Sherman Township Ordinance #38

AN ORDINANCE TO REGULATE WIND ENERGY SYSTEMS IN THE TOWNSHP OF SHERMAN, NEWAYGO COUNTY, MICHIGAN

THE TOWNSHIP OF SHERMAN HEREBY ORDAINS:

Section 1.0 TITLE: This Ordinance shall be known as the Wind Energy System Ordinance for the Township of Sherman.

Section 2.0 WIND ENERGY SYSTEM:
PURPOSE: The purpose of this section is to establish standards and procedures by which the installation and operation of any **Wind Energy System (WES)** is to be regulated within Sherman Township:

A. To promote the safe, effective and efficient use of wind energy in order to reduce the consumption of fossil fuels in producing electricity.

B. To preserve and protect public health, safety, welfare and quality of life.

DEFINTIONS:

A. Anemometer: A temporary wind speed indicator constructed for the purpose of analyzing the potential for utilizing a WES at a given site. This definition also includes the tower, base plate, anchors, cables and hardware thereof as well as any instruments and any telemetry devices used to monitor wind speed and flow characteristics over a period of time.

B. Applicant: The person, firm, corporation, trust, association, company, limited liability corporation or other entity which applies for Township approval under this section, as well as the applicant' successor(s), assign(s), and/or transferee(s) to any approved WES. An applicant must have the legal authority to represent and bind the landowner or lessee who will construct, own and operate the WES. The obligations regarding a zoning approval for any approved WES shall be with the owner of the WES and jointly and severally with the owner and operator or lessee of the WES if different than the owner of the WES.

C. Decommissioning: The process of terminating operations and removing a WES and all related buildings, structures, foundations, access roads and equipment in accordance with an approved Decommissioning Plan.

D. Interconnected Wind Energy System: A WES which is electrically connected to the local electrical power utility system and can provide power to the local electrical power utility system.

E. Nacelle: In a wind turbine, the nacelle refers to the structure which houses all of the generating components, gearbox, drive train and other components.

F. On-Site Use Wind Energy System: A WES the purpose of which is to provide energy to only the property where the structure is located or to adjacent properties under the same ownership or control as the property where the structure is located or by the mutual consent of the owners of adjacent properties.

G. Shadow Flicker: The moving shadow created by light/sunlight shining through the rotating blades of a WES. The amount of shadow flicker created is calculated by a computer model that includes turbine location, elevation, tree cover, location of all structures, wind activity and sunlight.

H. Single Wind Energy System for Commercial Purposes: A single WES placed upon a parcel or parcels with the intent to sell or provide electricity to a site or location other than the premises upon which the WES is located. The WES may or may not be owned by the owner of the property upon which it is placed.

I. Structure-Mounted Wind Energy System: A WES mounted or attached to an existing structure or building.

J. Utility Grid Wind Energy Systems: A WES designed and constructed to provide electricity to the electric utility grid.

K. Wind Farm: Clusters of two or more WES placed upon a lot or parcel (or upon two or more lots or parcels) with the intent to sell or provide electricity to a site or location other than the premises upon which the WES is located. The WES may or may not be owned by the owner of the property upon which it is placed.

L. Wind Energy System (WES): shall mean any combination of the following:

1. A mill or machine operated by wind acting on oblique vanes, blades or sails that radiate from a horizontal shaft.
2. A surface area such as a blade, rotor or similar device, either variable or fixed for utilizing the wind for electrical or mechanical power.
3. A shaft, gearing, belt or coupling utilized to convert the rotation of the surface area into a form suitable for driving a generator, alternator or other electricity-producing device.
4. The generator, alternator or other device used to convert the mechanical energy of the surface area into electrical energy.
5. The tower, pylon or other structure upon which any, all or some combination of the above are mounted.

M. Wind Energy System Height: The distance from the ground at normal grade to the highest point of the WES (which is the tip of a rotor blade when the blade is in the full vertical position).

N. Wind Energy System Setback: The distance from the base of the tower or structure upon which the WES is mounted to the nearest lot line, in the case of multiple parcels utilized for multiple of single WES, the setbacks shall be taken from the outside boundaries of the parcels utilized for the WES project.

Section 3.0 TEMPORARY USES:
The following is permitted in all zoning districts if approved as a Special use, in compliance with the provisions contained herein:

A. Anemometers:
   1. The construction, installation or modification of an anemometer tower shall require a building permit and shall conform to all local, state and federal requirements.
   2. An anemometer shall be subject to the minimum requirements for height, setback, location, safety and decommissioning that correspond to a Wind Energy System.
   3. An anemometer shall be allowed for no more than twelve (12) months for any On-Site Use Wind Energy System or thirty-six (36) months for any Wind Energy System.

Section 4.0 PERMITTED USES:
Any On-Site Use Wind Energy System including a Structure-Mounted Wind Energy System, which is sixty-five (65) feet or less in total height (as measured below) **shall be a permitted use in all zoning districts** subject to the following:

A. Height: The height of a WES with the blade in the vertical position shall not exceed sixty-five (65) feet.

B. Setback: A WES shall be setback from all lot lines a distance which is equal to 1.1 times the height of the WES as measured from the lot line to the base of the tower and no portion of the WES (including the guy wire anchors) shall be located within or above the required front, side, or rear yard setback.

C. Structure-Mounted: A Structure-Mounted WES shall have a distance from the nearest property line which is at least equal to 1.1 times the height of the WES as measured from the point of attachment to the structure of building to the top of the WES with the blade in the vertical position.

   The blade arcs created by a WES mounted on an existing structure shall have a minimum clearance of eight (8) feet and shall be designed so that the blade or other moving parts do not present a safety hazard.

D. Permits: A permit shall be obtained from Sherman Township to construct and operate an On-Site Use WES sixty-five (65) feet or less in total height. A permit shall be issued after an inspection of the plans and specifications for the WES by Sherman Township or an authorized agent of the Township; and where said inspection finds that the proposed WES complies with all this ordinance,

applicable State Construction and Electrical Codes, local building permit requirements and all manufacturers' installation instructions.
The WES shall not be installed, operated nor remain on the property unless a permit has first been issued by the Township. A copy of the manufacturer's installation instructions and blueprints shall be provided to the Township.

E. Electrical Power: An On-Site Use Wind Energy System may provide electrical power to more than dwelling unit, provided that the dwelling units are located on property or properties that are adjacent to the property or properties on which the WES is located.

Section 5.0 SPECIAL USE:
The following uses may be allowed if a Special Use is granted pursuant to the regulations contained in Article XVII of the Sherman Township Zoning Ordinance:

(1) Any Wind Energy System (including a Structure-Mounted WES) which is **greater than 65 feet in height**.
(2) Wind Farms.
(3) Single Wind Energy Systems for Commercial Purposes.
(4) Utility Grid Wind Energy Systems.

A. Site Development Plan Requirements: For those WES for which a Special Use is required, the following items shall be included with or on the site plan:

(1) All requirements for a site plan as contained in Article XVIII of the Sherman Township Zoning Ordinance, including the area and dimensions of the site to be purchased or leased for the WES.

(2) A location map of the proposed WES in sufficient detail to show the character of the area surrounding the proposed site.

(3) Location and height of all existing or proposed buildings, structures, boundary lines, electrical lines, towers, guy wires, guy wire anchors, security fencing and any other above-ground structures either existing or proposed on the parcel or parcels containing the WES.

(4) Specific distances from the WES structures to all other buildings, structures, boundary lines and above-ground utilities on the parcel or parcels upon which the WES is proposed to be located.

(5) Location of all existing overhead and underground electrical transmission or distribution lines located on the property upon which the WES is proposed to be located, as well as within 300 feet of the boundaries of the parcel. The applicant shall provide to the Township as-built drawings of all electrical transmission lines constructed to serve the WES.

(6) Location, height and type of all buildings and structures and the elevations of all existing and proposed structures within 300 feet of the parcel upon which the WES is proposed to be located.

(7) All existing land uses within 300 feet of the parcel.

(8) Access drives to the WES, including dimensions and composition, with a narrative describing proposed maintenance of the drives.

(9) All lighting proposed for the site, including diagrams or specifications of lighting fixtures proposed.

(10) Security measures proposed to prevent unauthorized trespass.

(11) Standard drawings of the structural components of the WES including structures, towers, bases and footings. A registered engineer shall certify drawings and any necessary calculations demonstrating that the system complies with all applicable federal, state and local building and structural codes.

(12) A narrative describing the proposed WES, including an overview of the project, the approximate generating capacity of the WES, the number, representative types and height or range of heights of the WES to be constructed, including their generating capacity and respective manufacturers and a description of ancillary facilities.

(13) Other relevant studies, reports, certifications and approvals as may be reasonably requested by Sherman Township to ensure compliance with this Ordinance.

B. Other Requirements:

(1) Height: A WES shall be set back from all lot lines a distance which is at least equal to 1.1 times the height of the WES as measured from the lot line to the base of the tower. No part of a WES, including guy wire anchors shall be located within or above any required front, side or rear yard setback.

(2) Rotor or Blade Clearance: Blade arcs shall have a minimum of thirty (30) feet of clearance over and from any structure adjoining property or tree.

(3) Lighting: Lighting shall be provided as required by the FAA or other applicable authority, and as necessary for the reasonable safety and security of the facility.

(4) Maintenance Program: The applicant shall provide a written description of the maintenance program to be used to maintain the WES, including a schedule of maintenance tasks to be performed.

(5) Decommissioning Plan: The Planning Commission shall require that a Decommissioning Plan be submitted to the Township for approval. The plan shall consist of a written description of the anticipated life of the system and facility; the estimated cost of decommissioning; the method of ensuring that funds will be available for decommissioning and restoration of the site; and removal and restoration procedures and schedules that will be employed if the WES becomes obsolete or abandoned. Decommissioning shall include the removal of the WES, buildings, cabling, electrical components, foundations to a depth of 48 inches and any other associated facilities.

C. Visual Appearance:

(1) A WES shall be designed and constructed in such a manner so as to minimize adverse visual and noise impacts upon neighboring properties.

(2) WES's shall be either monopole or monolithic tube, non-reflective and non-obtrusive in color, such as while, off-white or gray.

(3) A WES project with more than one WES structure or tower shall utilize similar design, size, color, operation and appearance throughout the project.

D. Inspections: The Township shall have the right to enter upon the WES premises at all reasonable times with the permission of the property owner. The Township may hire a consultant to assist with any inspections, at the applicant's cost.

E. Insurance: The WES operator shall maintain a current liability insurance policy or present proof of adequate liability insurance coverage provided by self insurance or other means, in an amount equal to the installation and operation of the WES.

F. Performance Guarantee: If a Special Use is approved pursuant to this section, the Planning Commission may require monetary security in the form of a cash deposit, surety bond or irrevocable letter of credit in a form, amount, time duration and with a financial institution deemed acceptable to the Township, which will be furnished by the applicant to the Township in order to ensure full compliance with the section and any conditions of approval.

G. Sound Pressure Level – Wind Energy System: Noise from a Wind Energy System shall not exceed 55 dBA as measured at the dwelling unit located closest to the WES on any adjacent property, unless the dwelling unit of property owner

has provided a written waiver of the noise requirement. The sound pressure level may be exceeded during short-term events such as severe wind storms.

H. Sound Pressure Level – Utility Grid Systems or Wind Farms: Utility Grid Systems and Wind Farms shall be subject to the sound pressure level requirements stated above. In addition, the applicant shall provide modeling and analysis that will demonstrate that the Utility Grid System or Wind Farm will not exceed the maximum permitted sound pressure.

I. Shadow Flicker: The Planning Commission may require that the applicant perform an analysis of potential shadow flicker. The analysis shall identify locations of shadow flicker that may occur and shall describe measures such as screening that shall be taken to eliminate or minimize the shadow flicker.

J. Construction Codes, Interconnection Standards, Federal, State and Township Codes:

Every WES shall comply with:

(1) All applicable State and Local construction and electrical codes and local building permit requirements.

(2) Federal Aviation Administration requirements.

(3) Regulations for public or private landing strips in or adjacent to Sherman Township.

(4) Regulations of the Michigan Public Service Commission and/or the Federal Energy Regulatory Commission if the WES is an interconnected system.

K. Safety:

(1) Each WES shall be equipped with both a manual and automatic braking device capable of stopping the WES operation in high winds so that the rotational speed of the rotor blade does not exceed the design limits of the rotor.

(2) To prevent unauthorized access, each WES must comply with at least one of the following provisions and more than one if required by the Planning Commission:

a. The tower climbing apparatus shall not be located within 12 feet of the ground.
b. A locked, anti-climb device shall be installed and maintained.
c. A tower capable of being climbed shall be enclosed by a locked, secure fence at least ten feet in height with barbed wire fence.

(3) All WES shall have lightning protection.

(4) If a tower is supported by guy wires, the wires shall be clearly visible to a height of at least ten feet above the guy wire anchors.

(5) The minimum height of the lowest position of the rotor or blade shall be at least 30 feet above the ground.

L. Signs:

(1) Each WES shall have one sign not to exceed two square feed posted at the base of the tower, or if the structure is fenced it shall be located on the fence. The sign shall include the following information:

a. The words, "Warning – High Voltage".
b. Emergency contact telephone numbers.
c. The name, address, telephone number and email address of the operator of the WES.

(2) A WES shall not include any advertising of any kind, except the nacelle may have lettering that indicates the manufacturers and/or owners name/identification.

M. Electromagnetic Interference: All WES shall be designed, constructed and operated so as not to cause radio or television interference.

N. Access Roads: Each WES shall be served by a road or drive that provides ready, dependable access in the event of an emergency. Private roads shall be constructed to Sherman Township's private road standards.

O. Maintenance: Every WES must be kept and maintained in good repair and condition at all times and shall not pose a potential safety hazard.

All distribution lines from the WES shall be located and maintained underground, both on the property where the WES is located and off-site. The Planning Commission may waive the requirement that distribution lines for the WES which are located off-site (i.e. – not located on or above the property where the WES will be located) be located and maintained underground if the Planning Commission determines that to install, place or maintain such distribution lines underground would be impractical or unreasonably expensive.

Section 6.0 VIOLATIONS AND PENALTIES:

A violation of this Ordinance constitutes a municipal civil infraction. Any person who violates, disobeys, omits, neglects or refuses to comply with any provision of this Ordinance, or any permit or approval issued hereunder, or any amendment thereof, or any person who knowingly or intentionally aids or abets another person in violation of this Ordinance shall be in violation of this Ordinance and shall be responsible for a civil infraction. The civil fine for a municipal civil infraction shall be not less than one hundred dollars ($100) for the first offense and not less than two hundred dollars ($200)

for subsequent offenses in the discretion of the Court in addition to all other costs, damages, expenses and remedies provided by law. For purposes of this section, "subsequent offense" means a violation of the provisions of this Ordinance committed by the same person within twelve (12) months of a previous violation of the same provision of this Ordinance or similar provisions of this Ordinance for which said person admitted responsibility or was adjudged to be responsible. Each day during which any violation continues shall be deemed a separate offense.

Section 7.0 SEVERABILITY:
The provisions of this ordinance are declared to be severable. If in the holding of any court of competent jurisdiction that any section hereof is invalid, it shall not impair or invalidate any other section.

Section 8.0 EFFECTIVE DATE:
This ordinance will become effective 30 days after publication.

The forgoing ordinance was offered by Board Member Stocking, and was supported by Board member Smalligan, the vote being as follows;

YEAS: Derks, Smalligan, Stocking, Stroven, Sullivan
NAYS:
ABSENT: None

Ordinance is declared adopted and to be effective 30 days after it is published in the newspaper as provided by law.

Murry D Stocking
Murry D Stocking; Clerk of Sherman Township

Adopted August 3rd, 2009