Customer Program Advisory Group Progress Update

Peter Evans, CPAG Chair
SVCE Board of Directors Meeting
June 13, 2018
Members

- My Nguyen (Campbell)
- Gary Latshaw (Cupertino)
- Tara Sreekrishnan (Cupertino)
- Don Weiden (Los Altos)
- Peter Evans (Los Altos Hills)
- George Parton (Los Gatos)
- Thomas Clavel (Milpitas)
- Bryan Mekechuk (Monte Sereno)
- Robert Brewer (Mountain View)
- Jeff Homan (Mountain View)
- Sandy Muju (Saratoga)
- Doug Kunz (Sunnyvale)
- Tara Martin-Milius (Sunnyvale)
- James Tuleya (Sunnyvale)
- Pamela Garcia (Santa Clara County)
- Tristan Mecham (Santa Clara County)

SVCE Staff

- Pamela Leonard
- Andrea Pizano
- Don Bray
- Others
CPAG “Charge”

• Bring new ideas
• Reflect customer & community priorities
• Identify and prioritize programs; quantitative & qualitative
• Report recommendations in June
Month 2 – Potential Program Benefits

- Customer energy literacy
- Personalized customer engagement, active choices
- Customer energy use comparisons/“gamification”
- Transparency of decisions for customers
- Customer choices & local control
- Disadvantaged community participation
- Leverage/compliment PG&E programs
- Reduce customer bills – usage reduction & peak shifting
- Reduce customer costs in energy consuming devices
- Peak demand period reduction/peak PV period increase

- Reduce use of carbon emitting peakers
- Reduce GHG through reduced electricity use
- Local jobs & economic development
- Customer backup power
- Transform clean energy markets
- Alleviate climate change impacts/GHG reduction
- Clean electricity use readiness
- Indoor/outdoor air quality
- Increase SVCE sales of clean electricity

Themes
- Customer empowerment
- Customer cost savings
- GHG reduction
- Demand/supply alignment
Month 3 – Potential Program Ideas

CPAG Brainstorming
Small Group Program Briefs

- Residential Storage
- Connected Home Load Management
- MF EV Charging
- MF Energy Efficiency and Electrification
- City Center Microgrid Resilience
- Used EVs and Smart Chargers
- Electricity Bill Explorer
- Residential Electricity Monitoring
- Residential BE Ready
- “Mass Produced” Zero Emission Retrofits
- Electrification “Survivorship Curve” Analysis
- BE Smart Upgrades
Program Brainstorming

How Might We...
- Increase customer energy literacy
- Provide personalized customer engagement; prompt active choices (e.g., upgrading to GreenPrime);
- Increase SVCE awareness
- Engage customers in their energy use through comparisons with peers, benchmarks, their own trends (gamification)
- Improve transparency on decisions for customers
- Provide customers more choices and local control

How Might We...
- Alleviate climate change impacts
- Increase readiness for expanded use of clean electricity
- Improve indoor/outdoor air quality

How Might We...
- Reduce customer bills by reducing usage and shifting usage from peak price periods
- Reduce customer costs in purchasing and using energy-consuming devices
Months 4 & 5 – Program Evaluation

- CPAG scoring for program benefits
- High-level cost and carbon evaluation (offline)
- Input gathered from community contacts
- CPAG scoring for “other factors”:
  - Scalability
  - Customer participation
  - Time to implement
  - Time to outcomes/benefits
  - Uncertainty of outcomes/benefits
  - Cost
  - Cost of carbon
CPAG Final Dot Ranking

Top third
• Residential Electricity Monitoring
• Electricity Bill Explorer
• Residential BE Ready
• MF EV Charging

The rest (in order)
• Residential Storage
• BE Smart Upgrades
• Used EVs and Smart Chargers
• MF Energy Efficiency and Electrification
• “Mass Produced” Zero Emission Retrofits
• Connected Home Load Management
• Electrification “Survivorship Curve” Analysis
• City Center Microgrid Resilience
Top Program Briefs

• **Residential Electricity Monitoring**
  Monitoring and analytics to provide customers with real-time consumption data via smart phone and to reveal individual loads

• **Electricity Bill Explorer**
  Bill data analytics to provide customers with personalized use comparisons against benchmarks and peers, fit with rate options

• **Residential BE Ready**
  Self-assessment tool and resources to ease electrification conversion

• **MF EV Charging**
  EV charging infrastructure for multi-family residences
Next Steps

• Incorporate board feedback
• Identify and address potential program barriers, success factors
• Work with staff and MAWG to shape final program recommendations
Authorize Execution of a 15-year Power Purchase Agreement (PPA) for Renewable Supply with Duran Mesa LLC
How we identified this project

On September 15, 2017, Silicon Valley Clean Energy and Monterey Bay Community Power issued a Joint Request for Offers (Joint RFO) for long-term power supply. The goal of the Joint RFO was to secure one or more long-term Power Purchase Agreements to meet SB350* requirements, while maintaining reliability of the grid.

*SB350, enacted into law in 2016, requires Load Serving Entities (LSE) to acquire a minimum of 65% of their Renewable Portfolio Standard (RPS) requirement, or a minimum of 20% of the LSE’s total load obligations, through long-term Power Purchase Agreements (10 years or more), for delivery beginning in 2021.

<table>
<thead>
<tr>
<th>KEY DATES</th>
<th>EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 15, 2017</td>
<td>Silicon Valley Clean Energy and Monterey Bay Community Power issued the Joint RFO</td>
</tr>
<tr>
<td>October 13, 2017</td>
<td>Deadline to submit Offer(s). Eighty-seven (87) unique offers were received for the building of forty-nine (49) new projects that were in various stages of development.</td>
</tr>
<tr>
<td>November 17, 2017</td>
<td>Notification of selected (Shortlisted) offers</td>
</tr>
<tr>
<td>December 2017 to present</td>
<td>Negotiations with Shortlisted developers</td>
</tr>
</tbody>
</table>
How we evaluated the offers

Evaluation of the 87 unique offers received was based on combination of Quantitative and Qualitative criteria

**Quantitative Evaluation criteria**
- Contract cost was calculated based on expected energy generation times the offered price.
- Contract benefit was evaluated based on market forward prices, various quantity scenarios, the value of capacity, and the value of energy storage. A Net Cost value was determined by subtracting the contract benefit from the contract cost.

**Qualitative Evaluation criteria**
- Project Viability
  - Project Status regarding Permits, Site Control, and Equipment
  - Technology Viability
  - Participant Experience
- Modifications to Form Agreement
- Project location, i.e. proximity to SVCE service territory

SVCE & MBCP evaluated each offer against these criteria and selected a subset of offers to move to the negotiation phase.
Who was selected/shortlisted?

The 3 projects, listed below, were selected, and agreed to begin joint negotiations with SVCE and MBCP of long-term power purchase agreements.

Negotiation began in December 2017.

<table>
<thead>
<tr>
<th>Developer</th>
<th>Project Name</th>
<th>Source</th>
<th>Generating Capacity (MW)</th>
<th>Storage technology</th>
<th>Storage Capacity (MW)</th>
<th>Storage Duration (Hours)</th>
<th>Location</th>
<th>Term (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duran Mesa LLC (Pattern Energy)</td>
<td>Corona</td>
<td>Wind</td>
<td>200</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Torrance Cnty, New Mexico</td>
<td>15</td>
</tr>
<tr>
<td>Recurrent Energy</td>
<td>RE Slate</td>
<td>Solar PV</td>
<td>150</td>
<td>Lithium Ion Battery</td>
<td>45</td>
<td>4</td>
<td>Kings Cnty, CA</td>
<td>15</td>
</tr>
<tr>
<td>EDF Renewable Energy</td>
<td>BAR13 Solar</td>
<td>Solar PV</td>
<td>128</td>
<td>Lithium Ion Battery</td>
<td>40</td>
<td>4</td>
<td>Kern Cnty, CA</td>
<td>20</td>
</tr>
</tbody>
</table>

Duran Mesa LLC is a subsidiary of Pattern Development.

Staff is seeking Board approval today of the PPA for renewable energy from the 200 MW Corona Wind project.

Negotiations continue with the two Solar PV + Storage projects, with the goal of bringing at least one to the July Board meeting for approval.
Corona Wind Overview

- 200 MW Generating Capacity, with SVCE to receive 55% of its output, and MBCP 45%.
- Location: Torrance and Lincoln Counties, New Mexico
- Delivers Bucket 1 (PCC1) renewable energy
- Delivery point into the CAISO is the Palo Verde Hub
- Delivery path is over the new 515 mile SunZia transmission path, with a 3,000 MW capacity on two 500 kV lines.
- Environmental studies began in 2016 and will continue through the end of 2018. Project is considered low risk from sensitive species perspective.
Corona Wind Overview, continued

- Corona Wind will have a capacity factor* of 48%, based on 10 years of wind data collected.
- Capacity factors in New Mexico are about 23% higher than in California.
- Location in New Mexico means generation from Corona wind farm contributes to the lessening of the challenges by the CAISO to serve the evening ramp as solar generation drops off (Duck Curve).

* Capacity factor is the ratio of an actual energy output over a given period of time to the maximum possible energy output over that period.
Duck curve effects are becoming more pronounced and occurring sooner than expected

*Note- Net Load is Actual Demand minus Wind & Solar generation*

Typical Spring Day

- **Net Load of 7,149 MW** on February 18, 2018
- **Actual 3-hour ramp of 14,777 MW** on March 4, 2018

Deeper Belly

Steeper Ramps
CAISO Duck Curve on Sunday, February 18, 2018

3-hr, 13,597 MW ramp met by:
- Import ~ 62%
- Hydro – 10%
- Thermal – 28%

Corona Wind generation, as an import into the CAISO, will help meet the evening ramp (duck curve neck) period.
Corona Winds location in New Mexico (time difference and wind flow patterns) contribute to mitigating the strain on the CAISO during California’s evening ramp (Duck curve neck), as their generation is peaking at this time.
Corona Wind Overview, continued

New Mexico Wind compliments Solar

Average Summer Hourly Production of 1,500 MW Corona Wind and 500 MW of CA Solar (PPT)

Wind ramp at critical peak load
About the Project Developer: Pattern Energy

- Pattern Energy is a leading independent renewable company, specializing in wind, solar, storage and transmission.

- They develop, construct, own and operate renewable energy and transmission assets in the United States, Canada, Mexico, Chile, and Japan.

- They operate 4,000 MW and their development pipeline exceeds 10GW of wind and solar power projects as well as large scale transmission projects.

- Pattern Energy’s primary entities are Pattern Development which develops their projects and Pattern Energy Group Inc. (NASDAQ: PEGI and TSX: PEG) which owns and operates the projects.
## Corona Wind Milestone Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Completed On or By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern Development chosen to be Anchor Tenant on SunZia</td>
<td>Completed Q3 2016</td>
</tr>
<tr>
<td>FERC Transmission approvals</td>
<td>Completed Q2 2017</td>
</tr>
<tr>
<td>Private Land Control</td>
<td>Completed Q1 2018</td>
</tr>
<tr>
<td>Execute PPAs with SVCE &amp; MBCP</td>
<td>2\textsuperscript{nd} Quarter 2018</td>
</tr>
<tr>
<td>FAA Permits</td>
<td>3\textsuperscript{rd} Quarter 2018</td>
</tr>
<tr>
<td>State Land Control</td>
<td>3\textsuperscript{rd} Quarter 2018</td>
</tr>
<tr>
<td>Start Construction</td>
<td>1\textsuperscript{st} Quarter 2019</td>
</tr>
<tr>
<td>Project COD</td>
<td>4\textsuperscript{th} Quarter 2020</td>
</tr>
</tbody>
</table>
Questions?
SVCE Strategic Plan

Human capital is a successful organization’s greatest asset, and at SVCE we strive to build a highly talented and dedicated team that will ensure the success and prosperity of our organization. Valuing this team and nurturing its talent will require a start-up culture that supports creativity, open communication, and the free flow of ideas to spur innovation. We will provide an infrastructure within SVCE that supports and cultivates our employees through professional and personal development, recognizes and rewards their contributions to achieving our mission, and offers opportunities that position our people, as well as SVCE, for success. In attracting and maintaining skilled employees, SVCE will continue to provide a rewarding workplace experience.
SVCE Strategic Plan

1. Build a high-performing team with 90% employee engagement and less than 10% employee turnover per year
   1. Build an environment that encourages creativity and innovation
      1) Support professional development by paying for memberships, conferences and other continuing education opportunities
      2) Encourage staff to attend conferences and networking events
   2. Support employee health and wellness
      1) Promote healthy habits
      2) Provide flexible schedules to accommodate family needs
   3. Build an inclusive and fulfilling company culture
      1) Monthly, arrange opportunities for staff to socialize in or outside of the office
      2) Annually, sponsor family events (e.g. holiday celebration, summer picnic, etc.)
      3) Promote team building through volunteer work
      4) Maintain an open-door policy for CEO and directors
   4. Provide effective and safe feedback processes
      1) Research and develop an annual feedback process to be implemented in 2018, promoting an open and safe performance assessment
      2) Conduct an annual survey to measure employee engagement
   5. Provide opportunities for cross-team interaction and collaboration
      1) Establish a monthly all-hands meeting
   6. Reward staff to keep them engaged
      1) Annually, update compensation schedule to account for cost of living adjustment
      2) Continue to provide competitive benefits
      3) Ensure that staff has the tools necessary to effectively do the job

Compensation & Benefits - June 13, 2018 BOD Meeting
A recovering economy has placed job seekers in the driver’s seat.

Half of employed job seekers see their current position as only temporary.

It’s been a long road to recovery, but the economy is finally bouncing back after the Great Recession. Businesses are growing, companies are hiring and quality talent is in high demand. For the skilled worker, the job market has shifted in their favor, and professionals everywhere are taking advantage. The findings of the sixth annual Job Seeker Nation Study explore the progression of the job market, the modern job seeker’s approach to job hunting, and what this means for the workforce in 2015.

What you need to know:
- The job market is looking up: compared to 2013, fewer people in 2014 said it was difficult to find a job.
- Everyone has their eye out for a better opportunity: 45% of workers will jump ship for a new job even though they are happy in their current position.
- Job seekers are surfing the wave of career opportunities. Technology sees the highest short-term turnover, but no industry is exempt from job-hopping.
- Over a quarter of job seekers view their current position as a stepping-stone, another indicator that people see their jobs as a growth experience rather than an endgame.
- Money talks: it’s the most influential factor both in deciding to leave a job and in choosing a new one.
- Men and women agree on one thing: both genders (38%) value work/life balance equally when considering a new job.
- Job seeking is now a 24/7 activity: job seekers search for new positions on mobile during their commute (38%), on the job (30%) and even in the bathroom (18%).

• Timing is right to review SVCE’s compensation and benefits strategy
  • There are 16 operating CCAs with SVCE being neighbored by 4 of them
  • All competing for the best talent
• Bay Area job market is hot!
• SVCE is in a different place
  • Financially stable
  • Debt-free
MOTIVATION and DISSATISFACTION

Dis-satisfactors (Hygiene) factors include:

• Job security
• Relationship with supervisor
• Salary
• Company policies and benefits like health insurance and vacation plans
• Work conditions

Motivators include:

• Challenging work
• Recognition
• Development
• Autonomy
• Opportunity to do something meaningful
• Sense of importance to an organization
COMPENSATION STRATEGY

Key Components to Attract & Retain

**PAY**
- Base Pay
- Recruitment Incentive “In Lieu Of”
- PTO Cash Out
- Performance Plan
- COLA Policy

**BENEFITS**
- Health
- Retirement
- Work/Life Balance
- Transportation
- Stipend
- Accident/Death
- Other Benefits

**CAREERS**
- Tuition Assistance
- Skills Enhancement
- Recognition
- Part-Time
- Nature of Work
- Compensation study under review
- Plan is recommendation to Board in July
- Recruitment incentive on consent
- In-Lieu-Of
  - $500/month payment for opt-out of benefits
- Savings to SVCE
PAY (continued)

- PTO Cash Out
  - Employee can cash-out partially accrued PTO
  - No impact to SVCE
- Performance Plan
  - Longer-term strategy to develop pay-for-performance incentives
- COLA (Cost of Living Adjustment)
  - Tie to Bay Area index
  - Cap at 4% without Board approval

Base Pay
Recruitment Incentive
“In Lieu Of”
PTO Cash Out
Performance Plan
COLA
BENEFITS

• Health Plan
  • Review current options
• Retirement
  • Consider increasing employer contribution based on longevity
• Work/Life Balance
  • Additional time off
    • Mandatory 2 weeks office is closed
    • Holidays and Summer
    • 7 days of CEO discretion
BENEFITS (continued)

- Transportation Stipend
- Incentive use of public transportation
- Consider $300/month

- Other Benefits
- Flexible Spending Account
- Gym membership
- Workplace charging station
- Rebates for EV purchase
- Telecommuting
CAREERS

- Tuition Assistance
  - Applied toward an advanced degree
  - Aid would be capped
- Skills Enhancement
  - CPE credits or pursue professional certifications
- Recognition
  - $10,000 budget for employee goodwill
- Part-Time/Job Sharing
SELF DIRECTED PLAN

• SVCE provides flat dollar toward wide range of benefits
• Employee chooses which to fund
• Certain benefits qualify for this approach
• Longer-term strategy
NEXT STEPS

1) Compensation Survey
   a) Compensation survey to Finance and Administration Committee on June 19
   b) To Board in July or September

2) Benefits – for implementation
   a) Benefits that are supported by the Board for immediate implementation may be brought back to the Board at its July or September meeting for approval

3) Benefits – for further study
   a) Benefits that are supported by the Board but require additional study will be agendized for the Finance and Administration Committee (including development of a self-directed plan)
   b) September with Budget or later Board meeting
1. Direct staff to develop implementation policies for the following:
   a) Transportation Stipend
   b) In-Lieu-Of
   c) Additional Leave
   d) Telecommuting
THANK YOU