



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

Wednesday, April 24, 2019

12:15 p.m.

555 W. 5th Street, 35th Floor

Los Angeles, CA 90013

Meetings are accessible to people with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting, or who have a disability and wish to request an alternative format for the meeting materials, should contact Jacquelyn Betha, at least two (2) working days before the meeting at jbetha@cleanpoweralliance.org or (213) 269-5870, ext.1001. Notification in advance of the meeting will enable us to make reasonable arrangements to ensure accessibility to this meeting and the materials related to it.

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 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

Clean Power Alliance Energy Planning & Resources Committee
April 24, 2019

specify the Agenda Item by number, otherwise they will be considered General Public Comment. Any written comments can be submitted to publiccomment@cleanpoweralliance.org.

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

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

Thousand Oaks City Hall
Public Works Conference Room
2100 Thousand Oaks Blvd., Thousand
Oaks, CA 91362

I. WELCOME & ROLL CALL

II. GENERAL PUBLIC COMMENT

III. CONSENT AGENDA

1. Approve Minutes from March 27, 2019 Energy Committee Meeting

IV. REGULAR AGENDA

2. Staff Update on Distributed Energy Resources (DER) Pilot Program
3. Staff Update on Resource Adequacy (RA)
4. April 2019 Risk Management Team Report

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.*

MEETING of the Energy Planning & Resources Committee
of the Clean Power Alliance of Southern California
Wednesday, March 27, 2019, 12:15 p.m.

MINUTES

*555 W. 5th Street, 35th Floor
Los Angeles, CA 90013*

*Arcadia Public Works Service Center
11800 Goldring Rd., Arcadia, CA 90166*

*Carson City Hall
Executive Conference Room, 2nd Floor
701 E. Carson St., Carson, CA 90745*

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

*Santa Monica City Hall – Room 201
1685 Main St., Santa Monica, CA 90401*

*Thousand Oaks City Hall
Public Works Conference Room
2100 Thousand Oaks Blvd., Thousand
Oaks, CA 91362*

I. WELCOME & ROLL CALL

Committee Chair Carmen Ramirez called the special meeting to order. Board Secretary Jacquelyn Betha Isidore conducted roll call.

ROLL CALL			
Arcadia	Tom Tait	Committee Member	Remote
Carson	Reata Kulcsar	Committee Member	Remote
Malibu	Skylar Peak	Committee Member	Present
Oxnard	Carmen Ramirez	Committee Chair	Remote
Thousand Oaks	Helen Cox	Committee Member	Remote
Santa Monica	Kevin McKeown	Committee Member	Remote
Sierra Madre	John Harabedian	Committee Member	Present

II. GENERAL PUBLIC COMMENT

The following individual provided general public comments: Harvey Eder (Public Solar Power Coalition).

III. REGULAR AGENDA

1. Approved Minutes from January 16, 2019 Energy Planning & Resources Committee Special Meeting

Motion: Committee Member Harabedian, Sierra Madre.

Second: Committee Member Peak, Malibu.

Vote: Item 1 was approved by a unanimous roll call vote.

2. Approved substitute providers for Long Term Renewable Energy Development and Storage Capacity

Natasha Keefer, Director of Power Planning & Procurement, reported that last meeting the Committee approved the shortlist of nine projects, and since then CPA has asked those bidders to enter into an exclusivity agreement and to put down a shortlist deposit, which five projects have done. Staff plans to bring those projects to the Board for review and approval in May and June. There are two additional projects CPA would like to bring into the shortlist negotiating process because, as anticipated, there was some attrition of projects during the shortlist process. One of the projects that exited the process has offered to provide substitute capacity at reduced price, and this project also scored very well on the qualitative criteria including committing to a project labor agreement (PLA). The second substitute project is a standalone battery storage project, which is beneficial because two storage projects fell out of the process, and this project also includes a PLA and is in CPA's service territory. Ms. Keefer also added that the RFO protocol allows CPA to pull project offers that were submitted through the RFO into the shortlist process at anytime, and these two substitute projects had previously bid into the RFO.

Committee Chair Ramirez asked how much the shortlist deposit is and Ms. Keefer responded that it's \$3.00 / KW of capacity, so it varies by size of the project.

Committee Member Harabedian asked if this attrition was expected and Ms. Keefer responded that it was, but that staff plans to expand the number of shortlisted projects in future RFOs given the amount of attrition we did experience in this round.

Committee Member Kulcsar asked the total number of shortlisted projects and Ms. Keefer responded that the initial number was eleven, then those projects were asked to re-bid with an opportunity to improve their price, and two projects fell out, so we ended up with nine projects and now CPA is currently in negotiations with five projects. Committee Member Kulcsar also asked what percentage of our load the 1-2 million MWh renewable energy RFO target represents and Ms. Keefer responded

approximately 10-20%. She also asked what the outcome of the two individuals who provided public comment at the last Board meeting regarding their project was.

Matthew Langer, Chief Operating Officer, responded that this project was not determined to be competitive through the evaluation process, but staff worked with Committee Member McKeown, who represents the jurisdiction of these individuals, to follow up on those comments.

Committee Member Peak commented that as SCE moves towards state mandates for renewable energy, its exciting to see that CPA is going above and beyond the minimum for renewables development.

Committee Member McKeown asked when the next RFO opportunity would be and Ms. Keefer responded that CPA would release another RFO in about six months.

Committee Member Cox asked how far these projects are along in the development process and Ms. Keefer responded that it varies, but the development risk column in the review criteria demonstrates how far along those projects are.

The following individuals provided public comments on Item 2: Harvey Eder (Public Solar Power Coalition), Joseph Sullivan (IBEW/NECA), and Stephanie Dashiell (The Nature Conservancy).

Motion: Committee Member McKeown, Santa Monica.

Second: Committee Member Peak, Malibu.

Vote: Item 2 passed by a unanimous roll call vote.

3. Received update on bilateral PPA opportunity for hydro renewable energy

Mr. Bardacke reported that similar to how staff brought forward the Voyager Wind Project last year, CPA has been approached by a hydro project that is a good opportunity for renewable energy contracting, especially since hydro projects recently fell out of the long term RFO process. Ms. Keefer reported that this 12 MW hydro project had bid into one of CPA's recent short term RFOs, and through negotiations, staff identified that it is available for long term contracting. This project is attractive because it adds diversity to our portfolio, it helps CPA meet our SB 350 long term contracting requirements, it is a de-risked existing resource, and it is very

well priced. Mr. Langer added that CPA has the ability to always consider bilateral opportunities and this particular opportunity is beneficial for CPA to pursue.

The following individual provided public comments on Item 3: Harvey Eder (Public Solar Power Coalition).

This item was for informational purposes only.

4. Received update on January, February, and March 2019 Risk Management Team reports

Mr. Langer reported that during the last three meetings of the CPA Staff Risk Management Team (RMT), the items to highlight are that in January CPA outlined its procurement schedule and planned solicitations for the year, in February CPA approved a set of counterparty credit processes, and in March the RMT discussed that the potential impacts on CPA of SCE being downgraded by several rating agencies due to the wildfires.

This item was for informational purposes only.

IV. COMMITTEE MEMBER COMMENTS

There were no additional Committee Member comments.

V. ADJOURN

Committee Chair Ramirez adjourned the meeting.



DER Pilot Program Overview

April 24, 2019

Background

- CPA's data management services contract with Calpine Energy Solutions includes a partnership with Olivine to implement a Distributed Energy Resources (DER) Pilot Program
- Olivine is providing both strategic advice on DER program evaluation as well as implementation services for DER programs that CPA may offer to its customers and/or member agencies
- The DER Pilot Program will be launched by January 2020
- The DER Pilot Program will allow CPA to develop critical learning and capabilities in the DER space and inform the local programs strategic planning process



About Olivine

- Olivine is one of the leading infrastructure and service providers that enables distributed and aggregated resources to offer grid services
- Olivine is one of the first third-parties to integrate battery storage and demand-side technologies into California's wholesale energy markets
- Olivine's comprehensive technology platform and operational support team is used by utilities, providers, and resource owners

What are DERs?

- DERs are local, geographically-dispersed resources that enable the shift to consumer choice and cleaner supply
- DERs can supplant air polluting power plants with other cost-effective options
- Drivers of DER growth:

State

- Renewable Portfolio Standard: 60% by 2030
- Executive Order: 5 million ZEVs by 2030
- Storage Mandate (AB 2514)

Federal

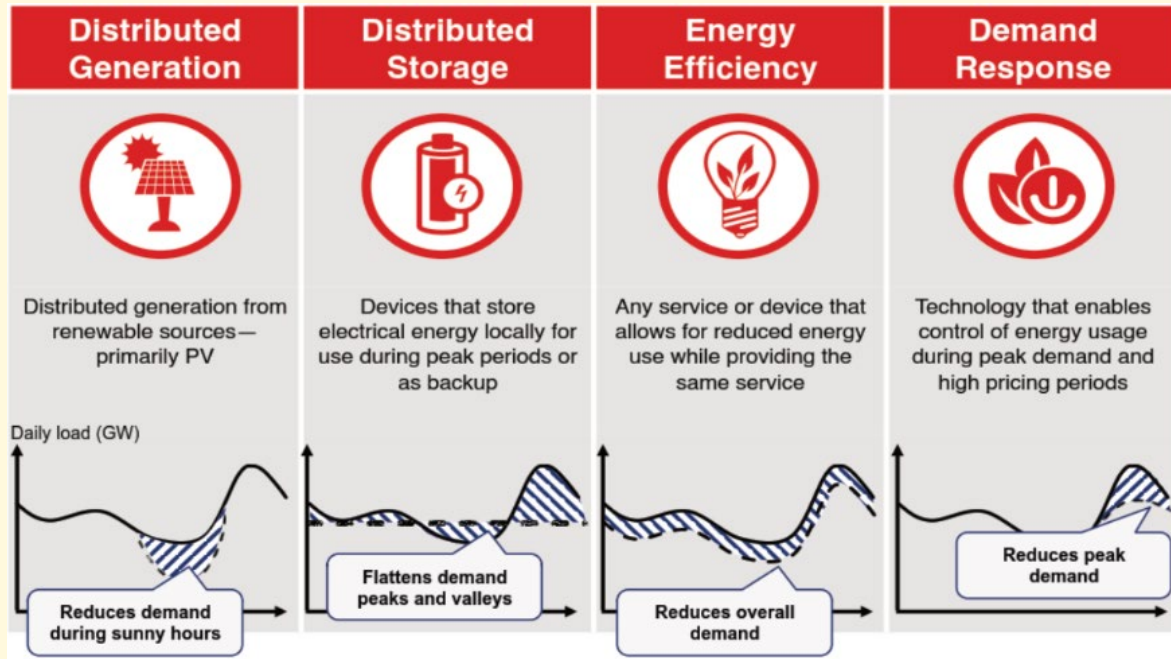
- FERC RM18-9-00: DER Aggregations in Wholesale Markets

Consumer

- Demand for smart-home technologies & EVs

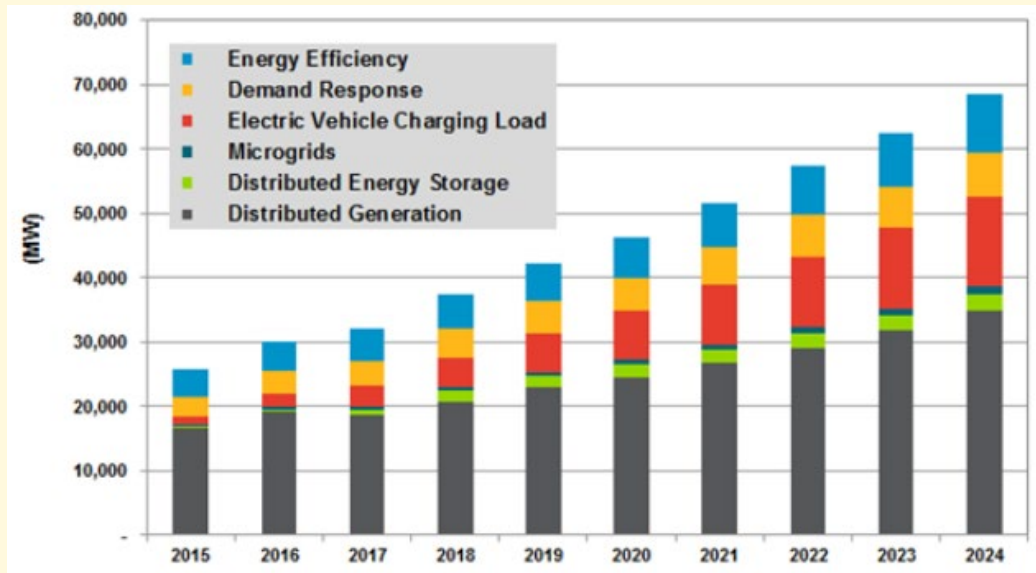
DER Examples

- Various underlying technologies can be considered DERs
- Can be implemented individually or in combination



Growth in DERs

- Forecasted annual installed DER power capacity additions by DER technology, United States 2015-2024



Source: Navigant analysis

DER Value Proposition

CPA Perspective

- Resource adequacy
- Energy procurement reduction by management of system load profile
- CCA storage mandate
- Customer loyalty/engagement
- Local economic development
- Air quality and public health

Customer Perspective

- Unlocks choices for customers to manage energy usage
- Retail energy bill reduction (demand charge management)
- Disaster preparedness and resiliency of critical facilities and infrastructure
- Air quality and public health

Work Plan

- CPA, Olivine, and Calpine are currently working together to meet a 2020 DER Pilot Program launch date

Phase 1

DER Program
Opportunities
Defined

March 25 – June 14

- Evaluate DER program options
- Identify best practices
- Conduct deep dive analysis on top 3*

Phase 2

Pilot Program Plan

June 15 – August 31

- Select pilot*
- Develop design and implementation plan
- Conduct consumer focus or test groups

Phase 3

Implement Pilot

September 6 – Jan 2020

- Board approves DER Pilot Program
- Execute DER Mgmt. Agreement
- Conduct marketing and customer outreach

**Seeking Energy Committee input*

DER Program Assessment

CPA is evaluating program options for a DER pilot based on the following desired outcomes:

- Implement a cost-effective, scalable, and viable model
- Improve local air quality and public health in Southern California
- Reduce greenhouse gas emissions and fossil fuel use in transportation and buildings via electrification
- Address underserved market segments, e.g. renters, multifamily buildings, and customers in Disadvantaged Communities
- Help CPA to cost-effectively manage intermittent resources
- Leverage CPA's member agencies as implementation partners and address specific local needs, including disaster preparedness and infrastructure resiliency

Summary and Next Steps

- CPA will update the Energy Committee on DER program selection, design, and implementation plans through August 2019
- A final DER Pilot Program proposal and budget will be presented to the Board of Directors in September 2019
- CPA targets a program launch in January 2020; the pilot could last as long as four years
- The DER Pilot Program will be conducted in coordination with the local programs strategic planning process



Staff Report – Agenda Item 3

To: Clean Power Alliance (CPA) Energy Planning & Resources Committee

From: Matthew Langer, Chief Operating Officer

Approved by: Ted Bardacke, Executive Director

Subject: Resource Adequacy (RA) Update

Date: April 24, 2019

SUMMARY

CPA has a major role to play in transitioning the grid away from greenhouse gas-emitting resources and towards greener capacity alternatives like renewables and energy storage. At the same time, a number of forces are converging in the near-term that could make this transition challenging and costly. CPA is actively monitoring market trends and developing approaches to dealing with uncertainty during this transition.

RESOURCE ADEQUACY PROGRAM OVERVIEW

The Resource Adequacy (RA) program is a statewide program that seeks to ensure sufficient capacity is always available on the grid to ensure reliable electric service. All load serving entities (LSEs) in the California Independent System Operator (CAISO) balancing area, including CCAs, electric service providers (ESPs), investor owned utilities (IOUs) and municipal utilities are subject to the RA program. RA program compliance is primarily administered by the California Public Utilities Commission (CPUC).

The RA program sets capacity requirements for three types of capacity: system, local and flexible.

System RA can be located anywhere on the grid, subject to limits on how much capacity can come from Northern California and Southern California respectively.

Local capacity must be procured in designated portions of the grid to ensure local grid reliability. Depending on the territory an LSE serves, the local areas it must procure in will vary. CPA is obligated to procure in the Big Creek Ventura and Los Angeles Basin local capacity areas.

Flexible RA comes from resources that have the ability to ramp up and down to load changes or as variable resources increase or decrease throughout the day. Flexible RA can be procured from either System RA or Local RA areas.

The quantity of RA each LSE must procure is based on its peak load. The requirement is to procure 115% of peak load for each month of the year. For system and flexible RA, 90% of this requirement must be met by October 31 each year for the following year. The remaining 10% for each month must be procured at least 6 weeks prior to the month. For local RA, 100% of the requirement must be met by October 31.

TRENDS IMPACTING THE RA MARKET

Over the last several years, numerous trends have converged to disrupt the RA market, increase the cost to meet RA obligations, make compliance more challenging, and raise questions about future reliability.

- **Retirement of existing gas-fired generation:** Due to economic, policy and compliance reasons, thousands of megawatts of gas-fired generation have either retired over the last several years or are expected to retire soon. One reason is the requirement for units that use once-through cooling technology to shut down (e.g. Redondo Beach Generating Station). Another reason is an increased focus on renewables leading to fewer interested buyers for long-term contracts with gas units, resulting in less economic incentive for units to continue operating. According to the CPUC 2017 Resource Adequacy Report, 3,851 MW of older gas and cogeneration facilities retired during 2017. While this was partially offset by

438 MW of new resources, overall 2017-2018 saw a significant decrease in available capacity. Although new energy storage and renewable resources are being added to the grid to offset declining capacity from gas-fired resources, the retirements of existing units are continuing to outpace new generation by a large margin.

- **Market power of generators:** The CPUC has become concerned that some generators, particularly in resource constrained local areas, may be able to exercise market power by withholding capacity in order to receive above-market prices for their capacity. In some cases, the market power concern is a result of recent unit retirements, although other areas have been constrained historically.
- **Buyer fragmentation:** Historically, the RA market had been limited to the three large IOUs, plus a number of smaller ESPs and municipal utilities. Over the last several years, the creation of nearly 20 new CCAs has significantly reduced the share of the market covered by IOUs and has created market fragmentation that increases complexity of market transactions. In 2017, there were 29 CPUC-jurisdictional LSEs (comprised of three IOUs, 14 ESPs, and 12 CCAs). Fifteen years ago when the RA program began, there were zero CCAs in the market. With the addition of CPA and other new CCAs, the number of LSEs is now significantly higher and continuing to grow.

Some generators have expressed the concern that it is more difficult to find a buyer for the full RA capacity of their facility with more, smaller LSEs in the market. They argue that without long-term buyers for their full capacity, they could be forced to retire the units. Additionally, an increasing number of LSEs have filed waivers in recent years for their inability to meet RA compliance requirements. The reasons for waiver requests are not public, but possible reasons include unavailability of RA and high RA prices.

RESPONSES TO MARKET TRENDS

Responses to the trends discussed above have come from the CPUC and the State Legislature. The CPUC has an open proceeding to review the RA program rules. It is largely in this venue that the CPUC has raised concerns about market power and buyer

fragmentation. In a recent decision, the CPUC ordered two key changes to the RA program. First, each LSE will be required to procure local RA for three years in advance starting with the 2020 RA compliance year. The main reason for adding this requirement is to provide more certainty for generators with the hope of slowing unit retirements.

The second major element of the recent CPUC decision is the introduction of a central buyer for local RA. The decision furthers consideration of two possible central buyer options. The primary option is for a central buyer that procures residual capacity after LSEs first have the opportunity to meet RA requirements on their own. If individual LSEs do not procure enough or are unable to address location-specific requirements, the central buyer would step in. The secondary option, should the details of a residual central buyer approach prove unworkable, is for a full central buyer to be responsible for purchasing all local RA capacity. The CPUC is expected to determine how to move forward by the end of the year.

The State Legislature is also considering a variety of bills that would create a central buyer for RA, renewable energy and other energy products. CPA is monitoring these actions at the Legislature and the CPUC and seeking to achieve outcomes that are in line with CPAs goals and the needs of our customers.

FUTURE RA CONSIDERATIONS

Given the trends in the market and the potential legislative and regulatory response, the future of the RA market is uncertain. Some issues to consider are:

- **Central buyer:** If a central buyer for RA is implemented, CPA's role in RA procurement could change significantly.
- **Further generation unit retirements:** Gas-fired generation retirements are expected to continue over the next several years. This is likely to lead to increased prices as RA resources become scarcer. It is likely that the state will become more reliant on imported generation to meet capacity needs during certain periods. The number of LSEs who are unable to meet the RA requirements may increase either due to supply shortages or unwillingness to pay excessive prices.

- **Transition to cleaner RA resources:** In the medium to long-term, an increasing percentage of RA resources will come from clean resources. This includes a growing amount of renewable energy and energy storage. However, the timeline for this transition is unclear and markets could prove volatile until new resources are built. In addition, statewide planning processes, like the CPUC's integrated resource planning process, is still in the early stages of addressing the transition from gas-fired generation to clean resources.



Staff Report – Agenda Item 4

To: Clean Power Alliance (CPA) Energy Planning & Resources Committee

From: Matthew Langer, Chief Operating Officer

Approved by: Ted Bardacke, Executive Director

Subject: April 2019 Risk Management Team Report

Date: April 24, 2019

SUMMARY

Key Actions

- Evaluated March market performance, including impacts of cold weather in early March and low day-time prices due to spring conditions later in the month, including low demands and high solar generation.
- Reviewed updated long-term load forecast that incorporates refreshed opt out rate assumptions. The load forecast will continue to be updated with actual Phase 4 customer opt out trends.
- Reviewed newly-implemented risk modeling tool and hedging scenarios to be evaluated in the future.
- Reviewed open positions and approved purchase of energy hedges covering the period of May 2019 through December 2021.

Policy Compliance

No new policy compliance issues to report.