The Case for Course Correction in Oregon's Community Solar Program Implementation

February 14, 2019

Charlie Coggeshall

Oregon Solar Energy Industries Association

Coalition for Community Solar Access

COALITION FOR COMMUNITY SOLAR ACCESS

PO Box 65491
Washington, DC 20035
202-888-6252
info@communitysolaraccess.org
communitysolaraccess.org

OSEIA

Order 18-177 is Undermined by Ongoing Delays and Evolving Market Revelations

<u>January 30 – April 24, 2018 – The case and result of Orders 18-088 and 18-177:</u>

- “Timing” and “value” concerns with the RVOS identified as “good cause” for investigating & adopting alternative credit rate
  - On timing: PUC cited long development timelines, ITC stepdown, and the legislature’s intent to develop a program in a “timely manner”
  - On value: PUC recognized it’s “essential” for program to have a bill credit rate that works for customers, and draft RVOS values are “unlikely”
- The hope was to “effectuate a timely launch” of the program in “2018”, observe the “market reaction” to the alternative credit rate and adjust as needed, either “prior to or after finalization of the utility RVOS values”

<u>February 14, 2019 – Where we are today:</u>

- We still do not have an acting Program Administrator
- The 30% ITC is becoming increasingly out of reach for potential program applicants
- The RVOS process continues with an uncertain role in community solar
- Initial “market reaction” sheds light on challenging project economics and risks and uncertainties haunting program viability

COALITION FOR COMMUNITY SOLAR ACCESS
PO Box 65491
Washington, DC 20035
202-888-6252
info@communitysolaraccess.org
communitysolaraccess.org

OSEIA

What's Needed and Why

Allocate the full initial capacity tier at the residential retail rate	• Enables economies of scale and reduces risk & uncertainty for all stakeholders • Provides equitable opportunity to customers • Leverages more federal subsidy dollars • Is necessary to ensure that the initial capacity tier yields projects
Clarify that the credit rate is based on the volumetric residential rate, set in time, and incorporates a 2% annual escalator thereafter	▪ Fixed rate simplifies administrative processes, improves investor confidence, and creates clear customer expectations ▪ Escalator ensures more projects are actually viable, particularly in light of initial experience and uncertainties surrounding the program
Consider "soft" launch approach for program	• Increases potential for leveraging 30% ITC • Reduces risks and costs of outstanding uncertainties • Addresses interest and demand in market

COALITION FOR COMMUNITY SOLAR ACCESS
PO Box 65491
Washington, DC 20035
202-888-6252
info@communitysolaraccess.org
communitysolaraccess.org

OSEIA

Project Economic Challenges Compounded by Major Uncertainties Threaten Program Failure

<u>Assuming a fixed residential retail credit rate (no escalator) for best-case project scenarios, industry finds:</u>

- PGE territory economics are tight at best, and out of reach if there are program administrative costs, low-income costs, or major development hurdles
- PAC territory economics could work in high solar resource locations, but interconnection costs undermine viability, or, more often, kill development
- Small projects do not pencil
- 30% ITC is ~$200K of NPV for 3 MW project, and increasingly out of reach

Program timing
- Implementation Manual development process?
- Program design completion vs. ability to submit applications?
- Pre-certification process – how long before a project has capacity reserved?
- Infrastructure – timing for completion by PA vs. utilities?

Credit rate interpretation
- Is it "floating" or "fixed"?
- Could it be a "fixed" rate with "escalator"?

"Ongoing" Program Administrative costs
- What are ongoing utility costs and Program Administrator costs?
- When does "start-up" costs end and "ongoing" costs begin?
- How much deducted from credit rate?

Low-income participation rules, incentives, etc.
- Does 5% per project stand? What about other 5%?
- Are housing organizations eligible?
- Are program incentives available?
- What role will the Low-Income Facilitator play?

Pre-certification requirements
- Interconnection, permits, customer acquisition/engagement materials, etc.

Post 40 MW
- *What* will the rate be?
- *When* will it be known?
- *How* will it be determined?
- How much additional capacity will be allocated?
- How will queue be affected?

Pacific Power interconnection
- Project type eligibility (QF or not? Network Resource vs. Energy Resource?)
- If Staff proposal accepted, how will any new (and many existing) interconnection applications be viable?
- Are there short-term solutions, versus long-term? What's the process?

Willamette Valley permitting
- Any safe harbor for community solar?
- DLCD ruling puts 80% of Willamette off limits?

ITC step downs
- Currently at high risk of missing the 30% ITC.
- What about 26% dropping to 22%? [further delay on program launch or uncertainty on credit rate could risk projects missing the window for the next ITC step down from 26% to 22%]

COALITION FOR COMMUNITY SOLAR ACCESS
PO Box 65491
Washington, DC 20035
202-888-6252
info@communitysolaraccess.org
communitysolaraccess.org

Reducing Uncertainty will Benefit Everyone

Industry	Administrator	PUC	Customers
• Reduces investment risk and allows for business models to scale and be more diverse	• Provides longer runway for program design and cost recovery assumptions	• Creates bandwidth for Staff and time to evaluate market and RVOS role	• Ensures greater equity across state programs and opportunity to participate sooner

COALITION FOR COMMUNITY SOLAR ACCESS
PO Box 65491
Washington, DC 20035
202-888-6252
info@communitysolaraccess.org
communitysolaraccess.org

OSEIA

Community Solar is a Cost Effective Way to Ensure Access to All Oregonians

Reaching Customers		
Capacity by Program	**Enabling Policies**	**Customers Served**
~ 100 MWac of onsite residential & commercial solar	- NEM - ETO - RETC (end 2017)	~ 14,000+ to-date
~ 160 MWac initial tier of community solar	- CS credit rate - Other?	Likely ~ 15,000+ (1/3 low-income)*

*Projections for number of customers reached through 160 MW of community solar, assumes average subscription sizes of: 8 kW-dc for resi/small commercial; 3.5 kW low-income; 1200 kW large commercial; 300 kW medium commercial

About 40%** of Oregonians do not own their home, and even more are unable to do onsite solar due to physical, financial, or other constraints

**U.S. Census Bureau

Rate Impact % of Revenue Requirement			
Utility	**Staff Analysis 25% of tier**	**OSEIA-CCSA 25% of tier*** **	**OSEIA-CCSA 100% of tier*** **
PGE	0.062%	0.107%	0.429%
PAC	0.065%	0.097%	0.390%
IDP	0.068%	0.096%	0.382%

***OSEIA-CCSA model was based on Staff's 2018 template, but adjusted for 2019 with updated retail and avoided cost rates and revenue requirements, the inclusion of a 2% annual escalator on the credit rate, higher capacity factors based on more optimized system location production, and a 0.5% annual degradation rate for projected generation declines (note, not all data points were updated for Idaho Power)

A 0.5% rate impact is equivalent to roughly 50¢/month for the avg. customer bill (based on consumption averages for PGE and PAC)

COALITION FOR COMMUNITY SOLAR ACCESS
PO Box 65491
Washington, DC 20035
202-888-6252
info@communitysolaraccess.org
communitysolaraccess.org

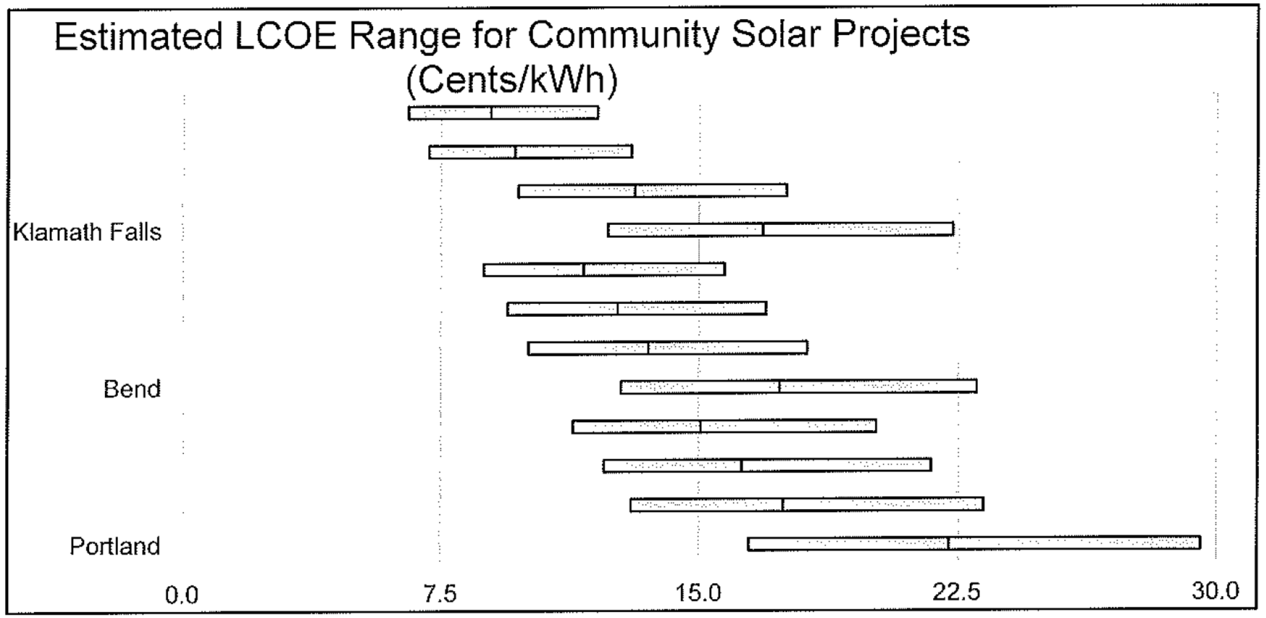
OSEIA

Conclusion

- A Start-Stop approach to the program adds to the delays and crippling uncertainties haunting the industry, Administrators, PUC, and ultimately the customers
- Increasing the capacity allocation, and at a rate that will be able to weather at least some of the additional costs and challenges inherent in the program, is a clear and fair approach to launching Oregon's program with greater likelihood of success
- The legislative intent was to open and "incentivize" a broad opportunity for customers to participate
- A reasonable chance of success at meeting legislative intent can be created while keeping cost shift at a minimum and rate impacts low

Energy Trust of Oregon: Embedded Cost Modeling for Community Solar Projects

- The estimated cost ranges were generated by Energy Trust of Oregon using a range of market assumptions.
- Variation in cost between locations is due to geographic differences in solar insolation, while cost variation across system sizes reflects economies of scale achieved by larger projects.
- ETO used a wide range of cost assumptions for key model inputs, including: equipment, labor, development, customer acquisition, ongoing customer management, financing, and O&M.
- The resulting analysis is a high-level estimate of potential project costs which may or may not reflect actual community solar project costs.



Location	System type	Size	Low ($/kWh)	Average ($/kWh)	High ($/kWh)
Portland	Fixed	Extra Small	$0.165	$0.223	$0.296
		Small	$0.131	$0.175	$0.233
		Medium	$0.123	$0.163	$0.218
		Large	$0.114	$0.151	$0.202
Bend	Fixed	Extra Small	$0.128	$0.174	$0.231
		Small	$0.101	$0.136	$0.182
		Medium	$0.095	$0.127	$0.170
		Large	$0.088	$0.117	$0.158
Klamath Falls	Fixed	Extra Small	$0.124	$0.169	$0.224
		Small	$0.098	$0.132	$0.176
	Tracking	Medium	$0.072	$0.097	$0.131
		Large	$0.066	$0.090	$0.121

Project Development Timeline