participating landowners' property.

### **5.12 AVIAN RISK.**

A. The large wind energy facility owner and/or operator shall make reasonable efforts to minimize avian mortality from the operation of a large wind energy facility. The Town of New Denmark may require an avian risk study prior to issuance of a conditional use permit for a large wind energy facility.

### **5.13 WASTE MANAGEMENT.**

A. All solid waste whether generated from supplies, equipment, parts, packaging, or operation or maintenance of the facility, including old parts and equipment, shall be removed from the site in a timely manner consistent with industry standards.

B. All hazardous waste generated by the operation and maintenance of the facility, including, but not limited to, lubricating materials, shall be handled in a manner consistent with all local, state, and federal rules and regulations.

### **5.14 SAFETY.**

A. All wiring between wind turbines and the large wind energy facility substation shall be underground.

B. Wind turbine towers shall not be climbable up to fifteen (15) feet above ground level.

C. All access doors to wind turbine towers and electrical equipment shall be lockable.

D. Appropriate warning signage shall be placed on Wind Turbine towers, electrical equipment, and large wind energy facility entrances.

E. The large wind energy facility site and all structures shall have an annual inspection report of structural stability, at cost to the large wind energy facility owner, with a report filed with the New Denmark Town Clerk.

F. The owner/operator of the large wind energy facility shall coordinate with the Wisconsin Public Service Commission (PSC) to test for stray voltage upon request by the New Denmark zoning Administrator.

G. All substations shall be fenced to prevent public access. Chain link fencing shall include vinyl or aluminum slats or other landscaping to create an opaque visual barrier.

### **5.15 REMOVAL.**

A. All wind generators and appurtenances shall be removed from the site within seven months or 210 days of use termination notice to the Town of New Denmark by the owner of the facility or its assigns.

1. Upon request of the owner or assigns of the large wind energy facility, and for good cause, the New Denmark Town Board may grant a reasonable extension to time.

B. The site shall be stabilized, graded, and cleared of any debris by the owner of the facility or its assigns. If site is not to be used for agricultural practices following removal, site shall be seeded to prevent soil erosion.

C. Any foundation shall be removed to a minimum depth of four (4) feet below grade, or to the level of the bedrock if less than four (4) feet below grade, by the owner of the facility or its assigns.

D. Any access roads shall be removed, cleared, and graded by the owner of the facility or its assigns, unless the property owner wants to keep the access road. The Town of New Denmark will not be assumed to take ownership of any access road unless through official action of the Town Board.

E. Removal shall conform to the contract between property owner and the owner/operator of the large wind energy facility, in addition to the requirements set forth in this Ordinance.

#### **5.16 PENALTIES.**

A. Any wind generation facility, turbine or appurtenant facility hereinafter significantly erected, moved or structurally altered in violation of the provisions of this Ordinance by any person, firm, association, corporation (including building contractors) or his or their agent shall be deemed an unlawful structure.

B. Any wind generation facility that does not meet the requirements of this Ordinance, including, but not limited to, those dealing with noise or visual appearance, or does not meet the conditions attached to an approved conditional use permit shall provide grounds for revocation of the conditional use permit, thereby deeming the facility an unlawful structure.

C. The Zoning Administrator shall report all such violations to the Town Board who may then refer the matter to the Town Attorney to bring action to enjoin the erection, moving or structural alteration of such facility or to cause such facility to be vacated or removed.

D. Any person, firm or corporation, or agent, employee, or contractor of such, who violates, destroys, omits, neglects, or refuses to comply with, or who resists enforcement of any provision of this Ordinance; shall upon conviction thereof forfeit no less than \$1,000 per offense together with the costs of prosecution, and in default of payment of such forfeiture and costs shall be imprisoned in the county jail until payment of said forfeiture and costs of prosecution are made. Confinement to the county jail shall not exceed 30 days for each offense. Each violation and each day of violation shall constitute a separate offense.

E. This section shall not preclude the Town of New Denmark from maintaining any appropriate action to prevent or remove a violation of this section.

**5.17 REVIEW.**

A. Nothing in this Ordinance shall be construed as limiting an aggrieved person's right to a Certiorari Review in Circuit Court as permitted by Wisconsin law.

limiting an aggrieved person's right to a Certiorari Review in Circuit Court as permitted by Wisconsin law.

**5.18 SEVERABILITY.**

A. The sections, paragraphs, sentences, clauses, articles and phrases of this chapter are severable; if any provision is found to be unconstitutional, invalid or unenforceable, such finding shall not affect the remaining portions of this chapter.

3/9/2009