Community Solar Made Better

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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
• Green power marketing: wind to solar as value-added
• Renewables as a fuel-risk hedge
• Community solar in public power communities
• Changing the NEM conversation
• CSVP: Community solar as a market-based laboratory for increasing DERs and flexible grid solutions
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
What It Looks Like: CSVP Strawman Model

Competitive Product with Voluntary Companion Measures

- Plus credits for adding integration value via DR / EE / storage
- Participants’ rate based on wholesale solar cost + admin + wires costs
- Keyed to solar capacity “share”

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 supply, demand
Some Project Designs Add First-Cost But Increase Long-term Value

We use **Demand Response as a “battery”** (with with or without storage capability) – Low-cost/high-value, and may enhance true battery value.
Addressing daily, seasonal issues w/ Solar ++

- Storage systems charged at night to take advantage of cheap resource (e.g. wind) or to offset predicted solar under-production.
- System peak must be addressed for solar to reduce utility infrastructure.
- Reduced ramping rate at end of solar day by managing energy storage and use.
- Better use of PV energy using storage and energy shifting from peak.
- Reduced evening peak load by shifting opportunistic energy use to daylight hours.
Strategic Benefits of High-Value CSS

- Customer choice: Many prefer community solar
- Optimal solar project location, orientation, and design
- Flexible operations
- Fleet strategy addresses pricing risk, adds diversity
- Customer acquisition and retention benefits from “solar-plus” service-bundling
- Clean electrification options: EVs, storage water heat, etc.
- Collaboration with customers and third-party innovators for emerging grid-interactive utility models
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 to improve CSS value
• Make it simple, but significant
The Presenter and the Project

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

For more information on SunShot Solar Market Pathways, see