

Regulation and Innovation for High-Value Community Solar

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CSVP Webinar • June 2016



Community
Solar Value
Project

CommunitySolarValueProject.com



Community Solar Value Project

- Led by Extensible Energy, with expertise of 3 additional firms
- Funded by U.S. Department of Energy SunShot Initiative
- Utility-led community solar programs; a variety of project ownership options



www.communitysolarvalueproject.com



What is “high-value” community solar? Utility-driven leadership in better solar siting and design, procurement, target marketing, and companion measures (storage, DR) that address solar integration needs at lower cost.



**From gardens...
To grid resources**



Community Solar is a Possible Win-Win For Utilities and Their Customers

88% of utility execs ranked distributed energy resources as their greatest opportunity, but 63% weren't sure how to build a good business around it*

* Utility Dive, 2014 Annual Survey

Navigant Research on Community Solar & VNEM

- One of the first reports on CS since extension of tax credits in late 2015
- Market growth totaling 1.5 GW by 2020; likely 7.5 GW by 2025
- Future state policies, including NEM and rates that may apply for CS are key to future CS market growth
- Currently, full-retail NEM for CS only in Massachusetts; others use avoided-cost of energy, VOS-type rates, or unique rates structures

See www.NavigantResearch.com

Featured in CSVP's latest I



Just One Example: CSVP Strawman Model

Competitive Product with Voluntary Companion Measures



- Participants' rate based on wholesale solar cost + admin + wires costs

- Keyed to solar capacity "share"

- *Rate may reflect select levelized benefits of solar*
- *Plus credits for adding integration value via DR / EE/ storage*

Solar Project/s with Strategic Design

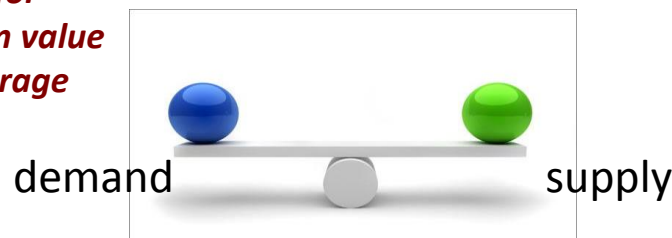


- Siting/design for value-added wholesale solar

- Utility pays price set by competitive PPA; spec for added value; likely buyout

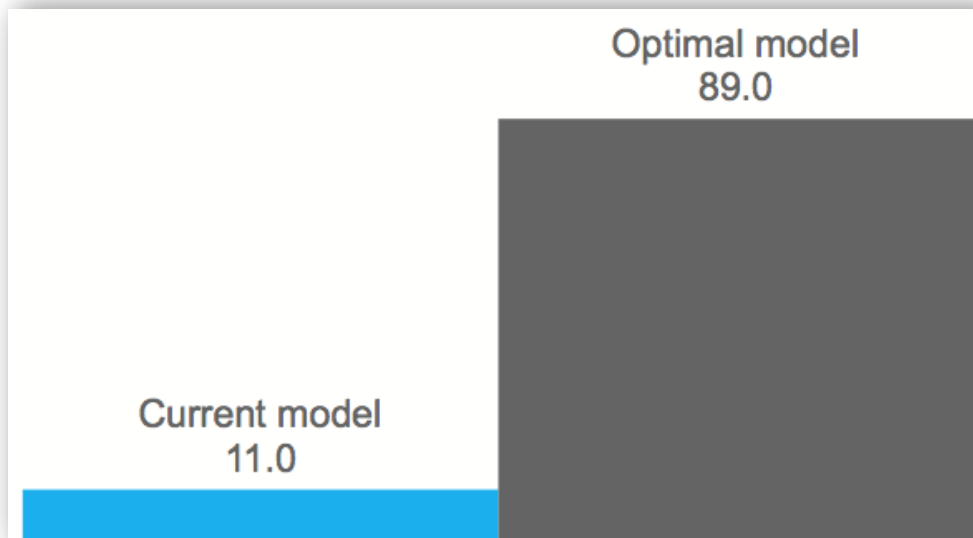
- Fleet expansion expected, with technical and pricing adjustments

Utility



Customer *Preferences* Put Competitive Pressure on CS Subscription-Program Designers

- ✓ Pricing near parity with the retail rate
- ✓ No sign-up fees; no hassle
- ✓ Utility leadership; partners ok
- ✓ Projects located in the community
- ✓ Easy access to information, including solar production



Dramatic difference between customer response to a typical CS subscription offer vs. optimal offer. Source: Shelton Group research for SEPA, presented April 2016, from upcoming report..

Utility Preference: Strategic Value May Drive Win-Win Solutions

- Optimal solar project location, orientation, and design
- Fleet strategy addresses pricing risk, adds diversity
- Customer acquisition and retention benefits from a utility-driven offer and “solar-plus” service-bundling
- Clean electrification options: EVs, storage water heat, etc.
- Collaboration with customers and third-parties to innovate emerging “flexible-grid” utility models
- Upcoming ASES 2016 paper (Cliburn, Bourg, Powers) on setting—and meeting—a practical stretch goal for better community solar pricing!

Regulatory and Policy Challenges

- Be cautious in comparing NEM- and utility-based programs
- Promote innovation in market-based laboratories: consider voluntary participation, evaluation
- Consider strategic as well as quantitative arguments; mindful of the dynamic nature of technologies, markets
- Emphasize silo-busting
- Encourage collaboration
- Make it simple, but significant

The Presenter and the Project

Jill K. Cliburn leads Cliburn and Associates, LLC and is program manager of CSVP. She focuses on integrated DER solutions, including business model innovation and assessment of policy and regulatory options. Contact her at jkcliburn@cliburnenergy.com

The Community Solar Value Project is focused on improving community-solar program value, through solar + storage + DR and other strategies, at electric utilities in Sacramento and beyond. Led by Extensible Energy, LLC, and drawing on expertise from three energy consulting firms. Contact John Powers, john@extensibleenergy.com or info@communitysolarvalueproject.com



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