Out of the Box Solutions
To Make Community Solar Better

Jill K. Cliburn, Cliburn and Associates
Community Solar Value Project Team Leader

Community Solar Procurements, Programs and Pricing
June 8, 2017 • Golden, Colorado
• Led by Extensible Energy, with funding from US DOE SunShot. Jill Cliburn, CSVP Project Team Leader, comes from Cliburn and Associates, one of four firms supporting this effort.

• CSVP works with utilities, industry innovators, and community partners. The Project provides demonstration and documentation of four ways to make utility-led community solar better, including:
  • strategic design
  • target marketing
  • procurement and pricing
  • solar-plus integration

www.communitysolarvalueproject.com
Doing Well, Thank You

1) Yearend ‘16 CSS capacity ~200 MW (GTM/SEIA)
2) Now 17 states with CSS policies or legislation
3) In other states, utilities can—and do—lead new programs
4) Market potential? Community-shared? Community-scale?

**Interest in Community Solar**

![Pie chart showing 47% interested]

*After hearing a description of CSS, nearly half of residential customers say they are interested.*

(Shelton and SEPA, 2016)
Define “Better”

✓ Cheaper
✓ Faster
✓ Farther reaching
✓ Forward leaning
✓ A market-based laboratory
One Process of Many

- Program Design
- Marketing
- Customer Acquisition
- Project Development
- Financing / Ownership
- Billing
- Other Software Services
- O&M/ Program Management

Source: Navigant for CSVP
Guiding Utility Plan

Situation Analysis

Monitoring & Evaluation

Program Design

Market-Driven Elements:
Competitive Offer

Utility-Driven Elements:
Strategic Value

Strategic Value Analysis

Implementation

CSVP Process
Solutions Beyond the Box

Assembly:

(a) Cut out the cube along the solid black lines.
Cut slots with a razor blade where indicated.

(b) Score and fold along the dotted lines.

(c) Fold “wing” tabs inward and insert each tab into the corresponding slot.
Assess market research needs

Draw on outside resources
   • ... question the questions
   • ... listen and learn

Draw on internal customer data

Draft your customer offer ...iteratively

Engage customers to test it

... and engage them to develop your delivery approach

Implement, monitor, improve
# Listening to Customers Makes a Difference

<table>
<thead>
<tr>
<th>Rate Model: Low Probability of Success</th>
<th>Rate Model: High Probability of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-yr. term; option to renew</td>
<td>20-year term; may opt-out</td>
</tr>
<tr>
<td>$100 non-refundable “sign-up fee”</td>
<td>No fee or small, refundable deposit</td>
</tr>
<tr>
<td>3 to 5 cent premium/kWh</td>
<td>0 to 2 cent premium/kWh</td>
</tr>
<tr>
<td>Solar gen from unrelated 3rd parties</td>
<td>Utility owner or co-sponsor</td>
</tr>
<tr>
<td>Distant project/s</td>
<td>Local project/s</td>
</tr>
<tr>
<td>No real-time production information</td>
<td>Web portal or phone app</td>
</tr>
</tbody>
</table>

| 11% Support in Survey Testing        | 89% Support in Survey Testing          |

Source: Shelton Group for SEPA, 2016
### Listening to Customers Makes a Difference

Source: Shelton Group for SEPA, 2016

<table>
<thead>
<tr>
<th>Panel Model: Low Probability of Success</th>
<th>Panel Model: High Probability of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-yr. term</td>
<td>5- to 10-year term</td>
</tr>
<tr>
<td>$595+/panel or share</td>
<td>$395 or less/panel or share</td>
</tr>
<tr>
<td>No financing</td>
<td>On-bill financing</td>
</tr>
<tr>
<td>Power to grid; no ownership</td>
<td>Ownership of power; even better, of panels</td>
</tr>
<tr>
<td>Solar gen from unrelated 3rd parties</td>
<td>Utility owner or co-sponsor</td>
</tr>
<tr>
<td>Distant project/s</td>
<td>Local project/s</td>
</tr>
<tr>
<td>No real-time production information</td>
<td>Web portal or phone app</td>
</tr>
</tbody>
</table>

**16% Support in Survey Testing**  **84% Support in Survey Testing**

Source: Shelton Group for SEPA, 2016
Market Research Pitfalls

- Eroding commitment
- Cherry picking (studies, subjects, results)
- Mass-market mania
- Collab-horroration
- ...
- ...

...
Similarly, With Analytic Tasks…

- RFS
- Unchecked assumptions
- Zeroing out refutable values
- Mistaking the limits of modeling
- Silos and sanctums
- …
- …
Start With A Story
Success Across Silos

1) Reward the broader view
2) Apply marketing lessons

Photo: Silos in Vancouver, BC, Brent Toderian
Quick! Pick One
Success Across Silos

1) Reward the broader view
2) Apply marketing lessons
3) Identify disincentives; respect what you can’t change
4) Examine your own role

Photo: Silos in Vancouver, BC, Brent Toderian
Success Across Silos

1) Reward the broader view
2) Apply marketing lessons
3) Identify disincentives; respect what you can’t change
4) Examine your own role
5) Create a campaign

Photo: Silos in Vancouver, BC, Brent Toderian
Success Across Silos

1) Reward the broader view
2) Apply marketing lessons
3) Identify disincentives; respect what you can’t change
4) Examine your own role
5) Create a campaign
6) Work with innovators

Photo: Silos in Vancouver, BC, Brent Toderian
Success Across Silos

1) Reward the broader view
2) Apply marketing lessons
3) Identify disincentives; respect what you can’t change
4) Examine your own role
5) Create a campaign
6) Work with innovators

Photo: Silos in Vancouver, BC, Brent Toderian
One More Thing

“Top-level support is the top predictor of program success.”

No way around it.

Jane Peters, 30 Years of Process Evaluation, Research Into Action
Top 5 of 9 Obstacles to Utility Transformation

1. COST of transition: 18%
2. REGULATORY model resistance: 18%
3. INTERNAL resistance to change: 16%
4. INTEGRATION technical challenges: 14%
5. STAKEHOLDER expectations: 12%

Source: Utility Dive March 2017
“Most senior managers fear that giving strategic guidance to their organizations will stifle their creativity and their willingness to “think outside the box.”

Govindarajan

*In fact, leadership opens the box and frees staff creativity.*
The Presenter and the Project

**Jill K. Cliburn** is principal consultant of Cliburn and Associates, LLC and project team leader of CSVP. As a relentless utility innovator, she has focused on helping utilities design community solar and solar-plus strategies since 2009. **Contact her at jkcliburn@CliburnEnergy.com**

**The Community Solar Value Project** led by Extensible Energy, Lafayette, CA, (John Powers, Project Director) with support from Cliburn and Associates, Navigant, Olivine and Millennium Energy.

john@extensibleenergy.com