1.6.12 for CC Hearing 1.18.12

FINAL FOR CITY COUNCIL ENACTMENT

Wind Energy Generation Ordinance

City of Portland, Maine

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1. DRAFT NEW TEXT FOR NEW ORDINANCE ARTICLE X AND DIVISION 1

ARTICLE X ALTERNATIVE ENERGY

Sec. 14-751 Purpose

The intent of this article is to allow the reasonable use of locally generated alternative sources of energy supply that help reduce greenhouse gas emissions consistent with the Sustainable Portland Report which was adopted on June 7th, 2010. Alternative energy systems include but are not limited to wind, solar and geothermal energy generation.

Sec. 14-752 Reserved

DIVISION 1 Wind Energy Generation

Sec. 14-753 Purpose

The purpose of this division is to allow for the construction and operation of public or private wind energy generation systems to produce energy for use on site or off site, by establishing appropriate locations and standards to ensure safe, effective and efficient use of wind energy systems compatible with surrounding uses.

Sec. 14-754 Applicability

(a) No wind energy system, expansion of any existing wind energy system, or installation of any associated facilities, shall be installed unless it has been approved under this ordinance and has obtained a building permit and any other necessary state or local approvals prior to its installation. Wind energy generation systems determined to be permitted uses shall be reviewed and approved by the Zoning Administrator; wind energy systems determined to be conditional uses shall be reviewed and approved by the Zoning Board of Appeals (ZBA).

(b) Any physical modification to an existing and permitted wind energy system which alters the total rated capacity, the size or type of the system or its associated equipment shall require approval under this ordinance. Like-kind replacements or non-structural maintenance and repair shall not require approval under his ordinance but shall require a building permit.

Sec. 14-755 Definitions

For the purposes of this division, the following words and phrases shall have the following meanings:

Abandonment: The date at which a wind energy system has been out of service for a continuous period of 6 months.

DEP Certification: Certification issued by the Maine Department of Environmental Protection (Maine DEP) pursuant to Title 35-A M.R.S. Section 3456 for a Wind Energy Development.

Horizontal wind energy system: A wind energy system that utilizes a generator shaft that is parallel to the ground and usually mounted on a tower.

Lattice Tower: A tower constructed of vertical metal struts and cross braces forming a square or triangular structure in horizontal cross-section, which may or may not be supported by external guy wires and anchors.

Monitoring and Maintenance Plan: For permitted systems this would constitute the Owner's Manual requirements. For systems that may be allowed as a conditional use, this would constitute a more detailed and customized document.

Monopole Tower: A tower constructed of a single, self-supporting metal tube, anchored to the foundation without guy wires.

Residential Building: A residence, nursing home/assisted living facility, or other building that is in use as an overnight residence but excluding hotels.

Total height of wind energy system: The vertical distance as measured from the average elevation of the finished grade adjacent to the fixed base of the support structure, to the tip of the wind generator blade or any other part of the system at its highest point. Where located on roof tops, the height shall be the total of the building and the wind energy system taken together.

Total Rated Capacity: The maximum rated output of electric power generation by the system in kilowatts (kW) as identified by the manufacturer.

Useful life of the wind energy system: The period for which the system has been designed by the manufacturer to operate in a safe manner, including the period during which new parts and refurbishment allow it to continue operating safely.

Vertical wind energy system: A wind energy system that utilizes a generator shaft that is positioned perpendicular to the ground.

Wind energy system: A wind energy generator and all associated facilities.

Wind energy system associated facilities: All elements of a wind energy system, other than its generating facilities, that are necessary for the proper operation and maintenance of the system, including but not limited to guy wires, remote electronic enclosures and fixtures, transformers, inverter, batteries, substations and similar equipment.

Wind energy generator: The device that converts kinetic wind energy into rotational energy that generates electricity, which may include components such as a base, blade, nacelle, rotor, tower, turbine, or vane.

Sec. 14-756 Reserved

Sec. 14-757 Permitted Uses

(a) Freestanding wind energy systems that are accessory to the lawful principal use of the lot, primarily for the generation of energy for on-site consumption, and at or below 25 feet in total height, may be allowed as permitted uses in all Residential, B1, I-B and Residence-Professional zones subject to the standards listed below in Section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements).

(b) Freestanding wind energy systems that are accessory to the lawful principal use of the lot, primarily for the generation of energy for on-site consumption, and meet the applicable height standards of the zone in which they are located and are no higher than 45 feet, may be allowed as permitted uses in all Business Zones except B1 and I-B, Office Park, Industrial Zones, Airport Business Zone, Recreation Open Space (ROS) Zone and Island Transfer Station Zone subject to the standards listed below in Section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements).

(c) Roof mounted wind energy systems that are accessory to the lawful principal use of the lot, primarily for the generation of energy for on-site consumption, meet the applicable height standards of the zone in which they are located and are less that 10 feet above the highest part of the roof, may be allowed as permitted uses in all zones except Stream Protection Zone, subject to the standards listed below in Section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements).

Sec. 14-758 Conditional Uses

(a) Wind energy systems that do not meet the requirements for a permitted system may be allowed as conditional uses in all zones (including all Overlay Zones but excluding Stream Protection and Resource Protection zones), subject to the provisions of Section 14-430 (height and bulk exceptions/use exceptions); Section 14-474 (conditional uses); and to the requirements and performance standards listed below in Section 14-761 (General Standards), 14-763 (Maintenance and Removal), and 14-765 (Submittal Requirements). For the purposes of this provision, wind energy may be an accessory use in all zones or a principal use in all zones except Residential Zones, B1 Zone, I-B Zone, Residence-Professional Zone and Resource Protection Zone.

Sec. 14-759 Prohibited Uses

(a) Wind energy systems of any kind are prohibited in the Stream Protection and Historic Landscape Districts [excepting the sewage treatment plant corner of Eastern Prom] and Historic Cemeteries;

(b) Wind energy systems are prohibited where they exceed the height limitations set out in Table 1 (below) and described in provision 14-761 (c) 3.

Table 1: SUMMARY TABLE of PERMITTING (see legend on next page)

Type and Scale of wind energy system	***Stream Protection and Historic Landscape Districts and Historic Cemeteries***	***Re-source Pro-tection Zone***	***All Residential Zones, and Residential Professional Zone; B1 Zone; I-B Zone***	***Historic Districts*, and within 1000 ft of specified landmark s (see **)***	***Water-front Zones and B6***	***Bus. Zones B2 and B5; Industria l Zones I-L, I-Lb and I-Ma***	***Bus. Zones B3 and B7;***	***B4 Zone, Office-Park Zone***	***Recreation al Open Space (ROS) Zones except four specified ROS Zones (see ***)***	***Island Transfer Station; Industrial Zones I-M, I-Mb, I-H; four specified ROS Zones (see ***); Airport Bus. (w/FAA approval)***
Roof mounted, accessory, <10 ft above roof) & below permitted height of zone	**X**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
Freestanding; accessory; up to 25 ft	**X**	**X**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
Freestanding or roof mounted; accessory; at or below permitted height of zone AND no higher than 45 ft	**X**	**X**	**X if <.5 acre Except C if .5 acre or larger**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
Freestanding or roof mounted; at or above permitted height of zone AND no higher than 45 ft	**X**	**X**	**X Except C only where access-ory & on insti-tutional sites over 5 acres**	**C**	**C**	**C**	**C**	**C**	**C**	**C**
Roof mounted or free- standing; at or below permitted height for that zone AND no higher than 65 ft	**X**	**X**	**X Except C only in USM Overlay Area & for college, university or trade schools in the R5 zone**	**X Except C in B3 part Congress St. Historic District**	**C**	**C**	**C**	**C**	**C**	**C**
Roof mounted or freestanding; above permitted height for that zone AND no higher than 65 ft	**X**	**X**	**X**	**X Except C in B3 part Congress St. Historic District**	**C**	**C**	**C**	**C**	**C**	**C**
Roof mounted; at or below permitted height for that zone AND no higher than 85 ft	**X**	**X**	**X**	**X Except C in B3 part Congress St. Historic District**	**X**	**X**	**C**	**C**	**C**	**C**
Freestanding; at or below permitted height for that zone AND no higher than 85 ft	**X**	**X**	**X**	**X Except C in B3 part Congress St. Historic District**	**X**	**X**	**X**	**C**	**C**	**C**
Freestanding; above permitted height for that zone AND no higher than 85 ft	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**C**	**C**
Roof mounted or freestanding; above 85 ft and no higher than 160 ft	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**C With increased setbacks (see 14-761 (d) 6)**

P = **Permitted Use**; needs Zoning Administrator approval plus building permit; if within 100 feet of a designated landmark, historic district or historic landscape district, also needs Planning Authority (HP) approval;
C = **Conditional Use**; needs ZBA approval plus building permit; if within 100 feet of a designated landmark, historic district or historic landscape district, also needs Planning Authority (HP) approval
X = **Prohibited**

* Historic Districts only (wind systems are prohibited in Historic Landscape Districts and Historic Cemeteries); in Historic Districts if the maximum allowed height in this section is different from the allowable height associated with the underlying zone, the lower of the two height limits would apply regarding wind energy systems. Within the B3 part of the Congress Street Historic District, the height limits in this ordinance for the B3 Zone shall apply.

** Specified landmarks are: Portland Observatory; Cathedral of Immaculate Conception; St Dominic's Cathedral; St Luke's Cathedral; State Street Church; and City Hall.

*** Specified recreational Open Space Zones where wind systems up to 160 feet are allowed as conditional uses subject to all other requirements of this ordinance being met: Riverside Golf Course; Quarries area off Ocean Avenue; Trott-Littlejohn Park on Peaks Island; Sewage Treatment Plant part of Eastern Promenade.

Sec. 14-760 Reserved

Sec. 14-761 General Standards

(a) General

1. *Application Requirements*: All applications for approval under this ordinance shall address the submittal requirements set out in Section 14-765 Submittal Requirements.

2. *Approvals:* All applicable State and local approvals shall be obtained prior to installation of any wind energy system, including *FAA* approval and *MDEP Certification* for all systems 100kW and above in total rated capacity.

3. *Conditions*: The Zoning Administrator or Zoning Board of Appeals (ZBA) may impose conditions to ensure compliance with the standards and purposes set out in this ordinance, including but not limited to post-construction certification of compliance by a licensed professional engineer or authorized factory representative.

(b) Historic Resource

1. Where any part of the proposed wind energy system (including associated facilities) is within an historic district, such development shall be reviewed and approved by the Planning Authority (Historic Preservation) in accordance with Article IX Historic Preservation prior to a review under this ordinance by the Zoning Board of Appeals.

2. Where any part of the proposed wind energy system (including tower base and associated facilities) is within one hundred (100) feet of any designated landmark, historic district or historic landscape district, such development shall be determined by the Planning Authority (Historic Preservation) to be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed system; such determination shall be made prior to a review under this ordinance by the Zoning Board of Appeals. Character-defining elements of landmarks and historic districts are identified in the historic resources inventory and respective historic district designation reports. An appeal of the Planning Authority (Historic Preservation) determination may be made in accordance with Section 14-767 (Appeals).

(c) Siting

1. *Location on site*: In Residential Zones, B1 Zone, I-B Zone and Residence-Professional Zone where the lot is less than .5 acre, any vertical element of the wind energy system (tower/pole) shall be located in the rear yard or on the rear half of the existing building. Wind energy systems

and associated facilities shall be sited to maximize existing vegetative or other screening from nearby residential buildings and public ways. The location shall minimize changes to existing topography and existing natural vegetation which would result from construction or maintenance of the system.

2. *Number per lot:* In Residential Zones, I-B Zone and Residence-Professional Zone and all business zones excluding B3, B4 and B7, a maximum of one (1) wind energy system shall be permitted per lot.

3. *Overall Height:* The total height (including the supporting structure or building and the rotors or blades of the generator) of the wind energy system when operating shall be at or below the following maximum height limits.

   These limits do not apply within Historic Districts (except the Congress Street Historic District) or within 1000 feet of Portland Observatory; Cathedral of the Immaculate Conception; St Dominic's Cathedral; St Luke's Cathedral; State Street Church; and City Hall where the overall height of wind energy systems may be no higher than 45 feet. Within the Congress Street Historic District, the overall height of wind energy systems may be no higher than 45 feet in those areas outside of the B3 Zone and within the B3 Zone the height limits below shall apply.

   In addition, the actual height of any roof mounted wind energy system, as measured above the roof from the point of attachment, where allowed as a conditional use shall not exceed 35% of the height of the building on which is it mounted.

i.	Maximum of 45 feet:	Roof mounted in R-6 Zone if 10 feet or less above highest part of the roof and permitted by that zone Residential Zones, B1 Zone, I-B Zone and Residence-Professional Zone if lot is .5 acre or larger and height permitted by that zone Institutional uses in Residential Zones, B1 Zone, I-B Zone and Residence-Professional Zone where lot is over 5 acres Resource Protection Zone (roof mounted and up to height permitted by the zone)
ii.	Maximum of 55 feet:	College, university or trade school in R5 Zone where conditional use requirements of the zone are met (14-118 (b) 6 g)
iii.	Maximum of 65 feet:	Waterfront Zones Business Zones B2, B5 and B6 Industrial Zone I-L, IL-b and I-Ma Freestanding in Business Zones B3 and B7 USM Overlay Zone if allowed by Overlay Heights
iv.	Maximum of 85 feet:	Roof mounted in B3 & B7 if height permitted by Overlay Heights Business Zone B4 if height permitted by that zone Office-Park Zone up to 75 feet where requirements of the zone are met (14-230.14 (e)) Recreational Open Space Zones except as specified in v. below
v.	Maximum of 160 feet: (Increased setbacks if over 85 feet)	Industrial Zones I-M and IMb and I-H Airport Business Zone Specified Recreation Open Space Zones: Riverside Golf Course; Quarries area off Ocean Avenue; Trott-Littlejohn Park on Peaks Island; Sewage Treatment Plant part of Eastern Promenade Island Transfer Station

(d) Safety

1. *Generation Equipment:* All wind energy generation equipment shall be approved under a certification program certified by the US Department of Energy such as the Underwriters Laboratories, Germanishcer Lloyd Wind Energies, or other similar certifying organizations. Experimental, homebuilt, and prototype models shall not be permitted.

2. *Design Safety*: Wind energy systems and associated facilities, including foundations and support structures, electrical connections and control equipment, associated site improvements and construction techniques, shall be designed, engineered and installed to comply with all applicable local, state and Federal construction and electrical codes/regulations and Federal Aviation Administration regulations and requirements.

3. *Setbacks*: Wind energy systems and associated facilities shall meet all setbacks for principal structures for the zone in which the wind energy system is located; where setbacks vary the largest setback shall apply. All parts of the wind energy system, including associated facilities and guy wires, shall be at least 10 feet from the property line (except where connecting to the grid), any utility line (in any direction) or other easement/ROW. The setback from utility lines, easements and ROW lines may be reduced where the owner/benefitted party provides written permission.

4. *Safety Setbacks (Roof mounted systems):* All roof mounted wind energy systems shall be set back from property boundaries and street right of way lines by a distance equal to or greater than 4 times the height of the system as measured from the roof surface at the point of attachment (including attachment structure to roof). For systems in and adjacent to Waterfront Zones, Business Zones (except B-1 and I-B), Office Park Zone, Industrial zones, Island Transfer Station Zone, and ROS Zone, the setback from property boundaries and street right of way lines may be reduced to a minimum distance of 1.0 times the height of the system as measured from the roof surface at the point of attachment (including attachment structure to roof) where the system is incorporated into the architecture of the building and a certified engineer confirms that it would not present any public safety risk. The setback distance shall be measured to the center of the wind generator base.

5. *Safety Setbacks (Freestanding systems no higher than 85 feet high):* All freestanding wind energy systems with a total height of 85 feet or less shall be set back from property boundaries and street right of way lines by a distance equal to or greater than 1.1 times the total height of the system, and from residential buildings and hospitals on other properties by a distance equal to or greater than 2 times the total height of the system. The setback distance shall be measured to the center of the wind generator base.

6. *Safety Setbacks (Freestanding systems above 85 feet high):* All freestanding wind energy systems with a total height above 85 feet shall be set back from property boundaries and street right of way lines by a distance equal to or greater than 2 times the total height of the system, and from residential buildings and hospitals on other properties by a distance equal to or greater than 4 times the total height of the system. For systems in and adjacent to Waterfront Zones, Business Zones (except B-1 and I-B), Office Park Zone, Industrial zones, Island Transfer Station Zone, and ROS Zone, the setback from property boundaries and street right of way lines may be reduced to a minimum distance of 1.0 times the total height of the system where the Board determines it will not be contrary to the public interest. The setback distance shall be measured to the center of the wind generator base.

7. *Control of Systems*: Wind energy generators shall have automatic braking, governing or feathering systems to ensure rotational speeds remain within the design parameters of the proposed generator and its support structure and components and do not create intermittent high noise levels.

8. *Security:* The support structure (e.g. tower, pole) for freestanding wind generating systems shall not be climbable (no step bolts, ladder, or unshielded lattice structure readily accessible to the

public) for a minimum height of twelve (12) feet above the surrounding ground level or accessible surface. All ground mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

9. *Clearances*: All moving components of a wind energy system shall be a minimum of twelve (12) feet from ground level or accessible surface.

10. *Wiring:* All on-site electrical wiring associated with the proposed wind energy system shall be located within the tower/pole/supporting structure and underground; above ground on-site connections near substations or to the electric grid shall be allowed.

11. *Guy Wires*: The use of guy wires is discouraged; if required they shall be located away from pedestrian routes/access points and marked with visible, reflective, colored objects, such as flags, reflectors, or tape which shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten feet from the ground.

(e) Impacts

1. *Sound impacts*: The audible sound levels generated by the wind energy system* shall comply with the requirements of the underlying zone, except that the method of measurement shall be in accordance with this provision and with Technical Standards set out in the City of Portland Technical Manual. In addition:

   i. Where the underlying zone is residential and does not specify sound requirements, or where the system will be within 100 feet of a residential building, the audible sound levels generated by the wind energy system* shall not exceed exceed forty-five (45) decibels on the A scale between the hours of 9:00 p.m. and 7:00 a.m., and fifty (50) decibels on the A scale between 7:00 a.m. and 9:00 p.m., as measured at the nearest property line in accordance with this provision and Technical Standards set out in the City of Portland Technical Manual.

   ii. For any system over 45 feet in total height not in the Recreation Open Space, Resource Protection or Island Transfer Zones, the maximum sound levels allowed by this ordinance shall not be exceeded at the nearest property boundary and at the nearest point vertically above the property line that coincides with the maximum building height allowed in the abutting zone.

   iii. Any system located within the Recreation Open Space, Resource Protection or Island Transfer Zones and more than 100 feet from a residential building shall not exceed fifty-five (55) decibels on the A scale as measured 50 feet from the base of the tower.

   *The audible sound levels of the wind energy system shall include sounds generated in all conditions including low and high winds (furling, yawing, and flutter) and power outages (free wheeling).

   If after installation the system is determined to be operating at levels above these limits (as measured at the property lines in accordance with this provision and Technical Standards set out in the City of Portland Technical Manual) the owner shall take (at the owners cost) remedial action to ensure compliance with these limits. Required action may include relocation or removal of the system.

2. *Significant Wildlife:* The proposed wind energy system shall not be located within 250 feet of any Significant Wildlife Habitat, as defined by MDEP/MDIFW under provisions of the Natural Resources Protection Act (Title 38, MRSA, Sec. 480, et.seq) including wildlife habitat for species appearing on the official state and federal list of endangered or threatened animal species.

3. *MDIF&W comments*: For all wind energy systems over 45 feet in height above the ground (however supported) or over 100kW the applicant shall provide evidence that the Environmental Coordinator of the Maine Department of Inland Fisheries and Wildlife, and the Maine Natural Area Program, have been notified of the location, height and design of the proposed wind energy system at least 3 weeks prior to any final determination under this provision. Any comments

received therefrom shall be addressed to the satisfaction of these State authorities prior to any final determination under this provision.

5. *Signal Interference*: Wind energy systems shall be designed to avoid electro-magnetic interference with the transmission or reception of radio, telephone, television, microwave, navigational or similar signals to neighboring areas.

6. *Appearance:* The wind energy system and associated facilities shall use non-reflective materials and neutral colors and textures that blend in with the surrounding environment. Ground-mounted systems and associated facilities shall be landscaped to integrate the proposed wind energy system into the existing landscape/streetscape. In the case of conditional uses the system shall be screened with a vegetated buffer from public areas and residential buildings.

7. *Lighting:* No part of the system may be illuminated, except as required (in writing) by the Federal Aviation Administration (FAA) or other authorities for safety and security purposes. Where lighting is required, it shall be at the lowest intensity allowable with fixtures shielded and directed to minimize glare and visibility from the ground.

8. *Signs and Advertising*: There shall be no signs, advertisements, flags or decorative items on a wind energy system or any associated facilities, except for the manufacturer's/ installer's/owner's identification (not exceeding 1 sq foot in size), appropriate warning signs, or lights if required by the FAA.

9. *Impact of construction*: The applicant shall avoid adverse impacts resulting from construction and maintenance of the wind energy system and obtain site plan approval (Article V Site Plan) where applicable.

Sec. 14-762 Reserved

Sec. 14-763 Maintenance and Removal

(a) A satisfactory Monitoring and Maintenance Plan shall be required to ensure that all aspects of operation remain safe and in accordance with the approved design, engineering and installation details. All buildings, structures, fences, and property used in connection with a wind energy system shall be regularly inspected and maintained, through the life of the system, so that they remain: in good condition; in compliance with the standards set out in this ordinance (eg meeting sound limits); in safe working order; and so that paint and other external materials remain as approved and free from corrosion.

(b) The Owner and Operator shall, at their expense, complete the removal of the wind energy system within 6 months of the end of the useful life of the wind energy system or within 6 months of the date of abandonment.

(c) The City shall revoke any approvals and/or pursue removal of the wind energy system at the Owner and Operator's expense in the following circumstances:

1. The wind energy system is not installed and functioning within 12-months from the date of approval under this ordinance; or

2. The wind energy system is at any time left in an unsafe condition in respect to federal, state and local safety standards (as determined by the City); or

3. The wind energy system has not been brought back to a safe condition/operation or removed from the site within required timeframe; or

4. The wind energy system is defective or abandoned and not been removed from the site within required timeframe.

Sec. 14-764 Reserved

Sec. 14-765 Submittal Requirements

(a) The following information shall be submitted with an application for a review of a wind energy system and associated facilities under this ordinance:

1. A narrative describing the proposed wind energy system, including an overview of the project; the project location; the generating capacity of the wind energy system; dimensions and respective manufacturers; the sound levels generated by the wind energy system; and a description of associated facilities and how the system and associated facilities comply with the standards of this ordinance (including a plan or other graphics that demonstrate compliance with the required setbacks). Calculations of sound attenuation and anticipated sound levels shall be in accordance with Technical Standards set out in the City of Portland Technical Manual.

2. An accurate scaled site plan of the subject property showing the planned location of the proposed wind energy system and all associated facilities; property lines, adjoining streets and access; topographic contour lines; existing and proposed buildings, fencing, structures, substations, vegetation, driveways, parking, and curb cuts on the subject property; and specifications for all proposed electrical cabling/transmission lines, accessory equipment, and landscaping. The site plan shall show any proposed off-site modifications to access the installation and/or to maintain the proposed wind energy system. [Note: separate site plan applications may be required for some or all of the associated modifications; see Article V Site Plan].

3. A Boundary Survey where the location and dimensions of the wind energy system are determined to be uncertain by the Zoning Administrator.

4. Names and addresses of the owners of abutting properties and the location, dimensions, and types of all existing structures and uses within 100 feet of the property line.

5. A scaled elevation drawing showing the proposed wind energy system and all proposed structures, foundations, supports, fencing, vegetation and landscaping, indicating the height, color and materials of the system.

6. The wind energy system specifications, including manufacturer, model, dimensions of all components, height, tower/support type, total rated capacity and information on any connections to the grid including a copy of the application for interconnection with the electric utility provider where to be connected to the grid.

7. Documentation that the wind generation equipment has been approved under a recognized certification program as set out in paragraph 14-761 (d) 1 of this ordinance and that the system complies with all applicable local, state and Federal codes/regulations and with the standards regarding signal interference. Electrical component and connection information shall be in sufficient detail to allow for a determination that it meets Maine electrical codes.

8. Engineered drawings of the structure, its foundations and associated facilities (stamped by a PE). In the case of conditional uses, the applicant shall provide a Safety Report prepared and stamped by a licensed professional engineer with their application that certifies that the proposed wind energy system design is safe and appropriate in terms of strength, stability, security, grounding, icing impacts, and maintenance, given local soil and climate conditions.

9. Evidence of compliance or non-applicability with FAA requirements, MDEP Certification pursuant to 35-A M.R.S. Section 3456 for Wind Energy Development (applies to systems over 100kW) and other federal and state regulations regarding potential impacts on wetlands, wildlife and other resources.

10. For any wind energy system that will exceed the height limit for buildings on the subject property, the following shall be submitted:

    i. A scaled vicinity map showing the subject property and the proposed wind energy system and fencing in the context of all property located within a distance from the wind energy system equal to three (3) times the height of the wind energy system (in the case of a system 85 feet

or higher, ten (10) times the height), showing within this area: all streets and existing buildings; significant structures: uses of any buildings; and topographic contours at five foot intervals;

ii. Color photographs showing the current view of the wind energy system site from any adjoining public street or any other street within 200 feet of the proposed wind energy system and from the closest groupings of residential buildings located within an area from the proposed wind energy system equal to three (3) times the height of the proposed structure (ten (10) times the height for systems 85 feet), plus a second set of color photographs showing the same views with the proposed wind energy system superimposed onto the photographs.

11. Where lighting of the wind energy system is proposed (due to FAA requirements), a lighting plan for the proposed wind energy system, indicating the location, color and intensity of the lighting, both as it will appear in daylight and at night, and indicating any mechanisms to prevent glare on adjacent properties and streets and to shield the lighting from residences.

12. Where the wind energy system manufacturer's sound level analysis does not clearly meet the sound standard of this ordinance, a statement by a professional engineer licensed in the State of Maine certifying that the proposed wind energy system will meet the sound standard of this ordinance. The Technical Standards set out in the City of Portland Technical Manual outline further information which may apply in this case.

13. A Monitoring and Maintenance Plan in accordance with Section 14-763 (a).

14. The following information shall be submitted with an application for a wind energy system proposed to be attached to the roof of a building or onto another structure:

i. Elevation drawings and details of the building or structure to which the proposed wind energy system will be attached, showing the placement of the wind system and its supports, indicating the location of any enclosures in relation to the surface to which it will be attached, and showing the projection of the wind generator from the structure, marked with all necessary dimensions.

ii. Design and engineering information for roof-mounted systems shall demonstrate that the structure on which it will be mounted has the structural integrity to carry the weight and wind loads of the system with minimal vibration impacts on the structure.

Sec. 14-766 Reserved

Sec. 14-767 Appeals

(a) Any aggrieved party may appeal a decision by the Zoning Administrator under the provisions of this ordinance by requesting in writing that it be referred to the Zoning Board of Appeals within 30 days of the decision being rendered. The date of the decision shall be the date of the letter from the Zoning Administrator documenting the decision.

(b) Any aggrieved party may appeal a decision of the Planning Authority determination under provision 14-761 (b) 2 of this ordinance (compatibility if within 100 feet of a designated landmark, Historic District or Historic Landscape District) by requesting in writing that it be referred to the Historic Preservation Board within 30 days of the determination. The date of the determination shall be the date of the letter from the Planning Authority documenting the decision. Appeals shall be considered by the Historic Preservation Board as a de-novo review of the determination of compatibility.

(c) Any aggrieved party may appeal the final decision of the Zoning Board of Appeals or the Historic Preservation Board to the superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure. The date of the final decision shall be the date of the Board Hearing or other Board meeting at which a final decision was taken.

Sec. 14-768 Reserved

Sec. 14-769 Reserved

Sec. 14-770 Reserved

[see also associated text amendments to existing ordinance – below]

Associated text amendments to existing ordinance:

1. The permitted uses and conditional uses in all zones need to be amended to be consistent with this ordinance; and

2. The following zones need to have anemometers added in as conditional uses to be consistent with this ordinance: Airport Business Zone; Resource Protection Zone; Island Business Zone; Overlay Zones including Island Transfer Station; and

3. Division 25 Space and Bulk Regulations and Exceptions needs to be amended by adding the following *underlined text:*

Sec. 14-430. Height limits.

(a) *Roof structure.* Roof structures for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, water tanks, or silos may be erected above the height limitation herein prescribed for buildings. *Roof-mounted wind energy systems shall not be considered to be roof structures for the purposes of ARTICLE X ALTERNATIVE ENERGY.*

(b) *Public art.* Except in residential zones, public art that has been individually accepted by the city council for inclusion within the public art collection, pursuant to Article XI, Public Art Program of the Land Use Code, (Section 14-852(c)), shall not be subject to the height limitations for buildings within the underlying zone.

(c) *Temporary wind anemometer towers.* Temporary wind anemometer towers may be erected above the height limitation for buildings within the underlying zone, subject to receiving Board of Appeals approval and FAA approval, if necessary.

(d) *Wind energy systems. Wind energy systems may be erected above the height limitation for principal buildings within the underlying zone, pursuant to ARTICLE X ALTERNATIVE ENERGY.*