



SMALL WIND ENERGY SYSTEM

The Board of County Commissioners adopted an amendment to the Saint Mary's County Comprehensive Zoning Ordinance, effective December 26, 2008, to allow a small wind energy system as an accessory structure in all zoning districts for on-site consumption only. (See Section 51.3.95 of the Ordinance)

A **Small Wind Energy System** is a single-tower wind energy conversion system used to generate electricity with a rated capacity (as defined by the manufacturer) of 100 kilowatts (kW) or less. The tower cannot exceed a maximum height of 85 feet on a lot or parcel less than one acre in size, or a maximum height of 150 feet on a lot or parcel one acre in size or greater. Total height means the vertical distance from ground level to the tip of a wind generator blade when the tip is at its highest point.

A **Wind Energy System** consists of the equipment that converts and then stores or transfers energy from the wind into usable forms of energy. This equipment includes any base, blade, foundation, generator, nacelle (enclosure housing the engine), rotor, tower, transformer, vane, wire, inverter, batteries, guy wire, or other component used in the system.

A **Wind Generator** consists of the blades and associated mechanical and electrical conversion components mounted on top of the tower.

A **Small Wind Energy System Tower** is a monopole, lattice, or guy-wired structure that supports a wind generator.

Building permit requirements:

A building permit is required prior to installing a small wind energy system. Approval of the building permit shall be subject to a determination by appropriate personnel affiliated with Patuxent River Naval Air Station as to noninterference with military activities. The building permit application shall be accompanied by the following:

- Standard drawings of the wind turbine structure including the tower, footings, and base; and
- A structural analysis of the tower showing compliance with the Uniform Statewide Building Code. This analysis may be provided by the manufacturer or the supplier; and
- Footing specifications provided by the manufacturer or supplier; and
- Site plan of the property drawn to scale, showing the following information:
 - All property boundaries;
 - Location of the proposed small wind energy system and the locations of all existing buildings, structures, overhead utility lines, and environmental features including woodland and other vegetation;
 - Distance between the small wind energy system tower and structures on adjoining properties;
 - Distance between the small wind energy system tower and property lines.

Requirements of a Small Wind Energy System are as follows:

- Must comply with National Electric Code. A line drawing of the electrical components must be shown in detail and may be supplied by the manufacturer
- Must comply with FAA regulations, if necessary
- Must be the default color of the manufacturer or painted a non-reflective, neutral color that conforms to the environment
- Must not exceed the ambient noise levels as established by Schedule 61.4.1 of the Ordinance
- Must not be artificially lighted unless required by the FAA or other applicable authority
- Must not be used for displaying any advertising. Appropriate warning signs and signs identifying the manufacturer, installer, or owner of the Small Wind Energy System may be attached; and
- Electrical controls and control wiring and power-lines must be wireless or underground
- Step bolts or a ladder readily accessible to the public are prohibited at a minimum height of 10 feet or less above the ground
- The tower of a Small Wind Energy System shall be set back a distance equal to its total height, which is a one to one (1:1) ratio between height and setback, from all property lines and any overhead utility lines.
- The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than fifteen (15) feet, as measured at the lowest point of the arc of the blades.
- Only one Small Wind Energy System is permitted on a site.
- Unsafe or abandoned small wind energy systems must be repaired or removed by the landowner.

See Section 51.3.95 of the Comprehensive Zoning Ordinance for a more detailed description of the requirements for a Small Wind Energy System.