

**TOWN OF ORANGE**

**ORDINANCE FOR**

**LARGE WIND ENERGY SYSTEMS**

**(LWES)**

**For Warrant Article March 8, 2016**

**Recommended by the**

**ORANGE PLANNING BOARD**

**January 19, 2016**

# ORDINANCE FOR LARGE WIND ENERGY SYSTEMS (LWES)

## Orange, New Hampshire

### A. PURPOSE:

The purpose of this Ordinance is to provide for the development and use of wind power as an alternative energy source, benefiting both the economy and the environment, while protecting public health, safety, property values, wildlife, and general welfare; preserving environmental, historic and scenic resources; controlling Sound Pressure Levels; and preventing electromagnetic interference.

This Ordinance provides regulation for Large Wind Energy Systems (LWES). This Ordinance also provides guidance to the NH Site Evaluation Committee (NH SEC) regarding proposed LWES of which the NH SEC has jurisdiction by establishing standards to ensure that LWES do not unduly interfere with the orderly development of the region as provided by RSA 162-H:16, IV (b).

This Ordinance is adopted pursuant to the enabling provisions of NH RSA 674:1, V, NH RSA 674:16, NH RSA 674:17(j). In addition, pursuant to the provisions of NH RSA 674:43, the Orange Planning Board is hereby granted the authority to require preliminary review of site plans and to review and approve or disapprove site plans and issue authorization for the construction or operation of Large Wind Energy Systems, including Meteorological Towers, in the Town of Orange, subject to these provisions.

If there is a conflict between provisions in this Ordinance, or between its provisions and those in any other Town ordinance or regulation, the provision which imposes the greater restriction or higher standard shall be controlling.

### B. DEFINITIONS: The following terms shall have the meanings indicated:

"Adverse Noise Impacts"- Disturbances that interfere with: customary speech and communications both indoors and outdoors, telephone conversations, reading, tasks requiring concentration, listening to music or television, and sleep.

"Applicant"- The person, firm, corporation, company, or other entity who applies for approval under this Section, as well as the Applicant's successor(s), assign(s) and/or transferee(s) as to any approved LWES or testing facility. An applicant must have the legal authority to represent and bind the landowner or lessee who will construct, own, and operate the LWES or testing facility. The duties and obligations regarding approval for any approved LWES or testing facility shall be with the owner of the LWES or testing facility, and jointly and severally with the owner and operator or lessee of the LWES or testing facility.

"Application"- An application for a LWES under this Section.

"Automatic Obstruction Lighting System" - A lighting system that provides continuous 360-degree surveillance of the air space around a wind farm from the ground level to above aircraft flight altitudes, automatically activating obstruction lighting when aircraft are detected at a defined outer perimeter and course of travel.

"A-weighted (dBA)"- The unit of measure for the human response to noise, using an electronic filter as specified by ANSI approximating the frequency response of the human ear from 20 Hz to 20 kHz.

"Background Sound Pressure Level" - The Sound Pressure Level represented without the wind turbines operating and when man-made and natural intrusive sounds are at a minimum. The intent of this definition is to exclude Sound Pressure Level contributions from intermittent noises such as traffic and emergency vehicles, and from seasonal natural sounds such as tree frogs and crickets that are not present year round.

"Blade Glint"- The intermittent reflection of the sun off the surface of the blades of a single Wind

Turbine or multiple Turbines.

"Debris Hazard"- Hazard owing to the possibility that the parts of a LWES, or material (ice or other debris) accumulated on its rotating elements, could be dislodged and fall or be thrown some distance onto surrounding property.

"FAA"-The Federal Aviation Administration.

"Health"- State of complete physical, mental and social well-being and not merely the absence of disease or infirmity

"Impact(s)"- Includes any effect on the environment, including sound and visual impacts such as changes in sound pressure, noise and light in the environment.

"Infrasound" - Sound energy below 20 Hz.

"Large Wind Energy System (LWES)"- An electricity-generating facility with a generating capacity of over 100 kilowatts, consisting of one or more Wind Turbines, including any substations, Met Towers, cables/wires, and other buildings accessory to such facility.

"Leq"-The equivalent continuous Sound Pressure Level that has the same acoustic energy for a constant Sound Pressure Level as for a fluctuating or intermittent level in the same period of time.

"Met Tower"- A meteorological tower used for the measurement of wind speed.

"Natural Environment"- Includes navigable waters, waters of a contiguous zone, ocean waters and any other surface water, groundwater, drinking-water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States, including wildlife, ecosystems, and habitat, and historical, cultural, recreational and archeological resources.

"Neighboring Area"- Orange and abutting towns.

"Noise"-Any unwanted sound or any sound that is not part of the natural environment.

"Non-Participating Landowner"- Any landowner who is not a Participating Landowner pursuant to definition below.

"Octave Band" - A band of sound covering a range of frequencies such that the highest is twice the lowest, as defined in ANSI Standard S 1.11.

"One-Third Octave Band" - A band of sound covering a range of frequencies such that the highest frequency is the cube root of two times the lowest, as defined in ANSI Standard S 1.11.

"Participating Landowner"- Any landowner on whose property all or a portion of a Large Wind Energy System is located pursuant to an agreement with the Applicant or any land owner who has waived his or her rights for protection under this Ordinance.

"Permit to Construct" - After the application has been reviewed, approved and the site plan is authorized by the Planning Board, the Orange Board of Selectmen shall issue a Permit to construct the project.

"Permit to Operate" - A written approval issued by the Orange Board of Selectmen to operate a LWES once such project has been approved and authorized by the Planning Board.

"Project Boundary" - A continuous line that encompasses all Wind Turbines and related equipment to be used in association with a Large Wind Energy System.

"Prosperity" - Often encompasses wealth but also includes other factors which can be independent of wealth to varying degrees, such as happiness and health.

"Public Infrastructure"- Roadways, culverts, and bridges maintained by the Town of Orange or State of New Hampshire.

"Setback" - The distance a LWES tower base is setback from abutting property lines, structures, or other features.

"Shadow Flicker"-The effect when the blades of an operating Wind Turbine pass between the sun and an observer, casting a readily observable, moving shadow on the observer and his/her immediate environment.

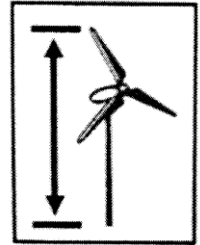
"Sound Power Level"- Lw. Ten times the logarithm to the base ten of the ratio of the sound power radiated by the source to a reference sound power, expressed in decibels (dB). The reference sound power is 1 picowatt (pW).

"Sound Pressure Level" - Lp. Twenty times the logarithm to the base ten of the ratio of a given sound pressure to a reference sound pressure of 20 microPascals (uPa), expressed in decibels (dB).

"Total Height"-When referring to a Wind Turbine, the distance measured from ground level to the blade extended at its highest point.

"Tower Shadowing"- The shadow created on the surrounding area by the sun shining on a Wind Turbine.

"Useful Life"-The LWES or individual Wind Turbine(s) will be presumed to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months.



"Visual Clutter" - The accumulation of diverse built elements on a site, especially elements that contrast with their surroundings in form, color, texture, or pattern.

"Welfare"-A state of well-being.

"Well-being"- A good or satisfactory condition of existence; a state characterized by health, happiness, and prosperity.

"Wind Shear" - The difference in atmospheric wind speed and direction occurring over relatively small increases in altitude (wind gradient).

"Wind Turbine" - A wind-energy conversion system that converts wind energy into electricity through the use of a wind-turbine generator, including the turbine, blade, tower, base, and pad transformer, if any.

## **C. LARGE WIND ENERGY SYSTEM REQUIREMENTS:**

### **1. Design, Manufacture, Construction, and Maintenance Standards**

- a) In order to minimize Visual Clutter, Wind Turbines shall use tubular towers of similar design, size, operation, and appearance throughout the project, which shall be painted a non-reflective, nonobtrusive color. Blades shall be coated or otherwise designed with a material to minimize Blade Glint.
- b) At LWES sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening, and landscaping that will blend with the existing natural setting and environment.
- c) Wind Turbines shall not be used for displaying any signs or advertising except for signs at ground level for reasonable identification of the manufacturer, owner, or operator of the LWES, the utility procuring the power, emergency contact information, and appropriate warnings as required by national, state, and local laws. Such identification shall not be illuminated. All signage shall meet Orange's Site Plan Review Regulations. Any graffiti on LWES structures shall be removed as soon as practical.
- d) Control wiring and power lines shall be wireless or below ground except where collector wiring is brought together for connection to the transmission or distribution network adjacent to that network. The Planning Board may permit above-ground wiring, if in the opinion of the Planning Board, its Impact, including but not limited to environmental and visual Impacts, is less than the Impact of below-ground wiring.
- e) The Applicant of an LWES shall not undertake any blasting without specific approval of such blasting during Site Plan Review. Terms and conditions for the blasting, including any necessary notifications, shall be specified during Site Plan Review.

- i. The Applicant shall prepare an inventory of all structures, wells, bridges, and other

seismically sensitive structures that could potentially be damaged by blasting.

- ii. Before each blasting event, the Applicant shall notify all Participating and Non-Participating Landowners whose property can be potentially damaged of the time and date of the event. The Applicant shall receive signature verification of such notice.
  - iii. Flying rock traveling in the air or along the ground is not permitted to cross into the property of Non-Participating Landowner(s).
  - iv. A blasting log for each blast shall be kept on site at the LWES office for not less than five (5) years, and copies of the required blasting log shall be promptly submitted to the Planning Board upon completion of construction of the LWES.
  - v. Pre-blasting and post-blasting inspection and documentation may be required by the Planning Board.
- f) If at any time during construction, operation, or maintenance of the LWES, the Applicant wishes to modify the approved Site Plan, the Applicant shall submit to the Planning Board an Amended Site Plan for review and approval.
  - g) Construction and maintenance activities shall be organized and timed to minimize Impacts on residents and wildlife from noise, disruption (including disruption of wildlife habitat), and the presence of vehicles and people. Construction and maintenance, unless there is an imminent threat to life or property, shall be performed only on weekdays between the hours of 7 AM and 6 PM. The Planning Board has the authority to waive this requirement if, in its opinion, there is good reason to do so.
  - h) Any construction equipment or parts (used or unused) kept on site shall be stored indoors except during periods of construction, maintenance, and repair.

## **2. Height**

- a) The Total Height of the Wind Turbines shall not exceed 350 feet.
- b) Met Towers must be less than 200 feet in height, and must be designed so as not to require lighting in compliance with FAA regulations. Guy wires are allowed on Met Towers, but must be designed so as to limit environmental hazards to wildlife, especially birds and bats.

## **3. Setbacks**

All LWES tower bases must be sited so as to be set back from adjacent property lines by at least two thousand (2,000) feet. An exception can be made to this requirement in the case of a Participating Landowner who waives his or her rights under this ordinance; such waivers shall exclude the ability of the owner of that property to have or build any structures within 2,000 feet of the closest LWES tower and shall be recorded in the Grafton County Registry of Deeds. In no case shall the Setback be less than 1.5 times the maximum height of the Wind Turbine from the nearest property line or from areas such as roads, trails, or other areas accessible by the public. The applicant shall submit a plan showing the required Setback for each tower as a circle for a single tower or as a series of connected arcs centered on each turbine for multiple towers and submitted with the applicable setbacks graphically superimposed to scale on town maps identifying map and lot numbers, lot owners, structures, and lot property lines.

## **4. Communications Interference**

Any LWES shall be sited and operated so that it does not interfere with television, telephone (including cellular and digital), microwave, satellite (dish), navigational, or radio reception to neighboring areas. The Applicant shall be responsible for the full cost of any remediation necessary to provide equivalent alternate service or to correct any problems. Remedies may include relocation or removal of the LWES. The Applicant of the LWES shall respond within thirty (30) business days to any request for a communications interference investigation by a property owner within the Project Boundary and a

three-mile radius beyond the Project Boundary. Testing shall commence within that thirty (30) business day window. The Applicant is responsible for mitigating the cause, within sixty (60) business days from the determination of interference attributed to the operation of the LWES or, failing a determination of interference, the Applicant shall provide certification from a NH licensed Professional Engineer confirming that the proposed project did not interfere with television, telephone (including cellular and digital), microwave, satellite (dish), navigational, or radio reception to neighboring areas.

## **5. Sound Pressure Level Limits and Measurement**

The intent of this section is to preserve the quiet rural environment of Orange and to provide protection from Excessive Sound Pressure Levels that cause adverse Impacts to public Health, Welfare, and Well-being. Annoyance due to Noise, as measured by community surveys, is the consequence of activity interference. Sound Pressure Level limits are based on the recommended guidelines found in the United States Environmental Protection Agency's document *Information On Levels Of Environmental Noise Requisite To Protect Public Health And Welfare With An Adequate Margin of Safety, 550/9-74-004, March 1974* and include levels requisite to protect against activity interference. These Sound Pressure Level limits are consistent with the World Health Organization (WHO) night-noise guidelines for exposure to noise during sleep, found in the following documents: *Night Noise Guidelines (NNLG) For Europe, 2007* and *ISBN 978 92 890 4173 7, 2009*.

- a) Sound Pressure Levels produced by the LWES shall not exceed 33 dBA (Leq 10 minute) anywhere at any time on a Non-Participating Landowner's property.
- b) Any model used to predict Wind Turbine Noise shall use the following parameters:
  - (1) Adherence to the ANSI/ASA S12.9-2013 Part 3 standard which requires short-term attended measurements;
  - (2) Long-term unattended monitoring shall be conducted in accordance with the ANSI/ASA S12.9- 1992 Part 2 (R2013), provided that audio recordings are taken in order to clearly identify and remove transient noises from the data, with frequencies above 1250 hertz 1/3 octave band to be filtered out of the data;
  - (3) Measurements shall be conducted at the nearest properties from the proposed wind turbines that are representative of all non-participating residential properties within 2 miles of any turbine; and
  - (4) Sound measurements shall be omitted when the wind velocity is greater than 4 meters per second at the microphone position, when there is rain, or with temperatures below instrumentation minima; following ANSI/ASA S12.9-2013 Part 3 protocol, and shall comply with the following additional specifications:
    - (i) Microphones shall be placed 1 to 2 meters above ground level, and at least 15 feet from any reflective surface;
    - (ii) A windscreen of the type recommended by the monitoring instrument's manufacturer must be used for all data collection;
    - (iii) Microphones should be field-calibrated before and after measurements; and
    - (iv) An anemometer shall be located within close proximity to each microphone.
- c) Pre-construction sound reports shall include a map or diagram clearly showing the following:
  - (1) Layout of the project area, including topography, project boundary lines, and property lines;
  - (2) Locations of the sound measurement points;
  - (3) Distance between any sound measurement point and the nearest wind turbine;
  - (4) Location of significant local non-turbine sound and vibration sources;
  - (5) Distance between all sound measurement points and significant local sound sources;

- (6) Location of all sensitive receptors including schools, day-care centers, health care facilities, residences, residential neighborhoods, places of worship, and elderly care facilities;
  - (7) Indication of temperature, weather conditions, sources of ambient sound, and prevailing wind direction and speed for the monitoring period; and
  - (8) Final report shall provide A-weighted and C-weighted sound levels for L-10, Leq, and L-90.
- d) The predictive sound modeling study shall:
- (1) Be conducted in accordance with ISO 9613-2 1996-12-15 standards and specifications;
  - (2) Include an adjustment to the Leq sound level produced by the model applied in order to adjust for turbine manufacturer uncertainty, such adjustment to be determined in accordance with the most recent release of the IEC 61400 Part 11 standard (Edition 3.0 2012-11); this standard anticipates that the analysis of wind turbine acoustical emissions shall also consider sound power level and tonality for a batch of wind turbines as opposed to a single machine, pursuant to IEC 61400 Part 14 (First Edition 2005-03);
  - (3) Include predictions to be made at all properties within 2 miles from the project wind turbines for the wind speed and operating mode that would result in the worst case wind turbine sound emissions during the hours before 8:00 a.m. and after 8:00 p.m. each day;
  - (4) Incorporate other corrections for model algorithm error to be disclosed and accounted for in the model;
  - (5) Include no attenuation (zero) for ground cover or foliage; and
  - (6) Include a plus-5-dB design margin to the predicted Sound Pressure Levels to account for variations in atmospheric propagation due to refraction (the bending of sound waves in the atmosphere due to changes in air temperature or wind gradient).
- e) The predictive sound modeling study report shall:
- (1) Include a complete description and the results of the modeling required above as well as a map with sound contour lines showing dBA sound emitted from the proposed wind energy system at 5 dBA intervals;
  - (2) Include locations out to 2 miles from any wind turbine included in the proposed facility; and
  - (3) Show proposed wind turbine locations and the location of all sensitive receptors, including schools, day-care centers, health care facilities, residences, residential neighborhoods, places of worship, and elderly care facilities;
- f) Post-construction noise compliance monitoring shall include:
- (1) Adherence to ANSI/ASA S12.9-2013 Part 3 which requires short-term attended measurements to ensure transient noises are removed from the data; measurements shall include at least one nighttime hour where turbines are operating at full sound power with winds less than 3 meters per second at the microphone;
  - (2) Unattended long-term monitoring shall also be conducted;
  - (3) Sound measurements shall be omitted when there is rain, or when temperatures are below instrumentation minima, and shall comply with the following additional specifications:
    - (i) Microphones shall be placed 1 to 2 meters above ground level and at least 15 feet from any reflective surface, following the protocols of ANSI/ASA S12.9-2013 Part 3;
    - (ii) Proper microphone screens shall be required;
    - (iii) Microphones shall be field-calibrated before and after measurements; and
    - (iv) An anemometer shall be located within close proximity to each microphone;

- (4) Monitoring shall involve measurements being made with the turbines in both operating and non-operating modes, and supervisory control and data acquisition system data shall be used to record hub-height wind speed and turbine power output;
  - (5) Locations shall be pre-selected where noise measurements will be taken that shall be the same locations at which predictive sound modeling study measurements were taken pursuant to subsection (e) above, and the measurements shall be performed at night with winds above 4.5 meters per second at hub height and less than 3 meters per second at ground level;
  - (6) All sound measurements during post-construction monitoring shall be taken at 0.125-second intervals measuring both fast response and Leq metrics; and
  - (7) Post-construction monitoring surveys shall be conducted once within 3 months of commissioning, and once during each season thereafter for the first year; additional surveys shall be conducted at the request of Planning Board; adjustments to this schedule shall be permitted subject to review by the Planning Board.
- g) Post-construction sound monitoring reports shall include a map or diagram clearly showing the following:
    - (1) Layout of the project area, including topography, project boundary lines, and property lines;
    - (2) Locations of the sound measurement points; and
    - (3) Distance between any sound measurement point and the nearest wind turbine.
  - h) For each sound measurement period during post-construction monitoring, reports shall include each of the following measurements:
    - (1) LAeq, LA-10, and LA-90; and
    - (2) LCeq, LC-10, and LC-90;
  - i) Noise emissions shall be free of audible tones, and if the presence of a pure tone frequency is detected, a 5 dB penalty shall be added to the measured dBA sound level; and
  - j) Validation of noise complaints shall require field sound surveys conducted under the same meteorological conditions as occurred at the time of the alleged exceedance that is the subject of the complaint.

**6. Shadow Flicker, Tower Shadowing, and Blade Glint**

- a) The facility shall be designed such that Shadow Flicker or Tower Shadowing falling on or in any Non-Participating Landowner's property or a public or private road shall be limited as follows:
  - i. The Shadow Flicker or Tower Shadowing shall not exceed eight (8) hours per year in total.
  - ii. The traffic volumes of an affected road shall be fewer than 500 vehicles per day on the roadway.
  - iii. The Shadow Flicker or Tower Shadowing shall not fall onto an intersection.
- b) Blades shall be coated or otherwise designed with a material to minimize Blade Glint.
- c) At any time upon receipt of a verified complaint of Shadow Flicker, Tower Shadowing, and/or Blade Glint, the Applicant shall submit to the Planning Board a Shadow Flicker, Tower Shadowing, and Blade Glint study certifying that Shadow Flicker, Tower Shadowing or Blade Glint present no deleterious effects for any occupied structure located within a one-mile radius of any Wind Turbine.
- d) If Shadow Flicker and/or Blade Glint exceeds any of the conditions listed above, the source Wind Turbine(s) shall be shut down until the Shadow Flicker, Tower Shadowing, or Blade Glint problem is remedied.



## **7. Public Infrastructure**

The Applicant shall not adversely impact any Public Infrastructure occasioned by or in any manner related to the installation, operation, maintenance, and repair or decommissioning of the LWES. The Applicant shall provide documentation of written permission for any modifications to Public Infrastructure, including roadways and utilities, that may be required for the proposed LWES. This includes reimbursement to the Town or State for any repairs or reconstruction reasonably deemed necessary by the Town or State.

## **8. Erosion and Storm Water Control**

All storm water management and erosion control measures shall adhere to the “Erosion and Sediment Control Design Handbook for developing Areas of New Hampshire”, published by the Rockingham County Conservation District, dated August 1992.

During the construction, operation, and decommissioning of the LWES, the Applicant shall maintain any and all erosion and storm-water control practices described in the Erosion and Storm-Water Control Plans and Life Cycle and Decommissioning Plans submitted with the Application for Site Plan Review.

An application for an LWES approval shall include an Erosion and Storm-Water Control Plans prepared by a licensed engineer demonstrating compliance with this Ordinance.

## **9. Safety**

- a) Each Wind Turbine shall be equipped with both manual and automatic controls to limit the rotational speed of the blade to within the design limits of the rotor. All Wind Turbines shall be equipped with redundant braking systems. This includes both aerodynamic (including variable pitch) over-speed controls and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode, whereby they are engaged in the case of loss of load on the generator. Stall regulation shall not be considered a sufficient braking system for over-speed protection. A manual electrical and/or over-speed shutdown disconnect switch shall be provided and clearly labeled on/in the Wind Turbine structure.
- b) The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of not less than 75 feet.
- c) Any Wind Turbine and/or accessory structure shall not be climbable within 15 feet of ground level.
- d) The LWES shall be designed to prevent unauthorized access to electrical and mechanical components and shall have access doors that are kept securely locked at all times when service personnel are not present.
- e) Appropriate warning and safety signage shall be placed on any Wind Turbine, accessory structure, and/or electrical equipment, and posted at all LWES entrances.
- f) All structures shall be self-supporting. No guy-wire-supported structures shall be permitted, with the exception of Met Towers.
- g) A sign bearing emergency contact information shall be posted near the tower(s) or operations and maintenance office building.
- h) Signage shall be placed at the road access to warn visitors about the potential danger of falling and thrown ice and the Debris Hazards.
- i) Any Wind Turbine that is found to present an imminent physical threat of danger to human life, wildlife, or property, or that is found to exceed the noise standards of this Ordinance, shall be immediately shut down. Following repair or redesign to comply with the noise standards of this Ordinance, the Wind Turbine shall be certified to be safe and to comply with this Ordinance by a NH licensed Professional Engineer(s) prior to resumption of operation.

## 10. Rescue, Fire, and Hazard Protection

The Applicant shall assure and provide documentation that the LWES complies with the following fire control and prevention measures.

- a) A plan acceptable to the Select Board of Orange, the Canaan Fire Chief, any contracted services secured by Orange and the NH State Fire Marshal, for fire-fighting and rescue services year-round including water accessibility, any necessary equipment, and/or training for local fire protection and rescue personnel, shall be prepared and updated annually. The full cost of implementing and maintaining the plan, including equipment, equipment maintenance, and staffing, shall be the responsibility of the Applicant.
- b) The Applicant shall comply with all laws applicable to the generation, storage, clean-up, transportation, and disposal of hazardous wastes generated during any phase of the project's life
- c) All structures and activities shall comply with the National Fire Protection Association (NFPA) Fire Code, including but not limited to the following (as updated): NFPA 1, 10, 12, 72 and 101, as well as the Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations, NFPA 850.

## 11. Environmental Impact

The Applicant shall take appropriate measures to minimize, eliminate, or mitigate adverse impacts on the natural environment during the entire life cycle of the LWES and shall comply with all Federal, State and local laws regulating environmental impacts. In making its determination under this section, the Orange Planning Board shall require the applicant to demonstrate that the proposed LWES is consistent with the U.S. Fish and Wildlife Service "*Wind Turbine Guidelines Advisory Committee Recommendations*," dated March 4, 2010, the "Proposed Wind Power Siting Guidelines-May 29, 2007" (which was developed by the Wind Energy Facility Siting Guidelines Working Group and forwarded to the NH Energy Policy Committee Wind Siting Subcommittee), and any recommendations of the New Hampshire Fish and Game Department and the Orange Conservation Commission.

- a) Environmentally Sensitive Areas. The plan for the LWES shall reflect the natural capabilities of the site to support development. Environmentally sensitive areas-including but not limited to wetlands, vernal pools, seeps or springs, steep slopes (greater than 15% ), watersheds, floodplains, significant wildlife habitats, fisheries, habitat for rare or endangered plants and animals, unique natural communities and natural areas, and sand and gravel aquifers-will be maintained and preserved to the maximum extent possible. The Applicant shall demonstrate appropriate measures for protecting these resources during the entire lifecycle of the project.
- b) Wildlife. The Applicant shall demonstrate that the LWES will have no significant adverse Impact on area wildlife and wildlife habitat. Such analysis shall include but not be limited to adverse Impacts on birds, bats, raptors, animals, and habitat fragmentation. In addition, the Applicant must demonstrate that the LWES will have no undue adverse Impact on rare, threatened, or endangered wildlife. The wildlife and habitat analysis must include pre-construction field studies conducted by a qualified wildlife biologist selected by the Planning Board and paid for by the Applicant.
- c) Avian and Bat Species. Development and operation of a LWES shall have no adverse impact on bird or bat species.
  - i. All above-ground lines, transformers, or conductors should comply with the Avian Power Line Interaction Committee (APLIC, <http://www.aplic.org/>) published standards to prevent avian mortality.
  - ii. The design and installation of the LWES shall avoid, to the extent practicable, the creation of artificial habitat for raptors or raptor prey; e.g., electrical equipment boxes on or near the ground that can provide shelter and warmth and horizontal perching opportunities on the towers or related structures.

- iii. In order to minimize the detrimental Impacts on bat and bird populations, all Wind Turbines shall be configured and or controlled so that the blades will not tum when wind velocity at hub height is less than 10 mph. In addition, there may be periods of time when the Wind Turbine operations must be curtailed to protect bats and raptors and other migratory birds.
- d) Ground and Surface Water. The LWES will not adversely affect the quality or quantity of ground and surface waters. No herbicides shall be used in any phase of the project. The Applicant shall demonstrate to the Planning Board's satisfaction that there are no unusual risks caused by the LWES. The Board may require that spill prevention and control measures be installed, and that all activities involving potentially permeable pollutants, including at delivery and transfer points, be conducted undercover and over an impervious surface surrounded by dikes. Whenever sedimentation is caused by stripping vegetation or grading, it shall be the responsibility of the Applicant to remove it from all adjoining surfaces, drainage systems, and watercourses and to repair any damage as quickly as possible at the Applicant's expense.
- e) Historical, Cultural and Archeological. Because the preservation of historic resources is very important to the Town of Orange, the Applicant shall be required to:
  - i. Inventory and map all historically significant sites located within two thousand (2000) feet of the proposed LWES project area, including but not limited to stonewalls, structures, roadways, cellar holes, cemeteries, mines, and sites of geological significance.
  - ii. Provide a plan outlining how the Applicant proposes to minimize the impact of construction and ongoing operation of the LWES on those sites. As a condition of approving the Applicant's Historical, Cultural and Archeological protection plan, the Planning Board may require specific setbacks of LWES structures or roadways from significant sites and/or other actions that protect or restore items of historic significance.

## 12. Visual Impact

- a) An LWES shall be designed and located so as not to cause adverse visual impacts, including Visual Clutter and Impacts caused by any lighting, and so as not to dominate views from residential areas, cultural resource areas, public recreational and scenic areas, trails used by the public, open space within the Town, or any public road right-of-way, and particularly from the summit and peaks of Mount Cardigan.
- b) Dominance is determined by how an LWES will be seen within its visual context and occurs when the project would cause a change in the balance or feel of the character of the surrounding area or create a very dominant focal point that detracts from other important natural or cultural focal points. (The Planning Board may use as a reference document *A Visual Impact Assessment Process for Wind Energy Projects*, Vissering, Sinclair, and Margolis, May 2011.) Some of the factors to be considered in evaluating the degree of dominance are:
  - i. appearance of proximity,
  - ii. duration of view,
  - iii. expectation for natural or intact landscape setting,
  - iv. uniqueness of a scenic resource,
  - v. whether the view is directly ahead over extended distances, and
  - vi. whether large numbers of turbines are visible in many views.
- c) All available mitigation techniques to reduce the visual impacts of the LWES shall be considered, including methods prescribed by the American Landscape Institute. The use of Automatic Obstruction Lighting Systems, such as those manufactured by DeTect and OCAS, is mandatory for Wind Turbines with FAA lighting.

- d) Photographic simulations shall be provided from potentially sensitive public and private viewpoints. The Planning Board may request that particular viewpoints be illustrated. Such locations could include the center of Town, public recreation areas, historic sites, and scenic sections of Town or State roads. Simulation photographs shall be taken at 50mm (or digital equivalent) and illustrated on 11" x 17" printed copies for each simulation. If several photographic frames are required to illustrate the breadth of the project from a particular viewpoint, illustrations shall be provided of each 50mm frame, plus a combined panoramic view. Any visible roads, site clearing, and all project infrastructure shall be depicted on the simulations. The report shall employ a standard visual-impact-assessment methodology for detailing what the visual impacts of the project would be and explaining why these may be acceptable or unacceptable.
- e) No transmission and/or utility lines shall be above ground. The report shall identify all mitigation methods proposed by the applicant, if any, to address the potential visual impacts of the LWES. These methods may include turbine siting and distance between towers; reductions in turbine height or numbers; design and size; hazard lighting mitigation by employing Automatic Obstruction Lighting Systems; underground placement of collector lines; and other methods. The Planning Board may require additional mitigation measures to minimize the impact on scenic resources of the Town.

### **13. Financial, Technical, and Managerial Capability**

Applicant shall demonstrate to the Planning Board that it has adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of this ordinance.

## **D. APPLICATION PROCEDURE AND REQUIREMENTS**

1. Applications for new and replacement LWESs shall be filed and processed in accordance with the Town of Orange Planning Board's Site Plan Review regulations and the provisions below. In case of any conflict with the Site Plan Review Regulations, the stricter requirement shall apply. Each of the studies and reports required below shall contain the information required by this Ordinance. If an application does not contain sufficient information to demonstrate compliance with the requirements of this Ordinance, the Planning Board shall reject the application as incomplete as provided by RSA 676:4, I (c).
2. An application for LWES is presumed to have regional impacts. Therefore the procedure shall include notification per NH RSA 36:54 - 57.
3. Submission Requirements: In addition to standard Planning Board requirements, applicants for a LWES shall submit the following:
  - 3.1 A Financial Resources Plan demonstration satisfactory to the Planning Board that the Applicant has adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of this ordinance. This Plan shall include the Applicant's proposal for performance guarantees for completion of the following: (1) street work; (2) public safety and fire response improvements; (3) stormwater and erosion control measures; (4) wildlife and other on-going studies; (5) wetlands, wildlife or other mitigation measures; (6) decommissioning; and (7) completion of such other studies, improvements or mitigation measures required by the Planning Board pursuant to this Ordinance. The Applicant's Financial Resources Plan shall provide for a performance guarantee that is equivalent to a self-calling letter of credit issued by a federally insured bank in a form acceptable to the Planning Board after legal consultation. The Financial Resources Plan shall include a cost estimate prepared by a licensed engineer of the above items for review by the Town's engineering or financial consultant.
  - 3.2 Plans prepared and stamped by a NH licensed Professional Engineer that show the location, shape, size, color, materials, textures, landscaping, design, and total height of all proposed components of Met Towers and LWES, including the proposed access to the project site (including Town and State roads) and associated transmission lines.

- 3.3 A location map to scale of current and planned land uses within the project boundary and a one-mile radius beyond the project boundary, showing the location of all proposed Wind Turbines and required setbacks for each, and that identifies Participating Landowners. These maps must be prepared by a NH licensed land surveyor.
- 3.4 A site grading and clearing plan that shows all areas to be cleared and all grade changes. The plan shall include details on the collector lines, locations and heights of poles, clearing limits for above-ground lines, substations, transmission line details, and upgrades or changes to existing power lines. This plan should delineate environmentally sensitive areas.
- 3.5 Historical, Cultural, and Archeological Inventory and Resource Map prepared by NH licensed land surveyor, and Applicant's plan to minimize impact of LWES construction and operation on these sites.
- 3.6 Environmental Resource Map prepared by a qualified NH licensed land surveyor.
- 3.7 Intended period of data collection for the Met Tower.
- 3.8 Certification of the non-reflecting properties of the external surfaces of the LWES.
- 3.9 Calculations and supporting data for all setbacks for each turbine.
- 3.10 List of property owners whose property wholly or in part falls within the standard setback areas.
- 3.10.1 Copies of any and all agreements with Participating Landowners.
- 3.11 Studies and Reports as required by the Planning Board, including but not limited to those listed below. The cost of any required study, report, plan, mitigation effort, or any other work required to be done by the Planning Board, is the full responsibility of the applicant.
  - 3.11.1 Sound Pressure Level Study, including all of the applicable reports and information required by Section C.5 of this Ordinance.
  - 3.11.2 Rescue, Fire, and Hazard Protection Plan
  - 3.11.3 Road and Property Risk Assessment
  - 3.11.4 Wildlife and Bird Impact Study and Protection Plan
  - 3.11.5 Groundwater and Surface Water Quality studies
  - 3.11.6 Visual Impact Assessment, including photographic simulations. The Planning Board may request that particular viewpoints be illustrated.
  - 3.11.7 Communication Interference Certificate
  - 3.11.8 Shadow Flicker, Tower Shadowing, and Blade Glint study
  - 3.11.9 Safety Plan
- 3.12 A Complaint Resolution Plan to address any complaints from affected parties during construction and over the life of the operation. The Plan shall identify a contact person and a process for mediation.
- 3.13 A Decommissioning and Site Restoration Plan as outlined in Section J (Decommissioning).
- 3.14 Storm Water Management Plan- pre-and post-decommissioning.
- 3.15 Erosion Control Plan.
- 3.16 Landscape Plan showing restoration of disturbed areas after completion of construction.
- 3.17 Estimate of decommissioning costs prepared by a NH licensed Professional Engineer.
- 3.18 Blasting plan, including inventory of all potentially affected structures.
- 3.19 Any other information deemed necessary by the Board in order to make an informed decision.
- 4.0 Repowering. When an LWES is planned for a retrofit or any other material change to the operating components of the turbine or its design specifications which might affect its auditory, visual, or other impacts, the Applicant must apply for, and obtain approval from the Planning Board before any portion of the LWES may be repowered.
- 5.0 Permit to Operate.
  - 5.1 Following construction of an LWES, before commencing operation, the Applicant shall apply to the Board of Selectmen for a Permit to Operate. The application shall include the following:
    - 5.1.1 An Inspection Report prepared and signed by a NH licensed Professional Engineer certifying the structural and operational integrity of the LWES, and completion of construction in accordance with all submitted and approved building, road, and lighting plans, and any other

plans submitted to the Planning Board as required.

5.1.2 A decommissioning fund. See Section G, #5 - "Decommissioning Costs".

5.1.3 A signed statement that the Applicant and project site land owner(s) have read this Ordinance, understand all its provisions, and agree to abide by them.

- 5.2 The Applicant shall complete decommissioning of the LWES or individual turbines within (12) twelve months after the end of the useful life of the Facility or individual turbines. The LWES or individual turbines will be presumed to be at the end of its useful life if no electricity is generated and sent to the power grid by it for a continuous period of (12) twelve months.
- 5.3 Applications for a Permit to Operate or a Renewal Permit will be heard at the next regularly scheduled Planning Board or Board of Selectmen meeting for which adequate legal notice has been posted.
- 5.4 Before a permit to operate is transferred to a new owner or operator, the holder of the permit must satisfactorily demonstrate to the Planning Board that the new owner or operator has adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of this Ordinance. An application to transfer ownership shall be considered as an application to amend the approved site plan and shall include a revised Financial Resources Plan and such other information as may be required by the Planning Board.
- 5.5 If a Permit to Operate is transferred to a new Owner or Operator, the new Owner or Operator is bound by all conditions, requirements, and financial obligations of the original permit.
- 5.6 A Permit to Operate may be revoked by the Planning Board if an applicant or the applicant's agent or successor in interest has performed work, erected a structure or structures, or established a use of land, which fails to conform to the statements, plans or specifications upon which the approval was based, or has materially violated any requirement or condition of such approval, or for other reasons as provided by RSA 676:4-a. The procedure for revocation shall be as provided by RSA 676:4-a or as specified by the Planning Board in its approval.

## **E. ADMINISTRATION AND ASSOCIATED COSTS**

1. At the time of formal submission of their application for the Site Plan Review, the Applicant shall deposit into an escrow account the amount of \$50,000.
2. The purpose of this escrow account is to reimburse the town of Orange for the costs incurred to hire consultants and experts as the Planning Board, at its sole discretion, deems necessary for the costs for notification of abutters and for the costs of special investigation and the review of documents and studies required by this ordinance by professionals retained by the Planning Board, and for other matters which may be required by particular applications.
3. The escrow account shall be managed as follows:
  - a) Funds may be withdrawn from this account only by the Planning Board.
  - b) If at any time the balance of this account shall fall below \$15,000, the Applicant shall, within 30 days of receipt of written notice, deposit an amount sufficient to bring the account to a minimum value of \$50,000 or to an amount determined by the Planning Board to be necessary for the costs of special investigations and review which may be required for the application.
  - c) The Planning Board shall deny an application if an Applicant fails to pay for the costs of notice or other fees required by the Planning Board as provided by RSA 676:4, I (e)(2). If at any time the balance of this fund shall fail to maintain a balance of \$15,000 or the amount specified by the Planning Board for a continuous period of thirty (30) days, the application shall be considered to have been withdrawn and the Planning Board shall deny the application as provided by RSA 676:4, I (e)(2).
  - d) The Board of Selectmen or its designee shall be charged with monitoring the escrow account and giving quarterly reports to the Planning Board and to the Applicant.

## **F. EASEMENTS AND LEASES**

1. Any landowner may grant an easement to the Applicant for any impacts of the LWES on their property and shall advise all subsequent owners of the property that the standards permitted by this Section run with the land and are enforceable against the property owner. The terms of the easement shall be consistent with the current application for an LWES. All easements or leases shall include consent of the land owner to monitoring and inspections as required by the provisions of this Ordinance.
2. The terms of leases or easements shall be recorded with the Registry of Deeds.
3. All easements and other agreements with Participating Landowners shall be submitted to the Board for review to ensure that they meet the legal and other requirements of this Ordinance, including any conditions as may be imposed by the Planning Board.

## **G. ONGOING REQUIREMENTS**

1. Monitoring: Upon reasonable notice, Town of Orange officials or their designated representatives may enter a lot on which an LWES has been approved for the purpose of monitoring noise, impacts on the natural environment, and other impacts that may arise. In such a case, the Town will provide the Applicant with 24-hour advance telephone notice, followed by e-mail notification for the record.  
  
The Planning Board shall require the following on-going studies to be completed for review and approval by the Planning Board, or its designee:
2. Post-construction Water-Quality Study:
  - a) Within six (6) months of the first Wind Turbine becoming operational, and every twelve (12) months thereafter for a period of three (3) years, a water-quality study of all wells, springs, and water resources specifically identified during the Site Plan Review shall be designed and carried out by a water-quality professional approved by the Board.
  - b) Upon receipt of a substantiated complaint that the integrity or water quality of any well, spring, or water resource has been damaged by the LWES construction or operation, the Planning Board may require prompt investigation of the complaint by a water-quality professional approved by the Board, at the expense of the Applicant.
  - c) If degradation or contamination of any well, spring, or water resource is found to have occurred, the Applicant shall be considered in violation of this Ordinance.
  - d) The Applicant is responsible for all costs associated with water-quality testing and corrective action if necessary.
3. Environmental Impact Studies: Recognizing the importance of wild life as described in C.11, continuing environmental impact studies shall be required.
  - a) At least every 3 years, an environmental study shall be conducted by a qualified wildlife biologist selected by the Board and paid for by the Applicant.
  - b) If the post-construction field studies demonstrate substantive harm to the Natural Environment, the Applicant shall develop an appropriate mitigation plan for approval by the Board after review by the Conservation Commission. The Applicant shall be responsible for the full cost of implementing the mitigation plan.
  - c) In addition, the Applicant shall submit a quarterly report to the Board of Selectmen and Conservation Commission identifying all dead birds and bats found within 500 feet of the LWES. Reporting shall continue for at least three (3) years after the first Wind Turbine becomes operational, or longer if required by the Planning Board, during the site plan review. In the event of an avian or bat mortality kill of threatened or endangered species, or discovery of more than

six ( 6) dead birds or bats of any variety on site, the Applicant shall notify the Board of Selectmen, Conservation Commission and the New Hampshire Department of Fish and Game within 24 hours. Within thirty (30) days of the occurrence, the Applicant shall submit a report to the Board of Selectmen describing the cause of the occurrence and the steps taken to avoid future occurrences. The Board of Selectmen reserves the right to install and monitor video surveillance at the expense of the applicant as part of environmental-impact studies.

4. Decommissioning Costs. The owner shall submit an updated report of the total costs of decommissioning, prepared at the Applicant's expense by independent NH licensed Professional Engineer(s), to the Board of Selectmen every fifth year of operation. The updated report shall demonstrate that the owner has sufficient financial capabilities required to complete decommissioning as required by this Ordinance, the Financial Resources Plan approved by the Planning Board and any conditions of approval imposed by the Planning Board.
5. Noise Compliance Report. Within four (4) months of the first Wind Turbine becoming operational and again within two (2) months after all Wind Turbines have become operational, the owner shall submit to the Board a noise-compliance report certifying compliance with the noise requirements of this Ordinance and any conditions of approval imposed by the Planning Board. The report shall be prepared under the direction of a Professional Engineer or a Board Certified member of the Institute of Noise Control Engineering (INCE). The report shall be signed or stamped by this person. The owner shall be responsible for the costs for the Planning Board's review of the Noise Compliance Review which shall comply with the following:
  - a) Except as specifically noted otherwise, sound measurements shall be conducted in compliance with the most recent version of the American National Standards Institute (ANSI) Standards, ANSI/ASA S12.9 Parts 2 & 3. Sound data shall be recorded with both dBA filtering and unfiltered down to 0.5Hz. Wind speeds shall be logged simultaneously with Sound Pressure Level data.
  - b) Sound Pressure Level meters and calibration equipment shall comply with the most recent version of ANSI Standard S 1.4 "Specifications for General Purpose Sound Pressure Level Meters," and shall have a calibration traceable to the National Institute of Standards and Testing (NIST) performed within the preceding 24 months.
  - c) Noise measurements shall be taken at locations and times when the Wind Turbine is clearly audible and dominating the acoustical environment. All unattended measurements shall consider the Wind Turbine as dominating the acoustical environment.
  - d) Noise measurements shall be taken with the Wind Turbines on and off to determine any background noise to be accounted for. The Applicant shall cooperate by shutting Wind Turbines off and turning them on during acoustic testing at times required by the acoustic monitoring personnel.
  - e) The acoustic-monitoring personnel shall determine if extraneous sounds such as those made by insects, frogs, or other wildlife are contributing to the measured Leg Sound Pressure Level and remove their contributions either by relocating the measurement microphone to a spot not affected by such sounds or conducting testing at dates and times when such sounds are not present. The acoustic-monitoring personnel may correct the Leg Sound Pressure Level using full or 1/3 octave band analysis to subtract Wind Turbine "off" levels from Wind Turbine "on" levels, and by removing data in 1/3 octave bands from the Leg computation that are contaminated by extraneous sounds.
  - f) The wind velocity at the sound-measurement microphone shall not exceed 2 m/s ( 4.5mph) during measurements of Background Sound Pressure Level, and the maximum wind speed at the microphone for noise measurements during turbine operation should not exceed 4 m/s (9mph).
  - g) During Wind Turbine testing the atmospheric profile shall be Pasquill Stability Class E or F preferred, Class D as alternate. Wind Turbine acoustic testing shall be conducted with hub-height



wind speeds varying between cut-in and cut-out speeds.

- h) The Wind Turbine shall be fully engaged blades-to-generator and running the standard power output program and producing the maximum power output for the incoming hub-height wind speed. Feathering or other blade angle manipulations that are not part of the normal Wind Turbine program to obtain maximum power output shall be prohibited during acoustic testing. If the wind turbine must be feathered due to a high wind condition for safety purposes, the testing shall be rescheduled.
- i) Wind Turbine power output and hub-height wind speed data at 10-minute or shorter intervals shall be provided to the acoustic-monitoring personnel by the Applicant for the entire sound-measurement period.
- j) Noise measurements shall be taken at locations specified by the Planning Board, which shall also set the direction of noise monitoring. The Planning Board may employ a NH licensed Professional Engineer, whose fees shall be paid by the Applicant, for advice regarding these measurements.

## **H. PUBLIC INQUIRIES AND COMPLAINTS**

Throughout the life of the project, including the decommissioning phase, the LWES Applicant shall maintain a phone number and identify a responsible person for the public to contact with inquiries and complaints. The Complaint Resolution Plan submitted with the initial application shall be used to resolve complaints. However, this process shall not preclude the local government from acting on a complaint, and local provisions for complaint resolution shall prevail and supersede all Applicant complaint resolution processes.

- a) Any individual, group of individuals, or reasonably identifiable entity may file a signed-and-dated written complaint with the Applicant of the LWES. If any complaints are received by phone, the Applicant shall inform the complainant that complaints must be submitted in writing. Any complaints received directly by the Board of Selectmen shall be referred to the Applicant.
- b) The Applicant of the LWES shall report to the Board of Selectmen all complaints received concerning any aspect of the LWES construction, operation, or decommissioning as follows
  - i. Complaints received by the Applicant shall be reported to the Board of Selectmen or its designee within five business days; except that complaints regarding unsafe and serious violations of this Section shall be reported to public-safety personnel immediately, and the Board of Selectmen or its designee by the following business day.
  - ii. The Applicant shall document each complaint by maintaining a record including at least the following information:
    - a. Name of the LWES and the Applicant
    - b. Name of complainant, address, phone number
    - c. A copy of the written complaint
    - d. Specific property description (if applicable) affected by complaint
    - e. Nature of complaint (including weather conditions if germane)
    - f. Name of person receiving complaint, date received
    - g. Date reported to the Board of Selectmen or its designee
    - h. Initial response, final resolution, and date of resolution
- c) The Applicant shall maintain a chronological log of complaints received, summarizing the above information. A copy of this log, and a summary of the log by type of complaint, shall be sent on or before January 15, March 15, July 15, and October 15 to the Board of Selectmen, covering the

previous calendar quarter. An annual summary shall accompany the January 15 submission.

- d) The Board of Selectmen shall forward copies of any health-related complaints to the Orange Health Officer and the State Board of Health.
- e) The Board of Selectmen may designate a person to seek a complaint resolution that is acceptable to the complainant, the Board of Selectmen, and the Applicant. If such a resolution cannot be obtained, the Board of Selectmen may take action as authorized by Section I: Enforcement and Penalties.
- f) The Board of Selectmen may at any time determine that a complaint shall be subject to enforcement and penalties as defined in Section I: Enforcement and Penalties.

## **I. ENFORCEMENT AND PENALTIES**

1. The enforcement of this Section shall be the responsibility of the Orange Board of Selectmen or its agent, who is hereby authorized to cause any LWES component, premises, use, or any related place to be inspected, and to order in writing the remedying of any condition found to exist in violation of this Section.
2. An Applicant, owner or other person shall be deemed in violation of this Ordinance if such applicant, owner or other person violates any provision of this ordinance, any provision or specification of any application, plat, or plan approved by the Planning Board, or any requirement or condition of a permit or decision issued by the Planning Board.
3. Violation of this Ordinance shall result in such enforcement action, including but not limited to revocation of approval, fines, recovery of attorney's fees, or any other action authorized by law.

## **J. DECOMMISSIONING**

The Applicant shall provide a Decommissioning Plan as part of its Financial Resources Plan. The Applicant's Decommissioning Plan shall include the following requirements:

1. The Applicant shall, at his or her expense, complete decommissioning (including site restoration) of the LWES, or individual Wind Turbine(s), within twelve (12) months after it is deemed unsafe, abandoned, or at the end of its useful life.
2. Site Restoration shall include:
  - a) Removal of Wind Turbines, buildings, cabling, electrical components, foundations, and any other associated facilities to a depth of four feet below the ground surface. Conduits buried deeper than four feet may remain in place, but all cables must be removed, and any pull boxes, junction boxes, transformer vaults, and other structures within four feet of the surface must be removed and remaining conduit ends permanently sealed and capped.
  - b) Removal from the property of all items in outdoor storage.
  - c) On-site-road and open-work-area removal, if any, to preconstruction conditions, excepting portions of roads useful for the proposed use of the site. If any roads are retained, excess paving and gravel shall be removed back to an appropriate width approved by the Planning Board, and the remaining areas loamed and seeded.
  - d) Regrading and revegetation necessary to return the subject property to the condition existing prior to establishment of the LWES. The restoration shall reflect the site-specific character including topography, vegetation, drainage, and any unique environmental features. If, in the opinion of the Planning Board, grades and vegetation existing at the time of decommissioning are sufficiently stable and well established, they may be allowed to remain.
  - e) Implementation of the post-decommissioning storm-water runoff plan.

## **K. CRITERIA FOR APPROVAL**

The Planning Board shall approve an application, subject to conditions, only if the Applicant demonstrates that all of the following criteria have been met:

- A. The proposed LWES complies with all of the requirements of this Ordinance and the Town's Site Plan Regulations.
- B. The proposed LWES will not unreasonably interfere with the use and enjoyment of property by non-participating land owners.
- C. The proposed LWES will not have an unreasonable adverse impact on aesthetics, historic sites, air quality, water quality, the natural environment, or public health.
- D. The proposed LWES will not have an unreasonable adverse impact on public safety and the Town has sufficient emergency response capability.
- E. The proposed LWES will not have a negative financial impact on the Town.
- F. The proposed LWES includes adequate financial and other assurances to ensure the continued operation and decommissioning of the proposed LWES in compliance with the terms of this Ordinance.

If an Applicant fails to demonstrate that all of the above criteria have been met, the Planning Board shall deny the application as provided by RSA 676:3.

#### **L. SEVERABILITY:**

The invalidity of any provision of this Ordinance shall not affect the validity of any other provision, nor any prior decisions made on the basis of the valid provisions of this Ordinance.