

**UNION COUNTY ORDINANCE # 73**  
**Amended for Future Wind Turbine Projects**  
**AN ORDINANCE REGULATING THE PLACEMENT OF WIND**  
**ENERGY CONVERSION SYSTEMS (WECS) ON PROPERTY**  
**LOCATED IN THE UNINCORPORATED AREAS OF UNION COUNTY, IOWA**

**BE IT ENACTED BY THE UNION 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 and promoting a goal of increased energy production from renewable energy sources. In addition, this Ordinance will serve to establish guidelines for the siting, construction and operation of Wind Energy Conversion Systems (WECS) which generate electricity. 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.

**Aircraft Detection Lighting System:** A sensor-based system designed to detect aircraft as they approach a wind energy conversion facility; this system automatically activates obstruction lights until they are no longer needed.

**Light Intensity Dimming Solution Technology:** Obstruction lighting that provides a means of tailoring the intensity level of lights according to surrounding visibility.

**Light-Mitigating Technology System:** Aircraft detection lighting system, lighting intensity dimming solution technology or comparable solution capable of reducing the impact of nighttime lighting while maintaining night conspicuity sufficient to assist aircraft in identifying and avoiding collision with the facilities.

### **SECTION 3. WECS PERMIT APPLICATION REQUIREMENTS.**

The applicant for the siting and construction of a WECS shall file an application with the County Engineer or 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 Union 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; the equipment manufacturer and 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 project applicant and project owner, including contact information.
  3. The general description of the location of the WECS.
  4. Total height and rotor diameter of the Wind Turbines.
  5. Site layout, including the location of the Wind Turbines and those items to which a setback applies. The site layout shall include distances and be drawn to scale, in order for the County to determine if the Wind Turbines meet the setback requirements of this Ordinance.
  6. Engineer's certification(s) of the Wind Turbines.

7. Documentation of land ownership or legal control of the property.
8. The latitude and longitude of individual Wind Turbines.
9. Location of the public areas listed in the table in Section 4.12.f. which are potentially affected by the proposed Wind Turbines.
10. Affirmation that a sound study was completed showing expected maximum decibel levels produced by the Wind Turbines as measured at non-participating residences should not exceed fifty-five (55) decibels (dBA) for any period of time.
11. Affirmation that the applicant has applied for necessary and appropriate Federal Communication Commission (FCC) applications and Federal Aviation Administration (FAA) hazard applications (or FAA determinations of no hazard, if received).
12. 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.
13. An Archaeological survey on new proposed infrastructure and construction of Industrial Wind Turbines & Meteorological towers must be completed in a (1) one mile radius of historic and prehistoric archaeological sites recorded by the office of the Iowa State Archaeologist (state archaeology sites as recorded with the State of Iowa via OSA website <https://archaeology.uiowa.edu/services/i-siges>) prior to ground-disturbing activities in Union County. The archaeological survey is completely funded by the applicant, the person or entity submitting the application under this ordinance, which is normally expected to be the owner or developer. Any evidence of historical resources, including ancient archaeological sites and human remains, found as the result of an Archaeological survey shall be recorded with the Office of the State Archaeologist and follow up investigations are required to preserve significant nonrenewable resources. Applicants can request a waiver from the Board of Supervisors.
14. A wind energy conversion facility for which a certificate of site compatibility was issued after 01/01/2024 must be equipped with functioning light-mitigating technology in compliance with this chapter by completion of project.
15. The Supervisors may grant a waiver of this chapter for a wind energy conversion facility designed for or capable of generating no more than five megawatts of electricity upon a motion demonstrating good cause for the waiver.
16. To allow proper conspicuity of a turbine at night during construction, a turbine may be lighted with temporary lighting until the permanent lighting configuration, including the light-mitigating technology, is implemented.
17. Owner shall provide written notice to the Supervisors upon implementation of light-mitigating technology in compliance with this chapter.

18. Owner is solely responsible for any costs associated with the implementation, operation, and maintenance of each light-mitigating technology system.
19. An Extension request must be in writing and contain:
  - a. The purpose of the extension;
  - b. A description of the light-mitigating technologies submitted to the federal aviation administration;
  - c. The technical or economic inability to implement light-mitigating technology systems;
  - d. The length of extension requested; and
  - e. Any other information requested by the Supervisors.
20. Each light-mitigating technology system must be installed, operated, and maintained in accordance with United State department of transportation federal aviation administration regulations [14 CFR 1.1. et, seq] in effect as of July 1, 2018.

*The WECS application shall contain the above information and be submitted to the Union County Engineer or his designee. Upon determination by the Union 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 Union County Board of Supervisors for approval. The Union County Board of Supervisors, upon approval of an application, shall provide any necessary building permits for each Wind Turbine. 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 Union County Engineer shall present the amended and completed WECS Application and any/all necessary supporting documentation to the Union County Board of Supervisors using the process described above. Upon the issuance of any necessary FAA and FCC permits identified in this section, the applicant shall provide the Union 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 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.
4. **Signage.** Upon completion of the Wind Turbines, the C-WECS owner's name and/or logo and the phone number 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, owner or operator of the WECS.
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 time period as established by local, state and federal regulations.
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 licensed microwave communication paths or those microwave paths planned to be used by Union County at the time of the application. 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.
9. **Federal Aviation Administration.** All Wind Turbines shall comply with FAA standards and regulations.
10. **Electrical Codes and Standards.** All WECS shall comply with the National Electrical Code and other applicable standards.

**11. 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 closest 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:

**a) Property Lines.** Each Wind Turbine and meteorological tower shall be set back a distance of no less than .62 miles (3281 ft) or 7x the total height whichever is greater from the adjoining property owner's property line. An affected property owner may waive this setback requirement by executing a written waiver or agreement.

**b) 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.

**c) 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 Union County at the time of the application, so that no part of the Wind Turbine interferes with the path's Fresnel zone.

**d) Public Areas and Areas under UCCB 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 Union 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: a.) Three Mile Lake b.) Twelve Mile Lake c.) Talmadge Hill natural wildlife area d.) Mt. Pisgah historical site e.) Paul & Becky Kelley Family Natural Wilderness Area f.) Thayer Lake g.) Groesbeck Wildlife Area	1.0 mile
All other parks or areas	.62 miles

**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.

**12. 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 approved conditionally by the Union County Board of Supervisors.
- b) Wind Turbines and meteorological towers shall not be climbable on their exterior up to fifteen (15) feet above ground level, except for stairs used to reach the access door used for entry into the Wind Turbines.
- c) All access doors to Wind Turbines and meteorological towers and electrical equipment shall be locked when not being serviced.
- d) Appropriate visible warning signage shall be placed on Wind Turbines, electrical equipment, and substation entrances.
- e) For all guyed meteorological towers, visible and reflective objects, such as plastic sleeves, balls, 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.

**SECTION 5. AVOIDANCE AND MITIGATION OF DAMAGES TO PUBLIC INFRASTRUCTURE AND DECOMMISSIONING**

- 1. **Roads.** The applicant or the C-WEC's owner shall enter into a road use agreement, substantially in the form attached to this Ordinance, with Union County prior to the start of construction of the WECS. Union County's approval and execution of the agreement shall not be unreasonably withheld.
- 2. **Drainage System.** The applicant or C-WEC's owner shall be responsible for prompt repair for damage to public drainage systems stemming from construction, operation or maintenance of the WECS. All bridge and culvert crossings must be preapproved by the Union County Engineer.
- 3. **Decommissioning.** The C-WEC's owner shall enter into a decommissioning agreement, substantially in the form attached to this Ordinance, with Union County prior to the start of construction of the C-WECS. Union County's approval and execution of the agreement shall not be unreasonably withheld.

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



1. **Non C-WECS are subject to the following standards.** In addition to satisfactorily addressing all other applicable requirements of this Ordinance, the applicant must provide documentation that the following requirements have also been met.

a) **Tower Height:** Non C-WECS Wind Turbines shall not exceed one hundred (100) feet in total height. Non C-WECS shall be subject to all height limitations as necessary to comply with other sections of this Ordinance and those imposed by FAA regulations.

b) **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 a minimum of 115% of the total height of the tower. An affected property owner may execute a written waiver of this distance requirement.

c) **Noise:** Non C-WECS shall not exceed 55 dBA, as measured at the closest 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 severe windstorms.

d) **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 an Iowa licensed professional engineer shall also be submitted. This analysis is frequently supplied by the manufacturer.

e) **Compliance with Federal Regulations:** Non C-WECS must comply with applicable Federal Communication Commission (FCC) applications and Federal Aviation Administration (FAA) applications, including but not limited to, necessary approvals for installations near airports.

f) **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 Electric Code. This information is frequently supplied by the manufacturer.

g) **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.

h) **Insurance**: The owner seeking a permit to erect a Non C-WECS shall provide evidence, in the form of a certificate of insurance satisfactory to Union County, showing general liability coverage for the installation and operation of the Non C-WECS 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 7. TRANSFER**

Building permits and the associated decommissioning and road use agreements granted under this Ordinance may be transferred to another party subject to Union County Board of Supervisors approval, which approval shall not be unreasonably withheld. Any assignee of the building permits and 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) per occurrence and Three Million Dollars (\$3,000,000) in the aggregate.

#### **SECTION 9. REVERSION OF OWNERSHIP**

If the owner is no longer operating the wind turbine and is no longer paying the property taxes on the wind turbine, then the landowner shall be responsible for payment of the property taxes for said wind turbine.

#### **SECTION 10. REPEALER**

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

#### **SECTION 11. 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 12. 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 Iowa Code Section 331.302.

**SECTION 13. EFFECTIVE DATE.**

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

Amendment for Future Wind Turbine Projects Passed and Approved this 20th day of May, 2024.

*s/ Dennis Hopkins*

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Dennis Hopkins, Chairperson  
Union County Board of Supervisors

Attest: *s/ Sandy Hysell*

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Sandy Hysell, County Auditor

RESOLUTION #18 FYR 23-24

NOW on this 20th day of May 2024, the matter of the waiver/suspension of the requirement of multiple readings of the proposed Ordinance #73 Amendment which comes to the attention of the Union County Board of Supervisors.

WHEREAS, the Union County Board of Supervisors has determined that Ordinance #73 Amendment has been duly published in two (2) official newspapers of Union County on as required by Iowa Code Sections 349.3(1), 331.305, and 331.302; and

WHEREAS the Union County Board of supervisors has previously received and considered information regarding this ordinance, and

WHEREAS, the Union County Board of Supervisors has held 1 public hearing, and no written or oral objections were received; oral comments were taken in consideration; and

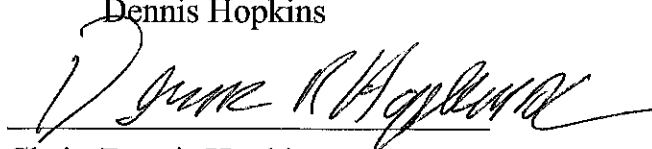
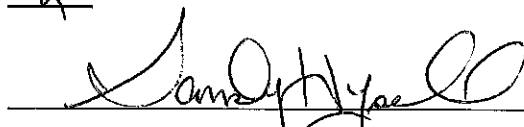
WHEREAS the Union County Board of Supervisors believes it is in the best interests of the citizens of Union County to adopt Ordinance #73 Amendment without further delay; and

BE AND IT IS HEREBY RESOLVED that Union County, by and through the Union County Board of Supervisors, pursuant to the provisions of section 331.302(5) formally waives/suspends the requirement of multiple readings (3<sup>rd</sup> Reading) of the proposed adoption of Ordinance #73 Amendment.

MOTION by:

SECONDED by:

Approved by:

<u>Name</u>	<u>Aye</u>	<u>Nay</u>
Dennis J. Brown	<u>X</u>	
Rick Friday	<u>X</u>	
Dennis Hopkins	<u>X</u>	
 Chair, Dennis Hopkins Union County Board of Supervisors		 Attested: Sandy Hysell Union County Auditor, Secretary to BOS