

# WINTHROP, MAINE

## SMALL WIND ENERGY SYSTEMS ORDINANCE

### **I. Title**

This ordinance shall be known and cited as the "SMALL WIND ENERGY SYSTEMS ORDINANCE" of the Town of Winthrop, Maine, (hereinafter referred to as the "ordinance").

### **II. Authority**

The Winthrop Planning Board (hereinafter referred to the "Board") is vested with the authority to review and approve, conditionally approve or reject any application for small wind energy systems.

### **III. Purpose and Intent**

The purpose of this ordinance is to facilitate the permitting and installation of small wind energy systems and to preserve and protect public safety without significantly increasing the cost or decreasing the efficiency of a small wind energy system.

### **IV. Applicability**

The requirements of this ordinance shall apply to all free standing small wind energy systems proposed, modified, or constructed after the adopted date of this ordinance. General ordinance requirements shall not apply to small wind energy systems mounted as an accessory on the wall or roof of a structure or to ornamental or architectural windmills.

### **V. Severability**

If any section, clause, or provision of this ordinance is declared unconstitutional or otherwise invalid by a court of competent jurisdiction, said declaration shall not affect the validity of the remainder of this ordinance as a whole or any part thereof, other than the part so declared to be unconstitutional or invalid.

### **VI. Conflict**

Where this ordinance is in conflict with other Winthrop ordinances, this ordinance shall prevail.

### **VII. Definitions**

#### **1) Applicant**

The person, firm, corporation, company, Limited Liability Company or other entity which applies for approval under this ordinance.

#### **2) Meteorological Tower**

A structure designed to support the gathering of wind resource data. This includes the tower, equipment booms, base plate, anchors, guy wires, and weather instrumentation.

3) Setback

The horizontal distance measured from the center of a tower base to a second specified point.

4) Site

The parcel(s) of land where a small wind energy system is to be placed. The site can be publicly or privately owned and may include several adjacent lots. Where the site is comprised of several adjacent lots the combined lots shall be considered one for the purpose of applying setback requirements.

5) Small Wind Energy System

A wind energy system consists of a wind turbine, a tower, footings, electrical infrastructure, and any other associated equipment or structures, which has a rated capacity of not more than 100 kilowatts and which is intended to produce electrical power primarily for the benefit of the applicant.

6) System Height

The vertical distance measured from a point on the ground at the mean finished grade adjoining the foundation as calculated by averaging the highest and lowest finished grade around the small wind energy system tower to the highest point of the wind turbine blade when the tip is at its full vertical position.

7) Tower

Tower means a monopole, lattice, or guyed structure that supports a wind turbine.

8) Wind Energy System

Wind energy system means a wind powered generator and all associated equipment, including foundation, base, tower, nacelle, turbine, vane, wire, inverter, batteries, or other components necessary to fully utilize the wind energy.

9) Windmill

A low speed wind turbine that principally captures wind energy by drag, i.e. the traditional multi-bladed farm windmill or Dutch windmill.

10) Licensed Professional Engineer

A Professional Engineer who is licensed by a governmental entity having jurisdiction in either the United States or Canada and who has the authority to sign and seal or "stamp" engineering documents (reports, drawings, and calculations) for a study, estimate, design or analysis, thus taking legal responsibility for it.

## **VIII. Building Permit Applications;**

Small wind energy system building permit applications shall be submitted to the Code Enforcement Officer and shall include the following;

1) Name, address, telephone number of the applicant.

- 2) Address of the proposed small wind energy system's location, including tax map and lot numbers. If the site includes properties not owned by the applicant, the applicant shall provide the Board with proof that the applicant holds rights for use of that property through long term lease or other conveyance and that the owner(s) of such property are aware of and agree to the construction of the proposed small wind energy system.
- 3) A description of the project, including the manufacturer and model, the maximum rated capacity of the small wind energy system, tower type, the system height, and whether or not it will be connected to the electric utility lines.
- 4) If available, standard drawings or blue prints of the wind turbine tower and footings and an analysis of the tower and footings certified by a licensed professional engineer shall be submitted. This analysis may be supplied by the manufacturer. Wet stamps shall not be required.
- 5) A small wind energy site plan drawn to scale and showing compass orientation, the planned location of the tower, property lines and physical dimensions of the property, location and dimensions of existing structures on the property, the proposed location of the tower, the location of major structures on abutting properties within two (2) times the system height from the proposed tower location.
- 6) Written evidence that the electrical utility service provider that serves the proposed site has been informed of the applicant's intent to install an interconnected customer-owned electrical generator, unless the applicant does not plan, and so states, to connect the system to the electric utility lines.

## **IX. Standards**

### **1) Zoning Districts**

Small wind energy systems and meteorological towers are permitted as a principal or accessory use in all Zoning Districts. A different existing use or an existing structure on the same lot shall not preclude the installation of a small wind energy system or meteorological tower. A small wind energy system or meteorological tower installed in accordance with the provisions of this ordinance shall not be deemed to constitute the expansion of a nonconforming use or structure.

### **2) Setbacks**

Small wind energy systems certified by a licensed professional engineer shall be setback a minimum horizontal distance of 50% of the system height from property lines. Setbacks for small wind energy systems not certified by a licensed professional engineer shall be 110% of the system height from the property lines. These distances may be reduced to the setback requirement of other structures in the same zone with the written consent of the owner of the abutting property.

3) At the time of application, each small wind energy system shall be set back from the nearest abutting inhabited structure by a distance not less than 150% of the system height. This distance may be reduced with the written consent of the owner of the abutting property.

4) Anchor points for guy wires for a tower shall be located within the site and are not otherwise constrained by setback requirements. The point of attachment for guy wires shall be enclosed by a fence or sheathed in bright orange or yellow covering to eight (8) feet above the ground.

5) Height

The system height of a small wind energy system shall not exceed 140 feet. The allowed height shall be reduced if necessary to comply with Federal Aviation Administration Requirements.

6) Ground Clearance

The blade tip of any rotor shall, at its lowest point, have a ground clearance of not less than twenty (20) feet.

7) Small wind energy systems shall be principally used to produce power for the benefit of the applicant. This standard does not preclude utility line connections for net metering or other small energy system grid tie-in plans that the Maine Public Utilities Commission may adopt.

8) The maximum power output for each small wind energy system shall be 100 kilowatts.

9) The system's tower, turbine, and blades shall be a non-reflective neutral color unless otherwise required by the Federal Aviation Administration.

10) Exterior lighting on any tower or turbine associated with the small wind energy system shall not be allowed except that which is required by the Federal Aviation Administration.

11) Except during short-term events including utility outages and severe wind storms, the audible noise due to wind turbine operations shall not create a nuisance condition.

12) Small wind energy systems larger than 1 kW shall be equipped with automatic over-speed controls to limit the turbine speed to within design limits and brakes to lock or minimize rotation.

13) A small wind energy system that is not in use shall be braked or locked so as to prevent uncontrolled rotation.

14) All small wind energy systems shall be maintained in safe condition. Systems that are structurally unsafe must be repaired or dismantled promptly. The town of Winthrop shall have the authority to pursue legal action if necessary.

**X. Meteorological Towers**

Meteorological towers shall require the same application procedures and applicable standards as small wind energy systems. They shall ordinarily be permitted for a period of two (2) years unless that period is extended by the Board.

**XI. Waivers or Modifications**

The Winthrop Planning Board may, after a public hearing, grant a waiver or modification from the strict application of the provisions of this ordinance if, in the opinion of the Board, the grant of the waiver or modification will not produce an adverse effect on the general safety and welfare of the town.. The Board may consider as reasonable factors in evaluating the request: the impact of the waiver or modification on the neighborhood, the benefit to the applicant, feasible alternatives, and the scope of the request.