

ORDINANCE NO: 243

VALLEY TOWNSHIP

ALLEGAN COUNTY, MICHIGAN

Wind Energy

SECTION 26.01 STATEMENT OF PURPOSE. The purpose of this section is to establish standards and procedures by which the installation and operation of Wind Energy Systems (WES) shall be regulated within the Township of Valley and to:

1. Promote the safe, effective and efficient use of WES in order to reduce the consumption of fossil fuels in producing electricity.
2. Preserve and protect health, safety, welfare and quality of life by minimizing the potential adverse impacts of WES.
3. Establish standards and procedures by which the siting, design, engineering, installation, operation and maintenance of a WES shall be governed.

SECTION 26.02 DEFINITIONS.

1. **Anemometer:** A wind speed indicator constructed for the purpose of analyzing the potential for utilizing a wind energy turbine at a given site. This includes the tower, base plate, anchors, cables and hardware, wind direction vanes, booms to hold equipment, data logger, instrument wiring and any telemetry devices that are used to monitor or transmit wind speed and characterize the wind resource at a given location.
2. **ANSI:** An abbreviation for the American National Standards Institute.
3. **Applicant:** The person, firm, corporation, company, limited liability corporation or any other entity that applies for Township approval under this section, as well as the applicant's successor(s), assign(s) and/or transferee(s) to any approved Wind Energy System (WES). An applicant must have the legal authority to represent and bind the landowner(s) or lessee(s) who will construct, own and operate the WES. The obligations regarding a zoning approval for any approved WES shall be jointly and severally with the land owner(s), the owner(s) of the WES and the operator or lessee of the WES if different from the owner.
4. **Building Mounted Wind Energy Systems (WES):** A WES mounted or attached to an existing structure or building.
5. **Cooperative Wind Energy System Site:** A WES site created with the mutual consent of two or more adjacent property owners, comprised of an easement encompassing all or portions of two or more adjacent lots or parcels. A cooperative WES site meeting the standards of this section may support an on-site WES for commercial purposes.
6. **ISO:** An abbreviation for the International Organization for Standardization; International Standards Organization.
7. **Nacelle:** In a wind turbine, the nacelle refers to the structure that houses all of the generating components, gearbox, drive train and all other components.
8. **On-Site-Use Wind Energy System:** A Wind Energy System (WES) with a main purpose of providing energy to the property where the WES structure is located, or 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.
9. **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.

10. **Single Wind Energy System for Commercial Purposes:** A single WES placed upon a lot or parcel with the main purpose of generating electricity for sale or otherwise, 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.
11. **Tower-Mounted Wind Energy System:** A WES mounted or attached to a tower, pole, or similar structure that is not a building.
12. **Utility Grid Wind Energy Systems:** A WES interconnected with the electricity distribution system.
13. **Wind Energy System (WES):** Shall mean any combination of the following:
(Note: For purposes of this section, a windmill traditionally used to pump water shall not be considered a Wind Energy System.)
 - a. A mill or machine operated by wind acting on oblique vanes or sails that radiate from a horizontal shaft.
 - 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.
 - 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.
 - d. The generator, alternator, or other device used to convert the mechanical energy of the surface area into electrical energy; and any temporary anemometer constructed for the purpose of analyzing the potential for utilizing a wind energy turbine at a given site prior to the installation of a wind energy turbine.
 - e. The tower, pylon or other structure upon which any, all, or some combination of the above are mounted.
14. **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.
15. **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.
16. **Wind Farm:** Clusters of two or more WES placed upon a parcel or parcels with a purpose of generating 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.

SECTION 26.03 WIND ENERGY SYSTEMS ALLOWED AS A PERMITTED USE. Any On-Site Use Wind Energy System that is sixty-five (65) feet or less in total height in all zoning districts, subject to the following standards and those of Section 26.05:

1. **Maximum WES height.** The height of the WES with the blade in vertical position shall not exceed sixty-five (65) feet.
2. **Tower-mounted WES setbacks.** A tower- mounted WES shall be set back from all lot lines, or (in the case of a cooperative WES site) all cooperative WES site easement lines a distance that is at least equal to the height of the WES as measured from the lot line or easement line to the base of the tower. No portion of the WES, including the guy wire anchors, shall be located within or above the required front, side, or rear yard setbacks.
3. **Building-mounted WES setbacks.** A building-mounted WES shall have a distance from the nearest property line that is at least equal to the height of the WES as measured from the point of attachment to the 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 ten (10) feet from roof of building/structure it is being attached to, or be designed so the blade or other moving parts do not present a safety hazard.
4. **Shared WES Usage.** An On-Site Use WES may provide electrical power to more than one dwelling unit or use, provided the dwelling units or users are located on property or properties that are adjacent to the property or properties on which the WES is located.
 5. **Building permit required.** A permit shall be required from the Township of Valley to construct or install any WES. The WES shall not be constructed nor remain on the property unless such permit has been issued. A copy of the manufacturer's installation instructions and blueprints shall be provided to the Township as part of the permit application.
 6. **Operating permit required.** Prior to commencement of operations the applicant shall submit to the Township an application to commence WES operations. Included in the operating permit application shall be as built land survey documentation showing the exact location of all WES towers and appurtenances, the depths and locations of all underground electric lines and all applicable easements and property lines. A permit to operate a WES shall be issued after an inspection of the WES by the Township or an authorized agent of the Township, and where the inspection finds that the WES complies with all requirements of the Section, all applicable state construction and electrical codes, local building permit requirements and all manufacturers' installation instructions.
 7. **Decommissioning and Removal Required.** The applicant shall certify and provide the Township with written assurance that the WES shall not be abandoned in place and shall be removed within one (1) year of decommissioning.

SECTION 26.04 WIND ENERGY SYSTEMS THAT REQUIRE A SPECIAL USE PERMIT. A WES including any structure-mounted WES that is greater than sixty-five (65) feet in height may be allowed as a special use in any zoning district provided that the lot, parcel or "cooperative WES site" contains at least (1) acre of total land area and a shape capable of encompassing within its boundaries a circle with a minimum diameter of 135 feet. Any WES eligible for special use consideration shall be further subject to the following regulations, the requirements of Section 26.05 and the procedures and general standards for special land uses.

1. **Site Plan Requirements.** For those WES for which a Special Use Permit is required, the following items shall be included with or on the site plan:
 - a. All applicable requirements for a site plan contained in the Site Plan Review Ordinance.
 - b. A legal survey showing the location and dimensions of the area owned, purchased, leased and/or dedicated by easement that is to contain the WES.
 - 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. 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.
 - e. Location of all existing and proposed overhead and underground electrical transmission or distribution lines and their associated easements located on the lot or parcel(s) upon which the WES is proposed to be located, as well as within 300 feet of the boundaries of the parcel(s).
 - 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.

- 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.
 - h. Land uses within 300 feet of the parcel.
 - i. Access drives to the WES including dimensions and composition, with a narrative describing proposed maintenance of the drives.
 - j. All lighting proposed for the site, including diagrams of lighting fixtures proposed if requested by the Planning Commission or Township Board.
 - k. Security measures proposed to prevent unauthorized trespass and access.
 - l. 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.
 - m. A shadow flicker analysis. 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.
 - n. Additional pertinent information as required by this Ordinance or as may be required by the Planning Commission.
2. **Height.** The height of a WES for which a Special Use Permit is required shall be determined by compliance with the requirements of Section 26.04.
3. **Setbacks.**
- a. The setback for the base of a WES tower from any adjacent residentially zoned or used lot or parcel shall be at least equal to the height of the WES. Any other part of a WES, including guy wire anchors, shall not be located within the minimum front, side, or rear yard area for principal buildings as required for the zoning district in which the WES is located.
 - b. The setback of the WES from any existing or proposed street right-of-way or other publicly traveled road or pedestrian way shall be not less than one hundred percent (100%) of the height of the WES.
 - c. The setback for a WES from any adjacent lot or parcel zoned or used for business purposes or Industrial purposes shall be the greater distance of either fifteen (15) feet or the required front, side, or rear yard setback for principal buildings as required for the zoning district in which the WES is located. In addition, there shall be signed analysis and certification by a state licensed professional engineer describing the manner in which the WES structure will fall or fail. The certified analysis shall be utilized, along with other applicable zoning regulations, in determining the appropriate setback to be required for the WES.
4. **Rotor or Blade Clearance.** Blade arcs created by a tower-mounted WES shall have a minimum of thirty (30) feet of clearance over and from any structure, adjoining property or tree.
5. **Lighting.** A WES shall provide lighting as may be required by the FAA.
6. **Maintenance Program Required.** The applicant shall provide to the township 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.
7. **Decommissioning Plan Required.** The applicant shall provide a written description to the township 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, system, facility, or site becomes obsolete or abandoned.

8. **Siting Standards and Visual Impact.**
 - a. A WES shall be designed and placed in such a manner to minimize adverse visual and noise impacts on neighboring areas.
 - b. A WES project with more than one WES structure or tower shall utilize similar design, size, color, operation and appearance throughout the project as is practical.
9. **Insurance.** The WES operator, company, or entity shall maintain a current liability insurance policy that shall cover installation and operation of the WES. The dollar amount shall be a minimum of one million (\$1,000,000) with a certificate issued to the township.
10. **Performance Guarantee.** If a Special Use Permit is approved pursuant to this section, the Township may require a 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 section and any conditions of approval.
11. **Operating Permit Required.** Prior to commencement of operations the applicant shall submit to the Township an application to commence WES operations. Included in the operating permit application shall be as-built land survey documentation showing the exact location of all WES towers and appurtenances, the depths and locations of all underground electric lines and all applicable easements and property lines. A permit to operate a WES shall be issued after an inspection of the WES by the Township or an authorized agent of the Township, and where the inspection finds full compliance with this section and any conditions of special use approval, all applicable state construction and electrical codes, local building permit requirements and all manufacturers' installation instructions.

SECTION 26.05 STANDARDS FOR ALL WIND ENERGY SYSTEMS.

1. **Tower Construction.** All towers shall be of mono-pole construction.
2. **Sound Pressure Level.**
 - a. On-Site Wind Energy Systems shall not exceed ISO Standard (2008) 35 dB (A) during the day, 30 dB (A) in the evening, and 20 dB (A) at night 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 the levels previously listed, the standard shall be ambient dB (A) plus 5 dB (A).
 - b. Utility Grid Systems and Wind Farms shall be subject to the sound level requirements of above, however, 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.
3. **Construction Codes and Interconnection Standards.**
 - a. All applicable state construction and electrical codes and local building permit requirements.
 - b. Federal Aviation Administration requirements.
 - c. The Michigan Airport Zoning Act, Public Act 23 of 1950, as amended.
 - d. The Michigan Tall Structures Act, Public Act 259 of 1959, as amended.
 - e. The Michigan Public Service Commission and Federal Energy Regulatory Commission if the WES is an interconnected system.
4. **Safety.**

- a. Each WES shall be equipped with both a manual and automatic braking device capable of stopping the WES operation in high winds or must otherwise be designed so that the rotational speed of the rotor blade does not exceed the design limits of the rotor.
 - 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 Township:
 - 1) Tower climbing apparatus shall not be located within twelve (12) feet of the ground.
 - 2) A locked anti-climb device shall be installed and maintained.
 - c. All WES shall have lightning protection.
 - d. If a tower is supported by guy wires, the wires shall be clearly visible to a height of at least ten (10) feet above the guy wire anchors.
5. **Signs.**
- a. Each WES shall have one sign not to exceed two (2) 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 and/or owner's identification.
6. **Electromagnetic Interference.** WES shall be designed, constructed and operated so as not to cause radio and television interference. No WES shall be installed in any location where its proximity to existing fixed broadcast, retransmission, or reception antennae for radio, television, or wireless phone or other personal communication systems would produce electromagnetic interference with signal transmission or reception unless the owner/operator provides a replacement signal to the affected party that will restore reception to at least the level present before operation of the WES. No WES shall be installed in any location within the line of sight of an existing microwave communications link where the operation of the WES is likely to produce electromagnetic interference in the link's operation unless the interference is insignificant.
7. **Maintenance.** WES must be kept and maintained in good repair and condition at all times and shall not pose a potential safety hazard.
8. **Electrical Distribution Lines.** All distribution lines from the WES shall be located underground, both on the property where the WES will be located and off-site. The Township may waive this requirement for the Utility Grid Wind Energy Systems if the Planning Commission determines that installation or maintenance of distribution lines underground would be impractical or unreasonably expensive.
9. **Road Frontage.** A WES, except for building-mounted WES, may be located on a lawful parcel or parcels that do not have frontage on a public or private road.
10. **Infrastructure.** The owner of the large turbine WES shall reimburse Valley Township and/or Allegan County for any and all repairs and reconstruction to public roads, culverts, and natural drainage ways resulting directly from the construction of the WES. Before construction, the owner/operator shall secure a permit from the Allegan County Road Commission for the transport and construction of a WES. Where the construction of a WES cuts through a private or public drain tile field, the drain tile must be repaired and reconnected to properly drain the site.
11. **Waste Management.** All solid waste, whether generated from supplies, equipment, parts, or packaging, as well as operating and maintaining the facility, including old parts and equipment shall be removed from the site in a timely manner consistent with industry standards. All hazardous waste generated by the operation and maintenance of the facility,

- including but not limited to lubricating materials, shall be handled and disposed of in a manner consistent with Federal EPA and State MDNR regulations.
12. **Vibration.** Under no circumstances shall a WES produce vibrations humanly perceptible beyond the property lines of the WES development.
 13. **Copy of a Shadow Flicker Analysis.** The analysis supplied shall identify the locations of shadow flicker on adjacent property that may be caused by the project and the expected durations of the flicker at these locations from sunrise to sunset over the course of a year. The analysis shall identify problem areas where shadow flicker may affect the occupants of the structures and describe measures to eliminate or mitigate the problems. Under no circumstances shall shadow flicker occur on an associated inhabited dwelling more than thirty (30) hours per year. Under no circumstances shall shadow flicker occur on a non-associated inhabited dwelling, unless a waiver is signed by the affected property owner.
 14. **Noise Monitoring or Measurements.** The applicant shall pay for any noise monitoring or measurements when reasonable need is determined by Valley Township.
 15. **Copy of an Environmental Impact Analysis.** The applicant shall have a third party professional conduct an analysis to identify and assess any potential impacts on the natural environment, including historical sites. The analysis shall also address potential electromagnetic interference with existing transmission systems.
 16. **Copy of an Avian and Wildlife Impact Analysis.** The applicant shall have a third party--qualified professional conduct an analysis to identify and assess any potential impacts on migratory birds, bats, and wildlife. At a minimum, the analysis shall include a thorough review of existing information regarding species and potential habitats in the vicinity of the project area. The owner/operator shall produce an avian risk study covering the areas likely to be affected by the project and conducted within twelve (12) months of application for a Special Use Permit.
 17. **Environment.** The applicant must comply with applicable parts of the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, M.C.L. 324.101 et seq.) including but not limited to:
 - i. Part 31 Water Resources Protection (M.C.L. 324.3101 et seq.)
 - ii. Part 91 Soil Erosion and Sedimentation control (M.C.L. 324.9101 et seq.)
 - iii. Part 301 Inland Lakes and Streams (M.C.L. 324.30101 et seq.)
 - iv. Part 303 Wetlands (M.C.L. 324.30301 et seq.)
 - v. Part 323 Shoreland Protection and Management (M.C.L. 324.32301 et seq.)
 - vi. Part 325 Great Lakes Submerged Lands (M.C.L. 324.32501 et seq.)
 - vii. Part 353 Sand Dunes Protection and Management (M.C.L. 324.35301 et seq.) as shown by having obtained each respective permit with requirements and limitations of those permits reflected on the site plan.
 18. **All costs associated with the permitting process will be paid for by the WES developer(s).**
 19. **All costs associated with fire and emergency response will be paid for by the WES owner(s).**

SECTION 26.06 VIOLATION AND SANCTIONS

1. Violation. Any person who violates, disobeys, neglects or refuses to comply with any provision of this Ordinance, any administrative decision made under the Ordinance, or any permit or approval issued under the Ordinance, including any conditions imposed thereon, or who causes, allows, or consents to any of same, shall be deemed to be responsible for a violation of this Ordinance. Any person responsible for a violation of this Ordinance whether as an owner (by deed or land contract), lessee, licensee, agent, contractor, servant, employee, or otherwise, shall be liable as a principal. Each day that a violation exists shall constitute a separate offense.

2. Municipal Civil Infraction. A violation of this Ordinance is a municipal civil infraction as defined by Michigan statute and shall be punishable by a civil fine determined in accordance with the following schedule:

	Minimum Fine	Maximum Fine
-1 st Offense	\$75.00	\$500.00
-2 nd Offense	150.00	500.00
-3 rd Offense	325.00	500.00
-4 th or More Offense	500.00	500.00

Additionally, the violator shall pay costs which may include all expenses, direct and indirect, which the Township of Valley has incurred in connection with the municipal civil infraction. In no case, however, shall costs of less than \$9.00 be ordered.

3. Remedial Action. Any violation of this Ordinance shall constitute a basis for injunctive relief or other appropriate remedy in any court of competent jurisdiction to compel compliance with this Ordinance and enforce the provisions thereof.

SECTION 26.07 SEVERABILITY AND EFFECTIVE DATE

1. Should any provision or section of this ordinance be held unconstitutional or invalid, such holding shall not be construed as affecting the validity of any of the remaining provisions or sections, and the remaining portions of the ordinance shall be enforceable unless the court determines that the sections held to be unconstitutional or invalid require the invalidation of the balance of the ordinance.

2. Effective Date. This ordinance shall take effect thirty days after publication following its adoption.