

Chapter 12

Wind Energy System Zoning Ordinance

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TOWN OF GREEN BAY WIND ENERGY SYSTEM ZONING ORDINANCE

Section 1: PURPOSE

1.00 Purpose. The purpose of the Wind Energy System Ordinance is to provide a regulatory scheme for the construction and operation of wind energy systems in the Town of Green Bay, subject to reasonable restrictions, which will preserve the public health and safety. The ordinance will distinguish between a large wind energy system that is used to generate energy for commercial sale and a small wind energy system that is primarily used to generate energy for use by the Landowner and may also be the subject of interconnection agreements for commercial sale.

Section 2. DEFINITIONS

2.00 Definitions

- 2.1. Hub Height.** The distance measured from ground level to the center of the turbine hub.
- 2.2. Inhabited Structure.** An occupied building existing prior to the conditional use application.
- 2.3. Landowner.** The legal entity that owns the property on which a wind energy system is located.
- 2.4. MET Tower.** A meteorological tower used for the measurement of wind speed.
- 2.5. Non-participating Property.** Real property that has no wind energy system or is in a different wind energy system.
- 2.6. Owner.** The legal entity that owns a wind system.
- 2.7. Shadow Flicker.** Moving shadows caused by the rotation of the turbine blades passing in front of the sun.
- 2.8. Total Height.** The vertical distance from ground level to the tip of a wind turbine blade when the tip is at its highest point.
- 2.9. Town.** Town of Green Bay and/or appointed or elected officials thereof.
- 2.10. Wind Energy Facility.** An electricity generating facility consisting of one or more wind turbines under common ownership or operating control and including substations, MET towers,

cables/wires, and other buildings accessory to such facility.

2.11. Wind Energy System-Large. A wind energy system of one (1) or more wind towers and turbines that has a nameplate capacity of more than one hundred (100) kilowatts and/or a total height of more than one hundred seventy (170) feet and less than five hundred (500) feet and is used to generate energy for commercial sale.

2.12. Wind Energy System-Small. A wind energy system of one (1) or more wind towers and turbines that has a nameplate capacity of one hundred (100) kilowatts or less and a total height of one hundred seventy (170) feet or less and is primarily used to generate energy for use by the landowner and or for commercial sale.

2.13 Forfeiture. There shall be penalties for any person, Owner, Landowner who fails to comply with the provisions of this ordinance or if orders from the Zoning Administrator are violated.

SECTION 3. GENERAL REQUIREMENTS

3.00 General Requirements

3.1. Location. A small wind energy system is a conditional use and may be located in areas zoned agriculture, business, industrial, or estate residential.

A large wind energy system is a conditional use and may only be located in areas zoned agriculture. No turbines shall be located within any floodplains, shorelands or wetland areas. A copy of all necessary DNR permits to cross any of these areas is required prior to issuing a building permit. A map indicating floodplains, shorelands and wetland areas in the proposed land parcels shall be submitted to the Town of Green Bay Zoning Administrator.

3.2. Setback. The wind tower in a small wind energy system must be set back two (2) times the total height of the tower from any inhabited structure, property line, public road, or communication and/or electrical lines. A minimum of two (2) acres per wind energy facility is required.

The wind tower in a large wind energy system must be set back from any existing inhabited structure no less than two (2) times its total height. Each wind tower shall be set back from the nearest property line, public road, communication and/or electrical lines a distance no less than one point one (1.1) times its total height.

Setbacks could be decreased if written permission of a waiver is

secured from the affected Landowners. In no instance shall the setback from an inhabited structure be decreased to less than one point one (1.1) times the total height of the wind tower. A notarized copy of the written permission shall be filed with the Town of Green Bay Clerk. Also, such permission must be recorded at the Brown County Register of Deeds and a copy of the recorded document shall be filed with the Town of Green Bay Clerk.

3.3. Clearance. The vertical distance from the ground level to the tip of a small wind turbine blade when the blade is at its lowest point must be no less than thirty (30) feet.

The vertical distance from the ground level to the tip of a large wind turbine blade when the blade is at its lowest point must be no less than seventy-five (75) feet.

3.4. Electrical Wires. All electrical wires associated with a wind energy system, other than wires necessary to connect the wind turbine to its base and to overhead collection lines, must be located underground. All electrical components of the wind energy facility shall conform to state of art practices (the best utility practices at the time of installation).

3.5. Design. Wind towers shall maintain a galvanized steel finish, or subject to any applicable standards of the FAA and; if painted, a neutral color shall be used so as to reduce visual obtrusiveness.

The design of the buildings and related structures shall, to the extent possible, use materials, colors, textures, screening, and landscaping that will blend the tower facilities to the natural setting and improvements (planned or existing) in the area.

Towers shall not be artificially lighted unless required by the FAA or other applicable authority. If lighting is required, the governing authorities, including but not limited to the Town of Green Bay, may review the available lighting alternatives and approve the design that would cause the least disturbance to the surrounding views.

All towers and structures shall comply with the "Obstruction Marking and Lighting" requirements, amended from time to time, of the Federal Aviation Administration in cooperation with the Federal Communications Commission. Where "Dual Lighting Systems" are optional, it shall be mandatory that white strobe lighting be used during daylight hours only and the red light shall be utilized at night.

Each wind turbine generator shall meet or exceed applicable standards and regulations of any agency of the State or Federal

government with the authority to regulate wind powered generators. If such standards and regulations are changed retroactively, then Owner shall bring the wind turbine generator into compliance with such applicable revised standards and regulations within six (6) months of the effective date of such standards and regulations, unless a different compliance schedule is mandated by the controlling State or Federal agency. Failure to bring the wind turbine generator into compliance with such revised standards and regulations shall constitute an event of default, in which case the Town of Green Bay reserves the right to revoke entirely or modify in part this permit.

A determination of no hazard shall be obtained from the FAA prior to installation and a copy of such determination shall be filed with the Town of Green Bay Clerk. If a permit issued by the Wisconsin Department of Transportation is required, Owner will not install the wind turbine generators until such a permit is issued.

No word or graphic representation, other than appropriate warning signs and Owner and Landowner identification, may be placed on a wind energy system.

Any above ground electrical equipment associated with a wind energy system must be located under the sweep area of a blade assembly.

3.6. Right-of-Way Excavation. A right-of-way excavation and utility permit shall be required for any excavation conducted in the Town of Green Bay right-of-way.

Owner shall follow requirements of the "Right of Way Excavation/Utility Lines" section under General Provisions in the Town of Green Bay Zoning Ordinance.

3.7. Blasting Activity. All blasting shall be conducted in conformance with applicable state and federal laws and regulations.

3.8. Driveway Permit. A driveway permit shall be required. Owner shall follow the requirements of the "Driveway Permits" section of the Town of Green Bay Zoning Ordinance.

All driveways or service roads shall be constructed so farm equipment can move on or over them without impairment.

SECTION 4. SAFETY AND HEALTH

4.00 Safety and Health

- 4.1.** A wind turbine, including any wind system accessories, must be secured against unauthorized access by means of a locked barrier or security fence. All access doors to wind energy system and electrical equipment shall be lockable.
- 4.2.** Exterior of towers shall not be climbable up to fifteen (15) feet above ground level.
- 4.3.** All new substations shall be fenced to prevent public access.
- 4.4.** Warning signs shall be placed on towers, equipment, and entrances.
- 4.5.** Owner shall ensure that ice from wind turbine blades does not impact any occupied structure or non-participating Landowner's property.
- 4.6.** Owner must take such reasonable steps as are necessary to prevent, mitigate, or eliminate shadow flicker on any inhabited structure or non-participating property.
- 4.7.** Owner shall minimize or mitigate any interference with electromagnetic communications such as radio, telephone or television signals caused by any wind energy facility.
- 4.8.** Owner shall take reasonable steps to minimize interference with the operation of any flights or air space required for any of the area hospitals or medical centers or area airports.
- 4.9.** The noise design limit for all wind turbine generators shall not exceed 50 dBA for any period of time when measured at one hundred (100) feet from the exterior of any inhabited structure existing at the date of approval.

Noise levels may exceed criteria listed above if written consent from the affected Landowners has been obtained allowing noise levels to exceed the maximum limits otherwise allowed. A notarized copy of the written permission shall be filed with the Town of Green Bay Clerk. Also, such permission must be recorded at the Brown County Register of Deeds and a copy of the recorded document shall be filed with the Town of Green Bay Clerk.

- 4.10.** Owner will employ good utility practice to ensure that the

Wind Energy Facility will not cause stray voltage and/or electromagnetic fields (EMF) that affects neighboring properties.

For purposes of this permit, stray voltage is defined as neutral-to-earth voltage measured from the electrical system neutral and/or any structure bonded to this neutral to earth that adversely affects humans or animals. For purposes of this permit, electromagnetic fields are defined as a concentration of electric charges or magnetic forces that adversely affects humans or animals.

Stray voltage and EMF testing shall be conducted upon complaint from neighboring Landowners based on probable cause or reasonable belief based upon the facts presented that stray voltage and/or EMF is an issue. Testing may be ordered by the Town of Green Bay Town Board at the expense of Owner for first tests. The Town of Green Bay will select and hire the Testing company. Owner will shut down the Wind Energy Facility as reasonably needed, but in no event longer than one hour, for testing to determine whether the Wind Energy Facility is the cause of stray voltage and/or EMF problems. If the Wind Energy Facility is determined by said testing to be the cause, then the Wind Energy Facility operations shall cease until the problems are solved.

Representatives of the affected Landowners and Owner shall monitor the testing and review the test results. Should the test results indicate that any stray voltage and/or EMF increase is due to the Wind Energy Facility, Owner shall pay the cost for all necessary steps to eliminate the problem.

Costs associated with the first testing will be paid by the Owner.

Subsequent costs of testing will be allocated among the complainant and the Owner, depending on the findings of the study.

4.11. In an emergency the Owner of an affected wind turbine shall immediately cease operation of the affected wind turbine for the duration of the emergency. Emergency shall mean a condition or situation caused by the affected wind turbine that presents an imminent physical threat of danger to life or significant threat to property as determined by the Owner and Landowner. The Owner shall be required to have emergency policies, procedures and personnel to effect those emergency procedures in the event of an emergency. Permits may be suspended or revoked for failure to recognize or handle emergencies or failure to have proper policies and practices as to the maintenance and operation of the wind facility that provide reasonable protection against any such emergency arising.

4.12. Owner shall follow a regular maintenance schedule

consistent with all manufacturer's recommendations to ensure safe operation.

Owner shall submit to the Town of Green Bay Clerk a yearly report of the maintenance records of the wind energy facility site plus any health and safety issues that have arisen.

4.13. Representatives of the Town of Green Bay, along with Owner's representatives, shall be allowed to inspect the maintenance and operational records of the Wind Energy Facility to determine whether the Owner is engaging in proper maintenance and operation of the facility and inspect the wind turbine generator site at ground level after providing not less than 24 hours advance written notice to Owner.

SECTION 5. PROCEDURE

5.00 Procedure. It is unlawful for any person to construct, install, or operate a wind energy system that is not in compliance with this ordinance or with any conditions issued pursuant to this ordinance.

5.1. Prior to the scheduling of any zoning meeting(s) the wind energy company and/or Landowners(s) of the proposed wind energy system must notify the Town Board and Landowners within an area two (2) times the total height and area of the wind energy system and/or any adjoining Landowners of their intent to establish a wind energy system. A copy of the notice, method of notification and names and addresses of those notified must be certified as completed by the wind energy company and/or Landowners and provided to the Zoning Administrator and Town of Green Bay Clerk. This is in accordance with the Town of Green Bay's Conditional Use regulations (Section XX:J).

5.2. A conditional use permit is required for each wind energy system (large or small). The fee required for a conditional use permit shall be three hundred fifty (\$350) dollars per wind energy system, with a fee of two hundred seventy-five (\$275) dollars per wind turbine in that system.

Owner must provide a site plan including:

5.2.1. Proposed location and distance of the tower/towers with reference to the property lines of the parcel/parcels on which they are located including GPS coordinates.

5.2.2. Any residence, business, or public building on the parcel or on an adjacent parcel.

5.2.3. The right-of-way of any public road that is within six hundred (600) feet.

The following information is required:

5.2.3.1. Name, corporate status, address, and telephone number of the person signing the application and certifying that the application is true and correct.

5.2.3.2. Name, corporate status, address, and telephone number of the Owner.

5.2.3.3. Name, corporate status, address, and telephone number of the Landowner.

5.2.3.4. Legal description of property.

5.2.3.5. Scale diagram showing proposed location of aboveground and underground electrical wiring, communication line location, access routes, landscaping, and fencing proposed by Owner.

5.2.3.6. Location of any overhead utility lines adjacent to the property.

5.2.3.7. Drawing showing a cross section, elevation, and diagram of the proposed tower, or a similar model, and the tower foundation.

5.2.3.8. Copy of the Proof of a Certificate of Authority from the Public Service Commission of Wisconsin and the Public Service Commission of Wisconsin Environmental Assessment for project one hundred (100) megawatts or more.

5.3. A building permit issued by the Town of Green Bay Zoning Administrator shall be required for each individual wind turbine prior to construction of said wind turbine. Permits granted under this ordinance run with the land and are transferable.

Owner shall not alter the location of any wind turbine generator

without first obtaining written consent from the Town of Green Bay Board, which consent shall not be unreasonably withheld.

If warranted, the Town of Green Bay Board has the authority to call a public hearing for requested permit modifications at the expense of the Owner.

The following additional information is required at the time the building permit is granted:

5.3.1. Number, description, and design specifications of each wind energy system including the manufacturer, model, capacity, blade length, height, lighting.

5.3.2. Blueprints or drawings that have been approved by a registered professional engineer showing a cross section, elevation, and diagram for any tower and tower foundation.

5.3.3. Statement describing any hazardous materials that will be used on the property and how those materials will be stored.

5.3.4. Statement that each wind energy system and MET tower will be installed in compliance with manufacturer's specifications.

5.3.5 The plan of construction and operation of the facility, which is submitted as part of the application shall be certified by qualified professional engineer(s).

5.4. A new conditional use permit must be obtained under the following conditions:

5.4.1. Wind Energy Facility expands beyond the original application information provided;

5.4.2. After the issuance of a building permit the Town of Green Bay Board would determine there to be a significant change to the project.

5.5. A permit issued pursuant to this ordinance expires if the wind energy system is not installed and functioning within two (2) years from the date the permit is issued or the wind energy system is out of service or otherwise unused for a continuous twelve (12) month period. A permit may be renewed by the Town of Green Bay Board if there are extenuating circumstances.

The term of this permit is thirty (30) years from commissioning, which will include the requirement that the Owner upgrade the technology and bring the facility up to the then current health and safety standards before a renewal of the permit would take place. However, the Town of Green Bay reserves the right to revoke entirely or modify in part this permit in an event of default where the Owner fails to bring the wind turbine generator into compliance with any material term of this permit or any other obligation presently imposed by the Town of Green Bay.

This permit, as well as the Owner's facility and records concerning its maintenance and operations will be subject to review at any time upon a complaint or upon the reasonable request by the Town of Green Bay Planning Commission and the Town of Green Bay Town Board to protect the health and safety of the public. The purpose of the review is to determine whether the Owner has complied with the terms and conditions of the permit.

5.6. Any recorded access easement across private lands to a wind energy facility shall name the wind energy facility Owner as having access to the easement and shall also name the Town of Green Bay representatives as having access to the easement to inspect the facility and investigate complaints.

5.7. Owner will be responsible for overseeing compliance with conditions of this permit during the construction phase of the project. Upon completion of construction, Owner shall designate all contact persons responsible for overseeing compliance with the conditions of this permit. Owner shall provide addresses, daytime telephone numbers and emergency telephone numbers of designated contact persons to the Town of Green Bay Clerk. The designated contact list must be kept current and all changes shall be filed with the Town of Green Bay Clerk.

5.8. Owner shall develop a Complaint Resolution Procedure to be utilized throughout the operational life of the wind energy facility that can be used to keep track of the complaints made. Town of Green Bay and Owner will agree on complaint procedure within ninety (90) days from the issuance of conditional use approval. Copies of the Complaint Resolution Procedure are to be given to the Town of Green Bay Clerk.

5.9. If allowed by the State of Wisconsin, the Town of Green Bay reserves the right to impose impact fees on Wind Energy System

projects approved after (date).

SECTION 6. FACTORS

6.00 Factors. To be considered by Town of Green Bay Plan Commission and Town of Green Bay Board:

- 6.1. Proposed ingress and egress
- 6.2. Proximity to transmission lines to link the system to the electric power grid
- 6.3. Number of wind turbines and their location
- 6.4. Nature of land use on adjacent and nearby properties
- 6.5. Location of other wind energy systems in the surrounding area
- 6.6. Surrounding topography
- 6.7. Proximity to residential structures, residential zoning districts, or areas identified for future residential use
- 6.8. Design characteristics that may reduce or eliminate visual obtrusiveness
- 6.9. Possible adverse effects on migratory birds and other wildlife
- 6.10. Possible adverse effects of stray voltage, interference with broadcast signals, shadow effect, and noise
- 6.11. Impact on the orderly development, property values, and aesthetic conditions within the Town of Green Bay
- 6.12. Effect on public roads
- 6.13. Any other factors relevant to the proposed system

SECTION 7. INSURANCE

7.00 Insurance. A large wind energy facility is required to have a comprehensive coverage policy of public liability insurance insuring against loss or liability caused by Owner's occupation and use of the wind energy facility in an amount not less than five million (\$5,000,000) dollars. Cancellation of this policy shall be prohibited. The Town of Green Bay shall be a certificate holder in this policy.

SECTION 8. FINANCIAL ASSURANCE

8.00 Financial Assurance. Owner shall provide the Town of Green Bay with an irrevocable letter of credit in the amount of Twenty Thousand Dollars (\$20,000.00) per windmill for decommissioning. The letter of credit must be issued by the (name of Bank Town of Green Bay deals with) in a form approved by the Town of Green Bay attorney. The letter of credit must be provided prior to the receipt of a building permit. The Town of Green Bay reserves the right to adjust the amount of this financial assurance if circumstances warrant.

SECTION 9. LIABILITY

9.00 Liability. The Owner of the wind energy facility shall defend, indemnify and hold harmless the Town of Green Bay 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 Owner concerning the operation of the wind energy facility without limitation.

In addition to the indemnification described above, the Owner shall reimburse the Town of Green Bay its reasonable attorney's fees incurred in defending any legal actions brought by third parties challenging the legality or enforceability of this permit or any portion thereof, or the issuance of any permits to the Owner by the Town of Green Bay. The Town of Green Bay shall notify the Owner promptly upon discovering any claim entitling it to a land use defense reimbursement.

SECTION 10. DECOMMISSIONING

10.00 Decommissioning. A wind energy system that is out of service for a continuous twelve (12) month period, shall be deemed to have been abandoned. The Town of Green Bay may require the removal of said wind energy system. Written notice must be given to the Owner of such wind energy system if removal is required. The Owner of such wind energy system shall remove the same within the time frame determined by the Town of Green Bay Board.

The Owner shall:

10.1. remove all wind turbines, above ground improvements, and outdoor storage.

10.2. remove all foundations, pads, and underground electrical wires and reclaim the site to a depth of four (4) feet below the surface of the ground.

10.3. remove all hazardous material from the property and dispose of the hazardous material in accordance with federal and state law.

10.4. remove, clear, and grade any access roads unless the Landowner wants to keep the access road. A copy of the Owner's intention to keep the access road shall be filed with the Town of Green Bay Clerk.

If such wind energy system is not removed within the time frame determined by the Town of Green Bay Board, the Town of Green Bay may remove such wind energy system at the expense of the Owner. Any profits associated with the removal of a wind energy system by the Town of Green Bay shall be retained by the Town of Green Bay.

SECTION 11. FORFEITURE

11.00 Forfeiture. There shall be penalties for any person, Owner, Landowner, firm, association, corporation or representative agent who fails to comply with the provisions of this Ordinance or orders from the Zoning Administrator.

11.01 Violations and Penalties.

Any building or structure hereafter erected, moved, or structurally altered or any use hereafter established in violation of any of the provisions of this ordinance, shall be deemed an unlawful building, structure, or use. The Zoning Administrator shall promptly report all such violations to the Town of Green Bay Board, which shall bring action to enjoin the erection, moving or structural alteration of such building or the establishment of such use or to cause such building, structure, or use to be vacated or removed.

Any person, Owner, Landowner, firm, association, corporation, or representative agent who violates, disobeys, neglects, omits, or refuses to comply with, or who resists the enforcement of any of the provisions of this ordinance, may be required, upon conviction, to forfeit not less than ten (\$10) dollars nor more than five hundred (\$500) dollars for each offense., together with the costs of prosecution, and may be imprisoned in the county jail of Brown County until said forfeiture and costs are paid, but not to exceed thirty (30) days for each violation. Each day that a violation continues to exist shall constitute a separate offense.

11.02 Enforcement.

11.02.1 It shall be the duty of the Zoning Administrator to enforce this Ordinance.

11.02.2 Enforcement options which may be exercised if provisions of this chapter are violated include such measures as stop work orders, permit suspension and/or revocation, citations, pursuant to Sec. 66.0113, Wisconsin Statutes, injunctive relief, and/or forfeiture of financial assurance.

11.02.3 No structure of any kind, including buildings, shall hereafter be erected, moved or structurally altered until a land use permit thereafter shall have been applied for and issued.

This Ordinance shall become effective upon adoption and required posting.

The foregoing Ordinance was duly adopted by the Town Board of the Town of Green Bay at a duly noticed Town Board meeting held on May 13, 2008 by a vote of 3 in favor and 0 opposed.

Town of Green Bay By:

Lee DeChamps
Lee DeChamps, Chairman

Cary Dequaine
Cary Dequaine, Supervisor

Dianne Jacobs
Dianne Jacobs, Supervisor

Approved, Attested By:

Debbie Mercier
Debbie Mercier, Town Clerk

Date of approval 5/13, 2008