

3. When a wetland is completely filled under an approved permit, the buffer area requirement associated with the size of the wetland that was filled will be required for the replacement wetlands unless replacement is occurring adjacent to a larger wetland. A landscaping plan for the buffer replacement site will need to be provided to meet the requirements of Section E.2 of this ordinance.

<sup>30</sup> **Subd. 21. Wind Energy Conversion Systems (WECS).**

- A. Purpose. This ordinance is established to regulate the installation and operation of Wind Energy Conversion Systems (WECS) within the City of Rockford not otherwise subject to siting and oversight by the State of Minnesota under the Minnesota Power Plant Siting Act (MS 116C.51 – 116C.697).
- B. Application. Wind conversion systems may be allowed as an interim use within certain zoning districts of the City, subject to the regulations and requirements of this Section, provided the property upon which the system is to be located is agricultural, commercial or industrial and is constructed and maintained on any parcel of land of at least five (5) acres in size.
- C. Declaration of Conditions. The City Council may impose such conditions on the granting of WECS conditional use permit as may be necessary to carry out the purpose and provisions of this Section and to maintain compatibility.
- D. Site Plan Drawings. In addition to the information required by Section 1001.03 of this Chapter, an application for all WECS shall include the following information:
  1. A description of the project including: Number, type, name plate, generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid.
  2. Detailed site plans drawn to scale and dimensioned including:
    - a. Lot lines and dimensions.
    - b. Location and height of all existing and proposed buildings, structures, above ground utilities, guy wires anchors, electrical wires, interconnection points with the electrical grid, and trees.
    - c. Locations and height of all adjacent buildings, structures, above ground utilities and trees located within three hundred (350) feet of the exterior boundaries of the property.
    - d. Existing and proposed setbacks of all structures located on the property.

- e. Sketch elevation of the premises accurately depicting the proposed WECS and its relationship to structures on adjacent lots.
  - f. Location of wetlands, scenic, and natural areas and bluffs within one (1) mile of the proposed WECS.
  - g. The location of any other WECS within ten (10) rotor distances of the proposed WECS.
3. Engineer's certification of site plans.
  4. A Noise Profile.
  5. FAA Permit Application.
  6. Location of all known Communications Towers within five (5) miles of the proposed WECS.
  7. Decommissioning Plan.
  8. Description of potential impacts on nearby WECS and wind resources on adjacent properties.
- E. Compliance with State Building Code. Standard drawings of the structural components of the wind energy conversion system and support structures, including base and footings shall be provided along with the engineering data and calculations to demonstrate compliance with the structural design provisions of the State Building Code especially with regards to wind and icing loads. Drawings and engineering calculations shall be certified by a registered engineer.
- F. Compliance with National Electrical Code. WECS electrical equipment and connections shall be designed and installed in adherence to the National Electrical Code as adopted by the City.
- G. Manufacturer Warranty. The applicant shall provide documentation or other evidence from the dealer or manufacturer that the WECS has been successfully operated in atmospheric conditions similar to the conditions within the City. The WECS shall be warranted against any system failures reasonably expected in severe weather operation conditions.
- H. Design Standards.
1. Height. The permitted maximum height of a WECS shall be determined in one of two ways. In determining the height of the WECS, the total height of the system shall be included. System height shall be measured from the base of the tower to the highest possible extension of the rotor.

The shortest height of the two following methods shall be used in determining the maximum allowable height of a WECS system. The height of a WECS must also comply with FAA Regulation Part 77 "Objects Affecting Navigable Air Space" and/or Mn/DOT Rule 14, MCAR 1.3015 "Criteria for Determining Obstruction to Air Navigation."

- a. A ratio of one (1) foot to one (1) foot between the distance of the closest property line to the base of WECS to the height of the system.
  - b. A maximum system height of one hundred fifty (150) feet.
2. Setbacks. No part of a WECS (including guy wire anchors) shall be located within or above any required front, side or rear yard setback and no part of the system shall be within ten (10) feet of any property line, whichever is greater. WECS towers shall be setback from the closest property line one foot for every one foot of system height, unless a structural engineer specifies in writing that the collapse of the tower will occur within a lesser distance under all foreseeable circumstances and the property abuts land zoned for industrial or commercial use. WECS shall not be located within fifty (50) feet of an above ground utility line.
3. Rotors.
- a. All WECS rotors shall not have rotor dimensions greater than thirty (30) feet.
  - b. Blade-arcs created by the WECS shall have a minimum of thirty (30) feet of clearance over any structure or tree within a two hundred (200) foot radius.
  - c. Each WECS shall be equipped with both a manual and automatic braking device capable of stopping WECS operation in high wind (forty (40) miles per hour or greater) or in conditions of imbalance.
4. Lightning Protection. Each WECS shall be grounded to protect against natural lightning strikes in conformance with the National Electrical Code as adopted by the City.
5. Tower Access. To prevent unauthorized climbing, WECS towers must comply with one of the following provision:
- a. Tower climbing apparatus shall not be located within twelve (12) feet of the ground.
  - b. A locked anti-climb device shall be installed on the tower.

- c. Tower capable of being climbed shall be enclosed by a locked, protective fence at least eight (8) feet high.
6. Signs: For all WECS, a sign or signs shall be posted on the tower, transformer and substation warning of shall contain the following information:
  - a. Warning high voltage.
  - b. Manufacturer's name.
  - c. Emergency phone number.
  - d. Emergency shutdown procedures.
7. Safety. 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. Visible fencing shall be installed around anchor points or guy wires.
8. Color and Finish. All wind turbines and towers shall be white, grey or another non-obtrusive color. Finishes shall be matte or non-reflective.
9. Lighting: WECS shall not have affixed or attached any lights, reflectors, flashers or any other illumination, except for illumination devices required by FAA Regulations Part 77 "Objectives Affecting Navigable Air Space" and Lighting."
10. Electromagnetic Interference: WECS shall be designed and constructed so as not to cause radio and television interference.
11. Noise Emissions: Noises emanating from the operation of WECS shall be in compliance with and regulated by the State of Minnesota Pollution Control Standards, Minnesota Regulations NPC 1 and 2, as amended.
12. Utility Company Interconnection: No WECS shall be interconnected with the local electrical utility company until the utility company and the City Engineer have commented upon such proposal. The interconnection of the WECS with the utility company shall adhere to the National Electrical Code as adopted by the City.
- I. Building Permit Required. A building permit shall be required for the installation of a WECS in the City.
- J. Inspection. The City hereby reserves the right upon issuing any interim use permit to inspect the premises on which the WECS is located. If a WECS is not maintained in operational condition and poses a potential safety hazard, the

owner shall upon written notice from the City, take expeditious action to correct the situation.

- K Decommissioning: Each Commercial WECS shall have a Decommissioning Plan outlining the anticipated means and cost of removing WECS at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a competent party; such as a Professional Engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the WECS and accessory facilities.
- L. Discontinuation: A WECS shall be considered a discontinued use and the interim use permit void after 1 year without energy production, unless a plan is developed and submitted to the Zoning Administrator outlining the steps and schedule for returning the WECS to service. All WECS and accessory facilities shall be removed to four feet below ground level within ninety (90) days of the discontinuation of use.