

**OVERISEL TOWNSHIP
ORDINANCE 2011-_____**

An ordinance to amend the zoning ordinance for Overisel Township by adding Section 12.22 regarding Wind Energy Systems.

The Township of Overisel ordains:

Section 1: This ordinance is adopted to amend the Overisel Township Zoning Ordinance in order to establish standards and procedures by which the installation and operation of a wind energy system (WES) shall be regulated within Overisel Township, in order to promote the safe, effective and efficient use of wind energy.

Section 2: Section 12 of the Overisel Township Zoning Ordinance is amended by the addition of Section 12.22 as set forth herein:

Chapter XII

Section 12.22 Wind Energy System (WES)

A Purpose.

The purpose of this section is to establish standards and procedures by which the installation and operation of a WES shall be regulated within the Township, in order to promote the safe, effective, and efficient use of wind energy.

B Definitions.

B.1 Wind Energy System (WES) — shall mean any combination of the following:

- B.1.A A mill or machine operated by wind acting on oblique vanes or sails that radiate from a horizontal shaft;
- B.1.B A surface area such as a blade, rotor, or similar device, either variable or fixed, for utilizing the wind for electrical or mechanical power;
- B.1.C 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;
- B.1.D The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy;
- B.1.E The tower, pylon, or other structure upon which any, all, or some combination of the above are mounted.

(Note: For purposes of this section a windmill traditionally used to pump water shall not be considered a Wind Energy System.)

- B.2 On Site Use Wind Energy System — A WES the purpose and use of which is to provide energy to only the property where the WES 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 adjacent property owners.
- B.3 Single WES for Commercial Purposes—A single WES placed upon a lot or parcel 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 the WES is placed.
- B.4 Wind Farm — Clusters of two or more 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 are located. The WES may or may not be owned by the owner of the property upon which the WES is placed.

- B.5 Utility Grid Wind Energy Systems—A WES designed and constructed to provide electricity to the electric utility grid.
- B.6 Structure Mounted WES —A WES mounted or attached to an existing structure or building.
- B.7 Interconnected WES — A WES which is electrically connected to the local electrical power utility system and can provide power to the local electrical power utility system.
- B.8 WES Height — The distance from the ground at normal grade and the highest point of the WES which is the tip of a rotor blade when the blade is in full vertical position.
- B.9 WES 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 or single WES, the setbacks shall be taken from the outside boundary of the parcels utilized for the WES project
- B.10 Nacelle — In a wind turbine, the nacelle refers to the structure which houses all of the generating components, gearbox, drive train, and other components.
- B.11 Shadow Flicker — Alternating changes in light intensity caused by the moving blade of a WES casting shadows on the ground and stationary objects such as dwellings.
- B.12 Applicant — The person, firm, corporation, company, limited liability corporation or other entity which applies for Township approval under this section, as well as the applicant's 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 land owner and the owner(s) of the WES and jointly and severally with the owner and operator or lessee of the WES if different than the owner.

C. Wind energy systems allowed as a permitted use.

Any On Site Use Wind Energy System including structure mounted WES which is 65 feet or less in total height shall be a permitted use in all zoning districts, subject to the following:

- C.1 The height of the WES with the blade in vertical position shall not exceed 65 feet.
- C.2 A WES shall be set back from all lot lines a distance which is at least equal to 1.5 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.3 A structure mounted WES shall have a distance from the nearest property line which is at least equal to 1.5 times the height of the WES as measured from the point of attachment to the structure or 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 feet or be designed so the blade or other moving parts do not present a safety hazard.
- C.4 A permit shall be required to be obtained from Overisel Township to construct and operate any WES; including structure mounted WES, 65 feet or less in total height. A permit shall be issued after an inspection of the WES by Overisel Township or an authorized agent of the Township, and where the inspection finds that the WES complies with all applicable state construction and electrical codes, local building permit requirements, and all manufacturers' installation instructions. The WES shall not operate nor remain on the property unless a permit has been issued. A copy of the manufacturer's installation instructions and blueprints shall be provided to the Township.
- C.5 An On Site Use WES may provide electrical power to more than one dwelling unit, provided the dwelling units are located on property or properties that are adjacent to the property or properties on which the WES is located.

D. Wind energy systems which require a special use permit.

Any WES including a structure mounted WES which is greater than 65 feet in height, Wind Farms, Single WES for Commercial Purposes, and Utility Grid Wind Energy Systems may be

allowed as a Special Use only within the AG Zoning District subject to the following regulations and requirements of this Section and also the general special land use review procedures and standards of Chapter XIII of this Zoning Ordinance:

- D.1 Site Plan Requirements—For those WES for which a Special Use is required the following items shall be included with or on the site plan:
 - D.1.A All requirements for a site plan contained Chapter XIII herein.
 - D.1.B Dimensions of the area purchased or leased which is to contain the WES.
 - D.1.C Location and height of all existing and proposed buildings, structures, electrical lines, towers, guy wires, guy wire anchors, security fencing, and any other above-ground structures proposed or existing for the parcel or parcels containing the WES.
 - D.1.D Specific distances from the WES structures to all other buildings, structures, and above ground utilities on the parcel or parcels upon which the WES is proposed to be located.
 - D.1.E Location of all existing and proposed overhead and underground electrical transmission or distribution lines, located on the lot or parcel(s) upon which the WES is or is proposed to be located, as well as within 300 feet of the boundaries of the parcel(s).
 - D.1.F Locations and height of all buildings and structures within 300 feet of the exterior boundaries of the lot or parcel where the WES is proposed to be located.
 - D.1.G Contour elevations of all WES buildings and structures and the elevations of all existing and proposed structures within 300 feet of the parcel(s) upon which the WES is proposed to be located.
 - D.1.H Land uses within 300 feet of the parcel.
 - D.1.I Access drives to the WES including dimensions and composition, with a narrative describing proposed maintenance of the drives.
 - D.1.J All lighting proposed for the site, including diagrams of lighting fixtures proposed if requested by the Planning Commission.
 - D.1.K Security measures proposed to prevent unauthorized trespass and access. 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 that show that the system complies with all applicable local, state, and federal building, structural and electrical codes.
 - D.1.L Additional information as required by Chapter XIII Special Land Uses of this Ordinance, or as may be required by the Planning Commission.
 - D.1.M The Planning Commission may waive or modify the above requirements at the request of the applicant if it is determined that those items would not be needed to properly review the project.
- D.2 Height — The height of a WES for which a Special Use is required shall be determined by compliance with the requirements of this subsection 12.22D.
- D.3 Setbacks — The setback for a WES shall be at least equal to 1.25 times the height of the WES. No part of a WES including guy wire anchors shall be located within or above any required front, side, or rear yard setback. A reasonable setback shall be maintained from overhead electrical transmission lines.
- D.4 Rotor or Blade Clearance — Blade arcs created by a WES shall have a minimum of 30 feet of clearance over and from any structure, adjoining property or tree.
- D.5 Lighting — A WES shall provide lighting as may be required by the FAA.
- D.6 Maintenance Program Required—The applicant shall provide a written description of the maintenance program to be used to maintain the WES, including a maintenance schedule of types of maintenance tasks to be performed.
- D.7 Decommissioning Plan Required — The applicant shall provide 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 become obsolete or abandoned.

- D.8 Setting Standards and Visual Impact.
 - D.8.A A WES shall be designed and placed in such a manner to minimize adverse visual and noise impacts on neighboring areas.
 - D.8.B WES project with more than one WES structure or tower shall utilize similar design, size, color, operation, and appearance throughout the project as is practicable.
- D.9 Insurance — The WES operator shall maintain a current insurance policy which will cover installation and operation of the WES. The amount of the policy shall be a condition of approval.
- D.10 Performance Guarantee — If a special use is approved pursuant to this article, the Planning Commission may require 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 this article and any conditions of approval. When determining the amount of the required security, the township may also require an annual escalator or increase based on the Federal Consumer Price Index (or the equivalent or its successor). The financial guarantee shall be deposited or filed with the township clerk after a special use has been approved but before construction commences upon a WES. At a minimum, the financial security shall be in an amount determined by the township to be sufficient to have the WES fully removed (and all components properly disposed of and the land returned to its original state) should the structure or structures become abandoned, dangerous or obsolete, or not in compliance with this article or the special use approval. The financial security shall be kept in full force and effect during the entire time while a WES exists or is in place. The financial security shall be irrevocable and noncancelable (except by the written consent of both the township and the then-owner of the WES). Failure to keep such financial security in full force and effect at all times while a WES exists or is in place shall constitute a material and significant violation of a special use approval and this article, and will subject the applicant to all available remedies for the township, including possible enforcement action and revocation of the special use approval.
- D.11 Abandonment – Any WES or testing facility which is not used for nine successive months or longer shall be deemed to be abandoned and shall be promptly dismantled and removed from the lot. All above and below ground materials must be simultaneously removed. The ground must be restored to its original condition within 60 days of abandonment. The zoning inspector may grant extensions to these deadlines if good cause is shown.

E. Standards for all wind energy systems.

All WES shall comply with the following:

- E.1 Sound Pressure Level.
 - E.1.A On Site Wind Energy systems shall not exceed 55 dB (A) at the property line closest to the WES. This sound pressure level may be exceeded during short-term events such as severe wind storms. If the ambient sound pressure level exceeds 55 dB (A), the standard shall be ambient dB (A) plus 5 dB (A).
 - E.1.B Utility Grid Systems and Wind Farms shall be subject to the requirements of Subsection E.1.A above, but the sound pressure level shall be measured at the property line closest to the WES at the outside boundary of all property used for the Utility Grid System. 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.
- E.2 Shadow Flicker. The Planning Commission or Zoning Administrator may request 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.

- E.3 Construction Codes and Interconnection Standards.
 - E.3.A All applicable state construction and electrical codes and local building permit requirements;
 - E.3.B Federal Aviation Administration requirements;
 - E.3.C The Michigan Airport Zoning Act, Public Act 23 of 1950, as amended;
 - E.3.D The Michigan Tall Structures Act, Public Act 259 of 1959, as amended;
 - E.3.E Private landing strips in or adjacent to Overisel Township;
 - E.3.F The Michigan Public Service Commission as applicable and Federal Energy Regulatory Commission if the WES is an interconnected system.
- E.4 Safety.
 - E.4.A 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.
 - E.4.B 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:
 - E.4.B.1 Tower climbing apparatus shall not be located within 12 feet of the ground.
 - E.4.B.2 A locked anti-climb device shall be installed and maintained.
 - E.4.B.3 A tower capable of being climbed shall be enclosed by a locked, protective fence at least ten feet high with barbed wire fence.
 - E.4.C All WES shall have lightning protection.
 - E.4.D If a tower is supported by guy wires, the wires shall be clearly visible to height of at least 10 feet above the guy wire anchors.
 - E.4.E. The minimum height of the lowest position of the rotor or blade shall be at least 30 feet above the ground.
- E.5 Signs.
 - a. Each WES shall have one sign not to exceed two square feet posted at the base of the tower, or, if the structure is fenced, on the fence. The sign shall include the following information:
 - 1. The words "Warning: High Voltage"
 - 2. Emergency phone numbers.
 - b. A WES shall not include any advertising of any kind, except the nacelle may have lettering that exhibits the manufacturer's and/or owner's identification.
- E.6 Electromagnetic Interference. WES shall be designed, constructed and operated so as not to cause computer, cell phone, radio and television interference.
- E.7 Maintenance. WES must be kept and maintained in good repair and condition at all times and shall not pose a potential safety hazard.
- E.8 All distribution lines from the WES shall be located and maintained underground, both on the property where the WES will be located and off-site. The Planning Commission may waive the requirement that distribution lines for the WES which are located off-site (i.e. are 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.
- E.9 A WES, except for structure mounted WES, may be located on a lawful parcel or parcels which do not have frontage on a public or private road.

F. MET Tower

- F.1 A MET Tower may be permitted as a Special Use only within the AG Districts, subject to the regulations and requirements of this section and also the special use review procedures and standards of Chapter XIII of this Zoning Ordinance.
- F.2 For purposes of this Section a MET Tower is a meteorological tower used for the measurement of wind speed.
- F.3 Application Requirements.

An applicant for a MET Tower shall submit an application in accordance with the requirements of Chapter XIII of this ordinance and shall also submit the following materials;

- F.3.A A description of the number and type of MET tower(s) to be installed and the expected length of time that the MET tower will be operable.
- F.3.B A description of the height of the MET tower as well as standard drawings of the structural components of the MET tower including structures, towers, bases and footing. A registered engineer shall certify the drawings and any necessary calculations that show that the system complies with all applicable local, state, and federal building, structural, and electrical codes.
- F.3.C An explanation of the purpose of the tower, the type, height and number of wind energy systems anticipated to be proposed for installation on the site or nearby.
- F.3.D A statement from the applicant that the MET tower will be installed in compliance with the manufacturer's specifications and a copy of the manufacturer's specifications.
- F.3.E A description of the tower maintenance program.
- F.3.F A decommissioning plan explaining the process to be undertaken by the applicant for tearing down the tower and removing all tower equipment, materials and structures and restoring the site so it can be used for a use permitted in that Zoning District.
- F.3.G Security measures including emergency contact personnel.
- F.3.H Ten copies of a site plan drawn at a scale of not more than one inch equals 100 feet however a larger scale may be accepted by the Planning Commission depending upon the size of the parcel. The site plan shall contain at a minimum the following information unless specifically waived by the Planning Commission.
 - F.3.H.1 The date on which the site plan was prepared.
 - F.3.H.2 A north arrow and legal description of the property.
 - F.3.H.3 Property lines and dimensions of the parcel containing the tower, as well as the area leased for the tower if applicable, the height of the MET tower and its distance to all property lines.
 - F.3.H.4 Any buildings or structures existing on the site and the use of the parcel.
 - F.3.H.5 The distance to the closest building on adjacent property.
 - F.3.H.6 The location of any overhead transmission lines on the site or on adjacent property which might be affected by the MET tower.
 - F.3.H.7 Guy wires, guy wire anchors and any other tower supporting structure or device.
 - F.3.H.8 Type and height of fencing to be installed around the tower or an equipment building. Elevation drawings of any buildings designed to serve the tower.
 - F.3.H.9 Access road; width and construction standards.
 - F.3.H.10 Any lighting proposed to be located on the tower.
- F.4 General Requirements. A MET tower shall comply with all of the following:
 - F.4.A The tower shall be setback from all property lines a distance of not less than 1.25 times the height of the tower as measured from the base of the tower
 - F.4.B All applicable state construction and electrical codes and local building permit requirements;
 - F.4.C Federal Aviation Administration requirements. All tower lighting required by the FAA shall be shielded to the extent possible to reduce glare and visibility from the ground. The tower shaft shall not be illuminated unless required by the FAA, and the minimum FAA lighting standards shall not be exceeded.
 - F.4.D The Michigan Airport Zoning Act (Public Act 23 of 1950);
 - F.4.E The Michigan Tall Structures Act (Public Act 259 of 1959);
 - F.4.F A MET tower which is unused or abandoned shall be removed, along with any associated buildings and structures, by the owner/operator within 90 days of the date of a written notice from the Township. An extension of 90 days may be

granted by the Planning Commission upon a request from the owner/operator citing extenuating circumstances beyond their control in removing the tower within the initial 90 day period.

- F.4.G In removing the tower the owner/operator shall comply with the decommissioning plan submitted by the applicant and as approved by the Planning Commission.
- F.5 Planning Commission Review. The Planning Commission shall review the proposed MET tower according to the standards for Special Uses contained in this Section 12.22 and in Chapter XIII of this Ordinance. The Commission may approve a MET tower for a specified period of time subject to renewal by the Planning Commission. The Commission may impose reasonable conditions in its approval of a MET tower in accordance with Chapter XIII herein including but not limited to a requirement that the applicant provide regular reports regarding the maintenance and condition of the tower.
- F.6 In approving a MET Tower the Commission shall require that the applicant provide a performance guarantee in a form and amount acceptable to the Township for the cost of removing the MET tower and restoration of the site.

Section 3: Effective Date. This amending ordinance shall become effective 7 days after publication or 7 days after publication of a summary of its provisions in a local newspaper of general circulation in the township.

Russell Van Dam
Township Supervisor

Renee Hop
Township Clerk