

Chapter 14.830

Commercial Wind Energy Facilities

14.830.100 Purpose and Intent

The Commercial Wind Energy Facilities chapter includes provisions to provide requirements for permitting commercial wind energy facilities based upon locations where wind energy facilities can meet the standards and criteria set forth herein and/or can be mitigated in relation to the County's rural and agricultural zones. The following standards and regulations were deemed necessary for the health, safety, general welfare, and convenience of the inhabitants.

The intent of this section is to provide site criteria for the utilization of the County's wind energy resources. Each wind energy facility will be subjected to an individualized review and the imposition of conditions based on site-specific information that will be tailored to address project impacts in accordance with the adopted site criteria. The goal is to achieve a predictable but sensitive siting process that effectively addresses project impacts.

1. Commercial Wind Energy Facilities: One or more wind turbines for the purpose of generating electricity for commercial sale, with an electrical capacity of over 1 Megawatt (MW). The facility would be under common ownership or operating control that includes commercial utility transmission towers, roads, cables/wires and other building accessories to such facility.
2. Wind turbine: A wind energy conversion system that converts wind energy into electricity.
3. Micrositing: The process of final location of wind generators and all wind generating facility structures and internal roads within the approved project corridors/areas.
4. Turbine Height: The distance measured from the grade level of the tower foundation to the highest point of the turbine rotor plane.
5. Shadow Flicker: Shadow flicker occurs when the blades of a turbine rotate in bright conditions, casting moving shadows resulting in alternating changes in light intensity.
6. Project corridor/area: The approved area within which all the components of a wind generating facility are located. This includes the turbines, all new access roads to the facility, above -and-below ground electrical transmission lines, and all buildings and uses associated with a wind energy facility, including meteorological towers.
7. Non-participating landowner: Any landowner except those on whose property all or a portion of a Wind-generating facility is located pursuant to an agreement with the facility owner or operator.
8. Meteorological Tower: A tower or a removed mast that carries measuring instruments with metrological instruments, such as thermometers and instruments to measure wind speed. An anemometer would be included as an accessory to a meteorological tower.
9. Commercial Utility Transmission Tower: An electric transmission tower is a tower that carries high-voltage transmission lines that transport bulk electric power for commercial use.
10. Occupied Building: A residence, school, hospital, church, public library, or other building used for public gathering that is occupied or in use when the permit application is submitted.

14.830.200 Types of Uses

Commercial Wind Energy Facilities uses for Rural and Resources Zones shall be permitted as demonstrated in table 830-1 Commercial Wind Energy Facility Matrix the Uses are categorized as follows:

1. **Permitted Uses:** Permitted uses are designated in Table 830-1 with the letter “P.” These uses are allowed if they comply with the development standards of the zone.
2. **Limited Uses:** Limited uses are designated in table 830-1 with the letter “L.” These uses are allowed if they comply with the development standards of the zone and specific performance standards.
3. **Conditional Uses:** Conditional uses are designated in table 830-1 with the letters “CU.” These uses require a public hearing and approval of a conditional use permit as set forth in chapter 14.404, Conditional Use Permits.
4. **Not Permitted:** Uses designated in table 830-1 with the letter “N” are not permitted. All uses not specifically authorized by this Code are prohibited.

14.830.210 Commercial Wind Energy Facilities Matrix

Table 830-1, Commercial Wind Energy Facilities Matrix

<u>Zone</u>	<u>Commercial Wind Energy Facilities</u>	<u>Meteorological Tower</u>
<u>Rural</u>		
Rural Traditional (RT)	CU	P
Rural-5 (R-5)	N	N
Rural Conservation	CU	P
Urban Reserve (UR)	N	N
Rural Activity Center (RAC)	N	N
<u>Resource Lands</u>		
Large Tract Agriculture (LTA)	CU	P
Small Tract Agriculture (STA)	CU	P
Mineral Lands	N	N
Forest Lands	N	N

14.830.220 Permitted Uses

Meteorological Tower: Rural Traditional, Rural Conservation, Large Tract Agriculture, Small Tract Agriculture

- A. Prior to the issuance of a building permit, the applicant shall have demonstrated compliance with the conditions and standards set forth herein.
- B. Meteorological Towers over 200 feet are subject to conditions applied by the Federal Aviation Authority (FAA) regarding lighting and markings. The towers will have four FAA red marker balls installed at the uppermost portion of the guy wires to serve as a visual aid for low-flying planes and helicopters.
- C. If guy wires are necessary, bird flight diverters or high visibility markings shall be used. The applicant should refer to the USFWS (United States Fish and Wildlife Service) best management practices for communication towers.
- D. For meteorological towers and associated accessory structures, the front setback shall be 35 feet from the right-of-way of any state or county road, and the side or rear setbacks shall be 20 feet. The setback from parcel or lease lines shall be 20 feet for meteorological towers and five feet for accessory structures.
- E. The meteorological towers and guy wires shall be fenced sufficiently to prevent unauthorized access. The fence shall be at a minimum six feet high.
- F. If a meteorological tower is no longer in use, it is to be removed at the time of the decommissioning of a wind energy facility. In the case of a meteorological tower that is not a part of the facility, it is to be removed at the end of its use.

- G. Meteorological towers are subject to height standards found in table 830-2.

Accessory Buildings: Rural Traditional, Rural Conservation, Large Tract Agriculture, Small Tract Agriculture

- A. This would include all accessory buildings, uses, and structures related to and supporting the operation of commercial wind energy facilities.
- B. All accessory uses should follow the approved conditions and standards laid out in their respective zones.

14.830.230 Conditional Uses

- 1) *Commercial Wind Energy Facilities (RT, RC, STA, LTA zones)*
- a) Prior to the issuance of a building permit, the application shall have demonstrated compliance with the conditions and standards set forth herein.
 - b) The applicant has met and provided documentation of all requirements of SEPA.
 - c) The application has met all standards of the Spokane County Critical Areas Ordinance, as amended.
 - d) The facility shall meet the minimum landscaping requirements for the underlying zone.
 - e) The applicant shall have met and provided documentation that all FAA and any required aviation easements have been satisfied.
 - f) The applicant has met all FAA regulations.
 - g) The applicant shall identify all resource lands, wildlife, open space corridors, and wildlife refuges within or adjacent to the project site of each proposed tower if widely dispersed.
 - h) The applicant shall consult in writing with the Inland Northwest Wildlife Refuge Complex Turnbull National Wildlife Refuge if a wind turbine is proposed within 1 mile of their project boundaries.
 - i) Identification of all shrub steppe, prime farmland, grassland, or forested habitat on and within the project areas or each proposed tower, if widely dispersed.
 - j) Noise
 - i) State noise standard compliance: During construction and operations, the project shall comply with applicable state noise standards as found in WAC 173-60.
 - k) Air Quality
 - i) All applicable air emissions permits shall be obtained, and all conditions shall be complied with from Spokane Regional Clean Air.
 - l) The applicant shall produce a shadow flicker analysis by a qualified third party using the most up-to-date modeling technology that demonstrates in their application that no occupied residence will experience more than (30) hours per year, or more than (30) minutes per day, of shadow flicker.
 - m) Micrositing Corridors/Areas
 - i) The applicant shall identify all occupied buildings within one mile of turbine "micro-siting corridors or areas and/or proposed turbine locations.
 - ii) All terrestrial and aquatic habitat, critical area assessments, and studies required shall be conducted within identified study corridors/areas of sufficient width and dimension to enable comprehensive environmental assessment while allowing flexibility in the final layout. In order to encourage the maximum sufficiency of studies and to enable the maximum flexibility of final layout based upon site-specific attributes, the County shall review and provide written approval of "micrositing" corridors/areas for all roads, wind turbine locations, and above- and below-ground electrical transmission locations. This micrositing review occurs at the time of the final layout approval of the project after the conditional use.
 - iii) Actual final locations of wind turbine generators, below-ground electrical cables, and above-ground electrical transmission towers will be established during the micrositing process, occurring after permit review and prior to actual construction; provided that all such facilities must be sited within the study corridors/areas reviewed and approved by the County. During the micrositing process

(when the final, exact locations of the turbines and other project elements and equipment are determined), the applicant will typically balance a number of technical and engineering factors, including limitations posed by the terrain, wind data (speed, wind shear, etc.), wake effects of turbines on others, feasibility of access, setbacks (internally established or based on permit requirements), geotechnical considerations (subsurface conditions), environmental restrictions (avoidance of sensitive habitat), cultural/archeological restrictions (avoidance of cultural resource sites), telecommunications constraints (line of sight microwave paths), FAA requirements, and other site-specific criteria that are not fully resolved until final engineering is completed.

- iv) Amendment of a Corridor/Area Site Plan. A corridor/area site plan as approved by the Hearing Examiner shall not be altered in a substantial way, such as an increase in the number of towers or a change in the project boundaries, unless approved by the Hearing Examiner. If the alteration is felt to be of a substantial nature, the Hearing Examiner shall require that the plan be submitted in compliance with these regulations. In the case of micrositing wind turbines or facilities, because of changing generator sizing, topographical features, and other conditions, latitude is given, provided the wind turbine location is within the corridors/areas approved by the Hearing Examiner. In the event of micrositing of turbines or facilities within the approved boundaries of the project area, micrositing will not be considered to be a substantial change to the site plan. Prior to any micrositing changes, county planning staff must be notified.
- n) Setbacks and Height Standards
 - i) Setbacks: All setback distances established in this section shall be measured from the closest point of the structure or property line, dependent on the setback criteria.
 - ii) Minimum, occupied building setbacks: Minimum setback standard of one and a half times (1.5x) the height of the wind turbine generator plus 100 feet away from existing occupied structures or 1000 feet whichever one is larger, measured from the ground to the maximum extent of the turbine blade, regardless of whether the occupied building owner consents to the location.
 - iii) Occupied building, visual, shadow flicker, and aesthetic setbacks: Visual, including but not limited to shadow flicker, and aesthetic setbacks are imposed to address wholly local concerns regarding the visual and aesthetic impacts of wind turbine generators. For all non-consenting, non-participating landowners, commercial wind energy turbine towers shall be set back a minimum distance of four times (4X) the maximum height of the turbine, measured to the blade tip at its maximum elevation, from the non-participating landowner's occupied building. This distance may be reduced to the standards found in section 14.830.30(n)(ii) provided the property owner signs a waiver agreeing to the reduction in the minimum distance.
 - iv) There shall be a minimum non-waivable setback distance of four times (4x) the maximum height of a turbine, measured to the blade tip at its maximum elevation, from the approved acquisition boundaries of all wildlife areas, state parks, and national wildlife refuges (Turnbull NWR Stewardship Area).
 - v) There shall be a minimum setback distance of four times (4x) the maximum height of a turbine measured to the blade tip at its maximum elevation from the boundaries of incorporated communities.
 - vi) Setbacks from property lines. There shall be a minimum distance of one and one-tenth times (1.1x) the height of the wind turbine generator away plus 100 feet from the property line from any landowners, including state and improved county right-of-ways, measured from the ground to the maximum extent of the turbine blade.
 - vii) There shall be a minimum setback of four times (4x) the height of the wind turbine from any urban growth area.
There shall be a minimum setback of four times (4x) the height of the wind turbine from the Felts Field, Deer Park, and Spokane International Airport Compatibility Zone (ACZ-5) boundary.

- viii) All wind turbine tower bases shall be located at least 40 feet for every 1 foot of tower height or one mile, whichever is greater, from the ends of and at least 5,000 feet from the sides of all runways that are available solely for private use and identified on the more current edition of the Sectional Aeronautical Charts produced by the National Aeronautical Charting Office (NACO).
- ix) The lowest point on all rotor blades must be at least 30 feet from above ground level.
- x) At a minimum, the applicant shall follow standards imposed by the Federal Aviation Authority (FAA). Height limits are not established for wind turbines. Please refer to Table 830-2.
- o) Feeder Lines: All feeder lines associated with the project distribution system installed as part of the commercial wind energy system shall be buried, where physically possible.
- p) Consultation with the Department of Defense
 - i) Conditional use permit applications for the placement and operation of wind turbines under this section shall be made available for review by the United States Department of Defense (USDOD) in accordance with RCW 36.01.320, as in effect now or hereafter amended.
 - ii) The notice and processing of wind turbine applications: The applicant is required to provide sufficient evidence to persuade the Hearing Examiner that the proposed commercial wind energy facilities are compatible with other uses in surrounding areas, including any military training activities, or are no more incompatible than any other outright permitted uses in the applicable zone.
- q) Avian and Bat Protection
 - i) The applicant shall conduct project pre-assessment studies consistent with the Washington Department of Fish and Wildlife Wind Power Guidelines as currently amended, effective on the date of submitting a complete permit application.
 - ii) The applicant shall assess and monitor raptor nests on the project site for activity prior to construction and modify construction timing and activities to avoid impacts to nesting raptors. At a minimum, one raptor nest survey during breeding season within 1 mile of the project site should be conducted to determine the location and species of active nests potentially disturbed by construction activities and to identify active and potentially active nest sites with the highest likelihood of impacts from the operation of the wind plant. A larger survey area (e.g., a 2-mile buffer) is recommended if there is some likelihood of nesting occurrence of state and/or federally threatened and endangered raptor species (e.g., ferruginous hawk, bald eagle, golden eagle) or if empirical data on displacement impacts may be monitored after construction.
 - iii) A minimum of one full season of avian use surveys is recommended following current state-of-the-art protocols to estimate the use of the project site by avian species/groups of interest during the season of most concern (usually spring/early summer). Additional seasonal data (e.g., fall or winter) is recommended in the following cases: 1) Use of the project site for the avian groups of concern is estimated to be high relative to other projects, and 2) there is very little existing data regarding seasonal use of the project site. This additional avian use data should be collected to refine impact predictions and make decisions on project layout.
 - iv) The applicant shall provide environmental training to construction and operation staff and contractors on applicable wildlife resource protection measures and federal and state laws (those that prohibit and collection or removal awareness of sensitive habitats and bird species, potential bird nesting areas, potential bat roosting/breeding, and general wildlife issues).
 - v) If rare, threatened, and/or endangered species and/or habitat will be impacted, the applicant shall develop a management plan to minimize or offset impacts in coordination with the Washington State Department of Fish and Wildlife.
- r) Public Safety, Inquires, and Complaints
 - i) The applicant shall provide a fire protection plan, which shall be sent to the relevant fire district.
 - ii) During the project construction and all project welding operations, the applicant shall have a readily accessible water truck and chemical fire suppression materials available on site to allow immediate fire response.

- iii) The applicant shall provide project staff with cellular or on-site phones to enable timely communication with the fire department and other emergency services.
- iv) The applicant shall provide a health response plan. Said plan shall contain response procedures to be followed in the event of a fire, collapse, personal injury, or other emergency at a project. The Plan shall contain 24-hour emergency contact information for the project. The plan will also entail design measures to ensure safety and inform potential responders.
- v) The applicant shall fence site entrances as appropriate and post signs warning of electrical dangers with emergency contact numbers, e.g. phone numbers of emergency responders. The facility owner and operator shall maintain a phone number and identify a person responsible for the public to contact with inquiries and complaints throughout the life of the project.
- vi) The applicant shall monitor the site for evidence of unauthorized use and provide additional security as appropriate.
- s) Visual Resources
 - i) The applicant shall prepare visual simulations of wind turbines from key viewpoints, chosen in consultation with the Planning Department.
 - ii) The facility shall be free of debris and unused or non-functioning equipment by storing equipment and supplies off-site (post-construction) and removing damaged or unusable equipment from the site.
 - iii) The facility shall meet requirements that meet the FAA's daytime lighting and marking standards; the applicant shall choose a non-obtrusive paint color such as white, off-white, or grey.
 - iv) To the extent practicable, and subject to industry standards and requirements to meet the FAA's daytime lighting and making standards, the applicant shall choose paint colors and use non-reflective paints to reduce glare.
- t) Decommissioning
 - i) The applicant shall provide a decommissioning plan that meets the following requirements. Prior to commencing construction of the project, the applicant shall prepare a decommissioning plan in a form acceptable to the County. A bond, letter of credit, or other security acceptable to the County is required to ensure proper decommissioning of each turbine and other equipment. The amount of the security shall be determined on the basis of the site-specific conditions affecting the costs of decommissioning, access, depth of foundation, terrain, etc., to include credit for the salvage value of the equipment. The timing for supplying the security shall be determined in consultation with the county. If, however, the project is owned and operated by an investor-owned electric utility regulated by the Washington Utility and Transportation Commission, such a security device as described in this condition may be waived, and the removal and restoration obligations hereunder shall be a general obligation of the investor-owned utility.
 - ii) Upon termination of operations, or if the project is abandoned or ceases operation for more than 270 consecutive days (except in the event of a man-made or natural disaster not in the control of the applicant), the applicant, or the then current owner, shall, at their sole cost and expense, dismantle and remove above-ground improvements, including wind turbines, step-up transformers, substations, overhead transmission lines and support structures, control hardware, and meteorological towers. Foundations will be removed to a level of three (3) feet below the surface of the ground unless requested to be maintained by the landowner. At the request of the landowner, they shall also remove operations and maintenance buildings. The applicant shall repair any damage as a result of such removal, restore the property to grade, and implement erosion and control devices and procedures, restoring the site as reasonably as possible to its pre-project condition. In the event that the applicant or the then-current owner does not fulfill their obligations under this section, the county may, at its sole election, dismantle and remove any wind tower or related facility. In such a case, the applicant and the then-current owner shall pay and be liable to the county for all costs incurred by the county to complete the decommissioning.

- u) Agriculture Management
 - i) The applicant shall be required to produce an agricultural protection plan. The agricultural management plan shall properly demonstrate that the site will have continued agricultural use and can mitigate any potential disturbance or interference with current and or future agricultural operations. Competition of the agricultural management plan shall be determined by the Hearing Examiner.
 - ii) The applicant will be responsible for convincing the hearing examiner that the project will have continued agricultural use and has been properly designed to mitigate all and any agricultural and/or natural resource disturbances.
- v) Commercial Utility Transmission Towers
 - i) Commercial Utility Transmission Line shall be part of the application for a conditional use permit for Commercial Wind Energy Facilities.
 - ii) The applicant shall secure the necessary property or right-of-way to assure the property construction, maintenance, and general safety of properties adjoining the commercial utility transmission lines.
 - iii) All support structures for electrical transmission lines shall have their means of access located a minimum of 12 feet above the ground.
 - iv) Height requirements are not established for commercial utility transmission towers as specified in table 830-2. The applicant shall be required to follow FAA Standards.

14.830.300 Maximum Height-Commercial Wind Energy Facilities

Table 830-2, Maximum Height in Feet - Commercial Wind Energy Facilities

Zone	Wind Tower	Commercial Utility Transmission Towers	Meteorological Tower
Rural Conservation Rural Traditional	*	*	300
Large Tract Agricultural Small Tract Agricultural	*	*	300

*There are no established height requirements for a wind tower and commercial utility transmission towers; the applicant shall be required to follow FAA standards.