

SECTION 8.8 SMALL WIND ENERGY SYSTEMS

8.8-1 Purposes

The purposes of this Section 8.8 are (a) to provide a permitting process for Small Wind Energy Systems (SWES) so that they may be utilized in a cost-effective, efficient, and timely manner to reduce the consumption of utility-supplied electricity; (b) to integrate these systems into the community in a manner that minimizes their impacts on the character of neighborhoods, on property values, and on the scenic, historic, and environmental resources of the Town; and (c) to protect health and safety, while allowing wind energy technologies to be utilized for citizens' general welfare.

8.8-2 Special Permit Requirement

- A. Small wind energy systems that comply with the requirements of this Section may be allowed by Special Permit as provided in Article IX below. The SPGA may grant a Special Permit only if it finds that the application complies with the provisions of this bylaw and is consistent with the applicable criteria for granting Special Permits. The SPGA may waive or adjust any of the requirements outlined below, consistent with the purposes of this Section, except for the special requirements for the reduction of setbacks in Subsection 8.8-3B(4).
- B. The Site Plan described in Subsection 9.2-1B of this bylaw shall be prepared to scale and

stamped by a professional land surveyor, registered landscape architect, or licensed civil engineer showing, in addition to other applicable requirements for a Site Plan, the location of the proposed SWES and any associated buildings or appurtenances, distances to all property lines and abutting dwellings, existing and proposed structures, existing and proposed elevations, public and private roads including temporary access roads, above and below ground utility lines, any other significant features or appurtenances, and any measures designed to mitigate the impacts of the SWES. Any portion of this Subsection 8.8-2 may be waived if in the opinion of the SPGA the materials submitted are sufficient for the board to make a decision.

8.8-3 Design Requirements

A. Blade Tip Height

On parcels of less than one acre, the blade tip (defined as combined tower and turbine) height shall not exceed 80 feet. For parcels of one acre or more, the blade tip height shall not exceed 160 feet. For purposes of this Section, tower height shall be measured from the average elevation of the existing grade at the base of the tower to the highest reach of the blade tip of the turbine.

B. Setbacks

1. The minimum horizontal distance from the base of the tower structure to any property line or road right-of-way shall be the greater of either: the blade tip height plus 10 feet; or the "fall zone," as determined by a licensed professional engineer, plus 10 feet.
2. No part of the SWES, including guy wire and anchors, may extend closer to the property boundaries than the setback for zoning districts in the dimensional table in Subsection 4.2-1.
3. The tower base shall be a minimum of three times its blade tip height from existing abutting dwellings, as abutting is defined in the Zoning Act, MGL. Ch. 40A.
4. The SPGA may reduce the above setback distances for the SWES in the course of its review of the application, consistent with the requirements of public health, safety, and welfare and the purposes of this Section 8.8. If the setback distances are reduced so that the "fall zone" of the tower includes land on abutting property, such reduction shall only be permitted if the affected abutting property owner(s) executes a recorded easement allowing the fall zone onto such abutting property.

C. Access. All small wind energy systems shall be designed and maintained to securely prevent unauthorized access.

D. Color and Finish

A non-reflective exterior color designed to blend with the surrounding environment is encouraged. No logos, designs, decorations, or writing shall be visible at or beyond the property line.

E. Visual Impact

Where a SWES would be visible from existing occupied structures, the applicant shall demonstrate through project Site Planning and proposed mitigation that the SWES minimizes impacts on the visual character of surrounding neighborhoods and the community. This may include, but not be limited to, information regarding site selection, turbine design or appearance, buffering, screening, or lighting. All electrical cables from the tower base to all connected facilities shall be underground.

8.8-4 General Requirements

A. Construction

The construction, operation, maintenance and removal of wind facilities shall be consistent with all other applicable Town, State, and Federal requirements, including all applicable health, safety, construction, environmental, electrical, communications and aviation requirements.

B. Operation and Maintenance

An application for a Special Permit for a SWES shall include a plan for the general procedures for safe and effective operation and maintenance of the facility.

C. Approved Wind Turbines

Small Wind Turbine makes and models must appear on the approved list of the California Energy Commission Lists of Eligible Small Wind Turbines or New York State Energy Research and Development Qualified Wind Generators, or a similar list approved by another state or by the Commonwealth of Massachusetts if available.

D. Compliance with State Building Code

Building Permit applications for small wind energy systems shall comply with the state building code and all applicable electrical codes.

E. Utility Notification

No small wind energy system shall be installed until evidence has been given to the electrical inspector that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator and has been approved for an intertie agreement. Off-grid systems shall be exempt from this requirement.

F. Noise

Small Wind Energy Systems shall comply with the Massachusetts Noise Regulations, 310 CMR 7.10.

G. Compliance with FAA requirements

All SWES towers shall also comply with applicable FAA regulations.

8.8-5 Abandonment and Removal

A. Abandonment

Unless authorized by written approval from the Planning Board, a SWES shall be considered to be abandoned if it is not operated for a period of two years, or if it is designated a safety hazard by the Building Inspector. If the Building Inspector determines that a SWES is abandoned, the owner shall be required to physically remove the SWES within 90 days of written notice from the Building Inspector. The owner shall have the right to respond to the written notice of abandonment within 30 days of such notice. If the owner can provide information to demonstrate that the SWES has not been abandoned, the Building Inspector may withdraw the notice of abandonment. If the property owner fails to remove the small wind energy system in accordance with the requirements of this Section after 90 days of such notice and the Building Inspector has not withdrawn said notice, the Town shall have the authority to enter the property and physically remove the facility at the owner's expense.

B. Removal

"Physically remove" shall include, but not be limited to:

1. Removal of SWES, any equipment shelters, and security barriers from the subject property.
2. Proper disposal of the waste materials from the site in accordance with local and state solid waste disposal regulations.
3. Restoration of the location of the SWES to a stable condition with vegetation sufficient to prevent erosion and sedimentation.