

Draft Model Wind Ordinance for Wisconsin

February 7, 2007

WISCONSIN MODEL WIND ORDINANCE FOR TOWNS/COUNTIES

1. PURPOSE

The purpose of the Ordinance is to provide a regulatory scheme for the construction and operation of Wind Energy Facilities in the [Town/County], subject to reasonable restrictions, which will preserve the public health and safety.

2. DEFINITIONS

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

Committee shall mean [[Town/County] Planning Committee or Planning Commission.]

FAA shall mean the Federal Aviation Administration.

Hub Height shall mean, when referring to a Wind Turbine, the distance measured from ground level to the center of the turbine hub.

MET Tower shall mean a meteorological tower used for the measurement of wind speed.

Total Height shall mean, when referring to a Wind Turbine, the distance measured from ground level to the blade extended at its highest point.

[Town/County] shall mean [_____ [Town/County].]

Wind Energy Facility shall mean 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 customer(s). It includes substations, MET towers, cables and wires and other buildings accessory to such facility.

Wind Energy Facility Siting Permit shall mean a construction and operating permit granted in accordance with the provisions of this Ordinance.

Wind Turbine shall mean 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

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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 [Note: wind turbines less than 170 feet in height or less than 100 kilowatts will be regulated pursuant to [Town/County] Ordinance Section _____].

3. **REGULATORY FRAMEWORK**

3.1. **COMPREHENSIVE PLANS** (SMART GROWTH)

Wind Energy Facilities shall be constructed in area consistent with the [Town/County] Comprehensive Plan.

3.2. **ZONING**

1) Option #1

Wind Energy Facilities may only be constructed in areas that are zoned [insert permitted zoning. See Appendix] on the official zoning map for the [Town/County].

2) Option #2 – Wind Overlay

Wind Energy Facilities may only be constructed in areas that are zoned [insert permitted zoning. See Appendix] and within areas designated as a Wind Energy Facility Overlay District on the official zoning map for the [Town/County].

3.3. **PRINCIPAL OR ACCESSORY USE**

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 Wind Energy Facility or a part of such facility on such lot. 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.

4. **APPLICABILITY**

The requirements of this Ordinance shall apply to all Wind Energy Facilities proposed after the effective date of this Ordinance. 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 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 Wind Energy Facility shall be allowed without full compliance with this Ordinance.

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5. GENERAL REQUIREMENTS FOR WIND ENERGY FACILITIES

5.1. VISUAL APPEARANCE; LIGHTING; POWERLINES

- 1) Wind Turbines shall be painted a non-reflective, non-obtrusive color.
- 2) At Wind Energy Facility sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the Wind Energy Facility to the natural setting and then existing environment.
- 3) Wind Energy Facilities shall not be artificially lighted, except to the extent required by the FAA or other applicable authority.
- 4) Wind Turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the Wind Energy Facility.
- 5) Electrical controls and 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.

5.2. SETBACKS

The following setbacks and separation requirements shall apply to all Wind Turbines; provided, however, that the Committee may reduce the standard setbacks and separation requirements if the intent of this Ordinance would be better served thereby.

- 1) Inhabited structures: Each Wind Turbine shall be set back from the nearest residence, school, hospital, church or public library, a distance no less than the greater of (a) two (2) times its Total Height or (b) one thousand (1,000) feet.
- 2) Property lines: Each Wind Turbine shall be set back from the nearest property line a distance no less than 1.1 times its Total Height, unless appropriate easements are secured from adjacent property owners, or other acceptable mitigation is approved by the Committee.
- 3) Public Roads: Each Wind Turbine shall be set back from the nearest public road a distance no less than 1.1 times its Total Height, determined at the nearest boundary of the underlying right-of-way for such public road.

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- 4) Communication and electrical lines: Each Wind Turbine shall be set back from the nearest above-ground public electric power line or telephone line a distance no less than 1.1 times its Total Height, determined from the existing power line or telephone line.

5.3. SOUND LEVELS AND MEASUREMENT

- 1) Audible sound due to Wind Energy Facility operations shall not exceed fifty (50) dBA for any period of time, when measured at the property line of any residence, school, hospital, church or public library existing on the date of approval of any Wind Energy Facility Siting Permit.
- 2) In the event audible sound due to Wind Energy Facility operations contains a steady pure tone, such as a whine, screech, or hum, audible sound due to Wind Energy Facility operations shall not exceed forty-five (45) dBA for any period of time, when measured at the property line of any residence, school, hospital, church or public library existing on the date of approval of any Wind Energy Facility Siting Permit. A steady pure tone is defined to exist if the sound level of any one-third (1/3) octave band exceeds the sound levels of the two (2) contiguous one-third (1/3) octave bands by five (5) or more dB for any period of time.
- 3) If the ambient sound level (exclusive of the Wind Energy Facility) exceeds the applicable standards given above, the applicable standards shall be adjusted to equal the ambient sound level. The ambient sound level shall equal the L10 sound level for full spectrum sound, expressed in dBA. For steady pure tones, the ambient sound level shall equal the L10 sound level of the one-third (1/3) octave band that exceeds the sound levels of the two (2) contiguous one-third (1/3) octave bands by five (5) or more dB for any period of time, expressed in dB.
- 4) Ambient sound levels and audible sound due to Wind Energy Facility operations shall be measured at the property line of affected existing residences, schools, hospitals, churches and public libraries. Sound level measurement techniques shall employ all practical means of reducing the effect of wind-generated sound at the microphone.
- 5) In the event audible sound due to Wind Energy Facility operations exceed the audible sound standards listed above, a waiver to said standards may be granted by the Committee provided that the following has been accomplished:

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- a. Written consent from the affected property owners has been obtained stating that they are aware of the Wind Energy Facility and the audible sound standards imposed by this Ordinance, and that consent is granted to allow sound levels to exceed the audible sound standards otherwise allowed; and
- b. If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent sound impact easement has been recorded in the [Office of the [Town/County] Register of Deeds] which describes the benefited and burdened properties and which advises all subsequent owners of the burdened property that sound levels in excess of audible sound standards permitted by this Ordinance may exist on or at the burdened property.

5.4. MINIMUM GROUND CLEARANCE

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

5.5. SIGNAL INTERFERENCE

The applicant shall minimize or mitigate any interference with electromagnetic communications, such as radio, telephone or television signals caused by any Wind Energy Facility. (If the applicant is a public utility, s. PSC 113.0707 also applies.)

5.6. SAFETY

- 1) All wiring between Wind Turbines and the Wind Energy Facility substation shall be underground.
- 2) Wind Turbine towers shall not be climbable up to 15 feet above ground level.
- 3) All access doors to Wind Turbine towers and electrical equipment shall be lockable.
- 4) Appropriate warning signage shall be placed on Wind Turbine towers, electrical equipment, and Wind Energy Facility entrances.

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