



1    **4.0 Conflicts with Other Ordinances, Laws and Regulations**

2           Whenever a provision of this Ordinance conflicts with or is  
3           inconsistent with another provision of this Ordinance or of any  
4           other ordinance, regulation or statute from any jurisdiction, the  
5           more restrictive provision shall control.

6    **5.0 Validity and Severability**

7           Should any section or provision of this Ordinance be  
8           declared by the courts to be invalid such decisions shall  
9           not invalidate any other section or provision of the  
10          Ordinance.

11   **6.0 Effective Date**

12          6.1 This Ordinance shall become effective upon the date of its  
13          Passage at the June 26, 2010 Annual Town Meeting.

14   **7.0 Applicability**

15          This Ordinance applies to any wind turbine that is the subject  
16          of a permit or license application pending before, or filed with  
17          the Town of Buckfield, after the effective date of the  
18          Ordinance.

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1       **8.0 Definitions**

2       **Aerodynamic Sound** — a noise that is caused by the flow of air  
3       over and past the blades of a WEF.

4

5       **Ambient Sound** — ambient sound encompasses all sound  
6       present in a given environment, being usually a composite of  
7       sounds from many sources near and far. It includes intermittent  
8       noise events, such as, from aircraft flying over, dogs barking,  
9       wind gusts, mobile farm or construction machinery, and the  
10      occasional vehicle traveling along a nearby road. The ambient  
11      sound also includes insect and other nearby sounds from birds  
12      and animals or people. The nearby and transient events are part  
13      of the ambient sound environment but are not to be considered  
14      part of the long-term background sound.

15

16      **American National Standards Institute (ANSI)** — standardized  
17      acoustical instrumentation and sound measurement protocol shall  
18      meet all the requirements of the following ANSI Standards:

19           ANSI S1.43 Integrating Averaging Sound Level Meters: Type-1  
20           (or IEC 61672-1)

21           ANSI S1.11 Specification for Octave and One-third  
22           Octave-Band Filters (or IEC 61260)

23           ANSI S1.40 Verification Procedures for Sound  
24           Calibrators

25           ANSI S12.9 Part 3 Procedures for  
26           Measurement of Environmental Sound

27           ANSI S12.18 Measurement of Outdoor Sound Pressure Level  
28           IEC 61400-11 WEF systems —Part 11: Acoustic noise  
29           measurements

1       **Anemometer** — a device for measuring the speed and direction of  
2 the wind.

3  
4       **Applicant** — the legal entity, which includes an individual or  
5 business entity and their successors and assigns that seeks to  
6 secure a Permit or Operating License under this Ordinance.

7  
8       **A-Weighted Sound Level (dBA)** — a measure of over-all sound  
9 pressure level designed to reflect the response of the human ear,  
10 which does not respond equally to all frequencies. It is used to  
11 describe sound in a manner representative of the human ear's  
12 response. It reduces the effects of the low with respect to the  
13 frequencies centered around 1000 Hz. The resultant sound level is  
14 said to be "A-weighted" and the units are "dBA". Sound level  
15 meters have an A-weighting network for measuring A-weighted  
16 sound levels (dBA) meeting the characteristics and weighting  
17 specified in ANSI Specifications for Integrating Averaging Sound  
18 Level Meters, S1.43-1997 for Type 1 instruments, and be capable  
19 of accurate readings (corrections for internal noise and microphone  
20 response permitted) at 20 dBA or lower. In this document dBA  
21 means LAeq unless specified otherwise.

22  
23       **Background Sound (L90)** — refers to the sound level present at  
24 least 90% of the time. Background sounds are those heard during  
25 lulls in the ambient sound environment. That is, when transient  
26 sounds from flora, fauna, and wind are not present. Background  
27 sound levels vary during different times of the day and night.  
28 Because WEFs operate 24/7 the background sound levels of  
29 interest are those during the quieter periods which are often the

1 evening and night. Sounds from the WEF of interest, near-by birds  
2 and animals or people must be excluded from the background  
3 sound test data. Nearby electrical noise from streetlights,  
4 transformers and cycling AC units and pumps etc., must also be  
5 excluded from the background sound test data.

6  
7 Background sound level (dBA and dBC (as L90)) is the sound level  
8 present 90% of the time during a period of observation that is  
9 representative of the quiet time for the soundscape under  
10 evaluation and with duration of ten (10) continuous minutes.  
11 Several contiguous ten (10) minute tests may be performed in  
12 one hour to determine the statistical stability of the sound  
13 environment.

14  
15 Measurement periods such as at dusk when bird and insect activity  
16 is high or the early morning hours when the “dawn chorus” is  
17 present are not acceptable measurement times. Longer term sound  
18 level averaging tests, such as 24 hours or multiple days are not at  
19 all appropriate since the purpose is to define the quiet time  
20 background sound level. It is defined by the LA90 and LC90  
21 descriptors. It may be considered as the quietest one (1) minute  
22 during a ten (10) minute test. LA90 results are valid only when LA10  
23 results are no more than 10 dB above LA90 for the same period.  
24 LC10 less LC90 are not to exceed 10 dB to be valid.

25  
26 The background noise environment consists of a multitude of  
27 distant sources of sound. When a new nearby source is introduced  
28 the new background noise level would be increased. The addition  
29 of a new source with a noise level 10 dB below the existing  
30 background would increase the new background 0.4 dB. If the

1 new source has the same noise level as the existing background  
2 then the new background is increased 3.0 dB. Lastly, if the new  
3 source is 3.3 dB above the existing background then the new  
4 background would have increased 5 dB. For example, to meet the  
5 requirement of  $L_{90A} + 5 \text{ dB} = 31 \text{ dBA}$  if the existing quiet  
6 nighttime background sound level is 26 dBA, the maximum wind  
7 turbine noise immission contribution independent of the  
8 background cannot exceed 29.3 dBA Leq at a dwelling. When  
9 adding decibels, a 26 dBA background combined with 29.3 dBA  
10 from the turbines (without background) results in 31 dBA. Further,  
11 background L90 sound levels documenting the pre-construction  
12 baseline conditions should be determined when the ten (10)  
13 minute maximum wind speed is less than 2 m/s (4.5 mph) near  
14 ground level/microphone location 1.5 m height.

15  
16 **Blade Passage Frequency (BPF)** — the frequency at which the  
17 blades of a turbine pass a particular point during each revolution  
18 (e.g. lowest point or highest point in rotation) in terms of events  
19 per second. A three bladed turbine rotating at 28 rpm would have a  
20 BPF of 1.4 Hz. [E.g.  $((3 \text{ blades times } 28\text{rpm})/60 \text{ seconds per}$   
21  $\text{minute} = 1.4 \text{ Hz BPF})]$

22  
23 **Blade Reflection** — the intermittent reflection of the sun off the  
24 surface of the blades of a Wind Turbine.

25  
26 **C-Weighted Sound Level (dBC)** — similar in concept to the A-  
27 Weighted sound Level (dBA) but C-weighting does not de-emphasize  
28 the frequencies below 1k Hz as A-weighting does. It is used for  
29 measurements that must include the contribution of low frequencies

1 in a single number representing the entire frequency spectrum.  
2 Sound level meters have a C-weighting network for measuring C-  
3 weighted sound levels (dBC) meeting the characteristics and  
4 weighting specified in ANSI S1.43-1997 Specifications for Integrating  
5 Averaging Sound Level Meters for Type 1 instruments. In this  
6 document dBC means L<sub>Ceq</sub> unless specified otherwise.

7  
8 **Decibel (dB)** — a dimensionless unit which denotes the ratio  
9 between two quantities that are proportional to power, energy or  
10 intensity. One of these quantities is a designated reference by  
11 which all other quantities of identical units are divided. The sound  
12 pressure level (L<sub>p</sub>) in decibels is equal to 10 times the logarithm  
13 (to the base 10) of the ratio between the pressure squared divided  
14 by the reference pressure squared. The reference pressure used in  
15 acoustics is 20 MicroPascals.

16  
17 **DEP Certification** — a certification issued by the Department of  
18 Environmental Protection pursuant to Title 35-A M.R.S.A. §3456 for  
19 a WEF that is subject to this Ordinance.

20  
21 **Emission** — sound energy that is emitted by a noise source  
22 (WEF) is transmitted to a receiver (dwelling) where it is  
23 immitted (see "immission").

24  
25 **Enforcing Authority** — the Code Enforcement Officer (CEO)  
26 designated by the Town of Buckfield. The CEO is responsible for  
27 enforcing the standards of this Ordinance after a permit is granted  
28 to a WEF.

1 **Frequency** — the number of oscillations or cycles per unit of time.  
2 Acoustical frequency is usually expressed in units of Hertz (Hz)  
3 where one Hz is equal to one cycle per second.

4  
5 **Good Utility Practice** — any of the practices, methods and acts  
6 with respect to the safe operation of the Wind Turbine or WEF  
7 engaged in or approved by a significant portion of the electric  
8 utility industry and, in particular, those portions of the industry  
9 with experience in the construction, operation and maintenance of  
10 wind turbines during the relevant period; or any of the practices,  
11 methods and acts which, in the exercise of reasonable judgment in  
12 light of the facts known at the time the decision was made, could  
13 have been expected to accomplish the desired result at a reasonable  
14 cost consistent with good business practices, reliability and safety.

15  
16 **Height** — the total distance measured from the grade of the  
17 property as existed prior to the construction of the wind energy  
18 system, facility, tower, turbine or related facility at the base to its  
19 highest point. (See Turbine Height definition below)

20  
21 **Hertz (Hz)** — frequency of sound expressed by cycles per second.

22  
23 **Horizontal Measurement** — distance between two points in  
24 relation to the horizon.

25  
26 **Ice Throw** — accumulated ice buildup on the blades of a Wind  
27 Turbine that is or can be thrown during normal spinning or  
28 rotation.



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**Immission** — noise immitted at a receiver (dwelling) is transmitted from noise source (WEF) that emitted sound energy (see "emission").

**Immission spectra imbalance** — the spectra are not in balance when the C-weighted sound level is more than 20 dB greater than the A-weighted sound level. For the purposes of this requirement, the A-weighted sound level is defined as the long-term background sound level (LA90) +5 dBA. The C-weighted sound level is defined as the L<sub>Ceq</sub> measured during the operation of the wind turbine operated so as to result in its highest sound output.

**Infra-Sound** — sound with energy in the frequency range of 0-20 Hz is considered to be infra-sound. It is normally considered to not be audible for most people unless in relatively high amplitude. However, there is a wide range between the most sensitive and least sensitive people to perception of sound and perception is not limited to stimulus of the auditory senses. The most significant exterior noise induced dwelling vibration occurs in the frequency range between 5 Hz and 50 Hz. Moreover, levels below the threshold of audibility can still cause measurable resonances inside dwelling interiors. Conditions that support or magnify resonance may also exist in human body cavities and organs under certain conditions. Although no specific test for infrasound is provided in this document, the test for immission spectra imbalance will limit low frequency sound and thus, indirectly limit infrasound. See low-frequency noise (LFN) for more information.

**L<sub>Aeq</sub>** — a pressure level measurement parameter Full form L<sub>Aeq</sub> is “Equivalent to continous A-weighted sound pressure level”.

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**Low Frequency Noise (LFN)** — refers to sounds with energy in the lower frequency range of 20 to 200 Hz. LFN is deemed to be excessive when the difference between a C-weighted sound level and an A-weighted sound level is greater than 20 decibels at any measurement point outside a residence or other occupied structure.

**Measurement Point (MP)** — location where sound measurements are taken such that no significant obstruction blocks sound from the site. The Measurement Point should be located so as to not be near large objects such as buildings and in the line-of-sight to the nearest turbines. Proximity to large buildings or other structures should be twice the largest dimension of the structure, if possible. Measurement Points should be at quiet locations remote from street lights, transformers, street traffic, flowing water and other local noise sources.

**Measurement Wind Speed** — for measurements conducted to establish the background noise levels (LA90 10 min, LC90 10 min, and etc.) the maximum wind speed, sampled within 5m of the microphone and at its height, shall be less than 2 m/s (4.5 mph) for valid background measurements. For valid WEF noise measurements conducted to establish the post-construction sound level the maximum wind speed, sampled within 5m of the microphone and at its height, shall be less than 4m/s (9mph). The wind speed at the WEF blade height shall be at or above the nominal rated wind speed and operating in its highest sound output mode. For purposes of enforcement, the wind speed and direction at the WEF blade height shall be selected to reproduce the conditions leading to the enforcement action while also restricting maximum wind speeds at

1 the microphone to less than 4 m/s (9 mph). For purposes of models  
2 used to predict the sound levels and sound pressure levels of the  
3 WEF to be submitted with the Application, the wind speed shall be  
4 the speed that will result in the worst-case LAeq and LCeq sound  
5 levels at the nearest non-participating properties to the WEF. If  
6 there may be more than one set of nearby sensitive receptors,  
7 models for each such condition shall be evaluated and the results  
8 shall be included in the Application.

9  
10 **Mechanical Noise** — sound produced as a byproduct of the  
11 operation of the mechanical components of a WEF(s) such  
12 as the gearbox, generator and transformers.

13  
14 **Meteorological Tower (MET Tower)** — a meteorological tower  
15 used for the measurement of wind speed.

16  
17 **Mitigation Waiver** — a legally enforceable, written agreement  
18 between the Applicant and a Non-participating Landowner in which  
19 the landowner waives certain setback, noise or other protections  
20 afforded in the Ordinance.

21  
22 **Nacelle** — the frame and housing at the top of the tower that encloses  
23 the gearbox and generator.

24  
25 **Nameplate Capacity** — the electrical power rating of an individual  
26 wind turbine as certified by the manufacturer and normally expressed  
27 in watts, kilowatts (kW), or megawatts (mW)

1 **Noise** — any unwanted sound. Not all noise needs to be excessively  
2 loud to represent an annoyance or interference.

3  
4 **Non-participating Landowner** — any landowner other than a  
5 Participating Landowner.

6  
7 **Notification Area** — the entire land base within two (2) miles,  
8 measured horizontally from the Project Boundary. All landowners  
9 with any part of their property within the notification area or  
10 residents living within the notification area must be notified as  
11 specified in the Ordinance.

12  
13 **Occupied Building** — any structure that is, or is likely to be,  
14 occupied by persons or livestock. This includes, but is not limited to  
15 dwellings, places of business, places of worship, schools and barns.

16  
17 **Operational License** — a license or a license renewal issued by the  
18 Planning Board to operate a WEF in accordance with this Ordinance.

19  
20 **Owner/operator** — the person or entity with legal ownership of the  
21 WEF, including successors and assigns, that has the authority and  
22 responsibility to operate the WEF on a day-to-day basis. An  
23 Owner/operator must have the legal authority to represent and  
24 bind.

25  
26 **Participating Landowner** — one or more persons that hold title in  
27 fee to the property on which the WEF is proposed to be located  
28 pursuant to an agreement with the development Owner/operator.

1 **Permitting Authority** — the Planning Board, designated as  
2 responsible for conducting the review of WEF applications.

3  
4 **Person** — an individual, corporation, partnership, firm, organization  
5 or other legal entity.

6  
7 **Project Boundary** — represented on a plot plan view by a  
8 continuous line encompassing all WEF(s) and related equipment  
9 associated with the WEF project.

10  
11 **Property Line** — the recognized and mapped property parcel  
12 boundary line.

13  
14 **Qualified Independent Acoustical Consultant** — qualifications for  
15 persons conducting baseline and other measurements and reviews  
16 related to the application for a WEF or for enforcement actions  
17 against an operating WEF include, at a minimum, full membership  
18 in the Institute of Noise Control Engineers (INCE). The  
19 Independent Qualified Acoustical Consultant can have no financial  
20 or other connection to a WEF developer or related company.

21  
22 **Scenic or Special Resource** — a scenic resource of state or  
23 national significance, as defined in Title 35-A M.R.S.A. §3451(9), any  
24 site registered in the National Registry of Historic Places or a scenic  
25 or special resource of local significance identified as such.

26  
27 **Sensitive Receptor** — places or structures intended for human  
28 habitation, whether inhabited or not, public parks, state and federal

1 wildlife areas, the manicured areas of recreational establishments  
2 designed for public use, including but not limited to golf courses,  
3 campgrounds and other nonagricultural state or federal licensed  
4 businesses. These areas are more likely to be sensitive to the  
5 exposure of the noise, shadow or flicker, etc. generated by a WEF.  
6 These areas include, but are not limited to, schools, daycare centers,  
7 elder care facilities, hospitals, places of seated assemblage, non-  
8 agricultural businesses and residences.

9  
10 **Setback** — the minimal allowable horizontal distance as  
11 measured from the Project Boundary to a defined point (e.g. a  
12 property line or a road).

13  
14 **Setback Area** — the entire land base that falls within a specified  
15 setback.

16  
17 **Setback Distance** — the larger of one mile or 13 times the  
18 Turbine Height, measured horizontally from the Project Boundary  
19 to the nearest property line.

20  
21 **Shadow Flicker** — alternating changes in light intensity caused  
22 by the movement of wind turbine blades casting shadows on the  
23 ground or a stationary object.

24  
25 **Shadow Flicker Receptor** — any Occupied Building on a Non-  
26 participating Landowner's property plus an additional 100 foot  
27 boundary surrounding the exterior of the Occupied Building, the  
28 entire outdoor public area surrounding schools, churches and

1 public buildings, and public roads with a posted speed limit  
2 greater than 25 mph.

3  
4 **Sight Line Representation** — a line depicted in profile extending  
5 from an observer's eye to the lowest point of a viewed tower.

6  
7 **Sound** — a fluctuation of air pressure which is propagated as a wave  
8 through air.

9  
10 **Sound Power** — the total sound energy radiated by a source per  
11 unit time. The unit of measurement is the watt. Abbreviated as Lw.  
12 This information is determined for the WEF manufacturer under  
13 laboratory conditions specified by IEC 61400-11 and provided to  
14 the local developer for use in computer model construction. There  
15 is known measurement error in this test procedure that must be  
16 disclosed and accounted for in the computer models. Even with the  
17 measurement error correction it cannot be assumed that the  
18 reported Lw values represent the highest sound output for all  
19 operating conditions. They reflect the operating conditions  
20 required to meet the IEC 61400-11 requirements. The lowest  
21 frequency is 50 Hz for acoustic power (Lw) requirement (at  
22 present) in IEC 61400-11. This Ordinance requires wind turbine  
23 certified acoustic power (Lw) levels at rated load for the total  
24 frequency range from 6.3 Hz to 10k Hz in one-third octave  
25 frequency bands tabulated to the nearest 1 dB. The frequency  
26 range of 6.3 Hz to 10k Hz shall be used throughout this Ordinance  
27 for all sound level modeling, measuring and reporting.

1       **Sound Pressure** — the instantaneous difference between the  
2 actual pressure produced by a sound wave and the average or  
3 barometric pressure at a given point in space.

4  
5       **Sound Pressure Level (SPL)** — 20 times the logarithm, to the base  
6 10, of the ratio of the pressure of the sound measured to the  
7 reference pressure, which is 20 micronewtons per square meter.  
8 In equation form, sound pressure level in units of decibels is  
9 expressed as  $SPL (dB) = 20 \log p/pr$ .

10  
11       **Spectrum** — the description of a sound wave's resolution into its  
12 components of frequency and amplitude. The WEF manufacturer is  
13 required to supply a one-third octave band frequency spectrum of  
14 the wind turbine sound emission at 90% of rated power. The  
15 published sound spectrum is often presented as A-weighted values  
16 but C-weighted values are preferred. This information is used to  
17 construct a model of the WEF sound immission levels at locations  
18 of interest in and around the WEF. The frequency range of interest  
19 for wind turbine noise is approximately 6 Hz to 10k Hz.

20  
21       **Statistical Noise Levels** — sounds that vary in level over time, such  
22 as road traffic noise and most community noise, are commonly  
23 described in terms of the statistical exceedance levels LNA, where  
24 LNA is the A-weighted sound level exceeded for N% of a given  
25 measurement period. For example, L10 is the noise level  
26 exceeded for 10% of the time. Of particular relevance, are: LA10  
27 and LC10 the noise level exceeded for 10% of the ten (10) minute  
28 interval. This is commonly referred to as the average maximum  
29 noise level. LA90 and LC90 are the A-weighted and C-weighted  
30 sound levels exceeded for 90% of the ten (10) minute sample



1 period. The L90 noise level is defined by ANSI as the long-term  
2 background sound level (i.e. the sounds one hears in the absence of  
3 the noise source under consideration and without short term or  
4 near-by sounds from other sources), or simply the "background  
5 level." Leq is the A or C-weighted equivalent noise level (the  
6 "average" noise level). It is defined as the steady sound level that  
7 contains the same amount of acoustical energy as the  
8 corresponding time-varying sound.

9  
10 **Structure** — the total footprint of all of the physical attributes  
11 of the entire WEF as defined in Title 38 M.R.S.A. § 482.

12  
13 **Tonal Sound, Tonality or Tonal Audibility** — . A sound for  
14 which the sound pressure is a simple sinusoidal function of the  
15 time, and characterized by its singleness of pitch. Tonal sound  
16 can be simple or complex.

17  
18 **Tower** — the freestanding structure on which the wind measuring  
19 or energy conversion system is mounted.

20  
21 **Turbine Height** — the distance measured from the surface of the  
22 tower foundation to the highest point of any turbine rotor blade  
23 measured at the highest arc of the blade.

24  
25 **Wind Energy Facility (WEF)** — equipment that converts and then  
26 transfers energy from the wind into usable forms of electrical  
27 energy. and includes all related and supporting items including but  
28 not limited to all buildings, structures, electrical equipment,  
29 substations, transmission lines, access roads, parking lots, areas to

1 be stripped or graded and areas to be landscaped or screened.

2 **Wind Turbine** — a wind energy conversion system that converts  
3 wind energy into electricity through the use of a WEF, and includes  
4 the nacelle, rotor, tower and pad transformer if any.

## 6 9.0 Classification of Wind Turbines and Meteorological Towers

7 For the purpose of clarification, all WEFs are classified  
8 according to the following definitions:

### 9 9.1 Wind Turbine Classifications

10 9.1.1 Type 1 — Small Wind Turbine means a single wind  
11 turbine with a nameplate capacity less than 10 kW, and a  
12 turbine height less than 100 feet.

13 9.1.1.1 This classification must meet all of the  
14 sections of this ordinance unless waived by the  
15 Buckfield Planning Board until such time as the Town  
16 of Buckfield adopts a separate Ordinance to govern  
17 this class at which time section 9.1.1.1 shall be  
18 automatically repealed..

19 9.1.2 Type 2 — Intermediate Wind Turbine means a single wind  
20 turbine with a nameplate capacity less than 100 kW, and a  
21 turbine height less than 150 feet, and not requiring a Site  
22 Location of Development permit from the Maine  
23 Department of Environmental Protection (DEP) pursuant

1 to Title 35-A M.R.S.A. §3456.

2 9.1.2.1 This classification must meet all of the  
3 sections of this ordinance unless waived by the  
4 Buckfield Planning Board until such time as the Town  
5 of Buckfield adopts a separate Ordinance to govern  
6 this class at which time section 9.1.2.1 shall be  
7 automatically repealed.

8  
9 9.1.3 Type 3 — Large Wind Turbine means up to three wind  
10 turbines with a nameplate capacity of 100 kW to 1 MW, and  
11 a turbine height of 150 to 300 feet. A Location of  
12 Development permit from the Maine Department of  
13 Environmental Protection (DEP) pursuant to Title 35-A  
14 M.R.S.A. §3451, Title 35-A M.R.S.A. § 3456 and Title 38  
15 M.R.S.A § 482 is normally required unless the Wind Turbine: 1)  
16 does not sell or convert electricity for off site use including net  
17 metering; and, 2) does not qualify as a Structure with a total  
18 land area in excess of 3 acres for the entire WEF.

19 For the purposes of this Ordinance, included in the Type 3 -  
20 Large Wind Turbine shall be any turbine(s) of nameplate  
21 capacity equal to or greater than 100 kW and a turbine height  
22 greater than 150 feet if the energy generated is for sale or

1 use by a Person other than the generator.

2 9.1.4 Type 4 — Industrial Wind Turbine means one or more wind  
3 turbines each with a nameplate capacity of greater than 1 MW,  
4 or a turbine height greater than 300 feet; or more than three  
5 Type 3 Wind Turbines. A Location of Development permit  
6 from the Maine Department of Environmental Protection  
7 (DEP) pursuant to Title 35-A M.R.S.A. §3451, Title 35-A  
8 M.R.S.A. § 3456 and Title 38 M.R.S.A § 482 is normally  
9 required unless the Wind Turbine: 1) does not sell or convert  
10 electricity for off site use including net metering; and, 2) does  
11 not qualify as a Structure with a total land area in excess of 3  
12 acres for the entire WEF.

### 13 9.2 Meteorological Towers (MET Towers)

14 MET towers shall be permitted under this Ordinance, with no height  
15 limitations, other than those imposed under State or Federal law. A  
16 Setback of 150% of the tower height shall be required from the  
17 nearest property line. A permit for a temporary MET tower shall be  
18 valid for a maximum of two years after which a single extension of  
19 up to one year may be granted. The site shall be restored to a  
20 condition that will not create erosion problems within 30 days  
21 following removal of the tower.

22

1    **10.0 Permit and Operational License Requirement**

2        10.1 Permit Requirement

3            10.1.1 A permit is required for each WEF built in the Town of  
4                Buckfield after the effective date of this Ordinance.

5            10.1.2 The Planning Board will aggregate, to the fullest and most  
6                practical extent possible, and pursuant to Section 26.0, all  
7                Wind Turbines held under common or related ownership into a  
8                single WEF. With the exception of Projects owned by the  
9                Town of Buckfield, separate corporate legal structures  
10              under common or joint ownership or under common or joint  
11              control will be deemed to be a single project for purposes of  
12              permit and licensing notwithstanding separate corporate legal  
13              ownership.

14            10.1.3 Receipt of a permit under this Ordinance does not relieve  
15                the Owner/operator from the responsibility to obtain any other  
16                such permits or approvals as required under any other Town  
17                of Buckfield Regulations, Ordinance or pursuant to other  
18                State or Federal jurisdiction.

19    10.2 Operational License

20        An Operational License is required for the operation of all WEF.  
21        Applications for a WEF Operational License shall be submitted  
22        to the Planning Board.

1 10.2.1 Where an Applicant is applying for a new or amended WEF  
2 Permit, the application for a WEF Operating License, or  
3 amended license, shall be submitted to the Planning Board in  
4 conjunction with the Permit application, and shall include the  
5 application form and the separate fee specified in Section  
6 10.2.10.

7 10.2.2 Where an Applicant is applying for a WEF Operational  
8 License renewal, a new License as the result of transfer of  
9 ownership or operation, or reinstatement or modification of an  
10 Operational License, the Applicant shall submit an application  
11 form, a copy of the existing WEF Permit and the fee specified in  
12 Section 10.2.10.

13 10.2.3 An Operational License shall be valid for five years.

14 10.2.4 The granting of an Operational License is conditional upon  
15 the following criteria:

16 10.2.4.1 Demonstration by the Applicant of compliance with  
17 performance standards of the Ordinance.

18 10.2.4.2 For the initial Operational License, the Wind Turbine  
19 Project must successfully pass an inspection for structural  
20 and operational integrity conducted by an independent Maine  
21 licensed professional engineer chosen by the Planning Board  
22 and paid for by the applicant. The inspection shall be

1 conducted after construction is completed but before  
2 operations begin. Success will be demonstrated by  
3 submission of a copy of the engineer's inspection report to  
4 the Planning Board. If the report specifies that repairs,  
5 maintenance or changes to safety procedures are necessary,  
6 the owner shall provide the Enforcing Authority with proof  
7 that the repairs have been completed, a written schedule  
8 for any recommended maintenance, and documentation of  
9 any updated safety procedures.

10 10.2.4.3 For a renewal of an Operational License, where there is  
11 no change of Ownership or operator, the inspection procedure  
12 and criteria specified in Section 10.2.4.2 shall be completed  
13 six months prior to the expiration of the current Operational  
14 License at the expense of the applicant.

15 10.2.5 Applications for Operational License renewals where there is  
16 no change of ownership of operator shall be submitted to the  
17 Planning Board 6 months prior to their expiration.

18 10.2.6 An Operational License shall automatically terminate  
19 upon transfer of ownership or operation of the WEF. The  
20 proposed new owner or operator shall be required to obtain a  
21 new Operational License, which must be in place prior to the  
22 transfer of ownership or operation of the WEF. The  
23 application for renewal of the Operational License in the case

1 of transfer of ownership or operation shall include the following  
2 items:

3 10.2.6.1 The Applicant's name, address and phone number,  
4 and the name, address and phone number of the  
5 Owner/operator, if different

6 10.2.6.2 An emergency directory for the Owner/operator  
7 sufficient to allow the Town to contact the Owner/operator  
8 at any time

9 10.2.6.3 Evidence of the Applicant's technical and financial  
10 ability to operate the WEF in accordance with this  
11 Ordinance, any other Town of Buckfield ordinance, and the  
12 Operational License

13 10.2.6.4 For any Project Parcel that is not owned by the Applicant,  
14 a copy of any agreement(s) between the owner of the Project  
15 Parcel and the Applicant

16 10.2.6.5 An updated safety plan in accordance with the  
17 requirements of Section 14.2.

18 10.2.6.6 An updated fire prevention and emergency response plan  
19 in accordance with the requirements of Section 15.6.1;

20 10.2.6.7 An updated emergency shutdown plan in accordance with  
21 the requirements of Section 21.4;



1 10.2.6.8 An updated decommissioning and site restoration plan in  
2 accordance with the requirements of Section 22.0;

3 10.2.6.9 Updated liability insurance information in accordance  
4 with the requirements of Section 14.4;

5 10.2.6.10 A signed statement from the Applicant that the Applicant  
6 agrees to assume full responsibility for complying with the  
7 provisions of this Ordinance, including agreeing to continue or  
8 complete any duties and obligations of the former Operational  
9 License holder under this Ordinance or former Operational  
10 License, including, but not limited to, the requirement for post-  
11 construction sound measurements, post-construction stray  
12 voltage testing, wind turbine inspections, and submission to  
13 inspections.

14 10.2.7 An Operational License shall automatically terminate upon any  
15 amendment to a permit.

16 10.2.8 Failure to comply with the provisions of this Ordinance may result  
17 in the suspension or revocation of the Operational License pursuant to  
18 Section 21.0

19 10.2.9 An Operational License shall be deemed abandoned if the WEF's  
20 operation has ceased for twelve consecutive months. An Operational  
21 License expires immediately upon abandonment.

1 10.2.10 Fees

2 10.2.10.1 The application fees for this ordinance shall be set by  
3 the Buckfield Board of Selectmen and may be changed by them as  
4 they deem necessary.

5 **11.0 Permitting Authority**

6 11.1 The Town of Buckfield Planning Board is authorized to  
7 review all WEF applications and may approve, reject or  
8 conditionally approve such applications in accordance with the  
9 standards of the Ordinance.

10 11.2 The Maine Department of Environmental Protection (DEP)  
11 may be required to review WEF applications. The Planning  
12 Board shall consider, at a minimum and to the extent  
13 applicable, pertinent findings in the DEP certification when  
14 making its determination.

15 11.3 The following types of permits require final approval by a vote  
16 of the residents of the Town of Buckfield:

17 11.3.1 Any WEF to be built on property owned by the Town

18 11.3.2 Any WEF partially or totally owned by the Town.

19

20

1 **12.0 Standards for Setbacks, Noise, Shadow Flicker, and Mitigation**  
2 **Waivers**

3 This section addresses the interrelated standards of setbacks,  
4 noise, shadow flicker and mitigation waivers and applies to all  
5 WEFs. Setbacks provide a number of important Ordinance  
6 functions, including but not limited to: 1) working in conjunction  
7 with noise standards as a primary means of mitigating potential  
8 and unforeseen noise complaints; 2) providing for public safety  
9 in the event of a catastrophic turbine failure or ice throw; 3)  
10 mitigating the effects of shadow flicker from larger turbines

11 In general, the taller the turbine, and the greater the number of  
12 turbines in a WEF, the greater the setback needed to mitigate  
13 noise, debris hazards, and shadow flicker. However, setbacks for  
14 noise must also be implemented in conjunction with specific wind  
15 turbine noise limits (see Section 12.2 ). Although larger wind  
16 turbines appear to generate the highest proportion of  
17 published noise complaints, poorly designed smaller turbines can  
18 also cause serious noise.

19 Setbacks to property lines are a minimum buffer of one mile from  
20 the Project Boundary. This is assuming a 1.5 MW industrial wind  
21 turbine, which has a Turbine Height of approximately 400 feet.  
22 However, larger wind turbines are louder, so a varying setback  
23 basis is required. A one mile setback is approximately equal to 13

1 times the turbine height for a 400 foot turbine. Therefore, the  
2 Setback Distance is defined as the larger of one mile or 13 times  
3 the Turbine Height, measured horizontally from the Project  
4 Boundary to the nearest property line.

5 Setbacks for public roads are based on an approximation of an  
6 1800-foot debris field for ice throw. Four times the turbine height  
7 for a 440 foot Wind Turbine is equal to 1760 feet.

## 8 12.1 Setback Standards

### 9 12.1.1 Setback to Non-participating Landowner Property Lines

10 — Given the abundant evidence that wind turbines sited too  
11 close to humans has deleterious effects on them, and given  
12 that the most effective means of preventing negative health  
13 effects is proper setbacks, WEFs must be located no closer  
14 than the Setback Distance from non-participating property  
15 lines. Property owners may waive this setback with a written  
16 Mitigation Waiver. (See Section 12.4 ).

### 17 12.1.2 Setback to Public Roads - Wind Turbines will be set

18 back from any public road a distance no less than 4 times  
19 the turbine height, measured horizontally.

## 20 21 12.2 Noise Standards

22 For all wind turbines, the primary guiding principle is that their

1 operation must not be disruptive at any time of day or night.  
2 Current sound limitations in the state of Maine regulating noise  
3 from WEF reflect sound limits applicable to urban residential  
4 and urban mixed neighborhoods instead of the deep quiet of  
5 rural areas such as Buckfield to which this Ordinance pertains.

## 6 12.2.1 Principles Governing Sound Measurements

7 12.2.1.1 Section 27.0 applies in addition to relevant paragraphs of  
8 Section 28.0 . Procedures in Section 27.0 and Section 28.0 are  
9 mandatory and additional to the relevant application  
10 procedures.

11 12.2.1.2 Sound measurements must be made at representative  
12 properties as determined by the qualified independent sound  
13 engineer out to a distance determined by the same.

14 12.2.1.3 All sound measurements will be filtered for both dBA and  
15 dBC.

16 12.2.1.4 All sound measurements before construction, and  
17 after will be made by a Professional Engineer who is a Full  
18 Member of the Institute of Noise Control Engineering  
19 (INCE).

20 12.2.1.5 This engineer must be an independent contractor to the  
21 Town of Buckfield, and have no ties to wind developers or  
22 related conflicts of interest and shall be paid for by the

1 applicant

2 12.2.2 Noise Limits at Non-participating Property Lines

3 No WEF turbine shall be located so as to cause an exceedance of  
4 the preconstruction/operation background sound levels by more  
5 than 5 dBA or dBC for day and evening (as defined in section  
6 27.17.1 & 27.17.2) . No WEF turbine shall be located so as to  
7 exceed the preconstruction/operation background sound levels by  
8 more than 3 dBA or dBC at night (as defined in section 27.17.3)  
9 The background sound levels shall be the L90 dB sound levels  
10 sound descriptor (both A and C weighting) measured during a pre-  
11 construction noise study during the quietest times. Measurements  
12 shall be for ten (10) minutes or more. L90 results are valid when  
13 L10 results are no more than 15 dB above L90 for the same time  
14 period. Noise sensitive sites are to be selected based on the WEF's  
15 predicted sound emissions (in dBA, dBC and 1/3 octaves to blade  
16 passage frequency), which are to be provided by the Applicant and  
17 verified by the Independent Acoustical Engineer.

18

19 12.2.2.1 Audible noise levels (dBA) due to wind turbine operation  
20 will not exceed the pre-construction ambient noise as defined in  
21 12.2.2 as measured at any property line. Property owners may  
22 waive this noise restriction with a written Mitigation Waiver. (See  
23 Section 12.4 .)

1 12.2.2.2 Low frequency noise levels (dBC) due to wind turbine  
2 operation as measured inside or at any Property Line will not  
3 exceed:

4 20 decibels (measured as dBC) above the pre-development ambient  
5 noise level (measured as dBA). There is a maximum not-to-  
6 exceed level of 50 dBC. Property owners may waive this noise  
7 restriction with a written Mitigation Waiver. (See Section 12.4 .)

8 12.2.2.3 Noise measurement standards and procedures are  
9 described in Section 27.0

#### 10 12.2.3 Violations and Enforcement

11 12.2.3.1 Sound Regulations Compliance. A WEF shall be  
12 considered in violation of the conditional use permit unless the  
13 applicant demonstrates that the project complies with all sound  
14 level limits using the procedures specified in this ordinance.  
15 Sound levels in excess of the limits established in this  
16 ordinance shall be grounds for the Town of Buckfield to order  
17 immediate shut down of all non-compliant Wind Turbine units.

18 12.2.3.2 A serious noise violation is defined as three (3) verified  
19 noise complaints attributed to the operation of a Wind Turbine  
20 within a period of one month or less with a measurable noise  
21 level greater than 10 dBA above pre-construction ambient noise  
22 levels or 50 dBC inside or at an Occupied Building. For serious

1 violations the Owner/operator will respond within five (5) days of  
2 the complaint. Testing, if necessary, will be conducted by a qualified  
3 independent acoustical engineer contracted by the applicant and  
4 paid for by the Owner/operator thru the Town to preserve the  
5 status of the engineer as a qualified independent consultant.  
6 The Town will at their discretion have the testing independently  
7 reviewed. Testing will commence within ten working days of the  
8 complaint. Testing will be conducted for a minimum of a one-  
9 month period according to the measurement standards and  
10 procedures in Section 27.0. The Owner/operator is responsible for  
11 mitigating the problem within ten (10) days from a final  
12 determination of any cause attributed to the operation of the Wind  
13 Turbine. Failure to mitigate the problem will result in the Wind  
14 Turbine being declared unsafe and emergency shutdown procedures  
15 will be implemented per Section 21.4.

16 12.2.3.3 Noise violations not determined to be an emergency  
17 pursuant to Sections 12.2.3.1 and 21.4, or not determined to  
18 be a serious violation pursuant to Section 12.2.3.2 , shall be  
19 managed pursuant to Section 21.6 . Testing, if necessary,  
20 will be paid for by the Owner/operator and hired  
21 independently by the Town. Testing will be conducted for an  
22 appropriate period of time and conducted according to the  
23 measurement standards and procedures set forth in Section



1 27.0. The Owner/operator is responsible for mitigating the  
2 problem within 30 days from a final determination of any  
3 cause attributed to the operation of the WEF. Mitigation  
4 involving significant construction or physical modification  
5 may have up to 90 days to be completed pursuant to Section  
6 15.4.1.

### 7 12.3 Shadow Flicker and Blade Reflection

8 12.3.1 WEFs shall be designed and sited so that shadow flicker  
9 and/or blade reflection will not fall on a receptor as defined in  
10 Section 8.0 . Exceptions to this standard may be made based on  
11 the following condition only if the flicker or reflection does not  
12 exceed 10 hours per year for any given receptor. Property  
13 owners may waive the Shadow Flicker and Blade Reflection  
14 restriction with a written Mitigation Waiver. (See Section 12.4 .)

### 15 12.3.2 Violations and Enforcement

16 12.3.2.1 A serious shadow flicker or blade reflection violation is  
17 defined as three (3) days of significant nuisance shadow  
18 flicker or blade reflection, in any one month falling on a  
19 receptor that, if annualized, will be estimated to be more than  
20 10 hours per year. The predictive annualized calculation  
21 shall assume clear weather, but take into account seasonal  
22 tracking of the sun. For serious violations the

1 Owner/operator will respond within five (5) days of the  
2 complaint. The Owner/operator is responsible for mitigating  
3 the problem within ten (10) days from a final determination  
4 of any cause attributed to the operation of the WEF. Failure  
5 to mitigate the problem will result in the WEF being declared  
6 unsafe and emergency shutdown procedures will be  
7 implemented per Section 21.4 .

8 12.3.2.2 Shadow flicker and blade reflection not determined to  
9 be a serious violation pursuant to Section 12.3.2.1, shall be  
10 managed pursuant to Section 21.6 . Field verification and  
11 modeling, if necessary, will be paid for by the  
12 Owner/operator and hired independently by the Town. The  
13 Owner/operator is responsible for mitigating the problem  
14 within 30 days from a final determination of any cause  
15 attributed to the operation of the WEF. Mitigation involving  
16 significant construction or physical modification may have up to  
17 90 days to be completed pursuant to Section 15.4.1.

#### 18 12.4 Mitigation Waivers

19 Non-participating Landowners may modify or waive certain  
20 specified protections in this Ordinance using a written, legally  
21 enforceable Mitigation Waiver negotiated between the Applicant  
22 and the Non-participating Landowner. Copies of executed  
23 Mitigation Waivers must be included with the application. The

1 Mitigation Waiver must be recorded in the Register of Deeds  
2 office appropriate for the affected property. The deed must advise  
3 all subsequent owners of the burdened property.

4 12.4.1 The requirements permitted in Mitigation Waivers are:

5 12.4.1.1 Property line setbacks — Section 12.1.1.

6 12.4.1.2 Audible noise levels — Section 12.2.2.1.

7 12.4.1.3 Low frequency noise levels — Section 12.2.2.2.

8 12.4.1.4 Shadow Flicker and Blade Reflection — Section 12.3.1.

9 12.4.1.5 No Mitigation Waivers on other requirements set  
10 forth in this Ordinance are permitted.

11 12.4.2 The Mitigation Waiver must contain a separate paragraph  
12 for each specific requirement being modified or waived.

13 Each paragraph must specify:

14 12.4.2.1 The requirement as set forth in this ordinance

15 12.4.2.2 The modified requirement to which the affected  
16 property owner is now agreeing.

## 17 13.0 **General Standards**

18 All WEFs shall comply with the appropriate Standards of this  
19 Ordinance. No WEF shall cause unreasonable health or safety  
20 conditions.

21 13.1 Building Codes. All components of the WEF shall conform to

1 local, state and national building codes.

2 13.2 Electrical Components and Interconnections. All electrical  
3 components of the Wind Turbine and WEF shall conform to  
4 relevant and applicable local, state, and national codes.

5 13.3 Controls and Brakes. Each Wind Turbine shall be equipped with a  
6 redundant braking system that includes both aerodynamic over-  
7 speed controls (including variable pitch, tip, and other similar  
8 systems) and mechanical brakes. Mechanical brakes shall operate in  
9 fail-safe mode. Stall regulation shall not be considered a sufficient  
10 braking system for over-speed protection.

11 13.4 Blade Clearance. The minimum distance between the ground  
12 and all blades of a Wind Turbine shall be 100 feet as measured at  
13 the lowest arc of the blades.

14 13.5 Signal Interference. WEFs will be designed and sited to prevent  
15 the disruption or loss of radio, telephone, television, or similar  
16 signals. (See Section 15.7 .)

17 13.6 Guy Wires, Blade Feathering and Bird Sensing Radar.  
18 Monopole towers with no guy wires are preferred to minimize bat  
19 and migratory bird fatalities, and bird fatalities in general. To  
20 further minimize such fatalities, Wind Turbines will be equipped  
21 with bird sensing radar, and the Wind turbine blades will be  
22 feathered. Bird flight diverters must be installed on any tower

1 with guy wires.

## 2 14.0 Appearance and Safety Standards

### 3 14.1 Appearance and Visibility Standards

4 14.1.1 Wind Turbines shall be a non-obtrusive color such as white,  
5 off-white or gray, or as may otherwise be required by another  
6 governmental agency with jurisdiction over the WEF.

7 14.1.2 The design of the buildings and related structures shall,  
8 to the extent possible, use materials, colors, textures,  
9 screening and landscaping that will blend the site to the  
10 natural setting and existing environment.

11 14.1.3 Wind Turbines shall not be artificially lighted, except to  
12 the extent consistent with Federal Aviation Administration  
13 recommendations or other applicable authority that  
14 regulates air safety or as is otherwise required by another  
15 governmental agency with jurisdiction over the WEF.

16 Additional lighting standards must be met for Wind Turbines  
17 (see Section 15.2.7).

18 14.1.4 Wind Turbines shall not be used to support signs and  
19 shall not display advertising except for reasonable and  
20 incidental identification of the turbine manufacturer, facility  
21 owner and operator, emergency contact information, and for  
22 any appropriate warnings.

1 14.1.5 Each Wind Turbine shall be located to reasonably  
2 maximize the effectiveness of existing vegetation, structures  
3 and topographic features to screen views of the Wind  
4 Turbine(s) from Occupied Buildings of Non-participating Land  
5 Owners, Scenic Resources and public roads.

6 14.1.6 When existing features do not screen views of a Wind  
7 Turbine from Occupied Buildings of Non-participating  
8 Landowners, Scenic Resources and public roads, screening  
9 shall be provided, where feasible and effective, through  
10 the planting of trees and/or shrubs. Generally, such  
11 plantings should be of native varieties. In order to maximize  
12 the screening effect and minimize wind turbulence near the  
13 Wind Turbine, plantings should be situated as near as  
14 possible to the Occupied Buildings, Scenic Resources and/or  
15 public roads.

## 16 14.2 Safety Standards

17 14.2.1 Design. The design of the Wind Turbines and WEF shall  
18 conform to applicable industry standards, including those of  
19 the American National Standards Institute, (ANSI) and shall  
20 comply with standards promulgated by Underwriters  
21 Laboratories, Det Norske Veritas, Germanischer Lloyd Wind  
22 Energies or other similar certifying organizations appropriate  
23 for the turbines' size and classification.

1 14.2.2 Access. All ground-mounted electrical and control  
2 equipment and all access doors to a Wind Turbine shall be  
3 labeled and secured to prevent unauthorized access. A  
4 Wind Tower shall not be climbable up to fifteen (15) feet  
5 above ground surface.

6 14.2.3 Warnings. A clearly visible warning sign concerning  
7 voltage must be placed at the base of all pad-mounted  
8 transformers and substations.

### 9 14.3 Inspections

10 Wind Turbines shall be inspected after construction is  
11 completed but before becoming operational, and at least every  
12 year thereafter, for structural and operational integrity by a Maine  
13 licensed professional engineer, and the Owner/operator shall  
14 submit a copy of the inspection report to the Enforcing  
15 Authority. If such report recommends that repairs or  
16 maintenance are to be conducted, the owner shall provide the  
17 Enforcing Authority a written schedule for the repairs or  
18 maintenance. Failure to complete the repairs or maintenance in  
19 accordance with the schedule shall be deemed a violation of this  
20 Ordinance.

### 21 14.4 Liability Insurance

22 The Applicant shall maintain a current general liability policy

1 for the WEF that covers bodily injury and property damage in an  
2 amount commensurate with the scope and scale of the Turbine  
3 or Project. The Applicant or its designee shall provide  
4 certificates of insurance to the Planning Board, and provide a  
5 copy of each annual renewal to the Planning Board. (See Section  
6 28.2.35.)

## 7 15.0 **Financial, Environmental and Operational Standards**

### 8 15.1 Financial Performance Standards

9 The Applicant must demonstrate that the WEF is financially  
10 viable and that the Owner/operator has the financial ability to  
11 complete the project.

### 12 15.2 Environmental Impact Standards

13 15.2.1 Environmentally Sensitive Area. The plan for the WEF  
14 will reflect the natural capabilities of the site to support  
15 development. Environmentally sensitive areas, including  
16 but not limited to wetlands, steep slopes, watersheds,  
17 floodplains, significant wildlife habitats, fisheries, habitat for  
18 rare or endangered plants and animals, unique natural  
19 communities and natural areas, sand and gravel aquifers will  
20 be maintained and preserved to the maximum extent. The  
21 Applicant shall demonstrate appropriate measures for  
22 protecting these resources, including both during construction



1 and post construction.

2 Given that areas within the Town of Buckfield are wildlife  
3 management areas and that protected bird species and  
4 migratory birds are regularly observed within the  
5 boundaries of the Town, the applicant must comply with  
6 the "Guidelines for Wind Project Ecological Study" by the  
7 Maine Department of Environmental Protection and Maine  
8 Department of Inland Fisheries and Wildlife.

9 15.2.2 Wildlife Protection

10 15.2.2.1 The Applicant will demonstrate that the WEF will  
11 not have a significant adverse effect on area wildlife and  
12 wildlife habitat. Such analysis shall include but not be  
13 limited to adverse effects to birds, bats, game animals,  
14 and habitat fragmentation. In addition, the Applicant must  
15 demonstrate that the WEF will have no significant adverse  
16 effect on rare, threatened or endangered wildlife. The  
17 wildlife and habitat analysis must include appropriate pre-  
18 construction field studies and at least three sets of  
19 corresponding post construction field studies conducted at  
20 periodic intervals within 3 years after the Wind Turbines  
21 become operational. These studies will be conducted by a  
22 qualified wildlife biologist hired by the Town of Buckfield  
23 and paid for by the Applicant.

1 15.2.2.2 If the post-construction field studies demonstrate  
2 significant adverse effect to birds, bats, game animals or  
3 habitat fragmentation, the Town, the Owner/operator and  
4 the Maine Department of Inland Fisheries and Wildlife  
5 (MDIFW) shall develop an appropriate mitigation plan. The  
6 Owner/operator will be responsible for the full cost of  
7 implementing the mitigation plan under the supervision of  
8 MDIFW.

9 15.2.3 Raptor Habitat. To the extent practicable, the creation of  
10 artificial habitat for raptors or raptor prey shall be minimized.  
11 In making its determination under this subsection the  
12 Planning Board shall consider comments and  
13 recommendations, if any, provided by the Maine Department  
14 of Inland Fisheries and Wildlife.

15 15.2.4 Erosion Control. The WEF will be designed, constructed  
16 and maintained in accordance with accepted erosion and  
17 sedimentation control methods. The acceptability of the  
18 proposed methods will be judged utilizing the "Maine Erosion  
19 Control Handbook for Construction: Best Management  
20 Practices", March 2003 or as revised. Whenever sedimentation  
21 is caused by stripping vegetation or grading it shall be the  
22 responsibility of the Owner/operator to remove it from all  
23 adjoining surfaces, drainage systems and watercourses and to

1 repair any damage at the Owner/operator's expense as quickly  
2 as possible.

3 15.2.5 Groundwater Protection. The WEF will not adversely  
4 affect the quality or quantity of groundwater. The Applicant  
5 shall have to demonstrate to the Planning Board's satisfaction  
6 that there are no unusual risks to the groundwater, including  
7 underground rivers, created by the project. The Board may  
8 require as a condition of permit approval, that spill prevention  
9 and control measures be installed, and that all activities  
10 involving potentially permeable pollutants, including at delivery  
11 and transfer points, be conducted under cover and over an  
12 impervious surface surrounded by dikes. If a Wind Turbine  
13 foundation is proposed in a bedrock area, a baseline of all  
14 wells, springs and certified public water sources within a two-  
15 mile radius of the foundation shall be established. If  
16 degradation or contamination occurs, permanent remedies  
17 shall be the responsibility of the Owner/operator.

18 15.2.6 Light Pollution. The WEF shall be designed to minimize  
19 the amount of nighttime light pollution. The Applicant shall  
20 provide a plan showing lighting on and around all Wind  
21 Turbines and associated facilities. Lighting on Wind Turbines  
22 shall be illuminated to Federal Aviation Administration (FAA)  
23 minimal standards using only red rather than white lights, if

1 possible. The minimum number of Wind Turbines will be  
2 illuminated, per FAA rules. Lighting shall be shielded from  
3 ground view to FAA maximum standards.

4 15.2.7 Relation to DEP Certification and Permitting. If DEP has  
5 issued a Site Location of Development Act permit for a WEF  
6 there is a rebuttable presumption that the development meets  
7 the requirements of Sections 15.2.2 and 15.2.3. If a DEP  
8 Site Location of Development permit is required, the Planning  
9 Board will require the permit to be issued  
10 before the application is deemed complete and may take  
11 the recommendations under advisement to determine  
12 compliance with Sections 15.2.2 and 15.2.3.

### 13 15.3 Scenic or Special Resource Standards

14 15.3.1 Except as otherwise provided in this subsection, if a WEF  
15 is proposed for a location in, or is visible from, a Scenic or  
16 Special Resource, the Applicant shall provide the Planning  
17 Board with a visual impact assessment that addresses the  
18 evaluation criteria in subsection 15.3.3. There is a rebuttable  
19 presumption that a visual impact assessment is not required  
20 for those portions of a WEF that are located more than 3  
21 miles, measured horizontally, from a Scenic or Special  
22 Resource. The Planning Board may require a visual impact  
23 assessment for portions of the WEF located more than 3

1 miles and up to 8 miles from a Scenic Resource if it finds  
2 that a visual impact assessment is needed to determine if  
3 there is the potential for significant adverse effects on the  
4 Scenic or Special Resource. Any interested Person must  
5 submit information intended to rebut the presumption to the  
6 Planning Board within 30 days of acceptance of the  
7 application as complete. The Planning Board shall determine if  
8 the presumption is rebutted based on a preponderance of  
9 evidence in the record.

10 15.3.2 The Planning Board shall determine, based on  
11 consideration of the evaluation criteria in subsection 15.3.3,  
12 whether the WEF significantly compromises views from or of a  
13 Scenic or Special Resource such that the proposed facility has  
14 an unreasonable adverse effect on the scenic character or  
15 existing uses related to scenic character of that Scenic or  
16 Special Resource.

17 15.3.3 In making its determination pursuant to subsection 15.3.2,  
18 and in determining whether an Applicant for a WEF located  
19 more than 3 miles from a Scenic Resource must provide a  
20 visual impact assessment and the Planning Board shall  
21 consider:

22 15.3.3.1 The significance of the potentially affected Scenic or  
23 Special Resource;

- 1 15.3.3.2 The existing character of the surrounding area;
- 2 15.3.3.3 The expectations of the typical viewer;
- 3 15.3.3.4 The WEF Project's purpose and the context of the
- 4 proposed activity;
- 5 15.3.3.5 The extent, nature and duration of potentially
- 6 affected public uses of the Scenic or Special Resource
- 7 and the potential effect on the public's continued use
- 8 and enjoyment of the Scenic or Special Resource; and
- 9 15.3.3.6 The scope and scale of the potential effect of views
- 10 of the WEF on the Scenic or Special Resource, including
- 11 but not limited to issues related to the number and extent
- 12 of Wind Turbines visible from the Scenic or Special
- 13 Resource, the distance from the Scenic or Special
- 14 Resource and the effect of prominent features of the WEF
- 15 Project on the landscape.

16 15.4 Construction/Design Standards

17 15.4.1 General Construction Standards. All Wind Turbines

18 shall be constructed in compliance with Good Utility Practice

19 for Wind Turbines. In the event that, after inspection by a

20 qualified expert in Good Utility Practice, the Town concludes

21 that any of the Wind Turbines were not constructed in

22 compliance with Good Utility Practice or constitutes a

1 danger to persons or property, then upon notice being  
2 provided, the Owner/operator shall have 90 days to bring  
3 the non-compliant Wind Turbine(s) into compliance with such  
4 standards. If 90 days is insufficient time to cure the non-  
5 compliance, the Owner/operator shall present a plan to the  
6 Town describing the reason for the delay and the time frame  
7 for the cure to be put in place.

8 15.4.2 Electrical Design Standard. On-site power and  
9 transmission lines shall be placed in a manner consistent  
10 with Good Utility Practices. Wind Turbines shall be  
11 engineered according to Good Utility Practice to prevent  
12 transient ground currents and stray voltage. The Applicant  
13 shall demonstrate that there will be no significant adverse  
14 effect upon the environment or individuals from transient  
15 ground currents and stray voltage.

16 15.4.3 Transmission Line Standards. The Applicant must, in  
17 conjunction with the Maine Public Utility Commission (PUC),  
18 prepare a written report documenting all anticipated changes,  
19 modifications or upgrades to the public utility grid within the  
20 Town of Buckfield due to the WEF. The written report must  
21 include necessary approvals from the PUC, proof of leases  
22 or required right of ways for transmission lines, and any  
23 alternatives to the final plan considered. The report must

1 document the residual capacity remaining in the local utility  
2 grid that is available for use by other local electrical  
3 generating projects.

4 15.4.4 Geological Stability. Wind Turbines shall not be constructed  
5 on areas of geological instability. The Applicant shall  
6 demonstrate that this standard is met.

7 15.5 Operational Performance Standards

8 15.5.1 General Performance Standards. All Wind Turbines shall be  
9 operated and maintained consistent with Good Utility Practice  
10 for comparable facilities.

11 15.5.2 Repairs and Maintenance. The Owner/operator shall be  
12 required to repair and replace the WEF and associated  
13 equipment consistent with Good Utility Practice as needed to  
14 keep the Wind Turbine and Associated Facilities in good  
15 repair and operating condition.

16 15.6 Public Safety and Health Standards

17 15.6.1 Fire Protection. The Applicant shall prepare a plan in  
18 consultation with the Town of Buckfield fire department as  
19 part of the permitting process. The plan shall address all  
20 activities at the WEF from the start of construction through  
21 the end of power generation and the final removal and  
22 restoration of the site, and shall describe a response plan



1 to address all identified potential fire, rescue and hazardous  
2 materials scenarios. The Owner/operator shall ensure that  
3 the WEF complies with the following control and prevention  
4 measures and assumes responsibility for all associated  
5 incremental costs:

6 15.6.1.1 Use of fireproof or fire resistant building materials  
7 and buffers or fire retardant landscaping around WEFs  
8 as appropriate.

9 15.6.1.2 Incorporation of a self-contained fire protection  
10 system to address nacelle fires including but not  
11 limited to redundant fire quenching systems in the  
12 nacelle.

13 15.6.1.3 Maintenance of firebreak areas as appropriate  
14 cleared of vegetation and maintained as a fire/fuel break  
15 as long as the Wind Turbine is in operation.

16 15.6.1.4 Provision for any additional fire fighting or rescue  
17 personnel, services, training, materials, or vehicles as may  
18 be required to address any emergency related to the WEF  
19 that is beyond the current capabilities and duties of the local  
20 fire department.

21 15.6.2 Hazardous Wastes. The Owner/operator shall be  
22 responsible for compliance with all ordinances, state

1 regulations and laws applicable to the generation, storage,  
2 cleanup, and disposal of hazardous wastes generated during  
3 any phase of the project's life. The Planning Board shall  
4 require that a plan be submitted by the Applicant  
5 demonstrating the ability and intent to meet such compliance.

6 **15.6.3 Blasting.** Owner/operator shall not undertake any  
7 blasting in connection with the construction of the WEF  
8 unless Applicant has notified the Town and submitted a  
9 blasting plan consistent with applicable laws and regulations.  
10 The plan must be reviewed and approved by the Planning  
11 Board before any blasting may take place. No blasting shall be  
12 undertaken without 48 hour notification to all residents within a  
13 two mile radius, measured horizontally, from the blasting area.  
14 All blasting operations will cover the blasting area with blast  
15 mats to prevent debris from falling on nearby properties.

16 **15.7 Communications and Electromagnetic Interference Standards**

17 **15.7.1** WEFs shall be sited and operated so that they do not  
18 interfere with emergency (fire, police/sheriff, ambulance)  
19 radio two-way communications (base stations, mobile, and  
20 hand held radios, including digital) and/or paging, television,  
21 telephone (including cellular and digital), microwave,  
22 satellite (dish), navigational, internet or radio reception to  
23 neighboring areas. The Owner/operator of the project shall

1 be responsible for the full cost of any remediation  
2 necessary to provide equivalent alternate service or correct  
3 any problems, including relocation or removal of the Wind  
4 Turbine, and any and all related transmission lines,  
5 transformers, and other components related to the  
6 interference.

7 15.7.2 The Owner/operator of the WEF shall respond within  
8 one day to any request for communications interference  
9 investigation by any emergency agency (fire, police/sheriff,  
10 ambulance). Testing will commence within two days of the  
11 request. The Owner/operator is responsible for mitigating  
12 within two days from the determination of interference  
13 attributed to the operation of the Wind Turbine.

14 15.7.3 The Owner/operator of the WEF shall respond within  
15 five business days to any request for communications  
16 interference investigation by a property owner or resident  
17 within a three-mile radius, measured horizontally, of the  
18 WEF. Testing will commence within five business days of  
19 the request. The owner/operator is responsible for  
20 mitigating within ten business days from the determination  
21 of interference attributed to the operation of the Wind  
22 Turbine.

23 15.8 Ground Transportation Standards

1 15.8.1 The Applicant shall identify all public ways to be used  
2 within the Town of Buckfield to transport equipment and  
3 parts for construction, operation or maintenance of the  
4 Wind Turbines.

5 15.8.2 A qualified third party engineer, hired by the Planning  
6 Board and paid for by the Applicant, shall document town road  
7 conditions prior to construction. The engineer shall document all  
8 town road conditions again thirty (30) days after construction is  
9 complete or as weather permits. The applicant will provide proof  
10 that MDOT has given permission for travel over any State roads

11 15.8.3 The Town of Buckfield shall require the applicant to  
12 purchase a bond for all town road(s) in compliance within state  
13 regulations.

14 15.8.4 Any road damage caused by the Applicant or its  
15 contractors shall be promptly repaired at the Owner/operators  
16 expense.

17 15.8.5 The Applicant shall demonstrate that it has appropriate  
18 financial insurance to ensure the prompt repair of damaged roads.

## 19 15.9 Plan and Risk Assessment for Road and Property Use

20 15.9.1 An Application for a WEF Site Permit shall include a road and  
21 property use and risk assessment plan containing the following  
22 information and meeting the following requirements.

1 15.9.1.1 A description and map of all public ways, and  
2 other property, in the Town to be used or affected in  
3 connection with the construction of the WEF,  
4 including a description of how and when such ways  
5 and property will be used or affected.

6 15.9.1.2 A description of the type and length of vehicles  
7 and type, weight and length of loads to be conveyed on  
8 all public ways in the Town.

9 15.9.1.3 A complete assessment of the proposed use of  
10 public ways in the town in connection with the  
11 construction of the WEF, including: the adequacy of  
12 turning radii; the ability of the public ways to sustain  
13 loads without damage; the need to remove or modify  
14 (permanently or temporarily) signs, trees, utilities, or  
15 anything else; any reasonably foreseeable damage to  
16 public ways or other property, public or private; any  
17 reasonably foreseeable costs that the town may incur in  
18 connection with the use of property in the town, including  
19 but not limited to costs relating to traffic control, public  
20 safety, or damage to public ways, or to other public or  
21 private property.

22 15.9.1.4 A traffic control and safety plan relating to the use  
23 of public ways in the town in connection with the

1 construction of the WEF.

2 15.9.1.5 Any additional relevant information that the Planning  
3 Board may request relating to the use of public ways or  
4 other effects on public and private property that may occur  
5 in connection with the construction and operation of the  
6 WEF.

7 15.9.2 The Planning Board will evaluate the risk assessment  
8 plan with assistance from such consultants that it deems  
9 appropriate, including without limitation a third-party  
10 engineer chosen by the Planning Board, the cost to be  
11 solely borne by the Applicant. The Planning Board may  
12 document the condition of public ways and other  
13 property to be used in connection with the construction of  
14 the WEF in such manner as it deems appropriate. The  
15 Planning Board may require changes to the risk  
16 assessment plan that it deems to be appropriate to protect  
17 public safety, to protect public and private property, and to  
18 address anticipated costs to the town associated with  
19 construction of the WEF.

20 15.9.3 If the Applicant requires the temporary closure of any  
21 public way, the Planning Board may require the Applicant to  
22 enter into an agreement relating to the use of the public way.

23 15.9.4 The Applicant shall be responsible for paying for any

1 damage to any public way. If the risk assessment anticipates  
2 damage to any public way, the Planning Board may require the  
3 Applicant to provide a surety in an amount that the Planning  
4 Board determines appropriate to secure any obligation under the  
5 agreement, including but not limited to any obligation relating to  
6 alterations or modifications to public ways made in connection with  
7 the Applicant's activities.

8  
9 **15.10 Reporting Requirements:**

10 **15.10.1 Extraordinary Events.** The Owner/operator shall notify  
11 the Town of any extraordinary event within 24 hours of that  
12 event, "Extraordinary events" shall include but not be limited  
13 to tower collapse, catastrophic turbine failure, fires, leakage  
14 of hazardous materials, unauthorized entry to the tower base,  
15 thrown blade or hub, any injury to a Facility worker or other  
16 person that requires emergency medical treatment, or other  
17 event that impacts the public health and safety of the Town or  
18 its residents. For the purpose of this section calling 911 is the  
19 same as notifying the town.

20 Additionally, the Owner/Operator will provide the Town and  
21 its residents with a hotline phone number for reporting of any  
22 such extraordinary events to a manned facility on call 24 hours  
23 a day, 365 days a year.

1           15.10.2 Change of Owner/operator. The Owner/operator will  
2           notify the Town of Buckfield of a pending change of ownership  
3           in writing 30 days before the effective change. New owners  
4           will apply for a transfer of permits to be reviewed by the  
5           Town Of Buckfield and will assume all the obligations of the  
6           selling Owner/operator.

7           15.10.3 Reports from annual safety inspections pursuant to Section  
8           14.3 . 15.10.4 Annual proof of liability insurance pursuant to  
9           Section 14.4.

10   **16.0 Application Submission Requirements and Procedural Time**

11   **Frames**

12       16.1 Pre-application Meeting

13           10 copies of the pre-application shall be submitted to the Code  
14           Enforcement Officer at least 14 days in advance of the regular  
15           monthly meeting.

16           A pre-application meeting with the Planning Board will be  
17           scheduled at a regularly scheduled public Planning Board  
18           meeting. At the meeting the Applicant will review the type and  
19           scope of the project and the Planning Board will review  
20           Ordinance Standards and submission requirements. The  
21           Planning Board will establish an application file at this time.



1        16.2 Site Inspection

2            Planning Board and Applicant will set a mutually agreeable time for  
3            the Planning Board to inspect the site. The inspection will be  
4            scheduled within 45 days of the pre-application meeting unless  
5            rendered impractical due to seasonal conditions. Site visits will  
6            normally be postponed if there is more than one foot of snow on  
7            the ground. The site inspection will be treated as a public  
8            meeting of the Planning Board with appropriate notices given to  
9            the community. While the Planning Board may set additional  
10           requirements for the site inspection at the pre-application meeting,  
11           the Applicant shall, at minimum, flag the location of the proposed  
12           WEF and relevant property boundaries. The Applicant or a  
13           representative will accompany the Planning Board to describe the  
14           project and answer any questions.

15        16.3 First Public Hearing

16           The Planning Board will schedule a public hearing to be held  
17           within 60 days of the pre-application meeting process for  
18           the WEF.

19        16.4 Notice to Abutters and residents within the Notification Area

20           In addition to any required public notices for the site inspection and  
21           first public hearing, the Planning Board will prepare a notice to  
22           property owners and residents within the Notification Area. The

1 notice will briefly describe the proposed WEF and notify the  
2 recipient of the dates, times and places of the site inspection and  
3 first public hearing. The notice will be sent by certified mail to  
4 abutters and first class mail to all others with mailing costs paid for by  
5 the Applicant. The town will give residents no less than 14 days'  
6 notice of such a meeting.

### 7 16.5 Determine Submission Requirements

8 Within 30 days of the site inspection the Planning Board shall inform  
9 the Applicant in writing of the submission requirements for the  
10 application. The submission requirements for WEFs are listed in  
11 Section 28.0. If the Applicant wishes to have any of the submission  
12 requirements waived, the Applicant must make the request in  
13 writing to the Planning Board. The Planning Board will notify  
14 property owners and residents within the Notification Area. The  
15 notice will be sent by certified mail to abutters and first class mail to  
16 all others with mailing costs paid for by the Applicant. The Planning  
17 Board will send the notice at least 14 days prior to the Planning  
18 Board meeting at which the Applicant's request will be considered.

### 19 16.6 Application Submission

20 The Applicant has up to 180 days after the determination of  
21 submission requirements to submit a completed application with the  
22 required fees to the Code Enforcement Officer. The application

1 shall be deemed  
2 abandoned unless the application has been received within 180  
3 days of the determination of submission requirements. The  
4 Code Enforcement Officer will forward the application to the  
5 Planning Board.

#### 6 16.7 Completeness Review

7 The Planning Board will notify the Applicant within 80 days  
8 from the date of submission whether the application is  
9 complete. Specific studies may be required for a consideration  
10 of completeness including but not limited to noise studies,  
11 DEP certification and permitting, and environmental impact  
12 studies. If the application is deemed to be incomplete the  
13 Planning Board shall indicate the additional information  
14 needed. The application shall be deemed abandoned unless  
15 the Applicant provides the information requested,  
16 demonstrates that additional time is needed to complete  
17 required studies, or submits in writing the reason for any delay  
18 within 30 days from the date of notice indicating the  
19 application is incomplete.

#### 20 16.8 Second Public Hearing

21 The Planning Board will schedule a second public hearing to be  
22 held within 63 days of the determination of completeness of  
23 the Application for the WEF.

1     **16.9 Notice to Town of Buckfield**

2           In addition to any required public notices for the second public  
3           hearing, the Planning Board will prepare a notice to all residents and  
4           property owners in the Town of Buckfield and to property owners and  
5           residents within the Notification Area. The notice will briefly describe  
6           the proposed WEF and notify the recipient of the date, time and  
7           place of the second public hearing. The notice will be sent by  
8           certified mail to all abutters and first class mail to all others with  
9           mailing costs paid for by the Applicant. The town will give residents  
10          no less than 14 days' notice of such a meeting.

11          **16.10 Final Planning Board Determination**

12          A decision to approve or reject the application, or to approve the  
13          application with conditions, will be made by the Planning Board  
14          within 63 days from the date of the second public hearing.

15          **16.11 Final Town Approval**

16          Final Town approval is required if the WEF is located on Town  
17          property or if the WEF is wholly or partially owned by the Town.

18          **17.0 Professional Services**

19          In reviewing an application for compliance with this Ordinance, the  
20          Permitting Authority may retain professional services as necessary  
21          to assist with its review, including but not limited to those of an

1 attorney, engineer, biologist, or land use planner. Within fourteen (14)  
2 days of filing an application the Applicant shall deposit in a joint  
3 escrow account with the Town the sum of \$25,000 as partial  
4 payment for the appropriate Town expenses in hiring consultants  
5 and experts, as the Permitting Authority shall, at its discretion,  
6 deem necessary. If at any time the balance of the fund falls below  
7 \$5,000, the Applicant upon notice shall submit an additional  
8 \$25,000 so that the Town's full and actual expenses of examining  
9 and verifying the data presented by the Applicant can be paid in  
10 full by the Applicant. If at any time the balance of this fund falls  
11 below \$5000 for a period of 30 days after notification the  
12 application shall be considered to have been withdrawn. The  
13 balance of the escrow account shall be returned to the  
14 Owner/operator after all expenses have been paid, and after a permit  
15 is granted / denied or the Applicant has withdrawn.

## 16 **18.0 Application Changes**

17 18.1 Throughout the permit process, the Applicant shall promptly  
18 notify the Permitting Authority of any changes to the  
19 information contained in the permit application.

20 18.2 Material changes may not be made to a WEF after an  
21 application is determined to be complete,  
22 without initiating a new application process. Material changes

1 include, but are not limited to, increasing the number of Wind  
2 Turbines, increasing the nameplate capacity of the Wind  
3 Turbines, increasing Turbine Height, changes to the location of  
4 Wind Turbines, or material changes to Associated Facilities.  
5 Non-material changes require a permit modification as  
6 determined by the Permitting Authority. The Permitting Authority  
7 shall have sole discretion for determining what is a material or  
8 non-material change.

#### 9 **19.0 Cumulative Effect of Multiple Permits**

10 The Town of Buckfield reserves the right to limit the total number  
11 of WEF permits that are under review for approval at any given  
12 time. The Permitting Authority will process no more than one  
13 application at any one time, or the deadline for submission and  
14 review may be modified correspondingly to reflect the increased  
15 workload of multiple permits.

#### 17 **20.0 Appeals**

18 20.1 All appeals of Planning Board decisions shall be filed with the  
19 Oxford County Superior Court.

20 20.2 A final Town vote as outlined in Section 16.11 shall not be  
21 subject to review.

1 **21.0 Complaints/ Violations/ Enforcement**

2 21.1 General Standard It shall be unlawful for any person, firm or  
3 corporation to violate or fail to comply with or take any action  
4 that is contrary to the terms of this Ordinance, or any permit or  
5 Operational License issued under this Ordinance, or cause  
6 another to violate or fail to comply or take any action which is  
7 contrary to the terms of this Ordinance or any permit or  
8 Operational License issued under this Ordinance.

9 21.2 Enforcing Authority The CEO will serve as the Enforcing  
10 Authority for WEFs. The Enforcing Authority will:

11 21.2.1 Have the authority to conduct investigations, resolve  
12 complaints, ensure compliance with and enforce standards,  
13 and levy penalties if required.

14 21.2.2 Appoint qualified representatives to investigate  
15 complaints. The reasonable costs and fees for the qualified  
16 representative will be paid by the Owner/operator and  
17 may include engineers, consultants, and other professionals.

18 21.2.3 Recommend to the Planning Board amendments to this  
19 Ordinance deemed necessary to address health or safety  
20 concerns not currently addressed in this Ordinance.

21 21.2.4 Have access to Town legal counsel as required.

22 21.3 Enforcement. Standards in this Ordinance will be enforced

1 through a series of enforcement options including but not  
2 limited to: 1) Emergency shutdown; 2) 5 day response to  
3 serious violations with a 10 day mitigation period; 3) 30 day  
4 complaint resolution with a 30 day mitigation period; 4)  
5 financial penalties; and 5) other remedies.

#### 6 21.4 Emergencies and Emergency Shutdown

7 The Owner/operator shall be required to immediately cease  
8 operations for the duration of any emergency. Emergency shall  
9 mean a proven condition or situation caused by the WEF that  
10 presents an imminent physical threat of danger to life or  
11 significant threat to property. A WEF that is found to present an  
12 imminent physical threat of danger to life or significant threat of  
13 damage to property shall be immediately shut down and repaired  
14 or otherwise made safe and certified so by a professional  
15 engineer in good standing prior to resumption of operation. The  
16 Town shall have the right to access all Wind Turbines to verify  
17 conditions and/or repair progress with reasonable notice to the  
18 Wind Turbine owner/operator. Within 24 hours of an occurrence  
19 of a tower collapse, turbine failure, property damage or  
20 contamination, fires, thrown blade or hub, severely injured  
21 Wind Turbine worker or private person as a result specific to  
22 being a WEF site, the Owner/operator shall notify the Town  
23 of the occurrence and proposed remedial action. For this



1 section calling 911 is considered notifying the town.

2 21.5 Serious Violations of Standards

3 The Owner/operator of the WEF shall respond within five  
4 business days to any complaint or complaints deemed by the  
5 Enforcing Authority to have merit. Testing, paid for by the  
6 Owner/operator, will commence within ten working days of the  
7 complaint. Except as noted for interference with emergency  
8 communications, the Owner/operator is responsible for  
9 mitigating the problem within ten business days from the final  
10 determination of any cause attributed to the operation of the  
11 WEF. Pursuant to Section 15.7.2, interference with emergency  
12 communications must be responded to in one day and mitigated  
13 within 2 days.

14 21.6 Other Violations

15 If the Enforcing Authority determines that a violation of the  
16 Ordinance or the permit has occurred, and the violation is  
17 determined neither to be an emergency pursuant to Section  
18 21.4, nor a serious violation pursuant to Section 21.5 , the  
19 Enforcing Authority shall provide written notice to the  
20 Owner/operator alleged to be in violation of this Ordinance or  
21 permit. The Enforcing Authority and the involved parties shall  
22 engage in good faith negotiations to resolve the alleged

1 violation. Such negotiations shall be conducted within thirty (30)  
2 days of the written notice of violation. The Owner/operator  
3 shall pay for any necessary testing if the Owner/operator is  
4 subsequently determined to be in non-compliance. The  
5 Owner/operator is responsible for mitigating the problem within  
6 30 days from the final determination of any cause attributed to  
7 the operation of the WEF. Mitigation involving significant  
8 construction or physical modification may have up to 90 days to  
9 be completed pursuant to Section 15.4.1.

#### 10 21.7 Penalties

11 Any Person or Applicant who fails to comply with any provision  
12 of this Ordinance by failing to reach agreement with the  
13 Enforcing Authority, or after the expiration of the mitigation  
14 periods defined in Section 21.5 and Section 21.6 , shall be fined  
15 at least five hundred dollars (\$500) but no more than one  
16 thousand dollars (\$1000) for each WEF. A separate offense shall  
17 be deemed to be committed on each day during which a violation  
18 occurs or continues to occur.

#### 19 21.8 Other Remedies

20 If the Owner/operator has not corrected the violation within  
21 the timeframes contained in Section 21.5 or Section 21.6 , the  
22 Enforcing Authority shall order the WEF to cease operation  
23 until the WEF can prove compliance with the standards of this

1 Ordinance. At the discretion of the Enforcing Authority,  
2 penalties and fines may continue to accrue during this period. If  
3 after 6 months of being ordered to cease operations the  
4 Owner/operator has not demonstrated good faith and significant  
5 effort in resolving the issue, the Enforcing Authority shall initiate  
6 the decommissioning procedure pursuant to Section 22.0 .  
7

## 8 21.9 Identifying Violations and Registering Complaints

9 21.9.1 Pursuant to Section 15.10.1, the Owner/operator will  
10 report to the Town all extraordinary events within 24 hours of  
11 their occurrence.

12 21.9.2 For Wind Turbines the Town will maintain, at the  
13 Owner/operator's expense, a system for recording and  
14 investigating all complaints related to the WEF. The system  
15 must be able to receive complaints 24 hours a day, 365 days  
16 a year. A permanent record of all complaints, investigations  
17 and outcomes will be maintained. The Owner/operator will  
18 designate a representative and method to receive and  
19 respond to complaints from the town 24 hours a day, 365  
20 days a year. Complaints for WEFs will be referred to the  
21 Code Enforcement Officer in a timely manner.

22  
23

1 **22.0 Decommissioning Standards**

2 22.1 The Owner/operator shall, at its expense, complete  
3 decommissioning of the WEF within: 1) twelve (12) months after  
4 the end of the useful life of the WEF, or; 2) as specified in the  
5 materials provided at the time of application or; 3) pursuant to  
6 remedies described in Section 21.8 . The WEF will be presumed  
7 to be at the end of its useful life if no electricity is generated  
8 for a continuous period of twelve (12) months.

9 22.2 Decommissioning shall include removal of wind turbines and  
10 foundations to a depth of 36 inches. All buildings, cabling,  
11 electrical components, roads, and any other associated facilities  
12 shall be removed unless, at the end of the Wind Turbine or  
13 WEF's useful life, as determined in accordance with Section  
14 22.1 , the Applicant provides written evidence of plans for  
15 continued beneficial use of these components of the WEF, and  
16 this evidence is approved by the Planning Board.

17 22.3 Except as otherwise provided by Section 22.2, disturbed  
18 earth shall be graded and re-seeded, unless the Participating  
19 Landowner of the affected land requests otherwise in writing.

20 22.4 The Owner /operator shall post and maintain  
21 decommissioning funds in an amount equal to Net  
22 Decommissioning Costs; provided that at no point shall  
23 decommissioning funds be less than one hundred percent

1 (100%) of Decommissioning Costs. The decommissioning funds  
2 shall be posted and maintained with a bonding company or  
3 Federal or State-chartered lending institution chosen by the  
4 Owner/operator and Participating Landowners posting the  
5 financial security, provided that the bonding company or lending  
6 institution is authorized to conduct such business within the  
7 State and is approved by the Town of Buckfield. No work can  
8 begin on the WEF before the decommissioning bond is issued  
9 and approved.

10 22.5 An independent and certified Professional Engineer shall be  
11 retained to estimate the total cost of decommissioning without  
12 regard to salvage value of the equipment ("Decommissioning  
13 Costs"), and the cost of decommissioning including the salvage  
14 value of the equipment ("Net Decommissioning Costs"). Said  
15 estimates shall be submitted to the Town of Buckfield after the  
16 first year of operation and every other year thereafter.

17 22.6 Decommissioning funds may be in the form of a  
18 performance bond, surety bond, letter of credit, or other  
19 form of financial assurance as may be acceptable to the  
20 Town of Buckfield.

21 22.7 If the Owner/operator fails to complete decommissioning  
22 within the period prescribed by Section 22.1 , then the  
23 Participating Landowner shall have an additional six (6)

1 months to complete decommissioning.

2 22.8 If neither the Owner/operator, nor the Participating  
3 Landowner completes decommissioning within the periods  
4 prescribed by Sections 22.1 and 22.7 the Wind Turbine or  
5 WEF shall be deemed to be in violation of this Ordinance and  
6 the Town of Buckfield may take such measures as necessary,  
7 including court action, to ensure the completion of  
8 decommissioning. The entry  
9 into and submission of evidence of a Participating Landowner  
10 agreement to the Town of Buckfield shall constitute agreement  
11 and consent of the Parties to the agreement, their respective  
12 heirs, successors and assigns that the Town of Buckfield may  
13 take such action as necessary to implement the  
14 decommissioning plan.

15 22.9 The escrow agent shall release the decommissioning funds  
16 when the Owner/operator has demonstrated and the  
17 Enforcement Authority concurs that the decommissioning  
18 has been satisfactorily completed, or upon written approval  
19 of the Town in order to implement the decommissioning plan.

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1 **23.0 Real Estate Property Value Assurance Plan**

2 **[This section left intentionally blank.]**

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1 **24.0 Tax Valuation Agreement and Tax Impact**

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1 **25.0 Jurisdiction Across Multiple Municipalities**

2 This section addresses issues unique to the geography of the  
3 Town of Buckfield and its neighboring towns with which it  
4 shares a common boundary. In the event that potential sites for  
5 WEFs share multiple municipal jurisdictions, project permits  
6 should be coordinated to the fullest extent possible across town  
7 boundaries, while at the same time maintaining each individual  
8 Town's right to individual Home Rule.

9 25.1 This Ordinance applies to WEFs located wholly or partially  
10 in the Town of Buckfield to the fullest extent allowable by  
11 municipal, state, and federal law.

12 25.2 Approval to build or operate a WEF applies only to that portion of  
13 the WEF located within the boundaries of the Town of Buckfield.  
14 However, the application must take into account the entire WEF  
15 across municipal boundaries, including but not limited to the  
16 total number of Wind Turbines, Turbine Height, Wind Turbine  
17 location and all other relevant facts and data that may directly or  
18 indirectly affect the operation and viability of that portion of the  
19 WEF located in the Town of Buckfield.

20 25.3 Setback, Noise, Shadow Flicker and Mitigation Waiver standards  
21 for WEFs located and operated in the Town of Buckfield shall  
22 apply to property lines and roads irrespective of Town boundaries.

1 For the purpose of this section a resident of such abutting towns  
2 is afforded the same protections as a resident of Buckfield.

3 25.4 This subsection applies to WEFs that are located partially in  
4 Buckfield and partially in neighboring Towns. To receive a  
5 permit from the Town of Buckfield for that portion of the WEF  
6 located in the Town of Buckfield, the Owner/Operator shall agree  
7 in writing that the most protective setback and noise ordinance  
8 standard from any Town located within the WEF area shall  
9 control. The controlling ordinance must be in effect at the time the  
10 permit is granted.

11 25.5 The Town Clerk shall forward notice of WEF permit applications  
12 within 10 days of receipt, and notice of hearings and public  
13 meetings 14 days in advance, to the Selectmen and Planning  
14 Boards of adjacent communities for all WEFs if the neighboring  
15 community is located within a defined Setback of this Ordinance.

## 16 26.0 Ethical Standards

### 17 26.1 Transparency, Public Participation and Highest Ethical 18 Standards

19 All public deliberations and decisions regarding WEFs and  
20 Community Owned Wind shall be conducted in an open,  
21 transparent manner that encourages the broadest public  
22 participation and adherence to the highest ethical standards.

1        26.2 Public Access

2            All deliberations concerning WEFs and Community Owned  
3            Wind, whether in writing or conducted verbally, by the Planning  
4            Board, Selectmen, and any subcommittees or working groups of the  
5            aforementioned bodies shall fully comply with the letter and spirit  
6            of State law regarding Freedom of Access pursuant to Title 1;  
7            Chapter 13; Subchapter 1. Specifically, all deliberations regarding  
8            WEFs between members of the Planning Board, Selectmen, and  
9            any subcommittees and working groups shall be conducted at  
10           public meetings, which have been duly posted. Exceptions will be  
11           made only for: 1)appropriately recorded and executed executive  
12           sessions, and 2)communicating the minimal information  
13           necessary to set up and facilitate public meetings. Detailed  
14           minutes of deliberations and decisions concerning WEFs and  
15           Community Owned Wind will be recorded and posted. Copies of  
16           all correspondence and e-mails will be made available to the  
17           public with the exception of those publicly identified and disclosed  
18           as being subject to "attorney-client privilege" by the Town  
19           attorney. All documents, correspondence and e-mails generated  
20           by consultants on behalf of the Planning Board, the Selectmen,  
21           their subcommittees and working groups shall be part of the public  
22           record.

1       26.3 Conflicts of Interest

2           The process to develop, permit and administer WEFs or  
3           Community Owned Wind shall be governed by a strict ethical  
4           code for conflicts of interest. No elected or appointed Town  
5           official or Town employee, their immediate family members, or  
6           their employees, who has a conflict of interest shall be directly  
7           or indirectly involved in the planning process or decision-making  
8           process for WEFs. Conflicts of interest include but are not  
9           limited to:

- 10           1. having a lease as a Participating Landowner for a Wind  
11           Turbine or transmission right-of-way,
- 12           2. having an identified financial arrangement with a wind  
13           development company including a signed Mitigation  
14           Waiver with financial remuneration,
- 15           3. serving as a paid representative of a wind development  
16           company, or a written or verbal promise for future  
17           employment or contracts from a wind development  
18           company;
- 19           4. being directly or indirectly affiliated or related to an  
20           Applicant with a pending application for a WEF, and,
- 21           5. knowing there is a substantial opportunity to accept bids,  
22           receive remuneration, or employment valued at greater

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Individuals with a conflict of interest must identify the conflict of interest and recuse themselves from all direct and indirect planning and decision making regarding WEFs or Community Owned Wind, with the exception of voting and debating as a private citizen at any public meetings and public hearings.

26.4 Bidding and Contracting

All bidding, contracts and employment for Community Owned Wind projects must be awarded through a process of public notice and competitive bidding. The Town of Buckfield reserves the right to design the bidding process to favor local contracts and local employment.

26.5 Code of Ethics for Wind Companies and Municipal Employees

26.5.1 Wind companies will not hire municipal employees or their relatives, give gifts of more than \$10 during a one-year period, or provide any other form of compensation that is contingent on any action before a municipal agency

26.5.2 Wind companies will not solicit, use, or knowingly receive confidential information acquired by a municipal officer in the course of his or her official duties.

1        26.5.3 Wind companies will submit to the Planning Board  
2            the names of all municipal officers or their relatives who  
3            have a financial stake in WEF development.

4        26.5.4 Wind companies will submit, in writing to the town clerk  
5            for public inspection, the nature and scope of the municipal  
6            officers' financial interest.

7    **27.0 Noise Measurement Standards and Procedures**

8        27.1 A qualified independent acoustical consultant who is a Full  
9            Member of the Institute of Noise Control Engineering (INCE)  
10          shall conduct all noise studies. The acoustical consultant shall  
11          be hired by and report to the Permitting Authority. The  
12          Applicant will pay for the studies.

13       27.2 The WEF Applicant/Licensee shall provide all technical  
14          information and wind farm data required by the qualified  
15          independent acoustical consultant before, during, and/or after  
16          any acoustical studies required by this document and for  
17          acoustical measurements.

18       27.3 Sound level meters and calibration equipment must comply  
19          with the latest version of the American National Standards  
20          Institute "American Standard Specifications for General  
21          Purpose  
22          Sound Level Meters" (ANSI Standard S1.4) and shall have

1           been calibrated at a recognized laboratory within one  
2           month prior to the initiation of the study.

3           27.4 Except as specifically noted otherwise, measurements shall  
4           be conducted in compliance with ANSI Standard S12.18-1994  
5           "Outdoor Measurements of Sound Pressure".

6           27.5 Along with information about the make, model, and name  
7           plate capacity of all turbines potentially used in the proposed  
8           WEF, the applicant will also supply their sound power levels  
9           (Lw) for each 1/3 octave band from 6.3 Hz to 10k Hz.

10          27.6 The applicant will also supply a sound propagation model  
11          predicting the sound levels immitted into the community  
12          computed using at minimum 1/1 octave band sound power levels  
13          to compute the L<sub>Ceq</sub> and L<sub>Aeq</sub> levels to generate L<sub>Aeq</sub> and  
14          L<sub>Ceq</sub> contours in 5 dB increments overlaying an aerial view  
15          and property survey map from the WEF property out to a  
16          distance to include all residential property lines within two (2)  
17          miles measured horizontally from the Project Boundary.

18          27.7 Prior to permit application approval, a pre-construction  
19          ambient noise level study shall be conducted at each property  
20          line within 2 miles measured horizontally from the Project  
21          Boundary.

22          27.8 The tests shall be conducted using both an A-weighting

1 scale (dBA) and low frequency C-weighting scale (dBC).

2 27.9 Predictions shall be made at all property lines within and  
3 outward for two (2) miles measured horizontally from the  
4 Project Boundary for the wind speed, direction and operating  
5 mode that would result in the worst case WEF nighttime sound  
6 emissions.

7 27.10 Tests shall be reflective of seasonal changes to vegetation  
8 and atmospheric conditions. At a minimum one set of tests  
9 should be performed during each of the four (4) calendar  
10 seasons of the year.

11 27.11 All measuring points shall be located in consultation with the  
12 property owners and such that no significant obstruction blocks  
13 noise and vibration to the site.

14 27.12 Outdoor noise level measurements must be taken at 6 feet  
15 above the ground and at least 15 feet from any reflective surface.

16 27.13 Duration of measurements shall be a minimum of ten  
17 continuous minutes for each criteria at each location.

18 27.14 Measurements must be made when the wind levels are less  
19 than 4.5 mph and with appropriate wind screening for the  
20 recording device.

21 27.15 When conducting their pre-construction noise prediction  
22 analysis, the Applicant shall make specific reference to: 1) the



1 unique aspects of the mountainous contours and terrain of the  
2 area and its effect on noise predictability and; 2) line source  
3 noise predictions (emanating from a line of Wind Turbines) in  
4 addition to the traditional single point source predictions.

5 27.16 Measurements should be obtained during representative  
6 weather conditions when the Wind Turbine noise is most  
7 noticeable, including periods of temperature inversion most  
8 commonly occurring at night.

9 27.17 Measurements shall be taken at each of the following three  
10 time periods:

11 27.17.1 Day (10 a.m. — 2p.m.)

12 27.17.2 Evening (7p.m. —11 p.m.)

13 27.17.3 Night (12 midnight — 4 a.m.)

14 27.18 Each measurement shall be replicated during the same time  
15 period over three different days within the same season for a  
16 total of 9 measurements per location per season (e.g., three  
17 daytime  
18 measurements in the winter, three evening measurements in the  
19 winter, and three night time measurements in the winter). The  
20 lowest of the three measurements per time period, per season,  
21 will be used to determine the pre-construction ambient noise for  
22 that time period and season.

1 27.19 For each measurement the following minimum criteria will be  
2 recorded:

3 27.19.1 Lmax, Leq, L10 and L90 in dBA

4 27.19.2 Lmax, Leq, L10 and L90 in dBC

5 27.19.3 A narrative description of any intermittent noises  
6 registered during each measurement.

7 27.19.4 Wind speed and direction at time of measurement

8 27.19.5 Description of weather conditions at time of  
9 measurement

10 27.19.6 Description of topography and contours relative to  
11 proposed or actual Wind Turbines

12 27.20 A comparison of the expected sound levels from the  
13 proposed WEF with the sound level limits of this regulation  
14 shall be submitted. Per Maine TA Bulletin #4, a written report  
15 comparing  
16 the expected sound levels with the pre-development ambient  
17 sound levels will help determine compliance with the standard.

18 27.21 A 5 dBA and/or a 5 dBC penalty shall be applied for short  
19 duration repetitive noise or repetitive impulse noise. This is a  
20 characteristic "thumping" or "whooshing" sometimes exhibited  
21 by larger Wind Turbines. Per Maine TA Bulletin #4, intermittent  
22 noise is a more serious nuisance than constant noise.

1 27.22 A 5 dBA penalty shall be applied for tonal noise. This is a  
2 single or limited frequency noise (vs. broadband noise) associated  
3 with mechanical noise artifacts (i.e. high pitched whining,  
4 screeching, buzzing). Per Maine TA Bulletin #4, noise over a  
5 narrow frequency is more serious nuisance than broadband noise.

6 27.23 For sites being measured with existing Wind Turbines two  
7 sets of measurements are required:

8 1) one set with the Wind Turbine(s) off and; 2) one set with the  
9 Wind Turbine(s) running.

10 27.24 For noise complaints after the Wind Turbines are operational,  
11 the measurement points, season, time, and duration of  
12 measurements shall be selected in consultation with the affected  
13 property owner. If requested by the property owner, continuous  
14 measurements may be taken for longer periods of time to  
15 capture intermittent nuisance noise patterns.

16 27.25 Within twelve months of the date when the project is fully  
17 operational, and within four weeks of the anniversary date of  
18 the pre-construction background noise measurements, repeat  
19 the existing sound environment measurements taken before the  
20 project approval. Post-construction sound level measurements  
21 shall be taken both with all WEF's running and with all WEF's off.

22 27.26 The post-construction measurements will be reported to the  
23 Town of Buckfield (available for public review) using the same

1 format as used for the preconstruction sound studies. Post-  
2 construction noise studies shall be conducted by a qualified  
3 independent acoustical engineer contracted by the applicant and  
4 paid for by the Owner/operator thru the town to preserve the  
5 status of the engineer as a qualified independent consultant,  
6 the town will at their discretion have the testing  
7 independently reviewed.

8 27.27 Any noise level falling between two (2) whole decibels shall  
9 be deemed the higher of the two.

10 27.28 When testing for WEF noise compliance, all measurements at  
11 the test location must be the pre-turbine background noise  
12 measurement location nearest to the home of the complainant  
13 in line with the WEF and nearer to it. The time of day for the  
14 testing and the wind farm operating conditions plus wind speed  
15 and direction must replicate the conditions that generated the  
16 complaint. Procedures of ANSI S12.9-Part 3 apply. The effect of  
17 instrumentation limits for wind and other factors must be  
18 recognized and followed.

19 **28.0 WEF Submission Standards and Fees**

20 28.1 Fees and Bonds.

21 28.1.1 Application Fee: As set by the Board of Selectmen.

22 28.1.2 Professional Fees Escrow: See section 17.

1 28.1.3 Decommissioning Bond: See Section 22.0.

2 28.1.4 Road Damage Bond: See Section 15.9.4.

3 28.2 Submission standards.

4 All information in this application, unless specified, will become  
5 part of the public record. Information submitted by the Applicant  
6 must be continuously updated throughout the application  
7 process as changes are made or new information becomes  
8 available. The Applicant shall include a written application, which  
9 shall include:

10 28.2.1 Applicant's name and contact information.

11 28.2.2 Legal Owner/operator and contact information.

12 28.2.3 Description of the legal structure of the WEF including a  
13 corporate organizational chart, ownership and equity structure,  
14 and all investors.

15 28.2.4 Description of the proposed WEF that includes the  
16 number of Wind Turbines, the nameplate capacity of each Wind  
17 Turbine, Turbine Height and manufacturer's specifications for  
18 each Wind Turbine, the aggregate generating capacity of the entire  
19 project, and a description of associated facilities.

20 28.2.5 Location map of the project showing the location of the  
21 each Wind Turbine, associated facilities, all property under  
22 partial or total control of Applicant including easements and those

1 under lease with Participating Landowners, roads, municipal  
2 boundaries, proximity to all Scenic or Special Resource features  
3 in the Town of Buckfield and major geographical features.

4 28.2.6 Detailed site plan showing the location of each Wind  
5 Turbine and Associated Facility and any of the following features  
6 located within 1.5 times the required setback: property  
7 boundaries, required setbacks, topographic contour lines  
8 (maximum 20-foot interval), buildings (identify use), roads,  
9 driveways, right-of-ways, overhead utility lines, Scenic or Special  
10 Resources, tree cover, wetlands, streams, water bodies, areas  
11 proposed to be cleared of vegetation or re-graded, and areas  
12 proposed to be significantly excavated or blasted.

13 28.2.7 Copies of all Participating Landowner agreements and  
14 easement agreements.

15 28.2.8 Copies of any deeds or purchase agreements for land owned  
16 or under option by the Owner/operator.

17 28.2.9 Receipt showing payment of application fees and escrow  
18 for professional and public hearing fees.

19 28.2.10 A copy of the most current business plan for the WEF.

20 28.2.11 A copy of all collected and available relevant wind data  
21 for the WEF. This information is a critical indicator of the long-  
22 term financial viability of the project.

1 28.2.12 Proof of financing.

2 28.2.13 Reference list of all previous WEFs with which the  
3 Owner/operator has been affiliated.

4 28.2.14 Proof of compliance with all required setbacks. The  
5 Applicant shall work with the Permitting Authority to complete a  
6 pre-construction noise study per Section 27.0 . This study must be  
7 completed before the permit can be approved.

8 28.2.15 A detailed noise prediction model for worst-case noise  
9 scenarios based on wind speed and wind direction for the WEFs.  
10 The study shall be projected onto a contour map for a minimum  
11 of two miles from each Wind Turbine. Worst-case scenarios for  
12 each property line within the 2-mile radius, measured  
13 horizontally from the Project Boundary, shall be reported in table  
14 form. The model will address the unique mountainous terrain of  
15 the area. Noise predictions will include both single source and  
16 line source origination. All underlying assumptions and  
17 algorithms in the model will be documented.

18 28.2.16 As part of the review process, the Applicant will, per  
19 Maine TA Bulletin #4, provide written demonstration that the  
20 noise standards in this Ordinance will be met.

21 28.2.17 The Wind Turbine manufacturer's noise emission  
22 specifications for each Wind Turbine model.

1 28.2.18 A shadow flicker and blade reflection model for the  
2 proposed WEF. The model will provide a worst-case scenario  
3 (100%) seasonal representation for each Occupied Building within  
4 two miles of any Wind Turbine. The model will calculate  
5 maximum hours of shadow flicker and blade reflection in table  
6 form for each Occupied Building. A worst-case scenario shall  
7 also be constructed for vehicle traffic.

8 28.2.19 Copies of all executed Mitigation Waiver agreements  
9 concerning Setbacks, Noise and Shadow Flicker/Blade Reflection.

10 28.2.20 Written demonstration that the Wind Turbine Plan is  
11 consistent with all other Buckfield regulations, ordinances and  
12 policies.

13 28.2.21 Documentation showing compliance with Section 15.2.1,  
14 both during construction and post construction.

15 28.2.22 Documentation showing compliance with Section 15.2.2  
16 and with Section 15.2. 3.

17 28.2.23 Documentation showing compliance with Section 15.2.4.  
18 Documentation must include a construction site erosion plan and  
19 storm water runoff control plan that minimizes potential adverse  
20 impacts on streams and wetlands.

21 28.2.24 Documentation showing compliance with Section 15.2.5.

22 28.2.25 Documentation showing compliance with Section 15.2.6.



1 28.2.26 Written evidence that the Environmental Coordinator  
2 of the Maine Department of Inland Fisheries and Wildlife and  
3 the Maine Natural Areas Program have both been notified of the  
4 pending application and the location and Turbine Height of all  
5 proposed Wind Turbines.

6 28.2.27 A Location of Development permit from the Maine  
7 Department of Environmental Protection (DEP) pursuant to Title  
8 35-A M.R.S.A. §3451, Title 35-A M.R.S.A. § 3456 and Title 38  
9 M.R.S.A § 482 is required unless the Wind Turbine: 1) does not  
10 sell or convert electricity for off site use including net metering;  
11 and, 2) does not qualify as a Structure with a total land area in  
12 excess of 3 acres for the entire WEF.

13 28.2.28 A visual impact assessment pursuant to Section 15.3

14 28.2.29 Photographs of existing conditions of each Wind Turbine  
15 and associated facility site.

16 28.2.30 Sight line, photographic, and elevation information shall  
17 be provided from: 1) each Occupied Building within the Setback;  
18 2) from any Scenic or Special Resource location and other  
19 locations as the Permitting Authority deems necessary.

20 28.2.30.1 A Sight Line Representation shall be drawn that shows  
21 the lowest point to the Wind Turbine visible from each location.  
22 Each sight line shall be depicted in profile, drawn at one-inch

1 equals 40 feet. The profiles shall show all intervening trees and  
2 physical structures.

3 28.2.30.2 Each Sight Line shall be illustrated by one four-inch by  
4 six-inch color photograph of the current view.

5 28.2.30.3 Each of the existing condition photographs shall have  
6 the proposed Wind Turbines superimposed on it to accurately  
7 simulate the WEF when built.

8 28.2.30.4 Elevations of the tops of any structures on the subject  
9 property relative to the elevation of the Wind Turbines(s)

10 28.2.30.5 The height and elevation relative to the Wind Turbine(s)  
11 of trees, both existing and proposed, that are to provide visual  
12 buffering. In the case of trees to be planted, the proposed height  
13 at the time of planting as well as the projected mature height is to  
14 be provided.

15 28.2.31 Demonstrate compliance with Section 13.3 . Provide a  
16 written description of emergency and normal shutdown  
17 operations.

18 28.2.32 Demonstrate compliance with Section 14.1 . Submit  
19 required permits from the Federal Aviation Administration.

20 28.2.33 Demonstrates compliance with Section 14.2 .

21 28.2.34 Submit contract with Maine licensed professional

1 engineer to conduct post construction structural and operational  
2 inspection and written agreement by Applicant to submit proof of  
3 successful inspection as a condition of permitting before  
4 operating WEF

5 28.2.35 Proof of liability Insurance in the amount of five million  
6 dollars (\$5,000,000.00) per occurrence.

7 28.2.36 Time-line showing all aspects of the construction.

8 28.2.37 Photographs and detailed drawings of each Wind Turbine,  
9 including foundation design. Details must be provided of all  
10 significant excavation and blasting.

11 28.2.38 Demonstrate compliance with Section 15.4.3. A map  
12 shall be provided showing all transmission lines and rights-of-  
13 way that will need to be built or upgraded to accommodate the  
14 WEF. Applicant shall submit copies of signed letters of intent to  
15 grant easements, longterm leases or other property rights from  
16 involved landowners and any governmental unit responsible for  
17 access, approval or construction of electric transmission and  
18 distribution lines, whether part of the WEF or part of the local  
19 electrical distribution grid. The Applicant shall submit an  
20 affidavit stating that no property will need to be taken by eminent  
21 domain to facilitate transmission lines necessary to support the  
22 project.

1 28.2.39 A geological report from a registered geotechnical  
2 engineer demonstrating that the soils can support the Wind  
3 Turbines and the underlying ground is geologically stable. The  
4 report shall include a slope stability analysis and any underlying  
5 fault zones.

6 28.2.40 A written summary of all routine operation and  
7 maintenance procedures for the WEF.

8 28.2.41 Demonstrate compliance with Section 15.6 . Provide an  
9 estimate of required new equipment and training to be provided.

10 28.2.42 Document all potential hazardous wastes that will be used  
11 on the WEF, including but not limited to any chemicals used to  
12 clean the Wind Turbine blades, and how these wastes will be  
13 transported, handled, stored, cleaned up if spilled, and disposed  
14 of during any phase of the project's life.

15 28.2.43 A communication/electromagnetic interference study  
16 prepared by a registered professional engineer showing that the  
17 proposed WEF will comply with Section 15.7 . The Owner/operator  
18 will sign an affidavit stating that the owner /operator shall be  
19 responsible for the full cost of remediation to remain in  
20 compliance with this Section.

21 28.2.44 Demonstrate compliance with Section 15.8 . Before and  
22 after photographs or videos of the roadways, in a format

1 approved by the Permitting Authority, shall be submitted as part  
2 of the documentation process.

3 28.2.45 A road and property use and risk assessment plan in  
4 compliance with Section 15.9.

5 28.2.46 An affidavit agreeing to comply with all provisions in  
6 Section 15.10.

7 28.2.47 An affidavit agreeing to comply with all provisions in  
8 Section 21.0.

9 28.2.48 A decommissioning plan in compliance with Section 22.0.

10 28.2.49 Copies of executed contracts as per Section 23.0.

11 28.2.50 An Tax Valuation Agreement must be submitted, if  
12 required under Section 24.1.

13 28.2.51 If the WEF crosses multiple municipal jurisdictions the  
14 Applicant shall demonstrate compliance with Section 25.4.

15 28.2.52 Copies of all written agreements and disclosure of all  
16 verbal promises, for contracts, subcontracts, employment,  
17 consulting fees, gifts or other remuneration in excess of \$10  
18 (cash or in-kind) to residents or businesses in Buckfield, either  
19 previously made or contingent on permitting of this project.

20 28.2.53 An Affidavit agreeing to comply with all provisions of  
21 Section 26.5

1 28.2.54 Applicant shall deliver a letter by certified mail to the  
2 owner of any property that the Applicant proposes to be  
3 restricted by the permit. The letter will state that the Applicant  
4 has filed an application, list future development that will be  
5 restricted, and to what extent it will be restricted, on abutting  
6 properties by virtue of the permit being granted. Examples of  
7 restrictions include, but are not limited to, building Occupied  
8 Buildings within the setback area without a Mitigation Waiver,  
9 building structures (i.e. Wind Turbines or cell towers that the  
10 WEF would interfere with), zones in which future  
11 telecommunication installations can expect interference from the  
12 WEF. Applicant must provide fair compensation to any non-  
13 participating landowners within the setback areas for restricting  
14 future development of their property.

15 28.2.55 Proof that the Applicant has notified the following agencies  
16 via certified mail and received any necessary permits or  
17 permissions for the project:

18 Federal Aviation Administration.

19 Department of Defense facilities located within 50 miles from the  
20 proposed WEF.

21 28.2.56 Other relevant studies, reports, certifications and  
22 approvals as may be reasonably requested by the Permitting

1 Authority to ensure compliance with this Ordinance.

2 28.2.57 Signed affidavit from the Owner/operator that Applicant  
3 has read the Town of Buckfield Wind Turbine Ordinance and  
4 agrees to abide by its provisions, as may be amended from time  
5 to time.

6