The Nuts and Bolts of Community Choice Energy In California

Pre–Forum Webinar – May 13, 2015
What is CCE?

**CCE leverages the market power of group purchasing and local control.**

CCE allows communities to pool their electricity demand in order to purchase and develop power on behalf of local residents, businesses, and municipal facilities.
CCE Around the Country

Authorized by CA Assembly Bill 117 in 2002

CCAs in 7 States
• California
• Illinois
• Massachusetts
• New Jersey
• Ohio
• Rhode Island
• New York

Under Consideration:
Utah, Delaware, Minnesota
Why is CCE So Powerful?

- Responsive to *local* environmental and economic goals
- Offers consumers a choice where none currently exists
- Revenue supported, *not* taxpayer subsidized
- Stable, often cheaper, electricity rates
- Allows for rapid switch to cleaner power supply and significant GHG reductions
- CCE is an energy integrator; works well with other energy programs
- Opens up new market opportunities such as EV charging stations, commercial battery storage, and other energy related technology.
“CCE: The Biggest Change You’ll Never Notice”

- Local governments participate by passing an ordinance
- Three administrative options; JPA is most common
- Utility continues to provide transmission and distribution, consolidated billing, customer service, grid maintenance
- CCE electric generation charges (including exit fee) appear as new line items on the customer bill; all other charges remain the same
- CCE becomes default electric provider. Customers receive a minimum 4 opt-out notices over 120 days and can return to PG&E service any time.
- CPUC certifies Implementation Plan; Oversees utility/CCE relationship and other requirements.
3 Administrative Frameworks

*Your Choice Depends on Community Goals and Long-Term Objectives*

**Model A: Multi-Jurisdictional JPA**
(e.g. Marin Clean Energy and Sonoma Clean Power; soon Monterey Bay, San Mateo and Alameda Counties...)

**Model B: Single City/Enterprise Fund**
(e.g. City of Lancaster)

**Model C: Commercial Managed Service**
(e.g. CA Clean Power, Good Energy)
Sample Energy Bill – Marin Clean Energy

ENERGY STATEMENT
www.pge.com/MyEnergy

Service For:
MARY SMITH
1234 STREET AVENUE
SAN RAFAEL, CA
94904

Questions about your bill?
24 hours per day, 7 days per week
Phone: 1-866-743-0335
www.pge.com/MyEnergy

Local Office Address
750 LINDARO STREET, STE 160
SAN RAFAEL, CA 94901

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Important Messages
Your charges on this page are separated into delivery charges other than PG&E. These two charges are for different power services.

Electric power line safety PG&E cares about your safety. Keep your antennas at least 10 feet away from overhead power lines. Call 9-1-1 and then PG&E at 1-800-743-5000.

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CCE Supercharges GHG Reduction

Excerpt from City of Sunnyvale CAP

2020 GHG Reductions (MTCO2e/yr)

- Optimize Vehicular Traffic
- Sustainable Circulation and Transportation
- Improve Mobility - Land Use Planning
- Reduce Off-Road Eq Emissions
- Reduce Landfilled Waste
- Decrease Water Consumption
- Sustainable Energy Portfolio
- Decrease Energy Consumption
- Open Space and Urban Forestry

Sunnyvale CAP - CCE realizes more GHG emission reductions than all other CAP measures **COMBINED!**
With Much Lower Emissions Rates

### Electric Power Generation Mix*

<table>
<thead>
<tr>
<th>Specific Purchases</th>
<th>PG&amp;E</th>
<th>Sonoma Clean Power</th>
<th>EverGreen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Biomass &amp; Biowaste</td>
<td>22%</td>
<td>33%</td>
<td>100%</td>
</tr>
<tr>
<td>• Geothermal</td>
<td>4%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>• Eligible hydroelectric</td>
<td>5%</td>
<td>15%</td>
<td>0%</td>
</tr>
<tr>
<td>• Solar electric</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>• Wind</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Coal</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Large hydroelectric</td>
<td>10%</td>
<td>37%</td>
<td>0%</td>
</tr>
<tr>
<td>Natural gas</td>
<td>28%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Nuclear</td>
<td>22%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Unspecified sources of power</td>
<td>18%</td>
<td>30%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*PG&E’s generation data represents 2013 is provided in the “Annual Report to the California Energy Commission: Power Source Disclosure Program.” SCP’s generation data is forecast for 2014.

### Total CO₂ Emissions from Electricity Sales per Megawatt-Hour**

<table>
<thead>
<tr>
<th></th>
<th>PG&amp;E</th>
<th>CleanStart</th>
<th>EverGreen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CO₂</td>
<td>445 pounds</td>
<td>294 pounds</td>
<td>70 pounds</td>
</tr>
</tbody>
</table>

**The CO₂ emission rates reflect the energy generation provided by PG&E in 2012. SCP’s CO₂ emission data is forecast for 2014.
CCE is a Local Economic Engine

Excerpt from San Mateo County- JPA Model

- Localized Revenue Stream = ~$356M gross/year *
  - Redirected from utility electric generation rates

- Estimated start-up costs of $1.5M provided by SM County
  - Fully recoverable from early revenues

- Financing is available for initial energy contracts and working capital; local community bank if possible

- CCEs have public agency bonding authority to initiate local power projects and programs

- Low overhead, no shareholder profits, no investor rates of return or corporate salaries

* San Mateo County 2013 electrical consumption = 4.5B kwh x .079/kwh which is MCE’s current E-1 residential rate. Revenues higher as customers and rates increase.
Both Marin and Sonoma CCE’s are fiscally sound

<table>
<thead>
<tr>
<th></th>
<th>MCE (Draft FY15-16)</th>
<th>SCP (Draft FY15-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Budgeted Revenue</strong></td>
<td>$145,933,000</td>
<td>$165,495,000</td>
</tr>
<tr>
<td><strong>Budgeted Expenses</strong></td>
<td>$141,433,000</td>
<td>$148,588,000</td>
</tr>
<tr>
<td><strong>Cost of Energy</strong></td>
<td>$129,522,000</td>
<td>$130,100,000</td>
</tr>
<tr>
<td><strong>Cost of Administration</strong></td>
<td>4%</td>
<td>3.5%</td>
</tr>
<tr>
<td><strong>Net Increase in Reserves</strong></td>
<td>$4,500,000</td>
<td>$16,907,000</td>
</tr>
</tbody>
</table>
The Economics

*CCE is Saving Citizens and Cities Money*

- MCE’s residential customers saved nearly $6M in 2014; greater savings expected in 2015.
- SCP customers saved $6M in first 7 months of service.
  - Sonoma’s current rates are 6-9% lower than PG&E and 10-14% lower for low-income CARE customers.
  - The City of San Rafael (municipal operations) saved $47,000 in 2014.
  - West Contra Costa Unified School District projected to save $60,000 per year from its operations in Richmond and San Pablo.
CCE is Good for Business

*Competition drives costs down, diversifies the market, incentivizes innovation, and spurs new technologies.*

- Rate savings are only the tip of the iceberg
- New energy contracts = new power projects, new CA and local jobs
- Local Feed-in-Tariff, Net Energy Metering incentivizes local DG
- Public/Private Partnerships: Community Solar, Battery Storage, Home Area Networks, EV Charging Stations, etc.
- Energy Efficiency funding available from utility and state
- On-bill repayment option and green business loans
- Local job training programs that focus on underserved populations
Marin Clean Energy (MCE)

- May 2010: service starts for Phase I customers
- As of 2014: 125,000 customers; expansion to 165,000 by end of 2015
- Service area includes Marin, City of Richmond, City of Benicia and unincorporated Napa County
- 15-Member Board of Directors; 25 staff members
- 200+ MW new renewable energy in development for MCE customers
- 131 M tons of GHG reductions to date (2010-2013 reporting periods)
- 1800 jobs created/supported by MCE; most in construction sector
### 2015 MCE Residential Cost Comparison

<table>
<thead>
<tr>
<th></th>
<th>PG&amp;E</th>
<th>MCE Light Green 22%</th>
<th>MCE Deep Green 50%</th>
<th>MCE Local Solar 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Delivery</strong></td>
<td>$44.37</td>
<td>$44.37</td>
<td>$44.37</td>
<td>$44.37</td>
</tr>
<tr>
<td><strong>Generation</strong></td>
<td>$49.50</td>
<td>$40.13</td>
<td>$45.21</td>
<td>$72.14</td>
</tr>
<tr>
<td><strong>PG&amp;E Fees</strong></td>
<td>-</td>
<td>$6.27</td>
<td>$6.27</td>
<td>$6.27</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$93.87</td>
<td><strong>$90.77</strong></td>
<td>$95.85</td>
<td>$122.78</td>
</tr>
</tbody>
</table>

- Delivery rates stay the same
- Generation rates vary by service option
- PG&E adds exit fees on CCA customer bills
- **Even with exit fees, total cost for Light Green is less than PG&E**
## 2015 MCE Commercial Cost Comparison

### 1,405 kWh A-1/Com-1

<table>
<thead>
<tr>
<th></th>
<th>PG&amp;E</th>
<th>MCE Light Green 22%</th>
<th>MCE Deep Green 50%</th>
<th>MCE Deep Green 100%</th>
<th>MCE Local Solar 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery</td>
<td>$154.70</td>
<td>$154.70</td>
<td>$154.70</td>
<td>$154.70</td>
<td>$154.70</td>
</tr>
<tr>
<td>Generation</td>
<td>$142.54</td>
<td>$111.00</td>
<td>$125.05</td>
<td>$199.51</td>
<td></td>
</tr>
<tr>
<td>PG&amp;E Fees</td>
<td>-</td>
<td>$15.45</td>
<td>$15.45</td>
<td>$15.45</td>
<td>$15.45</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$297.24</strong></td>
<td><strong>$281.15</strong></td>
<td><strong>$295.20</strong></td>
<td></td>
<td><strong>$369.66</strong></td>
</tr>
</tbody>
</table>

- Delivery rates stay the same
- Generation rates vary by service option
- PG&E adds exit fees on CCA customer bills
- Even with exit fees, total cost for Light Green *and* Dark Green is less than PG&E
CCE Facilitates Local Power

MCE Local Power Resources, 2012 – 2015

Map information accurate as of 08/07/14
Sonoma Clean Power (SCP)

- May/December 2014: service starts for 22,000 commercial customers; December roll out to 140,000 residential customers
- SCP has 11% opt out rate so far; 89% customer retention
- Average rates are 6%-9% lower than PG&E and 10-14% lower for low income CARE customers
- SCP customers are saving $6M in first year of program
- Product Options: CleanStart @ 33% and Evergreen @ 100% CA qualified renewable power
- 100% renewable product sourced from Calpine/local geo-thermal plant
- 70MWs plus 12.5 MW new solar project on floating docks in County irrigation pond
## 2015 Residential Cost Comparison

<table>
<thead>
<tr>
<th>Example Residential Electric Charges</th>
<th>PG&amp;E*</th>
<th>CleanStart</th>
<th>EverGreen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewable Energy</strong></td>
<td>28%†</td>
<td>33%</td>
<td>100%</td>
</tr>
<tr>
<td>Electric Generation (all customers)</td>
<td>$48.73</td>
<td>$35.50</td>
<td>$53.00</td>
</tr>
<tr>
<td>PG&amp;E Electric Delivery* (all customers)</td>
<td>$58.85</td>
<td>$58.85</td>
<td>$58.85</td>
</tr>
<tr>
<td>Additional PG&amp;E Fees (SCP customers only)</td>
<td>$0.00</td>
<td>$6.17</td>
<td>$6.17</td>
</tr>
<tr>
<td><strong>Average Total Cost</strong></td>
<td>$107.57</td>
<td>$100.52</td>
<td>$118.02</td>
</tr>
</tbody>
</table>

*PG&E fees are calculated by Sonoma Clean Power using rate data provided by PG&E effective on January 1, 2015.
## 2015 Commercial Cost Comparison

### Example Commercial Electric Charges
- Based on a business using 1,500 kWh per month on the COM-1 (A-1) rate

<table>
<thead>
<tr>
<th></th>
<th>PG&amp;E*</th>
<th>CleanStart</th>
<th>EverGreen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electric Generation (all customers)</strong></td>
<td><strong>28%</strong>(^{\dagger}) Renewable Energy</td>
<td><strong>33%</strong> Renewable Energy</td>
<td><strong>100%</strong> Renewable Energy</td>
</tr>
<tr>
<td></td>
<td><strong>$153.42</strong></td>
<td><strong>$114.24</strong></td>
<td><strong>$166.74</strong></td>
</tr>
<tr>
<td><em><em>PG&amp;E Electric Delivery</em> (all customers)</em>*</td>
<td><strong>$165.75</strong></td>
<td><strong>$165.75</strong></td>
<td><strong>$165.75</strong></td>
</tr>
<tr>
<td><strong>Additional PG&amp;E Fees (SCP customers only)</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$16.50</strong></td>
<td><strong>$16.50</strong></td>
</tr>
<tr>
<td><strong>Average Total Cost</strong></td>
<td><strong>$319.17</strong></td>
<td><strong>$296.49</strong></td>
<td><strong>$348.99</strong></td>
</tr>
</tbody>
</table>

*PG&E fees are calculated by Sonoma Clean Power using rate data provided by PG&E effective on January 1, 2015.
What are the Risks...

And how are they mitigated?

**Rate Competition/Market Fluctuation:** Power market expertise and well crafted power RFPs are essential; Long and short term contracts; Diversified supply portfolio, power asset ownership and “value add” programs.

**Customer Opt-Out:** Competitive rates are a must; Articulate additional consumer and community benefits; Opt-outs in CA typically in 10%-20% range.

**Political:** Align CCA to local policy objectives; Appeal to both progressive and conservative minds by making the environmental AND business case; Robust community engagement is essential.

**Regulatory/Legislative:** PUC decisions may adversely affect CCA, and proposed bills (eg: AB 2145) can change the original statute; Participate in the regulatory and legislative process.
The 3 Year Outlook...

- Historic gas lows help achieve competitive pricing
- Cost of in-state solar is currently low
- Utilities are fully resourced through 2018-2020; excess power available
- Capacity charges currently low
- Affordable financing available
CCA is Poised for Growth in CA

- **Operational CCAs**
  - MCE Clean Energy
  - Lancaster Choice Energy
  - Sonoma Clean Power

- **Exploring / in Process**
  - Alameda County*
  - Butte County
  - City of Arcata/Humboldt County
  - City of Davis/Yolo County
  - City of San Diego*
  - City/County of San Francisco
  - City of Sunnyvale/Silicon Valley Partnership*
  - Contra Costa County
  - LA County/South Bay Consortium
  - Lake County
  - Mendocino County
  - Monterey Bay Community Power (Tri-County)
  - Napa County Cities
  - San Bernardino County
  - San Diego County
  - San Luis Obispo/Morro Bay
  - San Mateo County*
  - Santa Barbara County
  - Solano County
  - Ventura County

* current LEAN clients
For More Information:

Shawn Marshall, Director
shawnmarshall@LEANenergyus.org
www.LEANenergyus.org

Now is the time to take control of your local energy future!

CCA is the path forward.