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**PUBLIC NOTICE
TOWN OF CHARLESTOWN**

16 Notice is hereby given that the Town Council of the Town of Charlestown will conduct a public hearing,
17 open to the public, on September 12, 2011 at 7:00 p.m. at the Charlestown Town Hall, 4540 South
18 County Trail on the following proposed amendment to the Code of Ordinances. Opportunity shall be
19 given to all persons interested to be heard upon the matter of the proposed ordinance. The following
20 proposed amendments are under consideration and may be adopted and/or altered or amended prior to the
21 close of the public hearing without further advertising, as a result of further study or because of the views
22 expressed at the public hearing. Any alteration or amendment must be presented for comment in the
23 course of the public hearing. The proposed amendments are available for review and/or purchase at the
24 Town Clerk's Office between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday, excluding
25 Holidays.

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ORDINANCE NO. 341

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AN ORDINANCE IN AMENDING CHAPTER 218 ZONING – WIND ENERGY GENERATORS

Note: Words set as ~~strikeover~~ are to be deleted from the ordinance; words set in **bold** are to be **added** to the ordinance.

Section 1. The Town Council of the Town of Charlestown hereby ordains that Chapter 218 of the Code of Ordinances, Town of Charlestown entitled Zoning, Section 37 is amended as follows:

ARTICLE VI. Land Use Regulations.

Section 218-37. Specific Land Use Standards and Conditions.

The existing text of this Section is to be deleted in its entirety and replaced with the following text:

D. Utilities

(4) Wind Energy Generator Towers and Systems

(4) Wind Energy Facilities

(a) Purpose. The purpose of this section is to ~~provide for~~ **prohibit** the construction and operation of wind energy facilities, as defined below, ~~and to provide standards for the placement, design, construction, monitoring, modification and removal of wind energy facilities that address to protect the public safety and health, and minimize negative impacts on~~ **to preserve the** scenic, natural and historic resources of the town.

(b) Definitions. The following terms are defined for use in applying the provisions of this Section 218-37.D.(4) and shall supplement and be in addition to those terms defined in Section 218-5.B.:

~~Height—The height of a wind turbine measured from pre-development grade to the tip of the rotor blade at its highest point, or blade tip height.~~

1 ~~Rated Capacity—The maximum rated output of electric power production equipment.~~
2 ~~This output is typically specified by the manufacturer. A wind turbine’s rated capacity is~~
3 ~~its maximum power at optimum wind speed.~~

4
5 Wind Energy Facility – All equipment, machinery, and structures utilized in connection
6 with the conversion of wind to electricity. This includes, but is not limited to,
7 transmission, storage, collection and supply equipment, substations, transformers, and
8 one or more wind turbines and their foundations.

9
10 Wind Monitoring or Meteorological Tower – A temporary tower equipped with devices
11 to measure wind speeds and direction, used to determine how much wind power a site
12 can be expected to generate (referred to as “met tower”). This includes SoDAR and
13 LiDAR equipment.

14
15 Wind Turbine - A device that converts kinetic wind energy into rotational energy that
16 drives an electrical generator. A wind turbine typically consists of a tower, nacelle body,
17 and a rotor with two or more blades.

18
19 (c) **Applicability. No Wind Energy Facility or Wind Turbine of any sort or nature is**
20 **permitted in any zoning district located in the Town. Such uses are prohibited uses**
21 **in all zoning districts.** ~~Only wind energy facilities that are designed primarily to provide~~
22 ~~or replenish electricity consumed by operations on-site or those designed to provide~~
23 ~~electricity consumed by municipal facilities are permitted under the provisions of this~~
24 ~~section. All other wind energy facilities are a prohibited use in all zones. All~~
25 ~~applications for a proposed wind energy facility must include evidence that the facility is~~
26 ~~appropriately sized to only meet the needs of the on-site consumer or otherwise offset the~~
27 ~~cost of electricity consumed by the municipal facility.~~

28
29 (d) ~~Application Procedures. A wind energy facility or a met tower shall be considered an~~
30 ~~accessory use. Any wind energy facility, regardless of rated capacity, and any met tower~~
31 ~~shall require the issuance of a building permit by the Building Official. Prior to the~~
32 ~~issuance of a building permit, the applicant/owner of the wind facility or met tower shall~~
33 ~~receive all other town approvals, as relevant:~~

34
35 [1] ~~A met tower is permitted by right in all zoning districts where structures of any~~
36 ~~sort are allowed. A met tower is allowed up to 200 feet in height and on a~~
37 ~~temporary basis not to exceed one year from the date the building permit was~~
38 ~~issued. The Building Official may grant a single one year extension, if justified~~
39 ~~upon a written request by the applicant.~~

40
41 [2] ~~A wind turbine that has a rated capacity of 15 kW or less is allowed by special use~~
42 ~~permit in all zoning districts where structures of any sort are allowed, provided~~
43 ~~that, in addition to the standards required for a special use permit (as contained in~~
44 ~~Section 218-23.A.), the standards contained herein are met.~~

1 ~~[3]—A wind turbine that has a rated capacity of greater than 15 kW is allowed by~~
2 ~~special use permit in all zoning districts with the exception of the R-20 and~~
3 ~~Traditional Village Districts, provided that, in addition to the standards required~~
4 ~~for a special use permit (as contained in Section 218-23.A.), the standards~~
5 ~~contained herein are met. Site plan review by the Planning Commission, under~~
6 ~~the provisions of Article XII is also required, as follows:~~

7
8 ~~[a]—The applicant shall apply for site plan review with the Planning~~
9 ~~Commission as specified in this ordinance, retain a conditional approval~~
10 ~~from the Planning Commission, and then apply for a special use permit~~
11 ~~with the Zoning Board of Review. Upon the issuance of a special use~~
12 ~~permit by the Zoning Board of Review the applicant shall return to the~~
13 ~~Planning Commission to complete site plan review.~~

14
15 ~~[b]—Applicants are encouraged to meet with the Town Planner prior to~~
16 ~~application and to request a pre-application meeting with the Planning~~
17 ~~Commission to discuss their project prior to submitting an application.~~

18
19 ~~(e) —Application Requirements for a Wind Turbine of 15 kW Capacity or Less. In addition to~~
20 ~~the application requirements for a special use permit, an application for a wind energy~~
21 ~~facility that consists of a wind turbine with a rated capacity of 15 kW or less shall include~~
22 ~~the following materials:~~

23
24 ~~[1]—Site plan~~

25
26 ~~The applicant shall submit a site plan with the following information:~~

27
28 ~~[a]—Property lines and physical dimensions of the subject property;~~

29
30 ~~[b]—Location, dimensions and types of existing structures on the property;~~

31
32 ~~[c]—Location of the proposed wind turbine, foundations, guy anchors and~~
33 ~~associated equipment;~~

34
35 ~~[d]—Setback distances between the wind turbine and property lines, with~~
36 ~~evidence of compliance with the setback requirements of subsection (h).~~

37
38 ~~[e]—Any overhead utility lines; and~~

39
40 ~~[f]—Any areas of clearing of vegetation required to facilitate installation of the~~
41 ~~tower.~~

1 ~~[2] — Engineering Details and Specifications~~

2
3 ~~The applicant shall submit the following details for the proposed turbine:~~

4
5 ~~[a] — Tower and tower foundation blueprints or drawings stamped by a~~
6 ~~Professional Engineer licensed in the State of Rhode Island, certifying~~
7 ~~compliance with the appropriate codes and wind zones;~~

8
9 ~~[b] — Wind system specifications, including manufacturer and model, rotor~~
10 ~~diameter, tower height and tower type (freestanding or guyed);~~

11
12 ~~[c] — A copy of the application for interconnection with their electrical utility~~
13 ~~provider, if the wind energy facility is proposed to be connected to the~~
14 ~~power grid;~~

15
16 ~~[d] — Electrical plans and components, in sufficient detail, and stamped by an~~
17 ~~electrical engineer licensed in the State of Rhode Island, to allow for a~~
18 ~~determination that the manner of installation conforms to the appropriate~~
19 ~~codes; and~~

20
21 ~~[e] — Evidence of compliance or non-applicability with Federal Aviation~~
22 ~~Administration requirements.~~

23
24 ~~[3] — Neighborhood Impact Analysis~~

25
26 ~~The applicant shall submit the following details regarding the potential sound and~~
27 ~~visual impacts of the proposed wind energy facility:~~

28
29 ~~[a] — Manufacturer's documentation of the sound levels generated by the~~
30 ~~turbine under various wind conditions and at given distances from the~~
31 ~~turbine. If requested by the Zoning Board of Review, the analysis of the~~
32 ~~sound impacts of a proposed wind facility shall include consideration of~~
33 ~~the ambient sound, as measured at the property lines.~~

34
35 ~~[b] — Shadow flicker effects of the turbine as sited, including the expected~~
36 ~~seasonal times and durations, and the properties potentially impacted. The~~
37 ~~Zoning Board of Review may waive this requirement for turbines having a~~
38 ~~tower height of less than 50 feet.~~

39
40 ~~(f) — Application Requirements for a Wind Turbine of Greater than 15 kW Capacity. In~~
41 ~~addition to the application requirements for a special use permit, and for a project~~
42 ~~undergoing site plan review, an application for a wind energy facility that consists of a~~
43 ~~wind turbine with a rated capacity of greater than 15 kW shall include the following~~
44 ~~materials. Where the requirements of this section are greater than those otherwise~~
45 ~~required for an application submitted under Article XII, the requirements of this section~~
46 ~~shall govern:~~

1 ~~[1]—Site Plan~~

2
3 ~~The applicant shall submit a site plan of the proposed wind energy facility site, at~~
4 ~~a scale of one inch equals 200 feet, with contour intervals of two feet, stamped by~~
5 ~~a Professional Engineer licensed in the State of Rhode Island, showing the~~
6 ~~following:~~

7
8 ~~[a]—Property lines for the site parcel, and for adjacent parcels within 500 feet~~
9 ~~of the site parcel.~~

10
11 ~~[b]—Outline of all existing buildings, including purpose (residence, garage,~~
12 ~~etc.) on the site parcel and all adjacent parcels within 500 feet. Distances~~
13 ~~from the wind facility to each building shall be shown.~~

14
15 ~~[c]—Location of all roads, public and private, on the site parcel and adjacent~~
16 ~~parcels within 500 feet, and proposed roads or driveways, either temporary~~
17 ~~or permanent.~~

18
19 ~~[d]—Existing area of tree cover, including average height of trees, on the site~~
20 ~~parcel and adjacent parcels within 500 feet.~~

21
22 ~~[e]—Proposed location and design of the wind facility, including all turbines,~~
23 ~~ground equipment, appurtenant structures, transmission infrastructure,~~
24 ~~access, fencing, exterior lighting, etc.~~

25
26 ~~[f]—Setbacks of all the components of the wind energy facility showing that~~
27 ~~they meet the standards of this section and the applicable zoning district.~~

28
29 ~~[2]—Wind Turbine Capacity~~

30
31 ~~The applicant shall submit all manufacturer's specifications and details for the~~
32 ~~proposed wind turbine, with evidence that the rated capacity of the turbine is~~
33 ~~compatible with the on-site electric energy needs for the one or more residences,~~
34 ~~businesses or institutions to be served. The wind turbine shall be sized to only~~
35 ~~generate the needed electricity consumed on-site, or to otherwise offset the cost of~~
36 ~~electricity consumed for municipal use via net metering.~~

37
38 ~~[3]—Impact Statement~~

39
40 ~~Unless waived by the Planning Commission, the applicant for a wind energy~~
41 ~~facility with a rated capacity greater than 15 kW shall provide an impact~~
42 ~~statement prepared by a qualified individual or firm, which identifies the potential~~
43 ~~adverse impacts to the neighborhood, community and the natural environment,~~
44 ~~including but not limited to the following areas (addressed in further detail~~
45 ~~below): sound impact, visual impact, shadow flicker, lighting, safety (ice throw);~~

1 and wildlife impact. Measures for mitigating any potential adverse impacts shall
2 be identified.

3
4 ~~[4]—Sound Impact Analysis~~

5
6 The applicant shall submit manufacturer’s documentation of sound impacts of the
7 wind turbine under various wind conditions, represented by a chart or map
8 indicating the expected decibel levels at given distances from the wind turbine,
9 including along the edges of the property. The sound analysis shall include
10 measurements of ambient sound levels under typical daytime and nighttime
11 conditions. The application shall specify the conditions under which background
12 sound levels are measured, as well as the frequency and duration of these
13 measurements. The town reserves the right to request measurement and/or
14 modeling to the degree necessary to determine the potential sound impacts of a
15 wind energy facility, and to employ the services of their own acoustical expert at
16 the expense of the applicant (see subsection (k)).

17
18 ~~[5]—Visualizations~~

19
20 The applicant shall provide at least six sight lines, including from the nearest
21 building with a view of the proposed wind energy facility, for pre and post-
22 construction view representation. Sites for the view representations shall be
23 selected from populated areas or public ways within a two mile radius of the wind
24 facility. The sites shall be approved by the Planning Commission in advance of
25 the submission of the formal site plan review application. View representations
26 shall have the following characteristics:

27
28 ~~[a]—Be in color and include actual pre construction photographs and accurate
29 post construction simulations of the height and breadth of the wind facility
30 by superimposition of the wind facility onto photographs of existing
31 views;~~

32
33 ~~[b]—Include existing or proposed buildings and tree coverage; and~~

34
35 ~~[c]—Include description of the technical procedures followed in producing the
36 visualization, such as distances, angles, and lens.~~

37
38 ~~[6]—Shadow Flicker Analysis~~

39
40 The applicant shall submit an evaluation of the shadow flicker effects (the
41 shadows caused by sunlight passing through the moving blades) of the turbine as
42 it is sited on the parcel, including the seasonal times and durations, and a
43 delineation of the areas impacted.

44
45 ~~[7]—Wildlife Impact Analysis~~

1 The applicant shall submit an evaluation of the potential impacts of the wind
2 turbine on birds and other wildlife, including documentation of bird migration
3 patterns, and dominate species and habitats (or lack thereof) by a wildlife
4 biologist. ~~Written comments from the appropriate official(s) of the US Fish and
5 Wildlife Service, addressing migratory birds and other species of concern, shall
6 be part of the application for any wind energy facility with a rated capacity greater
7 than 100 kW that is proposed within 2,000 feet of the following:~~

8
9 [a] ~~— The barrier beach;~~

10
11 [b] ~~— The exterior boundary of Ninigret Town Park; or~~

12
13 [c] ~~— The exterior boundary of the coastal unit of Ninigret National Wildlife
14 Refuge.~~

15
16 [8] ~~— Landscape Plan~~

17
18 The applicant shall submit a landscape plan indicating all proposed changes to the
19 landscape of the site, including temporary or permanent roads or driveways,
20 grading, vegetation clearing and planting, exterior lighting, and screening
21 vegetation or structures.

22
23 [9] ~~— Operation and Maintenance Plan~~

24
25 The applicant shall submit a plan, to remain on file in the Office of the Building
26 Official, for maintenance of access roads and storm water controls, as well as
27 general procedures for operational maintenance of the wind energy facility. The
28 Operations and Maintenance Plan for the wind facility should address the
29 following:

30
31 [a] ~~— Party responsible for operating the turbine;~~

32
33 [b] ~~— Maintenance schedule and procedures;~~

34
35 [c] ~~— Methods for measuring sound, shadow flicker and other potential impacts
36 and procedures for mitigation; and~~

37
38 [d] ~~— Emergency contact and procedures.~~

39
40

1 (g) ~~General Standards for all Wind Energy Facilities~~

2
3 ~~[1] Special Use Permit Standards~~

4
5 ~~Prior to an issuance of a special use permit for any wind energy facility, the~~
6 ~~Zoning Board of Review must determine that it meets the standards contained~~
7 ~~Section 218-23. In addition, the Zoning Board may impose reasonable~~
8 ~~conditions, safeguards and limitations on time and use, and may require the~~
9 ~~applicant to implement all reasonable measures to mitigate unforeseen adverse~~
10 ~~impact of the wind energy facility should they occur.~~

11
12 ~~[2] General Compliance~~

13
14 ~~The construction and operation of any proposed wind energy facility shall be~~
15 ~~consistent with all applicable local, state and federal requirements, including but~~
16 ~~not limited to all applicable safety, construction, environmental, electrical,~~
17 ~~communications and aviation (FAA) requirements.~~

18
19 ~~[3] Proof of Liability Insurance~~

20
21 ~~At the time of application for any wind energy facility, the applicant shall be~~
22 ~~required to provide evidence of liability insurance in an amount and for the~~
23 ~~duration sufficient to cover loss or damage to persons or property occasioned by~~
24 ~~the operation or failure of the wind facility.~~

25
26 (h) ~~Siting Standards for all Wind Energy Facilities~~

27
28 ~~[1] Height~~

29
30 ~~Wind energy facilities shall not be subject to the height limitations contained in~~
31 ~~Article VII. The maximum allowable height of any proposed wind energy facility~~
32 ~~shall be governed by the setback requirements as described below. However, this~~
33 ~~shall not preclude the Zoning Board of Review from imposing a height limitation~~
34 ~~as a condition of the special use permit.~~

35
36 ~~[2] Setbacks~~

37
38 ~~There shall be a minimum setback between the foundation of the turbine and all~~
39 ~~property lines that is equal to 3 times the total height of the turbine. This~~
40 ~~requirement may be waived if the applicant can secure an easement over the~~
41 ~~abutting property that otherwise meets this minimum required setback, subject to~~
42 ~~the following limitations:~~

43
44 ~~[a] The property subject to the easement is not divided by a public road within~~
45 ~~a distance that is equal to 1.25 times the total height of the turbine, as~~
46 ~~measured from the foundation; and~~

1
2 [b]—There are no habitable structures on the property subject to the easement
3 within a distance that is equal to 1.25 times the total height of the wind
4 turbine, as measured from the foundation. In addition, there shall be a
5 restriction on said property that prevents the construction of a habitable
6 structure within said distance while the wind turbine is in place.
7

8 [3]—Clearing
9

10 Clearing of natural vegetation shall be limited to that which is necessary for the
11 construction, operation and maintenance of the wind energy facility. Design and
12 construction of larger wind energy facilities shall meet all required construction
13 site runoff control and storm water management standards as contained in the
14 applicable sections of the Town of Charlestown Land Development and
15 Subdivision Regulations.
16

17 (i)—Aesthetic and Design Standards for all Wind Energy Facilities
18

19 [1]—Color and Finish
20

21 All components of the wind energy facility shall be painted a neutral, non-
22 reflective exterior color, unless mitigation measures as directed by the town
23 warrant differently.
24

25 [2]—Lighting
26

27 Wind turbines shall be lighted only if required by the Federal Aviation
28 Administration (FAA). Lighting of other parts of the wind energy facility, such
29 as appurtenant structures, shall be limited to that required for safety, security and
30 operational purposes, and shall be reasonably shielded from abutting properties.
31 Lighting shall be designed to minimize glare on abutting properties, and except as
32 required by the FAA, be directed downward with full cut-off fixtures to reduce
33 light pollution. Prior to the issuance of a special use permit for any wind energy
34 facility proposed within a two-mile radius of the Frosty Drew Observatory within
35 Ninigret Park, it shall be determined that the facility will not have a negative
36 impact on the observatory's dark sky resource. Consideration should also be
37 given to lighting that does not attract birds or bats.
38

39 [3]—Signage
40

41 A wind energy facility shall not display any permanent or temporary signs,
42 writing, symbols, logos or any graphic representation except for the following:
43

44 [a]—Those signs necessary to identify the owner, provide a 24-hour emergency
45 contact phone number, and warn of any danger; and
46

1 ~~[b] — Educational signs providing information about the facility, and the~~
2 ~~benefits of renewable energy.~~

3
4 ~~Signs that are permitted must comply with Article XI of this ordinance. Signs~~
5 ~~shall not exceed three square feet in size nor be placed at a height above twelve~~
6 ~~feet and shall be attached to the turbine or the facilities building or fencing.~~

7
8 ~~[4] — Advertising~~

9
10 ~~Wind turbines, and associated structures, shall not be used for displaying any~~
11 ~~advertising except for reasonable identification of the manufacturer or operator of~~
12 ~~the wind energy facility. Such reasonable identification shall not be located at a~~
13 ~~height greater than eight feet from the ground.~~

14
15 ~~[5] — Utility Connections~~

16 ~~Utility connections from the wind facility shall be installed underground.~~
17 ~~Electrical transformers for utility interconnections may be above ground if~~
18 ~~required by the utility provider.~~

19
20
21 ~~[6] — Appurtenant Structures~~

22 ~~All appurtenant structures to wind energy facilities, including but not limited to,~~
23 ~~equipment shelters, storage facilities, transformers and substations, shall be:~~

24
25
26 ~~[a] — Architecturally compatible with each other and contained within the~~
27 ~~turbine tower or other existing structures on the property whenever~~
28 ~~technically feasible;~~

29
30 ~~[b] — Shaded from view by vegetation and/or located in an underground vault~~
31 ~~and joined or clustered to avoid adverse visual impacts, whenever feasible;~~
32 ~~and~~

33
34 ~~[c] — Subject to the use and dimensional regulations of this ordinance for the~~
35 ~~district in which it is located, as well as all other relevant regulations~~
36 ~~(parking, signage, development standards, etc.).~~

1 ~~[7] — Support Towers~~

2
3 ~~Monopole towers are required. Lattice or cable supported towers may only be~~
4 ~~permitted if it is demonstrated to the satisfaction of the applicable body that the~~
5 ~~use of a monopole tower is impractical.~~

6
7 ~~[8] — Ancillary Structures~~

8
9 ~~No telecommunications dishes, antennas, cellular telephone repeaters, or other~~
10 ~~similar devices shall be attached externally to the wind turbine towers.~~
11 ~~Applicants are encouraged to provide internal locations for all these same devices~~
12 ~~if possible.~~

13
14 ~~(j) — Safety and Environmental Standards for all Wind Energy Facilities~~

15
16 ~~[1] — Braking System~~

17
18 ~~Wind turbines shall have an automatic braking, governing or feathering system to~~
19 ~~prevent uncontrolled rotation, overspeeding and excessive pressure on the tower~~
20 ~~structure, rotor blades and other turbine components, or as a means to implement~~
21 ~~mitigation for natural resource protection.~~

22
23 ~~[2] — Emergency Services~~

24
25 ~~The applicant shall provide a copy of the project summary and site plan to the~~
26 ~~police and to the appropriate fire district in which the property is located. Upon~~
27 ~~request of the police and/or fire district, the applicant shall cooperate with local~~
28 ~~emergency services in developing an emergency response plan.~~

29
30 ~~[3] — Unauthorized Access~~

31
32 ~~All components of a wind energy facility shall be designed to prevent~~
33 ~~unauthorized access. The tower shall be designed and installed so as not to~~
34 ~~provide step bolts or a ladder readily accessible to the public for a minimum~~
35 ~~height of twelve feet above the ground. All ground mounted electrical and control~~
36 ~~equipment shall be labeled and secured to prevent unauthorized access.~~

37
38 ~~[4] — Sound~~

39
40 ~~The sound pressure level generated by a wind energy facility shall not exceed 35~~
41 ~~dB(A) in the evening (7 pm to 7 am) or 45 dB(A) in the daytime (7 am to 7 pm);~~
42 ~~measured at the property lines. If the ambient sound pressure level exceeds these~~
43 ~~limits, based on a site specific sound study, the standard shall be ambient dB(A)~~
44 ~~plus 3 dB(A). The applicant has the burden of proving that the sound generated~~
45 ~~by the proposed turbine will not have a significant adverse impact on neighboring~~
46 ~~or adjacent uses.~~

1
2 [5] — Shadow Flicker
3

4 ~~Wind energy facilities shall be sited in a manner that minimizes shadowing or~~
5 ~~flicker impacts. The applicant has the burden of proving that this effect will not~~
6 ~~have a significant adverse impact on neighboring or adjacent uses. Potential~~
7 ~~shadow flicker impacts will be addressed either through siting or mitigation~~
8 ~~measures.~~

9
10 [6] — Wildlife
11

12 ~~The potential adverse impacts to wildlife must be identified by the applicant and~~
13 ~~shall be minimized through appropriate facility siting and design. The best~~
14 ~~available mitigation techniques should be utilized to minimize bird and bat~~
15 ~~mortalities and other known wildlife impacts. Such mitigation measures may~~
16 ~~include, but not be limited to, turbine cut in speed, feathering, lighting and~~
17 ~~coloration of rotors. Within areas of wildlife conservation concern (see (f)[7]),~~
18 ~~the Planning Commission and/or Zoning Board of Review may request a one to~~
19 ~~two year monitoring program to determine the efficacy of mitigation measures in~~
20 ~~preventing or reducing mortality of migratory birds and bats and other species of~~
21 ~~concern, as well as loss of habitat.~~

22
23 (k) — ~~Professional Review of an Application for a Wind Energy Facility. In their review of any~~
24 ~~application for a wind energy facility, the Planning Commission and/or the Zoning Board~~
25 ~~of Review may rely upon the review and analysis of the potential impact of the facility by~~
26 ~~qualified professionals. Such professionals can include, but need not be limited to,~~
27 ~~acoustical consultant, visualization expert, wildlife specialist, and/or structural engineer.~~
28 ~~The determination of the need for professional expertise shall be made by the appropriate~~
29 ~~board and shall be undertaken at the expense of the applicant.~~

30
31 (l) — Monitoring and Maintenance
32

33 [1] — Wind Energy Facility Conditions
34

35 ~~The owner of any wind energy facility shall maintain the wind facility in good~~
36 ~~condition. Maintenance shall include, but not be limited to, structural repairs,~~
37 ~~integrity of security measures, painting and landscaping. Site access shall be~~
38 ~~maintained to a level acceptable to the police and fire departments. The owner~~
39 ~~shall be responsible for the cost of maintaining the wind facility and any access~~
40 ~~road, as well as the cost of repairing any damage occurring as a result of~~
41 ~~construction and operation.~~

1 ~~[2] — Public Inquiries and Complaints~~

2
3 ~~The owner of the wind energy facility shall identify a responsible person and~~
4 ~~contact information in the event of public inquiries, for as long as the facility is in~~
5 ~~place. An emergency telephone number shall be posted so that the appropriate~~
6 ~~people may be contacted should the facility need immediate attention. This~~
7 ~~telephone number shall be clearly visible on a permanent structure or post at a~~
8 ~~location as determined by the Building Official.~~

9
10 ~~[3] — Annual Inspections~~

11
12 ~~Any wind energy facility consisting of a wind turbine with a rated capacity of 100~~
13 ~~kW or greater shall be subject to an annual inspection, with a report submitted to~~
14 ~~the Building Official. The inspection shall include an evaluation of all~~
15 ~~mechanical and structural components, with a focus on safety, performed by a~~
16 ~~registered professional engineer, or engineers, with expertise in the appropriate~~
17 ~~areas (structural, mechanical, electrical). The Building Official shall have the~~
18 ~~ability to request a similar operational and structural report following the~~
19 ~~occurrence of high wind or other conditions as deemed by the Building Official to~~
20 ~~constitute a potential threat to the integrity of the wind facility.~~

21
22 ~~[4] — Modifications~~

23
24 ~~Any material modification proposed to a wind energy facility following the~~
25 ~~issuance of all required approvals and permits shall first require the owner to~~
26 ~~return to the appropriate authority for additional approval. The Operations and~~
27 ~~Maintenance Plan (see (f)[9]) shall be updated as needed within thirty days of the~~
28 ~~completion of the modification to the wind energy facility.~~

29
30 ~~[5] — Operation~~

31
32 ~~If electronic interference results from the operation of the wind energy facility, or~~
33 ~~if sound, shadow flicker, or other adverse impacts exceed the allowable limits of~~
34 ~~this section or other applicable regulation, or a limit placed as a condition of the~~
35 ~~special use permit, the Building Official shall notify the owner in writing of the~~
36 ~~violation. If the violation is not remedied within thirty days, the facility shall~~
37 ~~remain inactive until the violation is remedied.~~

38
39 ~~[6] — Enforcement and Penalties~~

40
41 ~~The Building Official shall be responsible for the enforcement of the provisions of~~
42 ~~this section. Failure of the owner of any wind energy facility to comply with~~
43 ~~operational standards, mitigation measures or annual inspection requirements~~
44 ~~shall be considered a violation of the zoning ordinance, subject to the provisions~~
45 ~~of Section 218-9.~~

1 (m) ~~Removal of a Wind Energy Facility~~

2
3 [1] ~~Removal Required~~

4
5 A wind energy facility that meets any of the following criteria shall be considered
6 non-operational, and shall be removed at the expense of the owner:

7
8 [a] ~~Any wind facility found to be unsafe by the Building Official, and not~~
9 ~~repaired by its landowner according to all applicable safety standards~~
10 ~~within three months of the original notification by the Building Official;~~

11
12 [b] ~~Any wind facility not operational for a period of twelve consecutive~~
13 ~~months or more; or~~

14
15 [c] ~~Any wind facility which reaches the end of its useful life.~~

16
17 [2] ~~Notice Requirements~~

18
19 In all such cases, the Building Official shall notify the landowner by registered
20 mail that corrective action must be taken. The landowner shall have thirty days to
21 respond; in such response, the landowner shall set forth reasons for any
22 operational difficulty and provide a reasonable timetable for corrective action. In
23 the absence of corrective action, the wind facility shall be removed, no more than
24 six months from the date a facility is determined to be unsafe, or from the date a
25 facility is considered to have discontinued operations or been abandoned. The
26 Building Official shall have the authority to pursue legal action if necessary.

27
28 [3] ~~Site and Removal Requirements~~

29
30 No wind energy facility with a rated capacity greater than 15 kW shall be
31 removed without the prior issuance of a demolition permit by the Building
32 Official. At the time of removal, the wind energy facility site shall be restored to
33 the state it was in before the wind facility was constructed, or converted to
34 another legally authorized use. Removal shall consist of the following:

35
36 [a] ~~Physical removal of all wind turbines, structures, equipment, security~~
37 ~~barriers and transmission lines from the site;~~

38
39 [b] ~~Disposal of all solid and hazardous waste in accordance with local and~~
40 ~~state waste disposal regulations; and~~

41
42 [c] ~~Stabilization or re-vegetation of the site as necessary to minimize erosion.~~
43 ~~The Planning Commission may allow the owner to leave landscaping or~~
44 ~~designated below grade foundations in order to minimize erosion and~~
45 ~~disruption of vegetation.~~

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**PUBLIC NOTICE
TOWN OF CHARLESTOWN**

Notice is hereby given that the Town Council of the Town of Charlestown will conduct a public hearing, open to the public, on September 12, 2011 at 7:00 p.m. at the Charlestown Town Hall, 4540 South County Trail on the following proposed amendment to the Code of Ordinances. Opportunity shall be given to all persons interested to be heard upon the matter of the proposed ordinance. The following proposed amendments are under consideration and may be adopted and/or altered or amended prior to the close of the public hearing without further advertising, as a result of further study or because of the views expressed at the public hearing. Any alteration or amendment must be presented for comment in the course of the public hearing. The proposed amendments are available for review and/or purchase at the Town Clerk's Office between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday, excluding Holidays.

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ORDINANCE NO. 341

AN ORDINANCE IN AMENDING CHAPTER 218 ZONING – WIND ENERGY GENERATORS

Note: Words set as ~~strikeover~~ are to be deleted from the ordinance; words set in **bold** are to be **added** to the ordinance.

Section 1. The Town Council of the Town of Charlestown hereby ordains that Chapter 218 of the Code of Ordinances, Town of Charlestown entitled Zoning, Section 37 is amended as follows:

ARTICE VI. Land Use Regulations.

Section 218-37. Specific Land Use Standards and Conditions.

The existing text of this Section is to be deleted in its entirety and replaced with the following text:

D. Utilities

(4) Wind Energy Generator Towers and Systems

(4) Wind Energy Facilities

(a) Purpose. The purpose of this section is to ~~provide for~~ **prohibit** the construction and operation of wind energy facilities, as defined below, ~~and to provide standards for the placement, design, construction, monitoring, modification and removal of wind energy facilities that address to protect the~~ public safety and health, and ~~minimize negative impacts on~~ **to preserve the** scenic, natural and historic resources of the town.

(b) Definitions. The following terms are defined for use in applying the provisions of this Section 218-37.D.(4) and shall supplement and be in addition to those terms defined in Section 218-5.B.:

Height—~~The height of a wind turbine measured from pre-development grade to the tip of the rotor blade at its highest point, or blade tip height.~~

1 ~~Rated Capacity—The maximum rated output of electric power production equipment.~~
2 ~~This output is typically specified by the manufacturer. A wind turbine’s rated capacity is~~
3 ~~its maximum power at optimum wind speed.~~

4
5 Wind Energy Facility – All equipment, machinery, and structures utilized in connection
6 with the conversion of wind to electricity. This includes, but is not limited to,
7 transmission, storage, collection and supply equipment, substations, transformers, and
8 one or more wind turbines and their foundations.

9
10 Wind Monitoring or Meteorological Tower – A temporary tower equipped with devices
11 to measure wind speeds and direction, used to determine how much wind power a site
12 can be expected to generate (referred to as “met tower”). This includes SoDAR and
13 LiDAR equipment.

14
15 Wind Turbine - A device that converts kinetic wind energy into rotational energy that
16 drives an electrical generator. A wind turbine typically consists of a tower, nacelle body,
17 and a rotor with two or more blades.

18
19 (c) **Applicability. No Wind Energy Facility or Wind Turbine of any sort or nature is**
20 **permitted in any zoning district located in the Town. Such uses are prohibited uses**
21 **in all zoning districts.** ~~Only wind energy facilities that are designed primarily to provide~~
22 ~~or replenish electricity consumed by operations on-site or those designed to provide~~
23 ~~electricity consumed by municipal facilities are permitted under the provisions of this~~
24 ~~section. All other wind energy facilities are a prohibited use in all zones. All~~
25 ~~applications for a proposed wind energy facility must include evidence that the facility is~~
26 ~~appropriately sized to only meet the needs of the on-site consumer or otherwise offset the~~
27 ~~cost of electricity consumed by the municipal facility.~~

28
29 (d) ~~Application Procedures. A wind energy facility or a met tower shall be considered an~~
30 ~~accessory use. Any wind energy facility, regardless of rated capacity, and any met tower~~
31 ~~shall require the issuance of a building permit by the Building Official. Prior to the~~
32 ~~issuance of a building permit, the applicant/owner of the wind facility or met tower shall~~
33 ~~receive all other town approvals, as relevant:~~

34
35 [1] ~~A met tower is permitted by right in all zoning districts where structures of any~~
36 ~~sort are allowed. A met tower is allowed up to 200 feet in height and on a~~
37 ~~temporary basis not to exceed one year from the date the building permit was~~
38 ~~issued. The Building Official may grant a single one year extension, if justified~~
39 ~~upon a written request by the applicant.~~

40
41 [2] ~~A wind turbine that has a rated capacity of 15 kW or less is allowed by special use~~
42 ~~permit in all zoning districts where structures of any sort are allowed, provided~~
43 ~~that, in addition to the standards required for a special use permit (as contained in~~
44 ~~Section 218-23.A.), the standards contained herein are met.~~

1 ~~[3]—A wind turbine that has a rated capacity of greater than 15 kW is allowed by~~
2 ~~special use permit in all zoning districts with the exception of the R-20 and~~
3 ~~Traditional Village Districts, provided that, in addition to the standards required~~
4 ~~for a special use permit (as contained in Section 218-23.A.), the standards~~
5 ~~contained herein are met. Site plan review by the Planning Commission, under~~
6 ~~the provisions of Article XII is also required, as follows:~~

7
8 ~~[a]—The applicant shall apply for site plan review with the Planning~~
9 ~~Commission as specified in this ordinance, retain a conditional approval~~
10 ~~from the Planning Commission, and then apply for a special use permit~~
11 ~~with the Zoning Board of Review. Upon the issuance of a special use~~
12 ~~permit by the Zoning Board of Review the applicant shall return to the~~
13 ~~Planning Commission to complete site plan review.~~

14
15 ~~[b]—Applicants are encouraged to meet with the Town Planner prior to~~
16 ~~application and to request a pre-application meeting with the Planning~~
17 ~~Commission to discuss their project prior to submitting an application.~~

18
19 ~~(e) Application Requirements for a Wind Turbine of 15 kW Capacity or Less. In addition to~~
20 ~~the application requirements for a special use permit, an application for a wind energy~~
21 ~~facility that consists of a wind turbine with a rated capacity of 15 kW or less shall include~~
22 ~~the following materials:~~

23
24 ~~[1]—Site plan~~

25
26 ~~The applicant shall submit a site plan with the following information:~~

27
28 ~~[a]—Property lines and physical dimensions of the subject property;~~

29
30 ~~[b]—Location, dimensions and types of existing structures on the property;~~

31
32 ~~[c]—Location of the proposed wind turbine, foundations, guy anchors and~~
33 ~~associated equipment;~~

34
35 ~~[d]—Setback distances between the wind turbine and property lines, with~~
36 ~~evidence of compliance with the setback requirements of subsection (h).~~

37
38 ~~[e]—Any overhead utility lines; and~~

39
40 ~~[f]—Any areas of clearing of vegetation required to facilitate installation of the~~
41 ~~tower.~~

1 ~~[2] — Engineering Details and Specifications~~

2
3 ~~The applicant shall submit the following details for the proposed turbine:~~

4
5 ~~[a] — Tower and tower foundation blueprints or drawings stamped by a~~
6 ~~Professional Engineer licensed in the State of Rhode Island, certifying~~
7 ~~compliance with the appropriate codes and wind zones;~~

8
9 ~~[b] — Wind system specifications, including manufacturer and model, rotor~~
10 ~~diameter, tower height and tower type (freestanding or guyed);~~

11
12 ~~[c] — A copy of the application for interconnection with their electrical utility~~
13 ~~provider, if the wind energy facility is proposed to be connected to the~~
14 ~~power grid;~~

15
16 ~~[d] — Electrical plans and components, in sufficient detail, and stamped by an~~
17 ~~electrical engineer licensed in the State of Rhode Island, to allow for a~~
18 ~~determination that the manner of installation conforms to the appropriate~~
19 ~~codes; and~~

20
21 ~~[e] — Evidence of compliance or non-applicability with Federal Aviation~~
22 ~~Administration requirements.~~

23
24 ~~[3] — Neighborhood Impact Analysis~~

25
26 ~~The applicant shall submit the following details regarding the potential sound and~~
27 ~~visual impacts of the proposed wind energy facility:~~

28
29 ~~[a] — Manufacturer's documentation of the sound levels generated by the~~
30 ~~turbine under various wind conditions and at given distances from the~~
31 ~~turbine. If requested by the Zoning Board of Review, the analysis of the~~
32 ~~sound impacts of a proposed wind facility shall include consideration of~~
33 ~~the ambient sound, as measured at the property lines.~~

34
35 ~~[b] — Shadow flicker effects of the turbine as sited, including the expected~~
36 ~~seasonal times and durations, and the properties potentially impacted. The~~
37 ~~Zoning Board of Review may waive this requirement for turbines having a~~
38 ~~tower height of less than 50 feet.~~

39
40 ~~(f) — Application Requirements for a Wind Turbine of Greater than 15 kW Capacity. In~~
41 ~~addition to the application requirements for a special use permit, and for a project~~
42 ~~undergoing site plan review, an application for a wind energy facility that consists of a~~
43 ~~wind turbine with a rated capacity of greater than 15 kW shall include the following~~
44 ~~materials. Where the requirements of this section are greater than those otherwise~~
45 ~~required for an application submitted under Article XII, the requirements of this section~~
46 ~~shall govern:~~

1 ~~[1]—Site Plan~~

2
3 ~~The applicant shall submit a site plan of the proposed wind energy facility site, at~~
4 ~~a scale of one inch equals 200 feet, with contour intervals of two feet, stamped by~~
5 ~~a Professional Engineer licensed in the State of Rhode Island, showing the~~
6 ~~following:~~

7
8 ~~[a]—Property lines for the site parcel, and for adjacent parcels within 500 feet~~
9 ~~of the site parcel.~~

10
11 ~~[b]—Outline of all existing buildings, including purpose (residence, garage,~~
12 ~~etc.) on the site parcel and all adjacent parcels within 500 feet. Distances~~
13 ~~from the wind facility to each building shall be shown.~~

14
15 ~~[c]—Location of all roads, public and private, on the site parcel and adjacent~~
16 ~~parcels within 500 feet, and proposed roads or driveways, either temporary~~
17 ~~or permanent.~~

18
19 ~~[d]—Existing area of tree cover, including average height of trees, on the site~~
20 ~~parcel and adjacent parcels within 500 feet.~~

21
22 ~~[e]—Proposed location and design of the wind facility, including all turbines,~~
23 ~~ground equipment, appurtenant structures, transmission infrastructure,~~
24 ~~access, fencing, exterior lighting, etc.~~

25
26 ~~[f]—Setbacks of all the components of the wind energy facility showing that~~
27 ~~they meet the standards of this section and the applicable zoning district.~~

28
29 ~~[2]—Wind Turbine Capacity~~

30
31 ~~The applicant shall submit all manufacturer's specifications and details for the~~
32 ~~proposed wind turbine, with evidence that the rated capacity of the turbine is~~
33 ~~compatible with the on-site electric energy needs for the one or more residences,~~
34 ~~businesses or institutions to be served. The wind turbine shall be sized to only~~
35 ~~generate the needed electricity consumed on-site, or to otherwise offset the cost of~~
36 ~~electricity consumed for municipal use via net metering.~~

37
38 ~~[3]—Impact Statement~~

39
40 ~~Unless waived by the Planning Commission, the applicant for a wind energy~~
41 ~~facility with a rated capacity greater than 15 kW shall provide an impact~~
42 ~~statement prepared by a qualified individual or firm, which identifies the potential~~
43 ~~adverse impacts to the neighborhood, community and the natural environment,~~
44 ~~including but not limited to the following areas (addressed in further detail~~
45 ~~below): sound impact, visual impact, shadow flicker, lighting, safety (ice throw);~~

1 and wildlife impact. Measures for mitigating any potential adverse impacts shall
2 be identified.

3
4 ~~[4]—Sound Impact Analysis~~

5
6 The applicant shall submit manufacturer’s documentation of sound impacts of the
7 wind turbine under various wind conditions, represented by a chart or map
8 indicating the expected decibel levels at given distances from the wind turbine,
9 including along the edges of the property. The sound analysis shall include
10 measurements of ambient sound levels under typical daytime and nighttime
11 conditions. The application shall specify the conditions under which background
12 sound levels are measured, as well as the frequency and duration of these
13 measurements. The town reserves the right to request measurement and/or
14 modeling to the degree necessary to determine the potential sound impacts of a
15 wind energy facility, and to employ the services of their own acoustical expert at
16 the expense of the applicant (see subsection (k)).

17
18 ~~[5]—Visualizations~~

19
20 The applicant shall provide at least six sight lines, including from the nearest
21 building with a view of the proposed wind energy facility, for pre and post-
22 construction view representation. Sites for the view representations shall be
23 selected from populated areas or public ways within a two mile radius of the wind
24 facility. The sites shall be approved by the Planning Commission in advance of
25 the submission of the formal site plan review application. View representations
26 shall have the following characteristics:

27
28 ~~[a]—Be in color and include actual pre construction photographs and accurate
29 post construction simulations of the height and breadth of the wind facility
30 by superimposition of the wind facility onto photographs of existing
31 views;~~

32
33 ~~[b]—Include existing or proposed buildings and tree coverage; and~~

34
35 ~~[c]—Include description of the technical procedures followed in producing the
36 visualization, such as distances, angles, and lens.~~

37
38 ~~[6]—Shadow Flicker Analysis~~

39
40 The applicant shall submit an evaluation of the shadow flicker effects (the
41 shadows caused by sunlight passing through the moving blades) of the turbine as
42 it is sited on the parcel, including the seasonal times and durations, and a
43 delineation of the areas impacted.

44
45 ~~[7]—Wildlife Impact Analysis~~

1 The applicant shall submit an evaluation of the potential impacts of the wind
2 turbine on birds and other wildlife, including documentation of bird migration
3 patterns, and dominate species and habitats (or lack thereof) by a wildlife
4 biologist. ~~Written comments from the appropriate official(s) of the US Fish and
5 Wildlife Service, addressing migratory birds and other species of concern, shall
6 be part of the application for any wind energy facility with a rated capacity greater
7 than 100 kW that is proposed within 2,000 feet of the following:~~

8
9 [a] ~~— The barrier beach;~~

10
11 [b] ~~— The exterior boundary of Ninigret Town Park; or~~

12
13 [c] ~~— The exterior boundary of the coastal unit of Ninigret National Wildlife
14 Refuge.~~

15
16 [8] ~~— Landscape Plan~~

17
18 The applicant shall submit a landscape plan indicating all proposed changes to the
19 landscape of the site, including temporary or permanent roads or driveways,
20 grading, vegetation clearing and planting, exterior lighting, and screening
21 vegetation or structures.
22

23 [9] ~~— Operation and Maintenance Plan~~

24
25 The applicant shall submit a plan, to remain on file in the Office of the Building
26 Official, for maintenance of access roads and storm water controls, as well as
27 general procedures for operational maintenance of the wind energy facility. The
28 Operations and Maintenance Plan for the wind facility should address the
29 following:
30

31 [a] ~~— Party responsible for operating the turbine;~~

32
33 [b] ~~— Maintenance schedule and procedures;~~

34
35 [c] ~~— Methods for measuring sound, shadow flicker and other potential impacts
36 and procedures for mitigation; and~~

37
38 [d] ~~— Emergency contact and procedures.~~
39
40

1 (g) ~~General Standards for all Wind Energy Facilities~~

2
3 ~~[1] Special Use Permit Standards~~

4
5 ~~Prior to an issuance of a special use permit for any wind energy facility, the~~
6 ~~Zoning Board of Review must determine that it meets the standards contained~~
7 ~~Section 218-23. In addition, the Zoning Board may impose reasonable~~
8 ~~conditions, safeguards and limitations on time and use, and may require the~~
9 ~~applicant to implement all reasonable measures to mitigate unforeseen adverse~~
10 ~~impact of the wind energy facility should they occur.~~

11
12 ~~[2] General Compliance~~

13
14 ~~The construction and operation of any proposed wind energy facility shall be~~
15 ~~consistent with all applicable local, state and federal requirements, including but~~
16 ~~not limited to all applicable safety, construction, environmental, electrical,~~
17 ~~communications and aviation (FAA) requirements.~~

18
19 ~~[3] Proof of Liability Insurance~~

20
21 ~~At the time of application for any wind energy facility, the applicant shall be~~
22 ~~required to provide evidence of liability insurance in an amount and for the~~
23 ~~duration sufficient to cover loss or damage to persons or property occasioned by~~
24 ~~the operation or failure of the wind facility.~~

25
26 (h) ~~Siting Standards for all Wind Energy Facilities~~

27
28 ~~[1] Height~~

29
30 ~~Wind energy facilities shall not be subject to the height limitations contained in~~
31 ~~Article VII. The maximum allowable height of any proposed wind energy facility~~
32 ~~shall be governed by the setback requirements as described below. However, this~~
33 ~~shall not preclude the Zoning Board of Review from imposing a height limitation~~
34 ~~as a condition of the special use permit.~~

35
36 ~~[2] Setbacks~~

37
38 ~~There shall be a minimum setback between the foundation of the turbine and all~~
39 ~~property lines that is equal to 3 times the total height of the turbine. This~~
40 ~~requirement may be waived if the applicant can secure an easement over the~~
41 ~~abutting property that otherwise meets this minimum required setback, subject to~~
42 ~~the following limitations:~~

43
44 ~~[a] The property subject to the easement is not divided by a public road within~~
45 ~~a distance that is equal to 1.25 times the total height of the turbine, as~~
46 ~~measured from the foundation; and~~

1
2 [b]—There are no habitable structures on the property subject to the easement
3 within a distance that is equal to 1.25 times the total height of the wind
4 turbine, as measured from the foundation. In addition, there shall be a
5 restriction on said property that prevents the construction of a habitable
6 structure within said distance while the wind turbine is in place.
7

8 [3]—Clearing
9

10 Clearing of natural vegetation shall be limited to that which is necessary for the
11 construction, operation and maintenance of the wind energy facility. Design and
12 construction of larger wind energy facilities shall meet all required construction
13 site runoff control and storm water management standards as contained in the
14 applicable sections of the Town of Charlestown Land Development and
15 Subdivision Regulations.
16

17 (i)—Aesthetic and Design Standards for all Wind Energy Facilities
18

19 [1]—Color and Finish
20

21 All components of the wind energy facility shall be painted a neutral, non-
22 reflective exterior color, unless mitigation measures as directed by the town
23 warrant differently.
24

25 [2]—Lighting
26

27 Wind turbines shall be lighted only if required by the Federal Aviation
28 Administration (FAA). Lighting of other parts of the wind energy facility, such
29 as appurtenant structures, shall be limited to that required for safety, security and
30 operational purposes, and shall be reasonably shielded from abutting properties.
31 Lighting shall be designed to minimize glare on abutting properties, and except as
32 required by the FAA, be directed downward with full cut-off fixtures to reduce
33 light pollution. Prior to the issuance of a special use permit for any wind energy
34 facility proposed within a two-mile radius of the Frosty Drew Observatory within
35 Ninigret Park, it shall be determined that the facility will not have a negative
36 impact on the observatory's dark sky resource. Consideration should also be
37 given to lighting that does not attract birds or bats.
38

39 [3]—Signage
40

41 A wind energy facility shall not display any permanent or temporary signs,
42 writing, symbols, logos or any graphic representation except for the following:
43

44 [a]—Those signs necessary to identify the owner, provide a 24-hour emergency
45 contact phone number, and warn of any danger; and
46

1 ~~[b] — Educational signs providing information about the facility, and the~~
2 ~~benefits of renewable energy.~~

3
4 ~~Signs that are permitted must comply with Article XI of this ordinance. Signs~~
5 ~~shall not exceed three square feet in size nor be placed at a height above twelve~~
6 ~~feet and shall be attached to the turbine or the facilities building or fencing.~~

7
8 ~~[4] — Advertising~~

9
10 ~~Wind turbines, and associated structures, shall not be used for displaying any~~
11 ~~advertising except for reasonable identification of the manufacturer or operator of~~
12 ~~the wind energy facility. Such reasonable identification shall not be located at a~~
13 ~~height greater than eight feet from the ground.~~

14
15 ~~[5] — Utility Connections~~

16 ~~Utility connections from the wind facility shall be installed underground.~~
17 ~~Electrical transformers for utility interconnections may be above ground if~~
18 ~~required by the utility provider.~~

19
20
21 ~~[6] — Appurtenant Structures~~

22
23 ~~All appurtenant structures to wind energy facilities, including but not limited to,~~
24 ~~equipment shelters, storage facilities, transformers and substations, shall be:~~

25
26 ~~[a] — Architecturally compatible with each other and contained within the~~
27 ~~turbine tower or other existing structures on the property whenever~~
28 ~~technically feasible;~~

29
30 ~~[b] — Shaded from view by vegetation and/or located in an underground vault~~
31 ~~and joined or clustered to avoid adverse visual impacts, whenever feasible;~~
32 ~~and~~

33
34 ~~[c] — Subject to the use and dimensional regulations of this ordinance for the~~
35 ~~district in which it is located, as well as all other relevant regulations~~
36 ~~(parking, signage, development standards, etc.).~~

1 ~~[7] — Support Towers~~

2
3 ~~Monopole towers are required. Lattice or cable supported towers may only be~~
4 ~~permitted if it is demonstrated to the satisfaction of the applicable body that the~~
5 ~~use of a monopole tower is impractical.~~

6
7 ~~[8] — Ancillary Structures~~

8
9 ~~No telecommunications dishes, antennas, cellular telephone repeaters, or other~~
10 ~~similar devices shall be attached externally to the wind turbine towers.~~
11 ~~Applicants are encouraged to provide internal locations for all these same devices~~
12 ~~if possible.~~

13
14 ~~(j) — Safety and Environmental Standards for all Wind Energy Facilities~~

15
16 ~~[1] — Braking System~~

17
18 ~~Wind turbines shall have an automatic braking, governing or feathering system to~~
19 ~~prevent uncontrolled rotation, overspeeding and excessive pressure on the tower~~
20 ~~structure, rotor blades and other turbine components, or as a means to implement~~
21 ~~mitigation for natural resource protection.~~

22
23 ~~[2] — Emergency Services~~

24
25 ~~The applicant shall provide a copy of the project summary and site plan to the~~
26 ~~police and to the appropriate fire district in which the property is located. Upon~~
27 ~~request of the police and/or fire district, the applicant shall cooperate with local~~
28 ~~emergency services in developing an emergency response plan.~~

29
30 ~~[3] — Unauthorized Access~~

31
32 ~~All components of a wind energy facility shall be designed to prevent~~
33 ~~unauthorized access. The tower shall be designed and installed so as not to~~
34 ~~provide step bolts or a ladder readily accessible to the public for a minimum~~
35 ~~height of twelve feet above the ground. All ground mounted electrical and control~~
36 ~~equipment shall be labeled and secured to prevent unauthorized access.~~

37
38 ~~[4] — Sound~~

39
40 ~~The sound pressure level generated by a wind energy facility shall not exceed 35~~
41 ~~dB(A) in the evening (7 pm to 7 am) or 45 dB(A) in the daytime (7 am to 7 pm);~~
42 ~~measured at the property lines. If the ambient sound pressure level exceeds these~~
43 ~~limits, based on a site specific sound study, the standard shall be ambient dB(A)~~
44 ~~plus 3 dB(A). The applicant has the burden of proving that the sound generated~~
45 ~~by the proposed turbine will not have a significant adverse impact on neighboring~~
46 ~~or adjacent uses.~~

1
2 [5] — Shadow Flicker
3

4 ~~Wind energy facilities shall be sited in a manner that minimizes shadowing or~~
5 ~~flicker impacts. The applicant has the burden of proving that this effect will not~~
6 ~~have a significant adverse impact on neighboring or adjacent uses. Potential~~
7 ~~shadow flicker impacts will be addressed either through siting or mitigation~~
8 ~~measures.~~

9
10 [6] — Wildlife
11

12 ~~The potential adverse impacts to wildlife must be identified by the applicant and~~
13 ~~shall be minimized through appropriate facility siting and design. The best~~
14 ~~available mitigation techniques should be utilized to minimize bird and bat~~
15 ~~mortalities and other known wildlife impacts. Such mitigation measures may~~
16 ~~include, but not be limited to, turbine cut in speed, feathering, lighting and~~
17 ~~coloration of rotors. Within areas of wildlife conservation concern (see (f)[7]),~~
18 ~~the Planning Commission and/or Zoning Board of Review may request a one to~~
19 ~~two year monitoring program to determine the efficacy of mitigation measures in~~
20 ~~preventing or reducing mortality of migratory birds and bats and other species of~~
21 ~~concern, as well as loss of habitat.~~

22
23 (k) — ~~Professional Review of an Application for a Wind Energy Facility. In their review of any~~
24 ~~application for a wind energy facility, the Planning Commission and/or the Zoning Board~~
25 ~~of Review may rely upon the review and analysis of the potential impact of the facility by~~
26 ~~qualified professionals. Such professionals can include, but need not be limited to,~~
27 ~~acoustical consultant, visualization expert, wildlife specialist, and/or structural engineer.~~
28 ~~The determination of the need for professional expertise shall be made by the appropriate~~
29 ~~board and shall be undertaken at the expense of the applicant.~~

30
31 (l) — Monitoring and Maintenance
32

33 [1] — Wind Energy Facility Conditions
34

35 ~~The owner of any wind energy facility shall maintain the wind facility in good~~
36 ~~condition. Maintenance shall include, but not be limited to, structural repairs,~~
37 ~~integrity of security measures, painting and landscaping. Site access shall be~~
38 ~~maintained to a level acceptable to the police and fire departments. The owner~~
39 ~~shall be responsible for the cost of maintaining the wind facility and any access~~
40 ~~road, as well as the cost of repairing any damage occurring as a result of~~
41 ~~construction and operation.~~

1 ~~[2] — Public Inquiries and Complaints~~

2
3 ~~The owner of the wind energy facility shall identify a responsible person and~~
4 ~~contact information in the event of public inquiries, for as long as the facility is in~~
5 ~~place. An emergency telephone number shall be posted so that the appropriate~~
6 ~~people may be contacted should the facility need immediate attention. This~~
7 ~~telephone number shall be clearly visible on a permanent structure or post at a~~
8 ~~location as determined by the Building Official.~~

9
10 ~~— [3] — Annual Inspections~~

11
12 ~~Any wind energy facility consisting of a wind turbine with a rated capacity of 100~~
13 ~~kW or greater shall be subject to an annual inspection, with a report submitted to~~
14 ~~the Building Official. The inspection shall include an evaluation of all~~
15 ~~mechanical and structural components, with a focus on safety, performed by a~~
16 ~~registered professional engineer, or engineers, with expertise in the appropriate~~
17 ~~areas (structural, mechanical, electrical). The Building Official shall have the~~
18 ~~ability to request a similar operational and structural report following the~~
19 ~~occurrence of high wind or other conditions as deemed by the Building Official to~~
20 ~~constitute a potential threat to the integrity of the wind facility.~~

21
22 ~~[4] — Modifications~~

23
24 ~~Any material modification proposed to a wind energy facility following the~~
25 ~~issuance of all required approvals and permits shall first require the owner to~~
26 ~~return to the appropriate authority for additional approval. The Operations and~~
27 ~~Maintenance Plan (see (f)[9]) shall be updated as needed within thirty days of the~~
28 ~~completion of the modification to the wind energy facility.~~

29
30 ~~[5] — Operation~~

31
32 ~~If electronic interference results from the operation of the wind energy facility, or~~
33 ~~if sound, shadow flicker, or other adverse impacts exceed the allowable limits of~~
34 ~~this section or other applicable regulation, or a limit placed as a condition of the~~
35 ~~special use permit, the Building Official shall notify the owner in writing of the~~
36 ~~violation. If the violation is not remedied within thirty days, the facility shall~~
37 ~~remain inactive until the violation is remedied.~~

38 ~~— [6] — Enforcement and Penalties~~

39
40
41 ~~The Building Official shall be responsible for the enforcement of the provisions of~~
42 ~~this section. Failure of the owner of any wind energy facility to comply with~~
43 ~~operational standards, mitigation measures or annual inspection requirements~~
44 ~~shall be considered a violation of the zoning ordinance, subject to the provisions~~
45 ~~of Section 218-9.~~

1 (m) ~~Removal of a Wind Energy Facility~~

2
3 [1] ~~Removal Required~~

4
5 A wind energy facility that meets any of the following criteria shall be considered
6 non-operational, and shall be removed at the expense of the owner:

7
8 [a] ~~Any wind facility found to be unsafe by the Building Official, and not~~
9 ~~repaired by its landowner according to all applicable safety standards~~
10 ~~within three months of the original notification by the Building Official;~~

11
12 [b] ~~Any wind facility not operational for a period of twelve consecutive~~
13 ~~months or more; or~~

14
15 [c] ~~Any wind facility which reaches the end of its useful life.~~

16
17 [2] ~~Notice Requirements~~

18
19 In all such cases, the Building Official shall notify the landowner by registered
20 mail that corrective action must be taken. The landowner shall have thirty days to
21 respond; in such response, the landowner shall set forth reasons for any
22 operational difficulty and provide a reasonable timetable for corrective action. In
23 the absence of corrective action, the wind facility shall be removed, no more than
24 six months from the date a facility is determined to be unsafe, or from the date a
25 facility is considered to have discontinued operations or been abandoned. The
26 Building Official shall have the authority to pursue legal action if necessary.

27
28 [3] ~~Site and Removal Requirements~~

29
30 No wind energy facility with a rated capacity greater than 15 kW shall be
31 removed without the prior issuance of a demolition permit by the Building
32 Official. At the time of removal, the wind energy facility site shall be restored to
33 the state it was in before the wind facility was constructed, or converted to
34 another legally authorized use. Removal shall consist of the following:

35
36 [a] ~~Physical removal of all wind turbines, structures, equipment, security~~
37 ~~barriers and transmission lines from the site;~~

38
39 [b] ~~Disposal of all solid and hazardous waste in accordance with local and~~
40 ~~state waste disposal regulations; and~~

41
42 [c] ~~Stabilization or re-vegetation of the site as necessary to minimize erosion.~~
43 ~~The Planning Commission may allow the owner to leave landscaping or~~
44 ~~designated below grade foundations in order to minimize erosion and~~
45 ~~disruption of vegetation.~~

46

