



February 28, 2018

Oregon Public Utility Commission
Attn: Caroline Moore
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Salem, OR 97301

RE: UM 1930 Community Solar Implementation, Alternative Bill Credit Comments

Introduction:

The Bonneville Environmental Foundation (BEF) appreciates the opportunity to comment on the community solar implementation under UM 1930. BEF has partnered on the first community solar projects in the country and to date has partnered with 27 utilities on community solar projects in the Pacific Northwest. We believe that community solar is not a resource acquisition program for utilities but a customer engagement and energy education program for customers. This program has the very unique opportunity to engage Oregon citizens like never before in the energy transition that is already under way. As solar is the most scalable and approachable energy generation technology, it has the potential to boost the energy literacy and general understanding of the utility system values.

Community solar has seen tremendous growth across the country for two primary factors: state level policy mandates (compliance REC markets, virtual net metering, incentive programs) and compensation at retail rates. (Deloitte “Unlocking the value of community solar” 2016) Simply put, markets that have attempted to compensate community solar like a wholesale utility resource have failed. Oregon must now decide which path our program will take and what state level policies we will implement if we want to ensure a successful program.

Given how the elements were selected and evaluated in the Resource Value of Solar methodology, the analysis provides what the value of solar resource is for the *utility*. However, community solar is a customer program and should be evaluated from the *customer* perspective. In other words, the OPUC should not be asking what the utility will pay for community solar, but should be asking what is a fair bill credit rate to community solar participants to ensure a successful program?

Utilities may argue that a fair rate is what the customer is willing to pay, and that voluntary green power programs have charged a premium and continue to see record support. However, comparing community solar to a REC purchasing program is a classic case of comparing apples



to oranges. While voluntary green power programs seem to offer the option for a customer to green up their electricity supply, participation only requires a small customer contribution with no ongoing commitment. Community solar on the other hand is new resources, that benefit community members, and requires long term certainty in order to be developed and financed. This means there has to be value, and that value needs to be *payback or savings*. If there are no customer savings or no way to recoup an investment, projects will not be built. This is the most critical point the OPUC and stakeholders should evaluate when deciding how to incentivize participation in the program.

Legality:

Without providing a legal review of whether the OPUC can incentivize participation in the program, the consensus with community solar experts is that there needs to be customer savings, not a premium price to participate. This is evident through two Smart Electric Power Alliance surveys which show “lower-cost energy is the main reason customers sign up for community solar.” (Chwastyk and Sterling, Shelton Group, SEPA) The enabling legislation clearly directs the PUC to **incentivize** participation in the program while **minimizing** cost shifting and the task at hand is to determine how to achieve these dual objectives.

Means to incentivize participation:

- Provide compensation around the retail rate (embedded cost approach)
- State mandates for community solar (SB 1547!)
- Value the environmental benefits
- Value the RECs
- Leverage economies of scale

Means to discourage participation:

- Compensate energy like a wholesale resource
- Restrict system and subscription sizes
- Disregard environmental, societal, economic benefits
- Design program as a premium to utility rates and not a customer savings program

RVOS:

The timing complexities around utilizing the RVOS for community solar compensation are well documented by other parties and continuing to rely on this preceding will surely continue the delays in community solar program implementation. If we continue to wait for this docket to play out, and then analyze whether the values are applicable, the community solar program implementation will see unacceptable delays.

In addition to timing, there are also questions around the viability, applicability, simplicity, and stability in using RVOS for community solar compensation. Prior Oregon RVOS estimates show



value of solar rates from \$.055-\$.067/kWh for energy, deferred capacity investments, and line losses, with another \$.06/kWh with using midrange estimates for additional elements (OPUC Staff 2015). A few years later in 2017, the same utilities file RVOS rates of \$.05/kWh while incorporating 11 total elements. The OPUC itself noted that various value of solar studies produced rates ranging from \$.04-\$.25/kWh. The reduction in utility submitted values for solar energy of over 25% in just a matter of two years indicates the wild uncertainty around the true value of solar to the utility.

For community solar in Oregon to have stability, all parties should have a clear understanding of the bill credit rate without locational or temporal changes. OPUC has noted the confusion around disparate solar compensation programs in the reviews of the Volumetric Incentive Pilot Program. Program participants and stakeholders cited the lack of certainty around compensation levels as major barriers to developing a business plan and value proposition. (OPUC Staff 2014)

With the initial utility filings around \$.05/kWh (which is less than a residential customer's energy charge), community solar will not be viable. Many PURPA eligible QFs would not be viable. To require community scale solar to be compensated like a utility scale resource will result in a failed program. Even if the eventual RVOS rates come in slightly higher the program will not likely see any development. This is especially burdensome on customer sited projects, affordable housing projects, or any community-based developments seeking to expand access to solar.

For other states adopting a VOS compensation rate for community solar, such as NY and MN, they only did so *after* an initial program tier at retail rate compensation to ensure that the implementation of VOS compensation was well analyzed and vetted. This would be our recommendation is that the decision to implement RVOS as the bill credit methodology, be revisited for the second community solar capacity tier in Oregon.

Good Cause:

Uncertainty around RVOS methodology, timing, value of the bill credit, and the development risk for the initial tier would put community solar at a disadvantage relative to net metered projects. Nearly all other states have begun community solar programs with retail level compensation, including those who eventually transitioned to a VOS rate. However, those with VOS rates included other externalities that are not valued in the Oregon RVOS. The "embedded cost" approach to compensating community solar has a strong track record across state territories, and is the fairest, quickest, and the best alternative rate design to the RVOS for the initial program capacity tier.

There is no State level support for community solar outside of the yet to be determined bill credit rate. Good cause to adopt an alternative rate is simply that the legislature directed the OPUC to



incentivize participation in the program. This means create a fair and viable value proposition for customers.

Good cause is that rooftop solar owners have been able to access retail rate for a number of years, in addition to many other incentives. To not allow a broader and more equitable cross section of consumers to access the same rate would be unfair, given that community solar is intended as a method for those unable to install or own solar to participate in the same market. Retail rate compensation through net metering has a long track record of enabling rooftop solar through the embedded cost of utility service. It is a natural progression to extend this program to community solar.

Oregon ranks #28 in the nation in 2017, in solar capacity (GTM Solar Market Insight Report, 2017) There has been waning State support for solar given the expiration of the RETC, reduced QF rates for utility scale solar, no current solar capacity standard for utilities, and relatively small funding for solar through the public purpose charge.

While Oregon continues to retract programs that support solar development, other states are expanding access to solar, such as CO, NC, MA, NY, MD, IL, and more. While the raised renewable energy requirements in Oregon passed by SB 1547 are ambitious, they have a very long phase-in timeline, and don't address the ability of the renewable energy transition to equitably benefit all of Oregon's community members.

Low-income incentives:

Nearly all of the federal and state incentives for renewable energy have benefitted mid to upper income households in Oregon. This is all while the public purpose charge has been collecting millions of dollars a year from low-income utility customers with no way of benefitting those customers due to various barriers such as homeownership, financial means, credit scores, and energy literacy. Community solar has the ability to overcome all of these barriers.

As shown through State filings for other community solar programs, the low-income market is different and requires "no upfront cost, no ongoing payments, and immediate and significant savings." (GRID Alternatives 2018) We must first make sure that the program is viable for the general public but also incentivize low-income customers in order to fulfill both the project and program low-income targets.

Once the program is launched and has some momentum, the awareness, understanding, and value may become more apparent to all utility customers, and this could eventually lead to reductions in customer acquisition costs. However, to launch a new community solar program, with a 50% residential requirement, when the majority of the population has little understanding of solar in general, could lead to a confusing and costly program without additional support.



States such as CO, MA, MD, NY, RI all have incentives to enable low-income participation. To set a target for low income participation but not provide any support to achieve that goal is a futile effort that will negatively affect the entire program and its participants.

Process:

The Commission has always been tasked with the development of a bill credit rate for community solar, whether it reflects the RVOS or an alternative methodology. Unfortunately, not much attention has been given to whether the methodology will result in a successful program. A successful program must have some value proposition to the customer, whether it be a simple payback, bill savings, or hedging against escalating retail prices. A successful program is not asking customers to voluntarily pay a premium to construct 160MW of solar capacity.

To avoid the RVOS timing and to prevent additional delays through new credit rate methodology development, BEF recommends that a simple, fair, and equitable compensation method be adopted. The development of a bill credit calculation is deferred to the OPUC but a sample successful methodology would look something like:

$$\begin{aligned} & \text{(Project Development/EPC Costs)} \\ & + \text{Customer Acquisition/Management Costs} \\ & + \text{Customer Savings)} \\ & \div \text{(Average annual kWh production x 20 years)} \\ & = \text{Bill Credit Value} \end{aligned}$$

To do this calculation for only 3MW solar projects is simple, but the OPUC should provide an equitable program for all locations and customer types, not just the established solar developers, with existing land lease options and interconnect studies. The problem in designing a rate that works for everybody leads to an overly burdensome and complex formula that can discourage equitable participation in the program. This is why for the initial capacity tier in the program, the OPUC should adopt a bill credit rate that reflects the retail rate for residential customers.

Opposed to rooftop solar and the potential cost shift to lower income households, community solar and the 10% low income target has the potential to *benefit shift*. The benefits to utilities, their low-income customers, and the ability to further extend the reach of existing energy assistance programs should not be underestimated. This potential bill credit rate would have a comparable rate impact to the Solar Photovoltaic Volumetric Incentive Program but will enable six times more solar capacity to be built than the VIR pilot. d

In reference to the OPUC Staff provided considerations we have responded below:



Context:

- Other states bill credit rates have a wide range but nearly all of the programs have compensation rates above Oregon's retail rates. Any less compensation has resulted in no program activity.
- The OPUC has enabled net metering since 1999, and it has been the primary driver for customer adoption of renewables. Extending this framework to community solar not only has precedent around the country but is the best way to simplify the program implementation in a fair and equitable way.
- Voluntary utility renewable products in Oregon have seen tremendous success but we swiftly dismiss any comparisons of community solar to REC based programs. Purchasing the environmental attributes from operating wind farms is not the same as rooftop or community solar for countless reasons. The utilities have developed popular programs over the past decade but the trend towards bundled products is evident in the corporate renewable procurement markets. Savvy corporations prefer their renewable procurements to develop new resources and this "additionality" concept is has spurred tremendous growth in corporate renewable procurement. Most importantly, it is the cost savings large corporations see through renewable procurement that has fueled this growth. In order to facilitate 20-year agreements that provide certainty to new developments, savings need to be prioritized and are what separates community solar from other voluntary programs.

Considerations:

- The bill credit rate should reflect the RVOS unless there is a good cause to adopt an alternative rate. We have outlined in our comments that the RVOS timing and poor value will not incentivize participation in the program. If the RVOS will negatively affect the program there is good cause to adopt an alternate rate.
- The OPUC has the ability to minimize any potential cost shifting through capping the program's impact on rates. Our initial projections based on the spread of RVOS and retail appear to have minimal general rate impact, and significant low-income benefits.
- A successful program would be the full 160MW of community solar are developed within a few years. The way to achieve this is to ensure the value proposition of savings is built into the program.
- The OPUC should be evaluating how to incent participation as directed by the legislature.
- Is community solar reasonable and in the public interest? Community solar will be additive, complementary, and expand upon the existing customer renewable programs. The ability to provide broader participation, expanded renewable energy awareness, and customer savings are all very important public benefits.



Recommendations:

- Bill credit rates should reflect the residential retail rates for PGE and Pacific Power, around \$.11/kW
- The bill credit should build in a 2% escalator but offer a fixed, levelized rate over the 20-year program
- The initial capacity tier should have certainty of the bill credits and solar value be set at a specific rate, and not tied to fluctuating RVOS or retail rates
- Cap the rate impacts of the community solar program at 2% of utility revenue requirement
- Reserve 10% of program capacity for the precertification of small (360kW or less) customer sited projects (i.e. not co-located with larger projects) for the first two program years
- Low-income participants should receive significant savings to participate, which should be set as a program average of at least 50% savings on a low-income customer's utility bill
- Provide adders to the rate for specific applications:
 - Under 360kW and customer sited, + \$.02/kWh
 - Low-income participants, + \$.03/kWh
 - Without targeted low income support, it is highly uncertain how the 5% program target will be achieved
 - Precedent for such adders can be seen in other state programs such as CO, IL, MD and MA

Responsive Comments to OPUC Staff Report on UM 1930:

- Page 5 evaluates "Good Cause" and states that that the Commission should evaluate what means are necessary to incentivize participation in the program, whether RVOS, an alternative bill credit rate, or other means. This activity has only now begun, and a lengthy analysis or methodology development could lead to significant delays in program implementation.



- Page 6 questions the Commission's authority to pay costs above the RVOS. While this seems to be enabled in SB 1547, this should be analyzed further for a final determination and if it is prohibited, the OPUC should evaluate the possibility to incentivize the program through the RVOS elements to achieve a workable bill credit rate.
- Incentivizing participation has been described as "non-financial" yet no reasonable proposals for how to accomplish this have been put forward. The common understanding of incentive in the solar industry is financial, whether through an upfront rebate, renewable tariff, or performance-based incentive.
- Page 8 mentions that it may take time to develop an additional rate based on RVOS, however the alternative rate does not have to be based on RVOS and can have a different methodology. We have proposed a retail rate compensation which utilizes an embedded cost methodology, for both simplicity and to reduce the potential for further program delays.
- Page 8 refers to the only timing consideration from Stakeholders relates to the ITC step down, which may be the largest concern but not the only concern. BEF for example has been working on affordable housing solar projects that would utilize the bill credit to benefit the low-income residents. The tax credit partner on these properties need projects completed in 2018 which is the year the OPUC has planned for the program to be live. Continuing delays could kill projects requiring to be live by a certain tax year and contribute to uncertainty that can undermine the program.
- Page 9 refers to the "floor" that has been set for the bill credit rate and this is precisely why the value discussion has come about, as no community solar will be built at \$.05/kWh, and we agree with Staff that the primary discussion should be around value, but that timing and delays can also provide a significant "disincentive".
- Page 12 states that community solar projects will "connect directly to the utility system and will not offset onsite load" in the context of retail rate compensation. If we anticipate a diverse application for community solar we could see multifamily housing applications, leased warehouse roofs, or projects that are located next to load pockets that can serve nearby load from the perspective of the utility system.
- Page 12 also refers to net metering as a source of cost shifting and references a PUC report as the source. The 2014 report in question merely addresses cost shifting in the last paragraph but provides no substantial input or conclusion.
- Page 20 shows the "worst case" rate impacts that are somewhat exaggerated, as our PGE analysis shows that if a \$.06/kWh premium for 90MW of PGE projects, at 14% capacity factor, were paid by ratepayers, then the annual cost amounts to less than \$6.5m or .3% of PGE's revenue requirement. The total potential premium paid would be \$123m over 20 years, while providing up to \$22m in low-income benefits.



BEF continues to appreciate the responsiveness and willingness to work with Stakeholders in the implementation of community solar in Oregon. We hope that all parties share the common goal of creating a valuable and functioning program in Oregon. Thank you for your consideration.

A handwritten signature in black ink, which reads "Evan Ramsey". The signature is fluid and cursive, with the first name "Evan" and last name "Ramsey" clearly distinguishable.

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