

KEENE TOWNSHIP

ORDINANCE NO. 2019-9-10

Adopted Date 9-10-19

AN ORDINANCE TO AMEND THE ZONING ORDINANCE

ARTICLE XV

THE TOWNSHIP OF KEENE ORDAINS:

Section 1: Add new section below

Article XV Section 15.46 in its entirety shown below

Section 15.46 - WIND ENERGY SYSTEM (WES)

Section 15.46.01 - Purpose

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

Section 15.46.02 – Definitions

- A. Wind Energy System (WES) – shall mean any combination of the following:
1. A mill or machine operated by wind acting on oblique vanes 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 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.
 6. A windmill traditionally used to pump water shall not be considered a Wind Energy System.
- B. On Site Use Wind Energy System – A WES the purpose of which is to provide energy to 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 adjacent property owners.

- C. 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.
- D. Wind Farm – Clusters of two or more 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 are located. The WES may or may not be owned by the owner of the property upon which the WES is placed.
- E. Utility Grid Wind Energy Systems – A WES designed and constructed to provide electricity to the electric utility grid.
- F. Structure Mounted WES – A WES mounted or attached to an existing structure or building.
- G. 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.
- H. 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.
- I. 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.
- J. Nacelle - In a wind turbine, the nacelle refers to the structure which houses all of the generating components, gearbox, drive train, and other components.
- K. 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.
- L. 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 owner of the WES and jointly and severally with the owner and operator or lessee of the WES if different than the owner.
- M. Abandonment – The following standards are used to determine if a WES system is no longer in service.
 - 1. Utilities, such as water, gas and electricity to the property, have been disconnected.
 - 2. The property, structures, and grounds have fallen into disrepair.
 - 3. Signs or other indications of the existence of the use have been removed.
 - 4. Equipment or fixtures necessary for the operation of the use have been removed.

5. The blades have not turned and have not been operational for over one year's time.

Section 15.46.03 - Wind Energy Systems Allowed as a Permitted Use

- A. Any On Site Use Wind Energy System including structure mounted WES which are 75 feet or less in total height shall be a permitted use in all zoning districts, subject to the following:
 1. The height of the WES with the blade in vertical position shall not exceed 75 feet.
 2. A WES shall be set back from all lot lines a distance 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 or side yard setbacks. A crank down type WES pole shall be set back from all lot lines equal to the height of the pole.
 3. A structure mounted WES shall have a distance from the nearest property line equal to 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 and 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.
 4. A zoning permit shall be required to be obtained from Keene Township to construct and operate an On Site Use WES 75 feet or less in total height. The WES shall comply 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 construction drawings shall be provided to the Township.
 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.

Section 15.46.04 - Wind Energy Systems Which Require a Special Use Permit

Any WES, including a structure mounted WES, which is greater than 75 feet in height, may be allowed as a Special Use within the AG, AR, RR, CC, I and PUD Districts, subject to the following regulations and requirements of this Section and also the general special land use review procedures and standards of Article XII of this Zoning Ordinance.

- A. 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:
 1. All requirements for a site plan contained in Article XIX herein including the area and dimensions of the area to be purchased or leased for the WES.

2. Location, height and type 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.
3. 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.
4. Location of all existing and proposed overhead and underground electrical transmission or distribution lines located on the parcel(s) upon which the WES is proposed to be located, as well as within 300 feet of the boundaries of the parcel(s).
5. Rotor or blade clearance over and from any structure, adjoining property or tree on the parcel or parcels proposed for the WES and adjacent parcels.
6. Land uses within 300 feet of the parcel.
7. Access drives to the WES including dimensions and composition, with a narrative describing proposed maintenance of the drives.
8. All lighting proposed for the site, including diagrams of lighting fixtures proposed if requested by the Planning Commission.
9. Security measures proposed to prevent unauthorized trespass and access.
10. 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.
11. Additional information as required by Article XII Special Land Uses of this Ordinance, or as may be required by the Planning Commission.
12. 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

B. Height. - The height of a WES for which a Special Use is required shall be determined by compliance with the requirements of this Section.

C. Setbacks. - A WES shall be set back from all lot lines a distance 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 or side yard setbacks. A reasonable set back shall be maintained from overhead electrical transmission lines.

- D. 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 existing tree heights or expected tree growth height.
- E. Lighting - A WES shall provide lighting as may be required by the FAA.
- F. 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.
- G. 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 becomes obsolete or abandoned.
- H. Siting Standards and Visual Impact.
 - 1. A WES shall be designed and placed in such a manner to minimize adverse visual and noise impacts on neighboring areas.
 - 2. A WES project with more than one WES structure or tower shall utilize similar design, size, color, operation, and appearance throughout the project. New types of WES may also be erected as systems change with future technology.
- I. Inspection – The Township shall have the right upon approving any WES to inspect the premises on which the WES is located at all reasonable times with permission of the property owner. The Township may hire a consultant to assist with any such inspections at the applicant's cost.
- J. 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. A copy of the policy and its term length shall be provided to the Township.
- K. Performance Guarantee – If a Special Use is approved pursuant to this section, The Planning Commission 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.

Section 15.46.05 - Standards for All WES: All WES shall comply with the following:

- A. Sound Pressure Level.
 - 1. Wind energy systems shall not exceed 55 dB (A) as measured at the property line closest to the WES. This sound pressure level may be exceeded during short-term events such as high or severe winds If the

ambient sound pressure level exceeds 55 dB (A), the standard shall be ambient dB(A) plus 5 dB(A).

2. Utility Grid Systems and Wind Farms shall be subject to the requirements of Section A 1 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.
- B. Shadow Flicker – The Planning Commission 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.
- C. Construction Codes, Interconnection Standards, Federal, State and Township Codes
1. All applicable state construction and electrical codes and local building permit requirements;
 2. Federal Aviation Administration requirements.
 3. The Michigan Airport Zoning Act, Public Act 23 of 1950, as amended;
 3. The Michigan Tall Structures Act, Public Act 259 of 1959, as amended;
 4. Any State or Federal regulations regarding private landing strips in or adjacent to Keene Township
 5. The Michigan Public Service Commission and Federal Energy Regulatory Commission if the WES is an interconnected system.
- D. 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. 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,

protective fence at least ten feet high with barbed wire on the top.

3. All WES shall have lightning protection.
4. 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
5. The minimum height of the lowest position of the rotor or blade shall be at least 30 feet above the ground.

E. Signs.

1. 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:
 - a. The words "Warning: high voltage
 - b. Emergency phone numbers.
2. 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.

F. Electromagnetic Interference – WES shall be designed, constructed and operated so as not to cause radio and television interference.

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

H. All distribution lines from the WES to the electrical grid connection 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.

I. 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 as long as there is an access easement.

Section 2: Amend existing section below

Article XV Section 15.15 is amended as shown below in its entirety

Section 15.15 - Height Regulations

The height requirements established by this Ordinance shall apply uniformly in each zoning district to every building and structure except that the following structures and appurtenances shall be exempt from the height requirements of this Ordinance: spires, belfries, roof structures not used for human occupancy, chimneys, ventilators, skylights, water tanks, bulkheads, utility poles, powerlines, radio, television and other communication broadcasting and receiving antennae not directly linked to residential structures, silos, ~~wind-driven electricity generators~~, wind driven water aerators, parapets and other necessary mechanical appurtenances; provided, their location shall conform where applicable to the requirements of the Federal Communications Commission, other public authorities having jurisdiction and any regulations established by authorized state, county and township agencies.

Towers 50 feet or less in height for the purpose of containing antennas for receiving, transmitting and relaying electronic signals for radio, television, internet, weather recording, cellular enhancement and other similar communication systems may be erected in any district as long as the height of the tower does not exceed the setback distance from the base of the tower to all lot lines and from any dwelling. Anti-climbing devices or fencing is required, and such towers must be erected as designed by the manufacturer and building permit codes. Towers or antennas, if designed to be attached to other structures such as a silo, utility pole or other building, do not require a setback distance but must be attached as designed and meet building permit codes. These detached or attached towers or antennas must also meet any requirements of FCC, FAA and any other county, state or federal agency. With the exception of agriculture applications, all height requirements applications for the above structures shall be submitted, along with a site plan to the Planning Commission for review to assure that all local township requirements are met, and that the proposed structure doesn't constitute a public nuisance before the Zoning Administrator will issue a permit.

Section 3:

Validity and Severability. Should any portion of this Ordinance be found invalid for any reason, such holding shall not be construed as affecting the validity of the remaining portions of this Ordinance.

Section 4:

Repealer Clause. Any ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 5:

Effective Date. This Ordinance shall be effective seven (7) days after publication.

ADOPTED:

Yeas: 5

Nays: 0

STATE OF MICHIGAN)

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COUNTY OF IONIA)

I, the undersigned, the duly elected Clerk of Keene Township, Ionia County, Michigan, DO
HEREBY CERTIFY that the foregoing is a true and complete representation of certain
proceedings conducted by the Board of Trustees of said Township at a meeting held on this
10th day of September, 2019.

(Original is signed)

Nancy Feuerstein

Keene Township Clerk

Published Date: 9-21-19