

Marshall County, IA
Summary Only

For full ordinance text, please find pdf below or visit county website.

Date Passed/Amended: November 5, 1996

Summary Written: June 14, 2022

Agricultural Use Table:

Eligible Zoning:

- a) Commercial Wind Energy Conversion System (CWECS)
 - a. Please consult the full ordinance text.

Prohibition Language:

Required Information/Permits Required:

- a) Commercial Wind Energy Conversion System (CWECS)
 - a. Special Use Permit is required.
 - b. In addition to Special Use Permit requirements, the applicant must provide:
 - i. Names of the project applicant.
 - ii. Names of the project owners.
 - iii. Legal description and address of the project.
 - iv. A project description.
 - v. Site layout including property line, wind turbines, electrical wires, interconnection points with the electrical grid, and all related accessory structures.
 - vi. Engineer's certification as required in these supplemental standards.
 - vii. Documentation of land ownership or legal control of the property.
 - viii. Latitude and longitude of individual wind turbines.
 - ix. USGS topographical map, or map with similar data, of the property and surrounding area, including any other CWECS within ten (10) rotor diameters of the proposed CWECS.
 - x. Location of wetlands, scenic and natural areas within one thousand three hundred and twenty (1,320) feet of the proposed CWECS.
 - xi. An Acoustical analysis.
 - xii. FAA permit application.
 - xiii. Location of known communications towers/facilities within two (2) miles of the proposed CWECS.
 - xiv. Decommissioning Plan
 - xv. Description of potential impacts on nearby CWECS and wind resources on adjacent properties.
 - xvi. Identification of significant migratory patterns and nesting areas for birds in the vicinity.

Request for Variance:

Site and Structure Requirements:

- a) Compliance with all local, state, and federal regulations:
 - a. Commercial Wind Energy Conversion System (CWECS)
 - i. All CWECS shall comply with FAA standards and permits.
 - ii. All CWECS and accessory equipment and facilities shall comply with National Electrical Code and other applicable standards.
 - iii. For all CWECS, the manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the CWECS is within accepted professional standards, given local soil and climate conditions.
 - b) Concentrating Solar Power Facilities:
 - c) Fencing/Security:
 - a. Commercial Wind Energy Conversion System (CWECS)
 - i. Wind turbine towers shall not be climbable up to fifteen (15) feet above ground level.
 - ii. All access doors to wind turbine towers and electrical equipment shall be locked when not being serviced.
 - iii. 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 eight (8) feet above the ground.
 - iv. Visible fencing shall be installed around anchor points of guy wires.
 - d) Glare minimization:
 - a. Commercial Wind Energy Conversion System (CWECS)
 - i. Wind turbines may be painted a non-reflective color.
 - ii. Blades may painted black in order to facilitate deicing.
 - iii. Finishes shall be matte or non-reflective.
 - iv. At the CWECS site, 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 CWECS to the natural setting and existing environment.
 - e) Height:
 - a. Commercial Wind Energy Conversion System (CWECS)
 - i. The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.

f) Lighting:

a. Commercial Wind Energy Conversion System (CWECS)

- i. CWECS sites shall not be artificially lighted, except to the extent required by the FAA or other applicable authority.
- ii. Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by the FAA permits and regulations.
- iii. Red strobe lights are preferred for night-time illumination to reduce impacts on migrating birds. Red pulsating incandescent lights should be avoided.

g) Minimum Lot Size:

h) Noise:

a. Commercial Wind Energy Conversion System (CWECS)

- i. Audible noise due to CWECS sites operations shall not exceed sixty (60) decibels for any period of time, when measured at any residence, school, hospital, church or public library existing on the date of approval of any special use permit from the property line.
- ii. In the event audible noise due to CWECS operations contains a steady pure tone, such as a whine, screech or hum, the standards for audible noise, sixty (60) decibels, shall be reduced five (5) decibels.
- iii. 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.
- iv. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in decibels, which is succeeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing residences, schools, hospitals, churches and public libraries. 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) miles per hour at the ambient noise measurement location.
- v. In the event the noise levels resulting from the CWECS 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:
 1. Written consent from the affected property owners has been obtained stating that they are aware of the CWECS and the noise limitations imposed, and that consent is granted to allow noise levels to exceed the maximum limitations otherwise allowed.

2. If the applicant wishes the waiver apply to succeeding owners of the property, a permanent noise impact easement shall be recorded in the County Recorder's office which describes the burdened properties and which advises all subsequent owners of the burdened property that noise levels in excess of those permitted may exist on or at the burdened property.

i) Outside storage:

j) Setbacks and Lot Coverage:

a. Commercial Wind Energy Conversion System (CWECS)

- i. Each wind turbine shall be setback from the nearest residence, school, hospital, church or public library a distance no less than the greater of two (2) times its total height or one thousand (1,000) feet.
- ii. At no time shall any part of the turbine overhang an adjoining property without securing appropriate easements from the adjoining property owners.
- iii. Setbacks from public road right-of way, railroad right-of way, powerlines and structures or any easement thereto shall be a minimum of 1.1 times the height of the tower and rotor.
- iv. Each wind turbine shall be setback 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.

k) Screening:

a. Commercial Wind Energy Conversion System (CWECS)

- i. The proposed CWECS will not unreasonably interfere with the view from any publicly-owned or managed areas.
- ii. A Tower Site Evaluation Form will be completed for the property, and, if at the determination of the County Conservation Board, view sheds are impacted to an unnecessary level as a result of a CWECS, the Board of Adjustment will strongly consider such opinion in review and action on the application.

l) Signage:

a. Commercial Wind Energy Conversion System (CWECS)

- i. All signage on site shall comply with Article XV of the Marshall County Zoning Ordinance.
- ii. The manufacturer's or owner's company name and/or logo may be placed upon the compartment containing the electrical generator, of the CWECS.
- iii. Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the CWECS.

iv. Appropriate warning signage shall be placed on wind turbine towers, electrical equipment and CWECS entrances.

m) Site Access/Emergency Response:

n) Utility Connections:

o) Waste:

a. Commercial Wind Energy Conversion System (CWECS)

i. 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 and disposed of in accordance with all applicable local, state and federal regulations.

Operation and Maintenance Plan:

a) Monitoring and Maintenance:

b) Soil and Erosion and Sediment Control:

a. Commercial Wind Energy Conversion System (CWECS)

i. The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the CWECS.

Decommissioning and Site Reclamation:

a) Commercial Wind Energy Conversion System (CWECS)

- a. A CWECS shall be considered discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the County outlining the steps and schedule for returning the CWECS to service.
 - b. All CWECS and accessory facilities shall be removed to four (4) feet below ground level within one hundred and eighty (180) days of the discontinuation of use.
 - c. The Decommissioning Plan shall include the anticipated means and cost of removing the CWECS at the end of their serviceable life or upon becoming a discontinued use.
 - d. The cost estimates shall be made by a professional engineer licensed in the State of Iowa.
 - e. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the CWECS and accessory facilities.
 - f. The County reserves the right to verify that adequate decommissioning terms are contained in the landowner easement.
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