Oregon
Kate Brown, Governor

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January 16, 2019

Land Conservation and Development Commission
Department of Land Conservation and Development
635 Capitol Street NE, Ste. 150
Salem, OR 97301

Dear Commissioners,

The Oregon Department of Energy appreciates the opportunity to provide comments on the draft proposed amendments to OAR 660-033-0130(38) related to siting solar photovoltaic energy facilities on agricultural lands. ODOE has also appreciated Department of Land Conservation and Development's inclusion of our Siting Division staff on the Rules Advisory Committee, and DLCD's coordination with ODOE's Planning & Innovation Division staff to discuss energy and climate change policies in the state.

ODOE's mission is leading Oregon to a safe, clean, and sustainable energy future. The agency works to ensure reliable, accessible energy for every Oregonian, to responsibly site energy facilities, and to keep our state on the leading edge of energy efficiency, renewable energy, and energy resilience. We also support the state's efforts to reduce greenhouse gas emissions. It is from this perspective and the achievement of the state's energy and climate change goals that we offer these comments.

ODOE has had the opportunity to meet with DLCD staff to better understand the proposed rules, and appreciates the willingness of DLCD to meet and answer ODOE's questions. ODOE's initial interpretation of earlier versions of the proposed rules found ambiguity in whether they would retain the ability for a developer to seek a Goal 3 exception for new solar PV facilities on class I, class II, prime, and unique soils on all lands zoned for exclusive farm use. Following discussion with DLCD staff about the proposed rules and potential effect on the Energy Facility Siting Council process, the updated version of the proposed rules clarifies that a Goal 3 exception process would be available. With this understanding of the proposed rules, ODOE believes they do not conflict with the EFSC's energy facility review process or mandate. ODOE appreciates these changes to clarify the exception process. A Goal 3 exception process provides a high level of protection for high-value farmland and soils, while still allowing decision-makers, such as counties or EFSC, an opportunity to review and decide on a proposed project application based on the specific facts of a proposed project location.

In addition to state policies that support the conservation of farmland and promotion of Oregon's agricultural sector, multiple state policies support the development and procurement

of renewable energy. The State also seeks to reduce greenhouse gas emissions to address climate change; replacing existing fossil fuel generating resources with non-emitting resources, such as solar, is an important element of the State's efforts in this area. The 2018 *Biennial Energy Report*[1] ("BER") provides comprehensive data and information on energy in Oregon, including on solar energy. Chapter 3 of the BER provides detailed information about renewable energy policies applicable in Oregon, and some excerpts are included in Attachment 1 of these comments. Chapter 2 of the BER discusses climate change and the steps the state is taking to reduce greenhouse gas emissions.

While most of the policies supporting Oregon's clean energy and climate goals have not directed facilities to specific locations within the state, there are two exceptions – which were both established in 2016 through SB 1547: the *community solar program* and the related *resource value of solar* proceedings.

Under the existing PUC rules, community solar facilities must be developed within the service territories of program participants.[2] This means that customers of Pacific Power, Portland General Electric, and Idaho Power will only be able to participate in community solar projects located within the boundaries of their service territories. The service territories of these utilities are zoned for several types of uses, including urban, industrial, forest, and exclusive farm use (among others).

PUC rules also establish capacity limitations on the program, which may not exceed 2.5 percent of a utility's 2016 peak load. This results in 92.6 MW of potential community solar developments in PGE territory, 64.2 MW in Pacific Power territory, and 3.3 MW in Idaho Power territory. PUC guidelines further establish an initial program tier that will consist of 25 percent of these capacity allocations, with a limit of 75 percent large-scale projects (defined as 360 kW to 3 MW). For example, using PGE's capacity allocation of 92.6 MW (2.5 percent of PGE's 2016 peak load), this would mean the initial program tier for PGE customers is about 23 MW (25 percent of 92.6 MW). Of this 23 MW, up to 75 percent, or 17 MW, are permitted to be large-scale projects that are 360 kw to 3 MW in size.

These large-scale community solar projects are likely to occupy about two acres and up to 20 acres, depending on the project's capacity (360 kw to 3 MW in size). It is important to note that technology advancements suggest that smaller locations will be able to generate more energy

[1] More information about the Oregon Biennial Energy Report can be found here: https://energyinfo.oregon.gov/ber/. Chapter 3 of the Report specifically discusses policy and market trends for renewable energy in Oregon: https://www.oregon.gov/energy/Data-and-Reports/Documents/BER-Chapter-3-Renewable-Energy.pdf . Chapter 2 of the Report discusses climate change and state efforts to reduce greenhouse gas emissions: https://www.oregon.gov/energy/Data-and-Reports/Documents/BER-Chapter-2-Climate-Change.pdf

[2] More information about the PUC's implementation of the Community Solar Program can be found in a recent legislative update by the PUC here: https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAH&FileName=um1930hah111115.pdf&DocketID=21222&numSequence=55

over time. For example, PV modules in 2018 are more than 25 percent more efficient than ten years ago.

Another goal of the community solar program is to provide greater access to solar energy beyond rooftop solar, in particular for low-income Oregonians who may not have the ability to install solar systems on their roofs. Developing these projects in the most cost-effective manner possible will support the statutory goal of greater access, and specifically that 10 percent of the community solar program be available to low-income participants. Implementation of the community solar program is ongoing, with the launch of the program anticipated in 2019.

The Resource Value of Solar, statutorily established as the reimbursement mechanism for community solar projects, will also recognize location-specific attributes of solar energy facilities. For example, solar facilities located near population centers may be determined to have a different value than facilities located in rural areas. The RVOS process is ongoing, with conclusion of the process and adoption of the RVOS rate expected in 2019.

Concerns over climate change, plus advances in solar energy technologies and dramatic cost reductions, have enabled Oregon utilities and communities to consider strategic clean energy and climate plans. Chapter 2 of the *Biennial Energy Report*[3] identifies 15 communities that have adopted local climate and clean energy initiatives, and a summary table is provided in Attachment 2. Oregon's nascent community solar program further enables communities to take part in renewable energy advances. The majority of EFU lands in the Willamette Valley are comprised of class I, class II, prime and unique soils. While the proposed rule changes could have an effect on how communities participate in the community solar program, the opportunity for a Goal 3 exception provides some measure of discretion and could provide a potential pathway for Oregon communities to balance protection of farmland with meeting clean energy and climate goals. However, further conversations may be necessary as the community solar program is implemented and we learn more about the market dynamics with community solar projects.

Finally, regarding the proposed repeal of the sunset provision for the wildlife habitat review process for projects sited on non-arable lands under OAR 345-033-0130(38)(h)(G), all EFSC-jurisdictional projects are required to comply with the Oregon Department of Fish and Wildlife habitat mitigation policy. This process supports the responsible siting and design of energy facilities while also protecting Oregon's fish and wildlife habitat. In addition, repeal of the sunset provision will better align the review requirements of county-jurisdiction and EFSC-jurisdictional facilities.

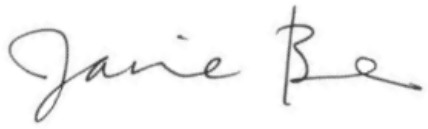
The purpose of these comments is not to take a position on the proposed rules; rather, the agency wishes to inform the Commission of the overlay of policies that could be affected by the new rules. Prior communication from DLCD staff suggests that ODOE affirmed it "can live with"

[3] See page 13 of Chapter 2, available here: https://www.oregon.gov/energy/Data-and-Reports/Documents/BER-Chapter-2-Climate-Change.pdf

some of the changes. ODOE would like to clarify that it explicitly took no position on these rule changes at the third RAC meeting in December.

Again, ODOE appreciates the opportunity to provide comments and to participate in the rulemaking process. Staff is available to provide additional information or clarification to DLCD or the Commission as needed.

Thank you,



Janine Benner
Director

Attachments:

- Attachment 1: Excerpts from *2018 Biennial Energy Report*, Chapter 3: Renewable Energy
- Attachment 2: Excerpt from *2018 Biennial Energy Report*, Chapter 2: Climate Change

ATTACHMENT 1

Excerpts from *2018 Biennial Energy Report*, Chapter 3: Renewable Energy

Chapter 3 of the *2018 Biennial Energy Report* provides detailed information about renewable energy policies applicable in Oregon, and is available here: https://www.oregon.gov/energy/Data-and-Reports/Documents/BER-Chapter-3-Renewable-Energy.pdf

Below are excerpts of Chapter 3:

- *Renewable Portfolio Standard (RPS)*: a policy requiring retail electricity providers to meet a certain percentage of their annual electricity sales with eligible renewable energy generating resources. SB 1547 (2016) increased the RPS from 25 percent by 2025 to 50 percent by 2040. This 50 percent target applies to the large investor-owned utilities that provide three percent or more of total state retail electricity sales. Consumer-owned utilities' compliance is capped at 25 percent by 2025. (BER Chapter 3, page 5).
- *Net Metering*: these systems are typically interconnected to an electric service panel and offset some of the electricity used on-site during certain hours of the day and year. Most net metered systems are relatively small and installed on rooftops however solar facilities up to 2MW (about 12 acres) may be net metered. In Oregon, all electric utilities are required to offer net metering to their customers. (BER Chapter 3, page 40).
- *Energy Trust of Oregon Incentives*: financial incentives to customers of PGE and PacifiCorp in the form of cash rebates for solar, hydro, bio power, wind, and geothermal electricity generators. The incentives help to buy down the above-market costs associated with renewable energy projects and are funded through the public purpose charge described in ORS 757.612.100. Standardized incentives are offered for residential and commercial solar projects. Incentives for large solar facilities and non-solar technologies are based on projects costs compared to the market value of the energy produced. Large incentives may be offered on a competitive basis. (BER Chapter 3, page 20).
- *Fee in Lieu of Taxes:* local jurisdictions currently have two options for levying property taxes on utility-scale solar facilities. The first is known as a centralized assessment, which aims to establish a property value in a manner similar to other power plants in Oregon. The second option is to levy a fee in lieu of property taxes, currently valued at $7,000 per megawatt of capacity per year. (BER Chapter 3, page 56).
- *Solar Development Incentive (Business Oregon):* a cash incentive paid to solar project owners for each kWh of electricity generated at a solar project in Oregon with a nameplate capacity between two and 10 MWs. Business Oregon selected 19 utility-scale solar projects to receive the SDI, representing 146.5 MWs of projects valued at upwards of $362 million and located primarily in central, southern, and eastern Oregon. (BER Chapter 3, pages 20-21).
- *Renewable Energy Development Grants (ODOE):* promotes investment in renewable energy by awarding grants to Oregon individuals, businesses, nonprofits, tribes, or other

organizations that install and operate a renewable energy system. Grants are awarded through a competitive selection process and can total up to $250,000, not to exceed 35 percent of eligible project costs. In 2018, 18 renewable energy projects, predominantly solar projects, were selected for grant awards totaling approximately $2 million. (BER Chapter 3, page 3).

- *Direct Access*: commercial and industrial entities that are customers of the state's largest IOUs may choose a retail provider of electricity other than their incumbent utility. This allows firms to seek out a new electricity supplier that can address their needs related to price or generation source. Oregon's largest solar facility, the 320 acre Gala solar project in Crook County, was developed through the direct access program. While there is no indication that the majority of Direct Access customers have historically chosen to procure renewable resources, there are a few noteworthy new entrants to the program for whom sourcing renewable energy has been one of the main motivations. (BER Chapter 3, page 17).
- *Green Tariff*: allows commercial and industrial customers to voluntarily purchase RECs bundled with the corresponding renewable energy from specified projects within a utility's service territory. As of February 2018, 21 green tariffs in 15 states have been approved by their respective PUCs. A green tariff, commonly referred to as a voluntary renewable energy tariff, or VRET, is not currently an option in Oregon. However, both PacifiCorp and PGE have worked with the Oregon Public Utility Commission (OPUC) to develop a program since 2014 and PGE has an open docket at the OPUC for a Green Tariff Program, where stakeholder discussions are ongoing. (BER Chapter 3, page 19).
- *Federal Incentives:* the two main federal incentives have been the Investment Tax Credit (ITC) and the Renewable Energy Production Tax Credit (PTC). The ITC provides a one-time tax credit based on the investment costs to develop a new solar energy project. For residential and commercial solar PV projects, the ITC stays at 30 percent for projects that have started construction by 2019, and steps down to 26 percent for projects begun in 2020 and then to 22 percent for those begun in 2021. The residential ITC sunsets after 2021 while the commercial ITC drops to 10 percent and continues at that level. (BER Chapter 3, page 22).
- *Public Utility Regulatory Policies Act (PURPA):* federal law that requires utilities to buy output from qualifying small renewable generators and cogeneration facilities ("qualifying facilities") at the utility's "avoided cost" of procuring that energy elsewhere. (BER Chapter 3, page 4).
- *Community Solar:* state law directed the OPUC to establish a program that enables owners and subscribers of a community solar project to share in the costs and benefits of the project. The program applies to customers of PGE and PacifiCorp [and Idaho Power] and enables subscribers to realize electric bill savings associated with a share of a community solar facility. The program is still in development at OPUC and has not yet resulted in any projects. Also, community solar projects have been built in Oregon outside of the OPUC community solar program. (BER Chapter 3, page 48).
- *Resource Value of Solar*: an analysis to determine the net costs and benefits that distributed solar facilities bring to the ratepayers of Oregon's investor-owned utilities. The OPUC currently has four dockets dedicated to examining the RVOS. (BER Chapter 3, page 49).

Other parts of the BER discuss *Integrated Resource Planning (IRP*), which is a two year planning process that requires utilities to identify all potential resource options, both demand-side and supply-side resources, to meet future loads. (BER Chapter 6, page 4). See also: Oregon Public Utility Commission website about IRPs (https://www.puc.state.or.us/Pages/electric_gas/Integrated-Resource-Plans.aspx).

ATTACHMENT 2

Excerpt from 2018 Oregon Biennial Energy Report, Chapter 2: Climate Change, page 13

https://www.oregon.gov/energy/Data-and-Reports/Documents/BER-Chapter-2-Climate-Change.pdf

Table 2.1: Jurisdictions in Oregon Taking Climate Change Actions

✓ = complete → = in progress	GHG Inventory	GHG Mitigation Goal	Climate Adaptation Goal	Focus Areas for GHG Mitigation: Renewable Energy	Transportation & Land Use	Buildings	Materials Management	Carbon Sequestration
Ashland	✓	✓	✓	✓	✓	✓	✓	
Beaverton	✓	Carbon neutral by 2050; 1.5°C goal	→	✓	✓	✓	✓	
Bend	✓	✓	→	→	→	→	→	
Clackamas County	✓	80% reduction by 2050		✓	✓	✓	✓	
Corvallis	✓	✓	✓	✓	✓	✓	✓	
Eugene	✓	Carbon budget for city residents consistent with 350 ppm in atmosphere by 2100, requiring an annual average emission reduction of 7.6%		✓	✓	✓	✓	
Forest Grove					✓	✓	✓	
Gresham	✓	→					✓	
Hillsboro	✓	✓		✓	✓	✓		
Hood River County	✓	Replace 30%, 50%, and 80% of fossil fuel power with renewable energy by 2030, 2040, and 2050 compared to 2016	✓	✓	✓			
Lake Oswego	✓		→	✓	✓	✓	✓	
Milwaukie	✓	Carbon neutral by 2050	✓	✓	✓	✓	✓	✓
Portland and Multnomah County	✓	80% reduction from 1990 levels by 2050	✓	✓	✓	✓	✓	✓
Salem	→	✓			✓	✓		
Washington County	✓			✓	✓	✓	✓	

Oregon
Kate Brown, Governor

Department of Agriculture
635 Capitol St NE
Salem, OR 97301-2532

Item 6
Exhibit 2-Revised
Public Comment



January 17, 2019

Oregon Land Conservation and Development Commission
635 Capitol Street NE, Ste. 150
Salem, Oregon 97301

Subject: Proposed Rules - Solar Power Generation Facilities on High-value Farmland

Dear Commissioners:

For over 45 years, Oregon has worked to ensure that our farm and ranch land is protected for the benefit of the state's natural resources and economy. With agriculture accounting for 13 percent of the state's GDP, having a vibrant agricultural industry is critical for a strong Oregon economy.

As the Commission knows well, agriculture is both land and soil dependent, which limits the options where farm use may happen. The protection of highly productive agricultural lands, taking into account all locational factors, is critical to our farming and ranching sector and the communities they support.

The Oregon Department of Agriculture (ODA) appreciates the ongoing discussions around the siting of solar energy facilities on agricultural land. Thank you for including ODA in the membership of the Land Conservation and Development Commission (LCDC) Solar Rulemaking Advisory Committee (RAC) and responding to the State Board of Agriculture's concerns and to those of many others within the agricultural community by initiating the current rulemaking process. ODA recognizes and appreciates the challenge of balancing the competing priorities of supporting the expansion of renewable energy and protecting the state's natural resource lands. We recognize that energy produced from renewable resources is an important part of the future of our state and meeting the state's climate goals.

At the same time, protection of agricultural lands also supports the state's goals to mitigate and adapt to climate change. Agricultural lands provide important mitigation and adaptation benefits such as flood water storage, carbon sequestration in the soil, and habitat for fish and wildlife under changing climate conditions. We believe that the work done by the RAC and the proposed draft rule is an excellent start. However, ODA remains concerned that highly productive agricultural lands may not be adequately protected and recommend the Commission continue to monitor the development of solar on agricultural lands and revisit should the rules not adequately protect agricultural lands from non-farm uses.

The protection of agricultural capability Class I and II, prime and unique soils, as proposed in the draft rule, is a positive step but only begins to define where Oregon's highly productive agricultural lands are found. Many of Oregon's highly productive agricultural operations can be found on lands outside the footprint of Class I and II, prime and unique soils. ODA hopes to continue this discussion in the future as it relates to defining what "highly productive" agricultural lands are beyond Class I and II, prime and unique soils.

Additionally, the concept of "dual use", that is to say farming amongst developed solar facilities, has been presented for the Commissions consideration in lieu of precluding development on high-value farmland. Farm use located amongst solar energy structures would not mitigate the problems that the

nonfarm development presents to agriculture. While some farm use might be able to occur, the development of solar structures would undoubtedly limit the range of farming practices, the intensity of production, the diversity of crops that could be grown and the ability of area farmers and ranchers to purchase, lease or rent viable agricultural lands at agricultural land values. Given the broad capabilities of Oregon's highly productive agricultural areas, ODA is concerned that "dual use" cannot replace the limited amount of lands available to Oregon agriculture.

ODA supports the provisions of the current LCDC temporary rule being made permanent. The temporary rules have done a good job at addressing definitional issues that had been problematic and should remain in place.

Again, ODA greatly appreciates the opportunity to participate in the rulemaking process and provide these comments. ODA looks forward to working with the Commission and your staff in the future to ensure farm and ranch land remains a resource for generations to come.

ODA staff are available should the Department of Land Conservation and Development or the Commission have additional questions.

Sincerely,

Alexis M. Taylor
Director

Cc: Department of Land Conservation and Development

State Board of Agriculture



January 17, 2019

To:

Land Conservation and Development Commission (LCDC)
Agriculture Building
635 Capitol St. NE Salem, OR 97301

CC:

Jim Rue, Director, Department of Land Conservation and Development

Jason Miner, Natural Resources Policy Manager, Office of Governor Kate Brown

Amira Streeter, Natural Resources Policy Advisor, Office of Kate Brown

Kristen Sheeran, Energy and Climate Change Policy Advisor, Office of Kate Brown; Director of Carbon Policy Office

Jon Jinings, Department of Land Conservation and Development

Rob Hallyburton, Department of Land Conservation and Development

Alexis Taylor, Director, Oregon Department of Agriculture

Re: Comments on draft amendments to OAR 660-033-0130

Dear Chair Lidz and Members of the Commission:

I appreciate the opportunity to comment on this matter. My husband and I own Atticus Wine and for the last seventeen months we have been actively working to protect our home, our family, our business and our community from the unnecessary proliferation of commercial solar facilities on high-value farmland. We have been touched directly by this issue and we have invested a lot of time and money to educate ourselves and to fight for what we believe in. Recently, in *Yamhill Creek Solar vs. Yamhill County*, the Court of Appeals affirmed a decision from the Land Use Board of Appeals (LUBA) in favor of protecting the county's high-value farmland. In turn, the LUBA decision had affirmed that the County had correctly balanced its comprehensive plan goals and policies to protect high-value farmland.

The application that was the subject of the court case was for a 12-acre facility that was proposed to be built in the Yamhill Carlton American Viticultural Area (AVA), next to our home and adjacent to our vineyard. We believe that the draft amendments to OAR 660-033-0130 do not go far enough. We urge you to please take a further step and prohibit commercial photovoltaic solar projects on all high-value farmland consistent with the definition of high-value farmland under ORS 195.300 to ensure the protection of Class I-IV soils and our AVAs. There has been substantial, fact-based testimony provided during this rulemaking by many individuals and other stakeholders to establish that there is no reason why our farmland should be displaced for an industrial-type use.

As per LCDC's direction, the purpose of the current proposed amendments are to provide appropriate protection for high-value farmland while ensuring continuation of a robust solar-energy industry in Oregon. In a joint-agency letter to the Governor's office in late 2017, where concerns about the existing solar rules were expressed and one of the primary reasons for this rule-making, a similar goal was stated when referencing the original solar rules that were adopted in 2011:

> "the rule was specifically designed to encourage solar developers to select sites with the poorest capability for commercial agriculture…" (Attachment 1, p.2).

In that same letter, the governor was advised of the future Rules Advisory Committee (RAC) that would take place this last fall:

> "DLCD proposed research and rulemaking to address the concerns of siting solar on lands zoned for EFU. The rulemaking process will include an evaluation of whether the existing solar rule does what it was intended to do - protect agricultural land, especially high-value farmland" (Attachment 1, p.4).

If you only protect class I-II, prime and unique soils you are not fully addressing the original goal that you set for yourselves. You will continue to leave considerable tracts of AVA land and other important soils unprotected. Leaving AVA lands available for an industrial-type use such as commercial solar instead of growing wine grapes or other valuable crops is inconsistent with the goal to encourage solar developers to select sites with the poorest capability for commercial agricultural and it does not eliminate the concern raised in the agency letter.

During the RAC hearings and in previous written submissions, various members of the solar industry referenced the Governor's Climate Report (Report) as evidence that you need to allow them to continue building commercial solar facilities on high-value farmland. Mrs. Hughes, from Renewables Northwest, specifically said that the proposed language was inconsistent with the Report (Attachment 2, p.3). However, as pointed out in the staff report, while in the Report the Governor is declaring her commitment to renewable energy, she also explicitly says that agricultural lands need to be kept in production:

> "Governor Brown is committed to maintaining and enhancing the health and viability of our working and natural lands in the face of climate change. This includes: …working with landowners, producers, and stakeholders to keep agricultural lands in production…" (Attachment 3, p.26)

Furthermore, the Report also calls out the importance of our land use and the protection of our farms from development:

> "Reducing greenhouse gas emissions, creating climate-resilient communities and growing our economy are not mutually exclusive goals. We have a strong legacy of environmental stewardship in Oregon, and this history has shown us that well-designed programs can deliver public health and environmental benefits while facilitating a strong economy. Oregon has already taken important steps to reduce climate emissions and build a clean energy economy. Some of the foundational legislation addressing climate change in Oregon includes:
>
> • Land use: Oregon's nationally renowned land use planning program (SB100) laid the groundwork for mitigation and adaptation in Oregon for 45 years by creating dense, livable communities and protecting farms, forests, and natural areas from development" (Attachment 3, p.7-8).

During the last RAC hearing in December 2018, Mrs. Hughes also shared a table that illustrated the Oregon Solar – Potential Buildout and Policy Goals (Attachment 4). Although the information in the table only includes estimates, in reviewing the megawatt (MW) column and the Notes, the conclusion is obvious. The participants in the RAC from the Solar Industry, who seem to be primarily interested in building 12-acre commercial solar facilities on high-value farmland, have presented a case that puts them as key agents of change to be able to meet Oregon's clean energy targets. It seems that the reality is that neither Portland General Electric (PGE) nor Pacificorp (PAC) need these 12-acre commercial solar facilities on high-value farmland to meet their targets. Moreover, PGE and PAC will achieve those goals without the need to displace high-value farmland.

PGE, by their own account, has stated that they have already met their renewable energy targets. Moreover, information in PGE's Integrated Resource Plan counsels against conversion of farmland for this use. According to PGE's 2016 Integrated Resource Plan:

> "The Solar Photovoltaic Capacity Standard is a legislative mandate that by January 1, 2020, PGE must own or contract to purchase 10.9 MW of solar PV capacity. Individual solar systems must be between 500 kW and 5 MW in size. PGE's existing portfolio meets the requirements with resources such as Baldock Solar, Bellevue Solar, Yamhill Solar, Outback Solar, and Steel Bridge Solar." Attachment 5.

Furthermore, The Oregonian reported on PGE's ability to meet this legislative mandate a year ago:

> "Both PGE and PacifiCorp have been generating more green power than required for years. As a result, they've built up huge banks of renewable energy credits that can be used to comply with the state mandates in years when they don't generate enough green power. Utilities successfully lobbied for those long-lived, bankable credits as a kind of compliance shock absorber. But PGE's bank of credits is now so big that it can satisfy the increasing mandates until 2029 or 2030 without purchasing any more physical resources." Attachment 6.

Contrary to what Mrs. Hughes and her colleagues stated, a prohibition of commercial solar facilities on high-value farmland will not affect the goals of the Report or the mandates to increase our clean energy in Oregon. You will also not be handicapping the Solar Industry as there are plenty of opportunities to expand the footprint of solar through residential, commercial, and industrial lands that are appropriately sited away from high-value farmland. Adopting stronger protections for high-value farmland will allow you to continue the state's legacy of strong land use policy that protects our farmland for generations to come.

Finally, regarding the concept of dual use, I want to urge you to be cautious. Having commercial solar panels co-exist with apiaries or with sheep or other forms of agriculture may seem to fit the bill of innovation but it is something that should be properly tested before including it as part of a state level rule. There are too many open questions with this approach and an overwhelming lack of ability to enforce the farm use component at a local county level. To include it as part of the rule is irresponsible.

As I have stated before, removing land from high-value farmland supply - soils used to grow crops, including wine grapes – should never be an option. New guidelines should ensure that we preserve high-value farmland for agricultural production and that we preserve the beautiful character of our rural communities.

Thank you,

Ximena Orrego
Atticus Wine
20501 Russell Creek Rd.
Yamhill OR 97148

Oregon
Kate Brown, Governor

Department of Land Conservation and Development
Oregon Department of Agriculture
Oregon Department of Fish and Wildlife
Oregon Department of Energy

November 2, 2017

To: Jason Miner, Natural Resources Policy Manager to Governor Brown
Lauri Aunan, Natural Resources Policy Manager to Governor Brown

Cc: Ruchi Sadhir, Energy Policy Advisor to Governor Brown

From: Department of Land Conservation and Development, Oregon Department of Agriculture, Oregon Fish and Wildlife Department, Oregon Department of Energy

Re: Solar Photovoltaic Project Siting Briefing

We understand that questions have been raised about solar siting in Oregon, particularly solar siting on farmland. Each of our agencies has a role in siting solar photovoltaic (PV) projects in the state. This memo summarizes concerns that have been raised among agencies and summarizes the current status of the Department of Land Conservation and Development (DLCD) solar siting rulemaking. Our exercise in the rulemaking is to evaluate whether the current rules are directing more solar development on less productive farmland and away from important habitat. Our agencies are coordinated through monthly interagency meetings facilitated by the Department of Energy (ODOE). The agenda items at the monthly meetings include discussion of recent solar PV siting applications and agency data collection projects, including the total number of applications and GIS mapping to analyze the locations.

Background

Solar developers in Oregon may apply for projects on lands protected for Exclusive Farm Use (EFU) in one of three ways.

1. The largest projects fall under the jurisdiction of the Energy Facility Siting Council (EFSC).[1] Generally these such projects are larger than 100 acres on cropland or 320 acres on non-arable land. An EFSC project requires a complex and extensive application that is submitted to ODOE who manages the process.
2. Smaller projects are under county jurisdiction, and may apply for a conditional use permit under the DLCD solar rule and the local zoning ordinance. Such projects must be less than 12 acres (if high-value farmland), 20 acres (if arable cropland), or 320 acres (if nonarable land). This is the simplest of all three processes.
3. Finally, projects that are larger than the sizes allowed under the DLCD solar rule, but do not trigger EFSC jurisdiction, may apply for an "exception" to the statewide planning goal to protect farmland. An exception is a detailed process involving multiple public hearings and requiring the local jurisdiction to amend its comprehensive plan.

The current solar siting rules were initiated following the establishment of the "wind rule" in 2009 and after observing an increased interest in developing utility scale photovoltaic solar projects on lands protected for agricultural activities. To develop a balanced approach to meet sometimes competing policy objectives of farmland protection, wildlife habitat protection, and PV siting, DLCD relied on the assistance of a Rules Advisory Committee (RAC), which included a diverse range of local government, state agency, energy, agriculture and NGO stakeholders. The solar rule was adopted in October 2011.

The solar rule created specific guidance for solar projects by establishing, among other things: multiple safeguards to reduce the possibility for adverse impacts to commercial farming and ranching operations, authorizing larger footprint sizes on lands with lower agricultural production capacity and requiring special consideration for wildlife habitat. In other words, the rule was specifically designed to encourage solar developers to select sites with the poorest capability for commercial agriculture and the lowest value for wildlife habitat. (Some of the habitat considerations will sunset in 2022.)

Many solar projects have been approved on all types of farm and rangeland in the six years since the rule has been in place. Naturally, some projects have been smaller and some larger. Only one project has elected to go through the EFSC process and its review has yet to be completed. Therefore, nearly all projects have been approved by local governments with some projects utilizing the plan amendment exceptions process and many using the conditional use process set forth in the solar rule. During this time concerns have been raised on both sides of the siting issue.

Recent Court Opinion

Land Use Board of Appeals (LUBA) issued an opinion and order on October 27, 2017 reversing the Jackson County approval of an 80-acre solar PV facility on high-value farmland. Because the facility was proposed for high-value farmland and was greater than 12 acres, it was approved as a "reasons exception" to Statewide Planning Goal 3 (Agricultural Lands). LUBA reversed the county's decision for two reasons. One, LUBA explained that Goal 13 (Energy Conservation) does not require a local government to promote the development of renewable energy, and therefore is not a "reason" to use high-value farmland. Two, LUBA found that when local governments conduct a solar siting alternative analysis the comparative advantages of proximity to an energy facility (a substation, in this instance) within a UGB does not justify an exception to Goal 3. The energy facility must also be located on rural land, and the alternatives analysis must consider other substations that have capacity or suitable points of connection.

The LUBA ruling will help inform the LCDC rulemaking by clarifying how the exceptions process properly operates with regard to solar proposals.

Concerns Raised Through Agencies

ODOE, ODA and ODFW have heard similar concerns from stakeholders and experienced some challenges with the rules. Because the agencies depend on the DLCD existing solar PV siting rules they have identified issues that may need attention or further clarification. The issues raised are framed as questions below with brief descriptions for context.

1. **Are the jurisdictional thresholds for siting solar PV projects encouraging solar developers to select sites with the poorest capability for commercial agriculture?**

   The EFSC solar PV thresholds were changed from megawatt capacity to acreages during the 2013 legislative session based on the significant footprint nature of these facilities. The legislature decided there should be a lower acreage threshold for an EFSC-led review of solar PV projects proposed to be located on high-value farmland and productive farmland (100 acres), and a higher acreage threshold for facilities proposed on other land (320 acres). Like the LCDC rules, these thresholds were designed to encourage solar developers to select sites with the poorest capability for commercial agriculture. What was not anticipated when these thresholds were established was the proliferation of solar PV projects on less than 100 acres located on high value or productive farm ground, and thus not EFSC jurisdictional. It was also not anticipated that so many PV projects on nonarable land would seek to avoid EFSC jurisdiction. The unintended consequence has been a proliferation of 319-acre PV projects fragmenting the wildlife habitats of eastern Oregon without certainty in offsetting fish and wildlife habitat losses.

2. **What constitutes a single solar PV project?**

   Over the last decade there was a clear pattern of wind projects barely below the state jurisdictional threshold, in close proximity to other projects that were also barely below the state jurisdictional threshold and owned by the same company. The result was that companies could avoid the time and expense of an ESFC application by siting what amounted to a single large project through applying to county decision makers for two side by side projects. The side by side projects functioned as a single development and were distinct only in name and application number. Although LCDC's solar rule require 1,320 of separation for individual facilities there is concern about a similar emerging pattern with solar PV projects.

   While the LCDC solar rules define what constitutes a "Photovoltaic solar power generation facility", no such definition resides in EFSC statutes or rules provide a definition for a "single energy facility," and as such, it is a subjective decision regarding what combination of shared facilities, shared ownership or shared operations could result in multiple smaller projects being considered a single project that is within EFSC jurisdiction. By staying within county jurisdiction, a developer can avoid the higher level review that is required through the process. By creating serial solar PV projects that are each just under 320 acres, a developer may also avoid having to go through the goal exceptions process previously described.

3. **What is the cumulative effect of natural resource and habitat loss from solar development? Should the rules include a required assessment of cumulative impacts of multiple solar PV facilities on resource land and wildlife habitat?**

   ODA and ODFW have limited regulatory authority regarding land use decisions that affect farmland, fish and wildlife. Therefore, the agencies rely on local and state compliance with the land use planning goals to consider natural resources, which ensures the protection and enhancement of Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations.

While commercial-scale solar development is an essential component of Oregon's renewable energy portfolio, it is not without its own environmental costs. Solar developments cause localized loss of farmland and wildlife habitat, often resulting in fragmentation of the larger landscapes needed by many wildlife for movement, raising young, and overwinter survival. Current rules do not require local jurisdictions to assess cumulative impacts or limit the conversion of high value farmland and wildlife habitat and statute does not adequately address the cumulative impacts of such developments on agricultural operations in a given area.

Generally for fish and wildlife habitat to be considered it needs to be on an acknowledged inventory on a local plan. Most local comprehensive plans have not been updated since DLCD acknowledgement in the 1980s and as a result the best available fish and wildlife habitat data is not always considered in the local plan criteria when evaluating land use actions. This can create challenges to evaluate the cumulative losses, and limits opportunities for more streamlined project review when fish and wildlife habitat impacts are minimal.

There have long been concerns expressed by the agricultural community, that the applicable statute, ORS 215.296, needs more definition. This is also an issue in the ongoing Supreme Court case in Yamhill County (*Stop the Dump*). The agricultural community is suggesting here that the current standard may not be enough when dealing with land consumptive nonfarm uses such as solar farms.

4. Are the alternative analysis considerations strong enough to protect high-value farmland, high quality soils and sensitive wildlife habitat?

County-level solar proposals have established a process for coordinating on potential wildlife conflicts and concerns with ODFW. However, the current LCDC rule does not provide the certainty in achieving no net loss of habitat as the EFSC siting standards provide. The LCDC rule does not require a thorough alternatives analysis to consider siting the solar facility to avoid impacts to resource land or sensitive wildlife habitat. If there are significant impacts to wildlife habitat, there are no assurances that mitigation will be achieved, since mitigation is not a requirement and the county has the final decision on if mitigation is necessary.

DLCD Active Rulemaking

The Land Conservation and Development Commission (LCDC) approved rulemaking related to solar siting on high value farmland as part of its 2017-19 Policy Agenda. Over the last several years, DLCD staff and stakeholders have recommended the review of the solar siting rules. Additional influencing factors were the Board of Agriculture letter to LCDC to consider additional solar siting rulemaking and the introduction of HB 3050, which ultimately did not pass during the 2017 legislative session. In lieu of a legislative workgroup, DLCD proposed research and rulemaking to address the concerns of siting solar on lands zoned for EFU. The rulemaking process will include an evaluation of whether the existing solar rule does what it was intended to do - protect agricultural land, especially high-value farmland. DLCD intends to initiate rule making and a RAC in the spring of 2018 and adopt rules by the end of the year, in advance of the 2019 session.

In preparation for the upcoming rulemaking project the department is conducting intra-agency scoping exercises and participating in interagency meetings hosted by ODOE, which also include Oregon Department of Agriculture (ODA) and the Oregon Department of Fish and Wildlife (ODFW). The scoping includes identifying data and research needs to support rulemaking efforts.

The department believes the scheduled LCDC solar siting rulemaking should be part of an overall statewide conversation about how much solar development is expected or desired in Oregon and where utility scale photovoltaic solar siting is preferred to occur. DLCD will consider stakeholder and partner agency concerns throughout the process and will proceed cautiously, with the intent to balance the interests.

Conclusion

Our agencies are committed to continued productive conversations about the concerns related to solar siting. Please let us know if further information from any of our agencies would be helpful.

Renewable Northwest Members

174 Power Global
3Degrees
7Skyline, LLC
American Wind Energy Association
Avangrid Renewables
Bonneville Environmental Foundation
Center for Energy Efficiency & Renewable Technologies
Clearway Energy Group
Climate Solutions
Columbia Gorge Community College
Community Renewable Energy Association
Cypress Creek Renewables
Davis Wright Tremaine LLP
DNV GL
EDF Renewable Energy
EDP Renewables
Environment Oregon
Environment Washington
Erwin Legal
Eurus Energy America
Geothermal Resources Council
Green Mountain Energy
HDR Engineering, Inc.
Idaho Conservation League
Invenergy
K&L Gates
Kapla Law PLLC
Latitude45 Associates
MAP
Montana Environmental Information Center
MontPIRG
National Grid
Natural Resources Defense Council
Neoen U.S. Inc.
NextEra Energy Resources
Northwest Environmental Business Council
NW Energy Coalition
OneEnergy Renewables
Oregon Citizens' Utility Board
Oregon Solar Energy Industries Association
OSPIRG
Oregon Tech
Orion Renewable Energy Group
Pattern Energy
Scout Clean Energy
Sempra Renewables
Solar Oregon
Spark Northwest
Stoel Rives, LLP
Sulus Solar
SunPower Corporation
SWCA Environmental Consultants
Tetra Tech
Vestas Americas
Warm Springs Power & Water Enterprises
Washington Environmental Council
WashPIRG
Western Resource Advocates

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Renewable Northwest

December 10, 2018

TO: Commissioners, Land Conservation and Development Commission

CC: Jim Rue, Director, Department of Land Conservation and Development
Janine Benner, Director, Oregon Department of Energy
Jason Miner, Natural Resources Policy Manager, Office of Governor Kate Brown
Amira Streeter, Natural Resources Policy Advisor, Office of Governor Kate Brown
Kristen Sheeran, Energy and Climate Change Policy Advisor, Office of Governor Kate Brown; Director of Carbon Policy Office
Jon Jinings, Department of Land Conservation and Development
Rob Hallyburton, Department of Land Conservation and Development

FR: Nicole Hughes, Executive Director, Renewable Northwest

RE: Comments on Draft Solar Rules

Dear Commissioners,

Renewable Northwest was invited to participate in the Rules Advisory Committee (RAC) considering the existing provisions of OAR 660-033-0130(38). The RAC was tasked with convening in October, November, and December, and DLCD Staff was to propose any necessary rule language change at a hearing in January 2019.

Renewable Northwest and other stakeholders have raised concerns over the fairness, transparency and pre-determined outcomes of the rulemaking process since its inception. These concerns have been raised vocally at meetings and directly to the Chair of the Land Conservation and Development Commission (LCDC).

The RAC was approved by LCDC to consider the following:

- Consider adopting as permanent the temporary rule adopted by LCDC on July 26, 2018, regarding the "use, occupy or cover" language applied to acreage thresholds employed in OAR chapter 660, division 33 for energy facility siting.
- Consider if minor amendments to the definition of "photovoltaic solar power generation facility" would be helpful in applying the "use, occupy or cover" language established by the temporary rule, which is proposed to be make permanent as part of this rulemaking.
- Consider whether the current provisions of OAR 660-033-0130(38) adequately protect high-value farmland. **After careful consideration of the facts the department shall either recommend that no changes are necessary or, if the department believes that the current provisions are not adequately protecting high-value farmland, propose a remedy for LCDC consideration.**

- Consider whether to retain, revise or remove the sunset date for the wildlife habitat provisions included at OAR 660-033-0130(38)(h)(F).

Draft rules were issued on December 5, 2018, which are in some cases outside the scope of the issues approved by LCDC to consider and are drastically out of proportion to any real or perceived threat to Oregon's farmland. **Importantly, the Department has failed to clearly identify how the current provisions do not adequately protect high-value farmland.**

The draft rules issued on December 5 result in the following:

- **Ban solar development on Class I, II soils** (most soils in the Willamette Valley currently fall under this classification, and the level of detailed mapping is not available to adequately microsite to consider these soils). Likewise the state has not considered how soil classifications have and will change with global warming, and conducted the necessary updates to the current maps. Finally, restrictions based on soil classifications will result in unnecessary fragmentation of agricultural lands and limit the ability of landowners to determine which tracts are the most productive on their lands.

- **Restrict solar development on Class III, IV soils under some circumstances**. This restriction has implications outside of the Willamette Valley and potentially for projects under the jurisdiction of EFSC.

- **Are not consistent with the Governor's Climate Agenda** issued on November 28, 2018.

- **Establishes more restrictive land use requirements on solar** than uses such as gravel mining, single family dwellings, and golf courses, which all have a much more intensive and permanent impact on Oregon farmland.

- **Set a 1-mile cumulative impacts zone (2,000 acres) whereby no new projects can be developed.** The existing language sets a safe harbor of 48 acres developed within a 1-mile area. This has been tested a few times and is proving to be successful. There is no justification for changing the rule to limit development within the 1-mile research area as the existing rules are adequate to protect against cumulative impacts. Furthermore, it is generally best practice to site projects as close to existing infrastructure as possible. This rule would force the construction of new infrastructure to interconnect projects, likely resulting in increased impacts.

- **Could affect existing projects** whose Conditional Use Permits are up for review, if they do not retroactively comply with the current rules.

- **Are disproportionate to the actual acreage currently impacted**, which is as follows, as prepared by Staff:

Table 1 below was provided by Staff upon request to show the current impacts to high value farmland in Oregon.

Table 1. Solar acreage as a percent of HVF

Benton County	0
Clackamas County	0.23
Lane County	0
Linn County	0
Marion County	0.10
Multnomah County	0
Polk County	0.03
Washington County	0
Yamhill County	0.07
Willamette Valley	0.05

Renewable Northwest and others supportive of responsible solar siting in Oregon have been consistent in providing requested documentation needed for evaluation of potential impacts. Our presentations and documentation provided to date have not been posted on the Agency's website for public viewing. We feel this one of many examples of how data relevant to determining the potential impacts to farmland in Oregon have been omitted from the record, resulting in confusion over what information is being used to determine that drastic limitations on siting solar projects in Oregon are needed. These omissions are misleading to the public and violate basic good government standards that Oregon Agencies should uphold. Additionally, we have requested in writing and at RAC meetings that DLCD provide evidence that farmlands are not adequately protected under the current rules and have not been provided such evidence. We highlight that Staff was directed to carefully consider the facts and determine the need to make changes to the rules based on these facts. To date there has been no information shared with RAC members demonstrating facts related to negative impacts of solar sited on farmland in the state.

Renewable Northwest also points out that the draft rules are inconsistent with the Governor's Climate Agenda dated November 28, 2018, which includes the following goals:

- Expand opportunities for residential, municipal, and commercial customers to access clean energy services from their utilities.
- Pursue climate solutions that benefit rural communities and Tribes, support working lands, and foster resilience to climate change.

Oregon's ability to meet these goals will be significantly hindered by adoption of the current draft rules. Additionally, the following existing policies and programs which are designed to address climate change and are supported under the Governor's Climate Agenda will be impacted:

- Renewable Portfolio Standard (ORS 469A.052)
- Net Energy Metering (OAR 860-039)
- Energy Trust of Oregon - incentive to offset cost of installing solar (ETO)
- Direct Access - allows customers to buy from a supplier rather than utility, while paying a utility a transition charge (OAR 860-038)

- Green Tariff - Allows non-residential customers to buy renewable energy product from a utility (pending HB 4126 (2014))
- Community Solar - allows subscribing customers to pay for solar project in exchange for bill credit - (pending SB 1547 § 22 (2016))
- Integrated Resource Planning - requires utility to plan for meeting customer demand with least-cost, least risk energy supply (OAR 860-027-0400
- PURPA - requires utility to purchase renewable energy that costs less that the utility's "avoided cost" (16 USC § 824a-3)

Finally, Renewable Northwest points out that one important voice in determining the impact on Oregon's farmland has been left out of the discussion. Landowners who support solar development and have found significant benefit to diversifying their agricultural investment in the state were not invited to participate in the RAC and have not been consulted on the draft rules. The draft rules take an important voice of Oregon's most knowledgeable land stewards out of the process and rely on perceived threats raised by a very narrow contingent of Oregon stakeholders to effectively ban the opportunity for landowners to consider development on their least productive lands. Oregon's agricultural industry relies very heavily on non-farm income, and with all the other threats to agriculture we are currently seeing, including the effects of climate change, it is not appropriate to limit a farmer's ability to utilize their land in a way that has not been demonstrated to have a negative impact on the overall agricultural economy in Oregon.

Renewable Northwest recommends that LCDC decline to adopt the current draft rules and extend the RAC process in order to gather the necessary data to demonstrate whether or not changes to the existing rules are needed, as per the original tasks assigned to Staff. Further we recommend that a landowner who represents farmers interested and supportive of solar energy be included on the RAC. Renewable Northwest also recommends oversight by the Governor's office in order to ensure a fair and transparent rule making process is followed. Finally, Renewable Northwest requests that all documentation provided by RAC members be provided on the website for public viewing and that all relevant data used to determine any proposed rule language be considered and made available to the public.

Sincerely,
Nicole Hughes
Executive Director

Oregon Climate Agenda:

A Strong, Innovative, Inclusive Economy While Achieving State Climate Emissions Goals

Kate Brown, Governor
Kristen Sheeran, Ph.D., Director, Carbon Policy Office and Governor's Climate and Energy Policy Advisor

November 28, 2018

STATE OF OREGON
Office of the Governor
KATE BROWN

Vision

Oregon has a strong, innovative, and inclusive economy that achieves the state's climate emissions goals through a complementary set of policies, including a least-cost, market-based greenhouse gas emissions pricing program.

Executive Summary

Climate change threatens our communities, our economy, our ecosystems, and our way of life in Oregon. We see the effects of climate change in record temperatures, declining snowpack, reduced summer streamflow, water scarcity, increased wildfires, and elevated public health risks. Climate change impacts every Oregonian, but our rural communities, our low-income communities, communities of color, and Tribes are especially vulnerable. Climate change also poses serious risks for many of Oregon's natural resource-based industries. Meeting the challenge of climate change and growing our economy are not mutually exclusive goals: we must do both.

Oregon has long been a national and world leader in demonstrating the Oregon Way: policies that preserve our natural environment while also supporting long-term economic competitiveness and business growth. The world is at a crossroads on climate policy, and Oregon must continue to pursue solutions that reduce emissions while creating good jobs and building a clean energy economy. The Governor's strategies for achieving her vision are:

1. Implement a well-designed market-based program to achieve our state climate emissions reduction goals at the least possible cost, while protecting our manufacturing sector and mitigating impacts and providing opportunities for low-income and rural communities, communities of color, and Tribes.

2. Hasten the pace of electrification of vehicles in Oregon by expanding electric vehicle infrastructure and incentives to support 50,000 electric vehicles on Oregon roads by 2020.

3. Decarbonize the electricity sector by achieving the state's renewable energy targets and encouraging grid modernization, while maintaining affordable and competitive electricity rates.

4. Expand opportunities for residential, municipal, and commercial customers to access clean energy services from their utilities while ensuring utility regulation supports the utility system and does not preference new customers over existing ones.

5. Maintain and strengthen strong energy efficiency investments in residential, commercial, industrial and agricultural sectors, expand the reach of energy efficiency programs to ensure all communities benefit, and improve the energy efficiency of state building codes.

6. Support world-leading industrial efficiency initiatives by Oregon's large industrial utility customers.

7. Pursue climate solutions that benefit rural communities and Tribes, support working lands, and foster resilience to climate change.

8. Create the new Oregon Climate Authority to better align state programs and expertise to achieve the state's climate policy goals.

The Governor's strategies will create new clean energy jobs across Oregon over the next five years and put Oregon on a trajectory to achieve the state's greenhouse gas reduction goals.

Background

Science

There is no doubt that the Earth's climate is warming, and Oregon is also experiencing that trend. The last three decades have been the warmest decades on record, and the five warmest years in the global record have all occurred since 2010.[1] Oregon's summers have become hotter and drier with record numbers of 90+ degree days. The Oregon Climate Change Research Institute projects average temperatures in Oregon will climb an additional 3-7 degrees Fahrenheit by mid-century under current emissions trends, or 2-5 degrees Fahrenheit if emissions level off.[2] The scientific consensus attributes the observed warming trend to increased greenhouse gas concentrations in the atmosphere from human activities, especially the combustion of fossil fuels.[3] In Oregon, transportation is the largest single source of greenhouse gas emissions, followed by electricity and natural gas.[4]

While some impacts of warming are now inevitable, every degree of additional warming we can avoid increases the livability of the planet for future generations. The international community's goal, reflected in commitments made by nearly every country in the 2015 Paris Climate Agreement[5], is to prevent the world from warming by more than 2 degrees Celsius (3.6 degrees Fahrenheit). This is the critical threshold beyond which the most serious consequences of climate change may become unavoidable.[6] Though the U.S. pulled out of the Paris Agreement[7], Oregon and 15 other states and Puerto Rico have committed to meeting their respective shares of global emissions reduction through the U.S. Climate Alliance. Together, Alliance jurisdictions represent 40% of the U.S. population and a $9 trillion economy – larger than every economy in the world except for the U.S. and China.[8]

1. National Oceanic and Atmospheric Association, Global Climate Report-Annual 2017, 2018. https://www.ncdc.noaa.gov/sotc/global/201713

2. Oregon Climate Change Research Institute, Third Oregon Climate Assessment Report, 2017. http://www.occri.net/publications-and-reports/third-oregon-climate-assessment-report-2017/

3. Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2013. http://www.climatechange2013.org/report/full-report/

4. Oregon Global Warming Commission, Biennial Report to the Legislature 2017. https://www.keeporegoncool.org/reports

5. United Nations Framework Convention on Climate Change, Paris Agreement, 2015. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

6. Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2013. http://www.ipcc.ch/report/ar5/wg1/

> **"Average temperatures in Oregon will climb an additional 3-7 degrees by mid-century under current emissions trends"**

Oregon-Specific Impacts

Climate change threatens our communities, our economy, our ecosystems, and our way of life in Oregon. We see the effects of climate change in declining snowpack, reduced summer streamflow, and water scarcity.[9] We're witnessing larger and more damaging wildfires, insect outbreaks, heat waves, floods, acidic oceans[10], and algal blooms. Rising sea levels place homes and coastal infrastructure at risk[11], while changing ocean conditions compromise the health of fisheries and marine ecosystems.[12]

Climate change is already exacting significant costs on Oregon's economy. Our tourism and natural resource-based industries, including thousands of Oregon farmers, fishermen, and shellfish growers, are already experiencing significant negative effects.[13] The state spent $100 million this year fighting wildfires, a figure which does not include the value of lost timber, infrastructure, or economic activity.[14] The closure of trails due to wildfire, cancellation of outdoor events due to heat and smoke, diminished skiing and rafting due to lack of snowfall and summer streamflow, and fishing and shellfish closures threaten Oregon's $11.8 billion tourism industry.[15]

The impacts of climate change, while experienced by nearly every

7. Originally signed by 200 counties, there were only three countries in 2017 who had not signed the Paris Agreement: Nicaragua, Syria, and the United States. Syria and Nicaragua have since signed.

8. U.S. Climate Alliance, https://www.usclimatealliance.org/

9. Oregon Climate Change Research Institute, Third Oregon Climate Assessment Report, 2017. http://www.occri.net/publications-and-reports/third-oregon-climate-assessment-report-2017

10. Oregon Sea Grant, The U.S. West Coast Shellfish Industry's Perception of and Response to Ocean Acidification, 2016. https://seagrant.oregonstate.edu/sgpubs/us-west-coast-shellfish-industrys-perception-and-response-ocean-acidification

Oregonian, pose even greater risks to vulnerable populations: rural communities, low-income communities, communities of color, and Tribes.[16] These populations may rely heavily on climate-impacted industries and natural resources, may be the least able to afford required adaptations, have fewer resources to plan for and recover from extreme weather events, and often suffer disproportionately from exposure to other pollutants.[17] Communities of color and low-income households already bear a disproportionate burden of disease and may experience cumulative health effects as climate-related disruptions increase in frequency. Climate disruptions may affect resources and habitats important to the cultural, community, medicinal, and economic health of Tribes.[18]

Particulate levels from wildfires may increase 160 percent in our region by mid-century, exacerbating risks to those with asthma, heart and lung disease.[19] When air quality deteriorates from smoke, it is children, the elderly, and those with pre-existing conditions who suffer first and most. The good news is that actions to reduce greenhouse gas emissions can produce other public health co-benefits, including improved air and water quality. The conversion to electric vehicles or biofuels, for example, can reduce exposure to diesel pollution, a known carcinogen and respiratory health risk.

Oregon's Leadership and Legacy

Reducing greenhouse gas emissions, creating climate-resilient communities and growing our economy are not mutually exclusive goals. We have a strong legacy of environmental stewardship in Oregon, and this history has shown us that well-designed programs can deliver public health and environmental benefits while facilitating a strong economy. Oregon has already taken important steps to reduce climate emissions and build a clean energy economy. Some of the foundational legislation addressing climate change in Oregon includes:

- Land use: Oregon's nationally renowned land use planning program (SB100) laid the groundwork for mitigation and adaptation in

11. Oregon Parks and Recreation Department, Climate Change Response: Preparedness and Action Plan, 2010. https://www.oregon.gov/oprd/PLANS/docs/coastal_plans/oprdclimatechangeplan_forcommission_forweb.pdf

12. Oregon Climate Change Research Institute, Third Oregon Climate Assessment Report, 2017. http://www.occri.net/publications-and-reports/third-oregon-climate-assessment-report-2017

13. Oregon Climate Change Research Institute, Third Oregon Climate Assessment Report, 2017. http://www.occri.net/publications-and-reports/third-oregon-climate-assessment-report-2017

14. Oregon Department of Forestry cited statistic, 2018.

15. Travel Oregon, http://industry.traveloregon.com/

16. Oregon Climate and Health Profile Report. 2014. https://www.oregon.gov/oha/ph/HealthyEnvironments/climatechange/Documents/oregon-climate-and-health-profile-report.pdf

17. Oregon Health Authority, Climate and Health Profile Report, 2014. https://www.oregon.gov/oha/ph/HealthyEnvironments/climatechange/Documents/oregon-climate-and-health-profile-report.pdf

Oregon for 45 years by creating dense, livable communities and protecting farms, forests, and natural areas from development.

- Energy Efficiency: The Northwest Power Act (1980) established energy efficiency as a cost-effective priority for the region, establishing Oregon's legacy as an energy efficiency leader nationwide. SB 1149 (1999) required Oregon's largest utilities to consistently invest in energy efficiency, using utility revenues collected through a public purpose charge.

- Renewable Energy: Oregon was one of the early states to adopt a renewable portfolio standard in 2007 (SB 838), when only two percent of Oregon's electricity came from renewable energy.

- CO2 Standard: In 1997, HB 3283 became the first U.S. law to specifically reduce levels of CO2 by requiring new power plants in Oregon to either reduce or offset some of their carbon dioxide emissions.

In 2007, HB 3543 established the Oregon Climate Change Research Institute (OCCRI) to advance regional understanding of climate change science, impacts, adaptation, and mitigation. HB 3543 also set specific, science-based climate emissions reduction goals for Oregon:

- Arrest the growth of emissions by 2010 (achieved)
- Achieve climate emissions levels that are 10 percent below 1990 levels by 2020 (not on track)
- Achieve climate emissions levels that are at least 75 percent below 1990 levels by 2050 (not on track)

Oregon Department of Environmental Quality produces an annual inventory of human-caused greenhouse gas emissions produced by economic sectors within Oregon. The inventory also includes emissions associated

18. Oregon Climate Change Research Institute, Third Oregon Climate Assessment Report, 2017. http://www.occri.net/publications-and-reports/third-oregon-climate-assessment-report-2017

19. Liu et al, 2016. "Particulate air pollution from wildfires in the Western US under climate change". Climatic Change 138(3–4): 655–666. DOI: 10.1007/s10584-016-1762-6

20. Oregon Department of Environmental Quality, Oregon Greenhouse Gas Sector Based Inventory. https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx

> "The impacts of climate change, while experienced by nearly every Oregonian, pose even greater risks to vulnerable populations: rural communities, low-income communities, communities of color, and Tribes"

with electricity imports that serve Oregon utility customers.[20] The Oregon Global Warming Commission uses this emissions inventory to track progress towards the state's emissions goals.[21] In its latest biennial report to the Legislature in 2017, the Oregon Global Warming Commission concluded that, despite Oregon's successes, current programs and policies are not sufficient and additional measures are needed to achieve the state's statutory emissions goals.[22]

Clean Energy Progress

Oregon has long been recognized as a national and global leader in energy efficiency. Energy efficiency reduces energy use, lowers utility system costs, saves customers' money on their utility bills, and avoids greenhouse gas emissions. Weatherization and energy efficiency improvements can also increase comfort, livability, improve public health, and lower health care expenditures, especially for low-income and rural communities. Energy efficiency is the lowest-cost energy resource available to Oregon utilities; for example, for every $1 the Energy Trust invests in energy efficiency, customers across Oregon save nearly $3.[23] Since 2002, the Energy Trust of Oregon has delivered $7.6 billion in savings on customer utility bills, while avoiding 22.8 million tons of carbon emissions. [24] Public utilities across Oregon

21. According to DEQ data, total emissions in Oregon in 2016 were 62 million metric tons of carbon dioxide equivalent. To achieve our 2050 goal, emissions need to fall to 14 million metric tons.

22. Oregon Global Warming Commission, Biennial Report to the Legislature 2017, https://www.keeporegoncool.org/reports

23. Energy Trust of Oregon, Annual Report 2017. https://www.energytrust.org/annualreport2017/

also administer their own energy efficiency programs, which contribute additional monetary savings and avoided carbon emissions.

Oregon's electrical grid is progressing toward becoming one of the cleanest in the country. A natural abundance of clean, zero-emissions hydropower provides about forty-percent of our state's electricity needs.[25] In 2010, Portland General Electric became the first utility in the country to commit to closing a modern baseload coal plant when it agreed to shut Oregon's only in-state coal plant in Boardman twenty years ahead of schedule in 2020.[26] When Governor Brown signed SB 1547, she committed Portland General Electric and PacifiCorp, our state's largest utilities, to eliminating all imported coal from Oregon electricity rates by date-certain, while doubling the amount of renewable energy required to serve Oregon customers to fifty-percent by 2040.

Recent changes in technology and the marketplace have placed a clean electricity system firmly within reach. The costs of wind and solar power have fallen dramatically over the last decade; for example, utility-scale solar costs have fallen more than seventy-percent since 2010. Onshore wind, solar, hydropower, and bioenergy-for-power are very cost-competitive, and in many markets, beating the generation costs for fossil-based electricity.[27] At the same time, the emerging energy storage technologies needed to balance intermittent resources – batteries and smart grid advancements – are rapidly improving in efficiency and price.[28] Our region also shows strong potential for hydroelectric "pumped" energy storage project. Utilities are increasingly using techniques such as demand response and direct load control to shift energy use from peak times in order to reduce the amount of needed generation. The growth and expansion of organized regional electricity markets will further lower costs and risks to customers while enabling greater integration of a diversity of energy resources. There are also opportunities to further decarbonize the natural gas grid through the addition of renewable natural gas.[29]

24. Energy Trust of Oregon, Annual Report 2017. https://www.energytrust.org/annualreport2017/

25. Oregon Department of Energy, Electricity Mix in Oregon. https://www.oregon.gov/energy/energy-oregon/Pages/Electricity-Mix-in-Oregon.aspx

26. Feldman, Stacy, "Early Closure of Oregon's Only Coal-Fired Power Plant Has National Implications", 2010. https://insideclimatenews.org/news/20100118/early-closure-oregons-only-coal-fired-power-plant-has-national-implications

27. International Renewable Energy Agency, Renewable Power Generation Costs, 2018. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2018/Jan/IRENA_2017_Power_Costs_2018.pdf

28. International Renewable Energy Agency, Renewable Power Generation Costs, 2018. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2018/Jan/IRENA_2017_Power_Costs_2018.pdf

29. The recently released Oregon Department of Energy study required under SB 334 (2017) shows substantial technical potential for the development of renewable natural gas (RNG) in Oregon and recommends natural gas utilities be permitted to purchase RNG on behalf of their customers. https://www.oregon.gov/energy/Data-and-Reports/Documents/2018-RNG-Inventory-Report.pdf

Economic Opportunity for Oregon

Oregon's emissions reduction goals reflect the state's share of global reduction efforts. But they are also an important signpost of the readiness of Oregon's economy and industries to compete in a climate-changed future. At the World Economic Forum in 2018, global business leaders identified climate change as this century's biggest business opportunity.[30] Led by China, global annual investment in clean energy exceeded $335 billion last year.[31] If positioned on the right side of this growing technological divide, Oregon can benefit from the investment fueling this global transformation. The world's economies are rapidly transitioning away from fossil fuels. Seventy jurisdictions worldwide have carbon pricing programs implemented or scheduled, representing twenty-percent of global greenhouse gas emissions. This list includes eleven U.S. states, Canada, Mexico, China, and Europe. The total value of the carbon priced under these initiatives exceeds $81 billion.[32]

The jurisdictions leading on climate change are building long-term competitiveness, creating good jobs, and improving access to affordable energy, while creating public health and environmental benefits. The clean energy sector worldwide now employs more than ten million people.[33] Nationally, the fastest growing occupations are in solar and wind power.[34] There are now more people employed in the U.S. in solar than in oil, coal, and gas combined.[35] The Pacific Coast jurisdictions of British Columbia, Washington, Oregon, and California – a region representing the world's fifth largest economy – witnessed regional economic growth of thirty-two percent since 2008, while emissions fell by six percent, demonstrating that it is possible to decouple economic growth from emissions growth. Clean economy jobs in these jurisdictions grew more than twice as fast as regional job growth overall.[36]

30. Reuters, "At Davos, Bosses Paint Climate Change as an Opportunity", 2018. https://www.reuters.com/article/us-davos-meeting-climatechange/at-davos-bosses-paint-climate-change-as-an-opportunity-idUSKBN1FE2LK

31. Bloomberg NEF, "Runaway 53GW Solar Boom in China Pushed Global Clean Energy Investment Ahead in 2017", 2018. https://about.bnef.com/blog/runaway-53gw-solar-boom-in-china-pushed-global-clean-energy-investment-ahead-in-2017/

32. World Bank, Carbon Pricing Dashboard. https://carbonpricingdashboard.worldbank.org/

33. Forbes, "Clean Energy Sector Employs More than 10 Million for the First Time", 2018. https://www.forbes.com/sites/mikescott/2018/05/08/clean-energy-sector-employs-more-than-10-million-for-the-first-time/#8a1662cb500d

34. U.S. Bureau of Labor Statistics, Fastest Growing Occupations, 2016. https://www.bls.gov/emp/tables/fastest-growing-occupations.htm

35. U.S. Department of Energy, U.S. Energy and Employment Report 2017, 2018. https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf

36. Pacific Coast Collaborative, 2018. https://pacificcoastcollaborative.org/wp-content/uploads/2018/08/PCC_ReportCard_Sept2018-email.pdf

Recent Accomplishments

In the past three years under Governor Brown's leadership, Oregon has become a leader in the U.S. and globally on reducing climate pollution and building a clean economy:

Coal to Clean Energy in SB1547 (2016)

- SB 1547 removes coal from Oregon electricity rates, effectively divesting Oregon from out-of-state coal plants.
- SB 1547 doubled Oregon's Renewable Portfolio Standard to 50%.
- SB 1547 reaffirms Oregon's commitment to pursuing all cost-effective energy efficiency and demand response.
- SB 1547 authorized community solar programs and utility investments in electric vehicle charging infrastructure.

Transit, Clean Fuels and EV Rebates in HB2017 (2017)

- The Clean Fuels Program will lower the carbon intensity of transportation fuels by 10% over 10 years. Last year alone, the program reduced emissions by nearly 1 million tons.[37]
- HB 2017 helps modernize our transportation infrastructure, including new investments in public transit, pedestrian and bike lanes.
- A new Zero Emissions Vehicles Rebate Program will accelerate the adoption of electric cars, including specific incentives for low and moderate income households.

Executive Orders: EVs and Building Efficiency

- The Governor's Executive Order on Electric Vehicles established a goal of 50,000 zero-emissions vehicles in Oregon by 2020 (18,000 today).
- The Governor's Executive Order on Efficiency calls for new state-owned buildings to be carbon neutral in 2022; all new buildings to be solar ready by 2022; and new residential buildings to "zero energy ready" starting in 2023.

37. https://www.oregon.gov/deq/aq/programs/Pages/Clean-Fuels-Data.aspx

> "Oregon can no longer wait for federal action to address carbon emissions. States must act to protect their communities and grow their economies"

These efforts are contributing to a thriving clean energy jobs economy in Oregon. There are 50,000 people employed in energy efficiency, clean fuels and clean power generation in Oregon.[38] More than 130 wind and solar companies call Oregon home. Governor Brown is committed to growing the low-carbon economy and achieving our state emissions goals through smart policies and initiatives, including a least-cost, market-based greenhouse gas emissions pricing program that aligns economic incentives in favor of clean energy solutions. Oregon can no longer wait for federal action to address carbon emissions. States and local jurisdictions must act to protect their communities and grow their economies.

Why Oregon? Why Now?

The international scientific consensus on the human causes of climate change is clear. But climate change is a global phenomenon, leading some to question the value of state action to address a global problem of this scale. While it is true that Oregon contributes only a small portion of global greenhouse gas emissions, so too does any single jurisdiction. This is why governments worldwide are pulling together to provide leadership. As discussed above, the world is rapidly transitioning away from fossil fuels and every country in the world except for the United States has signed on to the Paris Agreement to keep the increase in global temperature to below 2 degrees Celsius.

38. U.S. Energy and Employment Report, May 2018. www.usenergyjobs.org

Governor Brown believes that state and local actions to address climate change are justified on both ethical and economic grounds. As the Governor says: "Future generations will judge us not by the fact of climate change, but by how we respond to it." Oregon has a responsibility to address its share of global emissions and the economic evidence strongly suggests our economy will be better for it. Two different economic analyses commissioned by the Legislature, each examining a different approach to carbon pricing in Oregon[39], both found negligible to positive impacts on Oregon's economy under reasonable scenarios.[40] These studies correspond to findings in the economics literature broadly, which demonstrate that well designed carbon pricing programs will not adversely impact the economy.[41]

39. Macroeconomic Impacts and Design Considerations for Carbon Markets: A Literature Review, Environmental & Energy Economics, 2017. https://www.oregon.gov/deq/FilterDocs/App2LitReview.pdf

40. Economic or Emissions Impacts of a Clean Air Tax or Fee in Oregon (SB306), Northwest Economic Research Center, Portland State University, College of Urban and Public Affairs, 2014. http://www.pdx.edu/nerc/sites/www.pdx.edu.nerc/files/carbontax2014.pdf

41. Climate Change Economics. Special Issue on EMF 32 Study on U.S. Carbon Tax Scenarios; Guest Editors: A. A. Fawcett, J. McFarland, A. C. Morris and J. P. Weyant. Volume 9, Issue 1. 2018

The Governor's Strategies to Achieving Our Climate and Economic Goals

ONE: Implement a Market-Based Program to Reduce Emissions

Achieve our state climate emissions reduction goals, while protecting our manufacturing sector and mitigating impacts on low-income and rural communities, communities of color, and Tribes

TWO: Add 50,000 Electric Vehicles to Oregon Roads by 2020

Expand electric vehicle infrastructure and incentives to support 50,000 electric vehicles on Oregon roads by 2020

THREE: Decarbonize the Electricity System

Achieve the state's renewable energy targets and encourage grid modernization while maintaining affordable and competitive electricity rates

FOUR: Expand Access to Clean Energy Services

Expand opportunities for residential, municipal, and commercial customers to access clean energy services from their utilities

FIVE: Strengthen Energy Efficiency Investments

Maintain and strengthen energy efficiency investments in residential, commercial, industrial and agricultural sectors, expand the reach of energy efficiency programs to ensure all communities benefit

SIX: Increase Industrial Energy Savings and Competitiveness

Support world-leading industrial efficiency initiatives by Oregon's large industrial utility customers

SEVEN: Invest in Climate Solutions That Foster Resilience

Pursue climate solutions that benefit rural communities and Tribes, support working lands, and foster resilience to climate change

EIGHT: Create the New Oregon Climate Authority

Align state programs and expertise to acheive the state's climate policy goals

The Governor's strategies will create new clean energy jobs and put Oregon on a trajectory to achieve the state's greenhouse gas reduction goals.

ONE: Implement a Market Based-Program to Reduce Emissions

Implement a well-designed market-based program to achieve our state climate emissions reduction goals at the least possible cost, while protecting our manufacturing industry and mitigating impacts on low-income and rural communities, communities of color, and Tribes.

The state must set a gradually declining cap on emissions to achieve the state's emissions reduction goals with certainty. A market-based, cap-and-trade program will allow the state to achieve those emissions reductions at the least possible cost.

The basic construct of cap-and-trade is straightforward: large emitters either adopt technology to reduce emissions on-site or they purchase an emission allowance. The state caps the total amount of allowances economy-wide and gradually lowers the number of allowances over-time. Entities that can't reduce emissions cost-effectively will purchase allowances from entities that can attain reductions at a lower cost. The state sets the total cap on emissions at levels consistent with its goals, while the market determines where the actual reductions take place.

Cap-and-trade is an approach for reducing emissions widely supported

by economists because it aligns market incentives in favor of clean technologies, while providing regulated sectors flexibility in how they choose to comply. A federal cap-and-trade program in the 1990s reduced sulfur dioxide emissions from power plants and the associated acid rain at considerable savings.[42] Cap-and-trade programs have been adopted by many jurisdictions worldwide to address climate pollution, including Europe, China, California, Quebec, and ten Northeast states in the U.S. Oregon has the opportunity to connect its cap-and-trade program to existing programs, achieving administrative efficiencies and providing regulated sectors access to larger, established carbon markets.

Unlike a carbon tax, the goal of a cap-and-trade program is least-cost emissions reduction with certainty. A carbon tax can also reduce emissions cost-effectively, but may need to be continuously adjusted upward to drive the behavioral and technological change required to hit state emissions goals. Whereas with cap-and-trade, the cap sets a carbon budget across the economy and the cap is slowly and gradually reduced over time to achieve an emissions goal. The cap provides emissions reduction with certainty, and lets the market determine where the lowest cost reduction opportunities are. There is typically more flexibility for regulated industries under cap-and-trade unlike with with a carbon tax, where they pay the tax for every ton of emissions, or adopt technologies to reduce emissions on-site. With a cap-and-trade program, industries can reduce emissions on-site, purchase allowances from other regulated entities, purchase allowances at auction, or receive a distribution of allowances from the state. Moreover, if a jurisdiction links its cap-and-trade program to established carbon markets, its regulated sectors may access a larger market of allowances, offsets, and emissions reduction opportunities.

42. The SO2 Allowance Trading System and the Clean Air Act Amendments of 1990: Reflections on Twenty Years of Policy Innovation, Harvard Kennedy School, 2012. https://www.belfercenter.org/sites/default/files/legacy/files/so2-brief_digital4_final.pdf

A well-designed cap-and-trade program will take preventative measures to protect manufacturers in certain trade-exposed industries from competition in markets where climate emissions are not currently regulated. Once identified, sectors such as cement, pulp-and-paper, and steel could receive some free allowances to level the playing field with their competitors. Some utilities could also receive allowances to maintain competitive and affordable rates for customers. The distribution of allowances from within the state's allowance budget does not change the cap and the level of emissions reduction required economy-wide; it simply eases compliance while maintaining economic incentives to innovate and find ways to lower emissions. If the state auctions allowances, it can redirect proceeds to activities that further reduce emissions or help communities adapt to climate change impacts.

Governor Brown has identified the following priorities for a cap-and-trade program in Oregon:

• Science-based targets and innovation: The program goals should reflect the best available science and incentivize best-in-class technologies and carbon sequestration on natural and working landscapes.

•Protect vulnerable Oregonians: Protect vulnerable Oregonians from increased costs, especially low-income families, communities of color, Tribes, and people in rural areas.

•Maintain adequate cost-controls, certainty and transparency: The program must protect existing jobs and industries and provide certainty and transparency for covered sectors, including workers in those industries.

• Complement existing policies: Work alongside existing state policies to reduce emissions, transition to clean energy, and modernize our transportation infrastructure without duplicating costs.

• Link to the Western Climate Initiative (WCI): Oregon should seek to link its program to the larger, established WCI carbon market. This option could ensure greater price stability, certainty, access to wider range of emission reduction opportunities and administrative

TWO: Add 50,000 Electrical Vehicles to Oregon Roads by 2020

Hasten the pace of electrification of vehicles in Oregon by expanding electric vehicle infrastructure and incentives to support 50,000 electric vehicles on Oregon roads by 2020.

As EVs have entered the mainstream over the past several years, Oregon has consistently been a national leader in EV market share, boasting some of the highest rates of EV sales in the country. There are currently nearly 18,000 electric vehicles in Oregon[43], and in November 2017, Governor Brown established an ambitious target to reach 50,000 EVs by the end of 2020.[44] Executive Order 17-21 outlines a range of state actions to provide additional support to this growing market for clean cars. The executive order deploys more EVs in public fleets, establishes recognition programs for EV champions, helps school and transit districts deploy clean buses, and provides support to many other state programs around low-carbon transportation. The 2017 transportation package (HB2017) created one of the nation's leading rebate programs to incentivize EV purchases.

43. As of 6/30/18, there were 17,893 actively registered electric vehicles in the Oregon Department of Motor Vehicles database.

44. State of Oregon Office of the Governor, 2017. "Executive Order 17-21: Accelerating Zero Emission Vehicle Adoption in Oregon to Reduce Greenhouse Gas Emissions and Address Climate Change." Available at: https://www.oregon.gov/gov/Documents/executive_orders/eo_17-21.pdf

Governor Brown is committed to seeking innovative ways to reduce transportation emissions. The state will continue to be a national leader in EVs through successful implementation of the components of Executive Order 17-21, successful marketing of the EV rebate, collaboration with utilities, dealerships, auto manufacturers, and other private sector entities, and successful implementation of the Clean Fuels Program. Electric vehicles may play the biggest role in the near term, but hydrogen fuel cell vehicles and vehicles powered by renewable biofuels are also an important part of the Governor's vision for a low-carbon transportation system.

THREE: Decarbonize the Electricity System

Achieve the state's renewable energy targets and encourage grid modernization while maintaining affordable and competitive electricity rates.

For decades, Oregon utilities have served Oregon customers well with reliable, affordable electricity. Looking ahead, our utilities are well-positioned to deliver a wider range of clean energy services and emissions reductions to help the state meet its emissions goals. Utilities are actively investing in clean energy, energy efficiency, grid modernization, and electric charging in response to market demand and existing state policies. To hasten this transition while maintaining low rates for customers, Governor Brown supports:

• Complementing existing policies without duplicating costs: Oregon's energy efficiency programs, the renewable portfolio standard, and coal-to-

clean requirements have set utilities along a path to significant emissions reductions. Customers pay for these investments in their electricity rates. A market-based emissions trading program provides the flexibility to incentivize a faster transition to clean energy without duplicating costs, by allocating carbon allowances to utilities on behalf of their customers to account for emissions reductions already reflected in customer rates. This approach maintains market incentives, while maintaining affordable electricity rates. The cap-and-trade program also provides clear direction to the Public Utility Commission to consider regulated-climate emissions as part of its role as economic regulator of investor-owned utilities.

•Regionalization: Oregon must actively coordinate with neighboring states and utilities to ensure regulatory alignment and safeguard the emergence of regional power markets as it transitions to clean energy and implements a cap-and-trade program. The goal is to ensure that regional electricity markets can continue to enhance reliability, reduce costs, and facilitate greater integration of renewable energy resources, while providing new market opportunities for the low-carbon and hydropower resources abundant in our region.

FOUR: Expand Access to Clean Energy Services

Expand opportunities for residential, municipal, and commercial customers to access clean energy services from their utilities while ensuring utility regulation is designed to support the utility system and does not preference new customers over existing ones.

As technologies improve, residential, municipal, and commercial customers of natural gas and electric utilities increasingly seek more choices in clean energy services from their utility, including options such as rooftop solar, electric vehicle charging, renewable natural gas, carbon offsets and renewable power. These emerging green power options provide utility customers the flexibility they seek to meet their own sustainability and renewable energy goals.

Governor Brown supports expanding green power options and tariffs for residential, municipal, and commercial utility customers, provided these options do not compromise the efficiency and reliability of the utility system or impose costs on existing customers. Designed well, utility green power options can enhance the quality of utility services, continue to attract sustainability-minded businesses to Oregon, create good jobs in the clean power sector, and reduce Oregon's emissions.

FIVE: Strengthen Energy Efficiency Investments

Maintain and strengthen energy efficiency investments in residential, commercial, industrial and agricultural sectors, expand the reach of energy efficiency programs to ensure all communities benefit, and improve the energy efficiency of state building codes.

Energy efficiency is the cornerstone of a low-carbon economic development strategy and Oregon should continue aggressive efforts to acquire energy efficiency in all sectors. At the same time, Oregon needs to expand energy efficiency and weatherization programs to reach traditionally under-served communities by identifying and overcoming barriers to serving these communities. Oregon also needs to capture a wider range of energy efficiency improvements beyond the lowest cost, "low hanging fruit" measures that have already been picked. Carbon pricing can help level the playing field for energy efficiency, just as it does for renewable energy resources, by better accounting for the climate and public health costs of fossil fuels in resource decisions by utilities and other actors in the economy.

Buildings are large consumers of electricity and natural gas. In addition to increasing our efforts to update our existing buildings with energy efficiency improvements, Oregon needs stronger building codes for new construction. By adopting state-of-the-art building codes, Oregon can lock in energy savings and avoided emissions from new residential and commercial buildings for decades to come. Governor Brown's Executive Order No. 17-20 focused specifically on the built environment - residential, commercial, and public buildings across the state. Specifically, the Governor's Executive Order directs:

• Solar-ready buildings. New residential buildings should be ready for solar panel installation by 2020 for residential buildings and 2022 for commercial buildings.

• Zero-energy homes. For new residential construction, structures will need to achieve at least equivalent performance levels with the U.S. Department of Energy "Zero Energy Ready Standard" by 2023.

• High performance buildings. For new commercial construction, buildings will exceed national model energy codes and meet energy efficiency levels of high-performance standards by 2022.

• High efficiency H20. For new construction, the commercial code will require high-efficiency water fixtures by 2020, and the ability to capture and safely reuse water for irrigation or other uses by 2025.

• Building Retrofits: Calls for coordinated agency action to increase energy efficiency in existing buildings, with emphasis on affordable housing, multi-family dwellings, and buildings that are well below current building code requirements.

In these efforts, the state will demonstrate leadership by leading by example, ensuring that existing state-owned buildings operate efficiently and that new buildings operate as carbon-neutral by 2022.

SIX: Increase Industrial Energy Savings and Competitiveness

Support world-leading industrial efficiency initiatives by Oregon's large industrial utility customers.

Oregon's large industrial utility customers have pursued a variety of energy saving measures, including waste heat utilization, lighting modifications, energy management systems, energy efficient pumps, and industrial process modifications. But there is more potential to capture industrial energy efficiency savings in the market. Governor Brown supports a focused effort to reduce the energy intensity of Oregon's industries through creative partnerships and innovative approaches to identify and overcome barriers preventing the acquisition of all cost-effective energy efficiency in the industrial sector. This could include dedicating proceeds from Oregon's cap-and-trade program to help Oregon industries adopt more efficient technologies and equipment. These efforts can help Oregon industries maintain global competitiveness while reducing emissions at the same time.

In addition, Oregon should leverage existing efforts to become a global leader in industrial energy efficiency technologies. Collaborations between industry, universities, and government, such as the Oregon Manufacturing and Innovation Center, can lead to world-class innovations in advanced manufacturing, as well as new jobs and career pathways for Oregonians. Oregon's climate policy should support these and related efforts to build centers-of-excellence in green technologies here in Oregon.

SEVEN: Invest in Climate Solutions That Foster Resilience

Pursue climate solutions that benefit rural communities and Tribes, support working lands, and foster resilience to climate change.

Natural and working lands, including Oregon's farms, forests, ranchlands, grasslands, and wetlands, are vital to the health and resilience of rural communities but are threatened by the impacts of climate change. Working and natural lands also sequester and store carbon emissions at significant levels and play an important role in addressing climate change. Governor Brown is committed to maintaining and enhancing the health and viability of our working and natural lands in the face of climate change. This includes:

• Protecting the resources and habitats threatened by climate change that are important to the cultural, community, medicinal, and economic health of Tribes.

• Working with landownders, producers, and stakeholders to keep agricultural lands in production and avoid the conversion to more emissions-intensive uses.

• Providing technical and other assistance to producers looking to implement practices and technologies that improve soil health, increase productivity, and sequester carbon.

• Exploring innovative investments in working and natural lands that address water scarcity, reduce energy use, foster resilience to climate change, and increase carbon sequestration and storage.

EIGHT: Create the Oregon Climate Authority

Align state programs and expertise to achieve the state's climate policy goals.

In response to the urgency of the climate crisis and the need to better align state programs and expertise to achieve the state's climate goals, Governor Brown proposes a new Oregon Climate Authority and ceasing the operations of the Department of Energy and Carbon Policy Office. The Governor's vision is for a new entity, transparent and responsive to stakeholders and the regulated community, with exceptional domain and market expertise that is responsible for implementing the state's climate and clean energy strategies and tracking progress toward the state's climate goals. This would include the new carbon marketplace, greenhouse gas emissions reporting and accounting, energy markets data collection and analysis, as well as energy programs central to the state's climate and clean energy goals. The Governor would appoint a Director, subject to Senate approval, and work with the Legislature to appoint an advisory board and move existing energy programs to the new entity or other state agencies. By aligning state programs in this new capacity, the state can significantly reduce the Energy Supplier Assessment currently paid by utility rate payers.

TABLE 1

OREGON SOLAR - POTENTIAL BUILDOUT

Source*	Year	MWa**	MW	Likely solar?	Likely OR?	Acres***	Notes
PGE IRP - Capacity	2025	-	628	N	N	2,512	From 2019 IRP preliminary draft. Only 2 of PGE's 27 draft portfolios in 2019 IRP feature new solar; PGE's model likely to select wind, though procurement will be technology-neutral.
PGE IRP - Energy	2025	173	-	N	N	4,152	
PGE IRP - RECs	2032	422	-	N	N	10,128	
PAC IRP - Capacity	2036	-	239	Y	N	956	From 2017 IRP preferred portfolio. Capacity figure reduces 1040 MW aggregate solar addition by the 77% planned to be located in Utah. PAC modeled Southeastern OR solar.
PAC IRP - Energy	2027	0	-	-	-	0	
PAC IRP - RECs	2036	0	-	-	-	0	
PGE PURPA Queue****	2019	-	276	Y	Y	**1,104**	See footnote.
PAC PURPA Queue*****	2019	-	98	Y	Y	392	See footnote.

OREGON SOLAR - POLICY GOALS

PGE Deep Decarbonization	2050	-	5,200	Y	Y	20,800	PGE projects up to 5,200 MW central OR solar to meet deep decarbonization goals by 2050. Central OR is more attractive than Willamette Valley for solar because of higher solar energy potential. Analysis does not account for much higher likelihood of importing out-of-state solar as regional markets expand.
OSEIA Oregon Solar Plan	2027	-	4,000	Y	Y	16,000	OSEIA's plan is not cumulative but would include any of the above OR solar figures.

* Utility capacity, energy, and REC needs can be met by the same resources, hence the box around each set of rows to highlight the set of needs specific to each utility's IRP. PAC is shorthand for Pacificorp.

276 | 5800

5%

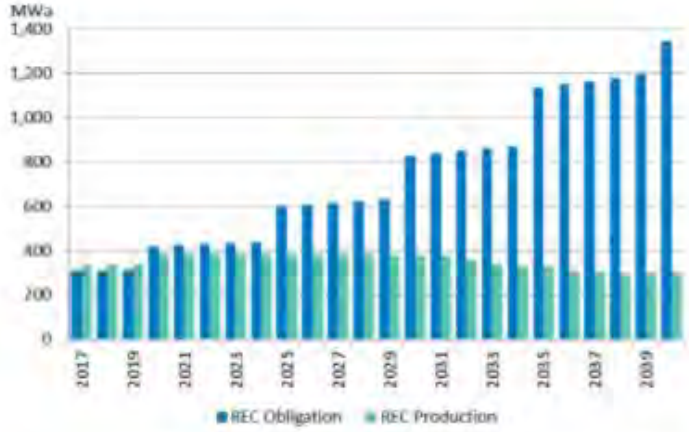
** MWa means average megawatts, and is a measure of energy production.
*** Because capacity, energy, and REC needs can be met by the same resources, acreage figures should not be aggregated. The highest acreage figure within each box represents the likely worst-case scenario for solar buildout. MWa-to-acreage conversion was determined by multiplying MWa by 24 based on PGE's suggestion that non-central Oregon solar with a nameplate capacity of approximately 60 MW translates to 10 MWa. 1 MWa x 6 MW/MWa x 4 acres/MW = 24 acres per 1 MWa.
**** PGE PURPA Queue figure derived from PGE's May 30, 2018 Small Generator Interconnection Report, with all projects labeled "withdrawn" removed from the total, rounded to the nearest MW. Note that the PGE IRP figures above are derived from the assumption that only projects with executed contracts are built. According to PGE, if even 50% of the projects without executed contracts in PGE's queue are built, the utility's resource needs go down and its REC deficit year is pushed out to 2035.
***** PAC PURPA Queue figure derived from PAC's April 24, 2018 Small Generator Interconnection Report, with all projects labeled "withdrawn" removed from the total, rounded to the nearest MW. Notably, as of 2015, PURPA projects in PAC's Queue had approximately a 10% completion rate resulting in only 1.3% of proposed MW.
Table 1 represents possible solar buildout to meet Oregon utilities' projected capacity, energy, and Renewable Portfolio Standard compliance needs, as well as their obligation to purchase power from qualifying facilities under PURPA. Community solar is effectively included because the utilities are required to account for community solar in their IRP processes, so any new community solar projects will offset resource needs identified in the table above. PGE and Pacificorp together are responsible for approximately 2/3 of Oregon's retail energy sales. It is very difficult to project the resource needs of non-utility retail energy suppliers; however, with overall load growth effectively flat in Oregon over the past decade, any solar buildout to meet non-utility resource needs is likely to be minimal. These figures also do not represent possible off-system additions such as the Prineville solar facility being constructed to power a Facebook data center. The bottom two rows reflect larger possible procurements to meet policy goals established by PGE (to move toward deep decarbonization of Oregon's energy sector) and OSEIA (to meet a range of OR policy goals through solar buildout).

Integrated Resource Plan

NOVEMBER 2016



FIGURE 5-22: PGE's projected RPS REC obligation and production[114]



PGE produces or receives RECs from qualified resources and contracts, including Biglow Canyon, Tucannon River Wind, Outback Solar, and several QF contracts. Appendix D, Existing Resources, contains information about PGE's current and contracted resources. Information about historical and projected REC production by resource is provided in PGE's Renewable Portfolio Implementation Plan (RPIP). The latest plan was filed in July 2016.

RPS legislation established provisions for "banking" RECs to allow RECs produced in one year to be retired in a later year. PGE's REC bank balance at the end of 2015 was approximately 896 MWa.[115] PGE discusses its REC bank in Chapter 10, Modeling Methodology, as part of the Company's RPS compliance strategy. REC banking provisions under SB 1547 are described in Chapter 3, Planning Environment.

5.4.1 Solar Photovoltaic Capacity Standard

The Solar Photovoltaic Capacity Standard is a legislative mandate that by January 1, 2020, PGE must own or contract to purchase 10.9 MW of solar PV capacity. Individual solar systems must be between 500 kW and 5 MW in size. PGE's existing portfolio meets the requirements with resources such as Baldock Solar, Bellevue Solar, Yamhill Solar, Outback Solar, and Steel Bridge Solar. Appendix D, Existing Resources, describes PGE's solar resources.

5.5 Energy Load-Resource Balance

The energy load-resource balance (LRB) compares the expected energy availability of PGE's resources (generating plants, contracts, and EE) to the expected annual average load under normal hydro and weather conditions for each year of the IRP analysis.

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[114] PGE's RPIP, July 2016.

[115] PGE's RPIP, July 2016.

OREGON BUSINESS NEWS

State regulators push back on PGE's green energy plan

Updated on August 12, 2017 at 7:02 AM Posted on August 12, 2017 at 7:00 AM

PGE's Tucannon River wind farm in Washington, with 116 turbines and a total installed capacity of 267 megawatts, generates enough electricity annually to cover about 84,000 customers.

PGE's Tucannon River wind farm in Washington, with 116 turbines and a total installed capacity of 267 megawatts, generates enough electricity annually to cover about 84,000 customers. (Courtesy of PGE)

Comment 18 shares

By **Ted Sickinger**, tsickinger@oregonian.com
The Oregonian/OregonLive

Portland General Electric officials entered a meeting in Salem this week intent on persuading state regulators that it makes economic and environmental sense to move quickly on a massive new wind farm to meet the state's expanded green energy mandates.

The utility was already playing defense. Facing intense blowback from environmental advocates, ratepayer groups and regulatory staff, it had abandoned the centerpiece of the resource plan it had submitted to the Public Utility Commission in November. That would potentially have had it building two new gas plants in Boardman to replace the coal-fired plant it will close there in 2020.

Now it was looking to salvage the other big-dollar component of the proposal, the most likely result of which would involve building or buying the output from a $1 billion wind farm in the Columbia River Gorge. And it was facing more opposition from the commission staff and ratepayer advocates.

By the end of the six-hour session, the three commissioners were unmoved. Though they left the door open for the utility to submit a new, more incremental renewables plan, they declined to give their blessing to the existing one. And they made it clear they agreed with staff.

"This does not mean that staff is opposed to renewables," JP Batmale, a senior utility analyst told commissioners Tuesday. But "PGE did not present a persuasive case to staff that the specific, take-it –or-leave-it proposal is the least-cost, least-risk for ratepayers at this time."

The decision underscores the difficulty of planning for future electricity needs at a time of rapid and accelerating change in the industry. Even as state and local leaders pursue policies to more aggressively cut greenhouse gas emissions, it's unclear how those efforts mesh with utilities traditional regulatory framework and their need to keep the lights on.

The decision could have big implications for PacifiCorp, which unveiled a plan earlier this year to invest $3.5 billion in wind energy and new transmission lines in Wyoming. Regulators acknowledgement of such resource plans aren't binding on the utilities. But without that blessing, the investments are riskier when it comes to recovering costs in future rate cases.

Bottom line, staff and the ratepayer groups contend that PGE simply doesn't need another wind farm right now, particularly in the Gorge.

Wind farms produce lots of energy, but they are inherently unpredictable, meaning they can't be relied on to fill the capacity hole that will be left when PGE closes the Boardman coal plant. During the region's recent heat wave, when utilities were running their fossil fuel plants hard to meet soaring demand, wind farms in the Gorge were often producing little to no electricity.

In the next two decades, state mandates will force PGE and PacifiCorp to meet a steadily larger percentage of customer demand with renewable energy, which will require more investments. Last year, state lawmakers doubled those requirements, which now top out at 50 percent of their customers' energy use by 2040.

The utility maintains that it makes sense to act now to capture federal production tax credits before that program begins to sunset in 2020. The credits, it has stressed, would cover 25 percent of the project's costs, making near-term action a low risk approach.

But staff and others were dubious. Ongoing price declines and technological advances mean delaying big investments could be a better strategy, even if it means forgoing the tax credits, they said. They're also wary of PGE concentrating more of its renewables portfolio in the Gorge, as that makes its energy supply more dependent on weather conditions in a single area.

But there's a more fundamental issue at work. Both PGE and PacifiCorp have been generating more green power than required for years. As a result, they've built up huge banks of renewable energy credits that can be used to comply with the state mandates in years when they don't generate enough green power.

Utilities successfully lobbied for those long-lived, bankable credits as a kind of compliance shock absorber. But PGE's bank of credits is now so big that it can satisfy the increasing mandates until 2029 or 2030 without purchasing any more physical resources.

Bob Jenks, executive director of the Citizens' Utility Board, described PGE's proposal as "problematic" given the remoteness of the actual compliance need. He said the company might have been better off proposing some big solar projects in eastern Oregon, perhaps with associated storage, as they would have provided a bigger contribution to its capacity needs.

Choosing "what resource to build and when is the key to making this transition in an affordable way. Making the right investments at the right time ... We don't believe Gorge wind at this time is the right investment."

PGE warns that backloading its renewables investments into the decade before 2040 will lead to rate shock. Moreover, some customers, including the city of Portland and Multnomah County, already are pushing the utility go beyond the state requirements and supply all their electricity with green power by 2035.

Those political, regulatory and customer pressures are reinforced by the business reality that renewables investments are now the most promising avenue for PGE to grow its asset base and earnings. Collectively, they're converting the company – publicly at least – into something of a climate activist.

Last weekend, PGE chief executive Jim Piro and his named successor, Maria Pope, authored an opinion piece in The Oregonian/Oregon Live that said PGE was doing its part to combat global warming, but warned that commissioners might block the path toward "a cleaner, more reliable, and affordable energy future."

"It doesn't make sense to sit back and wait on these carbon reductions, especially when we also have an opportunity to save our customers' money," they wrote.

Commissioner Stephen Bloom was not amused. He castigated the company Tuesday, saying it had failed to make its case for the investment, and that it wasn't the commission's job to micromanage PGE's business. He also said the company was giving him whiplash, as it hadn't offered a lot of support for reducing carbon emissions in the past.

"To say the OpEd was disingenuous would be charitable," he said.

But environmental and renewable industry advocates lined up in support of PGE's wind proposal.

Michael O'Brien, an analyst with Renewables Northwest, said that PGE's economic analyses had demonstrated the value of early investment in renewables. He said viewing them simply as a means of regulatory compliance, divorced from the energy, capacity and emissions benefits they offer, was deeply problematic.

Mia Rebak, a campaign coordinator for the climate change advocacy group 350 PDX, made a more impassioned plea.

"Climate change is here," she said. "Our number one concern is to transition off of fossil fuels as quickly as possible. It's imperative to ramp up renewables as fast as possible ... We can't wait to 2029 or 2030 to make this transition."

Commissioner Megan Decker was conflicted. She said the risks and uncertainties of early action could be offset by potential lost opportunities. She suggested PGE develop another, more incremental plan to layer in more renewables over time.

PGE executives said they understood the uncertainties and had already scaled back renewables in its plan to half of what its financial modeling suggested would be optimal. They also suggested that smaller, more incremental investments would undermine the economies of scale that benefit ratepayers.

PGE's plan, insisted Brett Sims, the utility's director of resource strategy, is not risky. "It is a decision that is about as no-regrets as it gets."

In the end, the commission agreed not to acknowledge PGE's renewables plan, but invited the company to work with its staff and other stakeholders to see if it could design a more workable version. The company said it had already been on that path for two years, but would welcome another opportunity.

While the renewables plan got most of the airtime Tuesday, environmentalists claimed victory in moving PGE off its preference for new gas-fired plants. The commission formally acknowledged that the utility needs to acquire a substantial chunk of reliable capacity resources – 560 megawatts. But it already had pushed PGE into negotiations to acquire existing resources to meet those needs – preferably from hydropower providers. PGE has told commissioners that the initial response in those negotiations has been encouraging.

"It was a really big win to stop a fossil fuel project in Oregon," said Amy Hojnowski of the Sierra Club. "We really feel like today was a turning point in whether Oregon will tolerate another fossil fuel plant."

She was also encouraged by PGE's stance before regulators on the need to "decarbonize" the grid and aggressively reduce emissions.

"They sound like true converts," she said. "Now that they've said it, we get to hold them accountable to this new pursuit of decarbonization."

- Ted Sickinger

tsickinger@oregonian.com

503-221-8505; @tedsickinger

Friends of Yamhill County
Affiliated with 1000 Friends of Oregon

P.O Box 1083
McMinnville, OR 97128

January 18, 2019

Helping to shape the use of our natural resources to protect the quality of life in Yamhill County.

Land Conservation and Development Commission
635 Capitol Street, Suite 150
Salem, OR 97301-2540

re: Rulemaking – Solar Facilities on High-Value Farmland

Dear Chair Lidz and Honorable Commissioners:

Friends of Yamhill County (FYC) works to protect natural resources through the implementation of land use planning goals, policies and laws that maintain and improve the present and future quality of life in Yamhill County for both urban and rural residents. FYC is supportive of renewable energy projects, such as solar, but is deeply concerned about the cumulative effect of the escalating conversion of our best agricultural lands to non-agricultural uses. Our involvement in over 20 applications for industrial solar facilities on high value farmland in our county has shown the existing rules do little to protect our most valuable farmlands and the vibrant agricultural economy they support.

ORS 215.243 states Oregon's farmland protection policies:

> (2) The preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state's economic resources and the preservation of such land in large blocks is necessary in maintaining the agricultural economy of the state and for the assurance of adequate, healthful and nutritious food for the people of this state and nation.

We appreciate the hard work the members of the RAC and the DLCD staff have put into the proposed amendments and we agree that the temporary rule should be made permanent.

Agriculture is dependent on farmland, especially high value farmland and has no other options. Why allow these facilities to be sited on our high value land at all? It is clear from the staff report that projects on Willamette Valley high value farmland are a drop in the bucket; they have virtually no impact on the state's overall renewable energy supply. Solar energy generating facilities may be sited just about anywhere; they do not need to be on our most productive lands. Here in Yamhill County we have a 72 acre solar facility planned for industrial land within Sheridan's UGB and a similar facility planned for 17 acres in Amity's UGB.

The existing solar rule was deliberately structured to "discourage development on high value farmland soils and to encourage their placement on lands with the least importance

for agriculture or wildlife habitat". DLCD staff concludes in their report "the existing rule has not achieved this purpose".

Unfortunately, the proposed amendments also fail to meet this purpose. They merely redirect power generation from one subset of high value farmland to another subset. Worse, the draft rule actually increases the potential impacts to high value farmland under the unproven fig leaf of "dual use."

The proposed amendment does little to address the original problem; preserving the maximum amount of the limited supply of our agricultural land. Offering protections for Class I and II is a small step, but it will simply redirect the siting of these industrial facilities onto other high value soils; what the staff report calls "the rest of the best." Here in the Willamette Valley these soils host highly productive crops such hazelnuts and grapes. We urge you to recognize the importance of all high value the soils listed in ORS 195.300 and extend the proposed protections for Class I and II soils to all high value farmland.

The solar industry proposes dual use and wants larger footprints for such facilities on high value soils. As staff has indicated in their report, there is nothing in the current rules that prohibit or discourage dual use. The potential for dual incomes from the same acreage from both farming and leasing should be incentive enough. If it were truly profitable to "dual use" farm, it would already be occurring. If developers really need a larger footprint, they should locate on land that is not high value or take an exception.

The proposed dual use rule is ill-conceived and will have unintended consequences. How will farm use be defined under dual use in the proposed amendment? Who will monitor compliance and how will it be funded? What will happen if the farming activity ceases? The RAC and DLCD staff has been unable to offer solutions to these questions and the proposed amendments simply punt the issue to the counties.

As Staff has reported, the solar industry is new, growing fast and changing quickly. It is irresponsible to continue to cede our most productive high value agricultural lands and adopt state-wide rules to accommodate its recent "dual use" vision.

The proposed amendment does little to address the effects of cumulative impact of these intrusions onto agricultural land and wildlife habitat, nor does it offer any improvement to the current rule's alternate analysis process. We do agree that the sunset clause related to ODFW be deleted.

Thank you for the opportunity to comment on this matter.

Sincerely,

/s/

Tom Abrego
Friends of Yamhill County

January 16, 2019

To:
Commissioners, Land Conservation and Development Commission

CC:
Jim Rue, Director, Department of Land Conservation and Development
Janine Benner, Director, Oregon Department of Energy
Jason Miner, Natural Resources Policy Manager, Office of Governor Kate Brown
Amira Streeter, Natural Resources Policy Advisor, Office of Governor Kate Brown
Kristen Sheeran, Energy and Climate Change Policy Advisor, Office of Governor Kate Brown; Director of Carbon Policy Office
Jon Jinnings, Department of Land Conservation and Development
Rob Hallyburton, Department of Land Conservation and Development

Dear Commissioners,

I work for a small, Portland based solar installation company. We complete residential installations and commercial solar system installations across the Willamette Valley.

Premier Solar NW is deeply concerned with the potential impacts of the draft Solar on High-Value Farmland rules. As written, these rules will negatively impact solar businesses across Oregon, directly conflict with the objectives outlines in Governor Kate Brown's Oregon Climate Agenda, and infringe upon rights and flexibility of Oregon landowners.

We request that these proposed rules be rejected, and we plan to closely watch future discussions of this draft rule and any Land Conservation and Development Commission consideration.

The draft rules will have a direct impact on our business and the customers we serve. Already, solar companies struggle to get off the ground due to tight regulations and uncertain incentives. In order to allow for innovation in the fight against Climate Change, we must be extremely cautious when implementing rules that restrict solar so heavily. It is important to take into consideration the needs of the agricultural community, but the rule being proposed to the DLCD must have input from all sides before a decision takes place.

The DLCD Rulemaking webpage and associated meeting materials lack justification for why a ban has been proposed. According to the meeting materials from the September 27-28 LCDC Meeting, LCDC required DLCD and the rulemaking advisory committee to: "Consider whether the current provisions at OAR 660-033-0130(38) adequately protect high-value farmland. After careful consideration of the facts the department shall either recommend that no changes are necessary or, if the department believes

that the current provisions are not adequately protecting high-value farmland, propose a remedy for commission consideration." No clear data has been presented detailing the ways in which high-value farmland is inadequately protected. Moreover, no acreage data has been provided regarding specific acreage impacts in counties across the state. Without such justification, any proposal to ban solar is inappropriate. It is imperative that the Commission fully consider the impacts of the rule so that the public is aware of the huge changes in place if it is implemented. Few solar stakeholders were included in the decision-making process- we request the decision is paused so that all stakeholders can explain the impacts before the Commission decides on any changes.

Oregon's clean energy economy is a growing core of our state's workforce. By banning solar across the Willamette Valley, these rules will negatively impact the industry's opportunity to grow and thrive. Considering the upcoming expiration of federal tax credits and recent expiration of the Oregon's clean energy tax credits, many Oregon solar companies are struggling. Premier Solar NW has completed projects with many businesses and residences within the Willamette Valley area, and as a small business, every system installed counts. The Willamette Valley serves us and many Oregon solar companies, and this rule would greatly impact our business.

The draft rules as they are written are in direct opposition of Governor Kate Brown's Oregon Climate Agenda (November 28, 2018). The Department of Land Conservation and Development should consider the objectives laid out by Governor Brown and understand that the prohibitive rules that are being considered will directly undermine the expansive of clean energy in Oregon. If Oregon wants to be a clean energy leader, state agencies should not put restrictions on landowners and installers for proposed solar installations.

Finally, landowners should be allowed to have flexibility on how to use their land, and the state should recognize that our hardworking agricultural leaders can responsibility choose what parts of their land would be best suited to agriculture and what would best work for solar. Premier Solar NW works with many customers who own farmland and want to offset the cost of their electricity- oftentimes, solar arrays can fit in small swatches of land that would be illogical to put crops on.

I urge the Commission to pause this decision and consider the sweeping impact it would have- on small businesses, like Premier Solar NW, on our Climate Future, and on responsible landowners. Solar is an abundant renewable resource in the Pacific Northwest, and in order to allow for a clean energy future, we must allow for positive growth.

Sincerely,
Anna Kemper
Sales and Marketing Analyst
Premier Solar NW
akemper@premiersolarnw.com

Item 6
Exhibit 6
Public Comment

YAMHILL DOWN TO EARTH CARLTON™

Yamhill-Carlton Winegrowers Association – P.O. Box 73 – Carlton, Oregon 97111

January 14, 2019

Land Conservation and Development Commission (LCDC)
Agriculture Building
635 Capitol St. NE Salem, OR 97301

Re: Comments on draft amendments to OAR 660-033-0130

Dear Chair Lidz and Members of the Commission:

We are writing to you in reference to the proposed draft amendments to OAR 660-033-0130 to be reviewed by you on January 24th. The Yamhill-Carlton Winegrowers Association (YCWA) Board of Directors is very concerned that industrial scale solar power installations will remove high-value farmland from production and negatively alter the aesthetics and character of our communities.

Our YCWA Board represents at least 65 vineyards and 50 winery facilities. We are proud to be able to work to increase awareness of our viticultural area in addition to significantly increasing the tax base for our local communities. Some of the most prestigious and internationally known Oregon wineries are members of the YCWA – Elk Cove Vineyards, Ken Wright Cellars, Belle Pente Vineyard and Winery, Penner Ash Wine Cellar, Shea Wine Cellars, Willakenzie Estate, Soter Vineyard, as well as newer arrivals like Jackson Family Wines and Maison Louis Jadot. Protection of high-value farmland and keeping our valley beautiful are the keys to keeping our businesses healthy. Our customers very much appreciate the agrarian scenery of our farming communities, and they spend significantly in our local restaurants, stores, lodging, and other area businesses.

The proposed draft amendments to OAR 660-033-0130 do not go far enough to protect high-value farmland. We respectfully request that you take a further step and prohibit commercial photovoltaic solar projects on all high-value farmland consistent with the definition of high-value farmland under ORS 195.300 to ensure the protection of Class I-IV soils and our AVAs.

Strong land use planning is the key to keeping agriculture viable for future generations. Industrial projects like large commercial solar power installations should be based in non-agricultural areas. Oregon's high-value farmland should be preserved for agricultural use and activities that are directly related to maintaining the economic viability of agricultural activities.

Sincerely,

The Yamhill Carlton Winegrowers Association Board of Directors

Adam Campbell, Elk Cove Vineyards
Brian O'Donnell, Belle Pente Winery
Mike McNally, Fairsing Vineyard
Jill Zarnowitz, Stag Hollow Wines
Rebecca Moore, Monks Gate Vineyard
Ken Wright, Ken Wright Cellars
Joel Kiff, Kiff Vineyards
Mike Green, Deux Vert Vineyard
John Hirschy, Hirschy Vineyards

Land Conservation and Development Commission
Attn: Commission Assistant
635 Capitol St NE
Suite 150
Salem, OR 97301

January 20, 2018

Dear Commissioners,

Friends of Polk County is a local citizen group that seeks to promote wise management of farm and forest land, a high level of livability in our urban and rural communities and a strong resource-based economy. We are pleased that solar power is actively being pursued within the state, but we think that all high-value soils in the Exclusive Farm Use Zones should be off-limits to industrial commercial development. There are adequate lower-value soil sites that can be used economically for the generation of solar power.

Agriculture is a very important component of the economy of Polk County as well as the State of Oregon. The Willamette Valley is a massively productive agricultural area. If all high-value soils of the Exclusive Farm Use land are excluded from solar development in Willamette Valley this still leaves 194,531 acres of Exclusive Farm Use land for potential development for solar power. In Polk County, exclusion of all high-value soils from potential solar development stills leaves 35,907 acres of Exclusive Farm land available to the solar industry.

The current proposal protects some high-value farm land but is not enough. We look forward to seeing a more thorough analysis of our limited supply of high-value farm land and potential sites for commercial solar developments to achieve the best long-term solution for providing both farm products and renewable energy for Oregon citizens.

Sincerely,

Tremaine Arkley

Tremaine Arkley, President
Friends of Polk County

Sid Friedman
14286 NW Old Moores Valley Road
Yamhill, OR 97148

January 20, 2019

Land Conservation & Development Commission
Jerry Lidz, Chair
635 Capitol Street NE
Salem OR 97301

re: Agenda item 6, Solar Development on High Value Farmland

Dear Chair Lidz and Commission Members,

My wife and I operate a farm west of Carlton. As I know you are aware, during the past few years there has been an alarming proliferation of industrial solar power facilities on high-value farmland in the Willamette Valley. This is our best farmland and it is critical to agriculture, which is the second largest sector of Oregon's economy.

We appreciate the temporary rule you adopted. We also appreciate the current rulemaking you initiated in response to the urgent need to protect high-value farmland from piecemeal conversion to industrial energy production. Unfortunately, I will be unable to attend this week's hearing on proposed solar rules and hope you will consider these written comments.

1) The existing rule was "deliberately structured to discourage development on high-value farmland soils. (Staff report, p. 9). It was "specifically designed to encourage solar developers to select sites with the *poorest* capability for commercial agriculture." (Joint agency letter to governor's office, November 2, 2017. Emphasis added.) "[T]he existing rule has not achieved this purpose." (Staff report, p. 9).

This should the starting point for evaluating the proposed amendments: Will the proposed amendments discourage future use of high-value soils and encourage selection of sites with the poorest soil capability? The answer is clearly no.

The proposed rules do not discourage future use of high-value farmland and encourage selection of sites with the poorest soils. They protect a small portion of high-value farmland- Class I, II, prime and unique soils- but do nothing to discourage continued use of "the rest of the *best agricultural soils*." (Staff report, p. 1. Emphasis added.)

If the Commission truly intends to direct industrial solar arrays to the poorest soils, instead of "the rest of the *best agricultural soils*," then do so. I suggest the following language:

> **A photovoltaic solar power generation facility shall not be located on high-value farmland described at ORS 195.300(10)**

2) The ill-conceived notion to allow projects even larger than 12 acres on high-value farmland under the guise of "dual use" should be rejected out of hand. If farming for a profit on the

footprint devoted to industrial energy production was practical, it would already be occurring in order to obtain two revenue streams from the same acreage. But even if it were practical, it would still harm the farm economy. Farmers change crops frequently in response to market conditions. The inability to readily change crops would be a tremendously significant change in accepted farm practices. If a few sheep can graze between solar arrays, it still means the land can't be used for a higher value crop like wine grapes, hazelnuts, or even grain or grass seed; and if the price for lambs drop, what happens then?

Tellingly, county planners on the Rule Advisory Committee (RAC) expressed misgivings about the vagueness of the dual use rule and their ability to ensure that farm use would continue over time, once a dual use project were approved. Rather than address that problem in a workable manner, the latest draft, revised since that RAC meeting, evades the issue by kicking it down to the counties with the vague direction to "require sufficient assurances that the farm use element of the dual-use development plan is established and maintained." (See staff report, p. 14).

The rule offers no guidance as to what might constitute "sufficient assurances," nor is it clear whether counties or the courts would have ultimate authority to decide.

In short, we are now dealing with and trying to fix the unintended consequences of a rule that did not function as intended. This process should fix problems, not create new ones. It would be irresponsible to create a new universe of unintended consequences from a half-baked and unproven "dual use"' rule.

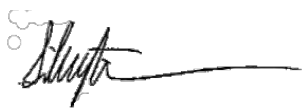
3) Finally, it is abundantly clear from the staff report that solar arrays on high-value Willamette Valley farmland are so insignificant in Oregon's overall renewable energy portfolio as to have virtually zero impact. The driving motivation to convert our best farmland is not an altruistic desire to save the planet; it is private profit.

During local hearings, energy developers have stated they selected sites on EFU land because the farmland was less expensive than the alternative sites. There are many alternative locations for solar arrays. Our area has abandoned mill sites and other brownfield industrial locations that are ideal locations for solar arrays because they are already asphalted or graveled and will not take agricultural land out of production. Solar arrays can be placed on rooftops, racked above parking lots, placed on utility poles, and in highway median strips.

Agriculture needs our most productive agricultural lands; solar photovoltaic projects do not.

I hope these comments are helpful. I regret that I cannot deliver them in person and thank you for your service to the people of Oregon.

Sincerely,



Sid Friedman

FRIENDS of MARION COUNTY

OFFICERS

Roger Kaye
President

Joe Kuehn
Vice-President

Richard van Pelt
Secretary

Susan Watkins
Treasurer

BOARD OF DIRECTORS

Laurel Hines
Carla Mikkelson
Linda Peterson
Kasia Quillinan

January 24, 2019

Land Conservation and Development Commission
635 Capitol St. NE, Suite 150
Salem 97301-2540

RE: Agenda Item 6 Comments on the Proposal to Adopt New Rules for Industrial Solar Arrays on High-value Farmland

Dear Commission Members:

For the record, my name is Roger Kaye, current President of Friends of Marion County. Friends of Marion County is a 501(c)(3) farmland protection organization founded in 1998. Our mission is to protect farm and forestland, parks, and open space.

We have already submitted written comments to LCDC with attached exhibits in our letter of July 16th and additional oral testimony on July 26th to address temporary rulemaking about this issue and to the RAC meetings on October 29th and December 11th.

We reviewed the January 10th Solar Draft Rule and Developer Comments and have the following comments:

1. We agree that protection of high-value farmland (HVF) should be given the highest priority and should be extended to include lots or parcels that include high value soils as described in ORS195.300(10).

2. In Marion County solar developers suggested a 2 mile buffer to the12 acre arrays. This proposal suggests a 1 mile buffer. Both of these standards are arbitrary and do not reflect the actual impacts to HVF. The impacts of solar development should be considered in addition to the other impacts from the dozens of other non-farm uses that impact farmland.

3. Dual-use arrays/farming is not a viable option and we do not support this proposal. It has been suggested that bee apiaries and sheep farming are suitable uses in conjunction with solar arrays. These uses are neither common nor profitable. Dual-use farming must involve more than a chicken coop and a can of corn. In order to accommodate a tractor the vertical support frame structures must be more widely separated. In a 3MW solar array, the consumption of HVF would be substantially greater as is now proposed to be 20 acres. Farmers already have difficulty negotiating their fields if obstacles are present. Colliding with a solar array could have disastrous consequences. Developers have suggested a review process for dual-use after a period of 3 years, however once these are approved there will be no way to get them removed. Also, the suggestion that dual-use on arable lands can be expanded to100 acres is totally unacceptable.

4. There is a comment that solar arrays comprise only about 0.1% of HVF in Marion County. Developers are only at the beginning of the development cycle and this number is not indicative of the future harm to HVF. The Commission must take a protective stance against this irreversible development.

Thank you for your consideration.

Roger Kaye, President
Friends of Marion County
P.O. Box 3274
Salem, OR 97302
503-743-4567

Item_6
Exhibit 10
Public Comment

January 22, 2019

Dear Commissioners,

Thank you for your work in addressing how agriculture and renewable energy can coexist. The Bonneville Environmental Foundation is committed to addressing the most pressing issue of our time: climate change. The rapidly changing climate demands an “all hands on deck” mentality to move our society forward into a clean energy future. We urge the LCDC will reconsider the potential for solar developments to negatively impact farmland and factor in the immediate climate crisis that will negatively impact all of Oregon and beyond.

The progress we have seen in this rulemaking is encouraging by considering dual use developments and larger acreage limits for certain applications. It is imperative to find these compromises and common ground where sustainable energy can enable a sustainable society. Unfortunately, this stakeholder process and rulemaking did not arrive at a consensus and the rules as drafted will still severely restrict solar development across the State.

As opposed to the voluminous evidence of our changing climate, there has been no evidence that Oregon’s agricultural land is not adequately protected from runaway solar development and no projections for future impacts under different rulemaking scenarios. There is also no reason that the LCDC cannot reengage with stakeholders to improve these rules and work toward more consensus. With such a wholistic change that prevents clean energy development in large parts of the State we would hope for more data and a more rigorous process to strive for a better compromise.

The State of Oregon has committed to climate action and the Department of Land Conservation and Development should be doing its part. We can no longer assume that the answers to clean energy and a sustainable society will be provided by someone else at some other time. That time is now, and that someone is you.

Sincerely,



Evan Ramsey
Sr. Director, Renewable Energy Group
Bonneville Environmental Foundation
503-248-1905
eramsey@b-e-f.org