# Standard LSE Plan

CITY OF COMMERCE

2020 INTEGRATED RESOURCE PLAN

SEPTEMBER 1, 2020

**Table of Contents**

# I. Introduction and Executive Summary

## a. Introduction

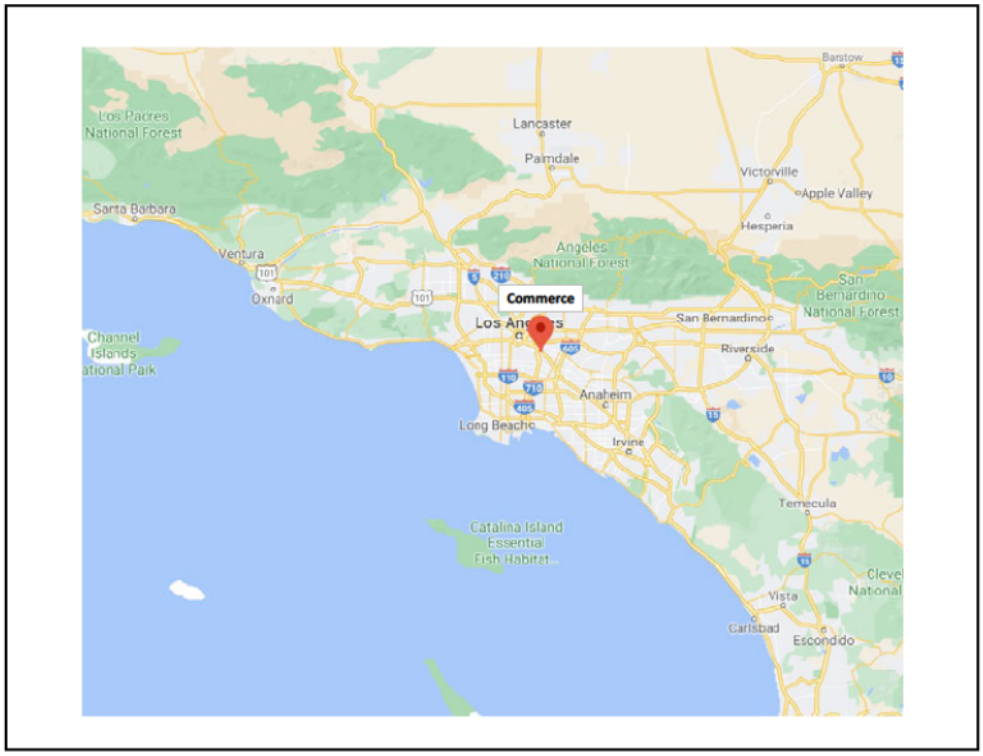
**Description of City of Commerce Community Choice Aggregation Program**

The City of Commerce ("Commerce") is a municipal corporation and general law city organized and operated under the laws of the State of California. Commerce is governed by, and accountable to, representatives elected by its citizens. Commerce operates numerous programs for the benefit of its citizens, including the City's Community Choice Aggregation program ("CCA"), Commerce CCA ("COM-CCA").

COM-CCA was formed by the Commerce City Council on November 20, 2018 through Ordinance 703 and plans to begin serving load in March 2022. COM-CCA will be providing retail electric generation services and complementary energy programs to customers within the municipal boundaries of Commerce. COM-CCA has launched as Commerce's CCA program for the purposes of promoting local control, renewable and clean energy technology development and deployment, and offering customers competitive and stable rates.

COM-CCA's service area is identified in the following map:

**Figure 1: Service Area Map**



Based on Commerce's eligible customer base, COM-CCA projects that it will be serving approximately 3,000 residential accounts and 2,420 commercial accounts after the enrollment process is complete. COM-CCA will provide retail generation service to a variety of customer classes, including residential, small and medium commercial, large commercial, industrial, and agricultural and pumping accounts. COM-CCA's service area has a population of 12,800, the majority of which live in households or work at businesses that will receive generation service from COM-CCA.

COM-CCA has pursued CCA implementation activities under a shared service model, which means COM-CCA has joined together with other, regionally located and city-specific CCA programs to promote administrative efficiencies by outsourcing many operational and technical services typically required for CCA administration and operation. The California Choice Energy Authority, or CalChoice, is the organization selected by COM-CCA to provide requisite services, including resource planning and procurement activities. Key decisions of COM-CCA, including rate setting, retail supply portfolio composition, disposition of financial reserves, and administration of complementary programs, are addressed by the Commerce City Council with supporting input from COM-CCA staff and CalChoice personnel. Due to the small size of COM-CCA (both in terms of population and retail sales), meaningful administrative efficiencies have been achieved through joint solicitation/procurement administration through CalChoice. By partnering with CalChoice, COM-CCA has been able to establish and pursue objectives and key parameters that are directly responsive to the unique constituents and interests within Commerce.

## COM-CCA's Mission

COM-CCA was formed for the express purpose of empowering Commerce to choose the generation resources that reflect its specific values, needs and cost preferences. More specifically, COM-CCA seeks to provide reliable electric service, within Commerce, at competitive rates when compared to those rates offered by the incumbent electric utility and also prioritizes local control, economic development and environmental stewardship within Commerce.

Consistent with Public Utilities Code Sections 366.2(a)(5) and 454.52 (b)(3),[1] all procurement by COM-CCA, including the portfolios set forth in this Integrated Resource Plan ("IRP"), must comply with policy direction provided from COM-CCA's governing board, which is comprised of the Commerce City Council.

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

## Introduction to COM-CCA's IRP

In accordance with the requirements of Sections 454.51 and 454.52 and California Public Utilities Commission ("Commission") Decisions ("D.") 20-03-028, D.19-11-016, D.18-02-018, D.19-04-040, and formal guidance provided by the Commission's Energy Division, COM-CCA is providing its load serving entity ("LSE") -specific Integrated Resource Plan ("IRP") to the Commission for certification and use in the Commission's statewide planning process. In addition to this narrative, COM-CCA's IRP includes the following documents:

- COM-CCA's 38 MMT Resource Data Template
- COM-CCA's 46 MMT Resource Data Template
- COM-CCA's 38 MMT Clean System Power Calculator
- COM-CCA's 46 MMT Clean System Power Calculator
- COM-CCA's Explanatory Letter addressing Incremental Capacity Procurement
- COM-CCA's IRP Verification

As directed in D.20-03-028, COM-CCA is submitting two conforming portfolios in this IRP, one based on the Commission's 38 MMT greenhouse gas ("GHG") reduction benchmark and associated 38 MMT Reference System Portfolio ("RSP"), and a second based on the Commission's 46 MMT benchmark and RSP.

As demonstrated by the significant differences between the Commission's 2017-2018 RSP and its 2019-2020 RSP, projecting resource needs over the planning horizon covered by the IRP is a fluid process and COM-CCA expects changes as COM-CCA continues to move forward in time. The future resources identified in COM-CCA's IRP represent COM-CCA'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, City policy, resource availability and other key considerations. The resources identified in future iterations of COM-CCA's IRP may change due to new information and evolving circumstances, and the ultimate resource mix that COM-CCA 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.

An example of a future regulatory consideration that may impact COM-CCA's next IRP is the Commission-administered resource adequacy ("RA") program. The Commission is currently evaluating "Track 3" proposals that could materially reshape how capacity and energy are valued for reliability purposes, and in turn, such changes may impact COM-CCA's future procurement decisions. COM-CCA, through CalChoice, will continue to monitor this proceeding and will incorporate pertinent planning and procurement adaptations, if necessary.

**City Council Approval of IRP**

In compliance with Section 454.52(b)(3), this IRP will be formally submitted to the Commerce City Council for approval based on the IRP's compliance with Sections 454.51 and 454.52 ("IRP Statute") and all relevant council-adopted procurement requirements of COM-CCA's governing council. On September 15, 2020, the Commerce City Council will issue a Resolution which will formally approve this IRP, and adopt COM-CCA's 46 MMT Preferred Conforming Portfolio ("46 MMT PCP") and its 38 MMT Preferred Conforming Portfolio ("38 MMT PCP"). Through the Resolution, the Commerce City Council will also make the following determinations regarding COM-CCA's Preferred Conforming Portfolios ("PCPs"):

- COM-CCA's PCPs are 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-I).
- COM-CCA's PCPs include a diversified procurement portfolio consisting of both short-term and long-term electricity and electricity-related and demand reduction products.
- COM-CCA's PCPs achieve the RA requirements established pursuant to Section 380.
- COM-CCA's PCPs are consistent with the procurement timing, resource mix, and operational attributes of both the Commission's 38 MMT RSP and the Commission's 46 MMT RSP.
- COM-CCA's PCPs are compliant with all COM-CCA board-adopted procurement directives.

A copy of the final Resolution will be available on the City's website.

The Commission did not publish the final IRP templates until mid-June, 2020; this was roughly 2 ½ months from the final IRP due date. However, even though COM-CCA had final templates available, there was continuous guidance, updates, and FAQs provided by the Commission throughout the summer months, continuing up until August 28, 2020. Although COM-CCA successfully completed its IRP, the evolving guidance inhibited COM-CCA's ability to achieve City Council approval of its IRP in advance of the Commission's filing date, which would have required COM-CCA to have a completed IRP at least a month in advance of the filing deadline due to City Council noticing requirements. Therefore, COM-CCA staff has approved this IRP, and the Commerce City Council is expected to formally approve this IRP on September 15, 2020.

**Request for Certification**

COM-CCA respectfully requests that the Commission certify this IRP.

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."[2] Likewise, the Legislature has granted CCAs autonomy in setting their own rates and managing interactions with their customers.[3] Based on COM-CCA's understanding, 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.[4]
- Ensuring that CCAs' current and planned procurement is consistent with the RA requirements established pursuant to Section 380.[5]
- Ensuring that CCAs' current and planned procurement satisfies the CCA's share of renewables integration resources identified in the Commission's RSP, and that the CCA either self-provides or pays for investor-owned utility ("IOU") procurement to support its share of any renewable integration shortfall.[6]

COM-CCA 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 COM-CCA's IRP.

### b. Executive Summary

This narrative provides a detailed description of the development and content of COM-CCA's PCPs, each portfolio's compliance with applicable requirements, and an action plan detailing COM-CCA's next steps (to promote conformance with such requirements).

COM-CCA developed its IRP through the following steps:

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[2] Section 366.2(a)(5).

[3] D.05-12-041 at 5 ("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."); D.19-04-040 at 18 ("[T]he Commission does not approve CCA or ESP rates.").

[4] 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 . . . .").

[5] Section 454.52(b)(3)(C).

[6] Section 454.51.

- COM-CCA incorporated the pro rata portion of incremental capacity contracts entered into (or soon to be entered into) by Southern California Edison Company ("SCE") to meet the requirements of D.19-11-016.[7]
- COM-CCA compiled data for its share of capacity for allocated Cost Allocation Mechanism ("CAM") resources.[8]
- For each IRP planning year, COM-CCA identified its short positions relative to known planning targets and its assigned load forecast.
- COM-CCA identified future contracts it expects to secure for new solar, storage, and wind generation. COM-CCA prioritized the selection of future resources to ensure that COM-CCA's overall portfolio of new resources is consistent with the relevant Reference System Portfolio's resource attribute/category mix, procurement timing, and COM-CCA's proportional share of planned new procurement.
- COM-CCA added generic future contracts with existing resources, including large hydroelectric generators, to help fill its remaining open positions.
- COM-CCA 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 equivalent to COM-CCA's assigned share of the 46 MMT benchmark; COM-CCA added planned purchases of additional large hydroelectric energy in sufficient volume to ensure that portfolio emissions were equal to COM-CCA's assigned share of the 46 MMT GHG benchmark.
- COM-CCA identified the resulting portfolio as its 46 MMT PCP.
- Using the 46 MMT PCP as a starting point, COM-CCA replaced planned system energy purchases with additional large hydroelectric energy procurement until the portfolio reflected emissions equal to COM-CCA's assigned share of the 38 MMT GHG benchmark.
- COM-CCA identified the resulting portfolio as its 38 MMT PCP.

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[7] On August 19, 2020, the Commission provided COM-CCA with its Resource Data Templates that included the incremental capacity contracts per D-19-11-016.

[8] Because COM-CCA is not serving load until March 2022, COM-CCA had to utilize a proxy dataset provided by CalChoice in order to project CAM allocations starting in 2022 and going out through 2030. Additionally, COM-CCA utilized the same proxy data provided by CalChoice to project COM-CCA's 2022 peak demand value for purposes of populating the Resource Data Templates. If COM-CCA followed the Commissions instructions verbatim, then COM-CCA's RA requirements per the Resource Data Template would have shown 0 MW for each calendar year going out through 2030.

- COM-CCA checked both its 38 MMT PCP and its 46 MMT PCP for reliability by comparing the total portfolio net qualifying capacity ("NQC") against COM-CCA's RA requirements for the month of September during each year of the planning period.[9]

COM-CCA reached the following findings regarding its 38 MMT PCP:

- COM-CCA's 38 MMT portfolio includes the procurement of the following new resources:
  - New hybrid resources totaling 20 MW solar/ 10 MW battery storage
  - New wind resources totaling 20 MW
  - New grid connected battery storage of about 3.5 MW[10]
  - New long duration storage of 3 MW
- COM-CCA's 38 MMT portfolio provides for the following overall resource mix in 2030:
  - 37 MW of large hydro
  - 3 MW of Biomass
  - 7 MW of Small Hydro
  - 50 MW of Wind
  - 31 MW of Solar
  - 13.5 MW of Short Duration Battery Storage
  - 3 MW of Long Duration Storage
  - 63 MW of Natural Gas/Baseload/Other (capacity-only)
- COM-CCA's 38 MMT portfolio is consistent with procurement timing, resource quantities, and general resource attributes identified in the 38 MMT RSP.
- COM-CCA's 38 MMT portfolio would have 2030 emissions of 0.048 MMT, which is equivalent to COM-CCA's assigned share of 2030 emissions.
- COM-CCA's 38 MMT portfolio meets all relevant reliability metrics.
- COM-CCA's 38 MMT portfolio provides approximately COM-CCA's load-proportional share of renewable integration resources.
- COM-CCA's 38 MMT portfolio is also consistent with the Commission's 46 MMT RSP and can be used in either a 38 MMT or 46 MMT consolidated statewide portfolio.

COM-CCA reached the following findings regarding its 46 MMT portfolio:

- COM-CCA's 46 MMT portfolio includes the procurement of the following new resources:

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[9] Due to the Resource Data Template utilizing the month of September to illustrate LSE's annual RA requirements, COM-CCA's Resource Data Templates show a large shortfall in meeting its 2020 and 2021 RA obligations since COM-CCA does not begin serving customers until March 2022. Furthermore, COM-CCA does not have any 2020 and 2021 RA obligations and plans to fully comply with is 2022 RA obligations, which is reflected in this IRP.

[10] Allocated by SCE as a combination of hybrid technologies and standalone short duration battery storage through D-19-11-016.

    - New hybrid resources totaling 20 MW solar/ 10 MW battery storage
    - New wind resources totaling 20 MW
    - New grid connected battery storage of about 3.5 MW[11]
    - New long duration storage of 3 MW
- COM-CCA's 46 MMT portfolio provides for the following overall resource mix in 2030:
    - 26 MW of large hydro
    - 3 MW of Biomass
    - 7 MW of Small Hydro
    - 50 MW of Wind
    - 31 MW of Solar
    - 13.5 MW of Short Duration Battery Storage
    - 3 MW of Long Duration Storage
    - 63 MW of Natural Gas/Baseload/Other (capacity-only)
- COM-CCA's 46 MMT portfolio conforms to the procurement timing, resource quantities, and general resource attributes identified in the 46 MMT RSP.
- COM-CCA's 46 MMT portfolio would have 2030 emissions of 0.060 MMT. This is equivalent to COM-CCA's assigned share of 2030 emissions.

To implement its PCPs, COM-CCA is adopting the action plan described in section IV, below. This action plan consists of the following steps:

- COM-CCA will periodically solicit offers for new renewable generation and storage projects. These resources are typically secured through long-term power purchase agreements. COM-CCA expects to secure power purchase agreements for new projects in multiple solicitations conducted over the next several years.
- Periodically throughout the year (beginning in 2021), COM-CCA 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 COM-CCA's risk management policy and practices. These solicitations may take the form of formal request for offers processes, bilateral discussions, and/or transactions arranged through broker markets.
- COM-CCA will participate in joint-LSE solicitations to take advantage of economies of scale related to large renewable energy and battery storage projects.

[11] Allocated by SCE as a combination of hybrid technologies and standalone short duration battery storage through D-19-11-016.

# II. Study Design

## a. Objectives

COM-CCA had the following objectives in performing the analytical work to develop its IRP:

1. Identify a 38 MMT portfolio with emissions equal to COM-CCA's proportional share of the 38 MMT GHG reduction benchmark, as determined using the Commission's emissions calculator.

2. Identify a 46 MMT portfolio with emissions equal to COM-CCA's proportional share of the 46 MMT GHG reduction benchmark, as determined using the Commission's emissions calculator.

3. Identify 38 and 46 MMT portfolios that 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-I).

4. Identify diverse and balanced 38 and 46 MMT portfolios that include both short-term and long-term electricity products as well as electricity-related demand reduction products.

5. Identify portfolios that achieve the RA requirements established pursuant to Section 380 and provide COM-CCA's share of system reliability and renewable integration resources.

6. Identify portfolios that comply with all Commerce City Council adopted procurement directives.

7. Identify portfolios that are compliant with COM-CCA's obligations under the Renewables Portfolio Standard program.

8. Identify portfolios that are cost-effective and minimize rate impacts on COM-CCA's customers.

## b. Methodology

### i. Modeling Tool(s)

In developing its planned portfolios COM-CCA used modeling tools to quantify portfolio targets for renewable energy content, capacity, and portfolio GHG emissions, as well as physical and financial positions to ensure adherence to COM-CCA's currently effective risk management policies and business practices. COM-CCA uses proprietary models to assess annual, monthly, and hourly open positions, taking account of forecasted hourly electric loads and expected deliveries from COM-CCA's resource portfolio. COM-CCA uses a proprietary financial model to project power supply costs and incorporates existing and planned procurement into an overall financial assessment of revenues, costs, and cash flows. COM-CCA also utilizes a commercially available energy trading and risk management system to monitor positions, market exposure, credit exposure, value-at-risk, and other risk management metrics.[12]

For new resource selection, COM-CCA relied upon the modeling and assumptions in the RSP as well as on CalChoice's ongoing and recent procurement experiences, which provides insight into resource availability and cost. The mix of new resources selected in the RSP is similar to the mix COM-CCA would select based on CalChoice's procurement experience. Due to COM-CCA being a very small LSE, there are certain resource types and technologies that COM-CCA does not plan on pursuing at this point in time due to anticipated adverse rate impacts.

GHG emissions were assessed using the Commission's Clean System Power tool for the 38 MMT and 46 MMT variations.

### ii. Modeling Approach

**Load Forecast**

COM-CCA developed this IRP using its assigned load forecast from Attachment A to the May 20, 2020 *Administrative Law Judge's Ruling Correcting April 15, 2020 Ruling Finalizing Load Forecasts and Greenhouse Gas Benchmarks for Individual 2020 Integrated Resource Plan Filings* ("Load Forecast Ruling"). COM-CCA's assigned load forecast is as follows[13]:

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12 Pioneer Solutions TRMTracker SaaS.

13 COM-CCA's IRP load forecast per the Load Forecast Ruling reflects COM-CCA serving customers in 2021. However, after coordination with SCE and communication to the Commission on April 23, 2020, COM-CCA has changed its planned launch to March 2022. COM-CCA continues to work with both SCE and the Commission to ensure the successful transfer of load. Therefore, for purposes of this IRP, COM-CCA's future power supply contracting assumptions align with a March 2022 launch.

**Table 1: COM-CCA's 2020-2030 Load Forecast**

| Year | Load Forecast (GWh) |
|---|---|
| 2020 | 0 |
| 2021 | 213 |
| 2022 | 393 |
| 2023 | 394 |
| 2024 | 395 |
| 2025 | 395 |
| 2026 | 396 |
| 2027 | 397 |
| 2028 | 398 |
| 2029 | 400 |
| 2030 | 401 |

## Load Shape

In developing its portfolio COM-CCA used the default load shape from the Clean System Power Calculator, which reflects the California Independent System Operator ("CAISO") hourly system average load shape forecast for the 2019 IEPR Mid Baseline Mid AAEE case.

Use of this load shape does not change COM-CCA's total annual energy volumes for both load and load modifiers, and these energy volumes remain consistent with COM-CCA's assigned load forecast.

## Load-Proportional GHG Emissions Benchmark

COM-CCA's modeling was assessed against its 2030 load-proportional share of the respective 38 MMT and 46 MMT benchmarks, as assigned in Table 1 of the Load Forecast Ruling. This assessment yielded the following results:[14]

**Table 2: COM-CCA's Assigned Shares of GHG Reduction Benchmarks**

| 2030 Load (GWH) | Proportion of 2030 Load Within IOU Territory | 2030 GHG Benchmark (MMT) – 46 MMT Scenario | 2030 GHG Benchmark (MMT) – 38 MMT Scenario |
|---|---|---|---|
| 401 | 0.47% | 0.060 | 0.048 |

[14] Load Forecast Ruling at 5-7 (Table 1).

**Compiling Existing Resources**

To populate its baseline resource templates, COM-CCA added existing resources from the following procurement categories:

- Capacity (Resource Adequacy)[15]
- COM-CCA's assigned share of capacity for CAM resources, taken from the most recent year-ahead CAM resource list available on the Commission's RA Compliance Materials webpage.

**Selecting New Resources**

To identify its new resource procurement opportunities, COM-CCA first determined the new resource capacity it intends to add each year, which considered resource needs (open positions), long-term renewable contracting requirements, renewables portfolio standards, RA requirements, the need for incremental RA capacity to contribute to system reliability and renewable integration needs, the potential for technological improvements, and financial considerations. COM-CCA selected resource types based on its experience with competitive solicitations for new renewable and storage resources as well as consideration of the studies and modeling underlying the adopted Reference System Portfolios.

**Confirming Reliability**

COM-CCA's portfolios were evaluated to ensure that sufficient dependable capacity (NQC) is available to meet peak load requirements, plus a 15% reserve margin. COM-CCA used technology-specific Effective Load Carrying Capacity ("ELCC") factors provided by the Commission to assess the contribution of each resource to system reliability. COM-CCA's portfolios were designed to ensure that current incremental RA capacity obligations are met and that COM-CCA contributes to new resource development to address fossil fuel retirements and decommissioning of the Diablo Canyon nuclear power plant.

**Calculating GHG Emissions**

COM-CCA calculated the emissions associated with its 38 MMT PCP and its 46 MMT PCP using the Commission's Clean System Power calculator tool. The assigned load forecast and default load shapes and behind the meter adjustments were used for this assessment, along with the

[15] Represents planned future contracts due to COM-CCA not having RA compliance obligations until the 2022 year-ahead compliance submission on October 31, 2021.

planned supply portfolios. The results were checked against the assigned GHG benchmarks included in the Clean System Power tools.

# III. Study Results

## a. Conforming and Alternative Portfolios

As required by the Commission, COM-CCA is submitting two conforming portfolios – a 38 MMT PCP that conforms with the Commission's 38 MMT RSP, and a 46 MMT PCP that conforms with the Commission's 46 MMT RSP. COM-CCA is not submitting alternative portfolios.

**COM-CCA's 38 MMT PCP**

The table included as Attachment A to this Narrative provides a summary of COM-CCA's 2030 38 MMT Portfolio, identifying resources by type and distinguishing between the following procurement categories:

- Existing resources (energy and capacity) that COM-CCA plans to contract with in the future.
- Existing resources (capacity) that COM-CCA partially pays for through CAM.
- New Resources (energy and capacity) that are under development that COM-CCA is planning to procure.
- New Resources (capacity) that SCE has procured for the benefit of COM-CCA customers through D-19-11-016.
- Future new resources (energy and capacity) that COM-CCA is planning to procure.

In summary, to meet COM-CCA's projected 2030 energy demand of 401 GWh, COM-CCA has selected a 2030 38 MMT PCP composed primarily of the following resources:

- Existing solar (planned procurement) – 11 MW
- Existing wind (planned procurement) – 30 MW
- Existing hydro (planned procurement) – 44 MW
- Existing biomass (planned procurement) – 3 MW
- New solar (future resources) – 20 MW
- New wind (future resources) – 20 MW
- New short duration storage (future resources) – 13.5 MW
- New long duration storage (future resources) – 3 MW

Additionally, COM-CCA's 2030 38 MMT PCP includes capacity-only resources composed primarily of the following resources:

[redacted]

COM-CCA's portfolio includes a mix of existing and new resources. Approximately 56 MW of COM-CCA's 2030 portfolio is composed of new resources, reflecting COM-CCA's role as an active player in the State's development of new renewable and storage resources. Furthermore, COM-CCA's 2030 portfolio is comprised of a mix of resources in which COM-CCA can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

COM-CCA's 38 MMT PCP Is Consistent With The 38 MMT RSP

The new resources included in COM-CCA's 38 MMT PCP are consistent with the 38 MMT RSP's 2030 new resource mix. Under D.20-03-028, "LSEs are not required to adhere directly to the exact proportion of resources selected by RESOLVE in the 46 MMT or 38 MMT portfolios, in developing their own portfolios" and "specific resources may be used as proxies for similar resources."[16] The Decision requires that LSEs procure resources in four broad categories defined by their attributes: long-duration storage (8-12 hours); short-duration storage (4 hours or less); hybrid resources; and other resources.[17]

As demonstrated in the following table, COM-CCA's 38 MMT portfolio is generally consistent with COM-CCA's proportional share of *new procurement* for each of the five "resource types" identified in D.20-03-028:

**Table 3: 38 MMT PCP New Resource Procurement by Resource Type Compared to 38 MMT RSP**

| Resource Type | 38 MMT RSP New Resources[18] | COM-CCA Load-Proportional Share of 38 MMT RSP New Resources | COM-CCA's 38 MMT Portfolio |
|---|---|---|---|
| Long-Duration Storage | 1,605 MW | 8 MW | 3 MW |
| Short Duration Storage (4 hours or less) | 9,714 MW | 46 MW | 13 MW |
| Renewable Resources | 20,274 MW | 95 MW | 86 MW |
| Hybrid Resources[19] | 0 MW | 0 MW | 0 MW |
| Other Resources | 222 MW | 0 MW | 0 MW |

16 D.20-03-028 at 63.

17 *Id.*

18 D.20-03-028 at 46 (Table 8).

19 COM-CCA interprets the category "hybrid resources" as including generation resources that combine storage with generation. The RSP does not identify hybrid capacity, so for comparison purposes, COM-CCA has allocated its planned hybrid resources between the renewable and short duration storage categories.

COM-CCA's proportional share of the 38 MMT RSP New Resources and the resources reflected in COM-CCA's 38 MMT Portfolio are relatively aligned; however, COM-CCA's 38 MMT Portfolio reflects a lower level of new resource procurement due to COM-CCA's small size and related cost/rate considerations while still ensuring COM-CCA meets its prescribed portfolio targets.

**COM-CCA's 46 MMT PCP**

The table included as Attachment B to this Narrative provides a summary of COM-CCA's 2030 46 MMT PCP, identifying resources by type and distinguishing between the following procurement categories:

- Existing resources (energy and capacity) that COM-CCA plans to contract with in the future.
- Existing resources (capacity) that COM-CCA partially pays for through CAM.
- New Resources (energy and capacity) that are under development that COM-CCA is planning to procure.
- New Resources (capacity) that SCE has procured for the benefit of COM-CCA customers through D-19-11-016.
- Future new resources (energy and capacity) that COM-CCA is planning to procure.

In summary, to meet COM-CCA's projected 2030 load of 401 GWh, COM-CCA has selected a 2030 46 MMT PCP composed primarily of the following resources:

- Existing solar (planned procurement) – 11 MW
- Existing wind (planned procurement) – 30 MW
- Existing hydro (planned procurement) – 33 MW
- Existing biomass (planned procurement) – 3 MW
- New solar (future resources) – 20 MW
- New wind (future resources) – 20 MW
- New short duration storage (future resources) – 13.5 MW
- New long duration storage (future resources) – 3 MW

Additionally, COM-CCA's 2030 38 MMT PCP includes capacity-only resources composed primarily of the following resources:

[redacted]

COM-CCA's portfolio includes a mix of existing and new resources. Approximately 56 MW of COM-CCA's 2030 portfolio is composed of new resources, reflecting COM-CCA's role as an active contributor to the State's development of new renewable and storage resources.

Furthermore, COM-CCA's 2030 portfolio is comprised of a mix of resources in which COM-CCA can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

As demonstrated in the following table, COM-CCA's 46 MMT PCP is generally consistent with COM-CCA's proportionate share of new procurement for each of the five "resource types" identified in D.20-03-028:

**Table 4: 46 MMT PCP New Resource Procurement by Resource Type Compared to 46 MMT RSP**

| Resource Type | 46 MMT RSP New Resources[20] | COM-CCA Proportional Share of 46 MMT RSP New Resources | COM-CCA's 46 MMT PCP |
|---|---|---|---|
| Long-Duration Storage | 973 MW | 5 MW | 3 MW |
| Short Duration Storage (4 hours or less) | 8,873 MW | 42 MW | 13 MW |
| Renewable Resources | 14,460 MW | 68 MW | 86 MW |
| Hybrid Resources[21] | 0 MW | 0 MW | 0 MW |
| Other Resources | 222 MW | 0 MW | 0 MW |

COM-CCA's proportional share of the 46 MMT RSP New Resources and the resources reflected in COM-CCA's 46 MMT Portfolio are relatively aligned; however, COM-CCA's 46 MMT Portfolio reflects a lower level of new resource procurement due to COM-CCA's small size and related cost/rate considerations while still ensuring COM-CCA meets its prescribed portfolio targets.

**COM-CCA's 38 MMT PCP And Its 46 MMT PCP Are Consistent With The D.19-11-016 Procurement Requirements**

In D.19-11-016, the Commission ordered LSEs that were currently serving load to collectively procure a total of 3,300 MW of incremental system capacity by 2023, with specific procurement obligations allocated to each LSE. Due to COM-CCA not serving customers when D.19-11-016 was adopted by the Commission, COM-CCA does not have an incremental capacity procurement obligation per D.19-11-016. Instead, SCE has assumed the responsibility for the incremental capacity procurement obligations on behalf of COM-CCA's customer base and will charge COM-CCA and its customers for the cost of the capacity procured through the final Modified Cost Allocation Mechanism. The incremental capacity contracts that SCE has entered

[20] D.20-03-028 at 41 (Table 5).

[21] COM-CCA interprets the category "hybrid resources" as including generation resources that combine storage with generation. The RSP does not identify hybrid capacity, so for comparison purposes, COM-CCA has allocated its planned hybrid resources between the renewable and short duration storage categories.

into or will be entering into to satisfy the requirements of D.19-11-016 have been reflected in COM-CCA's 38 MMT and 46 MMT Resource Data Templates[22] and throughout this IRP Narrative.

### b. Preferred Conforming Portfolios

**38 MMT PCP**

As demonstrated in Attachment A to COM-CCA's IRP, COM-CCA's 38 MMT PCP consists of a combination of:

- Utility-Scale Solar
- In-State Wind
- Out-Of-State Wind
- Short-Duration Storage
- Long-Duration Storage
- Small and large hydro
- Biomass
- Natural Gas/Baseload/Other (capacity only)

As stated above, in accordance with Section 454.51(b)(3), COM-CCA's governing 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 [Section] 454.51(a)(1)]." These benefits and characteristics are discussed as follows.

GHG Reduction Goals

COM-CCA's 38 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(A) goal of meeting the Commission's 38 MMT GHG reduction benchmark. The 2030 emissions from COM-CCA's 38 MMT PCP are equivalent to COM-CCA's load-proportional share of the 38 MMT emissions benchmark. COM-CCA's proportional share of the 38 MMT benchmark is 0.048 MMT. According to the Commission's emissions calculator, COM-CCA's 38 MMT PCP would account for 0.048 MMT in 2030 emissions, equaling the reductions benchmark of 0.048 MMT.

Renewable Energy

COM-CCA's 38 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(B) goal of ensuring that portfolios are composed of at least 50% eligible

[22] COM-CCA incorporated the exact incremental capacity data provided by the Commission in its Resource Data Templates, which resulted in ten (10) errors.

renewable resources. In 2030 COM-CCA's 38 MMT overall PCP portfolio would consist of 60% eligible renewable generation, which exceeds the 50% requirement.

Minimizing Bill Impact

COM-CCA's 38 MMT 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. PCP's portfolio consists primarily of renewable resources that have benefitted from increasing economies of scale over the past several years and have price projections that continue to drop in the foreseeable future.

COM-CCA's limited procurement experience, combined with the experience of all the CalChoice Members, indicates that solar costs continue to decline, and lithium ion battery storage is increasingly cost effective relative to other capacity products available in the market, particularly when offered in a tax-advantaged hybrid configuration with solar generation.

COM-CCA prioritizes cost competitiveness, reliability, use of renewable energy and local resource development. COM-CCA anticipates that bill impacts will be minimized during its planned portfolio transition as new solar generation projects secured via long-term contract generally have lower net costs than prices paid in the short-term renewable energy markets. Coupling new solar with battery storage increases the capacity value of the projects, displacing the need to buy expensive RA products, and provides limited dispatchability for the solar generation, minimizing the risk of energy value degradation over time. Further, COM-CCA's 38 MMT PCP minimizes 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

COM-CCA's 38 MMT PCP achieves results and performance characteristics consistent with the Section 454.52(a)(1)(E) goal of ensuring system and local reliability. The 38 MMT PCP meets system RA requirements as detailed in Section III.f. COM-CCA will meet its local RA requirements until such time as the central procurement entity ("CPE") takes on this responsibility pursuant to D.20-06-002. Some of the planned capacity-only contracts in COM-CCA's 38 MMT PCP will be displaced by local RA procured by the CPE. However, adoption of the CPE construct is a recent development, and the details of its planned procurement are not yet known. To ensure there are no reliability gaps in COM-CCA's 38 MMT PCP, and pursuant to Energy Division Guidance, COM-CCA's portfolio assumes no CAM allocations or CAM resources beyond what is described in the most recently issued year-ahead CAM resource list and allocations. This approach, while consistent with Energy Division direction, will likely indicate more RA than COM-CCA will be responsible for procuring. Thus, COM-CCA provides this information with the understanding that its RA positions will be reduced by any future CAM allocations.

Demand-Side Energy Management

COM-CCA's 38 MMT portfolio achieves results and performance characteristics consistent with the Section 454.52(a)(1)(G) goal of enhancing demand-side energy management. COM-CCA continues to explore and pursue demand-side management programs such as demand response, energy efficiency, and behind the meter energy storage solutions. COM-CCA is hopeful that some of these solutions will become more cost competitive over time so that a small LSE, such as COM-CCA, can deploy solutions that deliver value to COM-CCA's customers (on a cost-effective basis) as well as to the California grid.

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

COM-CCA's 38 MMT portfolio achieves results and performance characteristics consistent with the Section 454.52(a)(1)(H) goal of minimizing localized air pollutants and other GHG emissions with early priority on disadvantaged communities. COM-CCA's 38 MMT portfolio relies primarily on renewable generation and hydroelectric generation, and this portfolio is expected to exhibit relatively low GHGs and localized air pollution emissions. COM-CCA's 38 MMT portfolio minimizes COM-CCA's reliance on unspecified system power, instead opting for renewable and hydroelectric generation procurement/development whenever feasible.

Results from the Clean System Power ("CSP") tool indicate the following localized air pollutants associated with COM-CCA's 38 MMT portfolio in 2030:

- NOx: 17 tonnes/year
- PM 2.5: 6 tonnes/year
- SO2: 3 tonnes/year

These emissions are expected to result from the planned use of system energy and biomass energy in the 38 MMT PCP, as well as emissions from Combined Heat and Power ("CHP") resources and system energy assigned to the COM-CCA portfolio by the CSP tool. In evaluating new biomass resources, COM-CCA will prioritize development outside of DACs to the greatest practical extent.

**46 MMT PCP**

As demonstrated in Attachment B to COM-CCA's IRP, COM-CCA's 46 MMT PCP consists of a combination of:

- Utility-Scale Solar
- In-State Wind
- Out-Of-State Wind
- Short-Duration Storage
- Long-Duration Storage

- Small and large hydro
- Biomass
- Natural Gas/Baseload/Other (capacity only)

As stated above, in accordance with Section 454.51(b)(3), COM-CCA's governing 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 [Section] 454.51(a)(1)]." These benefits and characteristics are discussed as follows.

GHG Reduction Goals

COM-CCA's 46 MMT PCP achieves emissions equal to COM-CCA's proportional share of the 46 MMT benchmark. COM-CCA's Proportional Share of the 46 MMT benchmark is 0.060 MMT. According to the Commission's emissions calculator, COM-CCA's 46 MMT portfolio would account for 0.060 MMT in 2030 emissions, an amount equivalent to the stated benchmark.

Renewable Energy

COM-CCA's 46 MMT portfolio achieves results and performance characteristics that are consistent with the Section 454.52(a)(1)(B) goal of ensuring that portfolios are comprised of at least 50% eligible renewable resources. In 2030 COM-CCA's 46 MMT portfolio would consist of 60% eligible renewable generation, which meaningfully exceeds the 50% target.

Minimizing Bill Impact

COM-CCA's 46 MMT portfolio 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. COM-CCA's portfolio consists primarily of renewable resources that have benefitted from increasing economies of scale over the past several years and have price projections that continue to drop in the foreseeable future.

COM-CCA's recent procurement experience indicates that solar costs continue to decline, and lithium ion battery storage is increasingly cost effective relative to other capacity products available in the market, particularly when offered in a tax-advantaged hybrid configuration with solar generation.

COM-CCA prioritizes cost competitiveness, reliability, use of renewable energy and local resource development. COM-CCA anticipates that bill impacts will be minimized as new solar generation projects secured via long-term contract generally have lower net costs than prices paid in short-term renewable energy markets. Coupling new solar with battery storage increases the capacity value of these projects, displacing the need to buy expensive RA products and providing limited dispatchability for the solar generation itself, which minimizes the risk of energy value degradation over time. Further, COM-CCA's 46 MMT PCP minimizes

exposure to volatile natural gas prices and bill impacts that may result from periodic spikes in fossil fuel prices.

Ensuring System and Local Reliability

COM-CCA's 46 MMT portfolio achieves results and performance characteristics consistent with the Section 454.52(a)(1)(E) goal of ensuring system and local reliability.

The 46 MMT PCP meets system RA requirements as detailed in Section III.f. COM-CCA will meet its local RA requirements until such time as the CPE takes on this responsibility pursuant to D.20-06-002. Some of the planned capacity-only contracts in COM-CCA's 46 MMT PCP will be displaced by local RA procured by the CPE. However, adoption of the CPE construct is a recent development, and the details of its planned procurement are not yet known. To ensure there are no reliability gaps in COM-CCA's 46 MMT PCP, and pursuant to Energy Division Guidance, COM-CCA's portfolio assumes no CAM allocations or CAM resources beyond what is described in the most recently issued year-ahead CAM resource list and allocations. This approach, while consistent with Energy Division direction, will likely result in RA procurement that exceeds COM-CCA's expected obligations. Thus, COM-CCA provides this information with the understanding that its RA positions will be reduced by any future CAM allocations.

Demand-Side Energy Management

COM-CCA's 46 MMT portfolio achieves results and performance characteristics consistent with the Section 454.52(a)(1)(G) goal of enhancing demand-side energy management. COM-CCA continues to explore and pursue demand-side management programs such as demand response, energy efficiency, and behind the meter energy storage solutions. COM-CCA is hopeful that some of these solutions will become more cost competitive over time so that a small LSE, such as COM-CCA, can deploy solutions that deliver value (on a cost-effective basis) to COM-CCA's customers as well as to the California grid.

Minimizing Localized Air Pollutants With Emphasis on DACs

COM-CCA's 46 MMT portfolio achieves results and performance characteristics consistent with the Section 454.52(a)(1)(H) goal of minimizing localized air pollutants and other GHG emissions with early priority on disadvantaged communities. COM-CCA's 46 MMT portfolio relies primarily on renewable generation and hydroelectric generation, and this portfolio is expected to exhibit relatively low GHGs and localized air pollution emissions. COM-CCA's 46 MMT portfolio minimizes COM-CCA's reliance on unspecified system power, instead opting for renewable and hydroelectric generation procurement/development whenever feasible.

Results from the CSP tool indicate the following localized air pollutants associated with COM-CCA's 46 MMT portfolio in 2030:

- NOx: 17 tonnes/year

- PM 2.5: 6 tonnes/year
- SO2: 3 tonnes/year

These emissions derive from planned use of system energy and biomass energy in the 46 MMT PCP, as well as emissions from CHP resources and system energy assigned to the COM-CCA portfolio by the CSP tool. In evaluating new biomass resources, COM-CCA will prioritize development outside of DACs to the greatest practical extent.

### c. GHG Emissions Results

COM-CCA used its load-based proportional share of the 38 MMT and 46 MMT benchmark to determine the emissions compliance for its 38 MMT PCP and its 46 MMT PCP. COM-CCA's assigned load-proportional share of the 38 MMT benchmark is 0.048 MMT. Based on the 38 MMT version of the CSP calculator, COM-CCA's 38 MMT portfolio would result in total 2030 GHG emissions of 0.048 MMT, equivalent to COM-CCA's assigned share of the 38 MMT GHG reduction benchmark.

COM-CCA's assigned load-proportional share of the 46 MMT benchmark is 0.060 MMT. Based on the 46 MMT version of the CSP calculator, COM-CCA's 46 MMT portfolio would result in total 2030 GHG emissions of 0.060 MMT, which is equal to its assigned load-proportional share of the 46 MMT benchmark.

### d. Local Air Pollutant Minimization and Disadvantaged Communities

#### i. Local Air Pollutants

The 38 MMT version of the CSP calculator estimates the following emissions associated with COM-CCA's 38 MMT portfolio:

- NOx: 17 tonnes/year
- PM 2.5: 6 tonnes/year
- SO2: 3 tonnes/year

The 46 MMT version of the CSP calculator estimates the following emissions associated with COM-CCA's 46 MMT portfolio:

- NOx: 18 tonnes/year
- PM 2.5: 7 tonnes/year
- SO2: 3 tonnes/year

### ii. Focus on Disadvantaged Communities

COM-CCA's IRP is consistent with the goal of minimizing local air pollutants, with early priority on DACs. As identified in CalEnviroScreen 3.0, COM-CCA does not serve any Disadvantaged Communities.

COM-CCA is dedicated to reducing pollution impacts and encouraging the development, health, and prosperity of DACs both within and outside its service area. In developing its IRP, COM-CCA considered the impact of its resource procurement on DACs. All of the new resources COM-CCA plans to develop are renewable or storage with no expected local emission impacts.

## e. Cost and Rate Analysis

COM-CCA's 38 MMT and 46 MMT portfolios are reasonable from a cost perspective. In selecting resources for its portfolios, COM-CCA carefully considered the cost implications of specific resource selections and procurement timing.

This analysis was informed by COM-CCA's and CalChoice's procurement experience and the standard assumptions and results of the Commission's RESOLVE/SERVM modeling.

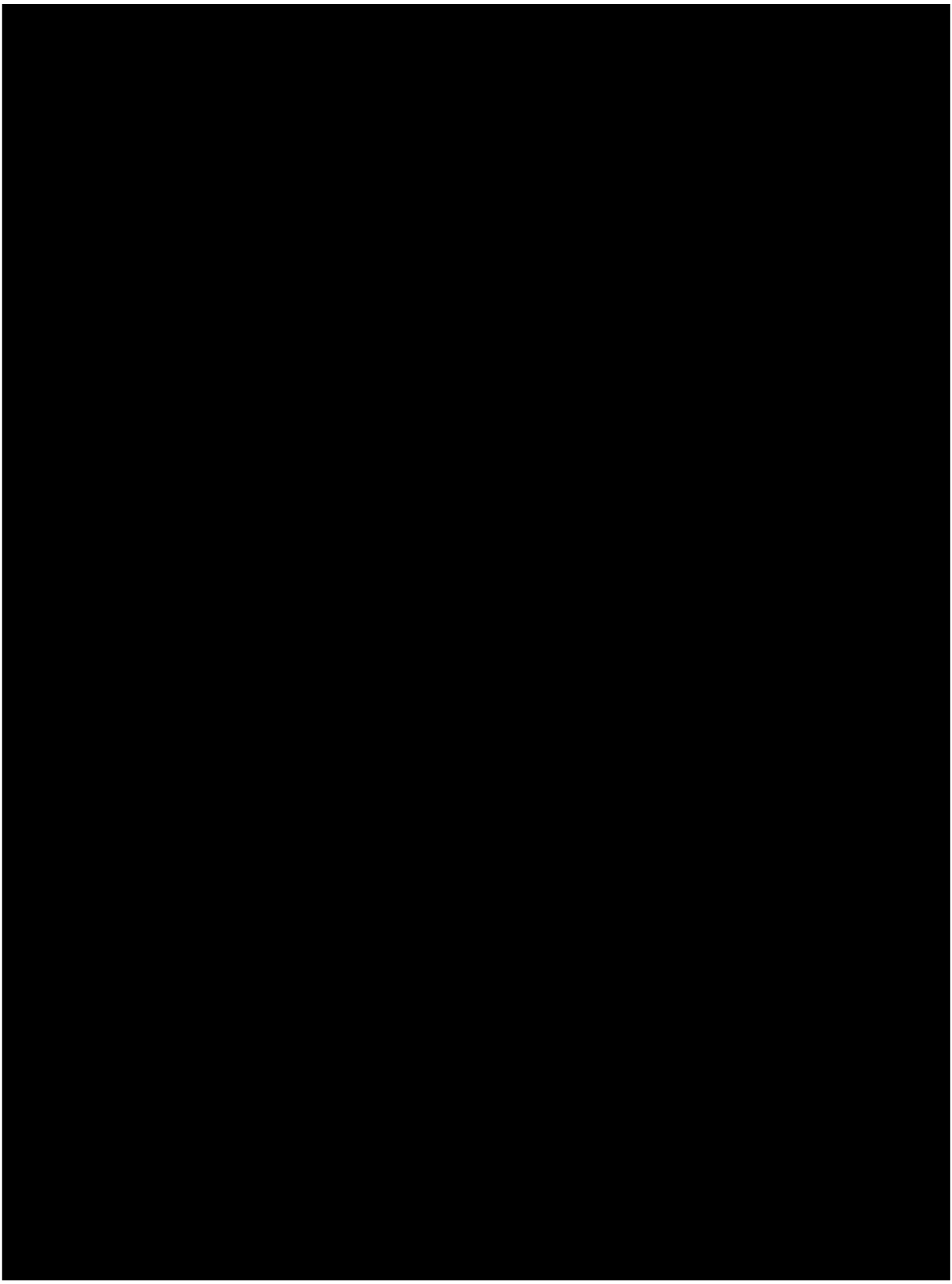
In general, COM-CCA sought to balance the need to procure resources with cost-related impacts. In particular, COM-CCA appreciates the lead time required to meet COM-CCA's LSE-specific procurement shortfalls and the Commission-identified overall system new resource need but will strive to balance such procurement needs with cost-related considerations, particularly the prospective benefits of waiting to purchase renewable and storage resources that seem to have downward sloping cost curves. COM-CCA also recognizes that future resource costs are highly uncertain, and technological advancement can happen unexpectedly; COM-CCA's procurement cycle is designed to take advantage of technological and cost improvements by incrementally adding new resource commitments over time.

COM-CCA's PCPs take advantage of the rapidly falling cost of solar, wind, and battery storage resources. COM-CCA's PCPs also take advantage of the fact that, compared to the IOUs, CCAs typically have shorter contracting and generation project development life cycles. These shorter timelines can result in direct savings and may give COM-CCA more flexibility to schedule its procurement activities in a way that takes advantage of falling renewable generation prices or other cost-effective procurement opportunities that may arise over time.

### f. System Reliability Analysis

Both COM-CCA's 38 MMT PCP and its 46 MMT PCP are expected to be reliable and will contribute COM-CCA's fair share to system reliability needs.

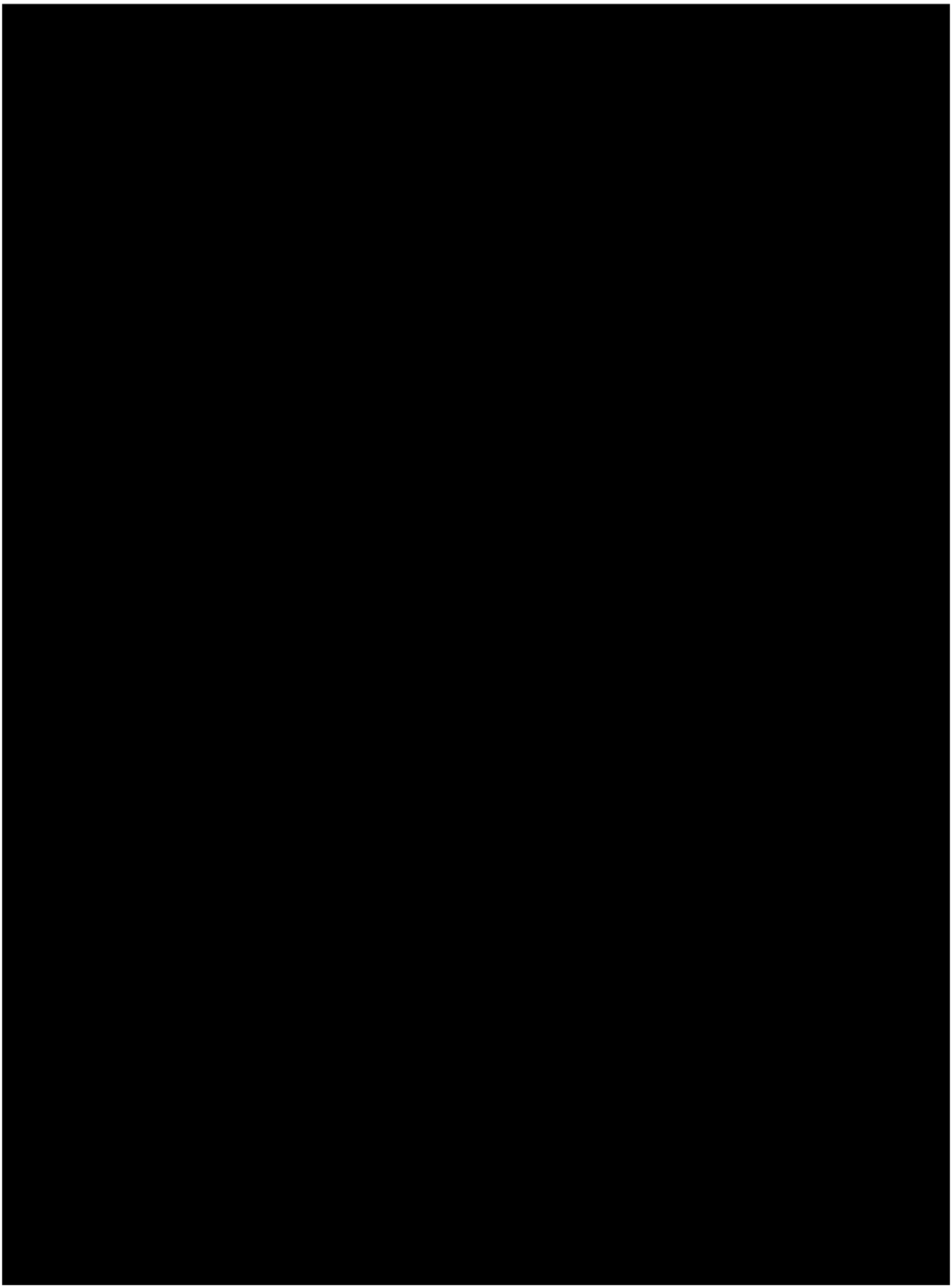
The effective capacity of COM-CCA's 38 MMT PCP is provided in the following "System Reliability Progress Tracking Table" from the its 38 MMT Resource Data Template dashboard (note that the row containing peak demand is confidential and has been excluded from this table). The NQC for the month of September is shown for each year in the following table:



[redacted] This balanced portfolio of flexible capacity works to effectively and reliably integrate a renewables-heavy portfolio, thus meeting COM-CCA's share of any system-wide renewable integration resource requirements.

The effective capacity of COM-CCA's 46 MMT PCP is provided in the following "System Reliability Progress Tracking Table" from the 46 MMT Resource Data Template dashboard (note that the row containing peak demand is confidential and has been excluded from this table). The NQC for the month of September is shown for each year in the following table:

[23] An undetermined portion of this capacity is expected to be procured by the CPE.



[redacted] This balanced portfolio of flexible capacity works to effectively and reliably integrate a renewables-heavy portfolio, thus meeting COM-CCA's share of any system-wide renewable integration resource requirements.

### g. Hydro Generation Risk Management

In developing its portfolios, COM-CCA took several steps to manage the risk of reduced hydro availability that may result from future in-state drought. First, COM-CCA 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 COM-CCA. COM-CCA's RSP includes hydroelectric resources located within California as well as imported hydroelectric power from the Pacific Northwest. Second, COM-CCA 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, COM-CCA's planned use of hydroelectric supply within its 46 MMT PCP is about half of COM-CCA's proportionate amount per the RSP (see table below). For its 38 MMT PCP, COM-CCA increased its planned use of hydroelectricity, which could be at risk under certain drought conditions. However, under both portfolios, due to COM-CCA's very small hydroelectric needs, COM-CCA will have a greater probability of filling its annual positions than other, larger LSEs. With that noted, under a drought scenario or in the event that other factors restrict the availability of hydroelectricity and COM-CCA is unsuccessful in filling related shortfalls through short-term contracting opportunities, COM-CCA would plan to substitute with renewable energy resources to ensure it meets its assigned GHG benchmark.

[24] An undetermined portion of this capacity is expected to be procured by the central procurement entity.

**Table 5: Proportionate Share of RSP Hydroelectric Generation**

| Hydro Resource | 38 and 46 MMT RSP MW | COM-CCA Proportionate Share | COM-CCA 46 MMT PCP | COM-CCA 38 MMT PCP |
|---|---|---|---|---|
| CAISO Hydro | 7,070 | 33 | 18 | 25 |
| Hydro Imports | 2,852 | 13 | 8 | 12 |

### h. Long-Duration Storage Development

The Commission's 38 MMT RSP calls for 1,605 MW of new long-duration storage to be operational by 2026, while the 46 MMT RSP calls for 973 MW of new long-duration storage to be operational by 2026.

In response to the Commission's analysis, thirteen CCAs ("Joint CCAs") issued a request for information ("RFI") on long-duration storage in June 2020. Results of the RFI were shared with other non-participating CCAs. This RFI defined long-duration storage resources as those with the capability to discharge at full capacity for at least 8 hours. The RFI requested the following types of information: (1) storage technology and commercial history; (2) project specifics, including location, permitting, financing and development risks; and (3) contracting terms and preferences, including indicative pricing.

The Joint CCAs received responses from 31 entities, which represented numerous types of chemical, mechanical and thermal long-duration storage technologies. These technologies included lithium-ion batteries, vanadium redox and other flow batteries, used electric vehicle batteries, waste to fuels via ultrasound, hydrogen storage, pumped storage hydro, geo-mechanical pumped storage, crane and stacked blocks, compressed air, flywheels, molten salt and other thermal storage technologies. Amongst the information provided, respondents identified 25 specific projects totaling more than 9,000 MW of capacity, two thirds of which was represented as capable of achieving commercial operation by 2026.

The Joint CCAs are now engaging in the critical next step of assessing project economics. This assessment is expected to lead to a Requests for Offers ("RFOs") process and, eventually, transactional discussions targeting the retention of projects that are capable of achieving commercial operation by 2026. COM-CCA and CalChoice have engaged the Joint CCAs in an effort to join the expected upcoming RFO process for purposes of securing its share of long-duration storage.

### i. Out-of-State Wind Development

The Commission's 38 MMT RSP calls for 3,000 MW of new out-of-state wind generation ("OOS Wind") to be developed and operational by 2030, while the 46 MMT RSP calls for 606 MW of new OOS Wind to be operational by 2030. COM-CCA understands that the transmission projects needed to connect OOS Wind to the CAISO grid require significant lead-times; however, COM-CCA is exploring potential opportunities with OOS Wind developers that are also building and securing the transmission needed to deliver necessary wind energy directly to California. Therefore, COM-CCA has reflected OOS Wind in both of its portfolios.

### j. Transmission Development

In identifying resource locations for all portfolios, COM-CCA was guided by the following considerations:

- COM-CCA has a general preference for resources located within its service area and the community it serves, but more generally, within southern California.
- COM-CCA prefers projects located in areas that can utilize existing transmission infrastructure with minimal upgrade/modification costs.
- COM-CCA prefers low-impact renewable energy projects that provide economic benefit to DACs, subject to community interest in siting projects within such locations.

Unlike the IOUs, COM-CCA is not a transmission and distribution ("T&D") system operator. COM-CCA does not enjoy the benefits of a granular knowledge of SCE's T&D system, and COM-CCA is not in the best position to identify optimal resource locations. In practice, COM-CCA relies on project developers to conduct the research and technical studies necessary for siting potential generation projects. COM-CCA 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, COM-CCA generally utilized the RSP selected candidate resources as a guide for likely resource locations in its 38 MMT PCP and its 46 MMT PCP. These should be treated as general expectations based on the aforementioned considerations, not definitive selections – actual project locations will be selected during COM-CCA's upcoming solicitation processes.

As discussed in prior sections, COM-CCA is a small LSE, and similar to the other CalChoice Members, COM-CCA aims to be nimble in administering pertinent resource planning processes. More specifically, if COM-CCA'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 COM-CCA would ultimately locate and contract for alternative resources that fall in preferred locations.

# IV. Action Plan

## a. Proposed Activities

COM-CCA, through CalChoice, has quickly developed a well-established procurement process that it will use to steadily achieve its PCP over the next ten years (i.e., by 2030). COM-CCA's procurement process includes the following key activities:

a) Identification of planned resources by type, desired online date, and capacity.
b) Planning for procurement activities in consideration of COM-CCA's risk management policy; resource acquisition lead times including, where applicable, development timelines; staff capacity; and financial considerations.
c) 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.
d) Careful negotiation of contract terms to ensure positive outcomes for COM-CCA customers with appropriate risk mitigation.
e) Ongoing contract management, including where applicable, careful monitoring of development milestones.
f) Ongoing contract management, including where applicable, careful monitoring of generator performance after a resource has achieved COD.
g) Conduct and participate in joint CCA solicitation processes in order to expand procurement opportunities available to COM-CCA.

## b. Procurement Activities

COM-CCA has a well-established procurement process that it will use to steadily achieve its IRP and associated portfolio over the next ten years. COM-CCA's procurement process includes the following key activities:

- Load forecast based on the number and types of customers, potential service territory expansions, opt-out rates, electrification trends, demand-side resources and weather.
- Calculate open positions and interim volumetric needs based on COM-CCA's risk management policies.

- Conduct one or more competitive solicitations for new renewable and hydroelectric resources with planned online dates before 2026.
- Refine plans for procurement of long-duration storage and begin solicitation process in 2023 or 2024 for a planned online date in 2026 (or later, as needed).
- Continue to manage COM-CCA's supply portfolio to achieve COM-CCA's policy objectives and ensure compliance with all pertinent regulatory requirements.

In addition, COM-CCA is planning to solicit offers periodically throughout each year for short-term renewable energy, large hydro-electric and ACS (starting in 2023), RA and load-hedging products needed to balance the portfolio and adhere to position limits established through COM-CCA's risk management policy and practices.

COM-CCA uses a portfolio risk management approach in its power purchasing program, seeking low cost supply (based on then-current market conditions) as well as diversity among technologies, production profiles, project sizes and locations, counterparties, lengths of contract, and timing of market purchases. These factors are taken into consideration when COM-CCA engages the market and pursues related procurement activities.

A key component of this process relates to the analysis and consideration of COM-CCA's forward load obligations and existing supply commitments with the objectives of closely balancing supply and demand, cost/rate stability and overall budgetary impacts, while leaving some flexibility to take advantage of market opportunities and/or technological improvements that may arise over time. COM-CCA monitors its open positions separately for each renewable generating technology, conventional resources, and its aggregate supply portfolio. COM-CCA maintains portfolio coverage targets of up to 100% (of expected customer energy requirements) in the near-term (0 to 2 years) and typically leaves gradually larger open positions in the mid- to long-term, consistent with generally accepted industry practices.

### c. Potential Barriers

COM-CCA has identified the following market, regulatory, financial, and other barriers/risks that may impede COM-CCA's ability to acquire the resources identified in its Portfolio:

- Impacts of the COVID-19 pandemic on supply chains, the labor force, financial and capital markets, and the overall ability of firms to timely develop generation and storage resources in the current environment.
- The potential for regulatory changes, including centralized procurement and rule changes that may create uncertainty and/or undermine COM-CCA's willingness or ability to enter into long-term resource commitments.

- Uncertainty around possible resource allocations from SCE resulting from the Power Charge Indifference Adjustment ("PCIA") working group process.
- Changes to the RA program that impact COM-CCA's compliance obligations.
- Changes to the RA Qualifying Capacity counting methodologies that impact existing and future RA contracts as well as how current and future generating resources count towards Qualifying Capacity.
- Factors that may restrict availability of RA capacity such as retirement of conventional resources, the potential derating of renewable resource or battery storage Effective Load Carrying Capacity.
- Factors that may increase COM-CCA customer costs such as potential regulatory changes relating to the treatment of SCE generation costs and the share of costs allocated to COM-CCA customers through the PCIA.
- The potential for reduced availability of large hydroelectric energy due to drought or increasing demand.

### d. Commission Direction or Actions

COM-CCA encourages the Commission to adopt durable rules and processes to bring greater stability to the regulatory framework within which COM-CCA and other suppliers must plan and operate. Frequent rule changes disrupt COM-CCA's ability to execute long-term planning activities and adopted planning elements while minimizing customer costs. Such regulatory changes can also result in disproportionately high costs and administrative burdens, which would prompt related customer rate increases – certain regulatory changes may necessitate duplicative procurement efforts and/or stranded investments that are expected to impact a larger portion of COM-CCA's portfolio.

In addition, the Commission should build in reasonable timelines for LSEs to receive and to respond to all new directions related to the applicable IRP cycle. This would also allow municipal LSEs to follow the necessary public approval processes and prescribed noticing timelines prior to the IRP due date. With respect to the clarification and updated instructions received August 28, 2020, the last minute directions to use 2020 CAM allocation static out to 2030 for simplicity, COM-CCA used its projected CAM allocations starting in calendar year 2022 static out to 2030.

### e. Diablo Canyon Power Plant Replacement

COM-CCA has included plans for new capacity development in its PCPs that is expected to be sufficient to meet its share of replacement capacity from the Diablo Canyon Power Plant. COM-

CCA's load ratio share of Diablo Canyon is estimated to be 3 MW, and COM-CCA has plans to add 56 MW of new capacity, including 21 MW of (September) NQC by 2030.

COM-CCA urges the Commission to formalize incremental capacity procurement related to Diablo Canyon Power Plant replacement as soon as practical to ensure that LSEs, including COM-CCA, who are currently addressing the loss of baseload capacity in their respective procurement processes, are credited for the procurement of such incremental resources.

## V. Lessons Learned

COM-CCA recognizes the improvements made to the data templates relative to the 2018 planning cycle, including consolidation of the new and baseline templates and enhancements to better capture the full range of resources in LSE existing and planned portfolios. COM-CCA believes that additional improvements in the data templates can be made, and COM-CCA looks forward to further discussions with Energy Division staff in this regard. COM-CCA's experience completing the resource data template and the Clean System Power tools leads to the following observations and suggestions:

- The Resource Data Template "dashboard" sheet could be enhanced to auto-populate comparisons of the LSE portfolio to the Reference System Portfolio, which could then be directly used in the IRP Narrative.
- The requirement to use "transfer_sale" and "transfer_purchase" for certain entries in the resource field causes a loss of information. It would be better to allow the actual resource information to be entered in the resource field and include another field to indicate if the transaction is a sale or purchase with another LSE.
- The resource categories in the Clean System Power tool should be consistent with those in the Resource Data Template. Ideally, a summary sheet would be created in the Resource Data Template to compile the supply data needed for the Clean System Power calculator. For example, there is no category for a hybrid resource in the Clean System Power tool and no obvious/intuitive category mapping.
- The Resource Data Template should include annual CAM capacity and allow the LSE to simply enter its load ratio share to auto-populate its CAM allocations.
- Reliability metrics should be standardized and specified to the extent that the NQC dashboard presented in the Resource Data Template does not capture required reliability attributes.

There is considerable time required/spent to complete necessary templates, and this remains a concern of COM-CCA and other LSEs. COM-CCA requests that Energy Division staff consider whether all requested data is necessary/critically important to the IRP process, and if not, COM-

CCA respectfully requests that any/all non-critical data requirements be eliminated from future processes.

COM-CCA also found that the directions and guidance provided by the Commission and staff for this IRP cycle seemed to lack clarity and consistency in certain key respects. Again, COM-CCA recognizes that the IRP process is evolving, but there is room for improvement in providing clear and consistent instructions in a timely manner.

## *Glossary of Terms*

***Alternative Portfolio:*** *LSEs are permitted to submit "Alternative Portfolios" developed from scenarios using different assumptions from those used in the Reference System Plan. 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 forecast 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, formerly "Clean Net Short") methodology****: the methodology used to estimate GHG 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 2030 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.*

***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 2030 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 2030 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.*

***Net Qualifying Capacity:*** *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.*

***Reference System Plan:*** *the Commission's integrated resource plan that includes an optimal portfolio (Reference System Portfolio) of resources for serving load in the CAISO balancing authority area and meeting multiple state goals, including meeting GHG reduction and reliability targets at least cost.*

***Reference System Portfolio****: the multi-LSE portfolio identified by staff for Commission review and adopted/modified by the Commission as most responsive to statutory requirements per Pub. Util. Code 454.51; part of the Reference 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).*

**Attachment A**
**Commerce CCA 2030 Resource Mix – 38 MMT PCP**

| Resource Type | Existing Resources (Owned/Contracted) | Existing Resources (Planned Procurement) | Existing Resources (CAM) | New Resources (In Development) | Future New Resources | Total |
|---|---|---|---|---|---|---|
| Nuclear | | | | | | 0 |
| CHP | | | | | | 0 |
| Natural Gas | | | | | | 0 |
| Coal | | | | | | 0 |
| Hydro (Large) | | 25 | | | | 25 |
| Hydro (Scheduled Imports) | | 12 | | | | 12 |
| Biomass | | 3 | | | | 3 |
| Geothermal | | | | | | 0 |
| Hydro (Small) | | 7 | | | | 7 |
| Wind | | 30 | | 10 | | 40 |
| Out-of-State Wind on New Transmission | | | | | 10 | 10 |
| Solar | | 11 | | | 20 | 31 |
| Customer Solar | | | | | | 0 |
| Battery Storage | | | | | 16 | 16 |
| Pumped (long-duration) Storage | | | | | | 0 |
| Shed Demand Response | | | | | | 0 |
| *Capacity-Only* | | | | | | |
| Natural Gas | | 63 | 24 | | | 87 |
| Battery Storage | | | | | 13 | 13 |
| Long Duration Storage | | | | | 3 | 3 |

**Attachment B**
**Commerce CCA 2030 Resource Mix – 46 MMT PCP**

| Resource Type | Existing Resources (Owned/Contracted) | Existing Resources (Planned Procurement) | Existing Resources (CAM) | New Resources (In Development) | Future New Resources | Total |
|---|---|---|---|---|---|---|
| Nuclear | | | | | | 0 |
| CHP | | | | | | 0 |
| Natural Gas | | | | | | 0 |
| Coal | | | | | | 0 |
| Hydro (Large) | | 18 | | | | 18 |
| Hydro (Scheduled Imports) | | 8 | | | | 8 |
| Biomass | | 3 | | | | 3 |
| Geothermal | | | | | | 0 |
| Hydro (Small) | | 7 | | | | 7 |
| Wind | | 30 | | 10 | | 40 |
| Out-of-State Wind on New Transmission | | | | | 10 | 10 |
| Solar | | 11 | | | 20 | 31 |
| Customer Solar | | | | | | 0 |
| Battery Storage | | | | | 16 | 16 |
| Pumped (long-duration) Storage | | | | | | 0 |
| Shed Demand Response | | | | | | 0 |
| *Capacity-Only* | | | | | | |
| Natural Gas | | 63 | 24 | | | 87 |
| Battery Storage | | | | | 13 | 13 |
| Long Duration Storage | | | | | 3 | 3 |