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CHAPTER 19 STANDARDS FOR NON COMMIERCIAL 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.

Definitions

To be included in Chapter 1- Introductory Provisions, Section 1.080 - Definitions

LAST UPDATED 25 August 2010

Underline = Proposed Language
~~Strikeout~~ = Language to be removed
Yellow Highlight & Italics = Notes or comments

Anemometer - A device to measure the wind speed, generally mounted to a meteorological tower.

Associated transmission lines – (1) New transmission lines constructed to connect an energy facility to the project's substation(s). (2) New transmission lines constructed to connect the project's substations(s) to the power grid only if they are owned by the developer of the project. Any transmission line owned by a public utility is not an associated transmission line.

Biomass Energy Facility - A facility producing energy from biomass and its related or supporting facilities.

Building Mounted Wind Turbine - A Wind Turbine mounted or attached to a building.

Blade - An element of a wind turbine ~~WECS~~ rotor which forms an aerodynamic surface or surfaces to convert movement of air into mechanical energy or torque.

BOCC - Wasco County Board of County Commissioners.

~~Commercial Energy Facility – An electrical power generating plant with a nominal electrical generating capacity of more than 25,000 kilowatts or operates at more than 230 kilovolts; including, but not limited to: a thermal power plant, hydroelectric power plant, combustion turbine power plant, geothermal power plant, electric power transmission facility, or a nuclear installation, including a power reactor, re-processing plant, waste disposal facility, and any facility handling a quantity of fissionable materials sufficient to form a critical mass. A commercial power generation facility includes related or supporting facilities including any structure adjacent to and associated with an energy facility, including associated transmission lines, reservoirs, intake structures, road and rail access, pipelines, office or industrial structures built in conjunction with and used as part of the energy facility. A commercial power generation facility does not include a portable power plant, the principal use of which is to supply power in emergency or for individual domestic use.~~

Commercial Power Generating Facility (Utility Facility For The Purpose Of Generating Power) - A facility for the production of energy and its related components that:

a. Generates energy using means listed in ORS or OAR such as solar power, wind power, fuel cells, hydroelectric power, thermal power, geothermal power, landfill gas, digester gas, waste, dedicated energy crops available on a renewable basis or low-emission, nontoxic biomass based on solid organic fuels from wood, forest or field residues; and

b. Is intended to provide energy for sale.

See "Net Metering Power Facility" and "Non-Commercial/Stand Alone Power Generating Facility" for additional definitions related to energy production.

Commercial Utility Facility - ~~Any energy facility or commercial energy facility.~~ See Commercial Power Generating Facility. (This definition should remain because it is the ORS review use in the Exclusive Farm Use zone)

Communication Tower - Any tower designed to support commercial radio, television, and/or telecommunications receiving or broadcastin g antennas, dishes, buildings and associated commercial equipment used to transmit or receive radio, microwave, wireless communications, and other electronic signals. (Chapter 4 height exceptions was updated to include communication towers)

Downwind - On the opposite side from the direction from which the wind blows.

Downwind Properties - Properties outside of the project boundary that can practicably be developed for commercial wind energy.

Electrical Transmission Facilities - The conductors, lines, structures, towers, substations, switching stations, buildings, corridor, and construction staging and assembly areas associated with the transmission of electricity from power sources to the regional power grid and from the regional power grid to the local power distribution system. (Replaces "Transmission Facility")

Energy - The amount of work that can be performed by a force.

Energy Development - A building or construction operation making a significant change in the use or appearance of a structure or land for an energy facility; and the clearing, excavation, filling, grading, and road building in connection with the operation.

Energy Facility - ~~A hydroelectric, wind energy, , biomass, geothermal, or transmission, facility with a nominal electric generating capacity of 25 MW or less or carrying 230 kV or less.~~ A solar, wind, fuel cell, hydroelectric, thermal, geothermal, cogeneration, landfill gas, digester gas, waste, dedicated low emission renewable crop, nontoxic biomass based on solid organic fuels from wood, forest or field residues, electrical transmission, natural gas

pipeline, or petroleum product pipeline facility.

Energy Facility Project Area - The proposed location of an energy facility and all of its related and supporting facilities as well as adjacent lands where there could be negative physical consequences as a result of the project such as soil compaction or erosion. ~~any structure adjacent to and associated with an energy facility, including associated transmission lines, reservoirs, intake structures, road and rail access, pipelines, barge basins, office or public buildings, and commercial and industrial structures proposed to be built in connection with the energy facility, and the area affected by the facility.~~

EFSC - Oregon Energy Facility Siting Council as established under ORS 469.450 and defined in ORS 469.300(7). The Council includes seven members appointed by the governor and confirmed by the Oregon Senate with the responsibility for overseeing and approving the development of large energy facilities defined in ORS 469.300.

FERC - Federal Energy Regulatory Commission – The United States federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, and oil pipeline rates. FERC also reviews and authorizes liquefied natural gas (LNG) terminals, interstate natural gas pipelines and non-federal hydropower projects.

Grid - The utility distribution system. The network that connects electricity generators to electricity users.

Guy Wire - A cable or wire used as a semi-flexible tension support between a guy anchor and a tower.

Height of Tower - The height of the vertical distance from the base of the tower, pole or building on which it is located to the tallest vertical point including any attachments that are above the highest point on the tower structure (i.e. blades and antennae).

Horizontal Axis Wind Turbine ~~WECS~~ - A wind turbine ~~WECS~~ on which the rotor axis substantially is parallel to the ground.

Inverter - A device that converts direct current (DC) to alternating current (AC).

Joule - Amount of work done by a force of one newton moving an object through a distance of one meter.

Kilowatt-hour (kWh) - A measure of energy equal to the use of one kilowatt in one hour.

Kilovolt (kV) - The unit of voltage of potential difference which equals 1,000 volts.

Kilowatt (kW) - A measure of power for electrical current (1,000 watts).

Megawatt (MW) - The electrical unit of power which equals 1,000,000 watts.

Meteorological Tower - The tower and any of the following: base plate, anchors, guy cables and hardware, anemometers (wind speed indicators), temperature and pressure sensors, other weather measuring devices attached to the tower, wind direction vanes, booms to hold equipment anemometers and vanes, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit weather information at a given location.

Nacelle -The structure which houses all of the generating components, gearbox, drive train and other components of the wind turbine.

Net Metering Power Facility - A facility for the production of energy that:

a. Generates energy using means listed in ORS or OAR such as solar power, wind power, fuel cells, hydroelectric power, landfill gas, digester gas, waste, dedicated energy crops available on a renewable basis or low-emission, nontoxic biomass based on solid organic fuels from wood, forest or field residues;

b. Is intended to offset part of the customer-generator's requirements for energy;

c. Will operate in parallel with a utility's existing transmission and distribution facilities;

d. Is consistent with generating capacity as specified in ORS 757.300 and/or OAR 860-039-0010 as well as any other applicable regulations;

e. Is located on the same tract as the use(s) to which it is accessory and the power generating facility, tract, and use(s) are all under common ownership and management.

See "Non-Commercial/Stand Alone Power Generating Facility" and "Commercial Power Generating Facility" for additional definitions related to energy production.

Non-Commercial/Stand Alone Power Generating Facility -

a. Generates energy using means listed in ORS or OAR such as solar power, wind power, fuel cells, hydroelectric power, landfill gas, digester gas, waste, dedicated energy crops available on a renewable basis or low-emission, nontoxic biomass based on solid organic fuels from wood, forest or field residues;

b. Is intended to provide all of the generator's requirements for energy for the tract or the specific lawful accessory use that it is connected to;

c. Operates as a standalone power generator not connected to a utility grid; and

d. Is located on the same tract as the use(s) to which it is accessory and the power generating facility, tract, and use(s) are all under common ownership and management.

See "Net Metering Power Facility" and "Commercial Power Generating Facility" for additional definitions related to energy production.

Non-Resource Zones - Zones within the jurisdiction of this ordinance that are not protected by either Oregon Land Use Planning Goal 3, Agricultural Lands or Goal 4, Forest Lands.

OWRD - Oregon Water Resources Department.

Planning Department - Wasco County Planning and Development Department.

Planning Commission - Wasco County Planning Commission.

Power - The rate at which work is performed or energy is converted.

~~Prevailing Wind Direction - Within 45 degrees of the direction from which wind flows for at least 20 percent of the year based on at least one year's site-specific recorded wind data.~~(This term is not used in the ordinance and can be eliminated)

Related or Supporting Facilities to a Commercial Power Generating Facility - Any structure, proposed to be constructed or substantially modified in connection with the construction of a commercial power generating facility, including associated transmission lines, power collector lines, substations, meteorological towers (not including ones applied for independent of the commercial power generating facility), data collection & operating systems, construction staging & laydown areas, reservoirs, storage facilities, intake structures, road and rail access, pipelines, barge basins, office or public buildings, and commercial and industrial structures. A related or supporting facility is considered "in connection with the construction of the commercial power generating facility" if it would not be built or substantially modified but for construction or operation of the energy facility.

"Related or supporting facilities" does not include geothermal or underground gas storage reservoirs, production, injection or monitoring wells or wellhead equipment or pumps or any structure existing prior to construction of the energy facility, unless such structure must be significantly modified solely to serve the energy facility.

Resource Zones - Zones within the jurisdiction of this ordinance that are protected by either Oregon Land Use Planning Goal 3, Agricultural Lands or Goal 4, Forest Lands.

Rotor - 1) A system of rotating aerodynamic elements and hub assembly attached to a shaft that converts the kinetic energy in the wind into mechanical energy; 2) Rotating element in an electrical generator.

Rotor Diameter - Twice the distance from the center of rotation to the outermost point of the blade.

Shadow Flicker - The alternating changes in light intensity caused by the movement of Wind Turbine blades casting shadows on the ground or a stationary object. Shadow Flicker is not the sun seen through a spinning wind turbine rotor, nor what an individual might view moving through the shadows of a wind turbine.

~~Significant Interference With Wind Access - A ten (10) percent decrease in wind speed caused by an obstruction(s).~~ (Other than setbacks from downwind property towers, this is not included in the ordinance and can be removed)

Solar Access - The right of a property owner to have sunlight shine onto the property owner's land.

Solar Energy Facility - A facility which converts solar energy for electricity generation, space heating, space cooling or water heating and which consists of solar panels, photovoltaic laminates, electrical lines, pipes, batteries, mounting brackets, frames, foundation and other appurtenances or devices necessary for the operation of the system wherever installed.

Swept Area - Area perpendicular to the wind velocity that a rotor will cover during one complete rotation.

~~Theoretical Horsepower - The product of the flow used by a hydroelectric facility, expressed in cubic feet per second, multiplied by the head, expressed in feet, divided by 8.8.~~ (Hydroelectric review is being removed from the ordinance so this is no longer needed)

Tower - monopole, freestanding, or guyed structure.

~~Total WECS Height - The height of a WECS measured from ground level to the highest vertical extension of a WECS.~~ (Replaced by height of tower)

~~Transmission Facility - The conductors, lines, structures, buildings, corridor, and construction staging and assembly areas associated with the transmission of electricity from major power sources to the regional power grid and from the regional power grid to the~~

~~local power distribution system. Such a facility operates at a current of 230 kilovolts (230kV) or less. Such a facility does not include electric power substations, switching stations, or generating facilities.~~ (See "Electrical Transmission Facility)

Upwind - On the same side as the direction from which the wind is blowing – windward.

Utility Facility (Minor) (Non-Resource Zones Only) - Any minor facility owned or operated by a public, private or cooperative company for the local distribution or provision of sewer, water, gas, electricity (utility facility service lines), data, radio or telephone. Cell towers and any structure over 100' in height constitutes a "Utility Facility (Major)".

Utility Facility (Major) (Non-Resource Zones Only) - Unless otherwise specified, any major facility owned or operated by a public, private or cooperative company for the generation, transmission, regional distribution or processing of its productions or for the disposal of cooling water, waste or by-products, and including, major trunk pipelines, water towers, sewage lagoons, sanitary landfills, structures over 100' in height, cell towers and similar facilities.

Utility Facilities Necessary for Public Service (EFU Only) - ~~Facilities for providing communication, water, sewers or transportation and facilities accessory to energy facilities.~~ Unless otherwise specified, any facility owned or operated by a public, private or cooperative company for the transmission, distribution or processing of its products or for the disposal of cooling water, waste or by-products, and including, major trunk pipelines, dams, water towers, sewage lagoons, cell towers and electrical transmission facilities (except transmission towers over 200' in height) and similar facilities. (Reviewed by Katherine Daniels with DLCD)

Utility Facility Service Lines - Utility lines and accessory facilities or structures that end at the point where the utility service is received by the customer and that are located on one or more of the following:

a. A public right of way;

b. Land immediately adjacent to a public right of way, provided the written consent of all adjacent property owners has been obtained;

d. The property to be served by the utility; or

e. In the case of non-EFU land, within a utility easement.

Vertical Axis Wind Turbine ~~WECS~~ - A wind turbine ~~WECS~~ where the rotor axis is vertical.

Watt - A unit of measure for the rate of energy conversion. Equal to 1 joule of energy per second.

Wind Access Rights - The right of a property owner to have unobstructed commercially viable wind available to the property owner's land. (We indicated people do not have wind rights so we should have a definition)

Wind Turbine ~~WECS (Wind Energy Conversion System)~~ - ~~A device that converts the kinetic energy in the wind into electric energy. The WECS includes all parts of the system except transmission lines.~~ Equipment that converts energy from the wind into usable forms of energy (such as electricity) and then stores or transfers the energy. This equipment includes any base, blade, foundation, wind generator, nacelle, rotor, wind tower, transformer, vane, wire, inverter, batteries or other component used in the system except transmission lines.

~~WECS Site - The lot or lots upon which a WECS is situated. If abutting lots are used primarily for WECS, the WECS site encompasses all such abutting lots.~~ (This duplicates "Energy Facility Project Areas")

Wind Turbine Tower ~~WECS~~ Tower - Subsystem of a wind turbine ~~WECS~~ that supports the rotor, or other collection device, above-ground.

Wind Energy Facility - A facility producing energy from wind and its related or supporting facilities. ~~A WECS or group of WECS including all parts of the system except transmission lines. Such a facility has a nominal electric generating capacity of 25 MW or less.~~

~~Wind Farm - A cluster or array of three or more electrical WECS which are under the same ownership or management.~~ (Definition is not needed)

~~Wind Measurement Device - An instrument for measuring wind speed and/or direction, including the tower or pole upon which it is mounted.~~ (Replaced by "Anemometer")

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

LAST UPDATED 2 September 2010

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 - This shall include 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'	*Ministerial	*Ministerial	Ministerial	Ministerial
> 35' - < 50'	STS	STS	Ministerial	Ministerial
50' - < 100'	CUP	STS	STS	STS
100' - 150'	CUP	CUP	CUP	STS
Resource Zones				
< 35'	*Ministerial	*Ministerial	Ministerial	Ministerial
35' - < 50'	STS	STS	Ministerial	Ministerial
50' - < 100'	CUP	STS	STS	STS
100' - < 200'	CUP	CUP	STS	STS
> = 200'	CUP	CUP	CUP	CUP

*The 4th tower sited on the property shall elevate the review from a Ministerial 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	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 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 and are allowed without any review by the Planning 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 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. Ministerial/Type I Review Standards - The following are applicable to energy facilities in addition to meeting any other listed or referenced standards in the zone.

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 - 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.

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.

a. 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 340-035-0035. (50 dBA comes from Table 8 of OAR 340-35-035. The L_x *refers to the percentage of time the noise was at or above the dBA. This standard needs to be*

non-discretionary under this review type and this standard was chosen so the applicant could show their system capacity did not exceed this. If they do exceed this they would be subject to an STS review. Most of the non-commercial wind turbines do not exceed this.)
New Industrial and Commercial Noise Source Standards Allowable Statistical Noise Levels in Any One Hour

7 am – 10 pm	*10 pm – 7am*
L_{50} – 55 dBA	*L_{50} – 50 dBA*
L_{10} – 60 dBA	*L_{10} – 55 dBA*
L_{1} - 75 dBA	*L_{1} – 60 dBA*

b. Air Quality - Manufacturer's emissions estimate shall be in compliance with Oregon Department of Environmental Quality in OAR Chapter 340, Division 200.

c. Vibration - Vibrations shall not be produced which are humanly perceptible beyond the property on which the energy facility is located.

d. Odor - Odors shall not be produced which are humanly perceptible beyond the property on which the energy facility is located.

e. 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.

(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) 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 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.

f. Advertising - No commercial or advertising markings shall be allowed except those of the manufacturer & installer.

g. Interference with Communication - Energy facilities 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 property owner must develop and implement a mitigation plan in consultation with the Planning Department.

h. 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.

i. 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. 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 affected property owner, road authority, or utility. Said written permission shall be made part of the deed records to any private property.

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) 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.

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 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 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 Ministerial/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 (ie. Chimney, stove pipe, other roof mounted appliances). Contact your 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. STS/Type II Review Standards - The following are applicable to 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.

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 level estimate exceeds 60 decibels or there is no manufacturer's sound level estimate, the applicant shall submit a qualified expert's analysis and written report to prove 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 regard to any existing dwellings on non-participating landowners property.

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 the top of the tower - Lighting of towers is only allowed if required by the Oregon Department of Aviation of Federal Aviation Administration. 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.

(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) Shadowing/Flicker - Wind turbines shall be sited to minimize the adverse

impact of shadow flicker to any existing dwellings on non-participating landowners property.

Towers shall be allowed to create an adverse shadow flicker impact to an existing dwelling on a non-participating landowner's property if granted written permission from the property owner. 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. 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.

SECTION 19.030 Commercial Power Generating Facilities Review Processes & Approval Standards

LAST UPDATED 25 August 2010

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 - 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

(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. 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 initially heard and decided upon 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, the Wasco County must promptly issue 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 (Type I review).

(4) Hydroelectric Energy Facilities - See subsection d. below.

c. EFSC

(1) EFSC has regulatory authority over all energy facilities exceeding thresholds designated by ORS 469.300. However, pursuant to ORS 469.480 EFSC shall designate the BOCC as a special advisory group who may participate in the siting process pursuant to the role established in ORS 469. (Do we want to define the county's process anymore? If yes should that be appealable? This is not required pursuant to ORS 46.504. We made this process public for the UPC application due to citizen concerns over the project but we did not do this with Summit Ridge. EFSC gives the county's rules deference with regards to this. How much should we include the public in this process?)

(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 BOCC desires, they may defer regulatory authority of energy facility to EFSC notwithstanding it is less than the threshold designated by ORS 469.300 (There are no statutes or rules which prohibit this.).

d. OWRD - 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 and are allowed without any review by the Wasco County as long as they are being reviewed by OWRD or FERC. (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. OWRD confirmed the proposed language is acceptable to them.)

(2) 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 a Section 3.740, Flood Hazard Overlay review by the Planning Department even if they are being reviewed by OWRD.

e. FERC - 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 final or tentative approval.

   a. Final Approval - Final approval occurs when the applicant has submitted all of the required application materials, Wasco County has issued a decision which includes only non-discretionary conditions of approval that can be submitted for staff review and verification, and the appeal period has concluded.

   b. 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.

3. Modifications - Energy facility requirements shall be facility specific, but can be amended as long as the facility does not exceed the boundaries of the Wasco County conditional use permit where the original facility was constructed.

   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;
   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.

   No amendment would be required if an expansion of power-generating capacity is due to technology upgrades installed within the existing boundaries of the established energy facility. Notification by the permit holder to the Planning Department of changes not requiring an amendment are encouraged, but not

required.

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 shall be allowed in non-resource zones upon a showing that such related or supporting facilities are necessary for siting the commercial power generating facility. 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. The related or supporting facilities will be consistent in size scale and impact as other existing or allowed uses in the non-resource zone;

   b. Technical and engineering feasibility of siting the energy facility as a whole;

   c. Availability of existing rights-of ways and public roads and proximity to transmission lines and interconnections;

   d. Environmental impacts associated with avoiding non-resource zoned land; and

   e. 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. (If after a wind turbine has been installed it does not comply with the noise standard, mitigation can occur to still allow the tower to remain and meet the standards. This can be done by programming it to change the cut in/start up speed so the noise from the blades is mitigation by the noise from the wind. If not mitigated it is a violation of the conditions of approval and the towers could be made to be removed.)

4. Visual Impact - The energy facility and all of its components have been designed to minimize adverse visual impacts to the extent practical by methods that may include, but are not limited to, the following:

   a. The energy facility is not located within the boundaries of a formally-designated state or federal scenic area, scenic byway, scenic corridor, scenic waterway or in an area identified as a significant or important visual resources in the Comprehensive Plan;

   b. Building the energy facility near the edge of contiguous timber areas or using the natural topography to obscure the energy facility;

   c. Using materials and colors that blend with the background unless otherwise required by the Federal Aviation Administration or the Oregon Department of Aviation; and

   d. Retaining or planting vegetation to obscure views of the energy facility.

Additional Visual Options – The advisory group discussed the potential visual impact to

local, state and federal scenic areas, waterways, corridors etc… The more widely known are the Columbia River Gorge National Scenic Area, the Deschutes Scenic Waterway, the John Day Scenic Waterway, and the White River Scenic Waterway. There was no consensus by the advisory group and it is anticipated there will be varied opinions about this issue when general notification is sent out and we begin the hearings process. The following represent several options on how to address this issue going from least discretionary to most discretionary.

Option 1 – Do not require visual impact analysis beyond existing scenic designated lands or buffers.

Subsection D(4) in the General Standards above states:

> "The proposed energy facility is not within a formally-designated state or federal scenic area, scenic byway, scenic corridor, scenic waterway or significant visual resources listed in the Comprehensive Plan."

If we do not add any more language in the Wind Energy Facility section or any other location it will be the finding/interpretation of Wasco County that as long as the facility is not located within any of these areas there is no visual impact. That will also be the finding/interpretation for the following Conditional Use standard as well:

> "The location and design of the site and structures for the proposed use will not significantly detract from the visual character of the area."

Option 2 – Create Visual Buffers beyond the existing designated boundaries or buffers. This could involve several different elements.

> -Create one buffer distance for all designated areas or individual buffer distances based on some analysis of potential impact to the designated area.
>
> -Do not allow any wind turbines within the additional buffer at all unless it can be shown they would be topographically screened from the designated area.
>
> -Do not allow any wind turbines within the additional buffer unless based on a visual impact analysis unless it can be shown they would not detract from the visual character of the area. If it can be shown a wind tower would be topographically screened no additional visual impact analysis would be required for that tower.
>
> -Beyond the additional buffers no additional visual impact analysis would be required.

Option 3 – Use standards more consistent with EFSC for Protected Areas & Scenic Resources - OAR- 345-022-0040

(1) Except as provided in sections (2) and (3), Wasco County shall not approve and energy facility located in the areas listed below. To approve an energy facility located outside the areas listed below, the Wasco County must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below.

(c) 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
(e) National recreation and scenic areas, including but not limited to the Oregon Cascades Recreation Area, and Columbia River Gorge National Scenic Area
(f) State parks and waysides as listed by the Oregon Department of Parks and Recreation
(k) 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;
(o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas
(p) State wildlife areas and management areas identified in OAR chapter 635, division 8

(2) Notwithstanding section (1), Wasco County may issue an approval for an electrical transmission line or a natural gas pipeline or for 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 in a protected area identified in section (1), if other alternative routes or sites have been studied and determined by Wasco County to have greater impacts. Notwithstanding section (1), Wasco County may issue approval for surface facilities related to an underground gas storage reservoir that have pipelines and injection, withdrawal or monitoring wells and individual wellhead equipment and pumps located in a protected area, if other alternative routes or sites have been studied and determined by Wasco County to be unsuitable.

(3) The provisions of section (1) 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 with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

OAR 345-022-0080 - Scenic Resources

(1) Except for facilities described in section (2), to issue an approval, Wasco 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 and values identified as significant or important.

(2) Wasco County may issue approval for a special criteria facility under OAR 345-015-0310 (Certain Natural Gas Energy Facilities) without making the findings described in section (1). However, Wasco County may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

5. Natural Resource/Wildlife Protection - The energy facility has been designed and will be constructed and operated without significant adverse impact to natural resources identified in the Wasco County Comprehensive Plan, Wasco County Land Use and Development Ordinance or by any local, state or federal wildlife agency. 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 local, state or federal wildlife agencies. Measures to reduce significant impact may include, but are not limited to, the following:

   a. Providing information pertaining to the energy facility's potential 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 towers designed to reduce horizontal surfaces for perching. Where horizontal surfaces cannot be avoided, anti-perching devices shall be installed where it is determined necessary to reduce bird mortality.

   e. Utilizing towers designed so the foundation and support structures avoid the creation of artificial habitat or shelter for raptor prey.

   f. Controlling weeds to avoid the creation of artificial habitat suitable for raptor prey such as spreading gravel on turbine pad.

   g. Using anti-perching protection devices on transmission line support structures where it is determined necessary to reduce bird mortality and appropriate spacing of conductors.

h. Avoiding construction activities near raptor nesting locations during sensitive breeding periods and using appropriate no construction buffers around known nest sites.

i. 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.

j. Locating transmission lines or electrical lines associated with the energy facility at least 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.

k. Separating transmission lines or electrical lines associated with the energy facility from the nearest wetland or water body by topography or substantial vegetation except where the line is required to cross the wetland or water body.

l. Locating transmission lines or electrical lines associated with the project parallel to the prevailing winds to the extent practical.

m. Locating transmission towers or electrical 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.

m. 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 shall be flagged and avoided and construction activities monitored to ensure all cultural resources are avoided. 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 prevent public access to hazardous areas.

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 also 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; and

    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.

10. Road Use Agreement - Where applicable, the applicant agrees to enter into a Road Use Agreement with Wasco County to set out the terms of use for the applicant's operation and any maintenance, repair or improvements to the county road rights-of way necessitated by the operation.

11. Onsite Access Roads and Staging Areas – The impact of onsite access roads and staging areas 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 non-paved temporary or permanent on-site roads and staging areas shall be constructed and maintained to minimize dust. If roads and staging areas are not construct 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 as well as a Wasco County Soil and Water Conservation District approved erosion and sediment control plan. 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 site shall not be erected, except:

    a. Signs required for public or employee safety or otherwise required by law; 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 are permitted.

16. Undergrounding 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 primary facility, except that such a building 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. Public Utility Coordination - The energy facility will not significantly burden the utility in whose service territory the project is proposed to be located.

20. Termination and Decommissioning

    a. A description of actions the facility owner proposes to take 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. A current detailed cost estimate, a comparison of that estimate with funds to be set aside, in the form of a third party assurance (bond, letter of credit, insurance policy or other such form of guarantee), for dismantling or decommissioning, and a plan for assuring the availability of adequate funds for completion of dismantling or decommissioning. The cost estimate will be reviewed and be updated by the permit holder on a 5 year basis.

    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.

(g) 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 and the landowner as beneficiary or payee. The form may include, but not be limited to posting a bond, issuing an irrevocable letter of credit, purchasing a paid up insurance policy, or by other means as may be proposed by the permit holder and found acceptable by Wasco County.

(3) The amount of the third party assurance (bond, letter of credit, insurance policy 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 shall increase the amount of the third party assurance (bond, letter of credit, insurance policy or other such form of guarantee) 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 bond or letter of credit account shall be prorated within the year to the date of decommissioning.

(4) The permit holder shall describe the status of the bond or letter of credit in an annual report submitted to Wasco County.

(5) The bond or letter of credit shall not be subject to revocation or reduction before retirement of the energy facility site.

(6) If any disputes arise between Wasco County and the landowner on the expenditure of any proceeds from the bond or the letter of credit, either party may request non-binding 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 the arbitration (excluding attorney fees) shall be shared equally by the parties.

21. 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 Wasco County GIS Department once commercial electrical power production begins. Alternatively, this information could be provided in GIS layer consistent with the datum referenced above.

22. Power Production Reporting - Wasco County may require a report of power production for any time frame after the energy facility first begins production. 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 D 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 - Using the minimum lighting necessary for safety and security purposes in addition to aviation warning lights required by federal or state law. To the extent possible, the lighting shall be shielded from the ground in a manner that prevents it from projecting onto adjacent properties, roadways, waterways, as well as preventing it from noticeably contrasting with the surrounding landscape;

(4) Using existing roads to provide access to the site, or if new roads 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 – Wind turbines shall be sited to minimize the adverse impact of shadow flicker to any existing dwellings on non-participating landowners property. (If a wind turbine does create an adverse shadow impact there are mitigation options. Computer models can determine the days and time of shadow flicker based on sun position and the turbine can be programmed to be non-operational during that period. A tree can also be planted near the house which would effectively screen the shadow flicker).

Towers shall be allowed to create an adverse shadow flicker impact to an existing dwelling on a non-participating landowner's property if granted written permission from the property owner. 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 public safety 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 facility to exclude the public from close proximity to turbine blades and electrical equipment;

(3) Designing, constructing and operating the facility to protect against structural failure of the turbine tower or blades that could endanger the public's safety and have adequate safety devices and testing procedures designed to warn the public of impending failure and to minimize the consequences of such failure; and

(4) Restricting public access to the interior of tubular turbine towers by installing locked access doors.

c. Setbacks

(1) Project Boundaries - If the wind energy project constitutes more than one property neither the wind turbine setback to abutting properties not part of the project below nor the property line setbacks of the zone in which they are located are applicable.

(2) Non Project Boundaries -

Wind Turbines - Wind turbines and their above ground parts shall be set back from the property line of any abutting property not part of the project, the right of way of any dedicated road and any above ground utility a minimum of 1.5 times (EFSC standard is 1.1 times the height of the tower) the height of the wind turbine tower.

Wind Turbines and their above ground parts shall be allowed closer to a property line of any abutting property not part of the project, the right of way of any dedicated road, or any above ground public utility line than 1.5 times the height of the tower without a variance pursuant to either Chapter 6 or 7 if granted written permission from the abutting property owner, road authority, or utility. Said written permission shall be made part of the deed records to any private property.

Notwithstanding receiving permission from the abutting property owner, road authority or utility, wind turbines and their above ground parts shall still be required to meet the property line setback of the zone in which

they are located unless a variance is granted pursuant to either Chapter 6 or 7.

(3) Resource Zone Dwellings - Wind turbines shall be setback from all resource zone dwellings a minimum of 1.5 times the height of the wind turbine tower or the distance required to meet the noise standard in Subsection D(3) above, whichever is greater.
(Do we want to create setbacks for non-residential structures such as barns)

(4) Non-Resource Boundaries - Wind turbines shall be setback from all non-resource zoned property boundaries and the urban growth boundary or urban reserve area of any incorporated city a minimum of one (1) mile (EFSC Uses 3,520 feet) or the distance required to meet the noise standard in Subsection D(3) above, whichever is greater.

(5) 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.

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.

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.

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 to 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.