WIND ENERGY SYSTEMS

§ 1233 Wind Energy System (WES).

1. Purpose. It is the purpose of this section to permit the safe, effective and efficient use of wind energy and to reduce the on-site consumption of utility supplied energy while protecting the health, safety and welfare of adjacent and surrounding land uses through appropriate zoning and land use controls. This section is intended to accomplish the following:
   A. To provide for appropriate locations and development of wind energy systems.
   B. To protect West Sadsbury Township's natural environment by permitting wind energy systems.
   C. To minimize adverse nuisance and visual impacts of wind energy systems through careful design and siting techniques.
   D. To avoid potential damage to adjacent properties through engineering and careful siting for wind energy systems.
   E. To permit the location of wind energy systems in areas not immediately adjacent to or adversely affecting residential uses.
   F. To promote the effective utilization of renewable energy sources.
2. Accessory Wind Energy System. Accessory wind energy systems are permitted in all zoning districts subject to the following:
   A. A wind energy system shall be considered accessory only if it supplies power primarily for on-site use, except that net metering shall be permitted per state law.
   B. The owner of the accessory WES shall provide written confirmation that the public electric distribution utility company has been informed of the customer's intent to install an interconnected customer-owned generator and that such connection meets applicable state and federal regulations. Off-grid systems shall be exempt from this requirement.
   C. Wind turbines shall meet all required setbacks.
   D. Wind energy generation shall be limited to one wind turbine per lot.
   E. Maximum Height is 75 feet, including to the highest point of all moving parts.
   F. Wind turbines shall have a capacity of 10 KW or less.
   G. All moving parts of a wind turbine shall be a minimum of 15 feet above the ground.
   H. All on-site utility and transmission lines shall be located underground.
   I. Any accessory equipment building shall have a maximum area of 250 square feet and shall comply with the accessory building requirements of §1209.
   J. Residential Setback. All portions of a wind turbine shall be setback a minimum of 250 feet from any adjoining residential dwelling, excluding guy wires, accessory equipment buildings, and such dwelling unit located on the same lot, measured from the extended tip of the blade or nearest point of the wind energy system to the dwelling unit.
   K. Wind energy systems shall meet the general requirements in Subsection 4 below.

3. Principal Wind Energy System. Principal wind energy systems shall be permitted in the Industrial zoning district when approved by Conditional Use by the Board of Supervisors subject to the following:

   A. All principal wind energy systems shall meet the applicable setback regulations of the underlying zoning district.

   B. The minimum height of the lowest position of the wind turbine shall be 30 feet.

   C. Maximum Height is 85 feet, including to the highest point of all moving parts.

   D. Access to a wind turbine tower shall not be provided any lower than 15 feet above ground level. Turbines shall be equipped with anti-climbing device or similar protective device to prevent unauthorized access. Access doors to the wind energy system and electrical equipment shall be locked to prevent unauthorized entry.

   E. Mechanical equipment associated with the use of the wind energy system shall comply with the following:

      (1) All associated mechanical equipment and accessory structures shall be enclosed by a fence, barrier or other appropriate means to prevent unauthorized persons or vehicles from entering that area of the property. Such fencing shall be a minimum of eight feet high and fully screened.

      (2) Any mechanical equipment associated with and necessary for the operation of the wind energy system that is not enclosed within the wind energy tower or within an accessory structure on the property shall comply with the following:

         a. Mechanical equipment shall be screened from any adjacent property that is residentially zoned or used for residential purposes. The screen shall consist of shrubbery, trees, or other plant materials which provide a visual screen. In lieu of a planting screen, a decorative fence meeting the requirements of this ordinance may be used.

         b. Mechanical equipment shall not be located within the minimum front yard setback of the underlying zoning district.

   F. Clearly visible, warning signs shall be placed around the perimeter of the property and at the facility entrance to inform individuals of the potential voltage hazards.

   G. In order to determine that a proposed use or activity complies with the above standards, the Township may, at the expense of the applicant:

      (1) Require the submission of impartial expert opinions or judgments from official agencies or private consultants.

      (2) Require the submission of written assurances from the applicant and proof that the applicant is the owner of the property or has permission from the property owner.

      (3) Require compliance with certain tests or provision of whatever safeguards may be considered necessary.

   H. A report from a qualified engineer, licensed in the Commonwealth of Pennsylvania, documenting the following shall be submitted for review:

      (1) Description of the wind energy system, including overview, project location, the rated capacity for the on-site user, type and height of facility, including generating capacity,

dimensions and respective manufacturers and a description of the ancillary facilities. Description should include technical, engineering, economic, and other pertinent factors governing selection of the proposed design.

(2) Evidence of structural integrity of each tower structure.

(3) Structural failure characteristics of each tower structure and demonstration that the site and setbacks are of adequate size to contain debris.

(4) Identification of the nearest wind energy system, telecommunications tower and residential homes.

(5) The applicant shall describe the technical options available and reasons why the technical option selected was chosen over the other options.

(6) Provide make, model, picture and manufacturer's specifications.

I. Visual impact: demonstrations, including before and after photo simulations and elevation drawings showing the height, design, color, night lighting and proposed location of the facility as viewed from neighboring areas. The applicant shall demonstrate through project site planning and proposed mitigation that the wind energy system's visual impacts will be minimized for surrounding neighbors and the community. This may include, but is not limited to, information regarding site selection, turbine design or appearance, buffering and screening of mechanical equipment.

(1) Clearing of natural vegetation shall be limited to that which is necessary for the construction, operation and maintenance of the wind energy system.

J. Other relevant studies, reports, certifications and approvals as may be reasonably requested by the Township to ensure compliance with this ordinance.

K. The owner of the principal WES shall provide written confirmation that the public utility company has been informed of the customer's intent to install an interconnected customer-owned generator and that such connection meets applicable state and federal regulations.

L. All principal wind energy systems shall meet the general requirements in Subsection 4 below.

4. General Requirements.

A. No wind turbine shall be placed in a required front yard.

B. Wind turbines shall be set back from all property lines a distance at least equal to the height of the turbine plus 50 feet.

C. Noise emitted from the operation of a wind energy system shall not exceed 55 decibels nor 10 decibels louder than ambient sound levels. Noise shall be measured at the property line of any adjoining residentially zoned or occupied dwelling.

D. Reasonable efforts shall be made to minimize shadow flicker to any neighboring property.

E. Wind turbines shall not be illuminated except as otherwise required by the Federal Aviation Administration, other regulatory authority or by law.

F. There shall be no antennae, advertising, or other items or material affixed or placed on any component of a wind energy system, except those required for safety or identification of the manufacturer.

G. The design and installation of wind energy systems shall use materials, colors, textures, screening and landscaping that will blend components of the system into the natural setting and existing environment.

H. The design of the wind energy system shall conform to applicable industry standards, such as, but not limited to: National Standards Institute (ANSI), Underwriters Laboratories (UL), American Society for Testing and Materials (ASTM), or other similar certifying organizations. The manufacturer's specifications shall be submitted as part of the application.

I. The minimum wind energy system setback distance from all aboveground utility lines, radio, television or telecommunication towers shall be a distance equal to the distance from the ground to the highest point of all moving parts plus 50 feet.

J. The minimum distance from guy wires, accessory structure, and other appurtenances of the wind energy system shall be twenty (20) feet from the property lines.

K. All power transmission lines from the wind energy system to any building or other structure shall be located underground. There shall be no exposed wiring.

L. A site plan shall be prepared and certified by a registered professional engineer. In addition to the other requirements of this section, the site plan shall contain the following:

(1) Property boundaries and identification of neighboring property owners.

(2) Soil types where any tower foundation will be constructed.

(3) Complete structural and engineering details, including narrative descriptions, demonstrating how the foundation, support and other parts of the wind energy system will be constructed, installed, and maintained.

(4) Information regarding the speed of operation and braking mechanism. No wind turbine shall be permitted that lacks an automatic braking, governing, or feathering system to prevent uncontrolled rotation, over-speeding, and/or excessive pressure on the turbine or any of its parts.

(5) Location of driveways, roadways, man-made structures and significant features within and adjacent to the subject property within five hundred (500) feet of the subject property boundaries.

(6) Location of the proposed wind energy system, foundations, guy anchors and associated equipment.

(7) Setback requirements as outlined in this ordinance and proposed setbacks.

(8) The location of any rights-of-way, easements, floodplains, or other covenants restricting the use of the property.

(9) Wind energy system specifications, including manufacturer, model, rotor diameter, tower height, and tower type.

M. The Township may require the submission of additional information during the conditional use hearing(s) (principal systems only).

N. Maintenance. All wind energy systems shall be maintained in compliance with Township standards contained in the applicable codes and ordinances so as to ensure the structural integrity of such facilities. If, upon inspection by the Zoning Officer or any code official, any such facility is determined not to comply with the applicable codes and ordinances or to constitute a

danger to persons or property, then notice of such lack of compliance shall be provided to the owner of the property. Failure to bring such facility into compliance within 30 days or such earlier time as specified in the notice where warranted by an emergency or unsafe condition from notice from West Sadsbury Township shall constitute a violation of this ordinance.

O. Decommissioning of Wind Energy System. The applicant shall sign an agreement stating that when all reasonable uses of the Wind Energy System are no longer necessary it will be promptly removed at the applicant's expense. The agreement shall be written in language acceptable to the Township Solicitor and shall, at the request of the Township, include posting financial security in a form and amount acceptable to the Township ~~a bond~~ for estimated expenses of removal. Decommissioning shall include removal of all systems, equipment, buildings, cabling, electrical components, foundations and other associated facilities, and the restoration and revegetation of the area within six months from the date the system enters such a state. Buildings may be reused as accessory buildings provided they comply with all sections of this ordinance.

5. Modifications.

A. The Board of Supervisors may, in connection with its conditional use approval, permit the modification of the provisions of this section, including but not limited to provisions related to the number of turbines and associated appurtenances per lot, the height of the system and the minimum yard dimensions. An applicant desiring to obtain conditional use approval shall, when making application for conditional use under this section, also make application for modifications simultaneously. However, granting of a modification shall not have the effect of making null and void the intent and purpose of the article. Any conditional use to permit a modification of the requirements of this section shall be subject to the following standards:

(1) The proposed modification shall be in harmony with the purpose and intent of this section.
(2) The proposed modification shall not have an adverse impact on the surrounding neighbors.
(3) The proposed modification shall not result in any danger to the public health, safety or welfare.
(4) The applicant shall demonstrate that the proposed modification will allow equal or better results as determined by the Township and represents the minimum modification necessary to afford relief.

(5) The applicant must demonstrate to the satisfaction of the Board of Supervisors that, with respect to each request for a modification, literal compliance with the provisions of this ordinance is not feasible; causes undue hardship because of unique or unusual conditions pertaining to the subject property but meets the purpose and intent of this ordinance; and is unnecessary because an alternate standard can be demonstrated to provide equal or better results as determined by the Township.

B. If the Board of Supervisors determines that the applicant has met his burden, it may grant a modification of the requirements of this section. In granting modifications, the Board of Supervisors may impose such conditions as will, in its judgment, secure the objectives and purposes of this section.

ADD to Section 202

WIND ENERGY SYSTEM - Any device which converts wind energy to mechanical or electrical energy and shall include blades, hubs to which blades are attached, and any device, such as a tower, used to support the hub and/or rotary blades, etc.