Standard LSE Plan

CLEAN ENERGY ALLIANCE

2025 INTEGRATED RESOURCE PLAN

AUGUST 10, 2026

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I. Executive Summary

Description of CEA

Clean Energy Alliance is a Joint Powers Authority ("JPA") formed by the communities of Carlsbad, Del Mar and Solana Beach in November 2019 (blue area in Figure 1 below), and subsequently expanded to include the cities of Escondido and San Marcos (Figure 1 yellow areas), and then Oceanside and Vista (Figure 1 teal areas).

As a JPA, CEA is a local government agency. CEA is governed by a seven-member board composed of representatives of its member local governments. Through these representatives CEA is controlled by and accountable to the communities CEA serves.

CEA provides retail electric generation services and complementary energy programs to customers within the municipal boundaries of the following communities:

a. City of Carlsbad
b. City of Del Mar
c. City of Escondido
d. City of Oceanside
e. City of San Marcos
f. City of Solana Beach
g. City of Vista

CEA began serving load in May 2021 and currently serves a customer base of approximately 257,000 service accounts. CEA is the default power provider for the communities it serves.

Figure 1: Service Area Map

CEA provides retail generation service to a variety of customer classes, including residential, small and medium commercial, large industrial, and agricultural and pumping facilities. CEA's current service area has a population of approximately 644,000, the majority of which live in households or work at businesses that receive generation service from CEA. In 2025, CEA had an estimated peak load of 544 MW, and energy usage of 2,320 GWh.

CEA's Mission

CEA's mission is to "empower local communities with the choice of sustainable and affordable energy for all customers, accelerating the transition to clean energy and fostering local economic growth, environmental responsibility, inclusivity and community well-being." CEA is an energy services provider, which benefits the community through the delivery of cleaner and more locally produced electricity, demand reduction, economic investment and competitive rates for residents, businesses, and municipal facilities in the service territory. CEA's formation agreements outline an organizational goal to achieve 100% renewable energy by 2035. Consistent with California Public Utilities Code Sections ("PUC") 366.2(a)(5) and 454.52(b)(3),[1] all procurement by CEA, including the portfolios set forth in this Integrated Resource Plan ("IRP"), must comply with policy direction provided by CEA's governing board.

Introduction to CEA's IRP

In accordance with the requirements of PUC Sections 454.51 and 454.52 and California Public Utilities Commission ("Commission" or "CPUC") Decision ("D.") 18-02-018, D.22-02-004, *Administrative Law Judge's Ruling Setting Requirements for Individual Integrated Resource Plans Due June 1, 2026*,[2] *Email Ruling Granting Joint Request for Extension of Load Serving Entity ("LSE") Integrated Resource Plan ("IRP") Filings*,[3] and guidance provided by the Commission's Energy Division,[4] CEA is providing its LSE-specific IRP to the Commission for certification and use in the Commission's statewide planning process.

In addition to this narrative, CEA's IRP includes the following documents:

- CEA's Resource Data Template
- CEA's Clean System Power Calculator
- CEA's IRP Verification

CEA is submitting a single Preferred Conforming Portfolio in this IRP, which achieves emissions that are equal to or less than the LSE's proportional share of the 8 million metric ton ("MMT") greenhouse gas ("GHG") target by 2045. CEA has also considered an alternative scenario exploring a "low load growth"

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[1] All further citations to statute are to the California Public Utilities Code unless otherwise noted.

[2] Rulemaking ("R.") 25-06-019, *Administrative Law Judge's Setting Requirements for Individual Integrated Resource Plans Due June 1, 2026,* issued on January 1, 2026 ("Final Load Forecast and GHG Benchmark Ruling"), January 16, 2026.

[3] R.25-06-019, *Email Ruling Granting Joint Request for Extension of Load Serving Entity ("LSE") Integrated Resource Plan ("IRP") Filings*, March 9, 2026.

[4] Energy Division Guidance can be accessed at: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2024-2026-irp-cycle-events-and-materials/updated-filing-requirements-overview-document.pdf.

future and has provided narrative commentary in various sections herein which outline the potential portfolio impacts of this change. This alternative is more consistent with CEA's experience with load growth since the organization's inception, though CEA recognizes that electrification trends may change this observed trend in the future.

Projecting resource needs over the planning horizon covered by the IRP is a dynamic process and CEA expects changes over time. The future resources identified in CEA's IRP represent CEA's current good-faith projection of the resource mix that will be procured over the IRP planning horizon. Such projections are based on best available information regarding planning directives, CEA policy, resource availability, and other key considerations. The resources identified in future iterations of CEA's IRP may change due to new information and evolving circumstances, and the ultimate resource mix that CEA actually procures (in future years) may differ from what is reflected in this plan due to a number of variables, including availability of supply, technology changes, price of supply, and/or other market or regulatory considerations.

Board Council Approval of IRP

In compliance with PUC Section 454.52(b)(3), this IRP was formally submitted to the CEA's governing board for approval based on the IRP's compliance with Sections 454.51 and 454.52 (the "IRP Statute") and all relevant board-adopted procurement requirements of CEA's governing board. On June 25th, 2026, the CEA's Board of Directors ("Board") adopted a Resolution that formally approved this IRP and adopted CEA's Preferred Conforming Portfolio ("PCP"). This Resolution also made the following determinations regarding CEA's PCP:

- CEA's PCP is expected to achieve economic, reliability, environmental, security, and other benefits and performance characteristics that are consistent with the goals set forth in Section 454.52(a)(1)(A-J).
- CEA's PCP includes a diversified procurement portfolio consisting of both short-term and long-term electricity and electricity-related and demand reduction products.
- CEA's PCP achieves the resource adequacy ("RA") requirements established pursuant to PUC Section 380.
- CEA's PCP is consistent with the procurement timing, resource mix, and operational attributes of the 2025-2026 Transmission Planning Process Portfolio with updates ("System Reference Plan" or "TPP Portfolio").[5]
- CEA's PCP is compliant with all CEA Board-adopted procurement directives.

A copy of the final Resolution is available on the CEA website.[6]

Request for Certification

CEA respectfully requests that the Commission certify this IRP.

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[5] D.25-02-026, Decision Transmitting Electricity Resource Portfolios to The California Independent System Operator for 2025-2026 Transmission Planning Process, Feb. 26, 2026; D.25-07-043, Order Modifying and Denying Rehearing of D.25-02-026, July 25, 2025.

[6] CEA's Board-approved Resolution can be found at: http://thecleanenergyalliance.org/wp-content/uploads/2026/06/Item-9-Attachment-A-Resolution-No.-2026-033-Approving-CEAs-2026-IRP.docx.pdf.

As both the Legislature and the Commission have recognized, the Legislature has granted CCAs broad authority to procure resources on behalf of their respective customers, an authority limited only where "other generation procurement arrangements have been expressly authorized by statute."[7] Likewise, the Legislature has granted CCAs autonomy in setting their own rates and managing interactions with their customers.[8] CEA understands that the Commission has three primary interests in the CCA IRP process:

- Ensuring that CCA IRPs provide requisite procurement information needed by the Commission to develop its statewide plan.[9]
- Ensuring that CCAs' current and planned procurement is consistent with the Resource Adequacy ("RA") requirements established pursuant to PUC Section 380.[10]
- Ensuring that CCAs' current and planned procurement satisfies the CCA's share of renewables integration resources identified in the Commission's System Reference Plan, and that the CCA either self-provides or pays for investor-owned utility ("IOU") procurement to support its share of any renewable integration shortfall.[11]

CEA has prepared its IRP with these interests in mind, and thanks the Commission for recognizing and preserving CCA procurement autonomy as well as the benefits of a collaborative planning approach with CCA organizations in its certification review of CEA's IRP.

Plan Summary

This narrative provides a detailed description of the development and content of CEA's PCP, the portfolio's compliance with applicable requirements, and an action plan detailing CEA's next steps to promote conformance with such requirements.

CEA developed its IRP through the following steps:

- CEA compiled data for its existing energy contracts, including Voluntary Allocation Market Offer ("VAMO") contracts from San Diego Gas & Electric ("SDG&E") and greenhouse gas ("GHG")-free

[7] PUC Section 366.2(a)(5).
[8] D.05-12-041 at 9-11 ("Nothing in the statute directs the CPUC to regulate the CCA's program except to the extent that its programs may affect utility operations and the rates and services to other customers. For example, the statute does not require the CPUC to set CCA rates or regulate the quality of its services… We are confident that existing law protects CCA customers. Entities of local government, such as CCAs, are subject to numerous laws that will have the effect of protecting CCA customers and promoting accountability by CCAs . . . .").
[9] D.19-04-040 at 17-18 ("The Commission's portfolio aggregation and evaluation process, which relies of fulfillment of IRP filing requirements by LSEs, is the only process capable of assessing the overall needs of the CAISO grid and meeting the statewide GHG, reliability, and least-cost goals collectively. While LSEs may use their IRP process to meet local planning needs as well, the statewide planning function is the statutorily required process . . . .").
[10] PUC Section 454.52(b)(3)(C).
[11] PUC Section 454.51.

allocations from the Diablo Canyon Nuclear Power Plant, as well as RA capacity contracts and its share of capacity for allocated Cost Allocation Mechanism ("CAM") resources.

- For each IRP planning year, CEA identified its short positions relative to known planning targets and its assigned load forecast.
- CEA populated the Resource Data Template ("RDT") with all current contracts.
- CEA compiled detailed information on projects for which it is currently negotiating power purchase agreements, including information regarding project status and timing.
- CEA identified future contracts it would aim to secure for new solar, storage, geothermal, hybrid, and wind generation. CEA prioritized the selection of future resources to ensure that CEA's overall portfolio of new resources is varied, is feasible in terms of anticipated resource availability, meets all regulatory goals, meets the goals expressed by CEA's Board, and is estimated to minimize costs to customers, subject to applicable mandates. CEA added generic future contracts with existing renewable resources to help fill its remaining open positions.
- CEA used the Commission's Clean System Power Calculator Tool to check the GHG emissions associated with the resulting portfolio to ensure that these emissions are less than CEA's assigned GHG emissions benchmarks in 2035 and 2045; CEA added planned purchases of additional energy from renewable or GHG-free resources in sufficient volume to ensure that portfolio emissions were less than CEA's assigned GHG benchmark.
- CEA evaluated the portfolio for reliability by comparing the total portfolio capacity against CEA's RA requirements as shown in the Reliability tab in the Resource Data Template and adding sufficient RA capacity contracts to ensure reliability. CEA further established that its planned incremental capacity procurement met or exceeded its assigned shares of the various incremental capacity procurement obligations.
- CEA identified the resulting portfolio as its PCP.

CEA reached the following findings regarding its PCP:

- CEA's PCP includes the procurement of the following new resources throughout the planning period:
    - New solar resources totaling 1,395 MW
    - New battery storage resources totaling 1,104 MW
    - New wind resources totaling 213 MW
    - New geothermal resources totaling 97 MW

- CEA's PCP provides for the following overall resource mix in 2045:
    - 1,003 GWh of Geothermal
    - 687 GWh of Wind
    - 2,992 GWh of Solar
    - 6,886 MWh of Battery Storage Discharge Capability
    - 160 MW of Natural Gas (Capacity-Only)
    - 175 MW of utility capacity resources allocated under the Cost Allocation Mechanism

- CEA's PCP is consistent with procurement timing, resource quantities, and general resource attributes identified in the System Reference Plan.

- CEA's PCP would have GHG emissions of 0.22 MMT, 0.17 MMT, 0.12 MMT, and 0.06 MMT in 2030, 2035, 2040, and 2045, respectively, which is equivalent to or less than CEA's assigned GHG emission benchmarks for those years.
- CEA's PCP meets all relevant reliability metrics.
- CEA's PCP is consistent with the Commission's System Reference Plan and can be used in an 8 MMT (2045) consolidated statewide portfolio.

To implement its PCP, CEA is adopting the action plan described in Section IV, below. This action plan consists of the following steps:

- CEA will periodically solicit offers for new renewable generation and storage projects. These resources are typically secured through long-term power purchase agreements. CEA expects to secure power purchase agreements for new projects in multiple solicitations conducted over the coming years.
- Periodically throughout the year, CEA will solicit offers for short-term renewable energy, RA, system energy, and other products needed to balance the portfolio and adhere to position limits established through CEA's risk management policy and practices. These solicitations may take the form of a formal request for offers processes, bilateral discussions, and/or transactions arranged through broker markets.
- CEA will continue to procure resources to meet any remaining assigned requirements from D.19-11-016, D.21-06-035, D.23-02-040, and D.26-02-057 as well as the specific sub-categories from those decisions.

II. Study Design

a. Objectives

CEA had the following objectives in performing the analytical work to develop its IRP:

1. Identify a PCP with lower emissions than CEA's assigned GHG emissions benchmarks, as determined using the Commission's emissions calculator.
2. Identify a PCP that achieves economic, reliability, environmental, security, and other benefits and performance characteristics that are consistent with the goals set forth in Section 454.52(a)(1)(A-J).
3. Identify diverse and balanced PCP that includes both short-term and long-term electricity products as well as electricity-related demand reduction products.
4. Identify a PCP that achieves the resource adequacy requirements established pursuant to PUC Section 380 and provide CEA's share of system reliability and renewable integration resources.
5. Identify a PCP that complies with all of CEA's Board-adopted procurement directives.
6. Identify a PCP that is compliant with CEA's obligations under the Renewables Portfolio Standard ("RPS") program.
7. Identify a PCP that is cost-effective and minimizes rate impacts on CEA's customers.

b. Methodology

i. Modeling Tool(s)

In developing its planned portfolios, CEA used the inputs, assumptions, and modeling performed by the Commission's Energy Division using RESOLVE and SERVM to identify candidate resources and portfolio characteristics needed to meet the GHG benchmarks in 2035 and 2045. Internal models were used to assess open positions and to incorporate RESOLVE/SERVM planning assumptions to specify a mix of planned resources, including considerations relating to the timing of resource acquisition, the type of resources acquired, and the assumed mix of procurement of new vs. existing resources. The RDTv3 and Clean System Power ("CSP") templates were used to test the portfolio for reliability and GHG emissions. CEA assessed its resulting physical and financial positions for conformance with CEA's risk management policies and business practices.

CEA utilizes a commercial energy trading and risk management system to monitor its positions, market exposure, credit exposure, value-at-risk, and other risk management metrics. CEA used the outputs of its energy trading and risk management system to develop reports and data which were then analyzed to assess annual, monthly, and hourly open positions by considering all forecasted electric loads and expected deliveries from CEA's resource portfolio. CEA also used a proprietary financial model to project power supply costs based on existing and planned procurements as well as an overall financial assessment of revenues, costs, and cash flows. Current market conditions were considered when compiling any costs associated with expected/planned purchases; actual costs, based on existing procurement contracts, were incorporated as appropriate, and RESOLVE cost assumptions were used for new candidate resources.

ii. Modeling Approach

The modeling approach was to identify a portfolio of resources that meets the objectives outlined above and that considers resource availability under the assumption that other LSEs would procure in a manner consistent with the 2025-2026 TPP Portfolio with updates. CEA relied on the 2025 Inputs and Assumptions documentation for information on expected cost and availability of new candidate resources and used this information to guide selection of technology types and timing of procurement for the new resources in the portfolio. Overall, renewable energy and carbon-free energy content follows a trajectory towards 100% by 2035 and continuing through 2045, which meets or exceeds the assigned GHG emissions limits and meets CEA's own renewable content targets.

Load Forecast

CEA developed this IRP using its assigned load forecast from the file Load Forecasts + GHG Benchmarks document published by the Commission on January 16, 2026[12] (also contained in the CSP templates), as directed in the Final Load Forecast and GHG Benchmark Ruling. This forecast is shown in Table 2 below.

CEA has also reviewed its load growth trends to date, which are significantly less aggressive than the Final Load Forecast and GHG Benchmark Ruling. If CEA's growth rate were 1.6% per year – which is still

[12] See *Load Forecasts + GHG Benchmarks* (January 16, 2026) (hereinafter "GHG Benchmarks"), *available at* https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-26-irp-cycle-events-and-materials.

healthy growth but more in line with CEA's direct experience and observations to date – CEA's 2045 load would be forecasted at 3,187 GWh instead of 4,477 GWh. CEA has provided narrative commentary in various locations in this IRP estimating the potential reductions in procurement need as of 2045 under these lower load growth assumptions.

Table 2: CEA's 2026-2045 Load Forecast (GWh)

Year	Load Forecast
2026	2,364.42
2027	2,461.48
2028	2,594.55
2029	2,728.54
2030	2,876.74
2031	3,010.70
2032	3,149.24
2033	3,290.96
2034	3,441.70
2035	3,609.56
2036	3,743.49
2037	3,860.27
2038	3,963.14
2039	4,057.17
2040	4,158.93
2041	4,234.95
2042	4,311.26
2043	4,375.32
2044	4,428.71
2045	4,476.71

Load Shape

In developing its portfolio, CEA used the default load shape from the Clean System Power Calculator. Use of this load shape does not change CEA's total annual energy volumes for both load and load modifiers, and these energy volumes remain consistent with CEA's assigned load forecast.

Load-Proportional GHG Emissions Benchmark

CEA's modeling was assessed against its 2030, 2035, 2040, and 2045 assigned GHG emissions benchmarks, which are shown below in Table 3:

Table 3: CEA's Assigned Shares of GHG Reduction Benchmarks (MMT/yr)

2030	2035	2040	2045
0.32	0.26	0.21	0.11

Compiling Existing Resources

To populate its baseline resource templates, CEA included existing resources from the following procurement categories:

- Energy contracts.
- Capacity (Resource Adequacy) contracts.

- CEA's existing long-term Power Purchase Agreements and Energy Storage Agreements
- CEA's assigned share of capacity for CAM resources.
- CEA's selected VAMO allocation of RPS resources from SDG&E.
- CEA's allocation of GHG-free resources from the Pacific Gas & Electric ("PG&E") Diablo Canyon Nuclear Power Plant.

Contracts using existing resources are a combination of those currently under contract (existing contracts) and potential future contracts (planned contracts). Reliance on planned purchases of existing resources was constrained to a small portion of the overall portfolio in recognition of the need that significant development of new resources will be necessary to meet the State's GHG reduction goals and that contracting opportunities with existing resources may become increasingly scarce.

Selecting New Resources

To identify its new resource procurement opportunities, CEA first determined the new resource capacity it intends to add each year and considered candidate resources based on assessments of availability, cost, and portfolio fit. Planned purchases were grouped into distinct tranches for modeling purposes, although actual procurement will likely occur on a more continuous basis. A variety of factors were considered in determining the size and composition of the new resource procurement tranches reflected in the plan. These factors include resource needs (*i.e.*, open positions relative to planning targets), renewable portfolio standard requirements (including long-term renewable contracting requirements), RA requirements, the need for incremental RA capacity to contribute to system reliability and renewable integration needs (*e.g.*, incremental procurement orders), the potential for technological improvements over time, cost/customer impacts, and risk considerations. CEA assessed resource availability based on the Commission's planning assumptions and inputs and used this information to help guide the timing of procurement of various generation resource types. The Commission's RESOLVE modeling helped guide CEA's selection of new resource types, as did its experience with competitive solicitations for new renewable and storage resources and its experience in procuring resource adequacy resources.

Confirming Reliability

CEA's portfolios were evaluated to ensure that sufficient dependable capacity (net qualifying capacity or "NQC") would be available to meet peak load requirements, as shown in the RDTv3. These requirements include procuring sufficient net qualifying capacity to meet the Planning Reserve Margin ("PRM") applicable to each year of the planning period. CEA used technology-specific Effective Load Carrying Capacity ("ELCC") factors from the RDT to assess the contribution of each resource to system reliability. The ELCCs for battery storage resources degrade precipitously during the planning period, which means that battery resources provide less NQC per MW of nameplate capacity. In order to ensure that its portfolio met the reliability requirements in each year of the planning period, CEA added sufficient short-term RA capacity as needed to supplement capacity from its long-term portfolio. CEA's portfolio was designed to ensure that current incremental RA capacity obligations from the various Commission procurement orders will be met.

Calculating GHG Emissions

CEA calculated the emissions associated with its PCP using the Commission's Clean System Power calculator. The assigned load forecast and default load shapes and behind the meter adjustments were used for this assessment, along with the planned supply portfolios. CEA used standard resource profiles

from the Clean System Power calculator. The resulting emissions in each year were checked against the assigned GHG benchmarks.

iii. Alternative Assumptions

CEA did not use alternative assumptions in developing its PCP.

III. Study Results

a. Conforming and Alternative Portfolios

As required by the Commission, CEA is submitting a preferred conforming portfolio that achieves CEA's share of the 2035 and 2045 GHG targets. CEA is not submitting alternative portfolios.

CEA's Preferred Conforming Portfolio

Table 1 included in Appendix A to this Narrative provides a summary of CEA's PCP, identifying resources by type and distinguishing between the following procurement categories:

- Existing resources (energy and capacity) that CEA owns or contracts with, consistent with definitions provided in the RDT.
- Existing resources (energy and capacity) that CEA plans to contract with in the future.
- Existing resources (capacity) that CEA partially pays for through CAM.
- New Resources (energy and capacity) that are under development that CEA is planning to procure.
- Future new resources (energy and capacity) that CEA is planning to procure.

In summary, to meet CEA's projected 2045 energy demand, CEA has selected a Conforming Portfolio composed primarily of the following resources by 2045:

- Solar, planned existing: 170 GWh
- Solar, planned new: 2,822 GWh
- Wind, planned existing: 293 GWh
- Wind, CA, planned new: 239 GWh
- Wind, New Mexico, new: 69 GWh
- Wind, Wyoming, new; 87 GWh
- Geothermal, existing: 250 GWh
- Geothermal, new: 753 GWh
- Battery storage, new: 6,886 GWh dispatch capability

Additionally, CEA's PCP includes capacity-only resources composed primarily of the following resources:

- CAM capacity resources: 175 MW
- Existing natural gas, baseload, and other (planned procurement): 161 MW

CEA's portfolio includes a mix of existing and new resources, with new resources dominating the portfolio by 2045. CEA's PCP is comprised of a mix of resources in which CEA can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

CEA has also estimated the potential impact on procurement needs if CEA's load growth were to materialize at a lower rate, with a total load forecast in 2045 of 3,187GWh instead of 4,477GWh. In this scenario, CEA could see reduced procurement needs of 420 MW of 8-hour battery storage and 630 MW of solar with potential to result in lower overall customer rate impacts (for example with the ability to more gradually target procurement efforts at the most cost effective options over time, and potential to allow for earlier amortized resources to contribute a larger portion of CEA's overall needs). If the lower load forecast were to materialize, and CEA adjusted its future solar and storage purchases accordingly, expected power purchase contract payments would be reduced by $238 million annually by 2045.

CEA's PCP Is Consistent with the 2025-2026 TPP Portfolio

The new resources included in CEA's CPP are consistent with the 2025-2026 TPP Portfolio new resource mix as demonstrated in the following table:

Table 4: Comparison of CEA's PCP New Build Resources to the 2025-2026 TPP Portfolio

Resource Category	TPP Portfolio (MW)	CEA's Proportional Share of TPP New Resources (MW)	CEA's PCP (MW)
Geothermal	3,230	44	97
Geothermal (Enhanced)	674	9	0
Biomass	12	0	0
In-State Wind	10,949	148	104
Out-of-State Wind	19,036	257	109
Offshore Wind	-	0	0
Solar	82,732	1,117	1,395
Li-ion Battery (4-hr)	6,758	91	304
Li-ion Battery (8-hr)	21,102	285	800
Location Constrained Storage (12-hr)	8,499	115	0

Overall, Table 4 shows that CEA's PCP is broadly consistent with CEA's proportional share of the TPP new-resource build, with the same core technology set (solar, wind, storage, and geothermal) providing the bulk of new supply. The primary differences are in the composition of that build: (1) the PCP is more solar-heavy than the proportional TPP share, (2) the PCP relies materially more on battery storage — particularly longer-duration (8-hour) storage — than the proportional share, and (3) the PCP includes less in-state and out-of-state wind than the proportional share. The PCP also does not assume Enhanced Geothermal (0 MW versus a small proportional share, though CEA maintains interest in this resource type and intends to pursue procurement of best value geothermal and/or enhanced geothermal options in parallel) and does not include the location-constrained 12-hour storage category included in the TPP due to uncertain cost and availability considerations. Taken together, these differences primarily reflect CEA's estimation of resource availability at competitive prices, while maintaining overall alignment with the statewide planning direction reflected in the TPP.

The contracted and planned resources for CEA's PCP are summarized as follows:

- **TECOLOTE_RA_1_SS_CEA** — PATTERN Energy wind in New Mexico, online, 2023-2038.

- **RESISTATION_RA_2_SS_CEA** — RESISTATION existing generic DR in CA, 2023-2032.
- **Cape_PCC1_1_LT_CEA** — FERVO geothermal (SCE Utah Geothermal), in development, COD 2031, 2031-2045.
- **Leap MTR** — LEAPFROG new generic DR in CA, online, 2023-2034.
- **ES 1A 2** — ES1A Opco existing solar+storage (Edward), online, 2024-2035.
- **ES 1A 3** — ES1A Opco existing solar+storage (Edward), online, 2024-2035.
- **ES 1A 4** — ES1A Opco existing solar+storage (Edward), online, 2024-2035.
- **TECOLOTE_RA_1_SS_CEA 2** — Second tranche of Pattern Energy NM wind, 2023-2038.
- **DeerCreek_PCC1_1_LT_CEA** — VISTRA new generic 2-axis solar (Tulare County), in development, 2026-2041.
- **DeerCreek_PCC1_1_LT_CEA_2** — VISTRA paired battery storage (Tulare County), in development, 2026-2041.
- **DeerCreek_DCR** — VISTRA solar paired with DR, in development, 2026-2041.
- **IEP Camp Pendleton** — New generic long-duration battery storage at Camp Pendleton, in development, 2026-2046.
- **IEP Camp Pendleton 2** — Second new generic battery storage at Camp Pendleton, in development, 2026-2046.
- **CIRCLECITY_RA_1_SS_CEA** — ENGIE new generic battery storage (Mira Loma area, Riverside County), new contract, 2026-2036.
- **Darden_PCC1_1_LT_CEA (Solar)** — INTERSECT new generic 2-axis solar in Fresno County, in development, 2028-2040.
- **Darden_PCC1_1_LT_CEA (Storage)** — INTERSECT paired battery storage, in development, 2028-2040.
- **SENA_PCC1_1_LT_CEA** — SHELL new generic 2-axis solar (energy-only), online, 2025-2034.
- **Powerex_PCC1_1_LT_CEA** — POWEREX existing generic wind (BC Canada), energy-only, online, 2021-2031.
- **SDG&E_PCC1_LT_1_CEA_SOLAR** — SDG&E VAMO solar baseline (CA), energy-only, online, 2022-2042.
- **SDG&E_PCC1_LT_1_CEA_WIND** — SDG&E VAMO existing wind (CA), energy-only, online, 2022-2042.
- **SDG&E_PCC0_LT_1_CEA_SOLAR** — SDG&E VAMO solar baseline (CA), energy-only, online, 2023-2033.
- **SDG&E_PCC0_LT_1_CEA_WIND** — SDG&E VAMO existing wind (CA), energy-only, online, 2023-2033.
- **SENA_PCC1_LT_2_CEA** — SHELL new generic 2-axis solar (CA), energy-only, online, 2022-2034.
- **Karbone_PCC1_1_CEA** — KARBONE new generic solar (CA), energy-only, online, 2025-2027.
- **Pattern_PCC1_2_CEA** — PATTERN SCE New Mexico wind, energy-only, online, 2026-2027.
- **PG&E_PCC1_4_CEA** — PGE new generic solar (CA), energy-only, online, calendar year 2026.
- **CDWR_PCC1_1_CEA** — CDWR new generic solar (CA), energy-only, online, 2027.
- **PCE_PCC1_1&2_CEA** — PCE existing generic wind (CA), energy-only, online, 2027-2028.
- **EDFTNA_RA_3_SD_CEA** — EDFT capacity (Baja California Mexico), online, 2024-2026.
- **SEMPRA_RA_4_SD_CEA** — SEMPRA capacity (Baja CA Mexico), online, 2024-2026.
- **SEMPRA_RA_5_SD_CEA** — SEMPRA capacity (Baja CA Mexico), online, 2024-2026.
- **SDG&E_RA_4_SD_CEA** — SDG&E capacity (CA), online, 2023-2037.
- **SDG&E_RA_4_SDF_CEA** — SDG&E flex capacity (CA, Kearny portfolio), online, 2023-2042.
- **SDG&E_RA_4_SS_CEA** — SDG&E SCE-area capacity (San Bernardino), online, 2023-2035.
- **SDG&E_RA_4_SSF_CEA** — SDG&E SCE-area flex capacity (Joanec/Sentinel portfolio), online, 2023-2037.

- **Saavi_RA_3_SD_CEA** — SAAVI capacity (Baja CA Mexico), online, 2026-2027.
- **CALPINE_RA_13_SD_CEA** — CALPINE capacity (CA, Otay Mesa), online, 2027-2028.
- **Chevron_RA_1_SS_CEA** — CHEVRON capacity (CA, Sycamore), online, calendar year 2026.
- **NRGBM_RA_6_SDF_CEA** — NRG flex capacity (CA, Termoeléctrica Mexicali), online, calendar year 2026.
- **Western Power II_RA_2_NS_CEA** — Western Power & Steam II capacity (CA), online, 2025-2026.
- **Saavi_RA_4_SD_CEA** — SAAVI capacity (Baja CA Mexico), online, calendar year 2026.
- **SENA_RA_8_SD_CEA** — SHELL capacity (Baja CA Mexico), online, 2027-2028.
- **Saavi_RA_5_SD_CEA** — SAAVI capacity (Baja CA Mexico), online, 2027.
- **SENA_RA_9_SDF_CEA** — SHELL flex capacity (Baja CA Mexico), online, 2027-2028.
- **PCE_RA_4_SD_CEA** — PCE capacity (CA, La Palma), online, 2027.
- **CALPINE_RA_14_SD_CEA** — CALPINE capacity (CA, Otay Mesa), online, 2027.
- **Saavi_RA_6_SD_CEA** — SAAVI capacity (Baja CA Mexico), online, 2027.
- **PCE_RA_5_NS_CEA** — PCE capacity (CA, La Palma), online, summer 2027.
- **Chevron_RA_2_SS_CEA** — CHEVRON capacity (CA, Sycamore/Omar), online, summer 2027.
- **SEMPRA_RA_6_SDF_CEA** — SEMPRA flex capacity (Baja CA Mexico), online, 2029.
- **NRGBM_RA_7_SDF_CEA** — NRG flex capacity (Baja CA Mexico), online, 2027-2028.
- **MSCG_CF_3_CEA** — MSCG existing generic NW hydro (WA), energy-only, online, Sept 2026.
- **Dynasty_CF_1_CEA** — DYNASTY existing in-state large hydro (CA), energy-only, online, 2026.
- **MSCG_Hydro_4_CEA** — MSCG existing in-state large hydro (CA), energy-only, online, 2026.
- **TENASKA_Nuke_1_CEA** — TENASKA existing nuclear (AZ - Palo Verde vintage), energy-only, online, 2026.
- **PG&E_Nuke_2_CEA_Allocation** — PGE existing nuclear (CA, Diablo Canyon allocation), energy-only, online, 2026-2030.
- **CAM - Storage Single** — SDG&E CAM allocation of existing battery storage, 2020-2045.
- **Other CAM** — SDG&E CAM allocation of existing combined cycle, 2020-2045.
- **LT Solar 1** — Planned new generic 1-axis solar, 2030-2050.
- **LT Storage 1** — Planned new generic battery storage, 2030-2050.
- **LT Wind Out of State 1** — Planned new generic OOS (AZ/NM) wind, 2030-2050.
- **LT Geothermal 2** — Planned new generic geothermal, 2035-2055.
- **LT Solar 2a/2b/2c** — Three planned new generic 1-axis solar tranches, 2033/2034/2035 starts.
- **LT Storage 2a/2b/2c** — Paired planned new battery storage tranches matching solar 2a-c.
- **LT Wind CA 2** — Planned new generic CA wind, 2035-2055.
- **LT Solar 3a/3b/3c** — Three planned new 1-axis solar tranches, 2038/2039/2040 starts.
- **LT Storage 3a/3b/3c** — Paired planned new battery storage tranches matching solar 3a-c.
- **LT Geothermal 3** — Planned new generic geothermal, 2040-2060.
- **LT Solar 4a/4b/4c** — Three planned new 1-axis solar tranches, 2043/2044/2045 starts.
- **LT Storage 4a/4b/4c** — Paired planned new battery storage tranches matching solar 4a-c.
- **LT Wind Out of State 4** — Planned new generic OOS Wyoming wind, 2045-2060.
- **ST Solar** — Planned existing generic 1-axis solar placeholder, 2028-2045.
- **ST Wind** — Planned existing generic wind placeholder, 2028-2045.
- **ST Large Hydro** — Planned existing generic in-state large hydro placeholder, 2030-2045.
- **OCPA_PCC1_LT_VAMO_1_CEA** — OCPA existing generic fixed solar via VAMO buy, energy-only, online, 2026-2035.
- **OCPA_PCC1_LT_VAMO_2_CEA** — OCPA existing generic fixed solar via VAMO sell, energy-only, online, 2026-2035.
- **LT LD Storage_D.26_8** — Planned new long-duration generic battery storage buy, 2032-2052.

- **Generic CCGT RA_2026 through 2045** — Planned existing generic combined-cycle RA placeholders, one per year 2026-2045, used as forward CCGT capacity assumptions. On a year-to-year basis, CEA also anticipates considering other existing facility resource types which have the potential to meet these same reliability needs.

b. Preferred Conforming Portfolio

As stated above, in accordance with PUC Section 454.52(b)(3), CEA's Board has determined that the resource mix in its PCP achieves "economic, reliability, environmental, security, and other benefits and performance characteristics that are consistent with the goals set forth in PUC Section 454.52(a)(1)]." These benefits and characteristics are discussed in the following sections.

GHG Reduction Goals

CEA's PCP achieves results and performance characteristics consistent with the PUC Section 454.52(a)(1)(A) goal of meeting the Commission's GHG reduction benchmarks. The 2030, 2035, 2040 and 2045 emissions from CEA's PCP are below CEA's assigned emissions targets. CEA's GHG targets and PCP GHG portfolio emissions are shown in the table below:

Table 5 GHG Emissions Benchmark (MMT)

2030	2035	2040	2045
0.321	0.261	0.209	0.108

Renewable Energy

CEA's PCP achieves results and performance characteristics consistent with the PUC Section 454.52(a)(1)(B) goal of ensuring that portfolios are composed of at least 60% eligible renewable resources by 2030. In 2030, CEA's PCP portfolio would consist of 85% eligible renewable generation, after accounting for resource curtailments, which exceeds the 60% requirement. In 2045, CEA's PCP portfolio would consist of 100% eligible renewable generation after accounting for resource curtailments.

Enable Each Electrical Corporation to Fulfill Its Obligation to Serve Customers at Just and Reasonable Rates

Not applicable.

Minimizing Bill Impact

CEA's PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(D) goal of minimizing the impact of planned procurement on ratepayers' bills. CEA's PCP portfolio consists primarily of renewable resources that generally support a least-cost, best-fit procurement strategy.

CEA prioritizes cost competitiveness, reliability, use of renewable energy and local economic development amongst its primary concerns. CEA anticipates that bill impacts will be minimized during its planned portfolio transition through the pursuit of a diversified resource mix that seeks to minimize exposure(s) that could otherwise occur by overemphasizing resources located within specific geographic areas, relying on a limited subset of technology types and/or purchasing from a limited pool of suppliers/developers, among other considerations.

CEA also considers the risks associated with certain renewable-only generating configurations that limit the buyer's ability to re-shape deliveries to times of the day when negative prices and, possibly, curtailments are less likely to occur. With this concern in mind, CEA has carefully considered and incorporated energy storage opportunities within its resource mix, which should promote grid reliability during California's transition to an increasingly clean/renewable energy mix while reducing the potential for unforeseen costs (due to negative pricing) and/or reduced renewable energy deliveries related to curtailment. For example, coupling new-build solar with battery storage increases the capacity value of such projects and provides some dispatchability for the associated solar generation, reducing risks related to curtailment and negative pricing. CEA's predominantly fossil-free PCP reduces exposure to volatile natural gas prices as well as bill impacts that may result from periodic spikes in fossil fuel prices.

Ensuring System and Local Reliability

CEA's PCP achieves results and performance characteristics consistent with the PUC Section 454.52(a)(1)(E) goal of ensuring system and local reliability. The PCP meets system resource adequacy requirements as detailed in Section III.f. CEA's portfolio assumes CAM allocations and CAM resources, consistent with what is described in the most recently issued CAM allocations. When possible, CEA prioritizes procurement in local areas to strengthen local reliability.

As has been done in the past, and as shown in most state planning studies, CEA anticipates that it will meet a portion of its reliability needs through capacity-only contracts with natural gas plants. This finding is consistent with the CPUC's RESOLVE/SERVM modeling showing the need to maintain existing fossil-fueled resources online for reliability purposes as well as the declining ELCC factors for storage resources shown by these studies. CEA has contracted with demand response resources to fulfill some of its RA needs and is exploring other opportunities for demand response. CEA is hopeful that new technologies will be developed that will provide cleaner resources with the reliability characteristics of California's existing natural gas fleet, ideally with some such resources also supporting San Diego / Imperial Valley's Local Reliability needs, and will continue to investigate such resources as appropriate. This noted, one of CEA's primary concerns is supporting ongoing grid reliability, which compels the CCA program, in the near term, to include natural gas resources amongst its RA purchases until such time that clean, reliable capacity becomes more readily available.

Ensure that at least 65% of RPS Procurement is From Long-Term Contracts

Consistent with PUC Section 454.52(a)(1)(F), CEA is on pace to meet the requirement that 65% of its RPS procurement must come from contracts of 10 years (long-term) or more for each compliance period. Additionally, the significant majority of the resources shown in CEA's PCP are expected to be acquired through long-term contracts. CEA will continue to procure renewable energy through short-term contracts when opportunities present themselves for cost-efficient procurement and when doing so would reduce any remaining dependency on system power, but the bulk of the portfolio is planned to be secured via long-term contracts.

Strengthen the diversity, sustainability, and resilience of the bulk transmission and distribution systems, and local communities

CEA's PCP achieves results and performance characteristics that strengthen the diversity, sustainability and resilience of the bulk transmission and distribution systems, as well as local communities, meeting PUC Section 454.52(a)(1)(G). CEA's PCP relies on procurement from a variety of resource types as well as storage resources incorporated in hybrid solar and storage configuration. CEA believes that the complementary nature of the solar and storage in hybrid resources makes better use of the existing transmission system. CEA carefully evaluates the long-term generation load-matching and congestion

risks of new resources and weighs its options in the context of its existing supply and net demand on an hourly basis for the full duration of any contract period.

As described below, CEA is actively pursuing the procurement of or has recently purchased capacity to meet the sub-category requirements of D.21-06-035 and D.26-02-057, which includes long-duration storage, clean-firm resources like geothermal, and resources to replace the Diablo Canyon Power Plant. Additionally, CEA has recently procured demand response capacity resources, providing additional system diversity. Finally, the significant transition away from use of fossil fuels enhances the sustainability of all communities impacted by pollution from these resources.

Distribution Systems Demand-Side Energy Management

CEA's PCP achieves results and performance characteristics consistent with the PUC Section 454.52(a)(1)(H) goal of enhancing distribution systems and demand-side energy management. CEA continues to explore and pursue demand-side management programs such as demand response, energy efficiency, and behind the meter energy storage solutions. These resources help reduce the strain on distribution systems as can help defer capital expansion needs. As part of CEA's procurement toward D.21-06-035, as discussed in more detail in Section IV.a.ii., CEA has contracted for demand response resources to meet a portion of its requirements.

Distribution system energy generation

As a CCA operating in the SDG&E service territory, CEA does not own or operate transmission or distribution facilities. CEA therefore relies on materials provided by SDG&E and CAISO – and collaborate with project developers – to identify interconnection locations that can use existing transmission and distribution capacity with minimal upgrades. From CEA's recent experience with projects under contract, public materials on interconnection capacity may be inaccurate or out of date, and upgrade costs assessed by SDG&E during the local interconnection processes such as the Rule 21 Fast Track generator project are often prohibitively expensive. Consistent with CEA's organizational goals, in our 2026 IRP, CEA will continue to pursue and prioritize new resources sited in or near our service area and more broadly within Southern California. We will continue to work with member agencies to identify sites that align with local zoning, climate action plans, and community preferences while minimizing interconnection costs and construction impacts, despite the current constraints and limitations with existing distributed generation interconnection processes in our service area. CEA solicits distribution connected systems both through our Local Solar Feed-in Tariff program and through requests for proposals ("RFPs") such as CEA's most recent solicitation issued in early 2026. Given the constraints to bring such projects to operations in CEA's service area and in San Diego County more generally (as referenced above), CEA has chosen not to include any such resources in its Preferred Portfolio but will continue to aggressively pursue such opportunities where they align with CEA's broader mission and goals.

Demand side management

Our 2026 IRP treats demand-side energy management as a planning tool in CEA's toolbox. CEA has begun building a suite of programs with demand management capabilities, including CEA's commercial and residential solar plus storage (Solar Plus, Solar Plus Business) and standalone storage programs (Battery Bonus), and our pilot demand response program (PeakSmart Savers). CEA's goals with these initiatives are consistent with the State's broader goals for demand side management, including improving local reliability and lowering costs for customers in the San Diego region, with particular focus on disadvantaged and climate-vulnerable communities. CEA also anticipates analyzing time-of-use rates in the coming years to determine if further shifts in usage – away from net peak hours and reducing

reliance on system power – can be achieved through rate design. CEA's programs are currently in the early stages of implementation and do not yet offer material adjustments to load or power supply, but we continue to review program and rate performance and adjust procurement efforts to reflect the impacts of these programs on an ongoing basis. Additionally, as a part of CEA's procurement toward D.21-06-035, as discussed in more detail above in this same section, CEA has contracted for demand response resources to meet a portion of its Mid-Term Reliability ("MTR") requirements.

Minimizing Localized Air Pollutants with Emphasis on Disadvantaged Communities ("DACs")

CEA's PCP achieves results and performance characteristics consistent with the PUC Section 454.52(a)(1)(I) goal of minimizing localized air pollutants and other GHG emissions with early priority on disadvantaged communities. CEA's PCP relies primarily on renewable generation, and this portfolio is expected to exhibit relatively low GHGs and localized air pollution emissions. CEA's PCP minimizes CEA's reliance on unspecified system power, instead opting for renewable and hydroelectric generation procurement and/or development whenever feasible. Results from the CSP tool indicate the following localized air pollutants associated with CEA's PCP in 2045:

- PM 2.5: 5 tonnes/year
- SO2: 0 tonnes/year
- NOx: 6 tonnes/year

These emissions are expected to result from the planned use of small quantities of system energy as well as emissions from Combined Heat and Power ("CHP") resources and system energy assigned to the CEA portfolio by the CSP tool.

Resource Diversity

Consistent with the PUC Section 454.52(a)(1)(J), CEA's PCP prioritizes resource diversity among numerous dimensions (technology, location, procurement timing, counterparty) as a fundamental risk management strategy and which yields a portfolio with production characteristics that generally align with CEA's load shape. Close alignment reduces reliance on system energy with resulting emissions, while also reducing CAISO market exposure. These considerations are necessarily balanced against cost and availability concerns – clean baseload resources are limited in availability and come with high costs. Consequently, while the PCP includes a diverse portfolio of resources, it leans heavily on solar and storage, consistent with the System Reference Plan. Potential technological improvements or incorporation of resources procured by the Department of Water Resources can be accommodated and may displace resources currently planned for the various procurement tranches. The staggered procurement timing articulated in the PCP provides flexibility to adapt to such changes.

Comparison to the 2022 IRP portfolio

The PCP is much larger than CEA's preferred 25 MMT by 2035 portfolio from the 2022 integrated resource plan due to the significant expansion of CEA's customer base and the significant load growth inherent in the assigned load forecast. The PCP shows greater reliance on solar and storage, which is primarily a function of resource availability and is consistent with the current RESOLVE/TPP results. Solar makes up the bulk of the build. California baseline wind is also substantial and supplemented by Pacific Northwest, New Mexico, and eventually Wyoming wind. Offshore wind is not included in the PCP, whereas the 2022 plan included offshore wind beginning in 2035.

c. GHG Emissions Results

The CSP calculator shows estimated GHG emissions as reported in the table below.

Table 6: PCP GHG Emissions (MMT/yr)

2030	2035	2040	2045
0.22	0.17	0.12	0.06

These portfolio emissions are equal to or below the assigned GHG limits as required for a conforming portfolio.

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

The CSP calculator estimates the following PM2.5, SO2, and NOx emissions associated with CEA's PCP:

Table 7: PCP Local Air Pollutants (tonnes/year)

Pollutant	2030	2035	2040	2045
PM2.5	14	11	8	5
SO2	1	1	1	0
NOx	19	19	17	6

The table below shows the portion of the load that is being served from net system power each year for the PCP.

Table 8: PCP Demand and System Power

	2030	2035	2040	2045
Retail Sales (GWh)	2,877	3,610	4,159	4,477
Net System Power (GWh)	477	369	334	125
% of Load Served by System Power	17%	10%	8%	3%

CEA discusses its plans to reduce reliance on system power in Section IV., Action Plan.

ii. Focus on Disadvantaged Communities

In our 2026 IRP, CEA uses the CSP calculator to quantify both GHG and criteria pollutant emissions (NOx, PM2.5, SO2) associated with our preferred portfolio as reported in Section III.c and III.d.i. above. CEA's service area does not include any disadvantaged communities per the 2026 IRP set of definitions, but we recognize that our reliance on CAISO system power can affect DACs outside of our service area.

Our planning objective is to minimize unspecified system power usage and prioritize clean resources that reduce local pollution burdens across the State. Where grid capacity exists within our coastal and inland communities, we are particularly conscious of local areas with high cumulative pollution scores. In

procurement practice, this involves prioritizing biomass facilities located outside of DACs and renewable generation with the greatest potential for displacement of fossil fuels, wherever practical: in its solicitations CEA requests respondents to identify how the submitted projects may replace or supplant existing generation and to quantify the expected emissions impacts of this transition.

As required in this 2026 IRP submission, CEA has also analyzed its existing portfolio of long-term contracts and their relationship to DACs within a 5-mile radius. While CEA does not have direct data showing emissions reductions as a result of these projects (many are not yet operational), CEA's long-term portfolio is comprised of renewable resources – solar, wind, geothermal – and battery storage capacity which all are anticipated to have either a positive impact or negligible impact on emissions and have the potential to displace emitting generation.

Table 9: Existing CEA Contracted Projects Near DACs

Project Type	Project Location	Census Tract	DACs in 5-mile radius
Solar plus Storage	Cantua Creek, CA	6019008200	6019008200, 6019008302, 6019007902
Solar plus Storage	Terra Bella, CA	6107004500	6107003400, 6107004200, 6107004500
Storage	Oceanside, CA	6073018700	None
Storage	Corona, CA	6065041500	6065041703, 6065041500, 6065041813, 6065041704, 6065041600, 6065041410
Solar plus Storage	Mojave, CA	6029005700	6029005900, 6029006500
Geothermal	Milford, UT	Out of state	Out of state
Wind	Duran, NM	Out of state	Out of state

One of CEA's contracted battery storage resources – located in census tract 6065041500, as noted in the table above – is located within the radius of six DAC census tracts that CEA has been able to identify, and is approximately 3 miles from a natural gas facility that appears to be functioning primarily as a peaking plant and may be nearing retirement. CEA would anticipate that a new operational battery storage project such as this one, located near such a peaking plant, will facilitate further reductions in the gas facility's generating hours and result in positive impacts to local air quality in surrounding DACs.

e. Cost and Rate Analysis

In selecting resources for its portfolio, CEA carefully considered the cost implications of specific resource selections and procurement timing. This analysis was informed by CEA's procurement experience and the standard assumptions and results of the Commission's RESOLVE/SERVM modeling.

CEA strives to keep customer costs as low as possible as a matter of community interest, and CEA has a competitive incentive to do so because customers can voluntarily leave the program. This objective is reflected both in the resources procured and in the timing of those procurements. CEA employs risk-management principles that consider risk associated with under-procurement, as well as risks of

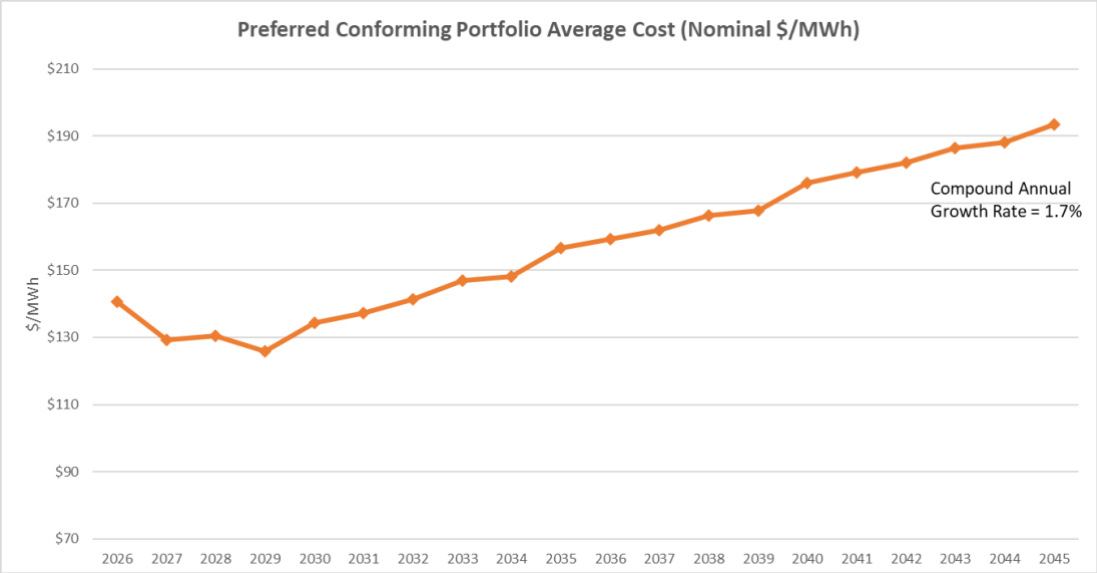
potential over-procurement which could occur from unforeseen changes in load going forward. Risk management also involves assessing the currently available technologies, expected technological developments, and potential for radically different technologies in the future. The assessment of potential resources is not strictly limited to cost but includes information on how well the resources match the specific needs of CEA's customers' load. For example, solar resources are often the least expensive on a simple cost per MWh basis, but other resources which may cost more on a simple MWh basis may provide additional benefits in terms of RA capacity, better matching CEA's load profile, or serving the needs of the CEA service area.

In general, CEA sought to balance the need to procure resources with enough lead time to meet CEA's LSE-specific procurement requirements and the Commission-identified overall system new resource needs with the cost-saving benefits of waiting to procure renewable and storage resources with downward sloping cost projections. CEA also recognizes that future resource costs – and resource prices, which are also impacted by resource scarcity in the CAISO queue and more generally by supply/demand balance – are highly uncertain, and technological advancement can happen unexpectedly; CEA's procurement cycle is designed to take advantage of technological and cost improvements by incrementally adding new resource commitments over time.

CEA continuously monitors the energy markets and reassesses current market prices, expected future prices, technological progress, and its expected needs. When opportunities arise CEA will take advantage of them.

CEA's portfolio cost analysis quantifies the expected power supply costs associated with the PCP through 2045. The cost analysis incorporates expected generation costs, resource value (energy, resource adequacy, and renewable energy, as applicable), and the costs associated with resource curtailments. Marginal ELCC values from RESOLVE were used to quantify expected net qualifying capacity values from the portfolio. As these ELCC factors decline significantly for battery storage resources over the planning period and remain low for solar resources, relatively little RA value is obtained from the solar and battery portfolio elements of the portfolio, despite large increased in nameplate capacity. The average nominal portfolio cost increases by a compound average growth rate of 1.7% annually from 2026 through 2045. The yearly average portfolio cost is shown in the following figure.

Figure 2: PCP Average Unit Cost Projections



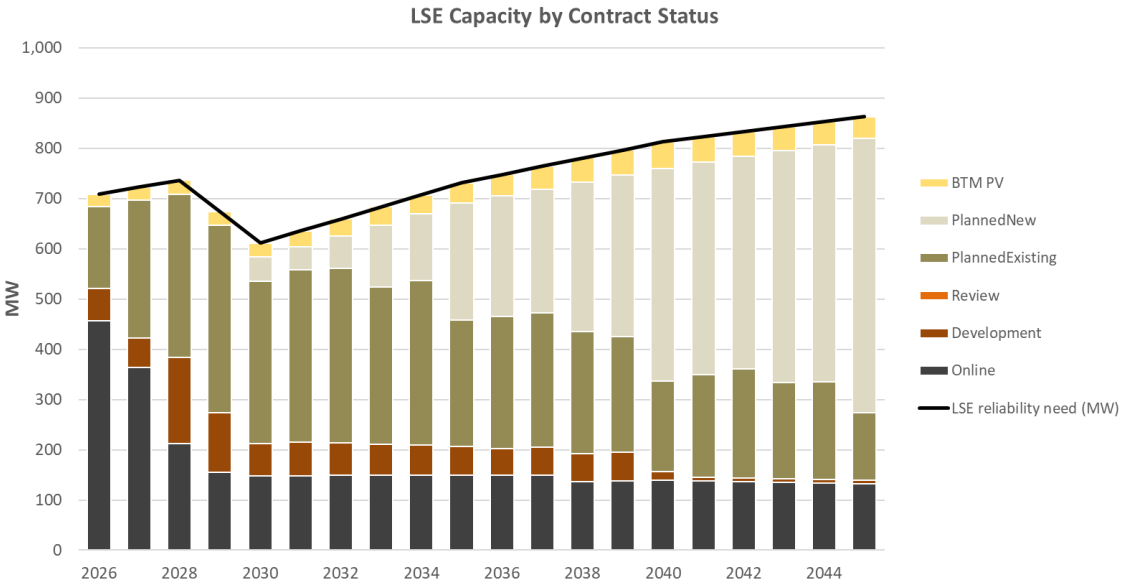
f. System Reliability Analysis

CEA's PCP meets applicable reliability standards and will contribute CEA's fair share to system reliability needs. The following table and chart from the Reliability – Planning sheet of the RDT show load and resource by contract status for the PCP that includes total reliability need (effective MW), total supply (effective MW), and net capacity position (effective MW) for all study years.

Table 10: Load and Resource Table by Contract Status

Load and Resource Table by Contract Status	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
LSE reliability need (MW)	**708**	**722**	**736**	**674**	**611**	**635**	**659**	**683**	**707**	**731**	**748**	**764**	**780**	**797**	**813**	**823**	**833**	**843**	**853**	**863**
ELCC by contract status (effective MW)																				
Online	457	363	212	154	148	148	149	149	149	150	149	150	136	138	139	138	137	136	134	133
Development	64	60	172	119	65	66	64	61	59	56	53	54	15	16	16	5	5	5	5	6
Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PlannedExisting	163	274	324	373	323	343	362	325	356	330	346	356	375	383	352	374	386	357	369	348
PlannedNew	-	-	-	-	47	46	51	112	105	155	157	159	206	210	253	254	255	297	298	332
BTM PV	24	26	28	28	28	31	34	36	38	41	43	45	48	50	53	51	49	48	46	44
LSE total supply (effective MW)	**708**	**722**	**736**	**674**	**611**	**635**	**659**	**683**	**707**	**731**	**748**	**764**	**780**	**797**	**813**	**823**	**833**	**843**	**853**	**863**
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Figure 3: PCP Net Qualifying Capacity



As demonstrated in Table 10, CEA's PCP provides total effective capacity equal to its designated reliability need in all years.

g. Existing Resource Planning

Over the planning period, the majority of supply in the PCP portfolio is planned to be from new resources, with minimal reliance on existing resources. Planned contracts with existing resources are generally for resources that have been available based on CEA's experience. CEA has chosen these resources because of their lower delivery risks compared to new resources (*i.e.*, existing resources are not subject to development risks that often result in delays or outright cancellation of planned new resources) and in recognition of the beneficial role that short-term purchases from existing resources can play in facilitating portfolio flexibility and reducing overall portfolio cost. However, CEA recognizes the possibility that these existing resources may not be available to meet CEA's plans. CEA's portfolio attempts to balance out these competing risks, and as CEA has explained elsewhere in this document, CEA views its proposed portfolio as a general plan to be followed and adapted as necessary based on market realities. If expected existing resources are not available as CEA monitors these short-term markets, CEA will consider alternatives. Even if the existing resources are available, CEA may procure new resources if doing so would reduce emissions or reduce costs for its customers.

In CEA's portfolio, the primary existing resources not already under contract with CEA are in-state large hydro, wind, and solar resources. These are resources that have been generally available to date and that have met the needs of CEA's customers for carbon-free energy at competitive prices with minimal risks. The PCP also includes planned purchases from existing geothermal resources due to the attractive portfolio characteristics of this resource type. If existing geothermal proves to be unavailable, CEA would utilize other renewable energy generation technologies for this element of the planned portfolio.

The proportionate use of planned purchases from existing resources included in the PCP is generally the same as what was included in the 25 MMT by 2035 PCP from the 2022 IRP. Focusing on 2035, the last year of the 2022 planning period, the split between existing and new is approximately 44/56 for the PCP and the 2022 plan. However, by 2045, the PCP is overwhelmingly a new-resource portfolio. Existing baseline supply declines to about 713 GWh, while new builds dominate at roughly 3,969 GWh.

h. Hydro Generation Risk Management

In developing its PCP, CEA took several steps to manage the risk of reduced hydro availability that may result from future in-state drought. First, CEA has developed a network of Pacific Northwest-based hydroelectric power suppliers, including entities that have substantial Asset Controlling Supplier ("ACS") supply and are thus able to sell firm low-carbon supply to CEA. CEA's PCP includes hydroelectric resources located within California, but this could be augmented with imported hydroelectric power from the Pacific Northwest if needed. Second, CEA prioritizes hydroelectric contracts with marketers that provide firm delivery volumes, helping to reduce the planning uncertainty associated with drought and variable hydroelectric conditions within California. Third, CEA's planned use of hydroelectric supply within its PCP declines over the planning period, with none planned for use by 2045. Due to CEA's relatively small hydroelectric needs during the planning period, CEA does not anticipate significant hydroelectric availability risk in its ability to meet its GHG limits or its portfolio costs. Under a drought scenario or in the event that other factors restrict the availability of hydroelectricity and CEA is unsuccessful in filling related shortfalls through short-term contracting opportunities, CEA would plan to substitute with renewable energy resources to ensure it meets its assigned GHG benchmark. Similarly, CEA may substitute large hydroelectric for some of its planned renewable energy purchases based on relative supply availability and costs. This is generally the same approach and conclusions CEA presented in its 2022 IRP.

i. Long-Duration Storage Planning

CEA observed that the System Reference Plan includes increasing amounts of eight-hour battery storage and relatively static amounts of four-hour battery storage over the planning period. CEA has similarly planned to increase its use of long-duration storage over time. Planned solar plus storage projects beginning with the 2035 procurement tranche include eight-hour battery storage. This represents a change from the 2022 IRP in which most of the battery storage was planned as four-hour duration. Current cost estimates are high for long duration storage, and this puts upward pressure on portfolio costs. The relatively low ELCC factors for battery storage in the RDT means that relatively little resource adequacy value is obtained, despite the high costs. As additional technologies are market-proven and more developers offer long-duration storage with potentially lower costs, CEA will consider further procurement of these resources. However, CEA will consider shorter duration storage if the long-duration storage economics do not improve and short-term value remains more attractive. CEA sees the possibility for substantial benefits from long-duration storage to the grid and for aiding LSEs in compliance with the Slide-of-Day Resource Adequacy program.

j. Clean Firm Power Planning

CEA views clean firm generation as a valuable element of its resource mix as it provides reliable and predictable generation with low emissions. The challenge to greater utilization of this resource type is availability and cost. The primary large scale clean firm resources are geothermal and nuclear generation. Other clean firm generation types, such as biomass and especially biogas are typically smaller-scale projects. None of these resources are abundant, and costs have been increasing rapidly due to resource scarcity and competition with non-LSE offtakers such as data centers, which could limit their role in the planned portfolio. The PCP includes new geothermal contracted and planned to come online in 2031, meeting CEA's D.21-06-035 requirements, and planned new geothermal in 2035 and 2040. The PCP assumes other LSEs and non-LSE offtakers such as data centers are similarly procuring from the pool of available geothermal resources, further limiting how much is assumed to be available to CEA and driving up pricing. The amount of geothermal included in the PCP is similar to the amounts included in the 2022 IRP.

CEA's contracted geothermal resource is located in Utah and may require maximum import capability expansion at the IPPDCADLN_ITC tie point for full delivery to the CAISO grid. CEA, along with the developer and other offtakers from the project have submitted the expansion request related to this resource. Alternatively, CEA may be able to obtain import allocation rights from other LSE's currently holding them on this branch group.

k. Non-CAISO, including Out-of-State, Wind Planning

CEA's planned contracting for new out-of-state wind energy projects generally follows the timeline and relative size for selected builds of this resource type from the CPUC's RESOLVE modeling results. To date, CEA has observed various LSEs with contracts for New Mexico wind resources delivered via the SunZia transmission project. Availability of IARs remains a constraining factor for New Mexico wind, and transmission limitations are anticipated to be constraining availability of wind from other states. As compared to the 2022 IRP, the current PCP includes similar amounts out-of-state wind after adjusting for the larger load reflected in the current PCP. Transmission remains the most significant risk to CEA's planned use of out-of-state wind.

l. Offshore Wind Planning

CEA did not include plans for off-shore wind in its PCP pending further progress on development of this resource type. Potential Department of Water Resources contracts of off-shore wind energy have not been assumed, but CEA could adapt future plans as needed to incorporate these resources.

m. Transmission Planning

In identifying resource locations, CEA is guided by the following considerations:

- CEA has a general preference for resources located within its service area and the community it serves, but more generally, within Southern California.
- CEA prefers projects located in areas that can utilize existing transmission infrastructure with minimal upgrade/modification costs.

- CEA prefers low-impact renewable energy projects that provide economic benefit to DACs, subject to community interest in siting projects within such locations.

CEA is not a transmission and distribution ("T&D") system operator and does not have detailed knowledge of expansion requirements on SDG&E's T&D system or the CAISO grid. CEA is not in the best position to identify optimal resource locations and does not have the expertise in house to determine the best locations for new resources. In practice, CEA relies on project developers to conduct the research and technical studies necessary for siting potential generation projects. CEA evaluates projects offered by developers based on a variety of criteria, including transmission availability, nodal prices and potential for congestion, project viability, environmental, workforce, and other factors. As such, CEA generally utilized the RESOLVE modeling and assumptions as a guide for likely resource locations in its PCP. These should be treated as general expectations based on the aforementioned considerations, not definitive selections – actual project locations will be selected during CEA's future solicitation processes. CEA believes that the best way to keep costs down during resource solicitations is to not limit the potential locations of the resources. Competition among the responders to resource solicitations ensures that CEA can avail itself of the best possible resources, including allowing developers to explore different locations and select what they feel is the best location for their resource taking into account numerous factors, including the costs of any potential transmission upgrades or curtailment issues.

As discussed in prior sections, CEA leaves flexibility in its resource planning process. If CEA's expected resource locations become infeasible due to various constraints, or if the Commission's modeling efforts happen to indicate that certain resource locations are no longer feasible/desirable, then CEA would ultimately locate and contract for alternative resources that fall in preferred locations. CEA also remains open to interesting opportunities offered by developers through CEA's Open Offer Form[13] which may not have been anticipated but involve a unique value proposition that meets CEA's procurement goals as stated in this IRP.

None of the contracted new resources require additional transmission expansion (though one resource may require Maximum Import Capability expansion). Projects are vetted during the project evaluation stage to ensure transmission interconnection agreements and/or deliverability status do not pose insurmountable risks to achieving delivery to CEA. The planned new resources in the PCP are not location specific, so transmission status cannot be determined.

IV. Action Plan

a. Proposed Procurement Activities and Potential Barriers

CEA has a well-established procurement process that it uses and will continue to use to steadily achieve its PCP over the planning period. CEA's procurement process includes the following key activities:

- Identification of planned resources by type, desired online date, and capacity.

[13] CEA's open offer form can be found here: https://thecleanenergyalliance.org/solicitations/#7c8849c1f1c7c159d.

- Planning for procurement activities in consideration of CEA's risk management policy; resource acquisition lead times including, where applicable, development timelines; staff capacity; and financial considerations.
- Design and administration of resource solicitations. For new resources, these typically take the form of periodic request for offers processes, while for existing resources, procurement activity is more frequent and routinized.
- Careful negotiation of contract terms to ensure positive outcomes for CEA customers with appropriate risk mitigation.
- Ongoing contract management, including where applicable, careful monitoring of development milestones.
- Ongoing contract management, including where applicable, careful monitoring of generator performance after a resource has achieved commercial operation date ("COD").
- Conduct and participate in joint CCA solicitation processes in order to expand procurement opportunities available to CEA.

CEA expects to use competitive solicitations to procure contracts for the new build resources contained in the PCP. Standard power purchase agreement terms are expected to range from ten to twenty years. A summary of the expected solicitation timelines is described below.

Table 11: Planned Solicitations

Tranche	COD	Resources	RFP Release
1	2030	LT Solar 1, LT Storage 1, LT Wind CA 1, LT Geothermal 1, LT Wind OOS 1 (AZ/NM)	Existing Geothermal RFI (January 2026) and Renewable Energy and Storage Capacity RFP (March 2026) with additional solicitations as needed.
2	2032	LT LD Storage D.26_8 (long-duration battery, 8+ hour)	Existing Geothermal RFI (January 2026) and Renewable Energy and Storage Capacity RFP (March 2026) with additional solicitations as needed.
3a	2033	LT Solar 2a + LT Storage 2a	2030
3b	2034	LT Solar 2b + LT Storage 2b	2031
3c	2035	LT Solar 2c + LT Storage 2c, LT Geothermal 2, LT Wind CA 2, LT Wind OOS 2 (AZ/NM)	2032 (geothermal & OOS wind: 2030–2031)
4a	2038	LT Solar 3a + LT Storage 3a	2035
4b	2039	LT Solar 3b + LT Storage 3b	2036
4c	2040	LT Solar 3c + LT Storage 3c, LT Geothermal 3, LT Wind CA 3, LT Wind OOS 3 (AZ/NM)	2037 (geothermal & OOS wind: 2034–2035)
5a	2043	LT Solar 4a + LT Storage 4a	2040
5b	2044	LT Solar 4b + LT Storage 4b	2041

Tranche	COD	Resources	RFP Release
5c	2045	LT Solar 4c + LT Storage 4c, LT Geothermal 4, LT Wind CA 4, LT Wind OOS 4 (Wyoming)	2042 (geothermal & OOS wind: 2039–2040)

i. Resources to meet IRP mandated procurement requirements, including D.21-06-035 and D.23-02-040:

All of CEA's required resources under the D.21-06-035 and D.23-02-040 procurement orders are under contract. CEA is in regular communication with its project development counterparts to monitor development progress for those resources not yet operational. The recent D.26-02-057 procurement order obligates additional incremental procurement totaling 75 MW by 2032, of which 19 MW is long duration storage and/or clean firm generation. CEA has existing contracts with new solar plus four-hour battery storage projects in development to meet this overall obligation but has not yet finalized resources and contracts for the long duration storage/clean firm element of this requirement.

ii. Plans for resources that are currently non-candidate in CPUC's IRPs not described above

Not applicable.

iii. Other renewable and/or zero carbon resources not described above

As previously mentioned, CEA's PCPs are not set in stone. CEA continually monitors the renewable energy space through RFPs and discussions with developers, as well as monitoring various news reports, and regulatory proceedings. CEA is ready to modify its expected portfolio if new resources or specific opportunities arise. CEA has expressed openness to alternative potential emissions reduction opportunities in its RFPs and has encouraged such offers from respondents. This has not resulted in any viable opportunities to date, but CEA will continue to pursue various approaches to explore the potential value of a wide range of options. CEA strives to be a nimble and adaptable energy buyer in order to offer its customers the lowest cost, high renewable content power.

iv. Other energy storage not described above

CEA expects that, except for the long-duration storage required under D.21-06-035, D.26-02-057, and future procurement orders, the storage it will acquire will mostly be from paired solar and storage resources and/or standalone storage resources that help balance CEA's very high behind-the-meter solar penetration. CEA remains open to considering other possibilities, especially if new technologies arise that reduce the costs of storage or in situations where storage can help fulfill other needs, such as reducing the need for new transmission or distribution, or increasing options for CEA's procurement of San Diego-Imperial Valley Local RA. CEA will continue to monitor developments in the energy storage markets and adjust its portfolio if advantageous opportunities arise.

v. Other demand response not described above

CEA has already contracted for a modest amount of demand response resources as a part of our efforts to meet our D.21-06-035 obligations. CEA remains open to other opportunities should they arise, consistent with the current maximum cumulative capacity ("MCC") bucket requirements and where competitive with other options. CEA also has initiated its own pilot demand response program

(PeakSmart Savers) and is considering whether to expand or modify the program after the current pilot phase.

vi. Other energy efficiency not described above

CEA does not currently have any energy efficiency investment plans but may consider these proposals in the future. Energy efficiency is anticipated to be a component of CEA's Programs Plan, which is currently in late stages of development. Additionally, the San Diego Regional Energy Network across CEA's territory and will be offering a variety of energy efficiency-related initiatives that will be available to CEA's customers – impacts of such measures will be reflected in IRP planning and load forecasting as implementation of these efforts ramps up over the coming years.

vii. Other distributed generation not described above

As noted earlier in this document, CEA solicits distribution connected systems both through our Local Solar Feed-in Tariff program and through RFPs such as CEA's most recent solicitation issued in early 2026. Given the constraints to bring such projects to operations in CEA's service area and in San Diego County more generally (as referenced above), CEA has chosen not to include any such resources in its Preferred Portfolio but will continue to aggressively pursue such opportunities where aligned with CEA's broader mission and goals. Additionally, CEA has launched solar plus storage customer programs (Solar Plus, Solar Plus Business) for both residential and commercial customers which have the potential to impact CEA's load profile depending on uptake.

viii. Transportation electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR)

CEA does not currently have any transportation electrification investment plans which would suggest a different forecast than what is included in IEPR but may consider these proposals in the future. Transportation electrification is a component of CEA's Programs Plan, which was issued in Spring 2026.

ix. Building electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR)

To date, CEA's primary means to participate in building electrification is through the California Energy Commission's Equitable Building Decarbonization program. CEA is a participant in the San Diego Regional Energy Network and anticipates program implementation in CEA territories as well as across San Diego County, but does not believe a material change outside of what is included in IEPR is warranted at this time.

x. Potential Centralized Procurement, pursuant to AB-1373

CEA is not currently assuming centralized procurement resources that might be procured by the Department of Water Resources, but such changes can be accommodated in CEA's planning and could displace resources (likely solar and storage, or CEA's own wind procurement which could be replaced with offshore wind) currently anticipated for the various procurement tranches. The staggered procurement timing articulated in the PCP provides flexibility to adapt to such changes.

xi. Other

With solicitation practices described further above regarding inclusion of other zero emissions resources in CEA's RFPs, CEA continuously explores new methods of lowering electricity demand and increasing clean energy supply.

b. Disadvantaged Communities (DACs)

CEA is committed to considering the impacts of its resource planning, procurement, and programming activities on disadvantaged communities – while CEA has no DACs as defined in this IRP cycle in CEA's service area, the service area represents a mix of communities, including communities which fall between the 50th and 75th percentile for the CalEnviroScreen 4.0 tool. To address the needs of these communities, CEA's Community Advisory Committee has established various annual subcommittees since CEA's inception focusing on underserved and disadvantaged communities (*e.g.*, outreach and communications, programs). As a part of its development of program offerings and a Programs Plan (issued in spring 2026), CEA considered approaches to effectively gather feedback from these constituents for purposes of evaluating and, potentially, adapting future resource planning and procurement decisions. The resulting outreach efforts included both a random sample survey across CEA's entire service area and customer base, as well as targeted English/Spanish community workshops focused on typically underrepresented groups.

CEA's outreach and analysis of DAC needs was primarily structured to inform CEA's program development and general responsiveness to customer needs and inquiries, but it does offer some insights relevant to the IRP and power supply procurement. For example, affordability was the most common concern raised in many of the workshops that were hosted. Understanding budget concerns of CEA's most disadvantaged communities, CEA will continue to focus on balancing rate affordability with CEA's ambitious 100% renewable energy target for 2035.

As it relates to disadvantaged communities potentially impacted by projects under contract (inside or outside of CEA's service area), CEA utilizes bid selection protocols and evaluative criteria that address impacts on DACs. These criteria are applied when analyzing RFP responses for projects that may be needed to meet California's RPS procurement mandate and CEA's own renewable energy objectives. Among other important considerations, CEA gathers information on and evaluates projects in relation to the following:

- Environmental impacts and related mitigation requirements, including impacts to air pollution within communities that have been disproportionately impacted by the existing generating fleet; and
- Potential economic benefits created within communities with high levels of poverty and unemployment, including:
    - Projected employment benefits (*e.g.*, number and type of jobs, construction and operations jobs)
    - Projected direct and indirect economic benefits to the local economy (*e.g.*., payroll, taxes, services)
    - Emissions reductions, to the extent new projects will replace/supplant existing local emitting generation sources – prospective suppliers are asked to quantify the associated emission impacts of this transition, where applicable

Gathering information in these areas provides CEA with valuable insight when determining whether certain projects may perpetuate or alleviate the aforementioned socioeconomic and community health impacts within disadvantaged communities, and also provides for broader consideration of CEA's resource planning and procurement decisions on sensitive communities.

c. LSEs' Tribal Customers

CEA does not have any tribal customers. Outside of its service area, CEA has engaged directly and via regional workshops and working groups with tribal communities and businesses in located in San Diego County. This outreach has included energy contract and offtake discussions with tribally owned businesses who are developing projects and/or may be interested in supporting implementation of CEA's programs while also driving economic opportunities to tribal communities and business in the region.

d. Procurement Products

CEA intends to utilize the following physical energy products in procurement activities associated with its PCP. Contracts are expected to be conducted bilaterally rather than via commodities exchanges.

Table 12: Procurement Products

Product	Description
Physical energy, RPS qualifying	Renewable energy qualified to meet California RPS
Physical energy, other carbon free	Non-carbon emitting energy that does not meet California RPS; e.g., large hydro
Physical energy, CAISO energy	Energy delivered to the CAISO grid from unspecified sources
Capacity, Net Qualifying Capacity	Capacity qualified to meet California Resource Adequacy program standards

e. Commission Direction of Actions

Not applicable

V. Lessons Learned

CEA appreciates the opportunity to describe lessons the team has learned between CEA's first IRP in 2022 and this latest iteration, as well as learnings from our engagement with the IRP process. CEA remains a new organization which is growing, learning and evolving. The comments below are reflective of the organization's experience with IRP targets and procurement thus far, with the understanding that other LSEs may have different experiences in the market and with their procurement processes.

Variability and Unknowns Impacting Procurement. This IRP process is being conducted at a highly uncertain time for many of components of this submission, with potential for material changes to inputs and therefore outputs. These unknowns include local and statewide load forecasts (and therefore

reliability needs), resource costs and cost curves over time, Federal and international trade and tax policy, and geopolitics. As CEA's submission has stated, the organization sees this IRP as one potential blueprint or path to achieving CEA's emissions goals and the State's policy goals. However, CEA wants to highlight the possibility for the types or quantities of resources CEA procures to change significantly if certain assumptions which informed the State's base portfolio were to change. CEA would welcome further scenario analysis over the coming years to inform collective understanding of the potential swings in the types of resources chosen under more dramatic changes in assumptions. This could include "high availability geothermal" and "high price geothermal" scenarios, a "low price battery" scenario, and a "high price solar" scenario, as well as additional scenarios addressing load growth and other key inputs.

Resource Costs and Prices. In reviewing the IRP's underlying levelized cost of energy ("LCOE") cost assumptions for different resource types, CEA noted many cost assumption figures that were moderately or significantly different from what we have seen in solicitations. While many factors can contribute to this disconnect, CEA's experience to date would suggest that an increase in available projects would limit seller market power and improve the supply-demand balance, resulting in a better match of cost to the price that LSEs are offered. Put more directly, CEA has serious concerns with cost effectively procuring renewable resources to meet our internal targets and the State's goals given recent price trends across all renewable generation options, including solar. LSEs and direct large load offtakers are fighting for the same projects, which is also increasing offtake costs for competing buyers. Competition across a broader set of offered projects would benefit customers across the State; CEA will continue to support local, regional, and statewide efforts to increase this pool of available projects – and would welcome discussions around how procurement orders can be structured to limit the demand-side pressure they exert – in order create a supply-demand balance that reflects the state's resource cost and availability assumptions.

Local Capacity. CEA has attempted numerous approaches to procuring local resources. Local projects would support CEA's Local San Diego / Imperial Valley Resource Adequacy obligations, provide reliable power and/or capacity to CEA's customers, and benefit local businesses involved in project development or land leasing. These efforts have proved very difficult, in large part due to the lack of available local RA deliverability. CEA would welcome further study and engagement with local, regional and State stakeholders to determine potential paths to decarbonization for key load centers such as CEA's heavily constrained San Diego load pocket.

Glossary of Terms

Alternative Portfolio: *LSEs are permitted to submit "Alternative Portfolios" developed from scenarios using different assumptions from those used in the Preferred System Plan with updates. Any deviations from the "Conforming Portfolio" must be explained and justified.*

Approve (Plan)*: the CPUC's obligation to approve an LSE's integrated resource plan derives from Public Utilities Code Section 454.52(b)(2) and the procurement planning process described in Public Utilities Code Section 454.5, in addition to the CPUC obligation to ensure safe and reliable service at just and reasonable rates under Public Utilities Code Section 451.*

Balancing Authority Area (CAISO): *the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.*

Baseline resources: *Those resources assumed to be fixed as a capacity expansion model input, as opposed to Candidate resources, which are selected by the model and are incremental to the Baseline. Baseline resources are existing (already online) or owned or contracted to come online within the planning horizon. Existing resources with announced retirements are excluded from the Baseline for the applicable years. Being "contracted" refers to a resource holding signed contract/s with an LSE/s for much of its energy and capacity, as applicable, for a significant portion of its useful life. The contracts refer to those approved by the CPUC and/or the LSE's governing board, as applicable. These criteria indicate the resource is relatively certain to come online. Baseline resources that are not online at the time of modeling may have a failure rate applied to their nameplate capacity to allow for the risk of them failing to come online.*

Candidate resource: *those resources, such as renewables, energy storage, natural gas generation, and demand response, available for selection in IRP capacity expansion modeling, incremental to the Baseline resources.*

Capacity Expansion Model: *a capacity expansion model is a computer model that simulates generation and transmission investment to meet forecasted electric load over many years, usually with the objective of minimizing the total cost of owning and operating the electrical system. Capacity expansion models can also be configured to only allow solutions that meet specific requirements, such as providing a minimum amount of capacity to ensure the reliability of the system or maintaining greenhouse gas emissions below an established level.*

Certify (a Community Choice Aggregator Plan)*: Public Utilities Code 454.52(b)(3) requires the CPUC to certify the integrated resource plans of CCAs. "Certify" requires a formal act of the Commission to determine that the CCA's Plan complies with the requirements of the statute and the process established via Public Utilities Code 454.51(a). In addition, the Commission must review the CCA Plans to determine any potential impacts on public utility bundled customers under Public Utilities Code Sections 451 and 454, among others.*

Clean System Power (CSP) methodology*: the methodology used to estimate GHG and criteria pollutant emissions associated with an LSE's Portfolio based on how the LSE will expect to rely on system power on an hourly basis.*

Community Choice Aggregator*: a governmental entity formed by a city or county to procure electricity for its residents, businesses, and municipal facilities.*

Conforming Portfolio*: the LSE portfolio that conforms to IRP Planning Standards, the 2045 LSE-specific GHG Emissions Benchmark, use of the LSE's assigned load forecast, use of inputs and assumptions matching those used in developing the Reference System Portfolio, as well as other IRP requirements including the filing of a complete Narrative Template, a Resource Data Template and Clean System Power Calculator*.

Effective Load Carrying Capacity*: a percentage that expresses how well a resource is able avoid loss-of-load events (considering availability and use limitations). The percentage is relative to a reference resource, for example a resource that is always available with no use limitations. It is calculated via probabilistic reliability modeling, and yields a single percentage value for a given resource or grouping of resources.*

Effective Megawatts (MW): *perfect capacity equivalent MW, such as the MW calculated by applying an ELCC % multiplier to nameplate MW.*

Electric Service Provider*: an entity that offers electric service to a retail or end-use customer, but which does not fall within the definition of an electrical corporation under Public Utilities Code Section 218.*

Filing Entity*: an entity required by statute to file an integrated resource plan with CPUC.*

Future*: a set of assumptions about future conditions, such as load or gas prices.*

GHG Benchmark (or LSE-specific 2045 GHG Benchmark)*: the mass-based GHG emission planning targets calculated by staff for each LSE based on the methodology established by the California Air Resources Board and required for use in LSE Portfolio development in IRP.*

GHG Planning Price: *the systemwide marginal GHG abatement cost associated with achieving a specific electric sector GHG planning target.*

Integrated Resources Planning Standards (Planning Standards)*: the set of CPUC IRP rules, guidelines, formulas and metrics that LSEs must include in their LSE Plans.*

Integrated Resource Planning (IRP) process*: integrated resource planning process; the repeating cycle through which integrated resource plans are prepared, submitted, and reviewed by the CPUC*

Long term*: more than 5 years unless otherwise specified.*

Load Serving Entity*: an electrical corporation, electric service provider, community choice aggregator, or electric cooperative.*

Load Serving Entity (LSE) Plan*: an LSE's integrated resource plan; the full set of documents and information submitted by an LSE to the CPUC as part of the IRP process.*

Load Serving Entity (LSE) Portfolio*: a set of supply- and/or demand-side resources with certain attributes that together serve the LSE's assigned load over the IRP planning horizon.*

Loss of Load Expectation (LOLE): *a metric that quantifies the expected frequency of loss-of-load events per year. Loss-of-load is any instance where available generating capacity is insufficient to serve electric demand. If one or more instances of loss-of-load occurring within the same day regardless of duration*

are counted as one loss-of-load event, then the LOLE metric can be compared to a reference point such as the industry probabilistic reliability standard of "one expected day in 10 years," i.e. an LOLE of 0.1.

Maximum Import Capability: a California ISO metric that represents a quantity in MWs of imports determined by the CAISO to be simultaneously deliverable to the aggregate of load in the ISO's Balancing Authority (BAA) Area and thus eligible for use in the Resource Adequacy process. The California ISO assess a MIC MW value for each intertie into the ISO's BAA and allocated yearly to the LSEs. A LSE's RA import showings are limited to its share of the MIC at each intertie.

Net Qualifying Capacity (NQC): *Qualifying Capacity reduced, as applicable, based on: (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions. The Net Qualifying Capacity determination shall be made by the California ISO pursuant to the provisions of this California ISO Tariff and the applicable Business Practice Manual.*

Non-modeled costs*: embedded fixed costs in today's energy system (e.g., existing distribution revenue requirement, existing transmission revenue requirement, and energy efficiency program cost).*

Nonstandard LSE Plan*: type of integrated resource plan that an LSE may be eligible to file if it serves load outside the CAISO balancing authority area.*

Optimization*: an exercise undertaken in the CPUC's Integrated Resource Planning (IRP) process using a capacity expansion model to identify a least-cost portfolio of electricity resources for meeting specific policy constraints, such as GHG reduction or RPS targets, while maintaining reliability given a set of assumptions about the future. Optimization in IRP considers resources assumed to be online over the planning horizon (baseline resources), some of which the model may choose not to retain, and additional resources (candidate resources) that the model is able to select to meet future grid needs.*

Planned resource: *any resource included in an LSE portfolio, whether already online or not, that is yet to be procured. Relating this to capacity expansion modeling terms, planned resources can be baseline resources (needing contract renewal, or currently owned/contracted by another LSE), candidate resources, or possibly resources that were not considered by the modeling, e.g., due to the passage of time between the modeling taking place and LSEs developing their plans. Planned resources can be specific (e.g., with a CAISO ID) or generic, with only the type, size and some geographic information identified.*

Qualifying capacity*: the maximum amount of Resource Adequacy Benefits a generating facility could provide before an assessment of its net qualifying capacity.*

Preferred Conforming Portfolio*: the conforming portfolio preferred by an LSE as the most suitable to its own needs; submitted to CPUC for review as one element of the LSE's overall IRP plan.*

Preferred System Plan: *the Commission's integrated resource plan composed of both the aggregation of LSE portfolios (i.e., Preferred System Portfolio) and the set of actions necessary to implement that portfolio (i.e., Preferred System Action Plan).*

Preferred System Portfolio: *the combined portfolios of individual LSEs within the CAISO, aggregated, reviewed and possibly modified by Commission staff as a proposal to the Commission, and adopted by the Commission as most responsive to statutory requirements per Pub. Util. Code 454.51; part of the Preferred System Plan.*

Short term*: 1 to 3 years (unless otherwise specified).*

***Staff**: CPUC Energy Division staff (unless otherwise specified).*

***Standard LSE Plan**: type of integrated resource plan that an LSE is required to file if it serves load within the CAISO balancing authority area (unless the LSE demonstrates exemption from the IRP process).*

***Transmission Planning Process (TPP)**: process conducted by the California Independent System Operator (CAISO) to identify potential transmission system limitations and areas that need reinforcements over 10-year and 15-year horizons.*