

PROPOSED WASHINGTON COUNTY ORDINANCE-DRAFT

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

BE IT ENACTED BY THE WASHINGTON COUNTY BOARD OF SUPERVISORS

SECTION 1. PURPOSE

The purpose of this Ordinance shall be to promote the public health, safety, comfort and general welfare, while facilitating economic opportunities for rural residents. The requirements of this Ordinance shall apply to all WECS constructed after the effective date of this Ordinance. 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 person or entity submitting the application under this Ordinance, which is normally expected to be the owner or operator of a WECS, or the owner of the WECS development.

Commercial Wind Energy Conversion System (or C-WECS): A WECS which has a generating nameplate capacity of 100 kW or greater.

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.

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 and/or operating WECS.

Non-Commercial WECS (or Non-C-WECS): A WECS which has a generating nameplate capacity of not more than 100 KW and which is intended to primarily reduce on-site consumption of utility power.

Operator: The entity responsible for the day-to-day operation and maintenance of the WECS.

Owner: The entity or entities with an equity interest in the WECS, including their respective successors and assigns. Owner does not mean (i) the property owner from whom a lease, easement or other property rights are acquired 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 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 at the earliest practical date.

Participating landowner: A landowner under lease, easement or other property agreements with the owner or operator of the WECS.

Non-participating landowner: Any landowner not under agreement with the owner or operator of the WECS.

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 and regularly occupied.

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

Setback: The minimum required distance from a certain object, structure or point to the center point of the foundation of the Wind Turbine at the natural ground level.

Structure: Anything constructed or erected on the ground or attached to the ground, including but not limited to, antenna(s), buildings, sheds, cabins, residences, signs, storage tanks, towers, Wind Turbines and other similar objects.

Substation: The apparatus that connects the electrical connection system of the WECS and increases the voltage for connection with the utility's, transmission owner's or WECs owner's transmission lines.

Total Height: The total height of the Wind Turbine inclusive of rotor blades, as measured from the ground to the tip of the blade when fully extended.

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

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 customers.

Wind Energy Conversion System (WECS): All necessary devices that together convert wind energy into electricity, including Wind Turbines, electrical components, transformers, feeder lines, substation and meteorological towers.

Wind Turbine: A Wind Turbine is any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy, primarily made up of a foundation, tower, nacelle and rotors.

SECTION 3. WECS PERMIT APPLICATION REQUIREMENTS

The applicant for the siting and construction of WECS shall file an application with the County Engineer of his designee, accompanied by a fee of Two Hundred Fifty Dollars (\$250.00) per Wind Turbine that is a part of the application and payable to Washington County, Iowa.

- A. All applications for WECS must include 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; a general description of the Wind Turbines, and (2) a description of the applicant, owner and operator, including their respective business structures.
 - 2) The names of the project applicant and project owner, including contact information.
 - 3) Total height and rotor diameter of the Wind Turbines.
 - 4) Site layout, including the location of the Wind Turbines (Latitude and longitude of the WECS) and those items to which a setback applies. The site layout shall be dimensioned and drawn to scale, in order for the County Engineer to determine if the Wind Turbines meet the setback requirements of this Ordinance.
 - 5) Location of the public areas listed in the table in Section 4.11.f which are potentially affected by the proposed Wind Turbines.
 - 6) Affirmation that a sound study if completed would show expected maximum decibel levels produced by the Wind Turbines as measured at non-participating or participating residences should not exceed fifty-five (55) decibels (dBA) for any period of time. After approval by BoS, all participating and non-participating inhabited locations may request a 24-hour period sound study, to measure ambient sounds prior to installation of WECS. Another sound study can be requested after construction and during normal operation to determine a variance. The costs of these studies will be borne by the applicant and paid out of escrow established in Section 3.A.11. Acceptable remedies will be negotiated with the participant or non-participant and the applicant.
 - 7) Once approval from Board of Supervisors, applicant will provide a \$25,000 escrow account to be maintained monthly and for the life of the project, to facilitate conflict resolution. Formal complaints for any violation of this ordinance will be presented to Washington County Engineer. Once approved

- for BoS review by the Engineer, the BoS chair will put on agenda for Board discussion/review/approval. This money will be utilized at the discretion of the Board of Supervisors for the investigation of complaints regarding WECS related conflict.
- 8) Affirmation that the applicant has identified significant migratory flyways and nesting areas for birds, bats and endangered species within one (1) mile of the proposed Wind Turbine.
 - 9) A Property Value Guarantee. Applicant/Developer/Owner shall offer a property value guarantee to non-participating property owners within the project and 2 miles of the project boundary. Such guarantee shall be based on non-turbine and with-turbine appraised values by a licensed third-party assessor appraiser familiar with the region and credible qualifications that will make the non-participating property owners whole financially. The difference to be paid by the applicant/developer/owner in the event the property owner cannot find an interested party to purchase said property at market value within six (6) months of actively marketing their property.
 - 10) WECS shall not create vibrations that are detectable by human(s) on non-participating landowner's properties. Documentation of increased sediment in water wells shall be considered evidence of vibration.
 - 11) A report prepared by a qualified third-party using the most current modeling software available establishing that no Occupied Residence will experience more than thirty (30) hours per year, or more than thirty (30) minutes per day of Shadow Flicker at the nearest external wall based on a "real world" or "adjusted case" assessment modeling. The report must show the locations and estimated amount of shadow flicker to be experienced at all Occupied Residences as a result of the individual turbines in the project. The owner or resident of an Occupied Residence may waive the shadow flicker limits established above, which waiver must be in a written instrument signed by all owners, residents and included with the application.

The WECS application shall contain the above information and be submitted to the Washington County Engineer or his designee. Upon determination by the Washington County Engineer that the requirements of this Ordinance have been satisfied, the completed WECS Application and any/all necessary supporting documentation shall be presented to the Washington County Board of Supervisors for approval. If there are any changes to the information provided as part of the application in Section 3 that occur from the time of the application until the construction of the WECS, the applicant shall submit a new application (along with an application fee per Wind Turbine with changed information) together with the updated information for each Wind Turbine (with changes to the information required to be provided in Section 3) and any such change shall be in compliance with this Ordinance. The Washington County Engineer shall present the amended and completed WECS Application and any/all necessary supporting documentation to the Washington County Board of Supervisors using the process described above. Any necessary FAA and FCC permits required by those agencies shall be provided to the Washington County Engineer with documentation that the applications were approved.

SECTION 4. GENERAL REQUIREMENTS FOR C-WECS AND METEOROLOGICAL TOWERS

As part of the siting, construction and operation of the C-WECS, the C-WECS owner must comply with the following requirements:

- 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.
- 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) **Lighting.** Wind Turbines shall not be artificially lighted, except to the extent required by the FAA 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 FAA regulations. Aircraft Detection Lighting System (ADLS) technology is required for all C-WECS in Washington County. ADLS is a passive radar sensing system used to turn on obstruction lighting (red flashing lights) only when aircraft are detected at the defined outer perimeter.
- 4) **Signage.** Upon completion of the Wind Turbines, the C-WECS owner's name and/or logo and the phone number to contact a project specific live person in case of emergency shall be placed upon the base of the WECS Tower or the entrance to any enclosure fence.
- 5) **Feeder Lines.** All communications and feeder lines, equal to or less than 34.5 kV, installed as part of a WECS shall be buried not less than forty-eight (48) inches deep.
- 6) **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 timely fashion.
- 7) **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.
- 8) **Signal Interference.** The C-WECS shall not interfere with any licensed microwave communication paths or those microwave paths planned to be used by current residents of Washington County or Washington County Emergency Management or any other county department at the time of the application. After applicant approval, evidence in the form of a report prepared by a qualified unrelated third-party acceptable to the Board of Supervisors will be presented to demonstrate that the project will not interfere as discussed in this section. The C-WECS owner shall minimize and mitigate any interference with electromagnetic communications, such as radio, telephone or television signals caused by any Wind Turbines. If, after construction of the C-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. See Section 3.A.11 regarding Complaint Resolution.

- 9) **Setbacks.** The following setbacks and separation requirements shall apply to all Wind Turbines and meteorological towers, as measured from the center of the object or structure or closet point of items below marked by lines (as applicable) to the center point of the foundation of the Wind Turbine at the natural ground level. Any proposal from participating or non-participating property owners for more or less restrictive setbacks may be submitted and considered by county engineer and all parties involved for each turbine placement, otherwise as follows:
- a) **Inhabited Structures (non-participating landowners).** Each Wind Turbine and meteorological tower shall be set back from the nearest residence, which is able to be occupied, school, hospital, church or public library (which such residence, school, hospital, church or public library exist as of the date of the Board of Supervisors approval of the project application for the WECS), a distance no less than (i) ~~half mile one point one times (1.1x) the total height or (ii) fifteen hundred (1500) feet, whichever is greater.~~ **half mile** An affected property owner may waive this setback requirement by executing a written waiver or agreement.
 - b) **Inhabited Structures (participating landowners).** Each Wind Turbine and meteorological tower shall be set back from the nearest residence, which is able to be occupied, school, hospital, church or public library (which such residence, school, hospital, church or public library exist as of the date of the building permit issued by the County under this Ordinance for the WECS), a distance no less than **half mile** ~~(i) one point one times (1.1x) the total height or (ii) fifteen hundred (1500) feet, whichever is greater.~~ An affected property owner may waive this setback requirement by executing a written waiver or agreement.
 - c) **Property Lines.** Each Wind Turbine and meteorological tower shall be set back a distance of no less than one point one times (1.1x) the total height without securing an appropriate agreement from the adjoining property owners. An affected property owner may waive this setback requirement by executing a written waiver or agreement.
 - d) **Public Right-of-Way.** Each Wind Turbine and meteorological tower shall be set back from the public right-of-way a distance no less than one point one times (1.1x) the total height.
 - e) **Radio Communication Pathways.** Each Wind Turbine and meteorological tower shall be set back from licensed microwave radio communication paths, or those paths planned to be used by Washington County at the time of the application, so that no part of the Wind Turbine interferes with the path's Fresnel zone.
 - f) **Public Areas and Areas under WCCB management.** Each Wind Turbine and meteorological tower shall be set back from the property line of designated public areas/publicly owned conservation areas and

other publicly owned areas managed by the Washington County Conservation Board as shown in the table below the minimum distances identified in the table below:

Designated Public Area	Setback Distance
State & Federal Parks	1.0 mile
Specially designated protected areas: Lake Darling	1.0 mile
All other parks or areas	0.5 mile

- g) **Municipalities.** Each Wind Turbine and meteorological tower shall be set back from the city limits of any incorporated municipality a distance no less than one (1) mile. An affected municipality may waive this setback requirement by executing a written waiver or agreement.

10) Safety

- a) All wiring between Wind Turbines and the substation shall be underground. If the applicant can demonstrate the need for an overhead line and the acceptance of landowners for this line, such option may be submitted to Washington County Engineer for recommendation and approved conditionally by the Washington County Board of Supervisors.
- b) Annual emergency training for local first responders will be provided at no charge from the applicant. Any first responders within 20 miles of the closest C-WECS can send representatives. Training classes will be limited to 1 person for each C-WECS installed with a minimum of 10 persons. \$40 per individual will be provided to each organization the representative is affiliated. Priority for classes will be given to closest organizations first on a first come first serve basis.
- c) The Applicant shall be responsible for compensation to residents of property including livestock, health, or other damage by stray voltage caused by a WECS. Applicant shall demonstrate WECS prohibit any detectable stray voltage, surge voltage and power from entering ground.

11)Public Hearing

After Project application approval, Applicant will advertise through direct mail all participant and non-participant land owners within 5 miles of the project boundaries and conduct a public hearing regarding the Project. This town hall format meeting will encourage residents of the affected areas to be present for first hand knowledge of project and for question answering.

SECTION 5. AVOIDANCE AND MITITGATION OF DAMAGES TO PUBLIC INFRASTRUCTURE AND DECOMMISSION

- 1) **Roads.** The applicant or the C-WEC's owner shall enter into a road use agreement, in the form attached to this Ordinance, with Washington County prior to the start of construction of the WECS.
- 2) **Drainage System.** The applicant or C-WEC's owner shall be responsible for prompt repair of damage to public drainage, systems stemming from construction, operation or maintenance of the WECS. Any construction proposed in an established drainage district, will be reviewed and approved by the drainage district members. All bridge and culvert crossings must be preapproved by the Washington County Engineer.
- 3) **Decommissioning.** The C-WEC's owner shall enter into a decommissioning agreement, substantially in the form attached to this Ordinance, with Washington County and participant land owners prior to the start of construction of the C-WECS.

SECTION 6. GENERAL REQUIREMENTS FOR NON-COMMERCIAL WECS (NON C-WECS).

- 1) **Non C-WECS are subject to the following standards.**
 - a) **Setback:** No part of the Non C-WECS 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 minimum of 115% of the total height of the tower. An affected property owner may execute a written waiver of this distance requirement.
 - b) **Noise:** Non C-WECS shall not exceed 55 dBA, as measured at the closet neighboring inhabited dwelling that exists as of the time of the application. The level, however, may be exceeded during short-term events such as utility outages and/or wind storms.

SECTION 7. TRANSFER

The associated decommissioning and road use agreements granted under this Ordinance may be transferred to another party subject to Washington County Board of Supervisors approval. Any assignee of the associated decommissioning and road use agreements shall be subject to all the requirements in this Ordinance and the agreements.

SECTION 8. LIABILITY INSURANCE

The owner or operator of any C-WECS subject to this Ordinance shall maintain a current general liability policy covering bodily injury and property damage with limits of at least Three Million Dollars (\$3,000,000.00) per occurrence and Three Million Dollars (\$3,000,000.00) in the aggregate.

SECTION 9. REPEALER

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

SECTION 10. 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 11. 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 simple misdemeanor as authorized by the Iowa Code Section 331.302.

SECTION 12. EFFECTIVE DATE

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