MEETING of the Energy Planning & Resources Committee
of the Clean Power Alliance of Southern California

Wednesday, January 22, 2020
12:15 p.m.
555 W. 5th Street, 35th Floor
Los Angeles, CA 90013

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PUBLIC COMMENT POLICY: The General Public Comment item is reserved for persons wishing to address the Committee on any Clean Power Alliance-related matters not on today’s agenda. Public comments on matters on today’s Consent Agenda and Regular Agenda shall be heard at the time the matter is called. Comments on items on the Consent Agenda are consolidated into one public comment period. As with all public comment, members of the public who wish to address the Committee are requested to complete a speaker’s slip and provide it to Clean Power Alliance staff at the beginning of the meeting but no later than immediately prior to the time an agenda item is called.

Each speaker is customarily limited to two (2) minutes (in whole minute increments) per agenda item with a cumulative total of five (5) minutes to be allocated between the General Public Comment, the entire Consent Agenda, or individual items in the Regular Agenda. Please refer to Clean Power Alliance Policy No. 8 – Public Comments for more information.

In addition, members of the Public are encouraged to submit written comments on any agenda item to PublicComments@cleanpoweralliance.org. To enable an opportunity for review, written comments should be submitted at least 72 hours but no later than 24 hours in advance of the noticed Committee meeting date. Any written materials submitted thereafter will be distributed to the Committee at the Committee meeting. Any written submissions must specify the Agenda Item by number, otherwise they will be considered General Public Comment.
Members of the public may also participate in this meeting remotely at the following addresses:

Arcadia Public Works Service Center  
11800 Goldring Road  
Arcadia, CA 90166

Santa Monica City Hall – Room 201  
1685 Main Street,  
Santa Monica, CA 90401

Carson City Hall  
Executive Conference Room  
701 E. Carson Street  
Carson, CA 90745

Oxnard City Hall Annex  
4th Floor, Conference Room  
300 W. Third Street, Oxnard, CA 93030

Malibu City Hall  
23825 Stuart Ranch Road  
Malibu, CA 90265

Thousand Oaks Public Works Conference Room  
2100 Thousand Oaks Boulevard,  
Thousand Oaks, CA 91362

I. WELCOME & ROLL CALL

II. GENERAL PUBLIC COMMENT

III. CONSENT AGENDA
1. Approve minutes from December 18, 2019 Energy Committee Meeting
2. Receive and file Risk Management Team Report

IV. REGULAR AGENDA
3. Approve 2019 Clean Energy RFO Utility Scale Track Shortlist
4. Update on 2020 Integrated Resource Plan Process

V. COMMITTEE MEMBER COMMENTS

VI. ADJOURN

Public Records: Public records that relate to any item on the open session agenda for a Committee Meeting are available for public inspection. Those records that are distributed less than 72 hours prior to the meeting are available for public inspection at the same time they are distributed to all, or a majority of, the members of the Committee. The Board has designated Clean Power Alliance, 555 W. 5th Street, 35th Floor, Los Angeles, CA 90013, as the location where those public records will be available for inspection. The documents are also available online at www.cleanpoweralliance.org.
I. WELCOME & ROLL CALL

Committee Chair Ramirez called the meeting to order at 11:33 a.m. and Interim Board Secretary Christian Cruz called the roll.

<table>
<thead>
<tr>
<th>Location</th>
<th>Name</th>
<th>Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arcadia</td>
<td>Tom Tait</td>
<td>Committee Member</td>
<td>Absent</td>
</tr>
<tr>
<td>Carson</td>
<td>Reata Kulcsar</td>
<td>Committee Member</td>
<td>Remote</td>
</tr>
<tr>
<td>Malibu</td>
<td>Skylar Peak</td>
<td>Committee Member</td>
<td>Remote</td>
</tr>
<tr>
<td>Oxnard</td>
<td>Carmen Ramirez</td>
<td>Committee Chair</td>
<td>Remote</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>Kevin McKeown</td>
<td>Committee Member</td>
<td>Present</td>
</tr>
<tr>
<td>Sierra Madre</td>
<td>John Capoccia</td>
<td>Committee Member</td>
<td>Present</td>
</tr>
<tr>
<td>Thousand Oaks</td>
<td>Helen Cox</td>
<td>Committee Member</td>
<td>Remote</td>
</tr>
</tbody>
</table>

II. GENERAL PUBLIC COMMENT

There were no general public comments.

III. CONSENT AGENDA

1. Approved minutes from October 23, 2019 Energy Committee Meeting
2. Received and filed Risk Management Team Report
Motion: Committee Member Kulcsar, Carson.
Second: Committee Member Cox, Thousand Oaks.
Vote: Items 1 and 2 were approved by a roll call vote 6-0-1, with Committee Member Tait absent.

There were no public comments on this item.

IV. REGULAR AGENDA

3. Approved Shortlist and Waitlist of Projects as recommended by the Review Team for the 2019 Reliability Request for Offers (RFO)

Natasha Keefer, Director of Power Planning and Procurement, provided a presentation. Ms. Keefer highlighted that CPA launched two long-term RFOs in October. Ms. Keefer also highlighted the CPUC's proposed decision, which directs CPA to procure new capacity resources for 2021, 2022 and 2023 and CPA is trying to fulfill some or all of those needs from the 2019 Reliability RFO. Additionally, the decision orders CPA to meet an August 1 deadline for 2021, after that date any generation coming online would meet compliance for 2022. The additional procurement needed is a total of 155 MW by August 1, 2023. Ms. Keefer noted that battery storage does qualify as new capacity.

Ms. Keefer reviewed the role Ascend Analytics takes as the CPA RFO administrator. They were selected in part because of their battery/storage valuation experience. Committee Member Capoccia asked how RA works with storage resources. Ms. Keefer indicated that storage resources will qualify for RA as long as that storage resource maintains its performance. Committee Member Kulcsar asked about the assumptions made in the energy modeling. Ms. Keefer clarified that the modeling maps out the California grid and makes assumptions about what capacity is going online.

Ms. Keefer provided an overview of offers received and the approach the Review Team took to develop the shortlist. Ms. Keefer indicated that there was a high concentration of projects in Southern California. Additionally, CPA received limited offers for 2021 projects and even less projects for 2022. This is due, in part to, how long it takes for projects to be developed. Ted Bardacke, Executive Director, highlighted that many of the 2021 projects will likely bid into other RFOs, and thus CPA will be trying to make decisions quickly to secure projects. Ms. Keefer moved on to discuss the qualitative scores and pointed out that under environmental stewardship no projects scored low. Also, the offers for 2021 were just as competitive as 2022 and 2023, in terms of cost. A key to the process was ensuring a robust shortlist, and therefore the Review Team approved a large number of projects upfront and included a waitlist of projects, as well. It was also important to try and secure 2021 projects given the competitive nature of the projects for 2022.
Committee Member Capoccia asked about the exclusivity for 2023 projects, and if they are lower priority than 2021 and 2022 project. Committee Member Capoccia also asked what the incentive for bidders of projects would be to go into exclusivity now for 2023 projects. Ms. Keefer highlighted that 2023 projects still want to secure contracts as early as possible so they can get additional project financing to finish the project. Ms. Keefer noted that the priority was meeting the 2021 compliance obligation and obtaining at least five times the megawatt obligation in anticipation that projects will fall out. Ms. Keefer discussed the waitlist, which is a backup to the shortlist. Additionally, CPA restricted the 2022 and 2023 projects to just CPA service territory and allowed for medium development risk scores.

Committee Member Cox asked if CPA takes into account having a large number of small projects versus a small number of large projects. Ms. Keefer clarified that there was a limit for the size of each project of 100 MW, so there is a mix of large and small. Committee Member Kulcsar asked about the Development Risk Score. Ms. Keefer clarified low development scores means that they have not secured site control, are not far along with their interconnection, or have not received permitting. Committee Member Kulcsar asked about the DAC scoring. Ms. Keefer clarified that a high score is given if the projected is located in DAC and offer benefits to those communities.

Motion: Committee Member Capoccia, Sierra Madre
Second: Committee Member McKeown, Santa Monica
Vote: Item 3 was approved by a unanimous roll call vote 6-0-1, with Committee Member Tait absent.

There were no public comments on this item.

V. COMMITTEE MEMBER COMMENTS

Committee Member McKeown commented that he is impressed with the staff putting all this together and would like to thank their effort. Ms. Keefer thanked Erik Nielsen for taking on a majority of this work.

VI. ADJOURN

Committee Chair Ramirez adjourned the meeting at 12:45 p.m.
DECEMBER 2019 RMT REPORT

Key Actions

- Discussed recent market trends and performance for November 2019. Market prices remain low as a result of mild weather.
- Reviewed long-term energy position and approved energy hedge solicitations for 2020 – 2022.

Policy Compliance

CPA’s Energy Risk Management Policy designates specific prompt-year (PY) up to prompt 5-year hedge targets for different product types. These targets are measured in December for the following year, e.g. December 2019 for calendar year 2020. RMT reviewed the end-of-year hedge targets for 2020 and beyond and identified the deviations listed below. The deviations for Resource Adequacy (RA) and environmental products (PCC2 and Carbon Free) are high due to regulatory uncertainty and constrained supply in the market, circumstances outside of CPA’s control.
<table>
<thead>
<tr>
<th>Policy Deviation</th>
<th>Required Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PCC2 2022 position is less than the minimum hedge target due to limited</td>
<td>CPA will run another RE/CF RFO in the first half of 2020 to secure PCC2 supply for 2022. In addition, the RMT will consider modifying the ERMP hedge</td>
</tr>
<tr>
<td>volumes available in the market 3 years ahead. CPA did not select any 2022</td>
<td>targets for PCC2 given the lack of supply in the PY+2 timeframe.</td>
</tr>
<tr>
<td>PCC2 offers in the November 2019 RE/CF RFO because volumes were limited, and</td>
<td></td>
</tr>
<tr>
<td>prices were too high.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The RMT will wait to procure carbon free until more clarity is reached in the PCIA proceeding.</td>
</tr>
<tr>
<td>The Carbon Free 2020 and 2021 hedges are less than the minimum hedge targets</td>
<td></td>
</tr>
<tr>
<td>due to uncertainty related to how the PCIA proceeding will allocate carbon free</td>
<td></td>
</tr>
<tr>
<td>resources from the IOUs to CCAs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CPA will run a multi-year RA RFO in the first half of 2020 to secure 2022 local supply.</td>
</tr>
<tr>
<td>The 2021 and 2024 LA Basin resource adequacy positions exceeded the maximum</td>
<td></td>
</tr>
<tr>
<td>hedge target due to CPA needing to secure a multi-year contract in order to</td>
<td></td>
</tr>
<tr>
<td>meet its 3-year compliance target. In addition, the 2022 LA Basin RA position</td>
<td></td>
</tr>
<tr>
<td>is less than the minimum hedge target due to limited supply and regulatory</td>
<td></td>
</tr>
<tr>
<td>uncertainty related to local RA procurement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No action to be taken.</td>
</tr>
<tr>
<td>The 2021, 2022, and 2023 Big Creek Ventura resource adequacy positions exceeded</td>
<td>CPA will run a multi-year RA RFO in the first half of 2020 to secure 2021 flex supply.</td>
</tr>
<tr>
<td>the maximum hedge targets due to CPA securing a low-price RA contract that also</td>
<td></td>
</tr>
<tr>
<td>meets Big Creek Ventura requirements.</td>
<td></td>
</tr>
<tr>
<td>The 2021 flex resource adequacy position is less than the minimum hedge target</td>
<td></td>
</tr>
<tr>
<td>due to lack of available supply.</td>
<td></td>
</tr>
</tbody>
</table>
To: Clean Power Alliance (CPA) Energy Planning & Resources Committee
From: Natasha Keefer, Director of Power Planning & Procurement
Approved by: Ted Bardacke, Executive Director
Subject: 2019 Clean Energy RFO Utility Scale Track Shortlist
Date: January 22, 2020

STAFF RECOMMENDATION
Approve the 2019 Clean Energy RFO Utility Scale Shortlist and Waitlist as recommended by the RFO Review Team.

The recommended shortlist is on Slide 23 of the attached presentation. The recommended waitlist is on Slide 25 of the attached presentation.

Attachment: 1) 2019 Utility Scale Shortlist RFO Presentation
2019 Clean Energy RFO
Shortlist – Utility Scale Track

Wednesday January 22, 2020
Executive Summary

• CPA launched its 2019 Clean Energy RFO on October 22\textsuperscript{nd}, with bids due on November 22\textsuperscript{nd}

• The Clean Energy RFO includes two tracks: Utility Scale and Distributed. This meeting is dedicated to the Utility Scale track shortlist

• CPA targets procurement of 1-2 million MWh annually in the Utility Scale track

• In the Utility Scale track, CPA received a robust response from bidders for renewable + storage and limited responses from wind and solar-only projects; CPA received 1 offer from a local project

• The RFO Review team met on January 13\textsuperscript{th} to evaluate proposals

• The Energy Committee will consider a recommended project shortlist for the Utility Scale track for approval during today’s meeting
2019 Long-term RFOs

- CPA launched two long-term RFO processes in October 2019:

1. 2019 Reliability RFO
2. 2019 Clean Energy RFO

- Utility-Scale Track
- Distributed Track

Subject of today’s review
2019 Clean Energy RFO – Utility Scale

• Goals:
  • Fulfill CPA’s renewable energy and long-term contracting requirements under SB 350
  • Support CPA load requirements with cost effective and clean generation
    – Target 1-2 million MWh of annual generation

• Utility Track Eligibility
  – Renewable and renewable + storage projects 10-400 MW
  – Commercial operation date (COD) no later than 12/31/2023
OFFER OVERVIEW
## Offer Overview

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of conforming offers submitted¹</td>
<td>59</td>
</tr>
<tr>
<td>Number of distinct sellers submitting offers</td>
<td>33</td>
</tr>
<tr>
<td>New / existing projects</td>
<td>54 / 5</td>
</tr>
<tr>
<td>Counties spanned by submissions</td>
<td>19</td>
</tr>
<tr>
<td>States spanned by submissions</td>
<td>4 (CA, AZ, NV, WY)</td>
</tr>
<tr>
<td>Earliest online date</td>
<td>3/16/2020</td>
</tr>
<tr>
<td>Latest online date</td>
<td>12/31/2023</td>
</tr>
</tbody>
</table>

¹ 2 projects did not meet the requirements for a conforming offer; some projects provided multiple offer variants
### Offers by Technology Type

<table>
<thead>
<tr>
<th>Technology Type</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar + Storage</td>
<td>43</td>
<td>73%</td>
</tr>
<tr>
<td>Solar Only</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Wind Only</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Geothermal</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>Biofuel</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Small Hydro</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Biofuel, Small Hydro</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Solar Only, Wind Only</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Solar + Storage, Wind Only</td>
<td>43%</td>
<td></td>
</tr>
</tbody>
</table>
Offers by Online Year

Number of Offers Online by Year

- 2020: 1 offer
- 2021: 5 offers
- 2022: 24 offers
- 2023: 29 offers
Offers by Project Size

All Offers, Ranked by Generation Capacity

Storage Capacity MW

Generation Capacity MW
## Qualitative Range of Offers

<table>
<thead>
<tr>
<th>Environmental Stewardship</th>
<th>Benefits to DACS</th>
<th>Workforce Development</th>
<th>Project Location</th>
<th>Development Risk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>11%</td>
<td>44%</td>
<td>72%</td>
<td>2%</td>
</tr>
<tr>
<td>Medium</td>
<td>13%</td>
<td>26%</td>
<td>6%</td>
<td>81%</td>
</tr>
<tr>
<td>Neutral</td>
<td>59%</td>
<td>30%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Low</td>
<td>17%</td>
<td>0%</td>
<td>22%</td>
<td>17%</td>
</tr>
</tbody>
</table>

*excludes existing projects*
VALUATION
Quantitative Valuation Approach

- Offers were valued and ranked based on their Net Present Value (NPV) per MWh. Offers were categorized into first through fourth quartiles (Q1-Q4).

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Energy Revenue</strong> ($/kWh)</td>
<td>• <strong>PPA Energy Cost</strong> ($/MWh)</td>
</tr>
<tr>
<td>Earnings from selling energy into CAISO market (from renewable generator and discharging energy from storage)</td>
<td>Energy price CPA pays the counterparty</td>
</tr>
<tr>
<td>• <strong>Resource Adequacy</strong> ($/kW-month)</td>
<td>• <strong>PPA Storage Cost, if applicable</strong> ($/kW-month)</td>
</tr>
<tr>
<td>Replaces RA CPA would otherwise have to purchase</td>
<td>Capacity price CPA pays the counterparty</td>
</tr>
<tr>
<td>• <strong>Ancillary Services (AS)</strong> ($/kWh)</td>
<td></td>
</tr>
<tr>
<td>Earnings from selling ancillary services into CAISO market (applicable for storage only)</td>
<td></td>
</tr>
</tbody>
</table>

Value (NPV) = Revenue – Costs
Valuation Range

Value Spread of Offers

Positive NPV

Negative NPV

Q1  Q2  Q3  Q4
Valuation Range by Technology

Value Spread of Offers by Technology

Positive NPV

Negative NPV

Hydro  Solar  Solar + Storage  Wind  Biofuel  Geothermal
SHORTLISTING APPROACH
Expanded Shortlist

- A key takeaway from the 2018 Clean Energy RFO is that in order to meet procurement targets, CPA needs a robust (but manageable) shortlist
- Staff is recommending an expanded shortlist and waitlist approach:

  **Shortlist**
  - Shortlist approximately **5 million MWh**
  - CPA will notify bidders of a Shortlist status award
  - CPA will ask for exclusivity and enter negotiations

  **Waitlist**
  - CPA will notify bidders they are on the Waitlist
  - CPA will not ask for exclusivity or enter negotiations
  - If projects in the Shortlist drop out, Waitlist projects will be invited to enter the Shortlist at CPA staff discretion
Shortlisting Approach

All

59 conforming offers

Initial Screen

22 offers removed from consideration that scored Low on:
- Development Risk score (significant uncertainty to complete)
- Environmental Stewardship (environmentally harmful)
- Location (removed out of state projects in Q2-Q4 NPV)  

Q1 NPV

Focus shortlist on first quartile NPV projects

Q2-Q4 NPV

Additional projects to diversify portfolio and meet MWh target
Diversity in: qualitative criteria, technology type, online date

Shortlist

Target shortlist of approximately 5 million MWh
Waitlist projects highest with NPV after shortlist

(1) Resulted in removal of all out-of-state projects
**Current Long-term PPAs**

<table>
<thead>
<tr>
<th>Project</th>
<th>Type</th>
<th>MW</th>
<th>Online Date</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arlington</td>
<td>Solar</td>
<td>233</td>
<td>12/31/2021¹</td>
<td>2018 Long-term RFO</td>
</tr>
<tr>
<td>White Hills</td>
<td>Wind</td>
<td>300</td>
<td>12/31/2020</td>
<td>Bilateral</td>
</tr>
<tr>
<td>Voyager</td>
<td>Wind</td>
<td>21.6</td>
<td>Operational</td>
<td>Bilateral</td>
</tr>
<tr>
<td>Golden Fields</td>
<td>Solar</td>
<td>40</td>
<td>3/31/2021</td>
<td>2018 Long-term RFO</td>
</tr>
<tr>
<td>Isabella</td>
<td>Hydro</td>
<td>11.95</td>
<td>Operational</td>
<td>Bilateral</td>
</tr>
</tbody>
</table>

(1) Phase 1 (100 MW) online by 12/31/2021, Phase 2 (133 MW) online by 12/31/2022

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**Portfolio Daily Average Generation (MW) Profiles VS 2020 Load**

- **While Hills Gen**
- **Isabella Gen**
- **Arlington Gen**
- **Golden Fields Gen**
- **Voyager Gen**
- **2020 Load Average**

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**Notes:**

- Slide 19
Key Trends

- Only 1 local project bid into the Utility Scale track – opportunities for local, utility-scale generation projects is limited

- 5 wind projects bid; 2 were removed due to low Environmental Stewardship scores and none were competitive with previous wind offers

- Solar + storage resources are the highest value offers; opportunities for cost effective portfolio diversification are scarce
High NPV value
High qualitative scores
Diversity in technology, location, online date

11 projects
4,445,999 MWh/year

Total MWh/year by Technology

<table>
<thead>
<tr>
<th>Technology</th>
<th>MWh/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro</td>
<td>117,717</td>
</tr>
<tr>
<td>Solar + Storage</td>
<td>4,328,282</td>
</tr>
</tbody>
</table>

Total # Projects by Technology

- Hydro, 1
- Solar + Storage, 10

Total # Projects by Online Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>1</td>
</tr>
<tr>
<td>2021</td>
<td>2</td>
</tr>
<tr>
<td>2022</td>
<td>4</td>
</tr>
<tr>
<td>2023</td>
<td>4</td>
</tr>
</tbody>
</table>
### Shortlist

- High NPV value
- High qualitative scores
- Diversity in technology, location, online date

<table>
<thead>
<tr>
<th>Environmental Stewardship</th>
<th>Benefits to DACS</th>
<th>Workforce Development</th>
<th>Project Location</th>
<th>Development Risk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>20%</td>
<td>70%</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Medium</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Neutral</td>
<td>70%</td>
<td>10%</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Low</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*excludes existing projects*
## Shortlist

11 projects
4,445,999 MWh / year

<table>
<thead>
<tr>
<th>NPV Quartile</th>
<th>Online</th>
<th>Technology Type</th>
<th>MW Gen Range</th>
<th>MW Storage Range</th>
<th>Environmental Stewardship</th>
<th>Benefits to DACS</th>
<th>Workforce Development</th>
<th>Project Location</th>
<th>Development Risk Rating</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A</td>
<td>Q4 2021</td>
<td>Solar + Storage</td>
<td>51-100</td>
<td>50-100</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>El Centro</td>
</tr>
<tr>
<td>1 B</td>
<td>Q1 2023</td>
<td>Solar + Storage</td>
<td>51-100</td>
<td>50-100</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>Jacumba</td>
</tr>
<tr>
<td>1 C</td>
<td>Q4 2022</td>
<td>Solar + Storage</td>
<td>51-100</td>
<td>0-49</td>
<td>Neutral</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>Lost Hills</td>
</tr>
<tr>
<td>1 D</td>
<td>Q4 2022</td>
<td>Solar + Storage</td>
<td>101-200</td>
<td>101-200</td>
<td>Neutral</td>
<td>High</td>
<td>High</td>
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</table>
Waitlist

Backup for Shortlist
High NPV value
High qualitative scores

3 projects
2,369,862 MWh / year

Total MWh/year by Technology
2,369,862
Solar + Storage

Total # Projects by Technology
Solar + Storage, 3

Total # Projects by Online Year
2022: 2
2023: 1
<table>
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<tr>
<th>NPV Quartile</th>
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<th>Technology Type</th>
<th>MW Gen Range</th>
<th>MW Storage Range</th>
<th>Environmental Stewardship</th>
<th>Benefits to DACS</th>
<th>Workforce Development</th>
<th>Project Location</th>
<th>Development Risk Rating</th>
<th>City</th>
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</table>
Next Steps

• Receive Energy Committee decision on Shortlist and Waitlist today
• Notify bidders of shortlist status on January 23, 2020
• Negotiate PPAs during February – May 2020
• Submit PPAs for board approval on a rolling basis
APPENDIX
Evaluation Criteria

CPA evaluates projects based on six criteria:

- $ Value
- Environmental Stewardship
- Workforce Development
- Development Risk
- Project Location
- Benefits to DACs
Development Risk Score

*Projects will be ranked from high (good) to low (bad)*

- The development risk metric is a composite rank based on a number of factors impacting project risk:
  - Site control
  - Interconnection status
  - Environmental screens
  - Land use and permits
  - Project financing
  - Developer experience
Environmental Stewardship

Projects are ranked high, medium, neutral, and low based on the following prioritization:

- **HIGH**
  - Demonstrates multiple benefits (provides additional societal, health, economic, water saving, or environmental benefits beyond the climate and GHG reduction benefits of renewable energy)

- **MEDIUM**
  - Located in an area designated as a preferred renewable energy zone and received required land use entitlement permits

- **NEUTRAL**
  - Project does not demonstrate either preference or avoidance criteria

- **LOW**
  - Project is located in a high conflict area
Workforce Development

*Projects will be ranked high, medium, and low based on the following prioritization:*

**HIGH**
- The project will use targeted-hire, union labor, or multi-trade project labor agreements (including requirements for state-apprenticeship graduates)

**MEDIUM**
- The project does not have a labor agreement, but can demonstrate prevailing wage, union labor, and targeted hire commitments

**LOW**
- The project does not demonstrate prevailing wage, union labor, and targeted hire commitments
Benefits to Disadvantaged Communities (DACs)

Projects will be ranked high, medium, and low based on the following prioritization:

- **HIGH**
  - Located within a DAC and demonstrates DAC workforce and community development benefits

- **MEDIUM**
  - Project not located within a DAC but can demonstrate DAC benefits and has completed community outreach

- **NEUTRAL**
  - Project does not demonstrate DAC benefits

- **LOW**
  - Project is inconsistent with community priorities
Projects will be ranked high, medium, and low based on the following prioritization:

- HIGH
  - In Los Angeles and Ventura counties

- MEDIUM
  - Other counties within California

- LOW
  - Out of state projects
Staff will provide an update on the 2020 Integrated Resource Plan (IRP) process.

Attachment: 1) 2020 IRP Process Presentation

January 22, 2020
Background

• Under SB 350, the CPUC conducts a two-year planning cycle to consider Integrated Resource Plan (IRP) filings from all LSEs
  – In August 2018, CPA submitted its Board-approved Conforming Portfolio plan as part of the 2017-2018 IRP

• The IRP encompasses discrete planning exercises at the LSE and statewide levels to estimate reliability and environmental outcomes of hypothetical future portfolios, focusing on:
  – Transition from centralized, monopoly IOU service to a disaggregated new paradigm with the proliferation of CCAs
  – Moving from dependence on California’s 30-40% natural gas resources to 100% clean energy
  – Plan for a diverse portfolio of resources that maintain overall system grid reliability
2019-2020 IRP

• The 2019-2020 IRP Cycle activities have begun, with LSEs’ plans due on May 1, 2020
  – IRP filings must be Board-approved; CPA will be bringing its IRP for Board consideration in April

• Four CCAs¹, including CPA, have banded together to conduct IRP modeling jointly for the 2019-2020 IRP Cycle (referred to as the “Joint IRP”)

• The effort is intended to minimize inefficiencies, comprehensively plan for future resource needs, and ensure that individual IRPs integrate well to achieve statewide GHG and reliability goals

(1) The Joint CCAs include CPA, East Bay Community Energy, Peninsula Clean Energy, and San Jose Clean Energy
Conforming Plan

• The CPUC requires all LSEs to submit a Conforming Plan that must be consistent with the CPUC’s Reference System Plan (RSP)

• The RSP requires CA’s electric sector to meet a 46 million metric ton (MMT) greenhouse gas emissions target by 2030
  - 46 MMT is the target set for the state by the California Air Resources Board (CARB)
  - Various parties have advocated for more aggressive GHG targets, including a 38 MMT and 30 MMT case
Conforming Plan (cont.)

• The CPUC also prescribes other portfolio assumptions:
  – Assigned load forecast, including electric vehicle and behind-the-meter generation penetration assumptions
  – Representative resources recommended to be procured and associated resource costs
  – Other financial assumptions, e.g. gas and carbon price forecasts

• The CPUC has not yet released final instructions and inputs; LSEs are seeking guidance on the ability to submit Alternative or Preferred Portfolios using alternate assumptions
Key Modeling Objectives

- Evaluate CPA’s current portfolio and a range of alternative future portfolios to meet customers’ electrical energy needs in an affordable, system-wide manner.

- The IRP must balance the following procurement priorities: **affordability**, **GHG reductions**, and **system reliability/operability**.

- The IRP modeling effort will focus on answering the following questions:
  - What tradeoffs are associated with various GHG reduction strategies?
  - How much renewable energy and flex capacity is needed to achieve CPA’s renewable targets?
  - What is the ideal mix of resources for CPA to achieve the goals of both the state and its community?
## Draft Joint IRP Schedule (subject to change)

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan - Feb</td>
<td>Formulate Joint Conforming and Alternate IRPs</td>
</tr>
<tr>
<td>February</td>
<td>Consultation with internal and external stakeholders¹</td>
</tr>
<tr>
<td>March</td>
<td>Disaggregate into individual IRPs; update Board and Community Advisory Committee on initial IRP modeling results</td>
</tr>
<tr>
<td>April</td>
<td>Finalize IRP submission and bring to Board for consideration</td>
</tr>
<tr>
<td>May 1</td>
<td>IRP submissions due</td>
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</tbody>
</table>

(1) Stakeholders include CPA’s Community Advisory Committee and environmental advocates, environmental justice advocates, renewable energy trade groups, and community organizations that intervene in the CPUC IRP process
Next Steps

• The Joint IRP group is awaiting CPUC final instructions and inputs to finalize modeling tools

• CPA plans to engage with internal and external stakeholders, including the Energy Committee, once initial modeling results are complete

• Key assumptions and trends will be presented to the Board in March, with the final IRP presented to the Board for consideration in April