

CHAPTER 11: WIND ENERGY SYSTEM REGULATIONS

ARTICLE 1: WIND ENERGY SYSTEM REGULATIONS

11-1.1. GENERAL STANDARDS

All Wind Energy Systems (WES) located within the jurisdiction of the Village of Clearwater shall conform to the following general standards:

- A. Clearance of rotor blades or airfoils for commercial/utility Wind Energy Systems must maintain a minimum of twenty (20) feet of clearance between their lowest point and the ground. Noncommercial WES shall have a minimum clearance of twelve (12) feet between their lowest point and the ground.
- B. On site signage shall be limited to identification signs not to exceed six (6) feet and high voltage warning signs.
- C. All wind turbines part of a commercial/utility WES shall be installed with a monopole tower.
- D. All commercial/utility WES shall obtain a FAA permit and comply with all aviation warning requirements established by the FAA regulations and permit.
- E. All commercial/utility WES shall be white, grey or other neutral non-obtrusive, non-reflective color. Blades may be black in order to facilitate deicing.
- F. All on site communication and transmission feeder lines installed as part of the commercial/utility WES shall be underground.
- G. Commercial/utility WES shall not exceed fifty (50) dba at the nearest occupied dwelling.
- H. Commercial/utility WES shall obtain FCC permits where necessary and provide evidence of permit approval.
- I. The commercial/utility WES, at the time of application for a permit, shall identify all county roads to be used for construction and maintenance of a WES. The applicant in coordination with the Clearwater Street Commissioner shall conduct a road condition survey and written report prior to construction. The applicant shall be responsible for restoration of the road(s) and bridges to preconstruction standards as established in the report. The applicant shall be responsible for the cost of retaining outside engineering firm(s) to evaluate road condition and cost for restoration if so determined by the Planning Commission.
- J. The commercial/utility WES applicant shall be responsible for immediate repair of damage to drainage or irrigation systems stemming from construction, operation or maintenance of the WES.
- K. Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as oils, lubricants and solvents shall be removed from the site promptly and disposed of in accordance with all applicable local, State and Federal regulations.
- L. A Commercial/Utility WES shall provide a decommissioning plan to the Village Board at the time application is made. The plan shall include the method or means of removing the WES and accessory facilities, parties responsible for removal and site cleanup, evidence of a damage insurance liability policy, schedule for removal not to exceed ninety (90) days from approval of the plan. The applicant shall set aside three-fourths (3/4) of one percent (1%) of each towers' cost for future decommissioning upon approval of the application by the Village Board. The funds are to be placed in a cash escrow account with a local bank.
- M. A Conditional Use Permit for a commercial/utility WES shall be considered null and void if the WES has not begun within one (1) year following issuance of the Conditional Use Permit or produced energy for one (1) year, unless a plan is submitted to the Planning Commission outlining the steps and schedule for returning the WES to service.
- N. A contractual agreement referred to as a Developers Agreement between the Village Board and the commercial WES developer shall be created and made part of the conditional use permit. The agreement shall detail road improvements, road reconstruction, additional right-of-way needs, location of transmission lines, easements, bond, and payment requirements.

11-1.2. NONCOMMERCIAL WIND ENERGY SYSTEMS

All noncommercial wind energy systems located within the jurisdiction of the Village of Clearwater shall conform to the following standards:

- A. Shall be systems installed to provide for full or partial onsite consumption of utility supplied electricity.
- B. Setbacks. Where allowed, Noncommercial WES shall be located in the rear yard of any Residential Districts; further, all towers shall adhere to the setbacks found in Table 2 within this Chapter.
- C. Tower Height. In all districts tower heights shall not exceed thirty (30) feet. Any tower exceeding thirty (30) feet shall be required to submit an application for conditional use permit. In the Agricultural District, there is no height limitation except that imposed by FAA regulations.
- D. Noncommercial WES shall not exceed fifty (50) dba, as measured at the closest neighboring inhabited dwelling unit. Temporary exceptions may include severe wind storms or power outages requiring higher demand.
- E. Compliance with this Ordinance.
 1. All noncommercial WES will require a permit.
 2. Permit application will include an engineered drawing showing compliance with nationally recognized building codes. The permit shall include standard drawings of the tower structure, turbine structure, footings, guy wire anchors and a professional engineers stamp.
 3. Evidence of notification to the servicing utility informing the utility that the noncommercial WES will be connected to the utilities grid.
 4. Evidence that noncommercial WES, when located within one thousand three hundred and twenty (1,320) feet of any waters of the United States, has complied with the requirements found in Checklist 1 below.

11-1.3. METEOROLOGICAL TOWERS

All meteorological towers located within the jurisdiction of the Village of Clearwater shall conform to the following standards:

- A. Shall be towers which are erected primarily to measure wind speed, direction, and record other data relevant to the site of a commercial WES.
- B. Meteorological towers shall be sited according to Table 1 within this Chapter.
- C. Meteorological towers shall be a conditional use and follow the same process as outlined in this Ordinance.
- D. Meteorological towers, permanent or temporary, in excess of two hundred (200) feet in height, shall meet all FAA requirements and shall be required to apply for a permit prior to construction. Meteorological towers less than two hundred (200) feet in height shall have the guy wires clearly marked with devices common to overhead transmission lines and shall be required to apply for a permit prior to construction.
- E. Setbacks. All meteorological towers shall adhere to the setbacks established in Table 2 within this Chapter.

11-1.4. COMMERCIAL/UTILITY WIND ENERGY SYSTEMS

All Commercial/Utility Wind Energy Systems (WES) located within the jurisdiction of the Village of Clearwater shall conform to the following standards:

- A. Commercial/Utility WES shall be permitted as conditional uses within the districts as seen in Table 1 within this Chapter.
- B. The request for a Conditional Use Permit shall include the following:
 1. Name(s) of project applicant.

2. Name(s) of project owner.
 3. Legal description of the project.
 4. Documentation of land ownership or lease of the property.
 5. Site plan showing property lines, setbacks, proposed accessory buildings, wind turbine locations, transmission lines, adjacent subdivisions, homes or other structures, county and service roads, legend and scale, signature of surveyor or engineer.
 6. Narrative description of the project including number, type, generating capacity, tower height, rotor diameter, total height of all wind turbines including meteorological towers, height of transmission lines and capacity, lastly proposed users of project.
 7. Overview map of the area showing topography, location of WES owned or not owned by the applicant, public or private airfields within one mile of the proposed WES and other communication towers.
 8. An acoustical report that certifies the WES will meet the noise requirements of this ordinance.
 9. Evidence that other tower owners or lessees have been notified of the proposed WES and there will not be interference in communications.
 10. An Environmental Assessment Worksheet shall be prepared by a qualified environmental engineering firm when a commercial WES is located within avian migratory routes. The Environmental Assessment Worksheet shall contain an avian assessment, map of the migratory routes and recommended mitigation practices.
 11. A decommissioning plan as required by this Ordinance.
 12. Meteorological and commercial/utility towers located within one (1) mile of any waters of the United States shall submit an Environmental Assessment Worksheet from the U.S. Environmental Protection Agency. Further a Conditional Use Permit shall not be issued until the applicant has completed Checklist 2 below.
 13. There shall be a flicker/strobe effect study provided.
- C. Aggregated Projects.
1. Aggregated projects may be jointly submitted as a single application and reviewed as a single application, including public notices, public hearing and subsequent approvals or denials.
 2. Permits may be issued and recorded separately.
 3. Aggregated projects proposed shall be considered conditional uses and follow the requirements of this Ordinance.
- D. Joint projects will be assessed as one project.
- E. Setbacks. All commercial/utility towers shall adhere to the setbacks found in Table 2 within this Chapter.

CHECKLIST 1 – Small Wind Energy Systems
<input type="checkbox"/> U.S. Fish and Wildlife
<input type="checkbox"/> Nebraska Game and Parks Commission
<input type="checkbox"/> Nebraska State Historical Society
<input type="checkbox"/> Village of Clearwater Utilities

CHECKLIST 2 – Commercial Wind Energy Systems
<input type="checkbox"/> U.S. Fish and Wildlife Service
<input type="checkbox"/> U.S. Army Corps of Engineers
<input type="checkbox"/> Nebraska Department of Aeronautics/Federal Aviation Agency (FAA)
<input type="checkbox"/> Nebraska Game and Parks Commission
<input type="checkbox"/> Nebraska State Historical Society
<input type="checkbox"/> Nebraska Department of Natural Resources
<input type="checkbox"/> Nebraska Department of Roads
<input type="checkbox"/> Village of Clearwater Utilities

TABLE 1				
Zoning District	Communication Tower	Meteorological Tower	Non-Commercial WES	Commercial WES
Agriculture District (A-1)	Conditional Use	Conditional Use	Conditional Use	Conditional Use
Transitional Agriculture (TA)	Conditional Use	Conditional Use	Conditional Use	Not Permitted
Large Lot Residential (LLR)	Conditional Use	Conditional Use	Conditional Use	Not Permitted
Single-Family Residential District (R-1)	Not Permitted	Not Permitted	Not Permitted	Not Permitted
Mixed-Use Development District (M-U)	Conditional Use	Conditional Use	Conditional Use	Not Permitted
General Commercial District (C-1)	Conditional Use	Not Permitted	Not Permitted	Not Permitted
Highway Commercial District (C-2)	Conditional Use	Conditional Use	Conditional Use	Not Permitted

TABLE 2			
Governing Entities	Meteorological Tower	Non-Commercial WES	Commercial/ Utility WES
Property Lines	1.1 x tower height	1.1 x total height	½ blade diameter or 150'; whichever is greater
All Road Rights-of-Way*	1.1 x tower height	1.1 x tower height	½ blade diameter or 150'; whichever is greater
Other Public or Private Utility Easements	1.1 x tower height	1.1 x tower height	½ blade diameter or 150'; whichever is greater
Public and Private Airfields	Per FAA regulations	Per FAA regulations	Per FAA regulations
Irrigation Canals	1.1 x tower height	1.1 x tower height	½ blade diameter or 150'; whichever is greater

Note: The setback for dwelling units shall be reciprocal in that no dwelling unit shall be constructed within the same distance required for a common Wind Energy System.

* The setback shall be measured from any future Rights-of-Way if a planned change or expanded right-of-way is known.