

**Town of Duxbury
Annual Town Meeting
March 13, 2010**

The Town meeting was called to order by the Moderator at 9:05am, recessed for a Special Town Meeting at 9:15am until the meeting adjourned sine die at 9:50am when the Annual Town Meeting reconvened, recessed for lunch from noon until 1pm and recessed at 3:50pm until the meeting was reconvened on Monday, March 15th at 7:30pm and adjourned sine die at 10:55pm. All sessions were held at the Duxbury Performing Arts Center, 73 Alden St., Duxbury

Article 18-Moved and seconded that the Town will vote to amend the Protective Bylaw by adding a new Section 616 entitled “Community-Scale Wind Facilities”:

616 COMMUNITY-SCALE WIND FACILITIES

616.1 Purpose and Applicability

The purpose of this section is to provide by special permit for the construction and operation of Community-Scale Wind Facilities, to generate power for use at municipally owned facilities and to provide standards for the placement, design, construction, monitoring, modification and removal of such Community-Scale Wind Facilities that address public safety, minimize impacts on scenic, natural and historic resources of the Town of Duxbury and to provide adequate financial assurance for operating and decommissioning such Community-Scale Wind Facilities.

This section applies to all Community-Scale Wind Facilities proposed to be constructed after the effective date of this section. It shall apply to any size turbines, regardless of rated nameplate capacity. Any new Community-Scale Wind Facility or physical modifications to existing Community-Scale Wind Facilities that materially alters the type or increases the size of such facilities or other equipment shall require a special permit processed in accordance with this section.

Community-Scale Wind Facilities shall be constructed only in the Publicly Owned Land Overlay District (POLOD) and exclusive of the Dunes Protection District and the Wetlands Protection Overlay District.

616.2 Definitions

Community-Scale Wind Facility. A Community-Scale Wind Facility is a Wind Facility where the primary use of the facility is to generate electrical power for use by the Town, inclusive of all equipment, machinery and structures utilized in connection with the conversion of wind energy to electricity. This includes, but is not limited to, transmission, storage, collection and supply equipment, substations, transformers, service and access roads, and one or more Wind Facility.

Height: When referring to a Community-Scale Wind Facility, the height of a Wind Facility will be measured from natural grade to the tip of the rotor blade at its highest point.

Nacelle: The housing around the electrical generator and other systems such as gearboxes and blade controls on a wind turbine. The rotor blades are typically connected to the nacelle.

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.

Setback: The distance from the base of the Community-Scale Wind Facility tower, measured from the centerline of the Community-Scale Wind Facility tower, to the nearest property line.

Special Permit Granting Authority: The Special Permit Granting Authority shall be the Planning Board.

Wind Monitoring or Meteorological Tower: A temporary tower (Met. Tower) equipped with devices to measure wind speeds and direction used to determine how much wind power a site can be expected to generate.

Wind Facility: A wind turbine device that converts kinetic wind energy into rotational energy that drives an electrical generator. A Wind Facility typically consists of a tower, nacelle body at the top of the tower, and a rotor with two or more blades, also known as a Horizontal- Axis Wind Turbine configuration. However, a Wind Facility could also consist of a Vertical-Axis Wind Turbine configuration. (Refer to Wind Turbine Configurations diagram 616.2a below.)

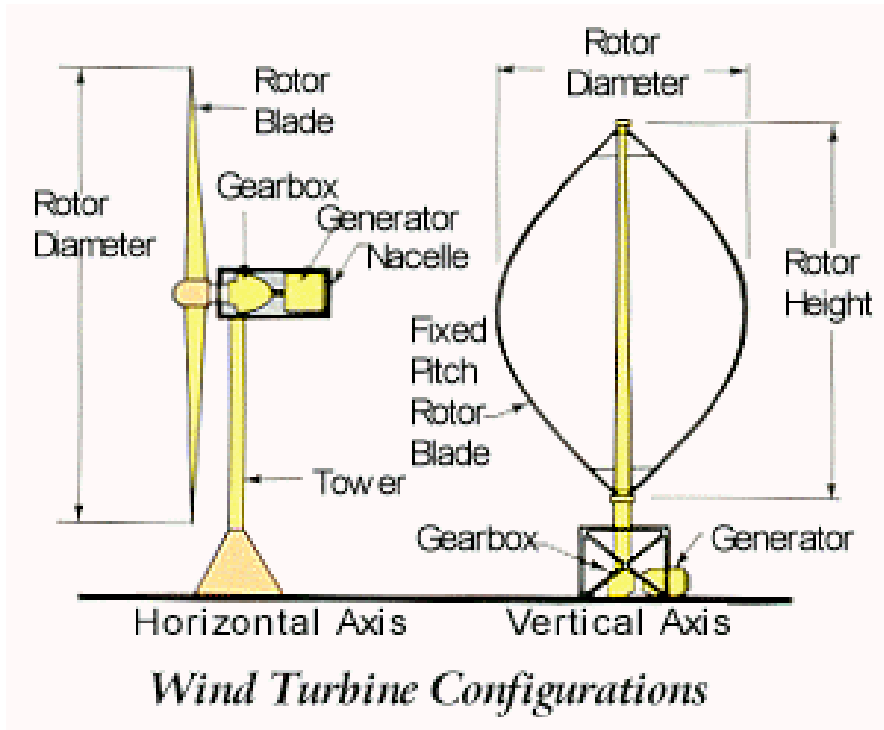


Diagram 616.2a

616.3 Permitting

1) **Special Permit Granting Authority.** No Community-Scale Wind Facility shall be erected, constructed, installed or modified as provided in this section without first obtaining a special permit from the Special Permit Granting Authority (a "Special Permit"). The construction of a Community-Scale Wind Facility shall comply with all requirements set forth in sections 616.3, 616.4, 616.5 and 616.6. All such Community-Scale Wind Facilities shall be constructed and operated in a manner that minimizes any adverse visual, safety, and environmental impacts. A Special Permit may be granted if the Special Permit Granting Authority finds that:

- (a) the specific site is an appropriate and approved location for such use;
- (b) the use is not expected to adversely affect the neighborhood;
- (c) there is not expected to be any appreciable hazard to pedestrians, vehicles or wildlife from the use;
- (d) adequate and appropriate infrastructure will be provided for the proper and safe operation of the Community-Scale Wind Facility; and
- (e) the requirements of section 616-3-616.10 are complied with in all respects;

Temporary erection of Wind Monitoring or Meteorological Towers shall also be required to be permitted as a temporary structure subject to issuance of a building permit for a temporary structure for not more than eighteen months. Wind Monitoring or

Meteorological Towers shall comply with the minimum height, setback, lighting and signage requirements as set forth in section 616.4.

2) Compliance with Laws, Ordinances and Regulations. The construction and operation of all such proposed Community-Scale Wind Facilities shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, environmental, electrical, communications and aviation requirements.

3) Proof of Liability Insurance. The applicant and all appropriate contractors shall provide evidence of liability insurance in an amount and for a duration sufficient to cover loss or damage to persons and structures occasioned by the failure of the facility or reasonably foreseeable events thereat.

4) Site Control. At the time of its application for a Special Permit, the applicant shall submit documentation of actual or prospective control of the project site sufficient to allow for installation and use of the proposed facility. Documentation shall also include proof of control over setback areas and access roads, if required.

5) Contact Data. The applicant or Community-Scale Wind Facility permit holder shall maintain a phone number, email address, and physical address (all to be posted at the facility) and identify a responsible individual person for the public to contact with inquiries and complaints throughout the life of the project. Such persons shall be accessible at all times during normal business hours and for emergencies on a 24 hour a day, every day basis. The Special Permit shall specify the requirements for a contact person(s).

616.4 Certain Specific Requirements

1) Height - Community-Scale Wind Facilities and or Monitoring or Meteorological Towers shall be no higher than 250 feet above the current grade of the land.

2) Setbacks - Community-Scale Wind Facilities and or Monitoring or Meteorological Towers shall be set back a minimum distance equal to 1.1 times the overall height of the Wind Facility from the nearest property line and private or public way and a minimum distance equal to 2 times the overall height of the Wind Facility from the nearest existing residential or commercial structure not owned by the applicant seeking to permit the Community-Scale Wind Facility and or Wind Monitoring or Meteorological Towers. The setback zone for Community-Scale Wind Facilities and or Wind Monitoring or Meteorological Towers can fall within the limits of Wetlands Protection Overlay and the Flood Hazard Overlay Districts.

3) Color and Finish - The Special Permit Granting Authority shall have discretion over the color of the Community-Scale Wind Facility, although a neutral, non-reflective exterior color designed to blend with the surrounding environment is encouraged.

4) *Lighting and Signage* - No lighting shall be permitted on Community-Scale Wind Facilities and or Monitoring or Meteorological Towers other than lighting required by the Federal Aviation Administration (FAA). Lighting of other parts of the Community-Scale Wind Facility and or Monitoring or Meteorological Towers, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Unless good cause is shown for an exemption, signs on the Community-Scale Wind Facility and or Monitoring or Meteorological Towers shall comply with the requirements of Duxbury's sign regulations, and shall be limited to:

(a) Those necessary to identify the owner, provide a 24-hour emergency contact phone number, and warn of any danger, whether inherent or perceived.

(b) Educational signs providing information about the facility and the benefits of renewable energy.

Community-Scale Wind Facilities shall not be used for displaying any advertising or signage.

5) *Utility Connections* - Utility connections from the Community-Scale Wind Facility to the utilities power grid shall be located underground. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

6) *Appurtenant Structures* - All appurtenant structures to such Community-Scale Wind Facilities shall be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other and shall be contained within the Wind Facility tower whenever technically and economically feasible. Structures shall only be used for housing of equipment for this particular site. Whenever feasible, structures shall be shielded from view by vegetation or fencing and or located in an underground vault and joined or clustered to avoid adverse visual impacts.

7) *Support Towers* - Monopole towers are the preferred type of support for Community-Scale Wind Facilities, and shall be used unless good cause is shown that a substantial economic hardship or safety consideration merits an alternative.

616.5 Emergency Services

The applicant shall provide a copy of the project summary and site plan to the local emergency services entity, as designated by the Special Permit Granting Authority. Upon request, the applicant shall cooperate with local emergency services in developing an emergency response plan. Wind turbines or other structures part of a Community-Scale Wind Facility shall be designed to prevent unauthorized access.

616.6 Specific Environmental Considerations

1) **Shadow/Flicker** - Community-Scale Wind Facilities shall be sited in a manner that minimizes shadowing or flicker impacts caused by motion of the rotor blades as they pass in front of the sun. The applicant has the burden of proving that this effect does not have significant adverse impact on neighboring or adjacent uses through either siting or mitigation. It is acknowledged that a degree of shadow/flicker effect results from any wind turbine, and that the existence of some "shadow flicker" alone shall not be cause for the refusal to permit a Community-Scale Wind Facility.

2) **Noise** - The Community-Scale Wind Facility and associated equipment shall conform with the provisions of the Department of Environmental Protection's, Division of Air Quality Noise Regulations (310 CMR 7.10), unless the Department agrees that those provisions shall not be applicable. A source of sound will be considered to be violating these regulations if the source:

(a) Increases the broadband sound level by more than 10 dB(A) above ambient level, or

(b) Produces a "pure tone" condition – when an octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by 3 decibels or more.

These criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the background A-weighted sound level that is exceeded 90% of the time measured during equipment hours. The ambient may also be established by other means with consent from the Department of Environmental Protection (DEP). An analysis prepared by a qualified engineer shall be presented to demonstrate compliance with these noise standards.

3) **Land Clearing, Soil Erosion and Habitat Impacts** - Clearing of natural vegetation shall be limited to that which is reasonably necessary for the construction, operation and maintenance of the Community-Scale Wind Facility and is otherwise prescribed by applicable laws, regulations, and ordinances. Community-Scale Wind Facilities shall be designed to minimize land clearing and fragmentation of open space areas.

616.7 Facility Conditions

The applicant shall maintain the Community-Scale Wind Facility in good condition and as a condition for the permit, shall submit with the application a plan for maintaining the Community-Scale Wind Facility in accordance herewith. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The project owner shall be responsible for the cost of maintaining the Community-Scale Wind Facility and any access road, unless accepted as a public way, and the cost of repairing any damage occurring as a result of operation and construction. All material modifications to a Community-Scale Wind Facility made after

issuance of the special permit shall require approval by the Special Permit Granting Authority as provided in this section.

616.8 Removal

1) Removal Requirements - Any Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower which has reached the end of its useful life, permit term or has been abandoned shall be removed by the facility owner. When the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower is scheduled to be decommissioned, the applicant shall notify the Special Permit Granting Authority by certified mail of the proposed date of discontinued operations and plans for removal. The owner/operator shall physically remove the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower no more than 150 days after the date of discontinued operations. At the time of removal, the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower site shall be restored to the state it was in before the facility was constructed, or to other less stringent restorative conditions approved by the Special Permit Granting Authority. More specifically, decommissioning shall include provision for:

(a) Physical removal of all wind turbines, Wind Monitoring or Meteorological Tower structures, equipment, security barriers and transmission lines from the site.

(b) Disposal of all solid and hazardous waste in accordance with local and state waste disposal regulations.

(c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Special Permit Granting Authority may allow the owner to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

2) Abandonment - Absent notice of a proposed date of decommissioning, the Community-Scale Wind Facility shall be considered abandoned when the facility fails to operate for more than one year without the written consent of the Special Permit Granting Authority. The Special Permit Granting Authority shall determine in its sole discretion what proportion of the facility is inoperable for the facility to be considered abandoned. If the applicant fails to remove the Community-Scale Wind Facility in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town shall have the authority to enter the property and physically remove the facility and be indemnified for the costs and all other liabilities associated with the removal.

3) Surety- A performance bond equal to the removal cost of the proposed wind facility and restoration of the site may be required as a condition of approval, such bond to be submitted to the Zoning Enforcement Officer prior to issuance of a building permit, and held by the Treasurer.

616.9 Duration

A special permit issued for a Community-Scale Wind Facility shall be valid for the projected useful life of the facilities as determined by the Special Permit Granting Authority based on submissions of the applicant, but in any case not more than 25 years, unless extended or renewed. The time period may be extended or the permit renewed by the Special Permit Granting Authority upon satisfactory operation of the facility. Request for renewal must be submitted at least 180 days prior to the expiration date of the Special Permit. Submitting a renewal request shall allow for continued operation of the facility until the Special Permit Granting Authority acts. At the end of that period (including extensions and renewals), the Community-Scale Wind Facility shall be removed as required by this section.

616.10 Application Procedures

1) General - The application for a Community-Scale Wind Facility shall be filed in accordance with section 906 of this Bylaw and the rules and regulations of the Special Permit Granting Authority concerning special permits as the same maybe revised from time to time, including such revisions and requirements as may be imposed that are consistent with this section and including the items set forth below. Each application for a Special Permit shall be filed by the applicant with the Duxbury Town Clerk pursuant to Massachusetts General Laws.

2) Required Compliance Documents - The applicant shall provide the Special Permit Granting Authority with seven copies of the application and all required exhibits. All plans and maps shall be prepared, stamped and signed by a professional engineer or surveyor licensed to practice in the Commonwealth of Massachusetts. Included in the application shall be:

- (a) Name, address, phone number and signature of the applicant, as well as all co-applicants or property owners, if any;
- (b) The name, contact information and signature of any agents representing the applicant;
- (c) A textual description of the project, including the names of all contractors and control persons and a consent to the publications of such description in the local newspaper;
- (d) Documentation of the legal right to use the Community-Scale Wind Facility site; and
- (e) Detailed architectural and structural plans of the proposed Community-Scale Wind Facility including foundation plans and structural calculations.
- (f) Proof of liability insurance that satisfies section 616.3.3;
- (g) Certification of height approval from the FAA,

(h) A statement that satisfies section 616.6.2, listing existing and maximum projected noise levels from the Community-Scale Wind Facility,

3) *Siting and Design* – Unless otherwise waived by the Special Permit Granting Authority, the applicant shall provide the Special Permit Granting Authority with a description of the property which shall include:

(a) Copy of a portion of the most recent USGS Quadrangle Map, at a scale of 1:25,000, showing the proposed facility site, including turbine sites, and the area within at least two miles from the facility. Zoning district designation for the subject parcel and surrounding parcels shall be included.

(b) A one inch equals 40 feet site plan of the proposed Community-Scale Wind Facility site, with contour intervals of no more than two (2) feet, showing the following:

(i) Property lines for the subject parcel and adjacent parcels within 500 feet;

(ii) Outline of all existing buildings, including purpose (e.g. residence, garage, etc.) on subject parcel and all adjacent parcels within 500 feet. Include distances from the Community-Scale Wind Facility to each building shown;

(iii) Location of all roads, public and private on the site parcel and adjacent parcels within 500 feet, and proposed roads or driveways, either temporary or permanent, including any associated drainage facilities;

(iv) Existing areas of tree cover, including average height of trees, on the site parcel and adjacent parcels within 500 feet;

(v) Proposed location and design of Community-Scale Wind Facility, including all turbines, ground equipment, appurtenant structures, transmission infrastructure, access, fencing, exterior lighting, etc; and

(vi) Location of viewpoints referenced below in 616.10.4 of this section.

4) *Visualizations* - The Special Permit Granting Authority shall select between three and six sight lines, including from the nearest building with a view of the Community-Scale Wind Facility, for pre-and post-construction view representations. Sites for the view representations shall be selected from populated areas or public ways within a 2-mile radius of the Community-Scale Wind Facility. View representations shall have the following characteristics:

(a) View representations shall be in color and shall include actual pre-construction photographs and accurate post-construction simulations of the height and breadth of the Community-Scale Wind Facility (e.g. superimpositions of the Community-Scale Wind Facility onto photographs of existing views); and

(b) All view representations will include existing, or proposed, buildings or tree coverage.

5) Landscape Plan - The applicant shall submit a landscape plan indicating all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures. Lighting, other than required by the FAA, shall be designed to minimize glare onto abutting properties and be directed downward with full cut-off fixtures to reduce light pollution.

6) Development, Operation and Maintenance Plan - The applicant shall submit a plan for the development of the Community-Scale Wind Facility (including the specifications for the Community-Scale Wind Facility and the development timeline and process from ground breaking to commissioning), as well as a plan for maintenance of access roads and storm water controls, and general procedures for operational maintenance of the Community-Scale Wind Facility.

7) Independent Consultants - Upon submission of an application for a Special Permit, the Special Permit Granting Authority will be authorized to hire outside consultants pursuant to Massachusetts General Laws. The applicant shall be required to pay all reasonable costs associated with the consultant reviews required by the Special Permit Granting Authority. Such costs shall be pre-paid by the applicant per the rules and regulations of the Special Permit Granting Authority.

616.11 RIGHT OF APPEAL

Any person aggrieved by the decision of the Special Permit Granting Authority may take an appeal to the courts in accordance with Massachusetts General Laws.

Moved and seconded that the Town vote to amend Section 616 in the following sections:

1. Section 616.2-Special Permit Granting Authority was changed from Zoning Board of Appeals to the **Planning Board**
2. Section 616.3-1)Special Permit Granting Authority last sentence of the first paragraph A Special Permit **may** be granted if the Special Permit Granting Authority finds that: Shall was changed to **may**.
- 3) 616.3-1(e)-the requirements of section **616.3-616.10** are complied with in all respects. The change removed and replaced this sequence.616.4, 616.5 and 616.6 with the above. Amendment passed.
- 4) 616.8 (3)-Surety-A performance bond equal to the removal costs of the proposed wind facility and restoration of the site **may** be required as a condition of approval, **such bond to be submitted to the Zoning Enforcement Officer prior to issuance of a building permit, and held by the Town Treasurer.**

All amendments are included in the complete text above.

A report was given by the Planning Board.

A hearing was held on Jan. 11, 2010

A 2/3 vote is required-Received the requisite 2/3 vote called by the Moderator.

Voted at the Monday, March 15th session.

A true copy, Attest:

Nancy M. Oates

Duxbury Town Clerk