

**218 SMALL WIND ENERGY SYSTEMS / PRIVATE – STANDARDS**

**218 SMALL WIND ENERGY SYSTEM:**

Defined for the purpose of this Ordinance as a privately owned or residential wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100 kilowatts (kW) and which is intended to primarily reduce on-site consumption of utility power. Any system over the 100 kW size must comply with the regulations as set forth in Section 217 of this Ordinance.

**218.1 ALLOWABLE USE:**

Small wind energy systems shall be allowed as a permitted use in areas zoned Agricultural Residential (AR) and by Special Exception Use in Rural Residential (RR), Commercial (COM) and Industrial (I) zoned districts subject to the requirements of this Section.

**218.2 SMALL WIND ENERGY STANDARDS AND REGULATIONS**

- A. **Wind Turbine Equipment:** Small wind turbines shall be approved under the state public benefits program or any other small wind certification program recognized by the American Wind Energy Association.
- B. **Setbacks:** The base of the tower shall be set back from all property lines, public right-of-ways, and public utility lines equal to 1.5 times the tower extended height, which is defined as the height above grade to the blade tip at its highest point of travel.
- C. **Tower Height:** Tower height is defined as the height above grade of the fixed portion of the tower, excluding the wind turbine itself. There are no specific height limitations for said towers except as imposed by the FAA regulations. However, any tower exceeding 100' in height shall require variance approval from the BZA.
- D. **Requirement for Engineered Drawings:** Building permit applications for small wind energy systems shall be accompanied by standard drawings of the wind turbine structure and engineered drawings of the tower, base, footings, and/or foundation as provided by the manufacturer. Wet stamps shall not be required.
- E. **Soil Studies:** For standard soil conditions (not including gravel, sand, or muck), foundations developed by the wind turbine manufacturer shall be acceptable for turbine installations of 20kW or less and will not require project-specific soils studies or an engineer's wet stamp.
- F. **Compliance with FAA Regulations:** No wind energy tower shall be constructed, altered or maintained so as to project above any of the imaginary airspace surfaces described in FAR Part 77 of the FAA guidance on airspace protection.
- G. **Compliance with National Electric Code:** Building permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components, as supplied by the manufacturing, in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code.
- H. **Utility Notification:** No small wind energy system shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

- I. **Sound:** Sound produced by the turbine under normal operating conditions, as measured at the property line, shall not exceed the zoning performance standards. Sound levels, however, may be exceeded during short-term events out of anyone's control such as utility outages and/or severe wind storms.
- J. **Lighting:** No illumination of the turbine or tower shall be allowed unless required by the FAA.
- K. **Signage:** All signs, other than the manufacturer's or installer's identification, appropriate warning signs, or owner identification on a wind generator, tower, building, or other structure associated with a small wind energy system visible from any public road shall be prohibited.
- L. **Access:** Any climbing foot pegs or rungs below 12 feet of a freestanding tower shall be removed to prevent unauthorized climbing. For lattice or guyed towers, sheets of metal or wood may be fastened to the bottom tower section such that it cannot readily be climbed.
- M. **Insurance:** Additional insurance beyond homeowners' coverage shall not be required.
- N. **Abandonment:** If a wind turbine is inoperable for six consecutive months the owner shall be notified that they must, within six months of receiving the notice, restore their system to operation condition. If the owner(s) fails to restore their system to operating condition within the six-month time frame, then the owner shall be required, at his expense, to remove the wind turbine from the tower for safety.
- O. **Any other information** required by the Zoning Administrator for the proper enforcement of this Ordinance.

### **218.3 APPLICATION, PERMIT & FEES:**

The applicant shall submit an application accompanied by a site plan showing all required setbacks and provide the required information as stated in Sub-section 218.2. When the project is in compliance with the Ordinance, a Improvement Location Permit may be issued by the Zoning Administrator. The permit fee will be in accordance with the Official Fee Schedule, which is maintained by the Zoning Administrator.