

APPENDIX E

WIND ENERGY CONVERSION SYSTEMS

**AN ORDINANCE REGULATING
WIND ENERGY CONVERSION SYSTEMS
WITHIN LOGAN COUNTY, ILLINOIS**

I. APPLICABILITY

This ordinance governs the siting of WECSs and Substations that generate electricity to be sold to wholesale or retail markets, except that owners of WECSs with an aggregate generating capacity of 3MW or less who locate the WECS(s) on their own property are not subject to this ordinance.

II. DEFINITIONS

“Applicant” means the entity or person who has submitted an application for a Special Use/Conditional Use Permit for a WECS Project.

“Financial Assurance” means reasonable assurance from a credit worthy party, examples of which include a surety bond, cash escrow, or irrevocable letter of credit.

“Operator” means the entity responsible for the day-to-day operation and maintenance of the WECS, including any third party subcontractors.

“Owner” means the entity or entities with an equity interest in the WECS(s), including their successors and assigns. Owner does not mean (i) the property owner from whom 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.

“Professional Engineer” means a qualified individual who is licensed as a professional engineer by the State of Illinois.

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

“Substation” means the apparatus that connects the electrical collection system of the WECS(s) and increases the voltage for connection with the utility’s transmission lines.

“Wind Energy Conversion System” (“WECS”) means all necessary devices that together convert wind energy into electricity, including the rotor, nacelle, generator, WECS tower, electrical components, WECS foundation, transformer, and electrical cabling from the WECS tower to the substation.

“WECS Project” means the collection of WECSs and substations as specified in the Conditional Use Permit application.

“WECS Tower” means the support structure to which the nacelle and rotor are attached.

“WECS Tower Height” means the distance from the rotor blade at its highest point to the top surface of the WECS foundation.

III. PROHIBITION

No WECS or substation governed by this section of the ordinance shall be constructed, erected, installed, or located within Logan County, unless prior siting approval has been obtained for each individual WECS and substation pursuant to this Ordinance.

IV. SITING APPROVAL APPLICATION

To obtain siting approval, the Applicant must first submit a siting approval application to the County. The siting approval application shall contain or be accompanied by the following information:

- A. A WECS Project Summary, including, to the extent available:
 - (1) a general description of the project, including its approximate name plate generating capacity; the potential equipment manufacture(s), type(s) of WECS, number of WECS, and name plate generating capacity of each WECS; the maximum height of the WECS Tower(s) and maximum diameter of the WECS rotor(s); the general location of the project; and
 - (2) a description of the Applicant, Owner and Operator, including their respective business structures;
- B. The name(s), address(es), and phone number(s) of the Applicant(s), Owner and Operator, and all property owner(s), if known;
- C. A site plan for the installation of the WECS's showing the planned location of each WECS Tower, guy lines and anchor base(s) (if any), Primary Structure(s), property lines (including identification of adjoining properties), setback lines, public access roads and turnout locations, Substation(s), electrical cabling from the WECS Tower to the Substation(s), ancillary equipment, third party transmission lines, private access roads, field tile locations and layout of all structures within the geographic boundaries of any applicable setback;
- D. All required studies, reports, certifications, and approvals demonstrating compliance with the provisions of this Ordinance; and
- E. Any other information normally required by the County Zoning Ordinance.

The Applicant shall notify the County of any changes to the information provided in the subsections A through E above that occur while the siting approval application is pending.

V. DESIGN AND INSTALLATION

- A. Design Safety Certification
 - 1. WECS shall conform to applicable industry standards, including those of the American National Standards Institute ("ANSI"). Applicants shall submit certificates of design compliance that equipment manufacturers have obtained from Underwriters Laboratories ("UL"), Det Norske Veritas ("DNV"), Germanischer Lloyd Wind Energie ("GL"), or an equivalent third party.
 - 2. Following the granting of siting approval under this Ordinance, a Professional Engineer shall certify, as part of the building permit application, that the foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.

B. Controls and Brakes

All WECS projects shall be equipped with Manual and Automatic Controls and mechanical brakes to limit rotation of blades to a speed below the designed limits of a WECS. A Professional Engineer or Authorized Factor Representative must certify that the rotor and overspeed control design and fabrication conform to good engineering practices. No changes or alterations from certified design shall be permitted unless accompanied by a Professional Engineer's or Authorized Factory Representative's statement of certification.

C. Electrical Components

All electrical components of the WECS shall conform to all applicable local utility standards and national electric codes. All electrical wires and lines connecting each WECS to other WECS shall be installed underground.

D. Color

Towers and blades shall be painted white or gray or another non-reflective unobtrusive color.

E. Lighting

WECS Projects shall utilize minimal lighting. No tower lighting, other than normal security lighting, shall be permitted except as may be required by the FAA. Lighting for the towers shall be constructed only in accordance with the minimum requirements and standards allowed through the FAA or other regulatory authority in an effort to minimize the visual impact of the structures.

F. Compliance with FAA

The Applicant for the WECS shall comply with all applicable FAA requirements. It shall be the responsibility of the Applicant for the WECS project to complete the proper FAA applications and obtain the proper permits for the WECS project. It shall also be the responsibility of the Applicant for the WECS project to obtain a determination of no significant impact to air navigation from the FAA.

G. Warnings

1. A visible warning sign of "High Voltage" must be placed at the base of all WECS projects, pad mounted transformers, and Substations. The sign must have at a minimum six-inch letters. Signs shall also be placed at all points of site ingress and egress.
2. Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on the anchor points of guy wires along the guy wires up to a height of 15 feet from the ground.

H. Climb Prevention

All WECS project towers or poles must be unclimbable by design or protected by anti-climbing devices such as:

1. Fences with locking portals at least six feet high; or
2. Anti-climbing devices 12 feet vertically from the base of the WECS tower; or

3. Anchor points for guy wires supporting tower shall be enclosed by a six foot high fence or shall be located within the confines of a yard that is completely fenced.

I. Setbacks

1. All WECS Towers shall be set back at least 750 feet from any Primary Structure. The distance for this setback shall be measured from the point of the Primary Structure's foundation closest to the WECS Tower to the center of the WECS Tower foundation. The owner of the primary structure may waive this setback requirement; but in no case shall a WECS Tower be located closer to a Primary Structure than 1.10 times the WECS Tower Height.
2. All WECS Towers shall be set back a distance of at least 1.10 times the WECS Tower Height from public roads, third party transmission lines, and communication towers.
3. All WECS Towers shall be set back a distance of at least 1.10 times the WECS Tower Height from adjacent property lines. The affected adjacent property owner may waive this setback requirement.
4. Any waiver of any setback requirement shall run with the land and be recorded as part of the chain of title in the deed of the subject property.

J. Height

WECS Tower height must comply with all applicable FAA regulations and not exceed 500 feet in height.

K. Compliance with Additional Regulations

Nothing in this ordinance is intended to preempt other applicable State and Federal laws and regulations. It shall be the responsibility of the Applicant for the WECS project to contact the FCC and FAA regarding additional permits necessary or any other applicable Federal or State regulations for the installation of a WECS project prior to the Logan County Board granting a Conditional Use Permit.

L. Use of Public Roads

Any proposed public roads that will be used for construction purposes shall be identified and approved by the respective Township Road Commissioner and the County Engineer prior to the granting of the Conditional Use Permit. Traffic for construction purposes shall be limited to these roads. All overweight and/or oversized loads to be transported on public roads will require a permit from the respective highway authority.

Any road damage caused by the transport of the facility's equipment, the installation, maintenance, or removal, must be completely repaired to the satisfaction of the Township Road Commissioner and the County Engineer. The Township Road Commissioner and County Engineer may choose to require either remediation of road repair upon completion of the project or are authorized to collect fees for overweight and/or oversized load permits. Further, financial assurance in an amount to be fixed by the Township Road Commissioner or the County Engineer to insure the township or the county that future repairs are completed to their satisfaction shall be provided. If required, said financial assurance shall be in place prior to granting the Conditional Use permit.

M. Migratory Birds

An avian habitat study shall be conducted by a qualified third-party professional, such as an ornithologist or wildlife biologist, to determine if the installation of WECS will have a substantial adverse impact on birds. The study shall be submitted with the application.

N. Noise Levels

Noise levels shall be in compliance with applicable Illinois Pollution Control Board rules and regulations. The applicant, through the use of a qualified professional, shall demonstrate compliance with applicable noise requirements.

O. Treatment of Existing Drainage Tile

It shall be the responsibility of the WECS Owner to notify the County Engineer if the construction of any part of the project encounters underground field drainage tiles. A plan sufficient to provide remediation shall be submitted, reviewed, and approved by the County.

All existing drainage tiles that will be crossed by private access roads shall be removed and replaced with a load resistant tile as specified by the County Engineer. This shall be done before the private access roads are used for construction purposes. The load resistant tile shall extend a minimum of 30 feet across any private access roads and shall be of the same diameter of the existing tile.

To ensure that all drainage tiles have been located, reasonable measures should be made to locate all existing tile in the vicinity of the private access roads by exploratory trench or other appropriate methods. All drainage tile that are encountered during construction shall be noted on the site plan.

VI. INSTALLATION CERTIFICATION

A Professional Engineer or Authorized Factory Representative shall certify that the construction and installation of the WECS project meets or exceeds the manufacturer's construction and installation standards.

VII. MAINTENANCE AND OPERATION

A. Annual Inspection

Every WECS project must be inspected annually by an Authorized Factory Representative to certify that it is in good working condition and is not a hazard to the public. A copy of said annual inspection must be filed with the Logan County Zoning Office within fifteen (15) days after the inspection report is received by the project Owner or Operator.

B. Interference

1. If the Applicant determines that the WECS project causes severe interference with microwave transmissions, residential television interference or radio reception, the WECS owner must take commercially reasonable steps to correct the problem. Evidence that the Applicant has determined that no such interference will occur or that interference has been corrected must be presented at the public hearing before the Board of Appeals.
2. The Applicant shall provide the applicable microwave transmission providers and local emergency service provider(s) (911 operators) copies of the project

summary and site plan. To the extent that the above provider(s) demonstrate a likelihood of interference with it communications resulting from the WECS(s), the Applicant shall take reasonable measures to mitigate such anticipated interference. If, after construction of the WECS, the Owner or Operator receives a written complaint related to the above-mentioned, the Owner or Operator shall take reasonable steps to respond to the complaint.

3. If, after construction of the WECS, the Owner or Operator receives a written complaint related to interference with local broadcast residential television, the Owner or Operator shall take reasonable steps to respond to the complaint.

C. Materials Handling, Storage and Disposal

1. All solid waste related to the construction, operation and maintenance of the WECS shall be removed from the site promptly and disposed of in accordance with all federal, state, and local laws.
2. All hazardous materials related to the construction, operation and maintenance of the WECS shall be handled, stored, transported and disposed of in accordance with all applicable federal, state, and local laws.

D. Coordination with Local Fire Department

1. The Applicant shall submit to the local fire department a copy of the site plan.
2. Upon request by the local fire department, the Applicant shall cooperate with the local fire department to develop the fire department's emergency response plan.
3. Nothing in this section shall alleviate the need to comply with all other applicable fire laws and regulations.

VIII. LIABILITY INSURANCE

The WECS project Owner shall maintain a current insurance policy to cover installation and operation of the WECS project. The amount of the policy shall be established as a condition of permit approval.

IX. DECOMMISSIONING PLAN

The WECS project must contain a decommissioning plan to ensure it is properly decommissioned upon the end of the project life or facility abandonment. For the purposes of this section, "facility abandonment" shall mean the ceasing of operations for a period of not less than one (1) year. Decommissioning shall include: removal of all structures (including transmission equipment and fencing) and debris to a depth of four (4) feet, restoration of the soil, and restoration of vegetation within six (6) months of the end of the project life or facility abandonment. The decommissioning plan shall state how the facility will be decommissioned, a professional engineer's estimated cost of decommissioning, the financial resources to be used to accomplish decommissioning, and the escrow agent with which the resources shall be deposited. The decommissioning plan shall also include an agreement between the applicant and the County which states:

1. The financial resources for decommissioning which shall be in the form of a surety bond, or shall be deposited in an escrow account with an escrow agent acceptable to the County.
2. If the Applicant chooses an escrow agreement:

- a. A written escrow agreement will be prepared, establishing upon what conditions the funds will be disbursed; and
 - b. The County shall have access to the escrow account funds for the express purpose of completing decommissioning if decommissioning is not completed by the applicant within six (6) months of the end of the project life or facility abandonment.
3. The County is granted the right of entry onto the site, pursuant to reasonable notice, to effect or complete decommissioning.
 4. The County is granted the right to seek injunctive relief to effect or complete decommissioning, as well as the County's right to seek reimbursement from applicant or applicant's successor for decommissioning costs in excess of the amount deposited in escrow and to file a lien against any real estate owned by the applicant or applicant's successor, or in which they have an interest, for the amount of the excess, and to take all steps allowed to enforce said lien.

Financial provisions shall not be so onerous as to make WECS projects unfeasible.

X. REMEDIES

- A. The Applicant's, Owner's, or Operator's failure to materially comply with any of the above provisions shall constitute a default under this ordinance.
- B. Prior to implementation of the existing County procedures for the resolution of such default(s), the Zoning Officer shall first provide written notice to the Owner and Operator, setting forth the alleged default(s). Such written notice shall provide the Owner and Operator a reasonable time period, not to exceed 60 days, for good faith negotiations to resolve the alleged default(s).
- C. If the County determines in its discretion, that the parties cannot resolve the alleged default(s) within the good faith negotiation period, the existing County ordinance provisions addressing the resolution of such default(s) shall govern.