

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Continue
Implementation and Administration, and
Consider Further Development, of California
Renewables Portfolio Standard Program.

Rulemaking 18-07-003

**FINAL 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN OF
THE CLEAN POWER ALLIANCE OF SOUTHERN CALIFORNIA**

**PUBLIC VERSION
(Appendices C and E Redacted)**

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January 18, 2023

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In accordance with the California Public Utilities Commission’s (“Commission” or “CPUC”) March 30, 2021 *Assigned Commissioner and Assigned Administrative Law Judges’ Ruling Identifying Issues and Schedule of Review for 2022 Renewables Portfolio Standard Procurement Plans and Denying Joint IOUs’ Motion to File Advice Letters for Market Offer Process* (“ACR”) and the *Decision on 2022 Renewable Portfolios Standard Procurement Plans* (D. 22-12-030), the Clean Power Alliance of Southern California (“CPA”) hereby submits this Final 2022 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in ACR sections 6.1-6.16. This RPS Procurement Plan also addresses deficiencies related to CPA’s Draft 2022 RPS Procurement Plan in D. 22-12-030.

CPA notes that certain issues and requests in these ACR sections are not statutory requirements for Community Choice Aggregators (“CCAs”). CPA is nevertheless voluntarily responding to these ACR sections in the interest of transparency and in the spirit of collaboration with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR,

however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”) 350 or Commission decisions and rulings on RPS Procurement Plan submittals do not extend to CCAs, and CPA reserves the right to challenge any such assertion of jurisdiction over these matters.

I. Major Changes to RPS Plan

This Section describes the most significant changes between CPA’s Final 2021 RPS Procurement Plan and its Final 2022 RPS Procurement Plan. A redline of this Final 2022 RPS Plan against CPA’s Draft 2022 RPS Plan is included as Appendix A. The table below provides a list of key differences between the 2021 and 2022 RPS Procurement Plans:

Plan Reference	Plan Section	Summary/Justification of Change
2022 RPS Procurement Plan: Section III	Summary of Legislation Compliance	Updated to describe compliance with SB 255.
2022 RPS Procurement Plan: Section IV	Assessment of RPS Portfolio Supplies and Demand	Updated to describe CPA’s Voluntary Allocation and Market Offer election, coordination efforts across CPUC program requirements, including IRP and climate change, and industry-wide challenges delaying project schedules.
2022 RPS Procurement Plan: Section VII	Risk Assessment	Updated to describe high compliance and development risk and address specific risk factors in the ACR.
2022 RPS Procurement Plan: Section XIII	Curtailement Frequency, Forecasting, Costs	Update to describe terms in RPS contracts intended to reduce the likelihood of curtailement or protect against negative prices.

II. Executive Summary

CPA began offering service to municipal customers of unincorporated Los Angeles County on February 1, 2018, and initiated the second phase of its roll-out to non-residential customers of unincorporated Los Angeles County, Rolling Hills Estates, and South Pasadena

beginning June 25, 2018. CPA enrolled all residential customers in 31 member jurisdictions in February 2019, and completed enrollment of the remainder of its non-residential customers in these 31 member jurisdictions in May 2019. On March 26, 2019, the CPUC certified CPA's Addendum No. 3 to the Community Choice Aggregation Implementation Plan and Statement of Interest, which expands CPA's service to the City of Westlake Village starting in June 2020, CPA's 32nd member jurisdiction. This expansion of service is included in CPA's total retail sales forecast. CPA currently serves approximately one million customer accounts and is the largest CCA in the state.

CPA has made significant progress towards meeting its renewable energy contracting obligations, including the execution of 21 long-term renewable and energy storage contracts totaling over 1,903 MW of renewable energy and 1,027 MW of storage.

III. Summary of Legislation Compliance

This RPS Procurement Plan addresses the requirements of all relevant legislation and the Commission's regulatory framework. This Section describes the relevant statutory and regulatory requirements and how this RPS Procurement Plan demonstrates that CPA meets these requirements.

SB 350 was signed by the Governor on October 7, 2015. SB 350 set a new RPS procurement target of 50 percent by December 31, 2030. On December 20, 2016, the Commission issued Decision ("D.") 16-12-040, which partially implemented the increased targets of SB 350 by establishing new compliance periods and procurement quantity requirements. On July 5, 2017, the Commission issued D.17-06-026, which implemented some of the key remaining elements of SB 350, including adopting new minimum procurement requirements for long-term contracts and owned resources, as well as revising the excess

procurement rules. SB 350 also directed the Commission to commence the Integrated Resources Planning (“IRP”) process. Subsequently, through D. 19-11-016, the Commission directed load serving entities (“LSEs”) to procure system capacity resources to come online between 2021 and 2023 to meet the anticipated system capacity shortfall. In 2021, the Commission issued D. 21-06-035, which directed LSEs to procure additional system capacity to address mid-term reliability.

SB 100 was signed by the Governor on September 10, 2018 and became effective on January 1, 2019. SB 100 increased the RPS procurement requirements to 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. On June 6, 2018, the Commission issued D.18-05-026, which implemented changes made by SB 350 to the RPS waiver process and reaffirmed the existing RPS penalty scheme. In July of 2018, the Commission issued Rulemaking 18-07-003 to continue the implementation of the RPS. On May 22, 2019, the Commission issued a proposed decision that would continue to use a straight-line method to calculate compliance period procurement quantity requirements.

The current RPS procurement targets are incorporated into CPA’s Renewable Net Short Calculation Table as described in Section VIII below and attached as Appendix C. CPA’s current and planned procurement, as reflected in CPA’s Renewable Net Short Calculation Table and described in Sections IV and V, is sufficient to exceed these targets, including a minimum margin of over-procurement based on CPA’s risk assessment, as described in Sections VII and IX. CPA is also positioned to exceed the SB 350 long-term procurement requirement, as described in Sections V and VII.

SB 901, signed by Governor Brown on September 21, 2018, added Public Utilities Code section 8388, which requires any investor owned utility, publicly owned electric utility, or CCA

with a biomass contract meeting certain requirements to seek to amend the contract to extend the expiration date to be five years later than the expiration date that was operative as of 2018. CPA does not have a contract with a biomass facility that is covered by Public Utilities Code section 8388.

To meet these legislative mandates and regulatory requirements, in October 2018 CPA launched its first solicitation for long-term renewable and energy storage contracts. CPA issued a 2019 Clean Energy Request for Offers (“RFO”) and a 2019 Reliability RFO in October 2019. CPA issued its 2020 Clean Energy RFO in October 2020 to procure more RPS-eligible resources to meet the aforementioned requirements. CPA issued its 2021 Mid-Term Reliability RFO in October 2021 to secure additional resources needed to comply with D. 21-06-035. CPA also issued two Disadvantaged Communities (“DAC”) and Community Solar (“CS”) Green Tariff (“GT”) program RFOs – one launched in December 2020 and a second launched in December 2021. To date, CPA has contracted for a total of 1,903.95 MW of long-term RPS eligible resources and 1,027.5 MW of long-term storage resources, and has secured sufficient resources to meet its 65% long-term contract requirement.

SB 255, signed into law by Governor Newsom in 2019, requires CCAs to participate in the Commission’s Supplier Diversity Program set forth in General Order (“GO”) 156. CCAs with gross annual revenue over \$25 million are required to submit annual reports. CPA has submitted annual Supplier Diversity Reports to be compliant with GO 156 and D. 22-04-035. As stated in CPA’s 2021 Supplier Diversity Report, CPA is prohibited to give preferential treatment based on race, sex, color, ethnicity, and national origin due to Proposition 209; nevertheless, CPA encourages minority-owned, women-owned, veteran-owned, and local businesses to respond to all solicitations. CPA also encourages its energy suppliers to expand their outreach

and consideration of diverse subcontractors by including a diversity supplier survey in its standard solicitation form. In further implementing SB 255, CPA established an internal Diversity, Inclusion, and Equity (“DEI”) team to assess best practices that can be adopted by CPA to expand our reach to diverse businesses while complying with Proposition 209 restrictions. This has culminated in an initiative to cultivate stronger relationships with community-based organizations in Los Angeles and Ventura counties that serve diverse communities to spread the word about contracting opportunities with CPA.

IV. Assessment of RPS Portfolio Supplies and Demand

IV.A. Portfolio Supply and Demand

CPA expects to meet all of its RPS compliance obligations. The quantitative analysis provided in Section VIII reflects CPA’s current forecast of retail sales and RPS-eligible procurement, assessed through 2032. CPA has entered into multiple power supply agreements, which will contribute to some of CPA’s RPS compliance over the upcoming twenty-year period. CPA expects to meet pertinent RPS compliance obligations during the coming twenty-year timeframe by entering into a variety of other renewable energy supply agreements. In October 2018, CPA launched its first solicitation for 15-year and longer long-term renewable and energy storage contracts. Resulting from this process and other bilateral negotiations, CPA executed four long-term renewable energy contracts and one long-term renewable energy plus storage contracts. In October 2019, CPA launched its 2019 Clean Energy RFO to meet its long-term renewable energy contracting requirements and CPA’s 2019 Reliability RFO to meet its IRP Procurement Track incremental capacity procurement requirements. From these two processes, CPA executed seven renewable energy plus storage and two standalone storage agreements. CPA launched its third solicitation for long-term clean energy resources in the Fall of 2020, the

2020 Clean Energy RFO. CPA has executed six long-term contracts, including geothermal and solar plus storage resources, from the 2020 Clean Energy RFO. In December 2020, CPA launched its fourth solicitation for long-term clean energy resources in its 2020 DAC-GT and CSGT RFO, which yielded one solar long-term PPA for CPA's DAC-GT program. In 2021, CPA issued two additional RFOs, its 2021 Mid-Term Reliability RFO and its 2021 DAC-GT and CSGT RFO. For its 2021 DAC-GT and CSGT RFO, which closed on June 1, 2022, CPA is currently evaluating offers and anticipates shortlisting of projects in July 2022. The 2021 Mid-Term Reliability RFO seeks to contract resources that would satisfy the requirements set by D. 21-06-035, which directs LSEs to procure additional capacities to be brought online in 2023, 2024, and 2025, and long lead time ("LLT") resources that are able to deliver at maximum capacity for at least eight hours, and non-weather dependent resources that have at least an 80 percent capacity factor. CPA has entered into exclusive negotiations with counterparties from the 2021 Mid-Term Reliability RFO and anticipates executing contracts in Summer/Fall 2022. In addition, CPA plans to launch a second 2022 Mid-Term Reliability RFO to ensure CPA's procurement obligations for new reliable capacity are met.

The exact portfolio characteristics selected from future solicitations may vary depending on market conditions, legislative and regulatory policy changes, technological improvements, preferences of the CPA and its governing body, or other developments. To manage this future uncertainty, CPA examines and estimates supply, including potential voluntary allocations of PCIA renewable resources, and customer demand and will structure its future procurement efforts to balance customer demand with resource commitments. This examination of customer demand and other market developments will help reduce costs and assist in meeting planned procurement for the period in this RPS Procurement Plan.

IV.A.1. Voluntary Allocation and Market Offer (VAMO)

The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a “Voluntary Allocation Market Offer” (“VAMO”) framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. To implement this modified VAMO structure, D.21-05-030 identifies various next steps, including a meet-and-confer process with the IOUs regarding the method for calculating potential Voluntary Allocations based on vintaged, annual load forecasts and a method for dividing the IOU’s RPS portfolios into shares. This will be followed by the submission of an advice letter and workshops.

In May 2022, CPA’s Board of Directors approved the staff recommendation to elect 50% of the Long-Term Voluntary Allocations. CPA formally made the Long Term Voluntary Allocation election on May 24, 2022.

IV.A.2. Portfolio Optimization

CPA was founded with the mission to empower its member communities to make an impact on climate change through clean, reliable, and competitively-priced energy. With this mission in mind, CPA staff aims to procure RPS, carbon-free, and storage resources that can

reduce our communities' carbon footprint and reliably deliver energy to its customers at affordable rates. These values are reflected in CPA's solicitation evaluation framework, which is used to evaluate all the resources competitively bid into its RFOs, as well as CPA's IRP filings.

CPA coordinates as appropriate with other CCAs via CalCCA in regulatory and planning forums to meet the State's reliability and environmental targets, and would consider joint resource procurement when appropriate. To date, CPA has not participated in a joint procurement effort with other retail sellers. Given CPA's sizable load, we have been able to meet compliance requirements through standalone procurement. However, CPA regularly evaluates participating in joint solicitations with other CCAs that can maximize value for its customers, achieve statewide or local procurement objectives, and minimize risk for CPA and its customers. For example, in June 2020, CPA participated in a joint effort with CleanPowerSF, East Bay Community Energy, Marin Clean Energy, Monterey Bay Community Power, Peninsula Clean Energy, Pioneer Community Energy, Redwood Coast Energy Authority, San Jose Clean Energy, Silicon Valley Clean Energy, Sonoma Clean Power, Valley Clean Energy, and Western Community Energy to seek qualified energy suppliers and developers to participate in a 2020 Request for Information on Long-Duration Storage. The Request for Information was intended to collect information for a subsequent long-duration storage request for offers, as well as helping inform long-term resource planning, including identifying candidate resources for the long-duration storage need identified in the 2019-2020 IRP Reference System Plan.

CPA also engages in sales solicitations to offer sales to other retail sellers to ensure that CPA's customers are not overburdened in the event of resource overgeneration or variations in expected load.

As CPA considers its long-term resource needs, CPA evaluates options in its existing power purchase agreements (“PPAs”) to increase output through either facility upgrades or adding new capacity to the generating facility. Expanding existing facilities can provide additional generation at reduced costs with a lower risk of project failure because the need for distribution system upgrades and permitting may be reduced. For example, CPA worked with a counterparty to add storage to its already contracted solar-only project, Arlington Energy Center II, LLC, allowing CPA to better optimize the output of this RPS facility.

On June 24, 2021, the Commission adopted D.21-06-035, which directed all retail sellers to procure 11,500 MW of new net qualifying capacity (“NQC”) between 2023 and 2026 and assigned each retail seller a specific procurement responsibility based on its share of peak demand. CPA’s total obligation is 679 MW, which must include minimum amounts of procurement from certain subcategories: (1) 148 MW from firm, zero-emitting capacity by 2025; (2) 59 MW from long duration storage resources by 2026; and (3) 59 MW from firm, non-fossil fueled baseload generating resources by 2026. To ensure compliance with D.21-06-035, CPA launched its 2021 Mid-Term Reliability RFO in October 2021. CPA expects to contract with one RPS-eligible resource from this RFO, and has issued a second 2022 Mid-term Reliability RFO in Summer 2022 to meet its outstanding compliance requirement. These resources, in addition to satisfying the D. 21-06-035 requirements, will provide system capacity values to help meet CPA’s RA compliance obligations and are consistent with the anticipated procurement described in CPA’s 2020 and 2022 IRP.

IV.B. Responsiveness to Local and Regional Policies

(i) Responsiveness to Policies of CPA's Governing Board

CPA is a local governmental agency that is subject to the control of its governing board and is directly accountable to the community that it serves. CPA strongly supports and is committed to meeting the state's GHG reduction and renewable procurement goals. As a member of CalCCA, CPA actively supported the passage of SB 100 and has fully incorporated the procurement requirements of the state's RPS program into its overall procurement strategy. Beyond the state's minimum renewable procurement requirements, CPA's governing board has established additional requirements for renewable procurement via its product offerings community default selections, which achieve renewable energy targets. CPA currently offers its customers a Lean, Clean, and 100% Green rate, which correspond to various renewable or carbon-free energy content percentages (compliance, 50%, and 100%, respectively). The voluntary margin of overprocurement reflects these customer product selections. Approximately 32% of CPA's customers receive service at the 100% Green rate currently, and this is anticipated to increase to 73% of CPA's customers at the 100% Green rate by the end of 2025 based on actions taken by CPA's member agencies. Due to this additional voluntary procurement to meet its customers' demand for renewable energy resources, CPA met its SB 100 target of 60% renewable energy in 2019 and 2020, much earlier than the 2030 compliance target, and anticipates exceeding this target in 2022 and beyond.

In addition to CPA's board-established product content offerings, CPA's board has established other policies related to CPA's renewable procurement, including discouraging the procurement of PCC3 products and encouraging the development of local and distributed energy resources. As of 2020, CPA has not procured PCC3 products to meet its RPS compliance

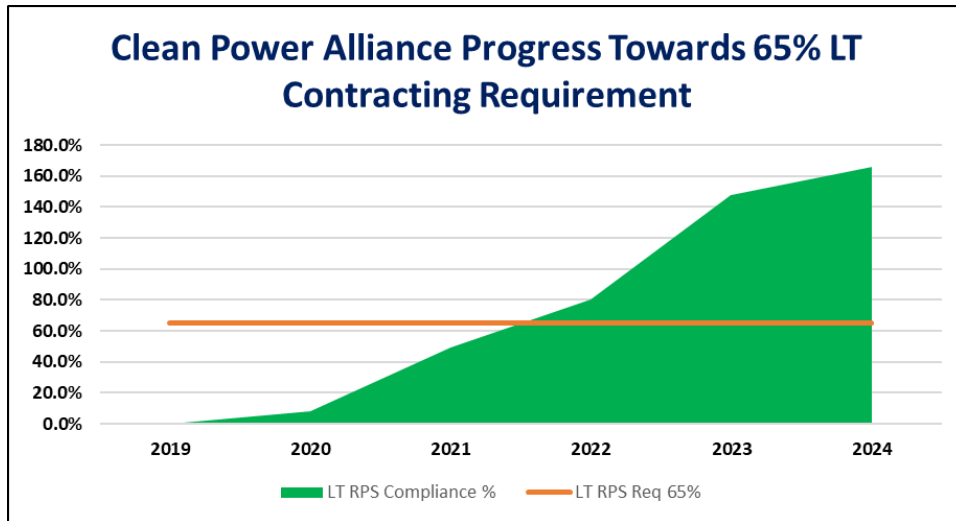
obligations. CPA's board has also implemented policies related to bid selection criteria, including preferences for projects constructed using union labor, projects that benefit Disadvantaged Communities, and projects that reflect environmental stewardship principles, which is described further in Section X.C and implemented through CPA's RFO protocols.

(ii) Responsiveness to Regional Policies

Each of CPA's member agencies determines its customers' default product offering (a Lean, Clean, and 100% Green rate, as described in Section IV.B(i) above), which allows each community to select a renewable and carbon free content that is consistent with its regional and community climate action plans. Member agencies can change their default product offering selection by notifying CPA consistent with the board-adopted Changes to Default Rate Product Policy.

IV.B.1. Long-term Procurement

As described in Section IV, CPA has contracted for a total of 1,903.95 MW of long-term RPS eligible resources and 1,027.5 MW of long-term storage resources, which will contribute to CPA's 65% long-term contracting requirement. CPA has secured all of its long-term contracting needs for the 2021-2024 compliance period. Since the 2021 Final RPS Procurement Plan, CPA has not entered into any new long-term contracts. The chart below shows CPA's progress towards complying with the 65 percent long-term contracting requirement.



IV.C. Portfolio Diversity and Reliability

CPA will also consider the deliverability characteristics of its future generating resources placed under contract, such as the resource’s dispatchability and available capacity, and will review the respective risks associated with short- and long-term purchases as part of its forecasting and procurement processes. These efforts will lead to a diverse resource mix, address grid integration issues, incorporate forecasted transportation electrification, and provide value to the local community, including a significant population residing in disadvantaged communities. CPA notes that transportation electrification would likely impact its load shape, depending on the scale of adoption and when customers charge their vehicles. CPA actively supports EV charging infrastructure and distributed energy resource activities to meet its renewable energy goals. CPA is partnering with customers to utilize energy storage systems for demand response and/or reliability. In addition, CPA’s customer programs, such as Power Response and Peak Management Program incentivize commercial and public agency customers to reduce their energy consumption during periods of grid stress and elevated wholesale energy prices. A quantitative description of this forecast is attached to the RPS Procurement Plan in Appendix C.

In developing its load forecast related to transportation electrification, CPA used CEC's 2021 IEPR demand forecast, adopted by the CEC Commissioners at the CEC's January 26, 2022 business meeting. For its planning of RPS procurement, CPA used the CEC's 2021 IEPR Mid-Demand base-line forecast, with mid-case Additional Achievable Energy Efficiency ("AAEE"). As CPA continues to develop its transportation electrification program, CPA will develop and refine its own transportation electrification load forecast assumptions in 2023. Based on the initial analysis, while transportation electrification is unlikely to have visible impact on load forecast in the near term, CPA anticipates adjusting its procurement strategy to support greater transportation electrification closer to 2030.

To date, CPA has procured a diverse set of resources, including, solar, wind, geothermal, co-located solar plus storage, and standalone storage resources. To ensure alignment with expected load curves, CPA is seeking to incorporate a diverse set of renewable energy technologies within its renewable energy portfolio, and procure additional complimentary energy storage resources, to support a mix of peaking, dispatchable, baseload, firm, and as-available resources to appropriately meet its load resource balance needs. CPA is considering advanced emerging technologies such as hybrid battery storage, offshore wind, or other emerging technologies and welcomes these technologies to participate in its solicitations for long-term resources.

CPA's long-term contracts include provisions for buyer curtailment rights to facilitate renewable integration. CPA intends to meet all of its future energy portfolio and system requirements, including Resource Adequacy, to address reliability needs.

IV.D. Lessons Learned

The California renewable energy market has developed and evolved significantly over the past few years. The general trend for pricing for renewable energy technologies has been decreasing over time, and this competitive pricing was reflected in the offers that CPA received in its 2020 Clean Energy RFO and 2021 Mid-Term Reliability RFO. In addition, the cost of storage technologies is decreasing at a rapid rate, based on the bids received by CPA in 2020 and 2021, which should enable CPA to cost-effectively mitigate generation variability of its portfolio and ensure reliable load resource balance. However, a number of unprecedented challenges has impacted the development of renewable energy projects in California, including interconnection delays, ongoing COVID-19 pandemic-related supply chain impacts, U.S. trade actions, and rising commodity prices. These challenges have increased the risk of project delays and driven up the cost of renewable and storage resources coming online in the 2022-2025 timeframe.

In addition, the growth of renewable resources in the CAISO system is resulting in the downward movement of mid-day wholesale energy market prices. This has led to decreasing value for renewable projects that generate during mid-day hours. The growth of renewable resources also has produced challenges, such as negative wholesale energy market prices. Contract provisions that address curtailment are important for CPA to address negative pricing situations that are likely to increase in the future, which protects customers from higher costs.

Some recent regulatory uncertainties and changes may likely impact the pricing of renewable and storage resources. The implementation of Local RA Central Procurement Entity (“CPE”) beginning in RA compliance year 2023 has impacted renewable resource valuation, and it is unclear whether the adopted resource compensation mechanism for Local RA resource premium truly reflects the resource needs in Local capacity areas. The proposed biennial

updates to wind and solar Effective Load Carrying Capacity (“ELCC”), as well as the newly published regional wind ELCC values, have also impacted the valuation of those resources and future procurement planning. The additional procurement mandate to fill mid-term reliability needs and replace Diablo Canyon in the IRP proceeding sends strong signals to the market in terms of the resource mix that LSEs will need to procure. The implementation of these decisions will likely affect the valuation and market participation behavior of renewable and storage resources. CPA will be paying close attention to the implementation of these rules and monitor their effects on the renewable energy market.

V. Project Development Status Update

As described in Section IV.B above, CPA’s current and planned procurement is sufficient to meet both the applicable RPS procurement requirements as well as support the state’s GHG reduction targets. Further, CPA’s current and planned procurement supports system reliability by considering both portfolio diversity and alignment with CPA customers’ load curve. Specifically, the projects that are currently under development fit within and support CPA’s plans for meeting these goals.

As of the date of this filing, CPA has entered into 26 agreements with RPS-eligible facilities. Of those 26 agreements, 9 are already online, and the remaining 16 renewable energy supply agreements are with facilities that are not yet in commercial operation or are coming online in phases, which are summarized in the table below. CPA has also attached the Project Development Status Update Report as Appendix D reflecting these projects. The project list has been updated to include all projects executed to date and reflect CPA’s best available information on when these projects are expected to come online. A number of the listed project CODs include known delays to project schedules due to interconnection, permitting, and supply

chain delays impacting renewable and storage development, further described in IV.D. CPA is closely monitoring project delays and is working closely with developers to mitigate delays and avoid contract terminations.

Facility Name	Technology Type	MW	Location	COD	Network Upgrades Milestone
Arlington Energy Center II	Solar + Storage	233 MW Solar / 132 MW Storage	Blythe, CA	3/21/2022; Full Deliverability 12/1/2023	Completed
Chalan	Solar + Storage	64.9 MW Solar / 25 MW Storage	Kern County, CA	12/31/2024	Expected 12/1/2023
Rexford	Solar + Storage	300 MW Solar / 180 MW Storage	Tulare, CA	12/31/2024	Expected December 2024
Daggett 3	Solar + Storage	123 MW Solar / 61.5 MW Storage	San Bernardino County, CA	12/1/2023	Expected 04/15/2023
Estrella	Solar + Storage	56 MW Solar / 28 MW Storage	Los Angeles County, CA	12/31/2023	Expected 11/30/2023
Resurgence Solar II	Solar + Storage	48 MW Solar / 38 MW Storage	Boron, CA	6/1/2023	N/A
Daggett Solar Power 2	Solar + Storage	52 MW Solar / 65 MW Storage	San Bernardino County, CA	12/19/2023	Complete
Arica	Solar + Storage	93.5 MW Solar / 71 MW Storage	Riverside County, CA	6/1/2024	Expected 06/20/2023
Radiant	Solar	3 MW	Newberry Springs, CA	12/31/2024	N/A
Desert Quartzite	Solar + Storage	300 MW Solar / 150 MW Storage	Blythe, CA	03/01/2025	Expected 07/15/2024
Cape Station	Geothermal	33 MW	Beaver, Utah	6/1/2028	Expected 6/1/2028
Prologis Dominguez	Solar	0.96 MW Solar	Carson, CA	12/30/2023	Expected 10/1/2023
Prologis El Segundo	Solar	0.64 MW Solar	Hawthorne, CA	12/30/2023	Expected 10/1/2023
Prologis Wilmington 1	Solar	1.8 MW Solar	Carson, CA	12/30/2023	Expected 10/1/2023

Prologis Wilmington 2	Solar	0.6 MW Solar	Carson, CA	12/30/2023	Expected 10/1/2023
Prologis Workman Mill	Solar	1.92 MW Solar	Whittier, CA	12/30/2023	Expected 10/1/2023
Pivot – Beverly	Solar	0.4 MW Solar	Pico Rivera, CA	12/31/2023	Expected 12/7/2023
Pivot – San Gabriel	Solar	0.27 MW Solar	Pico Rivera, CA	12/31/2023	Expected 12/7/2023

VI. Potential Compliance Delays

CPA does not anticipate any compliance delays for this compliance period. If a future compliance issue is identified, then CPA will address those issues and then describe them in a subsequent RPS Procurement Plan.

VII. Risk Assessment

CPA assesses and aims to mitigate risks associated with—but not limited to—permitting, transmission and development, supply chains, and financing. Potential impacts of these risks on the CPA RPS and long-term contract supply are incorporated into the program’s portfolio planning and risk management activities. The risk adjusted expected generation used by CPA to manage supply risks are included in Appendix C, the Renewable Net Short Quantitative Response.

As noted in the ACR, generation variability and market conditions may impact the amount of future electricity delivered from a retail seller. CPA acknowledges the possibility that contracted volumes of electricity, especially from variable resources, may not be delivered as expected under contract. CPA considers this potential risk in contracting, forecasting, procurement review, and programmatic decision-making and requires industry standard contractual protections for under- and over-deliveries to address RPS compliance and financial risks.

CPA uses a comprehensive, iterative enterprise risk management framework to regularly evaluate risk areas across its business, identify mitigation strategies, and execute on those strategies. CPA regularly monitors and manages power supply cost and risks in a manner that is consistent with best utility industry practice.

VII. A. Risk Variables

CPA has identified the following renewable energy supply risk variables that may impact RPS compliance and whose management are critical to a cost effective, stable, and predictable power portfolio:

- Variable resource availability risk (**Low**): Many forms of renewable power are variable and not dispatchable, meaning the actual power produced cannot be controlled or produced on demand. Due to this variability, renewable energy is typically sold as available, meaning that while a specified capacity is dedicated to the purchaser, the actual MW-hours are delivered based on production, which may be higher or lower than planned due to changing weather and other conditions. CPA categorized risks associated with this variable as low because expected variability in variable renewable energy technologies is well known given the extensive operating history of these resources in California and low for CPA specifically given CPA's large and diverse portfolio of renewable resources, i.e. no one resource comprises a majority of CPA's portfolio.
- System reliability and technology risk (**Medium**): Energy generation technology is rapidly evolving; entering into excessive long-term contracts therefore may commit CPA to a particular technology that may become obsolete or more expensive than energy available in later years. Overcommitting to certain

technologies in the near-term may also limit future investments in emerging technologies. System reliability and technology risk is categorized as a medium risk variable because a greater proportion of CPA's portfolio is comprised of solar plus storage given the state's needs for clean and reliable capacity. However, CPA is able to mitigate this risk through limiting the duration of contract terms, diversifying its portfolio with various renewable technologies, and encouraging the development of emerging technologies.

- Compliance and development risk (High): When entering into a contract for power from a plant that is not yet constructed and/or operational, CPA is exposed to the risk of the energy supply not being delivered on time or at all due to development, permitting, and supply chain delays or cancellation. CPA weighs compliance and development and compliance risk as a high-risk factor because of the complex nature of project development and the material impact such development risks have on the project's ability to achieve commercial operation and on CPA's regulatory compliance obligations.
- Counterparty credit risk (Low): A financially weak or unviable counterparty may expose CPA to the risk that contracted supply will not be delivered, exposing the program to a supply shortage and more market price volatility than desired. While the financial strength of the counterparty is important for project development, it is a relatively low risk that CPA is able to mitigate through development and performance security requirements.

- Supply chain risk (High): As many of the components for new energy facilities are imported from other countries, U.S. international relations can impact the renewable project supply chain and project development timelines. Global emergencies, like the COVID-19 pandemic, can also disrupt renewable energy supply chains. The rapid spread of the virus prompted shutdowns of industries around the world, and this has led to uncertainty for manufacturers and distributors of goods, who cannot produce or supply as much as they did pre-pandemic and causing potential project delays. Especially recently, CPA has put greater weight on supply chain risk when evaluating bids into our RFOs and negotiating contracts due to the visible impacts of supply chain issues.

VII. B. Strategies to Address Risk and Lessons Learned

Any of these risks may impact the amount of renewable generation available for RPS compliance. CPA manages and minimizes the risks described above through energy supply portfolio diversification, contract provisions and counterparty risk assessments. The diversification of suppliers and projects procured reduces the impact of development delays or energy delivery shortfalls of any one project, and credit risks from any one counterparty. CPA maintains diversity in counterparties, resource types, project sizes, and locations of RPS facilities. As discussed, CPA is well positioned to meet its RPS compliance requirements. Potential under-deliveries from the identified risks are addressed through a MMoP, CPA's margin of voluntary overprocurement and renewable energy targets as discussed above. CPA has not experienced project failures or contract terminations of resources that have reached COD and begun delivering energy. CPA has determined with a high confidence level that the Forecast

Failure Rate for Online Generation is 0% (i.e., existing facilities generating energy will not cease to generate energy and contracts for these resources will not be terminated).

CPA acknowledges that the possibility always exists that future renewable energy supply will not be delivered as required under the respective contract. As noted in Public Utilities Code section 399.13(a)(6)(A) and the ACR, generation variability and resource availability may impact the amount of future electricity delivered. CPA considers this potential risk in forecasting as well as during procurement review and decision-making. By targeting a volume of RPS energy that exceeds the requirements of the RPS program, CPA further mitigates the risk of lower-than-expected generation.

Currently, CPA meets the majority of its renewable energy demand via short-term contracts with firm delivery requirements from existing renewable facilities. These contracts have minimal risk of non-delivery, and to date, CPA has not experienced any underperformance or non-delivery related to these contracts.

However, as CPA transitions from meeting its renewable energy demand from short-term contracts to long-term contracts, CPA incorporates the risk factors described above into its risk assessment of its long-term contract portfolio. CPA is aware that RPS projects under construction have risks during the development period that could affect the contracted COD. First, as part of its solicitation process and selection of projects for which to contract, CPA applies project failure rates for new-build projects, based on technological maturity: 30% failure for renewable technologies, 40% failure for renewable plus storage technologies, and 50% failure for standalone storage technologies. This accounts for the risk that new resources may not be built due to a variety of project development risks, including permitting, transmission development, supply chain disruptions, and financing challenges. In addition, CPA's PPAs

incorporate a number of contractual obligations to ensure that sellers are incentivized to minimize project capacity variances and delays in commercial online dates. Second, CPA considers the risk of receiving lower than expected generation from variable energy resources, either due to variances in weather, resource availability, curtailment, or operational underperformance. CPA addresses this risk by including contractual obligations for sellers to meet minimum guaranteed generation performance thresholds. In addition, CPA models this expected generation variability using a deterministic tool that evaluates various generation scenarios, including expected energy profiles versus minimum contractual generation profiles.

As discussed in Section 4.C., CPA aims to avoid overreliance on any single technology type or resource concentration located in one geographic region to mitigate the impacts of localized curtailment to CPA's portfolio. The technological and geographic diversity of renewable resources in the CPA RPS portfolio, including baseload geothermal sources, contributes to grid reliability by not over-relying on any one resource type.

CPA has also invested in both stand-alone storage and energy storage paired with RPS resources as part of its renewable portfolio to provide increased reliability and renewable integration services. CPA currently has 13 stand-alone and paired solar plus storage contracts with collectively over 1,000 MWs of storage capacity. In its 2021 Midterm Reliability RFO, CPA is seeking additional baseload renewables, renewable plus storage and standalone storage, including 8-hour long duration storage offerings, to complement its existing portfolio. CPA's investment in a robust portfolio of incremental storage resources supports system reliability and mitigates any negative system impacts such as rolling electric outages or violation of current standards for ancillary services.

Because CPA is a new organization with limited historical data on how new renewable energy projects perform, CPA is not currently utilizing internal historical trends in its risk modeling. However, CPA's application of project failure rates and PPA contracting terms are consistent with best practices for load serving entities. In addition, as CPA develops additional operating history, CPA will incorporate historical trends related to variability in load and generation forecasts, project failure rates, curtailment, and force majeure events, which all pose risks related to renewable energy supply commitments.

Given CPA's high margin of voluntary overprocurement and CPA's election of voluntary allocations of PCIA renewable resources, the risk that CPA does not meet its RPS compliance is low. However, CPA can also address shortfall risk by utilizing short-term renewable energy products to fill expected intra-year shortfalls.

Overall, CPA's risk mitigation strategies as described in greater details above are consistent with other LSE's actions for minimizing and avoiding risk, particularly those that are used by CCAs. Key mitigation actions from CCAs include their commitment to achieving and exceeding compliance with state RPS goals and delivering renewable energy at levels established by their Board of Directors. CCAs' risk of non-compliance with the RPS program is therefore a low probability, as the risk of underperformance of any single contract is mitigated by targeting a higher volume of deliveries overall. CCAs seek to minimize unnecessary financial exposure and general planning risk by assembling a diversified portfolio of renewable generating resources and products that are intended to complement the manner in which their customers use electric power. Additionally, CCAs procurement decisions do consider a balanced mix of resources that helps ensure reliability of the electrical grid is maintained.

VIII. Renewable Net Short Calculation

CPA has provided a quantitative assessment to support the qualitative descriptions provided in this RPS Procurement Plan, which is attached as Appendix C. For RPS facilities in development, CPA has applied the following risk adjustments: 20% failure rate for projects in the pre-construction phase and 10% failure rate for projects in the construction phase. The risk factors are consistent with industry norms and are also based on CPA's experience in the market once facilities have entered the pre-construction and construction phases. The Forecast Failure Rate for RPS Facilities in Development line in Appendix C (row Fbb) reflects a composite failure rate reflective of each RPS facility's development stage. The failure rates were applied to the forecasted energy for each of our long-term resources to account for potential delays or lower generation (i.e. annual expected energy * risk factor).

IX. Minimum Margin of Procurement (MMoP)

CPA is, as shown in the table below, building an electricity supply portfolio with short-term and long-term contracts that are projected to achieve State requirements for increasing the RPS-eligible renewable and GHG-free energy content of its portfolio over time. The table below shows the margin of RPS over-procurement based on the differential between the SB 100 and the Clean Power Alliance RPS procurement targets.

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Requirement (% of Retail Sales)	33.0%	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
Clean Power Alliance Internal RPS Procurement Target (% of Retail Sales)	61.4%	56.1%	53.8%	77.0%	82.5%	84.8%	85.2%	85.5%	85.5%	85.5%	85.5%	85.5%	85.5%
Clean Power Alliance RPS Voluntary Margin of Over-Procurement (% of Retail)	28.4%	20.3%	15.3%	35.7%	38.5%	38.2%	35.9%	33.5%	30.8%	28.2%	25.5%	25.5%	25.5%
Clean Power Alliance RPS Minimum Margin of Over-Procurement (% of Retail)	0.0%	0.0%	0.3%	1.3%	6.0%	6.3%	6.2%	6.2%	6.1%	6.0%	6.0%	5.9%	5.9%
Clean Power Alliance RPS Aggregate Margin of Over-Procurement (% of Retail)	28.4%	20.3%	15.6%	37.0%	44.4%	44.5%	42.1%	39.7%	36.9%	34.2%	31.5%	31.4%	31.4%

As noted above, Clean Power Alliance’s RPS-eligible renewable energy target over 60% by 2020, increasing to at least 85% by 2026 to achieve its Board-adopted clean energy goals, thus allowing for a significant margin of procurement over the SB 100 mandates.

IX.A. MMoP Methodology and Inputs

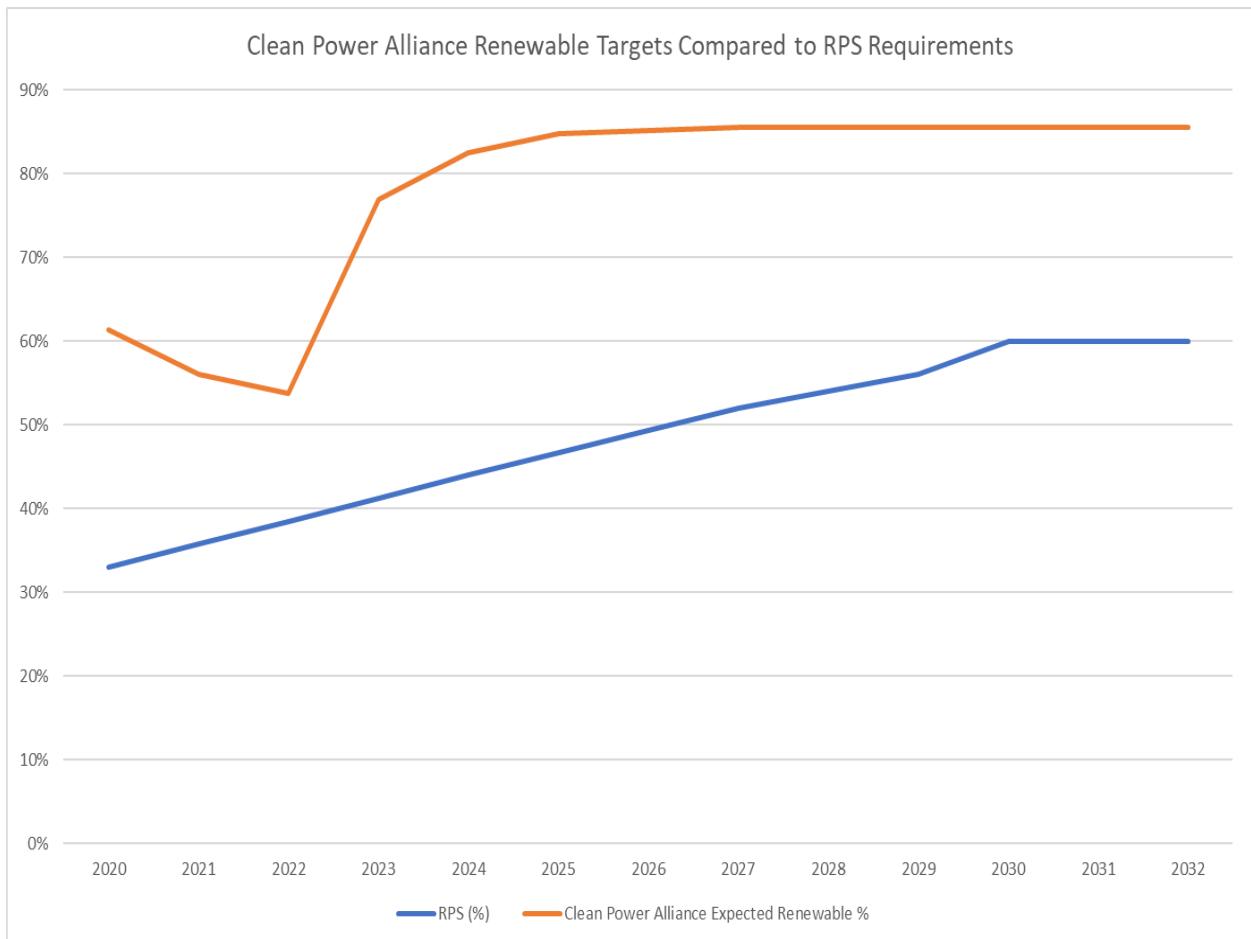
CPA’s MMoP is intended to address the RPS failure determined in the renewable net short calculation. In the event of contract under-deliveries or project failures, the MMoP should be sufficient to ensure CPA is compliant with the RPS procurement requirements. CPA has developed its MMoP independently of any VMOP set by Board goals, however.

As stated in Section VIII, CPA risk-adjusts the energy delivery estimates for RPS contracts with resources that are under development. Once a facility is in development, CPA applies a forecast failure rate to the expected value for all renewable contracts in development. The de-rate effectively removes this generation from CPA’s renewable energy supply projection used for procurement planning. Therefore, CPA plans to procure additional RPS energy equal to this quantity as its MMoP. The table below lists the projected RPS generation failure rates and MmoP that is consistent with the inputs in the Renewable net Short Quantitative Response.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Forecast Failure Rate (RPS Facilities online)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Forecast Failure Rate (RPS Facilities In-Development)	0.0%	1.5%	4.6%	11.3%	11.6%	11.6%	11.6%	11.6%	11.6%	11.7%	11.7%	11.7%
MMoP (MWh)	0	34,173	137,232	658,639	699,527	696,393	692,980	691,175	686,643	683,488	680,322	678,474

CPA has Total RPS Eligible Procurement in excess of the Gross RPS Procurement Quantity Requirement for 2021 as shown in Appendix C. CPA’s target Total RPS Eligible Procurement amount every year is based on its customer’s RPS tiered rate selection. CPA offers its customers different product levels, including an RPS compliance product (Lean Product), 50% RPS or higher (Clean Product) and 100% RPS product offering (100% Green Product) .

Because a majority of CPA member agencies and its customers have elected the 50% RPS or 100% RPS option, CPA anticipates meeting and exceeding the requirements of RPS every year. CPA continually tracks the variability in forecasted versus actual load and generation and can utilize short-term contracts for additional RPS quantities, if necessary. The program's RPS-eligible renewable energy targets and performance compared to the state RPS requirements are summarized below.



IX.B. MmoP Scenarios

CPA plans to meet the annual program renewable goals below, in the 2021 to 2024 compliance period, and over the 10-year planning horizon.

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Clean Power Alliance RPS Procurement Targets	61.4%	56.1%	53.8%	77.0%	82.5%	84.8%	85.2%	85.5%	85.5%	85.5%	85.5%	85.5%	85.5%
SB 100 RPS Requirement	33.00%				44.00%			52.00%			60.00%		60.00%

In 2023, Clean Power Alliance's RPS-eligible renewable energy target is 77%, 35.7% higher than the 2023 compliance target of 41.3%, and 17% above the state's 60% RPS requirement by 2030. This additional voluntary procurement serves to meet CPA customers' demand for renewable energy resources. As shown in Appendix C, the RNS Quantitative Template, CPA's VMOP exceeds its MmoP, and thus CPA expects to meet and exceed its MmoP as part of procuring to meet its Board goals, and comply with the RPS project to mitigate risk that renewable projects under contract are delayed or terminated. Even with project failure rates of 20%, CPA would comply with its minimum RPS targets.

X. Bid Solicitation Protocol

X.A. Solicitation Protocols for Renewables Sales

On an as-needed basis and either via a solicitation process or via bilateral transactions, CPA may enter into renewable sales for years in which it has over-procured for renewable energy resources, either due to higher than expected generation or due to deviations in load. CPA's solicitation protocol for renewables sales is similar to CPA's solicitation protocol for short-term renewable purchases.

X.B. Bid Selection Protocols

Consistent with Section 399.13(a)(6)(C), CPA conducts bid solicitations for procuring energy resources that includes specific needs for eligible renewable energy resources, generating capacity, locational preference, and required online dates to assist in determining what resources fit best within a portfolio. Since CCA program governing boards are comprised of local elected officials, these solicitation and procurement decisions are overseen by the elected representatives of the community. These decisions seek to comply with locally-set targets that tend to exceed the RPS requirement.

Consistent with the direction in the ACR, CPA has provided a copy of its most recent solicitation materials to Commission Energy Division staff in Appendix B, Exhibit A. CPA's most recent solicitation information is available at the following website:

<https://cleanpoweralliance.org/get-involved/job-contracting-opportunities/>.

X.C. LCBF Criteria

The Least-Cost Best Fit methodologies approved by the Commission pursuant to D.04-07-029, D.11-04-030, D.12-11-016, D.14-11-042, and D.16-12-044 are expressly only directly applicable to investor owned utilities and the Commission does not have jurisdiction over the solicitation protocols of CCAs. However, consistent with Section 399.13(a)(9),¹ CPA does consider best-fit attributes that support a balanced mix of resources to help support reliability of the electrical grid. CPA uses six evaluation criteria as part of its project selection process: (1) net economic value over the full term of the contract based on energy, Resource Adequacy, and ancillary service attributes of the facility, as applicable, given the

¹ Cal. Pub. Util. Code § 399.13(a)(9) ("In soliciting and procuring eligible renewable energy resources, each retail seller shall consider the best-fit attributes of resource types that ensure a balanced resource mix to maintain the reliability of the electrical grid.").

facility's specific operating characteristics, (2) development risk, including but not limited to factors such as status of interconnection agreement, network upgrade costs, site control, status of permitting, and project financing, (3) workforce development, (4) environmental stewardship, (5) benefits to Disadvantaged Communities, and (6) project location. An overview of this evaluation criteria is provided in Appendix B, Exhibit B. CPA's valuation is based on the specific location of project, taking into consideration congestion costs and risks of curtailment. CPA is technology agnostic and encourages solicitation participation by a diverse mix of RPS-eligible resources, including intermittent, baseload, and dispatchable, including energy storage technologies in a variety of project locations.

Additionally, the requirement of Section 399.13(a)(8) to give preference to renewable projects located in certain communities is expressly only applicable to "electrical corporations" and is not mandatory for CCAs.² However, CPA fully recognizes the need to help mitigate the impacts of air pollution in regions of the state where communities have been disproportionately impacted by the existing generating fleet as well as the need to bring economic benefits to communities with high levels of poverty and unemployment. Per its Joint Powers Agreement, CPA provides and manages its energy portfolio and products in a manner that promotes public health in areas impacted by energy production, including Disadvantaged Communities (as defined by the California Environmental Protection Agency CalEnviroScreen tool). Utilizing the CalEnviroScreen 4.0 dataset, CPA has determined that 22% of the 294 zip codes within its service territory either entirely or partially contain census tracts identified as Disadvantaged Communities. To address these

² Cal. Pub. Util. Code § 399.13(a)(8)(1) ("In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.").

communities, CPA's solicitation process demonstrates a preference for projects that are located within Disadvantaged Communities and can demonstrate that they provide those communities with benefits such as workforce development opportunities and targeting hiring of Disadvantaged Community residents.

XI. Safety Considerations

CPA holds safety as a top priority. Since CPA does not own, operate, or control generation facilities, CPA's procurement of renewable resources does not present any unique safety risks. This Section describes how CPA has taken actions to reduce the safety risks posed by its renewable resource portfolio and how CPA supports the state's environmental, safety, and energy policy goals.

In its contracts, CPA requires that facilities be operated using Prudent Operating Practices, including applicable safety and reliability criteria. CPA includes contract language that requires that a project owner/operator maintain the health and safety of the facility and people associated with the construction and operation of the facility:

“Maintenance of Health and Safety. Seller shall take reasonable safety precautions with respect to the operation, maintenance, repair and replacement of the Facility. If Seller becomes aware of any circumstances relating to the Facility that create an imminent risk of damage or injury to any Person or any Person's property, Seller shall take prompt, reasonable action to prevent such damage or injury and shall give Buyer's emergency contact identified on Exhibit N Notice of such condition. Such action may include disconnecting and removing all or a portion of the Facility, or suspending the supply of Facility Energy to the Delivery Point.”

XI.1. Wildfire Risks and Vegetation Management

As described further in Section XI.4, the majority of CPA's contracted facilities are located in low fire threat areas. However, CPA's contracted facilities have extensive fire mitigation and vegetation management plans in place to minimize risk.

In addition, in its evaluation of renewable offers, CPA has a preference for multiple benefit projects, including projects located in the built environment (i.e. rooftop or parking lot solar PV where there is minimal risk of wildfires) and technologies that facilitate vegetation management (e.g. forest or agricultural biomass facilities).

XI.2. Decommissioning Facilities

Because facilities are required to meet decommissioning requirements consistent with local CEQA and permitting standards, CPA doesn't explicitly require decommissioning its contracts. However, CPA's contracted facilities have the following decommissioning considerations:

- CPA's contracted solar facilities are expected to have a lifetime of approximately 30 years. All of CPA's contract solar facilities have requirements to decommission at the end of the project life, consistent with their Conditional Use Permits.
- Given the limited availability of wind resources in California, CPA's contracted wind facilities are anticipated to repower at the end of their facilities' life.
- CPA's run-of-river resources have explored decommissioning; however, these facilities are located on dams that are owned and operated by the US Army Corps of Engineers ("USACE") for flood prevention, so it would be very unlikely for the dams to be shut down, and the hydro facilities will likely be repowered to continue operation.

XI.3. Climate Change Adaptation

None of CPA's projects under contract have identified a specific climate change risk. Based on the National Oceanic and Atmospheric Administration ("NOAA") Sea Level Rise Tool, CPA's contracted projects are not at risk of sea level rise. CPA will closely monitor the output of these facilities from year to year and adjust expected output if climate change impacts

are observed. For example, wind and solar facilities may experience a change in their generation profiles due to changing weather conditions, and RPS hydro facilities generation profiles may change due to changing rainfall/snowpack.

When evaluating resource offers, CPA attempts to mitigate climate change risk by seeking a portfolio of projects with diverse technologies, generation profiles, and locations. In addition, CPA has a specific preference for projects that are multiple benefit, i.e. providing multiple environmental benefits for air, water, and nature beyond greenhouse gas reductions. Multiple benefit projects include those located on repurposed energy or industrial sites, on salt-affected agricultural land, or in the built environment.

XI.4. Impacts During Public Safety Power Shut-off (PSPS) Events

Using the CPUC's High Fire Threat District Map, CPA identified three projects that are located within a High Fire Threat District. Kaweah, a small hydro facility, is located within a Tier 2 fire threat area in Tulare County, California. Isabella Partners, another small hydro facility, is located within a Tier 3 fire threat area in Kern County, California. However, these are both small projects (20 MW or less) and should these facilities be impacted during PSPS Events, it will not have a material impact on CPA's overall supply. The third facility, Geysers Geothermal, is located within a Tier 3 fire threat area in Lake County, California; however, CPA is only a small offtaker (50 MW portion) of the larger facility.

CPA's other projects, while not located in High Fire Threat Districts, do have fire safety and mitigation strategies in place, including the vegetation management strategies described in Section XI.1, and some projects have back-up generators to maintain critical operations and maintenance (O&M) activities during PSPS Events.

XI.5. Biomass Procurement

To date, CPA has not procured forecast biomass resources because it has received limited offers from these types of projects. However, CPA's solicitations are open to all RPS-eligible resource types, including eligible forest biomass.

XII. Consideration of Price Adjustment Mechanisms

In the future, and consistent with SB 350, CPA will review the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index.

XIII. Curtailment Frequency, Forecasting, Costs

This Section responds to the questions presented in Section 5.13 of the ACR³ and describes CPA's strategies and experience so far in managing CPA's exposure to negative pricing events, overgeneration, and economic curtailment for CPA's region and portfolio of renewable resources.

XIII.1. Factors Having the Most Impact on the Projected Increases in Incidences of Overgeneration and Negative Market Price Hours

CPA continues to learn a great deal about the California energy market, including information and considerations related to energy curtailment, potential cost impacts, contracting considerations and other concerns. The following represents CPA's understanding of this topic, which may impact future procurement processes.

Due in large part to the rapid increase in the amount of wind and solar generating facilities that have been brought on line throughout the western United States, the California

³ ACR at 28-30.

Independent System Operator's ("CAISO") balancing authority area has experienced an increasing frequency and magnitude of curtailment and negative pricing events.

As of the end of 2021, California had over 15,000 MW of solar, and 7,800 MW of wind.⁴ This increased capacity results in discrete periods where the majority of load in the CAISO is served by solar and wind resources. The monthly maximum load served by wind and solar in the CAISO has averaged 61.4% over the past 3 years (May 2018 to May 2021), and in April of 2021 the monthly maximum load exceeded 85% with solar representing over 58%.⁵ To address the resulting instances of over-supply, the amount of curtailment of wind and solar in the CAISO has significantly increased since 2015, totaling 891,065 MWh in 2019, 1,587,496 MWh in 2020, and 1,504,803 MWh in 2021.⁶ 1.5 million MWh of solar energy that CAISO curtailed in 2020 represented 5% of the state's utility-scale solar production, according to the U.S. Energy Information Administration (EIA). In the early afternoon hours of March 2021, the California Independent System Operator (CAISO) curtailed an average of 15% of its utility-scale solar output. The reason for curtailment is that production from solar and wind generators exceeded demand. The growth of installed capacity drives further increases in curtailment rates. To help meet California's target of 50% renewable generation by 2025, more wind and solar generation has been added to our power mix. Increases in renewable energy curtailments have followed an increase in new renewable capacity additions to meet this 2025 directive, while solar capacity

⁴ CAISO Key Statistics Report, March 2022

⁵ CAISO, Monthly Renewables Performance Report, May 2021, *available at* <http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2021.html>.

⁶ Energy Central, "Why Is California Continuing To Curtail Solar & Wind Energy Production?", June 10, 2022, *available at* <https://energycentral.com/c/cp/why-california-continuing-curtail-solar-wind-energy-production>"

additions are causing high totals of solar power curtailment. Curtailment is typically the highest during the months of March, April, and May when hydroelectric generation is historically at its highest, demand is low and solar output is relatively high.

CAISO has explored a few options to mitigate renewable curtailment rates. One tool is the CAISO Energy Imbalance market (EIM), a real-time market that allows those outside of CAISO's territory to buy and sell energy to balance supply and demand. In 2020, 16% of possible curtailments were avoided through inter-market trading, according to the EIM. Another solution is increased use of energy storage. During the calendar year 2021, 2,359 megawatts (MW) of utility-scale battery storage capacity was added to CAISO system. For perspective, that compares to 172 MW added the previous year, over 12 times more than the storage additions in 2020.

XIII.2. Written Description of Quantitative Analysis of Forecast of the Number of Hours Per Year of Negative Market Pricing for the Next 10 Years

CPA has conducted a historical quantitative analysis of the number of hours per year of negative market pricing affecting CPA's PPA resources (see table below). To date, eight of CPA's contracted renewable facilities have commenced commercial operation. The analysis of these resources indicates a trend of increasing negative market price hours from 2020 to 2021.

Year	Nmber of Hours per Year of Negative Market Prices for all CPA's PPA Nodes
2020	366
2021	684

Additionally, CPA developed a more detailed curtailment forecast of its renewable generation through 2032 using PLEXOS, a Production Cost model from Energy Exemplar. PLEXOS Integrated Energy Model is a commercial optimization engine that can simulate the

economic commitment and dispatch used by the CAISO's day-ahead market processes which simultaneously optimizes energy dispatch and ancillary services capacity awards across the CAISO grid. The results show increasing curtailments of CPA's renewable generation over time as more renewables come into the system. The results also showed more curtailment of solar resources is happening in the middle of the day, when the sun is the brightest, and the vast majority of CPA curtailments come from solar compared to wind. A summary of curtailment as a percentage of CPA's total generation is provided in the table below.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
CPA Renewable Curtailment	0.0%	0.0%	4.8%	4.4%	4.3%	6.9%	6.7%	6.5%	6.3%	5.9%	5.4%

CPA conducts quantitative analysis to determine the expected negative market prices and the potential risk of curtailment. In its 2020 Clean Energy RFO and 2021 Mid-Term Reliability RFO, CPA contracted with Ascend Analytics to conduct an evaluation of offers. Ascend Analytics uses its proprietary long-term fundamental forecasting model, incorporating energy market conditions across the Western United States, to project the resource's value over the life of the contract. This analysis models each resource at its specific pnode, including a forecast of the price basis relative to SP-15, and addresses forecasting uncertainty, including stochastic uncertainty for prices and intermittent generation output, and incorporates price volatility and renewable penetration effects (i.e. duck curve) for the entire system. The economic valuation of each project takes into consideration an estimate of curtailment and related economic loss expected over the life of the contract.

XIII.3. Experience, to Date, With Managing Exposure to Negative Market Prices and/or Lessons Learned from Other Retail Sellers in California

CPA manages its exposure to negative market prices through its procurement activities. CPA takes actions to limit the impacts of curtailment on its customers, including issuing

solicitations for standalone storage or storage paired with renewable resources. To date, CPA has secured over 1,000 MW of storage, much of which is paired with solar projects representing up to 80% of the generation capacity of these projects. CPA will include a substantial proportion of storage in its future electric supply portfolio. We expect there will be more curtailments with a greater penetration of renewable generation in the California market. However, as storage capacity increases relative to the amount of intermittent resources, the incidence of negative prices should decrease. In addition, CPA includes contract terms that recognize and limit the potential financial impacts of negative pricing.

To date, CPA has eight RPS resources that are online and serving CPA's load and neither has had material exposure to negative market prices. However, CPA has taken into consideration the impact of negative market prices both in its evaluation of contracted resources and incorporating agreement terms addressing negative pricing risk and curtailment, as described further in Sections XIII.2 and XIII.5.

XIII.4. Direct Costs Incurred, to Date, for Incidences of Overgeneration and Associated Negative Market Prices

To date, CPA has not incurred material direct costs associated with overgeneration and negative market prices for its contracted RPS resources. However, CPA will continue to track this issue closely, particularly as a significant number of its utility-scale solar and wind contracts come online in 2022-2024.

XIII.5. An Overall Strategy for Managing the Overall Cost Impact of Increasing Incidences of Overgeneration and Negative Market Prices

While curtailment is a viable renewable integration strategy that is generally more cost-effective than other options, there are potential negative consequences from excessive curtailment. Curtailment of solar and wind represents a lost opportunity to generate zero GHG

emitting electricity, and excessive curtailment could impact the ability of the state to meet its environmental and energy policy goals. Additionally, these over-supply situations expose ratepayers to increased costs because their load serving entities must either economically curtail the generating resource (and often pay for the electricity that was not generated) or generate power and be exposed to negative prices. Because these conditions are largely driven by state policy, it is appropriate to consider macro-level mitigation measures through CAISO initiatives, Commission rulemakings, and possibly even legislation. There are a number of measures and policies that have already been implemented or are currently being pursued that will have significant impacts on how substantial curtailment will be in the future. This includes the expansion of the Energy Imbalance Market, improvements to the CAISO market design and structure, enhanced forecasting capabilities, time of use rates, improved EV charging functionalities, and smart deployment of distributed energy resources. The Commission's IRP proceeding will be an appropriate forum to measure the impact of these policies and the effect that they will have on future curtailment. These new measures will need to be modeled and incorporated into forecasts of future curtailment.

CPA considers the impact of curtailment and negative pricing on its individual portfolio and factors potential curtailment into its long-term planning. Due to the difficulty in accurately forecasting curtailment, CPA reviews the historical data on curtailment and negative pricing for the regions where CPA has contracted or owned generating resources. When CPA is evaluating new procurement, the potential amount of future curtailment is one factor that CPA considers. While CPA does not develop an individualized forecast of future curtailment, CPA does factor potential curtailment into both its minimum margin of procurement (described in Section IX) and its Risk Assessment (Section VII). Additionally, CPA takes actions to limit the impacts of

curtailment on its ratepayers. CPA pursues contract terms that recognize and limit the potential financial impacts of negative pricing and give CPA greater flexibility to direct economic curtailment. In addition, CPA is actively seeking contracting opportunities with energy storage resources in its solicitations for long-term contracts, which will improve CPA's ability to integrate intermittent resources and facilitate re-dispatch of emissions-free resources from hours of over-generation to hours when additional supply can be deployed. To date, CPA has executed contracts for 1,027.5 MW of storage resources, with more storage resources under negotiation from its 2021 Mid-Term Reliability RFO. Energy storage will assist CPA in mitigating curtailment and negative pricing. CPA's strategy to manage this cost risk includes the diversification of its renewable portfolio. CPA is planning to negotiate with developers that have submitted their offers to its 2020 Clean Energy RFO to include geothermal resources in its future renewable portfolio.

XIII.6. Contract Terms Included in RPS Contracts Intended to Reduce the Likelihood of Curtailment or Protect Against Negative Prices.

In CPA's pro forma contracting terms, CPA bears the cost of curtailed energy (defined as "Deemed Delivered Energy"). However, CPA is able to control the way that renewable resources are bid into the market and may choose to self-schedule the resource into the market (i.e. be a price taker) or set the bid price at a slightly negative price to ensure the resource is not curtailed and that RECs are generated.

In addition, of CPA's total 2,473 MW of renewable resources, only 457.6 MW are not paired with storage resources. Storage paired with renewables minimizes the risk of curtailment, because excess renewable energy that would otherwise be curtailed can be sent to charge storage and be used at a later hour when this renewable energy is needed to meet load requirements and prices are positive. Per CPA's pro forma contract, CPA will not compensate sellers for curtailed

renewable energy if that energy could have been sent to the paired storage resources and was not due to the storage resource being on outage:

“If the LMP for the Facility’s PNode during any Settlement Interval was less than zero (0), Deemed Delivered Energy shall be reduced in such Settlement Interval by the amount of any Charging Energy that was not able to be delivered to the Storage Facility during such Settlement Interval due to the unavailability of the Storage Facility due to a Forced Facility Outage.”

Lastly, in addition to its renewable resource portfolio, CPA has two contracts for standalone energy storage resources, the 100 MW Luna storage and 100 MW Sanborn storage projects. These standalone storage resources will contribute to minimizing curtailment on the grid overall.

XIV. Cost Quantification

CPA has provided the Cost Quantification Table as Appendix E. Pursuant to the direction in the ACR, CPA has completed those cells in the Cost Quantification table that correspond to Table 3, Rows 1-5 in the ACR.

XV. Coordination with Integrated Resource Planning Proceeding

The resources identified in this RPS Procurement Plan are consistent with the resources that were identified in CPA’s 2020 IRP, which was approved by CPA’s governing board and provided to the Commission for certification on September 1, 2020. As required by the ACR,⁷ CPA includes the following table that describes how CPA’s 2022 RPS Procurement Plan conforms with the determinations made in the IRP Proceedings (R.16-02-007 and R.20-05-003) in the 2020 IRP cycle.

As of the date of this filing, CPA has not yet completed its 2022 IRP analysis, which will be completed and submitted by November 1, 2022; therefore, the resulting RPS Portfolio is not

⁷ ACR at 32-35.

described in this section. However, due to an increase in the number of CPA customers that are on a 100% renewable rate (i.e. CPA's 100% Green rate product), CPA expects to achieve an even higher RPS portfolio content than what was forecasted in the 2020 IRP. In addition, the 2022 IRP will establish new GHG benchmarks under the 25 million metric ton (MMT) and 30 MMT scenarios for CPA's portfolio and extend CPA's portfolio forecasting period to 2035, which will help CPA better understand its long-term RPS position.

The table below refers to CPA's 2020 IRP, and will be updated once CPA's 2022 IRP analysis is complete:

IRP Section Subsection	RPS Alignment in IRP	
III. Study Results A. Preferred and Conforming Portfolios	Retail sellers should explain how the RPS resources they plan to procure, outlined in their RPS Plan, will align with each portfolio to be developed in their IRP. In addition to the list of the IRP portfolios developed and portfolio descriptions submitted for Commission approval and certification in IRP Plans, this should include:	
	<i>1. Existing RPS resources that the retail seller owns or contracts.</i>	CPA filed two IRP portfolios: One that conforms with the 46 MMT scenario and one that confirms with the 38 MMT scenario ("Conforming Portfolios"). Planned and already contracted RPS resources described in other sections of this Plan are included in the IRP, to the extent the contracts were executed prior to the IRP submission. Existing resources include the Voyager 21.6 MW wind facility, Kaweah 20.09 MW small hydro facility, and Isabella 11.95 MW small hydro facility. Since the 2020 IRP submission, CPA has contracted with the 14.0 MW Heber South geothermal and 50.0 MW Geysers geothermal facilities, which are also existing resources. CPA has also had several projects that were in development at the time of the IRP submission that are now operational, which are the 40.0 MW Golden Fields, 300.0 MW Mohave Wind (White Hills) facility, High Desert 150.0 MW Solar and

		50.0 MW Storage, and 100.0 MW Sanborn Storage.
	<i>2. Existing RPS resources that the retail seller plans to contract with in the future.</i>	CPA's IRP portfolios include planned and generic renewable projects that are new build resources. However, CPA may procure existing RPS resources to secure diversity in its portfolio (i.e. non-solar) depending on availability and pricing.
	<i>3. New RPS resources that the retail seller plans to invest in.</i>	CPA's resource plan expects to rely on a mix of renewable and carbon-free resources such as solar, wind, geothermal, storage, and hydro. As of today, CPA has completed long-term PPAs with new resources for a total of 1,808 MW of renewable energy and 1,027 MW of storage, as listed in Appendix D. CPA issued an RFO for new renewable resources in October 2020, the CPA 2020 Clean Energy RFO, and completed contracting for six solar plus storage and geothermal resources. These contracts plus CPA's previously executed contracts ensures that CPA meets its 2021-2024 RPS Compliance Period 4 mandates. CPA issued a 2021 Mid-Term Reliability RFO in October 2021, which solicited for baseload renewable, renewable plus storage, and standalone storage resources, including long-duration (8-hour duration or longer) storage projects. CPA is currently negotiating long-term contracts from this RFO. The activities described above will cover both the 46 MMT Conforming Portfolio and the 38 MMT Conforming Portfolio. In fact, CPA expects that procurement activities and action plans will remain the same regardless of portfolio, but the amount of resources procured or contracted will differ. The 38 MMT portfolio is expected to require additional incremental procurement and/or contracting of wind, solar, storage, geothermal and large scale hydro to ensure that emissions in the 38 MMT portfolio reaches the required 2030 emissions target. Finally, CPA will supply any gaps in RPS-eligible supply to reach its Conforming Portfolios through the use of short-term renewable contracts.

	<i>4. New and existing resources that will be used to meet Mid-Term Reliability obligations adopted in D.21-06-035.</i>	A number of CPA's executed contracts for new incremental reliable capacity will contribute to CPA's D.21-06-035 compliance, including Arlington Storage, Azalea Solar + Storage, Estrella Solar + Storage, Daggett 3 Solar + Storage, Rexford Solar + Storage, Chalan Solar + Storage, Resurgence Solar +Storage, Daggett 2 Solar + Storage, and Desert Quartzite Solar + Storage. CPA issued a 2021 Mid-Term Reliability RFO in October 2021, which solicited for CPA's outstanding procurement need for D. 21-06-035, and CPA is currently negotiating long-term contracts from this RFO. CPA also plans on launching a 2022 Mid-Term Reliability RFO to secure remaining procurement obligations.
IV. Action Plan A. Proposed Activities	Retail sellers should describe how they propose to use RPS resources to implement their Preferred Portfolio. Narratives should include:	
	<i>1. Proposed RPS procurement activities as required by Commission decision or mandated procurement.</i>	Both of CPA's IRP Conforming Portfolios are expected to rely on a combination of RPS-eligible solar PV, wind, geothermal, hydro, and storage. Unspecified market purchases and market-available RA is expected to provide the balance of resource needs. As part of its action plan and its continuous operations, CPA will monitor closely the progress of construction and key milestones for its contracted new capacity that will come online in the future. In order to secure sufficient long-term RPS eligible resources in its Conforming Portfolios in the 2021-2024 period, in October 2019, CPA conducted a 2019 Reliability RFO and has contracted for its required procurement under D.19-11-016. In addition, CPA launched its 2020 Clean Energy RFO in Fall 2020 for additional RPS resources. In order to secure sufficient long-term RPS eligible resources in its Conforming Portfolios in the 2025-2030 period, CPA plans to conduct solicitations for new capacity in the 2021-2024 period covering needs in 2025-2027, and likely also solicitations in 2025 or 2026 to cover needs for renewable energy and storage in the 2028-2030 period.

	<i>2. Description of RPS resources identified in the Study Results section that correspond to proposed activities.</i>	CPA expects additional capacity to be either RPS-eligible renewable energy or storage, for a total of 3,750 MW of new resources in the 46 MMT case and 4,020 MW of new resources in the 38 MMT case by 2030. These resources include a mix of geothermal, Southern PGE_Wind, Sacramento_River_Wind, Tehachapi_Wind, New_Mexico_Wind, Southern_PGE-Solar, Southern_CA_Desert_Southern_NV_Solar, Greater_Kramer_Solar, and Tehachapi_Solar. These resources were selected in order to be consistent with the CPUC Reference System Plan. Actual resources selected will be determined based on availability and pricing. The resource mix between the 46 MMT and 38 MMT portfolios are expected to be very similar, with the 38 MMT portfolio including 100 MW of additional solar, and 100 MW of additional offshore wind.
	<i>3. Procurement plans, potential barriers, and resource viability for each new RPS resource identified.</i>	CPA does not expect any procurement barriers to impede its future contracting for new renewable energy resources, but notes that even though a balanced RPS portfolio is desirable, the limited resource availability and lead time required for some resources, such as wind and geothermal generation, may lead to a “solar-heavy” RPS and IRP portfolio.
IV. Action Plan B. Procurement Activities	The retail seller should describe the solicitation strategies for the RPS resources that will be included in their Preferred Portfolio. This description should include:	
	<i>1. The type of solicitation.</i>	CPA conducts annual solicitations for renewable and clean energy resources, and may conduct additional solicitations as necessary to meet procurement targets.
	<i>2. The timeline for each solicitation.</i>	As described previously, CPA launched its 2020 Clean Energy RFO in Fall 2020 for resources coming online between 2021 – 2025. CPA launched its 2021 Mid-Term Reliability RFO in October 2021 for resources coming online between 2022-2026. For the Conforming Portfolios, the exact timing of additional procurement activities to secure RPS

		and IRP capacity in the 2025-2030 period will depend on load growth and 2022 IRP analysis.
	<i>3. Desired online dates.</i>	CPA will be seeking RPS projects with online dates from 2021-2025, with a focus on near-term online dates to comply with the 2021-2024 RPS Compliance Period 4 mandates.
	<i>4. Other relevant procurement planning information, such as solicitation goals and objectives.</i>	For new resources and for both of the Conforming Portfolios, CPA expects to continue mainly using an open and competitive procurement process using RFOs. CPA's goals include: • Securing cost-effective supply for its customers to ensure stable rates • Securing resources that contribute to grid reliability • Diversifying its portfolio with non-solar resources, if those resources are available and competitively priced • Building its resource supply with local renewable and storage capacity, to the extent such capacity is available and cost-effective
IV. Action Plan C. Potential Barriers	Retail sellers should provide a summary of the barriers that will be identified in their Preferred Portfolio as they relate to RPS resources. The section should include:	
	<i>1. Key market, regulatory, financial, or other resource viability barriers or risks associated with the RPS resources coming online in retail sellers' Preferred Portfolios.</i>	Recent changes to the RA program, including the creation of a CPE for Local RA resources, Maximum Cumulative Capacity (MCC) accounting rules, and uncertainty related to Effective Load Carrying Capacity (ELCC) methodology would likely impact the valuation and procurement of RPS resources in CPA's Preferred Portfolio.
	<i>2. Key risks associated with the potential retirement of existing RPS resources on which the retail seller intends to rely in the future.</i>	Because CPA is a newly formed entity and does not have any RPS resources with near-term retirement dates, CPA does not foresee any risks associated with potential retirements.

January 18, 2023

Respectfully submitted,

/s/ Matthew Langer

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Appendix A

Redlined Version of Final 2022 RPS Plan

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue
Implementation and Administration, and
Consider Further Development, of California
Renewables Portfolio Standard Program.

Rulemaking 18-07-003

**FINAL~~DRAFT~~ 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT
PLAN OF THE CLEAN POWER ALLIANCE OF SOUTHERN CALIFORNIA**

**PUBLIC VERSION
(Appendices C and E Redacted)**

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January 18, 2023~~July 1, 2022~~

**BEFORE THE PUBLIC UTILITIES COMMISSION
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Order Instituting Rulemaking to Continue Implementation and Administration, and Consider Further Development, of California Renewables Portfolio Standard Program.

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**FINAL~~DRAFT~~ 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT
PLAN OF THE CLEAN POWER ALLIANCE OF SOUTHERN CALIFORNIA**

**PUBLIC VERSION
(Appendices C and E Redacted)**

In accordance with the California Public Utilities Commission’s (“Commission” or “CPUC”) March 30, 2021 *Assigned Commissioner and Assigned Administrative Law Judges’ Ruling Identifying Issues and Schedule of Review for 2022 Renewables Portfolio Standard Procurement Plans and Denying Joint IOUs’ Motion to File Advice Letters for Market Offer Process* (“ACR”) [and the Decision on 2022 Renewable Portfolios Standard Procurement Plans \(D. 22-12-030\),](#) the Clean Power Alliance of Southern California (“CPA”) hereby submits this [Final](#)~~Draft~~ 2022 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in ACR sections 6.1-6.16. [This RPS Procurement Plan also addresses deficiencies related to CPA’s Draft 2022 RPS Procurement Plan in D. 22-12-030.](#)

CPA notes that certain issues and requests in these ACR sections are not statutory requirements for Community Choice Aggregators (“CCAs”). CPA is nevertheless voluntarily responding to these ACR sections in the interest of transparency and in the spirit of collaboration with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR,

however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”) 350 or Commission decisions and rulings on RPS Procurement Plan submittals do not extend to CCAs, and CPA reserves the right to challenge any such assertion of jurisdiction over these matters.

I. Major Changes to RPS Plan

This Section describes the most significant changes between CPA’s Final 2021 RPS Procurement Plan and its ~~Final~~^{Draft} 2022 RPS Procurement Plan. A redline of this ~~Final~~^{Draft} 2022 RPS Plan against CPA’s ~~Draft 2022~~^{Final 2021} RPS Plan is included as Appendix A. The table below provides a list of key differences between the 2021 and 2022 RPS Procurement Plans:

Plan Reference	Plan Section	Summary/Justification of Change
2022 RPS Procurement Plan: Section III	Summary of Legislation Compliance	Updated to describe compliance with SB 255.
2022 RPS Procurement Plan: Section IV	Assessment of RPS Portfolio Supplies and Demand	Updated to describe CPA’s Voluntary Allocation and Market Offer election, coordination efforts across CPUC program requirements, including IRP and climate change, and industry-wide challenges delaying project schedules.
2022 RPS Procurement Plan: Section VII	Risk Assessment	Updated to describe high severity of compliance and development risk and address specific risk factors in the ACR.
2022 RPS Procurement Plan: Section XIII	Curtailment Frequency, Forecasting, Costs	Update to describe terms in RPS contracts intended to reduce the likelihood of curtailment or protect against negative prices.

II. Executive Summary

CPA began offering service to municipal customers of unincorporated Los Angeles County on February 1, 2018, and initiated the second phase of its roll-out to non-residential

customers of unincorporated Los Angeles County, Rolling Hills Estates, and South Pasadena beginning June 25, 2018. CPA enrolled all residential customers in 31 member jurisdictions in February 2019, and completed enrollment of the remainder of its non-residential customers in these 31 member jurisdictions in May 2019. On March 26, 2019, the CPUC certified CPA's Addendum No. 3 to the Community Choice Aggregation Implementation Plan and Statement of Interest, which expands CPA's service to the City of Westlake Village starting in June 2020, CPA's 32nd member jurisdiction. This expansion of service is included in CPA's total retail sales forecast. CPA currently serves approximately one million customer accounts and is the largest CCA in the state.

CPA has made significant progress towards meeting its renewable energy contracting obligations, including the execution of 21 long-term renewable and energy storage contracts totaling over 1,903 MW of renewable energy and 1,027 MW of storage.

III. Summary of Legislation Compliance

This RPS Procurement Plan addresses the requirements of all relevant legislation and the Commission's regulatory framework. This Section describes the relevant statutory and regulatory requirements and how this RPS Procurement Plan demonstrates that CPA meets these requirements.

SB 350 was signed by the Governor on October 7, 2015. SB 350 set a new RPS procurement target of 50 percent by December 31, 2030. On December 20, 2016, the Commission issued Decision ("D.") 16-12-040, which partially implemented the increased targets of SB 350 by establishing new compliance periods and procurement quantity requirements. On July 5, 2017, the Commission issued D.17-06-026, which implemented some of the key remaining elements of SB 350, including adopting new minimum procurement

requirements for long-term contracts and owned resources, as well as revising the excess procurement rules. SB 350 also directed the Commission to commence the Integrated Resources Planning (“IRP”) process. Subsequently, through D. 19-11-016, the Commission directed load serving entities (“LSEs”) to procure system capacity resources to come online between 2021 and 2023 to meet the anticipated system capacity shortfall. In 2021, the Commission issued D. 21-06-035, which directed LSEs to procure additional system capacity to address mid-term reliability.

SB 100 was signed by the Governor on September 10, 2018 and became effective on January 1, 2019. SB 100 increased the RPS procurement requirements to 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. On June 6, 2018, the Commission issued D.18-05-026, which implemented changes made by SB 350 to the RPS waiver process and reaffirmed the existing RPS penalty scheme. In July of 2018, the Commission issued Rulemaking 18-07-003 to continue the implementation of the RPS. On May 22, 2019, the Commission issued a proposed decision that would continue to use a straight-line method to calculate compliance period procurement quantity requirements.

The current RPS procurement targets are incorporated into CPA’s Renewable Net Short Calculation Table as described in Section VIII below and attached as Appendix C. CPA’s current and planned procurement, as reflected in CPA’s Renewable Net Short Calculation Table and described in Sections IV and V, is sufficient to exceed these targets, including a minimum margin of over-procurement based on CPA’s risk assessment, as described in Sections VII and IX. CPA is also positioned to exceed the SB 350 long-term procurement requirement, as described in Sections V and VII.

SB 901, signed by Governor Brown on September 21, 2018, added Public Utilities Code section 8388, which requires any investor owned utility, publicly owned electric utility, or CCA with a biomass contract meeting certain requirements to seek to amend the contract to extend the expiration date to be five years later than the expiration date that was operative as of 2018. CPA does not have a contract with a biomass facility that is covered by Public Utilities Code section 8388.

To meet these legislative mandates and regulatory requirements, in October 2018 CPA launched its first solicitation for long-term renewable and energy storage contracts. CPA issued a 2019 Clean Energy Request for Offers (“RFO”) and a 2019 Reliability RFO in October 2019. CPA issued its 2020 Clean Energy RFO in October 2020 to procure more RPS-eligible resources to meet the aforementioned requirements. CPA issued its 2021 Mid-Term Reliability RFO in October 2021 to secure additional resources needed to comply with D. 21-06-035. CPA also issued two Disadvantaged Communities (“DAC”) and Community Solar (“CS”) Green Tariff (“GT”) program RFOs – one launched in December 2020 and a second launched in December 2021. To date, CPA has contracted for a total of 1,903.95 MW of long-term RPS eligible resources and 1,027.5 MW of long-term storage resources, and has secured sufficient resources to meet its 65% long-term contract requirement.

SB 255, signed into law by Governor Newsom in 2019, requires CCAs to participate in the Commission’s Supplier Diversity Program set forth in General Order (“GO”) 156. CCAs with gross annual revenue over \$25 million are required to submit annual reports. CPA has submitted annual Supplier Diversity Reports to be compliant with GO 156 and D. 22-04-035. As stated in CPA’s 2021 Supplier Diversity Report, CPA is prohibited to give preferential treatment based on race, sex, color, ethnicity, and national origin due to Proposition 209; nevertheless,

CPA encourages minority-owned, women-owned, veteran-owned, and local businesses to respond to all solicitations.~~solicitations~~. CPA also encourages its energy suppliers to expand their outreach and consideration of diverse subcontractors by including a diversity supplier survey in its standard solicitation form. In further implementing SB 255, CPA established an internal Diversity, Inclusion, and Equity (“DEI”) team to assess best practices that can be adopted by CPA to expand our reach to diverse businesses while complying with Proposition 209 restrictions. This has culminated in an initiative to cultivate stronger relationships with community-based organizations in Los Angeles and Ventura counties that serve diverse communities to spread the word about contracting opportunities with CPA.

IV. Assessment of RPS Portfolio Supplies and Demand

IV.A. Portfolio Supply and Demand

CPA expects to meet all of its RPS compliance obligations. The quantitative analysis provided in Section VIII reflects CPA’s current forecast of retail sales and RPS-eligible procurement, assessed through 2032. CPA has entered into multiple power supply agreements, which will contribute to some of CPA’s RPS compliance over the upcoming twenty-year period. CPA expects to meet pertinent RPS compliance obligations during the coming twenty-year timeframe by entering into a variety of other renewable energy supply agreements. In October 2018, CPA launched its first solicitation for 15-year and longer long-term renewable and energy storage contracts. Resulting from this process and other bilateral negotiations, CPA executed four long-term renewable energy contracts and one long-term renewable energy plus storage contracts. In October 2019, CPA launched its 2019 Clean Energy RFO to meet its long-term renewable energy contracting requirements and CPA’s 2019 Reliability RFO to meet its IRP Procurement Track incremental capacity procurement requirements. From these two processes, CPA executed seven renewable energy plus storage and two standalone storage agreements.

CPA launched its third solicitation for long-term clean energy resources in the Fall of 2020, the 2020 Clean Energy RFO. CPA has executed six long-term contracts, including geothermal and solar plus storage resources, from the 2020 Clean Energy RFO. In December 2020, CPA launched its fourth ~~solicitation~~^{solicitation} for long-term clean energy resources in its 2020 DAC-GT and CSGT RFO, which yielded one solar long-term PPA for CPA's DAC-GT program. In 2021, CPA issued two additional RFOs, its 2021 Mid-Term Reliability RFO and its 2021 DAC-GT and CSGT RFO. For its 2021 DAC-GT and CSGT RFO, which closed on June 1, 2022, CPA is currently evaluating offers and anticipates shortlisting of projects in July 2022. The 2021 Mid-Term Reliability RFO seeks to contract resources that would satisfy the requirements set by D. 21-06-035, which directs LSEs to procure additional capacities to be brought online in 2023, 2024, and 2025, and long lead time ("LLT") resources that are able to deliver at maximum capacity for at least eight hours, and non-weather dependent resources that have at least an 80 percent capacity factor. CPA has entered into exclusive negotiations with counterparties from the 2021 Mid-Term Reliability RFO and anticipates executing contracts in Summer/Fall 2022. In addition, CPA plans to launch a second 2022 Mid-Term Reliability RFO to ensure CPA's procurement obligations for new reliable capacity are met.

The exact portfolio characteristics selected from future solicitations may vary depending on market conditions, legislative and regulatory policy changes, technological improvements, preferences of the CPA and its governing body, or other developments. To manage this future uncertainty, CPA examines and estimates supply, including potential voluntary allocations of PCIA renewable resources, and customer demand and will structure its future procurement efforts to balance customer demand with resource commitments. This examination of customer

demand and other market developments will help reduce costs and assist in meeting planned procurement for the period in this RPS Procurement Plan.

IV.A.1. Voluntary Allocation and Market Offer (VAMO)

The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a “Voluntary Allocation Market Offer” (“VAMO”) framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. To implement this modified VAMO structure, D.21-05-030 identifies various next steps, including a meet-and-confer process with the IOUs regarding the method for calculating potential Voluntary Allocations based on vintaged, annual load forecasts and a method for dividing the IOU’s RPS portfolios into shares. This will be followed by the submission of an advice letter and workshops.

In May 2022, CPA’s Board of Directors approved the staff recommendation to elect 50% of the Long-Term Voluntary Allocations. CPA formally made the Long Term Voluntary Allocation election on May 24, 2022.

IV.A.2. Portfolio [Optimization](#)

CPA Optimization CPA was founded with the mission to empower its member communities to make an impact on climate change through clean, reliable, and competitively-priced energy. With this mission in mind, CPA staff aims to procure RPS, carbon-free, and storage resources that can reduce our communities' carbon footprint and reliably deliver energy to its customers at affordable rates. These values are reflected in CPA's solicitation evaluation framework, which is used to evaluate all the resources competitively bid into its RFOs, as well as CPA's IRP filings.

CPA coordinates as appropriate with other CCAs via CalCCA in regulatory and planning forums to meet the State's reliability and environmental targets, and would consider joint resource procurement when appropriate. To date, CPA has not participated in a joint procurement effort with other retail sellers. Given CPA's sizable load, we have been able to meet compliance requirements through standalone procurement. However, CPA regularly evaluates participating in joint solicitations with other CCAs that can maximize value for its customers, achieve statewide or local procurement objectives, and minimize risk for CPA and its customers. For example, in June 2020, CPA participated in a joint effort with CleanPowerSF, East Bay Community Energy, Marin Clean Energy, Monterey Bay Community Power, Peninsula Clean Energy, Pioneer Community Energy, Redwood Coast Energy Authority, San Jose Clean Energy, Silicon Valley Clean Energy, Sonoma Clean Power, Valley Clean Energy, and Western Community Energy to seek qualified energy suppliers and developers to participate in a 2020 Request for Information on Long-Duration Storage. The Request for Information was intended to collect information for a subsequent long-duration storage request for offers, as well as helping inform long-term resource planning, including identifying candidate resources for the long-duration storage need identified in the 2019-2020 IRP Reference System Plan.

CPA also engages in sales solicitations to offer sales to other retail sellers to ensure that CPA's customers are not overburdened in the event of resource overgeneration or variations in expected load.

As CPA considers its long-term resource needs, CPA evaluates options in its existing power purchase agreements ("PPAs") to increase output through either facility upgrades or adding new capacity to the generating facility. Expanding existing facilities can provide additional generation at reduced costs with a lower risk of project failure because the need for distribution system upgrades and permitting may be reduced. For example, CPA worked with a counterparty to add storage to its already contracted solar-only project, Arlington Energy Center II, LLC, allowing CPA to better optimize the output of this RPS facility.

On June 24, 2021, the Commission adopted D.21-06-035, which directed all retail sellers to procure 11,500 MW of new net qualifying capacity ("NQC") between 2023 and 2026 and assigned each retail seller a specific procurement responsibility based on its share of peak demand. CPA's total obligation is 679 MW, which must include minimum amounts of procurement from certain subcategories: (1) 148 MW from firm, zero-emitting capacity by 2025; (2) 59 MW from long duration storage resources by 2026; and (3) 59 MW from firm, non-fossil fueled baseload generating resources by 2026. To ensure compliance with D.21-06-035, CPA launched its 2021 Mid-Term Reliability RFO in October 2021. CPA expects to contract with one RPS-eligible resource from this RFO, and ~~has issued~~~~will issue~~ a second 2022 Mid-term Reliability RFO in Summer 2022 to meet its outstanding compliance requirement. These resources, in addition to satisfying the D. 21-06-035 requirements, will provide system capacity values to help meet CPA's RA compliance obligations and are consistent with the anticipated procurement described in CPA's 2020 [and 2022](#) IRP.

IV.B. Responsiveness to Local and Regional Policies

(i) Responsiveness to Policies of CPA's Governing Board

CPA is a local governmental agency that is subject to the control of its governing board and is directly accountable to the community that it serves. CPA strongly supports and is committed to meeting the state's GHG reduction and renewable procurement goals. As a member of CalCCA, CPA actively supported the passage of SB 100 and has fully incorporated the procurement requirements of the state's RPS program into its overall procurement strategy. Beyond the state's minimum renewable procurement requirements, CPA's governing board has established additional requirements for renewable procurement via its product offerings community default selections, which achieve renewable energy targets. CPA currently offers its customers a Lean, Clean, and 100% Green rate, which correspond to various renewable or carbon-free energy content percentages (compliance, 50%, and 100%, respectively). The voluntary margin of overprocurement reflects these customer product selections. Approximately 32% of CPA's customers receive service at the 100% Green rate currently, and this is anticipated to increase to 73% of CPA's customers at the 100% Green rate by the end of 2025 based on actions taken by CPA's member agencies. Due to this additional voluntary procurement to meet its customers' demand for renewable energy resources, CPA met its SB 100 target of 60% renewable energy in 2019 and 2020, much earlier than the 2030 compliance target, and anticipates exceeding this target in 2022 and beyond.

In addition to CPA's board-established product content offerings, CPA's board has established other policies related to CPA's renewable procurement, including discouraging the procurement of PCC3 products and encouraging the development of local and distributed energy resources. As of 2020, CPA has not procured PCC3 products to meet its RPS compliance

obligations. CPA's board has also implemented policies related to bid selection criteria, including preferences for projects constructed using union labor, projects that benefit Disadvantaged Communities, and projects that reflect environmental stewardship principles, which is described further in Section X.C and implemented through CPA's RFO protocols.

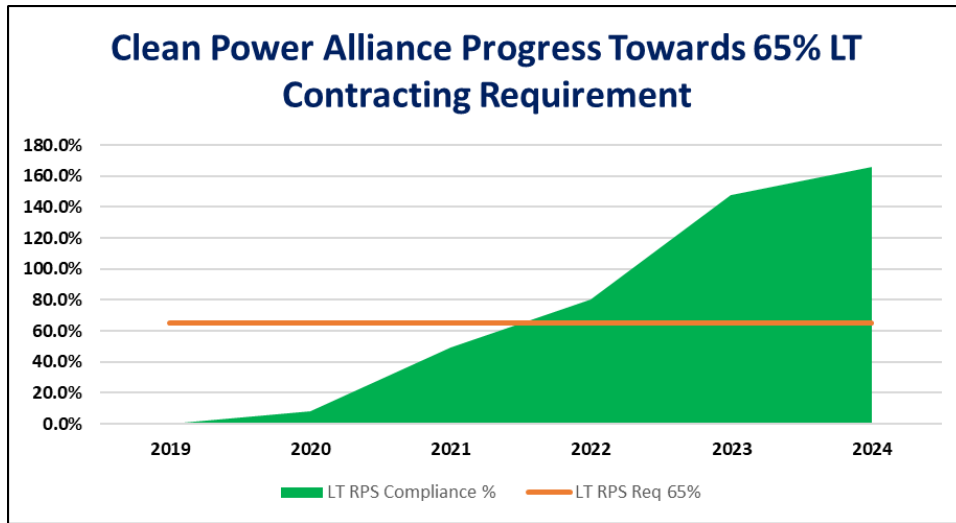
(ii) Responsiveness to Regional Policies

Each of CPA's member agencies determines its customers' default product offering (a Lean, Clean, and 100% Green rate, as described in Section IV.B(i) above), which allows each community to select a renewable and carbon free content that is consistent with its regional and community climate action plans. Member agencies can change their default product offering selection by notifying CPA consistent with the board-adopted Changes to Default Rate Product Policy.

IV.B.1. Long-term Procurement

As described in Section IV, CPA has contracted for a total of 1,903.95 MW of long-term RPS eligible resources and 1,027.5 MW of long-term storage resources, which will contribute to CPA's 65% long-term contracting requirement. CPA has secured all of its long-term contracting needs for the 2021-2024 compliance period. Since the 2021 Final RPS Procurement Plan, CPA has not entered into any new long-term contracts. [The chart below shows CPA's progress towards complying with the 65 percent long-term contracting requirement. -](#)

~~**IV.C. Portfolio Diversity and Reliability**~~



IV.C. Portfolio Diversity and Reliability

CPA will also consider the deliverability characteristics of its future generating resources placed under contract, such as the resource's dispatchability and available capacity, and will review the respective risks associated with short- and long-term purchases as part of its forecasting and procurement processes. These efforts will lead to a diverse resource mix, address grid integration issues, incorporate forecasted transportation electrification, and provide value to the local community, including a significant population residing in disadvantaged communities. [CPA notes that transportation electrification would likely impact its load shape, depending on the scale of adoption and when customers charge their vehicles. CPA actively supports EV charging infrastructure and distributed energy resource activities to meet its renewable energy goals. CPA is partnering with customers to utilize energy storage systems for demand response and/or reliability. In addition, CPA's customer programs, such as Power Response and Peak Management Program incentivize commercial and public agency customers to reduce their energy consumption during periods of grid stress and elevated wholesale energy prices.](#) A quantitative description of this forecast is attached to the RPS Procurement Plan in Appendix C.

In developing its load forecast related to transportation electrification, CPA used CEC's 2021 IEPR demand forecast, adopted by the CEC Commissioners at the CEC's January 26, 2022 business meeting. For its planning of RPS procurement, CPA used the CEC's 2021 IEPR Mid-Demand base-line forecast, with mid-case Additional Achievable Energy Efficiency ("AAEE"). As CPA continues to develop its transportation electrification program, CPA will develop and refine its own transportation electrification load forecast assumptions in 2023. Based on the initial analysis, while transportation electrification is unlikely to have visible impact on load forecast in the near term, CPA anticipates adjusting its procurement strategy to support greater transportation electrification closer to 2030.

To date, CPA has procured a diverse set of resources, including, solar, wind, geothermal, co-located solar plus storage, and standalone storage resources. To ensure alignment with expected load curves, CPA is seeking to incorporate a diverse set of renewable energy technologies within its renewable energy portfolio, and procure additional complimentary energy storage resources, to support a mix of peaking, dispatchable, baseload, firm, and as-available resources to appropriately meet its load resource balance needs. CPA is considering advanced emerging technologies such as hybrid battery storage, offshore wind, or other emerging technologies and welcomes these technologies to participate in its solicitations for long-term resources.

CPA's long-term contracts include provisions for buyer curtailment rights to facilitate renewable integration. CPA intends to meet all of its future energy portfolio and system requirements, including Resource Adequacy, to address reliability needs.

IV.D. Lessons Learned

The California renewable energy market has developed and evolved significantly over the past few years. The general trend for pricing for renewable energy technologies has been decreasing over time, and this competitive pricing was reflected in the offers that CPA received in its 2020 Clean Energy RFO and 2021 Mid-Term Reliability RFO. In addition, the cost of storage technologies is decreasing at a rapid rate, based on the bids received by CPA in 2020 and 2021, which should enable CPA to cost-effectively mitigate generation variability of its portfolio and ensure reliable load resource balance. However, a number of unprecedented challenges has impacted the development of renewable energy projects in California, including interconnection delays, ongoing COVID-19 pandemic-related supply chain impacts, U.S. trade actions, and rising commodity prices. These challenges have increased the risk of project delays and driven up the cost of renewable and storage resources coming online in the 2022-2025 timeframe.

In addition, the growth of renewable resources in the CAISO system is resulting in the downward movement of mid-day wholesale energy market prices. This has led to decreasing value for renewable projects that generate during mid-day hours. The growth of renewable resources also has produced challenges, such as negative wholesale energy market prices. Contract provisions that address curtailment are important for CPA to address negative pricing situations that are likely to increase in the future, which protects customers from higher costs.

Some recent regulatory uncertainties and changes may likely impact the pricing of renewable and storage resources. The implementation of Local RA Central Procurement Entity (“CPE”) beginning in RA compliance year 2023 has impacted renewable resource valuation, and it is unclear whether the adopted resource compensation mechanism for Local RA resource premium truly reflects the resource needs in Local capacity areas. The proposed biennial

updates to wind and solar Effective Load Carrying Capacity (“ELCC”), as well as the newly published regional wind ELCC values, have also impacted the valuation of those resources and future procurement planning. The additional procurement mandate to fill mid-term reliability needs and replace Diablo Canyon in the IRP proceeding sends strong signals to the market in terms of the resource mix that LSEs will need to procure. The implementation of these decisions will likely affect the valuation and market participation behavior of renewable and storage resources. CPA will be paying close attention to the implementation of these rules and monitor their effects on the renewable energy market.

V. Project Development Status Update

As described in Section IV.B above, CPA’s current and planned procurement is sufficient to meet both the applicable RPS procurement requirements as well as support the state’s GHG reduction targets. Further, CPA’s current and planned procurement supports system reliability by considering both portfolio diversity and alignment with CPA customers’ load curve. Specifically, the projects that are currently under development fit within and support CPA’s plans for meeting these goals.

As of the date of this filing, CPA has entered into ~~26~~¹⁹ agreements with RPS-eligible facilities. Of those ~~26~~¹⁹ agreements, ~~9~~^{eight} are already online, and the remaining ~~16~~^{eleven} renewable energy supply agreements are with facilities that are not yet in commercial operation or are coming online in phases, which are summarized in the table below. CPA has also attached the Project Development Status Update Report as Appendix D reflecting these projects. The project list has been updated to include all projects executed to date and reflect CPA’s best available information on when these projects are expected to come online. A number of the listed project CODs include known delays to project schedules due to interconnection, permitting, and

supply chain delays impacting renewable and storage development, further described in IV.D.

CPA is closely monitoring project delays and is working closely with developers to mitigate

delays and avoid contract terminations.

Facility Name	Technology Type	MW	Location	COD	Network Upgrades Milestone
Arlington Energy Center II	Solar + Storage	233 MW Solar / 132 MW Storage	Blythe, CA	3/21/2022; Full Deliverability 12/1/2023 10/01/2023	Completed
Azalea	Solar + Storage	60 MW Solar / 38 MW Storage	Kern County, CA	08/01/2024	Expected May 2024
Chalan	Solar + Storage	64.9 MW Solar / 25 MW Storage	Kern County, CA	12/31/ 2024 2023	Expected 12/1/2023
Rexford	Solar + Storage	300 MW Solar / 180 MW Storage	Tulare, CA	12/31 10/01/2024	Expected December 2024 10/01/2023
Daggett 3	Solar + Storage	123 MW Solar / 61.5 MW Storage	San Bernardino County, CA	12/1 09/27/2023	Expected 04/15/2023 12/09/2022
Estrella	Solar + Storage	56 MW Solar / 28 MW Storage	Los Angeles County, CA	12/31/2023	Expected 11/30/ 2023 2022
Resurgence Solar II	Solar + Storage	48 MW Solar / 38 MW Storage	Boron, CA	6/1 03/31/2023	N/A
Daggett Solar Power 2	Solar + Storage	52 MW Solar / 65 MW Storage	San Bernardino County, CA	12/ 19 20 /2023	Complete Expected 12/09/2022
Arica	Solar + Storage	93.5 MW Solar / 71 MW Storage	Riverside County, CA	6/1/2024 12/01/2023	Expected 06/20/2023
Radiant	Solar	3 MW	Newberry Springs, CA	12/31/ 2024 2023	N/A
Desert Quartzite	Solar + Storage	300 MW Solar / 150 MW Storage	Blythe, CA	03/01/2025	Expected 07/15/ 2024 2023
Cape Station	Geothermal	33 MW	Beaver, Utah	6/1/2028	Expected 6/1/2028
Prologis Dominguez	Solar	0.96 MW Solar	Carson, CA	12/30/2023	Expected 10/1/2023

<u>Prologis El Segundo</u>	<u>Solar</u>	<u>0.64 MW Solar</u>	<u>Hawthorne, CA</u>	<u>12/30/2023</u>	<u>Expected 10/1/2023</u>
<u>Prologis Wilmington 1</u>	<u>Solar</u>	<u>1.8 MW Solar</u>	<u>Carson, CA</u>	<u>12/30/2023</u>	<u>Expected 10/1/2023</u>
<u>Prologis Wilmington 2</u>	<u>Solar</u>	<u>0.6 MW Solar</u>	<u>Carson, CA</u>	<u>12/30/2023</u>	<u>Expected 10/1/2023</u>
<u>Prologis Workman Mill</u>	<u>Solar</u>	<u>1.92 MW Solar</u>	<u>Whittier, CA</u>	<u>12/30/2023</u>	<u>Expected 10/1/2023</u>
<u>Pivot – Beverly</u>	<u>Solar</u>	<u>0.4 MW Solar</u>	<u>Pico Rivera, CA</u>	<u>12/31/2023</u>	<u>Expected 12/7/2023</u>
<u>Pivot – San Gabriel</u>	<u>Solar</u>	<u>0.27 MW Solar</u>	<u>Pico Rivera, CA</u>	<u>12/31/2023</u>	<u>Expected 12/7/2023</u>

VI. Potential Compliance Delays

CPA does not anticipate any compliance delays for this compliance period. If a future compliance issue is identified, then CPA will address those issues and then describe them in a subsequent RPS Procurement Plan.

VII. Risk Assessment

CPA assesses and aims to mitigate risks associated with—but not limited to—permitting, transmission and development, supply chains, and financing. Potential impacts of these risks on the CPA RPS and long-term contract supply are incorporated into the program’s portfolio planning and risk management activities. The risk adjusted expected generation used by CPA to manage supply risks are included in Appendix C, the Renewable Net Short Quantitative Response.

As noted in the ACR, generation variability and market conditions may impact the amount of future electricity delivered from a retail seller. CPA acknowledges the possibility that contracted volumes of electricity, especially from variable resources, may not be delivered as expected under contract. CPA considers this potential risk in contracting, forecasting,

procurement review, and programmatic decision-making and requires industry standard contractual protections for under- and over-deliveries to address RPS compliance and financial risks.

CPA uses a comprehensive, iterative enterprise risk management framework to regularly evaluate risk areas across its business, identify mitigation strategies, and execute on those strategies. CPA regularly monitors and manages power supply cost and risks in a manner that is consistent with best utility industry practice.

VII. A. Risk Variables

CPA has identified the following renewable energy supply risk variables that may impact RPS compliance and whose management are critical to a ~~low~~-cost effective, stable, and predictable power portfolio:

- Variable resource availability risk (Low): Many forms of renewable power are variable and not dispatchable, meaning the actual power produced cannot be controlled or produced on demand. Due to this variability, renewable energy is typically sold as available, meaning that while a specified capacity is dedicated to the purchaser, the actual MW-hours are delivered based on production, which may be higher or lower than planned due to changing weather and other conditions. CPA categorized risks associated with this variable as low because expected variability in variable renewable energy technologies is well known given the extensive operating history of these resources in California and low for CPA specifically given CPA's large and diverse portfolio of renewable resources, i.e. no one resource comprises a majority of CPA's portfolio.

- System reliability and Technology risk (Medium): Energy generation technology is rapidly evolving; entering into excessive long-term contracts therefore may commit CPA to a particular technology that may become obsolete or more expensive than energy available in later years. Overcommitting to certain technologies in the near-term may also limit future investments in emerging technologies. System reliability and Technology risk is categorized as a medium risk variable because a greater proportion of CPA's portfolio is comprised of solar plus storage given the state's needs for clean and ~~reliable~~reliable capacity. However, CPA is able to mitigate this risk through limiting the duration of contract terms, ~~diversifying~~diversifying its portfolio with various renewable technologies, and encouraging the development of emerging technologies.
- Compliance and Development risk (High): When entering into a contract for power from a plant that is not yet constructed and/or operational, CPA is exposed to the risk of the energy supply not being delivered on time or at all due to development, permitting, and supply chain delays or cancellation. CPA weighs compliance and development and compliance risk as a high-risk factor because of the complex nature of project development and the material impact such development risks have on the project's ability to achieve commercial operation and on CPA's regulatory compliance obligations.
- Counterparty credit risk (Low): A financially weak or unviable counterparty may expose CPA to the risk that contracted supply will not be delivered, exposing the program to a supply shortage and more market price volatility than desired. While the financial strength of the counterparty is important for project development, it

is a relatively low risk that CPA is able to mitigate through development and performance security requirements.

- **Supply chain risk (High)**: As many of the components for new energy facilities are imported from other countries, U.S. international relations can impact the renewable project supply chain and project development timelines. Global emergencies, like the COVID-19 pandemic, can also disrupt renewable energy supply chains. The rapid spread of the virus prompted shutdowns of industries around the world, and this has led to uncertainty for manufacturers and distributors of goods, who cannot produce or supply as much as they did pre-pandemic and causing potential project delays. Especially recently, CPA has put greater weight on supply chain risk when evaluating bids into our RFOs and negotiating contracts due to the visible impacts of supply chain issues.

VII. B. Strategies to Address Risk and Lessons Learned

Any of these risks may impact the amount of renewable generation available for RPS compliance. CPA manages and minimizes the risks described above through energy supply portfolio diversification, contract provisions and counterparty risk assessments. The diversification of suppliers and projects procured reduces the impact of development delays or energy delivery shortfalls of any one project, and credit risks from any one counterparty. CPA maintains diversity in counterparties, resource types, project sizes, and locations of RPS facilities. As discussed, CPA is well positioned to meet its RPS compliance requirements. Potential under-deliveries from the identified risks are addressed through a MMoP, CPA's margin of voluntary overprocurement and renewable energy targets as discussed above. CPA has not experienced project failures or contract terminations of resources that have reached COD and

begun delivering energy. CPA has determined with a high confidence level that the Forecast Failure Rate for Online Generation is 0% (i.e., existing facilities generating energy will not cease to generate energy and contracts for these resources will not be terminated).

CPA acknowledges that ~~the~~ the possibility always exists that future renewable energy supply will not be delivered as required under the respective contract. As noted in Public Utilities Code section 399.13(a)(6)(A) and the ACR, generation variability and resource availability may impact the amount of future electricity delivered. CPA considers this potential risk in forecasting as well as during procurement review and decision-making. By targeting a volume of RPS energy that exceeds the requirements of the RPS program, CPA further mitigates the risk of lower-than-expected generation.

Currently, CPA meets the majority of its renewable energy demand via short-term contracts with firm delivery requirements from existing renewable facilities. These contracts have minimal risk of non-delivery, and to date, CPA has not experienced any underperformance or non-delivery related to these contracts.

However, as CPA transitions from meeting its renewable energy demand from short-term contracts to long-term contracts, CPA incorporates the risk factors described above into its risk assessment of its long-term contract portfolio. CPA is aware that RPS projects under construction have risks during the development period that could affect the contracted COD. First, as part of its solicitation process and selection of projects for which to contract, CPA applies project failure rates for new-build projects, based on technological maturity: 30% failure for renewable technologies, 40% failure for renewable plus storage technologies, and 50% failure for standalone storage technologies. This accounts for the risk that new resources may not be built due to a variety of project development risks, including permitting, transmission

development, supply chain disruptions, and financing challenges. In addition, CPA's PPAs incorporate a number of contractual obligations to ensure that sellers are incentivized to minimize project capacity variances and delays in commercial ~~online~~^{onlines} dates. Second, CPA considers the risk of receiving lower than expected generation from variable energy resources, either due to variances in weather, resource availability, curtailment, or operational underperformance. CPA addresses this risk by including contractual obligations for sellers to meet minimum guaranteed generation performance thresholds. In addition, CPA models this expected generation variability using a deterministic tool that evaluates various generation scenarios, including expected energy profiles versus minimum contractual generation profiles.

As discussed in Section 4.C., CPA aims to avoid overreliance on any single technology type or resource concentration located in one geographic region to mitigate the impacts of localized curtailment to CPA's portfolio. The technological and geographic diversity of renewable resources in the CPA RPS portfolio, including baseload geothermal sources, contributes to grid reliability by not over-relying on any one resource type.

CPA has also invested in both stand-alone storage and energy storage paired with RPS resources as part of its renewable portfolio to provide increased reliability and renewable integration services. CPA currently has 13 stand-alone and paired solar plus storage contracts with collectively over 1,000 MWs of storage capacity. In its 2021 Midterm Reliability RFO, CPA is seeking additional baseload renewables, renewable plus storage and standalone storage, including 8-hour long duration storage offerings, to complement its existing portfolio. CPA's investment in a robust portfolio of incremental storage resources supports system reliability and mitigates any negative system impacts such as rolling electric outages or violation of current standards for ancillary services.

Because CPA is a new organization with limited historical data on how new renewable energy projects perform, CPA is not currently utilizing internal historical trends in its risk modeling. However, CPA's application of project failure rates and PPA contracting terms are consistent with best practices for load serving entities. In addition, as CPA develops additional operating history, CPA will incorporate historical trends related to variability in load and generation forecasts, project failure rates, curtailment, and force majeure events, which all pose risks related to renewable energy supply commitments.

Given CPA's high margin of voluntary overprocurement and CPA's election of voluntary allocations of PCIA renewable resources, the risk that CPA does not meet its RPS compliance is low. However, CPA can also address shortfall risk by utilizing short-term renewable energy products to fill expected [intra-year](#)~~intra-year~~ shortfalls.

Overall, CPA's risk mitigation strategies as described in greater details above are consistent with other LSE's actions for minimizing and avoiding risk, particularly those that are used by CCAs. Key mitigation actions from CCAs include their commitment to achieving and exceeding compliance with state RPS goals and delivering renewable energy at levels established by their Board of Directors. CCAs' risk of non-compliance with the RPS program is therefore a low probability, as the risk of underperformance of any single contract is mitigated by targeting a higher volume of deliveries overall. CCAs seek to minimize unnecessary financial exposure and general planning risk by assembling a diversified portfolio of renewable generating resources and products that are intended to complement the manner in which their customers use electric power. Additionally, CCAs procurement decisions do consider a balanced mix of resources that helps ensure reliability of the electrical grid is maintained.

VIII. Renewable Net Short Calculation

CPA has provided a quantitative assessment to support the qualitative descriptions provided in this RPS Procurement Plan, which is attached as Appendix C. For RPS facilities in development, CPA has applied the following risk adjustments: 20% failure rate for projects in the pre-construction phase and 10% failure rate for projects in the construction phase. [The risk factors are consistent with industry norms and are also based on CPA's experience in the market once facilities have entered the pre-construction and construction phases.](#) The Forecast Failure Rate for RPS Facilities in Development line in Appendix C (row Fbb) reflects a composite failure rate reflective of each RPS facility's development stage.

[The failure rates were applied to the forecasted energy for each of our long-term resources to account for potential delays or lower generation \(i.e. annual expected energy * risk factor\).](#)

IX. Minimum Margin of Procurement (MMoP)

CPA is, as shown in the table below, building an electricity supply portfolio with short-term and long-term contracts that are projected to achieve State requirements for increasing the RPS-eligible renewable and GHG-free energy content of its portfolio over time. The table below shows the margin of RPS over-procurement based on the differential between the SB 100 and the Clean Power Alliance RPS procurement targets.

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Requirement (% of Retail Sales)	33.0%	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
Clean Power Alliance Internal RPS Procurement Target (% of Retail Sales)	61.4%	56.1%	53.8%	77.0%	82.5%	84.8%	85.2%	85.5%	85.5%	85.5%	85.5%	85.5%	85.5%
Clean Power Alliance RPS Voluntary Margin of Over-Procurement (% of Retail)	28.4%	20.3%	15.3%	35.7%	38.5%	38.2%	35.9%	33.5%	30.8%	28.2%	25.5%	25.5%	25.5%
Clean Power Alliance RPS Minimum Margin of Over-Procurement (% of Retail)	0.0%	0.0%	0.3%	1.3%	6.0%	6.3%	6.2%	6.2%	6.1%	6.0%	6.0%	5.9%	5.9%
Clean Power Alliance RPS Aggregate Margin of Over-Procurement (% of Retail)	28.4%	20.3%	15.6%	37.0%	44.4%	44.5%	42.1%	39.7%	36.9%	34.2%	31.5%	31.4%	31.4%

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Requirement	33.00%	35.75%	38.50%	41.25%	44.00%	46.67%	49.33%	52.00%	54.00%	56.00%	60.00%	60.00%	60.00%
Clean Power Alliance RPS Procurement Targets	61.4%	56.1%	53.8%	77.0%	82.5%	84.8%	85.2%	85.5%	85.5%	85.5%	85.5%	85.5%	85.5%
Clean Power Alliance RPS Minimum Margin of Procurement	28.4%	20.3%	15.3%	35.7%	38.5%	38.2%	35.9%	33.5%	31.5%	29.5%	25.5%	25.5%	25.5%

As noted above, Clean Power Alliance’s RPS-eligible renewable energy target over 60% by 2020, increasing to at least 85% by 2026 to achieve its Board-adopted clean energy goals, thus allowing for a significant margin of procurement over the SB 100 mandates.

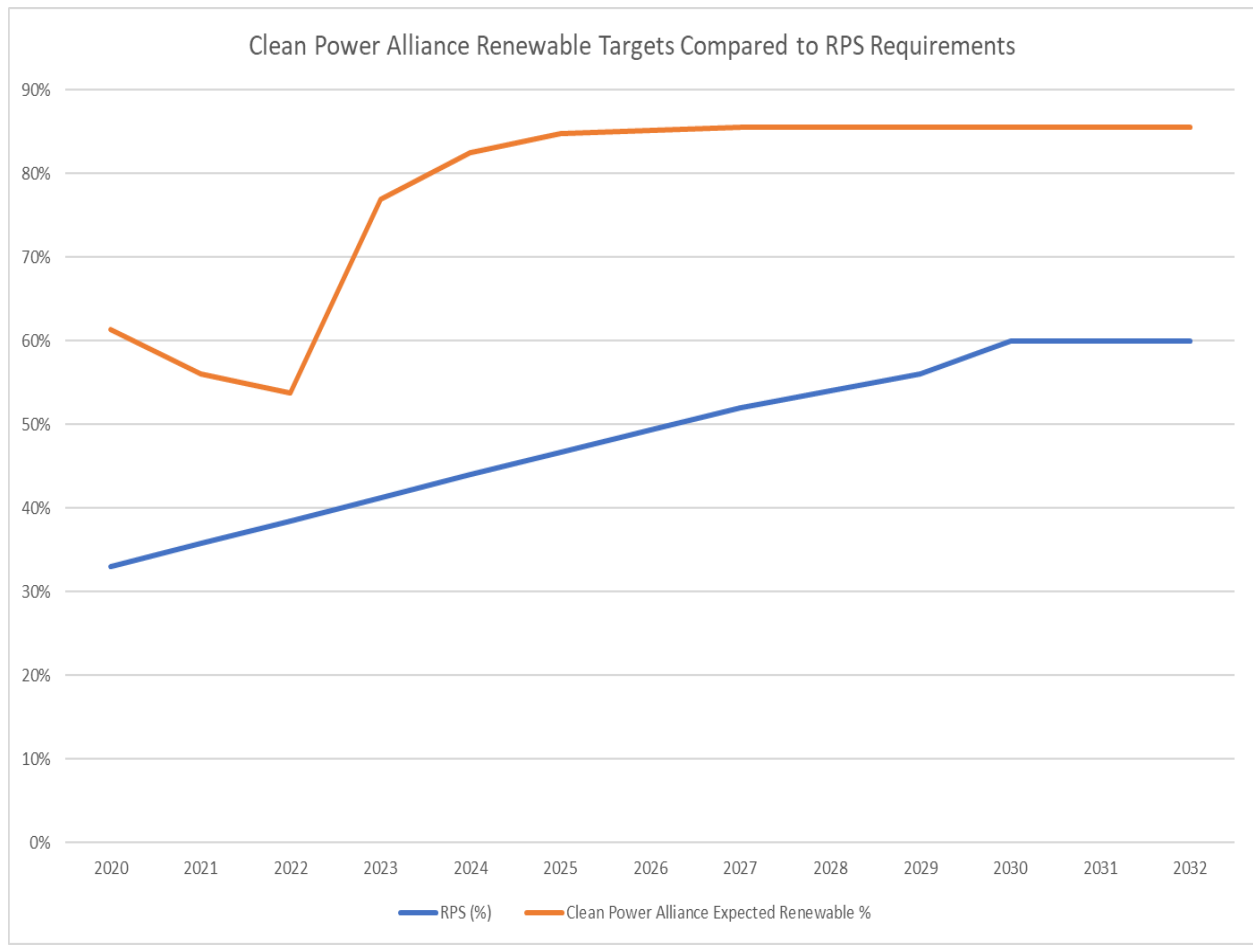
IX.A. MMoP Methodology and Inputs

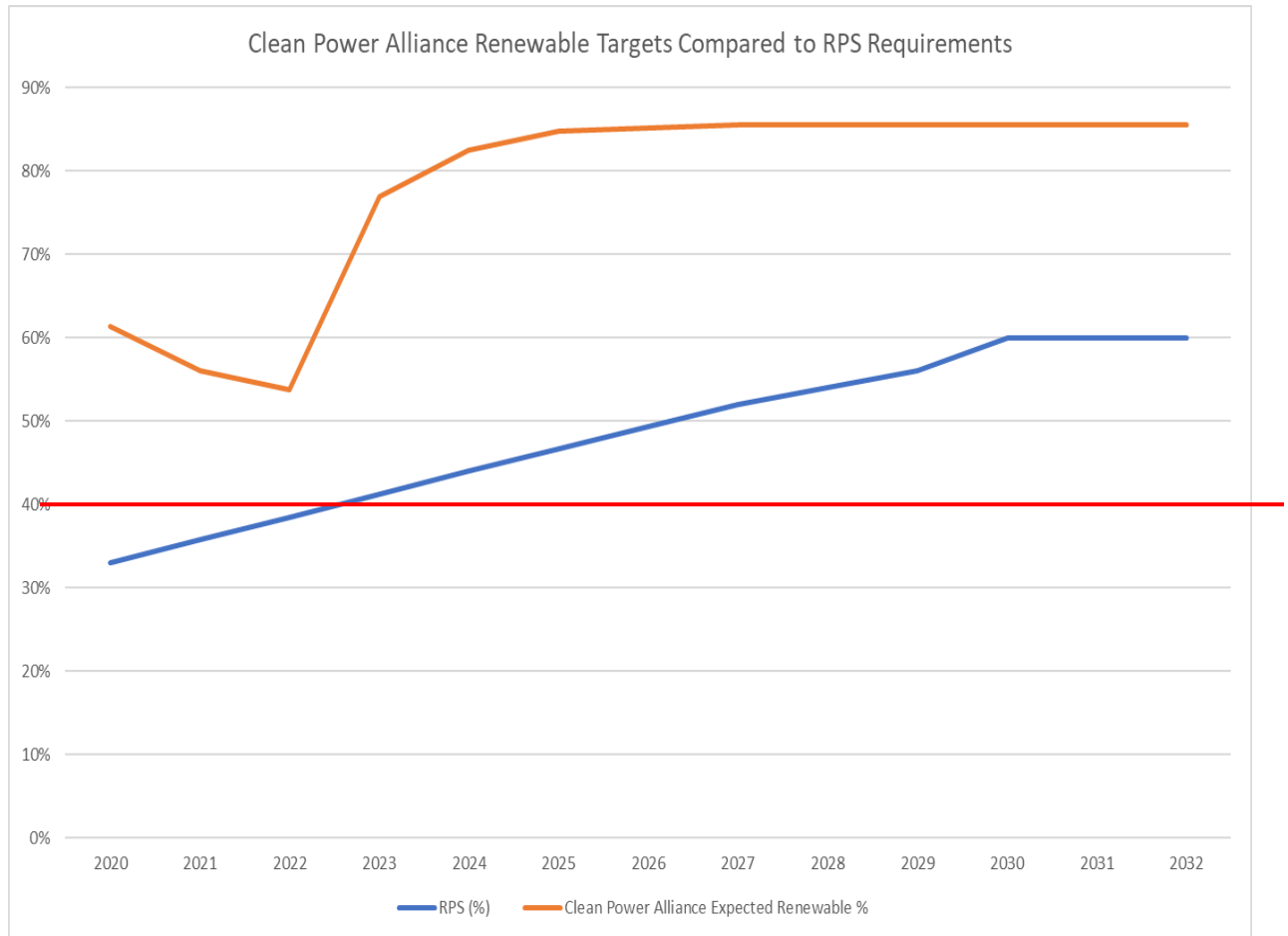
CPA’s MMoP is intended to address the RPS failure determined in the renewable net short calculation. In the event of contract under-deliveries or project failures, the MMoP should be sufficient to ensure CPA is compliant with the RPS procurement requirements. CPA has developed its MMoP independently of any VMOP set by Board goals, however.

As stated in Section VIII, CPA risk-adjusts the energy delivery estimates for RPS contracts with resources that are under development. Once a facility is in development, CPA applies a forecast failure rate to the expected value for all renewable contracts in development. The de-rate effectively removes this generation from CPA’s renewable energy supply projection used for procurement planning. Therefore, CPA plans to procure additional RPS energy equal to this quantity as its MMoP. The table below lists the projected RPS generation failure rates and MmoP that is consistent with the inputs in the Renewable net Short Quantitative Response.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Forecast Failure Rate (RPS Facilities online)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Forecast Failure Rate (RPS Facilities In-Development)	0.0%	1.5%	4.6%	11.3%	11.6%	11.6%	11.6%	11.6%	11.6%	11.7%	11.7%	11.7%
MMoP (MWh)	0	34,173	137,232	658,639	699,527	696,393	692,980	691,175	686,643	683,488	680,322	678,474

CPA has Total RPS Eligible Procurement in excess of the Gross RPS Procurement Quantity Requirement for 2021 as shown in Appendix C. CPA's target Total RPS Eligible Procurement amount every year is based on its customer's RPS tiered rate selection. CPA offers its customers different product levels, including an RPS compliance product (Lean Product), 50% RPS or higher (Clean Product) and 100% RPS product offering (100% Green Product) . Because a majority of CPA member agencies and its customers have elected the 50% RPS or 100% RPS option, CPA anticipates meeting and exceeding the requirements of RPS every year. CPA continually tracks the variability in forecasted versus actual load and generation and can utilize short-term contracts for additional RPS quantities, if necessary. The program's RPS-eligible renewable energy targets and performance compared to the state RPS requirements are summarized below.





IX.B. MmoP Scenarios

CPA plans to meet the annual program renewable goals below, in the 2021 to 2024 compliance period, and over the 10-year planning horizon.

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Clean Power Alliance RPS Procurement Targets	61.4%	56.1%	53.8%	77.0%	82.5%	84.8%	85.2%	85.5%	85.5%	85.5%	85.5%	85.5%	85.5%
SB 100 RPS Requirement	33.00%				44.00%			52.00%			60.00%		60.00%

In 2023, Clean Power Alliance’s RPS-eligible renewable energy target is 77%, 35.7% higher than the 2023 compliance target of 41.3%, and 17% above the state’s 60% RPS requirement by 2030. This additional voluntary procurement serves to meet CPA customers’ demand for renewable energy resources. As shown in Appendix C, the RNS Quantitative

Template, CPA's VMOP exceeds its MmoP, and thus CPA expects to meet and exceed its MmoP as part of procuring to meet its Board goals, and comply with the RPS project to mitigate risk that renewable projects under contract are delayed or terminated. Even with project failure rates of 20%, CPA would comply with its minimum RPS targets.

X. Bid Solicitation Protocol

X.A. Solicitation Protocols for Renewables Sales

On an as-needed basis and either via a ~~solicitation~~^{solicitation} process or via bilateral transactions, CPA may enter into renewable sales for years in which it has over-procured for renewable energy resources, either due to higher than expected generation or due to deviations in load. CPA's solicitation protocol for renewables sales is similar to CPA's solicitation protocol for short-term renewable purchases.

X.B. Bid Selection Protocols

Consistent with Section 399.13(a)(6)(C), CPA conducts bid solicitations for procuring energy resources that includes specific needs for eligible renewable energy resources, generating capacity, locational preference, and required online dates to assist in determining what resources fit best within a portfolio. Since CCA program governing boards are comprised of local elected officials, these solicitation and procurement decisions are overseen by the elected representatives of the community. These decisions seek to comply with locally-set targets that tend to exceed the RPS requirement.

Consistent with the direction in the ACR, CPA has provided a copy of its most recent solicitation materials to Commission Energy Division staff in Appendix B, Exhibit A. CPA's most recent solicitation information is available at the following website:
<https://cleanpoweralliance.org/get-involved/job-contracting-opportunities/>.

X.C. LCBF Criteria

The Least-Cost Best Fit methodologies approved by the Commission pursuant to D.04-07-029, D.11-04-030, D.12-11-016, D.14-11-042, and D.16-12-044 are expressly only directly applicable to investor owned utilities and the Commission does not have jurisdiction over the solicitation protocols of CCAs. However, consistent with Section 399.13(a)(9),¹ CPA does consider best-fit attributes that support a balanced mix of resources to help support reliability of the electrical grid. CPA uses six evaluation criteria as part of its project selection process: (1) net economic value over the full term of the contract based on energy, Resource Adequacy, and ancillary service attributes of the facility, as applicable, given the facility's specific operating characteristics, (2) development risk, including but not limited to factors such as status of interconnection agreement, network upgrade costs, site control, status of permitting, and project financing, (3) workforce development, (4) environmental stewardship, (5) benefits to Disadvantaged Communities, and (6) project location. An overview of this evaluation criteria is provided in Appendix B, Exhibit B. CPA's valuation is based on the specific location of project, taking into consideration congestion costs and risks of curtailment. CPA is technology agnostic and encourages solicitation participation by a diverse mix of RPS-eligible resources, including intermittent, baseload, and dispatchable, including energy storage technologies in a variety of project locations.

Additionally, the requirement of Section 399.13(a)(8) to give preference to renewable projects located in certain communities is expressly only applicable to "electrical

¹ Cal. Pub. Util. Code § 399.13(a)(9) ("In soliciting and procuring eligible renewable energy resources, each retail seller shall consider the best-fit attributes of resource types that ensure a balanced resource mix to maintain the reliability of the electrical grid.").

corporations” and is not mandatory for CCAs.² However, CPA fully recognizes the need to help mitigate the impacts of air pollution in regions of the state where communities have been disproportionately impacted by the existing generating fleet as well as the need to bring economic benefits to communities with high levels of poverty and unemployment. Per its Joint Powers Agreement, CPA provides and manages its energy portfolio and products in a manner that promotes public health in areas impacted by energy production, including Disadvantaged Communities (as defined by the California Environmental Protection Agency CalEnviroScreen tool). Utilizing the CalEnviroScreen 4.0 dataset, CPA has determined that 22% of the 294 zip codes within its service territory either entirely or partially contain census tracts identified as Disadvantaged Communities. To address these communities, CPA’s solicitation process demonstrates a preference for projects that are located within Disadvantaged Communities and can demonstrate that they provide those communities with benefits such as workforce development opportunities and targeting hiring of Disadvantaged Community residents.

XI. Safety Considerations

CPA holds safety as a top priority. Since CPA does not own, operate, or control generation facilities, CPA’s procurement of renewable resources does not present any unique safety risks. This Section describes how CPA has taken actions to reduce the safety risks posed by its renewable resource portfolio and how CPA supports the state’s environmental, safety, and energy policy goals.

² Cal. Pub. Util. Code § 399.13(a)(8)(1) (“In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”).

In its contracts, CPA requires that facilities be operated using Prudent Operating Practices, including applicable safety and reliability criteria. CPA includes contract language that requires that a project owner/operator maintain the health and safety of the facility and people associated with the ~~construction~~^{construction} and operation of the facility:

“Maintenance of Health and Safety. Seller shall take reasonable safety precautions with respect to the operation, maintenance, repair and replacement of the Facility. If Seller becomes aware of any circumstances relating to the Facility that create an imminent risk of damage or injury to any Person or any Person’s property, Seller shall take prompt, reasonable action to prevent such damage or injury and shall give Buyer’s emergency contact identified on Exhibit N Notice of such condition. Such action may include disconnecting and removing all or a portion of the Facility, or suspending the supply of Facility Energy to the Delivery Point.”

XI.1. Wildfire Risks and Vegetation Management

As described further in Section XI.4, the majority of CPA’s contracted facilities are located in low fire threat areas. However, CPA’s contracted facilities have extensive fire mitigation and vegetation management plans in place to minimize risk.

In addition, in its evaluation of renewable offers, CPA has a preference for multiple benefit projects, including projects located in the built environment (i.e. rooftop or parking lot solar PV where there is minimal risk of wildfires) and technologies that facilitate vegetation management (e.g. forest or agricultural biomass facilities).

XI.2. Decommissioning Facilities

Because facilities are required to meet decommissioning requirements consistent with local CEQA and permitting standards, CPA doesn’t explicitly require decommissioning its its contracts. However, CPA’s contracted facilities have the following decommissioning considerations:

- CPA’s contracted solar facilities are expected to have a lifetime of approximately 30 years. All of CPA’s contract solar facilities have requirements to decommission at the end of the project life, consistent with their Conditional Use Permits.
- Given the limited availability of wind resources in California, CPA’s contracted wind facilities are anticipated to repower at the end of their facilities’ life.
- CPA’s run-of-river resources have explored decommissioning; however, these facilities are located on dams that are owned and operated by the US Army Corps of Engineers (“USACE”) for flood prevention, so it would be very unlikely for the dams to be shut down, and the hydro facilities will likely be repowered to continue operation.

XI.3. Climate Change Adaptation

None of CPA’s projects under contract have identified a specific climate change risk. Based on the National Oceanic and ~~Atmospheric~~ [Atmospheric](#) Administration (“NOAA”) Sea Level Rise Tool, CPA’s contracted projects are not at risk of sea level rise. CPA will closely monitor the output of these facilities from year to year and adjust expected output if climate change impacts are observed. For example, wind and solar facilities may experience a change in their generation profiles due to changing weather conditions, and RPS hydro facilities generation profiles may change due to changing rainfall/snowpack.

When evaluating resource offers, CPA attempts to mitigate climate change risk by seeking a portfolio of projects with diverse technologies, generation profiles, and locations. In addition, CPA has a specific preference for projects that are multiple benefit, i.e. providing multiple environmental benefits for air, water, and nature beyond greenhouse gas reductions. Multiple benefit projects include those located on repurposed energy or industrial sites, on salt-affected agricultural land, or in the built environment.

XI.4. Impacts During Public Safety Power Shut-off (PSPS) Events

Using the CPUC's High Fire Threat District Map, CPA identified three projects that are located within a High Fire Threat District. Kaweah, a small hydro facility, is located within a Tier 2 fire threat area in Tulare County, California. Isabella Partners, another small hydro facility, is located within a Tier 3 fire threat area in Kern County, California. However, these are both small projects (20 MW or less) and should these facilities be impacted during PSPS Events, it will not have a material impact on CPA's overall supply. The third facility, Geysers Geothermal, is located within a Tier 3 fire threat area in Lake County, California; however, CPA is only a small offtaker (50 MW portion) of the larger facility.

CPA's other projects, while not located in High Fire Threat Districts, do have fire safety and mitigation strategies in place, including the vegetation management strategies described in Section XI.1, and some projects have back-up generators to maintain critical operations and maintenance (O&M) activities during PSPS Events.

XI.5. Biomass Procurement

To date, CPA has not procured forecast biomass resources because it has received limited offers from these types of projects. However, CPA's solicitations are open to all RPS-eligible resource types, including eligible forest biomass.

XII. Consideration of Price Adjustment Mechanisms

In the future, and consistent with SB 350, CPA will review the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index.

XIII. Curtailment Frequency, Forecasting, Costs

This Section responds to the questions presented in Section 5.13 of the ACR³ and describes CPA's strategies and experience so far in managing CPA's exposure to negative pricing events, overgeneration, and economic curtailment for CPA's region and portfolio of renewable resources.

XIII.1. Factors Having the Most Impact on the Projected Increases in Incidences of Overgeneration and Negative Market Price Hours

CPA continues to learn a great deal about the California energy market, including information and considerations related to energy curtailment, potential cost impacts, contracting considerations and other concerns. The following represents CPA's understanding of this topic, which may impact future procurement processes.

Due in large part to the rapid increase in the amount of wind and solar generating facilities that have been brought on line throughout the western United States, the California Independent System Operator's ("CAISO") balancing authority area has experienced an increasing frequency and magnitude of curtailment and negative pricing events.

As of the end of 2021, California had over 15,000 MW of solar, and 7,800 MW of wind.⁴ This increased capacity results in discrete periods where the majority of load in the CAISO is served by solar and wind resources. The monthly maximum load served by wind and solar in the CAISO has averaged 61.4% over the past 3 years (May 2018 to May 2021), and in April of 2021 the monthly maximum load exceeded 85% with solar representing over 58%.⁵ To address the

³ ACR at 28-30.

⁴ CAISO Key Statistics Report, March 2022

⁵ CAISO, Monthly Renewables Performance Report, May 2021, *available at* <http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2021.html>.

resulting instances of over-supply, the amount of curtailment of wind and solar in the CAISO has significantly increased since 2015, totaling 891,065 MWh in 2019, 1,587,496 MWh in 2020, and 1,504,803 MWh in 2021.⁶ 1.5 million MWh of solar energy that CAISO curtailed in 2020 represented 5% of the state's utility-scale solar production, according to the U.S. Energy Information Administration (EIA). In the early afternoon hours of March 2021, the California Independent System Operator (CAISO) curtailed an average of 15% of its utility-scale solar output. The reason for curtailment is that production from solar and wind generators exceeded demand. The growth of installed capacity drives further increases in curtailment rates. To help meet California's target of 50% renewable generation by 2025, more wind and solar generation has been added to our power mix. Increases in renewable energy curtailments have followed an increase in new renewable capacity additions to meet this 2025 directive, while solar capacity additions are causing high totals of solar power curtailment. Curtailment is typically the highest during the months of March, April, and May when hydroelectric generation is historically at its highest, demand is low and solar output is relatively high.

CAISO has explored a few options to mitigate renewable curtailment rates. One tool is the CAISO Energy Imbalance market (EIM), a real-time market that allows those outside of CAISO's territory to buy and sell energy to balance supply and demand. In 2020, 16% of possible curtailments were avoided through inter-market trading, according to the EIM. Another solution is increased use of energy storage. During the calendar year 2021, 2,359 megawatts (MW) of utility-scale battery storage capacity was added to CAISO system. For perspective, that

⁶ Energy Central, "Why Is California Continuing To Curtail Solar & Wind Energy Production?", June 10, 2022, available at <https://energycentral.com/c/cp/why-california-continuing-curtail-solar-wind-energy-production>"

compares to 172 MW added the previous year, over 12 times more than the storage additions in 2020.

XIII.2. Written Description of Quantitative Analysis of Forecast of the Number of Hours Per Year of Negative Market Pricing for the Next 10 Years

CPA has conducted a historical quantitative analysis of the number of hours per year of negative market pricing affecting CPA's PPA resources (see table below). To date, eight of CPA's contracted renewable facilities have commenced commercial operation. The analysis of these resources indicates a trend of increasing negative market price hours from 2020 to 2021.

Year	Nmber of Hours per Year of Negative Market Prices for all CPA's PPA Nodes
2020	366
2021	684

Additionally, CPA developed a more detailed curtailment forecast of its renewable generation through 2032 using PLEXOS, a Production Cost model from Energy Exemplar. PLEXOS Integrated Energy Model is a commercial optimization engine that can simulate the economic commitment and dispatch used by the CAISO's day-ahead market processes which simultaneously optimizes energy dispatch and ancillary services capacity awards across the CAISO grid. The results show increasing curtailments of CPA's renewable generation over time as more renewables come into the system. The results also showed more curtailment of solar resources is happening in the middle of the day, when the sun is the brightest, and the vast majority of CPA curtailments come from solar compared to wind. A summary of curtailment as a percentage of CPA's total generation is provided in the table below.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
CPA Renewable Curtailment	0.0%	0.0%	4.8%	4.4%	4.3%	6.9%	6.7%	6.5%	6.3%	5.9%	5.4%

CPA conducts quantitative analysis to determine the expected negative market prices and the potential risk of curtailment. In its 2020 Clean Energy RFO and 2021 Mid-Term Reliability RFO, CPA contracted with Ascend Analytics to conduct an evaluation of offers. Ascend Analytics uses its proprietary long-term fundamental forecasting model, incorporating energy market conditions across the Western United States, to project the resource's value over the life of the contract. This analysis models each resource at its specific pnode, including a forecast of the price basis relative to SP-15, and addresses forecasting uncertainty, including stochastic uncertainty for prices and intermittent generation output, and incorporates price volatility and renewable penetration effects (i.e. duck curve) for the entire system. The economic valuation of each project takes into consideration an estimate of curtailment and related economic loss expected over the life of the contract.

XIII.3. Experience, to Date, With Managing Exposure to Negative Market Prices and/or Lessons Learned from Other Retail Sellers in California

CPA manages its exposure to negative market prices through its procurement activities. CPA takes actions to limit the impacts of curtailment on its customers, including issuing solicitations for standalone storage or storage paired with renewable resources. To date, CPA has secured over 1,000 MW of storage, much of which is paired with solar projects representing up to 80% of the generation capacity of these projects. CPA will include a substantial proportion of storage in its future electric supply portfolio. We expect there will be more curtailments with a greater penetration of renewable generation in the California market. However, as storage capacity increases relative to the amount of intermittent resources, the incidence of negative prices should decrease. In addition, CPA includes contract terms that recognize and limit the potential financial impacts of negative pricing.

To date, CPA has eight RPS resources that are online and serving CPA's load and neither has had material exposure to negative market prices. However, CPA has taken into consideration the impact of negative market prices both in its evaluation of contracted resources and incorporating agreement terms addressing negative pricing risk and curtailment, as described further in Sections XIII.2 and XIII.5.

XIII.4. Direct Costs Incurred, to Date, for Incidences of Overgeneration and Associated Negative Market Prices

To date, CPA has not incurred material direct costs associated with overgeneration and negative market prices for its contracted RPS resources. However, CPA will continue to track this issue closely, particularly as a significant number of its utility-scale solar and wind contracts come online in 2022-2024.

XIII.5. An Overall Strategy for Managing the Overall Cost Impact of Increasing Incidences of Overgeneration and Negative Market Prices

While curtailment is a viable renewable integration strategy that is generally more cost-effective than other options, there are potential negative consequences from excessive curtailment. Curtailment of solar and wind represents a lost opportunity to generate zero GHG emitting electricity, and excessive curtailment could impact the ability of the state to meet its environmental and energy policy goals. Additionally, these over-supply situations expose ratepayers to increased costs because their load serving entities must either economically curtail the generating resource (and often pay for the electricity that was not generated) or generate power and be exposed to negative prices. Because these conditions are largely driven by state policy, it is appropriate to consider macro-level mitigation measures through CAISO initiatives, Commission rulemakings, and possibly even legislation. There are a number of measures and policies that have already been implemented or are currently being pursued that will have

significant impacts on how substantial curtailment will be in the future. This includes the expansion of the Energy Imbalance Market, improvements to the CAISO market design and structure, enhanced forecasting capabilities, time of use rates, improved EV charging functionalities, and smart deployment of distributed energy resources. The Commission's IRP proceeding will be an appropriate forum to measure the impact of these policies and the effect that they will have on future curtailment. These new measures will need to be modeled and incorporated into forecasts of future curtailment.

CPA considers the impact of curtailment and negative pricing on its individual portfolio and factors potential curtailment into its long-term planning. Due to the difficulty in accurately forecasting curtailment, CPA reviews the historical data on curtailment and negative pricing for the regions where CPA has contracted or owned generating resources. When CPA is evaluating new procurement, the potential amount of future curtailment is one factor that CPA considers. While CPA does not develop an individualized forecast of future curtailment, CPA does factor potential curtailment into both its minimum margin of procurement (described in Section IX) and its Risk Assessment (Section VII). Additionally, CPA takes actions to limit the impacts of curtailment on its ratepayers. CPA pursues contract terms that recognize and limit the potential financial impacts of negative pricing and give CPA greater flexibility to direct economic curtailment. In addition, CPA is actively seeking contracting opportunities with energy storage resources in its solicitations for long-term contracts, which will improve CPA's ability to integrate intermittent resources and facilitate re-dispatch of emissions-free resources from hours of over-generation to hours when additional supply can be deployed. To date, CPA has executed contracts for 1,027.5 MW of storage resources, with more storage resources under negotiation from its 2021 Mid-Term Reliability RFO. Energy storage will assist CPA in mitigating

curtailment and negative pricing. CPA's strategy to manage this cost risk includes the diversification of its renewable portfolio. CPA is planning to negotiate with developers that have submitted their offers to its 2020 Clean Energy RFO to include geothermal resources in its future renewable portfolio.

XIII.6. Contract Terms Included in RPS Contracts Intended to Reduce the Likelihood of Curtailment or Protect Against Negative Prices.

In CPA's pro forma contracting terms, CPA bears the cost of curtailed energy (defined as "Deemed Delivered Energy"). However, CPA is able to control the way that renewable resources are bid into the market and may choose to self-schedule the resource into the market (i.e. be a price taker) or set the bid price at a slightly negative price to ensure the resource is not curtailed and that RECs are generated.

In addition, of CPA's total 2,473 MW of renewable resources, only 457.6 MW are not paired with storage resources. Storage paired with renewables minimizes the risk of curtailment, because excess renewable energy that would otherwise be curtailed can be ~~sent~~send to charge storage and be used at a later hour when this renewable energy is needed to meet load requirements and prices are positive. Per CPA's pro forma contract, CPA will not compensate sellers for curtailed renewable energy if that energy could have been sent to the paired storage resources and was not due to the storage resource being on outage:

"If the LMP for the Facility's PNode during any Settlement Interval was less than zero (0), Deemed Delivered Energy shall be reduced in such Settlement Interval by the amount of any Charging Energy that was not able to be delivered to the Storage Facility during such Settlement Interval due to the unavailability of the Storage Facility due to a Forced Facility Outage."

Lastly, in addition to its renewable resource portfolio, CPA has two contracts for standalone energy storage resources, the 100 MW Luna storage and 100 MW Sanborn storage

projects. These standalone storage resources will contribute to minimizing curtailment on the grid overall.

XIV. Cost Quantification

CPA has provided the Cost Quantification Table as Appendix E. Pursuant to the direction in the ACR, CPA has completed those cells in the Cost Quantification table that correspond to Table 3, Rows 1-5 in the ACR.

XV. Coordination with Integrated Resource Planning Proceeding

The resources identified in this RPS Procurement Plan are consistent with the resources that were identified in CPA's 2020 IRP, which was approved by CPA's governing board and provided to the Commission for certification on September 1, 2020. As required by the ACR,⁷ CPA includes the following table that describes how CPA's 2022 RPS Procurement Plan conforms with the determinations made in the IRP Proceedings (R.16-02-007 and R.20-05-003) in the 2020 IRP cycle.

As of the date of this filing, CPA has not yet completed its 2022 IRP analysis, which will be completed and submitted by November 1, 2022; therefore, the resulting RPS Portfolio is not described in this section. However, due to an increase in the number of CPA customers that are on a 100% renewable rate (i.e. CPA's 100% Green rate product), CPA expects to achieve an even higher RPS portfolio content than what was forecasted in the 2020 IRP. In addition, the 2022 IRP will establish new GHG benchmarks under the 25 million metric ton (MMT) and 30 MMT scenarios for CPA's portfolio and extend CPA's portfolio forecasting period to 2035, which will help CPA better understand its long-term RPS position.

⁷ ACR at 32-35.

The table below refers to CPA’s 2020 IRP, and will be updated once CPA’s 2022 IRP analysis is complete:

IRP Section Subsection	RPS Alignment in IRP	
III. Study Results A. Preferred and Conforming Portfolios	Retail sellers should explain how the RPS resources they plan to procure, outlined in their RPS Plan, will align with each portfolio to be developed in their IRP. In addition to the list of the IRP portfolios developed and portfolio descriptions submitted for Commission approval and certification in IRP Plans, this should include:	
	<i>1. Existing RPS resources that the retail seller owns or contracts.</i>	CPA filed two IRP portfolios: One that conforms with the 46 MMT scenario and one that confirms with the 38 MMT scenario (“Conforming Portfolios”). Planned and already contracted RPS resources described in other sections of this Plan are included in the IRP, to the extent the contracts were executed prior to the IRP submission. Existing resources include the Voyager 21.6 MW wind facility, Kaweah 20.09 MW small hydro facility, and Isabella 11.95 MW small hydro facility. Since the 2020 IRP submission, CPA has contracted with the 14.0 MW Heber South geothermal and 50.0 MW Geysers geothermal facilities, which are also existing resources. CPA has also had several projects that were in development at the time of the IRP submission that are now operational, which are the 40.0 MW Golden Fields, 300.0 MW Mohave Wind (White Hills) facility, High Desert 150.0 MW Solar and 50.0 MW Storage, and 100.0 MW Sanborn Storage.
	<i>2. Existing RPS resources that the retail seller plans to contract with in the future.</i>	CPA’s IRP portfolios include planned and generic renewable projects that are new build resources. However, CPA may procure existing RPS resources to secure diversity in its portfolio (i.e. non-solar) depending on availability and pricing.
	<i>3. New RPS resources that the</i>	CPA’s resource plan expects to rely on a mix of renewable and carbon-free resources such as solar,

	<i>retail seller plans to invest in.</i>	wind, geothermal, storage, and hydro. As of today, CPA has completed long-term PPAs with new resources for a total of 1,808 MW of renewable energy and 1,027 MW of storage, as listed in Appendix D. CPA issued an RFO for new renewable resources in October 2020, the CPA 2020 Clean Energy RFO, and completed contracting for six solar plus storage and geothermal resources. These contracts plus CPA's previously executed contracts ensures that CPA meets its 2021-2024 RPS Compliance Period 4 mandates. CPA issued a 2021 Mid-Term Reliability RFO in October 2021, which solicited for baseload renewable, renewable plus storage, and standalone storage resources, including long-duration (8-hour duration or longer) storage projects. CPA is currently negotiating long-term contracts from this RFO. The activities described above will cover both the 46 MMT Conforming Portfolio and the 38 MMT Conforming Portfolio. In fact, CPA expects that procurement activities^{activities} and action plans will remain the same regardless of portfolio, but the amount of resources procured or contracted will differ. The 38 MMT portfolio is expected to require additional incremental procurement and/or contracting of wind, solar, storage, geothermal and large scale hydro to ensure that emissions in the 38 MMT portfolio reaches the required 2030 emissions target. Finally, CPA will supply any gaps in RPS-eligible supply to reach its Conforming Portfolios through the use of short-term renewable contracts.
	<i>4. New and existing resources that will be used to meet Mid-Term Reliability obligations adopted in D.21-06-035.</i>	A number of CPA's executed contracts for new incremental reliable capacity will contribute to CPA's D.21-06-035 compliance, including Arlington Storage, Azalea Solar + Storage, Estrella Solar + Storage, Daggett 3 Solar + Storage, Rexford Solar + Storage, Chalan Solar + Storage, Resurgence Solar +Storage, Daggett 2 Solar + Storage, and Desert Quartzite Solar + Storage. CPA issued a 2021 Mid-Term Reliability RFO in October 2021, which solicited for CPA's outstanding procurement need for D. 21-06-035,

		and CPA is currently negotiating long-term contracts from this RFO. CPA also plans on launching a 2022 Mid-Term Reliability RFO to secure remaining procurement obligations.
IV. Action Plan A. Proposed Activities	Retail sellers should describe how they propose to use RPS resources to implement their Preferred Portfolio. Narratives should include:	
	<i>1. Proposed RPS procurement activities as required by Commission decision or mandated procurement.</i>	Both of CPA's IRP Conforming Portfolios are expected to rely on a combination of RPS-eligible solar PV, wind, geothermal, hydro, and storage. Unspecified market purchases and market-available RA is expected to provide the balance of resource needs. As part of its action plan and its continuous operations, CPA will monitor closely the progress of construction and key milestones for its contracted new capacity that will come online in the future. In order to secure sufficient long-term RPS eligible resources in its Conforming Portfolios in the 2021-2024 period, in October 2019, CPA conducted a 2019 Reliability RFO and has contracted for its required procurement under D.19-11-016. In addition, CPA launched its 2020 Clean Energy RFO in Fall 2020 for additional RPS resources. In order to secure sufficient long-term RPS eligible resources in its Conforming Portfolios in the 2025-2030 period, CPA plans to conduct solicitations for new capacity in the 2021-2024 period covering needs in 2025-2027, and likely also solicitations in 2025 or 2026 to cover needs for renewable energy and storage in the 2028-2030 period.
	<i>2. Description of RPS resources identified in the Study Results section that correspond to proposed activities.</i>	CPA expects additional capacity to be either RPS-eligible renewable energy or storage, for a total of 3,750 MW of new resources in the 46 MMT case and 4,020 MW of new resources in the 38 MMT case by 2030. These resources include a mix of geothermal, Southern PGE_Wind, Sacramento_River_Wind, Tehachapi_Wind, New_Mexico_Wind, Southern_PGE-Solar, Southern_CA_Desert_Southern_NV_Solar, Greater_Kramer_Solar, and Tehachapi_Solar. These resources were selected in order to be

		consistent with the CPUC Reference System Plan. Actual resources selected will be determined based on availability and pricing. The resource mix between the 46 MMT and 38 MMT portfolios are expected to be very similar, with the 38 MMT portfolio including 100 MW of additional solar, and 100 MW of additional offshore wind.
	<i>3. Procurement plans, potential barriers, and resource viability for each new RPS resource identified.</i>	CPA does not expect any procurement barriers to impede its future contracting for new renewable energy resources, but notes that even though a balanced RPS portfolio is desirable, the limited resource availability and lead time required for some resources, such as wind and geothermal generation, may lead to a “solar-heavy” RPS and IRP portfolio.
IV. Action Plan B. Procurement Activities	The retail seller should describe the solicitation strategies for the RPS resources that will be included in their Preferred Portfolio. This description should include:	
	<i>1. The type of solicitation.</i>	CPA conducts annual solicitations for renewable and clean energy resources, and may conduct additional solicitations as necessary to meet procurement targets.
	<i>2. The timeline for each solicitation.</i>	As described previously, CPA launched its 2020 Clean Energy RFO in Fall 2020 for resources coming online between 2021 – 2025. CPA launched its 2021 Mid-Term Reliability RFO in October 2021 for resources coming online between 2022-2026. For the Conforming Portfolios, the exact timing of additional procurement activities to secure RPS and IRP capacity in the 2025-2030 period will depend on load growth and 2022 IRP analysis.
	<i>3. Desired online dates.</i>	CPA will be seeking RPS projects with online dates from 2021-2025, with a focus on near-term online dates to comply with the 2021-2024 RPS Compliance Period 4 mandates.
	<i>4. Other relevant procurement planning information, such</i>	For new resources and for both of the Conforming Portfolios, CPA expects to continue mainly using an open and competitive procurement process using RFOs. CPA’s goals include:

	<i>as solicitation goals and objectives.</i>	• Securing cost-effective supply for its customers to ensure stable rates • Securing resources that contribute to grid reliability • Diversifying its portfolio with non-solar resources, if those resources are available and competitively priced • Building its resource supply with local renewable and storage capacity, to the extent such capacity is available and cost-effective
IV. Action Plan C. Potential Barriers	Retail sellers should provide a summary of the barriers that will be identified in their Preferred Portfolio as they relate to RPS resources. The section should include:	
	<i>1. Key market, regulatory, financial, or other resource viability barriers or risks associated with the RPS resources coming online in retail sellers' Preferred Portfolios.</i>	Recent changes to the RA program, including the creation of a CPE for Local RA resources, Maximum Cumulative Capacity (MCC) accounting rules, and uncertainty related to Effective Load Carrying Capacity (ELCC) methodology would likely impact the valuation and procurement of RPS resources in CPA's Preferred Portfolio.
	<i>2. Key risks associated with the potential retirement of existing RPS resources on which the retail seller intends to rely in the future.</i>	Because CPA is a newly formed entity and does not have any RPS resources with near-term retirement dates, CPA does not foresee any risks associated with potential retirements.

January 18, 2023~~July 1, 2022~~

Respectfully submitted,

/s/ Matthew Langer~~Natasha Keefer~~

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Appendix B

Solicitation Information

Exhibit A

2021 Clean Energy RFO Protocol



2021 Midterm Reliability Request for Offers

Launch: September 29, 2021

Close: November 10, 2021

RFO Protocol

1. Introduction

Clean Power Alliance of Southern California (CPA) is soliciting competitive proposals for resources needed to achieve compliance with the California Public Utilities Commission (CPUC) decision requiring procurement to address mid-term reliability. Issued on June 24, 2021, the “Decision” orders load serving entities (LSEs), including CPA, to procure 11,500 MW of new capacity statewide between 2023 and 2026. A portion of the new capacity procured must be in the form of Long-Lead Time (LLT) resources, defined in the Decision as long-duration energy storage or firm, zero-emitting generation.

CPA’s 2021 Midterm Reliability RFO seeks offers from the following product types:

- **Renewable Generation Plus Storage Contracts:** RPS-eligible generation paired with storage projects (40 MWh – 800 MWh in storage capacity). The storage duration must be at least 4 hours. The generation component (e.g. solar) should be sized to ensure the battery could be fully charged from 0% to 100% State of Charge (SOC) every day of the year. Projects in this category must have a commercial operation date no later than June 1, 2026. CPA has a preference for projects with an earlier COD.
- **Stand Alone Storage Contracts:** Stand-alone storage projects with a storage capacity of 40 MWh – 800 MWh. The storage duration must be at least 4 hours. Projects must have a commercial operation date no later than June 1, 2026.
- **Baseload/Firm Renewable Energy Contracts:** Zero emissions generation capacity or capacity that is eligible under the requirements of the RPS program and has an expected annual capacity factor of at least 80%. The resources must not be use limited or weather dependent. No storage projects shall qualify under this product category. Projects in this category should have a generation size of 5 MW – 100MW and a commercial operation date no later than June 1, 2026. CPA has a preference for projects with an earlier COD.

General instructions for participating in CPA’s RFO and product-specific requirements are described in the text of this document (“RFO Protocol”).

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2. Background

a. Description of CPA

Established in 2017, CPA is a Joint Powers Authority made up of 32 local agencies across Los Angeles and Ventura Counties serving electricity to approximately 1 million customers in the region. CPA was established to provide cost competitive electric services, reduce electric sector greenhouse gas emissions, stimulate renewable energy development, implement distributed energy resources, promote energy efficiency and demand reduction programs, and sustain long-term rate stability for residents and businesses through local control.

CPA seeks to develop an electric supply portfolio with overall lower greenhouse gas (GHG) emissions than that of Southern California Edison, to encourage the use and development of cost-effective renewable and distributed energy resources, and to discourage the use of unbundled renewable energy credits (RECs). CPA also seeks to provide and manage its energy portfolio and products in a manner that is cost effective to customers, to promote public health in areas impacted by energy production, to achieve regional economic benefits and workforce development, and to offer customers a choice of differentiated renewable product tiers.

b. RFO Overview and Goals

The goal of this RFO is for CPA to solicit and evaluate offers for both renewable energy generation and energy storage in order to meet CPA's energy procurement obligations, its environmental objectives, and to offer its customers cost-competitive, clean energy options. Projects eligible to participate:

Renewable Generation Plus Storage Contracts

Utility-scale submissions must be bucket 1 REC-eligible projects paired with storage capacities in the range of 40 – 800 MWh. The storage duration must be at least 4 hours. The generation resources may be new or pre-existing and must be sized to ensure the battery could be fully charged from 0% to 100% SOC every day of the year. Utility-scale projects must have a Commercial Operation Date (COD) no later than June 1, 2026.

Stand Alone Storage Contracts

CPA seeks to enter into one or more long-term Energy Storage Agreements (ESAs) with energy storage facilities in the range of 40 – 800 MWh. The storage duration must be at least 4 hours. Projects must have a commercial operation date no later than June 1, 2026.

Baseload/Firm Renewable Energy Contracts

CPA seeks firm zero-emitting generation resources defined as: Zero emissions generation capacity or is eligible under the requirements of the RPS program and has an expected annual capacity factor of at least 80%. The resources must not be use limited or weather dependent. No storage projects shall qualify under this product category. Projects in this category should have a generation size of 5 MW – 100MW and a commercial operation date no later than June 1, 2026.

CPA intends to collect all relevant Energy, Environmental Attributes, Resource Adequacy (RA), and Ancillary Services benefits from the Projects, as applicable.

Responses to the RFO are due November 10, 2021 at 5:00 PM Pacific Standard Time.

A complete offer specification and detailed timeline are included in this document.

c. Ascend Analytics

Ascend Analytics (Ascend) will be supporting CPA's initiatives by administering and organizing the RFO. All information regarding this RFO will be posted to the RFO website (<https://www.ascendanalytics.com/cpa-midtermreliability-rfo>). The website is the main communication platform between the bidders and the RFO managers. Bidders shall use it to register, download RFO material, post Q&A, submit proposals (including narrative, offer form, redlined contracts, and all other documents), and receive RFO updates.

d. Acknowledgement of Terms

By participating in CPA's RFO, respondents ("Bidders") acknowledge that they have read, understand, and agree to the terms and conditions set forth in this RFO Protocol. CPA reserves the right to reject any offer that does not comply with the requirements identified herein. Furthermore, CPA may, in its sole discretion and without notice, modify, suspend, or terminate the CPA RFO without liability to any organization or individual. The CPA RFO does not constitute an offer to buy or create an obligation for CPA to enter into an agreement with any party, and CPA shall not be bound by the terms of any offer until CPA has entered into a fully executed agreement.

3. Submission Details

a. Registration

To access RFO materials, participate in Q&A, and receive notifications, all Bidders must register online at: <https://www.ascendanalytics.com/cpa-midtermreliability-rfo>.

b. Timeline

Date	Item
September 29, 2021	RFO opens
October 14, 2021	Bidder Webinar to discuss RFO process at 11:00am Pacific Time
October 20, 2021	Deadline to submit Q&A questions at 11:59pm PT. Submit questions directly on the RFO website: https://www.ascendanalytics.com/cpa-midtermreliability-rfo
October 28, 2021	Q&A responses posted to the CPA RFO website
November 10, 2021	Deadline to submit RFO Proposals at 5:00pm PT
January/February 2022	Bidders notified of shortlist status
January/June 2022	Power Purchase Agreement (PPA) and Energy Storage Agreement (ESA) negotiations and awards

c. Compliant Submission Specifications

All offers must meet the following specifications in order to be considered for selection. Note that there are different requirements for the “Renewable Generation Plus Storage”, “Stand Alone Storage”, and “Firm/Baseload Renewable Energy” contracts. Please ensure that proposals conform to the appropriate specifications for the project submitted. Any material deviations from the following list will be treated as non-compliant and excluded from consideration.

Renewable Generation Plus Storage Contracts

Location	Within or outside of California, with full deliverability to the CAISO grid.
Products	RPS-eligible generation plus storage. Projects may be pre-existing or new. Note: CPA’s preference for resources is co-located (two separate resource IDs). Bidders should highlight in the project narrative if their project is hybrid (single resource ID for both generation and storage).
Price	PPA Price: Fixed \$/MWh with zero percent (0%) annual escalator. Prices must be offered at the project Pnode. Bidders may include additional settlement points only in the project narrative. Examples of these variations are: • SCE Default Load Aggregation Point (DLAP) • CAISO liquid trading hub (e.g. SP15, NP15, ZP26, etc.) Storage Capacity Cost: Fixed \$/kW-month with zero percent (0%) annual escalator. Note: Actual payments to bidder will be consistent with the terms of the PPA Agreements for each project.
Number of Offers	Bidders can submit one (1) primary offer per unique facility/location. This project should be the largest size and most competitive offer that meets all compliance requirements. The storage duration must be at least 4 hours. Bidders may submit one (1) additional offer for a given unique facility /location only if the additional offer differs from the primary by the storage duration and capacity . Note that the alternative offer should also be within the 40 – 800 MWh range of storage capacity. ¹

¹ For example: a bidder may submit a primary offer of 100 MW of solar and 50 MW of 8 hours storage duration (400 MWh of storage capacity). The bidder can also submit an alternative offer of 100 MW of solar and 80 MW of 4 hours storage duration (320 MWh) or 70 MW of solar and 25 MW of 12 hours storage duration (300 MWh). Only one alternative offer is allowed.

	Other alternative configurations, durations, or pricing schemes than described above may be submitted as descriptions within the narrative document (see full description in “Submission Package” section below) but may not be evaluated or considered until final negotiations or at all. Please submit one Offer Form Template per offer containing all data for generation and storage as instructed in the excel file to ensure proper evaluation of all components of the project. Refer to the instructions tab for details on necessary sheets to complete. NOTE: If a single Bidder wishes to submit multiple unique facilities (at different locations), each project must be submitted as an entirely new Submission Package with fully completed copies of each document.
Term	Fifteen (15) years.
Scheduling Coordinator	For all generation plus storage projects, CPA shall be the scheduling coordinator (SC).
Ownership	All projects will be owned by the Bidder, with CPA contracting the output of the resource for the duration of the 15-year term.
Expected Commercial Operation Date (COD)	On or prior to June 1, 2026. CPA has a preference for projects with an earlier COD.
Interconnection	Projects with COD of December 31, 2024 or earlier must have completed a Phase I interconnection study. Projects with later COD must be in Queue Cluster 14 or less.
Installed Capacity	Storage capacity (defined as storage power x storage duration) no less than 40 MWh and no more than 800 MWh. The storage duration must be at least 4 hours. Generation nameplate capacity must be sized to ensure the battery could be fully charged from 0% to 100% SOC every day of the year. Bidders should size their generation/storage capacity optimally from both economic and technical aspects (while meeting by the above charging constraint).
Capacity Deliverability Status	Full Capacity Deliverability Status (FCDS) is required for the storage capacity of the project. FCDS is preferred for the generation portion but energy only is also acceptable.
Operation	Storage resources are expected to operate at approximately 365 cycles ² /year and a maximum of 2 cycles/day.

² “Cycles” is defined as the total cumulative amount of discharging energy (in MWh) from the storage facility, divided by the storage facility duration times the storage capacity.

Station Use	Seller will be responsible for Station Use.
Seller Security Requirements	\$60/kW of Contract Capacity for generation resources and \$90/kW of Contract Capacity for storage resources.
Guaranteed Energy Production	One hundred sixty percent (160%) of proposed estimated annual energy production in each 2-year performance measurement period.
Storage Maintenance	Seller is expected to maintain operation of the facility at full nameplate capacity throughout the 15-year term. Any maintenance or replacement required to maintain nameplate operation of the facility is the responsibility of the Bidder.
Operational Efficiency	The efficiency rate of the storage resource must reflect actual efficiency of the storage facility, measured at the storage facility meter, per year over the 15-year term.
Storage Availability	Storage resource must be available for a minimum of 98% of hours annually.

Stand Alone Storage Contracts

Location	Within or outside of California, with full deliverability to the CAISO grid.
Products	Standalone energy storage products capable of offering Energy, RA, and Ancillary Services. RA-only offers are not allowed.
Price	Fixed \$/kW-month with zero percent (0%) annual escalator. Note: Actual payments to bidder will be consistent with the terms of the CPA Energy Storage Agreement document.
Number of Offers	Bidders can submit one (1) primary offer per unique facility/location. This project should be the largest size and most competitive offer that meets all compliance requirements. The storage duration must be at least 4 hours. Bidders may submit one (1) additional offer for a given unique facility /location only if the additional offer differs from the primary by the storage duration and capacity . Note that the alternative offer should also be within the 40 – 800 MWh range of storage capacity. ³

³ For example: A bidder may submit a primary offer of 50 MW of 8 hours duration (400 MWh of storage capacity). The bidder can also submit an alternative offer of 80 MW of 4 hours duration (320 MWh) or 30 MW of 12 hours duration (360 MWh). Only one alternative offer is allowed.

	Other configurations, durations, capacities, and pricing schemes may be described within the narrative document (see full description in “Submission Package” section below) but may not be evaluated or considered until final negotiations or at all. Please submit one Offer Form Template per offer containing all data for storage as instructed in the excel file to ensure proper evaluation of all components of the project. Refer to the instructions tab for details on necessary sheets to complete. NOTE: If a single Bidder wishes to submit multiple unique facilities (at different locations), each project must be submitted as an entirely new Submission Package with fully completed copies of each document.
Term	Fifteen (15) years.
Scheduling Coordinator	CPA shall be the scheduling coordinator (SC) for all projects.
Ownership	All projects will be owned by the Bidder, with CPA contracting the output of the energy storage facility for the duration of the 15-year term.
Expected Commercial Operation Date (COD)	On or prior to June 1, 2026.
Interconnection	Projects with COD of December 31, 2024 or earlier, must have completed a Phase I interconnection study. Projects with later COD must be in Queue Cluster 14 or less.
Installed Capacity	Storage capacity no less than 40 MWh and no greater than 800 MWh with a minimum duration of 4 hours.
Capacity Deliverability Status	Full Capacity Deliverability Status (FCDS) is a requirement for all standalone storage projects.
Storage Maintenance	Seller is expected to maintain operation of the facility at full nameplate capacity throughout the 15-year term. Any maintenance or replacement required to maintain nameplate operation of the facility is the responsibility of the Bidder.
Operation	Storage resources are expected to operate approximately 365 cycles/yr ⁴ and a maximum of 2 cycles/day.

⁴ “Cycles” is defined as the total cumulative amount of discharging energy (in MWh) from the storage facility, divided by the storage facility duration times the storage capacity.

Operational Efficiency	The efficiency rate of the storage resource must reflect actual efficiency of the storage facility, measured at the storage facility meter, per year over the 15-year term.
Storage Availability	Storage resource must be available for a minimum of 98% of hours annually.
Daily Dispatch Limits	Unlimited daily dispatches.
Station Use	Seller will be responsible for Station Use.
Seller Security Requirements	\$90/kW of Contract Capacity.

Baseload/Firm Renewable Energy Contracts

Location	Within or outside of California, with full deliverability to the CAISO grid.
Products	Zero-emitting generation resources defined as: Zero emissions generation capacity or capacity that is eligible under the requirements of the RPS program and has an expected annual capacity factor of at least 80%. The resources must not be use limited or weather dependent. No storage projects shall qualify under this provision.
Price	PPA Price: Fixed \$/MWh with zero percent (0%) annual escalator. Prices must be offered at the project Pnode. Bidders may include additional settlement points only in the project narrative. Examples of these variations are: • SCE Default Load Aggregation Point (DLAP) • CAISO liquid trading hub (e.g. SP15, NP15, ZP26, etc.) Note: Actual payments to bidder will be consistent with the terms of the PPA Agreements for each project.
Number of Offers	Bidders can submit one (1) primary offer per unique facility/location. This project should be the largest size and most competitive offer that meets all compliance requirements. Other alternative configurations, durations, or pricing schemes than described above may be submitted as descriptions within the narrative document (see full description in “Submission Package” section below) but may not be evaluated or considered until final negotiations or at all. <u>Please submit one Offer Form Template</u> containing all data for generation as instructed in the excel file to ensure proper evaluation of all components of the project. Refer to the instructions tab for details on necessary sheets to complete.

	NOTE: If a single Bidder wishes to submit multiple unique facilities (at different locations), each project must be submitted as an entirely new Submission Package with fully completed copies of each document.
Term	Fifteen (15) years.
Scheduling Coordinator	For all firm/baseload generation projects, CPA shall be the scheduling coordinator (SC).
Ownership	All projects will be owned by the Bidder, with CPA contracting the output of the resource for the duration of the 15-year term.
Expected Commercial Operation Date (COD)	On or prior to June 1, 2026. CPA has a preference for projects with an earlier COD.
Interconnection	Projects with COD of December 31, 2024 or earlier must have completed a Phase I interconnection study. Projects with later COD must be in Queue Cluster 14 or less.
Installed Capacity	Generation nameplate capacity no less than 5 MW and no greater than 100 MW. A capacity factor of at least 80% is required.
Capacity Deliverability Status	Full Capacity Deliverability Status (FCDS) is required for all firm/baseload renewable energy contracts.
Station Use	Seller will be responsible for Station Use.
Seller Security Requirements	\$60/kW of Contract Capacity for generation resources.
Guaranteed Energy Production	Ninety five percent (95%) of proposed estimated annual energy production in each year.
Project Maintenance	Seller is expected to maintain operation of the facility at full nameplate capacity throughout the 15-year term. Any maintenance or replacement required to maintain nameplate operation of the facility is the responsibility of the Bidder.

d. Submission Package

Projects bids should be submitted directly on the RFO website <https://www.ascendanalytics.com/cpa-midtermreliability-rfo> by the submission deadline. **Bidders should refer to the “Submission Instructions for CPA 2021 Midterm Reliability RFO” document for a concise description of the submission process.** Once the offer is submitted through the online portal, bidders will be redirected to a web page that will

confirm their successful submission. Note that we will not be sending out confirmation emails. Below is a checklist for the required documents:

- ☐ Project Narrative (.pdf file)
- ☐ Offer Form (.xlsx file) – single or multiple depending on project type and storage capacity
- ☐ PPA Agreement document (.docx file) – must be agreement corresponding to project type
- ☐ Geospatial footprint project file (.zip shapefile or .kml file)
- ☐ Executed NDA document (.pdf file)
- ☐ Signed Vendor Campaign Contribution Disclosure Form (.pdf file)

Project Narrative

Bidders should submit a brief narrative of the proposed project and vendor qualifications. This narrative will be primarily used as a reference for specific project details that are not fully captured in the Offer Form templates and for further assessment of shortlisted proposals. **The project narrative should be submitted as a pdf document that includes the following sections in the order listed below:**

1. Project summary
 - i. Brief summary of project including location, sizing, and any relevant high-level details (1-2 paragraphs)
2. Project details summary table
 - i. Should include project name, project type (RPS Generation Plus Storage, Standalone Storage, Baseload/Firm Renewable Energy), project location city and county, capacity size (for both generation and storage as relevant), storage duration (if relevant), COD, and pricing (\$/kWh, \$/kW-month)
3. Technology Description
 - i. Describe the generation technology your project uses as well as the storage system (as applicable). Give details on the type of storage (chemical, mechanical, thermal, etc.) and the physics/chemistry behind the technology. The Offer Form Template discusses several storage parameters. The bidder should list here any additional assumptions/constraints related to the storage system such as SOC and slow ramping rates (beyond 5 min)
4. Detailed site description
 - i. Detailed description of the current land use of the project footprint, including a detailed site map
 - ii. Describe the project's proposed interconnection including proximity to transmission interconnection, the status of full capacity deliverability, and any new interconnection facilities that would need to be built, and
 - iii. Describe the project's decommissioning plans, including any decommissioning requirements
5. Project risk
 - i. Brief overview of project risks, particularly related to status of:
 1. Project interconnection
 2. Site control

3. Environmental zoning, studies, and permitting (including description of the permitting lead agency and achieved and outstanding milestones)
4. Financing
6. Community experience
 - i. Describe what benefits the project provides the community in which it is located, including resiliency, CPA member agency partnership or co-investment, and grant eligibility
 - ii. Describe the project's intended workforce development efforts, including commitments to union and targeted hires
7. Developer experience
 - i. Brief description of developer experience, particularly as relates to previously completed projects of a similar scope and scale
8. Offer variants
 - i. Description of additional variants the bidder would like CPA to consider.
 - ii. If the bidder would like to propose offer variants beyond the one proposed in the Offer Form Template, these variants may only be described in text in this section. **These additional variants may not be submitted as offer form templates** (except for the allowed (1) alternative offer in the case of RPS generation plus storage and standalone storage) and will not be evaluated in the quantitative evaluation phase but may be assessed for additive value if the initial proposal is chosen for shortlisting consideration.
 - iii. Alternative offers that might be proposed in this section include variant technologies, distinct CODs, alternative pricing schemes or locations, alternative dispatch capabilities (involving day-ahead, real-time, ancillary, RA or other markets), alternative capacities, alternative SOC assumptions, or any other arrangements that may provide additional value.

Offer Form Template

The excel file data template is the primary source of data for evaluating submissions. **This Offer Form template is mandatory and must be fully completed for each submission to be considered compliant.** Proposals must complete the appropriate sheets within the data template for the category of project being submitted (refer to section "3c: Number of Offers" for information about maximum number of Offer Forms per project type/location).

The Offer Form template contains the following sections as well as a guide (titled "Instructions") for which sheets must be completed in the excel spreadsheet. All yellow fields in the sheets relevant to the proposed project should be fully completed, utilizing the drop-down lists when provided.

1. **Participant & Project Info:** this sheet provides summary information for the project
2. **RPS Generation:** these values will be used for quantitative modeling of renewable generation resources, whether firm or combined with storage. 3 years of historical generation data (hourly basis) are requested as well as a 15-year monthly forecast. This section should only be filled by "RPS generation plus storage" and "firm/baseload renewable energy" contracts.

3. **Storage Parameters:** these values will be used for detailed modeling of the storage component of “RPS plus storage projects” as well as “standalone storage” resources.
4. **Qualitative Assessment:** this questionnaire gathers information for qualitative selection criteria. Responses to the qualitative questionnaire will be a significant component to CPA’s project evaluation, and all relevant cells must be completed to receive full consideration
5. **Development Risk:** these questions are intended to assess potential project development risk, and all relevant cells must be completed to receive full consideration
6. **Error Validation:** this sheet tracks specific errors/missing information in the offer form. Depending on the project type, the sheet will indicate which sections are required and checks for missing information. Make sure that this sheet has no errors prior to submitting the offer form. Note that it is still the bidder’s responsibility to conduct quality control on the offer form as well as any document in the submission package.

Redlined PPAs

The RFO materials packet includes PPA proformas for RPS, RPS Plus Storage, and Energy Storage resources. The agreement document applicable to your project type should be reviewed and redlined by the Bidder in accordance with Section 7 of this RFO Protocol.

Geospatial Footprint Project File

Bidders are required to submit a file of the relevant geospatial footprint of their project in a zipped shapefile (.zip) or Google Earth KML (.kml) format. Instructions on generating the files are available in Exhibit A.

Non-Disclosure Agreement

All Bidders are required to sign CPA’s standard Non-Disclosure Agreement (“NDA”). CPA will not accept changes to the NDA.

Vendor Campaign Contribution Disclosure Form

All Bidders are required to sign a vendor campaign contribution disclosure form.

e. Screening and Compliance

After the submission deadline, all submissions will be reviewed for basic compliance and completeness. At the discretion of CPA, developers may be contacted to notify them of deficiencies in their submission materials. **Bidders will have two (2) business days to respond with updated and compliant submission materials or risk rejection from consideration.** Updates to the PPA prices are not allowed.

Bidder is solely responsible for checking compliance of all submitted materials. Lack of communication from CPA does not imply confirmation of a compliant submission.

4. Evaluation and Selection Criteria

Projects will be evaluated based on a combination of quantitative and qualitative criteria. Quantitative criteria will focus on project performance and economics, while qualitative criteria will focus on factors related to environmental stewardship, workforce development, development risk, project location, and

impact on Disadvantaged Communities. Additionally, commitment to the Supply Chain Code of Conduct found in the proforma is an important qualitative consideration. Both categories of criteria will play a major role in project evaluation.

a. Quantitative Evaluation

All projects will be assessed for market performance against the relevant project Pnode. Pnode prices will be simulated using modeling that accounts for changes in regional fundamentals (congestion, solar generation, storage, etc.) over time. Projects will be valued for their RA as well as revenues across all relevant Day Ahead (DA), Real-Time (RT), and ancillary markets. CPA will assume RA value for projects that connect directly to CAISO (including Distribution Connected and Pseudo Tie projects), while projects that use a Dynamic Schedule will not be assumed to count for RA.

PPA prices in the Offer Form Template should be all-in, inclusive of energy, environmental attributes, RA, and ancillary services benefits. Bidders may provide different pricing only in the offer variant section of the Project Narrative. In cases of discrepancy between the PPA price of the Offer Form and the Project Narrative, the Offer Form price will be considered binding for the quantitative valuation.

b. Qualitative Evaluation Criteria

In performing this evaluation, CPA will consider a common set of qualitative criteria, a partial list of which is included below. This list may be revised at CPA's sole discretion and includes:

- Overall clarity and quality of response, inclusive of completeness, timeliness, and conformity
- **Environmental Stewardship**
 - CPA is committed to be an environmental leader by providing customers with energy that delivers multiple benefits for air, water, and nature and avoids impacts to important lands, species, and waters. CPA will prioritize projects that are considered multi-benefit renewable energy and projects located in areas zoned for renewable energy development. CPA will de-prioritize projects located in high-conflict areas.
- **Workforce Development**
 - CPA is committed to creating community benefits, which includes engaging a skilled and trained workforce and targeted hires. CPA will prioritize projects demonstrating the following:
 - Projects that have secured a 5-trade community benefit or project labor agreement.
 - Projects utilizing a skilled and trained workforce and meet all of the following criteria:

- All electrical work⁵ will be performed by Journeymen Electricians⁶ or Apprentices⁷
- At least 60% of all Journeyman Wiremen are graduates of a state-approved joint labor management apprenticeship training program
- At least 10% jobsite electrical workers shall be OSHA 30-hour General Industry Safety and Health Certified.
- Projects utilizing prevailing hourly wage rates
- Projects utilizing local and targeting hires:
 - A minimum of 40% of all hours of project work shall be performed by Local Targeted Workers⁸, with priority given to residents of Los Angeles and Ventura Counties. If the Contractor/Subcontractor/Employer ("C/S/E") has exhausted the available pool of local residents, Local Targeted Worker shall refer to workers from Economically Disadvantaged areas.⁹
 - A minimum of 10% of all hours of project work shall be performed by Disadvantaged Workers¹⁰ whose primary place of residence is within a 25-mile radius of the project.
- **Disadvantaged Communities¹¹** - CPA will prioritize projects that are located within DACs, can demonstrate DAC workforce and community development benefits, and have conducted outreach to DAC communities.

⁵ Electrical work is defined as the placement, installation, commissioning, testing, programming, erection or connection of any electrical wires, fixtures, appliances, apparatus, raceways, conduits, transmission lines, solar photovoltaic cells or any part thereof, or any upgrade thereto; which generates, transmits, transforms, stores or storage used to integrate eligible renewable resources, add/or utilizes electrical energy, regardless of form or purpose, and regardless of voltage; as well as electrical energy efficiency, which includes but is not limited to: all lighting work, all advanced lighting controls (including third party certification, California Advanced Lighting Control Training Program {also known as "CALCTP"}, all building controls and automation, energy and electric technology related to metering, sub-metering and/or systems related to or regarding demand response.

⁶ Journeymen Electrician is a worker who either: 1) graduated from an apprenticeship program for the applicable occupation that was approved by the chief or located outside California and approved for federal purposes pursuant to apprenticeship regulations adopted by the Secretary of Labor, or 2) has at least as many hours of on-the-job experience in an applicable occupation as would be required to graduate from an apprenticeship program for the applicable occupation that is approved by the chief.

⁷ An Apprentice means registered in an apprenticeship program approved by the chief pursuant to Section 3075 of the Labor Code who is performing work covered by the standards of that apprenticeship program and receiving the supervision required by the standards of that apprenticeship program.

⁸ Local Targeted Worker refers to workers located within a 25-mile radius of the project

⁹ Economically Disadvantaged Area" means a zip code that includes a census tract or portion thereof in which the median annual household income is less than \$40,000 per year, as measured and reported by the U.S. Census Bureau in the 2010 U.S. Census and as updated upon the U.S. Census Bureau issuing updated Median Annual Household Income data by census tract in the American Community Survey.

¹⁰ Disadvantaged Worker means an individual who faces at least one of the following barriers to employment: (1) being homeless; (2) being a custodial single parent; (3) receiving public assistance; (4) lacking a GED or high school diploma; (5) having a criminal record or other involvement with the criminal justice system; (6) suffering from chronic unemployment; (7) emancipated from the foster care system; (8) being a veteran of the United States Armed Services; (9) being an apprentice with less than 15% of the required graduating apprenticeship hours in a program; or (10) residing in an area that falls in the top 15-percentile of the [CalEnviroscreen](#) 3.0 score.

¹¹ Disadvantaged Community means in or within half a mile of a [CalEnviroscreen](#) census tract in the 75th percentile or higher.

- **Project Location** – CPA prefers projects located within California, with high preference for projects located within Los Angeles and Ventura counties.

c. Development Risk

All projects will be assessed for project development risk using the answers supplied in the “Development Risk” sheet of the Offer Form template. The assessment focuses on progress toward interconnection, deliverability, siting, zoning, permitting, and financing requirements. The results of these questions will be used to provide an additional qualitative project score to aid in final project shortlisting.

5. Communication Guidelines

Neither Ascend Analytics nor CPA will be answering questions related to the RFO outside of the formal Q&A process. Bidders are prohibited from communicating with CPA personnel, board of directors, or alternates outside of this Q&A process. **If it is discovered that a Bidder contacts and receives information from any CPA personnel, board director or alternate, outside of the rules established by this RFO, CPA may, in its sole determination, disqualify such Bidder’s proposal from further consideration or take any other action as CPA may decide.** Please review CPA’s Vendor Communication Policy, available at: https://cleanpoweralliance.org/wp-content/uploads/2019/06/CPA2019-010_Policy_Vendor-Communications.pdf.

Bidders’ Webinar

CPA and Ascend will host an informational webinar on October 14, 2021 at 11:00 AM Pacific Standard Time to review the objectives and process of this RFO. Bidders are encouraged to attend. To participate in the webinar, bidders must first register on the RFO website <https://www.ascendanalytics.com/cpa-midtermreliability-rfo>. RFO moderators will send a webinar invitation to registered bidders containing information about joining the webinar. **At the time of the webinar, please use the link in the invitation email (or the one posted on the RFO website) to join the meeting.**

Q&A

All questions will be answered through a formal Q&A process. Bidders must submit questions to the RFO website (<https://www.ascendanalytics.com/cpa-midtermreliability-rfo>) by 11:59 PM Pacific Standard Time on October 20, 2021. All questions received and all answers to such questions will be posted in a single response document for all Bidders to view on the RFO page by October 28, 2021. CPA reserves the right to group questions, combine issues, or organize answers in a manner that CPA finds appropriate.

6. Buyer Security

CPA does not provide collateral or performance security in connection with any PPAs or ESAs that it may execute in connection with this RFO. By submitting an offer through this RFO, Seller acknowledges and accepts that CPA does not intend to provide collateral or performance security in connection with any PPA or ESA, and no such offer submitted will be subject to a requirement that CPA post collateral or security.

7. PPA Redlines

CPA is including the proposed form of Power Purchase Agreement or Energy Storage Agreement that CPA intends to use as the basis for contracting with successful Bidders. Bidders must consider the commercial terms stipulated in this RFO Protocol as well as those commercial terms defined in the agreement when submitting an offer to this RFO. CPA will consider limited requests for adjustments and edits to its form agreements, provided that such requested edits are incorporated as redline edits to the Agreement Word document and submitted as part of the submission package. While CPA will consider limited requests for adjustments and edits to its form agreements, adherence to CPA's standard contract terms is an important factor in CPA's evaluative process that will be strongly weighted. Offers that accept CPA's standard contract terms will be given preference during such evaluation. Bidders should be aware that material changes to CPA's standard contract terms submitted after the response deadline may result in disqualification of the offer and, if applicable, forfeiture of the Shortlist Deposit provided under the Exclusivity Agreement.

8. Exclusivity Agreement

Following Bidder notification (i.e., shortlist selection), in order to continue with the process, selected Bidders will be required to sign CPA's standard Exclusivity Agreement that is attached to the RFO Release documents as "CPA Exclusivity Agreement.docx" and to **submit a deposit of \$3.00/kW AC for all short-listed project capacity ("Shortlist Deposit")**. The Shortlist Deposit is intended to secure the obligations of any shortlisted Bidder(s) during the negotiating period and to ensure that each offer has been carefully considered. The Shortlist Deposit must be in the form of either a cash deposit or a Letter of Credit. "Letter of Credit" means an irrevocable standby letter of credit, in a form reasonably acceptable to CPA, issued either by (i) a U.S. commercial bank, or (ii) a U.S. branch of a foreign commercial bank that meets the following conditions: (A) it has sufficient assets in the U.S. as determined by CPA, and (B) it is acceptable to CPA in its sole discretion. The issuing bank must have a credit rating of at least A- from S&P or A3 from Moody's, with a stable outlook designation. In the event the issuer is rated by both rating agencies and the ratings are not equivalent then the lower rating will apply. All costs of the Letter of Credit shall be borne by Bidder.

Please refer to the CPA Exclusivity Agreement for additional details regarding the Exclusivity Period (as defined the Exclusivity Agreement) and return of the Shortlist Deposit.

9. No Guarantee of Offer or Agreement

This RFO does not constitute an offer from CPA to buy and creates no obligation to execute any agreement as a consequence of this RFO. Under no circumstances shall CPA be bound by the terms of any Bidder's proposal nor any subsequent agreement until CPA has obtained all necessary approvals of its management and the CPA Board of Directors and all the conditions precedent, if any, set forth in a fully executed agreement have been satisfied or waived.

CPA reserves the right, without qualification and in its sole discretion to: (i) select multiple Bidders or no Bidders at all, or (ii) negotiate one or more agreements on a bilateral basis outside the terms of this RFO. CPA may at any time and for any reason decline to enter into any potential PPA with any Bidder, terminate negotiations with any Bidder, or to abandon the RFO process in its entirety. CPA reserves the right, without

qualification and in its sole discretion, to consider, accept, or reject a Bidder's request to replace one or more projects with another project(s) proposed by Bidder. In CPA's sole discretion, CPA may evaluate any such proposed replacement project(s) using the evaluation criteria as specified in this RFO or may follow any evaluation criteria or process as CPA may determine is appropriate and in the best interest of CPA. CPA shall not be liable to any Bidder submitting a proposal in response to this RFO. CPA shall not be liable to any Bidder or party in law or equity for any reason whatsoever for any acts or omissions arising out of or in conjunction with this RFO. No implied or express waiver of CPA's rights is intended and CPA reserves all rights.

CPA expressly reserves the right to request clarification of information submitted through supplementary follow-up questions or inquiries or to request additional information from any one or more of the Bidders.

Each Bidder's costs for developing its proposals, including all RFO review, bid preparation and submittal costs, are entirely the responsibility of the applicable Bidder, and CPA shall not have any responsibility or liability for such costs.

CPA states that the information in this RFO Protocol is accurate to the best of CPA's knowledge but is not guaranteed to be correct. Bidders are expected to complete all due diligence activities prior to entering into any final contract negotiations with CPA.

10. Collaboration

No Bidder shall collaborate on, coordinate, or discuss with any other Bidder or potential Bidder the substance of this RFO, RFO strategies, or whether CPA has shortlisted certain bids.

11. Non-discrimination

CPA does not give preferential treatment or discriminate based on race, sex/gender, color, ethnicity, or national origin.

12. Confidentiality

All correspondence with CPA including responses to this solicitation will become the exclusive property of CPA and will become public records under the California Public Records Act (Cal. Government Code section 6250 et seq.) All documents sent by Bidders to CPA may be subject to disclosure, unless exempt due to one of the narrow exceptions to the disclosure requirements.

In order to designate information as confidential, the Bidder must clearly stamp and identify the specific portion of the material designated with the word "Confidential" and provide a citation to the California Public Records Act that supports keeping the information confidential. Bidder should not over-designate material as confidential. Over-designation would include stamping entire pages or series of pages as confidential that clearly contain information that is not confidential.

Therefore, any proposal which contains language purporting to render all or significant portions of their proposal "Confidential", "Trade Secret" or "Proprietary", or which fails to provide the exemption

information required as described below may be considered a public record in its entirety subject to the procedures described below. **Do not mark your entire proposal as “confidential”.**

If required by any law, statute, ordinance, a court, Governmental Authority or agency having jurisdiction over the CPA, including the California Public Records Act, CPA may release Confidential Information, or a portion thereof, as required. In the event CPA is required to release Confidential Information, it shall notify the Bidder of the required disclosure, such that the Bidder may attempt (if it so chooses), at its sole cost, to cause the recipient of the Confidential Information to treat such information in a confidential manner, and to prevent such information from being disclosed or otherwise becoming part of the public domain. By submitting a proposal, Bidder agrees to indemnify and hold harmless CPA, its directors, officers, employees and agents, from any claims, liability, award of attorneys’ fees, expenses, or damages, and to defend any action brought against above said entities for CPA’s refusal to disclose any confidential, trade secret, or other proprietary information to any party.

CPA does not intend to disclose any part of any proposal before it announces a recommendation for approval by CPA’s Board of Directors of a contract, on the ground that there is a substantial public interest in not disclosing proposals during the evaluation or contract negotiation process.

13. Bidder Representations

By submitting a bid, Bidder agrees to be bound by the conditions of the RFO Protocol, and makes the following representations, warranties, and covenants to CPA, which representations, warranties, and covenants will be deemed to be incorporated in their entirety into each of Bidder’s submittals and are deemed to be material to CPA’s consideration of the proposals:

1. Bidder agrees that CPA is not liable to any Bidder or party in law or equity for any reason whatsoever for any acts or omissions arising out of or in conjunction with this RFO and that Bidder has no legal recourse whatsoever against CPA, its Members, CPA’s directors, officers, employees, and agents for rejection of their submittal(s).
2. Bidder acknowledges that it has had the opportunity to seek independent legal and financial advice of its own choosing with respect to this RFO and agrees to be bound by the terms and specifications of this RFO and any addenda subsequently issued prior to the due date of the submittal.
3. Bidder has obtained all necessary authorizations, approvals, and waivers, if any, required by Bidder to submit its offer pursuant to the terms of this RFO and to enter into a final agreement with CPA.
4. Bidder acknowledges that CPA reserves the right to enter into relationships with more than one Bidder, can choose not to proceed with any Bidder with respect to one or more identified Tasks, and can choose to suspend this RFO or issue a new RFO that would supersede and replace this RFO.
5. Bidder warrants that it has no employees in its employ who in any capacity have a position at CPA that enable him/her to influence the selection of a Bidder or any competing RFO, nor does Bidder have in its employ any CPA Board of Director, including any Regular or Alternating Directors (collectively “CPA Director”) or CPA employee who is the spouse or economic dependent of such

a CPA employee. A list of current CPA Directors can be found in CPA's Vendor Campaign Contribution Disclosure Form. This list may be updated from time to time.

6. Bidder's submission complies with all applicable laws and CPA policies.
7. Bidder warrants that all information submitted by Bidder to CPA in connection with this RFO is true and accurate as of the date of Bidder's submission. Bidder also covenants that it will properly update any submitted information immediately upon any material change thereto.

Bidder acknowledges and accepts that CPA does not intend to provide collateral or performance security in connection with any PPA.

14. Description of Documents in RFO Release Package

1. RFO Protocol (*2021 Midterm Reliability RFO Protocol.docx*):
 - a. Description of RFO, submissions and compliance requirements, contract terms, selection criteria, submittal instructions, legal terms.
2. Submission Instructions (*Submission Instructions for CPA 2021 Midterm Reliability RFO.docx*):
 - a. Concise instructions for submitting a compliant proposal to this RFO.
3. Non-Disclosure Agreement (NDA) (*CPA NDA Agreement 09-08-2021.docx*):
 - a. **The NDA must be signed by all Bidders and submitted in submission package.**
4. Exclusivity Agreement (*CPA Exclusivity Agreement 09-08-2021.docx*):
 - a. The Exclusivity Agreement must be signed by all Bidders selected by CPA to enter into the negotiation and contracting phase. Signature not required during initial submission.
5. Offer Form Template (*CPA 2021 Offer Form.xlsx*):
 - a. Template for submitting all projects specifications, qualitative assessment answers, and developer and project risk answers.
 - b. **Must be fully completed and submitted in submission package.**
6. Power Purchase and Energy Storage Agreements (*RPS PPA Pro Forma (CEC Rev. 9-23-21).docx*, *RPS Plus Storage Pro Forma PPA (CEC Rev. 9-23-21).docx*, *CPA Energy Storage Agreement (CEC Rev. 9-23-21).docx*):
 - a. Each proposal must fill out one agreement according to which category the proposed project falls in to.
 - b. **Must be reviewed, redlined as necessary, and submitted in submission package.**
7. CPA Vendor Campaign Contribution Disclosure Form (*Campaign Contributions Disclosure Form 2021-2022.docx*):
 - a. The Campaign Contribution Disclosure Form must be signed and submitted with each submission package.

Exhibit A: Clean Power Alliance Clean Energy RFO Evaluation Tool

The Clean Power Alliance Clean Energy RFO Evaluation Tool is available for optional use by bidders in the 2021 Mid Term Reliability RFO. [Click here to access the Tool.](#)

Note that detailed instructions on the Tool and its use are provided on the CPA Clean Energy RFO Evaluation Tool splash screen and are accessible from the Tool's main screen by clicking the  button.

The Tool will help bidders understand if a Project overlaps with certain environmental avoidance areas ("Avoidance Areas" in the Tool) or preferred renewable energy development and multi-benefit areas ("Renewable Energy Zones and Multi-benefit Areas" in the Tool).

CPA will use the Evaluation Tool to conduct internal environmental screening of 2021 Mid Term Reliability RFO projects. To facilitate this, **bidders are required to submit a file of the relevant geospatial footprint of their project in a zipped shapefile (.zip) or Google Earth KML (.kml) format. Bidders are not required to conduct their own project environmental screening.**

Appendix B

Solicitation Information

Exhibit B

CPA Evaluation Criteria

Request for Offers (RFO) Evaluation Criteria

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

Project Location

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



Appendix C

Renewable Net Short Calculation

(Public Version)

Renewable Net Short Calculations - 2022 RPS Procurement Plans

LSE Name:	Clean Power Alliance of Southern California		Input required		No input required		Hard-coded					
Date Filed:	1/18/23											
Variable	Calculation	Item	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2017-2020	2021 Actual	2022 Forecast	2023 Forecast	2024 Forecast	2021-2024
		Forecast Year					CP 3		1	2	3	CP 4
		Annual RPS Requirement										
A		Total Retail Sales (MWh)		876,719	8,986,112	11,045,771	20,908,602	10,719,619	10,796,040	10,901,820	11,015,379	43,432,858
B		RPS Procurement Quantity Requirement (%)	27.0%	29.0%	31.0%	33.0%	32.0%	35.8%	38.5%	41.3%	44.0%	39.9%
C	A*B	Gross RPS Procurement Quantity Requirement (MWh)	-	254,249	2,785,695	3,645,104	6,685,047.7	3,832,264	4,156,475	4,497,001	4,846,767	17,332,506.5
D		Voluntary Margin of Over-procurement (MWh)		274,806	2,822,954	3,135,311	6,233,071	2,178,519				
E	C+D	Net RPS Procurement Need (MWh)	-	529,055	5,608,649	6,780,415	12,918,119	6,010,783				
		RPS-Eligible Procurement										
Fa		Risk-Adjusted RECs from Online Generation (MWh)		529,055	5,608,649	6,780,415	12,918,119	6,010,783	5,615,909	4,356,172	3,653,791	19,636,655
Faa		Forecast Failure Rate for Online Generation (%)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fb		Risk-Adjusted RECs from RPS Facilities in Development (MWh)					-		307,560	925,412	3,188,546	4,421,518
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)					#DIV/0!		1.5%	4.6%	11.3%	5.8%
Fc		Pre-Approved Generic RECs (MWh)					-					-
Fd		Executed REC Sales (MWh)			268,250	130,000	398,250	930,000				930,000
F	Fa+Fb+Fc-Fd	Total RPS Eligible Procurement (MWh)	-	529,055	5,340,399	6,650,415	12,519,869	5,080,783	5,923,469	5,281,584	6,842,337	23,128,173
F0		Category 0 RECs					-					
F1		Category 1 RECs		248,230	3,468,318	5,422,277	9,138,825	5,143,183				
F2		Category 2 RECs		280,825	1,338,423	1,358,138	2,977,386	867,600				
F3		Category 3 RECs			801,908	-	801,908	-				
		Gross RPS Position (Physical Net Short)										
Ga	F-E	Annual Gross RPS Position (MWh)	-	-	(268,250)	(130,000)	(398,250)	(930,000)				
Gb	F/A	Annual Gross RPS Position (%)	0%	60%	59%	60%	60%	47%				
		Application of Bank										
Ha	J-Hc (from previous CP)	Existing Banked RECs above the PQR					-	-				-
Hb		RECs above the PQR added to Bank					-					-
Hc		Non-bankable RECs above the PQR					-					-
H	Ha+Hb	Gross Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance					-					-
Ib		Planned Sales of RECs above the PQR					-					-
J	H-Ia-Ib	Net Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-
J0		Category 0 RECs					-					-
J1		Category 1 RECs					-					-
J2		Category 2 RECs					-					-
		Expiring Contracts										
K		RECs from Expiring RPS Contracts (MWh)					-					-
		Net RPS Position (Optimized Net Short)										
La	Ga+Ia-Ib-Hc	Annual Net RPS Position after Bank Optimization (MWh)	-	-	(268,250)	(130,000)	(398,250)	(930,000)				
Lb	(F+Ia-Ib-Hc)/A	Annual Net RPS Position after Bank Optimization (%)	#DIV/0!	0.603448768	0.594294699	0.602077949	0.598790339	0.473970482				

Note: All values are to be input in MWhs

Renewable Net Short Calculations - 2022 RPS Procurement Plans

LSE Name:	Clean Power Alliance of Southern California
Date Filed:	1/18/23

Variable	Calculation	Item	2025 Forecast	2026 Forecast	2027 Forecast	2025-2027	2028 Forecast	2029 Forecast	2030 Forecast	2028-2030	2031 Forecast	2032 Forecast
		Forecast Year	4	5	6	CP 5	7	8	9	CP 6	10	11
Annual RPS Requirement												
A		Total Retail Sales (MWh)	11,087,483	11,154,570	11,248,740	33,490,793	11,321,003	11,397,823	11,466,833	34,185,659	11,543,040	11,589,564
B		RPS Procurement Quantity Requirement (%)	46.7%	49.3%	52.0%	49.3%	54.7%	57.3%	60.0%	57.3%	60.0%	60.0%
C	A*B	Gross RPS Procurement Quantity Requirement (MWh)	5,174,528	5,502,549	5,849,345	16,526,422.4	6,189,192	6,534,372	6,880,100	19,603,663.9	6,925,824	6,953,739
D		Voluntary Margin of Over-procurement (MWh)	4,231,965	4,001,499	3,769,446	12,002,910	3,491,391	3,211,900	2,925,183	9,628,474	2,944,623	2,956,492
E	C+D	Net RPS Procurement Need (MWh)	9,406,493	9,504,049	9,618,791	28,529,333	9,680,583	9,746,272	9,805,283	29,232,138	9,870,447	9,910,230
RPS-Eligible Procurement												
Fa		Risk-Adjusted RECs from Online Generation (MWh)	3,597,483	3,584,708	3,562,458	10,744,649	3,538,268	3,501,090	3,451,510	10,490,868	3,383,855	3,385,319
Faa		Forecast Failure Rate for Online Generation (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fb		Risk-Adjusted RECs from RPS Facilities in Development (MWh)	3,347,337	3,332,048	3,315,639	9,995,023	3,306,781	3,284,922	3,269,617	9,861,320	3,254,249	3,245,245
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%	11.7%	11.6%	11.7%	11.7%
Fc		Pre-Approved Generic RECs (MWh)				-				-		
Fd		Executed REC Sales (MWh)				-				-		
F	Fa+Fb+Fc-Fd	Total RPS Eligible Procurement (MWh)	6,944,820	6,916,755	6,878,097	20,739,672	6,845,049	6,786,012	6,721,127	20,352,188	6,638,104	6,630,564
F0		Category 0 RECs	83,464	83,464	83,464	250,393	83,749	83,464	83,464	250,677	83,464	83,749
F1		Category 1 RECs	6,861,355	6,833,291	6,794,632	20,489,279	6,761,300	6,702,547	6,637,662	20,101,510	6,554,640	6,546,815
F2		Category 2 RECs	-	-	-	-	-	-	-	-	-	-
F3		Category 3 RECs	-	-	-	-	-	-	-	-	-	-
Gross RPS Position (Physical Net Short)												
Ga	F-E	Annual Gross RPS Position (MWh)	(2,461,673)	(2,587,293)	(2,740,694)	(7,789,661)	(2,835,534)	(2,960,260)	(3,084,156)	(8,879,950)	(3,232,343)	(3,279,666)
Gb	F/A	Annual Gross RPS Position (%)	63%	62%	61%	62%	60%	60%	59%	60%	58%	57%
Application of Bank												
Ha	J-Hc (from previous CP)	Existing Banked RECs above the PQR	-			-	-			-	-	
Hb		RECs above the PQR added to Bank				-				-		
Hc		Non-bankable RECs above the PQR				-				-		
H	Ha+Hb	Gross Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance				-				-		
Ib		Planned Sales of RECs above the PQR				-				-		
J	H-Ia-Ib	Net Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-
J0		Category 0 RECs				-				-		
J1		Category 1 RECs				-				-		
J2		Category 2 RECs				-				-		
Expiring Contracts												
K		RECs from Expiring RPS Contracts (MWh)				-				-		
Net RPS Position (Optimized Net Short)												
La	Ga+Ia-Ib-Hc	Annual Net RPS Position after Bank Optimization (MWh)	(2,461,673)	(2,587,293)	(2,740,694)	(7,789,661)	(2,835,534)	(2,960,260)	(3,084,156)	(8,879,950)	(3,232,343)	(3,279,666)
Lb	(F+Ia-Ib-Hc)/A	Annual Net RPS Position after Bank Optimization (%)	0.626365745	0.620082658	0.611454874	0.619264879	0.60463274	0.595377903	0.586136268	0.595342852	0.575074192	0.572115016

Note: All values are to be input in MWhs

Appendix D

Project Development Status Update

Reporting LSE Name	RPS Contract ID	Project Name	Technology Type	Project Development Phase	City	County	State	Zip Code	Latitude	Longitude	Contract Length (Years)	Contract Execution Date (mm/dd/yyyy)
Clean Power Alliance of Southern California (CPA)	CPA70008	Voyager Wind II	Wind	Post-Construction	Mojave	Kern	CA	93501	35.0687	-118.2578	15.00	10/10/18
Clean Power Alliance of Southern California (CPA)	CPA50005	Arlington Energy Center II	Solar PV - Ground Mount	Construction	Blythe	Riverside	CA	92225	33.6552	-114.7503	15.00	7/1/19
Clean Power Alliance of Southern California (CPA)	CPA50003	Golden Fields Solar III	Solar PV - Ground Mount	Post-Construction	Rosamond	Kern	CA	93560	34.8483	-118.3792	20.00	7/1/19
Clean Power Alliance of Southern California (CPA)	CPA40001	Isabella Partners	Small Hydro	Post-Construction	Isabella Lake	Kern	CA	93240	35.6441	-118.4789	10.00	7/1/19
Clean Power Alliance of Southern California (CPA)	CPA70002	Mojave County Wind Farm	Wind	Post-Construction	White Hills	Mohave	AZ	86445	35.7914	-114.5044	20.00	10/3/19
Clean Power Alliance of Southern California (CPA)	CPA50004	High Desert	Solar PV - Ground Mount	Post-Construction	Victorville	San Bernardino	CA	92394	34.595	-117.364	15.00	5/11/20
Clean Power Alliance of Southern California (CPA)	CPA40057	Kaweah	Small Hydro	Post-Construction	Tulare	Tulare	CA	93422	36.4156	-119.0069	10.00	5/11/20
Clean Power Alliance of Southern California (CPA)	CPA50059	Azalea	Solar PV - Ground Mount	Pre-Construction	Lost Hills	Kern	CA	93249	35.768	-119.8959	15.00	7/14/20
Clean Power Alliance of Southern California (CPA)	CPA50062	Chalan	Solar PV - Ground Mount	Pre-Construction	Buttonwillow	Kern	CA	93206	35.4649	-119.5441	15.00	9/4/20
Clean Power Alliance of Southern California (CPA)	CPA50063	Rexford	Solar PV - Ground Mount	Pre-Construction	Tulare	Tulare	CA	93215	35.8406	-119.0823	15.00	9/4/20
Clean Power Alliance of Southern California (CPA)	CPA50065	Daggett 3	Solar PV - Ground Mount	Construction	Daggett	San Bernardino	CA	92327	34.8579	-116.8162	15.00	10/2/20
Clean Power Alliance of Southern California (CPA)	CPA50064	Estrella	Solar PV - Ground Mount	Pre-Construction	Los Angeles County	Los Angeles	CA	93536	34.8509	-118.3133	15.00	11/6/20
Clean Power Alliance of Southern California (CPA)	CPA30069	Heber South	Geothermal	Post-Construction	Heber	Imperial	CA	92249	32.7144	-115.5357	15.00	5/7/21
Clean Power Alliance of Southern California (CPA)	CPA50071	Arica	Solar PV - Ground Mount	Pre-Construction	Desert Center	Riverside	CA	92239	33.699	-115.3129	15.00	6/4/21
Clean Power Alliance of Southern California (CPA)	CPA50072	Daggett 2	Solar PV - Ground Mount	Pre-Construction	Daggett	San Bernardino	CA	92327	34.8579	-116.8162	15.00	6/4/21
Clean Power Alliance of Southern California (CPA)	CPA30070	Geysers	Geothermal	Post-Construction	Middletown	Sonoma and Lake	CA	95461	38.7452	-122.6233	15.00	6/4/21
Clean Power Alliance of Southern California (CPA)	CPA50073	Resurgence Solar II	Solar PV - Ground Mount	Construction	Boron	San Bernardino	CA	93516	35.0131	-117.5487	20.00	6/4/21
Clean Power Alliance of Southern California (CPA)	CPA50080	Desert Quartzite	Solar PV - Ground Mount	Pre-Construction	Blythe	Riverside	CA	92225	33.3401	-114.4507	15.00	9/3/21
Clean Power Alliance of Southern California (CPA)	CPA50081	Radiant	Solar PV - Ground Mount	Pre-Construction	Newberry Springs	San Bernardino	CA	92365	34.8479	-116.7727	15.00	9/3/21

Reporting LSE Name	RPS Contract ID	Project Name	Contract Start Date (mm/dd/yyyy)	Contract End Date (mm/dd/yyyy)	Contract Capacity	Expected Annual Generation	Total Contract Volume	Commercial Operation Date (COD)	Transmission Status	Storage: Rated Power (MW)
Clean Power Alliance of Southern California (CPA)	CPA70008	Voyager Wind II	12/28/18	12/27/33	21.6	71,523	929,799	12/28/18	Complete	
Clean Power Alliance of Southern California (CPA)	CPA50005	Arlington Energy Center II	3/21/22	9/30/37	233	693,619	10,404,282		Complete	132
Clean Power Alliance of Southern California (CPA)	CPA50003	Golden Fields Solar III	12/21/20	12/20/35	40	114,780	1,721,706	12/21/20	Complete	
Clean Power Alliance of Southern California (CPA)	CPA40001	Isabella Partners	12/8/20	12/7/30	11.95	48,000	480,000	12/8/20	Complete	
Clean Power Alliance of Southern California (CPA)	CPA70002	Mojave County Wind Farm	12/15/20	12/15/40	300	830,095	16,601,900	12/15/20	Complete	
Clean Power Alliance of Southern California (CPA)	CPA50004	High Desert	12/17/21	12/16/36	100	289,727	4,345,900	12/17/21	Complete	50
Clean Power Alliance of Southern California (CPA)	CPA40057	Kaweah	6/16/20	6/15/30	20	29,466	294,660	6/16/20	Complete	
Clean Power Alliance of Southern California (CPA)	CPA50059	Azalea	8/1/24	7/31/39	60	179,346	2,690,185		Expected May 2024	38
Clean Power Alliance of Southern California (CPA)	CPA50062	Chalan	12/31/23	12/30/38	64.9	179,695	2,695,432		Expected 12/1/2023	25
Clean Power Alliance of Southern California (CPA)	CPA50063	Rexford	10/1/23	9/30/38	300	833,838	12,507,574		Expected 10/1/2023	180
Clean Power Alliance of Southern California (CPA)	CPA50065	Daggett 3	11/17/23	11/16/38	123	369,942	5,549,133		Expected 12/09/2022	61.5
Clean Power Alliance of Southern California (CPA)	CPA50064	Estrella	12/31/23	12/30/38	56	160,856	2,412,834		Expected 11/30/2022	28
Clean Power Alliance of Southern California (CPA)	CPA30069	Heber South	1/1/22	12/31/36	14	112,517	1,687,758	1/1/22	Complete	
Clean Power Alliance of Southern California (CPA)	CPA50071	Arica	12/1/23	11/30/38	93.5	274,113	4,111,688		Expected 6/20/2023	71
Clean Power Alliance of Southern California (CPA)	CPA50072	Daggett 2	10/1/23	9/30/38	65	195,347	2,930,199		Expected 12/09/2022	52
Clean Power Alliance of Southern California (CPA)	CPA30070	Geysers	1/1/22	12/31/36	50	438,000	6,570,000	1/1/22	Complete	
Clean Power Alliance of Southern California (CPA)	CPA50073	Resurgence Solar II	3/31/23	2/28/43	48	137,547	2,750,940		Complete	40
Clean Power Alliance of Southern California (CPA)	CPA50080	Desert Quartzite	3/1/24	2/28/39	300	912,884	13,693,264		Expected 7/15/2023	150
Clean Power Alliance of Southern California (CPA)	CPA50081	Radiant	12/31/23	12/30/38	3	9,224	138,355		Complete	

Reporting LSE Name	RPS Contract ID	Project Name	Storage: Capacity (MWh)	Project Notes
Clean Power Alliance of Southern California (CPA)	CPA70008	Voyager Wind II		
Clean Power Alliance of Southern California (CPA)	CPA50005	Arlington Energy Center II	528	100 MW of Solar PV achieved COD on 3/21/2022.
Clean Power Alliance of Southern California (CPA)	CPA50003	Golden Fields Solar III		
Clean Power Alliance of Southern California (CPA)	CPA40001	Isabella Partners		
Clean Power Alliance of Southern California (CPA)	CPA70002	Mojave County Wind Farm		
Clean Power Alliance of Southern California (CPA)	CPA50004	High Desert	200	
Clean Power Alliance of Southern California (CPA)	CPA40057	Kaweah		
Clean Power Alliance of Southern California (CPA)	CPA50059	Azalea	152	
Clean Power Alliance of Southern California (CPA)	CPA50062	Chalan	100	
Clean Power Alliance of Southern California (CPA)	CPA50063	Rexford	540	
Clean Power Alliance of Southern California (CPA)	CPA50065	Daggett 3	246	
Clean Power Alliance of Southern California (CPA)	CPA50064	Estrella	112	
Clean Power Alliance of Southern California (CPA)	CPA30069	Heber South		
Clean Power Alliance of Southern California (CPA)	CPA50071	Arica	284	
Clean Power Alliance of Southern California (CPA)	CPA50072	Daggett 2	208	
Clean Power Alliance of Southern California (CPA)	CPA30070	Geysers		The Geysers is a complex of generating units located in Sonoma and Lake counties.
Clean Power Alliance of Southern California (CPA)	CPA50073	Resurgence Solar II	160	
Clean Power Alliance of Southern California (CPA)	CPA50080	Desert Quartzite	600	
Clean Power Alliance of Southern California (CPA)	CPA50081	Radiant		

Appendix E

Cost Quantification

(Public Version)

LSE Name:	Clean Power Alliance of Southern California
Date Filed:	1/18/23

Input Required

No Input Required

Table 1: Cost Quantification (Actual Net Costs, \$)		Actual RPS-Eligible Procurement and Generation Net Costs (\$)		
1	Executed RPS-Eligible Contracts by Technology Type* (Purchases and Sales)	2019	2020	2021
2	Biogas: Digester Gas	\$0	\$0	\$0
3	Biogas: Landfill Gas	\$1,028,083	\$0	\$729,362
4	Biodiesel	\$0	\$0	\$0
5	Biomass	\$10,776,754	\$5,940,025	\$9,292,441
6	Muni Solid Waste	\$0	\$0	\$0
7	Geothermal	\$27,996,590	\$54,195,201	\$36,619,220
8	Small Hydro (Non-UOG)	\$884,012	\$5,463,774	\$3,594,014
9	Conduit Hydro	\$0	\$0	\$0
10	Water Supply / Conveyance	\$0	\$0	\$0
11	Ocean Wave	\$0	\$0	\$0
12	Ocean Thermal	\$0	\$0	\$0
13	Tidal Current	\$0	\$0	\$0
14	Solar PV (Non-UOG)	\$118,826,423	\$141,036,411	\$115,217,650
15	Solar Thermal	\$257,808	\$65,546	\$0
16	Wind	\$19,341,151	\$66,736,709	\$103,065,584
17	Unbundled RECs (REC Only)	\$10,074,879	\$0	\$0
18	Various (Index Plus REC)***	\$0	\$0	\$0
19	Fuel Cell	\$0	\$0	\$0
20	UOG: Small Hydro	\$0	\$0	\$0
21	UOG: Solar PV	\$0	\$0	\$0
22	UOG: Other	\$0	\$0	\$0
23	Executed REC Sales (Revenue)	\$4,464,865	\$4,464,865	\$4,464,865
24	Total RPS-Eligible Procurement and Generation Net Cost	\$184,720,835	\$268,972,801	\$264,053,406
25	Total Retail Sales (MWh)	8,986,112	11,045,771	10,719,619
26	Incremental Rate Impact	2.055625673	2.435074984	2.463272295

LSE Name:	Clean Power Alliance of Southern California
Date Filed:	1/18/23

Input Required No Input Required

Table 2: Cost Quantification (Forecast Costs and Revenues, \$)		Forecast RPS-Eligible Procurement Costs and Revenues (\$)								
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales)**	2022	2023	2024	2025	2026	2027	2028	2029	2030
2	Biogas: Digester Gas									
3	Biogas: Landfill Gas									
4	Biodiesel									
5	Biomass									
6	Muni Solid Waste									
7	Geothermal									
8	Small Hydro (Non-UOG)									
9	Conduit Hydro									
10	Water Supply / Conveyance									
11	Ocean Wave									
12	Ocean Thermal									
13	Tidal Current									
14	Solar PV (Non-UOG)									
15	Solar Thermal									
16	Wind									
17	Unbundled RECs (REC Only)									
18	Various (Index Plus REC)***									
20	Fuel Cell									
21	UOG: Small Hydro									
22	UOG: Solar PV									
23	UOG: Other									
24	Executed REC Sales (Revenue)									
25	Total Executed But Not Approved RPS-Eligible Procurement and Generation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Total Retail Sales (MWh)	10,796,040	10,901,820	11,015,379	11,087,483	11,154,570	11,248,740	11,321,003	11,397,823	11,466,833
27	Incremental Rate Impact	0	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh
28	Executed RPS-Eligible Contracts (Purchases and Sales)****	2022	2023	2024	2025	2026	2027	2028	2029	2030
29	Biogas: Digester Gas									
30	Biogas: Landfill Gas									
31	Biodiesel									
32	Biomass									
33	Muni Solid Waste									
34	Geothermal				\$34,756,709	\$34,593,669	\$34,672,630	\$35,110,563	\$35,024,719	\$35,037,166
35	Small Hydro (Non-UOG)				\$5,455,305	\$5,381,480	\$5,392,352	\$5,691,062	\$5,705,235	\$4,876,786
36	Conduit Hydro									
37	Water Supply / Conveyance									
38	Ocean Wave									
39	Ocean Thermal									
40	Tidal Current									
41	Solar PV (Non-UOG)				\$164,306,366	\$159,844,820	\$158,541,234	\$168,961,079	\$167,511,041	\$166,248,888
42	Solar Thermal				\$1,475,055	\$1,397,284	\$1,388,481	\$1,631,278	\$1,626,192	\$1,618,144
43	Wind				\$81,169,524	\$78,930,244	\$79,067,833	\$87,053,266	\$87,402,562	\$87,796,995
44	Unbundled RECs (REC Only)									
45	Various (Index Plus REC)***				\$0	\$0	\$0	\$0	\$0	\$0
47	Fuel Cell									
48	UOG: Small Hydro									
49	UOG: Solar PV									
50	UOG: Other									
51	Executed REC Sales (Revenue)									
52	Total Executed and Approved RPS-Eligible Procurement and Generation Cost				\$287,162,959	\$280,147,497	\$278,962,530	\$298,447,249	\$297,269,749	\$295,577,978
53	Total Retail Sales (MWh)	10,796,040	10,901,820	11,015,379	11,087,483	11,154,570	11,248,740	11,321,003	11,397,823	11,466,833
54	Incremental Rate Impact				2.589974213	2.511504235	2.479944758	2.636226247	2.608127535	2.577677481
55	Total RPS-Eligible Procurement and Generation Cost				\$287,162,959	\$280,147,497	\$278,962,530	\$298,447,249	\$297,269,749	\$295,577,978
56	Total Incremental Rate Impact				2.589974213	2.511504235	2.479944758	2.636226247	2.608127535	2.577677481

*Note: Technology definitions are given in the PCC Classification Handbook located in the RPS Compliance Reporting section of: <https://www.cpuc.ca.gov/RPSComplianceReporting/>

**Note: For contracts that have been executed but still require formal approval (CPUC or other formal approval process) for purchases and sales.

***Note: The "Various" technology type is to be used in the case of contracts encompassing multiple facilities where the generation type is not yet known

****Note: For IOUs and SMJUs: Include all executed contracts that required CPUC approval. For CCAs and ESPs: Include all executed contracts that have been approved through relevant formal approval processes.

LSE Name:	Clean Power Alliance of Southern California
Date Filed:	1/18/23

Table 2: Cost Quantification (Forecast Costs and Revenues, \$)			
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales)**	2031	2032
2	Biogas: Digester Gas		
3	Biogas: Landfill Gas		
4	Biodiesel		
5	Biomass		
6	Muni Solid Waste		
7	Geothermal		
8	Small Hydro (Non-UOG)		
9	Conduit Hydro		
10	Water Supply / Conveyance		
11	Ocean Wave		
12	Ocean Thermal		
13	Tidal Current		
14	Solar PV (Non-UOG)		
15	Solar Thermal		
16	Wind		
17	Unbundled RECs (REC Only)		
18	Various (Index Plus REC)***		
20	Fuel Cell		
21	UOG: Small Hydro		
22	UOG: Solar PV		
23	UOG: Other		
24	Executed REC Sales (Revenue)		
25	Total Executed But Not Approved RPS-Eligible Procurement and Generation Cost	\$0	\$0
26	Total Retail Sales (MWh)	11,543,040	11,589,564
27	Incremental Rate Impact	0.00 ¢/kWh	0.00 ¢/kWh
28	Executed RPS-Eligible Contracts (Purchases and Sales)****	2031	2032
29	Biogas: Digester Gas		
30	Biogas: Landfill Gas		
31	Biodiesel		
32	Biomass		
33	Muni Solid Waste		
34	Geothermal	\$35,051,500	\$35,164,783
35	Small Hydro (Non-UOG)	\$1,818,328	\$1,848,938
36	Conduit Hydro		
37	Water Supply / Conveyance		
38	Ocean Wave		
39	Ocean Thermal		
40	Tidal Current		
41	Solar PV (Non-UOG)	\$166,606,911	\$167,346,226
42	Solar Thermal	\$1,645,298	\$1,675,670
43	Wind	\$88,624,198	\$89,705,912
44	Unbundled RECs (REC Only)		
45	Various (Index Plus REC)***	\$0	\$0
47	Fuel Cell		
48	UOG: Small Hydro		
49	UOG: Solar PV		
50	UOG: Other		
51	Executed REC Sales (Revenue)		
52	Total Executed and Approved RPS-Eligible Procurement and Generation Cost	\$293,746,234	\$295,741,529
53	Total Retail Sales (MWh)	11,543,040	11,589,564
54	Incremental Rate Impact	2.544790964	2.551791598
55	Total RPS-Eligible Procurement and Generation Cost	\$293,746,234	\$295,741,529
56	Total Incremental Rate Impact	2.544790964	2.551791598

*Note: Technology definitions are given in the PCC Classification Handbook
**Note: For contracts that have been executed but still require formal approval
***Note: The "Various" technology type is to be used in the case of contracts
****Note: For IOUs and SMJUs: Include all executed contracts that required

LSE Name:	Clean Power Alliance of Southern California		Input Required		No Input Required
Date Filed:	1/18/23				

Table 3: Cost Quantification (Actual Procurement / Generation and Sales, MWh)		Actual RPS-Eligible Procurement / Generation and Sales (MWh)		
1	Technology Type* (Procurement / Generation and Sales)	2019	2020	2021
2	Biogas: Digester Gas	0	0	0
3	Biogas: Landfill Gas	18,948	0	12,900
4	Biodiesel	0	0	0
5	Biomass	242,849	145,451	158,026
6	Muni Solid Waste	0	0	0
7	Geothermal	570,001	1,106,720	664,152
8	Small Hydro (Non-UOG)	17,280	107,524	63,584
9	Conduit Hydro	0	0	0
10	Water Supply / Conveyance	0	0	0
11	Ocean Wave	0	0	0
12	Ocean Thermal	0	0	0
13	Tidal Current	0	0	0
14	Solar PV (Non-UOG)	2,387,433	2,952,865	2,221,509
15	Solar Thermal	5,028	1,308	0
16	Wind	1,812,673	2,466,547	2,890,612
17	Unbundled RECs (REC Only)	554,437	0	0
18	Various (Index Plus REC)***	0	0	0
19	Fuel Cell	0	0	0
20	UOG: Small Hydro	0	0	0
21	UOG: Solar PV	0	0	0
22	UOG: Other	0	0	0
23	Executed REC Sales (MWh)	268,250	130,000	930,000
24	Total RPS Eligible Procurement (MWh)	5,340,399	6,650,415	5,080,783

LSE Name:	Clean Power Alliance of Southern California		Input Required		No Input Required
Date Filed:	1/18/23				

Table 4: Cost Quantification (Forecast Procurement / Generation and Sales, MWh)		Forecast RPS-Eligible Procurement / Generation and Sales (MWh)						
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales) **	2022	2023	2024	2025	2026	2027	2028
2	Biogas: Digester Gas							
3	Biogas: Landfill Gas							
4	Biodiesel							
5	Biomass							
6	Muni Solid Waste							
7	Geothermal							
8	Small Hydro (Non-UOG)							
9	Conduit Hydro							
10	Water Supply / Conveyance							
11	Ocean Wave							
12	Ocean Thermal							
13	Tidal Current							
14	Solar PV (Non-UOG)							
15	Solar Thermal							
16	Wind							
17	Unbundled RECs (REC Only)							
18	Various (Index Plus REC)***							
20	Fuel Cell							
21	UOG: Small Hydro							
22	UOG: Solar PV							
23	UOG: Other							
24	Executed REC Sales (MWh)							
25	Total Executed But Not Approved RPS-Eligible Procurement	0	0	0	0	0	0	0
26	Executed and Approved RPS-Eligible Contracts (Purchases and Sales) ****	2022	2023	2024	2025	2026	2027	2028
27	Biogas: Digester Gas				0	0	0	0
28	Biogas: Landfill Gas				0	0	0	0
29	Biodiesel				0	0	0	0
30	Biomass				0	0	0	0
31	Muni Solid Waste				0	0	0	0
32	Geothermal				593,854	593,241	592,657	593,696
33	Small Hydro (Non-UOG)				98,829	98,859	98,889	99,041
34	Conduit Hydro				0	0	0	0
35	Water Supply / Conveyance				0	0	0	0
36	Ocean Wave				0	0	0	0
37	Ocean Thermal				0	0	0	0
38	Tidal Current				0	0	0	0
39	Solar PV (Non-UOG)				4,724,638	4,698,753	4,662,493	4,628,500
40	Solar Thermal				20,524	20,466	20,213	19,809
41	Wind				1,506,975	1,505,436	1,503,844	1,504,003
42	Unbundled RECs (REC Only)				0	0	0	0
43	Various (Index Plus REC)***				0	0	0	0
45	Fuel Cell				0	0	0	0
46	UOG: Small Hydro				0	0	0	0
47	UOG: Solar PV				0	0	0	0
48	UOG: Other				0	0	0	0
49	Executed REC Sales (MWh)				0	0	0	0
50	Total Executed and Approved RPS-Eligible Procurement				6,944,820	6,916,755	6,878,097	6,845,049
51	Total RPS Eligible Procurement (MWh)				6,944,820	6,916,755	6,878,097	6,845,049

*Note: Technology definitions are given in the PCC Classification Handbook located in the RPS Compliance Reporting section of: <https://www.cpuc.ca.gov/RPSComplianceReporting/>

**Note: For contracts that have been executed but still require formal approval (CPUC or other formal approval process) for purchases and sales.

***Note: The "Various" technology type is to be used in the case of contracts encompassing multiple facilities where the generation type is not yet known

****Note: For IOUs and SMJUs: Include all executed contracts that required CPUC approval. For CCAs and ESPs: Include all executed contracts that have been approved through relevant formal approval processes.

LSE Name:	Clean Power Alliance of Southern California
Date Filed:	1/18/23

Table 4: Cost Quantification (Forecast Procurement / Generation and Sales, MWh)

1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales) **	2029	2030	2031	2032
2	Biogas: Digester Gas				
3	Biogas: Landfill Gas				
4	Biodiesel				
5	Biomass				
6	Muni Solid Waste				
7	Geothermal				
8	Small Hydro (Non-UOG)				
9	Conduit Hydro				
10	Water Supply / Conveyance				
11	Ocean Wave				
12	Ocean Thermal				
13	Tidal Current				
14	Solar PV (Non-UOG)				
15	Solar Thermal				
16	Wind				
17	Unbundled RECs (REC Only)				
18	Various (Index Plus REC)***				
20	Fuel Cell				
21	UOG: Small Hydro				
22	UOG: Solar PV				
23	UOG: Other				
24	Executed REC Sales (MWh)				
25	Total Executed But Not Approved RPS-Eligible Procurement	0	0	0	0
26	Executed and Approved RPS-Eligible Contracts (Purchases and Sales) ****	2029	2030	2031	2032
27	Biogas: Digester Gas	0	0	0	0
28	Biogas: Landfill Gas	0	0	0	0
29	Biodiesel	0	0	0	0
30	Biomass	0	0	0	0
31	Muni Solid Waste	0	0	0	0
32	Geothermal	591,454	590,855	590,272	591,332
33	Small Hydro (Non-UOG)	98,826	81,291	21,008	21,008
34	Conduit Hydro	0	0	0	0
35	Water Supply / Conveyance	0	0	0	0
36	Ocean Wave	0	0	0	0
37	Ocean Thermal	0	0	0	0
38	Tidal Current	0	0	0	0
39	Solar PV (Non-UOG)	4,578,940	4,537,578	4,515,422	4,502,872
40	Solar Thermal	19,423	19,009	19,009	19,040
41	Wind	1,497,368	1,492,393	1,492,393	1,496,312
42	Unbundled RECs (REC Only)	0	0	0	0
43	Various (Index Plus REC)***	0	0	0	0
45	Fuel Cell	0	0	0	0
46	UOG: Small Hydro	0	0	0	0
47	UOG: Solar PV	0	0	0	0
48	UOG: Other	0	0	0	0
49	Executed REC Sales (MWh)	0	0	0	0
50	Total Executed and Approved RPS-Eligible Procurement	6,786,012	6,721,127	6,638,104	6,630,564
51	Total RPS Eligible Procurement (MWh)	6,786,012	6,721,127	6,638,104	6,630,564

*Note: Technology definitions are given in the PCC Classification Handbook located in the f

**Note: For contracts that have been executed but still require formal approval (CPUC or oth

***Note: The "Various" technology type is to be used in the case of contracts encompassing

****Note: For IOUs and SMJUs: Include all executed contracts that required CPUC approval. f

Appendix F

2022 RPS Procurement Plan Checklist and Verification

Final 2022 RPS Procurement Plan Checklist- Task Completed

Retail seller name: Clean Power Alliance of Southern California	YES/NO	NOTES
I. Major Changes to RPS Plan	YES	
II. Executive Summary	YES	
III. Summary of Legislation Compliance	YES	
IV. Assessment of RPS Portfolio Supplies and Demand	YES	
IV.A. Portfolio Supply and Demand	YES	
IV.A.1. Voluntary Allocation and Market Offer (VAMO)	YES	
IV.A.2. Portfolio Optimization	YES	
IV.B. Responsive to Policies, Regulations, and Statutes	YES	
IV.B.1 Long-term Procurement	YES	
IV.C. Portfolio Diversity and Reliability	YES	
IV.D. Lessons Learned	YES	
V. Project Development Status Update	YES	
VI. Potential Compliance Delays	YES	
VII. Risk Assessment	YES	
VIII. Renewable Net Short Calculation	YES	
IX. Minimum Margin of Procurement (MMoP)	YES	
IX.A. MMoP Methodology and Inputs	YES	
IX.B. MMoP Scenarios	YES	
X. Bid Solicitation Protocol	YES	
X.A. Solicitation Protocols for Renewables Sales	YES	
X.B. Bid Selection Protocols	YES	
X.C. LCBF Criteria	YES	
XI. Safety Considerations	YES	
XII. Consideration of Price Adjustments Mechanisms	YES	
XIII. Curtailment Frequency, Forecasting, Costs	YES	
XIV. Cost Quantification	YES	
XV. Coordination with the IRP Proceeding	YES	
Appendix A: Redlined Version of the Final 2022 RPS Plan	YES	

Officer Verification

I am an officer of the reporting organization herein and am authorized to make this verification on its behalf. The statements in the foregoing document are true of my own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, I believe them to be true. The spreadsheet templates used within this filing have not been altered from the version issued or approved by Energy Division.

Executed on January 18, 2023 at Los Angeles, California.

/s/ Matthew Langer

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