COMMUNITY CHOICE AGGREGATION
INITIAL FEASIBILITY STUDY

INITIAL RESULTS

JULY 24, 2018

Presented by:

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Prepared for:

County of Butte, the Cities of Chico and Oroville, and the Town of Paradise
AGENDA

- Study Objectives
- Butte County Feasibility Study Results Overview
- Key Assumptions
- Sensitivity Results
- Risk Analysis
- Summary and Recommendations
FEASIBILITY STUDY OBJECTIVES

- Can a Butte County CCA be Financially Feasible Under a Range of Likely Future Conditions?
  - Methodology: conservatively estimate revenues and costs
- Analyze Various Governance and Operational Options if Financially Feasible
- Evaluate Various Risk Factors
RESULTS OVERVIEW
ANNUAL RATE SAVINGS ONCE OPERATIONAL

- **RPS Portfolio**
- **2% Savings Off of PG&E Bundled Rate = $5M**
  - CCA Generation Rate + PG&E PCIA + PG&E Distribution Rate is 2% lower than PG&E Generation Rate + PG&E Distribution Rate
- **Annual Rate Savings for 2-Participant CCA (Chico + Unincorporated) is $4M**
BILL SAVINGS EXAMPLES

- **RPS Portfolio, 2% Rate Savings**
- **Savings is per Account**
  - Nearly 1,500 streetlight accounts (4-Participants); half are in Unincorporated Butte County
- **Industrial Customer Savings Example**
  - 310,000 kWh/month = $1,200 monthly savings
  - 50,000 kWh/month (average for Participants) = $200
LOAD AND PHASING – KEY ASSUMPTIONS

4 PARTICIPANTS

<table>
<thead>
<tr>
<th>Phase</th>
<th>Start</th>
<th>Eligibility</th>
<th>Total Accounts Served</th>
<th>Percentage of Total Load Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apr 2020</td>
<td>Agriculture, Commercial &amp; Industrial</td>
<td>12,000</td>
<td>30%</td>
</tr>
<tr>
<td>2</td>
<td>Aug 2020</td>
<td>Residential</td>
<td>92,400</td>
<td>70%</td>
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</tbody>
</table>

Rate Class | Participation
---|----------------
Agricultural | 85%
Commercial | 85%
Industrial | 85%
Lighting | 100%
Residential | 95%
Diablo Canyon Nuclear Plant Retirement and Departing Load Balance Out Which is Reflected in PG&E Forecast Rates

Market Prices and Variable Cost Increases are Projected to be Main Contributors to PG&E Rate Increases
  - Variable costs are mainly fuel (natural gas)

Average Annual Escalation Rate of 0.5% over 10-Year Period
  - Conservative

Similar Resultant Cost and Trend to Other CCA Feasibility Studies (Contra Costa County, Central Coast)
Three Portfolios: RPS, 50%, and 75% Renewable
- RPS: 80% GHG-free all years
- 50% and 75% Renewable: 80% GHG-free ramps to 91% GHG-free by 2030

Wholesale Market Price Forecast Provided by Proprietary Market Price Forecasting Firm (S&P Global Market Intelligence)

Power Purchase Agreements (PPAs) Priced at $30 to $40/MWh (flat)

Geothermal and Local DER Project Costs have Limited Availability with Costs from $60 to $120/MWh

Based on a Survey of Recent Renewable PPA Prices, Assumed Renewable Energy Market Price of $40 to $49/MWh
GENERAL ASSUMPTIONS

- RPS Default Rate for All Customers
- Target 2% Total Bill Savings Annually
- Base Power Supply, PCIA Scenarios
  - PCIA increases 20% annually for first two years; decreases ~2% annually thereafter
- Target Operating Reserves at Three Months of Expenses: $18.5M (4 Participants)
- Working Capital Repayment at 5.5% Interest Rate for 5 Years, Early Repayment Likely
CASH FOR WORKING CAPITAL

- **Cash Required to Fund Pre-Startup Activities, Salaries, Bonds**
  - $600,000

- **Working Capital Required to Cover Expenses During Startup**
  - $1.5 – 6.1 million
  - Flexible power procurement payment terms reduce working capital requirements

- **Assumed Repayment of All Financing by May 2025 (Likely Earlier)**

- **Financing Options**
  - Line of credit
  - Term loan
  - Turnkey operation – provider fronts the cash
# CCA Rates, Renewable Content

<table>
<thead>
<tr>
<th>Rate Class</th>
<th>PG&amp;E</th>
<th>RPS</th>
<th>50%</th>
<th>75%</th>
</tr>
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<tbody>
<tr>
<td>Residential</td>
<td>0.2033</td>
<td>0.2007</td>
<td>0.2019</td>
<td>0.2035</td>
</tr>
<tr>
<td>Small Commercial</td>
<td>0.2436</td>
<td>0.2440</td>
<td>0.2453</td>
<td>0.2469</td>
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<tr>
<td>Medium Commercial</td>
<td>0.2151</td>
<td>0.2122</td>
<td>0.2135</td>
<td>0.2152</td>
</tr>
<tr>
<td>Large Commercial</td>
<td>0.1807</td>
<td>0.1676</td>
<td>0.1688</td>
<td>0.1703</td>
</tr>
<tr>
<td>Street Lights</td>
<td>0.2184</td>
<td>0.2002</td>
<td>0.2011</td>
<td>0.2023</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.2405</td>
<td>0.2407</td>
<td>0.2418</td>
<td>0.2432</td>
</tr>
<tr>
<td>Industrial</td>
<td>0.1543</td>
<td>0.1395</td>
<td>0.1406</td>
<td>0.1420</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.2057</strong></td>
<td><strong>0.2016</strong></td>
<td><strong>0.2029</strong></td>
<td><strong>0.2044</strong></td>
</tr>
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Initial Max Rate Savings in 2022 from PG&E Bundled Rate:

2.0% 1.5% 0.5%

Rate Savings after Fully Operational:

3.9-4.4% 2.9-3.9% 0.9-1.4%
RATE ANALYSIS – SENSITIVITY ASSUMPTIONS

- **Generation**
  - High/Low power cost cases

- **PCIA**
  - *High PCIA*: Based on Portfolio Allocation Methodology level proposed by IOUs
  - *Low PCIA*: -2% change in PCIA annually

- **Participation**
  - *High Participation*: +5%
  - *Low Participation*: -25%
SENSITIVITY ANALYSIS

Base Case Portfolio - Bundled Rates ($/kWh)
RPS Portfolio
10-Year Levelized Average System Rate

- PG&E Base Case: $0.2318
- Butte RPS Case: $0.2273
- PG&E Base Case, Butte 2-Jurisdiction: $0.2318
- PG&E Base Case, Butte Low PCIA: $0.2116
- PG&E Base Case, Butte High PCIA: $0.2318
- PG&E Low Power Costs, Butte Low Power Costs: $0.2272
- PG&E High Power Costs, Butte High Power Costs: $0.2365
- PG&E Base Case, Butte High Load (+5%): $0.2318
- PG&E Base Case, Butte Low Load (-25%): $0.2291

$0.16 $0.18 $0.20 $0.22 $0.24 $0.26 $0.28
## RISK ANALYSIS AND MITIGATION

<table>
<thead>
<tr>
<th>Risk Category and Description</th>
<th>Mitigation Strategies</th>
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<tbody>
<tr>
<td><strong>Customer Participation</strong></td>
<td>• Maintain competitive rates&lt;br&gt;• Tailor programs to local customer priorities&lt;br&gt;• Provide customers with a high-level of service and communication</td>
</tr>
<tr>
<td>• Customers can choose to opt-out</td>
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<tr>
<td>• High opt-out rates reduce sales, increase fixed cost per customer</td>
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<tr>
<td><strong>PG&amp;E Rate Competition</strong></td>
<td>• Diversify power contract portfolio&lt;br&gt;• Maintain financial reserves and a rate stabilization plan&lt;br&gt;• Monitor PG&amp;E rates and CCA charges&lt;br&gt;• Ensure relatively low CCA overhead&lt;br&gt;• Leverage CCA’s tax-exempt borrowing advantage to reduce long-term power supply costs</td>
</tr>
<tr>
<td>• Low customer participation rates</td>
<td></td>
</tr>
<tr>
<td>• Unfavorable future power market conditions</td>
<td></td>
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<tr>
<td>• Regulated charges could increase in the future</td>
<td></td>
</tr>
<tr>
<td><strong>Local, Agency, and State Policy</strong></td>
<td>• Track and participate in relevant CPUC/CEC proceedings and legislation&lt;br&gt;• Develop bi-partisan support with emphasis on both environmental/equity and financial/economic benefits associated with a CCA&lt;br&gt;• Lobby for the same government-imposed charges on all CA utilities</td>
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<tr>
<td>• PCIA and other regulated charges may reduce CCA competitiveness</td>
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<tr>
<td>• State energy policy could create burdensome energy procurement requirements</td>
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GOVERNANCE STRUCTURES

Create Joint Power Authority (JPA)
- Provides Participants with maximum local control
- Allows Participants to target programs specifically for residents
- Greater effort associated with formation of CCA
- Ability to better target County and Cities’ own residents in formation and future marketing
- More decision-making required by the cities
- More flexibility and timeliness in formation
- Greater potential for local generation projects

Join Existing JPA
- JPA completes the work without much effort from the Participants
- Potential cost savings due to shared services
- Participants may have less control over the process and operations
- Risk transferred to the JPA
- Less ability to customize for each County/Cities’ residents
- Less ability to influence power supply options and choices
- Ability for JPA to have more influence in regulatory issues
- Greater size of JPA might lead to more parties offering power supply contracts
- Greater process in reaching agreement on decisions
- May take longer for formation and implementation due to the number of parties involved
MANAGEMENT STRUCTURES

Full Staffing
- All CCA functions staffed internally
- CCA acquires its own financing

Pros:
- Maximum control over quality of service and long-term decision making

Cons:
- Possible financial risk

Minimal Staffing
- CCA employs program managers to manage contractors
- CCA acquires its own financing

Pros:
- Flexible staffing levels

Cons:
- Less control
- Possible financial risk

Third-Party Turnkey
- CCA employs program managers to manage contractors
- CCA financing provided by third-party

Pros:
- Flexible staffing levels

Cons:
- Possibility of third party abandoning venture
- Reduced control
- Higher rates due to higher 3rd party borrowing rate
SUMMARY AND RECOMMENDATIONS

- A Butte County CCA is Financially Feasible Under a Range of Sensitivities:
  - Renewable content of power supply
  - Lower or higher than expected participation rates
  - Small to moderate changes in PCIA or power supply costs
  - 2 or 4 Jurisdictions participating
  - Early repayment of start-up capital very likely

- $5 million and $4 million in Bill Savings Annually for 4-Participant and 2-Participant CCA, Respectively
  - Promotes economic development

- Through CCA, Participants Gain Greater Local Control Over Rates, Programs, Power Supply
Recommendation to Begin Forming a CCA and Performing Necessary Analysis to File Implementation Plan with California PUC

Next Steps:
- Community meetings/public outreach
- Identify financing options
- Board/council decision
- Development of Implementation Plan (IP)
October 2018 is Board/Council Decision

Timeline may be condensed and meet service start date in early 2020