

**House Committee on Land Use
HB 2820-A Testimony
Todd Cornett, ODOE Facility Siting Division Administrator
28 March 2013 – HR E**

Concentrating Thermal Vs. Solar Photovoltaic

See attached handout.

Current Conflicting Thresholds for EFSC Jurisdictional Solar Energy Projects

-Two state jurisdictional thresholds for solar energy facilities – located in statutory definition of “Energy Facility” - ORS 469.300(11).

-1) 100 Acres in (D) (10 – 20 MW for both Concentrating solar and Solar PV).
-Established 1975.

-2) 105 MW in (J) (Maximum Capacity) (525 – 1050 Acres for both Concentrating Solar and Solar PV).
-Established in 1991 as a 25MW threshold with no change to the 100 acre standard.
-Changed in 2001 to the current 35MW threshold with no change to the 100 acre threshold.

-No legislative intent to determine if one is meant for concentrated solar and one is meant for solar Photovoltaic.

-Lacking legislative intent and with no legal testing, the trigger is currently 100 Acres because that will be triggered well before 105 MW.

Prior Working Group and Language in HB 2820-A

House Interim Committee on Energy, Environment and Water established a Solar Work Group Chaired by Rep. Boone. The Jurisdictional subgroup focused on the issues in HB 2820. Group was broadly representative and included most if not all groups who have an interest in solar siting. While there was no voting there was what general consensus on several important issues.

Consensus that concentrating solar facilities should have a separate jurisdictional threshold than Solar PV because of the different ways they are operated.

HB 2820-A creates separate jurisdictional thresholds. Because of the similarities of impacts with other thermal plants, solar thermal plant was relocated to (A) of the definition which has a 25 MW jurisdictional threshold.

(D) is now specifically for Solar PV.

(J) solar is removed from this

Consensus that an acreage threshold is appropriate for Solar PV because it is primarily a footprint impact.

HB 2820-A includes only acreage thresholds for Solar PV.

Consensus that the acreage threshold should be varied based on the specific circumstances on the ground. The discussion focused on agricultural productivity.

HB 2820-A has three subsections which are all related to soil productivity.

- High Value farmland which refers to existing statute (See Handout Page 3)
- Arable lands – new definition included because this is defined in DLDC Solar Siting Rule.
- Non-Arable lands – new definition included because this is also defined in DLCD Solar Siting Rule.

Consensus that the acreage threshold should be 100 acres on high value and arable lands.

HB 2820-A does has 100 acres as the threshold for high valued and arable lands. It should be noted that this leaves the state threshold at where it is today under current statutes.

Consensus that the non-arable acreage threshold should be based on how land is typically divided and utilized where the larger facilities would be located which is in Eastern Oregon. That is based on sections which are equivalent to one square mile or 640 acres.

No Consensus on what the acreage threshold should be for non-arable lands. However, because this is non-productive farmland, this is where large scale solar development needs to occur and through the regulatory process we should try to incentivize developers choosing these areas.

- Last Strawman = 320 Acres which is equal to a half section with no consensus.
- Solar Industry = minimum of 640 acres which is a full section.

Decommissioning Amendment

ODOE does have a concern with the 640 acre threshold.

- Whether approved by the state or a county, every facility has a lifecycle and will eventually need to be removed
- All state jurisdictional energy facilities include a financial assurance for decommissioning requirement
- DLCD has solar siting rules for all County jurisdictional in the Exclusive Farm Use zone (See Handout page 4). It is permissive in that it allows for bonding for the retirement of the facility but it is not obligatory.

- Removing a square mile of solar infrastructure will be a significant task if:
 - panels undesirable;
 - scrap metal prices low;

Proposed Amendment

-ODOE recommends language be included in HB 2820-A to mandate that DLCD establish a workgroup to update this rule requiring financial assurance for decommissioning at an appropriate acreage level and with an appropriate financial assurance mechanism. Not one sized fits all but purposefully thought out and established.

Non-Exclusive Farm Use Zone Land Jurisdictional Threshold Amendment

The current state jurisdictional thresholds are applicable to all zoning designations. The proposed jurisdictional thresholds for solar photovoltaic solar are based on farm land productivity. While utility scale solar development is likely to occur on Exclusive Farm Use zoned land there is the possibility for it to occur on non-exclusive farm use zoned lands such as:

- Forest
- Non-Resource
- Industrial
- Commercial; and
- Residential

Because the discussion at the subgroup focused on farmland, this was not even considered. However, without a specific threshold for these zones it would likely default to 640 acres because they would likely be determined to have non-arable lands. The potential impacts of large scale solar development on these zones is higher than on Exclusive Farm Use zoned land so the jurisdictional threshold for when it comes to the state should be smaller than 640 acres. Oregon Department of Energy therefore recommends the language (See Handout Page 5) which would add:

- a new subsection D(i) with a 100 acre threshold for all non exclusive farm use zoned lands. This is consistent with the currently existing threshold.
- add the term “exclusive farm use zoned” in the other acreage thresholds

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Concentrating Solar (Thermal Solar): A system that uses mirrors or lenses to concentrate a large area of sunlight, or solar thermal energy, onto a small area. Electrical power is produced when the concentrated light is converted to heat, which drives a heat engine (usually a steam turbine) connected to an electrical power generator.



Solar Photovoltaic (PV): Method of generating electrical power by converting solar radiation into direct current electricity using semiconductors that exhibit the photovoltaic effect



ORS 195.300– Just Compensation for Land Use Regulation

- (10) “High-value farmland” means:
- (a) High-value farmland as described in ORS 215.710 that is land in an exclusive farm use zone or a mixed farm and forest zone, except that the dates specified in ORS 215.710 (2), (4) and (6) are December 6, 2007.
 - (b) Land west of U.S. Highway 101 that is composed predominantly of the following soils in Class III or IV or composed predominantly of a combination of the soils described in ORS 215.710 (1) and the following soils:
 - (A) Subclassification IIIw, specifically Ettersburg Silt Loam and Croftland Silty Clay Loam;
 - (B) Subclassification IIIe, specifically Klooqueth Silty Clay Loam and Winchuck Silt Loam; and
 - (C) Subclassification IVw, specifically Huffling Silty Clay Loam.
 - (c) Land that is in an exclusive farm use zone or a mixed farm and forest zone and that on June 28, 2007, is:
 - (A) Within the place of use for a permit, certificate or decree for the use of water for irrigation issued by the Water Resources Department;
 - (B) Within the boundaries of a district, as defined in ORS 540.505; or
 - (C) Within the boundaries of a diking district formed under ORS chapter 551.
 - (d) Land that contains not less than five acres planted in wine grapes.
 - (e) Land that is in an exclusive farm use zone and that is at an elevation between 200 and 1,000 feet above mean sea level, with an aspect between 67.5 and 292.5 degrees and a slope between zero and 15 percent, and that is located within:
 - (A) The Southern Oregon viticultural area as described in 27 C.F.R. 9.179;
 - (B) The Umpqua Valley viticultural area as described in 27 C.F.R. 9.89; or
 - (C) The Willamette Valley viticultural area as described in 27 C.F.R. 9.90.
 - (f) Land that is in an exclusive farm use zone and that is no more than 3,000 feet above mean sea level, with an aspect between 67.5 and 292.5 degrees and a slope between zero and 15 percent, and that is located within:
 - (A) The portion of the Columbia Gorge viticultural area as described in 27 C.F.R. 9.178 that is within the State of Oregon;
 - (B) The Rogue Valley viticultural area as described in 27 C.F.R. 9.132;
 - (C) The portion of the Columbia Valley viticultural area as described in 27 C.F.R. 9.74 that is within the State of Oregon;
 - (D) The portion of the Walla Walla Valley viticultural area as described in 27 C.F.R. 9.91 that is within the State of Oregon; or
 - (E) The portion of the Snake River Valley viticultural area as described in 27 C.F.R. 9.208 that is within the State of Oregon.

ODOE Proposed Amendments

Decommissioning

DLCD has solar siting rules for all County jurisdictional in the Exclusive Farm Use zone. OAR 660-33-0130(37)(j) is permissive in that it allows for bonding for the retirement of the facility but it is not obligatory.

Nothing in this section shall prevent a county from requiring a bond or other security from a developer or otherwise imposing on a developer the responsibility for retiring the photovoltaic solar power generation facility.

Every facility at some point will need to be removed. While abandoned solar facilities don't pose a lot of potential hazards there are some concerns if a facility in the size range of one square mile is abandoned

- changes in technology make the panels undesirable and do not justify their removal;
- scrap metal prices are not enough to justify removal of the infrastructure;
- shading results in invasive species and emergent habitats that are no longer controlled without constant maintenance. Both of which can spread to surrounding lands; and
- the site cannot be utilized in its pre-development state which was either as natural resource habitat or grazing.

Proposed Amendment

ODOE recommends language be included in HB 2820-A to mandate that DLCDC establish a workgroup to update this rule requiring financial assurance for decommissioning at an appropriate acreage level and with an appropriate financial assurance mechanism.

Non-EFU Zoning Designations

The current state jurisdictional thresholds are applicable to all zoning designations. The proposed jurisdictional thresholds for solar photovoltaic solar are based on farm land productivity. While utility scale solar development is likely to occur on Exclusive Farm Use zoned land there is the possibility for it to occur on non-exclusive farm use zoned lands such as:

- Forest
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Because the discussion at the subgroup focused on farmland, this was not even considered. However, without a specific threshold for these zones it would likely default to 640 acres because they would likely be determined to have non-arable lands. The potential impacts of large scale solar development on these zones is higher than on Exclusive Farm Use zoned land

so the jurisdictional threshold for when it comes to the state should be smaller than 640 acres. Oregon Department of Energy therefore recommends the following language:

Proposed Amendment

D) A solar { - collecting - } { + photovoltaic power generation + } facility using more than { - 100 acres of land. - } { + :

*(i) **100 acres on all non Exclusive Farm Use zoned lands;***

*(ii) 100 acres located on **Exclusive Farm Use zoned** high-value farmland as defined in ORS 195.300;*

*(iii) 100 acres located on **Exclusive Farm Use zoned** arable land; or*

*(iv) 640 acres located on **Exclusive Farm Use zoned** nonarable land. + }*