

CEDAR COUNTY ORDINANCE #47

AN ORDINANCE REGULATING THE PLACEMENT OF WIND ENERGY CONVERSION SYSTEMS (WECS) ON PROPERTY LOCATED IN THE UNINCORPORATED AREAS OF CEDAR COUNTY, IOWA.

BE IT ENACTED BY THE CEDAR COUNTY BOARD OF SUPERVISORS:

SECTION 1. PURPOSE.

The purpose of this ordinance is to establish guidelines for the siting, design and construction of Wind Energy Conversion Systems (WECS) and substations which generate electricity for use at the location of the WECS or to be sold to wholesale or retail markets. In addition, the purpose of this Ordinance shall be to promote the public health, safety, comfort and general welfare, while facilitating economic opportunities for rural residents and promoting a goal of increased energy production from renewable energy sources. The requirements of this Ordinance shall apply to all WECS constructed after the effective date of this Ordinance. WECS for which a required permit has been properly issued prior to the effective date of this Ordinance shall not be required to meet the requirements of this Ordinance; provided, that any such pre-existing WECS, which does not provide energy for a continuous period of twelve (12) months, shall meet the requirements of this Ordinance prior to recommencing production of energy. Also, no modification or alteration to an existing WECS shall be allowed without full compliance with this Ordinance.

SECTION 2. DEFINITIONS.

For use in this Ordinance, certain words used herein shall be defined as follows:

Applicant: The owner or operator of a WECS.

Aggregated Project: Aggregated projects are those which are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also included as part of the aggregate project.

Commercial Wind Energy Conversion System (C-WECS): A WECS of equal to or greater than [100/40] kW in total name plate generating capacity.

Easement: A legal interest in land, as defined in a document recorded in the office of the Cedar County Recorder, granted by the owner to another person or entity, which allows that person(s) or entity(ies) the use of all or a portion of the owner's land, generally for a stated purpose, including, but not limited to, access or placement of utilities.

Electromagnetic Interference (EMI): The interference to communication systems created by scattering of electromagnetic signals.

Fall Zone: The area, defined as the furthest distance from a tower base, in which a guyed tower or self-supporting tower will collapse in the event of a structural failure. This area includes the total height of the structure based upon the tower's structural design plus ten (10) percent.

Feeder Line: Any power line that carries electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the point of interconnection with the electrical power grid. In the case of interconnection with the high voltage transmission systems, the point of interconnection shall be the substation serving the WECS(s).

Meteorological Tower: For the purpose of this Ordinance, meteorological towers are those towers which are erected primarily to measure wind speed and directions plus other data relevant to siting WECS.

Non-Commercial WECS (Non C-WECS): A wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power.

Non-participating property: Real property that is not a participating party.

Non-participating residence: A residence located on a non-participating property.

Occupied community building: A school, church, hospital, licensed day care or public library.

Operator: The entity responsible for the day-to-day operation and maintenance of the WECS, including third party subcontractors.

Owner: The entity or entities with an equity interest in the WECS(s), including their respective successors and assigns. Owner does not mean (i) the property owner from whom the land is leased for locating the WECS (unless the property owner has an equity interest in the WECS); or (ii) any person holding a security interest in the WECS(s) solely to secure an extension of credit, or a person foreclosing on such security interest provided that after foreclosure, such person seeks to sell the WECS(s) at the earliest practicable date.

Participating property: Means any of the following:

- (a) A wind turbine host property
- (b) Real property that is the subject of an agreement that does the following:
 - 1. Provides for the payment of compensation to the landowner from a wind turbine owner regardless of whether any part of a wind energy system is constructed on the property.

Participating residence: A residence located on a participating property.

Professional Engineer: A qualified individual who is licensed in the state of Iowa as a professional engineer.

Residence: A house, apartment or other shelter that is the abode of a person, family, or household. For the purpose of this Ordinance, a residence does not include a vehicle defined as a motor home in the Code of Iowa Chapter 321.1(36C)(d), a travel trailer, defined under Chapter 321.1(36C)(b), or a fifth wheel trailer as defined under Chapter 321.1(36C)(c).

Rotor Diameter: The diameter of the circle described by the moving rotor blades of a WECS.

Setback: The minimum required distance from the property line, right-of-way, or easement to any portion of the structure.

Shadow Flicker: The alternating pattern of sun and shade caused by the wind tower blades casting a shadow onto a residence or occupied community building.

Structure: Anything constructed or erected on the ground or attached to the ground, including but not limited to, antenna(s), buildings, sheds, cabins, dwellings (built on-site or factory built homes), signs, storage tanks, towers, windmills and other similar uses.

Substation: The apparatus that connects the electrical connection system of the WECS(s) and increases the voltage for connection with the utility's transmission lines.

Total Height (WECS): The highest point, above ground level, reached by the rotor tip or any other part of the WECS.

Tower: The vertical structure that supports the electrical generator, nacelle, rotor blades, or meteorological equipment.

Tower Height: The total height of the WECS inclusive of the rotor blades.

Transmission Line: Those electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electrical energy over medium to long distances rather than directly interconnecting and supplying electrical energy to retail customers.

Wind Energy Conversion System (WECS): All necessary devices that together convert wind energy into electricity, including the rotor, nacelle, generator, WECS Tower, electrical components, WECS foundation, transformers, electrical cabling and meteorological towers from the WECS Tower to the Substation(s).

WECS Project: The collection of WECS(s) and Substations as specified in the siting approval application pursuant to Section 5 of this Ordinance.

Wind Energy Conversion System Emergency: A condition or situation at a wind energy conversion system that presents a significant threat of physical danger to human life or a significant threat to property or a natural event that causes damage to wind energy conversion system facilities.

Wind Turbine: A wind turbine is any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

SECTION 3. SPECIAL EXCEPTION.

All C-WECS and all Non C-WECS over one hundred (100) feet in height, or which sell a portion of the generated electricity to wholesale or retail markets, and Meteorological Towers may be permitted as a Special Exception use as provided in the Cedar County Zoning Ordinance, Number 10, upon determination that all applicable conditions of this Ordinance are met. Special Exception Use applications are submitted to the Cedar County Board of Adjustment for action after review and recommendation by the Cedar County Planning and Zoning Commission.

SECTION 4. PERMITTED LOCATIONS.

Subject to Section 3, of this Ordinance, C-WECS and Non C-WECS and Meteorological Towers are a permitted use in the following Zoning Districts as identified in the Cedar County Zoning Ordinance: A-1, Agricultural; C-1, Local Commercial; C-2, Highway Commercial; M-1, Light Industrial or the M-2, Heavy Industrial Zoning Districts.

No C-WECS or Non C-WECS or Meteorological Towers are permitted in the following Zoning Districts: AR-1, Agricultural-Recreational; R-1 Suburban Residential; R-2, Urban Residential or the R-3, Multi-Family Residential Zoning Districts.

SECTION 5. SITING APPROVAL APPLICATION REQUIREMENTS.

The applicant for a Special Exception for siting and construction of a WECS shall file an application, as provided by Chapter 17.18(2) of the Cedar County Zoning Ordinance accompanied by a fee as established by the Cedar County Board of Supervisors and payable to the Treasurer of Cedar County, Iowa.

A. In addition to the submittal requirements defined for Special Exception Permit

applications, all applications for C-WECS must submit the following information (as applicable).

1. A WECS Project summary, including, to the extent possible: (1) a general description of the project, including its approximate nameplate generating capacity; the potential equipment manufacturer(s), type(s) of WECS(s), number of WECSs, and the name plate generating capacity of each WECS; and (2) a description of the Applicant, Owner and Operator, including their respective business structures.
2. The names of project applicant.
3. The name of the project owner.
4. The legal description and address of the project.
5. Tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid.
6. Site layout, including the location of property lines, wind turbines, electrical wires, interconnection points with the electrical grid, and all related accessory structures. The site layout shall include distances and be drawn to scale.
7. Engineer's certification(s) as required in these supplemental standards.
8. Documentation of land ownership or legal control of the property.
9. The latitude and longitude of individual wind turbines.
10. A U.S.G.S. topographical map, or map with similar data, of the property and surrounding area, including any other C-WECS within 10 rotor diameters of the proposed C-WECS.
11. Location of wetlands, scenic, and natural areas [including bluffs] within 1,320 feet of the proposed C-WECS.
12. An Acoustical Analysis.
13. F.A.A. Permit Application.
14. Location of all known communications towers/facilities within 2 miles of the proposed C-WECS.
15. Decommissioning Plan.
16. Description of potential impacts on nearby C-WECS and Non C-WECS and wind resources on adjacent properties.
17. Identification of significant migratory patterns and nesting areas for birds and bats and identification of endangered species within two (2) miles. A qualified professional such as a wildlife biologist, shall conduct a habitat and migration route study, as part of the siting approval application process, to determine if the installation of WECS(s) will have a substantial adverse impact on these animals.

B. The Applicant, Owner or Operator shall submit a copy of the site plan and Emergency Action Plan to the Cedar County Emergency Management Administrator and to the appropriate area emergency response jurisdiction.

The Applicant shall notify Cedar County of any changes to the information provided in Section 5 that occur while the siting approval application is pending.

C. The Board of Adjustment after review of the recommendation from the Cedar County Planning and Zoning Commission and consideration of the petition for a Special Use Permit in accordance with this Ordinance and Chapter 17.18(2) of the Cedar County Zoning Ordinance, shall issue a written decision to grant or deny an application for a wind energy conversion system to the owner. A Resolution of Approval for a Special Use Permit on a parcel or property shall be recorded in the Office of the Cedar County Recorder.

D. Modifications to an approved wind energy conversion system.

- i) An owner may not make a material change in the approved design, location, or construction of a wind energy conversion system without prior written approval by the Board of Adjustment. A change is considered material if it will result in an 6 dBA or greater increase in noise at a residence or occupied community building; an annual increase of four (4) hours or more of shadow flicker impact at a residence or occupied community building; installation of additional WECS; or replacement of existing wind turbines ("repowering").

ii) An owner shall submit an application for a material change to an approved wind energy conversion system to the Board of Adjustment for approval. Review of the application for a material change will not require a recommendation from the Planning and Zoning Commission.

E. Effect of ownership change on approval.

i) Approval of the wind energy conversion system for which a Resolution of Approval was been recorded in the Office of the Cedar County Recorder remains in effect if there is a change in ownership of the wind energy conversion system site. ii) The new owner of the wind energy conversions system shall notify the Zoning Administrator in writing prior to the change in ownership. Notification will include contact information including name, address, telephone number, emergency contact information and updating of all applicable requirements and conditions of this Ordinance.

SECTION 6. GENERAL REQUIREMENTS FOR C-WECS AND METEOROLOGICAL TOWERS.

In addition to satisfactorily addressing the considerations set forth in Chapter 17.18, Subsections 2(d) and 2(e) of the Zoning Ordinance, the applicant must provide documentation that the following requirements have been met.

1. Color and Finish. Wind Turbines shall be painted a non-reflective color. Blades may be black in order to facilitate de-icing. Finishes shall be matte or non-reflective. At C-WECS 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 the C-WECS to the natural setting and existing environment.
2. Tower configuration. All wind turbines, which are part of a C-WECS, shall be installed with a tubular, monopole type tower. Meteorological towers may be guyed.
3. Tower Density. There shall not be more than one C-WECS per acre.
4. Lighting. C-WECS sites shall not be artificially lighted, except to the extent required by the F.A.A. or other applicable authority or for night time repairs/ maintenance. Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by Federal Aviation Administration and/or Federal Communication Commission permits and regulations. Red strobe lights are preferred for night-time illumination to reduce impacts on migrating birds. Red pulsating incandescent lights should be avoided. Exceptions may be made for meteorological towers, where concerns exist relative to aerial spray applicators.
5. Signage. Upon completion of the WECS Tower, the Owner's company name and/or logo and the phone number and name of the person to contact in case of emergency shall be placed upon the base of the WECS Tower or the entrance to any enclosure fence. Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the C-WECS sites.
6. Feeder Lines. All communications and feeder lines, equal to or less than 34.5 kV in capacity, installed as part of a C-WECS shall be buried not less than forty eight (48) inches deep.
7. Waste Disposal. Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site in a time period as established by the Cedar County Environmental Health Department and disposed of in accordance with all applicable local, state and federal regulations.
8. Minimum Ground Clearance. The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.
9. Signal Interference. The applicant shall provide to applicable microwave transmission providers and the Emergency Management Administrator copies of the project summary and site plan, in accordance with Section 5, of this Ordinance. The applicant shall minimize and mitigate any interference with electromagnetic communications, such as radio, telephone or television signals caused by any C-WECS. If, after construction of the WECS, the Owner or Operator receives a written complaint related to the above-mentioned interference, the Owner or Operator shall take reasonable steps to respond to the complaint.
10. Federal Aviation Administration. All C-WECS shall comply with F.A.A. standards and permits.

11. Electrical Codes and Standards. All C-WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.

12. Setbacks. The following setbacks and separation requirements shall apply to all Wind Turbines and meteorological towers; provided that the Board of Adjustment may reduce the standard setbacks and separation requirements if the intent of this Ordinance would be better served thereby. All other structures shall comply with the applicable setbacks as allowed by the base zoning district.

- a) Inhabited Structures. Each wind turbine and meteorological tower shall be set back from the nearest residence, or occupied community building, a distance no less than (i) three (3) times its total height or (ii) one thousand (1,000) feet, whichever is greater.
- b) Property Lines. Setbacks to non-participating property lines shall be a minimum of 1.1 times the total height of the wind turbine or meteorological tower. No setback is required to participating property lines. Amend: "At no time shall any part of the wind turbine and meteorological tower overhang an adjoining non-participating property line without securing appropriate easements from adjoining non-participating property owners.
- c) Public Right-of-Way. Setbacks from public right-of-way, railroads, power lines and structures shall be a minimum of 1.1 times the height of the tower and rotor.
- d) Communication and Electrical Lines. Each wind turbine and meteorological tower shall be set back from the nearest above-ground public electric power line or telephone line a distance no less than 1.1 times its total height, determined from the existing power line or telephone line.

13. Noise. Audible noise due to C-WECS sites operations shall not exceed fifty (50) decibel A (dBA) for any period of time, when measured at the outside wall of any non-participating residence or occupied community building existing on the date of approval of any Special Exception Use permit.

a) In the event audible noise due to C-WECS operations contains a steady pure tone, such as a whine, screech, or hum, the owner shall promptly take corrective action to permanently reduce the noise as soon as possible. The standards for audible noise set forth in this subsection shall be reduced by five (5) dBA.

b) In the event the ambient noise level (exclusive of the development in question) exceeds the applicable standard given above, the applicable standard shall be adjusted so as to equal the ambient noise level. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in dBA, which is succeeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior wall of potentially affected existing residences or occupied community building. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of wind generated noise at the microphone. Ambient noise level measurements may be performed when wind velocities at the proposed project site are sufficient to allow wind turbine operation, provided that the wind velocity does not exceed thirty (30) mph at the ambient noise measurement location.

c) Compliance.

If an owner uses sound level measurements to evaluate compliance with this section at a non-participating residence, or occupied community building, those measurements shall be made as near as possible to the outside wall nearest to the closest wind turbine, or at an alternate wall as specified by the owner of the non-participating residence or occupied community building. The owner may take additional measurements to evaluate compliance to those specified by this section.

An owner shall evaluate compliance with sub-section 13 as part of pre-and post construction noise studies.

The post-construction noise modeling study will be used to define the zone around the project area where the possibility of legitimate noise complaints may exist. This zone will be defined as any existing residences where turbine noise could reach 40 dBA as measured in accordance with sub-section 13.

Upon receipt of a written complaint regarding a violation of the noise standards in sub-section 13, at a residence or occupied community building within the 40 dBA zone, the owner shall test for compliance with the noise limits in sub-section 13.

The Board of Adjustment may not require additional testing to show compliance with sub-section 13 if the owner has provided the results of an accurate test conducted within two (2) years of the date of the complaint showing that the wind turbine is in compliance with sub-section 13 at the location relating to the complaint.

Methods available for the owner to comply with sub-section 13 shall include operational curtailment of one or more wind turbines and correction of the problem.

Within sixty (60) days of receipt of a written complaint about a noise under sub-section 13, the owner shall provide results of a noise test, and if the results show that the noise exceeds the limits established under sub-section 13, the owner shall take immediately remedial action to bring the turbine into compliance with sub-section 13. Such remedial action may include operational curtailment to eliminate the noise until the owner permanently corrects the problem.

The Board of Adjustment may, in its judgment, require immediate operational curtailment within the sixty (60) day study period in the event of extreme disturbance to surrounding residences or occupied community buildings.

In the event a noise complaint originates from a non-participating residence, or occupied community building, outside of the 40 dBA zone defined above, the written complaint shall be documented with accurate sound level measurements conducted by a qualified expert, at the expense of the complainant. If the results show that noise levels exceed the limits established by sub-section 13, the owner shall pursue remedial action as described in sub-section 13, and shall reimburse the complainant for the reasonable cost of the sound measurements.

d) In the event the noise levels resulting from the C-WECS exceed the criteria listed above, a waiver to said levels may be granted by the Board of Adjustment provided that the following has been accomplished:

- (i) Written consent from the affected property owners has been obtained stating that they are aware of the C-WECS and the noise limitations imposed by this Ordinance, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and
- (ii) If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent noise impact easement shall be recorded in the Office of the Cedar County Recorder which describes the burdened properties and which advises all subsequent owners of the burdened property that noise levels in excess of those permitted by this Ordinance may exist on or at the burdened property.

14. Safety.

a) All wiring between Wind Turbines and the C-WECS substation shall be underground. If the developer can demonstrate the need for an overhead line and the acceptance of landowners for this line, such option may be approved conditionally by the Cedar County Board of Adjustment.

- b) Wind Turbine and meteorological towers shall not be climbable up to fifteen (15) feet above ground level.
- c) All access doors to Wind Turbine and Meteorological Towers and electrical equipment shall be locked when not being serviced.
- d) Appropriate visible warning signage shall be placed on Wind Turbine towers, electrical equipment, and C-WECS entrances.

- e) For all C-WECS, the manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the C-WECS is within accepted professional standards, given local soil and climate conditions.
- f) All WECS shall be equipped with a redundant braking system. This includes both aerodynamic over speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for over speed control.
- g) For all guyed towers, visible and reflective objects, such as plastic sleeves, reflectors or tape, shall be placed on the guy wire anchor points and along the outer and innermost guy wires up to a height of twelve (12) feet above the ground. Visible fencing shall be installed around anchor points of guy wires. The property owner must sign a notarized acknowledgement and consent form allowing construction of the turbine and guyed wires without fencing as required in this Ordinance to be presented to the Board of Adjustment.

15. Exceptions to this section may be made for meteorological towers, where concerns exist relative to aerial spray applicators.

16. Emergency procedures. The owner shall have an Emergency Action Plan containing as a minimum, the following:

- a) The establishment and maintained liaison with representatives of Cedar County and the area emergency response jurisdiction for rescue and fire to create effective emergency plans.
- b) Contact information for the Emergency Management Administrator and the appropriate emergency response jurisdiction.
- c) Duties and responsibilities of the owner and emergency response personnel in the event of an emergency.
- d) A list of the types of wind energy conversion system emergencies, and the procedures for handling different types of emergencies including the shutting down of all or part of the C-WECS(s).

17. Shadow Flicker.

- a) The shadow flicker requirements of this section apply to a non-participating residence, or occupied community building that exists when the owner files an application in accordance with Section 5 of this Ordinance with the Zoning Administrator.
- b) An owner shall design the proposed C-WECS or Non C-WECS to minimize shadow flicker at a residence, or occupied community building to the extent reasonably practicable.
- c) An owner shall use shadow flicker computer modeling to estimate the amount of shadow flicker anticipated to be caused by the C-WECS and shall design the wind energy conversion system so that computer modeling indicates that no non-participating residence, or occupied community building will experience more than thirty (30) hours per year of shadow flicker under planned operating conditions.
- d) An owner shall operate the C-WECS in a manner that does not cause more than thirty (30) hours per year of shadow flicker occurring on the walls or windows at a non-participating residence, or occupied community building. If a non-participating residence, or occupied community building experiences more

than thirty (30) hours per year of shadow flicker under the C-WECS normal operating conditions, the owner shall use operational curtailment to comply with this section.

e) An owner of a C-WECS shall work with an owner of a non-participating residence, or occupied community building to mitigate the effects of the shadow flicker to the extent reasonably practicable.

f) An owner shall provide reasonable shadow flicker mitigation at the owner's expense for a non-participating residence, or occupied community building experiencing twenty (20) hours or more per year of shadow flicker.

g) An owner shall model shadow flicker and a non-participating residence, or occupied community building is eligible for mitigation if computer modeling shows the shadow flicker at the previously listed structures will be twenty (20) hours or more per year. An owner of a non-participating residence or occupied community building is not required to document the actual hours per year of shadow flicker if modeling indicates the structure is eligible for mitigation.

h) An owner may provide shadow flicker mitigation for any residence or occupied community building in addition to the mitigation required under par. (f).

i) The requirements under par. (f), to mitigate shadow flicker shall apply when the owner receives a written complaint or request for mitigation regarding shadow flicker from an eligible non-participating residence or occupied community building, within two (2) years of commencement of operation of the C-WECS.

If shadow flicker mitigation is required, the owner of the C-WECS shall allow the owner of the non-participating residence or occupied community structure to choose a preferred reasonable mitigation technique, including installation of window coverings or green plantings at the wind energy conversion system owner's expense. The requirement for shadow flicker mitigation is limited to window(s) which are directly impacted by shadow flicker.

j) In the event the shadow flicker resulting from the C-WECS exceeds the criteria listed above, a waiver to said shadow flicker may be granted by the Board of Adjustment provided that the following has been accomplished:

(i) Written consent from the affected property owners has been obtained stating that they are aware of the C-WECS and the shadow flicker limitations imposed by this Ordinance, and that consent is granted to allow shadow flicker to exceed the maximum number of hours per year otherwise allowed; and

(ii) If the applicant wishes the waiver to apply to succeeding owners of the participating property, a permanent shadow flicker impact easement shall be recorded in the Office of the Cedar County Recorder which describes the burdened properties and which advises all subsequent owners of the burdened property that shadow flicker in excess of the maximum permitted hours per year permitted by this Ordinance may exist on or at the burdened property.

SECTION 7. AVOIDANCE AND MITIGATION OF DAMAGES TO PUBLIC INFRASTRUCTURE

1. Roads. Applicants shall identify all roads to be used for the purpose of transporting C-WECS, substation parts, cement, and/or equipment for construction, operation or maintenance of the C-WECS and obtain applicable weight and size permits from the impacted road authority(ies) prior to construction.

2. Existing Road Conditions. Applicant shall conduct a pre-construction baseline survey, in coordination with the impacted local road authority(ies) to determine existing road conditions for assessing potential future damage. The survey shall include photographs and a written agreement to

document the condition of the public facility. The applicant is responsible for on-going road maintenance and dust control measures identified by the Cedar County Engineer during all phases of construction. The applicant is responsible for any costs required to repair roads to pre-construction baseline condition. Cedar County reserves the right to halt operations if road conditions deteriorate to a point that creates a hazard to the public.

3. Drainage System. The Applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the C-WECS.

4. Performance Bond or Equivalent Financial Instrument. The applicant shall be responsible for restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) and bridges to preconstruction conditions. A performance bond or equivalent financial instrument, approved by the Cedar County Attorney's Office, shall be submitted covering 130% the costs of all required improvements. This requirement may be waived by the Board of Adjustment by written recommendation from the Cedar County Engineer.

SECTION 8. DISCONTINUATION AND DE-COMMISSIONING.

A C-WECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Administrator outlining the steps and schedule for returning the C-WECS to service. All C-WECS and accessory facilities shall be removed to four (4) feet below ground level within one hundred eighty (180) days of the discontinuation of use. An extension to such period may be granted by the Board of Adjustment provided that the Owner or Operator submits an acceptable alternate plan for the decommissioning and thereafter diligently pursues such decommissioning until completed. Each C-WECS shall have a De-commissioning plan outlining the anticipated means and cost of removing C-WECS at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a professional engineer licensed in the State of Iowa. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the C-WECS and accessory facilities. Cedar County reserves the right to verify that adequate decommissioning terms are contained in the landowner easement.

SECTION 9. NON-COMMERCIAL WECS (Non C-WECS).

A. Non-Commercial WECS, are subject to the following standards. In addition to satisfactorily addressing the requirement of Chapter 17.6, of the Zoning Ordinance, the applicant must provide documentation that the following requirements have been met.

1. Tower Height: Subject to Section 3 of this Ordinance, Non C-WECS shall not exceed one hundred (100) feet in height without approval of a Special Exception by the Cedar County Board of Adjustment. Non C-WECS, shall be subject to all height limitations as necessary to comply with other sections of this Ordinance and those imposed by F.A.A. regulations.
2. Setback: No part of the wind system structure, including guy wire anchors, may extend closer than ten (10) feet to the property boundaries of the installation site. The distance of the base of the tower from any property line shall be a minimum of 115% of the total height of the tower.
3. Noise: Non C-WECS shall not exceed 50 dBA, as measured at the outside wall of the closest neighboring inhabited dwelling. The level, however, may be exceeded during short-term events such as utility outages and/or severe wind storms.
4. Shadow Flicker: A Non C-WECS shall not create shadow flicker onto a non-participating residence or occupied community building. Should the possibility exist that the Non C-WECS could create, or be found to create, shadow flicker on a non-participating residence or occupied community building, the Board of Adjustment may only in accordance with Section 6(17)j consider a waiver as a condition of approval.

5. Engineer Certification: Applications for Non C-WECS shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, and footings. An engineering analysis of the tower showing compliance with the applicable regulations and certified by a Iowa licensed professional engineer shall also be submitted. This analysis is frequently supplied by the manufacturer.
6. Compliance with F.A.A. Regulations: Non C-WECS must comply with applicable F.A.A. regulations, including any necessary approvals for installations close to airports.
7. Compliance with National Electric Code: Applications for Non C-WECS shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information is frequently supplied by the manufacturer.
8. Utility Notification: No Non C-WECS shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
9. Insurance: The Owner seeking a Zoning Permit to erect a Non C-WECS shall provide evidence, in the form of a certificate of insurance satisfactory to Cedar County, showing general liability coverage for the installation and operation of the system under a standard homeowner's or standard business owner's insurance policy, separate and distinct from any insurance requirements of a public utility.

SECTION 10. LIABILITY INSURANCE.

The Owner or Operator of the WECS(s) and Meteorological Towers, subject to Section 3 of this Ordinance, shall maintain a current general liability policy covering bodily injury and property damage with limits of at least Three Million Dollars per occurrence and Three Million Dollars in the aggregate.

SECTION 11. COMPLAINTS.

1. The owner of a non-participating residence, property or occupied community building may make a complaint regarding failure by an owner of a C-WECS or Non C-WECS to comply with an obligation under this Ordinance.
2. A complaint shall first be made to the owner of the wind energy conversion system pursuant to a written complaint resolution process developed by the owner.
3. An owner shall use reasonable efforts to resolve complaints regarding a wind energy conversion system and shall investigate complaints regarding a wind energy conversion system at the owner's expense.
 - a) Upon receipt of a complaint, the owner shall provide the complainant within thirty (30) days of receipt of the complaint an initial response to the complainant.
 - b) An owner shall make good faith effort to resolve complaints within forty five (45) days of receiving a written complaint. An owner shall notify the Zoning Administrator of complaints that have not been resolved within forty five (45) days of the date the owner received the original complaint.
 - c) An owner shall maintain a log of all complaints received regarding the wind energy conversion system, which includes the name and address of each complainant, the nature of each complaint, and the steps taken to resolve each complaint. An owner shall provide a copy of the complaint log every six (6) months to the Zoning Administrator. An owner shall

make any complaint log available to the Board of Adjustment upon request.

4. A complainant may petition in writing the Board of Adjustment for review of a complaint that is not resolved within forty five (45) days of the day the owner receives the original written complaint. The Board of Adjustment subject to this Ordinance and the terms and conditions of the Special Use Permit shall consider the complaint within thirty (30) days of filing, give public notice thereof, as well as due notice to the parties in interest, and decide the same within a reasonable time. At the hearing, the complainant and WECS owner may appear in person or by agent or attorney.

SECTION 12. ZONING PERMIT(S).

All C-WECS and Meteorological Towers are subject to the construction permit requirements of Chapter 17 of the Cedar County Zoning Ordinance. Permit issuance is contingent upon documentation of F.A.A. approval.

SECTION 13. POST CONSTRUCTION FILING REQUIREMENT.

Within ninety (90) days of the date the a C-WECS commences operation, the owner shall file with the Zoning Administrator an as-built description of the C-WECS, an accurate map of the wind energy system showing the location of all C-WECS facilities and current information identifying the owner of the C-WECS. The owner shall under this section label each C-WEC location with a unique identifier consistent with the information posted at the C-WEC location under Section 6(5) of this Ordinance.

Within one hundred twenty (120) days of this filing, the owner shall also provide documentation on the post construction noise study required in accordance with Section 6(13)c of this Ordinance.

SECTION 14. REPEALER.

All ordinance(s) in conflict with the provisions of this Ordinance are hereby repealed.

SECTION 15. SEVERABILITY.

Should any section or provisions of this Ordinance be declared by the courts to be invalid or unconstitutional, such decision shall not affect the validity of the Ordinance as a whole, or any part thereof other than the part so declared to be invalid or unconstitutional.

SECTION 16. PENALTY.

Any person, persons, firms, partnerships or corporations, whether acting alone or in concert with any other, who violates this Ordinance shall be guilty of a County Infraction and shall be penalized as set forth in Ordinance #20, of the County Code of Cedar County, Iowa.

SECTION 17. EFFECTIVE DATE.

This Ordinance and subsequent amendments shall be in effect after its final passage, approval and publication as provided by law.