



August 7, 2015

Filing Center
Oregon Public Utility Commission
201 High Street SE, Suite 100
Salem, OR
97308-1088

Re: UM 1746, Community Solar Program Design Comments

Dear Filing Center,

On July 14, 2015, the Public Utility Commission of Oregon (“PUC”) opened a docket to comply with Section 3 of HB 2941 (2015). Please accept these comments on behalf of Vote Solar in regard to community solar program design. Vote Solar appreciates the opportunity to provide the PUC with input on the future of community solar in Oregon.

Vote Solar is a non-profit grassroots organization working to foster economic opportunity, promote energy independence and address climate change by making solar a mainstream energy resource across the United States. Since 2002, Vote Solar has engaged at the state, local and federal levels to remove regulatory barriers and implement the key policies needed to bring solar to scale. Vote Solar is particularly focused on rate design issues related to solar. Vote Solar is actively participating in solar policy discussions and regulatory proceedings in states across the U.S, including: Arizona, California, Colorado, Georgia, Iowa, Kansas, Louisiana, Massachusetts, Minnesota, Nevada, New Mexico, New York, North Carolina, Utah, Vermont, among others.

Introduction

Community solar (a.k.a. shared solar) is becoming an ever-increasing opportunity to democratize the access to the benefits of solar. Vote Solar has been involved in the discussions related to community solar all around the country.

In these comments, rather than focusing on a specific program design, we focus on model rules and best practices. The expectation is that these comments will help the PUC evaluate the various program designs submitted by other parties.



Community Solar Broadly

New approaches are needed to expand customer access to solar energy

In our evolving energy infrastructure, the ability of individual customers to make informed choices about the source of their energy is critical. Customers who are in a position to install solar energy systems on their own property, behind their meter, are able to exercise direct control over their energy supply. However, the majority of customers are *not* able to install solar on their property. According to the 2010 Census, only 62% of Oregon housing units are owner-occupied. Renters typically lack the right to install solar, and landlords lack the financial motivation. For owner-occupied units, physical constraints like shading, improper orientation, and structurally challenging roofs limit the suitability of solar. And even in the case of owner-occupied units with a suitable site for solar (a) the owner simply may not want the hassle or maintenance concerns associated with an onsite solar system, (b) may be considering moving and therefore not interested in a long term investment, or (c) may not qualify for financing necessary to make onsite solar affordable. In urban areas like Portland, with limited rooftop space, lots of shading, and a transient population, the lack of access to onsite solar is especially notable.

There is opportunity to connect the significant pent up customer demand for solar with strategically deployed local solar projects, thereby greatly expanding access to the bill-savings benefits of distributed solar generation. We believe shared solar policy is an important tool for increasing access to solar in OR.

Best practices for shared solar policy

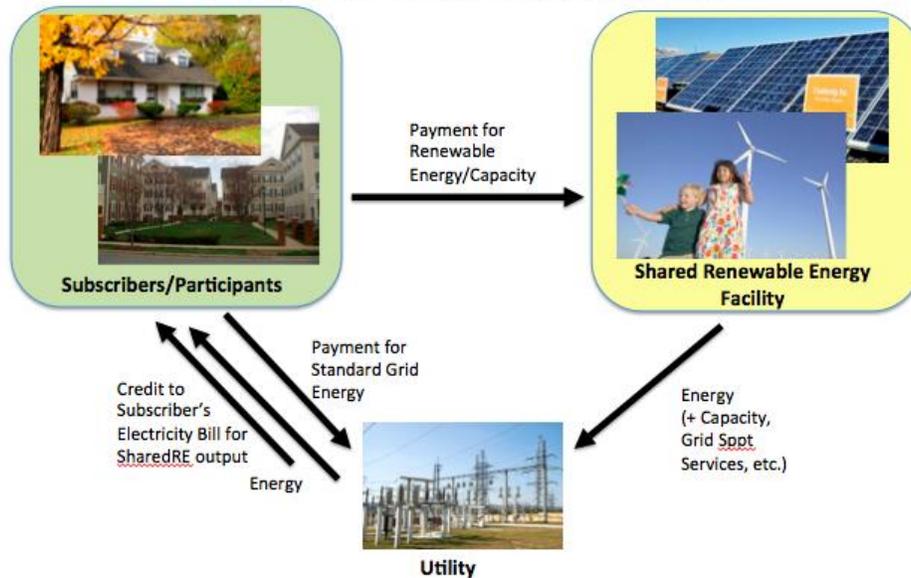
We define shared solar as an arrangement in which multiple customers participate in a single solar energy project and receive tangible economic benefit via their utility bill. Figure 1 below illustrates the shared solar arrangement as commonly conceived. This is, for example, the way it works in Colorado, which has the most experience implementing shared solar following passage of its Solar Gardens Act in 2010.



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Figure 1: Shared Solar Arrangement

How does Shared Solar work?



While other arrangements are theoretically possible, we have yet to see alternate structures that are scalable and can offer customers a range of attractive product options. Policy that enables the structure in Figure 1 can serve as an important foundation that will then spur continued business model innovation.

Working with the Interstate Renewable Energy Council (“IREC”), Vote Solar published model rules for shared renewable energy programs in 2013.^{1,2} The model rules are based around four guiding principles³:

¹ IREC, available at: <http://www.irecusa.org/regulatory-reform/shared-renewables/>

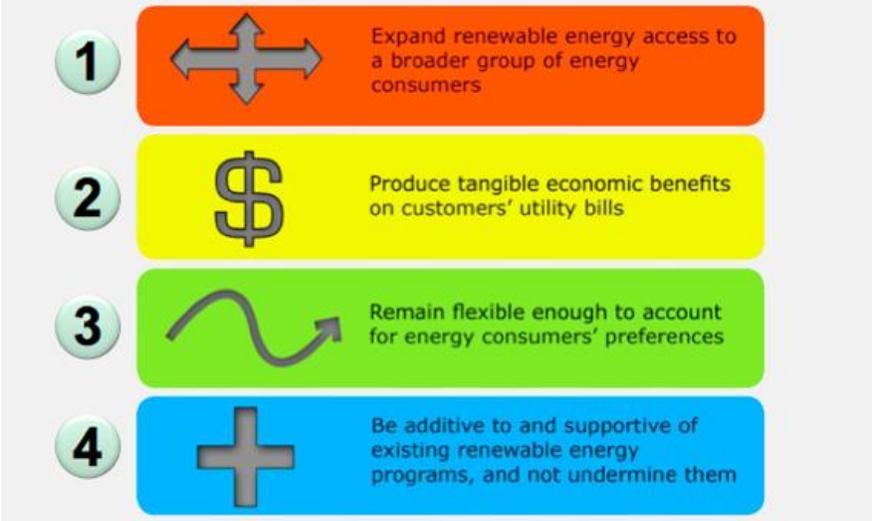
² While the general concept is applicable across technologies, we focus on shared solar in our comments here.

³ Vote Solar also has guiding principles for distributed solar generation. Although the guiding principles for distributed solar generation can also inform discussions in this docket, we only focus on the model rules for shared renewable energy programs in these comments. For more information on the guiding principles for



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Guiding Principles for Shared Renewables



These guiding principles should inform consideration of shared solar opportunities in Oregon, so that the necessary foundations can be put in place to support implementation.

Considerations when implementing these guiding principles include:

Principle 1: Expand renewable energy access to a broader group of energy consumers. While the Energy Trust of Oregon (“Trust”) programs have been successful to date, the program offerings to date have been limited to onsite solar projects. There is an opportunity with future Trust offerings to promote shared solar projects that expand access to customers who cannot install solar on their own property. In general, programs should be structured to enable participation by as broad a customer base as possible, including renters and other multi-tenant building occupants.

Principle 2: Produce tangible economic benefits on customer’s utility bills. Distributed energy resources – including solar – can offer bill-saving benefits to customers. In designing a shared solar program the PUC should strive to ensure that the benefits of the clean local

distributed solar generation, please see: http://votesolar.org/wp-content/uploads/2014/10/DSG_GuidingPrinciples1page_Final.pdf



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generation are properly valued and delivered to participating customers. Utilities in other states have proposed “community shared solar” programs that are in reality closer to traditional green tariffs – in which customers pay a premium for green energy and do not ever receive tangible economic benefit from participation. Solar as a generating resource is increasingly cost competitive with standard grid electricity, has zero fuel cost, and requires minimal maintenance – therefore it makes no sense to ask customers to pay a premium for it, especially in perpetuity. In situations where the characteristics of a shared solar project make it a relatively high cost project, such as a smaller solar array on a local community center or elementary school, the program can still be structured to deliver tangible economic benefits to participants. For example, participants could have the option to lock in their rate so that they would see value over time as standard grid electricity rates rise.

The benefits of participation in the shared solar project must be conveyed to participants *via their utility bill*. The utility bill is the focal point of consumer energy decisions; the place where customers expect to learn about their energy consumption patterns and strategies for conservation, efficiency, and clean energy options. Customers are motivated to reduce their utility bills, and an analysis suggests that once customers go solar, they are more likely to undertake measures to further reduce their bills.⁴ If customers receive the benefits of shared solar participation through a different channel, such as a check or other form of payment, it becomes more of a financial investment decision than an energy decision, and may reduce customer desire to understand energy consumption patterns and efficiency/conservation strategies. It may also trigger tax and legal complications that can be avoided by maintaining the link with the customer’s utility bill.

Principle 3: Remain flexible enough to account for energy consumers’ preferences. As excerpted from IREC’s Shared Renewable Energy Model Rules: Consumers are more likely to purchase a product that is specifically tailored to suit their personal

⁴ See CPUC California Solar Initiative 2009 Impact Evaluation, Final Report § 10, (June 2010), available at <http://www.cpuc.ca.gov/PUC/energy/Solar/eval09.htm>



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values and priorities. Therefore, we recommend that shared renewable energy programs be flexible with regard to business models so that developers and utilities can innovate to meet consumer desires. This can include preferences for specific technologies, project locations, or ownership models. For example, in our experience, consumers are highly motivated to participate in shared renewable energy when the generation facilities are located in or nearby their communities. Structuring a program to allow for the realization of these preferences can broaden interest and participation in the program.

Principle 4: Be additive to, and supportive of, existing renewable energy programs, and not undermine them. As noted under Principle 1, we believe Trust programs can be expanded to support shared solar projects, and that such expansion would be complementary to the Trust portfolio to date.

Vote Solar must make the point that the rooftop solar market is an entirely separate market from that served by shared solar. For customers who want to, and are able to, generate their own electricity on their own property, rooftop solar is an essential option and the PUC should do everything in its jurisdiction to enable customers to generate their own power affordably and without restriction. Shared solar is an entirely different product and serves an entirely different market than rooftop solar. Both are critical to our nation's energy future and we encourage the PUC to encourage both simultaneously, and separately.

Utilities see opportunity in community shared solar models

We note that utilities across the country have expressed interest in shared solar, including in Michigan, Colorado, and Georgia. Indeed, the Solar Electric Power Association, a membership association of utility companies, offers the following explanation of why community shared solar is “an attractive fit for a growing number of utilities:”⁵

⁵ SEPA, <http://www.solarelectricpower.org/utility-solar-blog/2013/may/22/community-solar-programs-are-challenged-and-sharpened-by-competition.aspx#.U9lDQq1dW4g>



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- **It contributes to the utility's reputation as THE leading provider of energy.** Utilities want to maintain a strong tie to their customers, especially those early adopters interested in solar. A utility-managed community solar program accelerates the utility learning curve across the internal utility structure.
- **Solar adds to customer satisfaction and engagement.** Solar is popular with the public and surveys show that most customers want their utility to add solar to the mix. Customers want meaningful choices in energy, and for a segment of the customer base, local solar fills the bill.
- **Solar is a new source of local economic development.** This is especially compelling to electric cooperatives and municipal utilities, which as locally owned utilities, share a strong connection to the community.
- **The opportunity to locate solar where it may have the optimal strategic benefit to the operation of the distribution system.** And to quantify those benefits in real-time.

In general, we encourage utilities to play a proactive role in the development of successful shared solar programs, as long as the programs adhere to the four guiding principles outlined earlier in our comments.

Low- and Moderate-Income Inclusion

Vote Solar believes that one of the primary purposes of community solar in Oregon should be to expand access to renewable energy beyond those that can, financially and physically, put solar on their roofs. We note that community solar policy, regardless of specific program components, creates unique opportunities for low- and moderate-income customers in and of itself.

Many of the factors that limit access to rooftop solar – not owning a residence, living in multi-family housing – may have a stronger effect amongst low- and moderate-income communities, thereby increasing community solar's positive benefits for those groups. Finally, community solar often allows participation at a lower capacity level per individual than the typical minimum size necessary for viable rooftop or backyard installations. Thus, this aspect of community solar will help address the cost-of-entry barrier for these types of consumers.

In order to truly build a low- and moderate-income market for solar, however, more must be done than simply enabling community solar. These customers face numerous barriers to market entry. For many of these customers, a viable



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community solar product would require options including no upfront payment, no minimum credit score, no minimum income requirement, no minimum energy use, and near term economic savings. Such a product does not easily exist with reasonably priced financing for renewable energy projects, thereby making this market nearly closed for many customers in these income classes.

Program-wide low- and moderate-income participation requirement

Vote Solar recommends that the Commission establish a program-wide standard that a minimum of 20% of residential members for community solar projects be low-income households at or below 60% of the Area Median Income (AMI).⁶ We recommend that the PUC prioritize community solar in order to overcome market barriers for low-income participation in renewable energy. Vote Solar is confident that the 20% standard can be achieved with the appropriate set of policies and incentives. We are eager to partner with the PUC to develop the market conditions to enable private developers in partnership with non-profit organizations and others to develop community solar projects that are accessible to all Oregonians.

1. **An incentive program for low-income subscribers to community solar projects.** The PUC should establish a program (perhaps in cooperation with the Trust) through which eligible low-income households could receive a deeper discount on top of any existing discount the project provides to all customers in order to help overcome the cost of entry for low-income customers. Such incentives would be used to increase the profitability of the overall project, thereby making financing both cheaper and less risk-averse.
2. **Credit support for low- and moderate-income customers.** In coordination with financial institutions and charitable organizations, the PUC and the Trust should work to support financing for low- and moderate-income customers who do not have the necessary credit scores to meet traditional underwriting standards. This credit support could be provided to projects with a substantial percentage of low- and moderate-income customers or directly to those customers where there are not-for-profit partners that could conduct the outreach and financial education necessary to identify and prepare those customers.

⁶ This percentage is recommended to serve the same proportion of Oregon households that are served by the Low-Income Home Energy Assistance Program. Available at: <http://www.liheapch.acf.hhs.gov/profiles/Oregon.htm>



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3. **Grants and technical assistance for not-for-profit developers and partners.** In order to assist non-profit organizations to develop or partner with for-profit developers to develop community solar facilities that are structured to serve low- and moderate-income customers, the PUC and the Trust should consider offering direct grants to help cover staffing to develop such projects and technical assistance to build organizational capacity. Such assistance to non-profit organizations will enable the creation of shared solar facilities built in diverse locations and specifically designed for underserved communities. Not-for-profit recipients of these grants would also be well positioned to invest in workforce development and targeted hiring for community solar projects, thereby increasing community benefits.
4. **Funding for pilot projects serving a majority of low-income subscribers.** In order to figure out the most successful models for community solar projects that can serve low-income electricity customers, the PUC and the Trust should release a request for proposals for teams of developers and not-for-profit partners to develop projects serving a majority of low- and moderate-income customers. The Trust should provide grant funding for a portion of these projects in order to attract interest. Such a pilot project initiative should be rolled out simultaneously with general community solar rules. A key eligibility criterion for pilot projects should be a commitment to building a self-sustaining business model for community solar projects that can serve low- and moderate-income customers after an initial round of funding support.
5. **Allocating energy assistance benefits toward shared solar facilities.** The PUC should provide low-income utility customers with the option to allocate their electricity assistance funds towards a shared solar facility, rather than the utility supplier, and receive credits on their utility bill in proportion to their share. One example of this type of program has been proposed in California by IREC and is called CleanCARE.⁷

All of the aforementioned proposals are designed to provide low- and moderate-income customers an opportunity to avail themselves of the benefits of solar. We

⁷ Case R. 12-06-13, CleanCARE – Investing in Communities, Interstate Renewable Energy Council (IREC), March 16, 2015. Available at: <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M148/K824/148824274.PDF>



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strongly encourage the PUC to consider the implications and the benefits of shared solar on these customers.

Recommendation

Vote Solar believes that the PUC should consider best practices when evaluating program designs. IREC's Shared Renewable Energy Model Rules provide an excellent overview of regulatory considerations. Vote Solar encourages the PUC to properly value the energy produced by shared solar facilities on customers' electricity bills.

Furthermore, Vote Solar strongly encourages the PUC to consider methods to maximize the benefit of community solar for low- and moderate-income customers. Community solar represents a tremendous opportunity for low- and moderate-income customers to avail themselves of the benefits of solar.

Conclusion

Vote Solar appreciates the opportunity to submit these comments on community solar. We appreciate the leadership of the PUC on this very important issue, and we look forward to continued engagement with other stakeholders during this docket and beyond. Thank you for your time.

Sincerely,

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