Community Choice Energy (CCE)
In Contra Costa County
Public Workshops
December 10, 14 and 16
7:00 -9:00 pm
**What is Community Choice Energy?**

**CCE** enables local governments to procure and/or develop power on behalf of their public facilities, residents and businesses. It creates a functional partnership between municipalities and existing utilities. It has proven to increase renewable energy and lower greenhouse gases while providing competitive electricity rates.
CCEs in 7 States
- California
- Illinois
- Massachusetts
- New Jersey
- Ohio
- Rhode Island
- New York

Under Consideration:
Utah, Delaware, Minnesota
Status in Bay Area Counties

All Nine Counties Engaged ...

Operational: Marin, Sonoma Counties

Joined Marin: Unincorporated Napa, Cities of Richmond, San Pablo, El Cerrito, Benicia

Launching Soon: City/County of San Francisco

Under Development: Alameda, San Mateo, Santa Clara counties

Early Investigations: Contra Costa County

Next/Follow Up: Solano County
3 Programs in California... so far

<table>
<thead>
<tr>
<th>Launch Year</th>
<th>Avg. Customer Rate Savings</th>
<th>Power Options (current)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2-5% below PG&amp;E</td>
<td>56% Renewable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% Renewable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% Local Solar</td>
</tr>
<tr>
<td>2014</td>
<td>6-14% below PG&amp;E</td>
<td>36% Renewable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% Renewable</td>
</tr>
<tr>
<td>2015</td>
<td>3-4% below SCE</td>
<td>35% Renewable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% Renewable</td>
</tr>
</tbody>
</table>
Basic Program Mechanics

1. Form or join a Joint Powers Agency: Local governments participate by passing an ordinance and entering into a JPA Agreement.

2. Utility (PG&E) continues to provide consolidated billing, customer service, grid and line maintenance.

3. PG&E programs for low income/CARE customers remain the same.

4. CCE electric generation charges (including exit fee) appear as new line items on the customer bill; all other charges remain the same.

5. CCE becomes default electric provider. Customers receive a minimum of 4 opt-out notices over 120 days and can return to PG&E service any time.

6. CPUC certifies CCE Plan; oversees utility/CCE service agreement and other requirements.
Typical Start Up Costs

- If forming a new JPA, general rule of thumb: 1-2% of projected revenues; ~ $1.5- $3M depending on size and complexity

- This includes program development and launch costs, but does not include credit capacity for JPA working capital or initial energy contract

- All start up costs can be repaid through CCE program revenues within 24-36 months of launch.

Start-Up Funding Options:

- Municipal Sponsorship/Cost-Share
- Bank financing (with municipal credit guaranty)
- Grants
- Private investors
Sample Energy Bill – Marin Clean Energy

ENERGY STATEMENT
www.pge.com/MyEnergy

Account No: 1234567890-1
Statement Date: 10/01/2013
Due Date: 10/22/2013

Service For:
MARY SMITH
1234 STREET AVENUE
SAN RAFAEL, CA
94804

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 deliveries other than PG&E. These two charges are for different services.

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

Your Account Summary
Amount Due on Previous Statement: 82.85
Payments Received Since Last Statement: 82.85
Previous Unpaid Balance: 0.00
Current PG&E Electric Delivery Charges: $30.32
MCE Electric Generation Charges: $42.81
Current Gas Charges: $27.20
Total Amount Due: $109.33

Details of MCE Electric Generation Charges
10/01/2013 – 11/01/2013 (31 billing days)
SERVICE FOR: 1234 STREET AVENUE
Service Agreement ID: 0123456789 ESP Customer Number: 0123456789

10/01/2013 – 11/01/2013
Rate Schedule: RES-1
DEEP GREEN - TOTAL: 508,000,000 kWh @ $0.0100 = $5.08
GENERATION - TOTAL: 508,000,000 kWh @ $0.07400 = $37.59
Net charges $42.67

Energy Surcharge: $0.14

Total MCE Electric Generation Charges: $42.81

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CCE and Potential GHG Reductions

Excerpt from City of Sunnyvale Climate Action Plan

2020 GHG Reductions (MTCO2e/yr)

- Optimize Vehicular Traffic
- Sustainable Circulation and...
- 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

0 100000 200000 300000
2014 Emission Profile: Sonoma Clean Power

**Electric Power Generation Mix***

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

Note that for 2014, PG&E is at ~427 lbs

SCP is where PG&E is expected to be in 2020.
## MCE and SCP Financial Conditions

<table>
<thead>
<tr>
<th></th>
<th>MCE (FY15-16)</th>
<th>SCP (FY15-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Projected Revenue</strong></td>
<td>$145,933,000</td>
<td>$165,495,000</td>
</tr>
<tr>
<td><strong>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>Projected Net Increase in Reserves</strong></td>
<td>$4,500,000</td>
<td>$16,907,000</td>
</tr>
</tbody>
</table>
# MCE & SCP Base Generation Rate Comparison (Per Kwh; As of May 2015)

<table>
<thead>
<tr>
<th>Generation Rate</th>
<th>PG&amp;E</th>
<th>MCE/Light Green</th>
<th>MCE Deep Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-1 (residential)</td>
<td>$0.097</td>
<td>$0.082</td>
<td>$0.092</td>
</tr>
<tr>
<td>A-1 (small commercial)</td>
<td>$0.102</td>
<td>$0.082</td>
<td>$0.092</td>
</tr>
<tr>
<td>E-19S (large industrial)</td>
<td>$0.099</td>
<td>$0.081</td>
<td>$0.091</td>
</tr>
<tr>
<td>AG-1A (agricultural)</td>
<td>$0.103</td>
<td>$0.093</td>
<td>$0.103</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Generation Rate</th>
<th>PG&amp;E</th>
<th>SCP/Clean Start</th>
<th>SCP/Evergreen</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-1 (residential)</td>
<td>$0.097</td>
<td>$0.071</td>
<td>$0.106</td>
</tr>
<tr>
<td>A-1 (small commercial)</td>
<td>$0.102</td>
<td>$0.076</td>
<td>$0.111</td>
</tr>
<tr>
<td>E-19S (large industrial)</td>
<td>$0.099</td>
<td>$0.077</td>
<td>$0.112</td>
</tr>
<tr>
<td>AG-1A (agricultural)</td>
<td>$0.103</td>
<td>$0.081</td>
<td>$0.116</td>
</tr>
</tbody>
</table>

**Note:** No guarantee will always be lower; existing CCE programs changes rate once a year compared to multiple times a year for PG&E.
Key Elements of a Technical Study

1) Load Analysis/Forecast
   Answers: How much energy does CCCo use now and potentially need in the future?

2) Rate Analysis
   Answers: Can the program be cost competitive now and in the longer term?

3) Supply Scenarios
   Answers: What are the potential rate and GHG reduction impacts of various renewable energy supply scenarios?

4) Sensitivity Analysis
   Answers: How do various market conditions and policy changes affect the program’s viability?

5) ProForma Analysis
   Provides the quantitative data/analytics supporting previous sections as well as costs of operation/programs

Other Issues Addressed in Recent Studies:
   Economic impacts/jobs; Energy efficiency, demand response and other program potential; Risk analysis
## Example of Technical Study: Peninsula Clean Energy

<table>
<thead>
<tr>
<th>Key Considerations</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Environmental Benefits</strong></td>
<td>35% Renewable</td>
<td>50% Renewable</td>
<td>100% Renewable</td>
</tr>
<tr>
<td></td>
<td>35% GHG-Free</td>
<td>63% GHG-Free</td>
<td>100% GHG-Free</td>
</tr>
<tr>
<td><strong>Rate Competitiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(on average, relative to PG&amp;E rate projections)</td>
<td>6% savings</td>
<td>4% savings</td>
<td>2% increase</td>
</tr>
<tr>
<td><strong>Projected Residential Customer Cost Impacts</strong></td>
<td>$5.40 monthly cost savings</td>
<td>$4.05 monthly cost savings</td>
<td>$1.80 monthly cost increase</td>
</tr>
<tr>
<td>(On average, relative to PG&amp;E rate projections. Average monthly usage for residential customers = 450 kWh)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assumed PCE Customer Participation</strong></td>
<td>85% across all customer groups</td>
<td>85% across all customer groups</td>
<td>75% for residential and small commercial</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50% for all other groups</td>
</tr>
<tr>
<td><strong>Comparative GHG Emissions Impacts</strong></td>
<td>~211,000 MTCO₂  of additional GHG emissions in Year 1</td>
<td>~75,000 MTCO₂  of GHG emissions reduction in Year 1</td>
<td>~204,000 MTCO₂  of GHG emissions reduction in Year 1</td>
</tr>
</tbody>
</table>
Local CCE Program Options

*Community Choice Energy supports local decision-making and local program design*

- MCE and SCP have collectively put over 300MWs of new renewable power on the grid; of that, nearly 100 MW is local power
- Local Feed-in-Tariff, Net Energy Metering programs incentivize local DG
- Public/Private Partnerships: Community solar, commercial and residential battery storage, home area networks/demand reduction, EV charging stations
- Energy efficiency funding is available from utility and state
- On-bill repayment option and green business loans
- Local job training programs that focus on underserved populations
What are the Risks...
And how are they mitigated?

**Rate Competition/Market Fluctuation:** Rates will vary with market conditions. Power market expertise and well crafted power RFPs are essential; Diversified supply portfolio and “value add” programs.

**Customer Opt-Out:** Competitive rates are a must; Articulate additional consumer and community benefits.

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

**Regulatory/Legislative:** PUC decisions may adversely affect CCA; also example of AB 2145; Participate in the regulatory and legislative process.
In Summary: Potential CCE Advantages

- CCE is 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; achievement of local CAP goals
- Provides a funding source for energy efficiency and other energy programs like energy storage and EV charging stations
## CCE Program Options

<table>
<thead>
<tr>
<th>Key Attributes</th>
<th>Joining MCE</th>
<th>Contra Costa CCE</th>
<th>Partnership with Alameda County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost to launch</strong></td>
<td>No cost if joining by 3/31/16; $10,000 thereafter.</td>
<td>Estimated costs at $1.5M for program design and JPA formation. Costs are recoverable through early revenues.</td>
<td>Alameda County has allocated initial start-up funding. Unsure of cost implications for CCCo.</td>
</tr>
<tr>
<td><strong>Governance</strong></td>
<td>MCE has large regional board serving a broad service territory; not Contra Costa-specific.</td>
<td>Contra Costa-specific Board of Directors.</td>
<td>To date, plan is for Alameda-County specific Board. Possible expansion to CCCo cities/county.</td>
</tr>
<tr>
<td><strong>Program Development</strong> (local power, EVs, battery storage, etc.)</td>
<td>Ability to participate in existing MCE programs</td>
<td>Ability to start and tailor programs of priority/interest to CCCo (local power generation, energy efficiency programs)</td>
<td>Ability to start and tailor programs of priority/interest to Alameda (and CCCo if there is a partnership).</td>
</tr>
<tr>
<td><strong>Control of surplus Revenues</strong></td>
<td>MCE controls revenues at discretion of MCE Board.</td>
<td>CCCo CCE would control revenues at discretion of its Board.</td>
<td>Alameda (and potentially CCCo) would control revenues at discretion of its JPA Board.</td>
</tr>
<tr>
<td><strong>Estimated Commencement of Service</strong></td>
<td>End of 2016</td>
<td>Potentially 2017</td>
<td>Proposed 2017</td>
</tr>
<tr>
<td><strong>Other considerations</strong></td>
<td>MCE and its member communities have been subject to organized opposition/negative marketing campaigns.</td>
<td>Need to form partnership with participating cities; JPA formation/agreement.</td>
<td>Alameda process currently underway; large advisory committee with some political risk.</td>
</tr>
</tbody>
</table>
Where do we go from here?

- **CCE Options**
  a) Form a Contra Costa County Program
  b) Partner with Alameda County to form a joint program
  c) Join Marin Clean Energy

- **Determine level of interest from cities for investigating options and participating in technical study**

- **Request for Load Data Authorization** *(responses by January 31)*

- **If there is interest in a Contra Costa CCE, determine potential cost-share for technical study**

- **Return to Internal Operations Committee and BOS for direction on next steps**
Thank You

For More Information:

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County of Contra Costa
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(925) 674-7722

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