CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Office of the City Auditor

Report to the City Council
City of San José

PRELIMINARY REVIEW OF SAN JOSÉ CLEAN ENERGY: THE CITY IS DEVELOPING CONTROLS TO MANAGE RISKS

Report 17-07
October 2017

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Office of the City Auditor
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October 27, 2017

Honorable Mayor and Members
Of the City Council
200 East Santa Clara Street
San José, CA 95113

Preliminary Review of San José Clean Energy: The City Is Developing Controls to Manage Risks

On May 16, 2017, the San José City Council voted to initiate the formation of San José Clean Energy (SJCE), a Community Choice Aggregation (CCA) program. Specifically, Council directed the City Manager to bring back an ordinance, plans, and budget actions to establish a new Community Energy Department to enable the start-up of SJCE in FY 2017-18. The Council also approved a guiding framework for the program that would enable San José residents access to a "greener" mix of electricity than offered by Pacific Gas & Electric (PG&E) and allow the City to pursue future renewable energy programs and projects. The framework also called for SJCE to have minimal or no adverse impact on the City's General Fund.

The objective of this audit was to monitor the development of the CCA program for safeguards and risk management best practices, and against guidelines prepared by the California Energy Commission. It provides a preliminary review on the development of internal controls for the new department. Internal controls are processes or procedures designed to assure organizations meet their objectives related to operations, reporting, and compliance.

Finding 1: The City Is Developing Safeguards to Manage Risks. Both prior to and after the City Council's vote to form SJCE, the City has taken many of the steps necessary to establish the program. We reviewed City staff's progress toward developing internal controls in the following areas:

- Defining program objectives and start-up activities (Exhibits 4, 5, and 6)
- Establishing an organizational structure to mitigate CCA risks (Exhibit 7)
- Ensuring minimal or no adverse impact to the General Fund (Exhibit 8)
- Creating an oversight body to ensure SJCE is responsive to community needs (Exhibit 9)
- Promoting SJCE to the community to minimize opt-outs and encourage residents to opt-up to further the City's renewable goals (Exhibit 10)
- Managing and monitoring contracts (Exhibits 11 and 12)
- Policy planning (Exhibit 13)

Much work remains in the coming months to ensure that SJCE achieves its goals under the City Council's approved framework. This is a major, new line of business for the City; the Department is expected to

collect $350 million in annual revenues when fully operational. (For scale, the Airport's operating revenues for FY 2015-16 were $142 million.)

With the approval of Council, the new Director of Community Energy will need to establish an internal control structure that mitigates the risks associated with operating a CCA. This includes market risks associated with volatile energy prices, regulatory risks associated with operating in a highly regulated environment with multiple rulemaking bodies, and operational risks associated with forecasting or transaction errors.

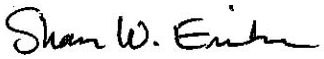
How these risks are prioritized will depend in part on how the program is implemented. Among the future actions, the internal controls outlined in this report include:

- Developing appropriate risk management policies to keep operating costs low and protect the City's General Fund;
- Developing reserve policies that allow the City to keep rates competitive with PG&E;
- Establishing an organizational structure to effectively monitor contracted services in the short term, and in the long term provide for segregation of duties across functional areas of the new department; and
- Defining the Clean Energy Community Advisory Commission's mission as well as how the City Council will continue to provide oversight over SJCE (e.g., defining performance targets and measures).

This report does not include any recommendations. We are issuing this report now so that the Council and staff have additional information as they consider and develop policies and procedures that guide future SJCE operations. We have shared information, such as risk management policies of operating CCAs, with the Administration throughout our audit, as well as in this report.

The Office of the City Auditor thanks the City Manager's Office, the Environmental Services Department, the City Attorney's Office, and all the other City departments and offices involved in the development of the San José Clean Energy program who provided their time and insight during the audit process.

Respectfully submitted,



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This report is also available online at www.sanjoseca.gov/audits.

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Introduction

The mission of the City Auditor's Office is to independently assess and report on City operations and services. The audit function is an essential element of San José's public accountability, and our audits provide the City Council, City management, and the general public with independent and objective information regarding the economy, efficiency, and effectiveness of City operations and services.

In accordance with the City Auditor's Fiscal Year (FY) 2017-18 Work Plan, we have completed a preliminary review of the San José Clean Energy program. The objective of our audit, originally proposed by the City Auditor's Office, was to monitor and conduct a review of the development of San José Clean Energy for safeguards and risk management best practices, and against guidelines prepared by the California Energy Commission.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We limited our work to those areas specified in the "Audit Objective, Scope, and Methodology" section of this report.

The Office of the City Auditor thanks the City Manager's Office, the Environmental Services Department, the City Attorney's Office, and all the other City departments and offices involved in the development of the San José Clean Energy program who provided their time and insight during the audit process.

Background

On May 16, 2017, the San José City Council voted to initiate the formation of San José Clean Energy (SJCE), a Community Choice Aggregation (CCA) program. Specifically, Council directed the City Manager to bring back an ordinance to establish a new Community Energy Department, plans, and budget actions to enable the start-up of SJCE in FY 2017-18.

With the creation of SJCE, the City will choose the source and set the retail rates for power used in the City. SJCE will become the default electricity provider for residents and businesses in San José who currently buy power through Pacific Gas & Electric (PG&E).[1] The Community Energy Department will procure energy from

[1] All current PG&E customers have the option of remaining with PG&E; however, as provided by state law, customers will be automatically enrolled in SJCE unless they affirmatively elect to opt-out.

power generators or electric service providers[2] and, to balance the City's supply with real-time demand, trade power on the California Independent System Operator's (CAISO)[3] day-ahead and spot markets. PG&E will still provide the transmission and distribution of electricity in the city, as well as handle the monthly billing process.[4]

The May 2017 vote was the culmination of a process begun in 2011 when Council directed staff in the Environmental Services Department (ESD) to study the feasibility of operating a CCA in San José. At the time, there was only one operating CCA in the state, and staff recommended that the City monitor developments due to the uncertainty of the model. In February 2016, the Administration reintroduced the CCA concept to Council, and Council directed staff to issue a Request for Proposals (RFP) to develop a business plan for a CCA.

From October 2016 to April 2017, staff held five study sessions and updates for Council, presenting the business plan and inviting representatives from local CCAs, public utilities, utilities regulators, and power generation companies to answer questions. All of this led to the May 16, 2017 Council direction to initiate formation of SJCE. In addition to the direction to bring back an ordinance, plans and budget, the Council also adopted a guiding framework for SJCE operations.

[2] An energy service provider, or ESP, is a third-party contractor that specializes in energy purchases and sales. A 'full-service' ESP provides additional services, like scheduling power with the regional transmission organization.

[3] CAISO is the regional transmission organization for most of California. It maintains access to the electric grid by tracking and scheduling energy generation and transmission to help match energy supply and demand in real-time. Though CAISO was created by state law, and the state government retains oversight of some of its decisions, it is a nonprofit public benefit corporation.

[4] This distinguishes a CCA from a municipal public utility such as those operated by the cities of Santa Clara or Palo Alto, which own, operate, and maintain distribution lines and bill residents directly.

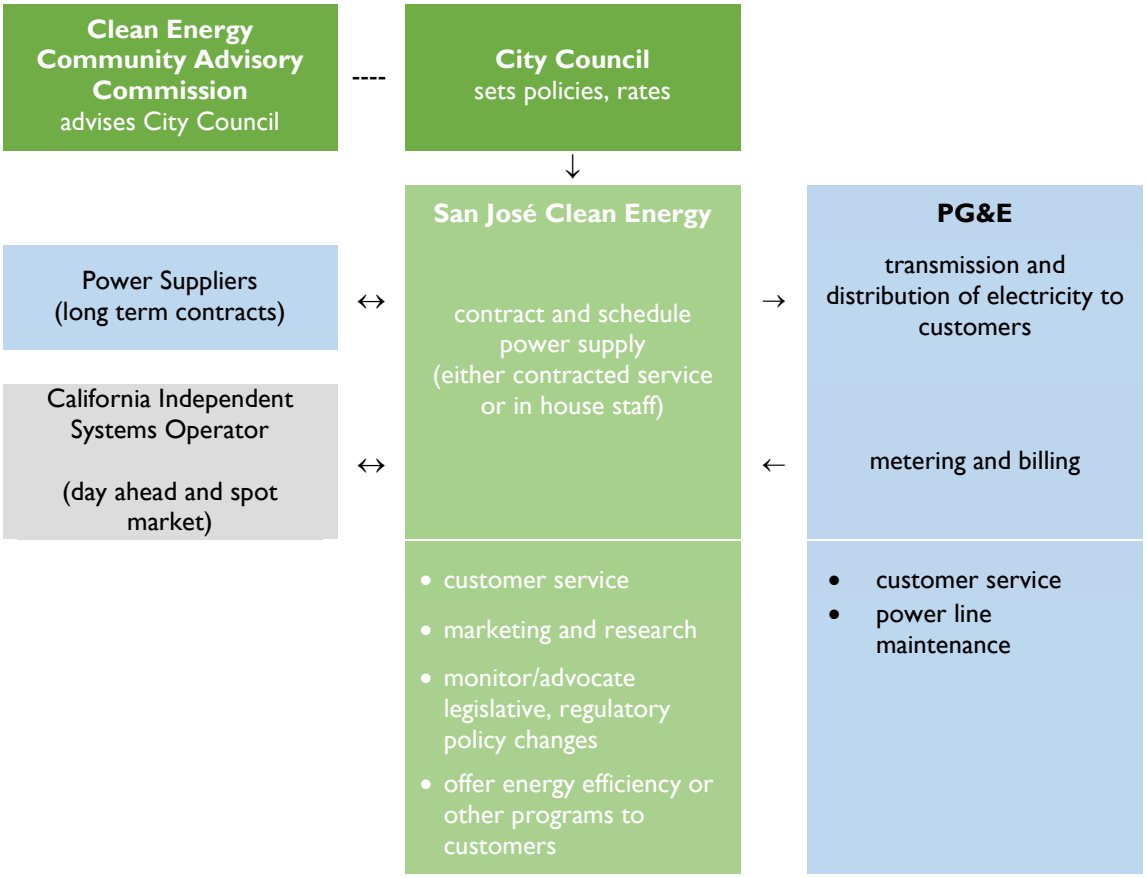
Exhibit 1: San José Clean Energy Guiding Framework

Rates	Offer at least one power mix option with a rate equal to or less than PG&E's rates
Power Mix	Offer at least one power mix option at 10 percent or more renewables than PG&E
	Offer at least one power option that is 100 percent greenhouse gas (GHG) free
Programs	Establish San José-specific renewable energy and energy efficiency programs
	Maintain, at a minimum, low-income programs at the same level as PG&E
	Develop local renewable energy projects
Community Input	Establish a community advisory committee
General Fund Impact	Minimal or no adverse impact on the City's General Fund

Source: May 16, 2017 City Council Meeting Synopsis and San José Clean Energy Community Choice Aggregation Implementation Plan and Statement of Intent

This guiding framework reflects the principal benefits of a CCA program: the ability to offer a cleaner portfolio of energy generation (e.g., wind and solar vs. natural gas or other non-renewable sources) and competitive retail prices compared to investor-owned utilities (IOUs) like PG&E. Exhibit 2 illustrates the proposed SJCE service framework.

Exhibit 2: San José Clean Energy Service Structure



Source: Auditor analysis of SJCE Business Plan and staff reports. Arrows indicate sequence of actions and decisions.

The Number of Community Choice Aggregation Programs Has Been Growing

Created in 2002 by AB 117, Section 366.2 of the CA Public Utilities Code provides the basis and requirements for public agencies to serve as CCAs.[5] CCAs can serve a single community (single jurisdiction model) or serve multiple communities where governance is shared among multiple member jurisdictions (joint powers authority (JPA) model). San José has chosen the single jurisdiction model.

Prior to forming a CCA, AB 117 requires local entities to submit an implementation plan to the California Public Utilities Commission (CPUC) for certification. The implementation plan must include information on the CCA's organizational structure, funding, rates or costs to participants, and other information about how the CCA intends to operate (see Finding 1 for more

[5] The CA Public Utilities Code was later amended with SB 790 in 2011 to expand formation of CCAs by removing barriers to forming or joining a CCA. Community choice aggregation programs are also available in Massachusetts, New York, Ohio, New Jersey, Rhode Island, and Illinois.

information required to be included in an implementation plan). The City submitted its Implementation Plan on September 18, 2017.

CCAs are also required to notify the public of (1) the terms of service for participation in the CCA and (2) the customer's ability to opt-out without penalty within 60 days of beginning automatic enrollment. The notice must include a mechanism for opting out, such as a pre-addressed postcard indicating the customer's option. The CCA is also responsible for notifying the electric utility 30 days prior to start of service. Finally, the CCA must follow CPUC audit and reporting guidelines, as well as CPUC guidelines for conservation program administration and funding.

Between 2002 and 2011, only one CCA (Marin Clean Energy) formed in the state. Later, between 2014 and 2017, seven new CCAs formed, and other jurisdictions have begun planning or considering CCA formation in their communities.

Exhibit 3: CCAs Operating in California

	SJCE*	*Marin Clean Energy*	*Sonoma Clean Power*	*Lancaster Choice Energy*	*Peninsula Clean Energy*	*CleanPowerSF*	*Silicon Valley Clean Energy*	*Apple Valley Choice Energy*	*Redwood Coast Energy Authority*
Launch	**2018**	2010	2014	2015	2016	2016	2017	2017	2017
Service Area	**City of San José**	Marin, Napa, and cities in Solano and Contra Costa Counties	Sonoma and Mendocino Counties (except Ukiah)	City of Lancaster (in Los Angeles County)	San Mateo County and all eligible cities in the County	City and County of San Francisco	Santa Clara County and most cities in the County (excepting San José, Santa Clara, Palo Alto, and Milpitas)	Town of Apple Valley (in San Bernadino County)	Humboldt County, Humbolt Bay Water District, and multiple cities within the county
Governance	**City Council**	JPA/board	JPA/board	City Council	JPA/board	SFPUC	JPA/board	Town Council	JPA/board
Board/Council Members	**11**	19	9	5	22	5	12	5	9
Staff	**TBD**	44	18	9	10	12	10	TBD	TBD
*Estimated Customers**	***300,000***	255,000	235,000	52,000	300,000	73,000	243,000	29,000	60,000
Participation Rate	**TBD**	~88%	88%	93%	99%	98% (Phase-in)	TBD	TBD	TBD
Projected 2017 Power Load (GWh)	***4,015***	2,740	2,550	595	3,800	520	2,600	235	730

* SJCE estimated customers and projected loads are 2018 estimates from the SJCE Business Plan and include all customer classes. Estimated customers for Silicon Valley Clean Energy, Apple Valley Choice Energy, and Redwood Coast Energy Authority are projections for 2017. All others are for 2016.

Source: San José Clean Energy Business Plan, California Public Utilities Commission, staff memoranda, www.cleanpowerexchange.org, and auditor review of other jurisdictions' websites and documents.

Creating and Operating a CCA Presents Inherent Risks

The City will be in competition with PG&E to maintain its customer base and remain viable. If SJCE is not price competitive and too many customers opt-out of SJCE, the City could be stranded with expensive, long-term energy contracts. Depending on the market rate of electricity and the cost of contracted power, the City may have to lay-off, or sell, excess energy at a loss. If the program fails to launch, the City could be stranded with start-up costs as well.

In order to stay cost-competitive and viable, the City will need to keep SJCE operating costs low. It will need to procure power at below-market rates, either by securing favorable long-term contracts or by developing generation projects using tax-free financing. The factors that can affect the City's competitiveness include:

- *Market risks* associated with the purchase and sale of energy. These include long-term contracts that could bind the City to a higher price than is currently available at present prices. Conversely, the City could be exposed to high prices in short-term markets to meet fluctuating demand for electricity.
- *Counterparty/credit risks*, such as the failure of customers or other parties to pay for energy delivered or power suppliers failing to deliver energy. This could also include contingent liabilities, or liabilities SJCE could incur in the event of failure of other parties to fulfill their obligations.
- *Regulatory risk* from regulatory agencies or the state legislature taking actions that hamper SJCE's ability to compete with PG&E. Regulations can affect SJCE indirectly, through increased operating costs, or directly, through fees added to ratepayers' bills.
- *Operational risk* from not effectively planning and executing departmental functions. This could occur if there is an absence or shortage of key personnel or from a failure to segregate incompatible functions within the organization, such as transaction approval, validation, closing, and reporting.

The City will also need to establish community support, satisfying customer expectations on program objectives, such as meeting renewable content goals and offering San José-specific renewable energy and energy efficiency programs.

To meet these goals, the City must implement policies and procedures to address the many varied risks at each stage of developing a new CCA program. The *Community Choice Aggregation Guide,*[6] commissioned by the California Energy Commission to assist local governments interested in establishing CCA programs, offers general recommendations on how to address some of these risks at early stages of development. Many of the practices recommended in the guidebook have been implemented by operational CCAs, which may also provide guidance. As the City moves forward implementing and operating a CCA, Council and staff should consider how these risks may affect San José in particular, and how to best tailor corresponding risk management strategies and safeguards to work within the City's guiding framework and organizational structure.

Audit Objective, Scope, and Methodology

The objective of our audit was to monitor and conduct a preliminary review of the development of San José's CCA program for safeguards and risk management best practices, and against guidelines prepared by the California Energy Commission.

[6] http://www.energy.ca.gov/2009publications/CEC-500-2009-003/CEC-500-2009-003.PDF

We performed the following to achieve our audit objective:

- Monitored interdepartmental SJCE formation team meetings to understand proposed internal controls for the new department; provided comments and input as requested (including other CCAs' risk management or other policies, power procurement best practices, etc.)
- Reviewed SJCE-related drafts, including draft memos, RFPs, ordinances, implementation plans, budgets, and Community Advisory Committee framework materials
- Reviewed the *Community Choice Aggregation Guide*, published by the California Energy Commission, to identify operational and market risks and corresponding mitigation strategies
- Reviewed best practice literature on public power procurement
- Reviewed best practice literature on mitigating regulatory risk
- Reviewed rulemaking processes to understand the City's potential for input in decisions issued by the CPUC, CEC, and CAISO
- Reviewed and monitored areas of potential regulatory change, including open CPUC rulemaking proceedings on the CCA bonding requirement, Power Charge Indifference Adjustment (PCIA) methodology, and integrated resource plan requirements
- Reviewed implementation plans, resource plans, policies, staffing, and/or budgets of eight operational CCAs: Marin Clean Energy (MCE), Lancaster Choice Energy (LCE), CleanPowerSF, Peninsula Clean Energy (PCE), Silicon Valley Clean Energy (SVCE), Sonoma Clean Power (SCP), Apple Valley Choice Energy, and Redwood Coast Energy Authority
- Reviewed risk management and other policies from two municipal utilities: Silicon Valley Power (SVP, of the City of Santa Clara) and the City of Palo Alto Utilities (CPAU)
- Interviewed staff from MCE, LCE, and CleanPowerSF to better understand programs and practices for mitigating risk
- Interviewed City staff to assess readiness to address relevant risks
- Synthesized guidelines, best practices, benchmarks, and the status of relevant City activities

Finding I The City Is Developing Safeguards to Manage Risks

Summary

In order to stay cost-competitive and viable, the City will need to keep SJCE operating costs low while satisfying customer expectations and program objectives, such as meeting renewable content goals. Both department and program structure can affect the risk of opt-outs. Departmental controls can help to minimize costs, keeping rates low and competitive. Program development under effective, public oversight helps to ensure the program is responsive to community needs, which should in turn limit opt-outs.

This report summarizes our preliminary review of San José Clean Energy for needed internal controls, safeguards and risk management best practices, and against guidelines prepared by the California Energy Commission.

Planning for SJCE Has Progressed, Following the Examples of Other CCAs

CCA programs can have high costs, such as those related to long-term power contracts that cover many years. Because of this, it is necessary to establish early that the program aligns with the community's long-term goals and has the support of the community, and that its projected costs and returns demonstrate economic feasibility. If these conditions are not met prior to implementation, it is more likely that customers will opt out of the program, potentially stranding the City with start-up costs.

Exhibit 4 shows guidance on planning objectives from the California Energy Commission, and compares how these guidelines are being operationalized by the City and other jurisdictions with CCAs. San José is well along the path to meeting those objectives.

Exhibit 4: San José Has Worked to Define Objectives, Assess Economic Feasibility, and Establish Community Support

Objective	Benchmark/Example	San José
Define community and program goals		
Define community goals and determine whether a CCA program can help meet those goals.	Several communities pursued CCAs to achieve earlier, related goals of reducing a city or region's carbon footprint. For example, Lancaster had a goal of becoming the first net-zero emission city in the country.	A staff presentation to Council described how SJCE was aligned with Envision San José 2040 General Plan and could help meet the City's Green Vision goals of creating 25,000 clean tech jobs, reducing per capita energy use by 50%, and powering the City with 100% clean, renewable energy.

Assess Economic Feasibility		
Perform financial analysis to: a) Determine what the cost will be to the CCA's customers over a period of years, based on usage data from the investor-owned utility (or IOU, such as PG&E), projected demographics, and fuel costs, b) Compare the CCA's revenue requirement to that of the IOU,[7] and c) Develop statements of income for the CCA program.	Marin Clean Energy (MCE), Peninsula Clean Energy (PCE), Silicon Valley Clean Energy (SVCE), Sonoma Clean Power (SCP), Lancaster Choice Energy (LCE), and CleanPowerSF each assessed the economic feasibility of a potential CCA with a business plan, technical study, or feasibility study. PCE and SCP had their studies peer reviewed as well.	SJCE's business plan included: • Historical data on energy use, 20-year projected resource costs, and growth projections. • A financial pro forma that calculated potential savings, revenues, operating costs, and average PG&E rates.
Test best and worst case scenarios with sensitivity tests that help put upper and lower bounds on expected financial results.[8]	CleanPowerSF used sensitivity tests (opt-out rates, customer mix, PG&E rate changes, renewable content, and power supply portfolio hedging strategy) to tailor the SFPUC's existing risk management policies to its CCA program.	Per Council request, City staff presented a worst case scenario that assumed simultaneous occurrence of unfavorable conditions (including 65% of the City's load opting out of the program) which would likely result in the dissolution of SJCE and $18 million in exposure to the General Fund.
Establish Community Support		
Secure buy-in from community stakeholders early in the investigative process.	"Serve community identified goals and local policy objectives" is a best practice of CalCCA.[9] Examples include: • SCP held public meetings to solicit feedback from the community, making targeted efforts to reach out to business interests and individuals about rate concerns. • MCE reaches out to its "Community Power Coalition" to discuss energy programs and development.	During its investigative process, San José held nine public information meetings and presented at five City Council meetings. The City Council passed the vote to proceed unanimously.

Source: Auditor benchmarking and analysis

San José Has Submitted its Implementation Plan to the CPUC

State law requires cities that establish a CCA do so by ordinance, and submit an implementation plan to the CPUC for certification. As shown in Exhibit 5, the CPUC has further requirements, including posting a surety bond that covers the return of CCA customers to the IOU in the event of program termination,[10] much

[7] "Revenue requirement" refers to the total amount that must be collected from customers in order to cover all of the CCA's costs of doing business.

[8] Possible variables for sensitivity analysis include: natural gas/power prices (±25%), PCIA (±25%), PG&E rate projections (±5%), PG&E rate design, renewable subsidies, combined operation with other communities. PCIA is the Power Charge Indifference Adjustment, a CPUC-approved fee that is designed to reimburse IOUs like PG&E for long-term power contracted on behalf of customers that switch over to a CCA. This charge is discussed more fully later in the Finding.

[9] CalCCA is an organization made up of operating CCAs in California that represents CCA interests before the state legislature and the relevant regulatory agencies.

[10] The CPUC has an open rulemaking proceeding with regard to this requirement, so it may change in the near future.

of which the City will need to do before starting operations. Not meeting these requirements could delay program implementation, which could result in higher start-up costs prior to launch and receipt of revenues. San José has submitted its Implementation Plan to the CPUC; other submittals will follow (as described in Exhibit 5).

Exhibit 5: San José Must Meet Additional CPUC Requirements

Objective	Requirements	San José
Ensure compliance with regulations surrounding start up activities		
Develop a Community Choice Implementation Plan and address other CPUC pre-roll out regulations.	The CPUC requires submission for certification of an implementation plan that includes certain elements about the proposed CCA's operations.[11]	At the August 8, 2017 meeting, the City Council approved an ordinance to establish SJCE. On August 29, it approved an implementation plan with the required elements and established a $100,000 bonding and security appropriation for the CPUC. The plan was submitted to the CPUC on September 18, 2017. **Future steps:** • Post bond or other security with CPUC • Notice PG&E when service is to begin • Development of rate comparison mailers and submission to CPUC • Prepare and send notices to customers
	The CCA must register with the CPUC and post a bond or other security to cover the cost of program default.	
	The CPUC requires the CCA notify the IOU (PG&E) when its service will begin within 30 days of start.	
	The CPUC requires the CCA fully inform all customers of their right to opt out of the CCA program and to continue receiving service as a bundled customer from the IOU.	

Source: Auditor benchmarking and analysis

The CPUC uses some of the information in the City's Implementation Plan to determine the Power Charge Indifference Adjustment (PCIA), a non-bypassable charge which will appear as a line item on CCA customers' monthly bills.[12] It also sets the start date of the CCA.

Once certified, the City may begin to roll-out service, a process which entails additional regulatory obligations, noticing customers, procuring power, transitioning accounts with PG&E, and initiating service. As shown in Exhibit 6, CCAs have reduced risks associated with roll-out by starting with a small number

[11] Implementation plans are to include the following elements: program structure, organization, operations, and funding; a system for rate setting, provisions for disclosure in setting rates and allocating costs among participants; methods for entering and terminating agreements with other entities; rights and responsibilities of program participants; and a description of third-party suppliers. The plan must also be accompanied by a statement of intent, which discusses how the CCA will address universal access, reliability, customer class equity, and other requirements established by state law or the CPUC. The plan must also be adopted at a public meeting of the jurisdiction(s) forming the CCA. The CPUC must respond within 90 days of submission by a prospective CCA.

[12] State law requires the CPUC to develop a cost-recovery mechanism to reimburse IOUs like PG&E for the long-term power contracts that they had already entered on behalf of customers that later switched over to a CCA. To this end, the CPUC created the PCIA; however, neither IOUs nor CCAs thought the PCIA fair, so the CPUC is considering changes to the methodology.

of accounts and phasing in service gradually. Recently, some CCAs have been able to ramp up service faster than anticipated, based on updated risk assessments and projected cash flow. San Jose's flexible Implementation Plan follows that model.

Exhibit 6: CCAs Commonly Phase-In Service to Mitigate Implementation Risk

Objective	Example	San José
Reduce risks associated with limited operational experience at roll out		
Consider planning to phase-in service with a pilot. *(Note: The CPUC requires that a phased-in program be described in the implementation plan.)*	CCAs generally phase-in service, though they have taken varied approaches: • MCE phased in municipal, commercial/industrial, and residential accounts gradually from May 2010 to July 2012, later expanding to other jurisdictions. • Lancaster phased-in municipal accounts and, after 6 months, returned to its council for confirmation to proceed with commercial and residential accounts. • SVCE phased in both commercial and residential customers gradually from April 2017 to October 2017. • CleanPowerSF has a policy that sets conditions for continued phase-in, like whether staff and systems and program supply commitments are sufficient to meet new customer demand.	The City's Implementation Plan includes a phase-in schedule from April 2018 to February 2019. Subject to a decision to proceed, SJCE will phase-in service to: 1. Municipal accounts and early (opt-in) adopters in April 2018 2. Residential and small commercial customers in September 2018 3. Commercial, industrial, and agricultural accounts in February 2019 The implementation plan allows for evaluation of other phase-in options based on current market conditions or other factors.

Source: Auditor benchmarking and analysis

SJCE Implementation and Policy Development Are Happening Concurrently

According to the California Energy Commission, once a jurisdiction has decided to develop a CCA program, "choices must be made regarding program management and organizational structure, resources and suppliers, rates and customer protections, terms and condition of service, financing, and staffing."

To expedite the process and minimize costs associated with the creation of a new department, the Administration has done preparatory work for Phase One of SJCE. For example, the City:

- Passed an ordinance to establish the creation of the new department and hired a director,

- Established a new Clean Energy Operating Fund along with a budget and staffing plan for FY 2017-18,[13]
- Issued RFPs for marketing and data management,
- Drafted RFPs for power supply and scheduling coordination,
- Drafted a new Title 26 for the Municipal Code, which will govern department operations at a high level, and
- Began recruitment for a Clean Energy Community Advisory Commission.

Hiring an experienced director limits implementation risk, as does structuring the department, and its oversight, to foster effective program management. The City's Implementation Plan describes the role of the Director. It states that *"the Director will report to the City Manager and have management responsibilities over the functional areas of administration & finance, marketing & public affairs, power resources & energy programs, and government affairs."* It also notes that the Director may use a combination of internal staff and consultants to operate SJCE.

Many management decisions affecting financial and other risks have not yet been made. For example, the scope of work for many Community Energy Department positions have not yet been determined and decisions must be made about how to properly separate duties associated with power purchases or other transactions to protect the City from erroneous or fraudulent transactions.[14] In addition, the scope of work for different positions and amount of authority delegated to them will inform the level of experience candidates will need. Similarly, while high-level risk policies and oversight procedures outline the Director's contracting authority, for example, department-level policies and procedures will determine contracting authority in the event the Director is absent.

Exhibit 7 shows the City's progress on developing a management structure and related policies that guide the department.

[13] The Council-approved staffing plan includes an Executive Director, a Senior Analyst, a Public Information Manager, a Public Information Representative, a Staff Technician, a Senior Office Specialist, and two City Attorney's Office (CAO) positions. The Administration has expedited the hiring of the senior analyst position to assist the new director.

[14] For example, Silicon Valley Power (SVP) has Market Risk Management Regulations, as adopted by their Risk Oversight Committee, that specifically address segregating duties among the initiation, confirmation, monitoring, and settlement of all types of transactions.

Exhibit 7: Many Decisions Regarding Organizational Structure Have Yet to Be Decided

Objective: Create organizational structure to mitigate risks surrounding financial, legal, regulatory, contract management, and other CCA functions	
Example	San José
The CEC recommends that a senior level manager with experience in the electric utility industry should head the CCA program. Most CCAs have hired CEOs with decades of experience in electric utilities or related fields.[15]	San José hired a consultant to assist in the Director search. The City required 10 years' experience, and stated a preference for experience with California energy markets, but did not require it. Interviews were held mid-September 2017. Council confirmed the new Director on October 17, 2017. She has over 20 years' experience, including experience as the Manager of Renewable Energy, Power Supply Manager, and Acting Director of Energy Infrastructure for the SFPUC. She has also held positions with the National Renewable Energy Laboratory, California Energy Commission, and the California Air Resources Board.
Financial risks associated with transaction errors and improper purchases or sales of electricity are often mitigated through management structure and Risk Management Policies. For example: • MCE, CleanPowerSF, CPAU, and SVP segregate duties associated with electricity transactions. • MCE, SVCE, and CPAU require certain staff and consultants involved in energy supply, resource transactions, and oversight to file economic interest disclosures. • In Lancaster, Palo Alto, and Santa Clara, staff from the energy, finance, public works, city attorney and city manager departments may comprise internal risk oversight committees.	Title 26 (as proposed) provides that the Director of the Community Energy Department submit a Risk Management Policy for approval by the City Council. This policy is to be reviewed annually, or as directed by Council. **Future steps:** • Formally adopt Title 26 • Develop a Risk Management Policy that ensures proper segregation of duties across among staff • Identify which positions within the new department should be included in the City's Conflict of Interest Code and should be required to file Form 700 Statements of Economic Interests. Determine which contractors should file Form 700s as well.
Other CCAs have emphasized the importance of in-house technical expertise for negotiating and managing contracts. For example: MCE, PCE, and SVCE have experienced electric power supply contract managers on staff.	SJCE expects to use outside legal counsel to help draft initial power supply and other contracts. The initial staffing plan includes two CAO positions who are expected to have expertise in energy and regulatory issues. **Future steps:** • Identify experienced staff and/or resources to manage power supply and other contracts to ensure the City is receiving contracted services under the terms and conditions of the various agreements
Risk Management Policies outline authority and approval delegation that is commensurate with accountability and capability. Most CCAs have delegated contracting authority, though limits vary based on the type and term of expenditure. For example:	Title 26 (as proposed) provides that the Director of the Community Energy Department submit a Risk Management Policy for approval by the City Council. This policy is to be reviewed annually, or as directed by Council. Title 26 also identifies short-term trading authority and transaction limits for the Community Energy Department

[15] Examples include: SVCEA's CEO has 30 years' experience, including time as the Assistant Director of Resource Management for City of Palo Alto Utilities (CPAU) and the Director of Electric Utility for the City of Roseville. SCP's CEO has 20 years' experience as a utilities consultant. PCE's CEO has over 30 years' energy and utility experience, including experience with the municipal utility of the City of Santa Clara. MCE's CEO has 20 years' experience, including developing and managing renewable energy and energy efficiency projects with public agencies.

Objective: Create organizational structure to mitigate risks surrounding financial, legal, regulatory, contract management, and other CCA functions	
Example	San José
• SCP has an annual, aggregate limit of $5 million for power procurement and $100,000 for all other expenditures. • MCE's CEO has authority for individual contracts of less than $25,000 for terms of less than a year, for any type of agreement.[16]	Director ($500,000/day). Title 26 also forbids speculative buying and selling of energy products. **Future steps:** • Formally adopt Title 26 • Develop a Risk Management Policy for Council approval
Legal and regulatory risks may be mitigated with a regulatory liaison that tracks relevant proceedings, coordinates comments, and ensures organizational compliance. MCE, PCE, SVCE, SCP, LCE and CleanPowerSF have regulatory analysts on staff. Additional measures include: • Participation in CalCCA. • Hiring external consultants/lobbyists.	SJCE's staffing plan includes a Deputy City Attorney to manager regulatory affairs and a Regulatory/Legislative Analyst starting in FY 2017-18. San José is also an affiliate member of CalCCA and maintains contracts for representation of City interests at the state legislature. **Future steps:** • Hire staff to fill regulatory affairs and analyst positions approved in the staffing plan; develop their scopes of work and job duties • Become an operational member of CalCCA for a voting seat on the CalCCA Board of Directors

Source: Auditor benchmarking and analysis

Additional Steps Can Minimize Risk to the City's General Fund

The City Council directed staff to develop SJCE as a stand-alone enterprise to be operated by a new department (like the Airport), with little to no adverse effect on the City's General Fund. The City aims to do this by using an enterprise fund separate from the General Fund to account for SJCE activity, ensuring program revenues cover costs through the budget and rate setting processes, and limiting the ability for City creditors or suppliers to draw from the General Fund in the event of default.

Like the organizational structure, the financial management structure for the department has been outlined, but not yet implemented. Final decisions on specific policies and power contracts will inform the department's revenue requirement and corresponding rates. As shown in Exhibit 8, department- and program-level policies will help ensure that program costs can be paid through program revenues. Furthermore, City staff anticipate that the department will use a "lockbox"—a deposit account for program revenues from which contractors and suppliers will have priority for drawing payment—though its ability to protect the General Fund is contingent upon contracts which have not yet been negotiated.

[16] For individual transactions, procedures may also require authority be checked at key points. For example, prior to executing agreements, CPAU procedures require that staff run a pre-purchase check in the transaction database to verify the intended deal is authorized. Many CCAs and utilities have reporting structures (to management or governing boards) in case a transaction exceeds a set threshold.

Exhibit 8: Separate Funds, Reserve Policies, Revenue Recovery, and Customer Terms and Conditions Minimize Financial Risk to the City

Objective	Examples	San José
Ensure minimal or no adverse impact to the City's General Fund		
Insulate the General Fund from financial liabilities of the CCA with a financial firewall.	Other single jurisdiction CCAs (CleanPowerSF and LCE) have enterprise funds to separate CCA money from the General Fund. Other CCAs also use a deposit account for customer payments (lockbox structure) as security for power purchase agreements.	San José established an enterprise fund for SJCE and is using commercial paper for start-up and working capital. While the General Fund backs the initial commercial paper for start-up, it has been prioritized such that it will be paid off before any other debts. San José is also exploring the lockbox structure. **Future steps:** • As needed, establish lockbox for SJCE revenues and incorporate lockbox protections into the terms and conditions of power purchase and other agreements
Ensure program costs can be paid through program revenues		
Set rates that cover the revenue requirement (operating expenses, depreciation and amortization, interest and financing expenses, taxes, and contributions to reserve funds). Per the California Energy Commission, CCAs should not guarantee that rates will at all times be lower than the utility's.	Rates are usually annually set in accordance with the budget process, with some flexibility for adjustment. CCAs address rate setting in their implementation plans. Some CCAs have additional policies or practices. For example: • CleanPowerSF's rate setting policies require rates cover program operations, contract obligations, and future projects while minimizing rate volatility and balancing the SFPUC Rates Policy principles of Affordability, Compliance, Sufficiency, and Transparency. • LCE uses a "market demand credit" to allow its City Manager to effectively adjust rates in case the IOU's rates dip below the city's.	The City Council directed staff to set customer rates annually as part of the typical utility rate setting process and allow for one mid-year adjustment in case PG&E adjusts rates below the SJCE's low-cost rate option. Title 26 (as proposed) states that rates *"shall be set so as to provide sufficient revenue to recover all expenses, debt service, credit requirements, other expenditure requirements and to build prudent reserves."* **Future steps:** • Formally adopt title 26 • Develop rate setting policy and procedures to guide rate setting process. Competitiveness, stability, and sufficiency were identified in the implementation plan as objectives for rate setting. Similar guiding principles to these or SFPUC's should be considered for adoption by Council to guide the rate setting process. • As needed, identify mechanisms including reserves to support low-cost option
Use excess revenues for a rate stabilization fund that will help weather short-term cost increases without the need to increase rates. (Consider creating a rate stabilization fund by	Most CCAs have a formal Reserve Policy, though they are set up in different ways.[17] For example: • Until it meets its reserve goal, SCP has a policy to set aside reserves	• The City Council directed staff to ensure that SJCE reserve policy includes direction that sufficient reserves be accumulated, prior to launch of local programs, that

[17] CalCCA identifies "In-house fiscal management, transparent rate setting and policies that build program reserves" as best practices for CCAs.

issuing debt that would be backed by future revenue streams of the program, thereby moving a portion of future savings forward in time.)	based on the forecasted difference between SCP and PG&E's average retail generation rates.[18] • CleanPowerSF has a policy to set aside reserves so that the CCA can meet its rate-stabilization reserve goal within three years of launch. • SVCE aims to set aside 5% of annual reserves for the first five years of operation. • MCE's Reserve Policy is to maintain 90 days of operating expenditures and rate stabilization funds equal to 15% of projected annual revenues.	would support wind down of operations in the unlikely event that SJCE is discontinued.[19] • Title 26 (as proposed) requires the Director of the Community Energy Department prepare a Risk Management Policy, providing for appropriate reserves, for review and approval by the City Council. **Future steps:** • Formally adopt Title 26 • Develop a Risk Management Policy that provides for appropriate reserves
Implement program rules that minimize customers switching back to the IOU, or impose exit fees for customers that switch back to PG&E after the close of the free opt-out period.	Several CCAs have termination fees. For example, SCP and MCE's termination fees are $5 for residential and $25 for non-residential, to cover customer transfer processing. MCE has an additional cost-recovery fee that covers supply commitments attributable to the customer. SCP's Board sets the termination fee annually, at the same time as rates.	Title 26 (as proposed) provides that the City may charge a termination fee to customers who opt out of SJCE after the initial 60-day post enrollment opt-out period to recover administrative or other costs related to returning customers to PG&E. **Future steps:** • Formally adopt Title 26 • Put in place a termination fee and establish its amount
Require deposits from customers and return customers to the IOU for failure to pay bills.	CCAs have varying policies on delinquent accounts. For example: • Prior to transferring accounts to PG&E, PCE sends late payment notification to residential accounts owing more than $250 for 90 days and non-residential accounts owing more than $500 for 60 days. • SCP has a policy of transferring delinquent accounts to PG&E after 14 days' written notice. SCP, PCE, and MCE all have policies to set aside 0.35% of revenues for bad debt reserves.	Title 26 (as proposed) provides that customers that fail to pay their accounts 30 days after receiving a delinquent notice will be returned to PG&E. **Future steps:** • Formally adopt Title 26 • Establish procedures for noticing delinquent customers and returning them to PG&E

Source: Auditor benchmarking and analysis

[18] SCP sets aside between 1.5 and 4 percent of total annual forecasted revenues for reserves. Its reserve goal is $50 million, not counting amounts pledged as collateral.

[19] SJCE's business plan assumes the program will accumulate reserves equivalent to 90 days of operating costs over the first four years of operation.

The City Council and the Clean Energy Community Advisory Commission Can Play Significant Oversight Roles Concerning SJCE Operations

Finally, as shown in Exhibit 9, while oversight structures have not yet been finalized, staff plan to have the Clean Energy Community Advisory Commission assembled in time to provide input on policies and programs, rate setting, and outreach efforts. Community involvement at this level reflects a best practice, as effective, public oversight helps to ensure the program is responsive to community needs, which should in turn limit opt-outs.

Exhibit 9: Effective Public Oversight Helps to Ensure Responsive Programming

Example	San José
Objective: Make choices regarding program management and organizational structure, resources and suppliers, rates and customer protections, terms and condition of service, financing, and staffing in a very public setting, so that the residential, commercial, and industrial constituents are fully informed and allowed to participate in the process	
CCAs make organizational decisions public through the budget process, and by receiving policy approval by resolution of their governing boards. For example: • MCE's and SCP's boards adopt operational policies piecemeal. • SFPUC approved CleanPowerSF's consolidated policies on business practice. Palo Alto and Santa Clara's city councils approve high-level utility risk management policies, while internal risk oversight committees approve detailed risk guidelines.	SJCE's governing board is the City Council. Council has approved organizational decisions (budget and staffing plan, Director confirmation) in public meetings. Title 26 (as proposed) provides that Council approve SJCE's Risk Management Policy. **Future steps:** • Formally adopt Title 26 • Council approval of Risk Management Policy • Council approval of long-term power supply and other contracts above the Director's contract approval authority under Title 26 • Develop internal administrative policies to implement Council-approved Risk Management Policy
Many CCAs have community advisory committees as well as governing boards. For example, the mission of PCE's Citizens Advisory Committee includes providing feedback on PCE policy and operational objectives, as well as providing a forum for community discussions. The Committee includes technical experts and environmental advocates. Municipal utilities like CPAU also have external utilities advisory commissions to provide advice on electric procurement and development and energy conservation.	The City Council approved a framework for a Community Advisory Committee to "provide essential advice to the Mayor and City Council, City Manager, and Director about all aspects of SJCE start-up and operations." On October 17, 2017, the Council formally established the Clean Energy Community Advisory Commission through an update to the Municipal Code. The Commission is to include at least six expert members. **Future steps:** • Appointment of Commission members • Establish the Commission's mission and develop a workplan • Staff and provide support to the Commission
CleanPowerSF has a Program Performance Reporting Policy to present metrics related to renewable energy content, local energy production and savings, environmental benefits, economic benefits, and financial metrics to the SFPUC annually. CPAU's Energy Risk Management Guidelines outline monthly, quarterly, bi-annual, and annual reports to advisory committees and city council.	The City Council directed staff to present semi-annual updates on SJCE's financials and customer status for the first two years of launch and operation. Title 26 (as proposed) provides that the Director of the Community Energy Department provide Council a list of plans and reports submitted to regulatory agencies in the past quarter.

	Future steps: • SJCE provide updates to Council on financial and customer status as well as the list of plans and reports required by regulatory agencies • Determine reporting requirements for the Community Advisory Commission

Source: Auditor benchmarking and analysis

Continuous Community Outreach Is Important to Achieve Program Goals

Organizational structure and program attributes can mitigate the risk of customer attrition. Departmental controls can help to minimize costs, keeping rates low and competitive. Further, outreach can allay consumer concerns related to issues aside from cost, such as service and renewable content. As shown in Exhibit 10, marketing and outreach can also encourage customers to opt-up, promoting the City's renewable energy goals.

Exhibit 10: Proactive Outreach Efforts Can Mitigate Opt-Out Risk and Encourage the City's Renewable Goals

Objective	Examples	San José
To the extent possible, minimize opt-outs during roll-out		
Conduct outreach, assuring business owners that transmission services will not change.	During roll-out, SVCP held webinars and workshops for potential commercial customers, covering commercial rates, service reliability, effects on direct access customers, and potential for local public-private partnerships. Local businesses, like Google, sponsored the workshops. SCP also held public meetings, making targeted efforts to reach out to business interests. CleanPowerSF promotes businesses that opt-up to their 100% renewable option on their website.	The City issued an RFP for marketing services and selected a firm. It is expected that the contracted firm will help conduct outreach to new customers prior to the launch. **Future steps:** • Finalize selection and negotiate scope of services as well as terms and conditions of contract • Identify staff to manage contract over the term of the agreement
Market benefits to the community beyond lower rates, such as local control and greener power-mix.	CleanPowerSF has targeted marketing so early adopters can opt-up to 100% renewable at the start of service. They report a higher opt-up rate than opt-out rate. SVCP similarly allowed customers opting-up to start service early.	The City issued an RFP for marketing service and selected a firm. It is expected that the contracted firm will help conduct outreach to new customers prior to the launch. **Future steps:** • Finalize selection and negotiate scope of services as well as terms and conditions of contract • Identify staff to manage contract over the term of the agreement

Source: Auditor benchmarking and analysis

Effective Contract Management Is Necessary to Mitigate Market and Counterparty Risks in Purchasing Power

To keep operational costs (and corresponding rates) low, the City will need to secure favorable power supply and energy service contracts. As with the gradual service phase-in, most CCAs contracted out other services, such as power scheduling and data management, at start-up. While this approach can be costly, it can help mitigate risks associated with limited operational experience. Once the Department has gained experience, transitioning these functions in-house could lower operating costs. Exhibit 11 summarizes San José's progress in securing initial contracts.

Exhibit 11: Contracting for Power Supply and Power Scheduling Are in Process

Objective	Examples	San José
Limit costs associated with initial procurement of power and energy services		
Negotiate unbundled program services and individual contracts with third parties for each discrete service to: a) Support the accumulation of industry knowledge and experience (gained through the execution of day-to-day administrative responsibilities and interaction with service contractors). b) Diffuse risk associated with supplier default.	Several CCAs started with limited operational experience and are transitioning from contracting with a full-service ESP to several contractors, or bringing services in-house. For example: • LCE operates the CCA using a combination of internal staff, contractors and qualified ESPs. • Initially, MCE contracted with an ESP to manage MCE's overall supply portfolio, and planned to contract the majority of its supply for 2010-2015; MCE has since established an annual Open Season Procurement Process. • SCP has two primary energy suppliers: an ESP and a local geothermal facility. With the development of in-house procurement expertise, SCP may pursue centralized competitive solicitation. SCP aims to transition scheduling services from their energy service provider to a dedicated vendor, or in-house, to save on costs associated with overhead, and to better control load imbalances.	The City has been developing separate RFPs for power scheduling, power supply, and data management services. It is working with outside legal counsel with experience in power purchase agreements on the RFPs and will utilize them in the development of the contracts, as well as train staff in preparation of master service agreements and confirmation letters. **Future steps:** • Finalize selection process for initial power scheduling, power supply, and data management providers and negotiate scope of services, as well as terms and conditions of contract • Identify staff to manage contracts over the terms of the agreements • Develop future staffing plan that allows for bringing program services in house, where appropriate
Use a competitive process to screen potential suppliers for qualifications and obtain price offers for the services required such that: a) RFPs clearly define the desired services with a goal of responsive bids that can be compared on an apples-to-apples basis. b) RFPs establish minimum bid requirements from bidders and	CCAs generally select contracts by way of a competitive process. To compare respondents on an apples-to-apples basis and allow for the submission of creative alternatives, MCE requires respondents to propose a flat price for each MWh of electric energy delivered, but also allows alternative pricing options to be proposed so long as the	The City has been developing separate RFPs for the initial power scheduling and power supply. The City is working with experienced outside counsel in the development of the RFPs for power scheduling and supply services. Title 26 (as proposed) provides that long-term energy procurements be made through a competitive bidding

allow for submission of creative alternatives in addition to the minimum requirements.	single flat pricing requirement is satisfied.	process, bilateral contracts, net metering or feed-in tariffs (noting that Council reserves authority to approve the latter three types of agreements). **Future steps:** • Issue RFPs for power supply and power scheduling • Formally adopt Title 26

Source: Auditor benchmarking and analysis

Contracting for program services presents an opportunity to pass some market risks on to the contractors, but also raises new risks, such as the failure of a contractor to perform, or of a supplier defaulting on commitments to the City. Negotiating power supply and scheduling service contracts requires specialized legal expertise. Like most CCAs, San José has hired expert energy procurement counsel to assist in the contracting process.

As shown in Exhibit 12, other CCAs and municipal utilities have incorporated protections into the negotiated contracts. As with all contracted services, contracts require monitoring to ensure contractors adhere to agreed upon terms and conditions, including meeting regulatory requirements and making decisions in the best interest of the City.

Exhibit 12: Negotiated Contracts Can Protect the City, but Require Monitoring

Objective	Examples	San José
Negotiate contracts that minimize counterparty risk and commodity price risks to the City		
Ensure supplier diversity; maintain collateral and surety instruments.	CCAs and municipal utilities use standard master contract agreements for power supply, but may incorporate additional collateral or surety instruments. For example: • LCE negotiated a deposit requirement in their supplier contract, in case of non-performance. • CPAU uses Master Agreements with credit protections built in, including the ability to seek credit enhancement (or additional collateral) under certain conditions. CPAU's Energy Risk Management Guidelines list required contract terms and preferred credit contract form and terms. • Prior to contract negotiation, MCE requires shortlisted respondents to submit a deposit of $3/kw of proposed capacity within 10 days of notification to secure the obligations of shortlisted respondents during negotiation.	Title 26 (as proposed) provides that counterparties shall post a guarantee or security appropriate to cover unperformed and unpaid transactions with instruments approved by the Director of Finance in a form that is approved by the City Attorney. **Future steps:** • Issue power supply RFP • Formally adopt Title 26 • Ensure appropriate guarantees and security instruments are included in the negotiated terms and conditions of future power supply contracts

Transfer commodity price risks to energy suppliers through fixed-price contracts or guaranteed discount pricing.	MCE requires suppliers to propose a flat price for each MWh of electric energy delivered.	Initial power supply RFP is still in development. It is unclear what form of pricing the City will be requiring. **Future steps:** • Selection of energy providers and negotiation of terms and conditions of future agreements should include protections for the City to mitigate commodity price risks
Protect the City from default by suppliers		
Perform periodic credit and exposure monitoring. Common practice in the energy industry is to periodically calculate the financial exposure to a specific supplier by comparing the value of the support contract to the contractual price.	CleanPowerSF, CPAU, and SVP include credit monitoring within their risk policies. These policies: • Set counterparty credit exposure limits • Require monitoring and assessment of counterparty credit exposure • Establish regular reports on counterparty credit risks.	Title 26 (as proposed) provides that wholesale trading will only be carried out with counterparties meeting minimum standards of creditworthiness as established by the Director of Finance. It also requires the Director of Community Energy to submit a Risk Management Policy for approval by the City Council. **Future steps:** • Formally adopt Title 26 and develop Risk Management Policy for Council approval that include minimum creditworthiness standards for counterparties • Identify and implement processes for staff monitoring of counterparty creditworthiness
Put controls in place to ensure regulatory compliance		
CCA programs are required to maintain physical reserves to ensure reliable operation of the electric grid.	CAISO requires load-serving entities to maintain: a) Operating reserves (6-8% of load) and regulating reserves (2.5-5%) that can be quickly called upon, or else CAISO will charge the cost of reserves procured on its behalf, and b) A 15% planning reserve margin approximately one year in advance (Note: resource adequacy requirements must also address local, system, and flexibility requirements for SJCE's load share)	SJCE will initially rely on contracted services to meet these requirements. Title 26 (as proposed) requires the Director to submit plans to City Council on how the City will meet CAISO and other regulatory agencies' requirements.

Source: Auditor benchmarking and analysis

Depending on the type of service and the extent to which the contractor interacts with City staff, monitoring ranges from formal quarterly reports, internal credit and exposure monitoring, and third-party review, to less formal, daily interactions.

As SJCE's Scope of Work Changes, So Should Its Risk Policies

As the City gains experience, it will gradually transition some contracted services in-house, taking on a more active role in power procurement, forecasting, and scheduling. As the City takes on these services, it will have a more active role in mitigating market and regulatory risks associated with its power portfolio, as shown in Exhibit 13. The City may also revisit its energy policies and introduce energy programs in the future. With these changes, the Department will need to adjust its risk management policies, and reports to Council and the Clean Energy Community Advisory Commission accordingly.

Exhibit 13: Risk Policies Will Need to Change as Service Delivery Evolves

Objective	Examples	San José
With the development of internal expertise, take on a greater role in energy resource planning, procurement, and programming		
Develop both long-term and short-term energy procurement plans.[20] Perform a 20-year electric load forecast as a part of planning. The forecast should consider sector-specific growth planning statistics.	Most CCAs completed feasibility assessments which included long-term (20 year) projections. Ongoing CCA resource planning varies. For example, SCP has a five-year resource plan, while MCE and CleanPowerSF have ten-year resource plans. Each of these plans are updated annually, and are meant to provide guidance for the near and mid-term.	The City expects to retain a technical consultant to provide short-term forecasting of SJCE load requirements. Long-term planning forecasts will be the responsibility of the City. **Future steps:** • Selection of power scheduler and negotiation of scope of services and terms and conditions (and hiring of experienced staff to perform this function in the future if brought in house) • Identify contracted or in house staff to prepare long-term procurement plans
Set renewable energy targets, as well as a timeline for how quickly the CCA should be able to meet target percentages.	All CCAs currently have renewable content targets greater than required by the California Renewable Portfolio Standard (RPS).[21] CleanPowerSF, as an example, has a flexible product content policy to offer a default product with an initial, flexible target of 33 to 50% renewable content and a product with 100% renewable content. The goal for the default product launch (2016) was 35%.	City Council directed staff to offer a power-mix with at least 10% more renewable content than PG&E's. The City will issue a power supply RFP that includes the Council-directed renewable content requirements. **Future steps:** • Selection of power supply provider and negotiation of scope of services and terms and conditions • Identify staff to manage power scheduling and power supply agreements to ensure renewable energy targets are met

[20] This can be done using an off-the-shelf and/or customized forecasting applications that will model future energy demand based on a range of detailed assumptions, including historical load data provided by the IOU. Subject matter experts may also be hired to assist with the development and interpretation of such forecasts.

[21] The RPS establishes the minimum amount of renewable power a CCA or utility must use to serve its retail customers.

Decide whether to supplement contracted renewable energy content by purchasing renewable energy certificates (RECs) from producers of renewable energy. [22]	• Palo Alto's City Council passed a resolution to authorize REC transactions (up to $5 million annually) to meet the needs of specific Council-approved initiatives, such as PaloAltoGreen. • San Francisco voters passed a proposition to limit the sale and use of unbundled RECs to the extent deemed feasible by the SFPUC. • MCE limits unbundled RECs to 3% annual retail sales, in accordance with state RPS.	The City plans to contract assistance for SJCE in planning for and obtaining required renewable energy and RECs that meet California Energy Commission eligibility criteria. **Future steps:** • Develop policy on the use of RECs, including limits or transaction approval authorities • Selection of power supply provider and negotiation of scope of services and terms and conditions
Take an integrated approach to supply planning, energy efficiency, and demand response to reduce overall energy costs.	MCE's integrated resource plan includes energy efficiency, net metering, and demand response programs within its electric load forecast, and potential MCE generation developments within its resource assessment.	City Council directed staff to establish San José-specific renewable energy and energy efficiency programs and develop local renewable energy projects. **Future steps:** • Develop an integrated resource plan that addresses Council directives related to renewable energy and energy efficiency programs, as well as the development of local renewable energy projects
Maintain a diverse portfolio to mitigate market/price risk		
Diversify supply portfolio by using contracts with various terms, multiple suppliers, and renewable energy and conventional generation.	Portfolio diversity can be supported through planning and policies. Palo Alto's Risk Management Policies and procedures, for example, specify transaction limits to diversify transactions across counterparties.	The City plans to issue a power supply RFP that includes the Council-directed renewable content requirements. Title 26 (as proposed) requires the Director of Community Energy to submit a Risk Management Policy for approval by the City Council. **Future steps:** • Selection of power supply provider and negotiation of scope of services and terms and conditions that mitigates risks associated with power procurement • Formally adopt Title 26 • Develop Risk Management Policy for Council approval that includes policies on maintaining a diverse supply portfolio to minimize power procurement risks (e.g., transaction limits to diversify transactions across counterparties)

[22] RECs can be purchased (subject to state imposed limites) from renewable energy generators to increase the renewable energy in a power portfolio without contracting additional power supply. Each REC has a unique identification number, and includes attributes such a generator location, capacity, fuel-type and source, owner and the date when operations began.

		• Develop internal administrative policies to implement Council-approved Risk Management Policy
Maintain a diverse portfolio to mitigate regulatory risk		
Use shorter duration supply contracts to offset the risk associated with increased PCIA charges. (If market prices decrease, the CCA's supply portfolio costs will also decrease, offsetting the increase in the customers' PCIA payments to the IOU (PG&E).)	CCAs generally have procurement strategies that mix short and long-term contracts. These strategies vary by organization: • CleanPowerSF has a Supply Management Policy to maintain a "modest open position" in the mid-term and long-term. • While LCE does not have a procurement policy, their contracts tend to track close to market price as a strategy. To do this, their City Council approved unlimited contracting authority for the city manager.	**Future steps:** • Determine how much energy the City plans to buy on the spot market. (The California Energy Commission recommends procuring less than 15% of the community's total energy portfolio through the spot market.) • Monitor ongoing rulemaking on PCIA

Source: Auditor benchmarking and analysis

Future Considerations Include CCA Partnerships and Renewable Development

Council provided additional direction to staff to "explore opportunities for formal partnerships and informal collaborations" with operational CCAs to pool resources and cut costs. By combining the electric loads of multiple cities and/or counties, a CCA should be able to achieve economies of scale, reducing administrative and operational costs to individual jurisdictions.[23] While partnerships carry similar risks as other counterparties (such as nonperformance or default), these can be mitigated through active monitoring.

Existing Partnerships

As CCAs have only recently expanded, there are few existing partnerships. The California Choice Energy Authority and the Northern California Power Authority (NCPA) provide two models for collaborative power procurement and management. LCE created the California Choice Energy Authority, which pools regulatory and legal affairs, rate analysis, financial projections, data exchange, accounting, power procurement, and other functions for member governments. It has helped smaller local governments in Southern California start up single jurisdiction CCAs. NCPA is a JPA with authority to build, finance, operate and maintain generation facilities along with general power management responsibilities. While public utilities currently comprise its membership, it may open membership to CCAs.

[23] The load shape (i.e., the distribution of energy demand over time) of a large program should be more statistically normal than an individual community's load profile. This allows the CCA to procure a larger amount of standard, base load energy products (base load products generally reflect lower pricing when compared to peaking or dispatchable products.)

Energy Conservation and Generation

Other future strategies to keep costs low and increase price stability are to minimize volatility in energy consumption through conservation programs and to develop renewable energy generation, rather than relying on power suppliers. As stated in the Background, Council directed staff to:

i. Establish San José-specific renewable energy and energy efficiency programs.

ii. Maintain, at minimum, low-income programs at the same level as PG&E.

iii. Develop local renewable energy projects.

The Director and Clean Energy Community Advisory Commission will shape these future programs, following the guiding principles approved by Council. Once the City has established financial reserves, it can develop power generation projects, independently or with a partner CCA, through a power purchase agreement (PPA). An assessment of the City's current capacity, energy, cost, and in-service date characteristics for distributed generation should inform development opportunities.

These projects will have similar risks as other capital projects. To mitigate risks associated with project development failure or delay, Palo Alto and MCE negotiate credit or collateral if a project is not complete in time. MCE also receives quarterly reports on project status.

PPAs can also provide an avenue to future generation asset ownership. For example, while MCE does not yet have its own generating capacity, it has included optional buyout provisions in some of its renewable PPAs, which allow MCE to later decide whether to own each generation asset on a case-by-case basis.

Future Decisions to Support the City's Renewable Goals

Partnerships, energy generation, and energy programs have risks, but offer significant benefit. SJCE provides the City an opportunity to increase the use of clean energy in the community, as well as to implement energy conservation programs. In addition, SJCE can spur investment in local clean energy development. To achieve these goals, the City will be making many near- and long-term decisions about organizational structure, oversight, risk management, and various other program elements. Although there is much work to be done, the City has made strides to lay the groundwork for SJCE to be successful.

Conclusion

This report summarizes our preliminary review of San Jose Clean Energy (SJCE) for needed internal controls, safeguards, and risk management best practices. This is a new line of business for the City; CCAs face significant market, regulatory, and operational risks. The objective of this review was to monitor the development of the program for safeguards and risk management best practices, and against guidelines prepared by the California Energy Commission. The City has taken many of the steps necessary to establish SJCE, however much work remains in the coming months to ensure that SJCE achieves its goals under the City Council's approved framework. As the City moves forward implementing and operating a CCA, Council and staff should consider how these risks may affect San José in particular, and how to best tailor corresponding risk management strategies and safeguards to work within the City's guiding framework and organizational structure.

This report has no recommendations.

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