



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Lori Mitchell

SUBJECT: San José Clean Energy
2026 Integrated Resource
Plan

DATE: June 1, 2026

Approved

Date:

6/10/26

COUNCIL DISTRICT: Citywide

RECOMMENDATION

Adopt a resolution:

- (a) Approving San José Clean Energy's Compliant Portfolio for the California Public Utilities Commission as its Preferred Conforming Portfolio for its 2026 Integrated Resource Plan;
- (b) Approving the submission of an Alternative Portfolio for San José Clean Energy's 2026 Integrated Resource Plan to inform procurement planning under conditions of load forecast uncertainty and evolving market conditions;
- (c) Authorizing the Director of the Energy Department to finalize and submit the Compliant Portfolio and the Alternative Portfolio to the California Public Utilities Commission; and
- (d) Directing the Director of the Energy Department to submit the final Integrated Resource Plan to City Council through an informational memorandum within 30 days of the filing of the Plan.

SUMMARY AND OUTCOME

This memorandum recommends that City Council adopt a resolution approving San José Clean Energy's (SJCE) 2026 Integrated Resource Plan (IRP) for submission to the California Public Utilities Commission (CPUC) by August 10, 2026. The IRP is a long-term planning document that outlines how SJCE will meet customer electricity demand in a reliable and cost-effective manner while complying with state greenhouse gas

(GHG) reduction and clean energy requirements. City Council approval is required prior to submission.¹

SJCE's 2026 IRP includes two energy resource portfolios: 1) a CPUC Compliant Portfolio that meets all the CPUC filing requirements and serves as SJCE's required Preferred Conforming Portfolio; and 2) an Alternative Portfolio that evaluates procurement needs under more conservative load growth assumptions and helps inform procurement decisions under conditions of load forecast uncertainty. SJCE intends to scale procurement activities over time in alignment with realized load growth, evolving market conditions, and regulatory requirements. The results of these portfolios are shared at a high level in the Analysis section. A third, internal planning portfolio is also presented in this memorandum for informational purposes only.

The importance of procuring in accordance with the timing of actual load growth is highlighted by the difference in estimated costs among the portfolios modeled. ***The costs of the CPUC Compliant Portfolio with its aggressive load forecast are 70% higher than the Alternative Portfolio and 135% higher than the Internal Portfolio.*** If actual load growth through 2035 is closer to the assumptions in the Alternative Portfolio, a significant portion of the cost difference between Compliant Portfolio and Alternative Portfolio could become exposed to market recovery risk through the sale of excess positions if SJCE procures based on the CPUC Compliant portfolio.

Approval of this item will authorize SJCE to submit its IRP to the CPUC and continue refining its procurement strategy based on the results. SJCE will provide the final submitted IRP to City Council via an information memorandum within 30 days of filing. A description of the compliance documents is provided in the attachment.

BACKGROUND

The IRP process, administered by the CPUC, is California's primary framework for long-term electricity planning. Established under Senate Bill 350, the process ensures the state's electricity system meets greenhouse gas reduction targets while maintaining a safe, reliable, and cost-effective electricity supply.²

All CPUC-jurisdictional load-serving entities (LSE), including community choice aggregators (CCA) such as SJCE, must submit individual IRPs. CCAs must have their IRP submission approved by their governing boards. These plans include a Preferred Conforming Portfolio of resources designed to meet forecasted customer demand while complying with state policy requirements. The CPUC evaluates the individual IRPs

¹ Public Utilities Code § 454.52 states: 3) The plan of a community choice aggregator shall be submitted to its governing board for approval and provided to the commission for certification, consistent with paragraph (5) of subdivision (a) of Section 366.2

² [CPUC Integrated Resource Plan and Long-Term Procurement Plan webpage](#)

collectively to determine whether statewide reliability and climate goals are met and may order additional procurement if needed.

The CPUC adopts carbon emission reduction targets for the IRP to align progress towards the zero-carbon goals established in Senate Bill 100 and established by the California Air Resources Board (CARB).³ For the 2026 IRP, LSEs must demonstrate how their planned portfolios meet their proportional share of electric sector GHG targets of 25 million metric tons by 2035 and eight million metric tons by 2045.

A CPUC ruling issued January 16, 2026, established the IRP filing requirements, including assigned load forecasts and greenhouse gas emission benchmarks for the 2026-2045 planning horizon. A subsequent ruling extended the deadline to August 10, 2026.⁴ LSEs must submit at least one Compliant Portfolio (“Preferred Conforming Portfolio”) that conforms with the CPUC required inputs and assumptions. LSEs may also study and present additional alternative portfolios developed from different assumptions. While the Preferred Conforming Portfolio supports statewide planning consistency, the Alternative Portfolio evaluates local load uncertainties, affordability considerations, and procurement implementation risks.

ANALYSIS

The City Council last approved SJCE’s IRP on October 13, 2022, and 2026 represents the next required filing cycle.⁵ SJCE has achieved many of the procurement objectives developed in the 2022 IRP, including long-term agreements totaling more than one gigawatt of new resources and production trends in line with internal goals to be carbon neutral by 2030. The 2022 IRP progress has been substantially completed through the early to mid-2030s. As this memorandum demonstrates, further buildout of new resources is required in all 2026 IRP scenarios. Part of those buildouts include resources required as a result of a CPUC decision issued in February 2026 mandating new procurement.

Any remaining procurement needs from the 2022 IRP will be superseded by the 2026 IRP planning exercise. Procurement will occur in a manner that reflects load certainty while balancing reliability and emission targets. Similar to the 2022 IRP, SJCE expects actual procurement to be influenced by evolving load forecasts, technology availability, developer execution, state and federal policy, regulatory developments, supply chain constraints, interconnection timelines, and market pricing dynamics. SJCE will bring all long-term agreements to City Council for review and approval.

³ California Air Resources Board's [2022 Climate Change Scoping Plan for Achieving Carbon Neutrality](#).

⁴ [Administrative Law Judge's Ruling Correcting Table in January 16, 2026 Filing Requirements Ruling and Confirming August 10, 2026 Integrated Resource Plan Due Date](#)

⁵ Typically, Individual LSE IRP plans are submitted every two years; however the CPUC delayed the filing until 2026.

IRP Objectives

SJCE's primary objectives for its 2026 IRP were to meet the Commission's IRP requirements, identify a robust, least-cost portfolio that satisfies state greenhouse gas reduction and reliability mandates, and advance the City of San José's clean energy and carbon reduction goals.

Specifically, the modeling objectives were to:

- Develop a Preferred Conforming Portfolio that achieves the Commission assigned reliability targets and GHG benchmarks associated with SJCE's proportional share of the statewide electric sector emissions targets of 25 million metric tons by 2035 and eight million metric tons by 2045.
- Develop an Alternative Portfolio using reasonable load growth assumptions to evaluate procurement needs under conditions of load uncertainty. The Alternative Portfolio also achieves the commission assigned reliability targets and GHG benchmarks associated with SJCE's proportional share statewide electric sector emissions targets.
- Develop an internal portfolio that evaluates a path to achieving the City of San José's goal to be carbon neutral by 2030 under a minimal load growth scenario.
- Identify conforming, alternative, and internal portfolios that provide economic, reliability, environmental, and energy security benefits consistent with the objectives set forth in California Public Utilities Code Section 454.52(a)(1)(A-I).
- Ensure the portfolios meet applicable Resource Adequacy requirements pursuant to Public Utilities Code Section 380 and contribute to statewide system reliability and renewable energy integration needs.
- Ensure the portfolios maintain compliance with the state's Renewables Portfolio Standard and achieve California's statutory goal requiring zero-carbon resources to supply 100 percent of electric retail sales by 2045 under Senate Bills 100 and 1020.

SJCE intends to use the Alternative Portfolio to help inform near- and medium-term procurement decisions under conditions of forecast uncertainty, while continuing to evaluate procurement needs relative to the Preferred Conforming Portfolio as load growth materializes. This approach is intended to balance affordability, reliability, and emission reductions while minimizing the risks of stranded cost.

IRP Modeling Approach

Overview

To ensure consistent assumptions and techniques across all scenarios, the portfolio capacity expansion modeling was based on SJCE's proportional share of the CPUC statewide resource build-out. The load forecast in the CPUC Compliant Portfolio was

externally developed and assigned while the Alternative Portfolio and Internal Portfolio utilized internally developed forecasts.

To calculate the statewide resource buildout the CPUC utilizes the RESOLVE model, a publicly available and vetted planning tool. Over a long-term planning horizon this tool identifies optimal new candidate resources and the economic retention of existing resources to meet GHG emission targets and reliability needs at least cost. The tool ensures compliance with state emission targets, renewable portfolio standards and reliability needs while minimizing total system costs.

Portfolio costs were simulated using the Ascend PowerSimm model. This model incorporated a stochastic production cost analysis to estimate total portfolio costs based on hourly operations, dispatch, and system variability such as weather, demand, and resource performance.

Finally, the portfolio outcomes were tested to ensure they met reliability and emission targets. Emissions were evaluated using the CPUC's Clean System Power tool, which applies standardized emissions assumptions to assess each portfolio's ability to meet the carbon emission benchmarks in specified compliance years with the assumed level of load. Reliability targets were evaluated using the CPUC's Resource Data Template to ensure SJCE meets the required capacity need relative to its share of load during critical hours.

Load Forecasting

The electricity demand of City of San José is projected to increase significantly, largely driven by new large load facilities, transportation, and building electrification.⁶ While meeting the energy needs from this growth is important, the financial and stranded asset risks from underutilized investments need to be mitigated if load materializes below forecast, is delayed, or customers opt out of SJCE. Furthermore, the incremental adoption of electric vehicles and building electrification remains highly uncertain due to federal policy shifts, unpredictable consumer behavior, and supply-chain constraints. The impact this uncertainty has on planning is discussed throughout this memorandum and summarized in the IRP Procurement Considerations section.

For the CPUC Compliant Portfolio, the CPUC requires load serving entities to utilize an assigned load forecast based on the California Energy Commission's 2024 Integrated Policy Report (IEPR), which assumes aggressive growth in data centers, electric vehicle adoption rates, and building electrification. Notably, the subsequent 2025 IEPR update, as shown in Chart 1, introduced material changes by lowering near-term load projections but accelerating demand post-2032 due to shifting policy impacts on electrification and evolving large load information. To further evaluate implications of the

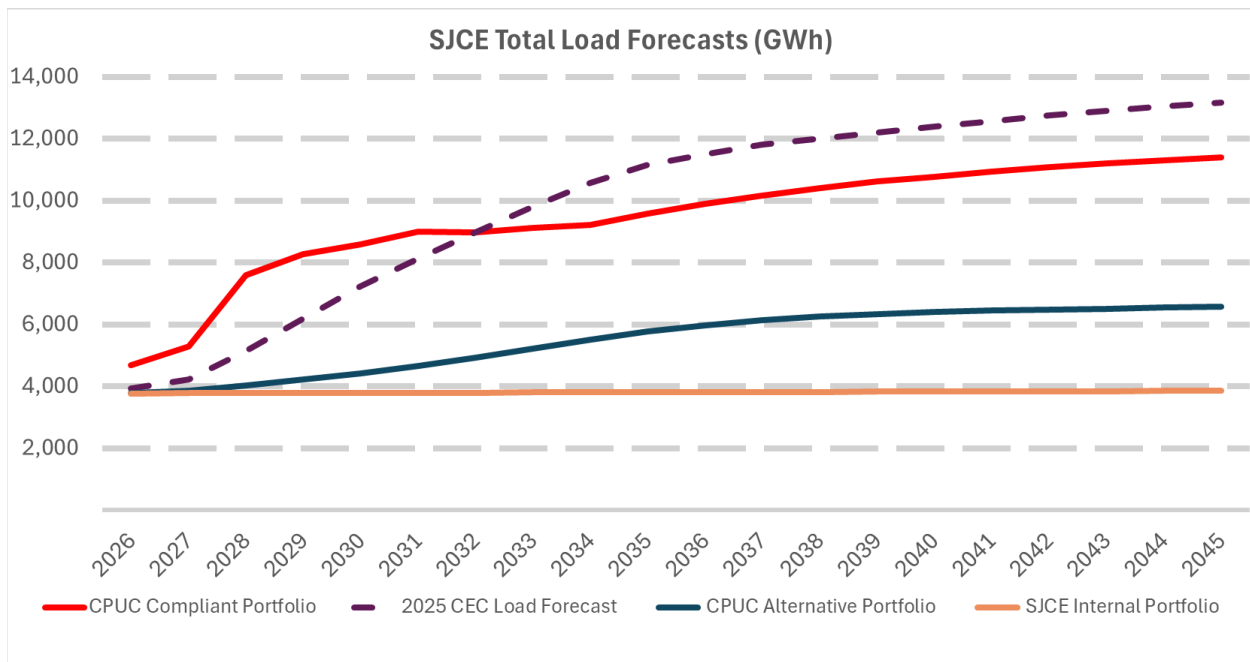
⁶ Large load facilities are sites that require a large electric demand, typically over 20 megawatts, such as data centers, electric vehicle charging facilities, and advanced manufacturing.

assigned load forecast, SJCE developed an alternative load forecast for the CPUC Alternative Portfolio by adjusting major load modifiers. For new large loads, SJCE applied probability-weighted analysis of permitting and development milestones, customer choice, and self-generation potential (i.e., behind the meter resources or pre-arranged power purchase agreements) using data from City of San José departments and customer outreach. For transportation and building electrification, forecast incorporated confidence levels to account for policy shifts, supply chain issues, and volatile equipment costs.

Lastly, to establish a lower-bound planning case, SJCE developed the Internal Portfolio using a conservative annual growth rate of 0%.

These load forecasts are illustrated in Chart 1. ***The forecasts are substantially different, highlight near-term procurement concerns, and reinforce the importance of procurement flexibility during times of load uncertainty.***

Chart 1: Modeled Portfolio, Load Forecasts (Gigawatt-Hours)



Modeling Results

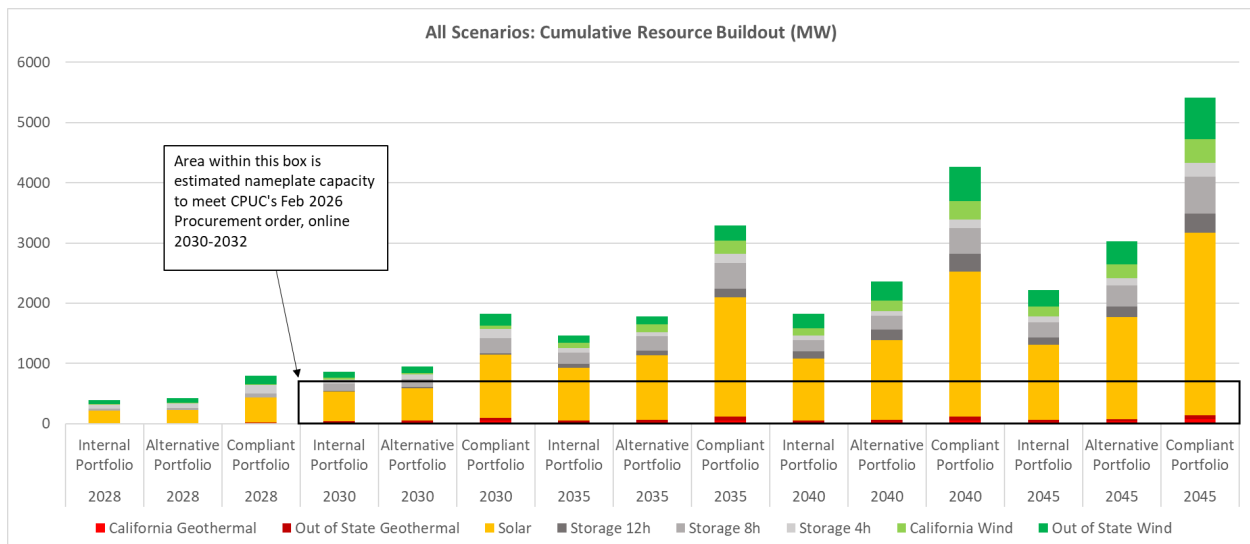
Each portfolio will be discussed with additional details in the applicable memorandum section. Table 1 represents the cumulative capacity buildout for SJCE’s CPUC Compliant Portfolio, CPUC Alternative Portfolio, and Internal Portfolio by 2045, the end of the IRP planning horizon.

Table 1: 2026 SJCE IRP Results (Megawatts (MW))

Technology	CPUC Compliant Portfolio	CPUC Alternative Portfolio	Internal Portfolio
Geothermal	120	65	55
Geothermal (Enhanced)	25	15	10
Biomass	0	0	0
In-State Wind	400	225	170
Out-of-State Wind	685	390	295
Solar	3030	1690	1330
Li-ion Battery (4-hr)	225	125	105
Li-ion Battery (8-hr)	620	340	270
Location Constrained Storage (12-hr)	315	180	135

Chart 2 below provides a comparison of the modeled scenarios' buildouts for the Compliant Portfolio, Alternative Portfolio, and Internal Portfolio:

Chart 2: Cumulative Portfolio Buildout, MW



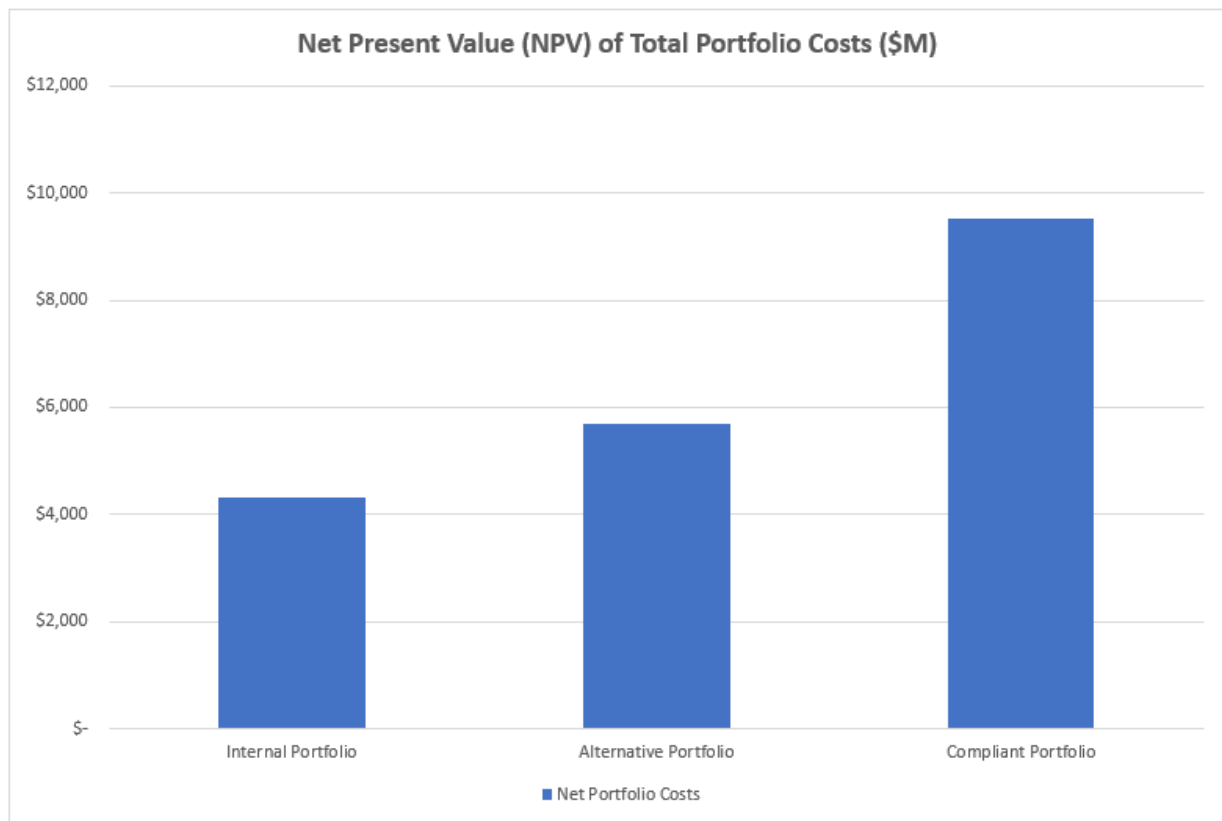
The new resource build requirements under the CPUC Compliant Portfolio are extremely aggressive and challenging given interconnection queues and resource availability. The more conservative Alternative Portfolio will also require substantial and steady development of new clean resources.

Estimated Portfolio Costs

The CPUC Compliant Portfolio is substantially more expensive than the Alternative Portfolio and the Internal Portfolio. Due to the large buildout requirements driven by the assigned load forecast, this outcome is expected.

Chart 3 represents the net present value over the 20-year planning horizon, 2026-2045, for each portfolio studied.

Chart 3: Net Present Value, Total Portfolio Cost Comparison



The cost differential between the three portfolios (costs of CPUC Compliant Portfolio are 70% and 135% higher than Alternative Portfolio and Internal Portfolio, respectively) support a phased procurement approach that aligns long-term procurement commitments with demonstrated load growth.

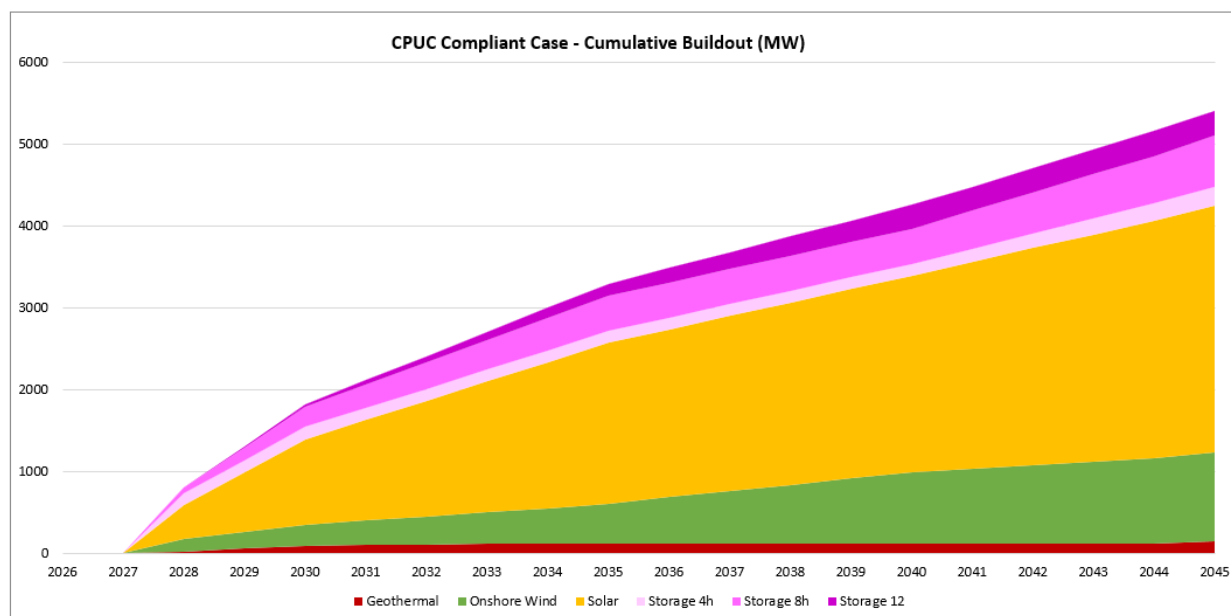
Compliant Portfolio Highlights

Consistent with CPUC requirements, SJCE prepared a CPUC Compliant Portfolio that achieves the GHG reduction targets and reliability targets using the CPUC assigned load forecast. This assigned load forecast results in an almost two-fold increase in SJCE load by 2028. As shown in Chart 4 below, the CPUC Compliant Portfolio results

in a substantial number of new resources. ***The near-term buildout results are of particular concern because they do not align with observed demand trends and reflect the uncertainty associated with forecasting future large load, electric vehicle adoption, and building electrification.***

The Compliant Portfolio is 96% renewable and 95% carbon-free in 2030, achieving 100% carbon neutrality by 2035.

Chart 4: Compliant Portfolio Total Buildout, MW



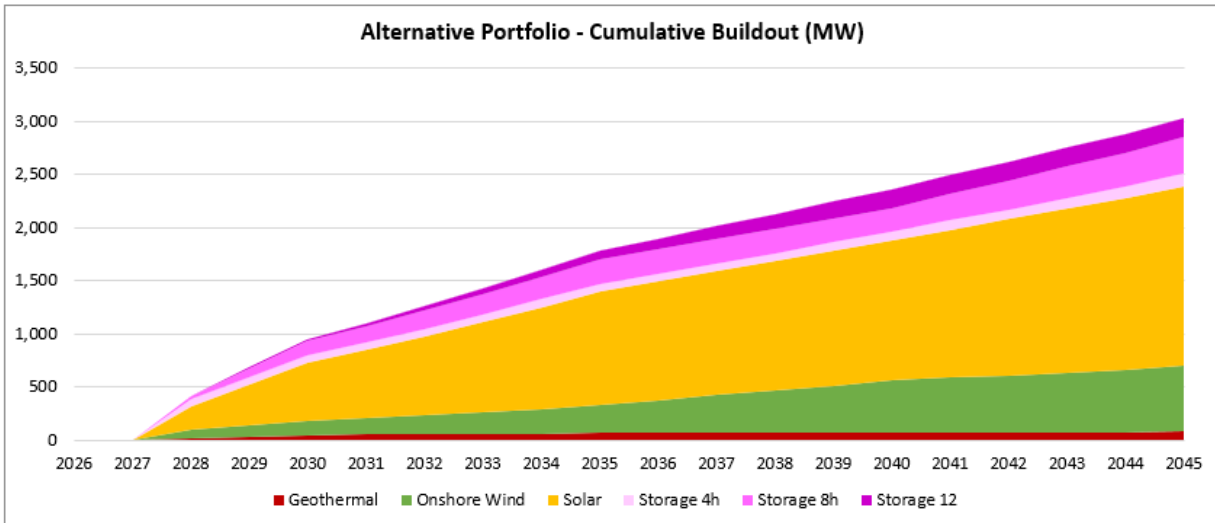
Alternative Portfolio Highlights

SJCE also prepared an Alternative Portfolio to present to the CPUC to demonstrate resource buildout projections that are driven by a reasonable load forecast to account for uncertainty in energy demand from large load, transportation, and building electrification, as shown in Chart 5 below.

While SJCE will utilize the Preferred Conforming Portfolio to evaluate procurement decisions as load growth materializes, it can use the Alternative Portfolio to help inform near- and medium-term procurement decisions under conditions of forecast uncertainty. This approach will reduce the risk of over-procurement while advancing clean energy and reliability goals.

The Alternative Portfolio exceeds 100% renewable and 100% carbon-free targets in 2029. The Alternative Portfolio builds additional renewable resources in 2029 to ensure system reliability; excess renewable energy is sold back to the California spot market.

Chart 5: Alternative Portfolio Total Buildout, MW

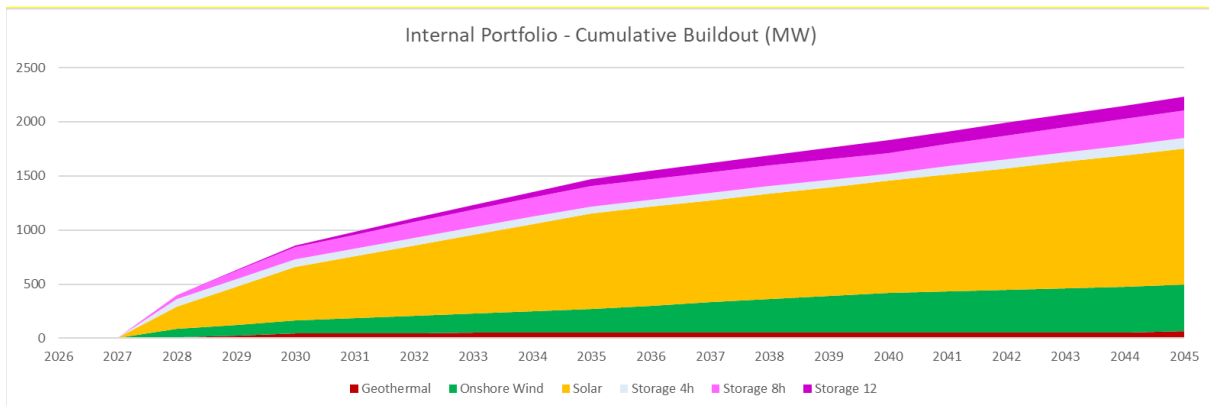


Internal Portfolio Highlights

SJCE also developed a portfolio to meet the City’s goal to be carbon neutral by 2030, assuming business-as-usual load growth scenario. This portfolio modeled existing load with a conservative annual growth rate of 0.1%. Since this forecast includes minimal growth, it represents a minimum load to be served by SJCE absent load growth, as shown in Chart 6 below.

The Internal Portfolio exceeds 100% renewable and 100% carbon-free in 2029. Similar to the Alternative Portfolio, the Internal Portfolio builds additional renewable resources in 2029 to ensure system reliability; excess renewable energy is sold back to the California spot market.

Chart 6: Internal Portfolio Total Buildout, MW



IRP Procurement Considerations

SJCE has made substantial progress toward state and City emissions reduction targets by securing more than one gigawatt of long-term resources. Since the 2022 IRP, the CPUC has issued procurement orders extending through 2032, including a February 2026 order requiring load-serving entities to procure 6,000 megawatts of new resource capacity by 2032. Based on assumptions used in these IRP exercises, SJCE estimates its share of this procurement requirement to be approximately 600 MW of new resources coming online in the 2030–2032 timeframe.⁷ For reference, SJCE has contracted for over 1,000 MW of new long-term resources since its inception in 2018, of which 934 MW have come online as of the end of May 2026.

SJCE intends to procure the volume necessary to meet compliance with the February 2026 procurement mandate, utilize the Alternative Portfolio to help inform near- and medium-term procurement decisions, and incorporate resource buildout information from the Preferred Conforming Portfolio as new load materializes. Staff recognizes that forecast data is continuing to evolve and requires the procurement of large volumes of long-term resources to meet uncertain future demand can expose customers to the costs of contracts that may ultimately not be needed.

SJCE recognizes the risk associated with both over- and under-procurement and will continue balancing long-term procurement with short- and medium-term products where appropriate. This approach helps progress carbon neutrality goals and incentivizes resource development while gaining certainty on customer choice, actual load growth, and changing market conditions.

For these reasons, a measured, flexible approach to procurement will better position SJCE to manage risks and protect ratepayers while continuing to advance City of San José carbon neutrality goals as well as California's clean energy and decarbonization goals. Accordingly, SJCE will utilize the results of these IRP exercises to inform its procurement framework and guide procurement decisions, rather than as a fixed buildout path.

2026 SJCE IRP Portfolios Submission

SJCE proposes submitting the CPUC Compliant portfolio as SJCE's Preferred Conforming Portfolio to the CPUC. SJCE also recommends submitting the Alternative Portfolio to demonstrate the importance of accounting for load uncertainty, the associated impact to portfolio costs, and the risk further procurement mandates can create.

⁷ D.26-02-057 requires SJCE to procure a total of 129 MW of "net qualifying capacity", which represents the resource's expected capacity contribution to system reliability. The NQC value of different technology types are based on a CPUC methodology and study that will be updated in July 2026.

Racial Equity Impact Analysis

Communities that have been historically marginalized often face disproportionate exposure to pollution, higher energy costs relative to income, and less access to reliable, clean energy. SJCE's IRP evaluates how its portfolios affect customer rates and affordability, while also assessing how effectively they minimize air pollution, with a priority on disadvantaged communities.⁸

SJCE's IRP portfolios are designed to identify least-cost pathways for investing in new zero-emission resources while maintaining a strong focus on affordability. In its IRP, SJCE describes potential local air pollution impacts associated with its resource mix and identifies strategies to reduce those impacts—such as investing in clean, zero-emission resources and implementing programs that support disadvantaged communities in adopting emission-free homes, vehicles, and energy services. SJCE also conducts ongoing, multi-channel outreach and engagement to ensure disadvantaged communities and environmental justice communities are informed, represented, and able to participate in program design and implementation.

Climate Smart San José Analysis

The proposed 2026 IRP Plan detailed in this memorandum is helping to advance several City climate goals by facilitating the following:

- It facilitates the reduction of energy or water use consumption or increases the demand for renewable energy.
- It facilitates the energy and water efficiency of homes or commercial buildings.
- It facilitates the choice of mobility choices other than single-occupancy, gas-powered vehicles.

EVALUATION AND FOLLOW-UP

Energy Department staff will finalize and file the 2026 SJCE IRP with the CPUC consistent with City Council direction. Staff will submit the final 2026 SJCE IRP to City Council in an informational memorandum within 30 days of the August 10, 2026 filing date.

FISCAL IMPACTS

There are no immediate fiscal impacts from approving the IRP portfolios. The new resource buildouts in the portfolios presented in this memorandum represent least-cost

⁸ To learn more about the disadvantaged communities designation, visit:

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/disadvantaged-communities>

options for SJCE to procure towards meeting its reliability, clean energy, and carbon-free targets and are estimated costs. SJCE will only incur costs when it signs power purchase agreements with new resources and City Council will review those agreements on an individual basis. Funding for power purchase agreements will be subject to the appropriation of funds.

COORDINATION

This memorandum was coordinated with the City Attorney's Office and the City Manager's Budget Office.

PUBLIC OUTREACH

This memorandum will be posted on the City Council Agenda website for the June 23, 2026 City Council meeting.

BOARD, COMMISSION, COMMITTEE RECOMMENDATION AND INPUT

Climate Advisory Commission

Staff from the Energy Department presented to the Climate Advisory Commission (CAC) on several occasions about SJCE's IRP modeling and resource portfolio development. Staff presented early internal modeling results to CAC in May 2025, submitted an informational memorandum update on CPUC schedule delays in January 2026, and most recently presented the portfolio modeling approach at its March 19, 2026 meeting.

On March 19, 2026, the CAC approved the following recommendations:

- CAC supports staff's recommendation to develop and submit a CPUC Compliant portfolio that achieves emissions proportional to SJCE's share of the 25 million metric tons target by 2035 and eight million metric tons target by 2045.
- CAC supports staff's recommendation to also develop and submit an Alternative Portfolio to help provide context surrounding the importance of load forecasting, resource diversity, and affordability.
- CAC supports staff's approach to remain flexible and adaptive as market conditions, regulatory requirements, and load forecast uncertainties evolve.
- CAC recognizes that SJCE has contracted for a significant amount of long-term renewable resources and encourages staff to continue pursuing innovative procurement strategies to address current and ongoing market challenges.

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- CAC also supports staff providing the CPUC with feedback on key issues, including load forecast uncertainty, binding procurement obligations, affordability impacts, and resource diversity.
- CAC supports staff, including estimated costs for each portfolio scenario, to provide City Council with clear information on affordability, trade-offs, and overall impacts to inform decision-making.

CEQA

Not a Project, File No. PP17-008, General Procedure and Policy Making resulting in no changes to the physical environment.

PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/

Lori Mitchell

Director, Energy Department

For questions, please contact Heather Dauler, Deputy Director, Energy Department, at heather.dauler@sanjoseca.gov.

ATTACHMENT: Description of Integrated Resource Plan Templates

Attachment: Description of Integrated Resource Plan Templates

Required Integrated Resource Plan Templates

To complete the Integrated Resource Plan (IRP) filing, a Load Serving Entity (LSE) must fully and accurately prepare three required components: the Narrative Template (NT), the Resource Data Template (RDT), and the Clean Power System (CSP) tool, following all instructions and guidance, provided on the California Public Utilities Commission (CPUC) website: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-26-irp-cycle-events-and-materials>.

A brief description of each filing component is provided:

Narrative Template (NT): This Word document provides a written description of the Load Serving Entity's (LSE) approach to fulfilling detailed CPUC IRP requirements, including a description of the methodological approach and analysis, results of the analysis, and plan of action.

Resource Data Template (RDT): This is an Excel workbook used to report existing LSE energy and capacity contracts and identify the volumes of planned energy and capacity contracts that are indicated from the LSE's IRP analysis as necessary to contribute to the 25 million metric tons greenhouse gas emissions by 2035 and 8 million metric tons by 2045 portfolio. The workbook also checks the system reliability of the LSE's portfolios. The CPUC uses this document to analyze and aggregate all individual LSE IRP portfolios submitted.

Clean System Power (CSP) Tool: This is an Excel workbook that is tied to the Resource Data Template results. The CSP is used to calculate the estimated greenhouse gas and criteria air pollutant emissions associated with the resource portfolios detailed in the Resource Data Template. This workbook calculates the CPUC determined implied emission values associated with each type of energy-generating resource and how the LSE will expect to rely on system power on an hourly basis. The CPUC uses this document to check that each LSE meets its required carbon emission benchmarks.