

Draft Model Small Wind Ordinance for Maryland

March 2008

MARYLAND MODEL WIND ORDINANCE FOR TOWNS/COUNTIES

1. PURPOSE

The purpose of the Ordinance is to facilitate the installation and construction of small wind energy systems in the [Town/County] for private landowners, subject to reasonable restrictions, which will preserve the public health and safety.

2. APPLICABILITY

The requirements set forth in this Ordinance shall govern the siting of small wind energy systems used to generate electricity or perform work which may be connected to the utility grid pursuant to the Maryland's net metering laws (Maryland Public Utility Companies Article § 7-306), serve as an independent source of energy, or serve in a hybrid system.

The requirements of this Ordinance shall apply to all Small Wind Energy Systems proposed after the effective date of this Ordinance. Small Wind Energy Systems for which a required permit has been properly issued prior to the effective date of this Ordinance shall not be required to meet the requirements of this Ordinance; provided, however, that any such pre-existing Small Wind Energy System that is not producing energy for a continuous period of twelve (12) months shall meet the requirements of this Ordinance prior to recommencing production of energy. No modification that increases the height of the system or significantly increases its output shall be allowed without full compliance with this Ordinance.

3. DEFINITIONS

As used in this Ordinance, the following terms shall have the meanings indicated:

Committee shall mean [[Town/County] Planning Committee or Planning Commission.]

FAA shall mean the Federal Aviation Administration.

MET Tower shall mean "Meteorological tower" or "met tower" means a structure designed to support the gathering of wind energy resource data , and includes the tower, base plate, anchors, guy cables and hardware, anemometers (wind speed indicators), wind direction vanes, booms to hold equipment anemometers and vanes, data logger, instrument wiring, and any telemetry devices that are

used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at a given location.

Small Wind Energy System shall mean a wind energy conversion system, less than 100 kW, consisting of a wind turbine, tower, base and associated control or conversion electronics.

Siting Permit shall mean a construction and operating permit granted in accordance with the provisions of this Ordinance.

Total Height shall mean, when referring to a Wind Turbine, the distance measured from ground level to the blade extended at its highest point.

[Town/County] shall mean [_____] [Town/County].]

Wind Turbine shall mean the parts of the wind system including the blades, generator and tail.

4. REGULATORY FRAMEWORK

4.1. COMPREHENSIVE PLANS (SMART GROWTH)

Small Wind Energy Systems shall be constructed in areas consistent with the [Town/County] Comprehensive Plan.

4.2. ZONING

Small Wind Energy Systems may only be constructed in the following zoned areas: [insert permitted zoning] on the official zoning map for the [Town/County]. MET Towers may be temporarily installed in any zoned areas for a period of 18 to 24 months.

4.3. PRINCIPAL OR ACCESSORY USE

Small Wind Energy Systems may be considered either principal or accessory uses. A different existing use or an existing structure on the same lot shall not preclude the installation of a Small Wind Energy System or a part of such facility on such lot. Small Wind Energy Systems that are constructed and installed in accordance with the provisions of this Ordinance shall not be deemed to constitute the expansion of a nonconforming use or structure.

5. GENERAL REQUIREMENTS FOR SMALL WIND ENERGY SYSTEMS

5.1. VISUAL APPEARANCE; LIGHTING; POWERLINES

- 1) Wind Turbines shall be painted a non-reflective, non-obtrusive color such as the manufacturer's default color option or a color that conforms to the environment and architecture of the community. Small wind energy towers shall maintain galvanized steel, brushed aluminum or white finish, unless FAA standards required otherwise. The zoning authority may require a photo of a small wind energy system of the same model that is the subject of the landowner's application adjacent to a building or some other object illustrating scale (e.g., manufacturer's photo).
- 2) At Small Wind Energy System sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the Small Wind Energy System to the natural setting and then existing environment.
- 2) Small Wind Energy Systems shall not be artificially lighted, except to the extent required by the FAA or other applicable authority.
- 3) Small Wind Energy Systems shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the wind turbine.
- 4) Electrical controls and control wiring and power-lines shall be wireless or underground except where small wind energy system wiring is brought together for connection to the transmission or distribution network, adjacent to that network.
- 5) The applicant shall provide evidence that the proposed height of the small wind energy system tower does not exceed the height recommended by the manufacturer or distributor of the system.
- 6) The applicant shall certify that they will comply with the utility notification requirements contained in the Maryland net metering law and accompanying regulations in Section 5.7 of this Ordinance, unless the applicant intends, and so states on the application, that the system will not be connected to the electricity grid. Whether or not the applicant is participating in the net metering program, the applicant will be required to meet the most current IEEE (Institute of Electrical and Electronics Engineers) 1547 Standard for Interconnecting Distributed Resources with

Electric Power Systems. Additionally, upon final ruling of the Maryland Public Service Commission, the applicant shall also meet the requirements set forth in Maryland Small Generator Interconnection Standards (PSC Case No. 9060 pending).

5.2. SETBACKS

The following setbacks and separation requirements shall apply to all Small Wind Energy Systems and MET Towers; provided, however, that the Committee may reduce the standard setbacks and separation requirements if the intent of this Ordinance would be better served thereby.

- 1) A small wind energy system shall be located on a parcel that, at a minimum, is $\frac{1}{2}$ acre in size.
- 2) The tower height of a small wind energy system shall not exceed a maximum height of 80 feet on a parcel of between $\frac{1}{2}$ acre and one acre. For property sizes of one acre or more, there is no limitation on maximum height except as imposed by FAA regulations. In those zoned areas that have maximum height limits, the applicant can receive a waiver or variance from the Committee for exceeding the maximum height requirements for wind turbines if all other requirements in this Ordinance are met. MET Towers cannot exceed a maximum height of 80 meters (or 263 feet).
- 3) Property lines: Each Small Wind Energy System shall be set back from the nearest property line a distance no less than 1.1 times its Total Height, unless appropriate easements are secured from adjacent property owners, or other acceptable mitigation is approved by the Committee.
- 4) At the time of application, each Small Wind Energy System shall be set back from the nearest non-participating building structure (i.e., buildings on neighboring land) a distance no less than one and a half (1.5) times its total height.
- 5) Public and Private Roads: Each Small Wind Energy System shall be set back from the nearest public road or neighboring private right-of-ways (e.g., shared driveway, neighboring driveway) a distance no less than 1.1 times its Total Height, determined at the nearest boundary of the underlying right-of-way for such public road.

- 6) Communication and electrical lines: Each Small Wind Energy System shall be set back from the nearest above-ground public electric power line or telephone line a distance no less than 1.1 times its Total Height, determined from the existing power line or telephone line.
- 7) No portion of Small Wind Energy Systems or MET Towers, including guy wire anchors, may extend closer than 30 feet from any property line.

5.3. SOUND LEVELS AND MEASUREMENT

Audible sound due to Small Wind Energy System operations shall not exceed fifty (55) dBA for any period of time, when measured at the property line of any property containing an occupied building on the date of approval of any Small Wind Energy System Siting Permit. The level, however, may be exceeded during short-term events such as utility outages and/or severe windstorms.

5.4. MINIMUM GROUND CLEARANCE

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.

5.5. SAFETY

- 1) Wind Turbine towers shall not be climbable up to 12 feet above ground level.
- 2) All access doors to Wind Turbine towers and electrical equipment shall be lockable.
- 3) Appropriate warning signage (e.g., electrical hazards) shall be placed on Wind Turbine towers, electrical equipment, and Small Wind Energy Systems.

5.6. FEDERAL AND STATE REQUIREMENTS

- 1) Compliance with Uniform Statewide Building Code: Building permit applications for wind energy systems shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, and footings, and site plan (showing the location of the proposed small wind energy system and the locations of all existing buildings, structures and property lines to scale along with distances). An engineering analysis of the tower showing compliance with the Uniform Statewide Building Code and certified by a licensed professional engineer shall also be submitted.

This analysis may be supplied by the manufacturer. Wet stamps shall not be required.

2) Compliance with FAA Regulations: Wind energy systems must comply with regulations of the Federal Aviation Administration (FAA), including any necessary approvals for installations close to airports.

3) Compliance with National Electric Code: Building permit applications for Small Wind Energy Systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information may be supplied by the manufacturer.

4) Compliance with Regulations Governing Net Energy Metering: Small Wind Energy Systems connected to the utility grid must comply with the Maryland Net Metering Laws (Maryland Code, Utility Companies Article § 7-306).

5) Compliance with IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems: Applicants must meet all interconnection requirements of the IEEE 1547, including those pertaining to safety, reliability and liability coverage requirements. Upon final ruling of the Maryland Public Service Commission, the applicant shall also meet the requirements set forth in Maryland Small Generator Interconnection Standards (PSC Case No. 9060 pending).

5.7. REMOVAL OF DEFECTIVE OR ABANDONED SMALL WIND ENERGY SYSTEMS

Any Small Wind Energy System found to be unsafe by the building official shall be repaired by the landowner to meet federal, state and local safety standards or removed within six months. If any Small Wind Energy System is not operational for a period of 12 consecutive months or more, the county will request by registered mail and provide 45 days such response for the landowner to provide corrective action. In such a response, the landowner shall set forth reasons for the operational difficulty and provide a reasonable timetable for corrective action. If the county deems the timetable for corrective action as unreasonable, they must notify the landowner and such landowner shall remove the turbine at their own expense within 120 days of receipt of notice from the county. The county or town administrator shall have the authority to pursue legal action if necessary.