

Community Solar “Lessons Learned” At Sacramento Municipal Utility District

CSVP Webinar Series • May 2017

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**Community
Solar Value
Project**



Special Guest for This Webinar



- Stephen Frantz: Strategic planner and project manager for SMUD. Led PV program plan; instrumental to SolarShares from its inception.
- SMUD team developed SolarShares, one of the first full-scale community solar programs in 2008. 1-MW scale project, serving about 625 participants.
- Monthly charge on the bill, based on solar PPA cost. Participant credit for solar production. Initial program included SB1 incentives.

Goals for SolarShares 2008 and Today

- Make affordable solar available to all customers
- Achieve full cost recovery
- Ensure customers receive the full value of distributed solar PV that is successfully integrated into SMUD's grid
- Provide a customer alternative to PV self-generation
- Prepare for a future in which distributed energy resources coexist with centralized power plants in serving SMUD's customers.

In 2013, a review began to expand SolarShares, while minimizing subsidy and risk. The new SolarShares portfolio is in launch, 2017 through 2020, along with new TOU rates.

The Community Solar Value Project

- Led by Extensible Energy, w/ expertise of 3 additional firms
- Funded by U.S. Department of Energy SunShot Initiative, Solar Market Pathways
- Utility-led community solar programs, using a variety of project ownership options and program innovations.



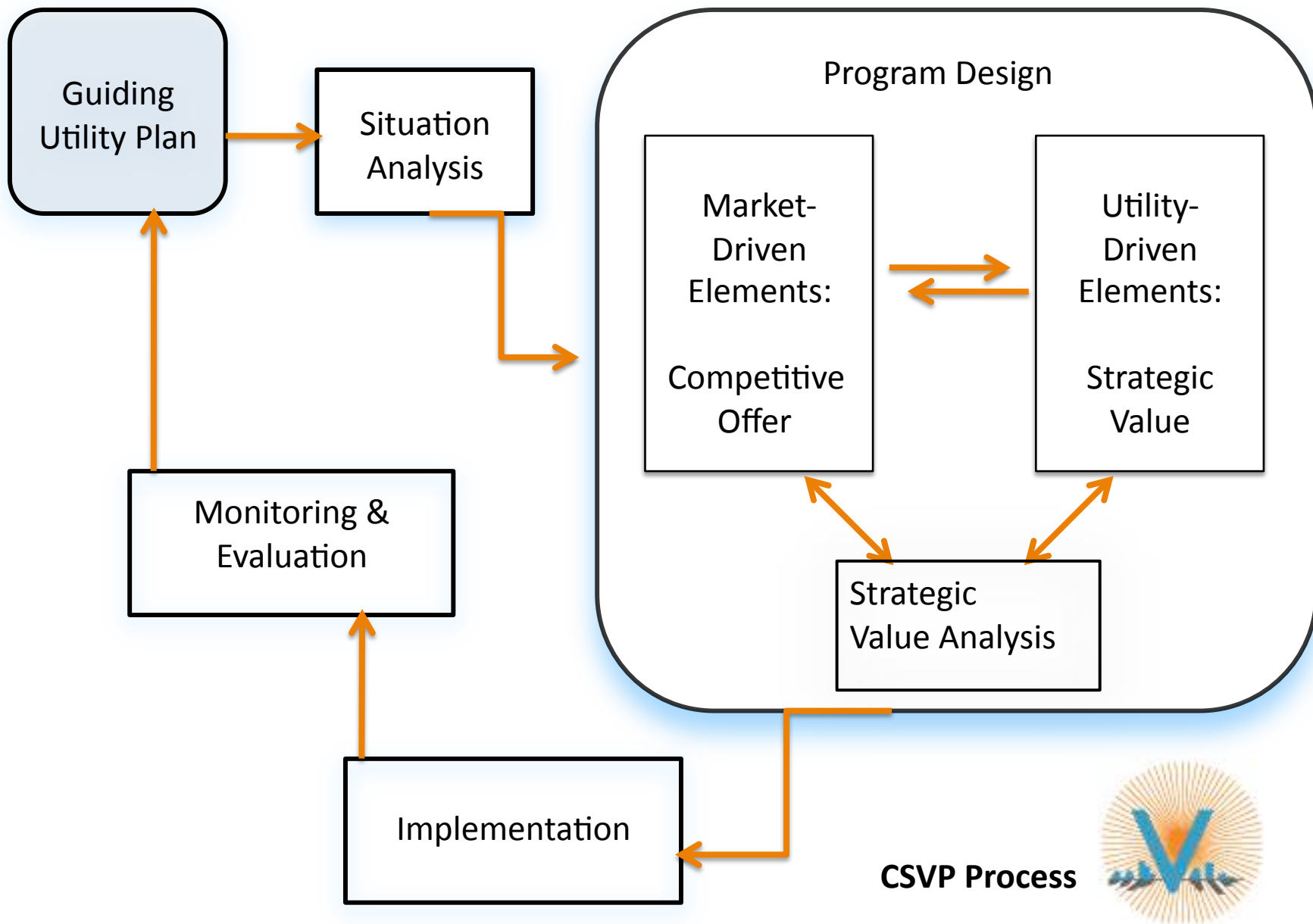
www.communitysolarvalueproject.com





Community Solar Procurements, Programs and Pricing
June 7-8, 2017 • Golden, Colorado
Western Area Power Administration Training Center

- One and one-half day agenda
- Primarily for utilities; others as space allows
- Speakers include utility leaders and topic experts
- **Preferred registration date: May 1**
- Presenting at SEPA/SEIA Solar Power Southeast • May 10
- **Next Webinar: Solar Plus Storage • May 11**



CSVP Process



SolarShares Portfolio

Product	Attributes
SolarShares Residential	Legacy program continues. Updated program will be compatible w/ new TOU rates. Energy aspects of rate fixed; delivery charge changeable. Centralized & local solar.
SolarShares Small Commercial	Will be compatible w/ new TOU rates. Energy aspects of rate fixed; delivery charge changeable. Promoted via small business account managers. Centralized & local solar.
SolarShares Key Accounts	Promotion via key account managers. Uses resources from local and centralized sites. Estimated short-term target: X MW. Centralized & local solar.
SolarShares Carport/EV Option (Pilot)	Highlights solar carports for C/I accounts; EV charging may support smart grid demos.
SolarShares Low Income (Under Study)	Mixed-income and small business urban redevelopment project.
SolarShares New Development (Targeted)	Simplifies and lowers cost for development and utility engineering and operations.

SolarShares: High-Value CSS Model

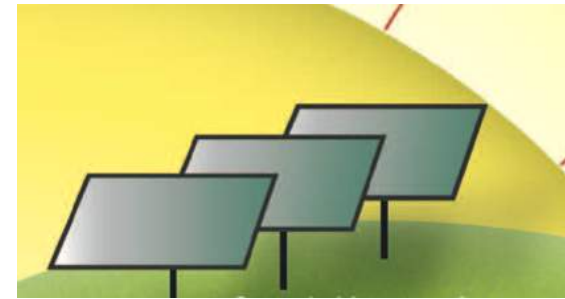
Competitive Product with Voluntary Companion Measures



- New target markets and partners
- Participants' rate based on wholesale solar cost + admin + wires costs

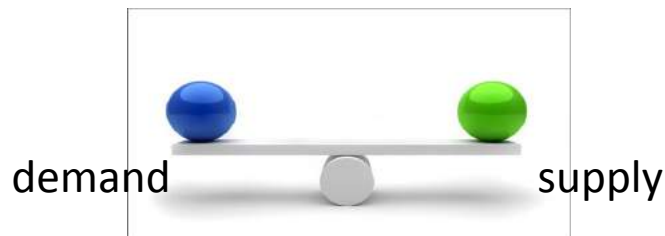
- Optional integration value via DR / storage (w/ separate rate or incentive)

Solar Project/s with Strategic Design



- Design and Procurement for value-added wholesale solar
- Competitive PPA
- Fleet expansion expected, w/ technical and pricing adjustments

Utility



Why Are You Doing Community Solar?

- Is your program reactive or proactive?
 - Responding to pressure from policymakers or discrete sets of customers?
 - Part of an overall strategy that you plan to scale and continue?
- What benefits are you hoping to achieve?
 - Community goodwill?
 - Competitive solar offering, alternative to self-gen?
 - Demo for a more distributed approach?

What Are Your Chief Internal Issues?

- Cross-subsidization, under-recovery of fixed costs?
- Overbuilding and being stuck with excess capacity?
- Committing to a long-term offering you may not want to offer in the long term?
- Oversubscription due to price hedge?

How Do You Start?

- Use others' experience at the beginning
 - Read the studies
 - Buy consulting time
- Confirm executive backing; develop project charter and enlist project sponsor with decision-making power
- Form a cross-enterprise team
 - Pricing, resource planning, energy contracting, customer strategy

Comments on the Cross-Enterprise Team



Comments on the Innovative Aspects Of the SolarShares Portfolio: EV/Canopies



Comments on Other Innovative Aspects Of the SolarShares Portfolio.



Questions!



And don't forget to visit www.communiitysolarvalueproject.com