

## Section 4.12, Small Wind Energy Systems

### 4.12.1 Purpose

The purpose of this By-law is to provide criteria which will help the Town of Ashby evaluate a small wind project. The criteria will be utilized by building inspectors charged with issuing building permits for Small Wind Energy Systems (SWEF). Any proposed non-conforming small wind energy systems will be addressed through a special permit process under the review of the special permit granting authority.

#### 4.12.1.1 Applicability

This section applies to small wind systems no greater than 60 kilowatts of rated nameplate capacity proposed to be constructed after the effective date of this section.

### 4.12.2 Definitions

**Height:** The height of a wind turbine measured from natural grade to the tip of the rotor blade at its highest point, or blade-tip height.

**Rated Nameplate Capacity:** The maximum rated output of electric power production equipment. This output is typically specified by the manufacturer with a “nameplate” on the equipment.

**Small Wind Energy System:** All equipment, machinery and structures utilized in connection with the conversion of wind to electricity. This includes, but is not limited to, storage, electrical collection and supply equipment, transformers, service and access roads, and one or more wind turbines, which has a rated nameplate capacity of 60 kW or less.

**Wind turbine:** A device that converts kinetic wind energy into rotational energy that drives an electrical generator. A wind turbine typically consists of a tower, nacelle body, and a rotor with two or more blades.

### 4.12.3 General Requirements

4.12.3.1 **Special Permit Granting Authority:** No wind facility less than 60 kilowatts of rated nameplate capacity shall be erected, constructed, installed or modified as provided in this section without first obtaining a permit from the Zoning Board of Appeals (ZBA). The construction of a SWEF shall be permitted in the all zoning districts subject to the issuance of a Special Permit, and provided that the use complies with all requirements set forth in sections 4.12.3, 4, 5 and 6. All such SWEF shall be constructed and operated in a manner that minimizes any adverse visual, safety, and environmental impacts. No special permit shall be granted unless the ZBA finds in writing that:

- (1) the specific site is an appropriate location for such use;
- (2) the use is not expected to adversely affect the neighborhood;
- (3) there is not expected to be any serious hazard to pedestrians or vehicles from the use;
- (4) no nuisance is expected to be created by the use; and
- (5) adequate and appropriate facilities will be provided for the proper operation of the use.

Such permits may also impose reasonable conditions, safeguards and limitations on time and use and may require the applicant to implement all reasonable measures to mitigate unforeseen adverse impacts of the WEF, should they occur.

Wind monitoring or meteorological towers shall be permitted in all zoning districts subject to issuance of a building permit for a temporary structure.

#### 4.12.3.2 Compliance with Laws, Bylaws and Regulations

The construction and operation of all such proposed SWEF's shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, environmental, electrical, communications, and FAA aviation requirements.

#### 4.12.4 General Siting Standards

##### 4.12.4.1 Setbacks

Wind turbines shall be set back a distance equal to the total height of the wind turbine from all inhabited structures, overhead utility lines, public road or right of way and at least twenty five (25) feet from property boundaries.

##### 4.12.4.1.1 Setback Waiver

The building inspector may reduce the minimum setback distance if written permission is granted by the entity with care and control over the affected asset.

#### 4.12.5 Design Standards

##### 4.12.5.1 Appearance, Color and Finish

The wind generator and tower shall remain painted or finished the non-reflective color or finish that was originally applied by the manufacturer, unless approved in the building permit.

##### 4.12.5.2 Lighting

Wind turbines shall be lighted only if required by the Federal Aviation Administration.

Lighting of other parts of the SWEF, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties.

##### 4.12.5.3 Signage and Advertising

Signs and advertising shall be restricted to reasonable identification of the manufacturer or operator of the small wind energy facility and shall defer to the requirements of the Town of Ashby sign regulations.

#### 4.12.6 Safety, Aesthetic and Environmental Standards

##### 4.12.6.1 Unauthorized Access

Wind turbines or other structures part of a SWEF shall be designed to prevent unauthorized access. For instance, the tower shall be designed and installed so as to not provide step bolts or a ladder readily accessible to the public for a minimum height of 8 feet above the ground.

##### 4.12.6.2 Noise

The SWEF and associated equipment shall conform to the provisions of the Department of Environmental Protection's, Division of Air Quality Noise Regulations (310 CMR 7.10), unless the Department and the Permit Granting Authority agree that those provisions shall not be applicable.

##### 4.12.6.3 Land Clearing, Soil Erosion and Habitat Impacts

Clearing of natural vegetation shall be limited to that which is necessary for the construction, operation and maintenance of the SWEF and is otherwise prescribed by applicable laws, regulations, and bylaws.

#### 4.12.7 Monitoring and Maintenance

##### 4.12.7.1 System Conditions

The applicant shall maintain the SWEF in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and security measures.

#### 4.12.8 Abandonment or Decommissioning

4.12.8.1 Removal Requirements: Any SWEF which has reached the end of its useful life or has been abandoned shall be removed. When the SWEF is scheduled to be decommissioned, the owner shall notify the Board of Selectmen and the ZBA by certified mail of the proposed date of discontinued operations and plans for removal. The owner/operator shall physically remove the SWEF no more than 90 days after the

date of discontinued operations. This period may be extended at the request of the operator and at the discretion of the ZBA. "Physically Remove" shall include, but not be limited to:

- (1) Removal of all wind turbines, structures, shelters, machinery, equipment, security barriers and transmission lines from the site;
- (2) Disposal of all solid and hazardous waste in accordance with local and state waste disposal regulations; and
- (3) Restoration of the location of the SWEF to its natural condition, except the ZBA may allow the owner to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

4.12.8.2 Abandonment: Absent notice of a proposed date of decommissioning, the SWEF shall be considered abandoned when the facility fails to operate for more than 180 days without the written consent of the ZBA.

#### 4.12.9 Term of Special Permit:

A special permit issued for any SWEF shall be valid for 25 years, unless the Special Permit is extended or renewed upon a finding of satisfactory operation of the facility. Request for renewal must be submitted at least 180 days prior to expiration of the Special Permit. Upon the expiration of the Special Permit or any renewal thereof, the SWEF shall be removed by the owner in accordance with Section 4.11.8.1.

#### 4.12.10. Application Process

The ZBA shall adopt rules and regulations relative to application procedures and requirements for SWEF Special Permits.