

Section 431 – Wind Energy Systems

431.1 Purpose:

The purpose of this Section is to accommodate wind energy systems in appropriate locations, while minimizing any adverse visual, safety and environmental impacts of the systems. In addition, this ordinance provides a permitting process that supports the use of wind energy systems maintained in a safe and attractive condition and allows for the prompt and complete removal of towers and related structures when no longer needed.

This section sets forth a permitting process for the following types of wind energy systems:

- Meteorological (Met) Towers
- Small Wind Energy Systems consisting of two or fewer towers generating up to 50 KW.
- Large Wind Energy Systems consisting of three or more towers that generate more than 50 KW and less than the 105 MW threshold that is governed by the State of Oregon.
- Wind Energy Systems governed by the State of Oregon’s Energy Facility Siting Council (EFSC)

431.2 Applicability:

1. Meteorological (Met) Towers: The construction of a met tower for the purpose of collecting data to develop a wind energy system shall abide with the following requirements:
 - a. The construction, installation or modification of a met tower shall require a temporary use permit and building permit and shall conform to all applicable sections of the state building code.
 - b. Met towers shall be permitted on a temporary basis not to exceed 3 years.
 - c. Prior to the issuance of a building permit, the County will review to ensure the met tower conforms with the small wind energy system standards.
2. Small Wind Energy Systems: Small wind energy systems shall be permitted under an administrative review permit in all zones within the County on legal parcels of one acre (for one wind turbine) or five acres or more (for two wind turbines).
3. Large Wind Energy Systems shall be permitted under a conditional use and site plan review permit process in all zones within the County on legal parcels of ten (10) acres or more. Large wind systems on high-value farmland must be located along field edges and in nonagricultural areas.
4. Wind Energy Systems governed by the State of Oregon’s Energy Facility Siting Council (EFSC) shall be permitted under a conditional use and site plan review permit process in limited zones (EFU, Forest Management, County Commercial, County Industrial, and Industrial Reserve) on legal parcels of twenty (20) acres or more.
5. The Planning Commission or Board of Commissioners may waive any portion of this ordinance in such cases where, in the opinion of the review bodies, strict conformity would

pose an unnecessary hardship to the applicant and waiver would not be contrary to the spirit and intent of this ordinance.

432.2 Application Requirements:

An application must be submitted to erect a new wind energy system or to increase the height or ground area of an existing wind energy system.

A. Small Wind Energy System Application Requirements:

1. A vicinity map showing the proposed tower location and all tax lots within 500 feet of the area centered on the proposed location.
2. A site plan showing the following:
 - a. Township, range, section and tax lot number.
 - b. Property lines and physical dimensions of the applicant's property.
 - c. Names and location of all streets or roads adjacent to the property.
 - d. Indicate the direction and percent of slope and contours.
 - e. Indicate location of and distance from all major features (i.e., rims, canals, irrigation ditches, rock ledges, rivers and streams).
 - f. Indicate location of any wells or water source.
 - g. Indicate existing or proposed fencing.
 - h. Identify with dotted lines the location of any Easements and Deed Restrictions.
 - i. Location, dimensions, and types of existing structures on the property (number each structure. In the margin reference the structures by number and indicate structure usage and dimensions). Indicate the distance from all structures to adjacent structures and property lines.
 - j. Location of the proposed small wind energy system, foundations, guy anchors and associated equipment.
 - k. Indicate the setback requirements as outlined in this ordinance.
 - l. Show any overhead utility lines.
 - m. Show location of power and water lines or any other utility with the length indicated.
 - n. State and federal resource lands, Goal 5 areas, and other protected areas in the vicinity of the project site.
 - o. A map showing the existing topography of the site.
 - p. Water bodies, waterways, wetlands and drainage channels.
 - q. The location and distance to residences and other noise sensitive properties, public or private airports or airstrips, and other uses or structures relevant to the standards or criteria for the facility.
3. Small wind energy system specifications, as provided by the manufacturer, including model, rotor diameter, tower height, tower type (freestanding or guyed), sound level estimate, and tower foundation drawing.
4. If the small wind energy system will be connected to the power grid, documentation shall be provided regarding the notification of the intent with the utility regarding the applicant's installation of a small wind energy system.

5. Evidence of compliance or non-applicability with Federal Aviation Administration requirements.
 6. A narrative addressing the Wind Energy System Approval Standards in Section 432.3.
 7. For the Building Permit:
 - a. Standard drawings and an engineering analysis of the tower showing compliance with the State of Oregon Structural Specialty Code and certification by a licensed professional engineer. Wet stamps are not required.
 - b. Electrical code compliance requires line drawings of system electrical components showing sufficient detail to determine that installation conforms to the National Electric Code.
- B. Large Wind Energy System Application Requirements:
1. All of the application requirements in 432.2(A).
 2. For Large Wind Energy Systems in the EFU or FM Zone, approval is subject to compliance with Sections 301.4(H) or 303.4(F).
 3. Provide a narrative addressing the criteria in Section 602 Conditional Use Approval Criteria, and Section 414 Site Plan Review.
- C. Wind Energy Systems governed by the State of Oregon's Energy Facility Siting Council (EFSC)
1. All of the application requirements in 432.2(B).
 2. Evidence of submittal to the Oregon Department of Energy's Energy Facility Siting Committee.

432.3 Approval Standards

Through the appropriate permit review process, wind energy systems will be evaluated for compliance with the following standards:

- A. Small Wind Energy System Application Requirements:
1. Setbacks: Small wind energy system turbines shall be set back a distance equal to 110% of the total height of the tower and one blade length from:
 - a. Any public road right-of-way, unless written permission is granted by the governmental entity with jurisdiction over the road.
 - b. Any overhead utility lines.
 - c. All property lines, unless the affected land owner provides written permission through a recorded easement allowing the small wind energy system's fall zone to overlap with the abutting property.
 - d. Any travel ways to include but not be limited to driveways, parking lots, nature trails, or sidewalks.
 - e. Small wind energy systems must meet all setbacks for principal structures for the zoning district in which the system is located.
 - f. The setback shall be measured to the center of the tower's base.
 - g. Guy wires used to support the tower are exempt from the small wind energy system setback requirements, except that anchor points for guy wires shall be located within the property lines of the facility and not across any electric transmission lines.

- h. Wind turbines shall not be located within an identified bird nesting site.
 - i. Turbines, pads, roads and accessory uses shall be sited to strictly minimize the amount of farmland taken out of production, both directly, in chosen development sites, and indirectly, in awkward land configurations resulting from development that are difficult for farm machinery to access.
2. Small wind energy system turbines shall be set back a distance of the total height of the tower and one blade length from any dwelling inhabited by humans on neighboring property.
3. Tower:
 - a. The tower height shall not exceed 160 feet.
 - b. The applicant shall provide evidence that the proposed tower height does not exceed the height recommended by the manufacturer of the wind turbine.
 - c. Facilities shall be equipped with both manual and automatic controls to limit the rotational speed of the blade below the design limits of the rotor.
 - d. In no case shall the rotor be less than 15 feet from the ground.
4. Sound Level: The small wind energy system's manufacturer's sound level estimate shall not exceed 60 decibels, and operation of the system shall be in compliance with noise regulations established by the Oregon Department of Environmental Quality in OAR Chapter 340, Division 35..
5. Electromagnetic Interference: Facilities shall be designed and operated so as not to cause harmful interference with an existing microwave communications link, or other airwaves broadcasts.
6. Shadowing/Flicker: Small wind energy systems shall be sited in a manner that does not result in significant shadowing or flicker impacts. The applicant has the burden of proving that this effect does not have significant adverse impact on neighboring or adjacent uses either through siting or mitigation.
7. Signs: All signs, both temporary and permanent are prohibited on the small wind energy system, except as follows:
 - a. Manufacturer's or installer's identification on the wind turbine.
 - b. Appropriate warning signs and placards.
8. Code Compliance: The small wind energy system shall comply with all applicable sections of the Oregon State Building Code and any other applicable State or local government regulations.
9. Aviation: The small wind energy system shall be built to comply with all applicable Federal Aviation Administration rules, including but not limited to 14 C.F.R. part 77, subpart B regarding installations close to airports, and any State of Oregon regulations. In addition, compliance with JCZO Section 418, Airport Protection is required. Evidence of compliance or non-applicability shall be submitted with the application.

10. Visual Impacts: It is inherent that wind energy systems may pose some visual impacts due to the tower height needed to access the wind resources. The purpose of this section is to reduce the visual impacts, without restricting the owner's access to the wind resource.
 - a. If visible from a residentially zoned lot, ground mounted electrical and control equipment will be screened. All electrical conduits shall be underground.
 - b. The color of the wind energy system shall be either the stock color from the manufacturer or painted in a non-reflective, unobtrusive color that blends in with the surrounding environment.
 - c. A small wind energy system shall not be artificially lit unless such lighting is required by the Federal Aviation Administration (FAA).
 - d. Upon completion of construction, all construction debris shall be removed.
 - e. All wind energy systems shall comply with JCZO Section 412, Scenic and Natural Hazard Rim Set Back, and JCZO Section 417, Historic Resource Protection.
11. Utility Connection: If the proposed small wind energy system is to be connected to the power grid through net metering, the applicant must provide their written notification to the utility provider with a plan to satisfy any requirements for safety and serviceability of the utility provider.
12. Access:
 - a. All ground mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.
 - b. The tower shall be designed and installed so as to not provide step bolts or a ladder readily accessible to the public for a minimum height of 8 feet above the ground.
 - c. Heavy equipment used to install or maintain must use the access travel ways provided in the application to avoid soil compaction.
13. Approved Wind Turbines: The manufacturer and model of the wind turbine(s) to be used in the proposed small wind energy system must have been approved by the California Energy Commission or the American Wind Energy Association's list of U.S. manufacturers and suppliers of wind turbines and must be installed by licensed contractor.
14. Clearing and Stripping of Topsoil: Clearing of natural vegetation shall be limited to that which is necessary for the construction, operation and maintenance of the small wind energy system and as otherwise prescribed by applicable laws, regulations, and ordinances. All topsoil shall be stripped from agricultural land used for turbine pads and vehicle and equipment traffic and parking, and stockpiled separate from other excavated material. Topsoil stockpiles shall be clearly designated in the field and on construction drawings. Excess concrete will not be buried or left on the surface in active agricultural areas.
15. Prior to commencement of construction, all other necessary permits shall be obtained, e.g., County Land Use Permit, road access permits, and building permits.

16. The County shall notify ODFW when an application is submitted for Wind Energy Systems proposed to be located in a Wildlife Area Overlay Zone.
17. The County shall take into consideration crop dusting when approving a wind energy system.
18. Abandonment or Discontinuation of Use: At such time that a small wind energy system is scheduled to be abandoned or discontinued, the applicant will notify the Building Inspector by certified U.S. mail of the proposed date of abandonment or discontinuation of operations.
 - a. Upon abandonment or discontinuation of use, the owner shall physically remove the small wind energy system 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 Inspector. “Physically remove” shall include, but not be limited to:
 1. Removal of the wind turbine and tower and related above grade structures.
 2. Restoration of the location of the small wind energy system to its natural condition, except that any landscaping, grading or below-grade foundation may remain in the after-conditions.
 - b. In the event that an applicant fails to give such notice, the system shall be considered abandoned or discontinued if the system is out-of-service for a continuous 12-month period. After 12 months of inoperability, the Building Inspector may issue a Notice of Abandonment to the owner of the small wind energy system. The owner shall have the right to respond to the Notice of Abandonment within 30 days from Notice receipt date. The Building Inspector shall withdraw the Notice of Abandonment and notify the owner if the owner provides information that demonstrates the small wind energy system has not been abandoned.
 - c. If the owner fails to respond to the Notice of Abandonment or if after review by the Building Inspector it is determined that the small wind energy system has been abandoned or discontinued, the owner of the small wind energy system shall remove the wind turbine and tower at the owner’s sole expense within 3 months of receipt of the Notice of Abandonment. If the owner fails to physically remove the small wind energy system after the Notice procedure, the County shall have the authority to enter the subject property and physically remove the small wind energy system.
 - d. Any wind energy system found to be unsafe by the local enforcement officer shall be repaired by the owner to meet federal, state and local safety standards or removed within six months.

B. Large Wind and EFSC Energy System Approval Standards: In addition to the approval standards in 423.3(A), the following pertain to large wind energy systems:

1. Large wind energy systems shall not cause conflicts with:

- a. Accepted farming practices as defined in ORS 215.203(2)(c) on adjacent lands devoted to farm uses.
 - b. Other resource operations and practices on adjacent lands except for wind power generation facilities.
2. If located in the EFU or FM zone, a condition of approval will require that the landowner sign and record in the deed records for the County a document binding the landowner, and the landowner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices for which no claim is allowed under ORS 30.936 or 30.937.
3. The applicant must prevent and control all Jefferson County identified noxious weeds (per JCC Chapter 8.28) directly resulting from the wind energy system during preparation, construction, operation and demolition/rehabilitation.
4. Impacts of the Large Wind Energy System must avoid or, if possible, gain approval from State or local agencies (i.e., DSL, ODFW, County Sheriff, Fire District) to mitigate the impacts of the system on:
 - a. Wetlands
 - b. Wildlife (all potential species of reasonable concern)
 - c. Wildlife habitat
 - d. Historic and cultural resources
 - e. Fire hazards
 - f. Criminal activity (vandalism, theft, trespass, etc.)
5. A dismantling and decommissioning plan of all components of the wind energy system must be proposed and maintained at all times by the facility owner.
6. No portion of the Large Wind Energy System facility shall be within 3,520 feet of properties zoned residential use or designated in the Comprehensive Plan as residential.
7. Private access roads shall be gated to protect the facility and property owners from illegal or unwarranted trespass, and illegal dumping and hunting.
8. Where practicable, the electrical cable collector system shall be installed underground, at a minimum depth of 4 feet in cropland or 3 feet in grazing areas; elsewhere the cable collector system shall be installed to prevent adverse impacts on agricultural operations.
9. Required permanent maintenance/operations buildings shall be located off-site in one of Jefferson County's appropriately zoned areas, except that such a building may be constructed on-site if:
 - a. The building is designed and constructed to resemble the character of similar buildings used by commercial farmers or ranchers; and
 - b. The building will be removed or converted to farm use upon decommissioning of the wind energy system facility.

10. A Large Wind Energy System shall comply with the Specific Safety Standards for Wind Facility delineated in OAR 345-024-0010 (as adopted at time of application).

C. Decommissioning/Dismantling Process: The applicant's dismantling of incomplete construction and/or decommissioning plan for Large and EFSC Wind Energy Systems shall include the following information:

1. A provision for completion of dismantling or decommissioning of the facility without significant delay and protection of public health, safety, and the environment in compliance with the restoration requirements of this section.
2. A description of actions the facility owner proposes to take to restore the site to a useful, no hazardous condition, including options for post-dismantle or decommission land use, information on how impacts to fish and wildlife would be minimized during the process, and measures to protect the public against risk or danger resulting from post-decommissioning site conditions in compliance with the requirements of this section.
3. A current detailed cost estimate, a comparison of that estimate with present funds set aside for dismantling or decommissioning, and a plan for assuring the availability of adequate funds for completion of dismantling or decommissioning (a bond or letter of credit acceptable to the County, in the amount of the decommissioning fund naming Jefferson County and the landowner as beneficiary or payee). The cost estimate will be reviewed and updated by the facility owner/operator on a 5-year basis.
4. Restoration of the site will consist of the following:
 - a. Dismantle turbines, towers, pad-mounted transformers, meteorological towers and related above-ground equipment. All concrete turbine pads shall be removed to a depth of at least three feet below the surface grade (4 feet in cropland).
 - b. The underground collection and communication cables need not be removed if at a depth of three feet or greater (at least four feet in cropland). These cables can be abandoned in place if they are deemed not a hazard or interfering with agricultural use or other consistent resource uses of the land.
 - c. Gravel shall be removed from areas surrounding turbine pads.
 - d. Access roads shall be removed by removing gravel and restoring the surface grade and soil.
 - e. After removal of the structures and roads, the area shall be graded as close as reasonably possible to its original contours and the soils shall be restored to a condition compatible with farm uses or consistent with other resource uses. Re-vegetation shall include planting by applicant of native plant seed mixes, planting by applicant of plant species suited to the area, or planting by landowner of agricultural crops, as appropriate, and shall be consistent with the weed control plan approved by Jefferson County.
 - f. Roads, cleared pads, fences, gates, and improvements may be left in place if a letter from the landowner is submitted to Jefferson County indicating said

landowner will be responsible for, and will maintain said roads and/or facilities for farm or other purposes as permitted under applicable zoning.

5. If any disputes arise between Jefferson County and the landowner on the expenditure of any proceeds from the bond or the letter of credit, either party may request nonbinding arbitration. Each party shall appoint an arbitrator, with the two arbitrators choosing a third. The arbitration shall proceed according to the Oregon statutes governing arbitration. The cost of arbitration (excluding attorney fees) shall be shared equally by the parties.
6. For projects sited by EFSC, compliance with EFSC's financial assurance and decommissioning standards shall be deemed to be in compliance with the dismantling and decommissioning requirements of the Section.

D. Large and EFSC Wind Energy System Post-Siting Requirements: After approval, the following information is required to be submitted:

1. The bond or letter of credit shall be established for the dismantling of uncompleted construction and/or decommissioning of the facility. For projects being sited by the State of Oregon's Energy Facility Siting Council (EFSC) the bond or letter of credit required by EFSC will be deemed to meet this requirement.
2. The actual latitude and longitude location or Stateplane NAD coordinates for each turbine tower, connecting lines, and transmission lines shall be provided to Jefferson County once commercial electrical production begins.
3. A summary of as-built changes in the facility from the original plan, if any, shall be provided by the owner/operator.
4. An amendment to the conditional use permit shall be required if proposed facility changes would:
 - a. Require an expansion of the established facility boundaries or increase the land area taken out of agricultural production.
 - b. Increase the number of towers.
 - c. Increase generator output of more than 25 percent relative to the generation capacity authorized by the initial permit due to the repowering or upgrading of power generation capacity.

432.4 Permit Duration: The permit will expire two years from the date of decision unless the applicant has completed substantial construction or development of the permitted facility. The expiration date may be extended if the applicant submits a written request to the Planning Director for a one-time, one-year extension prior to the expiration date of the permit.

Sources for this draft: Rockingham Small Wind Energy Ordinance; Gilliam County Zoning and Land Development Ordinance; DLC Wind Energy Advisory Committee memo of October 3, 2008; Harney County Criteria; advice from Greg Price, Abundant Renewable Energy; Wallowa County Ordinance; and Power Wind Energy Model Ordinance Options NYS Energy Research & Development Authority.