


SJCE OPERATIONAL UPDATE & STRATEGIC FRAMEWORK PLAN

Transportation & Environment Committee
December 6, 2021



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SAN JOSE 
CLEAN ENERGY
A Program of the City of San José



PROJECTED AND ACTUAL PERFORMANCE

Based on 2017 Business Plan Projections

KEY TAKEAWAYS FROM REPORT

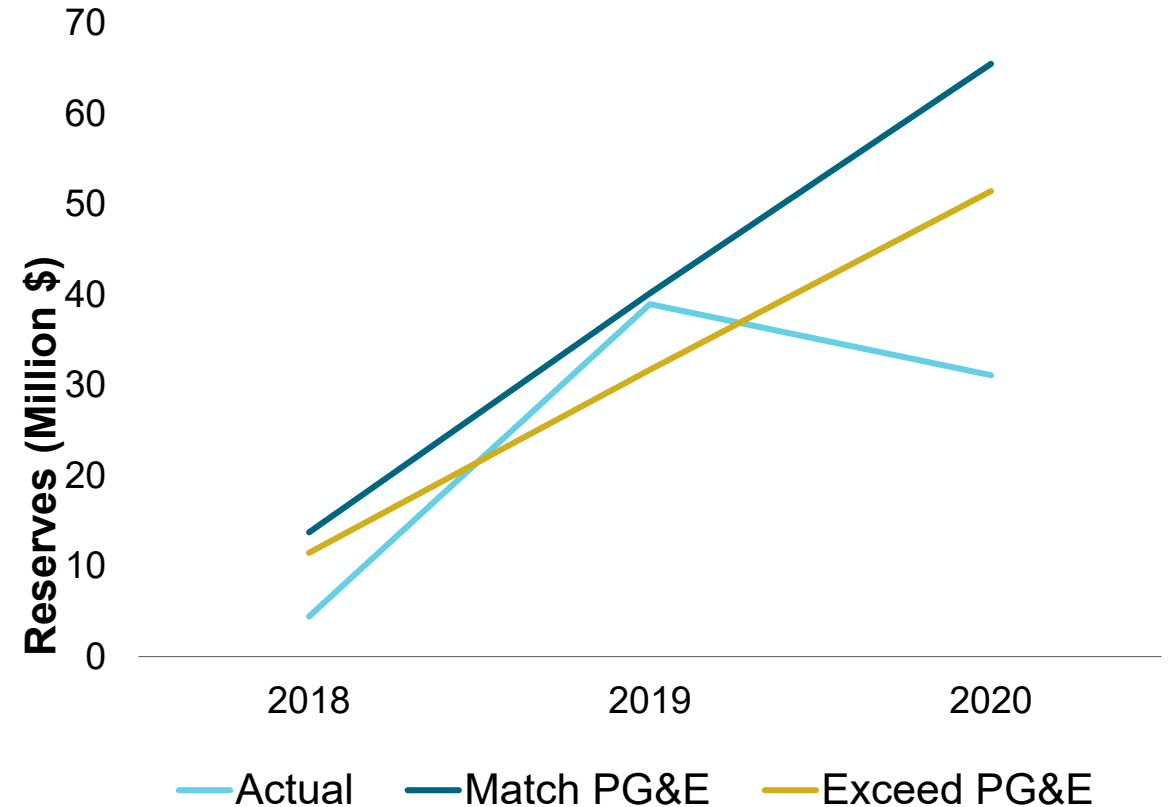
- Higher-than-expected customer participation and revenues in 2019 and 2020
- Provided more renewable power than PG&E and reduced more greenhouse gas emissions than expected
- Analysis and recommendations in the 2017 Plan were reasonable given the regulatory and market information that was available at the time
- Financial position suffered from high power supply costs and unprecedented increases in the Power Charge Indifference Adjustment (PCIA)
- In some cases, the 2017 Plan underestimated the likelihood of possible extreme outcomes
 - The Plan's worst-case scenario projected impact was less than what was realized
 - Recommends City perform more rigorous stress testing of possible risks
- Recommends SJCE add staff focused on power supply and risk management

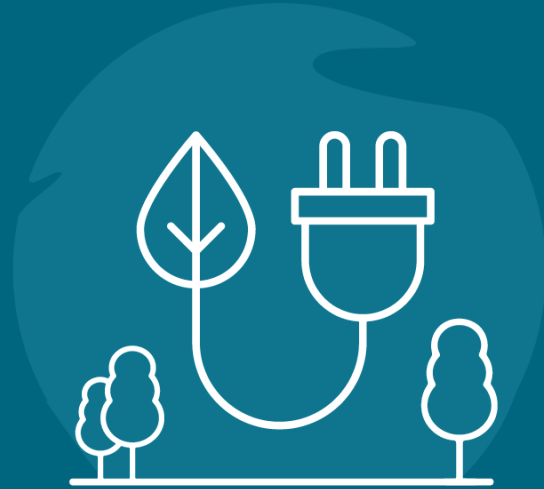
HIGH PCIA REDUCED RESERVES

Actual vs Projected PCIA for Residential E1



SJCE's Projected vs Actual Reserves



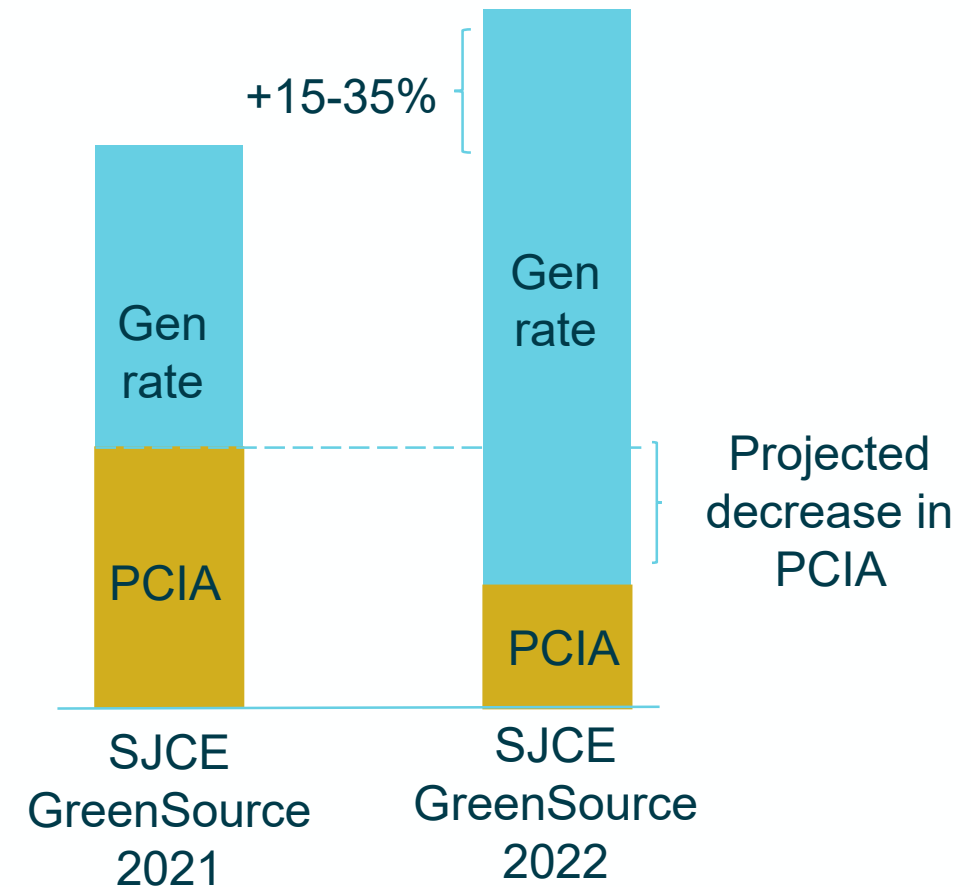


FINANCIAL OUTLOOK

For upcoming 12 months

FINANCIAL OUTLOOK 2022 LIKELY IMPROVED

- Summer 2021 had historically high prices but not higher than planned
- SJCE has borrowed \$41M from CP through October – slightly below forecast
- PG&E projected to increase generation rates, reduce PCIA in 2022
 - More clarity on final rates expected in January
- Bringing staff recommendation for 2022 rates and power mix to Council on Dec 14
 - Set interim rates for early 2022 (12% bill increase)
 - Maintain current rate structure following PG&E's rate change



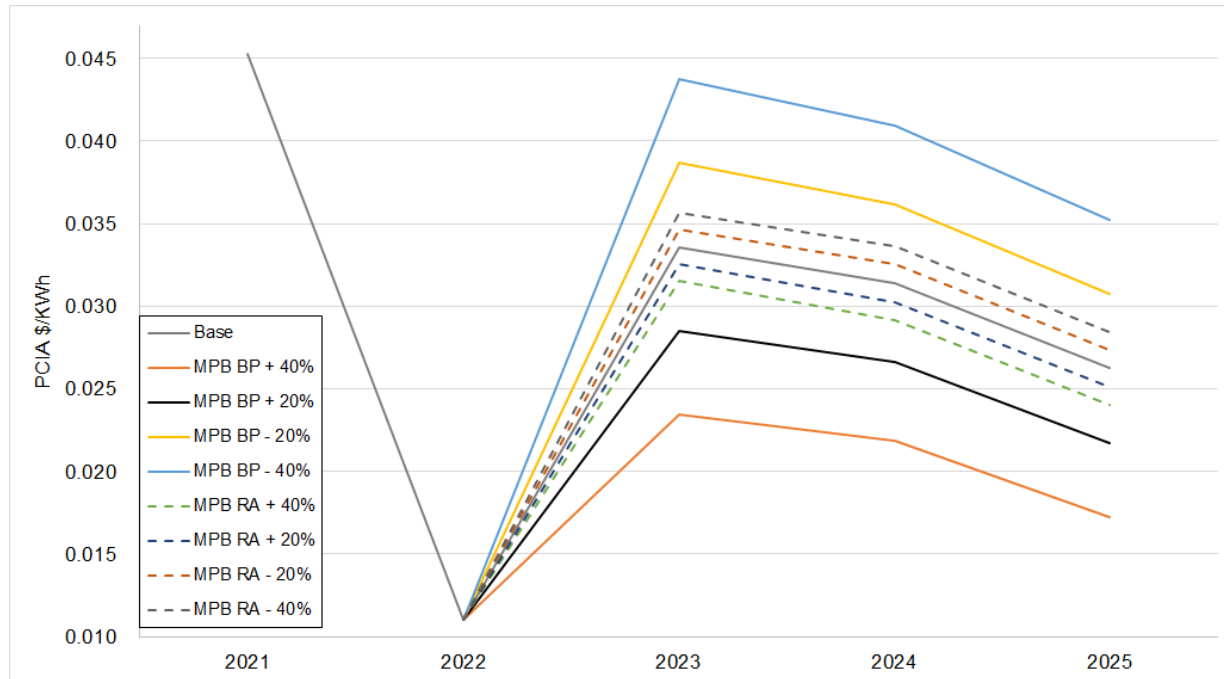


ENERGY AND INDUSTRY TRENDS

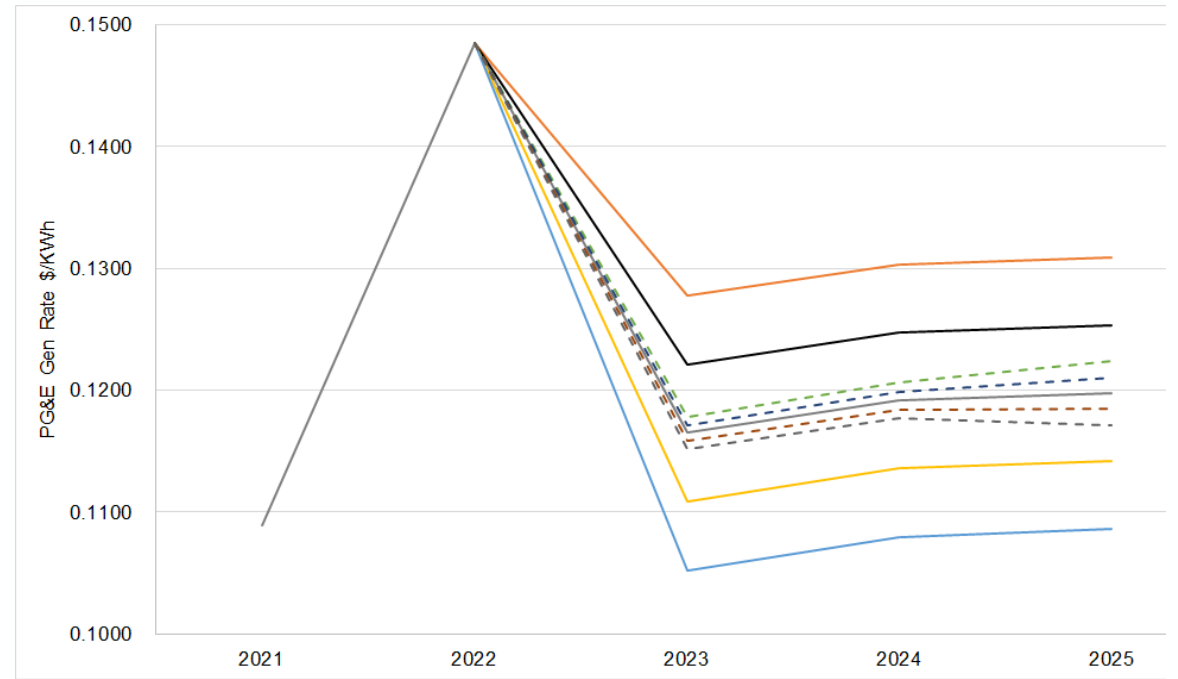
Generation, PCIA, Power Prices, Renewables

PCIA & GENERATION RATES OUTLOOK

Comparison of PCIA Projection Scenarios



Comparison of PG&E Generation Rate Projection Scenarios

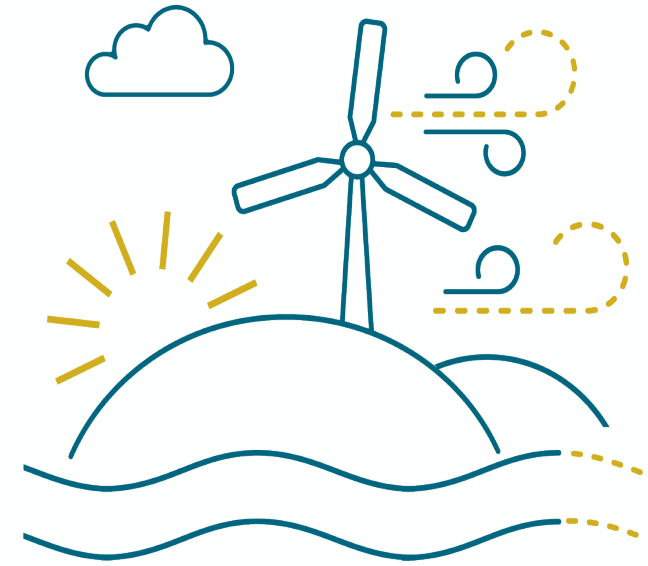


MBP BP: Market Price Benchmark for Brown Power
 MBP RA: Market Price Benchmark for Resource Adequacy

POWER MARKET TRENDS

Power prices are expected to be higher and more volatile from 2022-2025 due to:

- 4 gigawatts (GW) of natural gas is set to retire in 2023-24 (typically helps meet the evening load peak)
- PG&E's Diablo Canyon nuclear facility will shut down its two reactors, one each in 2024 and 2025
- Severe drought in the West has lowered hydropower generation, leading to more natural gas consumption for power generation in the summer, and thereby raising natural gas prices
- Increasing summer peak demand



NEW RENEWABLE & STORAGE TECHNOLOGIES

Technology	Current Trends
Lithium-Ion Batteries	<ul style="list-style-type: none">• Short and medium duration lithium-ion storage prices are expected to fall• Growth expected to surge over the next five years
Pumped Storage Hydropower	<ul style="list-style-type: none">• Currently accounts for 93% of grid storage in US; however, as costs of lithium-ion batteries fall, it may be less competitive• Siting a pumped hydro project requires overcoming multiple environmental and other hurdles
Compressed-air energy storage (CAES)	<ul style="list-style-type: none">• Use of natural formations dependent on geography• storage tanks could become competitive at longer duration
Long-Duration Batteries	<ul style="list-style-type: none">• 8-hour batteries commercially viable
Green Hydrogen	<ul style="list-style-type: none">• Another option for decarbonization; pilots underway in California



PROJECTED STRATEGIC FRAMEWORK

Clean energy, Financial stability, Organizational effectiveness

CLEAN ENERGY GOALS COMPARISON

California Investor-Owned Utilities & Munis – 100% Clean Energy Target

Entity	Target year
Pacific Power	2045
Pacific Gas & Electric (PG&E)	2045
Trinity Public Utilities District	2045
Southern California Edison	2045
Imperial Irrigation District	2045
Sacramento Municipal Utility District	2045
San Diego Gas & Electric	2045
Los Angeles Department of Water and Power (LADWP)	2035

(2045 = State Law)

Comparable CCAs

CCA Name	Target Type	Target %	Target year
Silicon Valley Clean Energy (SVCE)	Clean Energy	100	2017
Clean Power San Francisco (CPSF)	Renewable Energy	100	2025
Redwood Coast Energy Authority (RCEA)	Renewable Energy	100	2025
Valley Clean Energy (VCE)	Renewable Energy	100	2030
Central Coast Community Energy (3CE)	Renewable Energy	100	2030
East Bay Community Energy (EBCE)	Clean Energy	100	2030
San José Clean Energy (SJCE)	Clean Energy	100	2030

RECOMMENDATIONS TO ENHANCE FINANCIAL STABILITY – 1 OF 2

- Cost-of-service (COS) rates
 - Set rates aligned to underlying costs
 - Opportunity to reduce rate volatility, provide long-term value, & simplify rate classes
- Risk management approaches to address the weather-related load increases
 - Explore adding instruments such as options, other energy and weather derivatives to SJCE's portfolio, as permitted by the City's rules, regulations, and policies.
 - Using enhanced risk measurement and monitoring tools
- Load shaping strategies
 - Wide use of time-of-use (TOU) rates
 - Demand response
 - Battery storage management
 - Encouraging rooftop solar in combination with storage

RECOMMENDATIONS TO ENHANCE FINANCIAL STABILITY – 2 OF 2

- Power Procurement strategies
 - Perform more extensive scenario analyses, leveraging both historical price data as well as models of forward price curves
 - SJCE is currently working with cQuant to enhance scenario analysis capabilities
- Development of prepayment structures for long-term contracts
 - Several CCAs have formed California Community Choice Financing Authority, a Joint Powers Authority to potentially reduce procurement costs
 - Allows the entity to monetize its tax-advantaged capabilities
 - Similar structures have been used by municipal electric utilities since early 1990s

STRATEGIES TO IMPROVE ORGANIZATIONAL EFFECTIVENESS

- Improve financial monitoring and reporting
 - Document existing financial monitoring mechanisms and reporting as well as City reporting needs, then develop a hierarchy of reporting cadence from the Risk Oversight Committee (ROC) down through management and staff
 - Review the current ROC agenda topics and consider adding discussion of commodity market and credit risk on a regular basis
- Improve financial projections and modeling
 - Improve controls on inputs into the proforma model and on methodologies for key variables
 - Enhancing stress testing and scenario modeling capabilities
 - Develop robust scenario analysis capabilities
- Improve contract management process and procedures
- Increase staffing



AGREED-UPON PROCEDURES FINDINGS

FY2019-20 and FY2020-21

SUMMARY

- Independent Accountants, Macias Gini & O'Connell (MGO) performed 15 Agreed-Upon Procedures (AUP) on City of San Jose's compliance with Clean Energy Risk Management Regulations (RMR) for fiscal years 2020 and 2021.
- Findings of the Accountant's Reports have helped inform the process improvements SJCE will seek to implement.
- Findings where deviations/ insufficient documentation were noted were mostly on the same procedures for both fiscal years as the audit were completed over similar timeframes

KEY FINDINGS WITH DEVIATIONS

KEY FINDING BY AUDITOR	MANAGEMENT RESPONSE AND REMEDIAL ACTIONS
<ul style="list-style-type: none">• Minimum coverage ratios not met for specific periods• Coverage ratios not reported for certain periods	<ul style="list-style-type: none">• Some minimum ratios practically unworkable during organization start up as SJCE was building the portfolio• Actual coverage ratios vary due to many factors market conditions, weather, changes in load<ul style="list-style-type: none">➤ Spring 2020, SJCE changed strategy due to pandemic, ROC briefed summer 2020• Standard procedures on management reporting and documentation will be developed
Unable to verify CAO approval for several selected short-term power purchase agreements and confirmations	<ul style="list-style-type: none">• CAO and Outside Counsel draft and negotiate all master agreements and confirmations, but some confirmations did not include CAO's signature as to form.• Process to verify CAO's approval as to form, including signature of all short-term power purchase agreements and transactions, was initiated in December 2020.
Insufficient documentation on competitive bidding of few selected transactions	Competitive bidding was utilized, SJCE will improve procedures on documentation and centralized storage of information

QUESTIONS?

- Recommendation: accept staff summary report
- Staff
 - Lori Mitchell, Director of Community Energy
 - Zach Struyk, Assistant Director of Community Energy

