Agenda

• Call to order / Roll Call

• Public Comment

• Action to set the agenda and approve consent items
Regular Agenda

1. Chair Report (Discussion)
Regular Agenda

2. CEO Report (Discussion)
Today’s Updates

- Staffing Update
- COVID-19 Update
  - Load Impact Analysis
- Avoided GHG Emissions Calculations
- Strategic Plan Update
- PG&E Bankruptcy Update
- Merced Update
- Upcoming Meetings
Staffing Update

Matthew Rutherford starting on June 15 as Regulatory Analyst

Greg Miller, PhD student from UC Davis, joining PCE as summer intern, researching 24x7 renewable energy goal

Finalist in negotiations for Manager, Distributed Energy Resource Strategy

Engaged an HR Consultant whose role will be Employee Relations and Employee Engagement, and will introduce her to staff at our all-hands staff meeting on June 17
COVID-19 Load Impact Analysis

• Overall PCE load
• Weekly and Daily Load Changes
• Weekly Load by Customer Type
• Load Shape Changes

Thank you to the power resources team for this analysis!
Weekly Load

- 14% decrease in Total PCE load in week of May 18th compared to last week of Feb and first two weeks of Mar
Daily Load

- Decrease in daily load compared to same weekdays in the weeks before shelter-in-place.
Weekly Load by Customer Type

- Small Commercial
- Medium Commercial
- Large Commercial
- Residential

Load (MWh)

- 2/24/2020
- 4/13/2020
- 5/18/2020

Peninsula Clean Energy
Load Shapes

Total PCE

Residential

Medium Commercial

Large Commercial

Load (MWh) vs. Hour

1/3/5/7/9/11/13/15/17/19/21/23

Load (MWh) vs. Hour

2/24/2020

4/13/2020

5/18/2020

2/24/2020

4/13/2020

5/18/2020

2/24/2020

4/13/2020

5/18/2020

2/24/2020

4/13/2020

5/18/2020
Residential Load Shape
Avoided GHG Emissions Calculations

Past method:
- Estimate emissions based on annual usage (MWh) and PCE emissions factor for that year
- Subtract emissions based on annual usage (MWh) and PG&E’s emissions factor in that year
- Difference is estimated savings in GHG emissions

Problem:
- PG&E’s emissions factor would be different if they still had to provide power to customers of CCAs in their territory
- But we don’t know what that would be
GHG Emissions Calculations

New method:
• Compare PCE emissions vs. a baseline emissions factor prior to inception of PCEA
• The baseline emissions factor is the PG&E emissions factor for 2016

Note:
• This results in a larger emissions savings estimate than the other method
• It compares to a known baseline energy mix
• Does not compare PCE reductions to PG&E
## GHG Emissions Calculations

<table>
<thead>
<tr>
<th>Approach: Compared to Baseline Energy Mix Prior to Inception of PCEA</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total ECOplus usage (MWh)</td>
<td>3,395,464</td>
<td>3,299,108</td>
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<tr>
<td>Emissions Factors (pounds per MWh)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peninsula Clean Energy</td>
<td>142.26</td>
<td>129.77</td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>294</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### GHG Emissions in lbs of CO2e

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions at Baseline Power Mix</td>
<td>998,266,552</td>
<td>969,937,631</td>
<td></td>
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<tr>
<td>Emissions with Peninsula Clean Energy Power Mix</td>
<td>483,038,775</td>
<td>428,125,192</td>
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</tr>
<tr>
<td>Reduction in Emissions each year</td>
<td>515,227,778</td>
<td>541,812,439</td>
<td></td>
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<tr>
<td>Cumulative Reduction in Emissions vs. Baseline</td>
<td>1,057,040,217</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cumulative GHG Emissions Reductions in metric tons of CO2e 479,465

### Approach: Compared to PG&E Emissions Factor in Each Year

<table>
<thead>
<tr>
<th></th>
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<td>Peninsula Clean Energy</td>
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<td></td>
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<tr>
<td>PG&amp;E</td>
<td>294</td>
<td>210</td>
<td>206</td>
</tr>
</tbody>
</table>

### GHG Emissions in lbs of CO2e

<table>
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<tr>
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<th>2016</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Emissions with PG&amp;E Energy Power Mix</td>
<td>713,047,537</td>
<td>679,616,163</td>
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</tr>
<tr>
<td>Emissions with Peninsula Clean Energy Power Mix</td>
<td>483,038,775</td>
<td>428,125,192</td>
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</tr>
<tr>
<td>Difference in Emissions each year</td>
<td>230,008,763</td>
<td>251,490,971</td>
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</tr>
<tr>
<td>Cumulative Difference in Emissions each year</td>
<td>481,499,734</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cumulative GHG Emissions Difference in metric tons of CO2e 218,405
Strategic Plan Update

- Board approved Strategic Plan at April Board meeting
- Staff has started implementation process
  - Worked through templates with Gallagher Consulting Group on 4/29
  - Breaking higher-level objectives into specific tactics
  - Developing metrics to measure progress
- Timeline:
  - Staff implementation work through summer
  - Update for board at September retreat
- Brochure under development – high-level
  - Distribute at end of June
PG&E Bankruptcy Update (1)

- PG&E’s Plan of Reorganization was mailed to stakeholders.
  - Ballots and objections to confirmation were due on May 15.
- CPUC issued its Proposed Decision on the bankruptcy on April 20.
  - CPUC approved the proposed decision today at their voting meeting, and finds the plan complies with AB 1054.
PG&E Bankruptcy Update (2)

• SB350 was introduced by Senator Jerry Hill – hearing was scheduled for Assembly committee today, but was pulled

• Mayor Liccardo sent letter of “support if amended”
  • Emphasize the primacy of converting PG&E to a Non-Profit Entity
  • Mitigate Rate Impacts on Customers by Minimizing the Cost of Capital
  • Focus PG&E on Safety and Reliability of the Grid
    • Designate CCAs as the primary procurement entity where qualified CCAs can fulfill that role
Merced Update

• PCE presentation to Los Banos City Council on June 3
  • Key objective – agree to submit request to PG&E for load data in order to conduct a technical study

• Additional Merced County jurisdictions have been invited to listen in to the meeting

• Other jurisdictions invited to participate in the technical study – due date of June 23
Upcoming Meetings

These meetings will continue to be held by video/teleconference

- Executive Committee:
  - June 8 at 8:00 a.m.

- Audit and Finance Committee:
  - June 8 at 10:00 a.m.

- Citizens Advisory Committee:
  - June 11 at 6:30 p.m.

- Board of Directors:
  - June 25 at 6:30 p.m.
Regular Agenda

3. Citizens Advisory Committee Report (Discussion)
Regular Agenda

4. Audit and Finance Committee Report (Discussion)
Regular Agenda

5. Appointments to the Executive Committee and other Standing Committees (Action)
Nominations for Committee Appointments

Executive Committee:
- Jeff Aalfs
- Rick DeGolia
- Dave Pine
- Carole Groom
- Rick Bonilla
- Cat Carlton
- Donna Colson
- Catherine Mahanpour
- Julia Mates

(Away Lee is stepping down)

Audit and Finance Committee:
- Donna Colson
- Carole Groom
- Laurence May
- Carlos Romero
- Jeff Aalfs

(no changes)
Regular Agenda

6. Appointments to the Citizens Advisory Committee (Action)
Nominations for CAC Appointments

The subcommittee on Citizens Advisory Committee Recruitment recommends the PCE Board of Directors:

• Reappoint two members whose 3-year terms expired:
  • Michael Closson from Menlo Park
  • Desiree Thayer from Burlingame

• Appoint three new appointees:
  • Kathryn Green from San Mateo
  • Terri Givens from Unincorporated San Mateo County
  • Tim Bussiek from Belmont

Qualifications are in Attachment 1 of the Resolution.
Regular Agenda

7. Review Draft Fiscal Year 202—2021 Budget (Discussion)
Schedule – Budget Review and Approval

May 11, 2020 – Review Draft with Executive Committee - **Done**

May 11, 2020 – Review Draft with Audit & Finance Committee - **Done**

May 28, 2020 – Review Draft with Board of Directors - **Today**

June 8, 2020 – Review Final with Audit & Finance Committee

June 25, 2020 – Approve Final by Board of Directors
Draft Budget FY2020-2021 - Key Assumptions

• **Rates** – PG&E Generation Rates Increase of 2% on January 1, 2021

• **PCIA**
  • PCIA Cap of $0.005 on January 1, 2021
  • PCIA Trigger of 58% increase on October 1, 2020 (3 months)

• **Energy Prices**
  • Based on latest ABB forecast (in November) – does not include effects of COVID-19

• **PPA Contracts**
  • Mustang (Solar) project expected to start December 1, 2020 for 15 years
  • New Wind project starting August 1, 2020 for 7 years

• **Programs**
  • DER/Resiliency Program ramps up at total cost of $2 million
  • Significant expansion of Community Energy Programs
    • Approved Electric Vehicle Programs/Infrastructure - $5 million
    • Proposed Building Electrification Program - $950K
## Draft Budget FY2020-2021 – Without COVID-19 Impact

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>OPERATING REVENUES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity Sales, net</td>
<td>265,221,745</td>
<td>283,383,570</td>
<td>245,886,610</td>
<td>(37,496,960)</td>
</tr>
<tr>
<td>Green electricity premium</td>
<td>2,560,486</td>
<td>2,547,489</td>
<td>2,471,362</td>
<td>(76,126)</td>
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<tr>
<td><strong>Total Operating Revenues</strong></td>
<td>267,782,231</td>
<td>285,931,059</td>
<td>248,357,973</td>
<td>(37,573,086)</td>
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<tr>
<td><strong>OPERATING EXPENSES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cost of energy</td>
<td>216,549,065</td>
<td>209,263,330</td>
<td>221,136,254</td>
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<td>Staff compensation</td>
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<td>4,429,501</td>
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<td>Data Manager</td>
<td>3,822,123</td>
<td>3,694,891</td>
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<td>(274,891)</td>
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<td>Service Fees - PG&amp;E</td>
<td>1,256,056</td>
<td>1,253,737</td>
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<td>6,263</td>
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<td>Consultants &amp; Professional Services</td>
<td>896,333</td>
<td>792,122</td>
<td>2,843,340</td>
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<td>1,471,500</td>
<td>1,255,456</td>
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<td>Communications and Noticing</td>
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<td>1,288,158</td>
<td>2,873,350</td>
<td>1,585,192</td>
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<tr>
<td>General and Administrative</td>
<td>1,277,187</td>
<td>1,346,180</td>
<td>1,707,282</td>
<td>361,102</td>
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<td>Community Energy Programs</td>
<td>5,094,473</td>
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<td>6,090,866</td>
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<td>Depreciation</td>
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<td>97,039</td>
<td>133,728</td>
<td>36,689</td>
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<tr>
<td><strong>Total Operating Expenses</strong></td>
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<td>249,334,165</td>
<td>23,989,617</td>
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<td><strong>Operating Income (Loss)</strong></td>
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<td>60,586,511</td>
<td>(976,193)</td>
<td>(61,562,704)</td>
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<tr>
<td><strong>NON-OPERATING REVENUES (EXP.)</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Nonoperating Income/(Expense)</td>
<td>2,232,000</td>
<td>1,913,038</td>
<td>1,408,000</td>
<td>(505,038)</td>
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<td><strong>CHANGE IN NET POSITION</strong></td>
<td>33,205,145</td>
<td>62,499,549</td>
<td>431,807</td>
<td>(62,067,741)</td>
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<tr>
<td><strong>Net Position at the end of period</strong></td>
<td>167,991,587</td>
<td>202,638,677</td>
<td>203,070,484</td>
<td>431,807</td>
</tr>
</tbody>
</table>

Revenue decrease expected = $37.6 million
Budget Impact of COVID-19
Change in Load, 2019 compared to 2020

T+8 Data for 2019, AMI data for 2020

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>2019</th>
<th>2020</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>March</td>
<td>April (1st-20th)</td>
<td>Total</td>
</tr>
<tr>
<td>Agricultural</td>
<td>2,364</td>
<td>1,519</td>
<td>3,883</td>
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<tr>
<td>Industrial</td>
<td>25,042</td>
<td>16,324</td>
<td>41,367</td>
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<tr>
<td>Large Commercial</td>
<td>65,409</td>
<td>42,932</td>
<td>108,341</td>
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<tr>
<td>Medium Commercial</td>
<td>44,078</td>
<td>28,916</td>
<td>72,994</td>
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<tr>
<td>Small Commercial</td>
<td>39,605</td>
<td>24,734</td>
<td>64,339</td>
</tr>
<tr>
<td>Street Lights-Other</td>
<td>1,535</td>
<td>980</td>
<td>2,514</td>
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<tr>
<td>Residential</td>
<td>121,606</td>
<td>69,071</td>
<td>190,677</td>
</tr>
<tr>
<td>Total PCE</td>
<td>299,639</td>
<td>184,476</td>
<td>484,115</td>
</tr>
</tbody>
</table>

April 2020 vs. April 2019 (20 days)
- 6% decrease in total PCE load
- 20% decrease in combined commercial and industrial load
- 17% increase in residential load
COVID-19 Scenario Timelines

- "Mid Case" Scenario used for 1st Draft FY 2020-21 Budget

1. "Worst Case"
   - Shelter-in-Place
   - Rebound
   - Shelter-in-Place
   - Rebound
   - Shelter-in-Place
   - Rebound
   - "New Normal"
   - 12% load reduction

2. "Mid Case"
   - Shelter-in-Place
   - Rebound
   - Shelter-in-Place
   - Rebound
   - Shelter-in-Place
   - "New Normal"
   - 6% load reduction

3. "Best Case"
   - Shelter-in-Place
   - Rebound
   - "New Normal"
   - 2% load reduction
Post COVID-19 Load Impact – 1st Draft Assumptions

Presented a 1st Draft Budget to Audit & Finance Committee on May 11, 2020

• Included sharp recovery, 2nd Shelter-in-place Order, and 2nd sharp recovery

• Residential – 39% of Total PCE Load
  o 12% increase through June 2021, then 3% increase for 1 year
  o 1% increase for next 3 years after

• Small/Medium Business – 29% of Total PCE Load
  o 22% decrease through June 2021, then 15% decrease for 1 year
  o 14% decrease for next 3 years after

• Large Commercial/Industrial – 31% of Total PCE Load
  o 20% decrease through June 2021, then 10% decrease for 1 year
  o 9% decrease for next 3 years after

• Total PCE Load
  o 9% decrease through June 2021, then 6% decrease for next 4 years after

• Demand Load Assumptions
  o FY20-21 – down 15%
  o FY21-22 – down 10%
  o FY22-23 – down 5%
# 1st Draft Budget FY2020-2021 – (With 1st Draft COVID Assumptions)

<table>
<thead>
<tr>
<th>Items</th>
<th>FY2019-2020 Approved Budget</th>
<th>Forecast (FY)</th>
<th>Preliminary Budget (without COVID-19 Assumptions)</th>
<th>1st Draft Budget</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING REVENUES</td>
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<td>222,756,970</td>
<td>(23,129,640)</td>
<td>-9%</td>
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<td>2,560,486</td>
<td>2,498,440</td>
<td>2,471,362</td>
<td>2,265,017</td>
<td>(206,345)</td>
<td>-8%</td>
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<td>(23,335,985)</td>
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<td>-7%</td>
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<td>-</td>
<td>0%</td>
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<td>8,015,000</td>
<td>8,015,000</td>
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<td>133,728</td>
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<td><strong>233,094,472</strong></td>
<td>(16,239,693)</td>
<td>-7%</td>
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<tr>
<td>Operating Income (Loss)</td>
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<td>56,938,920</td>
<td>(976,193)</td>
<td>(8,072,485)</td>
<td>(7,096,292)</td>
<td>727%</td>
</tr>
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<td>1,913,038</td>
<td>1,408,000</td>
<td>1,408,000</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td>CHANGE IN NET POSITION</td>
<td>33,205,145</td>
<td>58,851,958</td>
<td>431,807</td>
<td>(6,664,485)</td>
<td>(7,096,292)</td>
<td>-1643%</td>
</tr>
<tr>
<td>Net Position at the end of period</td>
<td>167,991,587</td>
<td>198,991,086</td>
<td>203,070,484</td>
<td>192,326,601</td>
<td>(10,743,883)</td>
<td>-5%</td>
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</tbody>
</table>

Impact of COVID-19 on Change in Net Position: Down $3.6 million in Current FY

Down $7.1 million in Next FY
Post COVID-19 Load Impact – New Budget Assumptions

Consensus from Audit & Finance Committee on May 11, 2020 was that assumptions should be adjusted to be less optimistic.

Revised assumptions:

• No sharp recovery periods

• Residential
  o 6% increase through June 2021, then 4% increase for 1 year
  o 2% increase for next 3 years after

• Small/Medium Business (biggest change)
  o 30% decrease through June 2021, then 25% decrease for 1 year
  o 20% decrease for next 3 years after

• Large Commercial/Industrial
  o 20% decrease through June 201, then 15% decrease for 1 year
  o 10% decrease for next 3 years after

• Total PCE Load
  o 13% decrease through June 2021, then 10% decrease for 1 year
  o 8% decrease for next 3 years after
## Impact of Revised COVID-19 Assumptions on Total Load

<table>
<thead>
<tr>
<th></th>
<th>FY2020-2021</th>
<th>FY2021-2022</th>
<th>FY2022-2023</th>
<th>FY2023-2024</th>
<th>FY2024-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-COVID Forecast</strong></td>
<td>3,817</td>
<td>3,836</td>
<td>3,880</td>
<td>3,934</td>
<td>3,969</td>
</tr>
<tr>
<td><strong>Revised Budget (GWh)</strong></td>
<td>3,334</td>
<td>3,437</td>
<td>3,561</td>
<td>3,614</td>
<td>3,646</td>
</tr>
<tr>
<td><strong>Change from Pre-COVID Forecast</strong></td>
<td>-13%</td>
<td>-10%</td>
<td>-8%</td>
<td>-8%</td>
<td>-8%</td>
</tr>
</tbody>
</table>
Impact of Revised COVID-19 Assumptions on Load by Customer Category

"Budget Case"

- Large Comm/Ind Load Change
- Ag,SL,TC Load Change
- Res Load Change
- Small Business Load Change
- Total PCE Load Change

% Change in Forecast Load (Pre- vs Post- COVID)
## Impact of COVID-19 Assumptions on Net Position:
- **1st Draft Budget** – Down $3.6 million in Current FY19-20 FY
- **1st Draft Budget** – Down $7.1 million in Next FY20-21 FY
- **Revised Budget** – Down additional $0.5 million in Current FY19-20 FY (Total of $4.1 million)
- **Revised Budget** – Down additional $1.8 million in Next FY20-21 FY (Total of $8.9 million)
Revised Budget Draft Detail - Revenues

Significant changes in Revenue from FY2019-20 Forecast to FY2020-21 Budget:

- Reduction of $5 million – PCIA Cap of $0.005 implemented on May 1, 2020
- Reduction of $16 million – PCIA Trigger (58%) on October 1, 2020 (3 months)
- Reduction of $8 million - PCIA Cap of $0.005 implemented on January 1, 2021
- Reduction of $33 million – Impact from COVID-19 Load reduction assumptions (partially offset by lower energy costs)
Revised Budget Cost Detail – Cost of Energy

Revised Budget

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of energy</td>
<td>216,549,065</td>
<td>204,990,853</td>
<td>197,427,131</td>
<td>($7,563,722) -4%</td>
</tr>
<tr>
<td>Net Energy Purchases</td>
<td>166,929,241</td>
<td>151,776,443</td>
<td>146,775,606</td>
<td>($5,000,838) -3%</td>
</tr>
<tr>
<td>Resource Adequacy (Net of Resales)</td>
<td>21,045,015</td>
<td>27,934,725</td>
<td>31,474,662</td>
<td>3,539,937 13%</td>
</tr>
<tr>
<td>Forecasting and scheduling</td>
<td>1,313,079</td>
<td>1,343,006</td>
<td>1,477,502</td>
<td>134,497 10%</td>
</tr>
<tr>
<td>NEM Expense</td>
<td>474,380</td>
<td>843,659</td>
<td>1,000,000</td>
<td>156,341 19%</td>
</tr>
</tbody>
</table>

Net Energy Purchases - Lower
- Lower volume expected
- PPAs are producing in FY20-21 (Wright Solar for full year, Mustang for 7 months)
- RECs and GHG expenses lower
  - Lower volume required
  - Production from PPAs decreases need to purchase separately

Resource Adequacy - Higher
- Higher prices expected
- Increased Volume – Requirements are based on prior year (Pre-COVID) forecast
Draft Budget FY2022-2025 - Key Assumptions

Rates – Increase of 1% on Jan 1 of each year starting on January 1, 2022

PCIA
- PCIA Cap of $0.005 on January 1, 2022
- PCIA Trigger - no additional Trigger

PPA Contracts
- 1st Solar+Storage project starting January 1, 2023 for 20 years
- 2nd Solar+Storage project starting January 1, 2023 for 20 years
- New Solar+Storage project starting January 1, 2024 for 20 years
- Community Solar projects starting September 1, 2021

Programs Contracts
- DER/Resiliency Program ramps continues
- Significant expansion EV infrastructure- $5 million/year in FY22 and FY23
- Allocated funds for Innovation - $1 million/year in FY23, FY24 and FY25
## Draft FY2020-2021 Budget & 5-year Plan

### Revised Budget

<table>
<thead>
<tr>
<th>OPERATING REVENUES</th>
<th>FY2020-2021</th>
<th>FY2021-2022</th>
<th>FY2022-2023</th>
<th>FY2023-2024</th>
<th>FY2024-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Sales, net</td>
<td>213,603,336</td>
<td>226,324,486</td>
<td>230,173,006</td>
<td>238,327,485</td>
<td>244,396,642</td>
</tr>
<tr>
<td>Green electricity premium</td>
<td>2,160,956</td>
<td>2,346,287</td>
<td>2,562,620</td>
<td>2,761,752</td>
<td>2,998,512</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPERATING REVENUES</th>
<th>FY2020-2021</th>
<th>FY2021-2022</th>
<th>FY2022-2023</th>
<th>FY2023-2024</th>
<th>FY2024-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING EXPENSES</td>
<td>215,764,292</td>
<td>228,670,773</td>
<td>232,735,626</td>
<td>241,089,237</td>
<td>247,395,154</td>
</tr>
<tr>
<td>Cost of energy</td>
<td>197,427,131</td>
<td>202,237,781</td>
<td>206,782,611</td>
<td>203,341,622</td>
<td>214,720,629</td>
</tr>
<tr>
<td>Staff compensation</td>
<td>6,236,981</td>
<td>6,786,954</td>
<td>7,119,219</td>
<td>7,468,097</td>
<td>7,834,419</td>
</tr>
<tr>
<td>Data Manager</td>
<td>3,420,000</td>
<td>3,454,200</td>
<td>3,488,742</td>
<td>3,523,629</td>
<td>3,558,866</td>
</tr>
<tr>
<td>Service Fees - PG&amp;E</td>
<td>1,260,000</td>
<td>1,272,600</td>
<td>1,285,326</td>
<td>1,298,179</td>
<td>1,311,161</td>
</tr>
<tr>
<td>Consultants &amp; Professional Services</td>
<td>2,843,340</td>
<td>3,825,940</td>
<td>1,658,135</td>
<td>1,201,572</td>
<td>1,182,480</td>
</tr>
<tr>
<td>Legal</td>
<td>1,708,230</td>
<td>1,706,160</td>
<td>1,753,260</td>
<td>1,797,619</td>
<td>1,854,449</td>
</tr>
<tr>
<td>Communications and Noticing</td>
<td>2,873,350</td>
<td>2,966,418</td>
<td>2,227,878</td>
<td>2,335,362</td>
<td>2,447,910</td>
</tr>
<tr>
<td>General and Administrative</td>
<td>1,707,282</td>
<td>1,771,452</td>
<td>1,838,462</td>
<td>1,908,448</td>
<td>1,981,552</td>
</tr>
<tr>
<td>Community Energy Programs</td>
<td>8,015,000</td>
<td>11,085,000</td>
<td>12,860,000</td>
<td>12,940,000</td>
<td>12,990,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>133,728</td>
<td>169,728</td>
<td>205,728</td>
<td>241,728</td>
<td>277,728</td>
</tr>
<tr>
<td>OPERATING EXPENSES</td>
<td>225,625,042</td>
<td>235,276,232</td>
<td>239,219,361</td>
<td>246,056,257</td>
<td>248,159,195</td>
</tr>
</tbody>
</table>

| Operating Income (Loss) | (9,860,750) | (6,605,459) | (6,483,735) | 5,032,980 | (764,040) |

| NON-OPERATING REVENUES (EXP.) | | | | | |
| Total Nonoperating Income/(Expense) | 1,408,000 | 1,528,000 | 1,648,000 | 1,768,000 | 1,888,000 |
| CHANGE IN NET POSITION | (8,452,750) | (5,077,459) | (4,835,735) | 6,800,980 | 1,123,960 |

| Net Position at the end of period | 190,073,006 | 184,995,548 | 180,159,813 | 186,960,792 | 188,084,752 |

| Unrestricted Cash Days on Hand | 259 | 240 | 229 | 242 | 232 |
### Draft 5-year Plan – COVID-19 Impact

#### Pre-COVID-19

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPERATING REVENUES</strong></td>
<td>Forecast</td>
<td>Preliminary Budget</td>
<td>Preliminary Plan</td>
<td>Preliminary Plan</td>
<td>Preliminary Plan</td>
<td>Preliminary Plan</td>
</tr>
<tr>
<td></td>
<td>285,931,059</td>
<td>248,357,973</td>
<td>256,081,446</td>
<td>253,811,943</td>
<td>261,458,771</td>
<td>268,336,846</td>
</tr>
<tr>
<td><strong>OPERATING EXPENSES</strong></td>
<td>225,344,548</td>
<td>249,334,165</td>
<td>258,368,077</td>
<td>257,028,163</td>
<td>252,152,471</td>
<td>266,715,732</td>
</tr>
<tr>
<td><strong>CHANGE IN NET POSITION</strong></td>
<td>62,499,549</td>
<td>431,807</td>
<td>(278,631)</td>
<td>(1,208,219)</td>
<td>11,314,300</td>
<td>3,629,115</td>
</tr>
</tbody>
</table>

*Note: CINP also includes interest income*

#### Revised Budget

<table>
<thead>
<tr>
<th></th>
<th>Forecast</th>
<th>Proposed Budget</th>
<th>Proposed Plan</th>
<th>Proposed Plan</th>
<th>Proposed Plan</th>
<th>Proposed Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPERATING REVENUES</strong></td>
<td>277,545,661</td>
<td>215,764,292</td>
<td>228,670,773</td>
<td>232,735,626</td>
<td>241,089,237</td>
<td>247,395,154</td>
</tr>
<tr>
<td><strong>OPERATING EXPENSES</strong></td>
<td>221,072,071</td>
<td>225,625,042</td>
<td>235,276,232</td>
<td>239,219,361</td>
<td>236,056,257</td>
<td>248,159,195</td>
</tr>
<tr>
<td><strong>CHANGE IN NET POSITION</strong></td>
<td>58,386,628</td>
<td>(8,452,750)</td>
<td>(5,077,459)</td>
<td>(4,835,735)</td>
<td>6,800,980</td>
<td>1,123,960</td>
</tr>
<tr>
<td><strong>Net Position at the end of period</strong></td>
<td>198,525,756</td>
<td>190,073,006</td>
<td>184,995,548</td>
<td>180,159,813</td>
<td>186,960,792</td>
<td>188,084,752</td>
</tr>
<tr>
<td><strong>Unrestricted Cash Days on Hand</strong></td>
<td>278</td>
<td>259</td>
<td>240</td>
<td>229</td>
<td>242</td>
<td>232</td>
</tr>
</tbody>
</table>

**Net Position Impact of COVID-19**

<table>
<thead>
<tr>
<th></th>
<th>Forecast</th>
<th>Proposed Budget</th>
<th>Proposed Plan</th>
<th>Proposed Plan</th>
<th>Proposed Plan</th>
<th>Proposed Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(4,112,921)</td>
<td>(8,884,557)</td>
<td>(4,798,828)</td>
<td>(3,627,516)</td>
<td>(4,513,320)</td>
<td>(2,505,155)</td>
</tr>
</tbody>
</table>

**Impact from COVID-19**

- $8.9 million in FY21
- $28 million over next 5-year period

Lower revenues offset mostly by lower costs
Draft 5-year Plan – Observations

1. COVID-19 likely to have significant impact on revenues
   • Revenue decrease of $32.6 million expected in FY20-21
   • Revenue decrease of an average of $22.5 million expected for each of next 4 years

2. Expect to be able to mitigate revenue loss with significant energy cost reductions
   • Cost of Energy expected to be $23.7 million lower than Pre-COVID in FY20-21
   • Cost of Energy expected to be on average $18.9 million less for next 4 years

3. Avg of $5 MM/year impact to Net Position – Declining from $8.9 MM impact in FY20-21

4. Significant Cash Reserves enables ability to weather downturn for some time and:
   • Maintain Cash Reserves well above required level
   • Continue to invest in community grants and energy programs
Revised Budget Cost Detail – Staff Compensation

Significant assumptions of note:
• Addition of 8 employees from today’s level through June 2021 (2 current open positions)
• Increase over FY19-20 forecast looks bigger because 10 current employees were hired during the year – only a portion of their full-year salaries is reflected in current year’s forecast
### Revised Budget Cost Detail – Data Manager/Service Fees

<table>
<thead>
<tr>
<th>OPERATING EXPENSES</th>
<th>OPERATING EXPENSES</th>
<th>OPERATING EXPENSES</th>
<th>OPERATING EXPENSES</th>
<th>OPERATING EXPENSES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approved Budget</td>
<td>Forecast</td>
<td>Proposed Budget</td>
<td>Increase/(Decrease)</td>
</tr>
<tr>
<td>Data Manager</td>
<td>3,822,123</td>
<td>3,694,891</td>
<td>3,420,000</td>
<td>$(274,891)</td>
</tr>
<tr>
<td>Service Fees - PG&amp;E</td>
<td>1,256,056</td>
<td>1,253,737</td>
<td>1,260,000</td>
<td>6,263</td>
</tr>
</tbody>
</table>

**Significant assumptions of note:**
- Data Manager expenses expected to be lower due to revised/lower contract with Calpine.
### Significant assumptions of note:
- $1.5 million for Approved DER and Resiliency projects – included in Power Resources Consulting for now
## Revised Budget Cost Detail – Legal

### Significant assumptions of note:
- Increased legal effort expected in support of several new PPAs to be signed in FY2020-2021
- Increased Regulatory support expected

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal</td>
<td>1,471,500</td>
<td>1,255,456</td>
<td>1,708,230</td>
<td>$ 452,774 +36%</td>
</tr>
<tr>
<td>Legislative</td>
<td>210,000</td>
<td>128,323</td>
<td>126,750</td>
<td>$(1,573) -1%</td>
</tr>
<tr>
<td>Legal Power Resources</td>
<td>540,000</td>
<td>472,199</td>
<td>720,000</td>
<td>$ 247,801 +52%</td>
</tr>
<tr>
<td>Legal Agency</td>
<td>240,000</td>
<td>199,122</td>
<td>240,000</td>
<td>$ 40,878 +21%</td>
</tr>
<tr>
<td>Legal Regulatory</td>
<td>481,500</td>
<td>455,812</td>
<td>621,480</td>
<td>$ 165,668 +36%</td>
</tr>
</tbody>
</table>
### Revised Budget Cost Detail – Communications/Marketing

#### Significant assumptions of note:
- Required Mailings expenses expected to decrease related to new electronic distribution of Joint Rate Mailer
- Additional funds were added for Board-approved program related to Resiliency
  - $845K for Medically-vulnerable; grant funding to community-based organizations
  - $220K for digital advertising for DER Resiliency
  - $208K for Building Electrification awareness previously approved by Board

<table>
<thead>
<tr>
<th>OPERATING EXPENSES</th>
<th>Approved Budget</th>
<th>Forecast</th>
<th>Proposed Budget</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications and Noticing</td>
<td>1,754,800</td>
<td>1,288,158</td>
<td>2,873,350</td>
<td>1,585,192</td>
<td>123%</td>
</tr>
<tr>
<td>Advertising/Paid Media</td>
<td>73,000</td>
<td>73,520</td>
<td>503,850</td>
<td>430,330</td>
<td>585%</td>
</tr>
<tr>
<td>Communications consultants</td>
<td>420,000</td>
<td>281,376</td>
<td>375,300</td>
<td>93,924</td>
<td>33%</td>
</tr>
<tr>
<td>Sponsorships and memberships</td>
<td>100,000</td>
<td>94,610</td>
<td>129,000</td>
<td>34,390</td>
<td>36%</td>
</tr>
<tr>
<td>Marketing Automation/Software</td>
<td>14,800</td>
<td>4,335</td>
<td>77,500</td>
<td>73,165</td>
<td>1688%</td>
</tr>
<tr>
<td>Promotions &amp; Branding</td>
<td>747,000</td>
<td>82,809</td>
<td>83,200</td>
<td>391</td>
<td>0%</td>
</tr>
<tr>
<td>Communications - misc expenses</td>
<td>50,000</td>
<td>42,562</td>
<td>12,000</td>
<td>(30,562)</td>
<td>-72%</td>
</tr>
<tr>
<td>Grants &amp; Partner Contracts</td>
<td>8,000</td>
<td>272,086</td>
<td>1,297,500</td>
<td>1,025,414</td>
<td>377%</td>
</tr>
<tr>
<td>Direct Mail</td>
<td>-</td>
<td>-</td>
<td>87,000</td>
<td>87,000</td>
<td>0%</td>
</tr>
<tr>
<td>Collateral</td>
<td>-</td>
<td>-</td>
<td>72,000</td>
<td>72,000</td>
<td>0%</td>
</tr>
<tr>
<td>Required Mailings</td>
<td>342,000</td>
<td>436,860</td>
<td>236,000</td>
<td>(200,860)</td>
<td>-46%</td>
</tr>
</tbody>
</table>

#### Variance FY2021 Budget vs. FY2020 Forecast

### Revised Budget

**FY2019-2020**

- **Approved Budget**: $1,754,800
- **Forecast**: $1,288,158
- **Proposed Budget**: $2,873,350
- **Variance**:
  - Required Mailings: $(200,860) (-46%)
  - Advertising/Paid Media: $430,330 (585%)
  - Communications consultants: $93,924 (33%)
  - Sponsorships and memberships: $34,390 (36%)
  - Marketing Automation/Software: $73,165 (1688%)
  - Promotions & Branding: $391 (0%)
  - Communications - misc expenses: $(30,562) (-72%)
  - Grants & Partner Contracts: $1,025,414 (377%)
  - Direct Mail: $87,000 (0%)
  - Collateral: $72,000 (0%)

**FY2020-2021**

- **Forecast**: $1,288,158
- **Proposed Budget**: $2,873,350
- **Variance**:
  - Required Mailings: $(200,860) (-46%)
  - Advertising/Paid Media: $503,850 (585%)
  - Communications consultants: $375,300 (33%)
  - Sponsorships and memberships: $129,000 (36%)
  - Marketing Automation/Software: $77,500 (1688%)
  - Promotions & Branding: $83,200 (33%)
  - Communications - misc expenses: $12,000 (0%)
  - Grants & Partner Contracts: $1,297,500 (377%)
  - Direct Mail: $87,000 (0%)
  - Collateral: $72,000 (0%)

**Variance**:

- **Increase/Decrease**
  - Required Mailings: $(200,860) (-46%)
  - Advertising/Paid Media: $430,330 (585%)
  - Communications consultants: $93,924 (33%)
  - Sponsorships and memberships: $34,390 (36%)
  - Marketing Automation/Software: $73,165 (1688%)
  - Promotions & Branding: $391 (0%)
  - Communications - misc expenses: $(30,562) (-72%)
  - Grants & Partner Contracts: $1,025,414 (377%)
  - Direct Mail: $87,000 (0%)
  - Collateral: $72,000 (0%)

**Total Variance**

- **Increase/Decrease**: $2,352,833 (123%)

---

**PENINSULA CLEAN ENERGY**
# Revised Budget Cost Detail – General & Administrative

## OPERATING EXPENSES

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,277,187</td>
<td>1,346,180</td>
<td>1,707,282</td>
<td>$ Change</td>
</tr>
<tr>
<td>General and Administrative</td>
<td>60,000</td>
<td>100,581</td>
<td>129,312</td>
<td>361,102</td>
</tr>
<tr>
<td>Bank service fee</td>
<td>3,000</td>
<td>8,121</td>
<td>15,000</td>
<td>28,731</td>
</tr>
<tr>
<td>Building Maintenance</td>
<td>12,000</td>
<td>19,477</td>
<td>30,000</td>
<td>6,879</td>
</tr>
<tr>
<td>Business meals</td>
<td>42,000</td>
<td>29,135</td>
<td>24,000</td>
<td>10,523</td>
</tr>
<tr>
<td>Conferences &amp; prof development</td>
<td>3,600</td>
<td>2,932</td>
<td>6,000</td>
<td>(5,135)</td>
</tr>
<tr>
<td>Equipment lease</td>
<td>425,000</td>
<td>363,548</td>
<td>480,000</td>
<td>3,068</td>
</tr>
<tr>
<td>Industry memberships and dues</td>
<td>84,000</td>
<td>80,214</td>
<td>120,000</td>
<td>116,452</td>
</tr>
<tr>
<td>Insurance</td>
<td>12,000</td>
<td>3,000</td>
<td>-</td>
<td>39,786</td>
</tr>
<tr>
<td>Miscellaneous G&amp;A</td>
<td>18,000</td>
<td>18,704</td>
<td>24,000</td>
<td>(3,000)</td>
</tr>
<tr>
<td>Office supplies and postage</td>
<td>18,000</td>
<td>19,716</td>
<td>21,000</td>
<td>5,296</td>
</tr>
<tr>
<td>Payroll service fees</td>
<td>381,787</td>
<td>429,076</td>
<td>531,570</td>
<td>1,284</td>
</tr>
<tr>
<td>Rent</td>
<td>72,000</td>
<td>114,403</td>
<td>150,000</td>
<td>102,494</td>
</tr>
<tr>
<td>Small equipment &amp; software</td>
<td>60,000</td>
<td>72,261</td>
<td>72,000</td>
<td>35,597</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>48,000</td>
<td>48,490</td>
<td>60,000</td>
<td>(261)</td>
</tr>
<tr>
<td>Utilities</td>
<td>4,200</td>
<td>3,411</td>
<td>3,600</td>
<td>11,510</td>
</tr>
<tr>
<td>Travel - Mileage/fuel</td>
<td>3,600</td>
<td>4,874</td>
<td>7,200</td>
<td>189</td>
</tr>
<tr>
<td>Travel - Parking and Tolls</td>
<td>12,000</td>
<td>8,705</td>
<td>9,600</td>
<td>2,326</td>
</tr>
<tr>
<td>Travel - Airfare</td>
<td>12,000</td>
<td>18,031</td>
<td>24,000</td>
<td>895</td>
</tr>
<tr>
<td>Travel - Lodging</td>
<td>6,000</td>
<td>1,500</td>
<td>-</td>
<td>5,969</td>
</tr>
<tr>
<td>Travel - Other Travel</td>
<td></td>
<td></td>
<td></td>
<td>(1,500)</td>
</tr>
</tbody>
</table>

### Significant assumptions of note:
- Rent – higher due to expansion of space into additional office
## Revised Budget Cost Detail – Community Energy Programs

### Significant assumptions of note:
- **Approved Electric Vehicle Programs/Infrastructure**
  - Consulting - $1.1 million
  - Incentives - $3.9 million
- **Building Electrification Program** - $950K
- **Community Pilots/Grants** - $350K
- **Approved Ride & Drives** - $250K

### Revised Budget

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Energy Programs</td>
<td>5,094,473</td>
<td>1,924,134</td>
<td>8,015,000</td>
<td>$6,090,866</td>
</tr>
<tr>
<td>Energy Program Consulting</td>
<td>1,569,447</td>
<td>1,007,342</td>
<td>2,560,500</td>
<td>$1,553,158</td>
</tr>
<tr>
<td>Programs - G&amp;A</td>
<td>97,196</td>
<td>97,196</td>
<td>142,805</td>
<td>$45,609</td>
</tr>
<tr>
<td>Programs - Marketing</td>
<td>2,500</td>
<td>2,500</td>
<td>250,000</td>
<td>$247,500</td>
</tr>
<tr>
<td>Programs - Incentives</td>
<td>3,525,026</td>
<td>817,096</td>
<td>4,964,500</td>
<td>$4,147,404</td>
</tr>
</tbody>
</table>

### Percentage Change

<table>
<thead>
<tr>
<th>Percentage Change</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase/Decrease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Energy Programs</td>
<td>317%</td>
<td></td>
</tr>
<tr>
<td>Energy Program Consulting</td>
<td>154%</td>
<td></td>
</tr>
<tr>
<td>Programs - G&amp;A</td>
<td>147%</td>
<td></td>
</tr>
<tr>
<td>Programs - Marketing</td>
<td>9900%</td>
<td></td>
</tr>
<tr>
<td>Programs - Incentives</td>
<td>508%</td>
<td></td>
</tr>
</tbody>
</table>
Regular Agenda

8. Approve PG&E GHG-free Allocation (Action)
PG&E Allocation of GHG Free

Board of Directors

May 28, 2020
(Updated from May 11, 2020 presentation to Executive Committee)
Agenda

- Background
- Schedule
- COVID-19 Impacts on Load Forecast
- GHG-Free Targets and Status
- Cost Impact
- Market Research
- Other CCAs Response
- Recommendation
• PG&E owns or contracts for GHG free energy including large hydro and nuclear resources
• In 2018, 13% of PG&E’s supply was from large hydro and 34% from nuclear
• PG&E is counting these resources to meet or exceed their IRP GHG-free targets
• CCA customers pay for these resources through the PCIA
• CCAs are not currently able to claim and count the benefit of these resources for their customers on Power Content Labels or in connection with other GHG reporting
• Over the longer term, this will be addressed through the PCIA proceeding – expected in 2021
Interim Approach

- CCAs have worked an interim approach with PG&E
- PG&E will allocate large hydro and nuclear to all load serving entities (LSEs) in PG&E’s territory based on a load ratio share
- Each LSE has the option to accept each resource allocation separately
  - i.e. can accept allocation of large hydro but not nuclear, or can accept nuclear but not large hydro, or can accept both
- Volume of resource allocation is established based on actual generation
  - Rejecting a resource allocation does not impact the volumes you receive for the resource you accept
- CCA has 30 days to accept allocation
Schedule

CPUC Process

12/2: PG&E Submits Advice Letter

3/25: CPUC Published Proposed Resolution

5/7: CPUC Approves Advice Letter

6/6: Advice Letter Approval Final and Non-Appealable

5/29: Accept Allocations

6/20: Deadline to Accept Allocations

6/15 – 7/1: PG&E Start Deliveries

PCE Process

5/21: PG&E Provided Allocation Offer to PCE

30 days to accept

5/28: Board Approval

30 days to final

6/19: Deadline to execute contract

15 business days
Load Scenarios with COVID-19

- Range of scenarios with economic and epidemiological assumptions
- “Mid Case” Scenario used for original FY 2020-21 Budget

<table>
<thead>
<tr>
<th>Year</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Shelter-in-Place</td>
<td>Rebound</td>
<td>Shelter-in-Place</td>
</tr>
<tr>
<td>2021</td>
<td>Shelter-in-Place</td>
<td>Rebound</td>
<td>Shelter-in-Place</td>
</tr>
<tr>
<td>2022</td>
<td>Shelter-in-Place</td>
<td>Rebound</td>
<td>Rebound</td>
</tr>
</tbody>
</table>

- **“Worst Case”**
  - 12% load reduction

- **“Mid Case”**
  - 6% load reduction

- **“Best Case”**
  - 2% load reduction

---

“Worst Case”

“Mid Case”

“Best Case”
Post COVID-19 Load Impact – New Budget Assumptions

Consensus from Audit & Finance Committee on May 11, 2020 was that assumptions should be adjusted to be less optimistic.

Revised assumptions:

- No sharp recovery periods
- Residential
  - 6% increase through June 2021, then 4% increase for 1 year
  - 2% increase for next 3 years after
- Small/Medium Business (biggest change)
  - 30% decrease through June 2021, then 25% decrease for 1 year
  - 20% decrease for next 3 years after
- Large Commercial/Industrial
  - 20% decrease through June 2021, then 15% decrease for 1 year
  - 10% decrease for next 3 years after
- Total PCE Load
  - 13% decrease through June 2021, then 10% decrease for 1 year
  - 8% decrease for next 3 years after
2020 ECOplus Load Forecast Updated

<table>
<thead>
<tr>
<th>Month</th>
<th>2020 Actual</th>
<th>2020 Forecast (January)</th>
<th>2020 Forecast (May) (includes impact of COVID-19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td></td>
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<td></td>
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<tr>
<td>8</td>
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<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2020 ECOplus Annual Load (GWh)

<table>
<thead>
<tr>
<th>Forecast (January)</th>
<th>3,333</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Forecast (May) (includes impacts of COVID-19)</td>
<td>3,030</td>
</tr>
</tbody>
</table>
Delay in CPUC Advice Letter Approval has resulted in decreased volumes allocated

Current assumptions:
- PCE receives allocations beginning July 1 (delayed from January)
- Large hydroelectric volume based on historic snowpack-generation relationship
- Nuclear volume based on 2019 generation

<table>
<thead>
<tr>
<th>Expected 2020 PG&amp;E Allocation</th>
<th>Jan 2020 Estimate</th>
<th>Current Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Hydroelectric</td>
<td>300 GWh</td>
<td>156 GWh</td>
</tr>
<tr>
<td>Nuclear</td>
<td>700 GWh</td>
<td>421 GWh</td>
</tr>
</tbody>
</table>
Reduced Open Position for GHG-Free

- Since January, PCE has procured 176 GWh of GHG-Free
- Renewables currently exceed 50% target by 10% after revising the load forecast
- In total, GHG-Free open has decreased 12% since January
GHG Free Net Open Position

• Refer to Attachment to Board Memo
Cost Impact

<table>
<thead>
<tr>
<th></th>
<th>Jan 2020</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecoplus Load (GWh)</td>
<td>3,336</td>
<td>3,030</td>
</tr>
<tr>
<td>RE Procured</td>
<td>1,640</td>
<td>1,944</td>
</tr>
<tr>
<td>GHG-Free Procured</td>
<td>658</td>
<td>834</td>
</tr>
<tr>
<td>GHG-Free Open</td>
<td>837</td>
<td>313</td>
</tr>
<tr>
<td>PG&amp;E Hydro Allocation</td>
<td>300</td>
<td>156</td>
</tr>
<tr>
<td>New Open After Hydro</td>
<td>537</td>
<td>157</td>
</tr>
<tr>
<td>Assumed Price</td>
<td>$8 / MWh</td>
<td>$3.25 / MWh</td>
</tr>
<tr>
<td>Cost to Procure</td>
<td>$4,293,863</td>
<td>$511,168</td>
</tr>
<tr>
<td>PG&amp;E Nuclear Allocation</td>
<td>700</td>
<td>421</td>
</tr>
<tr>
<td>New Open After Nuclear</td>
<td>(163)</td>
<td>(264)</td>
</tr>
</tbody>
</table>

- Due to decreases in load and more renewable energy generation than expected, our current GHG-Free open position is much smaller than January.

- Costs for GHG-Free resources have also decreased significantly and continue to fall.

- In January presentation to board, it was estimated that the effective cost (reduced savings) to PCE of not accepting the nuclear was $5.6 million.

- At this time, the reduced savings of not accepting nuclear allocation is ten-fold less, or about $500,000.
Market Research Survey Results

• Objective: Gauge customer reactions to the addition of nuclear power to the mix of energy sources in PCE’s ECOplus plan
• Fielded: February 11-19, 2020
• Random sample of 17,500 PCE residential customers
• Self-administered web-based survey in English only
• Completes: 350
“If you had a choice between Options Q and R – with no difference in cost — which would you prefer, or do you not have a preference?”

<table>
<thead>
<tr>
<th>Source of Power</th>
<th>Option Q</th>
<th>Option R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible Renewable</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Biomass &amp; Biowaste</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Geothermal</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Eligible Hydroelectric</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Solar</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Wind</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Coal</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Large Hydroelectric</td>
<td>27%</td>
<td>45%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Nuclear</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Unspecified Sources of Power</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Market Research Survey Results

Most respondents preferred the option without nuclear but about 1 in 5 preferred the option that included nuclear.
## Market Research Survey Results

<table>
<thead>
<tr>
<th>Reason for Preferences</th>
<th>Those Who Preferred Option with Nuclear</th>
<th>Those Who Preferred Nuclear-Free Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>About half of them see it as cleaner, cheaper, more reliable</td>
<td></td>
<td>Risk: Waste disposal – 30%</td>
</tr>
<tr>
<td>16% perceived large hydro as damaging to the ecosystem*</td>
<td></td>
<td>Risk: Danger of meltdown – 23%</td>
</tr>
</tbody>
</table>
Market Research Survey Results

- Most (76%) of those who preferred the nuclear-free option expressed an inclination to take some action.
- About 2 in 5 would form a negative perception of the energy supplier.

<table>
<thead>
<tr>
<th>Action</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shop for an option that does not use nuclear</td>
<td>47%</td>
</tr>
<tr>
<td>Shop for an option that only uses renewables</td>
<td>37%</td>
</tr>
<tr>
<td>Discuss the change with family and friends</td>
<td>35%</td>
</tr>
<tr>
<td>Shop for another company from which to buy electricity</td>
<td>23%</td>
</tr>
<tr>
<td>Shop for an option that uses less nuclear</td>
<td>17%</td>
</tr>
<tr>
<td>Comment on the change via social media</td>
<td>19%</td>
</tr>
<tr>
<td>Contact the electricity supplier</td>
<td>18%</td>
</tr>
<tr>
<td>Contact an elected official</td>
<td>16%</td>
</tr>
<tr>
<td>Take some other action</td>
<td>8%</td>
</tr>
</tbody>
</table>
Other CCAs Approach

• CCA’s who plan to accept PG&E Nuclear Allocation
  o Silicon Valley Clean Energy (SVCE)
  o San Jose Clean Energy (SJCE)
  o Monterey Bay Community Power (MBCP) – disappointed residents in SLO asking them to reconsider the decision

• CCA’s who plan to reject PG&E Nuclear Allocation
  o East Bay Community Energy (EBCE)
  o Sonoma Clean Power (SCP)
  o Clean Power San Francisco (CPSF)
  o Marin Clean Energy (MCE)
Recommendation

• Changes from January
  o Delay in allocation of PG&E GHG-free energy results in smaller allocation amounts
  o Decreased load results in reduced open-position for GHG-free energy
  o Price of GHG-free has dropped significantly since January, and will likely drop further

• Continued uncertainty on impact of COVID-19 on load – load may be lower than forecasted resulting in even lower open position for GHG-free

• Market research results provide more insight into customer responses to changed power content label

• Staff recommendation:
  • Accept PG&E hydro allocation
  • Do not accept PG&E nuclear allocation
  • Wait until Q3 to fill open GHG-free position due to load uncertainty, and likelihood of even lower cost for GHG-free resources
Regular Agenda

9. Approve Expenditure of up to $500,000 for Portable Battery Program for Medically Vulnerable Customers (Action)
Power On Peninsula Portable Battery Program for Medically Vulnerable

May 28, 2020
Presentation Outline

1. Background: PSPS Event Details, Similar Programs
2. Program Summary
3. Vendors
4. Key Considerations
5. Timeline
6. Recommendation
Relevant PSPS Details

- Three PSPS events in San Mateo County in 2019:
  - 10/9-10/12: 15k customers affected, 270 Medical Baseline
  - 10/23-10/26: 1.1k customers affected, 23 Medical Baseline
  - 10/26-10/29: 57k customers affected, 590 Medical Baseline
- 14,049 customers experienced two+ PSPS events, 1,069 on CARE, 119 Medical Baseline
- Events lasted 13-92 hours in PCE service territory
- Customers that rely on medical devices are particularly vulnerable to electricity outages
Similar Programs

- Staff are communicating with PG&E and MCE regarding their programs
- They also seem to be at an early planning stage and staff will continue to coordinate with them on lessons learned

<table>
<thead>
<tr>
<th></th>
<th>MCE</th>
<th>PG&amp;E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>MCE Bulk Battery Purchase</td>
<td>Disability Disaster Access and Resources Program</td>
</tr>
<tr>
<td>$ Allocated</td>
<td>$300,000</td>
<td>$5 MM</td>
</tr>
<tr>
<td>Customer Target</td>
<td>100</td>
<td>500 across PG&amp;E territory; 50 in San Mateo County</td>
</tr>
<tr>
<td>Technology Selection</td>
<td>Goal Zero Yeti 3000</td>
<td>Goal Zero Yeti 3000</td>
</tr>
<tr>
<td>Program Structure</td>
<td>Equipment loan</td>
<td>Short-term lease; long-term lease; lease-to-own options</td>
</tr>
<tr>
<td>Partners</td>
<td>Long-term partnership with California Foundation for Independent Living Centers (CFILC) through Healthy Homes initiative</td>
<td>CFILC and local Independent Living Centers</td>
</tr>
</tbody>
</table>
Program Summary

- Leverage Peninsula Clean Energy’s relationship to our community, non-profits, backup power battery vendors, and our medically vulnerable customers
- Provide **portable storage devices** to medically vulnerable customers most likely to experience PSPS events
- Aggregate procurement of portable storage devices to achieve a **bulk purchase discount**
- Provide portable storage devices to target customers free or at a very low cost (considering: free, rent, loan-to-own, purchase)
- Vet technology providers ahead of time to ensure products meet the needs of medically vulnerable customers
Program Priorities

• Target customers who are most vulnerable to the intersection of PSPS and COVID-19. Keep costs low for our customers to increase access.

• Prioritize clean power solutions over traditional diesel-fueled generators.

• Customers have a wide range of electricity needs for their medical devices. Identify a realistic list of medical devices that can be powered by batteries over a ~three-day power outage.

• Ensure that the batteries are used safely throughout distribution, storage, and operation.
Program and Vendor Recommendation

- **Vendor Selection**: Sent RFI to 8 potential Vendors –
  - **5 vendors responded as of 5/28

- **Program structure**: PCE purchases batteries and provides them to customers for small or no charge

- **Customer targets**: Limit participation to those with medical devices that can be served by one or two batteries, full list to be determined

- **Vendor shortlist**: Goalzero Yeti 3000x/6000x (3 kWh, $2,400 & 6kWh, $3,750), SimpliPhi ExprESS (7.6 kWh, $8,900), or Humless Complete ESS (10 kWh, $10,820)
Vendor Selection Key Considerations

- **Battery capacity**: Must be able to meet specific medical device charging needs

- **Uninterruptible Power Supply (UPS)**: Must have UPS functionality if paired with devices that require UPS

- **Recharge time**: Needs to recharge between PSPS events

- **Price**: Competitive on a $/kWh basis

- **Portability**: Batteries need to be portable and able to be moved into customers’ homes
## Program Timeline

<table>
<thead>
<tr>
<th>Step</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinate with community outreach partners</td>
<td>April - June</td>
</tr>
<tr>
<td>Initiate Vendor Outreach</td>
<td>Early May</td>
</tr>
<tr>
<td>Send Informal RFI for Battery Vendors</td>
<td>5/14-5/15</td>
</tr>
<tr>
<td>Received RFI Responses</td>
<td>5/15-5/19</td>
</tr>
<tr>
<td>RFI Evaluation and Additional Diligence</td>
<td>5/18-6/4</td>
</tr>
<tr>
<td>Present Recommendation to Board</td>
<td>5/28</td>
</tr>
<tr>
<td>Finalize Diligence and Vendor Selection</td>
<td>6/5</td>
</tr>
<tr>
<td>Negotiate Contract</td>
<td>6/8 – 6/11</td>
</tr>
<tr>
<td>Customer Outreach and Enrollment</td>
<td>6/1 – 7/31</td>
</tr>
<tr>
<td>Expected Battery Delivery</td>
<td>July - September</td>
</tr>
</tbody>
</table>
Recommendation

- Approve Expenditure of up to $500,000 for Portable Battery Program for Medically Vulnerable Customers

- **Indicative results**, based on $500,000 budget:

<table>
<thead>
<tr>
<th></th>
<th>Price per Unit</th>
<th>Battery Capacity</th>
<th>Expected # of batteries</th>
<th>Total Capacity (kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goalzero Yeti 3000x</td>
<td>$2,400</td>
<td>3.0 kWh</td>
<td>208</td>
<td>624</td>
</tr>
<tr>
<td>Goalzero Yeti 6000x</td>
<td>$3,750</td>
<td>6.0 kWh</td>
<td>133</td>
<td>798</td>
</tr>
<tr>
<td>SimpliPhi ExpESS</td>
<td>$8,900</td>
<td>7.6 kWh</td>
<td>56</td>
<td>426</td>
</tr>
<tr>
<td>Humless Complete ESS</td>
<td>$10,820</td>
<td>10.0 kWh</td>
<td>46</td>
<td>460</td>
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</tbody>
</table>

- Staff may pursue 2 different vendors to meet different medical device needs
## RFI Summary

<table>
<thead>
<tr>
<th></th>
<th>SimpliPhi - Big Genny</th>
<th>SimpliPhi - ExprESS</th>
<th>Freewire – Mobi Gen</th>
<th>Goalzero – Yeti 3000x</th>
<th>Goalzero – Yeti 6000x</th>
<th>Humless - Complete ESS</th>
<th>Portable Electric - VOLTstack 2.8kWh</th>
<th>Portable Electric - VOLTstack 5.6kWh</th>
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</thead>
<tbody>
<tr>
<td><strong>Product Capacity (kWh)</strong></td>
<td>1.24</td>
<td>7.60</td>
<td>80.00</td>
<td>3.00</td>
<td>6.00</td>
<td>10.00</td>
<td>2.80</td>
<td>5.60</td>
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<tr>
<td><strong>Bulk Price ($)</strong></td>
<td>$2,399</td>
<td>$8,900</td>
<td>$55,250</td>
<td>$2,400</td>
<td>$3,700</td>
<td>$10,820</td>
<td>$8,000</td>
<td>$16,000</td>
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<tr>
<td><strong>Capacity Price ($/kWh)</strong></td>
<td>$1,935</td>
<td>$1,171</td>
<td>$691</td>
<td>$800</td>
<td>$616</td>
<td>$1,082</td>
<td>$2,857</td>
<td>$2,857</td>
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<tr>
<td><strong>Product Life</strong></td>
<td>2,500</td>
<td>10,000</td>
<td>10 years</td>
<td>500-2,500</td>
<td>500-2,500</td>
<td>4,000</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Recharge Time (hrs)</strong></td>
<td>2.5</td>
<td>2</td>
<td>12</td>
<td>12-24</td>
<td>12-24</td>
<td>3</td>
<td>2.5</td>
<td>2.5</td>
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<tr>
<td><strong>Weight (lbs)</strong></td>
<td>366</td>
<td>411</td>
<td>1860</td>
<td>70</td>
<td>106</td>
<td>400</td>
<td>190</td>
<td>330</td>
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</tbody>
</table>
Regular Agenda

10. Approve Existing Buildings Electrification Program (Action)
Existing Buildings Electrification Program

Board of Directors, May 28, 2020
Existing Buildings Program: Request

**Program**: Provide incentives and program support for electric appliances in existing buildings

**Request**: Approval of the proposed Existing Building Electrification Program

**Amount**: Up to $6.1M for 4-year program
Overall Emissions – Original Estimates

2015 RICAPS EMISSIONS INVENTORY
2018 “Back of Envelope” Calculation

- **Transportation & Equipment**: 61%
- **Building Natural Gas**: 20%
- **Electricity**: 15%
- **Waste & Water**: 4%

- **7%**

**Key Points**

- Upstream fugitive emissions are not accounted for so NG impact is likely significantly higher.
- Air travel and embedded carbon of products not included.

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Peninsula Clean Energy
Natural Gas Emissions Breakdown in SMC

Residential is Largest Segment

Water Heater is Most Market Ready

Sources:
2018 PG&E Gas data
2010 California Residential Appliance Saturation Survey,
2006 California Commercial End-Use Survey
PCE Program

Rationale
- Support meeting CA goal of being carbon neutral by 2045
- Limited state programs are insufficient for nascent market
- COVID-19 recession impacting low-income community

Objectives
- Create initial momentum and establish market
- Leverage regional and state programs
- Establish workforce readiness
- Promote economic benefits through job creation
Summary of Proposed Budget

4-Year program for $6.1 M, includes:

1. **Incentives = $2.8 M (47%)**
   - Incentives for appliances and service panels

2. **Low Income = $2 M (33%)**
   - Turnkey program building on Healthy Homes concept + electrification

3. **Other components = $1.3 M (21%)**
   - Includes workforce development, load shaping, innovation pilots, electrification potential study and administration
FY 21: Heat Pump Water Heater Program

Overview & Objective
• Gas to electric heat pump water heater (HPWH) replacement incentives for single family homes
• Foster early market, develop workforce, create jobs

Scope
• Offer incentive of $1,000 – 1,500/unit and if warranted $1,500/service panel upgrade
• Robust contractor network fed by existing training program
• Coordinated marketing with Building Decarbonization’s “The Switch Is On” campaign

Budget
• Total incentive budget of $2.7M over 4 yrs to replace ~1,200 water heaters

Collaborations
• Align approach with SVCE and others
• Layer incentives with BayREN to offer streamlined customer experience
• Leverage Building Decarbonization Coalition and BayREN marketing
Electrification Programs in Region

• Current Rebates
  • Heat Pump Water Heaters: up to $2,500
  • HVAC: up to $4,000
  • Induction cooktop (Up to $500),
  • Service panel upgrade (up to $2,500)
• Engaged contractor network
• Residential energy advisors
• Contractor training and quality control

• Current Rebates
  • Heat Pump Water Heater: up to $2,300
  • Bonuses: up to $1,500 (low-income or DR)
  • Panel: up to $2,500
• Forthcoming Phase 2 - via BayREN Home+ single family program
  • Water Heater: $1,000 (plus BayREN $1,000)
  • Panel: $1,500
  • Residential energy advisors
  • Contractor training and quality control
FY 21: Low Income Program

Overview & Objectives
• Program for eligible low-income single-family residents
• Low income home improvements plus workforce employment

Scope
• Select electrification, complementary energy efficiency, PV, EV charging, and healthy home fixes
• Turn-key program covering 100% of installed cost. Max. $8,000/home + other partner incentives
• Goal of 200-250 homes in 4 yrs

Budget
• Total Program budget of $2M over 4 yrs

Collaborations
• Layer incentives with the Energy Savings Assistance Program (ESA), Peninsula Minor Home Repair (PMHR), Single Family Affordable Solar Housing (SASH), BayREN and other state and federal agencies wherever possible
FY 21: Harvest Thermal Pilot Program

Overview & Objectives

• Pilot new Harvest Thermal technology in homes to prove viability
• Technology provides simultaneous water and space heating through one heat pump
• Help technology development to address market needs

Scope

• Install technology in 5 homes in SMC
• Support development of installation guidelines
• Provide detailed assessment of technology (install costs, energy, bill savings, customer satisfaction)
• Preferred pricing for PCE if technology is scaled for larger market penetration
• Independent measurement and verification

Budget

• Total program budget of $300,000 over 2 years
# 4 YR Budget Breakdown

<table>
<thead>
<tr>
<th></th>
<th>FY 2021</th>
<th>FY 2022</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>4 yr Total</th>
<th>% of Total budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentives</td>
<td>$ 500</td>
<td>$ 450</td>
<td>$ 750</td>
<td>$ 1,100</td>
<td>$ 2,800</td>
<td>46%</td>
</tr>
<tr>
<td>Low Income</td>
<td>$ 450</td>
<td>$ 400</td>
<td>$ 550</td>
<td>$ 600</td>
<td>$ 2,000</td>
<td>33%</td>
</tr>
<tr>
<td>Load Shaping</td>
<td>$ 50</td>
<td>$ 50</td>
<td>$ 100</td>
<td>$ 250</td>
<td>$ 450</td>
<td>7%</td>
</tr>
<tr>
<td>Innovation Pilots</td>
<td>$ 250</td>
<td>$ 50</td>
<td>$ 50</td>
<td>$ 100</td>
<td>$ 450</td>
<td>7%</td>
</tr>
<tr>
<td>Admin &amp; Other</td>
<td>$ 150</td>
<td>$ 50</td>
<td>$ 50</td>
<td>$ 150</td>
<td>$ 400</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total Budget</strong></td>
<td>$ 1,400</td>
<td>$ 1,000</td>
<td>$ 1,500</td>
<td>$ 2,200</td>
<td>$ 6,100</td>
<td>100%</td>
</tr>
</tbody>
</table>

*1000s of $s
Existing Buildings Program: Request

**Program**: Provide incentives and program support for electric appliances in existing buildings

**Request**: Approval of the proposed Existing Building Electrification Program

**Amount**: Up to $6.1M for 4-year program
Regular Agenda

11. Background in Integrated Resource Plan (IRP) Process (Discussion)
Integrated Resource Plan Update

Siobhan Doherty, Director of Power Resources
Doug Karpa, Senior Regulatory Analyst
May 28, 2020
AGENDA

• IRP Timeline
• IRP Background
• IRP Requirements
• CPUC Modeling Framework
• CPUC Modeling Constraints
• CCA Approach
• Timeline
BACKGROUND

• This CPUC IRP was mandated by SB350, (de León, Chapter 547, 2015)

• Initial reporting year was 2018

• 2020 IRP is due 9/1/2020

• The main purpose of the CPUC IRP is to provide CPUC staff with the inputs from each LSE to forecast industry-wide procurement and determine whether load serving entities (LSEs) in CA are meeting GHG and reliability needs for 2030.
BIANNUAL PROCESS

• The CPUC IRP a two-year process.

• In odd-numbered years, CPUC will conduct modeling to recommend a GHG emissions target for the electricity sector and identify optimal portfolio – “Reference System Portfolio”.

• During even-numbered years, LSEs will submit IRP to the commission.

• CPUC will aggregate individual IRPs and conduct production cost modeling and a reliability assessment.
# 2020 IRP SUBMISSION TIMELINE

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 6, 2020</td>
<td>CPUC Issued Final Decision on Reference System Portfolio</td>
</tr>
<tr>
<td>April 15, 2020</td>
<td>CPUC Published Final Load Forecasts and GHG Benchmarks</td>
</tr>
<tr>
<td>May 12, 2020</td>
<td>CPUC Published Final Reporting Templates</td>
</tr>
<tr>
<td>May Board Meeting</td>
<td>Staff Provide Background on IRP to Board</td>
</tr>
<tr>
<td>June Board Meeting</td>
<td>Staff Present Preliminary Analysis to Board</td>
</tr>
<tr>
<td>July Board Meeting</td>
<td>Staff Present Final Analysis and Board Approves IRP Submission</td>
</tr>
<tr>
<td>August Board Meeting</td>
<td>Reserve for Any Final Approvals</td>
</tr>
<tr>
<td>September 1, 2020</td>
<td>IRP Submissions Due to CPUC</td>
</tr>
</tbody>
</table>
REFERENCE SYSTEM PORTFOLIO

• The Reference System Portfolio (RSP) is the outcome of the modeling work done by the CPUC in the odd-numbered years of the IRP process.

• The RSP provides general planning direction for how LSEs and policymakers can achieve State GHG reduction goals at least cost while ensuring electric service reliability.

• When LSEs file their individual IRPs, they must conform to the assumptions used to develop the portfolio, but actual LSE procurement may result in a buildout of a resource mix that differs from RSP.
The 2019-20 IRP cycle targets an economy-wide GHG emissions reduction of 40% from 1990 levels by 2030 while maintaining system reliability.

- The RSP targets 46 MMT 2030 electric sector GHG emissions.
- CPUC can re-evaluate this target for each IRP Cycle.
- 46 MMT keeps electric sector on trajectory to meet state's zero-emissions goal by 2045.
- LSEs are required to present two portfolios:
  - Target 46 MMT electric sector GHG emissions.
  - Target 38 MMT electric sector GHG emissions.
Figure 2. Cumulative Buildout of New Resources in 2019-2020 RSP
RSP – 38 MMT

Figure 4: New Resource Buildout Associated with a 38 MMT GHG Target in 2030
CCA APPROACH

• Coordinating with 3 CCAs on modeling for IRP
  –
    o East Bay Community Energy
    o Clean Power Alliance
    o San Jose Community Energy

• Siemens is providing modeling services to PCE and other 3 CCAs

• Production cost modeling using Aurora model

• Will provide 2 Conforming Portfolios + alternative scenarios
MODELING REQUIREMENTS

- PCE must submit 2 conforming portfolios – 46 MMT and 38 MMT
- Use the assigned load forecast\(^1\) from the CEC’s 2019 Integrated Energy Policy Report (IEPR).
- Be consistent with the CPUC-adopted Reference System Portfolio:
  - Conforms to the LSE’s 2030 GHG Benchmark
  - Uses inputs and assumptions matching those used by CPUC staff to develop the Reference System Portfolio

<table>
<thead>
<tr>
<th>2030 Load (GWh)</th>
<th>2030 Emissions Benchmark – 46 MMT</th>
<th>2030 Emissions Benchmark – 38 MMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,560</td>
<td>0.729</td>
<td>0.602</td>
</tr>
</tbody>
</table>

\(^1\) The mid-AAEE version of Form 1.1c of the 2017 IEPR Mid-demand case
PORTFOLIO MODELING OBJECTIVES

• In addition to meeting the requirements of the CPUC filing, PCE is targeting internal objectives and IRP-strategies:

  • 100% renewable by 2025
  • Matching generation to load on an hourly basis
  • 50% new resources
  • 50% long-term contracts
The CPUC requires that LSEs use certain specific assumptions in their Conforming Portfolio, including the following:

- Load shape;
- Energy production profiles;
- BTM PV, EE, and EV charging profiles;
- Battery storage dispatch profiles; and
- Biomass/Geothermal/Hydro dispatch profiles.

Due to these fixed constraints, arriving at a 0 MMTCO2 emissions portfolio (load-following generation) for the IRP filing is not possible.

We have created a conforming portfolio meeting the CPUC requirements and PCE’s requirements as closely as possible while minimizing the 2030 GHG benchmark.

We have also created an alternative portfolio which more closely follows PCE’s expected load shape.
1. Standard LSE Plan – written description of IRP, including:
   • Description of modeling process and assumptions

2. CPUC Provided Clean System Power Calculator
   • Calculates LSE’s Portfolio’s expected GHG Emissions

3. Resource Data Template
   • Details on current and planned resources to meet LSE’s targets
The Clean Net Short Calculator aims to calculate expected GHG emissions based on hourly load and procurement.

PCE subtracts its contracted (either current or planned) GHG-free generation (like renewables) from the projected hourly electricity demand (our load).

PCE will subtract the discharging pattern (and add the charging pattern) of any storage resources contracted to PCE from the hourly profile derived in the previous step. The result is the “clean net short” (CNS) in each hour.

The CNS will then be multiplied by the system GHG emissions intensity on an hourly basis.

- This yields PCE’s total emissions associated with using unspecified system power for every hour of 2030.
For every hour, the following calculation happens:

\[ \text{Assigned Emissions} = \text{Grid Emissions Factor} \times (\text{Load} - \text{Renewable Generation}) \]

It is then summed to give a total annual emissions factor.
NEXT STEPS

• Present initial scenarios to Board at June 2020 Board meeting

• Present final scenarios for Approval in July 2020
Regular Agenda

12. Board Members’ Reports (Discussion)