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Cc:	ANDRUS Brittany; DOLEZEL Cindy; ADAMS Aster; EISDORFER Jason; PUC.FilingCenter
Subject:	UM 1746 (Community Solar Program Design) - Staff draft recommendations
Date:	Friday, September 18, 2015 4:43:52 PM
Attachments:	Staff Recommended Attribute Characteristics_150922.pdf

Dear Stakeholders,

Thank you for your continued participation in the UM 1746 Community Solar docket. The attached description of Community Solar Program Design attributes represents Staff's current thinking in identifying the preferred characteristics that should be part of a community solar program design in Oregon. Staff reiterates that this is our current thinking and we are open to feedback and discussion from stakeholders. Staff is expecting feedback on this draft preferred approach from stakeholders at a public workshop at 1:00PM on Tuesday, September 22 and public comment from stakeholders by COB on Friday, September 25.

As a reminder, please see below for the remaining schedule for this docket.

- ✓ Friday, August 7, COB: ***Interested parties submit Proposals*** for community solar program design in advance of Workshop 1. Please submit proposals via email to the OPUC Filing Center (PUC.FilingCenter@state.or.us) with your name or affiliation and "UM 1746 – Community Solar Program Design Proposal" in the subject line.
- ✓ Tuesday, August 11, 1PM – 5PM: ***Workshop 1*** – Discuss program design proposals submitted by parties, provide clarifications about program design proposals, identify common attributes, and discuss pros/cons of proposals.
- Friday, August 14: ***Staff email*** to follow up on workshop 1 and provide direction for written public comment.
- Tuesday, September 1, COB: ***Written Public Comment*** due on program design proposals. Please submit comments via email to the OPUC Filing Center (PUC.FilingCenter@state.or.us) with your name or affiliation and "UM 1746 – Community Solar Program Design comments" in the subject line.
- Friday, September 18**:** ***Staff email*** to provide materials for Workshop 2, including Staff draft recommendation for program design.
- Tuesday, September 22, 1:00-5:00PM: ***Workshop 2*** – discuss Staff draft recommendation for community solar program design (emailed to stakeholders in advance on Friday, Sept 18).
- Friday, September 25: ***Written Public Comment*** due on Staff draft recommendation for community solar program design. Please submit proposals via email to the OPUC Filing Center (PUC.FilingCenter@state.or.us) with your name or affiliation and "UM 1746 – Community Solar Program Design Comments" in the subject line.
- October 16, 9:30-11:00AM**:** ***Special Public Meeting with Commissioners*** – staff public

meeting memo will provide Staff's recommendation for Commission approval. Stakeholders will have the opportunity to provide public comment at the meeting.

- Friday, October 30 – ***Submit Community Solar program design recommendation to the Legislature.*** Statutory deadline is Sunday, Nov 1, 2015.

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UM 1746 – Community Solar Program Design Recommendation (HB 2941, Section 3)
Staff's Draft Recommendations on Program Attributes and Characteristics
DRAFT

The following description of Community Solar Program Design attributes represents Staff's current thinking in identifying the preferred characteristics that should be part of a community solar program design in Oregon. Staff is expecting feedback on this draft preferred approach from stakeholders at a public workshop at 1:00PM on Tuesday, September 22, 2015, and public comment from stakeholders by COB on Friday, September 25, 2015.

To provide context for the program attributes and characteristics below, Staff is providing a high level outline of a program design. This should not be construed as Staff's recommendation, but rather a contextual illustration to help achieve a better understanding among stakeholders of the preferred characteristics below. Staff envisions a phased approach:

- Project interest identification and third party review.
- Creation of a central "Project Pool", subscribers "reserve" their shares.
- Once a project reaches a certain threshold of customer interest/reservations, it moves to construction.
- Interconnection and power purchase agreements (PPA) completed between the project owner and the utility equate to; (1) the bid price for subscribed energy and associated Renewable Energy Credits (RECs) (utility would pass through subscriber payment portion via utility bills) and (2) the utility avoided cost price for unsubscribed energy.
- Two line items are added to the customer bill – subscription price and bill credit:
    - Subscription price is the subscriber's share of the energy output at the PPA subscription price, plus an administrative fee.
    - Bill credit is the energy generated from the subscriber's share of the project multiplied by a rate that is informed by the Resource Value of Solar.
- Early termination fees would apply, subscriptions can follow subscribers within the service territory if they move, and subscribers may be able to use the "Project Pool" to find a new subscriber.

Objective

Based on Staff's interpretation of the legislative intent of HB 2941, Section 3, the PUC's objective is to recommend a community solar program design or a set of preferred attributes of different community solar program designs, that best balances the resource value benefits, costs, and impacts to ratepayers to the interim committees of the Legislative Assembly related to energy and business on or before November 1, 2015.

Definition of Community Solar in Oregon

*Oregon Community Solar 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 privately installing solar capacity on their own property.*

Opportunity:

- 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:
  - Do not own the 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 installed solar.

Share in the costs, risks and benefits:

- To the extent that it is reasonable, this program for customers that currently do not have the opportunity to install solar (listed above) 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, mirroring the understanding that a homeowner experiences when they execute contracts related to their solar installation.
- The subscriber should understand the subscription fee components, risks, and estimated bill credit economic benefit from their share of the community solar facility.

Through their utility bill:

- Community solar should create 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.

Community Solar Resource's System Constraints

- **System Ownership Attribute**

  - Flexible – utility or third party developer or municipality, several options
  - Utility owned
  - ***Non-utility owned (including utility affiliate) – Staff Preferred Characteristic***

  Reasoning:

  - Avoids layers of accounting complexity and oversight when the utility owns the resource – the 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*.

- Avoids risk of stranded asset when the utility owns the resource – what if all subscribers back out in 10 years? How does the utility fully recoup their costs without cost to ratepayers?
- Encourages market competition, because utility could have a market advantage (lower risk because of captive customer rate base, easier to borrow capital, customer information records, etc.) unless through an affiliate.

- **System Location Attribute**

  - Within utility service territory

  - Within Oregon

  - ***Flexible but within Oregon as long as electricity is delivered to the utility's system. Utility could identify optimal grid locations for diverse community solar projects that may appeal to an array of customers. – Staff Preferred Characteristic***

  Reasoning:

  - Some customers may prefer that the location of the community solar resource 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 community solar resource is physically located in Oregon and its generated electricity is delivered to the utility's system.
  - On one hand, it may be simpler for the utility to use a service territory boundary. On the other hand, there may be disparate impacts on the community solar 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 ratepayers' opportunity to access to the program.
  - In Staff's preferred characteristic, if there is a strong preference for more projects that are close to subscribers' homes, then the result may be that more community solar resources would be sited in the utility's service territory.
  - Staff has developed the concept that the 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 utility resource planning. With this analysis, the utility, third party developers, and interested customers would work together to identify an initial set of diverse project sites, specifications, and expected costs/benefits to subscribers. This concept needs further exploration with stakeholders.

- **System Size Attribute**
  - 2 MW maximum
  - None defined
  - ***Flexible, but phased approach – Staff Preferred Characteristic***

  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.
  - However, a phased approach and a method of matching customer interest to projects are warranted to reduce the risk of under subscription. The legislature could set an initial capacity standard that is reviewed annually by the PUC. The initial capacity standard should be reflective of the first stage of the program and set so that it limits risk while program implications and customer interest are better understood.
  - Staff's concept for the utility to analyze and identify optimal locations on the grid for both small and large community solar projects could help determine whether the capacity standard should increase over time as well. Again, that concept needs further exploration with stakeholders.

<u>Eligibility / Limitations</u>

- **Customer type Attribute**
  - Residential only
  - ***Residential and small commercial - Staff Preferred Characteristic***
  - Any, Diversity of types and groups

Reasoning:

- The Voluntary Renewable Energy Tariff and renewable energy available through Direct Access would better address the needs of large non-residential customers.
- A community solar program involves voluntary sign up by subscribers, and could therefore mirror eligibility for voluntary Portfolio Options Committee programs (e.g. 30 kw or less as seen in PacifiCorp Schedule 23 and PGE Schedule 32)

- **Special carve-outs Attribute**

  - 10 percent low income
  - None defined
  - Concern with carve-outs
  - Maximize the benefit for low and moderate income customers

  Reasoning:

  - Staff has not indicated a preferred characteristic for this attribute. Staff recommends that the Legislature should determine if carve-outs are necessary elements to include in Community Solar. If so, the subscription price should continue to be rationally related to the cost of the resource and any administrative fees, but Staff envisions that the subscribers that do not qualify for the carve-out would pay a higher subscription fee to subsidize the subscription fee for subscribers that do qualify for the carve-out.
  - Similar to the market preference discussion for the location and size attributes, some customers may prefer projects that include carve outs for low-income customers. Some customers may consider the project to be more of a "community" project when they help to subsidize subscription fees for low-income customers. Developers may consider special carve outs to be part of their project's design to attract these types of customers.

- **Subscription Size Attribute**

  - ***Not to exceed average annual load – Staff Preferred Characteristic***
  - ***Any solar energy credits in excess of annual energy use at the subscribers site will be donated to low income programs as is done with net metering today. – Staff Preferred Characteristic***
  - Up to 90 percent average annual load

- Minimum of 10 customers, maximum 25 kW pp, at least 50 percent capacity subscribed

Reasoning:

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

Contract terms

- **Length Attribute**
  - Options for 2,5,7,10, or 15 years
  - 20 year, life of system
  - Between project and customer, standards could be useful
  - ***Must include standard options of (1) one year and (2) life-of-the project (in years); other lengths could be determined through program design that is aiming to meet customer preferences – Staff Preferred Characteristic***

Reasoning:

- A range of options for a subscriber would likely result in greater ratepayer access to a community solar program. Staff expects further consideration of additional parameters.
- Renters may not be inclined to commit past one year because of typical rental contract lengths. Having a one year option available is in line with many rental agreements and could reduce need for early termination fees if only two years or greater were offered.
- Other customers may be willing to commit to a long term contract most similar to installing solar on their own roof; having an option for the life of the project would be preferable for this type of customer.

- **Early Termination Attribute**
  - ***Fee for early termination – Staff Preferred Characteristic***
  - ***Transfer of subscription within service territory – Staff Preferred Characteristic***

Reasoning:

- The ability to transfer subscriptions within a service territory would likely result in greater ratepayer access to a community solar program. A new

location may require reassessment of average annual load (subscription size attribute).
- A fee for early termination helps to control costs for remaining subscribers and mitigates risk of undersubscription.

Subscription pricing

- **Calculation Method Attribute**

  - ***Share of solar resource costs in the Power Purchase Agreement plus cost of administering program – Staff Preferred Characteristic***

  - Price set by negotiations with solar provider

  - More stakeholder involvement if administered by the utility

  - ***Availability of Residential Energy Tax Credit for subscribers and Energy Trust incentives for developers to bring down the cost of a community solar subscription fee – Staff Preferred Characteristic***

  Reasoning:

  - The subscription price should be rationally related to the resource costs incurred in the Power Purchase Agreement between the developer and the utility plus any administrative cost related to the program. These characteristics mirror agreements that net metered solar customers use when the buy their own panels or lease panels from a third party.
  - Amendments to the Residential Energy Tax Credit and use of Energy Trust incentives should be considered, as existing net metered solar customer have access to these benefits to reduce their solar costs.

- **Product Design Attribute**

  - Energy or capacity

  - ***Capacity – Staff Preferred Characteristic***

  - Separate costs from value or combined into one netted rate?

  - RECs – Subscribers could get the value of the RECs

  Reasoning:

  - A capacity product is similar to the type of product that existing net metered solar customer have access to, which mirrors the net metered solar customer

when purchasing a solar electric system. The energy output will vary as the resource varies month to month and year to year.

- REC ownership could be part of the product so that the subscribers claim the environmental attributes of the solar project. This concept needs further exploration with stakeholders.

- **Oversight Attribute**

  - OPUC does not review the cost, market
  - ***Central "Project Pool" established – Staff Preferred Characteristic***
  - ***Review of messaging and outreach for consumer protection by the existing voluntary renewable energy Portfolio Options Committee – Staff Preferred Characteristic***

  Reasoning:

  - Entry of a community solar project into the central "Project Pool" is subject to advancement through an upfront screening process that includes review of project design for technical standards and business practices. Post installation review is required prior to interconnection.
  - There should be some subscription cost oversight so that there is a rational relationship with the costs of the community solar project and the subscription fee. Transparent, consistent, and comparable information about costs and benefits of community solar projects in a central Project Pool may serve that purpose.
  - The renewable energy voluntary Portfolio Options Committee has experience in reviewing solar messaging and programs with an eye towards consumer protection. The Commission engages their expertise for voluntary renewable programs, and it would be efficient to rely on their expertise for this voluntary program as well.

<u>Bill Credits</u>

- **Calculation Method Attribute** – ***Energy x Rate – Staff Preferred Characteristic***
- **Rate Attribute**
  - Retail rate until RVOS determined
  - Netted with subscription cost
  - Determined by Commission

- ***Informed by Resource Value of Solar – Staff Preferred Characteristic***

- **Energy Attribute**

  - Energy estimated, not proportion of actual output

  - ***Proportional share of actual system output – Staff Preferred Characteristic***

  - ***Showing energy bill credit key element – Staff Preferred Characteristic***

  Reasoning:

  - Energy x Rate to calculate the credit, using the proportional share of the actual system output, and recognizing the credit on the subscriber's bill mirrors the net metered solar customer's experience.
  - Staff does not believe that the retail rate is appropriate. The Resource Value of Solar is still in development. Staff believes that it will inform the development of the rate to use for bill credits.

Risk and Cost-shift minimization

- ***Developer and subscriber bear risks – Staff Preferred Characteristic***

- Borne by participating customers

- ***Unsubscribed portion attributed to all ratepayers at the as-available avoided cost price (market) – Staff Preferred Characteristic***

- ***Non-Payment of subscriptions (uncollectibles) is borne by the Developer/Owner - Staff Preferred Characteristic***

- ***Performance guarantees, including force majeure provisions, in contracts can limit risk – Staff Preferred Characteristic***

- Determined by customer/solar provider in contracting

Reasoning:

- Risk borne by the subscriber and developer parallels the net metered solar customer's experience, where the net metered customer installs solar on their roof (developer function) and receives a bill credit for its output (subscriber function).
- Creates an incentive for the community solar owner to maintain a fully subscribed community solar facility.
- As-available avoided cost price (market) and assignment of risk for uncollectibles should hold the non-subscribing ratepayers harmless.
- Performance guarantees, including force majeure provisions, in contract will protect subscribers.