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**CHAPTER 19 STANDARDS FOR NON COMMERCIAL ENERGY FACILITIES, COMMERCIAL ENERGY FACILITIES & RELATED USES**

**SECTION 19.010 Purposes**

This chapter describes the requirements for establishing non-commercial energy facilities, commercial energy facilities and related uses (as included) in Wasco County. The goals of this chapter are to:

- Encourage renewable energy production;
- Utilize clear and objective standards;
- Establish a clear, consistent and accountable application process;
- Collaborate and coordinate with agencies and other stakeholders;
- Protect the public health, safety and general welfare of the citizens of Wasco County; and
- Protect resources identified in the Wasco County Comprehensive Plan.
- ~~Focus development in areas which minimize conflict with other permitted uses.~~
- ~~Protect investments in property by ensuring that incompatible uses do not occur on adjacent properties.~~

The uses described in this chapter are only allowed if listed in the zoning section in Chapter 3 applicable to the subject property.

**SECTION 19.020 Definitions**

See Definitions Document. Definitions will either be placed here or in Chapter 1.

**SECTION 19.030 Non-Commercial/Stand Alone Generating Facilities & Related Uses Review Processes & Approval Standards**

A. Review Processes - Non-commercial/Stand Alone Generating Facilities & Related Uses (energy facilities) shall be reviewed pursuant following:

1. Towers - This shall include free standing (WECS & Meteorological) or roof mounted towers.

Tower Height	Property Size			
	<2 Acres	2 - <5 Acres	5 - <10 Acres	>=10 Acres
<35' in height	*Ministerial	*Ministerial	Ministerial	Ministerial
35' - < 50' in height	STS	STS	Ministerial	Ministerial
50' - < 100' in height	CUP	STS	STS	STS
100' - < 200' in height	CUP	CUP	STS	STS
>=200' in height	CUP	CUP	CUP	CUP

\*The 4<sup>th</sup> tower sited on the property shall elevate the review from a Ministerial to an STS.

## 2. Photovoltaic/Solar Systems

System Size	Property Size				
	<2 Acres	2- <5 Acres	5 - <10 Acres	10 - < 40 Acres	> = 40 Acres
Roof Mounted < = 35' in height	Ministerial	Ministerial	Ministerial	Ministerial	Ministerial
*Roof Mounted >35' in height	STS	STS	STS	Ministerial	Ministerial
**Ground Array <500 sq. ft.	Ministerial	Ministerial	Ministerial	Ministerial	Ministerial
**Ground Array 500 - <1,500 sq. ft.	STS	STS	STS	STS	Ministerial
**Ground Array >=1,500 sq. ft.	CUP	CUP	CUP	CUP	STS

\*Roof mounted systems exceeding 35' in height shall be allowed without a variance pursuant to either Chapter 6 or 7.

\*\*Ground Arrays are limited to 35' in height. Ground Arrays exceeding 35' in height will be required to apply for a variance pursuant to either Chapter 6 or 7.

Small (less than 10 square feet) photovoltaic/solar systems that are accessory to other uses including but not limited to gates, electric fences & lights are not subject to the standards of chapter 19. They shall be subject to the same standards and review process as the use to which they are accessory as outlined in the applicable zone.

Multiple panels, multiple arrays and supporting equipment providing energy to the same structure or use shall be considered one (1) system in determining the applicable review process. If a portion of the system is already installed and the applicant is creating an addition to the system, the applicable review process shall be based on the total size of the system.

## 3. Hydroelectric Facilities

- a. Not Located within an Area of Special Flood Hazard - Hydroelectric energy projects not located within an Area of Special Flood Hazard are not required to meet property development standards within the zone they are being located and are allowed without any review by the Wasco County Planning and Development Department as long as they are being reviewed by the Oregon Department of Water Resources. (OWRD has a robust review process pursuant to ORS 543 & OAR 690-051-0060 which requires consultation with all applicable state, federal and local agencies. Hydro facilities are precluded in certain areas subject pursuant OAR 690-051-0030.)

b. Located within an Area of Special Flood Hazard - Hydroelectric energy facilities located within an Area of Special Flood Hazard are not required to meet property development standards within the zone they are being located or any additional criteria below but are subject to Section 3.740, Flood Hazard Overlay even if they are being reviewed by the Oregon Department of Water Resources.

4. Additional Non-Commercial/Stand Alone Power Generating Facilities

The review process for energy facilities other than those previously described will be decided by the Planning Director based on an evaluation of the primary purpose of the zone, the size of the subject property and surrounding properties, the proposed location of the use and its potential impact to adjacent properties. Impacts include but are not limited to noise, vibration, smell, emissions, visibility, or physical footprint.

B. Ministerial/Type I Review Standards

1. General Standards - The following are applicable to all energy facilities in addition to meeting any other listed or referenced standards in the zone.

a. Lawful Use - Power will be for a lawfully established use or use that is in the process of being reviewed by the Wasco County Planning & Development Department.

b. Interconnect Agreement (Net Metering Only) - The applicant shall provide an interconnect agreement with a local utility or copy of a submitted application requesting an interconnect agreement with a local utility.

c. Closed System (Non-Commercial Stand Alone Only) - The applicant shall provide a plan or diagram that proves the proposal is a closed system and will not tie into a utility.

d. Setback/Buffers - Unless otherwise specified in this chapter, all energy facilities shall meet the property line setbacks of the zone in which they are located, natural resource buffers, as well as any additional setbacks required below.

e. Height – Pursuant to Section 4.070, General Exceptions to Building Height Requirements, unless otherwise specified in this Chapter, all energy facilities shall meet the height limits of the zone in which they are located. Height shall be measured from the average elevation of the finished grade to the top of the structure.

- f. Color/Visibility - Energy facilities and their accessory electrical control equipment shall be either the stock color from the manufacturer or painted in a non-reflective, unobtrusive color that blends in with the surrounding environment unless otherwise required by the Federal Aviation Administration or Oregon Department of Aviation.
- g. Noise - 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.
- h. Air Quality - Manufacturer's emissions estimate shall be in compliance with Oregon Department of Environmental Quality in OAR Chapter 340, Division 200.
- i. Vibration - Vibrations shall not be produced which are humanly perceptible beyond the property on which the energy facility is located.
- j. Odor - Odors shall not be produced which are humanly perceptible beyond the property on which the energy facility is located.
- k. Health & Safety
  - (1) Any uses or structures that are dangerous shall be designed and constructed to limit access.
  - (2) Warning and safety signs, up to three square feet in area, are allowed unless further specified.
  - (3) All ground mounted electrical and control equipment shall be labeled or secured to prevent unauthorized access.
  - (4) The manual electrical and/or overspeed shutdown disconnect switch(es) shall be clearly labeled.
  - (5) Private Utility Facility Service Lines, Electrical Lines and Wires that are not underground shall be kept clear along the route and have a single point of access to the building to the maximum extent practicable while still complying with local, state, and federal electrical codes. (Run this by building codes. Should we reference chapter 10 construction standards or is this adequate?)

- (6) Uses and structures shall be designed and constructed to not impair emergency response. Contact your local emergency responder for specific requirements and guidance.
  - (7) Energy facilities shall be kept and maintained in good repair and condition at all times and shall not pose a potential safety hazard.
  - I. Advertising - No commercial or advertising markings shall be allowed except those of the manufacturer & installer.
  - m. Communication Interference - Energy facilities shall be designed, constructed and operated so as not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, microwave or emergency communication systems.
  - n. Decommissioning/Removal - Any facility that is inoperable for more than 12 months shall be deemed discontinued. Removal of the equipment and facilities shall occur within six (6) months of the discontinuance time frame unless all or a portion of the equipment and facilities are converted to an approved use within this same time frame.
  - o. Other Authority - The applicant shall obtain all necessary local, state and federal authorizations/permits prior to constructing the use.
2. Specific Standards
- a. Tower Standards
    - (1) Setbacks
      - (a) The base of the tower shall be set back from all property lines, public-rights-of-ways, and above ground public utility lines a distance equal to the height of the tower. The setback shall be measured to the center of the tower's base.
      - (b) Towers shall be allowed closer to a property line, public-right-of-way, or above ground public utility line than the height of the tower without a variance pursuant to either Chapter 6 or 7 if granted written permission from the property owner, road authority, or utility.

Notwithstanding receiving permission from an adjacent property owner, road authority or utility, towers shall still be required to meet the setback and buffer requirements of the zone in which they are located unless a variance is granted pursuant to either Chapter 6 or 7.

(c) Any guys wires associated with a tower shall be required to meet the property and buffer setbacks of the zone in which they are located.

(2) Minimum Height - The lowest extension of any exposed blade or other exposed moving component shall be at least fifteen (15) feet above the ground (at the highest point of the grade level within fifty (50) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human occupancy, such as balconies, that are located directly below the blade.

(3) Safety

(a) WECS shall be equipped with an automatic braking, governing or feathering system to prevent uncontrolled rotation, over-speeding and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies that a braking system is not necessary.

(b) Towers shall be equipped with lightning protection.

(c) 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.

(d) "Danger" signs shall be posted at the height of five feet on the tower if it has a climbing apparatus.

(e) All guy wires shall be sheathed in a bright orange or yellow color covering them from a height of three above ground to eight feet above ground.

(4) Avian Protections

(a) Bird deflectors shall be placed on all guy wires to minimize the risk of collisions by birds and bats. (Waiting to hear back from Jeremy Thompson about this. If he has no concern this will be removed.)

(b) Perch deterrents shall be placed on all surfaces that would attract birds to a location where they could be struck by a moving component on the tower such as the sweep of a WECS blade.

(5) Lighting - No lighting of towers is allowed. (Verify Oregon Department of Aviation would not require lighting of towers less than 50' in height.)

b. Photovoltaic/Solar System Standards:

(1) Safety

(a) Roof mounted solar panels shall be installed in a manner that maintains adequate fire department access to the roof, with an unobstructed path from the structures eaves to structure components located on the roof (ie. Chimney, stove pipe, other roof mounted appliances). Contact your local fire official for specific requirements and guidance. (Developed in Conjunction with Dan Hammel, MCFR Fire Marshal)

(b) Ground arrays shall maintain a ten feet (10') perimeter of fire fuel break. Refer to Section 10.120 of the Fire Safety Standards for a description of a fire fuel break.

(2) Solar Access Rights - The establishment of a photovoltaic/solar system consistent with the requirements of this ordinance shall not constitute solar access rights that are protected by this ordinance.

C. STS/Type II Review Standards

1. General Standards - The following are applicable to all energy facilities in addition to meeting the Ministerial/Type I Review Standards in subsection B above, the property development standards of the zone and any other listed or referenced standards.

a. General Compatibility - The proposed use is compatible with adjacent surrounding properties taking into consideration the following:

- (1) Scale
- (2) Odors
- (3) Vibration

b. Noise - If the manufacturer's sound level estimate exceeds 60 decibels, the applicant shall submit a sound study that proves it will not exceed this level at any of the property lines. 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 with regards to adjacent surrounding properties.

The applicant may exceed the standard listed above from any property where this standard would not be met if written permission is received from that property owner.

## 2. Specific Standards

### a. Tower Standards:

(1) Aircraft Safety - To ensure visibility of the towers to aircraft, the tower must comply with these precautions to be completed at the time of siting each tower: (Find out what height (100') triggers what requirement for Oregon Department of Aviation. Then check with Shearers sprayers if they would like the same standard applied at 50' in height. If they do then finish the sentence above with "over 100' tall or over 50' tall in an exclusive farm use zone or any zone where the tower is sited in an area devoted to agriculture.")

(a) Place a one 55-gallon barrel painted Aviation Orange, or equivalent visible marker at each of the outermost guy wire anchors.

(b) Paint the top 30 feet of each tower with 5 foot bands of alternating colors of Aviation Orange and Aviation White or any other standard required or recommended by the Oregon Department of Aviation.

(c) Lighting of towers is not allowed except as required by the Federal Aviation Administration or other federal or state agency. If lighting is required, to the extent that it can meet safety requirements, it shall be shielded from the ground in a manner that prevents the lighting from projecting onto adjacent properties, roadways, waterways, as well as preventing the lighting from noticeably contrasting with the surrounding landscape.

(d) Planning staff shall notify following groups or agencies as to the location of the proposed tower(s). Any additional safety recommendations/requirements provided by these groups or agencies may also be required:

(i) Local Aerial Sprayers - All towers over 50' in height.

(ii) Lifeflight This should be taken care of by noticing Oregon Department of Aviation)

(iii) Oregon Department of Aviation - All towers over XXXX' in height

(iv) Federal Aviation Administration – All towers over 200' in height

- (2) Shadowing/Flicker - WECS' 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.
- b. Solar/Photovoltaic Standards - The Photovoltaic/Solar energy systems shall be located such that any significant or prolonged glare is directed away from an adjoining property or roadway.
- D. CUP/Type II Review Standards - Energy facilities subject to conditional use review shall meet the standards of Chapter 5, Conditional Use Review, the Ministerial/Type I Review Standards in subsection B above, the STS/Type II Review Standards in subsection C above, the property development standards of the zone and any other listed or referenced standards.