Approve SVCE Generation Rate Changes

Board of Directors
February 09, 2022
Action Requested

- Implement rate changes to maintain 1% discount rate
- Seek recommendation on any additional expenditure

Presentation Outline

- Favorable market movement driving improved net margin
- Reversal of price trend presents
- Allocation of any additional expenditure between decarbonization programs and customer discount
Key Messages

Market prices for power have moved in the direction that is favorable for us resulting in higher net margin.

Market prices can just as easily move in direction that can affect us adversely in the future.

Staff recommends we take the expected favorable outcome to:
1. Build reserves to withstand future adverse market price movements
2. Further serve our mission by setting aside an additional $20 million towards our decarbonization programs
3. Keep customer discount at 1% to PG&E generation rates

Both the Executive Committee (EC) and the Finance and Administration Committee (F&A) agreed with staff to build reserves and limit additional expenditure to $20 million.

On how to allocate the $20 million between programs and additional customer discount, the EC decided to have that discussion at the Board meeting.

The F&A voted unanimously to recommend that the Board maintain a 1% customer discount and target to transfer $20 million to the programs fund at the March 2022 Mid-Year Budget Update.
New PG&E Gen and PCIA Rates Result in Higher Margin than FY 22 Budget Assumptions

- Relative to assumptions in the FY 22 Budget:
  - PG&E’s generation rate is expected to increase by about 21%
  - PCIA is expected to decrease by about 20%
  - Relative to Budget, SVCE’s margin improve by about 32%
  - CPUC is expected to approve actual rates February 10, 2022.

- Source: NewGen Strategies estimate based on proposed decision. Final number will be available in late February.
## Estimated Impact on Budget

**Based on preliminary calculations. To be updated next month as part of Mid-Year Budget.**

<table>
<thead>
<tr>
<th>FY 22 Budget ($ in thousands)</th>
<th>Budget</th>
<th>With Revised Margins **</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues*</td>
<td>342,105</td>
<td>376,802</td>
<td>34,697</td>
</tr>
<tr>
<td>Power Supply Cost</td>
<td>273,561</td>
<td>282,835</td>
<td>9,274</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>68,544</td>
<td>93,967</td>
<td>25,423</td>
</tr>
<tr>
<td>Other Costs</td>
<td>32,060</td>
<td>32,060</td>
<td>-</td>
</tr>
<tr>
<td>Net Contribution to Reserves</td>
<td>36,484</td>
<td>61,907</td>
<td>25,423</td>
</tr>
</tbody>
</table>

* Potential customer write-offs included in other costs.

** Assumes 1% customer discount.
High Prices Driving Favorable Outcome but Price Reversal Presents Significant Risks

- 2022 forward prices are at
  - Extreme case of runup in

- Most of the increase occurred in the last 12

- Can’t predict future but price trends could reverse, and prices could drop equally or more.
  - Leads to substantial draw from reserves

### Chart:
- **Past Forecast**
  - Cal 2022 Prices
  - Future Path

- **2022 Forecast as of Nov 2021**
  - 2022 Actuals Low Case Scenarios
  - Percentile

- **Power Price $/Mwhr**
  - $67/Mwhr
  - $34/Mwhr

- **Months relative to Nov 2021**

- **2022 Actuals**
  - $67
  - $34
  - $33
  - 5%
  - 1%
Staff conducted a stress test analysis where prices drop to historical low levels in 2022 and 2023 (analysis summarized in the appendix). The analysis shows that such an adverse market movement could draw between 55% to 65% of the reserve, leaving us with only 159 to 121 days of cash on hand (DCOH). Staff recommends to limit expenditure to no more than $20 million based on the analysis that if the stress test scenario were to occur, we can target to keep the reserves above the board-approved minimum of 120 DCOH.
## Programs vs Additional Customer Discount

### Table

<table>
<thead>
<tr>
<th>Allocate to Programs Double Down Strategy* (Spend will occur over 3-5 year period)</th>
<th>% Relative to PG&amp;E Generation Rate</th>
<th>Monthly Savings to Average Residential Customer</th>
<th>Monthly Savings Medium to Small Commercial Customer</th>
<th>Monthly Savings $20 million</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1% (existing discount)</td>
<td></td>
<td></td>
<td>$31.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$62.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$93.00</td>
</tr>
</tbody>
</table>

*Inclusive of equity program allocation to focus on low-income customers.
Board Action

A. Board Approval
Adopt Resolution 2022-06, authorizing SVCE to implement rate changes to maintain a 1% discount to PG&E generation rates taking effect when PG&E implements its next generation rate change, which is expected to occur on March 1, 2022.

B. Board Recommendation
Transfer $_ million from the operating budget to the programs decarbonization fund for the March 2022 Mid-Year Budget Update.
Thank you! / Questions?
Board approves changing SVCE rates to maintain a 1% Discount (from 4%) to PG&E Gen Rates, effective Jan 2021.

Board approves to maintain 1% discount rate to PG&E Gen Rate in response to increase in PCIA and PG&E Gen Rate.

Board approves FY 22 budget that anticipates significant decrease in PCIA and increase in PG&E Gen Rate and maintains 1% discount rate. Board to reconsider discount rate in Dec when there’s more certainty on PG&E rates and PCIA.

New SVCE rates go into effect.

Board adopts Mid-Year Budget Update.

Board authorizes rate changes.

Special session of the Finance and Administration Committee (FA) to review the same information as that shared with the EC. FA unanimously recommends keeping customer discount at 1% and target to transfer $20 million to the Programs Fund at the Mid-Year budget update.

The Executive Committee (EC) reviewed updated SVCE margin analysis based on the Nov. 8 released PG&E Gen Rate and PCIA projections. EC reaches consensus to spend an additional $20 million from the FY 22 budget.
Risk Factors to Consider

- Highermarginsresultfromextremeincreaseinpowermarketprices (black-swantevent).
- PG&E Gen Ratealsoincreasedbecauseof underrecoveryin ERRA account
- Black-swanteventsthataffectus adverselyinthefuturecan draw substantialfundsfromthereservesand/or increasecustomerratesto uncompetitivelevels.
- PCIA is basedon currentestimatedmarketpricebenchmark/forwards (MPB) fromtheCPUC.
- IfrealizedpricesarelowerthanMPB,thenPCIA willbe undercollectedandtheundercollectionwillraise2023PCIA rates
Can we improve our forecast?

Any modeling improvement will not eliminate the biggest contributor to uncertainty: Market Price Movements
**Stress Test – Market Prices Plunge**

Assumes market prices drop to historical lows (1 percentile).

<table>
<thead>
<tr>
<th>($ in thousands)</th>
<th>Cal 2023 Forecast</th>
<th>Stress Test 1.**</th>
<th>Stress Test 2.***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues*</td>
<td>394,111</td>
<td>96,629</td>
<td>96,629</td>
</tr>
<tr>
<td>Power Supply Cost</td>
<td>251,249</td>
<td>219,867</td>
<td>251,249</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>142,862</td>
<td>(123,238)</td>
<td>(154,620)</td>
</tr>
<tr>
<td>Other Costs</td>
<td>33,663</td>
<td>33,663</td>
<td>33,663</td>
</tr>
<tr>
<td>Net Contribution to Reserves</td>
<td>109,199</td>
<td>(156,901)</td>
<td>(188,283)</td>
</tr>
</tbody>
</table>

* Potential customer write-offs included in other costs.
** Hedges for Cal 2023 at current 70% level. Assumes 1% customer discount.
*** Assumes Cal 2023 is hedged 100% at today's prices. Assumes 1% customer discount.

- The stress test above was performed in November 2021 using the higher initial PG&E ERRA Update Rates.
- Based on the delay in implementation of rate change from January to March 2022, some of the revenues from 2022 are shifted to Calendar Year 2023.
- The relative values among the scenarios for the most part are still relevant.
## Reserve Analyses – Days Cash on Hand (DCOH)

<table>
<thead>
<tr>
<th>Stress Tests</th>
<th>Beg. 2023 Forecast of Reserves (DCOH)</th>
<th>Draw on Reserves from Stress Case (DCOH)</th>
<th>Remaining (DCOH)</th>
<th>Available for Use* (Maintaining Min. Reserve Threshold of 120 DCOH)</th>
<th>Available for Use in $ Millions</th>
<th>Expected Case FY 22 Forecast of Reserves (DCOH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Drop to 1 percentile (100% Hedged Case)</td>
<td>348</td>
<td>227</td>
<td>121</td>
<td>1</td>
<td>1</td>
<td>310</td>
</tr>
<tr>
<td>Price Drop to 1 percentile (70% Hedged Case)</td>
<td>348</td>
<td>189</td>
<td>159</td>
<td>39</td>
<td>32</td>
<td>272</td>
</tr>
</tbody>
</table>

* Target to maintain 120 DCOH under the stress case scenario while ensuring that on an expected basis DCOH does not drop below the target threshold of 230 in FY22.
Options for use of Improved Margins

1. Hold in reserves for future black swan events
   - Forecast days cash on hand (DCOH) at the end of December 2021: 185 ($154 Million)
   - Black swan event/stress test modeled would use 189 - 227 DCOH.

2. Add funds to programs double down strategy
   - Currently programs are funded at 2% of revenues.
   - Each 1% adds $3.8 million.

3. Increase customer discount
   - Every 1% increase in customer discount diverts $5.7 million from reserves annually and ~$3.5 million for the remaining months of the current fiscal year (Mar to Sep).

4. Combination of above
Challenges in Forecasting Headroom

- Energy price in the current and prior year have the largest impact on headroom (cash reserves).
- Based on historic price analysis Scenarios 1 and 4 are more common than Scenarios 2 and 3.

Additional Headroom Drivers

1. 2021 Gen Rate (ERRA balance)
2. 2021 PCIA (PABA balance)
3. 2022 Net Revenue Increase

2022 Energy Price Change
(Forecast, Now – Forecast at budget)

2021 Energy Price Change
(Actual – Forecast)

2021 Gen Rate Increase (ERRA Under collection)
2021 PCIA Decrease (PABA Over collection)
2022 Net Revenue Increase

2021 Gen Rate Decrease (ERRA Over collection)
2021 PCIA Increase (PABA Under collection)
2022 Net Revenue Decrease
### 2023 Forward Price Stress Scenarios

<table>
<thead>
<tr>
<th>2023 Forecast as of Nov 2021</th>
<th>2023 Low case scenarios</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>50%</td>
</tr>
<tr>
<td>$</td>
<td>44</td>
<td>5%</td>
</tr>
<tr>
<td>$</td>
<td>34</td>
<td>1%</td>
</tr>
</tbody>
</table>
ERRA Forecast Update
## 2022 Forecast Compared to Budget

<table>
<thead>
<tr>
<th>2017 Vintage Calendar Year</th>
<th>2021 Rates</th>
<th>2022 Rates</th>
<th>2022 Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PG&amp;E AET(^1) 12/30/20</td>
<td>BUDGET 7/16/21(^2)</td>
<td>PG&amp;E Update 1/24/22(^3)</td>
</tr>
<tr>
<td>PG&amp;E Gen Rate ($/kWh)</td>
<td>0.1096</td>
<td>0.1203</td>
<td>0.1459</td>
</tr>
<tr>
<td>PCIA (cents/kWh)</td>
<td>0.0459</td>
<td>0.0243</td>
<td>0.0193</td>
</tr>
<tr>
<td>Headroom (cents/kWh)</td>
<td>0.0638</td>
<td>0.096</td>
<td>0.1266</td>
</tr>
</tbody>
</table>

### Assumptions

<table>
<thead>
<tr>
<th></th>
<th>2021 Rates</th>
<th>2022 Rates</th>
<th>2022 Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Peak Energy Price ($/MWh)</td>
<td>43.16</td>
<td>56.75</td>
<td>72.96</td>
</tr>
<tr>
<td>Off-Peak Energy Price ($/MWh)</td>
<td>35.50</td>
<td>42.54</td>
<td>58.34</td>
</tr>
<tr>
<td>System Capacity Price ($/KW-mon)</td>
<td>6.10</td>
<td>7.25</td>
<td>6.03</td>
</tr>
<tr>
<td>Local Capacity Price ($/KW-mon)</td>
<td>6.15</td>
<td>7.25</td>
<td>6.35</td>
</tr>
<tr>
<td>Flex Capacity Price ($/KW-mon)</td>
<td>5.69</td>
<td>7.25</td>
<td>6.41</td>
</tr>
</tbody>
</table>

\(^1\) AET is the Annual Electric True-up that finalizes the rates based on changes across all proceedings.

\(^2\) Based on New Gen Model run with SVCE assumptions.

\(^3\) Estimate based on proposed decision; number will be finalized in late February.
The PG&E Generation Rate (Gen Rate) increased 33% between 2021 and 2022.

The large increase is mainly due to extremely high energy prices driven by high gas prices.

<table>
<thead>
<tr>
<th>Gen Rate ($/kWh)</th>
<th>On-Peak Price ($/MWh)</th>
<th>Off-Peak Price ($/MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1096</td>
<td>43.6</td>
<td>35.5</td>
</tr>
<tr>
<td>0.1459</td>
<td>72.96</td>
<td>58.34</td>
</tr>
</tbody>
</table>

Gas Prices at PG&E City Gate ($/MMBtu

| Winter Futures | 3.80 | 7.00 |

1 Market Price Benchmark issued by CPUC

2 Data from Intercontinental Exchange
The other driver of the high Gen Rate is due to the difference between the forecast energy price and the actual energy price. The energy prices in 2021 were higher than the forecast resulting in bundled customers paying less than they should. This "undercollection" is added to the 2022 prices thus compounding the increase in the 2022 Gen Rate.

<table>
<thead>
<tr>
<th>On-Energy Price ($/MWh)</th>
<th>2021 Forecast</th>
<th>2022 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off-Peak</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SILICON VALLEY CLEAN ENERGY
### Market Price Benchmarks 2019-2022

#### On-Peak Energy Index ($/MWh)

<table>
<thead>
<tr>
<th>Year</th>
<th>Final</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### System RA

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2.77</td>
</tr>
<tr>
<td>2020</td>
<td>4.59</td>
</tr>
<tr>
<td>2021</td>
<td>5.20</td>
</tr>
<tr>
<td>2022</td>
<td>5.10</td>
</tr>
</tbody>
</table>

#### Local RA

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>3.19</td>
</tr>
<tr>
<td>2020</td>
<td>4.11</td>
</tr>
<tr>
<td>2021</td>
<td>5.02</td>
</tr>
<tr>
<td>2022</td>
<td>6.15</td>
</tr>
</tbody>
</table>

#### RA Adder ($/kW-month)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
</tr>
</tbody>
</table>

#### Flexible RA

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2.78</td>
</tr>
<tr>
<td>2020</td>
<td>4.41</td>
</tr>
<tr>
<td>2021</td>
<td>4.65</td>
</tr>
<tr>
<td>2022</td>
<td>5.69</td>
</tr>
</tbody>
</table>

#### RPS Adder ($/MWh)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>16.44</td>
</tr>
<tr>
<td>2020</td>
<td>17.35</td>
</tr>
<tr>
<td>2021</td>
<td>15.10</td>
</tr>
<tr>
<td>2022</td>
<td>14.49</td>
</tr>
</tbody>
</table>

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**Silicon Valley Clean Energy**
Timeline

- Week of October 18: Assumptions Review, Revise Analysis
- November 1: CPUC issues MPBs
- November 8: PG&E Issues Updated PCIA and Gen Rate for 2022
- November 15: PG&E Issues Preliminary AET
- By mid to late November: NewGen and MRW 2022 Updated Forecasts
- Late January: Proposed Decision Issued
- February: Final Decision, Final Annual Electric True-up (AET) filed

The 2022 PCIA and Gen Rate will become final once PG&E files the AET

March 1, 2022: New Rates Implemented
California Community Power
Long Duration Energy Storage
Tumbleweed Project
Summary  

Background:  
On October 8, 2021, CC Power Board approved notice of intent to negotiate an Energy Storage Service Agreement (ESSA) with LS Power for Tumbleweed Energy Storage Project ("Tumbleweed")  
On November 17, 2021 SVCE Board directed CEO to vote in favor of Tumbleweed  
On January 19, 2022, CC Power Board approved the Tumbleweed agreements  

Request:  
Delegate authority to CEO to execute necessary Tumbleweed Agreements with CC Power, Tumbleweed LLC and Other Participating CCAs
Interest & Information Gathering (RFI)

CCAs Issue a Joint Request for Offers (RFO)

California Community Power (CC Power) Formed/Long Duration Storage Project Oversight Committee formalized

LDS Projects Shortlisted, ESSA Negotiations start and begin to development of CC Power/CCA Agreements

CPUC Issues Mid-term Reliability Procurement Order
• Proposals received mid-December 2020
• 51 Entities submitted offers (over 9,000 MW)
• Total of 221 unique pricing offers
  • 160 Full Toll Offers
  • 57 RA Only Offers
• 8 Technology types
  • 18 distinct technologies
• 8,10,12-hour, and multi-day discharge durations
• In-depth evaluation process led by a Project Oversight Committee
• CC Power Shortlisted & Negotiating three projects
  – Two Lithium-ion
  – One Emerging Technology
CPUC conducted resource stack analysis and found "11.5GW of need" due to the nature of retiring assets (DCPP). CPUC required a subset to be met with firm clean resources and 5-hr batteries (4.5GW). Resolution 21-06-035 adopted by CPUC on June 24, 2021, to address mid-term reliability needs.

Existing resources are compared to the necessary demand. The chart shows the shortfall in terms of energy sources such as solar, wind, and geothermal for the years 2022-2026, with a focus on the specified imports and energy storage requirements.
Item 5
PRESENTATION
REVISED

Term Reliability Order: Procurement
Allocation & Technology Carve-outs

Cumulative Additions (NQC)

System MW, NQC

2023 2024 2025 2026

11.5 GW required to come online over the 2023-2026 timeframe

Capacity is shown as Net Qualifying Capacity ("NQC"), actual nameplate will be higher but is dependent on exact resource types procured.

Long-duration storage and firm clean resources are considered "long-lead time" and are all expected in 2026. LSEs may request extension to 2028.

Non-Specific RA Capacity  Zero-Emitting Peak Resources*  Long-Duration Storage
Firm Resources (e.g. Geothermal)  SVCE Share

*Zero-emitting resources must be online by 2025, however for illustrative purposes we assume 1/3 will come online in 2024 as they can be used to meet an LSEs 2024 obligations. They are expected to be largely comprised of 5-hr batteries, which meet the definition of being zero-emitting and available for delivery 4-9pm daily.
Tumbleweed Project

- Seller: Tumbleweed Energy Storage, LLC
- Developer: LS Power/Rev Renewables
- Technology: Lithium-ion, 8 hours discharge duration
- Project size: 69 MW/552 MWh
- Product: Tolling Agreement w/full capacity rights
- Location: Rosamond, Kern County
- Expected COD: June 2026
- Price: fixed $/kw-mo, no escalation
- Term: 15 years
Tumbleweed Benefits

Long Duration Storage is needed to integrate renewable/intermittent resources

• Provides Energy Arbitrage Value – tolling arrangement
  • Charge during solar producing hours and discharge during non-solar hours

• Enhances grid reliability
  • Ancillary Services
  • Resource Adequacy

• Reduces GHG emissions – charge low emitting hours and discharge in high emitting hours

• Meets Mid-term Reliability Procurement Order requirements
  • Participating CCA’s Obligation 96 MW Net Qualifying Capacity (NQC)
  • SVCE’s expected share – 14.6 MW NQC
Mid-term Reliability Procurement Order: Long Duration Storage

- 1,000 MW of LDS by June 2026
- 8-hour minimum discharge
- Resource Adequacy eligible
- NQC Adjusted for Effective Load Carrying Capacity (ELCC) ~78%

<table>
<thead>
<tr>
<th>Name</th>
<th>CCA NQC MW</th>
<th>Nameplate MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>CleanPowerSF</td>
<td>19.8</td>
<td>15.5</td>
</tr>
<tr>
<td>Peninsula Clean Energy</td>
<td>19.0</td>
<td>24.3</td>
</tr>
<tr>
<td>Redwood Coast Energy</td>
<td>3.5</td>
<td>4.5</td>
</tr>
<tr>
<td>San Jose Clean Energy</td>
<td>21.5</td>
<td>27.5</td>
</tr>
<tr>
<td>Silicon Valley Clean Energy</td>
<td>20.5</td>
<td>26.2</td>
</tr>
<tr>
<td>Sonoma Clean Power</td>
<td>12.5</td>
<td>16.0</td>
</tr>
<tr>
<td>Valley Clean Energy</td>
<td>4.0</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Total: 96.5
Energy Storage Service Agreement

- 15 year-term at COD
- Development and Performance Deposits
- Buyer's Liability Pass Through Agreement (BLPTA) - guaranty performance by each Participating Member to CC Power & Tumbleweed (Exhibit L)
- Step-up provision - capped at 125% of Entitlement Share per Participating Member
- Meets CC Power Board specified labor, environmental, and environmental justice preferences
- Executed on 2/24/22
- 90 days from execution for Participating Members to approve agreements
Project Participation Share Agreement

- Presentations
- CC Power and Participating CCAs Agreement to fund Project obligations - deposits & payments
- Sharing of Project revenue and benefits
- Step-up provision - capped at 125% of Entitlement Share per Participating Member
- Liability and insurance provisions
- Establish need for Coordinated Operating Agreement
- Retain a Scheduling Coordinator
- Establish scheduling strategy
- Governance & Voting structure for operating PPSA:
  - Each Participating Member gets one vote
  - Non-participating members abstain
Coordinated Operating Agreement

- Develop project operating
- Sharing of Project revenue and benefits
- Step-up provision - capped at 125% of Entitlement Share per Participating Member
- Liabilities and insurance
- Establishes need for an Operating Agreement
- Retain a Scheduling Coordinator
- Establish scheduling strategy
- Governance & Voting structure for operating PPSA: Each Participating Member gets one vote
- Non-participating members abstain

CC Power and Participating CCAs

CD Coordinated Operating Agreement
### Tumbleweed Participating CCAs

<table>
<thead>
<tr>
<th>% Entitlement Share in ESSA/PPSA</th>
<th>Entitlement Share MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.06%</td>
<td></td>
</tr>
<tr>
<td>19.69%</td>
<td></td>
</tr>
<tr>
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<td>100.00%</td>
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Approval Process

- **Step 1:** CC Power Board issues 60-day notice to consider ESSA for approval – October 8, 2021
- **Step 2:** CC Power Board approves Tumbleweed Agreements – January 19, 2022
- **Step 3:** General Manager & Tumbleweed execute agreements – January 24, 2022
- **Step 4:** Participating Members seek respective Board Approvals of PPSA and BLPTA within 90 Days – April 24, 2022

Timeline:
- October
- November
- January 19th
- January 2022
- March 2022
- 2022

CC Power & Tumbleweed Execute Agreements
Participating CCAs Approve Agreements
Delegate authority to the CEO to execute on behalf of SVCE the necessary Tumbleweed Long Duration Energy Storage Agreements for a delivery term of 15 years starting on or about June 1, 2026, for a quantity not to exceed **22.41 MW** and amount not to exceed $100 million.

Agreements:

1. **Project Participation Share Agreement (PPSA)** between Silicon Valley Clean Energy Authority, California Community Power and participating community choice aggregators (CCAs)


3. **Coordinated Operations Agreement (COA)** between Silicon Valley Clean Energy Authority, California Community Power and participating CCAs for Tumbleweed.
# Project Oversight Committee

Role: solicit, evaluate, direct negotiations and recommend projects

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<thead>
<tr>
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<th>POC Member</th>
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<tbody>
<tr>
<td>CleanPowerSF</td>
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<tr>
<td>Peninsula Clean Energy</td>
<td>Siobhan Doherty</td>
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<td>Redwood Coast Energy</td>
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<td>San Jose Clean Energy</td>
<td>Jeanne Sole</td>
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<td>Silicon Valley Clean Energy</td>
<td>Monica Padilla</td>
<td>Oren Weiner and Maren Wenzel</td>
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<tr>
<td>Sonoma Clean Power</td>
<td>Deb Emerson</td>
<td>Ryan Tracey and Hannah Rennie</td>
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<td>Valley Clean Energy</td>
<td>Gordon Samuel</td>
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THANK YOU!
Clean Power Update

SVCE Board Meeting

Monica Padilla, Director of Power Resources
Topics

• Clean Procurement Efforts
• PPA Update
• Renewable Portfolio Standard
Clean Procurement Efforts

- CPUC Mid-term Reliability Procurement Order - 11.5 GW of new capacity
  - SVCE’s Obligation is 237 MW - based on nameplate capacity
- Long Duration Storage (2026) - 20.5 MW - Procuring through CC Power
  - Feb 9, 2022 - SVCE Board to consider Tumbleweed
- Two additional resources under negotiations
  - Firm Clean Resources new geothermal and/or biomass (2026) - 20.5 MW - Procuring through CC Power RFO
  - Ormat’s geothermal will be a portion of obligation
- Other requirements (2023-2025) - stand-alone storage, zero emitting resources (solar + storage) - 196 MW
  - Joint RFO with Sonoma Clean Power and Central Coast Community Energy
  - Some of SVCE’s executed PPAs will count towards MTR Order
Signed Power Purchase Agreements

- Item 6
- PRESENTATION
- REVISED

$1.6B in commitments
62% RPS in 2024
13 PPAs signed
10 new build projects
725 MW in total
173 MW lithium-ion storage paired with 516 MW of Solar

CASADAfitO
Mono County, CA
COSO
Inyo County, CA
COSO Geothermal

CASADA fitO
Mono County, CA
Generation: 442 MW
Developer: COSO Geothermal
Online: 2022

CASADA fitO
Mono County, CA
Generation: 5 MW
Developer: Silicon Energy
Online: 2022

ARATINA
Kern County, CA
Generation: 10 MW
Battery: 26 MW
Developer: Arizona Solar
Online: 2022

YELLOW PINE
Clark County, NV
Generation: 10 MW
Battery: 16 MW
Developer: First Solar
Online: 2022

RASPBERRY fitO
Nevada County, CA
Generation: 60 MW
Battery: 16 MW
Developer: First Solar
Online: 2022

CAMERON CREST
Kern County, CA
Generation: 23.7 MW
Developer: Terra-Gen
Online: 2023

BIG BEAU
Kern County, CA
Generation: 23.7 MW
Developer: Big Beau
Online: 2023

ATLAS
LaPlata County, CO
Generation: 33 MW
Developer: 184 Mountain Global
Online: 2023

AES MOUNTAIN VIEW
Placer County, CA
Generation: 1.3 MW
Developer: AES North America Development
Online: 2023

VICTORY PASS
Riverside County, CA
Generation: 1.5 MW
Battery: 22 MW
Developer: Cleanway
Online: 2023

SAN FRANCISCO
SACRAMENTO
SAN JOSE
SAN ANTONIO
LAS VEGAS
SAN DIEGO
LOS ANGELES
SAN BERNARDINO
SANTA BARBARA
NEVADA
ARIZONA
SILICON VALLEY
CLEAN ENERGY
Some good news...

Coso Geothermal (38 MW) started delivering energy on January 1, 2022 - existing facility, no issues

Baseload resource

Slate Solar (93 MW) + Storage (46.5 MW/186 MWh) - now operating in the CAISO market!

COD delayed from original contract start date

Started receiving PCC1 renewable energy certificates in xxx under a testing period

Scheduling Coordinator is pleased with battery performance

Developing bidding/operational strategies consistent with SVCE objectives, project constraints and CAISO rules

Mountain View Wind (33.5 MW) - may come on-line earlier than expected
PPA Updates

- Projects are coming on-line but face many challenges due to interconnection delays due to labor issues, complicated requirements, and too many projects in the queue.

- Global manufacturing and supply chain issues - BESS systems stuck in other countries or in ports.

- Local jurisdictional permitting delays.

- Governor’s Office of Business Development (GO-Biz) has made it a priority to bring projects online ASAP.

- Tracking Energy Development (TED) Task Force - the CPUC, CEC, CAISO, and GO-Biz.

- SVCE is directing its project developers to communicate and work with the Task Force.

- CPUC now requiring monthly updates on project development progress and known delays.
SVCE RPS Policy has exceeded SB1

- 2022 State RPS is 38.5%. SVCE’s RPS is 54%
- SVCE’s RPS via PPAs in 2024 >60% and 57% in 2030
- 2030 RPS Requirement 60%
- Long-term requirement is 65% of overall RPS per compliance period
- Executed short-term transaction for CY 22
**Long-term RPS Procurement**

**SB350 Requires 65% of RPS Resources**

- Term PPAs exceed minimum requirements

- Compliance Period 4 (2021-24) currently expect 34.8% and minimum is 25.9%

- SVCE’s IRP set a minimum buffer of 5% per compliance period to cover delays and performance with PPAs
PPA Expected Commercial On-line Dates

- Coso, Casa Diablo Geothermal & Big Beau - 2022 - Q1
- Mountain View Wind & Rabbitbrush Solar + Storage - 2022 - Q3
- Cameron Crest Wind - 2023 - Q1
- Angela & Aratina Solar + Storage - 2023 - Q2, Q3
- Victory Pass & San Luis West Solar + Storage - 2023 - Q3, Q4
Projects Delivering to SVCE

- Coso Geothermal (38 MW)
- Slate Solar (93 MW) + Storage (46.5 MW)
- COD January 2022
Project Construction

AES Mountain View Turbine Install
Riverside County, CA

https://youtu.be/lMUOxx3hKRg