

INTRODUCED BY: Mayor Thomas P. Koch

**CITY OF QUINCY
IN COUNCIL**

ORDER NO:

BE IT ORDAINED, by the City Council that the Quincy Municipal Code is hereby amended as follows:

- 1. Title 17 of the Quincy Municipal Code is hereby amended by adding the following new chapter.**

Chapter 17.38 Wind Facilities

17.38.010 Purpose

The purpose of this ordinance is to provide by either a special permit or a site plan review permit for the construction and operation of wind facilities and to provide standards for the placement, design, construction, monitoring, modification and removal of wind facilities that address public safety, minimize impacts on scenic, natural and historic resources of the city and provide adequate financial assurance for decommissioning.

17.38.020 Applicability

A site plan review permit is required for the construction and/or modification of wind facilities where the height of the wind turbine(s) is less than 250 feet.

A special permit is required for the construction and/or modification of wind facilities where the height of the wind turbine(s) equals or exceeds 250 feet.

17.38.030 Definitions

Director: Director of Inspectional Services

Wind Facility: A facility where the primary use of the facility is the conversion of wind to electricity including, but not limited to, the wind turbine(s) and all the equipment and/or machinery required for the generation, storage, and transmission of such electricity.

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. The manufacturer typically specifies this output with a “nameplate” on the equipment.

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Permit Granting Authority: The Planning Board shall be the site plan review permit granting authority and the special permit granting authority.

Wind Monitoring or Meteorological Tower: A temporary 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 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.

17.38.040 Application Procedures

The application for a wind facility shall be filed in accordance with the rules and regulations of the Planning Board, the Quincy Zoning Ordinance, and G.L. chap. 40A, sec. 9. The applicant shall provide the Planning Board with five (5) copies of the application. All plans and maps shall be prepared, stamped and signed by a professional engineer licensed to practice in Massachusetts. Included in the application shall be:

1. General

- a.) Name, address, phone number and signature of the applicant, as well as all co-applicants and property owners;
- b.) Name, contact information and signature of any agents representing the applicant;
- c.) Documentation of the legal right to use the wind facility site, including the requirements set forth in section 17.38.050(4)

2. Siting and Design

The applicant shall provide 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 should be included; however a copy of a zoning map with the parcel identified is suitable.
- b.) A one inch equals 200 feet plan of the proposed wind facility site, with contour intervals of no more than 10 feet, showing the following:
 - 1.) Property lines for the site parcel and adjacent parcels within 300 feet.
 - 2.) Outline of all existing buildings, including purpose (e.g. residence, garage, etc.) on site parcel and all adjacent parcels within 500 feet. Include distances from the wind facility to each building shown.
 - 3.) Location of all roads, public and private on the site parcel and adjacent parcels within 300 feet, and proposed roads or driveways, either temporary or permanent.
 - 4.) Existing areas of tree cover, including average height of trees, on the site parcel and adjacent parcels within 300 feet.
 - 5.) Proposed location and design of wind facility, including all turbines, ground equipment, appurtenant structures, transmission infrastructure, access, fencing, exterior lighting, etc.
 - 6.) Location of viewpoints referenced in the 17.38.040(3).

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3. Visualizations

The applicant shall provide at least six sight lines, including from the nearest building with a view of the 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 two (2) mile radius of the wind facility. View representations shall have the following characteristics:

- a.) Be in color and include actual pre-construction photographs and accurate post-construction simulations of the height and breadth of the wind facility by superimposition of the wind facility onto photographs of existing views.
- b.) Include existing or proposed buildings or tree coverage.
- c.) Include description of the technical procedures followed in producing the visualization, such as distances, angles, and lens.

4. 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, other than FAA lights, screening vegetation or structures. Lighting shall be designed to minimize glare on abutting properties and except as required by the FAA be directed downward with full cut-off fixtures to reduce light pollution.

5. Operation & Maintenance Plan

The applicant shall submit a plan for maintenance of access roads and storm water controls, as well as general procedures for operational maintenance of the wind facility.

6. Compliance Documents

If required under other sections of this chapter, the applicant will provide the compliance documents with the application.

7. Independent Consultants

Upon submission of an application for a special permit, the Planning Board may hire outside consultants, pursuant to G.L. chap. 44, sec. 53G. As necessary, the applicant may be required to pay not more than 50% of the consultant’s costs.

17.38.050 General Requirements

1. Zoning District:

The construction of a wind facility is not permitted in Residence A, Residence B, or Residence C zoning districts. The construction of a wind facility is permitted in all other zoning districts subject to the issuance of a permit in accordance with the provisions of this chapter. In addition to any other requirements of the Quincy Zoning Ordinance, such permits may also impose reasonable conditions to insure that wind facilities shall be constructed and operated in a manner that minimizes any adverse visual, safety, and environmental impacts; require safeguards and limitations on time and use; and may require the applicant to implement all reasonable measures to mitigate unforeseen adverse impacts of the wind facility, should they occur.

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Wind monitoring or meteorological towers are not permitted in Residence A, Residence B, or Residence C zoning districts. Wind monitoring or meteorological towers are permitted in all other zoning districts subject to issuance of a building permit for a temporary structure for a period of no longer than twelve (12) months and subject to reasonable regulations concerning the bulk and height of structures and determining yard-size, lot area, setbacks, open space, parking, sound and building coverage requirements.

2. Compliance with Laws, Ordinances and Regulations

The construction and operation of all such proposed 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 and industry standards.

3. Insurance

The applicant shall provide evidence of liability insurance in an amount and duration sufficient to cover loss or damage to persons and structures occasioned by the failure of the facility.

4. Site Control

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. Control shall mean the legal authority to prevent the use or construction of any structure for human habitation within the setback areas.

17.38.060 General Siting Standards

1. Ground Clearance

The minimum distance between the ground and any part of a rotor or a turbine blade shall be thirty (30) feet.

2. Setbacks

Wind turbines shall be set back a distance equal to 1.1 times the overall blade tip height of the wind turbine from the nearest nonparticipating residential or commercial structure and from the nearest property line and public or private right of way line.

17.38.070 Lighting, Signage, Utilities and Other Structures

1. Lighting

Wind turbines shall be lighted only if required by the Federal Aviation Administration. Lighting of other parts of the wind facility, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties.

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2. Signage

Signs on the wind facility shall comply with the requirements of the city's sign regulations, and shall be limited to:

- a.) Signs necessary to identify the owner, provide a 24-hour emergency contact phone number, and warn of any danger.
- b.) Educational signs providing information about the facility and the benefits of renewable energy.

3. Advertising

Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the wind energy facility.

4. Utility Connections

Reasonable efforts shall be made to locate utility connections from the wind facility underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

5. Appurtenant Structures

All appurtenant structures to such 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 turbine tower whenever technically and economically feasible. Structures shall only be used for housing of equipment for this particular site. Whenever reasonable, structures should be shaded from view by vegetation and/or located in an underground vault and joined or clustered to avoid adverse visual impacts.

6. Ancillary Structures

No telecommunications dishes, antennas, cellular telephone repeaters, or other similar devices shall be attached externally to wind turbine towers.

7. Support Towers

Monopole towers are the preferred type of support for the wind facilities.

17.38.080 Safety, Aesthetic and Environmental Standards

1. Emergency Services

The applicant shall provide a copy of the project summary to the police and fire departments. Upon request the applicant shall cooperate with these departments in developing an emergency response plan.

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2. Unauthorized Access

Wind turbines or other structures part of a wind facility shall be designed to prevent unauthorized access and wind turbines shall not be climbable up to fifteen (15) feet above ground surface.

3. Shadow/Flicker

Wind facilities shall be sited in a manner that minimizes shadowing or flicker impacts. 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.

4. Noise

The wind facility and associated equipment shall conform to the provisions of the Department of Environmental Protection’s (DEP), Division of Air Quality Noise Regulations (310 CMR 7.10), unless the DEP and the special permit granting authority agree 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 above ambient, 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 three (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 DEP. An analysis prepared by a qualified engineer shall be presented to demonstrate compliance with these noise standards. The special permit granting authority, in consultation with the DEP, shall determine whether such violations shall be measured at the property line or at the nearest inhabited residence.

Methods for measuring and reporting acoustic emissions from wind turbines and the wind facility shall be equal to or exceed the minimum standards for precision described in the American Wind Energy Association Standard 2.1 – 1989 titled *Procedures for the Measurement and Reporting of Acoustic Emissions from Wind Turbine Generation Systems Volume 1: First tier as revised.*

5. Color and Finish

The Planning Board shall have discretion over the turbine color, although a neutral, non-reflective exterior color designed to blend with the surrounding environment is encouraged.

6. 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 wind facility and is otherwise prescribed by applicable laws, regulations, and ordinances.

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7. Waiver of Setbacks, Sound and Shadow Flicker Provisions

The Planning Board, in its discretion, is authorized to waive the setback, sound, and shadow flicker provisions of this chapter to the extent these provisions affect a non-participating property, provided the applicant submits the request in writing, and if the applicant is not the property owner, the property owner’s written consent to the waiver shall also be submitted. The application shall contain the non-participating property owner’s acknowledgement of the setback, sound or shadow flicker requirements of this chapter and what is proposed in lieu thereof, describe the impact on the non-participating property owner, and state the non-participating property owner’s support for the applicant’s waiver request. A non-participant property owner’s affidavit shall be made part of the permit decision and shall be separately recorded with the Norfolk County Registry Deeds at the same time that the permit decision is recorded to provide notice to all subsequent purchasers of the non-participating property of the waiver granted.

8. Facility Conditions

The applicant shall maintain the wind facility in good condition. 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 fire and police departments. The project owner shall be responsible for the cost of maintaining the 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.

17.38.090 Abandonment or Decommissioning

1. Removal Requirements

Any wind facility, which reaches the end of its useful life or is abandoned, shall be removed. When the wind facility is scheduled for decommissioning, the applicant shall notify the director by certified mail thirty (30) days prior to the proposed date of discontinued operations and plans for removal. The owner/operator shall physically remove the wind facility no more than one hundred fifty (150) days after the date of discontinued operations. At the time of removal, the wind facility site shall be restored to the state it was in before the facility was constructed or any other legally authorized use. More specifically, decommissioning shall consist of:

- (a) Physical removal of all wind turbines, 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 director 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 facility shall be considered abandoned when the facility fails to operate for more than one year without the written consent of the director. The director shall determine what proportion of the facility is inoperable for the facility to be considered abandoned. If the applicant fails

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to remove the wind facility in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the city shall have the authority to enter the property and physically remove the facility. The costs incurred by the city shall constitute a debt due to the city upon completion of the decommissioning activities and the rendering of an account to the facility owner, operator and the landowner, if applicable, and shall be recoverable from such parties in an action of contract.

3. Financial Surety

The Planning Board may require the applicant for to provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of removal in the event the city must remove the facility, of an amount and form determined to be reasonable by the Planning Board, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the applicant. Such surety will not be required for municipal or state-owned facilities. The applicant shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for Cost of Living Adjustment.

17.38.100 Term of Special Permit

A special permit issued for a wind facility shall be valid for twenty-five (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 expiration of the special permit. Submitting a renewal request shall allow for continued operation of the facility until the Planning Board acts. At the end of that period, including extensions and renewals, the wind facility shall be removed as required by this chapter.

17.38.110 Public Inquiries and Complaints

The wind facility owner shall maintain a phone number and identify a responsible person for the public to contact with inquiries and complaints throughout the life of the project. The applicant shall notify all abutters within 300 feet of the facility prior to the operation and testing of any wind facility. The wind facility owner/operator shall post an emergency telephone number so that the appropriate people may be contacted should any wind turbine need immediate attention. This telephone number shall be clearly visible on a permanent structure(s) or post(s) within a reasonable distance from the facility.

The wind facility owner and operator shall make reasonable efforts to respond to the public's inquiries and complaints. Upon receipt by the director of a complaint regarding sound, shadow, or flicker from an existing wind facility, the director shall investigate the complaint. If the director determines the complaint reasonably demonstrates inconsistency with the permit granted, the wind facility owner or operator may be required, at its expense, to have prepared by an independent authority, approved by the director, a study that demonstrates compliance with this chapter.

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2. Section 17.04.170 is hereby amended by striking out the first sentence and inserting in place thereof the following new sentence:

By the terms of this title and in accordance with the provisions of M.G.L. Ch. 40A, as amended, the board of appeals is designated as the “special permit granting authority” and is authorized to approve or disapprove certain uses (specified in Section 17.16.020, Table of use regulations), for which a special permit is required, except that the city council is designated as the “special permit granting authority” for applications filed under Sections 17.12.020, 17.12.030 and 17.16.020, subsection 12, adult uses, subsection 9(b), heavy industry, subsection 10, waste recovery and subsection 4(a)(2) retail business and consumer services and further that the planning board is designated as the “special permit granting authority” for applications filed under Section 17.38, Wind Facilities.

3. Section 17.04.174 is hereby amended by striking out the first sentence and inserting in place thereof the following new sentence:

The city council adds a new zoning control procedure to be known as site plan review which shall require a permit for: (1) all multi-family or apartment development in a Residential B zoning district of three units or more; (2) all multi-family or apartment development in any zoning district other than Residential B, in excess of twelve units; (3) all development where the area of any new structure is ten thousand square feet or more excluding single-family homes and related accessory structures; and (4) wind facilities that do not exceed 250 feet in height as described in section 17.38.030.

PASSED TO BE ORDAINED

ATTEST:

CLERK OF COUNCIL

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