

Clinton Township - Wind Energy Facility Regulations [DRAFT]

615 Wind Energy Facilities.

615.1 Special Definitions.

Borrow Area - An area where surplus excavated material is stored.

Residence - Any dwelling suitable for habitation in Clinton Township on the date an application is received. A residence may be part of a multi-family dwelling or multipurpose building, but shall not include buildings such as hotels or motels, hospitals, day care centers, dormitories, sanitariums, nursing homes, municipal buildings, schools or other buildings used for educational purposes, or correctional institutions.

Site - The parcel(s) of land where a wind energy facility is to be placed. The Site can be publicly or privately owned by an individual or a group of individuals controlling single or adjacent properties. Where multiple lots are in joint ownership, the combined lots shall be considered as one for purposes of applying setback requirements. Any property which has a wind energy facility or has entered an agreement for said facility or a setback agreement shall not be considered off-site.

Wind Turbine - A wind energy conversion system consisting of a rotor, blades, a tower, and associated control or conversion electronics, which is intended to produce power for distribution on the utility grid, excepting those facilities producing power for their own use.

Sound Pressure Level - A measure of sound pressure in the atmosphere which can be determined according to the International Standard for Acoustic Noise Measurement Techniques for Wind Generators (IEC 61400-11), or other accepted procedure. Also, the perceived loudness of a sound as expressed in decibels (db) or A-weighted decibel scale dB(A). For example, an L10 - 30 dBA indicates that in any hour of the day 30 dBA can be equaled or exceeded only 10% of the time, or for 6 minutes.

Total Height - The height of the tower and the furthest vertical extension of the wind turbine blades.

Wind Energy Facility - Any wind turbine, small wind turbine or wind measurement tower or combinations of these, including all related infrastructure, electrical lines and substations, access roads and accessory structures such as battery storage sheds, control equipment and the like.

Wind Measurement Tower - A tower used for the measurement of meteorological data such as temperature, wind speed and wind direction.

615.2 Land development standards. The following land development standards shall apply to all wind energy facilities:

- A. All power transmission lines from the tower to any building or other structure shall be located underground to the maximum extent practicable.
- B. No television, radio or other communication antennas may be affixed or otherwise made

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part of any wind turbine, except with approval of Clinton Township.

- C. No advertising signs are allowed on any part of the wind energy facility, including fencing and support structures.
- D. No tower shall be lit except to comply with Federal Aviation Administration (FAA) requirements. Minimum security lighting for ground level facilities shall be allowed as approved on the wind energy facility development plan.
- E. All applicants shall use measures to reduce the visual impact of wind turbines to the extent possible. Wind turbines shall use tubular towers. All structures in a project shall be finished in a single, non-reflective matte finished color or a camouflage scheme. Wind turbines within a multiple wind turbine project shall be generally uniform in size geometry, and rotational speeds. No lettering, company insignia, advertising, or graphics shall be on any part of the tower, hub, or blades.
- F. No wind turbine shall be installed in any location where its proximity with existing fixed broadcast, retransmission, or reception antenna for radio, television, or wireless phone or other communication systems would produce electromagnetic interference with signal transmission or reception. If it is determined a wind turbine is causing electromagnetic interference, the operator shall take necessary corrective action to eliminate this interference including relocation or removal of the facilities, or resolution of issues with the affected parties. Failure to remedy electromagnetic interference is grounds for revocation of the Wind Energy Facility Permit for the specific wind turbine or wind turbines causing the interference.
- G. Wind turbines shall be designed to minimize the impacts of land clearing and the loss of important open spaces.
- H. Wind turbines shall be sited to minimize significant negative impacts on rare animal species in the vicinity.
- I. Storm water run-off and erosion control shall be managed in a manner consistent with all applicable state and Federal laws and regulations and such standards as shall be applied by the Township Board of Supervisors on the advice of the Township Engineer and other Township consultants. Borrow areas shall be managed in accordance with DEP standards.
- J. No shadow flicker shall be permitted on any off-site residences that exist at the time of application.
- K. All wind turbines shall have an automatic braking, governing or feathering system to prevent uncontrolled rotation, over-speeding and excessive pressure on the tower structure, rotor blades and turbine components.
- L. Wind energy facilities shall be gated or fenced to prevent unrestricted public access to the facilities and reduce any attractive nuisance aspects of the use.
- M. Warning signs shall be posted at entrances to wind energy facilities and at the base of

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each tower warning of electrical dangers and containing emergency contact information. Wind turbines shall be designed to prevent unauthorized external access to electrical and mechanical components and shall have access doors that are always kept securely locked.

- N. No climbing pegs or tower ladders shall be located closer than 15 feet to the ground level at the base of the structure for freestanding single pole or guyed towers. The minimum distance between the ground and any part of the rotor or blade system shall be 30 feet.**
- O. Access Roads, Traffic Routes and Road Maintenance**
- 1. Vehicular accesses to the facilities shall, whenever feasible, be provided along the circulation driveways of the existing use and incorporate storm water management measures. All such roads shall be constructed to Township specifications per Section 607 hereof.**
 - 2. Construction and delivery vehicles for wind turbines and/or associated facilities shall propose, and the Township Board of Supervisors shall approve or modify, designated traffic routes to minimize traffic impacts from construction and delivery vehicles, wear and tear on local roads and impacts on local business operations.**
 - 3. The applicant is responsible for remediation of damaged roads upon completion of the installation or maintenance of a wind turbine. A public improvement bond may be required prior to the issuance of any building permit in an amount, determined by the Township Board of Supervisors, sufficient to compensate the Township for any damage to Township roads if any of these roads will be among the designated traffic routes.**
 - 4. The applicant shall provide pre-development and post-development photographic evidence of the condition of any Township roads along the proposed route.**
- P. Setbacks**
- 1. Each wind turbine shall be set back a distance of 500 feet or 1½ times the total height of the largest wind turbine, whichever shall be greater, from any public road, off-site residence, lodging facility, public building, church and other institution. No wind turbine shall be located within its own total height of a site boundary line.**
 - 2. The statistical sound pressure level generated by a wind turbine shall not exceed L10 - 30 dBA measured at the nearest residence located off the site. Sites can include more than one piece of property and the requirement shall apply to the combined properties. Independent verification by an acoustical engineer certified with the Institute of Noise Control Engineering shall be provided before and after construction demonstrating compliance with this requirement.**
 - 3. In the event audible noise due to wind energy facility operations contains a steady pure tone, such as a whine, screech, or hum, the standards for audible noise set forth in subparagraph (B) of this subsection shall be reduced by five (5) dBA. Should the ambient noise level (exclusive of the development in question) exceed the applicable**

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standard given above, the applicable standard shall be ambient dBA plus 5 dBA. Ambient noise level measurements shall be performed when wind velocities at the proposed project site are sufficient to allow wind turbine operation.

The Township Engineer shall review all verifications provided to comply with items 2 & 3 and provide a recommendation to the Township.

Q. State and Federal Permits.

The applicant shall provide documentation of compliance with all Pennsylvania DEP and other state and Federal standards and permit requirements as may be applicable.

R. Decommissioning

1. The Wind Energy Facility owner and operator shall, at its expense, complete decommissioning of the Wind Energy Facility, or individual Wind Turbines, within (12) twelve months after the end of the useful life of the facility or individual Wind Turbines. The Wind Energy Facility or individual Wind Turbines will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months.
2. Decommissioning shall include removal of Wind Turbines, buildings, cabling, electrical components, roads, foundations to a depth of 36 inches, and any other associated facilities.
3. Disturbed earth shall be graded and re-seeded unless the landowner requests in writing that the access roads not be restored.
4. An independent and certified Professional Engineer shall be retained to estimate the total cost of decommissioning without regard to salvage value of the equipment, and the cost of decommissioning net salvage value of the equipment.
5. The Wind Energy Facility owner or operator shall, as a condition of approval, -post and maintain decommissioning funds in an amount equal to net decommissioning costs; Provided, that at no point shall decommissioning funds be less than twenty five percent (25%) or more than 125% of decommissioning costs. The decommissioning funds shall be posted and maintained with a bonding company or Federal or Commonwealth chartered lending institution chosen by the Wind Energy Facility owner or operator posting the financial security. Decommissioning Funds may be in the form of a performance bond, surety bond, letter of credit, corporate guarantee or other form of financial assurance as may be acceptable to the Township and shall be adjusted every five years for inflation.
6. If neither the Wind Energy Facility owner nor operator complete decommissioning then the Township may take such measures as necessary to complete decommissioning. The entry into and submission of evidence of a participating landowner agreement to the Township shall constitute agreement and consent of the parties to the agreement, their respective heirs, successors and assigns that the

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Township may take such action as necessary to implement the decommissioning plan.

7. The escrow agent shall release the decommissioning funds when the Wind Energy Facility owner or operator has demonstrated and the Township concurs that decommissioning has been satisfactorily completed, or upon written approval of the Township to implement the decommissioning plan.

S. Wind Measurement Towers

Installation of wind measurement towers, also known as anemometer towers, shall be permitted to determine the wind speeds and the feasibility of using sites. The distance between a wind measurement tower and the tower site shall be at least 1½ times the total height of the tower. Wind Energy Facility permits for wind measurement towers shall be issued for a period of two years and shall be renewable upon application to the Township Board of Supervisors.

T. Application to Existing Facilities

These regulations shall apply to existing wind energy facilities to the extent that wind turbines are added or replaced with newer higher facilities, new access roads or buildings are constructed or additional areas of land disturbance in excess on one acre in area.