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Office of County Recorder
Traverse County, Minnesota
I hereby certify that the within instrument
was filed December 17, 2009 at 4:00 PM
LeAnn Peyton, Traverse County Recorder
By: Le Ann Peyton
Deputy County Recorder

Traverse County

Wind Power Management Ordinance

2009

TRAVERSE COUNTY
WIND POWER MANAGEMENT ORDINANCE, 2009

ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS OCTOBER 20, 2009

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COUNTY ATTORNEY

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The County Board of Commissioners, Traverse County, Minnesota, does ordain:

SECTION 26
WIND POWER MANAGEMENT ORDINANCE

26.00 WIND POWER MANAGEMENT

26.01 General Provisions

1. **Purpose.** This ordinance is established to regulate the installation and operation of Wind Energy Conversion Systems (WECS) within Traverse County not otherwise subject to siting and oversight by the State of Minnesota under the Minnesota Power Plant Siting Act (MS 116C.51-116C.697.)

2. **Severability.** The provisions of this Ordinance shall be severable, and the invalidity of any paragraph, subparagraph or subdivision thereof, shall not make void any other paragraph, subparagraph or subdivision of this Ordinance.

3. **Enforcement, Violations, Remedies and Penalties.** Enforcement of the Wind Energy Conversion System Ordinance shall be done in accordance with process and procedures established in Section 7 of the Traverse County Land Use Ordinances, 2000.

4. **Definitions** For the purpose of this Ordinance, certain words and terms used herein are defined below:

   Aggregated Project: Aggregated projects are those which are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also included as part of the aggregated project.

   Bluff: A steep bank having an "E" slope as defined and mapped in the official Soil Survey of Traverse County, Minnesota.

   Commercial WECS: A WECS of equal to or greater than 100 kW in total name plate generating capacity.

   Fall Zone: The area, defined as the furthest distance from the tower base, in which a tower will collapse in the event of a structural failure. This area is less than the total height of the structure.

   Feeder Line: Any power line that carries electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the point of interconnection with the electric power grid, in the case of interconnection with the high voltage transmission systems the point of interconnection shall be the substation serving the WECS.

Meteorological Tower: For the purposes of this Wind Energy Conversion System Ordinance, meteorological towers are those towers which are erected primarily to measure wind speed and directions plus other data relevant to siting WECS. Meteorological towers do not include towers and equipment used by airports, the Minnesota Department of Transportation, or other similar applications to monitor weather conditions.

Micro-WECS: Micro-WECS are WECS of 1 kW nameplate generating capacity or less and utilizing supporting towers of 40 feet or less.

Non-Commercial WECS: A WECS of less than 100 kW in total name plate generating capacity and having a total height of less than 200 feet.

Property Line: The boundary line of the area over which the entity applying for a WECS permit has legal control for the purposes of installation of a WECS. This control may be attained through fee title ownership, easement, or other appropriate contractual relationship between the project developer and landowner.

Public Conservation lands: Land owned in fee title by State or Federal agencies and managed specifically for grassland conservation purposes, including but not limited to State Wildlife Management Areas, State Parks, State Scientific and Natural Areas, federal Wildlife Refuges and Waterfowl Production Areas. For the purposes of this section public conservation lands will also include lands owned in fee title by non-profit conservation organizations.

Rotor Diameter: The diameter of the circle described by the moving rotor blades.

Substations: Any electrical facility designed to convert electricity produced by wind turbines to a voltage greater than 35,000 volts (35 KV) for interconnection with high voltage transmission lines shall be located outside of the right of way.

Total Height: The highest point, above ground level, reached by a rotor tip or any other part of the WECS.

Tower: Towers include vertical structures that support the electrical generator, rotor blades, or meteorological equipment.

Tower Height: The total height of the WECS exclusive of the rotor blades.

Transmission Line: Those electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.

WECS – Wind Energy Conversion System: An electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: Power lines, transformers, substations and metrological towers that operate by converting the kinetic energy of wind into electrical energy. The energy may be used on-site or distributed into the electrical grid.

Wind Turbine: A wind turbine is any piece of electrical generating equipment that convert the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

26.02 Procedures

1. **Permits.** Land Use Permits, Conditional Use Permits, and Variances shall be applied for and reviewed under the procedures established in Sections 11, 13, and 14 of the Traverse County Land Use Ordinances, 2000, except where noted below.

   A. The application for all WECS shall include the following information:
      1) The names of project applicant
      2) The name of the project owner
      3) The legal description and address of the project
      4) A description of the project including: Number, type, nameplate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid, and all related accessory structures. The site layout shall include distances and be drawn to scale.
      5) Manufacturer's Certification
      6) Documentation of land ownership or legal control of the property

   B. The application for Commercial WECS shall also include:
      1) The latitude and longitude of individual wind turbines, and meteorological towers.
      2) A USGS topographical map, or map with similar data, of the property and surrounding area, including any other WECS within 10 rotor diameters of the proposed WECS.
      3) FAA Permit Application
      4) Location of all known Communications Towers within 2 miles of the proposed WECS.
      5) Decommissioning Plan
      6) Description of potential impacts on nearby WECS and wind resources on adjacent properties.
      7) Engineer's Certification

2. **Aggregated Projects**

   A. **Procedures.** Aggregated Projects may jointly submit a single application and be reviewed under joint proceedings, including notices, hearings, reviews and as appropriate approvals. Permits will be issued and recorded separately. Joint applications will be assessed fees as one project. Aggregated projects having a combined capacity equal to or greater than the threshold for State oversight as set forth in MS Statute 116C.691 through 116C.697 shall be regulated by the State of Minnesota.

26.03 District Regulations

1. **Regulations.** WECS will be permitted, conditionally permitted or not permitted based on the generating capacity and land use district as established in the table below:

   A. Non-Commercial WECS and Meteorological towers shall require a conditional use permit if 200 feet or more in height.

District	Non-Commercial	Commercial	Meteorological	Micro-Turbines
Commercial/Industrial	Permitted	CUP	Permitted	Permitted
Shoreland	CUP	Not Permitted	Not Permitted	CUP
Agricultural	Permitted	Permitted	Permitted	Permitted

26.04 Setbacks

Setback to:	Wind Turbine Non-Commercial and Micro-turbines	Wind Turbine Commercial	Meteorological Towers
Property with No Signed Project Lease Agreement (Non-Participating)	1.1 times the total height	3 times the Rotor Diameter (RD) in the non-prevailing wind axis and 5 RD in the prevailing wind axis	1.1 times the total height
Occupied Dwelling on Property with Signed Project Lease Agreement (Participating)	N/A	500 feet and/or sufficient distance to meet state noise standards pursuant Minnesota Rule 7030*	1.1 times the total height
Road Rights-of-Way (no guide wire anchors will be allowed within the right-of way)	1.1 times the total height or 150' to the center of the abutting road, whichever is greater **	1.1 times the total height or 150' to the center of the abutting road, whichever is greater **	1.1 times the total height or 150' to the center of the abutting road, whichever is greater **
Other Rights-of-Way	1.1 times the total height	1.1 times the total height	1.1 times the total height
Public Conservation Land	N/A	600 feet	600 feet
Wetlands (Type 3, 4 & 5)	N/A	600 feet	600 feet
Other Structures	N/A	1.1 times the total height	1.1 times the total height
Existing WECS	N/A	To be considered ***	N/A
Lake Traverse	¼ mile minimum; 0 on micro-turbines	¼ mile minimum; per setbacks in CUP	¼ mile

* The setback for dwellings shall be reciprocal in that no dwelling shall be constructed within 500 feet of a commercial wind turbine.

** The setback shall be measured from future rights-of-way if a planned change or expanded right-of-way is known.

*** Consideration will be based upon:

1) Relative size of the existing and proposed WECS
2) Alignment of the WECS relative to the predominant winds
3) Topography
4) Extent of wake interference impacts on existing WECS
5) Property line setback of existing WECS
6) Other setbacks required

Waived for internal setbacks in multiple turbine projects including aggregated projects.

1. **Substations and Accessory Facilities.** Setback standards for substations and feeder lines shall be established by the procedure outlined in Section 8, Essential Services, of the Traverse County Land Use Ordinances, 2000.

26.05 REQUIREMENTS AND STANDARDS

1. **Safety Design Standards**

A. Engineering Certification – For all WECS', the manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.

B. Clearance – Rotor blades or airfoils must maintain at least 12 feet of clearance between their lowest point and the ground.

C. Warnings – For all Commercial WECS, a sign or signs shall be posted on the tower, transformer and substation warning of high voltage. Signs with emergency contact information shall also be posted on the turbine or at another suitable point.

D. All meteorological towers shall be marked and painted in the following manner:

1) The top portion of all meteorological towers shall be painted aviation orange.

2) All guyed towers shall have:
   a. Two marker balls shall be attached on each of the outside guy wires.
   b. A flashing red light at the top of the tower.
   c. A seven foot safety sleeve at each anchor point.

d. Have a 7 foot safety sleeve at each anchor point on #1, #4, and #6; plus one sleeve located 6' outside the outside anchor, and one sleeve at the lift anchor.

2. **Standards.** Total height – Non-Commercial WECS shall have a total height of less than 200 feet.

A. Tower Configuration

1) All wind turbines, which are part of a commercial WECS, shall be installed with a tubular, monopole type tower.

2) Meteorological towers may be guyed.

B. Color and Finish – All commercial wind turbines shall be white, grey or another non-obtrusive color. Blades may be black in order to facilitate de-icing. Finishes shall be matte or non-reflective. Exception may be made for meteorological towers, where concerns exist relative to aerial spray applicators.

C. Lighting – Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by Federal Aviation Administration permits and regulations. Red strobe lights are preferred for night-time illumination to reduce impacts on migrating birds. Red pulsating incandescent lights should be avoided. Exception may be made for meteorological towers, where concerns exist relative to aerial spray applicators.

D. Other Signage – All signage on site shall comply with Section 19 of the Traverse County Land Use Ordinances, 2000. The manufacturer's or owner's company name and/or logo must be placed upon the nacelle, compartment containing the electrical generator, of the WECS.

E. Feeder Lines – All communications and feeder lines, equal to or less than 34.5 kV in capacity, installed as part of a WECS shall be buried where reasonably feasible. Feeder lines installed as part of a WECS shall not be considered an essential service. This standard applies to all feeder lines subject to Traverse County authority.

F. Waste Disposal – Solid and Hazardous wastes, including but not limited to crates, packaging materials, damaged or worn out parts, as well as used oils and lubricants, shall be removed from the site promptly and disposed of in accordance with all applicable local, state and federal regulations.

G. Discontinuation and Decommissioning - A WECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Traverse County Zoning Administrator outlining the steps and schedule for returning the WECS to

service. All WECS and accessory facilities shall be removed to four feet below ground level within 90 days of the discontinuation of use.

Each Commercial WECS shall have a Decommissioning plan outlining the anticipated means and cost of removing WECS at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a competent party; such as a Professional Engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the WECS and accessory facilities.

3. **Orderly Development**. Upon issuance of a conditional use permit, all Commercial WECS shall notify the Environmental Quality Board Power Plant Siting Act program staff of the project location and details on the survey form specified by the Environmental Quality Board.

4. **Other Applicable Standards**

   A. Noise – All WECS shall comply with Minnesota Rules 7030 governing noise.

   B. Electrical Codes and Standards – All WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.

   C. Federal Aviation Administration – All WECS shall comply with FAA standards and permits.

5. **Interference.** The applicant shall minimize or mitigate interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by any WECS. The applicant shall notify all communication tower operators within two miles of the proposed WECS location upon application to the county for permits. No WECS shall be constructed so as to interfere with County or Minnesota Department of Transportation microwave transmissions.

6. **Avoidance and Mitigation of Damages to Public Infrastructure**

   A. Roads. Applicants shall:

      1) Identify all county, city or township roads to be used for the purpose of transporting WECS, substation parts, cement, and/or equipment for construction, operation or maintenance of the WECS and obtain applicable weight and size permits from the impacted road authority(ies) prior to construction.

      2) Conduct a pre-construction survey, in coordination with the impacted local road authority(ies) to determine existing road conditions. The

survey shall include photographs and a written agreement to document the condition of the public facility.

3) Be responsible for restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) and bridges to preconstruction conditions.

B. Drainage System. The Applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the WECS.

ADOPTION OF ORDINANCE

This Ordinance shall become effective and be in force from and after its passage, approval, publication and recording in the office of the County Recorder.

Recommended by the Planning Commission, Traverse County the 24th day of June, 2009.

Jerome Deal, Chairperson
Traverse County Planning Commission

Passed and approved by the Board of County Commissioners, Traverse County, Minnesota, this 20th day of October, 2009.

Gerald Kaus, Chairman
Traverse County Board of Commissioners

Attest:

Janet Raguse, Traverse County Coordinator

I, Janet Raguse, do hereby certify that this is a true and correct copy of the Traverse County Wind Power Ordinance as passed by the Board of Commissioners on October 20th, 2009.

I further certify that on the 20th day of October, 2009, the County Commissioners duly approved a Summary of the foregoing Ordinance to be published, pursuant to Minn. Stat. 375.51, Subd. 3.

Janet Raguse, Traverse County Coordinator

Date of publication of Summary of Ordinance: October 27, 2009.

Filed in the Office of the County Recorder, Traverse County, Minnesota, this _____ day _____, 2009.