

CHESTER TOWNSHIP
OTTAWA COUNTY, MICHIGAN
(Ordinance No. _____)

At a _____ meeting of the Township Board of the Township of Chester, Ottawa County, Michigan, held at Township Hall on _____, 2005, at ____ p.m., Township Board Member _____ moved to adopt the following ordinance/ordinance amendment, which motion was seconded by Township Board Member _____:

AN ORDINANCE TO AMEND THE CHESTER TOWNSHIP ZONING ORDINANCE, AS AMENDED, REGARDING SPECIAL USE STANDARDS AND REGULATIONS FOR WIND ENERGY CONVERSION SYSTEMS AND RELATED MATTERS.

THE TOWNSHIP OF CHESTER (“Township”) ORDAINS:

Article I. A new and additional definition is hereby added to Section 222-W of the Chester Township Zoning Ordinance as follows:

“Wind Energy Conversion System (WECS)

Also commonly referred to as a wind generating tower, windmill, or wind-powered generator. It shall mean a combination of:

- A. The surface area (typically a blade, rotor, or similar device), either variable or fixed, for utilizing the wind for electrical or electrical generating powers; and
- B. 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; and
- C. The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy; and
- D. The tower, pylon, or other structure upon which any, all, or some combination of the above are mounted.

A wind energy conversion system can also include other components not listed above but associated with the normal construction, operation, and maintenance of a wind energy conversion system.”

Article II. The following new and additional Section 1909 is hereby added to Chapter 19 of the Chester Township Zoning Ordinance, as amended:

“1909—WIND ENERGY CONVERSION SYSTEMS (WECS):

(a) Purpose: The purpose of this Section 1909 is to establish standards and procedures by which the installation and operation of a WECS shall be governed within the Township as a special use within the A-Agricultural zoning district.

(b) Definitions:

(1) Interconnected WECS: A WECS which is electrically connected to the local electrical power utility system and could feed power back into the local electrical power utility system.

(2) Survival Wind Speed: The maximum wind speed, as designated by the WECS manufacturer, at which a WECS in unattended operation (not necessarily producing power) is designed to survive without damage to any structural equipment or loss of the ability to function normally.

(3) WECS Height: The distance between the ground (at normal grade) and the highest point of the WECS, as measured from the ground (at normal grade), plus the length by which the rotor blade on a horizontal mounted WECS exceeds the structure which supports the rotor and blades (normally, the tower). Or put another way, the distance between the ground (at normal grade) and the highest point of the WECS (being the tip of the blade, when the blade is in the full vertical position).

(4) Wind Energy Conversion System (WECS)

Shall mean a combination of:

a. A surface area (typically a blade, rotor, or similar device), either variable or fixed, for utilizing the wind for electrical powers; and

b. 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; and

- c. The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy; and
- d. The tower, pylon, or other structure upon which any, all, or some combination of the above are mounted.
- e. Other components not listed above but associated with the normal construction, operation, and maintenance of a WECS.

[See also Section 222-W of this Ordinance.]

- (5) Wind Farm: Clusters of 2 or more WECS 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 WECS are located. Said WECS may or may not be owned by the owner of the property upon which the WECS is placed.
- (6) Single WECS for Commercial Purposes: A single WECS 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 structure is located. Said WECS may or may not be owned by the owner of the property upon which the WECS is placed.
- (7) WECS Testing Facility or Testing Facility: A structure and equipment used to determine the potential for the placement of a WECS.
- (8) 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) as to any approved WECS or Testing Facility. An applicant must have the legal authority to represent and bind the landowner or lessee who will construct, own, and operate the WECS or Testing Facility. The duties and obligations regarding a zoning approval for any approved WECS or Testing Facility shall be with the owner of the WECS or Testing Facility, and jointly and severally with the owner and operator or lessee of the WECS or Testing Facility if different than the owner.

- (c) Applicability:
- (1) WECS, Wind Farms, Single WECS for Commercial Purposes, and WECS Testing Facilities: Wind energy conversion systems such as a WECS, wind farm, single WECS for commercial purposes, and WECS Testing Facilities associated with the commercial application of a WECS may be allowed as a Special Use only within the Agriculture zoning district, subject to the regulations and requirements of this section and also the general special use review procedures and standards/criteria of Chapter 19 of this Zoning Ordinance.
 - (2) Single WECS for On-site Service Only: Single WECS applications of wind energy conversion system, including WECS Testing Facilities, to service the energy needs of only the property where the structure is located may be approved in any zoning district as a Special Use, provided the property upon which the system is to be located is at least three and one-half (3-1/2) acres in size and subject to the review and approval procedures and standards/criteria of Chapter 19 of this Ordinance, as well as all of the following:
 - a. The tower shall not exceed a height of 80 feet.
 - b. The blade diameter (tip to tip) shall not exceed 100 feet.
 - c. The height of the overall WECS (with the blade in the vertical position) shall not exceed 130 feet above ground level (at normal grade).
 - d. The distance of the structure from all property lines shall be at least two (2) times the WECS height.
- (d) Site Plan Drawing: All applications for a WECS or WECS Testing Facility special use approval shall be accompanied by a detailed site plan drawn to scale and dimensioned, displaying all of the following information:
- (1) All requirements for a site plan contained in Chapter 13 shall also be met.
 - (2) All lot lines and dimensions, including a legal description.
 - (3) Location and height of all proposed buildings, structures, electrical lines, towers, guy wires, guy wire anchors, security

fencing, and other above ground structures associated with the WECS.

- (4) Locations and height of all adjacent buildings, structures, and above ground utilities located within 300 feet of the exterior boundaries of the lot or parcel where the proposed WECS and/or Testing Facility will be located. Specific distances to other on-site buildings, structures, and utilities shall also be provided. The location of all existing and proposed overhead and underground electrical transmission or distribution lines shall be shown, whether to be utilized or not with the WECS or Testing Facility, located on the lot or parcel involved, as well as within 1,000 feet of the boundaries of such parcel or lot.
- (5) Existing and proposed setbacks for the WECS from all structures located on the property where the WECS will be located.
- (6) Elevation of the premises accurately depicting the proposed WECS location and its relationship to the elevation of all existing and proposed structures within 300 feet of the proposed WECS.
- (7) Access driveway to the WECS and the Testing Facility together with a detailed narrative regarding dimensions, composition, and maintenance of the proposed driveway. The Township shall require the construction of a private road to serve a WECS or Testing Facility if it is determined by the Township Board that said road is necessary to protect the public health, safety, or welfare or to offer an adequate means by which the Township or other governmental agency may readily access the site in the event of an emergency. All private roads shall be constructed to Township private road standards.
- (8) Planned security measures to prevent unauthorized trespass and access.
- (9) WECS and Testing Facility Maintenance Programs-The applicant shall provide to the Township a written description of the maintenance program to be used to maintain the WECS and Testing Facility, including removal when determined to be obsolete or abandoned. The description shall include maintenance schedules, the types of maintenance to be

performed, and removal procedures and schedules should the WECS or Testing Facility become obsolete or abandoned.

- (10) Additional detail(s) and information as required by the Special Use requirements of this Ordinance, or as requested by the Planning Commission.
- (e) Compliance with the Township Building Code: A copy of the manufacturer's installation instructions and blueprints shall be provided to the Township. Included as part of or as an attachment to the installation instructions shall be standard drawings of the structural components of the WECS and support structures, including base and footings provided along with engineering data and calculations to demonstrate compliance with the structural design provisions of the Building Code as adopted by the Township. Drawings and engineering calculations shall be certified by a registered engineer licensed in the State of Michigan.
- (f) Compliance with the Electrical Code: WECS and Testing Facility electrical equipment and connections shall be designed and installed in full compliance with the Electrical Code as adopted by the Township. A copy of manufacturer installation instructions and blueprints shall be provided to the Township.
- (g) Design Standards.
 - (1) Height: The permitted maximum total height of a WECS (i.e., WECS height) shall be 400 feet including the blade in vertical position.
 - a. State and federal regulations may require a lesser height.
 - b. As a condition of approval, the Township may require a lesser height for a WECS if reasonably necessary to comply with the standards contained in subsection (h) hereof.
 - c. A WECS shall be constructed with a tubular tower, not a lattice tower.
 - (2) Height of Test Tower Facility: Unless a different height is approved by the Planning Commission, the WECS Testing Facility height shall be no greater than 300 feet from the

ground (i.e., from normal grade to the test tower top) and shall comply with design standards.

a. A WECS Testing Facility which is not in use for 6 months or more shall comply with subsection (l) hereof regarding abandonment

- (3) Setbacks: No part of a WECS or WECS Testing Facility (including guy wire anchors) shall be located within or above any required front, side or rear yard setback. The setback for placement of a WECS or a WECS Testing Facility shall be equal to the required setbacks for the zoning district in which the WECS is located plus the WECS height. Furthermore, no WECS or WECS Testing Facility shall be located within 1600 feet of the high water mark of Crockery Lake.
- (4) Rotor or Blade Clearance: Blade arcs created by a WECS shall have a minimum of seventy-five (75) feet of clearance over and from any structure, adjoining property or tree. The minimum blade or rotor clearance above ground level shall be at least twenty (20) feet.
- (5) Rotor or Blade Safety: Each WECS shall be equipped with both a manual and automatic braking device capable of stopping the WECS operation in high winds within 80% of design limits of the rotor.
- (6) Tower Access: To prevent unauthorized climbing, WECS and Testing Facilities must comply with at least one of the following provisions:
 - a. Tower climbing apparatus shall not be located within twelve (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 (10) feet high with barbed wire fence.
- (7) Signs: Each WECS and Testing Facility shall have one sign, not to exceed two (2) square feet in area, posted at the base of the tower. The sign shall contain at least the following:

- a. Warning high voltage.
 - b. Manufacturer's name.
 - c. Emergency numbers (list more than one number).
 - d. Emergency shutdown procedures.
 - e. FAA regulated sign with precise description with latitude and longitude and shall also contain both the applicant's current telephone number and the current telephone number for the FAA's regional office having jurisdiction over Chester Township.
 - f. If fenced, place signs on the fence.
- (8) Lighting: A lighting plan for each WECS and Testing Facilities shall be approved by the Planning Commission. Such plan must describe all lighting that will be utilized, including any lighting that may be required by the FAA. Such a plan shall include but is not limited to the planned number and location of lights, light color and whether any lights will be flashing. Strobe lights are discouraged and must be shielded from the ground if such lights are allowed by the Planning Commission.
- (9) Electromagnetic Interference: Each WECS and Testing Facilities shall be designed, constructed and operated so as not to cause radio and television interference. In the event that electromagnetic interference is experienced, the applicant must provide alternate service to each individual resident or property owner affected.
- (10) Noise Emissions: Noise emissions from the operation of a WECS and Testing Facilities shall not exceed forty-five (45) decibels on the DBA scale as measured at the nearest property line or road.
- a. A baseline noise emission study of the proposed site and impact upon all areas within one (1) mile of the proposed WECS location must be done (at the applicant's cost) prior to any placement of a WECS and submitted to the Township. The applicant must also provide estimated noise levels to property lines at the time of a Special Use application.

- (11) Utility Company Interconnection (Interconnected WECS): All distribution lines from the WECS to the electrical grid connection shall be located and maintained underground (both on the property where the WECS will be located and off-site). The Planning Commission may waive the requirement that distribution lines for the WECS which are located off-site (i.e., are not located on or above the property where the WECS 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.

- (h) Approval Standards: In addition to the other requirements and standards contained in this section, the Planning Commission shall not approve any WECS or Testing Facilities unless it finds that all of the following standards are met:
 - (1) The general special use standards contained in Section 1901 of this Ordinance; and
 - (2) The WECS or Testing Facility will not pose a safety hazard or unreasonable risk of harm to the occupants of any adjoining properties or area wildlife.

- (i) Ornamental Wind Devices: Ornamental wind devices that are not a WECS shall be exempt from the provisions of this section, so long as they do not exceed the height limitations for permitted accessory structures (i.e., those permitted as of right) within the zoning district where the ornamental wind device will be located. Such devices may also be regulated by other provisions of this Ordinance.

- (j) Inspection: The Township shall have the right upon issuing any WECS and Testing Facility special land use permit to inspect the premises on which the WECS or Testing Facility is located at all reasonable times. The Township may hire a consultant to assist with any such inspections at the applicant's cost.

- (k) Each WECS and Testing Facility must be kept and maintained in good repair and condition at all times. If a WECS is not maintained in operational and reasonable condition or poses a potential safety hazard, the applicant shall take expeditious action to correct the situation.

- (1) The applicant shall keep a maintenance log on each WECS which the Township can review on a monthly basis.
- (l) Abandonment: Any WECS or Testing Facilities which is not used for six (6) successive months or longer shall be deemed to be abandoned and shall be promptly dismantled and removed from the property. All above and below ground materials must be removed. The ground must be restored to its original condition within 60 days of abandonment.
- (m) Security: If a special use is approved pursuant to this section, the Planning Commission shall 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 section and any conditions of approval. When determining the amount of such 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). Such financial guarantee shall be deposited or filed with the Township Clerk after a special use has been approved but before construction commences upon a WECS or WECS Testing Facility. At a minimum, the financial security shall be in an amount determined by the Township to be sufficient to have the WECS or Testing Facility fully removed (and all components properly disposed of and the land returned to its original state) should such structure or structures become abandoned, dangerous or obsolete, or not in compliance with this ordinance or the special use approval. Such financial security shall be kept in full force and effect during the entire time while a WECS or WECS Testing Facility exists or is in place. Such financial security shall be irrevocable and non-cancelable (except by the written consent of both the Township and the then-owner of the WECS or WECS Testing Facility) for at least 30 years from the date of the special use approval. Failure to keep such financial security in full force and effect at all times while a WECS or WECS Testing Facility exists or is in place shall constitute a material and significant violation of a special use approval and this ordinance, and will subject the applicant to all available remedies to the Township, including possible enforcement action and revocation of the special use approval.
- (n) Road repair: Any damages to a public road located within the Township resulting from the construction, maintenance, or operation

of a WECS or Testing Facility shall be repaired at the applicant's expense.

- (o) Liability: The applicant shall insure each WECS at all times for at least \$2,000,000 (in 2005 dollars based on the federal CPI) for liability to cover the applicant, Township and land owner.
- (p) Color: A WECS shall be painted a non-obtrusive (light environmental color such as beige or gray) color that is non-reflective. The wind turbine base and blades shall be of a color consistent with all other turbines in the area. No striping of color or advertisement shall be visible on the blades or tower.
- (q) Strobe effect: All efforts shall be made not to affect any resident with any strobe effect.
- (r) Under no circumstances shall a WECS or Testing Facility produce vibrations or wind currents humanly perceptible beyond the property boundaries of the lot or parcel on which the WECS or Testing Facility is located.
- (s) The applicant shall be responsible for compensation to persons damaged due to any stray voltage caused by a WECS.
- (t) At the Township's request, the applicant shall fund an environmental assessment or impact study and/or other relevant report(s) or studies (including, but not limited to, assessing the potential impact on endangered species, eagles, birds, and/or other wildlife) as required by the Township for review by the Township regarding the area or surrounding areas where the WECS will be placed. Each such study or report shall be provided to the Township prior to the time when the Planning Commission makes its final decision regarding the special use request.
- (u) The applicant shall show proof of a minimum wind rating of 3 from the proposed WECS when applying for a Special Use Permit.
- (v) At the Township's request, the applicant shall fund a financial impact study for review by the Township of the area affected by the WECS. Such study or report shall be provided to the Township prior to the time when the Planning Commission makes its final decision regarding the special use request.
- (w) An escrow account shall be set up when the applicant applies for a Special Use Permit for a WECS or WECS Testing Facility. The

monetary amount filed by the applicant with the Township shall be in an amount estimated by the Township to cover all costs and expenses associated with the special use zoning review and approval process, which costs can include, but are not limited to, fees of the Township Attorney, Township Planner and Township Engineer, as well as any reports or studies which the Township anticipates it may have done related to the zoning review process for the particular application. Such escrow amount shall be in addition to regularly established fees. At any point during the zoning review process, the Township may require that the applicant place additional monies into escrow with the Township should the existing escrow amount filed by the applicant prove insufficient. If the escrow account needs replenishing and the applicant refuses to do so promptly, the zoning review and approval process shall cease until and unless the applicant makes the required escrow deposit. Any applicable zoning escrow resolutions or other ordinances adopted by the Township shall also be applicable.

- (x) Reasonable conditions: In addition to the requirements of this section, the Planning Commission may impose additional reasonable conditions on the approval of a WECS or WECS Testing Facilities as a special use.
- (y) Each WECS and WECS Testing Facility shall also comply with all applicable federal, state of Michigan, and county requirements, in addition to Township ordinances.”

Article III. A new and additional subsection 5 is hereby added to Section 306(C) of the Chester Township Zoning Ordinance as follows:

- “5. A wind tower or wind energy conversion system (which are only allowed within the Agricultural zoning district) pursuant to Section 1909 of this Ordinance.”

Article IV. Subsection 902(F) of the Chester Township Zoning Ordinance is hereby amended to read as follows:

- “F. Windmills, wind-powered generators, and wind energy conversion systems (but excluding those where the electricity or power generated is used exclusively on the parcel where the structure is located) as provided in Section 1909 of this Ordinance.”

Article V. Severability. Should a court of competent jurisdiction find any provision, clause, or portion of this ordinance/ordinance amendment to be invalid, the balance or remainder of this ordinance/ordinance amendment shall remain valid and in full

force and effect and shall be deemed "severable" from the portion, clause, or provision deemed to be invalid by the court.

Article VI. Effective Date. This ordinance/ordinance amendment shall become effective seven (7) days after this ordinance/ordinance amendment (or a summary thereof) is published in the newspaper as provided by law.

Article VII. Except as expressly amended by this ordinance/ordinance amendment, the balance of the Chester Township Zoning Ordinance, as amended, shall remain unchanged and in full force and effect.

YEAS: _____

NAYS: _____

ABSTAIN/ABSENT: _____

ORDINANCE/ ORDINANCE AMENDMENTS DECLARED ADOPTED.

CERTIFICATION

I hereby certify that the above is a true copy of an ordinance/ordinance amendment adopted by the Chester Township Board at a _____ meeting held on _____, 2005, pursuant to the required statutory procedures.

Respectfully submitted by:

Dated: _____, 2005

Janice Redding
Chester Township Clerk