

AN ORDINANCE
TO AMEND THE TEXT OF THE DICKSON TOWNSHIP
ZONING ORDINANCE OF MARCH 1987,
AS AMENDED THROUGH JUNE 13, 2007
TO ACCOMMODATE INSTALLATION
OF WIND ENERGY CONVERSION SYSTEMS

THE TOWNSHIP OF DICKSON, MANISTEE COUNTY, MICHIGAN, ORDAINS:

1. The Ordinance shall be amended to add to section 503 the following definitions:

ANEMOMETER TOWER means a freestanding tower containing instrumentation such as anemometers that is designed to provide present moment wind data for use by the supervisory control and data acquisition (SCADA) system which is an accessory land use to a Utility Grid Wind Energy System.

AMBIENT means the sound pressure level exceeded 90% of the time or L_{90} .

ANSI means the American National Standards Institute.

dB(A) means the sound pressure level in decibels. It refers to the "a" weighted scale defined by ANSI. A method for weighting the frequency spectrum to mimic the human ear.

DECIBEL means the unit of measure used to express the magnitude of sound pressure and sound intensity.

IEC means the International Electrotechnical Commission.

ISO means the International Organization for Standardization.

LEASE UNIT BOUNDARY means boundary around property leased for purposes of a Wind Energy System, including adjacent parcels to the parcel on which the Wind Energy System tower or equipment is located. For purposes of setback, the Lease Unit Boundary shall not cross road right-of-ways.

ON-SITE WIND ENERGY SYSTEM means a land use for generating electric power from wind and is an accessory use that is intended to primarily serve the needs of the consumer at that site.

ROTOR means an element of a wind energy system that acts as a multi-bladed airfoil assembly, thereby extracting through rotation, kinetic energy directly from the wind.

- exceeds 55 dB(A), the standard shall be ambient dB(A) plus 5 dB(A).
- E. **Construction Codes, Towers & Interconnection Standards:** On-site Use Wind Energy systems including towers shall comply with all applicable state construction and electrical codes and local building permit requirements. On-site Use Wind Energy Systems including towers shall comply with Federal Aviation Administration requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 *et. seq.*), the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 *et. seq.*), and local jurisdiction airport overlay zone regulations. An interconnected On-site Use Wind Energy System shall comply with Michigan Public Service Commission and Federal Energy Regulatory Commission standards. Off-grid systems are exempt from this requirement.
 - F. **Safety:** An On-site Use Wind Energy System shall have automatic braking, governing, or a feathering system to prevent uncontrolled rotation or over speeding. All wind towers shall have lightning protection. If a tower is supported by guy wires, the wires shall be clearly visible to a height of at least six feet above the guy wire anchors. The minimum vertical blade tip clearance from grade shall be 20 feet for a wind energy system employing a horizontal axis rotor.

3. The Ordinance shall be amended to add section 1611.

1611. Utility Grid Wind Energy System, On-Site Use Wind Energy System over 66 Feet High, and Anemometer Towers over 66 Feet High.

A Utility Grid Wind Energy System, On-site Use Wind Energy System over 66 feet high, and Anemometer Towers over 66 feet high shall meet the following standards in addition to the general special use standards (Section 8608 of this ordinance):

- A. **Property Setback:**
 - 1. Anemometer Tower setback shall be the greater distance of the following:
 - a. The setback from property lines of the respective zoning district;
 - b. The setback from the road right-of-way; and
 - c. A distance equal to the height of the tower from property lines or from the lease unit boundary, whichever is less.
 - 2. Utility Grid and On-site Use Wind Energy System setback shall be the greater distance of the following:
 - a. The setback from property lines of the respective zoning district;
 - b. The setback from the road right-of-way; and
 - c. A distance equal to the height of the tower including the top of the blade in its vertical position from property lines or from the lease unit boundary, whichever is less.
 - 3. An operations and maintenance office building, a sub-station, or ancillary equipment shall comply with any property setback

- ii. *seq.*),
- ii. Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 *et. seq.*),
- iii. Part 301 Inland Lakes and Streams (MCL 324.30101 *et. seq.*),
- iv. Part 303 Wetlands (MCL 324.30301 *et. seq.*),
- v. Part 323 Shoreland Protection and Management (MCL 324.32301 *et. seq.*),
- vi. Part 325 Great Lakes Submerged Lands (MCL 324.32501 *et. seq.*), and
- vii. Part 353 Sand Dunes Protection and Management (MCL 324.35301 *et. seq.*)

as shown by having obtained each respective permit with requirements and limitations of those permits reflected on the site plan.

- F. **Performance Security:** Performance security, pursuant to Section 8611 of the Ordinance, shall be provided by the applicant for making repairs to public roads damaged by the construction of the wind energy system.
- G. **Utilities:** Power lines should be placed underground, when feasible, to prevent avian collisions, and electrocutions. All above-ground lines, transformers, or conductors should comply with the Avian Power Line Interaction Committee (APLIC, <http://www.aplic.org/>) published standards to prevent avian mortality.
- H. The following standards apply only to Utility Grid Wind Energy Systems:
 - 1. **Visual Impact:** Utility Grid Wind Energy System projects shall use tubular towers and all Utility Grid Wind Energy Systems in a project shall be finished in a single, non-reflective matte finished color. A project shall be constructed using wind energy systems of similar design, size, operation and appearance throughout the project. No lettering, company insignia, advertising, or graphics shall be on any part of the tower, hub, or blades. Nacelles may have lettering that exhibits the manufacturer's and/or owner's identification. The applicant shall avoid state or federal scenic areas and significant visual resources listed in the local unit of government's Plan.
 - 2. **Avian and Wildlife Impact:** Site plan and other documents and drawings shall show mitigation measures to minimize potential impacts on avian and wildlife, as identified in the Avian and Wildlife Impact Analysis.
 - 3. **Shadow Flicker:** Site plan and other documents and drawings shall show mitigation measures to minimize potential impacts from shadow flicker, as identified in the Shadow Flicker Impact Analysis.
 - 4. **Decommissioning:** A planning commission approved decommissioning plan indicating 1) the anticipated life of the project, 2) the estimated decommissioning costs net of salvage value in

9. The Ordinance shall be amended to add to section 5402 a new subsection BB. (Residential-Commercial District):

BB. On-site Wind Energy System.

10. The Ordinance shall be amended to add a new section 9408 and recodify the remainder of the article:

9408. Site Plans for Anemometer Tower, Utility Grid Wind Energy System, and On-site Use Wind Energy System.

In addition to the requirements for a site plan found in sections 9404, 9405 and 9406 of the Ordinance, site plans and supporting documents for Anemometer Tower, Utility Grid Wind Energy System, and On-site Use Wind Energy Systems which are over 66 feet high shall include the following additional information:

- A. Documentation that sound pressure level, construction code, tower, interconnection (if applicable), and safety requirements have been reviewed and the submitted site plan is prepared to show compliance with these issues.
- B. Proof of the applicant's public liability insurance for the project.
- C. A copy of that portion of all the applicant's lease(s) with the land owner(s) granting authority to install the Anemometer Tower and/or Utility Grid Wind Energy System; legal description of the property(ies), Lease Unit(s); and the site plan shows the boundaries of the leases as well as the boundaries of the Lease Unit Boundary.
- D. The phases, or parts of construction, with a construction schedule.
- E. The project area boundaries.
- F. The location, height and dimensions of all existing and proposed structures and fencing.
- G. The location, grades and dimensions of all temporary and permanent on-site and access roads from the nearest county or state maintained road.
- H. All new infrastructure above ground related to the project.
- I. A copy of Manufacturers' Material Safety Data Sheet(s) which shall include the type and quantity of all materials used in the operation of all equipment including, but not limited to, all lubricants and coolants.
- J. For Utility Grid Wind Energy Systems only:
 - 1. A copy of a noise modeling and analysis report and the site plan shall show locations of equipment identified as a source of noise which is placed, based on the analysis, so that the wind energy system will not exceed the maximum permitted sound pressure levels. The noise modeling and analysis shall conform to IEC 61400 and ISO 9613. After installation of the Utility Grid wind energy system, sound pressure level measurements shall be done by a third party, qualified professional according to the procedures in the most current version of ANSI S12.18. All sound pressure levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI

6. A second site plan, which includes all the information found in sections 9404, 9405, and 9406 of this Ordinance, and shows the restoration plan for the site after completion of the project which includes the following supporting documentation:
 - a. The anticipated life of the project.
 - b. The estimated decommissioning costs net of salvage value in current dollars.
 - c. The method of ensuring that funds will be available for decommissioning and restoration.
 - d. The anticipated manner in which the project will be decommissioned and the site restored.
7. A description of the complaint resolution process developed by the applicant to resolve complaints from nearby residents concerning the construction or operation of the project. The process may use an independent mediator or arbitrator and shall include a time limit for acting on a complaint. The process shall not preclude the local government from acting on a complaint. During construction the applicant shall maintain and make available to nearby residents a telephone number where a project representative can be reached during normal business hours.

Renumber section 9408 to 9409; section 9409 to 9410; section 9410 to 9411; section 9411 to 9412; section 9412 to 9413; section 9413 to 9414; section 9414 to 9415; section 9415 to 9416; and section 9416 to 9417.

