ITEM NO. 1

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
SPECIAL PUBLIC MEETING DATE: October 16, 2015

REGULAR X **CONSENT** ___ **EFFECTIVE DATE** N/A

DATE: October 12, 2015

TO: Public Utility Commission

FROM: Ruchi Sadhir and Elaine Prause

THROUGH: Jason Eisdorfer

SUBJECT: OREGON PUBLIC UTILITY COMMISSION STAFF:
(Docket No. UM 1746) Recommendations for Community Solar Program Designs and Attributes. Docket opened by HB 2941, Section 3.

STAFF RECOMMENDATION:

Accept Staff's analysis of preferred community solar attributes and characteristics and adopt Staff's suggested "Elements to Include in the Commission's Recommendation to the Legislative Assembly."

DISCUSSION:

Background

House Bill (HB) 2941, which passed during the 2015 legislative session, directs the Public Utility Commission (PUC or Commission) to hold a proceeding with public comment to examine a range of community solar programs and the attributes of different community solar program designs that allow individual customers to share in the costs and benefits of solar facilities. HB 2941, Section 3(1) describes program attributes to include ownership structure, eligibility criteria, length and terms of contracts, subscription pricing, and how bill credits are calculated. The Commission must recommend a community solar program design or a set of preferred attributes that best balances the resource value benefits, costs, and impacts to ratepayers to the Legislative Assembly by Friday, October 30, 2015.

The purpose of this Special Public Meeting is to consider Staff's preferred community solar program attributes and characteristics and hear stakeholder perspectives in order to inform the Commission's recommendation to the Legislative Assembly. This Staff

Report has three major sections: (1) summary of this proceeding's public comments and workshops, (2) analysis of Staff's preferred community solar attributes and characteristics, and (3) elements to include in the Commission's recommendation to the Legislative Assembly. In addition, there are two attachments that support the second section regarding Staff's preferred attributes: (1) community solar diagram and (2) summary of Staff's preferred attributes.

Analysis

Procedural Background

HB 2941 Section 3(1) directs the PUC to hold a proceeding that includes public comment to examine community solar programs and attributes that allow individual customers to share in the costs and benefits of solar facilities. This proceeding included three rounds of public comment and two public workshops.

In the first round of public comments, interested stakeholders were asked to submit proposals for community solar program design in advance of the first workshop. The following stakeholders submitted community solar program design proposals on August 7, 2015: Citizen's Utility Board (CUB), Oregon Department of Energy (ODOE), Industrial Customers of Northwest Utilities (ICNU), Northwest & Intermountain Power Producers Coalition (NIPPC), Portland General Electric (PGE), PacifiCorp, Vote Solar, Northwest Energy Coalition (NWEC), and a consortium of non-profit and governmental organizations that Staff referred to as the "Joint NGOs" (Northwest Sustainable Energy for Economic Development, Oregon Solar Energy Industries Association, Renewable Northwest, Environment Oregon, Northwest Energy Coalition, Portland Bureau of Planning and Sustainability, and Oregonians for Renewable Energy Progress).

The first workshop was held on August 11, 2015. Interested stakeholders discussed the submitted program design proposals, provided clarifications about program design proposals, identified common attributes, and discussed pros/cons of proposals. Staff summarized and provided a list of attributes that were in stakeholder proposals. While there was some common ground on attributes in stakeholder proposals, the characteristics of many attributes differed in stakeholder proposals.

In the second round of public comments, interested stakeholders were asked for their perspectives on all parties' proposals, Staff's list of attributes, and the potential options for characteristics of each attribute in Staff's list. The following stakeholders submitted comments on September 1, 2015: ICNU, PacifiCorp, the Joint NGOs, PGE, ODOE, CUB, and joint comments from Vote Solar and Interstate Renewable Energy Council

(IREC). In addition, on September 15, 2015, Representative Paul Holvey submitted comments.

On September 18, 2015, Staff filed its draft preferred attributes and characteristics of a community solar program for stakeholders to consider in advance of the second workshop. The second workshop was held on September 22, 2015. Interested stakeholders asked clarifying questions about Staff's draft preferred attributes, engaged in discussion about what characteristics were appropriate for each attribute, and explored Staff's rationale for selecting certain characteristics of attributes.

In the third round of public comments, interested stakeholders provided feedback on Staff's draft preferred attributes and argued for Staff to change its position on certain attributes, such as the ownership attribute and the consumer protection attribute. The following stakeholder submitted comments on September 25, 2015: ICNU, PGE, IREC, CUB, PacifiCorp, ODOE, Vote Solar, and the Joint NGOs. On October 8, 2015, NWEC submitted additional comments to Staff, expressing interest in supporting regulated utility ownership in an initial pilot or exploratory phase of a community solar program.

Staff has appreciated stakeholders' willingness to engage with Staff and consider a range of stakeholder perspectives at workshops and through public comments despite the accelerated timeline that neither Staff nor stakeholders are accustomed to in PUC proceedings. In response to the workshop discussion and public comments, Staff has modified the characteristics of several attributes to arrive at its preferred Community Solar attributes and characteristics today.

Staff's Preferred Community Solar Program Attributes and Characteristics

In order to understand how attributes interact and understand the potential public policy issues in a community solar program, it was helpful to visualize how a community solar program may function. Therefore, Staff has provided a community solar diagram in Attachment 1 to assist in understanding how the attributes may interact and Staff's rationale in preferring certain characteristics. This diagram is not intended as a recommendation of a preferred program design, but serves as a tool to help explore attributes. Staff has summarized its preferred attributes and characteristics in a table found in Attachment 2 for ease in referencing each attribute and its corresponding preferred characteristic.

Definition

First, Staff defined Community Solar in Oregon: *Community Solar in Oregon allows electric customers to have an opportunity to share in the costs, risks, and benefits,*

including economic benefits, of solar projects through their utility bill, such that individual customers are provided with an option to buy solar energy via a more collaborative and shared process as opposed to installing solar capacity on their own property. To help develop criteria that Staff used to select the characteristics of community solar program attributes, Staff found it helpful to explain key terms in this definition (in *italicized/underlined* above).

- ***Opportunity***. Staff found that some customers are currently not able to put solar on their roof, but if they could, they would be interested in access to solar. Barriers for an electric utility customer acquiring solar could include:
  - Not owning their property because they are renters.
  - Shared roof space may preclude installation (such as condos).
  - Roof is shaded, so it is a poor resource/less suitable for solar.
  - Limited income/low income customers have a cost barrier because of upfront monetary investment of installing solar on their property.

- ***Share in costs, risks, and benefits.*** To the extent that it is reasonable, this program is geared towards customers that currently do not have the opportunity to install net metered solar on their home. The program should reflect costs, risks, and benefits (including economic benefits) similar to a homeowner's experiences with net metered solar. The subscriber should be aware of project costs, risks, and benefits to promote fairness and combat misinformation. Similar to the understanding that homeowners experience when they execute contracts related to their solar installation, the subscriber should understand the subscription fee, risks, and estimated economic benefit (bill credit) from their share of the community solar facility.

- ***Through their utility bill.*** Community Solar should utilize a new billing structure that is capable of reflecting the costs, risks, and benefits of a subscriber's share of a community solar facility.

- ***Collaborative and shared process.*** An open and transparent framework is useful for customers to buy solar without installing solar capacity on their own property and useful in combating misinformation to protect consumers. Subscribers join with other subscribers in their energy community to share in the costs, risks, and benefits of a shared solar resource.

Criteria

HB 2941 Section 3(3) provides guidance as to how the preferred set of attributes for Community Solar should be determined: "The Commission must recommend a

community solar program design or a set of preferred attributes that best balances the resource value benefits, costs, and impacts to ratepayers . . . ." In addition, Section 3(2)(a)-(d) raises specific considerations in examining community solar attributes: (a) individual ratepayer access to a specific solar resource, (b) costs to community solar program subscribers and non-subscribers, (c) the role of utilities, and (d) any other reasonable considerations.

Staff used the components of the bill with the definition of community solar above to develop criteria that guided Staff's consideration of community solar program attributes. Below are seven criteria used to select Staff's preferred characteristics of community solar program attributes:

1. Encourage fair access to costs, risks, and benefits of solar to those who do not currently have access to installing solar on their property.

2. Minimize shifting of costs and risks onto non-subscribing ratepayers.

3. Encourage consumer protection.

4. Maintain the competitive market landscape for projects.

5. Encourage development of lowest cost systems to increase access for cost-sensitive subscribers.

6. Encourage multiple options and choices for subscribers, acknowledging that some subscribers may have preferences that do not relate to cost.

7. Encourage administrative ease and efficiency.

Analysis of Community Solar Program Attributes & Staff's Preferred Characteristics

In the following section, Staff lists fifteen community solar program attributes considered through the stakeholder process, along with Staff's reasoning to prefer certain characteristics of those attributes. These preferred characteristics and reasoning were informed by Staff's definition, seven criteria, and statutory considerations listed in the section above. Attachment 2 includes a table that summarizes the definition, criteria, and these fifteen attributes with their characteristics.

Attributes related to Community Solar Resource's System Constraints

1. **System Ownership Attribute** – Who can own the Community Solar Resource (CSR)?

   Staff's Preferred Characteristics of this Attribute → **No regulated utility ownership, third party owners only. Utility affiliate may own CSR. If the regulated utility is permitted to own CSRs, then there must be strict parameters on their ownership to mitigate public policy issues.**

   Reasoning:
   - Avoids layers of accounting complexity and increased PUC workload/oversight when the regulated utility owns the resource – the regulated utility would need to separate accounts for *existing customer rate base and associated return on investments* from *subscriber community solar accounts and associated return on investments*. While the regulated utility may have experience in separating accounts in other areas of their business, Staff believes that there may be greater administrative ease and efficiency in limiting the regulated utility's transaction to potential power costs of paying for any unsubscribed CSR generation.
   - Even with separate accounting for a regulated utility-owned CSR, the regulated utility has the benefit of economies of scale in administration and the marginal administrative cost for overhead may be attributed to all ratepayers. The regulated utility may not be able to fully separate indirect support through internal resources, like HR staff and IT support, from those used in non-CSR matters. Without complete transparency and accountability, invariably a non-CSR subscribing ratepayer will subsidize the work done by the regulated utility to own the CSR. This could worsen as a CSR program grows.
   - Not allowing regulated utility-owned CSRs avoids risk of stranded assets when the regulated utility owns the resource – what if all subscribers back out in 10 years? How does the regulated utility fully recoup their costs without cost to all ratepayers? Staff is reluctant to encourage large regulated utility investments that are not recoverable because it could be risky and undermine business; if the regulated utility's credit rating drops, then all ratepayers could be impacted due to higher costs.
   - Not allowing regulated utility-owned CSRs encourages market competition, because the regulated utility has a strong market advantage (lower risk because of captive customer base, easier to borrow due to lower cost of capital, customer information records, etc.)

unless operating through an affiliate. Third parties may be deterred from competing with regulated utilities, resulting in fewer choices for customers.

- Ratepayers already have access to renewable energy through the regulated utility's existing voluntary program participation in Clean Wind, Green Source, Green Future Solar, and Blue Sky as well through the general rate base of renewables to meet the Renewable Portfolio Standard (RPS) and solar energy to meet the solar capacity standard.
- Low cost system development can be encouraged through program design attributes such as transparency of subscription price on an open market to encourage competition and drive down costs.
- Staff notes that despite the issues above, there is significant interest in regulated utility ownership among some stakeholders. If the Commission decides to allow regulated utility ownership, Staff recommends the following parameters to mitigate those issues:
  1) The subscription rates the regulated utility charges to subscribers along with terms and conditions should be regulated by the Commission.
  2) The regulated utility agrees that it will not seek recovery of costs from non-subscribing ratepayers. If shareholders expect a return on CSR investments, then they should seek that return from subscribers, not all ratepayers.
  3) Require a diversity of ownership types in the Request for Proposal (RFP), so that consumers have more options than only regulated utility-owned CSRs. This requirement could be fully developed in the rulemaking process.
  4) Do not allow the regulated utility to use its marketing and customer information advantages through billing and existing marketing functions.
  5) Any other reasonable requirements determined by the Commission in its rulemaking process.

2. **System Location Attribute** – Where should the CSR be located?

   Staff's Preferred Characteristics of this Attribute → **Flexible, but within Oregon and electricity must be delivered to the regulated utility's system.**

   Reasoning:

   - Some customers may prefer that the location of the CSR be close to where they live, while others may believe that all of Oregon is their "community." This nuance of location preference may be better left to

the market, as long as the CSR is physically located in Oregon and its generated electricity is delivered to the regulated utility's system.

- On one hand, it may be simpler for the regulated utility to use a service territory boundary. On the other hand, there may be disparate impacts on the CSR options available to all customers because PacifiCorp's service territory has more geographic diversity than PGE's service territory, including sites that have greater solar resource potential east of the Cascade mountain range. This may result in higher cost community solar options for PGE subscribers and lower cost community solar options for PacifiCorp subscribers, which impacts the opportunity to access to the program.
- If there is a strong customer preference for more projects that are close to subscribers' homes, then the result may be that more CSRs would be designed and sited in the regulated utility's service territory to meet customer preferences.
- In addition, Staff expects that any wheeling or transmission related costs would be borne by the CSR developer, so large projects outside of the regulated utility service territory may be less attractive to develop due to those additional costs. The additional costs, however, did not compel Staff to limit the potential sites for CSRs.
- Staff has developed the concept that the regulated utility could analyze and identify optimal locations on the grid for both small local community solar projects and larger utility-scale community solar projects. This could alleviate system operational and reliability concerns with solar siting that is not part of resource planning. This analysis could be used in the RFP for CSRs. This optimal grid location concept would need further exploration in the rulemaking, and therefore is not part of Staff's preferred characteristics of this attribute at this time.
- Details of this attribute could be further refined in the rulemaking to encourage diversity of location options through the regulated utility's RFP to select CSRs.

3. **Program Size Attribute** – How big should the cumulative Community Solar program be for each regulated utility?

   Staff's Preferred Characteristics of this Attribute → **Legislative Assembly should set an initial capacity cap for each utility: 0.5 percent of 2014 peak load for each IOU. Legislative Assembly should provide PUC authority to revise the capacity cap (if needed) after a two-year pilot of the community solar program.**

Reasoning:

- A phased approach is important to help match customers to projects and reduce the risk of CSR under-subscription. As discussed above, the Legislative Assembly should set an initial capacity cap that is reflective of the first stage of the program so that it limits risk while program implications, the emerging market, and customer interest are better understood during the two-year pilot phase. Staff believes that 0.5 percent is a reasonable initial capacity cap that is reflective of a pilot phase of the program. As an example, 2014 peak load for PGE was 3,866 MW and PacifiCorp's Oregon 2015 peak load is 2,598 MW, which would lead to an approximately 19.5 MW initial capacity cap for PGE and an approximately 13 MW initial capacity cap for PacifiCorp in Oregon.
- Market demand for community solar in Oregon is untested. To minimize the risk of unintended consequences if demand were to exceed reasonable capacity to administer, deliver, evaluate, and improve a successful program, Staff recommends an initial cap for capacity which the Commission can revisit and adjust after evaluation of the initial two-year pilot phase.
- Setting an initial cap may also be helpful in minimizing risk of undersubscription such that the cap sends a clear market signal of interest that can translate into staged RFPs for projects.
- Details of the amount and how solicitations for meeting capacity through RFPs over the two-year pilot phase should be further refined in the rulemaking.

4. **System Size Attribute** – How big should the CSR be?

Staff's Preferred Characteristics of this Attribute → **Flexible, but a mix of small and large project options in the 25 kW to 2 MW range should be available for customers of each utility.**

Reasoning:

- Similar to the market preference discussion for the location attribute, some customers may prefer smaller projects closer to home and other customers may prefer larger projects anywhere in Oregon. In either case, the customer would have the opportunity to access solar with its associated costs and benefits.
- Staff believes that the 25 kW to 2 MW range for project size is reasonable for the two year pilot phase. Staff referenced the existing

net metering schedule for guidance for the upper and lower bounds of this project size range (*see, e.g.* PGE Schedule 203 Net-Metering Service (". . .generating nameplate capacity is 2 MW or less for Non-residential Customers and 25 kW or less for Residential Customers")).

- Staff sees potential for the need to further classify project size into small and large types (e.g. Small: 25 kW – 200 kW, Large: 200 kW – 2 MW) to aid in promoting diversity of options for customers, the details of which should be determined in rulemaking.

Attributes related to Eligibility / Limitations

5. **Customer Type Attribute** – What class of customers should be eligible to subscribe to a CSR?

   ***Staff's Preferred Characteristics of this Attribute* → Residential and small commercial customers (e.g. those customers that consume 30 kW or less, as seen in PacifiCorp Schedule 23 and PGE Schedule 32).**

   Reasoning:

   - Renewable energy available through Direct Access programs and the Voluntary Renewable Energy Tariff docket (UM 1690) would better address the needs of large non-residential customers. In Oregon, large retail customers already have the option of selecting a third party Electricity Service Supplier through Direct Access.[1] Allowing large customers to be eligible for Community Solar raises several issues related to impacts on the competitive marketplace and Direct Access programs.
   - For the two-year pilot phase, Staff believes this CSR option should mirror eligibility of the voluntary Portfolio Options Committee programs (e.g. 30 kw or less as seen in PacifiCorp Schedule 23 and PGE Schedule 32), but the Legislative Assembly could allow the PUC to reconsider issues related to impacts on Direct Access programs and potentially expand eligibility after the two-year pilot phase.

6. **Special Carve-outs Attribute** – Should there be some amount of capacity that is set-aside with a lower price for certain types of customers (e.g. low-income customers)?

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[1] *See* Pacific Power Oregon Direct Access, *available at* https://www.pacificpower.net/directaccess *and see* PGE Direct Access Operations, *available at* https://portlandgeneral.com/contact_us/direct_access_operations/default.aspx

Staff's Preferred Characteristics of this Attribute → **The Legislative Assembly may determine if carve-outs are elements to include in a Community Solar program to pursue the goal of greater access to solar across a broader range of customers. If so, the subscribers that do not qualify for the carve-out would likely pay a higher subscription fee to subsidize the subscription fee for subscribers that do qualify for the carve-out. All ratepayers should not subsidize lower cost subscriptions for a CSR carve-out group.**

Reasoning:

- Staff has not indicated a preferred characteristic for this attribute. Staff recommends that the Legislative Assembly should consider its public policy goals to determine if carve-outs would help pursue the goal of greater access to solar across a broader range of customers.
- However, Staff believes that any obligation to create lower-cost participation for low-income participants should be borne by other participants, not all ratepayers generally.

7. **Subscription Size Attribute** – How much capacity should an eligible customer be able to subscribe?

Staff's Preferred Characteristics of this Attribute → **Estimated output should not exceed average annual load. Any credits associated with CSR generation that are in excess of annual energy use at the subscriber's home/site should be donated to low-income programs as is done with net metering today.**

Reasoning:

- These characteristics mirror the experience of net-metered solar customers.
- Donation of excess credits to the low-income programs creates a self-capping mechanism within the program and also mirrors net-metered solar.

Attributes related to Contract terms

8. **Length Attribute** – What should be the length of the subscription contract between the eligible customer and the CSR?

Staff's Preferred Characteristics of this Attribute → **Flexible, but should include standard options of (1) two-year option to attract renters and (2) 15-year option to mirror the experience of a rooftop solar customer.**

Reasoning:

- A range of options for a subscriber would likely result in greater ratepayer access to a Community Solar program.
- Renters may not be inclined to commit to long subscription lengths because of typical rental contract lengths. Having a two year option available could reduce the need for early termination fees if only long-term contacts were offered.
- Other customers may be willing to commit to a long-term contract that is most similar to installing solar on their own roof; having an option for at least 15 years would be preferable for this type of customer.
- Details of contract length considerations should be further refined in the rulemaking. If the Commission prefers to not require specific contract lengths, the need for greater direction on subscription lengths could be assessed within the two-year pilot phase and revisited in the PUC's Biennial Report.

9. **Early Termination Attribute** – How should a customer be treated if they need to terminate their contract early?

   Staff's Preferred Characteristics of this Attribute → **Fee for early termination. Transfer of subscription within service territory with two types of transfers available: (1) transfer to a different subscriber and (2) portable to a new account in same service territory if the subscriber moves.**

   Reasoning:

   - The ability to transfer subscriptions within a service territory would likely result in greater ratepayer access to a Community Solar program. If the subscriber moves to a new location that has a different historic load, then a subscription reassessment of average annual load may be required (*see* subscription size attribute).
   - A fee for early termination helps to control costs for remaining subscribers and mitigates risk of under-subscription.
   - Details of the development of fees or mechanisms for portability should be further refined in the rulemaking.

<u>Attributes related to Subscription Pricing</u>

10. **Subscription Price Calculation Method Attribute** – How should the price that an eligible customer pays to the CSR be calculated?

Staff's Preferred Characteristics of this Attribute → **CSR owner and subscribers should bear the costs and risks of the CSR. Non-payment of subscriptions (uncollectibles) should be borne by the CSR owner. The regulated utility should only bear costs of any unsubscribed portion of the CSR at the as-available avoided cost (market) price. Start-up costs should be allocated to all eligible ratepayers, but on-going administrative costs should be borne by the CSR owner and subscribers. The subscription price should be set by the CSR market so the CSR owner recovers their costs and earns a rate of return, but the PUC should not oversee or regulate the subscription price offered by third-party CSR owners. The project pool website should require prices to be posted, thus enabling eligible customers to use a well-functioning market and competition to drive down prices.**

Reasoning:

- Requiring that risk is borne by the subscriber and CSR owner/developer parallels the net-metered solar customer's experience, where the net metered customer installs solar on their roof (owner/developer function) and receives a bill credit for its output (subscriber function).
- Using the as-available avoided cost (market) price creates an incentive for the CSR owner to maintain a fully subscribed CSR, which mitigates risk of undersubscription and holds non-subscribing ratepayers harmless.
- The subscription price should be rationally related to the CSR costs, the CSR owner's rate of return, and any on-going administrative cost related to the program. These characteristics mirror agreements that net metered solar customers use when they buy their own panels or lease panels from a third party. But the PUC would not regulate these cost components of a third party CSR owner's subscription price, similar to the PUC not regulating the cost of net-metered solar panels.
- Details about the amount of costs that should be designated as start-up costs or ongoing administrative costs should be further refined in the rulemaking.
- It should be noted that some stakeholders believe that amendments to Residential Energy Tax Credit (RETC) should be considered by the Legislative Assembly to mirror the existing net-metered solar customers' experience of taking advantage of this tax credit to bring down their solar costs. The existing statutory language of the RETC would not allow community solar subscribers to use this tax credit to bring down the costs of a CSR. The question of whether to amend the

RETC statutory language is ultimately the Legislative Assembly's decision.

11. **Product Design Attribute** – What is the eligible customer buying?

Staff's Preferred Characteristics of this Attribute → **Capacity product, which is a share of the capacity of the entire CSR. The question of whether Renewable Energy Credits (RECs) are included in the product requires more attention in the rulemaking.**

Reasoning:

- A capacity product is similar to the type of product that existing net-metered solar customers have access to, which mirrors the net metered solar customer experience when purchasing a solar electric system. The energy output will vary as the resource varies month-to-month and year-to-year.
- Details of parameters around the type of product offered should be further refined in the rulemaking.
- REC ownership could be part of the product so that the subscribers claim the environmental attributes of the solar energy generation. However, there are complications with REC ownership that should be transparent to subscribers when considering their CSR purchase. If Energy Trust contributed to the project as they do with rooftop solar today, Energy Trust would claim a portion (75 percent) of the RECs on behalf of all ratepayers, leaving just 25 percent for the subscriber and project to negotiate. If the utility were to compensate the subscriber for RECs associated with their share of the solar project through a cost component in the Resource Value of Solar (RVOS) informed bill credit, the subscriber would no longer own the RECs and the utility would apply them toward RPS compliance. As evidenced by these complications, this issue needs further exploration in the rulemaking.

12. **Consumer Protection/Oversight Attribute** – How will eligible customers (in particular, residential customers) be protected from price gouging and misleading information, similar to issues experienced in jurisdictions that introduced retail choice?

Staff's Preferred Characteristics of this Attribute → **The Project Pool website should require prices for a capacity product to be posted, thus enabling eligible customers to have comparable information when making their purchase decision. It should require estimated annual output of the CSR, location of the CSR, and eligible service territory. The Project Pool**

website should include consumer protection information, including disclosure requirements, questions to ask checklist, and DOJ fraud phone line.

Reasoning:

- Knowing that consumers have little knowledge of how much an energy product should cost, Staff considered five approaches to protect consumers against unreasonable or excessive subscription prices offered by third party CSR owners: (1) PUC oversight on cost components of the subscription price, (2) access to market information and use of a well-functioning market to drive down prices, (3) reliance on existing consumer protection and fraud protection resources, (4) requirements for CSR information disclosures, and (5) re-assessment of market conditions after a two-year pilot phase. Staff believes that approach (1) is not necessary if approaches (2) through (5) are used.
- To protect consumers that may have little to no experience with energy products, availability of transparent, consistent, and comparable market information about costs and benefits of CSRs in a Project Pool will help drive prices down.
- While performance guarantees should not be required, the Project Pool should include information about estimated output of the CSR.
- This is a new type of product in Oregon, where there has never been retail choice. No one knows the reasonable retail costs of solar or how the retail CSR market will emerge. A well-functioning market should not fear perfect information; the Project Pool website would aim to provide that information. At the same time, the Project Pool does not prevent a CSR owner from conducting direct marketing or pursuing its own marketing strategies. It simply provides consistent and comparable information about all of the options that a consumer could choose for a community solar product.
- Staff is reminded of the CUB Connects website to compare telephone rates in Oregon.[2] Under the Federal Telecommunications Act of 1996, most telecommunications and online services are not regulated services like traditional utilities. Therefore, consumers must make their own decisions between pricing and services available in the marketplace. CUB Connects aims to educate consumers by helping them sort through service providers and available plans to choose telecommunications services which fulfill their needs. At the very least, this is the type of concept that Staff envisioned during the two year Community Solar pilot phase.

[2] Citizens Utility Board, CUB Connects, *available at* http://cubconnects.org/

- Without easy access to all of their options on a Project Pool website, consumers would likely learn about a CSR through direct marketing by the CSR owner. This could lead to an outcome similar to "red-lining," where low-income or less-desirable customers are not approached to participate in a CSR. This would defeat the criteria of encouraging greater access to solar.
- Setting disclosure requirements such as providing projected costs and benefits of subscriptions; applicable rules, fees, and charges; solar panel warranty; CSR owner's production projections; description of methodology to develop projections; proof of insurance; and proof of long-term maintenance plans have been used successfully in other jurisdictions. These types of required disclosures and a checklist of questions to ask before subscribing to a CSR would help to protect consumers that are approached directly by CSR owners, perhaps without getting the chance to consult the Project Pool website. These disclosure requirements and related resources should be established in the rulemaking.

Attributes Related to Bill Credits

13. **Bill Credit Calculation Method Attribute** – How should the bill credit that the subscriber is receiving from the utility be calculated?

    Staff's Preferred Characteristics of this Attribute → **Energy x Rate. (Energy from share of CSR) multiplied by (Rate that is informed by the Resource Value of Solar). Showing the credit on the subscriber's bill is a key element.**

    Reasoning:
    - Energy x Rate to calculate the credit is similar to the net-metered solar customer's experience.

14. **Bill Credit Rate Attribute** – What is the rate that should be used for the energy generated from the subscriber's CSR shares?

    Staff's Preferred Characteristics of this Attribute → **Informed by the Resource Value of Solar (RVOS). If the RVOS is not determined by the time that the PUC rulemaking to implement Community Solar programs begins, then the Commission should determine the rate in the rulemaking.**

    Reasoning:

- Staff does not believe that the retail rate is appropriate. The RVOS is still in development. Staff believes that the RVOS will inform the development of the rate to use for bill credits.
- Staff anticipates a rulemaking to implement the Community Solar bill, and if the RVOS has not yet been determined, then the Commission should set a rate in that rulemaking.

15. **Energy from CSR Attribute** – How should the energy generated from the CSR be used in the bill credit?

    ***Staff's Preferred Characteristics of this Attribute* → Subscribers' shares of actual CSR output. Not an estimated output that is trued up over time.**

    Reasoning:
    - Using the proportional share of the actual CSR output mirrors the net-metered solar customer's experience.

Elements to include in Commission's Recommendation to Legislature Assembly

Staff understands that the Community Solar diagram and full list of preferred attributes may be too detailed for the Commission's recommendation to the Legislative Assembly. Staff originally set out to identify attributes, but Staff needed a more detailed model in order to better understand the issues that could arise in a Community Solar program. Staff's analysis that led to the detailed diagram and attributes allowed Staff to conclude that some attribute characteristics should be determined in a rulemaking proceeding and allowed to be further refined after a two-year pilot phase. Staff suggests that the Commission include the following elements in its recommendation to the Legislative Assembly; all other attributes and characteristics not covered in the recommendation to the Legislative Assembly should be determined by the PUC in a rulemaking proceeding that includes stakeholder input.

1. Definition of Community Solar in Oregon. There are many types and definitions of Community Solar across the country. The Legislative Assembly should define what Community Solar means in Oregon. Having a clear definition of Community Solar will be important in conducting the PUC rulemaking. Staff has included its preferred definition in the previous section, which is summarized in Attachment 2.

2. Criteria to Guide Rulemaking. To help understand the goals and intent in establishing a Community Solar program, criteria will be helpful to guide the PUC rulemaking process. Staff has included its preferred criteria in the previous section, which is also summarized in Attachment 2.

3. Direction on Key Attributes. While Staff's preferred characteristics of attributes reflect several areas of stakeholder consensus, there were some attribute characteristics where stakeholders had different perspectives. Staff applied its definition of Community Solar in Oregon and criteria to decide Staff's preferences, but it may be helpful for the Legislative Assembly to consider its public policy goals and weigh in on the following key attributes. The Legislative Assembly's direction on these key attributes may encourage a more efficient rulemaking process at the PUC:

    a. ***Program Size Attribute*** – *how big should the cumulative Community Solar program be for each utility?* An initial capacity cap per utility will help to define the program size. The Legislative Assembly should assign an initial capacity cap, but should provide PUC authority to adjust the cap after a two-year pilot phase. Staff has suggested an initial capacity cap of 0.5 percent of 2014 peak load for each utility.

    b. ***System Ownership Attribute*** – *Who can own the CSR?* Staff has recommended that only third parties or utility affiliates should be permitted to own a CSR. If the regulated utilities are permitted to own CSRs, then there should be strict parameters to their ownership of CSRs to mitigate several public policy issues. Those parameters include: (1) The subscription rates the regulated utility charges to subscribers along with terms and conditions should be regulated by the Commission; (2) The regulated utility agrees that it will not seek recovery of costs from non-subscribing ratepayers. If shareholders expect a return on CSR investments, then they should seek that return from subscribers, not all ratepayers; (3) Require a diversity of ownership types in the RFP, so that consumers have more options than only regulated utility-owned CSRs. This requirement could be fully developed in the rulemaking process; (4) Do not allow the regulated utility to use its marketing and customer information advantages through billing and existing marketing functions; and (5) Any other reasonable requirements determined by the Commission in its rulemaking process.

    c. ***System Size Attribute*** – *How big should the CSR be?* Staff has recommended that system size be flexible, but a mix of small and large project options in the 25 kW to 2 MW range should be available for customers of each utility.

d. ***System Location Attribute*** – *Where should the CSR be located?* Staff has recommended that system location be flexible, but within Oregon and electricity must be delivered to utility's system.

e. ***Customer Type Attribute*** – *What class of customers should be eligible to subscribe to a CSR?* Staff has recommended that residential and small commercial customers (e.g. 30 kW or less as seen in PacifiCorp Schedule 23 and PGE Schedule 32) be eligible to subscribe to a CSR initially. The Commission should be allowed to consider expansion of eligibility after the two-year pilot phase.

f. ***Subscription Size Attribute*** – *How much capacity should an eligible customer be able to subscribe?* Staff has recommended that estimated output should not exceed the subscriber's average annual load. Any credits associated with CSR energy generation that are in excess of annual energy use at the subscriber's site should be donated to low income programs as is done with net metering today.

g. ***Bill Credit Rate Attribute*** – *What is the rate that should be used for the energy generated from the subscriber's CSR shares?* Staff has recommended that the bill credit rate should be informed by the RVOS. If the RVOS is not determined by the time that the PUC rulemaking to implement the Community Solar program begins, then the Commission should determine the rate in the rulemaking.

h. ***Cost and Risk Shifting Minimization*** – While Staff has included "minimize shifting of costs and risks onto non-subscribing ratepayers" in its preferred criteria for the implementation of Community Solar in Oregon, the bill should make clear that the CSR owner/developer and the subscribers bear the costs and risks of a CSR.

i. ***Utility Cost Recovery of Start-Up Costs of a CSR program*** – In Staff's preferred subscription pricing method attribute, Staff believes that start-up costs should be borne by all ratepayers, while on-going administrative costs should be borne by the CSR owner/developer and subscribers. The Legislative Assembly should make this distinction clear in the bill.

j. ***Two-Year Pilot Phase, PUC Report, and PUC Authority*** – In several areas of Staff's reasoning regarding preferred attributes and characteristics, Staff referred to a two-year pilot phase. In the bill, the Legislative Assembly should direct a pilot phase for two years with the

community solar definition, criteria, and key attributes defined above, but grant the PUC authority to examine the pilot phase, provide a report on the status of the CSR program, and make necessary adjustments to CSR attributes to improve the program.

PROPOSED COMMISSION MOTION:

The Commission accept Staff's analysis of preferred community solar attributes and characteristics and adopt Staff's suggested "Elements to Include in the Commission's Recommendation to the Legislative Assembly."

LEGISLATURE

- Defines "Community Solar", key attributes, and criteria for PUC implementation
- Sets initial capacity cap for each utility: 0.5 percent of 2014 peak load for each IOU

PUC

- Rulemaking to implement the bill, including biennial reports, bill credit rate, and revision to capacity cap (if needed) after two-year pilot phase

UTILITY

- Submits RFP draft to PUC for consistency with rule
- Conducts RFP to populate Project Pool
- CSR generation delivered to utility
- Pays CSR market rate for unsubscribed energy
- Pays Subscriber a bill credit based on actual generation of subscribed capacity and informed by the Resource Value of Solar docket
- Admin start up costs (e.g. project pool) paid by all eligible ratepayers (amount TBD in Rulemaking)

RFP for PPAs

- Projects selected through RFP enter the "project pool"
- PUC oversees of utility's RFP process
- RFP criteria, e.g. mix of small (>25 kW – 200 kW) and large (200 kW – 2 MW) projects to fulfill capacity targets in biennial solicitations set in PUC Rule

PPA $ from utility for unsubscribed energy

Energy from CSR

Bill Credit $ from utility

Oregon Community Solar Project Pool

- Eliminates need for PUC oversight on subscriptions by providing customers with equal access to consistent/comparable information
- All projects selected through RFP enter this central pool for all customers to consider
- All projects must list: price for a capacity product, estimated annual output, location of resource and eligible service territory
- Website will include consumer protection information, such as disclosure requirements & questions to ask

CSR OWNER – (third party or utility affiliate)

Builds CSR if RFP bid selected

Community Solar Resource (CSR)

- Size: >25 kW – 2 MW
- Location: flexible, as long as generation delivered to utility system

Subscription $ based on number of "shares" of capacity purchased

1 2 3 4 5 6 7 8 9 10+

SUBSCRIBERS

- Residential and Small Commercial Customers are eligible
- Continues to pay electricity bill to utility and receives credit for CSR generation on utility bill
- Share of CSR generation cannot exceed subscriber's annual electricity use, excess donated to low-income fund
- Bears on-going admin costs (amount TBD in Rulemaking)
- Could pay subscription price via bill, utility would pass through payment to CSR

UM 1746 - Attachment 1

UM 1746 – Community Solar Program Design Recommendation (HB 2941, Section 3)
Attachment 2: Summary of Staff's Preferred Program Attributes and Characteristics

DEFINITION OF COMMUNITY SOLAR IN OREGON

Community Solar in Oregon allows electric customers to have an opportunity to share in the costs, risks, and benefits, including economic benefits, of solar projects through their utility bill, such that individual customers are provided with an option to buy solar energy via a more collaborative and shared process as opposed to installing solar capacity on their own property.

COMMUNITY SOLAR IN OREGON: CRITERIA

1. Encourage fair access to costs, risks, and benefits of solar to those who do not currently have access to installing solar on their property.
2. Minimize shifting of costs and risks onto non-subscribing ratepayers.
3. Encourage consumer protection.
4. Maintain the competitive market landscape for projects.
5. Encourage development of lowest cost systems to increase access for cost-sensitive subscribers.
6. Encourage multiple options and choices for subscribers, acknowledging that some subscribers may have preferences that do not relate to cost.
7. Encourage administrative ease and efficiency.

TABLE OF PREFERRED COMMUNITY SOLAR ATTRIBUTES & CHARACTERISTICS

ATTRIBUTE		ATTRIBUTE'S CHARACTERISTICS
Community Solar Resource's System Constraints		
1	***System Ownership Attribute*** – Who can own the Community Solar Resource (CSR)?	-No regulated utility ownership, third party owners only. -Utility affiliate may own CSR. -If the regulated utility is permitted to own CSRs, then there must be strict parameters on their ownership to mitigate public policy issues.
2	***System Location Attribute*** – Where should the CSR be located?	-Flexible, but within Oregon and electricity must be delivered to the regulated utility's system.
3	***Program Size Attribute*** – How big should the cumulative Community Solar program be for each	-Legislative Assembly should set an initial capacity cap for each utility: 0.5% of 2014 peak load for each IOU.

	utility?	-Legislative Assembly should provide PUC authority to revise the capacity cap (if needed) after a two-year pilot of the community solar program.
4	***System Size Attribute*** – How big should the CSR be?	-Flexible, but a mix of small and large project options in the 25 kW to 2 MW range should be available for customers of each utility.
Eligibility / Limitations		
5	***Customer Type Attribute*** – What class of customers should be eligible to subscribe to a CSR?	-Residential and small commercial customers (e.g. customers that consume 30 kw or less, as seen in PacifiCorp Schedule 23 and PGE Schedule 32).
6	***Special Carve-outs Attribute*** – Should there be some amount of capacity that is set-aside with a lower price for certain types of customers (e.g. low-income customers)?	-The Legislative Assembly may determine if carve-outs are elements to include in a Community Solar program to pursue the goal of greater access to solar across a broader range of customers. -If the Legislative Assembly decides to establish a carve-out, the subscribers that do not qualify for the carve-out would likely pay a higher subscription fee to subsidize the subscription fee for subscribers that do qualify for the carve-out. All ratepayers should not subsidize lower cost subscriptions for a CSR carve-out group.
7	***Subscription Size Attribute*** – How much capacity should an eligible customer be able to subscribe?	-Estimated output should not exceed average annual load. -Any credits associated with CSR generation that are in excess of annual energy use at the subscriber's home/site should be donated to low-income programs as is done with net metering today.
Contract terms		
8	***Length Attribute*** – What should be the length of the subscription contract between the eligible customer and the CSR?	-Flexible, but should include standard options of (1) two-year option to attract renters and (2) 15-year option to mirror the experience of a rooftop solar customer.
9	***Early Termination Attribute*** – How should a customer be treated if they need to terminate their contract early?	-Fee for early termination. -Transfer of subscription within service territory with two types of transfers available: (1) transfer to a different subscriber and (2)

		portable to a new account in same service territory if the subscriber moves.
Subscription pricing		
10	***Calculation Method Attribute*** – How should the price that an eligible customer pays to the CSR be calculated?	-CSR owner and subscribers should bear the costs and risks of the CSR. -Non-payment of subscriptions (uncollectibles) should be borne by the CSR owner. -The regulated utility should only bear costs of any unsubscribed portion of the CSR at the as-available avoided cost (market) price. -Start-up costs should be allocated to all eligible ratepayers, but on-going administrative costs should be borne by the CSR owner and subscribers. -The subscription price should be set by the CSR market so the CSR owner recovers their costs and earns a rate of return, but the PUC should not oversee or regulate the subscription price offered by third-party CSR owners. -The project pool website should require prices to be posted, thus enabling eligible customers to use a well-functioning market and competition to drive down prices.
11	***Product Design Attribute*** – What is the eligible customer buying?	-Capacity product, which is a share of the capacity of the entire CSR. -The question of whether Renewable Energy Credits (RECs) are included in the product requires more attention in the rulemaking.
12	***Consumer Protection/Oversight Attribute*** – How will eligible customers (in particular, residential customers) be protected from price gouging and misleading information, similar to issues experienced in jurisdictions that introduced retail choice?	-The Project Pool website should require prices for a capacity product to be posted, thus enabling eligible customers to have comparable information when making their purchase decision. - The Project Pool website should require estimated annual output of the CSR, location of the CSR, and eligible service territory. -The Project Pool website should include consumer protection information, including disclosure requirements, questions to ask

		checklist, and DOJ fraud phone line.
Bill Credits		
13	***Bill Credit Calculation Method Attribute*** – How should the bill credit that the subscriber is receiving from the utility be calculated?	-(Energy from share of CSR) *multiplied by* (Rate that is informed by the Resource Value of Solar). -Showing the credit on the subscriber's bill is a key element.
14	***Bill Credit Rate Attribute*** – What is the rate that should be used for the energy generated from the subscriber's CSR shares?	-Informed by the Resource Value of Solar (RVOS). -If the RVOS is not determined by the time that the PUC rulemaking to implement Community Solar programs begins, then the Commission should determine the rate in the rulemaking.
15	***Energy from CSR Attribute*** – How should the energy generated from the CSR be used in the bill credit?	-Subscribers' shares of actual CSR output. -Not an estimated output that is trued up over time.