



Small Wind Energy Systems

PB-21

Community Development Department

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15.340.060 Small wind energy systems.

- A. **Purpose.** To facilitate the installation and construction of wind energy systems in the city of Ellensburg for private landowners, subject to reasonable restrictions.
- B. **Applicability.** The requirements set forth herein shall govern the siting of small wind energy systems (SWES) used to generate mechanical or electrical energy to perform work, and which may be connected to the utility grid pursuant to the Revised Code of Washington, Chapter 80.600, Net Metering of Electricity, serve as an independent source of energy, or serve as part of a hybrid system.

The requirements of this ordinance shall apply to all new Small Wind Energy Systems (SWES) proposed after the effective date of this ordinance. Any SWES for which a required permit has been properly issued prior to the effective date of this ordinance shall not be required to meet the requirements of this ordinance; provided, however, that any such pre-existing SWES that is not producing energy for a continuous period of 12 months shall meet the requirements of this ordinance prior to recommencing production of energy. No modification that increases the height of the system or significantly increases its output shall be allowed without full compliance with this ordinance.

C. Where permitted.

1. One SWES system per parcel is permitted in all zones subject to satisfying all requirements as set forth in this chapter, except:
 - a. where otherwise noted in ECC 15.310.040; and
 - b. on properties listed in the Ellensburg landmark register which must first under landmarks and design commission approval as a Type II permit per ECC 15.210.050(B)
2. Multiple SWES per parcel are permitted in all zoning districts (except where otherwise noted in ECC 15.310.040) subject to the issuance of a conditional use permit per ECC 15.250.040.

D. General requirements for small wind energy systems. . In addition to the general requirements listed below, the applicant must provide documentation showing that the SWES meets the *AWEA Small Wind Turbine Performance and Safety Standards* as promulgated by the American Wind Energy Association:

1. Visual appearance - lighting and power lines.
 - a. Wind Turbines shall be painted a non-reflective, non-obtrusive color such as the manufacturer's default color option or a color that conforms to the environment and architecture of the community, unless FAA standards require otherwise. The reviewing authority may require a photo of a SWES of the same model as that proposed in the landowner's application, adjacent to a building or some other object illustrating scale (e.g., manufacturer's photo).
 - b. No SWES shall be artificially lighted, except to the extent required by the FAA or other applicable authority.
 - c. No SWES shall be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the wind turbine.
 - d. Electrical controls, control wiring and power lines shall be wireless or underground, except where SWES wiring is brought together for connection to the transmission or distribution network adjacent to that network.

2. Setbacks and height limits. The following setback requirements shall apply to all SWES towers:
 - a. SWES structures up to 40 feet shall be allowed in all zones as a Type I review project (see ECC Chapter 15.210). SWES structures exceeding 40 feet, but no more than a maximum of 100 feet, are allowed in the P-R zone and all commercial and industrial zones with a conditional use permit per ECC 15.25.040;
 - b. Property lines. Each tower shall be set back from the nearest property line a distance no less than 1.1 times its tower height unless appropriate easements are secured from adjacent property owners, or other acceptable mitigation is approved by the reviewing authority;
 - c. Communication and electrical lines. Each SWES shall be set back from the nearest above-ground public or private non-participating utility a distance no less than 1.1 times its tower height determined from the existing power line or telephone line. Each SWES shall be set back from the nearest above-ground public or private participating utility a distance as specified by said utility; and
 - d. Setbacks shall be measured to the outer edge of the base of the SWES structure towers. Guy cables and other accessory support structures may be located within setback areas.
3. Sound levels and measurement. Audible sound due to SWES operations shall not exceed 55 dBA for any period of time, when measured at the property line of any abutting property. The level, however, may be exceeded during short-term events such as utility outages and/or severe windstorms.
4. Safety.
 - a. The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than 15 feet, as measured at the lowest point of the arc of the blades.
 - b. Wind turbine towers shall not provide step bolts or a ladder readily accessible to the public and all step bolts, ladder or access apparatus shall be a minimum height of 10 feet above ground level.
 - c. All electrical equipment shall be safely and appropriately enclosed from unintentional access by means such as barrier fencing, equipment cabinetry or similar. All access doors to wind turbine towers and electrical equipment shall remain locked until access is necessary.
 - d. Appropriate warning signage (e.g., electrical hazards) shall be placed on wind turbine towers, and electrical equipment.
 - e. All SWES shall be equipped with over speed controls to limit rotation of blades to a speed below the designed limits of the system. No changes or alterations from the certified design shall be permitted unless accompanied by a licensed professional engineer's statement of certification.
 - f. Any SWES found to be unsafe by the building official shall be repaired by the landowner to meet federal, state and local safety standards or removed within 3 months.
5. Federal, state and local requirements.
 - a. SWES shall comply with all current adopted city of Ellensburg codes and ordinances, including but not limited to Ellensburg Municipal Code Titles 3, 4, and 15.
 - b. SWES must comply with regulations of the Federal Aviation Administration (FAA).
 - c. All SWES electrical systems shall comply with requirements per the Washington State Department of Labor & Industries and the current adopted edition of the National Electrical Code (NEC).
 - d. All SWES with the intention to tie to their respective utility provider's grid system shall meet the requirements of Chapter 80.60 of the Revised Code of Washington, Net Metering of Electricity.

E. Abandonment process.

1. At such time that a SWES is scheduled to be abandoned or discontinued, the applicant will notify the building official by certified U.S. mail of the proposed date of abandonment or discontinuation of operations.
2. Upon abandonment or discontinuation of use, the owner shall physically remove the SWES within 90 days from the date of abandonment or discontinuation of use. This period may be extended at the request of the owner and at the discretion of the building official. The term "physically remove" shall include, but not be limited to:
 - a. Removal of the wind turbine and tower and related above grade structures.
 - b. Restoration of the location of the SWES to its natural condition, except that any landscaping, grading or below-grade foundation may remain in the after-conditions.
3. In the event that an applicant fails to give such notice as required in 'A' above, the SWES shall be considered abandoned or discontinued if it has been out-of-service for a continuous 12-month period. After the 12 months of inoperability, the building official may issue a notice of abandonment to the owner of the SWES. The owner shall have the right to respond to the notice of abandonment within 30 days from Notice receipt date. The building official shall withdraw the notice of abandonment and notify the owner that the notice has been withdrawn if the owner provides information that demonstrates the SWES has not been abandoned.
4. If the owner fails to respond to the Notice of Abandonment or if after review by the building official it is determined that the SWES has been abandoned or discontinued, the owner of the small wind energy system shall remove the SWES at the owner's sole expense within 3 months of receipt of the notice of abandonment.
5. As a condition of initial SWES permit approval, the applicant may be required to provide a form of surety (e.g., post a bond, letter of credit or establish an escrow account or other) at the time of building permit approval to cover costs of the removal in the event the city must remove the facility. The applicant shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism to accommodate the rate of inflation over 15 years.