

**TABLE OF CONTENTS**

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

(Amended 4/12)

<b><u>SECTION</u></b>	<b><u>TITLE</u></b>	<b><u>PAGE</u></b>
19.010	PURPOSES	19-2
19.020	NON-COMMERCIAL/STAND ALONE POWER GENERATING FACILITIES & RELATED USES REVIEW PROCESSES & APPROVAL STANDARDS	19-2
19.030	COMMERCIAL POWER GENERATING FACILITIES REVIEW PROCESSES & APPROVAL STANDARDS	19-9

CHAPTER 19 STANDARDS FOR NON COMMERCIAL ENERGY FACILITIES, COMMERCIAL ENERGY FACILITIES & RELATED USES (Amended 4/12)

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;
- Minimize conflict with other permitted uses through compatibility review;
- Protect resources identified in the Wasco County Comprehensive Plan; and
- Protect the public health, safety and general welfare of the citizens of Wasco County.

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

SECTION 19.020 Non-Commercial/Stand Alone Power Generating Facilities & Related Uses Review Processes & Approval Standards

A. Review Processes - Non-commercial/Stand Alone Power Generating Facilities & Related Uses (energy facilities) shall be reviewed pursuant to the following. Where standards are less restrictive than comparative standards in other sections, the more restrictive shall govern.

1. Towers: Includes free standing (Wind Turbine & Meteorological) or roof mounted towers/turbines.

Tower Height	Property Size			
	<2 Acres	2 - < 5 Acres	5 - < 10 Acres	> = 10 Acres
Non-Resource Zones				
< = 35'	*Type I	*Type I	Type I	Type I
> 35' - < 50'	Type II – STS	Type II – STS	Type I	Type I
50' - < 100'	Type II – CUP	Type II – STS	Type II - STS	Type II - STS
100' - 150'	Type II – CUP	Type II – CUP	Type II - CUP	Type II - STS
Resource Zones				
< 35'	*Type I	*Type I	Type I	Type I
35' - < 50'	Type II – STS	Type II – STS	Type I	Type I
50' - < 100'	Type II – CUP	Type II – STS	Type II - STS	Type II - STS
100' - < 200'	Type II – CUP	Type II – CUP	Type II - STS	Type II - STS
> = 200'	Type II – CUP	Type II – CUP	Type II - CUP	Type II - CUP

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

Wind turbines that are attached to other lawful uses (excluding roof mounted turbines) including but not limited to street lamps and telephone poles 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 attached as outlined in the applicable zone.

## 2. Solar Systems

System Size	Property Size				
	<2 Acres	2 - < 5 Acres	5 - < 10 Acres	10 - < 40 Acres	> = 40 Acres
Roof Mounted < = 35' in height	Type I	Type I	Type I	Type I	Type I
*Roof Mounted > 35' in height	STS	STS	STS	Ministerial	Ministerial
**Ground Array < 500 sq. ft.	Type I	Type I	Type I	Type I	Type I
**Ground Array 500 - < 1,500 sq. ft.	Type II – STS	Type II - STS	Type II – STS	Type II - STS	Type I
**Ground Array > = 1,500 sq. ft.	Type II – CUP	Type II - CUP	Type II – CUP	Type II - CUP	Type II - 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 solar systems (less than 10 square feet) that are accessory to other lawful 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 permit holder is creating an addition to the system, the applicable review process shall be based on the total size of the system.

## 3. OWRD -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. If located in a non-resource zone they are allowed without any review by the planning department as long as they are being reviewed by the OWRD. If located in a resource zone they are required to be reviewed as a “utility facilities necessary for a public use”, “reservoir”, or water impoundment”.
- b. Located within an Area of Special Flood Hazard – In addition to a. above, hydroelectric energy facilities located within an Area of Special Flood Hazard are subject to Section 3.740, Flood Hazard Overlay by the planning department even if

they are being reviewed by the OWRD.

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 department 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. Type I (Ministerial) Review Standards: The following are applicable to energy facilities in addition to meeting the property development standards of the zone, unless otherwise specified, and any other listed or referenced standards:

1. General Standards for all Energy Facilities:

- a. Lawful Use: Power will be for a lawfully established use or use that is in the process of being reviewed by the planning 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: Unless otherwise specified in this Chapter, Pursuant to Section 4.070, General Exceptions to Building Height Requirements, energy facilities shall be exempt from the height limits of the zone in which they are located.
- f. Color/Visibility: Energy facilities and their accessory electrical control equipment shall be 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 power level shall not exceed 60 dBA.
- 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: To the extent practicable, odors shall not be produced which are humanly perceptible beyond the property on which the energy facility is located.
- k. Health & Safety:

- (1) All uses or structures shall be designed and constructed to limit access.
  - (2) Warning and safety signs, up to three square feet in area, are allowed.
  - (3) All ground mounted electrical and control equipment shall be labeled or secured to prevent unauthorized access.
  - (4) The manual electrical and/or over speed shutdown disconnect switch(es) shall be clearly labeled.
  - (5) Utility facility service lines, electrical lines and other wires associated with the energy facility 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.
  - (6) Uses and structures shall be designed and constructed to not impair emergency response. Contact 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. Interference with Communication: Energy facilities shall not create any material signal interference with communication systems such as, but not limited to, radio, telephone, television, satellite, microwave or emergency communication systems. Should any material interference occur, the property owner must develop and implement a mitigation plan in consultation with the planning department.
  - 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 or other time frame approved by the planning department unless all or a portion of the equipment and facilities are converted to an approved use within this same time frame.
  - o. Other Authority - All necessary local, state and federal authorizations/permits shall be obtained 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 (i.e., fall height). The setback shall be measured to the center of the tower's base.

- (b) Notwithstanding receiving permission from an affected property owner(s), road authority or utility, towers shall still be required to meet the property lines setbacks of the zone in which they are located and all natural resource buffer requirements unless a variance is granted pursuant to either Chapter 6 or 7.
- (c) Any guy wires associated with a tower shall be required to meet the property and buffer setbacks of the zone in which they are located unless a variance is granted pursuant to either Chapter 6 or 7.

(2) Safety:

- (a) Blade Reach: 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.

The minimum height may be reduced if a safety fence is installed around the area of the exposed blade or other moving component that would prevent access and direct contact with the exposed blade or other moving component. The minimum height may also be reduced through the Type II/STS review process in subsection C below.

- (b) Wind turbines 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.
- (c) Towers shall be equipped with lightning protection.
- (d) Towers 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.
- (e) "Danger" signs shall be posted at the height of five feet on the tower if it has a climbing apparatus.
- (f) Permit holders are encouraged to sheath guy wires in a covering that would increase their visibility from a height of three feet above ground to eight feet above ground.

- (3) Avian Protections: 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 wind turbine blade.

- (4) Lighting : Lighting of towers subject to only a Type I review is not allowed.

b. 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 (i.e., chimney, stove pipe, other roof mounted appliances). Contact local fire official for specific requirements and guidance.

(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 solar system consistent with the requirements of this ordinance shall not constitute solar access rights that are protected by this ordinance.

C. Type II (Subject to Standards) Review Standards: The following are applicable to energy facilities in addition to meeting the Type I Review Standards in subsection B above, the property development standards of the zone, unless otherwise specified, and any other listed or referenced standards.

1. General Standards for all Energy Facilities

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 power level exceeds 60 db(A) or there is no manufacturer's stated sound power level, the applicant shall submit an analysis from a qualified consultant or individual and written report to prove operation of the energy facility shall be in compliance with sound pressure noise regulations established by the Oregon Department of Environmental Quality in OAR Chapter 340, Division 35 with regard to any existing dwellings on non-participating landowners property. These regulations shall govern notwithstanding the energy facility is neither a commercial or industrial use.

2. Specific Standards:

a. Tower Standards:

(1) Aviation Notification: Planning staff shall notify the following groups or agencies as to the location of the proposed tower(s). Comments received regarding safety may be included as safety features required in subsection (2) below.

(a) Aerial Sprayers and operators who have requested to be notified - All towers over 50' in height.

(b) Oregon Department of Aviation (ODA) & Federal Aviation Administration (FAA) - All towers over 200 feet in height or as prescribed by OAR 738-070-0110.

(2) Aircraft Safety Plan: A safety plan shall be submitted that will ensure aircraft safety is maintained for all towers 50' in height or greater. Unless a determination of no hazard is made, safety features will be required as necessary to ensure aircraft safety based on the location, height, and type of tower. Any safety features required as part of an approval shall be completed at the time the tower is installed. Safety features, if required, could include but are not limited to the following:

(a) Placing an aviation device or equivalent visible marker at each of the outermost guy wire anchors.

(b) Painting the top 30 feet of each tower with 5 foot bands of alternating colors of Aviation Orange and Aviation White.

(c) Lighting: Lighting of towers shall be evaluated on a case-by-case basis and is only allowed if required by the Oregon Department of Aviation or Federal Aviation Administration. If lighting is required by Oregon Department of Aviation or Federal Aviation Administration the applicant shall minimize the amount of lighting to the extent feasible under the law, which may include consideration of radar triggered lighting.

(3) Minimum Height: The lowest extension of any exposed blade or other exposed moving component may be allowed less than (15) feet above the ground as required by subsection B(2)(a)(2) if based on the proposed location and site specific circumstances, the tower will not represent a safety hazard.

(4) Shadow Flicker: Upon the non-participating owner's request, the applicant shall demonstrate that the wind turbines, taking into account mitigation measures, will have no significant adverse impact of shadow flicker on an existing dwelling of a non-participating landowner within ¼ mile (1,320 feet) from a turbine, measured from the centerline of the turbine to the centerline of the dwelling.

Towers shall be allowed to create an adverse shadow flicker impact to an existing dwelling on a non-participating landowner's property if written permission from the property owner and an adjustment is granted under Section 19.030(D)(1)(c). Said written permission shall be made part of the deed records of the non-participating landowner's property.

b. Solar Standards:

(1) Ground Leveling: The solar energy facility shall be designed and constructed to minimize ground leveling and to the extent reasonably practicable, limit ground leveling to those areas needed for effective solar energy collection.

(2) Misdirection of Solar Radiation: The solar energy facility shall be designed, constructed, and operated to prevent the misdirection of concentrated solar

radiation onto nearby properties, public roadways or other areas accessible to the public.

- (3) Glare: The solar energy facility shall be designed, constructed and operated such that any significant or prolonged glare is directed away from any nearby properties or public roadways.
  - (4) Cleaning Chemicals and Solvents: During operation of the solar energy facility, all chemicals or solvents used to clean solar panels or heliostats shall be low in volatile organic compounds and to the extent reasonably practicable, the permit holder shall use recyclable or biodegradable products.
- D. Type II (Conditional Use) Review Standards: Energy facilities subject to conditional use review shall meet the standards of Chapter 5, Conditional Use Review, the Type I Review Standards in subsection B above, the Type II Review Standards in subsection C above, the property development standards of the zone, unless otherwise specified and any other listed or referenced standards.

SECTION 19.030 Commercial Power Generating Facilities Review Processes & Approval Standards

A. Review Processes - Commercial Power Generating Facilities & Related Uses (energy facilities) shall be reviewed pursuant to the following. Where standards are less restrictive than comparative standards in other sections, the more restrictive shall govern.

1. Review Authority:

a. Planning Commission Review – Notwithstanding applications reviewed by EFSC and unless otherwise specified all energy facilities reviewed pursuant to this section shall be initially heard and decided upon by the Planning Commission in a public hearing.

b. Planning Department Review:

(1) Small Scale Commercial Power Generating Facilities - A commercial power generating facility shall be considered small scale if it falls within either the tower or solar matrix listed in Section 19.020, Non-Commercial Power Generating Facilities and shall be reviewed by the planning department pursuant to the standards of Section 19.020 and not this section.

For non-resource zones, solar arrays shall be limited to ¼ acre and towers to no more than 150' in height and no more than 4 towers per property. For resource zones solar arrays shall be limited to ½ acre and towers to under 200' in height and no more than 4 towers per property shall be reviewed by the planning department. Beyond these limits the energy facility will not be considered small scale and will only be allowed pursuant to the standards in this section.

(2) Community Projects - Renewable projects of 10MW or less which include a partnership between a local land owner and a community (public) organization such as Wasco County, Mid-Columbia Council of Governments, a city, or a school district, shall be reviewed by the planning department.

- (3) Post EFSC Review - Pursuant to ORS 469.401, after issuance of a site certificate by EFSC pursuant to subsection c. below, and subject to receiving the proper fees, Wasco County will issue in an expedited manner any permits, licenses and certificates addressed in the site certificate subject only to conditions set forth in the site certificate but without hearings or other proceeding (i.e., Type I review).
  - (4) Hydroelectric Energy Facilities - See subsection d. below.
- c. EFSC Review:
- (1) EFSC has regulatory authority over all energy facilities designated by ORS 469.300. However, pursuant to ORS 469.480 EFSC shall designate the BOC as a Special Advisory Group. As such and at their discretion the BOC may participate in the siting process pursuant to the role established in ORS 469 and OAR 345, which includes recommending substantive criteria applicable to the proposed energy facility.
  - (2) Pursuant to ORS 469.320(8), notwithstanding the threshold limits in ORS 469.300, an applicant can elect to have EFSC review an energy facility that may otherwise be subject to Wasco County's jurisdiction.
  - (3) If for any reason the BOC desires, they may defer regulatory authority of energy facility to EFSC notwithstanding it is less than the threshold designated by ORS 469.300.
- d. OWRD Review - Hydroelectric Energy Facilities:
- (1) Not Located within an Area of Special Flood Hazard - Hydroelectric energy facilities not located within an Area of Special Flood Hazard are not required to meet property development standards within the zone they are being located. If located in a non-resource zone they are allowed without any review by the planning department as long as they are being reviewed by OWRD or FERC. If located in a resource zone they are required to be reviewed as a "utility facilities necessary for a public use".
  - (2) Located within an Area of Special Flood Hazard - In addition to (d)(1) above, hydroelectric energy facilities located within an Area of Special Flood Hazard are subject to Section 3.740, Flood Hazard Overlay by the planning department even if they are being reviewed by the OWRD or FERC.
- e. FERC Review - FERC has regulatory authority over all energy or related projects of a size, scale or interest to the federal government pursuant to Title 18, Conservation of Power and Water Resources, of the Code of Federal Regulations.
2. County Decision Options - As part of the application materials the applicant shall indicate if they are requesting tentative or final approval. For facilities sited through EFSC, this section does not apply.
- a. Tentative Approval - A tentative approval may be issued when the applicant has submitted most of the required application materials but defers completion of one or

more required discretionary elements such as the wildlife plan and all of its required baseline studies. Any deferred discretionary elements will be the only elements reviewed and decided upon during the final approval process.

A tentative approval shall specify a time limit or expiration date within which all deferred discretionary review elements or plans shall be reviewed for final approval. Pursuant to Section 2.125, Time Limits for Permits and Extensions of Time, the combined time for both the tentative and final approval shall be limited to 2 years with the opportunity for a onetime 2 year extension. This time frame shall start on the date of the tentative approval.

- b. Final Approval - Final approval occurs when the applicant has submitted all of the required application materials, Wasco County has issued a decision which includes conditions of approval that can be submitted for staff review and verification, and the appeal period has concluded.
3. Modifications - An amendment to the conditional use permit shall be required if the proposed facility changes would:
    - a. Require an expansion of the established facility boundaries where the original facility was sited or constructed;
    - b. Increase the number of towers; or
    - c. Increase generator output by more than 25 percent relative to the generation capacity authorized by the initial permit due to the repowering or upgrading of power generation capacity.

B. Non-Resource Zone Standards:

1. Small Scale Commercial Power Generating Facilities - Pursuant to Subsection A(1)(b)(1) above, commercial power generating facilities that are considered small scale will be allowed in non-resource zones subject to the standards of Section 19.020.
2. Large Scale Commercial Power Generating Facilities - Except for related or supporting facilities, large scale commercial power generating facilities shall not be allowed in non-resource zones.
3. Related or Supporting Facilities (Reasonable Alternatives Analysis) - Related or supporting facilities to a commercial power generating facility may be allowed in non-resource zones subject to Conditional Use Review upon a showing that such related or supporting facilities are necessary for siting the commercial power generating facility. To the extent practicable, any related or supporting facilities must be consistent in size, scale, and impact as other existing or allowed uses in the non-resource zone. Related or Supporting Facilities shall be reviewed as part of the Commercial Power Generating Facility and not subject to a separate Conditional Use Review. To demonstrate the related or supporting facilities are necessary within the meaning of this section, an applicant must show that reasonable alternatives have been considered and that the related or supporting facilities must be sited in a non-resource zone after considering the following factors:
  - a. Technical and engineering feasibility of siting the energy facility as a whole;

- b. Availability of existing rights-of-ways and public roads and proximity to transmission lines and interconnections;
  - c. Environmental impacts associated with avoiding non-resource zoned land; and
  - d. Protection of farm and forest resources.
- C. General Standards - The following standards apply to energy facilities as outlined in Section A above, in addition to meeting the Conditional Use Standards listed in Chapter 5:

1. Air Safety - All structures that are more than 200 feet above grade or, exceed airport imaginary surfaces as defined in OAR Chapter 738, Division 70, shall comply with the air hazard rules of the Oregon Department of Aviation and/or Federal Aviation Administration. The applicant shall notify the Oregon Department of Aviation and the Federal Aviation Administration of the proposed facility and shall promptly notify the planning department of the responses from the Oregon Department of Aviation and/or Federal Aviation Administration.

Aerial Sprayers and operators who have requested to be notified will receive all notifications associated with the energy facility as required by Chapter 2, Development Approval Procedures.

2. Interference with Communications - The energy facility shall be designed, constructed and operated so as to avoid any material signal interference with communication systems such as, but not limited to, radio, telephone, television, satellite, microwave or emergency communication systems. Should any material interference occur, the permit holder must develop and implement a mitigation plan in consultation with the planning department.
3. Noise - The energy facility shall comply with the noise regulations in OAR Chapter 340, Division 35. The applicant may be required to submit a qualified expert's analysis and written report.
4. Visual Impact
  - a. Scenic Resources – To issue a conditional use permit for an energy facility, the county must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values identified as significant or important in the Wasco County Comprehensive Plan.
  - b. Protected Areas - Except as provided in subsections (b) and (c) below, an energy facility shall not be located in the areas listed below:
    - (1) National recreation and scenic areas, including but not limited to the Columbia River Gorge National Scenic Area;
    - (2) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed as potentials for designation;

- (3) State parks and waysides as listed by the Oregon Department of Parks and Recreation;
- (4) State wildlife areas and management areas identified in OAR chapter 635, division 8.
- (5) National and state fish hatcheries or national and state wildlife refuges;
- (6) State natural heritage areas listed in the Oregon Register of Natural Heritage Areas pursuant to ORS 273.581;
- (7) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782; and
  - a. Exceptions to Protected Areas - Except where the following uses are regulated by federal, state or local laws, including but not limited to the Columbia River Gorge National Scenic Area Act and implement land use ordinances, the following may be approve in a protected area identified in subsection (b) above if other alternative routes or sites have been studied and been determined to have greater impacts
    - An electrical transmission line;
    - A natural gas pipeline; or
    - An energy facility located outside a protected area that includes an electrical transmission line or natural gas or water pipeline as a related or supporting facility located within a protected area.
  - b. Transmission Line & Pipeline Exception - The provisions of subsection (b) above do not apply to electrical transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line or one natural gas pipeline.
  - c. Additional Visual Mitigation Impacts for all Facilities - The design, construction and operation of the energy facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified in subsection (b) above. Methods to mitigate adverse visual impacts could include but are not limited to:
    - (1) Building the energy facility near the edge of contiguous timber areas or using the natural topography to obscure the energy facility;
    - (2) Using materials and colors that blend with the background unless otherwise required by the Federal Aviation Administration or the Oregon Department of Aviation; and
    - (3) Retaining or planting vegetation to obscure views of the energy facility.
5. Natural Resource/Wildlife Protection - Taking into account mitigation, siting, design, construction and operation the energy facility will not cause significant adverse impact to important or significant natural resources identified in the Wasco County Comprehensive

Plan, Wasco County Land Use and Development Ordinance or by any jurisdictional wildlife agency resource management plan adopted and in effect on the date the application is submitted. As appropriate, the permit holder agrees to implement monitoring and mitigation actions that Wasco County determines appropriate after consultation with the Oregon Department of Fish and Wildlife, or other jurisdictional wildlife or natural resource agency. Measures to reduce significant impacts may include, but are not limited to the following:

- a. Providing information pertaining to the energy facility's potential impacts and measures to avoid impacts on:
  - (1) Wildlife (all potential species of reasonable concern);
  - (2) Wildlife Habitat;
  - (3) Endangered Plants; and
  - (4) Wetlands & Other Water Resources.
- b. Conducting biologically appropriate baseline surveys in the areas affected by the proposed energy facility to determine natural resources present and patterns of habitat use.
- c. Selecting locations to reduce the likelihood of significant adverse impacts on natural resources based on expert analysis of baseline data.
- d. Utilizing turbine towers that are smooth steel structures that lack features that would allow avian perching. Where horizontal surfaces cannot be avoided, anti-perching devices shall be installed where it is determined necessary to reduce bird mortality.
- e. Designing and installing all aboveground transmission line support structures following the current suggested practices for avian protection on power lines published by the Avian Power Line Interaction Committee.
- f. Utilizing towers and transmission line support structures designed so the foundation area and supports avoid the creation of artificial habitat or shelter for raptor prey.
- g. Controlling weeds to avoid the creation of artificial habitat suitable for raptor prey such as spreading gravel on turbine pad.
- h. Avoiding construction activities near raptor nesting locations during sensitive breeding periods and using appropriate no construction buffers around known nest sites.
- i. Locating transmission lines or associated transmission lines with the energy facility to minimize potential impacts (e.g., 50 feet from the edge of the nearest wetland or water body except where the line is required to cross the wetland or water body; or separating transmission lines or associated transmission lines with the energy facility from the nearest wetland or water body by topography or substantial vegetation to the extent practical, except where the line is required to cross the wetland or water body).
- j. Locating transmission towers or associated transmission towers outside of Class I or II streams unless:

- (1) Adjoining towers and conductors cannot safely and economically support the line(s) that span the stream without an in-stream tower; and
  - (2) The lines cannot be safely and economically placed under the water or streambed.
  - (3) Developing a plan for post-construction monitoring of the facility site using appropriate survey protocols to measure the impact of the project on identified natural resources in the area.
6. Protection of Historical and Cultural Resources - The applicant shall complete a cultural resources survey of areas where there will be temporary or permanent disturbance. During construction, cultural resources included in the Wasco County Comprehensive Plan shall be flagged and avoided in areas of potential temporary or permanent disturbance, and construction activities monitored to ensure all cultural resources in such areas are avoided, unless appropriate permits are obtained from the Oregon State Historic Preservation Office. Prior to construction an Inadvertent Discovery Plan (IDP) shall be developed that must outline the procedures to be followed in the case previously undiscovered archeological, historical or cultural artifacts are encountered during construction or operation of the energy facility, in compliance with ORS 358.905-358.955 and any other applicable local, state and federal law.
  7. Fire Protection & Emergency Response - A fire protection and emergency response plan shall be developed and implemented in consultation with the applicable fire district or department and/or land management agency to minimize the risk of fire and respond appropriately to any fire or emergency that occurs onsite for all phases of the life of the facility. In developing the plan the applicant shall take into account, among other things, the terrain, dry nature of the region, address risks on a seasonal basis, and identify the locations of fire extinguishers, nearby hospitals, telephone numbers for emergency responders, and first aid techniques.
  8. Public Safety - A public safety plan shall be developed and implemented to exclude members of the public from hazardous areas within the Energy Facility Project Area.
  9. Transportation Plan - A transportation plan shall be developed and implemented in consultation with the Wasco County Road Department and/or the Oregon Department of Transportation (ODOT). The plan shall be consistent with any applicable requirements from the Wasco County Transportation System Plan and shall also provide or address:
    - a. The size, number, and location of vehicle access points off of public roads.
    - b. Use of existing roads to the extent practical to minimize new access roads.
    - c. Restoring the natural grade and revegetating all temporary road cuts, used during construction of the energy facility. The applicant shall specify the type and amount of native seed or plants used to revegetate the disturbed areas and a timeline to complete this work.
    - d. A Road Impact Assessment/Geotechnical Report for roads to be used by the project. Said report should include an analysis of project-related traffic routes to be used during phases of construction, project operation and decommissioning. The report

and any subsequent amendments shall be used as a discipline study and shall be incorporated into the Road Use Agreement between the Applicant and the County.

10. Road Use Agreement - Where applicable, the Wasco County Road Department shall require the applicant to enter into a Road Use Agreement with the County to ensure that project construction traffic is mitigated and any damage to county roads that is caused by the construction of the energy facility or its related or supporting facilities is repaired by the applicant, and such county roads are restored to pre-construction conditions or better (this includes a weed plan and providing for re-vegetation).
  - General design standards for roads shall, in general, conform to policies set forth in Chapter 21.
  - As part of the Road Use Agreement the applicant shall also obtain a utility permit for all project utility installation and approach permits for road approach access to county roads.
11. Onsite Access Roads and Staging Areas - The impact of onsite access roads and staging areas within the Energy Facility Project Area shall be limited by:
  - a. Constructing and maintaining onsite access roads for all-weather use to assure adequate, safe and efficient emergency vehicle and maintenance vehicle access to the site;
  - b. Using existing onsite access roads to the extent practical and avoiding construction of new on-site access roads as much as possible; and
  - c. Restoring the natural grade and revegetating all temporary access roads, road cuts, equipment staging areas and field office sites used during construction of the energy facility. The applicant shall specify the type and amount of native seed or plants used to revegetate the disturbed areas and a timeline to complete this work.
12. Dust Control - All approved non-paved temporary or permanent roads and staging areas within the Energy Facility Project Area shall be constructed and maintained to minimize dust, which may be addressed through the Road Use Agreement. If roads and staging areas are not constructed with material that would prevent dust, the permit holder must regularly water roads and staging areas as necessary or apply an approved dust suppression agent such as Earthbind 100 to minimize dust and wind erosion.
13. Erosion and Sediment Control - All ground disturbing activities shall be conducted in compliance with a National Pollutant Discharge Elimination System (NPDES) permit as may be required by Oregon Department of Environmental Quality. Where applicable, an NPDES permit must be obtained. The plan must include best management practices for erosion control during construction and operation and permanent drainage and erosion control measures to prevent damage to local roads or adjacent areas and to minimize sediment run-off into waterways.
14. Weed Control - A weed plan shall be developed in consultation with the Wasco County Weed Department and implemented during construction and operation of the energy facility.
15. Signs - Outdoor displays, signs or billboards within the energy facility project boundary

shall not be erected, except:

- a. Signs required for public or employee safety or otherwise required by law; (e.g., OSHA or compliance with the Manual of Uniform Traffic Control Devices (MUTCD) administered through the County Road Department); and
  - b. No more than two signs relating to the name and operation of the energy facility of a size and type to identify the property for potential visitors to the site, but not to advertise the product. No signs for advertising of other products are permitted.
16. Underground Systems - Where reasonably practicable, power collector and communication systems shall be installed underground, at a minimum depth of 3 feet. Shallower depths may be authorized where notification and safety measures are taken and wires are placed in schedule 40 conduit. The cable collector system shall be installed to prevent adverse impacts on agriculture operations and natural resources.
17. Operation & Maintenance Buildings - Permanent maintenance/operations buildings shall be located in the same zone as the principal energy facility, except that such buildings may be constructed in a separate zone if:
- a. The building is designed and constructed generally consistent with the character of similar buildings used in the surrounding area; and
  - b. The building will be removed or converted to another approved use upon decommissioning of the energy facility consistent with the provisions of this ordinance.
18. Coordination and Documentation - Prior to commencement of any construction, all other necessary permits shall be obtained, e.g. building permit, rural address, road approach, utility and other permits from the Wasco County Public Works Department, and/or from ODOT as well as any other applicable local, state or federal permits or approvals.
19. Termination and Decommissioning. For an energy facility sited through EFSC, compliance with EFSC's financial assurance and decommissioning standards shall be deemed to be in compliance with these requirements.
- a. The applicant shall prepare a decommissioning plan that describes the actions to restore the site to a useful, non-hazardous condition, including options for post-dismantle or decommission land use, information on how impacts on fish, wildlife and the environment would be minimized during the dismantling or decommissioning 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.
  - b. The applicant shall provide a detailed cost estimate, a comparison of that estimate with funds to be set aside, in the form of a financial assurance (bond, letter of credit, insurance policy other such form of guarantee acceptable to Wasco County), and a plan for assuring the availability of adequate funds for completion of dismantling or decommissioning. The cost estimate and financial assurance may take into account salvage value associated with the project, and can be requested for review and update by Wasco County at their discretion (e.g., every 5 years).

- c. The following shall be required as conditions of the Wasco County approval:
- (1) If operation of the energy facility ceases or begins construction of the project, but does not complete it, the permit holder shall restore the site according to a plan approved by Wasco County. A plan shall be submitted that ensures the site will be restored to a useful, non-hazardous condition without significant delay, including but not limited to the following:
    - (a) Removal of aboveground and underground equipment, structures and foundations to a depth of at least three feet below grade (four feet if cropland). Underground equipment, structures and foundations need not be removed if they are at least three feet below grade and do not constitute a hazard or interfere with agricultural use or other resource uses of the land. Restoration of the surface grade and soil after removal of aboveground structures and equipment.
    - (b) Removal of graveled areas and access roads and restoration of surface grade and soil.
    - (c) Revegetation of restored soil areas with native seed mixes, plant species suitable to the area, consistent with Wasco County's weed control plan.
    - (d) For any part of the energy facility on leased property, the plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or buildings in place or regarding restoration of agricultural crops or forest resource land. Said landowner will be responsible for maintaining said facilities for purposes permitted under applicable zoning.
    - (e) The underground power collector and communication lines need not be removed if at a depth of three feet or greater. 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.
    - (f) The plan must provide for the protection of public health and safety and for protection of the environment and natural resources during site restoration.
    - (e) The plan must include a schedule for completion of site restoration work.
  - (2) Before beginning construction of the energy facility, the permit holder must submit in a form and amount satisfactory to Wasco County, assuring the availability of adequate irrevocably committed funds to restore the site to a useful, non-hazardous condition naming Wasco County as beneficiary or payee. The form may include posting a bond, issuing an irrevocable letter of credit, purchasing a paid up insurance policy or by other means acceptable by Wasco County and shall ensure continuity between owners.
  - (3) The amount of the financial assurance (bond or other such form of guarantee) shall be annually adjusted for inflation using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast," or by any

successor agency (the "Index"). The permit holder (including possible successor if sold or transferred) shall increase the amount of the financial assurance annually by the percentage increase in the Index and shall pro-rate the amount within the year to the date of retirement. If at any time the Index is no longer published, Wasco County shall select a comparable index for adjusting the amount. The amount of the financial assurance shall be prorated within the year to the date of decommissioning.

- (4) Per the request of Wasco County, the permit holder (including possible successor if sold or transferred) shall describe the status of the financial assurance in a report (e.g., annual update report submitted to Wasco County).
  - (5) The financial assurance shall not be subject to revocation or reduction before retirement of the energy facility site.
20. Final Location - The actual latitude and longitude location or Oregon State Plane NAD83 HARN (international feet) coordinates of the energy facility and related or supporting facilities shall be provided to the County GIS Department once commercial electrical power production begins. Alternatively, this information could be provided in GIS layer consistent with the datum referenced above or any other datum deemed acceptable by the Wasco County GIS Department.
21. Power Production Reporting - The County may require a report of nonproprietary power production for any time frame after the energy facility first begins production if permitted through the County. If requested, the permit holder shall have 180 days to produce said report.

D. Specific Standards - The following standards apply to specific types of energy facilities as described, in addition to the General Standards in Section C above.

1. Wind Energy Facilities:

- a. Visual Impact - To the extent practical, the proposed wind energy facility has been designed to minimize visual impact upon open space and natural landscape by:
  - (1) Using underground communication and power collector lines (transmission lines that connect each turbine to a substation);
  - (2) Using turbine towers of uniform design, color and height;
  - (3) Lighting - Lighting of towers shall be evaluated on a case by case basis and is only allowed if required by the Oregon Department of Aviation or Federal Aviation Administration. If lighting is required by Oregon Department of Aviation or Federal Aviation Administration the applicant shall minimize the amount of lighting to the extent feasible under the law, which may include consideration of radar triggered lighting.
  - (4) Using existing roads within the Energy Facility Project Area to provide access to the site, or if new roads within the Energy Facility Project Area are needed, minimizing the amount of land used for new roads and locating roads to reduce visual impact;

- (5) Using existing substations, or if new substations are needed, minimizing the number of new substations; and
- (6) Shadow Flicker – Upon the non-participating owner’s request, the applicant shall demonstrate that the wind turbines, taking into account mitigation measures, will have no significant adverse impact of shadow flicker on an existing dwelling of a non-participating landowner within ¼ mile (1,320 feet) from a turbine, measured from the centerline of the turbine to the centerline of the dwelling.

Towers shall be allowed to create an adverse shadow flicker impact to an existing dwelling on a non-participating landowner’s property if written permission from the property owner and an adjustment is granted under Section 19.030(D)(1)(c). Said written permission shall be made part of the deed records of the non-participating landowner’s property.

- b. Public Safety - The wind energy facility shall be designed, constructed, and operated to protect the public by measures that may include, but are not limited to, the following:

- (1) Installing the tower so at the closest point, the sweep of any exposed blade or other exposed moving component is at least 20 feet above the tallest existing or foreseeable obstruction to blade movement unless based on the proposed location and site specific circumstances, the tower will not represent a safety hazard; and
- (2) Designing, constructing and operating the energy facility to exclude members of the public from close proximity to turbine blades and electrical equipment, including installing locks on turbine tower access doors; and
- (3) Designing, constructing and operating the energy facility to protect against structural failure of the turbine tower or blades that could endanger members of the public’s safety, including having adequate safety devices and testing procedures designed to warn members of the public of impending failure and to minimize the consequences of such failure.

- c. Setbacks:

- (1) Project Boundaries - If the wind energy project encompasses more than one parcel neither the wind turbine setback to non-project boundaries nor the property line setbacks of the underlying zone in which the project is located are applicable to any internal property lines within the project area.
- (2) Non Project Boundaries - Wind turbines shall be set back from the property line of any abutting property not part of the project (non-project boundaries), the right-of-way of any dedicated road, and any above ground major utility facility line a minimum of 1.5 times the height of the wind turbine tower (i.e., full-height). Wind turbines shall be set back from any above ground minor utility facility line a minimum of 1.1 times the height of the wind turbine tower.

- An applicant may request an adjustment to non-project boundaries using the

process described in 19.030(D)(1)(c)(3)(C) below.

- Wind turbines shall meet the underlying zone setback requirement unless a variance is granted pursuant to either Chapter 6 or 7.

### (3) Resource Zone Dwellings

a. **Participating Landowners:** Participating landowners are owners of legally placed resource dwellings on lands committed to the energy facility project by written contract. Participating landowners or applicant must provide evidence demonstrating that setbacks from dwellings will meet the DEQ noise standard and, prior to construction, provide evidence of any recorded noise easement obtained under OAR 345-035-0035.

b. **Non-Participating Landowners:** For owners of legally placed resource dwellings who are not participating landowners in the energy facility project, wind turbine setbacks shall be 3,520 feet, measured from the centerline of the turbine to the edge of the dwelling, or the distance required to comply with the DEQ noise standard (OAR 345-035-0035), whichever is greater, unless a noise easement is obtained under OAR 340-035-0035.

c. **Adjustment Provision:** Applicant may, as part of the wind energy permitting process, obtain an administrative adjustment to authorize a lesser setback from regulations addressing turbine setbacks from dwellings in resource zones. This may be authorized as part of the CUP pursuant to the Administrative Action process of Section 2.060(A) by the Director or designee and upon findings that demonstrate the following criteria are met:

- (1) The underlying landowner (or applicable road authority or utility as may be appropriate for non-project boundary setbacks) has consented, in writing, to an adjusted setback.
- (2) The proposed adjustment complies with DEQ noise standard.
- (3) The proposed adjustment will not force a significant change in accepted farm or forest practices on surrounding lands devoted to or available for farm or forest use.
- (4) The proposed adjustment will not unduly burden existing infrastructure (e.g., underground utilities or leach fields).
- (5) The proposed adjustment will not unduly impair safety in the area.
- (6) The proposed adjustment will minimize impacts to environmental resources (e.g., wetlands or identified EPDs).

(4) Non-Resource Boundaries - Wind turbines shall be setback a minimum of 1 mile (5,280 feet) from all non-resource zoned property boundaries located outside of urban growth boundaries or urban reserves (as measured from the centerline of the turbine to the edge of the property boundary zoned for non-resource purposes, e.g., rural residential). Adjustment provisions do not apply to these non-resource zone property boundary setbacks.

(5) City Limits and Urban Areas – Wind turbines shall be setback 3/4 mile (3,960 feet) from the established city limit, urban growth boundary or urban reserve boundary of an incorporated city (whichever is the more restrictive applies) unless a lesser setback is granted through the adjustment process under this

provision.

Adjustment Provision – Applicant may, as part of the wind energy permitting process, obtain an administrative adjustment to authorize a lesser setback from regulations addressing turbine setbacks from city limits, urban growth boundaries or urban reserves. This may be authorized as part of the CUP pursuant to the Administrative Action process of Section 2.060(A) by the Director or designee and upon findings that demonstrate the following criteria are met:

- (a) The incorporated city that would be affected has consented, in writing, to an adjusted setback.
  - (b) The proposed adjustment complies with DEQ noise standard.
  - (c) The proposed adjustment will not force a significant change in accepted farm or forest practices on surrounding lands devoted to or available for farm or forest use.
  - (d) The proposed adjustment will not unduly burden existing infrastructure (e.g., underground utilities or leach fields).
  - (e) The proposed adjustment will not unduly impair safety in the area.
  - (f) The proposed adjustment will minimize impacts to environmental resources (e.g., wetlands or identified EPDs).
- (6) Downwind Properties - The establishment of a commercial wind energy facility consistent with the requirements of this ordinance shall not constitute wind access rights that are protected by this ordinance beyond the following setback requirement.

If a wind turbine 200' in height or taller has been previously placed on a downwind property that is not part of the project, the closest tower on the upwind property shall be set back a minimum of fifteen rotor diameters from the downwind tower location or any lesser distance agreed to by the downwind and upwind property owners or those authorized to act on their behalf.

## 2. Solar Energy Facilities:

- a. Ground Leveling – The solar energy facility shall be designed and constructed to minimize ground leveling and to the extent reasonably practicable, limit ground leveling to those areas needed for effective solar energy collection.
- b. Misdirection of Solar Radiation - The solar energy facility shall be designed, constructed, and operated to prevent the misdirection of concentrated solar radiation onto nearby properties, public roadways or other areas accessible to the public, or mitigated accordingly.
- c. Glare - The solar energy facility shall be designed, constructed and operated such that any significant or prolonged glare is directed away from any nearby properties or public roadways, or mitigated accordingly.
- d. Cleaning Chemicals and Solvents - During operation of the solar energy facility, all chemicals or solvents used to clean solar panels or heliostats shall be low in volatile organic compounds and to the extent reasonably practicable, the permit holder shall use recyclable or biodegradable products.

- e. Wildlife - Measures to reduce wildlife impact may include using suitable methods such as coloration or sound producing devices to discourage birds from entering areas of concentrated solar energy near solar-thermal mirrors or other devices that concentrate solar radiation.

3. Cogeneration Facilities:

- a. The cogeneration facility would supply thermal energy to an existing or approved industrial or commercial use.
- b. Except as allowed in this section, an electric transmission line or natural gas or petroleum pipeline necessary for the cogeneration facility must be an upgrade to an existing transmission line or pipeline or must otherwise be constructed in an existing right-of-way or utility easement. If the proposed electric transmission line or natural gas or petroleum product pipeline necessary for the proposed cogeneration project is not an upgrade to an existing transmission line or pipeline, the transmission line or pipeline must comply with the standards in subsection 4 or 5 below.

4. Electrical Transmission Facilities:

- a. Use of Existing Routes/Co-Locating - The development uses available developed or approved road and utility rights-of-way, easements or transmission facilities that can accommodate the proposed facility. New routes are permitted if more adverse energy, environment, economic, and social consequences would result from using an existing route than development of other rights-of-way or easements.
- b. Adjacent to Existing Routes - To the extent practical, any part of the proposed transmission or distribution line outside an existing route would be adjacent to an existing public road or utility right-of way or easement.
- c. New Routes - If all or part of the proposed transmission line is outside an existing route or not adjacent to an existing route:
  - (1) The proposed new route would serve an existing or proposed electric generation project that is not adjacent to an existing right-of-way or easement, or
  - (2) The proposed new route would result in less adverse energy, environmental, economic and social consequences than would result from using an existing route.
- d. Setbacks to dwellings - Unless sited within a public road right-of-way, new electrical transmission lines shall not be constructed closer than 500 feet to an existing dwelling without prior written approval of the owner. Said written approval shall be made part of the deed records to that property.

5. Natural Gas or Petroleum Product Pipelines:

- a. Use of Existing Routes - To the extent practical, the proposed pipeline would use developed or approved road and utility rights-of way or easements that can safely accommodate the proposed line.

- b. Adjacent to Existing Routes - To the extent practical, any part of the proposed pipeline outside an existing route would be adjacent to an existing public road or utility right-of-way or easement.
- c. New Routes - If all of part of the proposed pipeline is outside an existing route or not adjacent to an existing route:
  - (1) The proposed new route would serve an existing or proposed electric generation project that is not adjacent to an existing right-of-way or easement, or
  - (2) The proposed new route would result in less adverse energy, environmental, economic and social consequences than would result from using an existing route.
- d. Stream crossings: If the proposed pipeline would cross a stream or river that is important habitat for a state or federally-listed threatened or endangered species, the permit holder must use a crossing technique or method approved by the Oregon Department of Fish and Wildlife.