

STATE OF WISCONSIN

Town of Clay Banks

Ordinance #1-2008

WIND ENERGY CONVERSION SYSTEMS

THE TOWN BOARD OF THE TOWN OF CLAY BANKS DOES ORDAIN AS FOLLOWS:

I. GENERAL PROVISIONS

A. Title

These regulations shall officially be known, cited and referred to as the Wind Energy Conversion Systems (WECS) Ordinance of the Town of Clay Banks, and hereinafter will be referred to as "The Ordinance."

B. Findings Of Fact

These regulations are adopted under the authority granted pursuant to Wis. Stat. § 66.0401, which provides:

Wis. Stat. § 66.0401 (2002)  
Regulation relating to solar and wind energy systems.

1. **Authority To Restrict Systems Limited:** No county, city, town, or village may place any restriction, either directly or in effect, on the installation or use of a solar energy system, as defined in s. 13.48(2)(h) 1.g., or a wind energy system, as defined in s. 66.0403(1)(m), unless the restriction satisfies one of the following conditions:
  - a. Serves to preserve or protect the public health or safety.
  - b. Does not significantly increase the cost of the system or significantly decrease its efficiency.
  - c. Allows for an alternative system of comparable cost and efficiency.
2. **State Regulatory History:** Pursuant to Wisconsin Act 204, (enacted in 1998) state regulation and oversight (by the PSCW and DNR) of "small" electrical generating facilities less than 100 MW was virtually eliminated. As a direct result, the responsibility for review and approval of these facilities was shifted from Wisconsin state agencies to local units of government.
3. **Local Regulatory History:** Clay Banks is under the umbrella of a Door County 'Wind Energy System Ordinance' since 1999. The county ordinance lacks the appropriate standards to ensure public health and safety of the residents and property owners of the Town of Clay Banks.
4. **Local Authority:** This ordinance is formulated pursuant to the exercise of the town's village powers as adopted by the Town of Clay Banks. The Town finds that a Wind Energy System operating in the Town requires special licensing, by the Town, in order to protect and preserve the health, safety, and welfare of it's citizens and people in general. In this regard, the Town adopts and incorporates by reference a report issued by the National Research Council entitled Environmental Impacts of Wind-Energy Projects, May 2007 ("2007 NRC Report"). The Town further finds that the provisions of the "Draft Model Wind Ordinance for Wisconsin" do not adequately protect public health and safety and have no legal basis under Wisconsin law.

1 C. Purposes  
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3 1. **Public Health, Safety & Welfare:** Town officials have a duty to protect the public health,  
4 safety and welfare of its citizens and their environment and enact appropriate ordinances as they  
5 relate to the public health and safety issues associated with wind energy conversion systems. The  
6 quality and integrity of the environment are paramount to good health. Our goal is to protect our  
7 watersheds and water supplies; to protect forest and scenic areas; to conserve fish and wildlife  
8 habitat. To maintain the rural character of our town with respect to its landscape, open spaces,  
9 scenery, peace, tranquility, and solitude. We will achieve these principles by addressing the  
10 following standards and other standards as part of this ordinance.  
11

12 2. **Noise:** We will safeguard the health and safety of our community from noise by assessing the  
13 impact of dBA, dBC and dBLinear noise. We will provide adequate setbacks from residences  
14 based on the German standard of “35dB(A) for rural nighttime environments,” as reported by  
15 the 2007 NRC Report at page 159, and on the need to prevent the types of adverse public health  
16 effects from wind turbines as documented and reported by Dr. Nina Pierpont and others who  
17 have done research on this issue and lived near wind turbines. See ‘Health Effects of Wind  
18 Turbine Noise’, Nina Pierpont, MD, PhD, March 2, 2006, available online at:  
19 www.ninapierpont.com. Noise guidelines and setbacks from property lines will also be  
20 established.  
21

22 • ‘The health significance of noise is ..... noise-induced hearing impairment; interference with  
23 speech communication; disturbance of rest and sleep; psychophysiological, mental-health and  
24 performance effects; effects on residential behavior and annoyance; as well as interference with  
25 intended activities.’ – **WORLD HEALTH ORGANIZATION 1999, GUIDELINES FOR COMMUNITY  
26 NOISE, (3) ADVERSE HEALTH EFFECTS OF NOISE**  
27

28 • ‘There is sufficient evidence that noise exposure can induce hearing impairment, hypertension  
29 and ischemic heart disease, annoyance, sleep disturbance, and decreased school performance.’ –  
30 **TNO PREVENTION AND HEALTH, LEIDEN, THE NETHERLANDS; DEPARTMENT OF HEALTH RISK  
31 ANALYSIS AND TOXOLOGY, UNIVERSITEIT MAASTRICHT, MAASTRICHT, THE NETHERLANDS**  
32

33 • ‘Noise causes hearing loss, interferes with human activities at home and work, and is in various  
34 ways injurious to peoples health and well-being. Although hearing loss is the most measurable  
35 health hazard, noise is also linked to other physiological and psychological problems.’ – **EPA  
36 BULLETIN 550/9-74-004, MARCH 1974, U.S. ENVIRONMENTAL PROTECTION AGENCY**  
37  
38

39 3. **Emergency Communications:** Emergency communications are vital for the protection of our  
40 community’s residents and infrastructure. Emergency communications falls into two categories.  
41

42 The first is the communications system used by local emergency agencies such as fire  
43 departments, police and sheriffs departments, and ambulance services. Communications by  
44 these agencies is vital to rapid notification of, and response to any potentially life threatening  
45 situation encountered by our residents. This communications system must be protected by  
46 degradation by WECS siting and/or operation, which results in interference with either radio  
47 transmission or reception, even as emergency radio technology continues to evolve from analog  
48 to digital formats.  
49

50 The second are the signals received by residents in their homes, which alerts them to local  
51 and/or national emergencies. These include television, telephone (including cellular and digital),  
52 microwave, satellite (dish), navigational, and radio signals.  
53

54 These communication categories will be protected by the use of setbacks, communication  
55 studies, and a requirement that communications be maintained at the performance level which  
56 existed prior to the installation of the WECS.

- 1           4. **Shadow Flickering:** Shadow flicker can be an annoyance or nuisance but the effects of shadow  
2 flicker can also cause health problems as outlined in several studies. In addressing this issue, a  
3 shadow map study will be required. Blade material, color, operational times, etc. will be  
4 addressed. Placement and setbacks sufficient to eliminate these problems will be established.  
5
- 6           5. **Fire Protection:** Fires, although rare, can occur in WECS due to factors such as lightning  
7 strikes or mechanical failures. The majorities, of WECS fires, are located in the nacelle portion  
8 of the WECS and are nearly inaccessible to fire personnel. Public safety will be provided  
9 through preplanning incidents, use of proper setbacks and fire breaks, requiring self contained  
10 extinguishment systems in the nacelle, and joint development of a response plan in conjunction  
11 with the responsible fire department for all stages of the WECS from construction, through  
12 power generation, to final disassembly and site restoration.  
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- 14           6. **Safety Setbacks:** Issues associated with safety will be addressed by placing distance between  
15 WECS and people, buildings, property lines, roads, environmental areas, etc. Setbacks will be  
16 established to address safety issues.  
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- 18           7. **Water Quality:** Incorporate construction guidelines to protect our aquifers and/or the lateral  
19 flow of water to our wetlands, streams or water that is captured by our water-supply wells.  
20 Determine setbacks to protect and prevent contamination of our ground water, wetlands and  
21 streams from structure collapse, blade throw, etc.  
22
- 23           8. **Soil Erosion:** Developing an area for WECS changes the site and topography with increased  
24 risks of water and wind erosion. Proper erosion control plans and monitoring will be required.  
25
- 26           9. **Visual Impact:** Visual and aesthetic views are necessary for the health and well being of our  
27 community. It is in the public interest to minimize the visual impact of wind energy conversion  
28 units through careful design and siting standards, particularly in circumstances in which the  
29 community places a high value on its visual quality. An assessment of whether a project will be  
30 visually compatible with the character of the surrounding features or views will be established.  
31 Elements that influence visual and aesthetic views are heights, spacing, setbacks, markings,  
32 lighting, etc.  
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- 34           10. **Minimize Conflict Between Incompatible Land Uses:** It is in the public interest to ensure  
35 that conflict between incompatible land uses is minimized by limiting wind energy conversion  
36 system development in the vicinity of existing or planned residential or development and certain  
37 sensitive or high value environmental areas.  
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- 39           11. **Certification:** To assure proper installation, all WECS installations will be required to be  
40 certified by a registered professional engineer. Annual inspections and full reporting shall be  
41 made to the town.  
42
- 43           12. **Decommissioning:** Wind energy conversion systems are expected to have a useful life of 20 or  
44 more years. Decommissioning and removal of wind energy conversion systems and restoring  
45 the site at some point years into the future has proven to be very expensive, therefore it is in the  
46 public interest that the developer and property owner provide financial security to insure the  
47 removal of these facilities at some point in the future.  
48

## 49   II.    **INTENT**

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- 51           A. Licensing is a legitimate and reasonable means of accountability to ensure that the construction of  
52 and operation by employees of wind energy systems comply with reasonable regulations and to  
53 ensure that operators and employees do not allow their establishments to be hazardous to the public  
54 health or safety.

1 B. It is not the intent of this ordinance to significantly increase the cost of the system or significantly  
2 decrease the efficiency of any wind energy system proposed to be located in the town.  
3

4 C. Based upon the findings stated above, it is the intended purpose of the town to regulate wind energy  
5 systems to promote the health, safety, and general welfare of the citizens of the town and to establish  
6 reasonable and uniform regulations for the operation thereof so as to minimize potentially dangerous  
7 effects of these systems on the community.  
8

9 **III. DEFINITIONS**

10 **Ampacity:** The current carrying capacity of conductors or equipment expressed in Amperes.

11 **Ampere:** The basic unit measuring the quantity of electricity.

12 **Anemometer:** A device for measuring the speed and direction of the wind.

13 **Applicant:** The person, firm, corporation, company, limited liability corporation or other entity which  
14 applies for approval under this ordinance, as well as the applicant's successor(s), assign(s) and/or  
15 transferee(s) as to any approved WECS or testing facility. An applicant must have the legal authority to  
16 represent and bind the landowner or lessee who will construct, own, and operate the WECS or testing  
17 facility. The duties and obligations regarding any approved WECS or testing facility shall be with the  
18 owner of the WECS or testing facility, and jointly and severally with the owner and operator or lessee of  
19 the WECS or testing facility. Also known as owner or operator.  
20

21 **Aerodynamic Noise:** A noise that is caused by the flow of air over and past the blades of a WECU.

22 **Ambient Noise:** Intermittent noise events such as from aircraft flying over, dogs barking, mobile farm  
23 or construction machinery, and the occasional vehicle traveling along a nearby road are all part of the  
24 ambient noise environment, but would not be considered part of the background noise unless they were  
25 present for at least 90% of the time.  
26

27 **Background Noise:** Sounds that would normally be present at least 90% of the time. The lull in the  
28 ambient noise environment.  
29

30 **Blade Glint:** The intermittent reflection of the sun off the surface of the blades of a single or multiple  
31 WECSs.  
32

33 **Board:** Means the Town Board for the Town of Clay Banks, County of Door, Wisconsin.  
34

35 **Broadband Noise:** The "swishing" or "whooshing" sound emitted as a function of a WECS(s)  
36 operation.  
37

38 **Employee:** Means any and all Persons, including but not limited to "operators" who work in or at, or  
39 render any services directly related to operation of Wind Energy Conversion Systems.  
40

41 **FAA:** Federal Aviation Administration.  
42

43 **Good Utilities Practice:** Means any of the practices, methods and acts with respect to the safe  
44 operation of the Wind Energy Conversion System (WECS) engaged in or approved by a significant  
45 portion of the electric utility industry and, in particular, those portions of the industry with experience in  
46 the construction, operation, and maintenance of wind turbines during the relevant period; or any of the  
47 practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at  
48 the time the decision was made, could have been expected to accomplish the desired result at a  
49 reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility  
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1 Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all  
2 others, but rather to be acceptable practices, methods or acts generally accepted in the region.  
3

4 **High Voltage Electrical Termination:** Connecting of conductors to a device or system where the  
5 voltage exceeds 600 volts.  
6

7 **Hub Height:** The distance to the center of the wind turbine hub as measured from ground level.  
8

9 **Ice Throw:** Accumulated frozen moisture or ice buildup on the rotor and/or blades of a WECU that is  
10 or can be thrown during normal spinning or rotation.  
11

12 **Impermissible Interference:** The blockage of wind from a wind energy conversion unit or system for  
13 which a permit has been granted under this ordinance during a use period if such blockage is by any  
14 structure or vegetation on property, an owner of which was notified in advance by certified mail or  
15 delivered by hand of any property which the applicant proposed to be limited by the permit.  
16

17 Impermissible interference does not include:  
18

- 19 1. Blockage by a narrow protrusion, including but not limited to a pole or wire, which does not  
20 substantially block the wind from a wind energy conversion unit or system.  
21
- 22 2. Blockage by any structure constructed, under construction or for which a building permit has been  
23 applied for before the date the last notice was mailed or delivered.  
24
- 25 3. Blockage by any vegetation planted before the date the last notice was mailed or delivered.  
26

27 **Impulsive Noise:** Short acoustical impulses or “thumping” sounds, which vary in amplitude and are  
28 caused by the interaction of the wind turbine blades with the distributed air flow around the tower of  
29 downwind WECU’s.  
30

31 **Inoperable:** A WECU shall be determined inoperable if it has not generated power within the  
32 preceding two calendar quarters equal to at least 60% of the expected production.  
33

34 **Licensee:** Is the applicant and/or successor who has been granted a license under this ordinance.  
35

36 **Livestock Facility:** A confinement area designed specifically for raising, controlling, feeding, and  
37 providing care for livestock. This may include but is not limited to: dairy barns, pastures, feedlots,  
38 freestall barns, calf hutches, horse barns, veal barns, feed storage areas, brooder and laying barns,  
39 farrowing and finishing barns, veterinary care.  
40

41 **Low Frequency Noise:** An ongoing debilitation sound emitted during periods of turbulence as the  
42 blades are buffeted by changing winds that can cause structural vibration.  
43

44 **Measurement Point:** (MP): Location where sound and/or vibration measurements are taken such that  
45 no significant obstruction blocks sound and vibration from the site.  
46

47 **Mechanical Noise:** Sound produced as a byproduct of the operation of the mechanical components  
48 of a WECU(s). Also known as “tonal noise”. Tonal noises are distinct and tend to be more noticeable  
49 at the same relative loudness of other types of noises.  
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51 **Meteorological Tower:** Used for the measurement of wind speed and direction, also known as MET  
52 tower or wind test tower.  
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54 **NFPA:** National Fire Protection Association

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**Nacelle:** The enclosure located at the top of a WECU tower that houses the gearbox, generator and other equipment.

**Noise:** Any unwanted sound.

**Non-Participating Property Line:** A continuous line surrounding all contiguous adjacent parcels of property owned by a single individual, company, corporation, partnership or other entity not part of a proposed Wind Energy Conversion System.

**Operator:** The person who is designated on the license application to be the person in charge of daily operation of the premises and who is to be the Wind Energy Conversion System contact person for the Town.

**Ownership Property Line:** A continuous line surrounding all contiguous adjacent parcels of property owned by a single individual, company, corporation, partnership or other entity.

**Person:** An individual, proprietorship, corporation, association, limited liability entity, or other legal entity.

**PSCW:** Public Service Commission of Wisconsin

**Project Area:** All of the properties within the project boundary and within a one-mile radius beyond the project boundary of a proposed or approved WECS project.

**Project Boundary:** A continuous line, which encompasses all WECU's and related equipment to be used in association with a WECS project.

**Property Line:** The recognized and mapped property parcel boundary line.

**Related Equipment:** Transformers, tower, electrical conductors, termination points, switches, fences, substations, and any other related equipment necessary to operate a WECS.

**Residences & Other Buildings:** Means all private residences and businesses located 2,640 feet, measured from the foundation of an existing residence or business to the outermost edge of the closest of the circular path of the wind turbine rotor blade of a WECS, further providing a non-participating land owner has applied for a building permit on or before a full and complete application is submitted to the Town Board per Section V of this ordinance.

**Sensitive Environmental Area:** An identified habitat for endangered species, or other designated area as identified by county, state or federal authorities.

**Sensitive Receptor:** Places that are likely to be more sensitive to the exposure of the noise or vibration generated by WECS(s). This includes but is not limited to: schools, day-care centers, hospitals, parks, residences, residential neighborhoods, places of worship, and elderly care facilities.

**Setback:** The minimum allowable horizontal distance from a given point or line of reference, such as a thoroughfare right-of way, water line, or prospective line to the nearest vertical wall or other element of building or structure.

**Setback Area:** The land base that falls within a specified setback.

1       **Shadow Flicker:** The effect when the blades of an operating wind energy conversion unit pass  
2       between the sun and an observer, casting a readily observable, moving shadow on the observer and  
3       his/her immediate environment.  
4

5       **Shadow Flicker and Glade Glint Zone:** The land area that falls within the setback for shadow flicker  
6       or blade glint.  
7

8       **Stray Voltage:** Means neutral-to-earth voltage measured from the electrical system neutral and/or any  
9       structure bonded to this neutral to earth that adversely affects humans or animals.  
10

11       **Structures:** Residences, livestock facilities, communications towers, commercial businesses, and all  
12       sensitive receptors.  
13

14       **Total Height:** The distance between the ground at normal grade and the highest point of the installed  
15       WECS (being the tip of the blade when the blade is in the full vertical position).  
16

17       **Wetland:** An area of land, which regularly persists in a wet state, or as otherwise defined by the  
18       WDNR.  
19

20       **Wind Energy Conversion Unit (WECU):** A wind driven machine with an output rating greater than  
21       100 kilowatts (kW) and with a total height of greater than 170 feet that converts wind energy into  
22       electrical power for the primary purpose of sale, resale, or off-site use. The WECU includes the tower,  
23       turbine, footings, and all equipment associated with individual units including the land beneath  
24       encompassing the equivalent area of the circumference of the rotors. Also known as a Wind Turbine.  
25

26       **Wind Energy Conversion System (WECS):** All WECUs, related transformers, electrical conductors  
27       substations, and connection points to transmission or distribution lines.  
28

29       **Wind Energy Conversion System Facility or Facility:** Means all of the land and equipment used by  
30       the wind energy conversion system and its support facilities including the wind turbine, tower, access  
31       roads, control facilities, meteorological towers, maintenance and all power collection and transmission  
32       systems.  
33

34       **Wind Energy Conversion System Tower:** Means any structure that is designed and constructed  
35       primarily for the purpose of supporting the Wind Energy Conversion Unit.  
36

37       **Windmill:** A wind-driven machine that does not produce electricity.  
38

39       **Wind Test Tower:** The tower on which meteorological equipment is located to measure wind speed,  
40       direction, strength, etc., for the purpose of evaluating a potential for WECS siting.  
41

42       **Wind Turbine:** A wind driven machine that converts wind energy into electrical power, also known as  
43       a Wind Energy Conversion Unit (WECU) or turbine.  
44

45       **WDNR:** Wisconsin Department of Natural Resources  
46

47   **IV. LICENSING**  
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- 49    A. **License Required:** From and after the effective date of this ordinance, no wind energy systems  
50    shall be operated or maintained in the town without first obtaining a license, to operate, issued by the  
51    town. However, small scale, wind energy systems of less than 170 feet in height and less than 100  
52    kilowatts are exempt from the licensure requirements of this ordinance.  
53

1 B. **Effect Other Licenses:** The fact that an applicant possesses any other valid license or permit  
2 required by law, does not exempt the applicant from the requirement of obtaining a Wind Energy  
3 Conversion System license under this Section.  
4

5 C. **Non-Assignability Of Licenses:** The license is not assignable or transferable to any other Person,  
6 without the express prior written consent of the Town, such consent not to be unreasonably  
7 withheld; provided, however, the Licensee may assign the License once to a new entity, upon notice  
8 to the Town, if the new Person submits an affidavit demonstrating the following:  
9

- 10 1. The new Person wholly owns the new entity.
- 11 2. The new entity is properly formed and authorized to do business in Wisconsin.
- 12 3. The written assignment requires the new entity to assume all of the Licensee's rights, duties and  
13 obligations under the License including but not limited to the letter of credit requirements and  
14 the certificate of insurance requirements.  
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17

18 **V. LICENSE APPLICATION PROCEDURE FOR WIND ENERGY SYSTEMS**  
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20 A. **Filing Individual:** Any person desiring to secure a Wind Energy Conversion System license shall file  
21 an application together with two additional copies of the application with the Town Clerk.  
22

23 B. **Filing Form:** The application shall be on a form provided by the Town Clerk.  
24

25 C. **Information Required:** The following information shall be required of each Applicant, and must be  
26 provided under oath or affirmation:  
27

- 28 1. Name, address, and phone number.
- 29 2. If the Applicant is a corporation, partnership, limited liability company or limited liability  
30 partnership, the application shall include the name of the business entity; the date of  
31 incorporation, registration or organization; the state in which the entity was incorporated,  
32 registered or organized; the name and address and home numbers of the registered agent where  
33 applicable; the names and addresses of all officers and directors; operating or managing partners  
34 or general partners; managing members or managers, whichever is applicable for the particular  
35 form of business entity.  
36  
37
- 38 3. Name and address of any other current or past Wind Energy Systems operated by the Applicant  
39 whether in this State or any other State or District within the United States.  
40
- 41 4. Name, address and phone number of an individual who is responsible for the day-to-day  
42 operation of the facility, who will be deemed the Operator for purposes of this section, and who  
43 will be the contact Person for the municipality.  
44
- 45 5. Evidence that the applicant is the owner of the property involved or has the written permission  
46 of the owner(s) to make such an application.  
47
- 48 5. A signed statement by the landowner acknowledging that the landowner is financially responsible  
49 if the owner/operator fails to reclaim the site as required and that any removal and reclamation  
50 costs incurred by the town will become a lien on the property and may be collected from the  
51 landowner in the same manner as property taxes.  
52
- 53 7. A statement that the Applicant is familiar and in compliance with the provisions of this section  
54 of the Town's code, including the responsibility to reimburse all reasonable costs and



1 professional fees associated with the processing, examination and analysis of the proposed  
2 facility.

- 3  
4 8. Proof of continuous liability insurance in the minimum amount of five million dollars  
5 (\$5,000,000.00) per occurrence shall be submitted to the Town of Clay Banks indicating coverage  
6 for potential damages or injury to landowners, occupants, or other third parties. The Town shall  
7 be named as an additional insured on the policy.  
8

9 **D. Supportive Documentation:** Each application shall be accompanied by:

- 10  
11 1. **Site Plan:** A site plan which meets all the requirements of this Section and applicable provisions  
12 of the County Zoning Code pertaining to Land Use Permits, as well as any additional site specific  
13 requirements of the Town in accordance with the technical requirements in this ordinance. Each  
14 application shall be accompanied by a site plan of the WECS Tower Site(s), including:  
15  
16 a. Total acreage occupied by the facility.  
17 b. A detailed map of the area showing parcel boundaries and individual Wind Turbine locations  
18 and their distances to existing structures.  
19 c. Existing structures and proposed facilities.  
20 d. Location of existing and proposed transmission lines, substations, etc. Denote underground  
21 and overhead installation method on existing lines. All proposed lines shall be underground.  
22 e. Location of meteorological or wind testing towers.  
23 f. Location of wells, abandoned and active, within a half-mile radius of project boundary.  
24  
25 2. **WECS Information and Certification:** The applicant shall provide specific information on  
26 WECS including:  
27  
28 a. The type, size, total installed height, rotor material, rated power output, performance history,  
29 safety history, and noise characteristics of each type of WECS, tower and electrical  
30 transmission equipment. Identify the length of service of the proposed components.  
31  
32 b. A structural safety certificate shall be provided from a professional engineer stating that the  
33 structure is of new construction and not refurbished or rebuilt and has been designed to  
34 operate in cold weather conditions and is safe.  
35  
36 c. Photographs or detailed drawings of each wind turbine model including the tower and  
37 foundation. Provide design and specifications for all proposed structures and foundations.  
38 (Foundation at and around the tower base shall be designed so that no surface water or  
39 runoff can access subsurface aquifer at any time during construction, operation or  
40 decommissioning.)  
41  
42 d. Detailed computer and photographic simulation(s) overlaid on existing environment  
43 showing the proposed WECS project area fully developed with all proposed wind energy  
44 conversion units and related facilities. The format shall meet approval of the Town of Clay  
45 Banks.  
46  
47 3. **Timeline:** The applicant shall provide a timeline showing all aspects of construction with a  
48 starting and final completion date.  
49  
50 4. **Affected Property Owners:** The applicant shall submit the name and address of property  
51 owners within WECS setback areas. Considering that development rights of adjacent property  
52 owners may be forfeited due to these setbacks as per this ordinance, a written agreement for  
53 non-development within the specified setback must be obtained and recorded on the affected  
54 properties' deeds. Copies of the agreements must be submitted with the application.

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5. **Impermissible Interference Notification:** The applicant shall deliver by certified mail or by hand a notice to the owner of any property, which the applicant proposes to be restricted by the permit. The applicant shall submit to the Town of Clay Banks a copy of a signed receipt for every notice delivered in addition to the following information:
  - a. The name and address of the applicant, and the address of the land upon which the WECS is or will be located.
  - b. That the applicant has filed an application.
  - c. That the permit, if granted, may affect the rights of the notified owner to develop his or her property and to plant vegetation.
  - d. That any person may request a hearing within 30 days after receipt of the notice, and the address and procedure for filing the request.
6. **Wind Access Agreements:** Evidence (a signed statement from the applicant and countersigned by landowner) that the applicant has negotiated with adjacent landowners and has obtained written agreements with all landowners who could potentially interfere with the applicant's access to the wind.
7. **Easements:** Applicant must submit copies of signed letters of intent to grant easements from all involved landowners and any governmental units responsible for right-of-ways for access, construction, power lines, etc.
8. **Notifications:** The applicant shall notify the following agencies, via certified mail upon submitting an application to the town. Copies verifying proof of delivery shall be provided to the town.
  - a. Federal Aviation Administration
  - b. Wisconsin Bureau of Aeronautics
  - c. Door County Emergency Services
  - d. Southern Door Fire Department
  - e. Door County Planning Department
  - f. Door County Highway Department
  - g. Door County Sheriff's Department
  - h. Southern Door School District
  - i. Sturgeon Bay Utilities
  - j. Wisconsin Public Service Corporation
  - k. Wisconsin Department of Natural Resources
9. **Wind Study:** A study documenting minimum, maximum, and average wind speeds and prevailing wind direction over the course of one year. Anemometers shall be calibrated regularly to ensure a measurement of error of 1% or less. All anemometers shall be placed at the expected hub height of the wind turbine to be used. Sufficient wind resources, as described by the U.S. Department of Energy, include areas with a wind power class 4 or higher. The town shall retain the services of an independent, recognized expert to review the results of the wind resources study prior to acting on the application for a permit. Said study shall indicate the long-term commercial economic viability of the project.
10. **Critical Communications:** The applicant shall provide a critical communication study prepared by a registered professional engineer showing that any WECS sited and operated will not interfere with emergency (fire, police/sheriff, ambulance) radio two way communications

1 (base stations, mobile, and hand held radios, including digital) and/or paging, television,  
2 telephone (including cellular and digital), microwave, satellite (dish), navigational, internet or  
3 radio reception to neighboring areas. The applicant shall provide a signed affidavit that they will  
4 be responsible for the full cost of any remediation necessary to provide equivalent alternate  
5 service or correct any problems; including relocation or removal of the facility caused or  
6 exacerbated by the operation of such equipment and any and all related transmission lines,  
7 transformers, and other components related thereto. The applicant shall maintain equivalent  
8 communications throughout the life of the WECS even as future technologies may change.  
9

- 10 11. **Noise Study:** A pre-construction noise survey within a one mile radius of each proposed Wind  
11 Turbine location showing ambient background noise levels over a one year period prior to final  
12 layout and construction. The study shall be based on the Town of Clay Banks Measurement  
13 Protocol for Sound and Vibration Assessment for Proposed and Existing Wind Energy  
14 Conversion Systems (see Appendix A).  
15
- 16 12. **Shadow Flicker and Blade Glint:** The applicant shall provide a shadow flicker and blade glint  
17 model for any proposed wind energy conversion unit. The study shall be based on the Town of  
18 Clay Banks, 'Shadow Flicker and Blade Glint Model Protocol' (see Appendix B).  
19
- 20 13. **Ice Throw Calculations:** A report from a Wisconsin professional engineer that calculates the  
21 maximum distance that ice from the turbine blades could be thrown. The basis of the  
22 calculation and all assumptions must be disclosed.  
23
- 24 14. **Blade Throw Calculations:** A report from a Wisconsin professional engineer that calculates  
25 the maximum distance that pieces of the turbine blades could be thrown. The basis of the  
26 calculation and all assumptions must be disclosed  
27
- 28 15. **Ground Water:** An environmental study specifically indicating the impact the project will have  
29 on the groundwater beneath and in the vicinity of the proposed Wind Turbine sites. If a Wind  
30 Turbine foundation is proposed in a bedrock area, a baseline of all wells and certified public  
31 drinking sources in a half-mile radius shall be established and provided to the Town as part of  
32 the application.  
33
- 34 16. **Travel Route:** The applicant shall provide the town, county and state notice of intended travel  
35 route to proposed WECS site. The applicant shall provide at their cost a pre-construction  
36 inventory of road conditions performed by a Wisconsin certified professional engineer mutually  
37 agreed upon by applicant and municipality. The applicant shall abide by any town, county or  
38 state laws and/or ordinances that may affect travel and/or ingress or egress to properties.  
39
- 40 17. **Soils Report:** A geotechnical report that shall at a minimum include the following:  
41  
42 a. Soils engineering and engineering geologic characteristics of the site based on on-site  
43 sampling and testing.  
44 b. Slope stability analysis.  
45 c. Grading criteria for ground preparation, cuts and fills, soil compaction.  
46 d. Certification from a registered geotechnical engineer that the soils can support a WECS.  
47
- 48 18. **Site Preparation & Erosion Control:** The applicant shall submit the following:  
49  
50 a. A site preparation plan that has been approved by the Door County Soil and Water  
51 Conservation Department. The plan shall show planned storage and retention of topsoil,  
52 and all types of subsoil for later site restoration. Any permit to remove any subsoil from the  
53 WECS site must be applied for by the landowner, under the Door County Mining

1 Ordinance and/or any other applicable state or county laws. It is prohibitive to remove any  
2 topsoil from the site, under this ordinance.  
3

- 4 b. A construction site erosion plan and storm water runoff control plan that has been approved  
5 by the Door County Soil and Water Conservation Department. The plan shall comply with  
6 all state statutes, county and local ordinances to minimize the potential adverse impacts on  
7 sinkholes, wetlands and Class I and II streams and the banks and vegetation along those  
8 streams and wetlands and to minimize erosion or sedimentation.  
9
- 10 19. **Hazardous Waste:** A plan shall be submitted showing compliance with all laws applicable to  
11 the generation, storage, clean up, transportation and disposal of hazardous wastes generated  
12 during any phase of the project's life.  
13
- 14 20. **Fire Prevention, Emergency Rescue Plan:** The applicant shall submit a plan to outline  
15 preventative measures, identify, train and fund fire and rescue personnel to ensure readiness and  
16 appropriate response. Further, to identify potential fire, rescue, hazardous materials scenarios  
17 over the life of the WECS. This plan shall be based in part on Section H of this ordinance.  
18
- 19 21. **Stray Voltage Test Results:** The applicant must perform two pre-construction stray voltage  
20 tests on all livestock facilities within the project boundary and a one-mile radius beyond the  
21 project boundary. The tests shall be performed by a mutually acceptable Wisconsin certified stray  
22 voltage investigator once in the spring and once in the fall. The tests shall be performed  
23 according to PSCW Phase II Stray Voltage Testing Protocol identified in Appendix C. A copy  
24 of the test results shall be sent to each of the following: property owners, PSCW, Sturgeon Bay  
25 Utilities, Wisconsin Public Service and the Town of Clay Banks. Applicant shall receive written  
26 permission from property owners prior to stray voltage testing. It shall be understood that when  
27 permission is denied, all responsibility for stray voltage remains with the property owner.  
28
- 29 22. **Lighting Plan:** A plan showing lighting on and around all WECS and related facilities. Lighting  
30 on WECS shall be lit to FAA minimal standards only. Lighting shall be shielded from ground  
31 view to FAA maximum standards.  
32
- 33 23. **Avian and Bat Impact Study Plan:** The applicant shall submit a plan for monitoring the avian  
34 and bat impact of the WECS to the Town of Clay Banks for its review and approval. Such plan  
35 shall document and follow accepted scientific study procedures. In addition, the applicant shall  
36 agree to submit a quarterly report to the Town of Clay Banks that identifies the number of bird  
37 and bat fatalities found within 500 feet of the WECS.  
38
- 39 24. **Abandonment, Removal and Site Restoration Plan Required:** The applicant shall submit a  
40 removal and site restoration plan and removal and site restoration cost estimate to the Town of  
41 Clay Banks for its review and approval. The restoration plan shall identify the specific properties  
42 it applies to and shall indicate removal of all materials above and below ground; road repair  
43 costs, if any; and all re-grading and re-vegetation necessary to return the subject property to the  
44 condition existing prior to establishment of the wind energy facility. The restoration shall reflect  
45 the site-specific character including topography, vegetation, drainage, and any unique  
46 environmental features and shall be completed within one year. The plan shall reflect any  
47 standards set forth in this ordinance. The plan shall include a certified estimate of the total cost  
48 (by element) of implementing the removal and site restoration plan.  
49
- 50 25. **Application Fee and Financial Security** to cover the following shall be provided by the  
51 applicant prior to preliminary project approval:  
52
- 53 a. **Application, Legal and Consultant Fees.** The applicant shall pay a fee of \$100 to the  
54 town upon filing an application under this ordinance. In addition, within fourteen (14) days

1 of filing an application the applicant shall deposit in a joint escrow account with the town a  
2 sum of \$25,000, as partial payment for the appropriate town expenses in hiring consultants  
3 and experts, as these authorities shall, at their discretion, deem desirable. At any time the  
4 balance of this fund shall fall below \$15,000, the applicant shall submit an additional \$15,000  
5 so that the applicable municipal authority's full and actual expenses of examining and  
6 verifying the data presented shall be covered in total by the applicant. This deposit shall  
7 accompany the initial application and be considered a part thereof. If at any time the balance  
8 of this fund shall fall below \$15,000 for a period of 30 days, the application shall be  
9 considered to have been withdrawn. The balance of the escrow account, after all the town  
10 expenses have been paid, shall be returned to the applicant.

- 11 b. **Road Repair:** The amount to be agreed upon by the applicant and the appropriate  
12 municipal authority with guidance from applicable experts is to be deposited in a joint  
13 escrow account. When determining the amount of such required security, the governing  
14 authorities may also require an annual escalator or increase based on current construction  
15 costs and/or the Federal Consumer Price Index. Such financial security shall be deposited or  
16 filed with the appropriate governing authorities prior to commencement of construction.  
17 This security shall be kept in full force and effect during the entire time that a WECS is in  
18 existence and shall be used to maintain roads during the construction, maintenance and  
19 decommissioning of the WECS facility. Such security shall be irrevocable or non-cancelable  
20 (except by written consent by both the governing authorities and the current owner of the  
21 WECS) for the life of the approved permit. Failure to comply will subject the applicant to all  
22 available remedies of the governing authority, including possible enforcement action and  
23 revocation of the permit.
- 24 c. **Site Reclamation:** Advance payment for WECS site reclamation and restoration is to be  
25 placed in joint escrow account or surety bond, the amount to be determined by the  
26 appropriate municipal governing authorities to be sufficient to have the WES fully removed  
27 and all components properly disposed of and the land returned to its original state should  
28 such structures become abandoned, dangerous, or not in compliance with this ordinance.  
29 Such financial security shall be kept in full force and effect during the entire time while a  
30 WECS facility exists or is in place. Such financial security shall be irrevocable and non-  
31 cancelable until such time as appropriate municipalities certify that reclamation and  
32 restoration are complete and release the obligation.
- 33 d. **Decommissioning:** An appropriate continuous renewal bond amount will be set for each  
34 Wind Turbine for decommissioning should the Owner/Operator fail to comply with the  
35 Ordinance requirements or the Wind Turbine is inoperable for a period of twelve (12)  
36 consecutive months.

37  
38 **VI. LICENSING PERMIT PROCEDURE**  
39

- 40 A. After determining that an application is complete, the Town Board will conduct a public hearing on  
41 the application after a class 2 hearing notice is published in the Town's official newspaper. The  
42 public hearing will be held within ninety (90) days, after the Town Board determines that the  
43 application is complete. Within fourteen (14) days after the close of the public hearing, the Town  
44 Board will meet in open session to deliberate and make a decision concerning the application. The  
45 deliberation meeting shall be noticed to the applicant and the public at least five (5) prior to the  
46 deliberation meeting. The Town Board may have the assistance of legal counsel at the public hearing  
47 and the deliberation meeting.
- 48  
49 B. The Town Board shall grant a licensing permit if it determines that the requirements of this  
50 ordinance are met and that granting the licensing permit will not unreasonably interfere with the  
51 orderly land use and development plans of the Town. The Town Board may include conditions in  
52 the permit if those conditions preserve or protect the public health and safety; do not significantly

Approved by Committee on May 3, 2008 - Scheduled for June Town Board Meeting

1 increase the cost of the system or significantly decrease its efficiency; or allow for an alternative  
2 system of comparable cost and efficiency. In addition to other provisions and standards set forth in  
3 this ordinance, the Town Board may consider the following factors when setting conditions:  
4

- 5 1. Proposed ingress and egress.
- 6
- 7 2. Proximity to transmission lines to link the system to the electric power grid.
- 8
- 9 3. Number of wind turbines and their location.
- 10
- 11 4. Nature of land use on adjacent and nearby properties.
- 12
- 13 5. Surrounding topography.
- 14
- 15 6. Proximity to residential structures, residential zoning districts, or areas identified for future  
16 residential use.
- 17
- 18 7. Design characteristics that may reduce or eliminate visual obtrusiveness.
- 19
- 20 8. Possible adverse effects on migratory birds, raptors, and other animals and wildlife.
- 21
- 22 9. Possible adverse effects of stray voltage, interference with broadcast signals, shadow effect, and  
23 noise.
- 24
- 25 10. Impact on the orderly development, property values, and esthetic conditions of the Town.
- 26
- 27 11. Effect on public roads.
- 28
- 29 12. Recommendations from the town boards of adjacent towns, which may be affected by a large  
30 wind energy system.
- 31
- 32 13. Any other factors, which are relevant to the proposed system.

33  
34 C. If requested by an applicant, the Town Board may waive or reduce the burden on the applicant of  
35 one or more of the standards and requirements of this ordinance, if it concludes that the purpose of  
36 this ordinance will be met, that any requested waiver(s) by an applicant are justified based on credible  
37 evidence or information submitted to the Town Board by the applicant with the application, and that  
38 the requested waiver(s) will not adversely affect public health and safety. The installation and  
39 continued operation of a WECS is contingent on compliance with all standards of this ordinance and  
40 all conditions established by the Town Board relative to the approval or conditional approval of an  
41 application and licensing permit.  
42

43 D. The Town Board's decision to approve, conditionally approve or deny an application, the reason(s)  
44 for its decision, and any conditions established by the Town Board relative to a conditional approval  
45 of an application and licensing permit shall be recorded in the Town Board's minutes. The Town  
46 Clerk shall issue a licensing permit to the applicant or inform the applicant that the application for a  
47 licensing permit has been denied within thirty (30) days of the Town Board's final action on the  
48 completed application. At the same time, the Town Clerk shall publicly post a notice of the final  
49 decision at the Town Hall.  
50

51 E. The Town Board's final decision on approval, conditional approval or denial of an application may  
52 be appealed to Circuit Court by anyone aggrieved by the decision, including but not necessarily  
53 limited to the applicant or any aggrieved resident or property owner of the Town, within thirty (30)  
54 days of the issuance of the decision, and the posting of public notice of the decision, by the Town

1 Clerk. In addition, any revocation of a licensing permit or other enforcement action by the Town  
2 Board under this ordinance may be appealed to Circuit Court by the applicant or any other aggrieved  
3 party within (30) days of actual notice to the applicant or other aggrieved party of such revocation or  
4 enforcement action.  
5

6 **VII. DEVELOPMENT / PERFORMANCE STANDARDS FOR LICENSING**  
7

8 All WECS and testing structures shall comply with the Development/Performance Standards set forth in  
9 this section. It is recognized that the standards herein are neither exclusive, nor exhaustive. In instances  
10 where a health or safety concern is identified with regard to any application for a Wind Energy  
11 Conversion System, additional and/or more restrictive conditions may be included in the license to  
12 address such concerns. All rights are reserved to impose additional standards as circumstances warrant.  
13 Such additional and/or more restrictive standards may include, but are not limited to: a) longer setbacks  
14 from nearby property lines, roads, power lines, residences, businesses and inhabited structures; b) more  
15 restrictive noise limitations, and c) more restrictive limitations to protect surface water and groundwater.  
16

17 **A. Design.**  
18

19 1. Each Wind Turbine shall consist of a tower, generator(s), nacelle and blades. Each WECS site  
20 must have access roads, underground transmission cabling to connect the generators to local  
21 utility electric distribution lines, and underground fiber optic lines. The application shall disclose  
22 the nature and type of the proposed Wind Turbine to be installed. Detailed product literature  
23 shall accompany the application. Each Wind Turbine shall also comply with the following  
24 design requirements  
25

26 (a) Wind Turbines shall be painted a non-reflective, non-obtrusive color.  
27

28 (b) Each WECS site, the design of the buildings and related structures shall, to the extent  
29 reasonably possible, use materials, colors, textures, screening and landscaping that will blend  
30 the WECS to the natural setting and the existing environment.  
31

32 (c) Wind Turbines shall not be artificially lighted, except to the extent required by the FAA or  
33 other applicable authority; strobe or other intermittent lights are prohibited.  
34

35 (d) Wind Turbines shall not be used for displaying any advertising.  
36

37 (e) Wind Turbines shall not display any name or logo.  
38

39 (f) Electrical controls and control wiring and power-lines must be wireless or not above ground,  
40 except where wind farm collector wiring is brought together for connection to the  
41 transmission or distribution network, adjacent to that network.  
42

43 (g) The clearance between the ground and the Wind Turbine blades shall be at least 75 feet.  
44

45 **B. Aircraft Protection:**  
46

47 1. The wind turbine generator tower shall be marked as required by the Federal Aviation  
48 Administration (FAA). There shall be no lights on the outside of the tower other than what is  
49 required by the FAA or other applicable authority or as otherwise agreed in connection with the  
50 issuance of the License. Notwithstanding the foregoing, this restriction shall not apply to  
51 infrared heating devices used to protect the monitoring equipment. The tower shall be  
52 connected to an uninterruptible back-up power source to ensure continuous compliance with  
53 FAA regulations. To the extent consistent with FAA regulations, shrouding for the lights shall  
54 direct reflection of light up. Aircraft safety and protection shall also be accomplished by

1 establishing sufficient setbacks between all Wind Turbines and adjoining properties in order to  
2 allow for safe crop-dusting of agricultural fields, and safe emergency medical aircraft landings on  
3 all adjoining properties.  
4

5 **C. Blasting:**  
6

7 1. Licensee shall not undertake any blasting in connection with the construction of the Facility  
8 unless Applicant shall have notified the Town and submitted a blasting plan consistent with  
9 applicable laws and regulations. The plan must be submitted by the Licensee, reviewed and  
10 approved by the Town Board, before any blasting may take place. The plan shall, at a minimum,  
11 provide that:

12 (a) Blasts must comply with the State ground vibration limitations.  
13

14 (b) Fly-rock traveling in the air or along the ground must remain in the controlled blasting area  
15 site owned or controlled by the applicant.  
16

17 (c) All blasting must be performed by or under the direct supervision of a State-licensed blaster.  
18

19 (d) A blasting log for each blast will be kept on-site at the WECS office for not less than 5 years,  
20 and copies of the required blasting log will be promptly submitted to the Town upon its  
21 request.  
22

23 (e) A resident call list must be established for the purpose of notifying neighbors at homes in the  
24 vicinity of the WECS of eminent blasting activity. This call list must be maintained and  
25 utilized on a “request basis only” for all residents in the vicinity of the WECS who asked to  
26 be notified prior to any blast.  
27

28 (f) The storage of explosives will be in accordance with Wis. Admin. Code Ch. Comm. 7.  
29  
30

31 **D. Communications Interference:**  
32

33 1. Any WECS shall be sited and operated so that they do not interfere with emergency (fire,  
34 police/sheriff, ambulance) radio two way communications (base stations, mobile, and hand held  
35 radios, including digital) and/or paging, television, telephone (including cellular and digital),  
36 microwave, satellite (dish), navigational, internet or radio reception to neighboring areas. The  
37 applicant and/or operator of the facility shall be responsible for the full cost of any remediation  
38 necessary to provide equivalent alternate service or correct any problems; including relocation or  
39 removal of the facility caused or exacerbated by the operation of such equipment and any and all  
40 related transmission lines, transformers, and other components related thereto. The applicant  
41 shall maintain equivalent communications throughout the life of the WECS even as future  
42 technologies may change.  
43

44 c. The owner/operator of the WECS shall respond within five business days to any request for  
45 communications interference investigation by a property owner within the project boundary  
46 and a three-mile radius beyond the project boundary. Testing will commence within ten  
47 working days of the request. The owner/operator is responsible for mitigating within ten  
48 working days from the determination of interference cause attributed to the operation of the  
49 WECS.  
50

51 d. The owner/operator of the WECS shall respond within one business day to any request for  
52 communications interference investigation by any emergency agency (fire, police/sheriff,  
53 ambulance). Testing will commence within two working days of the request. The  
54



1 owner/operator is responsible for mitigating within two business days from the  
2 determination of interference cause attributed to the operation of the WECS.  
3

4 **E. Electromagnetic Interference:**  
5

- 6 1. Any WECS shall be sited and operated so that they do not interfere with television, telephone  
7 (including cellular and digital), microwave, satellite (dish), navigational, or radio reception to  
8 neighboring areas. The applicant and/or operator of the facility shall be responsible for the full  
9 cost of any remediation necessary to provide equivalent alternate service or correct any  
10 problems; including relocation or removal of the facility, caused or exacerbated by the operation  
11 of such equipment and any and all related transmission lines, transformers, and other  
12 components related thereto. The owner/operator of the WECS shall respond within five  
13 business days to any request for a communications interference investigation by a property  
14 owner within the project boundary and a three-mile radius beyond the project boundary. Testing  
15 shall commence within ten working days of the request. Owner/operator is responsible for  
16 mitigating within ten working days from determination of interference cause attributed to the  
17 operation of the WECS.  
18

19 **F. Groundwater Protection:**  
20

- 21 1. Licensee shall construct and operate the Facility so as not to cause groundwater contamination in  
22 violation of applicable law. Nothing contained in the license is intended to authorize or permit  
23 any degradation of the quantity or quality of the groundwater in connection with the WECS.  
24  
25 a. No excavations deeper than nine (9) feet below the surface of the soil shall be allowed in the  
26 construction of any Wind Energy Facility or Wind Turbine unless the Licensee submits  
27 evidence of increased cost or design necessity based on actual foundation designs. Any  
28 change in foundation design shall maintain the water quality standards of this ordinance.  
29  
30 b. Wells shall not be drilled within the boundaries of the WECS site.  
31  
32 c. The licensee shall complete a plan for managing surface water runoff to prevent pollution of  
33 groundwater through sinkholes, wetlands and infiltration through the soil and underlying  
34 bedrock within a 1,000-foot radius of each Wind Turbine site and along all access roads and  
35 driveways leading to Wind Turbine sites. The plan shall provide for surface water  
36 management so that the water flows away from the Wind Turbine sites and known sinkholes  
37 rather than toward them.  
38  
39 d. If a Wind Turbine foundation is proposed in a bedrock area, a baseline of all wells and  
40 certified public drinking sources in a half-mile radius shall be established and permanent  
41 remedies shall be the responsibility of the developer if contamination occurs.  
42

43 **G. Noise:**  
44

- 45 1. Audible Sound Limit  
46  
47 a. No Wind Turbine or group of turbines shall be located so as to cause an exceedance of the  
48 pre-construction/operation background sound levels by more than 5 dBA or dBC. The  
49 background sound levels shall be the L90 dB sound descriptor (both A and C weighting)  
50 measured during a pre-construction noise study during the quietest time of evening or night.  
51 Measurements shall be for ten (10) minutes or more. L90 results are valid when L10 results  
52 are no more than 15 dB above L90 for the same time period. Noise sensitive sites are to be  
53 selected based on wind farm's predicted sound emissions (in dBA, dBC and 1/3 octaves to  
54 blade passage frequency), which are to be provided by developer.

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- b. A 5 dB penalty is applied for pure tones or when the sound emissions fluctuate in amplitude or frequency over time in reasonable synchronicity with the blade revolution.
- 2. In-Audible (e.g. Low Frequency) Sound Limit
  - a. Not to exceed dBC-dBA greater than 20 dB inside or outside any occupied structure.
- 3. General Clause
  - a. Not to exceed 40 dBA or dBC within 100 feet of any occupied structure.
- 4. Requirements:
  - a. All instruments must meet ANSI Type 1 performance specifications.
  - b. Procedures must meet ANSI S12.9 and other applicable ANSI standards.
  - c. Measurements must be made when ground level winds are 10 mph or less. Background sound measurements are with winds of 5 mph or less. Wind shear in the evening and night often result in low ground level wind speed. At turbine fan heights, the wind is at or above nominal operating wind speeds.
  - d. IEC 61400 procedures are not suitable for enforcement of these requirements. ANSI standards shall be followed for testing procedures.
- 5. In the event the noise levels resulting from the WECS exceed the criteria listed above, a waiver to said levels may be granted by the Town Board provided that the following has been accomplished:
  - a. Written consent from the affected property owners has been obtained stating that they are aware of the WECS and the noise limitations imposed by this Ordinance, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and
  - b. If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent noise impact easement has been recorded in the Office of the County Register of Deeds which describes the benefited and burdened properties and which advises 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.

**H. Fire Protection:**

- 1. The applicant shall prepare a plan in consultation with fire department having jurisdiction over the area prior to construction. The plan shall address all activities at the WES and site from the start of construction through the end of power generation and the final removal and restoration of the site, and shall result in a response plan to address all identified potential fire, rescue, hazardous materials scenarios.
- 2. The owner/operator shall assure that the WECS and site comply with the following control and prevention measures and incurs associated costs.
  - a. Fire proof or fire resistant building materials and buffers or fire retardant landscaping.

- 1 b. Incorporation of a self contained fire protection system to address nacelle fires and  
2 approved by NFPA or comparable underwriter.
- 3
- 4 c. Maintain firebreak areas cleared of vegetation and maintained as a fire/fuel break as long as  
5 the WECS is in operation. Firebreaks shall be 30 feet in width around the periphery of the  
6 proposed WECS site, 10 feet in width around all transformers, and 30 feet in width around  
7 all buildings.
- 8
- 9 c. Fire fighting and rescue services, including programs and costs associated with equipment  
10 and training, for local fire protection and rescue personnel.
- 11
- 12 d. Any additional fire fighting or rescue personnel, services, materials, and/or vehicles as may  
13 be required to address any call related to the WECS or site that is beyond the capabilities of  
14 local fire fighting and/or rescue services.
- 15
- 16 e. The owner/operator shall be responsible for compliance with all laws applicable to the  
17 generation, storage, clean up, transportation and disposal of hazardous wastes generated  
18 during any phase of the project's life.
- 19

20 **I. Public Roads:**

- 21
- 22 1. **Construction:** Licensee shall, prior to the initiation of construction and use of haul roads,  
23 consult with the Town Board, County Highway Commissioner, the Wisconsin State Police and  
24 the County Sheriff's Office for load paths and restrictions on their respective roads or bridges.  
25 At Licensee's expense:
- 26
- 27 a. Licensee shall provide, the Town Board, a preconstruction evaluation and identification of  
28 road surface materials stating the type and amount of surface cover, PASER ratings, and  
29 photographic or video documentation of predetermined designated traffic route, performed  
30 by a Wisconsin certified professional engineer mutually agreed upon by applicant and  
31 municipality.
- 32
- 33 b. Licensee shall contract with qualified contractors, approved by the town, to repair any  
34 damage to the haul roads due to transportation of equipment and Facility components  
35 ("Road Repair Obligations").
- 36
- 37 c. In the event a hazardous road condition exists that is not immediately corrected by Licensee,  
38 the Town Board may order emergency road repairs, be performed by qualified contractors.  
39 Licensee shall promptly reimburse the Town for reasonable emergency road repair costs.
- 40
- 41 d. Licensee shall assure funding of the Road Repair Obligations by a letter of credit or guaranty  
42 prior to initiation of any construction.
- 43
- 44 e. Weather permitting, the final Road Repair Obligations shall be completed to the reasonable  
45 satisfaction of the Town Board within six (6) months after completion of construction of the  
46 Facility, or as soon thereafter as weather conditions permit.
- 47

48 **J. Shadow Flicker or Blade Glint**

- 49
- 50 1. The facility shall be designed such that shadow flicker or blade glint will not fall on, or in any  
51 existing sensitive receptor.
- 52
- 53 2. Shadow flicker or blade glint expected to fall on a roadway or a portion of a residential parcel  
54 may be acceptable under the following circumstances;

- 1 a. The flicker or glint will not exceed 10 hours per year.
- 2 b. The flicker or glint will fall more than 100 feet from an existing residence.
- 3 c. The traffic volumes are less than 500 vehicles per day on the roadway.
- 4 d. The flicker or glint shall not fall onto an intersection.
- 5 e. If shadow flicker or blade glint exceeds any of the conditions listed in Sections J, the source
- 6 WECS(s) shall be shut down until the flicker or glint problem is remedied.
- 7

8 **K. Setbacks:**

- 9
- 10 1. Setbacks shall be measured from the outermost edge of the closest of the circular path of the
- 11 wind turbine rotor blade. The Town Board may increase the following minimum setbacks on a
- 12 case-by-case basis, in order to protect public health and safety.
- 13
- 14 a. **Participating Property Line:** 1.1 times the total height of the Wind Turbine from the
- 15 nearest property line of a participating property owner.
- 16
- 17 b. **Non-Participating Property Line:** Five (5) times the rotor diameter but not less than
- 18 1,000 feet from the nearest property line of a non-participating property, unless the owner of
- 19 the non-participating property grants an easement for a lesser setback. The easement must
- 20 be recorded with the County Register of Deeds and may not provide for a setback that is
- 21 less than 1.1times the total height of the Wind Turbine.
- 22
- 23 c. **Public Roads and Highways:** 1,000 feet or three (3) times the total height of the Wind
- 24 Turbine, whichever is greater.
- 25
- 26 d. **Above Ground Power/Telephone Lines:** 1,000 feet or three (3) times the total height of
- 27 the Wind Turbine, whichever is greater, from the nearest above-ground public electric power
- 28 line or telephone line.
- 29
- 30 e. **Residences & Other Buildings:** 2,640 feet from the nearest residence, business, school,
- 31 daycare facility, church, hospital and other sensitive receptors.
- 32
- 33 f. **Wetlands:** 1,000 feet from all sinkholes and wetlands.
- 34
- 35 g. **Water Bodies Setbacks:** 1,000 feet from the ordinary high water mark of all navigable
- 36 water bodies.
- 37
- 38 h. **Parks & Public Property:** 2,640 feet from any town, county or state park, property,
- 39 recreational or rest area.
- 40
- 41 i. **Spacing and Density:** Minimum setback distances between turbines shall be (2) times the
- 42 total height of each WES.
- 43

44 **L. Signage and Fencing.**

- 45
- 46 1. Licensee shall provide reasonable signage at the Facility, identifying the Premises as being part of
- 47 the Facility and providing appropriate safety notices and warnings against trespassing. The no
- 48 trespassing signs shall be posted around the entire premises at an appropriate distance for
- 49 posting but no less than 2 conspicuous places for every 40 acre parcel within the Facility. Signs
- 50 should be sized at a minimum to meet the provisions of Wis. Stat. § 943.013(2).
- 51
- 52 2. No wind turbine, tower, building, or other structure associated with a wind energy system may
- 53 be used to advertise or promote any product or service. No word or graphic representation,
- 54 other than appropriate warning signs and owner or landowner identification, may be placed on a

1 wind turbine, tower, building, or other structure associated with a wind energy system so as to be  
2 visible from any public road.

- 3  
4 3. This prohibition shall include the attachment of any flag, decorative sign, streamers, pennants,  
5 ribbons, spinners or waving, fluttering or revolving devices, but not including weather devices.  
6

7 **M. Electrical Standards**

- 8  
9 1. All wiring between Wind Turbines and the Wind Energy Facility substation shall be  
10 underground.  
11  
12 2. All neutral grounding connectors from Commercial Wind Turbines shall be insulated from the  
13 earth and shall be sized to accommodate at least twice the peak load of the highest phase  
14 conductor, to absolutely prevent transient ground currents, in order to comply with the National  
15 Electric Safety Code and the IEEE Standard 519-1992, approved by the American National  
16 Standards Institute, as follows:  
17  
18 3. Grounding of both the electrical transmission lines and the supply lines to the internal electrical  
19 systems of the turbines themselves, shall comply with Rule 92D, Current in Ground Conductors:  
20 "Ground connector shall be so arranged that under normal circumstances, there will be no  
21 objectionable flow of current over the grounding conductor."  
22  
23 4. Rule 215B: [It is not permissible] "to use the earth as a part of a supply circuit."  
24  
25 5. Under no circumstances shall any Wind Turbine be connected directly to the grid; connection  
26 must be made through a substation or transformer properly grounded and filtered to keep  
27 harmonic distortion within recommended limits.  
28  
29 6. Bare, concentric neutrals are specifically prohibited in buried lines between turbines and in  
30 underground transmission lines to substations.  
31  
32 7. Electrical controls and control wiring and power-lines shall be wireless or not above ground  
33 except where wind farm collector wiring is brought together for connection to the transmission  
34 or distribution network, adjacent to that network.  
35

36 **N. Stray Voltage.**

- 37  
38 1. The Licensee shall respond within (5) five business days to any request for a stray voltage  
39 investigation by a property owner within the project boundary and a one-mile radius beyond the  
40 project boundary.  
41  
42 2. The tests shall be performed by a mutually acceptable Wisconsin certified stray voltage  
43 investigator.  
44  
45 3. The tests shall be performed according to PSCW Phase II Stray Voltage Testing Protocol  
46 identified in Appendix C.  
47  
48 4. Testing shall commence within (10) ten working days of the request. If testing cannot be initiated  
49 within (10) days, the Wind Turbine(s) in question shall be shut down until the testing can be  
50 started.  
51  
52 5. The investigation shall be provided to the property owner at no cost up to a maximum of two  
53 investigations within a 12-month period. See Appendix C.  
54

- 1           6. At no time shall the operation of a WECS increase the measured cow contact voltage (Vcc) or  
2           primary neutral to remote voltage (Vpn) on a livestock facility within the project boundary and a  
3           one-mile radius beyond the project boundary, above the maximum pre-construction levels.  
4
- 5           7. The owner/operator agrees to abide by all rules, procedures, standards, and reporting established  
6           by the PSCW for stray voltage and related electrical phenomena.  
7
- 8           8. Owner/operator is responsible for mitigating within five working days from determination any  
9           net increase in cow contact voltages (Vcc) or primary neutral to remote voltages (Vpn) attributed  
10          to the operation of the WECS. If corrections cannot be initiated within (5) five working days, the  
11          Wind Turbine(s) in question shall be shut down until the voltages in question are mitigated.  
12
- 13          9. A copy of the test results shall be sent to the property owner, PSCW Rural Electric Power  
14          Services staff, and the Town Board within (30) days of test completion.  
15

16       **O. Reporting and Complaint Resolution Procedure.**  
17

18       Licensee shall report to the Town as follows:  
19

- 20       1. **Power Production and Monitoring Reports:** The Licensee shall agree to submit the following  
21       to the Town:  
22
  - 23           a. A quarterly power production report covering the proceeding calendar quarter, and shall  
24           include actual power production in kilowatt-hours for each commercial wind energy facility.  
25
  - 26           b. A yearly monitoring report, or more periodic as set forth by the Town, containing data on  
27           the operations and environmental impacts of the WECS site.  
28
  - 29           c. Annual safety inspections by a certified licensed Wisconsin professional engineer.  
30
- 31       2. **Extraordinary Events:** Within 24 hours of any extraordinary event, Licensee shall notify the  
32       Town. "Extraordinary events" shall include but not be limited to tower collapse, catastrophic  
33       turbine failure, fires, leakage of hazardous materials, unauthorized entry to the tower base,  
34       thrown blade or hub, any injury to a Facility worker or other person that requires emergency  
35       medical treatment, or other event that impacts the public health and safety of the Town.  
36
- 37       3. **Complaints:** The Licensee of the Wind Energy System Facility shall, at the licensee's expense  
38       and in coordination with the Town develop a system for logging and investigating all complaints  
39       related to the operation of the Wind Energy System Facility. The Town will select a qualified  
40       individual to investigate complaints. The Licensee shall provide this qualified individual with  
41       direct phone contact and address information of the licensee representative. The reasonable cost  
42       and fees incurred by the Town in retaining said qualified individual shall be reimbursed by the  
43       owner of the Wind Energy System Facility. After the investigation, if the Town Board  
44       reasonably concludes that operational violations or other public or private nuisances are shown  
45       to be caused by the Wind Energy System Facility, the Licensee shall use reasonable efforts to  
46       mitigate or eliminate such problems on a case-by-case basis, as required by the Town Board,  
47       including, but not necessarily limited to, measures such as planting trees and installing awnings,  
48       limiting the hours of Wind Turbine operation, repair of WECS and/or removal and  
49       decommissioning of Wind Turbines.  
50  
51  
52  
53  
54

1       **P.     Emergency Shutdown:**  
2

- 3           1. Licensee shall be required to immediately cease operations for the duration of any Emergency.  
4           Emergency shall mean a proven condition or situation caused by the Facility that presents an  
5           imminent physical threat of danger to life or significant threat to property.  
6  
7           2. Any WECS that is found to present an imminent physical threat of danger to life or significant  
8           threat of damage to property shall be immediately shut down and repaired or otherwise made  
9           safe and certified so by a Wisconsin professional engineer prior to resumption of operation. The  
10          Town shall have the right to access a wind energy facility site to verify conditions and/or repair  
11          progress with a 12 hour advance notification.  
12  
13          3. Within 24 hours of an occurrence of a tower collapse, turbine failure, property damage or  
14          contamination, fires, thrown blade or hub, collector or feeder line failure, injured WECS worker  
15          or private person, the owner/operator shall notify the Town of the occurrence and proposed  
16          remedial action.  
17

18       **Q. Turbine Decommissioning and Site Restoration Plan.**  
19

- 20           1. Each Wind Turbine and all related improvements shall be removed in accordance with the  
21           Decommissioning and Site Restoration Plan submitted by the applicant and approved by the  
22           Town through the permitting process.  
23  
24           2. The owner of a Wind Energy Facility and the underlying property owners shall be jointly liable  
25           for the removal of all equipment associated with the Wind Energy Facility at the end of the  
26           permit period, the useful life of the facility, or when the facility is abandoned or otherwise out of  
27           operation for more than six months, at their expense. Upon removal of a Wind Energy Facility,  
28           the owner of the facility and the underlying property owners shall be jointly liable for restoration  
29           of the site to its original condition at their expense. To protect the environment, removal shall be  
30           done by mechanical means. Blasting is not an approved means for removal. The restoration  
31           shall include removal of all materials above and below ground; public road repair, if any; and all  
32           re-grading and re-vegetation necessary to return the subject property to the condition existing  
33           prior to establishment of the Wind Energy Facility. All hazardous materials shall be removed  
34           from the site and disposed of in accordance with state and federal laws.  
35  
36           3. The owner of a Wind Energy Facility and the underlying property owner shall provide proof of  
37           financial responsibility for the removal of the facility and restoration of the site in the form of a  
38           bond or an irrevocable standby letter of credit held in trust in favor of the Town, in a form to be  
39           approved by the legal counsel for the Town.  
40

41       **VIII.   INSURANCE AND INDEMNIFICATION**  
42

43       **A.   Insurance.**  
44

45           All licensees shall maintain the following insurance coverage commencing upon construction of the  
46           facility.  
47

- 48           1. The owner/operator shall, at its expense, maintain a broad form comprehensive coverage policy  
49           of public liability insurance insuring Applicant and Participating Landowners against loss or  
50           liability caused by Applicant's occupation and use of the Property under the Lease, in an amount  
51           not less than Five Million Dollars (\$5,000,000) of combined single limit liability coverage per  
52           occurrence, accident or incident, which has a commercially reasonable deductible. The Town  
53           shall be named as an additional insured on the policy.  
54

- 1 2. Worker's compensation coverage in an amount required by Wisconsin law. Applicant shall  
2 require subcontractors and others not protected under its insurance to obtain and maintain  
3 worker's compensation and employers' liability insurance.  
4
- 5 3. Certificates of insurance evidencing compliance with these requirements shall be provided upon  
6 request of the Town. The insurer will provide notice to the Town in the event there is a lapse in  
7 coverage exceeding thirty (30) days. All policies other than worker's compensation shall be  
8 written on an occurrence and not on a claim-made basis.  
9

10 **B. Defense of Land Use Decision and Indemnity.**

11  
12 1. Defense of Land Use Decision.  
13

14 In addition to the indemnification described below, Licensee shall reimburse the Town its  
15 reasonable attorneys' fees incurred in defending any legal actions brought by third parties  
16 challenging the legality or enforceability of this ordinance or any portion thereof, or the issuance  
17 of a License by the Town pursuant to this ordinance. If the Town seeks reimbursement, it shall  
18 notify Licensee in writing promptly upon discovering any claim entitling it to a land use defense  
19 reimbursement, but in no event later than 120 days after receiving written notice of any action,  
20 lawsuit, proceeding, investigation or other claim against it which may give rise to a claim for a  
21 land use defense reimbursement. Licensee shall not be obligated to reimburse the Town with  
22 respect to any such liability, action or claim if the Town fails to notify Licensee thereof in  
23 accordance with the provisions of this section in sufficient time including, without limitation,  
24 any responsive motion or answer to a complaint, petition, notice, or other legal, equitable action  
25 or claim, but only insofar as such knowing failure to notify Licensee has actually resulted in  
26 prejudice or damage to Licensee. With respect to any third party action, lawsuit, proceeding,  
27 investigation or other claim which is subject to reimbursement under this section, Licensee shall  
28 be entitled to assume and control (with counsel of its choice) the defense of such action, lawsuit,  
29 proceeding, investigation or other claim at Licensee's expense; provided, however, that the Town  
30 shall be entitled to participate in the defense of such claim and to employ counsel of its choice  
31 for such purpose (the fees and expenses of such separate counsel to be borne by the Town) and  
32 to assert against any third party any and all cross claims and counterclaims the Town may have,  
33 subject to Licensee's consent, which consent shall not be unreasonably withheld. If Licensee  
34 elects to assume the defense of any such claim, it may settle such claim in its sole discretion so  
35 long as either (i) such settlement provides an unconditional release of the Town, or (ii) Licensee  
36 shall obtain the prior written consent of the Town (which consent shall not be unreasonably  
37 withheld). If Licensee elects to assume the defense of any claim, the Town shall fully cooperate  
38 with Licensee and its counsel in such defense.  
39

40 2. Indemnification.  
41

42 Licensee shall defend, indemnify and hold harmless the Town and its officials, employees and  
43 agents from and against any and all claims, demands, losses, suits, causes of action, damages,  
44 injuries, costs, expenses and liabilities whatsoever, including reasonable attorneys' fees (such  
45 liabilities together known as "Liability") arising out of Licensee's selection, construction,  
46 operation and removal of the Wind Turbines and affiliated equipment including, without  
47 limitation, Liability for property or personal injury (including death), whether said Liability is  
48 premised on contract or on tort (including without limitation strict liability or negligence). This  
49 general indemnification shall not be construed as limiting or qualifying the Town's other  
50 indemnification rights available under law.  
51  
52  
53  
54



1 **IX. STANDARDS**

2  
3 **A. Construction Standards.**

4  
5 Wind Turbines shall be constructed in compliance with Good Utility Practice for Wind Turbines. In  
6 the event after inspection by a qualified expert in Good Utility Practice, the Town concludes that any  
7 of the Wind Turbines were not constructed in compliance with Good Utility Practice or constitutes a  
8 danger to persons or property, then upon notice being provided, Licensee shall have 90 days to bring  
9 the non-compliant Wind Turbine(s) into compliance with such standards. If 90 days is insufficient  
10 time to cure the non-compliance, Licensee shall present a plan to the Town describing the reason for  
11 the delay and the time frame for the cure to be put in place. Failure to bring such non-compliant  
12 Wind Turbine(s) into compliance or failure to provide a plan for compliance within 90 days shall  
13 constitute grounds for the Town Board to order immediate removal of said Wind Turbine(s) at  
14 Licensee's expense.

15  
16 **B. Performance Standards.**

17  
18 Any Wind Energy System or Wind Energy System Facility shall be operated and maintained  
19 consistent with Good Utility Practice for comparable facilities.

20  
21 **C. State and Federal Standards.**

22  
23 Construction of Wind Turbines shall meet or exceed current standards and regulations, if any, of any  
24 other agency of the state or federal government with the authority to regulate wind powered  
25 generators. If such standards and regulations are changed and retroactive application is required for  
26 the change, then Licensee shall bring the Wind Turbine(s) into compliance with such applicable  
27 revised standards and regulations within 6 months of the effective date of such standards and  
28 regulations, unless a different compliance schedule is permitted by the controlling state or federal  
29 agency or approved by the Town. A Determination of No Hazard for each Wind Turbine must be  
30 obtained from the FAA for each Wind Turbine as a condition precedent to the receipt of a license  
31 under this ordinance.

32  
33 **D. Wind Turbine Safety Standards.**

34  
35 Licensee shall comply with the following safety standards:

- 36  
37 1. All wiring between the Wind Turbines and substations shall be installed at least four (4) feet  
38 underground.  
39  
40 2. The outside of Wind Turbines shall not be climbable.  
41  
42 3. All access doors to the towers and electrical equipment shall be locked.  
43  
44 4. Appropriate warning signage shall be placed on each tower, all electrical equipment, and all  
45 entrances.

46  
47 **X. REPAIR AND REPLACEMENT**

48  
49 Licensee shall be authorized to repair and replace the wind turbine generator and associated  
50 equipment consistent with Good Utility Practice during the Term of this License as needed to keep  
51 the Facility in good repair and operating condition. However, no such repair or replacement shall  
52 entitle Licensee to any extension of the Term of this License, even if it extends the useful life of the  
53 Facility. If Licensee desires to extend the term of this License in the future, Licensee shall be

1 required to apply for such extension or amendment of this License in accordance with the terms of  
2 this ordinance.  
3

4 **XI. PROCEDURES FOR ALTERATION OR REVOCATION OF LICENSED PREMISES.**  
5

6 **A. Amendment.**  
7

8 Following the granting of a license any licensee who wishes to materially alter any aspect of the  
9 licensed premises which was required to be described in the building plan or site plan required under  
10 this Section, shall apply to the Town Board for an amendment to the license. The application shall  
11 explain the nature of the alteration and the reasons therefore and include a non-refundable  
12 application fee. The Applicant shall pay the reasonably necessary engineering expenses, if any,  
13 associated with the review. The Town Board shall act on the amendment application consistent with  
14 the terms of this ordinance.  
15

16 **B. Revocation of License.**  
17

18 1. An unsafe WECS and an inoperable WECS is hereby declared a public nuisance, which shall be  
19 subject to abatement by repair, rehabilitation, demolition, or removal. An inoperable WECS shall  
20 not be considered a public nuisance provided the owner can demonstrate that modernization,  
21 rebuilding or repairs are in progress or planned and will be completed within no more than six  
22 months. During this six-month period, monthly reports shall be provided to the Town Board of  
23 Clay Banks.  
24

25 2. Each of the following occurrences shall constitute a violation of the terms and conditions of this  
26 License (a "Violation") and any such Violation shall be grounds for revocation of this License  
27 (whatever the reason for such an event of default and whether it shall be voluntary or  
28 involuntary or be effected by operation of law or pursuant to any judgment, order or regulation)  
29 after the expiration of the notice and cure period and revocation hearing as set forth below:  
30

31 a. The Licensee abandons the wind turbine generators located on the premises for a period of  
32 six months or more.  
33

34 b. The Licensee fails to observe or perform any material condition or provision of this License  
35 for a period of 30 days after it has received written notice of such failure from the Town;  
36 provided, however, that a Violation shall not occur if Licensee commenced performance of  
37 such obligation within such 30 day period and is diligently proceeding to complete such  
38 performance.  
39

40 c. There is a material failure by Licensee to comply with any statute, regulation, rule, or license  
41 administered by any federal, state or county department, agency, or commission directly  
42 related to the operation of the wind turbine generator, and if Licensee fails to cure the  
43 material failure to comply for a period of 30 days after the date Licensee receives written  
44 notice of such failure from the Town or the federal, state or local governmental body or  
45 agency with jurisdiction; provided, however, that a Violation shall not occur if Licensee  
46 commences performance of such obligation within such 30 day period and is diligently  
47 proceeding to complete such performance.  
48

49 3. Each Wind Turbine and all related improvements shall be removed in accordance with the  
50 Decommissioning and Site Restoration Plan submitted by the applicant and approved by the  
51 Town through the permitting process.  
52

53 4. The owner of a Wind Energy Facility and the underlying property owners shall be jointly liable  
54 for the removal of all equipment associated with the Wind Energy Facility at the end of the

1 permit period, the useful life of the facility, or when the facility is abandoned or otherwise out of  
2 operation for more than six months, at their expense. Upon removal of a Wind Energy Facility,  
3 the owner of the facility and the underlying property owners shall be jointly liable for restoration  
4 of the site to its original condition at their expense. To protect the environment, removal shall be  
5 done by mechanical means. Blasting is not an approved means for removal. The restoration  
6 shall include removal of all materials above and below ground; public road repair, if any; and all  
7 re-grading and re-vegetation necessary to return the subject property to the condition existing  
8 prior to establishment of the Wind Energy Facility. All hazardous materials shall be removed  
9 from the site and disposed of in accordance with state and federal laws.

10  
11 **C. Hearing.**

12  
13 The Town shall not revoke any License without first providing Licensee a hearing and the right to  
14 respond, including the right to present evidence regarding any defenses or extenuating circumstances  
15 (such as Applicant's prompt commencement of remedial measures that cannot reasonably be  
16 concluded within 30 days) regarding the alleged Violations or public or private nuisance.

17  
18 **XII. LICENSE EXPIRATION**

19  
20 Unless the Town Board authorizes a different term based upon analysis of the useful life of the Wind  
21 Energy Systems Facility, every license issued pursuant to this Section will terminate upon the  
22 expiration of twenty five years from the date of issuance.

23  
24 **XIII. FEES AND EXPENSES**

25  
26 **A. Tax Hold Harmless.**

27  
28 The parties acknowledge that the shared revenue payments payable to the Town under current state  
29 law may be revised or revoked by future Legislatures. In the event that the shared revenue payments  
30 payable to the Town are eliminated by the Legislature, Licensee will pay to the Town an amount not  
31 less than \$1,667 per megawatt per year for Wind Turbines actually installed and operating within the  
32 Town. Such payments shall be on an annual basis and payable on the 180<sup>th</sup> day after notice from the  
33 Town of Licensee's obligation to pay under this paragraph. Licensee's obligation to make such  
34 payments shall cease if the State adopts or implements a new mechanism to replace the shared  
35 revenue payments, to the extent that the new payment mechanism produces revenue not less than  
36 the revenue payable under the predecessor program.

37  
38 The parties acknowledge that the shared revenue payments referenced above are paid to the Town  
39 directly by the State of Wisconsin, not Licensee. Regardless, Licensee agrees to supplement the  
40 Town's annual shared revenue payments actually received by an amount equal to the annual  
41 percentage change of the Consumer Price Index as of January 1 of each calendar year beginning on  
42 the first January following the date that the Town receives its first payment. For purposes of this  
43 escalator clause, the Consumer Price Index means the U.S. Department of Labor, Bureau of  
44 Statistics, Consumer Price Index for the United States, All Urban Consumers, all items, unadjusted  
45 index.

46  
47 **B. Property Taxes**

48  
49 The parties acknowledge that the property tax exemption for WECS under current state law may be  
50 revised or revoked by future Legislatures. In the event that the property tax exemption for WECS is  
51 eliminated by the Legislature, Licensee will be responsible for all related assessments and taxes  
52 associated with the license and WECS site. Failure to pay such tax obligation shall be considered a  
53 non-compliance and subject to Section XI-B of this ordinance.  
54

1           **C. Reimbursement of Fees and Costs.**  
2

3           Licensee agrees to reimburse the Town's actual reasonable fees and costs incurred in the application,  
4           negotiation, administration and enforcement of this ordinance, including, without limitation, the  
5           Town's attorneys' fees, engineering consultant fees, Town Board meeting and hearing fees, and the  
6           costs of public notices relative to the review and considerations of each application filed by an  
7           applicant under this ordinance. The preceding fees are payable within 30 days of invoice. Unpaid  
8           invoices shall bear interest at the rate of 1% per month until paid. The Town may recover all  
9           reasonable costs of collection, including attorneys' fees.

10  
11           **XIV. WESF NEIGHBOR AGREEMENT**  
12

13           Licensee may offer to non-participating landowners the opportunity to enter into a Windpower  
14           Facilities Neighbor Agreement, provided:

- 15  
16           1. Landowner has not otherwise entered into a Ground Lease, Easement or Setback Waiver  
17           Agreement with Licensee.  
18  
19           2. Has a primary residence or private business located within the setbacks provided for under  
20           Section VI-K and VI-K-(c) of this ordinance.  
21  
22           3. Owns the property in fee simple and has applied for a building permit on or before the issuance  
23           of a license pursuant to this ordinance. A landowner who enters into such an agreement is not a  
24           Participating Residence for purposes of this ordinance.  
25

26           The terms and form of such agreements shall be subject to negotiation between the Licensee and  
27           non-participating landowners who may be interested in such an agreement. However, such  
28           agreements, once signed, shall be subject to review and approval by the Town Board.  
29

30           **XV. ADMINISTRATION and ENFORCEMENT**  
31

- 32           A. This ordinance shall be administered by the Town Board or its designee.  
33  
34           B. The Town Board or its designee may enter upon any property for which a licensing permit has been  
35           issued under this ordinance to conduct inspections to determine whether the conditions stated in the  
36           permit and other standards and requirements of this ordinance are being complied with.  
37  
38           C. The Town Board or its designee may issue orders to abate any violation of this ordinance or any  
39           condition attached to a licensing permit approved by the Town Board.  
40  
41           D. The Town Board or its designee may issue a citation for any violation of this ordinance. The Town  
42           Board may refer any violation of this ordinance to the Town's legal counsel or to special counsel for  
43           enforcement. Nothing in this ordinance shall be construed to prevent or limit the Town from using  
44           any other lawful means of enforcing this ordinance.  
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46           **XVI. PENALTIES**  
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48           Any person, applicant or licensee who fails to comply with any provision of this ordinance or of any  
49           licensing permit issued pursuant to this ordinance shall, upon conviction thereof, forfeit at least five-  
50           hundred dollars (\$500.00) but not more than one-thousand dollars (\$1,000.00) for each offense. A  
51           separate offense shall be deemed committed on each day during which a violation occurs or  
52           continues. Any person, applicant or licensee who is in default of payment of forfeiture or costs may  
53           be imprisoned in the county jail until the forfeiture or costs are paid, except that the period of  
54           imprisonment may not exceed thirty (30) days.

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**XVII. RELATIONSHIP to OTHER ORDINANCES**

This ordinance does not abrogate, annul, impair, interfere with, or repeal any existing ordinance of the Town.

**XVIII. SEVERABILITY**

The provisions of this ordinance are severable, and the invalidity of any section, subdivision, paragraph, or other part of this ordinance shall not affect the validity or effectiveness of the remainder of the ordinance.

**XIX. EFFECTIVE DATE**

This ordinance shall take effect upon passage and posting or publication as provided by law.

Adopted this \_\_\_\_ day of \_\_\_\_\_ 2008.

\_\_\_\_\_  
Myron Johnson, Chairman

\_\_\_\_\_  
Mark Heimbecher, Supervisor

\_\_\_\_\_  
Patrick Olson, Supervisor

\_\_\_\_\_  
Attest: Jessica Bongle, Clerk  
Town of Clay Banks

Date Posted: \_\_\_\_\_

**REFERENCES**

1  
2  
3 Impacts of Wind-Energy Development on Humans & Planning & Regulating Wind-Energy Development,  
4 National Research Council of The National Academies, 2007, the Environmental Impacts of Wind-Energy  
5 Projects.  
6  
7 Lincoln Wind Energy Project Acoustic Sound Measurement Report, Sanchez & Bajdek,(2001)  
8  
9 Wind Turbines, Noise and Health, Harry,(2007)  
10  
11 Noise Radiation from Wind Turbines Installed Near Homes: Effects on Health, By Barbara J Frey, BA, MA  
12 and Peter J Hadden, BSc, FRICS, 2007  
13  
14 Sound Source, Vol.1,Issues 4, (2005)  
15  
16 Shadow Casting from Wind Turbines, Danish Wind Industry Association, www.windpower.org  
17  
18 Commercial Wind Energy Facility & Wind Access Model Ordinance, Town of Barton, Washington County,  
19 WI  
20  
21 Retexo International Sales Promotion  
22  
23 Protective Noise Levels, Condensed Version of EPA Levels Document, (1978)  
24  
25 Noise Exposure and Public Health, *Environmental health perspectives*,(2000)  
26  
27 Guidelines for Community Noise, WHO document,(1994)  
28  
29 Wind Energy Conversion System Ordinance, Shawano County, WI  
30  
31 Notes on low frequency noise from wind turbines with special reference to the Genesis Power Ltd proposal,  
32 near Waiuku NZ, Leventhall,(2004)  
33  
34 Vibroacoustic Disease, lowertheboom.org  
35  
36 Infrasound, lowertheboom.org  
37  
38 Impact of Wind Farms on Public Health, Kansas Legislative Research Department, (2007)  
39  
40 Impacts on Emissions, Wildlife, and Humans, News, The National Academies, (2007)  
41  
42 Sound Level Measurement and Analysis, and Acoustical Recommendations Report, Whitehead, (2006)  
43  
44 Environmental Noise Assessment Pubnico Point Wind Farm, Nova Scotia, HGC Engineering, ( 2006)  
45  
46 Health, Hazard, and Quality of Life Near Wind Power Installations. How Close is Too Close?, Pierpont,  
47 (2005)  
48  
49 Wind Energy Syndrome, Pierpont, (2006)  
50  
51 Wind Generator and Wind Generating Facility Ordinance for Trempealeau County  
52 Trempealeau County, WI  
53  
54 Californian Wind Energy Collaborative Forum 2004, ucdavis.edu

Approved by Committee on May 3, 2008 - Scheduled for June Town Board Meeting

- 1
- 2 Report from the Bethany Wind Turbine Study Committee, (2007)
- 3
- 4 Standard Guide for Selection of Environmental Noise Measurements and Criteria (Designation E 1686-96).
- 5 July 1996. American Society for Testing and Measurements.
- 6
- 7 Measurement Protocol for Sound and Vibration Assessment of Proposed and Existing Electric Power Plants.
- 8 February 2002. Public Service Commission of Wisconsin.
- 9
- 10 Environmental Noise Guidelines: Wind Farms. (ISBN 1 876562 43 9). February 2003. Environment
- 11 Protection Authority, Adelaide SA.
- 12
- 13 Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with and
- 14 Adequate Margin of Safety, Environmental Protection Agency, March 1974
- 15
- 16 Human Response to Wind Turbine Noise, Department of Health and Community Medicine, Eja Pederson,
- 17 The Sahlgrenska Academy, Goteborg 2007
- 18
- 19 Large Wind Energy System Ordinance, Manitowoc County, October 2007
- 20
- 21 Model Wind Ordinance Reference Guide, Wisconsin PSC, April 2007
- 22
- 23 Wind Energy Model Ordinance, NYS Energy Research & Development Authority, October 2005
- 24
- 25 Permitting of Wind Energy Facilities, National Wind Coordinating Committee, 2002
- 26
- 27 Technical Considerations in Siting Wind Developments, NWCC Research Meeting, Dec. 1-2, 2005,
- 28 Washington, D.C.
- 29
- 30 Madison Gas & Electric, [www.mge.com/environment/wind/](http://www.mge.com/environment/wind/)
- 31
- 32 Vestas, [www.vestas.com](http://www.vestas.com)
- 33
- 34 Dawes Cranes, [www.dawescraneloadscharts.com/crawler-cranes/1600-manitowoc.pdf](http://www.dawescraneloadscharts.com/crawler-cranes/1600-manitowoc.pdf)
- 35
- 36 Firetrace, [www.firetrace.com/windturbines.html](http://www.firetrace.com/windturbines.html)
- 37
- 38 A Study of Wind Energy Development in Wisconsin, Prepared for: State of Wisconsin Department of
- 39 Administration, Division of Energy, July 1, 2004
- 40
- 41 Wind Energy Easements and Leases: Best Practices and Policy Recommendations, [www.windustry.org](http://www.windustry.org)
- 42
- 43 International Standards Organization, ISO 1996-1971, Recommendations for Community Noise Limits
- 44