Standard LSE Plan

SAN JACINTO POWER

2020 INTEGRATED RESOURCE PLAN

August 31, 2020

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I. Introduction and Executive Summary

a. Introduction

Description of SJP

The City of San Jacinto is a municipal corporation and general law city organized and operated under the laws of the State of California. The City of San Jacinto is governed by, and accountable to, representatives elected by its citizens. The City of San Jacinto operates numerous programs for the benefit of its citizens, including San Jacinto Power ("SJP").

SJP was formed by the San Jacinto City Council on December 6, 2016 through Ordinance 16-12 and began serving load in April 2018. SJP currently provides retail electric generation services and complementary energy programs to customers within the municipal boundaries of the City of San Jacinto. SJP launched as the City's Community Choice Aggregation ("CCA") program for the purposes of promoting local control, renewable and clean energy technology development and deployment, and offering customers competitive and stable rates.

SJP's service area is identified in the following map:

Figure 1: Service Area Map

SJP currently serves approximately 12,600 residential accounts and 1,550 commercial and industrial accounts. SJP provides retail generation service to a variety of customer classes,

including residential, small and medium commercial accounts, large industrial consumers, and agricultural and pumping facilities. SJP's service area has a population of 48,900, the majority of which live in households or work at businesses that receive generation service from SJP. In 2019, SJP had a peak load of 57 MW, and a total 2019 energy usage of 160 GWh.

SJP has pursued CCA implementation activities under a shared service model, which means SJP 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 SJP to provide requisite services, including resource planning and procurement activities. Key decisions of SJP, including rate setting, retail supply portfolio composition, disposition of financial reserves, and administration of complementary programs, are addressed by the San Jacinto City Council with supporting input from SJP staff and CalChoice personnel. Due to the relatively small size of San Jacinto (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, SJP has been able to establish and pursue objectives and key parameters that are directly responsive to the unique constituents and interests within San Jacinto.

SJP's Mission

SJP was formed for the express purpose of empowering the city to choose the generation resources that reflect its specific values, needs and cost preferences. More specifically, SJP seeks to provide reliable electric service, within the City, 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 San Jacinto.

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

Introduction to SJP's IRP

In accordance with the requirements of California Public Utilities Code 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, SJP is providing its load serving entity ("LSE")-specific IRP to the Commission for

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

certification and use in the Commission's statewide planning process. In addition to this narrative, SJP's IRP includes the following documents:

- SJP's 38 MMT Resource Data Template
- SJP's 46 MMT Resource Data Template
- SJP's 38 MMT Clean System Power Calculator
- SJP's 46 MMT Clean System Power Calculator
- SJP's Senior Executive Attestation addressing D.19-11-016 Incremental Capacity Procurement
- SJP's IRP Verification

As directed in D.20-03-028, SJP is submitting two conforming portfolios in this IRP, one based on the Commission's 46 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 SJP expects changes as SJP continues to move forward in time. The future resources identified in SJP's IRP represent SJP'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 SJP's IRP may change due to new information and evolving circumstances, and the ultimate resource mix that SJP 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 SJP'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 SJP's future procurement decisions. SJP, 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 Public Utilities Code Section 454.52(b)(3), this IRP will be formally submitted to the San Jacinto 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 SJP's

governing council. On September 15, 2020, the San Jacinto City Council is expected to issue a Resolution which is expected to formally approve this IRP, and adopt SJP's 46 MMT Preferred Conforming Portfolio ("46 MMT PCP") and its 38 MMT Preferred Conforming Portfolio ("38 MMT PCP"). Through the Resolution, the San Jacinto City Council will also make the following determinations regarding SJP's Preferred Conforming Portfolios ("PCPs"):

- SJP'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).
- SJP's PCPs include a diversified procurement portfolio consisting of both short-term and long-term electricity and electricity-related and demand reduction products.
- SJP's PCPs achieve the resource adequacy requirements established pursuant to Public Utilities Code Section 380.
- SJP'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.
- SJP's PCPs are compliant with all SJP 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 SJP 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 SJP successfully completed its IRP, the evolving guidance inhibited SJP's ability to achieve City Council approval of its IRP in advance of the Commission's filing date, which would have required SJP to have a completed IRP at least a month in advance of the filing deadline due to City Council noticing requirements. Therefore, SJP staff has approved this IRP, and the San Jacinto City Council is expected to formally approve this IRP on September 15, 2020.

Request for Certification

SJP 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

[2] Public Utilities Code Section 366.2(a)(5).

own rates and managing interactions with their customers.[3] Based on SJP'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 Public Utilities Code 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]

SJP 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 SJP's IRP.

b. Executive Summary

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

SJP developed its IRP through the following steps:

- SJP compiled data for its existing energy contracts, RA capacity contracts, and its share of capacity for allocated Cost Allocation Mechanism ("CAM") resources.[7]

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[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.

[7] SJP based its share of CAM resources on the most recent 2021 CAM, Reliability Must Run, and Demand Response resource allocations provided by the Commission in July 2020. This approach, while consistent with Energy Division direction, will likely ultimately indicate more RA than SJP will be responsible for procuring due in part to the creation of a Central Procurement Entity ("CPE") for local RA.

- For each IRP planning year, SJP identified its short positions relative to known planning targets and its assigned load forecast.
- SJP populated the Resource Data Template with all current contracts.
- SJP compiled detailed information on projects for which it is currently negotiating power purchase agreements, including information regarding project status and timing.
- SJP identified future contracts it expects to secure for new solar, storage, and wind generation. SJP prioritized the selection of future resources to ensure that SJP's overall portfolio of new resources is consistent with the relevant Reference System Portfolio's resource attribute/category mix, procurement timing, and SJP's proportional share of planned new procurement.
- SJP added generic future contracts with existing resources, including large hydroelectric generators, to help fill its remaining open positions.
- SJP 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 SJP's assigned share of the 46 MMT benchmark; SJP added planned purchases of additional large hydroelectric energy in sufficient volume to ensure that portfolio emissions were equal to SJP's assigned share of the 46 MMT GHG benchmark.
- SJP identified the resulting portfolio as its 46 MMT PCP.
- Using the 46 MMT PCP as a starting point, SJP replaced planned system energy purchases with additional large hydroelectric energy procurement until the portfolio reflected emissions equal to SJP's assigned share of the 38 MMT GHG benchmark.
- SJP identified the resulting portfolio as its 38 MMT PCP.
- SJP checked both its 38 MMT PCP and its 46 MMT PCP for reliability by comparing the total portfolio net qualifying capacity against SJP's RA requirements for the month of September during each year of the planning period. SJP further established that its planned incremental capacity procurement exceeded its pro rata share of the related incremental capacity procurement obligation.

SJP reached the following findings regarding its 38 MMT PCP:

- SJP's 38 MMT portfolio includes the procurement of the following new resources:
    - New hybrid resources totaling 10 MW solar/5 MW battery storage
    - New wind resources totaling 13 MW
    - New grid connected battery storage of 2 MW
    - New long duration storage of 2 MW
- SJP's 38 MMT portfolio provides for the following overall resource mix in 2030:
    - 13 MW of large hydro
    - 1 MW of Biomass

    - 3 MW of Small Hydro
    - 23 MW of Wind
    - 12 MW of Solar
    - 7 MW of Short Duration Battery Storage
    - 2 MW of Long Duration Storage
    - 43 MW of Natural Gas/Baseload/Other (capacity-only)
- SJP's 38 MMT portfolio is consistent with procurement timing, resource quantities, and general resource attributes identified in the 38 MMT RSP.
- SJP's 38 MMT portfolio would have 2030 emissions of 0.019 MMT, which is equivalent to SJP's assigned share of 2030 emissions.
- SJP's 38 MMT portfolio meets all relevant reliability metrics.
- SJP's 38 MMT portfolio provides more than SJP's load-proportional share of renewable integration resources.
- SJP'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.

SJP reached the following findings regarding its 46 MMT portfolio:

- SJP's 46 MMT portfolio includes the procurement of the following new resources:
    - New hybrid resources totaling 10 MW solar/5 MW battery storage
    - New wind resources totaling 13 MW
    - New grid connected battery storage of 2 MW
    - New long duration storage of 2 MW
- SJP's 46 MMT portfolio provides for the following overall resource mix in 2030:
    - 8 MW of large hydro
    - 1 MW of Biomass
    - 3 MW of Small Hydro
    - 23 MW of Wind
    - 12 MW of Solar
    - 7 MW of Short Duration Battery Storage
    - 2 MW of Long Duration Storage
    - 43 MW of Natural Gas/Baseload/Other (capacity-only)
- SJP's 46 MMT portfolio conforms to the procurement timing, resource quantities, and general resource attributes identified in the 46 MMT RSP.
- SJP's 46 MMT portfolio would have 2030 emissions of 0.024 MMT. This is equivalent to SJP's assigned share of 2030 emissions.

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

- SJP will periodically solicit offers for new renewable generation and storage projects. These resources are typically secured through long-term power purchase agreements. SJP expects to secure power purchase agreements for new projects in multiple solicitations conducted over the next several years.
- Periodically throughout the year, SJP will solicit offers for short-term renewable energy, resource adequacy, system energy, and other products needed to balance the portfolio and adhere to position limits established through SJP'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.
- SJP has and will continue to participate in joint-LSE solicitations to take advantage of economies of scale related to large renewable energy and battery storage projects.

II. Study Design

a. Objectives

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

1. Identify a 38 MMT portfolio with emissions equal to SJP'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 SJP'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 resource adequacy requirements established pursuant to Section 380 and provide SJP's share of system reliability and renewable integration resources.

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

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

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

b. Methodology

i. Modeling Tool(s)

In developing its planned portfolios SJP 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 SJP's currently effective risk management policies and business practices. SJP uses proprietary models to assess annual, monthly, and hourly open positions, taking account of forecasted hourly electric loads and expected deliveries from SJP's resource portfolio. SJP 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. SJP 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.[8]

For new resource selection, SJP relied upon the modeling and assumptions in the RSP as well as on SJP'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 SJP would select based on its procurement experience. Due to SJP being a very small LSE, there are certain resource types and technologies that SJP 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.

[8] Pioneer Solutions TRMTracker SaaS.

ii. Modeling Approach

Load Forecast

SJP 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"). SJP's assigned load forecast is as follows:

Table 1: SJP's 2020-2030 Load Forecast

Year	Load Forecast (GWh)
2020	159
2021	159
2022	159
2023	159
2024	160
2025	160
2026	160
2027	160
2028	161
2029	161
2030	162

Load Shape

In developing its portfolio SJP 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 SJP's total annual energy volumes for both load and load modifiers, and these energy volumes remain consistent with SJP's assigned load forecast.

Load-Proportional GHG Emissions Benchmark

SJP'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:[9]

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

Table 2: SJP'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
162	0.19%	0.024	0.019

Compiling Existing Resources

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

- Energy Contracts.
- Capacity (Resource Adequacy) Contracts.
- SJP's assigned share of capacity for CAM resources, taken from the most recent year-ahead CAM resource list available on the Commission's Resource Adequacy Compliance Materials webpage.

Selecting New Resources

To identify its new resource procurement opportunities, SJP first determined the new resource capacity it intends to add each year, which considered resource needs (open positions), long-term renewable contracting requirements, renewable portfolio standards, resource adequacy requirements, the need for incremental resource adequacy capacity to contribute to system reliability and renewable integration needs, the potential for technological improvements, and financial considerations. SJP 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

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

Calculating GHG Emissions

SJP 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 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, SJP 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. SJP is not submitting alternative portfolios.

SJP's 38 MMT PCP

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

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

In summary, to meet SJP's projected 2030 energy demand of 162 GWh, SJP has selected a 2030 38 MMT PCP composed primarily of the following resources:

- Existing solar (owned or under contract) – 2 MW
- Existing wind (planned procurement) – 9 MW
- Existing hydro (planned procurement) – 16 MW
- Existing biomass (planned procurement) – 1 MW
- New solar (future resources) – 10 MW
- New wind (future resources) - 13 MW
- New short duration storage (future resources) – 7 MW

- New long duration storage (future resources) – 2 MW

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

[redacted]

SJP's portfolio includes a mix of existing and new resources. Approximately 32 MW of SJP's 2030 portfolio is composed of new resources, reflecting SJP's role as an active player in the State's development of new renewable and storage resources. Furthermore, SJP's 2030 portfolio is comprised of a mix of resources in which SJP can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

SJP's 38 MMT PCP Is Consistent With The 38 MMT RSP

The new resources included in SJP'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."[10] 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.[11]

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

[10] D.20-03-028 at 63.

[11] *Id.*

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

Resource Type	38 MMT RSP New Resources[12]	SJP Load-Proportional Share of 38 MMT RSP New Resources	SJP's 38 MMT Portfolio
Long-Duration Storage	1,605 MW	3 MW	2 MW
Short Duration Storage (4 hours or less)	9,714 MW	18 MW	7 MW
Renewable Resources	20,274 MW	39 MW	23 MW
Hybrid Resources[13]	0 MW	0 MW	0 MW
Other Resources	222 MW	0 MW	0 MW

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

SJP's 46 MMT PCP

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

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

In summary, to meet SJP's projected 2030 load of 162 GWh, SJP has selected a 2030 46 MMT PCP composed primarily of the following resources:

- Existing solar (owned or under contract) – 2 MW
- Existing wind (planned procurement) – 9 MW

[12] D.20-03-028 at 46 (Table 8).

[13] SJP 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, SJP has allocated its planned hybrid resources between the renewable and short duration storage categories.

- Existing hydro (planned procurement) – 11 MW
- Existing biomass (planned procurement) – 1 MW
- New solar (future resources) – 10 MW
- New wind (future resources) - 13 MW
- New short duration storage (future resources) – 7 MW
- New long duration storage (future resources) – 2 MW

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

[redacted]

SJP's portfolio includes a mix of existing and new resources. Approximately 32 MW of SJP's 2030 portfolio is composed of new resources, reflecting SJP's role as an active contributor to the State's development of new renewable and storage resources. Furthermore, SJP's 2030 portfolio is comprised of a mix of resources in which SJP can minimize customer rate impacts while still achieving the State's GHG-reduction targets.

As demonstrated in the following table, SJP's 46 MMT PCP is generally consistent with SJP'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[14]	SJP Proportional Share of 46 MMT RSP New Resources	SJP's 46 MMT PCP
Long-Duration Storage	973 MW	2 MW	2 MW
Short Duration Storage (4 hours or less)	8,873 MW	17 MW	7 MW
Renewable Resources	14,460 MW	27 MW	23 MW
Hybrid Resources[15]	0 MW	0 MW	0 MW
Other Resources	222 MW	0 MW	0 MW

SJP's proportional share of the 46 MMT RSP New Resources and the resources reflected in SJP's 46 MMT Portfolio are relatively aligned; however, SJP's 46 MMT Portfolio reflects a lower level

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

[15] SJP interprets the category "hybrid resources" as including generation resources that are capable of reliably dispatching to meet late-afternoon peak load. This would include biogas generation, combined solar and storage, and geothermal.

of new resource procurement due to SJP's small size and related cost/rate considerations while still ensuring SJP meets its prescribed portfolio targets.

SJP'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 to collectively procure a total of 3,300 MW of incremental system capacity by 2023, with specific procurement obligations allocated to each LSE. As part of SJP's contribution to system reliability and renewable integration needs, SJP has committed to self-providing its assigned share of the identified system capacity need.

SJP's assigned share of the system capacity need is 2.8 MW,[16] 50% of which must be online by August 1, 2021, 75% of which must be online by August 1, 2022, and 100% of which must be online by August 1, 2023.

On February 18, 2020, SJP notified the Commission of its intent to self-provide its share of this requirement.[17] In IRP-filing years, D.19-11-016 further requires LSEs to include an update on incremental procurement activities in their biennial IRPs, including contract and resource information and an attestation of compliance by a senior executive.[18] This formal attestation is being submitted as part of SJP's IRP filing.

Incremental Procurement Progress Report

SJP has executed agreements that will satisfy SJP's 2021 incremental capacity requirements and also contribute towards SJP's open position for its 2022 and 2023 tranches of resource adequacy procurement. As of the date of this submission, SJP has approximately 4.26 MW of September Net Qualifying Capacity under contract, which exceeds the prescribed 2.8 MW total.

SJP's completed and planned capacity procurement towards its D.19-11-016 requirement is reflected in SJP's 38 MMT and 46 MMT Resource Data Templates. SJP also provides a narrative description of specific incremental procurement efforts below.

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[16] D.19-11-016, Ordering Paragraph ("OP") 3.

[17] *San Jacinto Power's February 15, 2020 Integrated Procurement Planning Progress Report Pursuant to Decision 19-11-016 Adopted in Rulemaking 16-02-007*, filed February 18, 2020.

[18] D.19-11-016 at 85 (OP 13) ("All load serving entities serving load as of May 1 of every year beginning in 2020 shall provide the Commission staff with a data response detailing contract and resource information, to allow the Commission and stakeholders to monitor progress about system reliability and renewable integration. In years where an individual integrated resource plan (IRP) is required by Decision (D.) 18-02-018 to be filed, the same information shall be included in each LSE's individual IRP.").

Sutter Energy Center

On March 10, 2020, SJP executed a *Master Power Purchase and Sale Agreement Confirmation Letter* with Calpine Energy Services, L.P. ("Calpine") for 1.4 MW of capacity from the Sutter Energy Center in 2021, 1.4 MW in 2022 and 1.4 MW in 2023. The period for this agreement begins on January 1, 2021 and continues through December 31, 2023. D.19-11-016 defines the Sutter Energy Center as an incremental capacity resource.[19] Although located outside of the CAISO balancing authority, D.19-11-016 also indicates the Sutter Energy Center is not an import for purposes of the capacity procurement ordered by the decision[20] and thus not subject to D.19-11-016's 20% limitation on import resources. SJP's agreement with Calpine is also consistent with D.19-11-016's requirement that contractual commitments utilizing existing resources must "stay in place at least through the end of the resource adequacy summer months of 2023."[21]

The Sutter Energy Center has received final regulatory approvals from CAISO and the Federal Energy Regulatory Commission ("FERC") and is therefore on schedule to be online by January 1, 2021 pursuant to its obligations under the noted resource adequacy supply agreement with SJP. SJP's agreement with Calpine satisfies SJP's 2021 requirements and represents approximately 50% of SJP's total procurement requirement.

The Sutter Energy Center is represented in both the 46 MMT and 38 MMT Resource Data Templates as incremental capacity (please refer to the "Unique_Contracts" tab of SJP's Resource Data Templates).

Voyager Wind IV Expansion

On December 20, 2019, SJP executed a *Power Purchase and Sale Agreement* with Voyager Wind IV Expansion, LLC ("Voyager IV Wind project"). This 12-year power purchase agreement ("PPA") relates to a new-build wind energy project located in Kern County, California. SJP's portion of the project has a nameplate capacity of 5.76 MW, with a September Net Qualifying Capacity of approximately 0.86 MW. This resource is a new grid resource that is not included on the baseline resource list adopted in Rulemaking 16-02-007.[22] Thus, the Voyager IV Wind project is eligible to count towards SJP's assigned 2.8 MW of incremental system resource capacity.

The guaranteed commercial operation date ("COD") is January 1, 2021, which is in advance of the 2021 procurement deadline defined in D.19-11-016.

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19 D.19-11-016, OP 6.

20 D.19-11-016, OP 6.

21 D.19-11-016 at 47.

22 *See Administrative Law Judge's Ruling Finalizing Baseline for Purposes of Procurement Required by Decision 19-11-016*, filed January 3, 2020, Rulemaking 16-02-007.

The Voyager IV Wind project is represented in both the 46 MMT and 38 MMT Resource Data Templates as incremental capacity (please refer to the "Unique_Contracts" tab of SJP's Resource Data Templates).

Black Walnut Energy Storage

On March 25, 2020, SJP executed an *Energy Storage Resource Adequacy Agreement* with Black Walnut Energy Storage, LLC ("Black Walnut"). This 10-year PPA is for a new-build, standalone four-hour duration lithium ion battery project located in Santa Paula, California. SJP's portion of the project has a nameplate capacity of 2 MW, with a September Net Qualifying Capacity of approximately 2 MW. This resource is a new grid resource that is not included on the baseline resource list adopted in Rulemaking 16-02-007.[23] Thus, Black Walnut is eligible to count towards SJP's assigned 2.8 MW of incremental system resource capacity.

The guaranteed COD is June 1, 2022, which is in advance of the 2022 procurement deadline defined in D.19-11-016.

Black Walnut is represented in both the 46 MMT and 38 MMT Resource Data Templates as incremental capacity (please refer to the "Unique_Contracts" tab of SJP's Resource Data Templates).

b. Preferred Conforming Portfolios

38 MMT PCP

As demonstrated in Attachment A to SJP's IRP, SJP'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), SJP'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.

[23] *See Administrative Law Judge's Ruling Finalizing Baseline for Purposes of Procurement Required by Decision 19-11-016*, filed January 3, 2020, Rulemaking 16-02-007.

GHG Reduction Goals

SJP'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 SJP's 38 MMT PCP are equivalent to SJP's load-proportional share of the 38 MMT emissions benchmark. SJP's proportional share of the 38 MMT benchmark is 0.019 MMT. According to the Commission's emissions calculator, SJP's 38 MMT PCP would account for 0.019 MMT in 2030 emissions, equaling the reductions benchmark of 0.019 MMT.

Renewable Energy

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

Minimizing Bill Impact

SJP'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.

SJP'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.

SJP prioritizes cost competitiveness, reliability, use of renewable energy and local resource development. SJP 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 resource adequacy products, and provides limited dispatchability for the solar generation, minimizing the risk of energy value degradation over time. Further, SJP'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

SJP'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 resource adequacy requirements as detailed in Section III.f. SJP will meet its local resource

adequacy requirements until such time as the central procurement entity takes on this responsibility pursuant to D.20-06-002. Some of the planned capacity-only contracts in SJP's 38 MMT PCP will be displaced by local resource adequacy procured by the central procurement entity. However, adoption of the central procurement entity construct is a recent development, and the details of its planned procurement are not yet known. To ensure there are no reliability gaps in SJP's 38 MMT PCP, and pursuant to Energy Division Guidance, SJP'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 SJP will be responsible for procuring. Thus, SJP provides this information with the understanding that its RA positions will be reduced by any future CAM allocations.

Demand-Side Energy Management

SJP'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. SJP continues to explore and pursue demand-side management programs such as demand response, energy efficiency, and behind the meter energy storage solutions. SJP is hopeful that some of these solutions will become more cost competitive over time so that a small LSE, such as SJP, can deploy solutions that deliver value to SJP's customers (on a cost-effective basis) as well as to the California grid.

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

SJP'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. SJP'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. SJP's 38 MMT portfolio minimizes SJP'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 SJP's 38 MMT portfolio in 2030:

- NOx: 5 tonnes/year
- PM 2.5: 2 tonnes/year
- SO2: 1 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 SJP portfolio by the CSP tool. In evaluating new

biomass resources, SJP will prioritize development outside of DACs to the greatest practical extent.

46 MMT PCP

As demonstrated in Attachment B to SJP's IRP, SJP'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), SJP'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

SJP's 46 MMT PCP achieves emissions *equal to* SJP's proportional share of the 46 MMT benchmark. SJP's Proportional Share of the 46 MMT benchmark is 0.024 MMT. According to the Commission's emissions calculator, SJP's 46 MMT portfolio would account for 0.024 MMT in 2030 emissions, an amount equivalent to the stated benchmark.

Renewable Energy

SJP'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 SJP's 46 MMT portfolio would consist of 60% eligible renewable generation, which meaningfully exceeds the 50% target.

Minimizing Bill Impact

SJP'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. SJP'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.

SJP'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.

SJP prioritizes cost competitiveness, reliability, use of renewable energy and local resource development. SJP 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 resource adequacy products and providing limited dispatchability for the solar generation itself, which minimizes the risk of energy value degradation over time. Further, SJP'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

SJP'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 resource adequacy requirements as detailed in Section III.f. SJP will meet its local resource adequacy requirements until such time as the central procurement entity takes on this responsibility pursuant to D.20-06-002. Some of the planned capacity-only contracts in SJP's 46 MMT PCP will be displaced by local resource adequacy procured by the central procurement entity. However, adoption of the central procurement entity construct is a recent development, and the details of its planned procurement are not yet known. To ensure there are no reliability gaps in SJP's 46 MMT PCP, and pursuant to Energy Division Guidance, SJP'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 SJP's expected obligations. Thus, SJP provides this information with the understanding that its RA positions will be reduced by any future CAM allocations.

Demand-Side Energy Management

SJP'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. SJP continues to explore and pursue demand-side management programs such as demand response, energy efficiency, and behind the meter energy storage solutions. SJP is hopeful that some of these solutions will become more cost competitive over time so that a small LSE, such as SJP, can deploy solutions that deliver value (on a cost-effective basis) to SJP's customers as well as to the California grid.

Minimizing Localized Air Pollutants With Emphasis on DACs

SJP'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. SJP'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. SJP's 46 MMT portfolio minimizes SJP'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 SJP's 46 MMT portfolio in 2030:

- NOx: 6 tonnes/year
- PM 2.5: 2 tonnes/year
- SO2: 1 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 SJP portfolio by the CSP tool. In evaluating new biomass resources, SJP will prioritize development outside of DACs to the greatest practical extent.

c. GHG Emissions Results

SJP used its load-based proportional share of the 38 and 46 MMT benchmark to determine the emissions compliance for its 38 MMT PCP and its 46 MMT PCP. SJP's assigned load-proportional share of the 38 MMT benchmark is 0.019 MMT. Based on the 38 MMT version of the CSP calculator, SJP's 38 MMT portfolio would result in total 2030 GHG emissions of 0.019 MMT, equivalent to SJP's assigned share of the 38 MMT GHG reduction benchmark.

SJP's assigned load-proportional share of the 46 MMT benchmark is 0.024 MMT. Based on the 46 MMT version of the CSP calculator, SJP's 46 MMT portfolio would result in total 2030 GHG emissions of 0.024 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 SJP's 38 MMT portfolio:

- NOx: 5 tonnes/year

- PM 2.5: 2 tonnes/year
- SO2: 1 tonnes/year

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

- NOx: 6 tonnes/year
- PM 2.5: 2 tonnes/year
- SO2: 1 tonnes/year

ii. Focus on Disadvantaged Communities

SJP's IRP is consistent with the goal of minimizing local air pollutants, with early priority on DACs. As identified in CalEnviroScreen 3.0, SJP serves the following Disadvantaged Communities:

Table 5: Disadvantaged Communities Information

Census Tract	City, County, Zip	Population	CCA Customer Accounts
6065043517	San Jacinto, Riverside, 92582	6,815	1,981

In total, SJP serves 1,981 customer accounts located within DACs. This is approximately 14% percent of SJP's total customer base (14,150 customers).

SJP 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, SJP considered the impact of its resource procurement on DACs. All of the new resources SJP plans to develop are renewable or storage with no expected local emission impacts.

e. Cost and Rate Analysis

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

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

In general, SJP sought to balance the need to procure resources with cost-related impacts. In particular, SJP appreciates the lead time required to meet SJP'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. SJP also recognizes that future resource costs are highly uncertain, and

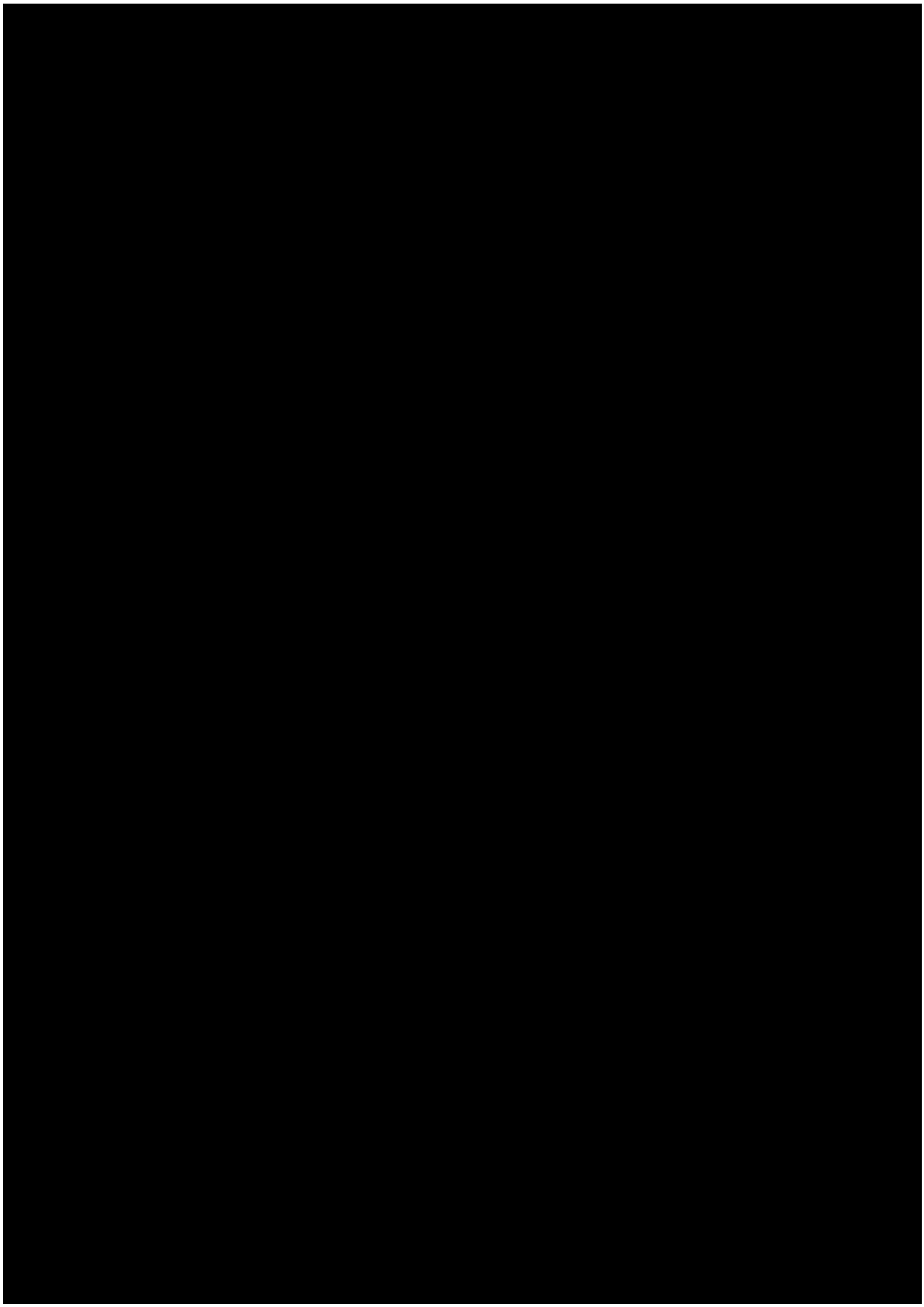
technological advancement can happen unexpectedly; SJP's procurement cycle is designed to take advantage of technological and cost improvements by incrementally adding new resource commitments over time.

SJP's PCPs take advantage of the rapidly falling cost of solar, wind, and battery storage resources. SJP'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 SJP 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 SJP's 38 MMT PCP and its 46 MMT PCP are expected to be reliable and will contribute SJP's fair share to system reliability needs.

The effective capacity of SJP'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 net qualifying capacity for the month of September is shown for each year in the following table:

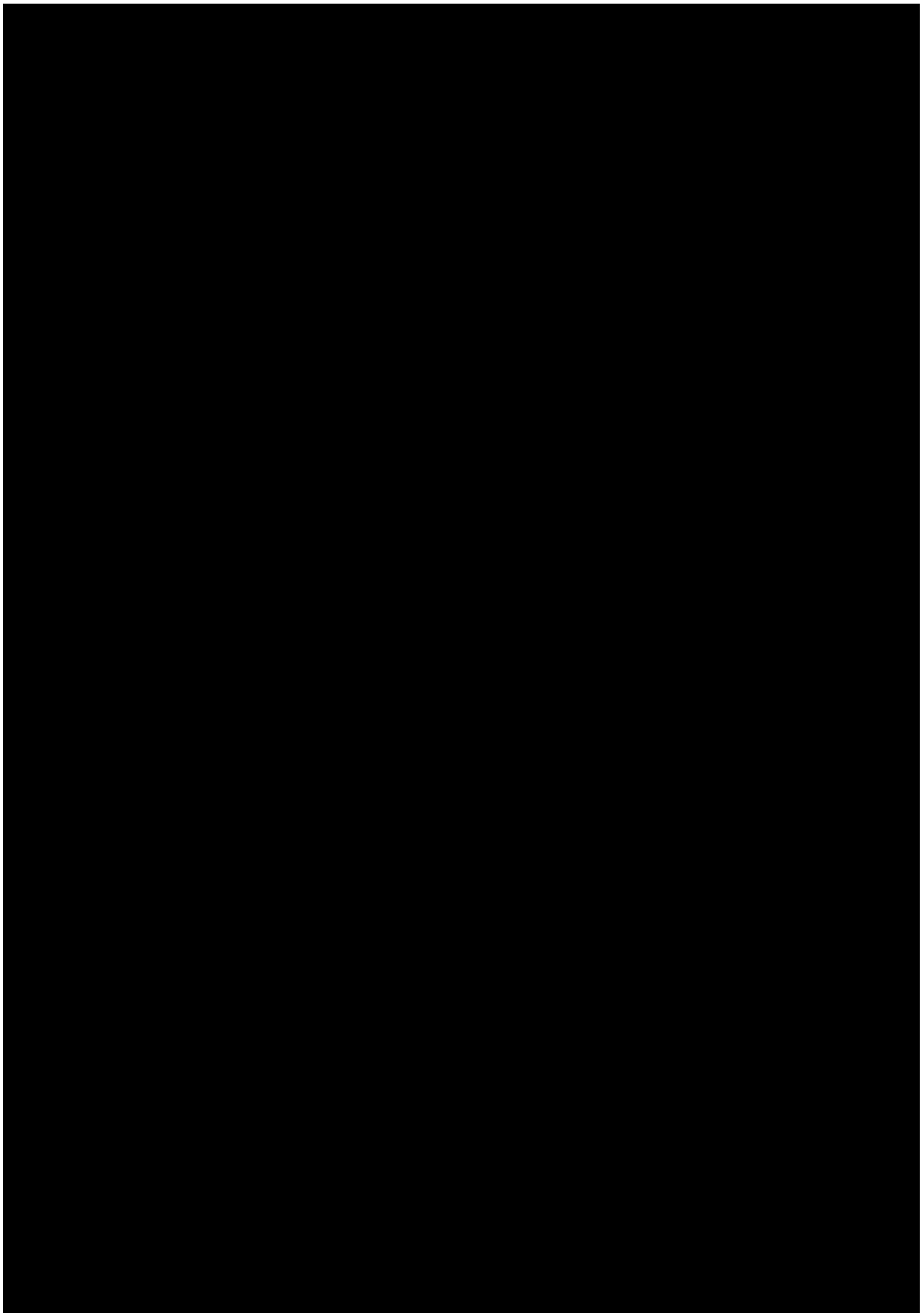


[redacted]

This balanced portfolio of flexible capacity works to effectively and reliably integrate a renewables-heavy portfolio, thus exceeding SJP's share of any system-wide renewable integration resource requirements.

The effective capacity of SJP'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 net qualifying capacity for the month of September is shown for each year in the following table:

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



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

g. Hydro Generation Risk Management

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

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

Table 6: Proportionate Share of RSP Hydroelectric Generation

Hydro Resource	38 and 46 MMT RSP MW	SJP Proportionate Share	SJP 46 MMT PCP	SJP 38 MMT PCP
CAISO Hydro	7,070	13	6	9
Hydro Imports	2,852	5	2	4

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. SJP has 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. SJP understands that the transmission projects needed to connect OOS Wind to the CAISO grid require significant lead-times; however, SJP is currently in discussions with OOS Wind developers that are also building and securing the transmission needed to deliver necessary wind energy directly to California. Therefore, SJP has reflected OOS Wind in both of its portfolios.

j. Transmission Development

In identifying resource locations for all portfolios, SJP was guided by the following considerations:

- SJP has a general preference for resources located within its service area and the community it serves, but more generally, within Southern California.
- SJP prefers projects located in areas that can utilize existing transmission infrastructure with minimal upgrade/modification costs.
- SJP 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, SJP is not a transmission and distribution ("T&D") system operator. SJP does not enjoy the benefits of a granular knowledge of Southern California Edison Company's ("SCE") T&D system, and SJP is not in the best position to identify optimal resource locations. In practice, SJP relies on project developers to conduct the research and technical studies necessary for siting potential generation projects. SJP 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, SJP 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 SJP's future solicitation processes.

As discussed in prior sections, SJP is a small LSE that is very nimble in administering pertinent resource planning processes. More specifically, if SJP'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 SJP would ultimately locate and contract for alternative resources that fall in preferred locations.

IV. Action Plan

a. Proposed Activities

SJP has a well-established procurement process that it will use to steadily achieve its PCP over the next ten years (i.e., by 2030). SJP'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 SJP'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 SJP 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 SJP.

b. Procurement Activities

SJP has a well-established procurement process that it will use to steadily achieve its IRP and associated portfolio over the next ten years. SJP'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 SJP's risk management policies.
- Conduct one or more competitive solicitations for new renewable and hydroelectric resources with planned online dates before 2026.
- Manage existing development contract for four-hour duration battery storage project to ensure expected commercial operation date is timely achieved.

- Manage existing development contract for new wind project to ensure expected commercial operation date is timely achieved.
- 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 SJP's supply portfolio to achieve SJP's policy objectives and ensure compliance with all pertinent regulatory requirements.

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

SJP 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 SJP engages the market and pursues related procurement activities.

A key component of this process relates to the analysis and consideration of SJP'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. SJP monitors its open positions separately for each renewable generating technology, conventional resources, and its aggregate supply portfolio. SJP 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

SJP has identified the following market, regulatory, financial, and other barriers/risks that may impede SJP'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 SJP'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 SJP's compliance obligations.
- Changes to the RA Qualifying Capacity counting methodologies that impact existing and future RA contracts as well as how current and 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 ELCC.
- Factors that may increase SJP customer costs such as potential regulatory changes relating to the treatment of SCE generation costs and the share of costs allocated to SJP customers through the PCIA.
- The potential for reduced availability of large hydroelectric energy due to drought or increasing demand.

d. Commission Direction or Actions

SJP encourages the Commission to adopt durable rules and processes to bring greater stability to the regulatory framework within which SJP and other suppliers must plan and operate. Frequent rule changes disrupt SJP'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 SJP'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, please note that PCC1, PCC2, and PCC3 contracts are identified in column C (field name is cpuc_contract_id) in the "monthly_gwh_mw" tab of the Resource Data Templates rather than in column K (field name is notes). Additionally, PCC3 contracts are also identified in column B (field name resource) using the resource name "unbundled_rec" per the resources tab. Likewise, in order to comply with the directions to use 2020 CAM allocation static out to 2030 for simplicity, SJP used its 2020 CAM allocations for 2020 and its 2021 CAM allocations static out to 2030.

e. Diablo Canyon Power Plant Replacement

SJP 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. SJP's load ratio share of Diablo Canyon is estimated to be 2 MW, and SJP has plans to add 32 MW of new capacity, including 11 MW of (September) net qualifying capacity by 2030.

SJP urges the Commission to formalize incremental capacity procurement related to Diablo Canyon Power Plant replacement as soon as practical to ensure that LSEs, including SJP, 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

SJP 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. SJP believes that additional improvements in the data templates can be made, and SJP looks forward to further discussions with Energy Division staff in this regard. SJP's experience completing the resource data template and the CSP 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 caused 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 SJP and other LSEs. SJP requests that Energy Division staff consider whether all requested data is necessary/critically important to the IRP process, and if not, SJP respectfully requests that any/all non-critical data requirements be eliminated from future processes.

SJP 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, SJP 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
SJP 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)		9				9
Hydro (Scheduled Imports)		4				4
Biomass		1				1
Geothermal						0
Hydro (Small)		3				3
Wind		9		8		17
Out-of-State Wind on New Transmission					5	5
Solar	2				10	12
Customer Solar						0
Battery Storage				2	7	9
Pumped (long-duration) Storage						0
Shed Demand Response						0
Capacity-Only						0
Natural Gas		43	14			57
Battery Storage				2	5	7
Long Duration Storage					2	2

Attachment B
SJP 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)		6				6
Hydro (Scheduled Imports)		2				2
Biomass		1				1
Geothermal						0
Hydro (Small)		3				3
Wind		9		8		17
Out-of-State Wind on New Transmission					5	5
Solar	2				10	12
Customer Solar						0
Battery Storage				2	7	9
Pumped (long-duration) Storage						0
Shed Demand Response						0
Capacity-Only						0
Natural Gas		43	14			57
Battery Storage				2	5	7
Long Duration Storage					2	2