

Board of Directors Meeting

Thursday, October 3, 2019
2:00 p.m.

I. Welcome & Roll Call

II. General Public Comment

III. Consent Agenda

Item 1

Approve Minutes from September 5, 2019
Board of Directors Meeting

Item 2

Appoint Rigoberto Garcia as Board Secretary for
Clean Power Alliance.

Item 3

Receive and file the Risk Management Team (RMT) Quarterly Report from July through September 2019.

Item 4

Authorize the Executive Director to execute Task Order TEA-#4 with The Energy Authority (TEA) for Power Procurement and Advisory Services for the period of October 1, 2019 to June 30, 2020 for a not-to-exceed budget of \$600,000.

Item 5

Appoint one member to the Community Advisory Committee for 2019-20 representing the South Bay Region.

Item 6

Bylaws Amendment No. 1

- a) Approve the Bylaws amendment regarding participation of non-elected Alternate Directors in Closed Session;
- b) Provide 30-day notice of CPA's intent to amend the Bylaws; and
- c) Direct the General Counsel to return with an implementing resolution for adoption of the amended Bylaws effective January 1, 2020 at the next duly-noticed Board meeting following the 30-day notice period.

Item 7

Approve proposed amendment to Policy No. 7 Net Energy Metering (NEM), regarding procedures for processing unclaimed returned checks.

Item 8

Receive and file an update from the
September 12, 2019 Community Advisory
Committee meeting.

Item 9

Receive and file Letter Agreement with River City Bank updating loan covenants.

IV. Regular Agenda

Item 10

Presentation on Local Programs Goals and
Priorities Strategic Planning Project.

CLEAN POWER ALLIANCE

Local Program Goals and Priorities Status Update

CPA Board of Directors Meeting - October 3, 2019

Agenda

Recap

- Purpose of project
- Project schedule

Stakeholder Process

- Who we engaged
- What we heard

Program Categories

Comparison Tool

Next Steps

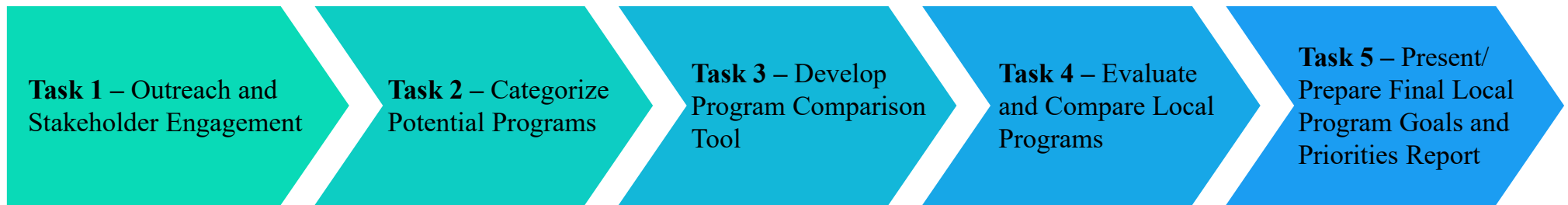
Q&A

Project Purpose

Provide Clean Power Alliance with:

1. Stakeholder goals and priorities, and a local program comparison tool, to aid **future** development and refinement of local programs
2. An **initial** prioritized set of recommendations on local programs based on this framework

Project Process



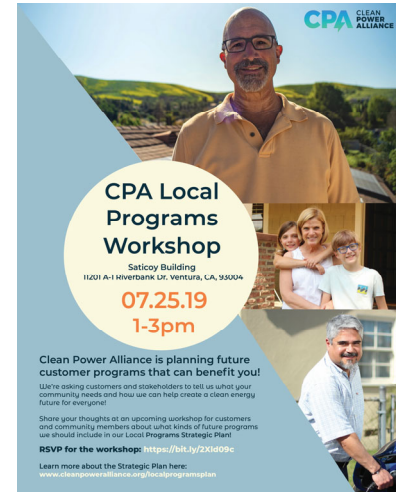
Stakeholder Process

Who We Engaged

Goal Setting Workshops: 100 total participants

- CPA Board Retreat
- CPA CAC Workshop
- LA County Public Workshop
- Ventura County Public Workshop
- Subject Matter Focus Groups
 - Environmental
 - Environmental Justice / Community
 - Labor

On-Line Survey (English, Spanish, Chinese): 317 total participants

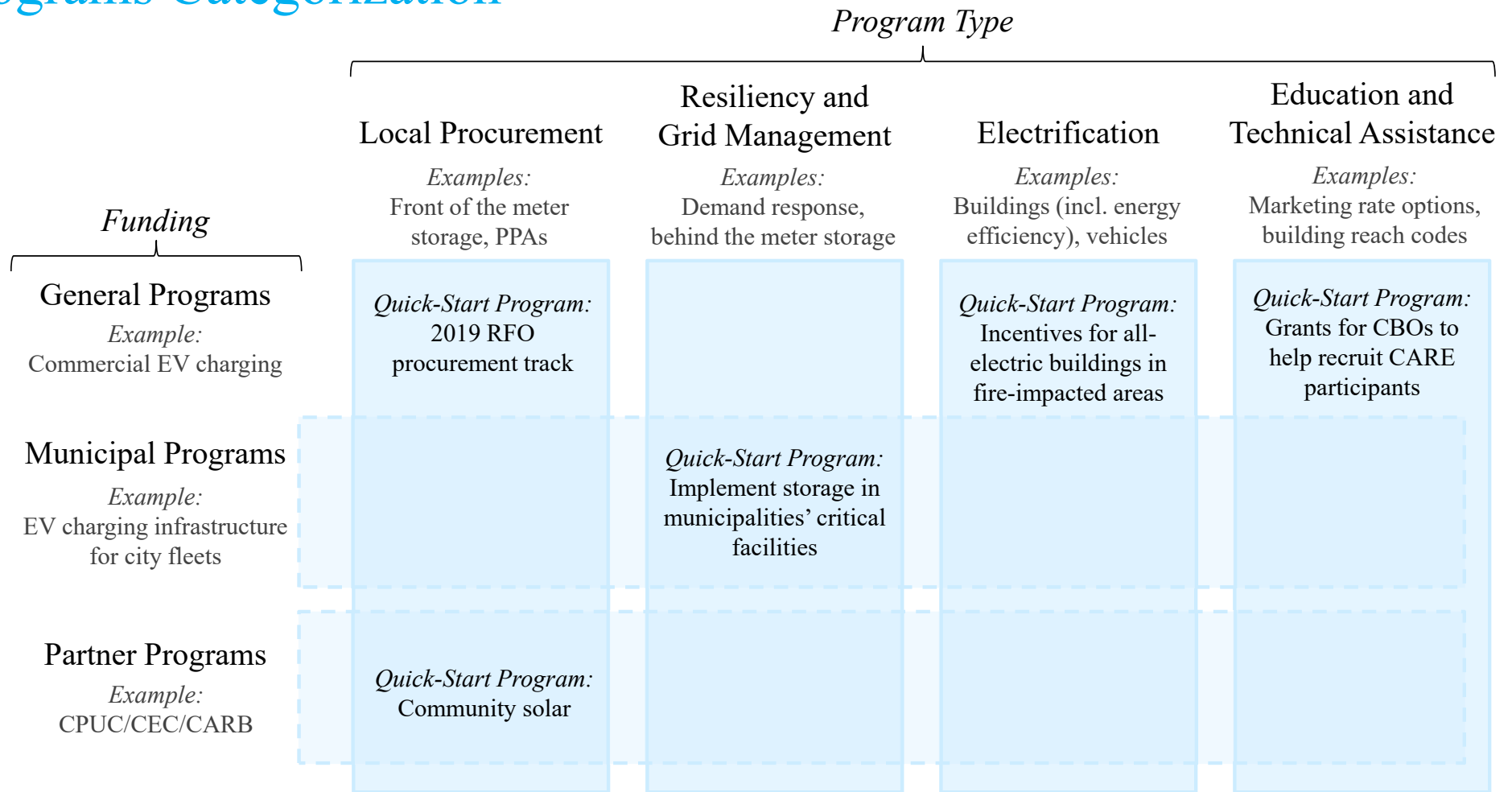


Stakeholder Process

What We Heard

| Goals and Priorities | | Weighting (%) |
|----------------------|----------------------------------------------------------------------------|---------------|
| Outcomes | | |
| 1. | Make 100% Green Rate more affordable | 14.2 |
| 2. | Job creation | 12.4 |
| 3. | Decarbonization | 10.8 |
| 4. | Local resiliency – community response to stresses | 8.3 |
| 5. | Increase accessibility and benefits for specific groups | 7.5 |
| 6. | Grid resiliency – mitigating grid shutdowns | 6.5 |
| 7. | Public health – including air quality, heat stress and sensitive receptors | 5.2 |
| Program Type | | |
| 1. | Distributed energy resources | 8.2 |
| 2. | Energy efficiency | 7.5 |
| 3. | Education | 7.4 |
| 4. | Electrification | 6.2 |
| 5. | Local program funding | 4.8 |
| 6. | Partnerships | 1.1 |

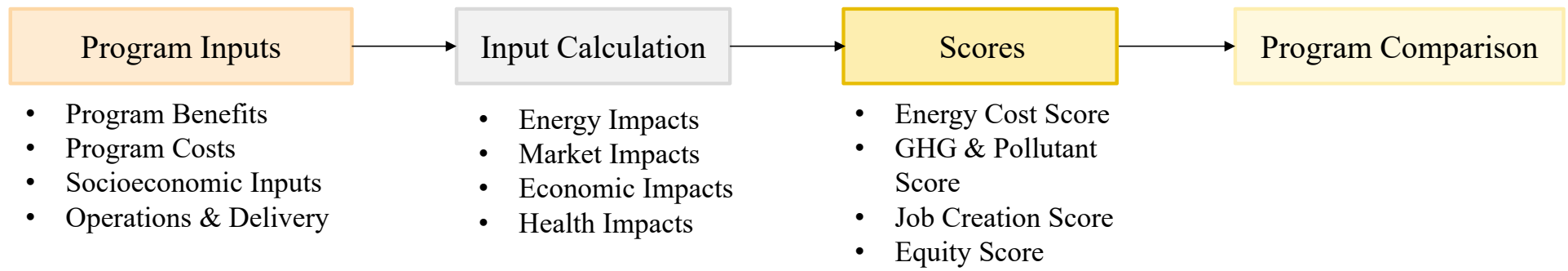
Programs Categorization



Slide 7

Comparison Tool

Tool Workflow



Comparison Tool

Tool Capabilities

The tool helps Clean Power Alliance by providing the following capabilities:

- **Compare** programs for prioritization
- **Justify investment** in a program by understanding its **co-benefits**
- **Adjust** a program to **maximize co-benefits** and **cost effectiveness**
- **Updatable** to changing circumstances and priorities

Next Steps



Nov 14th: Presentation to the CAC
(75% completion stage)

Dec 5th or Jan 9th: Present final report to the Board

Item 11

Approve and authorize the Executive Director to execute Amendment No. 1 to the agreement between Calpine and CPA and approve and authorize the Executive Director to execute an agreement with Calpine and Olivine, Inc. for Distributed Energy Resources (DER) Pilot Program services.



DER Pilot Program

October 3, 2019

Background

- CPA has been working with Calpine Energy Solutions and subcontractor Olivine Inc. to plan and implement a proposed Distributed Energy Resources (DER) Pilot Program, expected to launch in January 2020
- DERs are local, geographically dispersed energy resources or technologies that enable customers to increase, shift or reduce load during certain times of the day. Load reductions from DERs can be aggregated and sold as a resource in the CAISO market
- The DER Pilot Program will allow CPA to develop critical learning and capabilities in the DER space, help achieve policy and procurement goals, and inform the broader deployment of local programs

Olivine Inc.

- An industry leader in DER program design, deployment and operations, Olivine has successfully launched DER programs for other utilities and CCAs
- Olivine will have lead responsibility for implementation activities and operations of the CPA DER Pilot Program
- Olivine will act as Demand Response Provider (DRP) and Scheduling Coordinator for DER Resources, with the ability to aggregate DERs for real time bidding into the wholesale market

DER Pilot Program Goals

- Achieve CPA policy objectives
 - Improved air quality and public health, GHG reduction, benefits to Disadvantaged Communities, local integration of renewables, local capacity needs and resilience
- Achieve benefits to customers, allowing them to save money and benefit from DER equipment investment
- Achieve CPA procurement goals
 - Allow CPA to test wholesale market participation, avoid RA and wholesale market purchases, and earn revenue from bidding event capacity into wholesale market

Program Selection Process

CPA and Olivine conducted a rigorous program selection process over the past several months:

1. Conducted review and analysis of CPA system load curves and customer load profiles to identify target customer classes for DER technology deployment that would reduce contribution to system loads during hours of high-priced wholesale energy
2. Developed a detailed screening matrix to identify the top 10 technology use cases from CPA and program participant perspectives
3. Selection of top 8 technology use cases for further analyses, including cost/benefit analysis for CPA and customers
4. Selection of final 3 technology pillars for pilot-scale program design and implementation

Proposed DER Pilot Program

The proposed program is comprised of three pillars targeting different customer segments, primarily leveraging existing customer equipment

| | <u>Description</u> | <u>Target Segment</u> |
|------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------|
| EV Charging | Pays customers to allow CPA to shed EV charging load during peak times | Commercial & Municipal |
| Solar + Storage | Pairs onsite solar with battery to help customers manage costs and help CPA shift load | Residential & Commercial |
| Smart Thermostat | Pays customers who allows CPA to control load remotely with smart thermostats | Residential, including Disadvantaged Communities (DACs) |

EV Charging

Segments: Commercial and Municipal

Target Participation: Up to 56 customers with multiple EV chargers

- Commercial and municipal customers with existing EV smart charging infrastructure will participate in CPA load reduction events that will reduce their EV charging load during the evening ramp (4pm-9pm)
- CPA to provide enrollment incentive of \$250 (\$300 for DAC)
- CPA to provide annual participation incentive of \$100/kW for participation in load shifting events based on committed capacity (\$125/kW for DAC)

Solar + Storage

Segments: Residential & Commercial

Target Participation: Up to 220 customers
(120 commercial, 100 residential)

- Customers with new or existing paired solar and battery storage system will participate in events that allow CPA to call on their battery as a DER resource during the evening ramp (4pm-9pm)
- Customers charge battery with solar during low price periods and battery is discharged during evening peak (4pm-9pm)
- CPA to provide enrollment incentive of \$100 for residential and \$250 for commercial (\$125 and \$300 for DAC)
- CPA to provide annual incentive of \$100/kW for participation in load shifting events based on committed capacity (\$125/kW for DAC)
- For some commercial customers, CPA may provide additional incentive funds for battery installation

Smart Thermostat

Segment: Residential

Target Participation: Up to 900 customers
(600 existing thermostat, 300 new)

- Residential customers with new or existing smart thermostats will participate in load control events called by CPA during the evening ramp (4-9pm)
- Program will have options for pre-cooling and event override
- CPA to provide \$100 enrollment incentive (\$125 for DAC)*
- CPA to provide annual incentive of \$100 for participation in load shifting events (\$125 for DAC)

*Customers that buy new thermostats are also able to take advantage of equipment rebates through SCE or SoCal Gas.

Summary of Incentive Budget

| Technology Pillar | Units/Capacity | Estimated # of Participants | Enrollment Incentive | Participation Incentive / Year | Total |
|--------------------------------------|--------------------------------|-----------------------------|----------------------|--------------------------------|------------------|
| I. Smart T-Stats | 600 existing/ 300 new | | | | |
| Residential | 775 | 775 | \$100 | \$100 | \$155,000 |
| Residential – DAC/low-income | 125 | 125 | \$125 | \$125 | \$31,250 |
| Pillar I Total | | 900 | | | \$186,250 |
| II. Solar + Storage | Committed Capacity (kW) | | | \$/kW-year | |
| Residential | 85 | 85 | \$100 | \$100 | \$17,000 |
| Residential – DAC/low-income | 15 | 15 | \$125 | \$125 | \$3,750 |
| Commercial | 1800 | 90 | \$250 | \$100 | \$202,500 |
| Commercial – DAC | 600 | 30 | \$300 | \$125 | \$84,000 |
| Direct Installation Incentive | 2,500 | | | | \$172,300 |
| Pillar II Total | | 220 | | | \$479,550 |
| III. Commercial EV Charging | Committed Capacity (kW) | | | \$/kW-year | |
| Commercial | 845 | 42 | \$250 | \$100 | \$95,000 |
| Commercial – DAC | 280 | 14 | \$300 | \$125 | \$39,200 |
| Pillar III Total | | 56 | | | \$134,200 |
| Pillar Incentive Totals | | | | | \$800,000 |

Phased Implementation

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

Phase 1

Launch Preparation

Oct 2019 – Dec 2019

- Board approval of DER Services Agreement
- Refine program details
- Develop marketing and sales materials
- Commercial pre-enrollment

Phase 2

Program Launch

Jan 2020 – May 2020

- Marketing and customer engagement through multiple channels
- Customer enrollment

Phase 3

Program Operations

June 2020 – Dec 2020

- Activities related to aggregation of DER resources to bid into the CAISO wholesale market
- Interim report to assess program extension

Summary and Next Steps

- Today, staff is recommending approval of the DER Services Agreement
- Upon execution of agreement, pre-launch activities to commence, including development of marketing collateral and engagement of high priority commercial customers
- Staff will be communicating with members regarding outreach strategy and providing marketing tools as January 2020 launch date nears
- Member agencies with EV charging infrastructure or battery storage are eligible to participate in the pilot

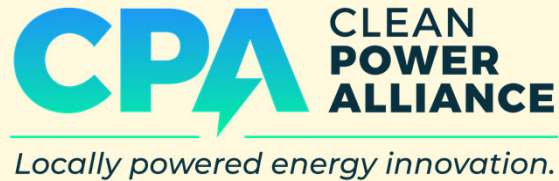
Appendix

DER Programs Reviewed

| DER Type | DER Category |
|------------------------------|--------------|
| Solar PV | Generation |
| Community Solar | Generation |
| Solar plus Storage | Generation |
| Community Solar Plus Storage | Generation |
| Smart Home Package | Load Control |
| Electric Vehicle V1G | Load Control |
| Electric Vehicle V2G | Load Control |
| Smart Thermostat | Load Control |
| Resistance Water Heater | Load Control |
| Heat Pump Water Heater | Load Control |
| Behavioral Demand Response | Load Control |
| Pool Pump Load Control | Load Control |
| Residential Battery | Storage |
| Community Battery | Storage |
| Commercial Solar | Generation |
| Microgrid (PV + Storage) | Generation |
| CHP | Generation |
| Fuel Cell | Generation |
| Automated Demand Response | Load Control |
| A/C Cycling | Load Control |
| Pump Cycling | Load Control |
| Commercial Battery | Storage |
| Flywheel | Storage |

Item 12

Presentation on Long-Term Power Contracting status.



Update on Renewable Energy Contracting

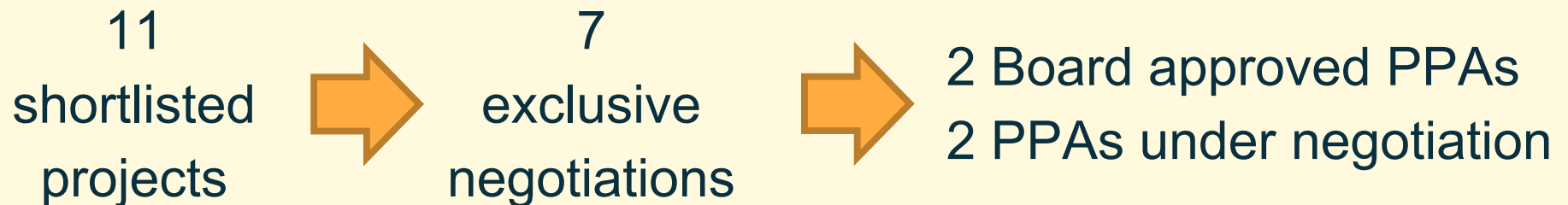
October 3, 2019

Agenda

- Status of current long-term renewable energy contracts
- Procurement drivers
 - Long-term compliance requirement
 - Cost savings through long-term pricing
 - Portfolio diversification – renewables integration and GHG reduction
- Overview of 2019 Clean Energy RFO

Summary of Long-term Contracting Activities

- CPA launched its first Clean Energy RFO in October 2018, with the goal of contracting for 1-2 million MWh of renewable energy
- CPA requested offers from renewable, renewable plus storage, and standalone storage projects
- CPA received a robust response from over 230 facilities
- The RFO resulted in 1.2 million MWh of contracted generation¹:



- Board also approved 2 contracts via bilateral negotiations

(1) Includes solar + storage PPA currently under negotiation

Current Long-term Portfolio and Projects Under Negotiation

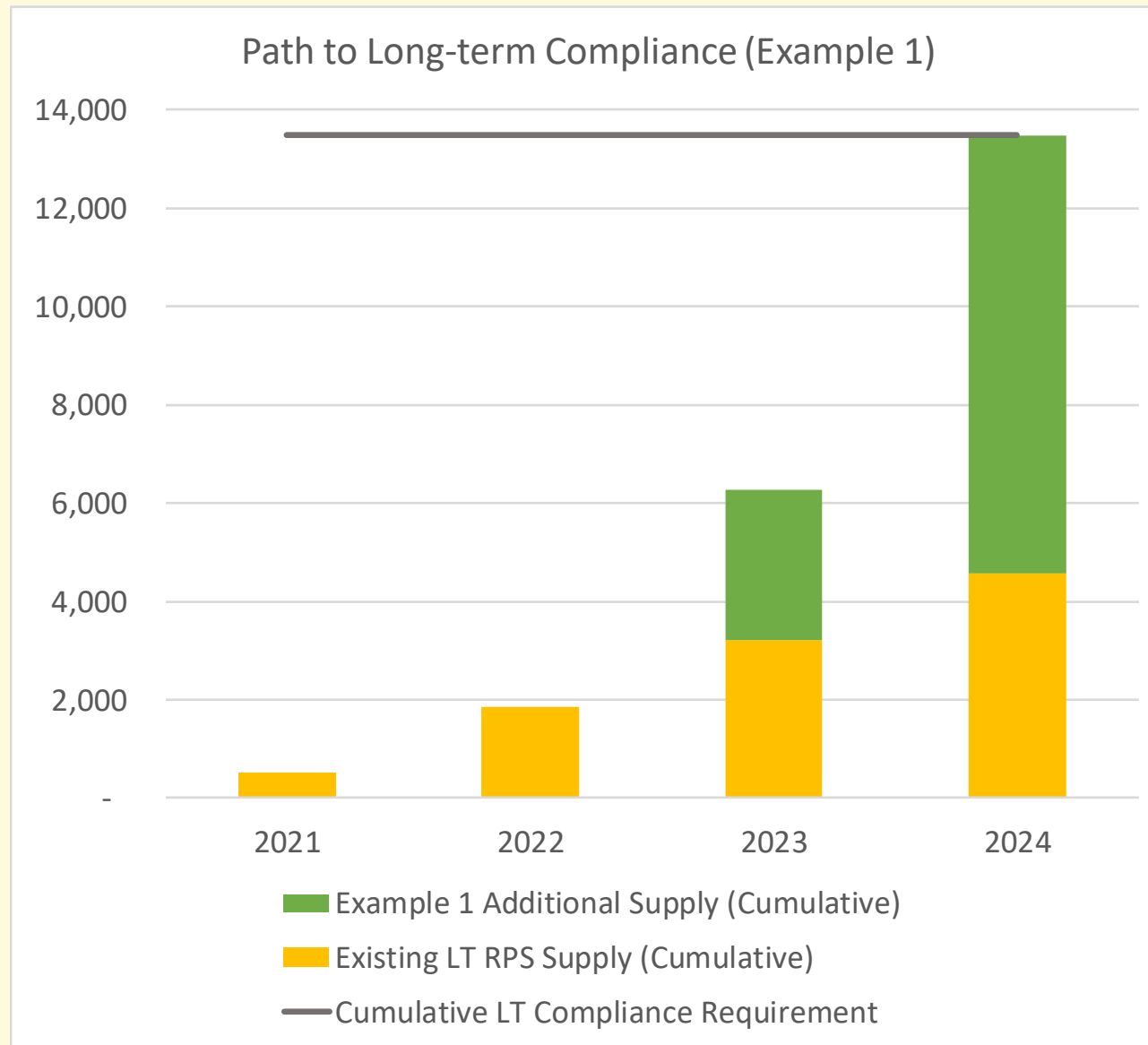
| Project | Type | MW | Online Date | Source | Status |
|------------------|--------------------|------|-------------------------|-----------------------|-------------------|
| Voyager | Wind | 21.6 | Operational | Bilateral | Executed |
| Arlington | Solar | 233 | 12/31/2021 ¹ | 2018 Long-term RFO | Executed |
| Golden Fields | Solar | 40 | 3/31/2021 | 2018 Long-term RFO | Executed |
| Isabella | Hydro | 11.9 | Operational | Bilateral | Executed |
| Solar + Storage | Solar + Storage | 123 | 12/31/2021 | 2018 Long-term RFO | Under negotiation |
| Moorpark Storage | Standalone Storage | 60 | 12/31/2022 | 2018 Long-term RFO | Under negotiation |
| White Hills | Wind | 300 | 12/31/2020 | Bilateral | Pending approval |

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

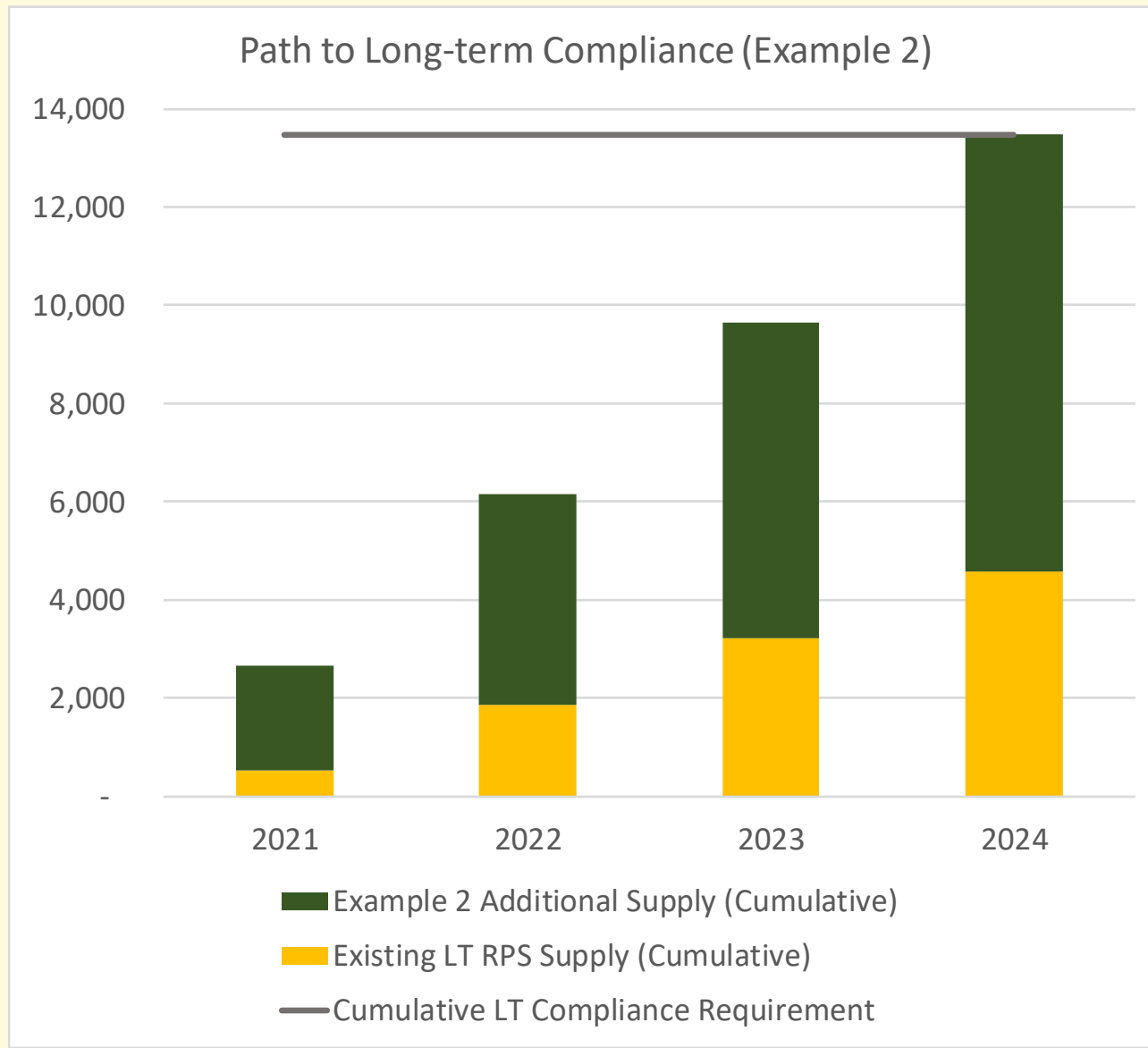
Long-Term Procurement Requirement and Project Timing

- SB 350 requires CPA to secure at least 65% of its RPS energy obligations through long-term (10+ years) contracts over the 2021-2024 compliance period
- Projects with earlier online dates help CPA meet its compliance requirement early and reduce catch up that would need to be made in later years (examples on next slides)
- Meeting compliance requirements in the near term allows CPA to become more selective over time in terms of price, location, innovation
- Opportunities to contract with new-build resources with 2020 and 2021 online dates are limited due to development timelines

Path to Compliance Example – Late Online Dates



Path to Compliance Example – Early Online Dates

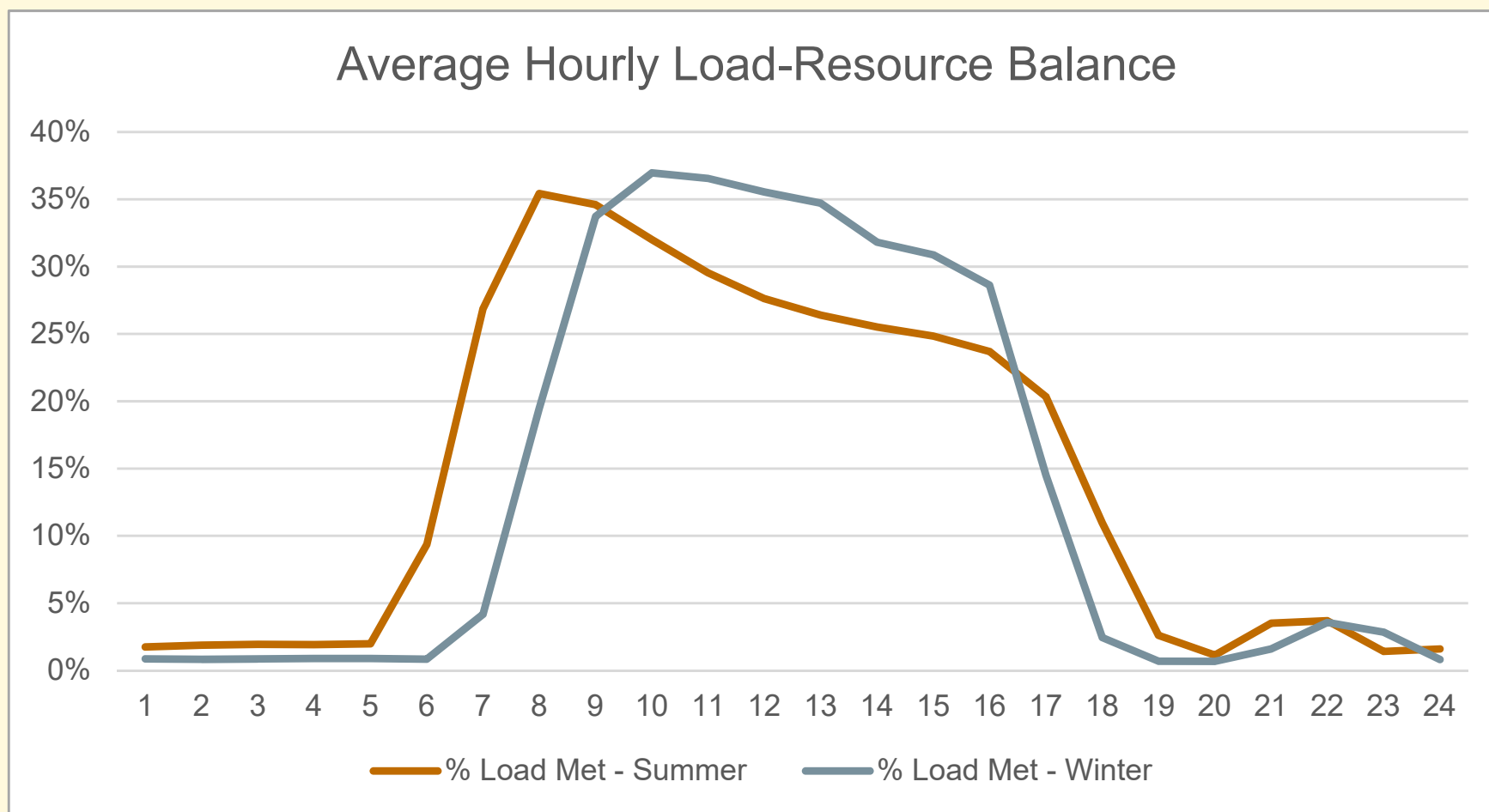


Portfolio Diversity is Critical

- Resource diversity will be an important consideration in portfolio selection
- Most renewable energy supply is anticipated to come from solar resources, therefore other resources that generate significant output during the nighttime will improve CPA's supply shape compared to load and help with overall renewable integration
- CPA can reduce its portfolio greenhouse gas content by offsetting nighttime system generation that is largely provided by gas-fired resources with emissions-free renewable supply
- Wind, geothermal, small hydro and resources paired with storage all can provide nighttime renewable energy supply

Hourly Power Supply

- Average supply over a day from CPA's current long-term contracts



2019 Clean Energy RFO

- CPA plans to launch its 2019 Clean Energy RFO in October
 - Targeting another 1-2 million MWh of annual generation
- To enhance competitiveness of smaller local projects, two tracks will be used:
 - **Utility-Scale Procurement Track** (10 MW or larger)
 - **Distributed Procurement Track** (less than 10 MW and located in Los Angeles and Ventura counties)
- A “fast-track” procurement process is also being contemplated for GHG-free Resource Adequacy capacity (such as battery storage) as a result of the recent proposed CPUC decision

2019 Clean Energy RFO Evaluation Criteria

- **Utility-Scale Procurement Track** will use the same evaluation criteria as 2018, with *preferences* for local and in-state locations, projects on already disturbed land, Project Labor Agreements and benefits to DACs
- **Distributed Procurement Track** will have additional *mandatory* Workforce Development criteria and enhanced locational and environmental preferences suited to urbanized areas and to reduce local air pollution
- **Both Tracks** will be used as data benchmarks for CPA's 2020 Integrated Resources Plan (IRP), where a target amount of local procurement as a percentage of overall long-term procurement will be proposed to the Board

2019 RFO Schedule

| Date | Action |
|------------------|-------------------------------------|
| Mid-October | Launch 2019 Clean Energy RFO |
| Late-October | Conduct RFO Bidder Webinar |
| Mid-November | Bids Due |
| Mid-December | Longlist Selection |
| Mid-January | Energy Committee Shortlist Approval |
| Early February | Exclusivity Agreements Due |
| February – April | PPA Negotiations |
| May – June | Board Consideration of PPAs |

Schedule may be subject to change

Item 13

Approve a 20-year power purchase agreement (PPA) with the Mohave County Wind Farm, LLC (Mohave Wind) project, and authorize the Executive Director to execute the Mohave Wind PPA.

V. Management Update

VI. Committee Chair Updates

Legislative & Regulatory Committee Chair

Finance Committee Chair

Energy Planning & Resources Committee Chair

VII. Board Member Comments

VIII. Report from the Chair

IX. Adjourn

Next Meeting – December 5, 2019

