

100.22 SMALL WIND ENERGY CONVERSION SYSTEMS. The intent of the regulations of this Section is to balance the need for clean, renewable energy resources with the need to protect the public health, safety, and welfare. The regulations of this Section are found to be necessary to ensure that small wind energy conversion systems are appropriately designed, sited, and installed. Small wind energy conversion systems include only those systems having a rated capacity of no more than fifteen kilowatts (15 kW) for residential districts and land uses, and no more than one hundred kilowatts (100kW) for all other zoning districts and land uses.

1. ***Accessory Use.*** A Small Wind Energy Conversion System (SWECS) shall be allowed only as an accessory use to a permitted principal use. The Zoning Administrator may grant a zoning permit to allow a SWECS in any zoning district provided no such permit may be granted unless the SWECS is in compliance with all regulations of this Section, including prior approval of a Special Use Permit when applicable.
2. ***Special Use Permit Required.*** No zoning permit shall be issued for any SWECS that is proposed to be constructed in a residential zoning district until after a Special Use Permit has been approved by the Board of Adjustment in accordance with Section 100.32 of this Chapter. This requirement does not apply to commercial, industrial, or agricultural zoning districts.
3. ***Zoning Permit Required.*** It shall be unlawful to construct, erect, install, alter, or locate any SWECS within Monona County, unless a zoning permit has been obtained from the Zoning Administrator or their designee. In granting such permit, the Zoning Administrator or their designee may impose conditions on the use in addition to the regulations of this Section. The zoning permit may be revoked by the Zoning Administrator or their designee any time the approved system does not comply with the regulations of this Section and the conditions imposed at the time the permit was granted. The owner/operator of the SWECS must also obtain any other permits required by other federal, state, and local agencies or departments prior to obtaining an approved zoning permit or installing the system, and shall comply with all applicable overlay district regulations.
4. ***Permit Application Information.*** An application for a zoning permit for a SWECS shall be made on forms provided by the County. Along with the application, the applicant shall submit the following information:
 - A. ***Site Plan.*** One (1) complete copy of a site plan and fee shall be submitted in accordance with Section 100.25. The site plan shall be based on a certified instrument survey by a surveyor licensed in the State of Iowa. A Plat of Survey is required to establish property lines and/or setbacks. The site plan shall include the following:
 - (1) Location of the SWECS on the site and total height of the system, including blades, rotor diameter, and ground clearance;
 - (2) Utility lines, telephone lines and any other lines, both above and below ground, within a radius of 200% of the tower height measured from the tower

base to the highest reach of the rotor tip, or 500 feet, whichever is larger;

- (3) Details as to how the power will be delivered to the grid, including the route and size of poles and towers to be used;
 - (4) Property lot lines, land uses and the location and dimensions of all existing structures and uses on and off site within a radius of 200% of the tower height measured from the tower base to the highest reach of the rotor tip, or 500 feet, whichever is larger; and
 - (5) Standard site drawings and dimensional representations of the wind turbine structure, including the tower and base.
5. **Installation.** Installation shall be done by a qualified professional and according to manufacturer's recommendations.
6. **Location.**
- A. No more than one (1) SWECS shall be installed on any lot or parcel.
 - B. No part of a SWECS shall be located within or over drainage, utility or other established easements, or on or over any property lines.
 - C. A SWECS shall be located entirely in the rear yard in permitted districts.
 - D. A SWECS shall not be located in any required setback.
 - E. A SWECS shall be located in compliance with all Federal Aviation Administration (FAA) regulations, guidelines and standards. It is the owner's responsibility to ensure compliance with the FAA.
 - F. A SWECS shall not be installed within 20 feet laterally from any overhead electric power line (excluding secondary electric service lines or service drops).
 - G. A SWECS shall not be installed within 10 feet laterally from any underground electric distribution line.
7. **Bulk Regulations.**
- A. **Setbacks.** The minimum distance between any SWECS and any property line shall be a distance that is equivalent to one hundred ten percent (110%) of the total system height.
 - B. **Minimum Lot Size.** The minimum net lot size for a SWECS shall meet the current zoning ordinance, exclusive of right-of-way.
 - C. **Maximum Tower Height.** The maximum tower height of a SWECS shall conform

to the following restrictions:

- (1) one hundred (100) feet for residential properties,
- (2) one hundred eighty (180) feet for commercial properties,
- (3) three hundred sixty (360) feet for industrial properties, or
- (4) five hundred (500) feet for agricultural properties.

Site plans with a SWECS exceeding the height limits of this chapter shall require a special exception prior to the issuance of a building permit. In no case shall a SWECS exceed 150% of the height allowed within this chapter.

- D. *Clearance of Blade:* No portion of any SWECS blade shall extend within thirty (30) feet of the ground. No portion of any SWECS blade shall extend over parking areas, driveways or sidewalks. No portion of any SWECS blade shall extend within twenty (20) feet of the nearest tree or structure.
8. ***Automatic Over Speed Controls:*** Every SWECS shall be equipped with manual (electronic or mechanical) and automatic over speed controls to limit the blade rotation speed within the design limits of the specific system.
 9. ***Restriction on Use of Electricity Generated.*** A SWECS shall be used exclusively to supply electrical power for on-site use, except that excess electrical power generated by the SWECS and not presently need for on-site use may be used by the utility company in accordance with Section 199, Chapter 15.11(5) of the Iowa Administrative Code.
 10. ***Fall-Zone Clearance.*** No existing or proposed dwelling unit or principal structure shall be located closer than a distance equal to the total system height from the base of the tower of any SWECS. Other accessory structures may be located no closer to the base of the tower than seventy-five percent (75%) of the total system height.
 11. ***Tower Configuration.*** Any SWECS under fifty (50) feet in total system height may have a monopole, guyed, or lattice design for the tower. All SWECS towers with a total system height of more than fifty (50) feet shall only be allowed a monopole design for the tower.
 12. ***Security.***
 - A. ***Lighting.*** No light shall be installed on the tower, unless required to meet FAA regulations.
 - B. ***Signage.*** One sign, limited to four (4) square feet, shall be posted at the base of the tower. The sign shall include a notice of no trespassing, a warning of high voltage, and the phone number of the owner/operator to call in case of emergency.

- C. *Climbing Apparatus.* All climbing apparatus shall be located at least eight (8) feet above the ground, and the tower must be designed to prevent climbing within the first eight (8) feet.
- D. *Fencing.* To limit access to the tower, a non-climbable fence six (6) feet high with locked gate may be required around the SWECS at the discretion of the Zoning Administrator or their designee.
13. ***Maintenance.*** Structures and facilities shall be well maintained in an operational condition that poses no potential safety hazard.
14. ***Electromagnetic Interference.*** Every SWECS shall be designed and constructed so as not to cause radio and television interference.
15. ***Removal.*** If the SWECS remains nonfunctional or inoperative for a continuous period of one (1) year, the system shall be deemed discontinued and abandoned and shall constitute a public nuisance.
- A. The owner/operator shall remove the abandoned system at their sole expense. Removal of the system includes the entire structure, including transmission equipment, and fencing from the property. Nonfunctioning or lack of operation may be proven by reports from the interconnected utility. If removal of towers and appurtenant facilities is required, the Zoning Administrator shall notify the owner/operator.
- B. If the property owner does not remove the abandoned system and appurtenant structures within the timeframe provided on the official notice from the Zoning Administrator, the County may cause the structure to be removed and shall assess the costs to the property owner by invoice or property tax lien.
16. The SWECS, if not off-grid, shall meet the requirements for interconnection and operation as set forth by the utility and the Iowa Utilities Board. No permit of any kind shall be issued until Monona County has been provided with a copy of an executed interconnection agreement. Off-grid systems, defined as not being connected to the distribution network of a utility, shall be exempt from this requirement.