

**CLEVELAND TOWNSHIP
ORDINANCE NO. 1 of 2007
Draft 12 – March 20, 2007, as amended April 4th, 2007**

**PROPOSED AMENDMENT TO THE CLEVELAND TOWNSHIP ZONING
ORDINANCE TO ESTABLISH GUIDELINES AND STANDARDS FOR THE SITING
OF ON SITE USE WIND ENERGY SYSTEMS, ANEMOMETERS AND RELATED
DEVICES AND STRUCTURES**

THE TOWNSHIP OF CLEVELAND ORDAINS:

Amendment 1. The Cleveland Township Zoning Ordinance is hereby amended. A new Section 4.23 shall read as follows:

Section 4.23 Wind Energy Systems

Purpose and Intent: This Section establishes general guidelines and standards for the siting and use of wind energy systems, anemometers and related devices and structures. This Section is intended to be used as part of the Zoning Ordinance, to further the conservation and preservation of the Township's natural and undeveloped areas and preservation of scenic resources and to minimize adverse impacts of wind energy systems on neighbors and nearby property owners and to limit such systems to those specific locations in the Township which are most likely to provide for the needs of one's home, home business and/or farm.

1. Further, the intended purpose is to
 - a. Allow the use of wind energy system towers and anemometers of limited height.
 - b. Protect residential areas from any potentially adverse visual or noise impacts of wind energy systems or related devices and structures.
 - c. Provide for a land use that will provide an energy source with low associated environmental impacts.
 - d. Provide for the removal of abandoned or noncompliant wind energy turbine generator towers, anemometer towers, and/or related devices or structures.
2. Definitions:
 - a. Anemometer: An instrument for measuring wind speed. This definition includes an anemograph.

- b. Anemometer Tower: A structure, including all accessory facilities, on which an anemometer is mounted.
- c. Wind Energy System: A wind energy conversion system which converts wind energy into electricity through the use of a wind turbine generator and includes the turbine, blades and tower as well as related electrical equipment.
- d. Wind Energy System Tower Height: The distance between the ground and the highest point of the wind energy system tower including the top of the blade in its vertical position
- e. On Site Use Wind Energy System: An On Site Use Wind Energy System is primarily intended to serve the electrical needs of the consumer at the site of the wind energy system.

3. Applicability

Anemometer towers and wind energy system towers shall be permitted land uses exclusively in the Districts outlined in Table 4.23.1 and subject to the requirements of Sections 4.23.4 and 4.23.5.

Table 4.23.1 Summary of Applicability

Districts	Agricultural District	Residential District R1	Residential District R2	Residential District R3	Business District B1	Business District B2	Commercial Resort District	Recreational District	Government
Allowed	Yes	Yes	Yes	No	No	Yes	No	No	No

4. Requirements

- a. Minimum Site Area: The minimum site area for an anemometer tower or wind energy system tower shall be as necessary to meet required setbacks and any other applicable standards of this Ordinance. A wind energy system site may include more than one abutting parcel.
- b. Setbacks: Each proposed anemometer tower or wind energy system shall be set back from any adjoining site property line or road right-of-way a minimum distance of 1.5 times the wind energy system tower height, however side and/or rear setbacks may be waived or reduced if the property owner of the abutting/affected property provides written permission to do so. If adjoining property owners wish to share a tower then the site area shall be the area within the combined parcels, and the

setback requirements shall be established based upon the perimeter of the combined parcels.

- c. **Maximum Height:** The maximum height of an anemometer tower or wind energy system tower shall be one-hundred-twenty-five (125) feet.
- d. **Minimum Rotor Wind Vane or Blade Clearance:** The lowest point of the arc created by rotating wind vanes or blades on a wind energy system shall be no less than twenty-five (25) feet or 1/3 of the tower height, whichever is greater, above the ground
- e. **Maximum Noise Levels:** Any proposed wind energy system shall produce sound levels of no more than fifty (50) decibels as measured on the dB(A) scale at the property lines of the site in question. A noise report must be submitted with any application for an anemometer tower, or wind energy system tower.
- f. **Maximum Vibration:** Any proposed wind energy system shall not produce ground vibrations humanly perceptible beyond the property on which it is located.
- g. **Transmission Lines:** Any on-site electrical transmission lines connecting the wind energy system to the public utility electricity distribution system shall be located underground.
- h. **Interference with Reception:** Wind energy systems shall be constructed and operated so that they do not interfere with television, radio, microwave or navigational reception of neighboring areas.
- i. **County, State or Federal Requirements:** Any proposed anemometer tower, or wind energy system tower shall fulfill or exceed any standards and regulations of the Leelanau County Inspections Department, FAA, Michigan Public Service Commission, National Electric Safety Code and any other agency of the State or Federal Government with the authority to regulate wind energy systems or other such structures that are in effect at the time the land use permit is approved.
- j. **Aesthetics and Lighting:** Any proposed anemometer tower or wind energy system tower shall fulfill the following requirements:
 - 1. Each anemometer tower, or wind energy system tower including all accessory structures shall maintain either a galvanized steel finish or be painted a neutral color so as to reduce visual obtrusiveness.

2. Each anemometer tower, or wind energy system tower shall not be artificially lighted, unless required by the FAA, FCC or other governmental agencies
 3. Each anemometer tower or wind energy system tower may be a monopole, monolithic tube or lattice style construction.
- k. Signs: The wind energy system tower or anemometer tower owner is responsible for updating and maintaining a sign at least one (1) square foot and no more than two (2) square feet in area that shall provide the owner's name, address and telephone number for emergency calls. The sign shall have at least one half inch (1/2") high letters and be posted on the anemometer tower or wind energy system tower not more than eight (8) feet off the ground. No advertising of any type shall be displayed at the site.
- l. Non-essential Services: Any anemometer tower or wind energy system shall be regulated and permitted pursuant to this Article of the Cleveland Township Zoning Ordinance and shall not be regulated and permitted as essential services, public utilities or private utilities.
- m. Abandoned or Unsafe Anemometer Tower or Wind Energy System:
1. Any anemometer or wind energy system that is inoperative for a continuous period of three-hundred-sixty-five (365) days shall be considered abandoned.
 2. The owner of any anemometer or wind energy system that is abandoned or in violation of the Requirements in this Section 4.23 shall rectify the violation or remove the tower from the property within ninety (90) days of the receipt of a notice of abandonment or violation from the Cleveland Township Zoning Administrator.
 3. The landowner shall restore the site to its condition prior to location of any anemometer or wind energy system or associated structures, related devices and their foundations on site and this shall be accomplished at the expense of the current land owner(s).

5. Land Use Permit Requirements

- a. Standards of Approval: All wind energy systems shall comply with the following standards for approval:
1. The use shall fulfill all requirements listed above in Section 4.23.4.
 2. There shall be a signed agreement with the Cleveland Township Board to ensure full conformance with the standards of this Section and to ensure removal of any abandoned or unsafe/dangerous anemometer or wind energy system signed by all owners of the system. The above provisions, covenants and restrictions shall be

binding upon all owners of the property/system and all assigns and persons claiming under or through any owner or occupant.

3. A Noise Report shall be submitted including satisfactory mitigation measures to assure that no nearby properties will be subjected to unreasonable noise impacts.
4. Proof of application for an electrical and mechanical permit from the Leelanau County Inspections Department.
5. A topographic map shall be provided by the applicant to show location and elevations of the site in question.
6. If the proposed location of a system is within 500 feet of a body of water a soil erosion permit shall be required.