

SUMMARY: Provides for the development of wind resources within Elko County Zoning Districts.

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE ADDING SECTION 15 TO TITLE 4, CHAPTER 8 OF THE ELKO COUNTY CODE ALLOWING FOR THE DEVELOPMENT OF WIND RESOURCES IN THE VARIOUS ELKO COUNTY ZONING DISTRICTS; REVIEWING WIND RESOURCE DEVELOPMENT THROUGH THE USE OF CONDITIONAL USE PERMITS, AND MITIGATING POTENTIAL ADVERSE IMPACTS, AND ALL OTHER MATTERS RELATED THERETO.

THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF ELKO DOES ORDAIN:

Section 1: That a new section 15 of Title 4, Chapter 8 is hereby added as follows:

4-8-15: ELKO COUNTY WIND MACHINE ORDINANCE: The provisions of this title are intended to encourage the appropriate development of wind resources by residents of Elko County in appropriate locations within the County. It is designed to establish the public processes needed to identify preferred locations for wind turbines and other devices that convert wind energy to electricity, and create a clear regulatory path that will address specifically, wind turbine deployment.

This title pertains to residential wind turbines and towers with a maximum rated output of one hundred (100) kW, Commercial wind facilities, and wind monitoring or meteorological towers both commercial and non-commercial.

Although Elko County has been the site of wind machines in its past, typically those were used for water-pumping for agriculture (livestock) uses. The types of machines now being contemplated and proposed differ from those historic devices in purpose, size, technology, cost and potential environmental impact. As renewable energy technology develops, particularly wind power, we see a rapidly changing field as more and more individuals give serious consideration to wind turbines as a means of supplying some or all of their electricity requirements.

It is therefore the intent of this title "ELKO COUNTY WIND MACHINE ORDINANCE" to provide the County of Elko with an ordinance to understand the land use issues regarding wind power and to enable its residents to plan for the installation of modern wind electrical generating equipment. It is the express purpose of this ordinance to provide for a permitting process to accommodate residential wind energy and commercial wind conversion facilities in appropriate locations, while minimizing any adverse visual, safety or environmental impacts of the facilities.

These ordinances enable the review and approval of proposals for wind energy conversion facilities through the conditional use process within ECC 4-9-6. These ordinances are intended to be used in conjunction with the Nevada Revised Statutes, Elko County master plans and other regulations adopted or enacted by Elko County, including but not limited to site plan review, and other factors.

(A) DEFINITIONS:

Ambient Noise. “Ambient Noise” is defined as the composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.

Anemometer: An instrument that measures the force and direction of the wind.

A-Weighted Sound Pressure Level (dBA). “A-Weighted Sound Pressure Level (dBA)” is defined as the sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighted filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.

Clear Fall Zone. An area surrounding the wind turbine unit into which the turbine and or turbine components might fall due to inclement weather, poor maintenance, faulty construction methods, or any other condition causing turbine failure that shall remain unobstructed and confined within the property lines of the primary parcel where the turbine is located at, the purpose being that if the turbine should fall or otherwise become damaged, the falling structure will be confined to the primary parcel and will not fall onto dwellings, accessory buildings, and will not intrude onto a neighboring property.

Cowling. A streamlined removable metal that covers the turbines nacelle.

Disconnect, Manual. A device by which the conductors of a circuit can be disconnected from the source of supply.

Identification Marking. A sign that identifies the owner of a wind energy conversion system tower that is inscribed with a twenty-four (24) hour emergency phone number and warning of “Danger High Voltage or “Caution Electrical Shock Hazard” which is posted at the wind energy facility.

Interference or Degradation. “Interference or Degradation” shall mean a significant and measureable reduction in the ability to communicate or receive data which cannot be mitigated by other means by the group interfered with by the wind machine.

L50. “L50” is defined as the noise level exceeded fifty percent (50%) of the time during a given period of time.

LeqA. “LeqA” is defined as the equivalent or energy-averaged noise level.

Lmax. “Lmax” is defined as the highest root-mean-square (RMS) noise level measured over a given period of time.

Meteorological Towers. “Meteorological Towers” are those towers which are erected primarily to measure wind speed and directions plus other data relevant to siting wind machines, and include the tower, guy cables and hardware, anemometers, wind direction vanes, booms to hold equipment, data logger, instrument wiring, and telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at a given location. Meteorological towers under this section do not include towers and equipment used by airports, Nevada Department of Transportation (NDOT), or similar applications to monitor weather conditions; such towers are exempt from the provisions of this article.

Micro Wind Energy Conversion Machine. A private wind machine that has a maximum rated capacity of less than 2 kilowatts (kW) and is considered an accessory use. All micro wind machines shall be subject to the provisions of this chapter. A micro wind machine consists of a wind turbine, tower, and associated control or conversion electronics for the purpose of providing electrical power to meet the future needs of a lawful principal use.

Nacelle: A separate streamlined metal enclosure that covers the essential mechanical components of the turbine.

Overall Height. Shall be measured from finished grade to the uppermost portion of the rotor blade at its highest point of travel.

Placard, Wiring and Maintenance. A permanent placard posted near the residences main power control box mounted conspicuously notifying any person beginning work on the electrical

Primary Structure: For each property, the structure that one or more persons occupy the majority of time on that property for either business or personal reasons. Primary structures include structures such as residences, commercial buildings, hospitals, and day care facilities. Primary structures exclude structures such as storage sheds, pool houses, unattached garages, and barns.

Private Wind Energy Conversion Machine. “Private Wind Energy Conversion Machine” is defined as a wind machine having a minimum rated capacity of two (2) kilowatts and a maximum rated capacity of (one hundred (100) kilowatts (kW) and designed to offset energy costs of the existing principal uses on parcels of land for the purposes of these regulations.

Public Roads. “Public Roads” are defined as roadways that are owned and/or maintained by the county, the state, or a local general improvement district (GID).

Rotor. That part of a wind energy system comprised of an assembly of rotating airfoils.

Shadow Flicker. “Shadow Flicker” is defined as alternating changes in light intensity caused by the moving blade casting shadows on stationary objects, such as a residential dwelling which

exceeds ten (10) hours a year. The dissipation of shadow intensity over the distance from a wind machine limits the classification of shadow flicker to ten (10) rotor diameters or three-thousand (3,000) feet, whichever is greater.

Siting. The location of the wind machine upon a parcel of land which takes advantage of the available wind resource and which avoids obstructions and land features to maximize wind energy production.

Site Restoration. "Site Restoration" of a commercial wind energy facility shall mean the removal of all wind machines and all ancillary structures and equipment, excluding the wind machine foundations, and regrading and revegetation of all disturbed area.

Trail Easements. "Trail Easements" are defined as an Elko County recorded easement for pedestrian, equestrian, bicycle or other similar public access uses.

Wind Energy Conversion System, Commercial. "Commercial Wind Energy Conversion System" is defined as:

- (a) Intended to produce electricity to sell for consumption.
- (b) Having a total system height not to exceed six-hundred feet (600').
- (c) May be grouped together into a wind energy facility consisting of one or more wind machines and other structures and buildings, including substations, electrical infrastructure, and other appurtenant structures and facilities.
- (d) Subject to the "Application & Permit Information Requirements" section of this chapter for "Commercial Wind Energy Conversion System."

Wind Energy Conversion System Test Site, Commercial. "Commercial Wind Energy Conversion System, Test Site" is defined as Electrical equipment, wind sensors, communication devices, towers, guy wires and anchors, and other associated controls to measure, monitor and report wind speed, wind direction and other wind related data for commercial systems.

Wind Energy Conversion System Test Site, Non-Commercial. "Non-Commercial Wind Energy Conversion System, Test Site" is defined as Electrical equipment, wind sensors, communication devices, towers, guy wires and anchors, and other associated controls to measure, monitor and report wind speed, wind direction and other wind related data for Micro wind energy conversion and private wind energy conversion systems.

(B) RULES OF APPLICATION, MICRO WIND ENERGY AND PRIVATE WIND ENERGY CONVERSION SYSTEMS.

- 1. Requirements, Micro Wind Energy Conversion Systems and Private Wind Energy Conversion Systems.** All permit applications for micro wind energy and private wind energy conversion systems provided for under this section shall comply with the

following standards and in addition shall comply with that normally required by other sections in the Development Code.

(a) A micro wind energy system that does not exceed a maximum overall height of forty (40) feet, or exceed a maximum rotor diameter of four (4) feet, or is not to be connected to electric utility equipment of any utility grid, shall not require a conditional use.

(b) A micro wind energy system that exceeds a maximum overall height of forty (40) feet, or a rotor diameter exceeding four feet (4), or is to be connected to electric utility equipment of any utility grid shall require a conditional use permit.

(c) A conditional use permit is required for all private wind energy conversion systems.

(d) Not more than one (1) micro wind machine or private wind machine or a combination of micro wind machines and private wind machines with a maximum rated capacity of one hundred one hundred (100) kW shall be allowed in any Open Space District, Special Lands District, Agricultural-Residential District, Agricultural-Recreation District, AR-CRD-1, Agricultural-Residential Conservation Reserve District, AR-CRD-2, Agricultural-Residential Conservation Reserve District, General Industrial District or Light Industrial District with a minimum parcel size of ten (10) acres or 1/64th of a section.

(e) Not more than one (1) private wind machine with a total rated capacity of one-hundred (100) kW or one (1) micro wind machine shall be allowed in any Special Lands District, Agricultural- Residential District, Agricultural-Recreation District, AR-CRD-1, Agricultural-Residential Conservation Reserve District, AR-CRD-2, Agricultural-Residential Conservation Reserve District, General Industrial District or Light Industrial District where the parcel size is less than ten (10) acres or 1/64th of a section and the Residential - 1 District where the parcel has a minimum area of one (1) acre.

(f) Not more than one (1) private wind machine or one (1) micro wind machine, or a combination of wind machines with a total rated capacity of one hundred (100) kW shall be allowed per forty 40 acres or 1/16th of a section.

(g) Micro wind energy conversion systems and private wind energy conversion systems shall be accessory to an existing principal use and may be utilized for accessory structures or other permitted uses where the principal use is established.

(h) Setbacks.

(1) The minimum setbacks from any property line, right-of-way, trail, easement, overhead utility, railroad, area set aside for public parking, public parks and play grounds, schools or any other area that the public has access to, any commercial structure designed for recreation, lodging, shopping or other similar activity where the public gathers, structure designed for habitation, residence or residential property whether owned or under other ownership, are one and one-half (1 ½) times the overall height.

(2) A setback exception may be made for property abutting federal lands with proper documentation from the governing entity.

(3) Setbacks between wind machines upon the same parcel shall follow the manufacturer's recommendations, but shall not be located closer than one (1) times the overall height of any wind machine measured to any portion of the adjacent wind machine including the supporting structure or guy wires.

(4) Micro Wind Machines and Private Wind Machines shall be allowed closer to a property line if the abutting property owner(s) grants written approval of the proposed setback. The written consent shall be signed and notarized by the owner of record of the adjoining property and shall detail the setback distance and the size and height of the proposed private wind machine. The written consent shall be recorded with the Elko County Recorder, a conformed copy of which shall be submitted with the conditional use application to construct the wind machine.

(5) Guy wire anchors may not extend closer than five feet (5') from any property line and shall be properly marked and maintained from grade to a height of six feet (6') to help clearly identify them and serve as a safety system to prevent unwanted injuries. They shall be marked in accordance with the current adopted electrical codes.

(i) Maximum overall height shall not exceed allowable elevation indications inapplicable airport master plans or Federal Aviation Administration regulations.

(j) Maximum wind turbine rotor diameter and wind energy system height shall be regulated to meet the established and proposed uses of the property while being flexible to allow for current model offerings.

(k) Re-siting of any approved micro wind energy conversion system or private wind energy conversion system shall require a new conditional use permit application.

(l) Micro wind energy conversion systems and private wind energy conversion systems shall not be located within any side yard setback, any rear yard setback, any front yard setback, or within any front or side yard setback facing a street on a corner parcel of land.

(m) The tower, or any of its parts, shall not be located in or on drainage, utility or other established easements.

(o). Micro wind energy conversion systems and private wind energy conversion systems shall be approved by a national wind certification program, comply with Elko County adopted International Building Code, NEC, UL 1741, IEEE 1547 and IEC Section 61400 and other applicable codes.

(p) Utility notification. No micro wind energy conversion system or private wind energy conversion system that is to be connected to electric utility equipment of any utility grid shall be operated until a net metering agreement or interconnection agreement has been made with the affected electric utility company(s), and the utility company or companies have approved the proposed method of interconnection. Off-grid systems shall be exempt from this requirement.

(q) Tower and Facility Access. All micro wind energy conversion system and private wind energy conversion systems shall comply with the following provisions:

(1) The tower shall be designed and installed so that there shall be no exterior steps, bolts, or a ladder on the tower readily accessible to the public for a minimum height of twelve feet (12') above the ground.

(2) For lattice or guyed towers, sheets of metal or wood or other barrier shall be fastened to the bottom tower section such that it cannot readily be climbed.

(3) All ground-mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

(r) Roof mounted micro wind energy conversion systems and private wind energy conversion systems.

(1) Shall not be allowed on residential structures.

(2) Shall not be allowed on any structure that the public has access to.

(3) Attachment of a micro wind energy conversion system or private windenergy conversion system wind machine to an ancillary structure

shall be in strict compliance with regulations of the Elko County Department of Building and Safety; and

(4) The minimum setbacks for roof mounted micro wind energy conversion systems or private wind energy conversion systems from any property line, right-of-way, trail, easement, overhead utility, railroad, area set aside for public parking, public parks and play grounds, schools or any other area that the public has access to, any commercial structure designed for recreation, lodging, shopping or other similar activity where the public gathers, structure designed for habitation, residence or residential property whether owned or under other ownership, are one and one-half (1 ½) times the overall height.

(s) Micro wind energy conversion system and private wind energy conversion system Facility Signage and Posting.

(1) A sign no larger than three (3) square feet that identifies the owner of the tower, a twenty-four (24) hour emergency phone number, and warning of "Danger High Voltage or "Caution Electrical Shock Hazard" shall be posted at the private wind energy facility.

(2) A permanent placard shall be posted near the residences main power control box mounted conspicuously notifying any person beginning work on the electrical system that there is an auxiliary power device connected to the system.

(t) Evidence of an external, manual shut-off switch is required prior to Certificate of Occupancy.

(u) Rotor Safety.

(1) Micro wind energy conversion systems and private wind energy conversion systems shall be equipped with both manual and automatic controls to limit the rotational speed of the blade within the design limitations of the system.

(2) All rotating blades shall be a minimum of fifteen feet (15) above the adjacent finish grade as measured at the lowest point of the arc of the blades.

(v) Repair and Removal of micro wind energy conversion systems and private wind energy conversion systems.

(1) Any micro wind energy conversion systems or private wind energy conversion system found to be unsafe by an official of the Elko County

Department of Building and Safety shall be repaired by the owner to meet federal, state, and local safety standards, or;

(2) Micro wind energy conversion systems and private wind energy conversion systems that are not operational due to electrical, mechanical or other pending maintenance issues for a continuous period of twelve (12) months and upon notification by the Department of Building and Safety of the existence of an unsafe condition shall be repaired or removed within one hundred eighty days (180) days by the owner of the wind machine. Removal does not include tower foundations.

(3) A micro wind energy conversion system or private wind energy conversion system that is not used for a period of time of one year or longer to generate electricity but is in otherwise operable condition and maintained in accordance with the manufacturer's recommendations shall be deemed to be in operational condition upon demonstration of worthiness by the owner of the wind machine.

(4) A micro wind energy conversion system or private wind energy conversion system shall be removed within one hundred eighty (180) days where the building permit is expired.

(5) No micro wind energy conversion system or private wind energy conversion system or combination of wind machines shall be operated so that impulsive sound below twenty (20) Hertz adversely affects the habitability or use of any off-site dwelling unit, hospital, school, library, or nursing home.

(6) A manufacturer's sound report shall be submitted with each building permit.

(w) Evidence shall be submitted with a building permit application that the micro wind energy conversion system or private wind energy conversion system has been constructed in accordance with Elko County adopted International Building Code, NEC, UL 1741, IEEE 1547, IEC Section 61400, other applicable codes, and certified safe.

(x) Advertisements are prohibited on all micro wind energy conversion systems and private wind energy conversion systems. The only advertising sign allowed on a wind machine shall be a logo on the generator housing.

(y) A micro wind energy conversion system or private wind energy conversion system shall not be artificially illuminated.

(z) Feeder power lines from the turbine shall be buried underground from the towers base to whichever structure houses the balance-of-system components.

(aa) Lighting.

(1) Wind machine towers shall not be artificially lighted unless required, in writing, by the Federal Aviation Administration (FAA) or other applicable authority that regulates air safety.

(2) Where the FAA requires lighting, the lighting shall be the lowest intensity allowable under FAA regulations; and

a) The lighting fixtures shall be shielded and directed to the greatest extent possible to minimize glare and visibility from the ground.

b) No strobe lighting shall be permitted, unless expressly required by the FAA.

(3) Lighting may be permitted when requested by an air ambulance service.

(ab) Compliance with Regulations. Once micro wind energy conversion systems or private wind energy conversion systems are permitted, the owners have the option of compliance with the standards of this chapter or discontinuation of operations. If the operation of the wind machine(s) does not comply with the provisions of this article, the operator shall promptly take all measures necessary to comply with these regulations, including, but not limited to, discontinued operation of one or more micro wind energy conversion systems or private wind energy conversion systems until compliance has been achieved.

2. Permit Applications, Micro Wind Energy Conversion Systems and Private Wind Energy Conversion Systems: All permit applications for Micro Wind Energy Conversion Systems and Private Wind Energy Conversion Systems shall include the information listed in this section in addition to that normally required by other sections in the Development Code.

(a) Site Plan(s). A scaled site plan showing the following information:

(1) Existing topography, trees and drainage channels.

(2) Direction of prevailing winds across the project site.

(3) Locations, dimensions and setbacks of all existing and proposed structures located or proposed to be located upon the parcel.

- (4) Location and height above ground of all proposed private wind machines and, existing and proposed above-ground utility lines.
 - (5) Dimensions of private wind machine structures and private wind machine sites.
 - (6) Distances of private wind machine structures and private wind machine sites to roads, access easements, and trails.
- (b) Standard drawings and photographs of the wind turbine structure, including the tower, base, turbine and blades.
 - (c) Plans shall be stamped by an engineer licensed in the State of Nevada.
 - (d) Subject to the "Micro Wind Energy Conversion Systems Requirements" section of this chapter for Private Wind Energy Conversion Systems.
 - (e) Maintenance plan submitted with application.
 - (f) Decommissioning plans prepared in conformance with requirements as specified in the "Removal of Micro Wind Energy Conversion Systems and Private Wind Energy Conversion Systems" section of this chapter.

(C) RULES OF APPLICATION, COMMERCIAL WIND ENERGY CONVERSION SYSTEMS:

1. Requirements, Commercial Wind Energy Conversion Systems. All permit applications for commercial wind energy conversion systems provided for under this section shall comply with the following standards and in addition shall comply with that normally required by other sections in the Development Code.

- (a) A conditional use permit is required for all commercial wind energy conversion systems.
- (b) Commercial wind energy conversion systems may be permitted only within the Open Space zoning district.
- (c) The overall height of Commercial wind machines, including the uppermost extension of any blades, shall not exceed six-hundred (600) feet.
- (d) The maximum diameter of rotor assemblies shall be flexible to allow for current model offerings.
- (e) Setbacks. The minimum setbacks are ten (10) times the blade diameter for horizontal blade designed turbines or three (3) times the overall height,

whichever is the greater from any property line, right-of-way, trail, easement or overhead utility; and

(1) One (1) mile from any existing residential districts with parcels of ten (10) acres or less whether owned or under other ownership.

(2) One (1) mile from any off-site dwelling(s) or other occupied buildings within Elko County whether owned or under other ownership.

(3) Other structures related to the commercial wind energy system shall not be located in or on drainage, utility or other established easements, and are restricted to the setback requirements of the district.

(4) An exception may be made for property abutting federal lands with proper documentation from the governing entity.

(f) Lighting.

(1) Commercial wind machine towers shall not be artificially lighted unless required, in writing, by the Federal Aviation Administration (FAA) or other applicable authority that regulates air safety.

(2) Where the FAA requires lighting, the lighting shall be the lowest Intensity allowable under FAA regulations; and

(a) The lighting fixtures shall be shielded and directed to the greatest extent possible to minimize glare and visibility from the ground.

(b) No strobe lighting shall be permitted, unless expressly required by the FAA.

(3) Lighting may be permitted when requested by an air ambulance service.

(g) Tower and Facility Access. All commercial wind machine towers shall comply with the following provisions:

(1) The tower shall be designed and installed so that there shall be no exterior step, bolts, or a ladder on the tower readily accessible to the public for a minimum height of twelve feet (12') above the ground.

(2) For lattice or guyed towers, sheets of metal or wood or other barrier shall be fastened to the bottom tower section such that it cannot readily be climbed.

(3) Any guy wires shall be made clearly visible to a minimum height of six feet (6').

(4) All ground-mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

(h) Electromagnetic Interference. To avoid interference, the owner(s) of any radar facility, television, radio, licensed Ham radio station, cellular telephone or microwave reception facility within a radius of five (5) miles from any commercial wind machine shall be notified in writing no less than forty-five (45) days prior to any public hearing, of a proposed project and shall be provided an opportunity to assess and determine any detrimental impact(s) on the operation of their facility. If degradation of television, radio, cellular telephone, radar microwave or licensed Ham Radio reception occurs as the result of the commercial wind machine and confirmation that the commercial wind machine is the source of the interference, the owner/developer of the wind machine shall pay all reasonable costs to correct the television, radio, cellular telephone or microwave reception within thirty (30) days of notification by Elko County that a problem exists.

(i) Utility notification. No commercial wind machine that is to be connected to electric utility equipment of any utility grid shall be operated until a net metering agreement or interconnection agreement has been made with the affected electric utility company(s), and the utility company or companies have approved the proposed method of interconnection.

(j) Commercial wind turbines shall be approved by a wind certification program which is recognized by the American Wind Energy Association.

(k) Commercial wind turbines shall comply with Elko County adopted International Building Code, National Electrical Code, UL 1741, IEC, and IEEE 1547.

(l) Commercial Wind Machine Noise Standards, Noise Studies.

(1) As part of the application submittal for a commercial wind machine, the applicant shall provide modeling and analysis that will confirm that the facility will not exceed the maximum permitted noise levels.

(2) A post-construction noise study shall be conducted within six (6) months of the date when the project is fully operational. The post-construction measurements will be reported to the Elko County Department of Community Development using the same format as used for the pre-construction sound studies. As with the pre-construction study the post-construction study shall be conducted by an Independent Qualified Acoustical Consultant approved by the Elko County Department of Community Development, but paid for by the applicant / owner /developer of the wind project. The post- construction noise study shall be performed according to the procedures in the most current version of American National Standards Institute (ANSI) S12.18. All noise levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI S1.4 specifications for a Type I sound meter. Any post-construction noise levels that exceed any of the limits set forth, referring to the following subsection (m) will constitute proof that the commercial wind machine(s) is non-compliant and shall be rectified or shut down immediately.

(3) Noise studies shall not be required in the event that the placement of a wind turbine is located more than two (2) miles from any existing residence.

(m) Commercial Wind Machine Noise Standards, Audible Noise Limit.

(1) No commercial wind machine shall be located so as to generate post construction sound levels that exceed forty-five (45) dBA at night or fifty (50) dBA during the day as measured a minimum distance of fifty feet (50) from any existing residence within one (1) mile from a wind machine. The appropriate value to use for the post-construction sound level is LeqA.

(n) Commercial Wind Machine Noise Standards, Noise Setbacks.

(1) Setbacks greater than those set forth in this Section shall be imposed if necessary to meet the noise level requirements of this section.

(o) The colors of materials used in the construction of the tower shall be muted, non-reflective, non-obtrusive, and visually compatible with the surroundings. Acceptable colors shall be off-white, white, light silver, tan, grey, or sand. The painting or coating shall be kept in good repair for the life of the machine.

(p) Commercial wind machines shall be kept in good repair as recommended by the manufacture's scheduled maintenance or industrial standards and shall be free of rust.

(q) Waste Lubricants and cooling fluids shall not be permitted to accumulate, shall be removed in a timely manner and properly disposed of.

(r) If a commercial wind system is not used for one year to generate electricity or the permit has expired, the system shall be removed and the property restored to its previous condition within one hundred eighty (180) days.

(s) Advertisements are prohibited on all commercial wind energy conversion systems. The only advertising sign allowed on a wind machine shall be a logo on the generator housing.

(t) Repair and Removal of Commercial Wind Machines.

(1) Any commercial wind machine found to be unsafe by an official of the Elko County Department of Building and Safety shall be repaired by the owner to meet federal, state, and local safety standards, or, if not repaired, shall be removed in accordance with the provisions of this section within one hundred eighty (180) days of being notified by the Department of Building and Safety of the existence of an unsafe condition.

(2) Commercial wind machines that are not operated for a continuous period of twelve (12) months shall be removed by the owner of the wind machine.

(3) Decommissioning. For commercial wind machines, the applicant/developer shall submit a decommissioning plan at the time of application for a conditional use permit. The plan shall include:

a) The anticipated life of the project,

b) The estimated decommissioning costs net of salvage value in current dollars,

c) The method of ensuring that funds will be available for decommissioning and restoration, and

d) The anticipated manner in which the project will be decommissioned and the site restored.

4) When a commercial wind machine is removed from a site, all associated and ancillary equipment, batteries, devices, structures or support(s) for that system shall also be removed. For the purposes of this section, non-operation shall be deemed to include, but shall not be limited to, the blades of the wind machine remaining stationary so that wind resources are not being converted into electric or mechanical energy, or the wind machine is no longer connected to the public utility electricity system.

5) In the event a commercial wind machine owner fails to remove the wind machine tower and all associated and ancillary equipment, batteries, devices, structures or support(s) for that system, as required in this section, Elko County shall have the authority to remove or authorize the removal of the tower and all associated elements of the project.

(u) Compliance with Regulations. Once commercial wind machines are permitted, the owners have the option of compliance with the standards of this chapter or discontinuation of operations. If the operation of the wind machine(s) does not comply with the provisions of this article, the operator shall promptly take all measures necessary to comply with these regulations, including, but not limited to, discontinued operation of one or more commercial wind machines until compliance has been achieved.

2. Permit Applications, Commercial Wind Energy Conversion System: All permit applications for a commercial wind energy conversion system shall include the information listed in this section in addition to that normally required by other sections in the Development Code. The applicant may appeal to the Director of Community Development for the consideration of waiving certain submittal requirements of this section in cases where the wind machine(s) are not used for power sales and are constructed to offset power demands on site.

(a) Site Plan(s). A scaled site plan showing the following information:

(1) Existing topography, trees and drainage channels;

(2) Direction of prevailing winds across the project site;

(3) Location of all existing structures within one mile of the proposed commercial wind machine sites;

- (4)** Location and height above ground of all proposed commercial wind machines and, existing and proposed above-ground utility lines;
- (5)** Location, height and direction of all radar and microwave stations that could be affected;
- (6)** Preliminary dimensions, grading and alignment for all temporary and permanent roads, power transmission and distribution line easements, structures, wind machine sites, substation(s), staging areas and other site work.
- (7)** Distances to dwellings, churches, schools, nursing homes, roads, access easements, trails, railroads, and parks;
- (8)** Standard drawings and photographs of the wind turbine structure, including the tower, base, turbine and blades;
- (9)** A GIS map(s) and visual simulations, showing the impact of the topography upon visibility of the project from other locations. The base map used shall be a published topographic map showing non-natural features, such as roads, towers, and buildings;
- (10)** A preliminary drainage, sediment collection and erosion control plan for all areas proposed to be disturbed on the parcel(s);
- (11)** Decommissioning plans prepared in conformance with requirements as specified in the "Repair and Removal of Commercial Wind Machines" section of this chapter.
- (12)** Provide location of all public, private and military airports and airstrips within ten (10) miles of the nearest proposed wind turbine.
- (13)** A current determination letter resulting from a Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration, for each proposed wind machine or tower.
- (14)** A summary of the status of all FAA determinations with details on how any unresolved problems with aircraft safety are being addressed as well as a detailed description of any obstruction marking and lighting that will be required by the FAA.

(C) REQUIREMENTS, NON-COMMERCIAL METEOROLOGICAL TOWERS: All meteorological towers provided for under this section shall comply with the following standards:

1. All permit applications for non commercial meteorological towers provided for under this section shall comply with the following standards and in addition shall comply with that normally required by other sections in the Development Code.

(a) A Conditional use permit is required for any non-commercial wind energy conversion system test site.

(b) The minimum setbacks are one and one-half (1 ½) times the overall height from any property line, right-of-way, trail, easement, overhead utility, structure designed for habitation, residence or residential property whether owned or under other ownership.

(c) Maximum overall height shall not exceed allowable elevation indications in applicable airport master plans or Federal Aviation Administration regulations.

(d) Maximum overall height is to be regulated to meet the established and proposed uses of the property while being flexible to allow for current model wind machine offerings.

(e) No rotor blade is permitted under a non-commercial wind energy conversion system, non commercial use test site conditional use permit.

(f) Guy wire anchors shall not extend closer than five feet (5') from any property line and shall be properly marked and maintained from grade to a height of six (6) feet to help clearly identify them and serve as a safety system to prevent unwanted injuries. They shall be marked in accordance with the current adopted electrical codes.

(g) A conditional use permit for all temporary meteorological towers shall be valid for a maximum of two (2) years. Towers shall be removed within one (1) month after the two (2) year period has ended. Failure to remove the tower within the one (1) month period may result in a lien being placed against the property for the entire cost to Elko County to remove and dispose of it. An extension of time of one (1) year may be permitted by the Director of the Department of Community Development upon submittal of a letter explaining the need for the extension.

(h) Test site equipment shall not be located in or on drainage, utility or other established easements.

(i) Conditional use permits for test sites shall expire twenty-four (24) months after construction at which time the test site equipment shall be removed and the property restored to its previous condition prior to the expiration of the temporary use permit.

(j) All meteorological towers shall comply with lighting, signage, aesthetics, tower and facility access, and maintenance requirements as outlined in **"Requirements, Micro Wind Energy Conversion Systems and Private Wind Energy Conversion Systems."**

(k) Shall comply with the Elko County adopted International Building Code, NEC, other applicable codes.

(l) The noise levels generated by a commercial test site system shall not exceed fifty (50) dBA measured at any property line.

(D) REQUIREMENTS, COMMERCIAL WIND ENERGY CONVERSION SYSTEM TEST SITES: All meteorological towers provided for under this section shall comply with the following standards:

1. All permit applications for commercial meteorological towers provided for under this section shall comply with the following standards and in addition shall comply with that normally required by other sections in the Development Code.

(a) A Conditional use permit shall be required for any commercial wind energy conversion system test site.

(b) Test sites shall be located within the Open Space zoning district.

(c) Test towers shall not exceed two hundred feet (200') in height.

(d) The minimum setbacks are one and one-half (1 ½) times the overall height from any property line, right-of-way, trail, easement, overhead utility, structure designed for habitation, residence or residential property whether owned or under other ownership.

(e) No rotor blade is permitted under a commercial wind energy conversion system commercial use test site conditional use permit.

(f) Guy wire anchors shall not extend closer than five feet (5') from any property line and shall be properly marked and maintained from grade to a height of six feet (6) to help clearly identify them and serve as a safety system to prevent

unwanted injuries. They shall be marked in accordance with the current adopted electrical codes.

(g) Test site equipment shall not be located in or on drainage, utility or other established easements.

(h) Lighting.

(1) Commercial Wind Energy Conversion System towers shall not be artificially lighted unless required, in writing, by the Federal Aviation Administration (FAA) or other applicable authority that regulates air safety.

(2) Where the FAA requires lighting, the lighting shall be the lowest intensity allowable under FAA regulations; and

a) The lighting fixtures shall be shielded and directed to the greatest extent possible to minimize glare and visibility from the ground.

b) No strobe lighting shall be permitted, unless expressly required by the FAA.

(3) Lighting may be permitted when requested by an air ambulance service.

(i) Conditional use permits for test site shall expire twenty-four (24) months after construction at which time the test site equipment shall be removed and the property restored to its previous condition prior to the expiration of the temporary use permit.

(j) Shall comply with the Elko County adopted International Building Code, NEC, other applicable codes.

(k) The noise levels generated by a commercial test site system shall not exceed 50 dBA measured at any property line.

(l) Tower and Facility Access. All commercial test site towers shall comply with the following provisions:

(1) The tower shall be designed and installed so that there shall be no exterior step, bolts, or a ladder on the tower readily accessible to the public for a minimum height of twelve feet (12') above the ground.

(2) For lattice or guyed towers, sheets of metal or wood or other barrier shall be fastened to the bottom tower section such that it cannot readily be climbed.

(3) Any guy wires shall be made clearly visible to a minimum height of six feet (6').

(4) All ground-mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

Proposed this _____ day of _____, 2011, by
Elko County Commissioner _____, 2011.

Passed and adopted this _____ day of _____, 2011.

Vote: Ayes:

Nays:

Absent:

Chairman of the Board of Commissioners

ATTEST:

CAROL FOSMO
Elko County Clerk

This Ordinance shall be in full force and effect from and after the _____ day of _____, 2011, after required publication.

CV#03787 / WIND TURBINE