

STRATEGIC ENERGY PLAN

Detailed Strategy Descriptions

City of Santa Barbara, Public Works

Table of Contents

Definitions.....	2
Understanding this Document.....	4
Program Area 1: Energy Partnerships, Plans & Structures	7
Program Area 2: Community Engagement & Outreach.....	31
Program Area 3: New Funding Sources & Financial Incentives.....	39
Program Area 4: New City Facility Development & Pilot Projects.....	53
Program Area 5: New Administrative Policies & Procedures.....	79

Definitions

Building Electrification: The conversion of natural gas loads in buildings to electricity loads. It is most commonly achieved by converting furnaces, boilers, and other equipment used for space and hot water heating to electric heat pumps and is a key strategy to reduce greenhouse gas emissions.

California Energy Commission (CEC): Formally the State Energy Resources Conservation and Development Commission headquartered in Sacramento, this agency was created in 1974 to address energy challenges facing the state. They provide technical guidance, stakeholder outreach and coordination, and administer grant funding.

California Solar Rights Act: The California Solar Rights Act was originally passed in 1978 and is a combination of California Civil Code Sections 714 and 714.1, California Civil Code Section 801, California Civil Code Section 801.5, California Government Code Section 65850.5, California Health and Safety Code Section 17959.1, California Government Code Section 66475.3, and California Government Code Section 66473.1.¹ It codifies a citizen's right to solar access and right to install a solar system by limiting installation restrictions placed on solar systems.

Community Solar: A large, or community-scale, solar installation or set of installations that residents and businesses can subscribe to for the purposes of receiving local solar electricity, even if their own sites cannot host solar. It can also provide other community benefits such as resiliency if connected at the appropriate point in the distribution system.

Community Choice Energy/Aggregation (CCE/CCA): A form of electric power procurement, enabled in 2002 under Assembly Bill 117, in which a city or county (or joint powers agency) serves residents, businesses and municipal facilities within its jurisdiction by removing the responsibility of aggregating electricity supply from the existing Investor Owned Utility.

The California Public Utilities Commission (CPUC): The state regulatory agency that sets rules and performs oversight on privately-owned public utilities and some aspects of CCE, including approval of formation.

Design Integrated Permitting: This is a form of permitting where solar designs that adhere to a preset of pre-approved design parameters and conditions are automatically eligible receive a municipal permit, thereby reducing permitting time and costs.

Distributed Energy Resources (DERs): Small renewable energy and energy efficiency devices that are interconnected to the grid in a decentralized manner and provide more local energy control and reduce reliance on the utility. The category of DERs can also include services such as Demand Response (DR), when many electrical loads are aggregated and reduced in response to a grid signal.

Energy Benchmarking: A policy or program for comparing energy use of buildings or appliances with the goal of achieving reductions in usage. On a building scale, it is typically defined on a square foot basis to allow larger buildings to use more energy.

Full-Time Equivalent (FTE): A staffing metric defined by the number of hours a full-time employee would work over the course of a year. This is taken to be approximately 2,000 hours.

Home Energy Score: Developed by the US Department of Energy, it is a measure that provides home owners, renters, and prospective buyers with a score that credibly indicates the energy use of a home. The

calculation of this score is standardized to enable direct comparison between various different homes, similar to fuel efficiency ratings for cars.

Interconnection: The process through which an energy resource is connected to the grid according to applications, permissions, approvals, inspections etc. as required by utility procedures.

kW/MW: A unit of power that describes the amount of energy being used at any given moment in time. A traditional incandescent lightbulb uses approximately 60-100 W. 1000 W equals 1 kW, and 1000 kW equals 1 MW.

kWh/MWh: Units that describe the energy used by load or produced by a generator over a given period of time. For example, 1 kWh is the energy consumed by a 1 kW load over 1 hour. 1000 kWh equals 1 MWh.

Microgrid: A miniature electric grid consisting of DERs that can connect or disconnect to and from the utility grid as necessary. This enables buildings and loads served by the microgrid to operate independently of the utility grid in power outage events if there are sufficient energy resources on the microgrid.

Public Safety Power Shutoff: A new utility protocol enabling utilities to proactively turn off transmission lines in advance of dangerous weather, such as high winds, to protect against forest fires and other natural disasters. This policy could result in blackouts for customers served by these transmission lines.

Reliability: In the context of electricity, the consistency in providing high-quality energy at all times, in terms of both voltage and frequency, as required by applicable regulatory standards.

Regional Energy Network (REN): Partnerships of county and local governments who deliver or coordinate energy efficiency programs, often for hard-to-reach populations. RENs are approved, regulated, and largely funded by the CPUC.

Resilience: In the context of electricity, the ability of an electricity system—whether on a local or utility scale—to maintain reliable service for the purposes of public safety by withstanding disruptions, responding to faults, and recovering rapidly from failures.

Smart Energy Zone (SEZ): A designated district that can serve as a testing ground for pilot energy projects and policies and drive energy development.

Water-energy nexus: The connection between the resources and equipment that deliver water and those that deliver electricity. For example, water is used to create electricity through hydroelectric power; and electricity is used to treat, convey, and create potable water. The resiliency, reliability, and cost of electric resources affect sites in the water distribution system which require substantial amounts of electricity to operate; thus, the price and availability of one resource is inseparably linked to the price and availability of the other resource.

Zero-net-energy (ZNE): Used to describe a building that generates as much or more energy as it uses. Achieving ZNE is primarily focused on reducing energy use and serving the remainder through renewable energy.

Understanding this Document

This is the second of six SEP documents and follows directly after the SEP Overview. The previous SEP section provided highlights of five Program Areas whereas this document serves as a step-by-step playbook to guide planning and implementation of various strategy options by providing detailed descriptions, action plans, and case studies for each strategy option. The Program Areas and their accompanying policy strategy options are:

Program Areas		Strategies	
	Program Area 1: Energy Partnerships, Plans & Structures	<i>Strategy 1.1</i>	Formalize Energy & Climate Program
		<i>Strategy 1.2</i>	Continue Exploring Community Choice Energy (CCE)
		<i>Strategy 1.3</i>	Participate in Regional Climate & Energy Collaborative
	Program Area 2: Community Engagement Initiatives	<i>Strategy 2.1</i>	Launch 100% Renewables Education, Outreach & Behavior-change Programs
	Program Area 3: Funding Sources & Financial Incentives	<i>Strategy 3.1</i>	Offer Financial Incentive for Solar + Storage
		<i>Strategy 3.2</i>	Pilot On-Bill Financing for Distributed Energy Resources (DERs)
	Program Area 4: Municipal Development & Pilot Projects	<i>Strategy 4.1</i>	Develop DERs & Microgrids at Municipal Facilities
		<i>Strategy 4.2</i>	Pursue Community Solar
		<i>Strategy 4.3</i>	Create Smart Energy Zone
	Program Area 5: Administrative Policies & Procedures	<i>Strategy 5.1</i>	Further Streamline Permitting, Inspections & Administrative Procedures for DERs
		<i>Strategy 5.2</i>	Explore Title 24 Building Code Improvements
		<i>Strategy 5.3</i>	Implement Energy Disclosure & Performance Policies

This document will present a description of each strategy with step-by-step actions sufficient to guide implementation, followed by charts of staffing and outsourced support needed for each strategy option. Strategies conclude with a table of impact metrics, case studies, when available, from relevant municipalities and a discussion of the approach that should be followed to ensure equity is prioritized throughout the SEP. An expanded explanation of the aspects included under each strategy follows.

Strategy Descriptions

Strategy Descriptions outline the rationale and key components of the strategy. This includes, as applicable: Local, regional or national context; policy or program design options; and the tradeoffs between multiple options for design and/or implementation. For pilot projects that have a physical construction or siting element, the strategy description provides project siting specifications. The Strategy Descriptions are intended to be a meaningful first step in policy, program and project design enabling City staff to build upon these options and accelerate SEP implementation.

Action Plans

The Action Plans provide clear, linear steps to guide implementation. The Action Plans are color coded and listed by category such as kick-off, outreach, analysis, engagement, draft policy, approval, launch, audit, and review. The set of categories included in each Action Plan depends on the type of strategy being discussed, namely policy, programs or projects.

The Action Plans are intended to empower staff to envision a clear path toward realizing each SEP strategy while allowing for flexibility to reframe as circumstances dictate during implementation. Therefore, each Action Plan includes steps for strategy assessment and, if necessary, redesign. As with the entire SEP, the Action Plans are not intended to remain static, but rather to adapt to a changing energy landscape.

It is critical that the City staff responsible for each action is identified. The Action Plan will offer an assumed division of tasks between permanent City staff (existing and new hires) and outsourced temporary consulting. It is assumed that for most of these strategies the Energy and Climate Program (as proposed under Program Area 1) would be best to lead in the assessment and implementation of individual strategies. The Energy and Climate Program would also then be best capable of managing the changing dynamics of energy markets and technologies that will likely require changes to Action Plans as the City moves towards its goals. The costs associated with staffing for each strategy can be fund in the SEP Budget Document.

Strategy Impact Metrics

The modeled metric results are associated with an assumed forecast baseline level of funding and staffing. A greater, or lesser, impact can be achieved under each strategy option by adapting the funding level to meet the desired outcome. The Metric Tables include estimated impacts and costs for each individual strategy as follows:

- The percent contribution toward the City's total renewable energy goals in 2025 and 2030 (%)
- Cost effectiveness in dollars per enabled renewable kilowatt-hour (\$/kWh)
- Simple payback period, if applicable (years)
- Emissions reduction in metric tons of carbon dioxide equivalent (MtCO₂e)
- Enabled period of local energy storage for electricity resiliency (MWh of storage)

Case Studies

The SEP strategy options are intended to draw from current best practices and to expand on types of interventions which the City, or its relevant peers, have shown to be viable in existing programs. The case

studies provide real-world examples that support each strategy, or aspects of each strategy, and serve as references for City staff to learn from the successes of past or existing efforts. Case studies are also designed to guide staff to example references in public documents that can serve as templates for implementation of administrative procedures, and municipal ordinances where relevant.

Approach to Ensuring Equity

Throughout the SEP process equity concerns emerged as a shared concern between the community, City Council and City Staff. Equity, the context of the SEP, means that the plan and resulting implementation efforts need to include specific actions that enable low-income and minority communities to capture the same benefits that the rest of the Santa Barbara community can capture through SEP implementation. It is important that the City take specific actions to achieve this goal, as low-income and minority communities often face unique barriers to capturing the benefits of renewable energy (e.g. lack of education, lack of capital, lack of home ownership). To guarantee that equity is prioritized wherever possible, each relevant strategy includes a discussion of how equity can be ensured during implementation.

Program Area 1: Energy Partnerships, Plans & Structures

Strategy 1.1: Formalize Energy and Climate Program

Strategy Description

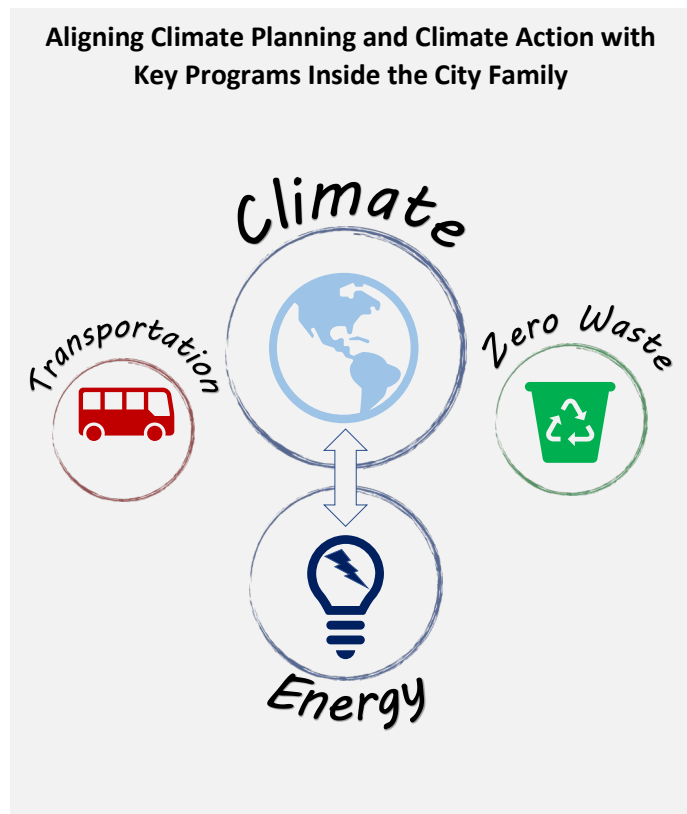
In June of 2017 the Santa Barbara City Council passed an enormously ambitious goal to transition to 100% renewable electricity by 2030. This Strategic Energy Plan proposes an equally ambitious response. The success of many of the strategies outlined in the plan rely on the addition of program staff to oversee and execute them.

Currently, energy-related efforts for the City are managed primarily through the Public Works Department by 1.5 official full-time employees with additional support from other City staff, when possible. Energy efforts have historically been “in-facing” and focused on municipal infrastructure and municipal energy usage. The existing Energy Program Supervisor oversees a broad range of issues and serves generally as a centralized authority responsible for developing and implementing programs and policies that advance energy, economic and environmental priorities within that municipal infrastructure. The City’s remaining sustainability and climate efforts are spread across several existing Departments and Divisions.

8% of the electricity use within the City is municipal load, meaning that the remaining 92% is used by the community as a whole.

This large percentage is why the majority of SEP strategies focus on engaging and inspiring members of the community. The success of the SEP will rely on a program that shifts from the existing in-facing position to a progressively more out-facing one.

It is generally assumed that the majority of the community will not adopt the energy behaviors and measures necessary to meet the City’s goal without significant amounts of education and outreach, nor without the necessary actions being easily accessible through the appropriate community facing programs. Additionally, there are significant obstacles to achieving the goal that will require greater coordination of program staff and community stakeholders. For example, Santa Barbara has a significant number of renters and multifamily buildings which present added challenges to adopting some of the proposed measures. This increasingly out-facing focus necessitates a formalized energy



program with additional staff to execute and promote the SEP strategies and to develop a compelling outreach and education platform.

While considering formalizing a new approach to energy programing it seems only appropriate to think of energy in the context of climate change. The State of California is increasingly moving toward measuring energy usage and reductions in terms of Greenhouse Gas (GHG) emissions. The City's Climate Action Plan (CAP) identifies the three largest sources of GHG emissions to be, in order, Transportation, Energy and Solid Waste. It is our opinion that if the City is going to go through the process of formalizing an energy program that there is a clear and reasonable rationale for including climate planning and action into that program and that this colocation would be a significant advancement toward a holistic response to climate change.

To be clear, the SEP does not advocate that this proposed program would immediately combine all climate-related work underway at the City within one program, as that is a much more complex and involved effort. The plan suggests that by combining Energy and Climate the City would be taking a significant step toward breaking down the silos under which climate action is approached currently and dedicating staff to ensuring that each plan is implemented and updated per Council's intention of reducing GHG emissions.

An added benefit to combining Energy and Climate efforts would be to have staff focused on the implementation of both the SEP and the CAP, which are often thematically aligned and provide a platform for systematic implementation of both sets of strategies.

Also, these plans will both require consistent monitoring and updating which can be streamlined by bringing both of these processes under one program with shared staffing.

Thus, the City would likely be best served by creating an Energy and Climate Program (ECP) that would focus on the successful implementation of the SEP and CAP, attainment of the City's renewable energy goals and the realization of accompanying goals such as increased resilience and reliability in the face of climate change. Eventually, the ECP *could* draw together all the City's relevant existing sustainability, energy and climate work—currently divided across several City Departments and Divisions—into a single focused effort, if and when Council were to find that appropriate.

As the effects of climate change become more pronounced in the coming decades, the City's expanded focus on energy and climate work will position the City to plan and react nimbly to the changing

An Example of the Energy & Climate

Nexus: Vehicle Electrification Planning

A particularly relevant example of the benefits to forming a formal Energy & Climate Program is planning for vehicle electrification and developing comprehensive efforts to support it within Santa Barbara. While vehicle electrification trends were considered in SEP scenario modeling, policy and program options around this topic were outside of the plan's scope. The need for vehicle electrification planning, however, is clear when considering both the market trends of EV sales in California and the feedback received from the community and City Council. Accordingly, the SEP includes a Community-wide Electric Vehicle Masterplan as a suggested future project. The ECP provides the staff capacity and expertise to drive this planning process and the resulting actions, in coordination with existing staff, and bring energy expertise to the process.

regional energy and climate landscape. A new ECP would act as both the driving force in SEP and CAP implementation and an important signal to the community and region that the City is committed to addressing the reliability and resilience of its electricity system in the face of climate-related threats.

The ECP would be primarily responsible for implementation, tracking and updating the City's SEP and CAP. To achieve this the ECP would spearhead community engagement efforts, development of new policies and programs, hiring and management of contractors to complete specific aspects of SEP/CAP implementation, management of existing City energy assets and projects and development of new municipal energy efficiency, renewable energy and climate-related programs and projects.

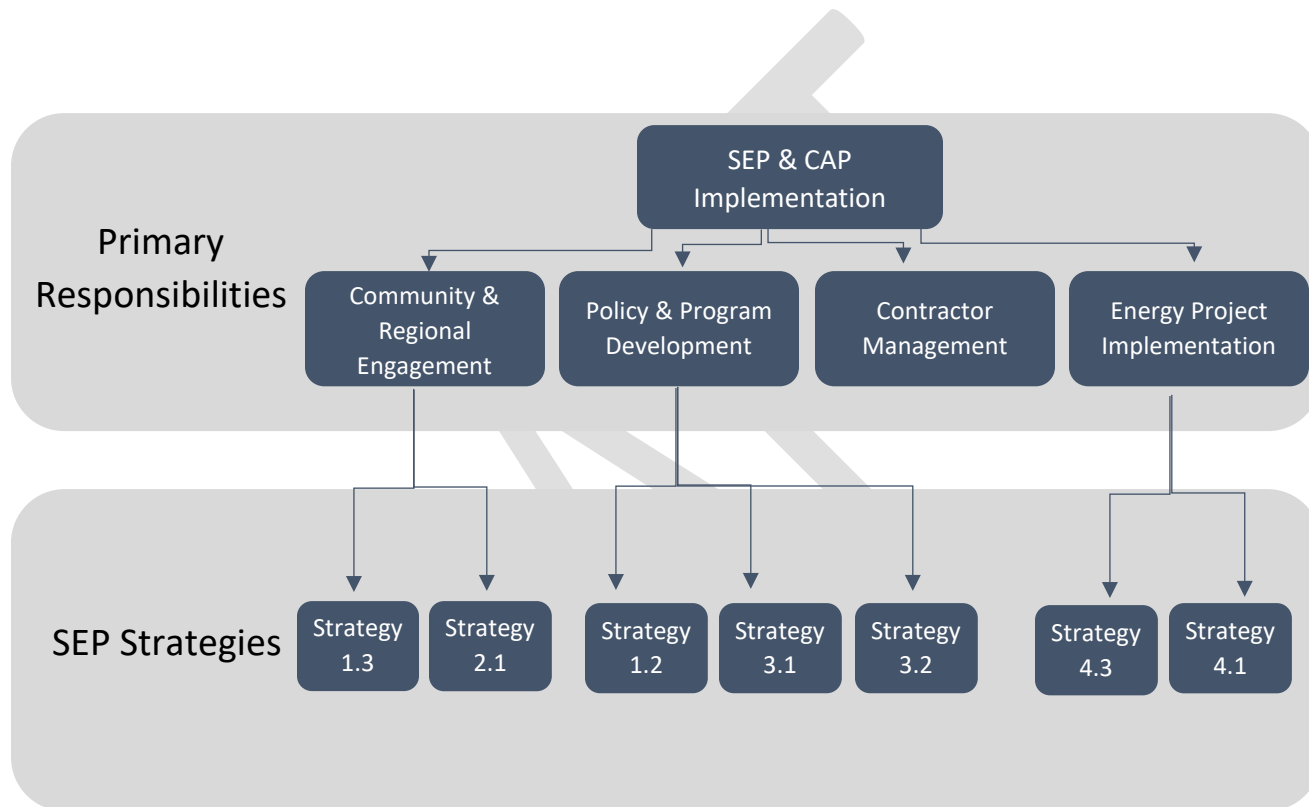


Figure 1: Primary Responsibilities of Formalized Energy & Climate Program

Proposed Staffing

The formalized Energy & Climate Program would include four staff members. These employees would be an Energy & Climate Supervisor, two Energy & Climate Analysts and a Water – Energy Analyst. A brief description of their roles is included in Table 1 below.

Table 1: Proposed Energy & Climate Program Positions

Staff Position	Position Description
Energy & Climate Supervisor	The Energy & Climate Supervisor would oversee the City's Energy & Climate Program and is responsible for all cross-cutting efforts connecting the City's CAP and SEP Plan implementation.

Energy & Climate Analyst (I & II)	The Energy & Climate Analysts would focus on all CAP & SEP implementation projects. This plan proposes that the ECP Analyst I would focus on municipal energy and climate projects, as well as climate planning, action and reporting, ECA Analyst II would have an increased focus on outward facing programs such as financial incentives as well as outreach and community engagement.
Water – Energy Analyst	The Water – Energy Analyst would focus on CAP and SEP projects that are at the water – nexus and centered around municipal facilities and water distribution infrastructure. This employee would have shared oversight by the ECP and the existing Water Resources Division

Design & Implementation Action Plan

Formalized Energy & Climate Program

Kick-off

April 2019

1. Present preliminary SEP budget to City Staff Budget Committee and City Council Sustainability Sub-Committee, highlighting the additional budget requirements of a standalone ECP

July 2019

2. Present final SEP to Council, highlighting immediate need for staffing increase
3. Obtain approval to move forward on formalizing the Energy and Climate Program and adding additional staffing

Outreach

August 2019

4. Engage internal stakeholders in Public Works, the City Manager's office, Finance and any other relevant departments to inform them of proposal and receive feedback and assistance

Analysis & Research

June 2020

5. Review other municipal energy, climate and sustainability programs

6. Based on needs outlined in SEP, finalize organizational chart, position descriptions and proposed budget
7. Assess best mechanism for hiring process and identify members of the hiring committee for the ECP Supervisor

Approval

January 2020

8. Obtain approval from City Council and City Manager to set aside budget for ECP and move forward with hiring the ECP Supervisor and Water – Energy Analyst in 2021

Project Execution

March - August 2020

9. Issue hiring notice for approved positions (ECP Supervisor, Water – Energy Analyst)
10. Execute interviews and hiring process

March - August 2021

11. Issue hiring notice for remaining position (ECP Analyst II)

Pilot & Launch

December 2020 – January 2021

12. Hire first employees and begin SEP and CAP implementation work

December 2021 – January 2022

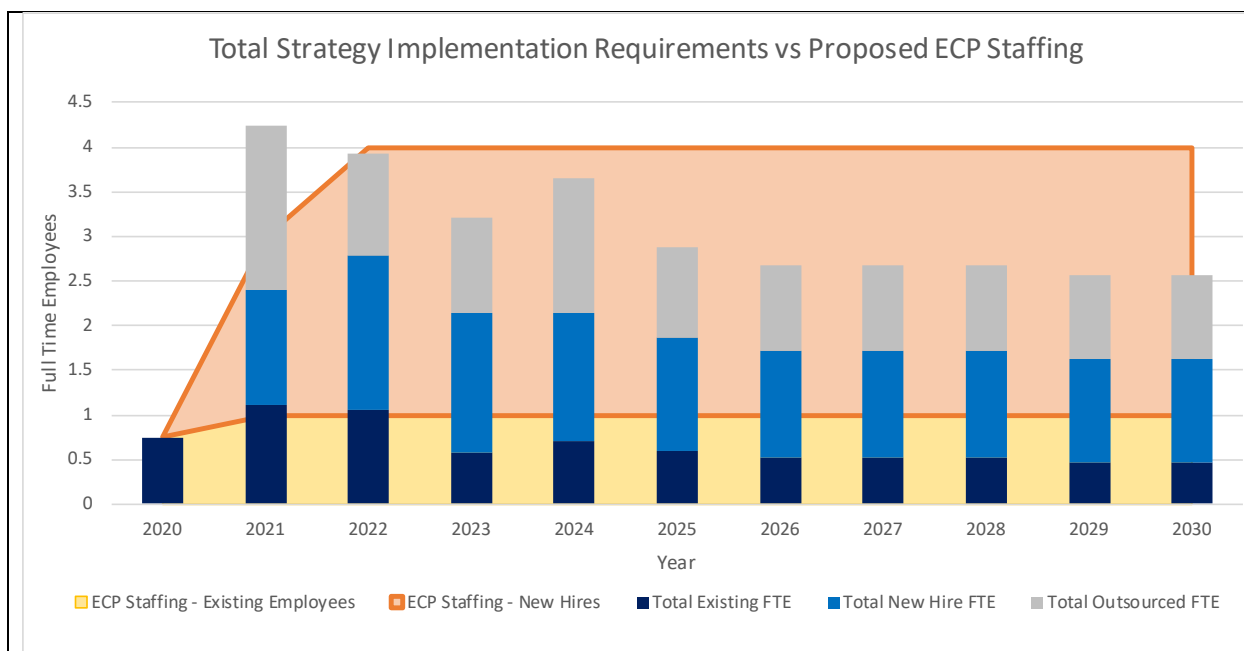
13. Hire ECP Analyst II

Performance Review

February 2021 (forward)

14. Track SEP and CAP implementation and progress toward goals to determine any additional hiring needs

Staffing Resources Required



Total FTE Requirement

2020: .75 FTE

2021: 3 FTE

2022 forward: 4 FTE

FTE Position Breakdown

2020:

ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 1500 hours

2021:

ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 2000 hours

ECP Supervisor: 2000 hours

Water – Energy Analyst: 2000 hours

2022 forward:

ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 2000 hours

ECP Supervisor: 2000 hours

Water – Energy Analyst: 2000 hours

ECP Analyst II: 2000 hours

Case Studies of Success in Local Government

Climate & Sustainability Division, Boulder, Colorado²

The Climate & Sustainability Division for the City of Boulder focuses on the nexus between climate and energy in the city, to great success. Since 2005 the City has reduced its emissions by 16% without compromising economic growth.³ Half of Boulder's greenhouse gas emissions come from electricity generation and this combined Division allows the City to run a host of community facing energy efficiency and renewable energy programs, including solar rebates and incentives, for residents and businesses while closely aligning the results with its climate planning.

The Division has 14 employees and a 2019 budget of almost \$4 million⁴. This level of funding and staffing is made possible in part by Boulder's first in the nation Climate Action Planning (CAP) Tax. The CAP tax, passed in 2007, is levied on residents and business depending on how much electricity they use⁵. It raises about \$1.8 million per year⁶.

The structure of this tax is clear example of how Boulder is tying together energy and climate and achieving great results. In describing the process of securing long-term funding for climate efforts Boulder staff stated that the "option that represented the closest nexus to the goal of reducing GHG emissions was a tax on electricity use or carbon tax".⁷

Boulder provides a useful example of the benefits that can be achieved for a community by the leveraging the energy – climate nexus efficiently and pairing it with long-term funding.

Office of Sustainability and the Environment (OSE), Santa Monica, California

The Office of Sustainability and the Environment in Santa Monica oversees all sustainability efforts for the City, but energy and climate play a large role in the office's functions. The office was created in the early 1990s as one of the first of its kind in the Country.⁸ OSE led the success of Santa Monica's initial climate action plan, which set a goal of 15% emissions reductions below 1990 levels by 2015. The City achieved a 20% reduction while also seeing increased economic activity and population.⁹ OSE is currently in the process of creating a new climate action plan with a goal of being carbon neutral by 2050, or earlier.

OSE has also led successful efforts to reduce municipal energy intensity, enabling energy usage to remain level as the City adds new buildings. A highlight of these efforts has been a prioritization of net-zero buildings. In one example, the City's contractor purchased a solar system and battery storage to power trailers used during construction as a way to reduce the embodied emissions of the project.¹⁰

The structure of the OSE has also enabled Santa Monica to develop a robust public education program around energy and climate. This is noted as a key strategy necessary to meet Santa Barbara's energy goals.

OSE has 19 full-time employees and a budget ranging between \$4 - \$6 million over the past three fiscal years.¹¹ In 2016 the office shifted from the City Manager Office to Public Works.

Strategy 1.2: Continue Exploring Community Choice Energy (CCE)

Strategy Description

In this strategy option the City of Santa Barbara would continue to pursue Community Choice Energy (CCE, also known as Community Choice Aggregation or CCA) through two different options. The primary option is to continue existing efforts around regional formation that are underway in partnership with the County of Santa Barbara and the cities of Goleta and Carpinteria. The secondary option is to explore a different approach to city-only CCE that focuses on municipal electricity use first, before expanding to the entire Santa Barbara community.

How Community Choice Energy Benefits the Strategic Energy Plan

CCE is a powerful tool that gives local governments authority over electricity rates and their power content, especially the level of renewable energy content. Although the creation of a City of Santa Barbara CCE would allow the City to choose an energy portfolio and set rates, the investor owned utility (SoCal Edison) would continue to own and operate the electricity grid. CCE is becoming a dominant trend in parts of California, and community choice aggregators currently serve over 3 million customer accounts in the state.¹²

Establishing CCE in Santa Barbara fills the local authority gap, one of the key gaps preventing the City from reaching its renewable energy goals. CCE shifts local government squarely into the business of procuring energy and creates a vehicle to support many of the other initiatives in the SEP.

In the context of Santa Barbara's renewable energy goals, CCE plays a central role in supporting the implementation of the SEP and empowering the City to meet its renewable energy goals through:

- Rate setting to support SEP efforts to develop local renewable generation including a Performance Based Incentive or other financial incentive (Strategy 3.1)

Community Aggregation as an Alternative to Municipalization

Community Choice Aggregation would allow the City to set electric rates and power mix without purchasing the electricity distribution system from the incumbent investor-owned utility. Municipalization, on the other hand, would allow the City to purchase, operate, and maintain the local electricity grid. California law provides the rules and procedures for the City to purchase utility property.

"Determination of Just Compensation for Acquisition of Utility Properties" is the title of Chapter 8 of Utilities Code Division 1, Part 1 which would guide a detailed process between the commission and the State courts for the determination of just compensation. If the City decides to pursue municipalization after or instead of CCA it should be aware of a risk that just-compensation proceedings may be less open to appeal and modification than CCA proceedings. The cost of purchasing the utility properties cannot be known before beginning findings toward just compensation, but is reasonably on the order of hundreds of millions of dollars. The legal and consulting cost of these proceedings would also likely cost many multiples of the cost of CCA formation, and the City should study how these costs may be recovered in operating a municipal electric utility.

- A market-making intermediary for community-scale solar projects (see Strategy 4.2) or other large-scale renewable energy projects in the area
- Procurement authority over the energy supply of its customers, with the potential to provide 100% renewable energy through a combination of long-term contracts, local generation, and Renewable Energy Certificates (RECs) supplementing

CCE & Customer Programs

Throughout California, community choice aggregators continue to expand their customer program offerings in order to support local development and fight climate change. East Bay Clean Energy created a Local Economic Business Plan exploring programs and initiatives to support local development in its service territory.¹³ Marin Clean Energy offers a feed-in tariff supporting renewable energy development, a community solar program and electric vehicle incentives, among other local programs.¹⁴ Silicon Valley Clean Energy created a decarbonization roadmap.¹⁵ All of these initiatives are examples of efforts that could be undertaken by CCE in Santa Barbara and align activities with the City's Energy & Climate Program. It is important to note, however, that a CCE's ability to offer customer programs is contingent on their being headroom between the rates it is charging for electricity and the rates that it purchases electricity. Thus, customer program offerings are often established slowly. Any CCE established in Santa Barbara would be subject to this same timeline.

Option A: Proceed with Existing CCE Efforts

The Santa Barbara region has made significant progress exploring the possibility of establishing CCE, but those efforts are being reassessed after the recent CPUC decision on the Power Charge Indifference Adjustment (PCIA), or "exit fee." The PCIA is a charge that CCEs are required to pay to the IOUs in order to compensate the utilities for long-term electricity contracts that they no longer need because of the departing load joining CCE. In October 2018 the CPUC approved a new methodology for calculating the PCIA that significantly raised the PCIA and cast doubt on the economic feasibility of regional CCE¹⁶. A feasibility study, assessing the viability of regional CCE and of city-only CCE that includes the new PCIA amount is currently being completed through a process separate to the SEP process, but results will not be complete until April 2019. If either of these options prove feasible under the current study, the City of Santa Barbara should proceed immediately with the viable option.

However, the potential of CCE to help achieve the City's renewable energy goals, both through direct electricity procurement for City facilities and the community and customer programs supporting renewable energy, is significant to the point that it warrants further pursuit even if both regional CCE and city-only CCE is deemed infeasible under the feasibility assessment discussed above.

Option B: A Different Approach to City-only CCE - Background

If both regional CCE and city-only CCE using a traditional approach is deemed unfeasible, the City can pursue city-only CCE with an alternative approach and implementation plan tailored to operate under the current electricity market conditions and reflect the priorities of the SEP.

An initial feasibility study completed in May 2018, prior to the PCIA decisionⁱ, by Pacific Energy Advisors

(PEA), found that city-only CCE would be unable to provide high-content renewable energy (75%) at a lower cost than SoCal Edison retail rates until 2028.¹⁷

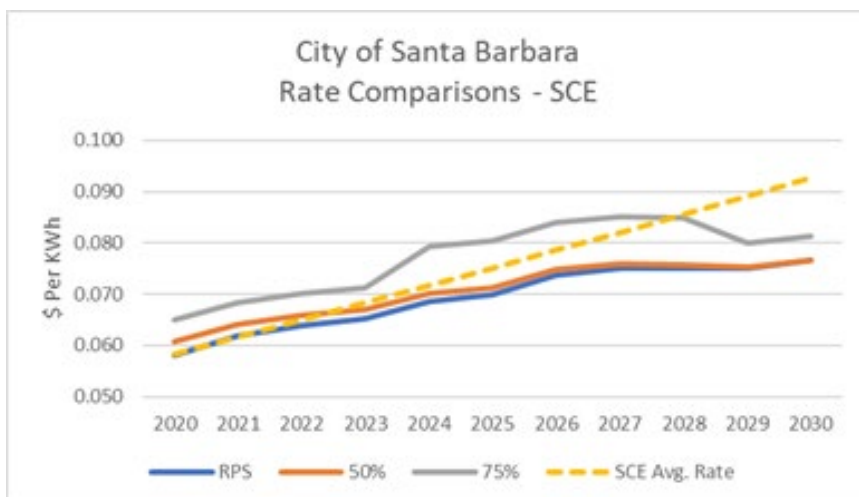


Figure 2: Comparison of Projected Rates - CCA vs SoCal Edison

Thus, if the purpose of CCE is only to provide cost savings for residents, it does not make sense to pursue city-only CCE in the near-term. However, under the 100% renewable goals of Resolution 17-043, pursuing city-only CCE has merit on its own, independent of a direct rate competition with SoCal Edison. This means moving beyond cost-effectiveness (e.g. cheaper electricity rates than SoCal Edison) as the only metric relevant to a feasibility assessment. Instead, the City would consider the feasibility of city-only CCE by assessing its ability to advance the renewable electricity and resiliency goals of the City's SEP.

The SEP modeling results clearly show that without CCE, it will be difficult for the City to reach its goals.

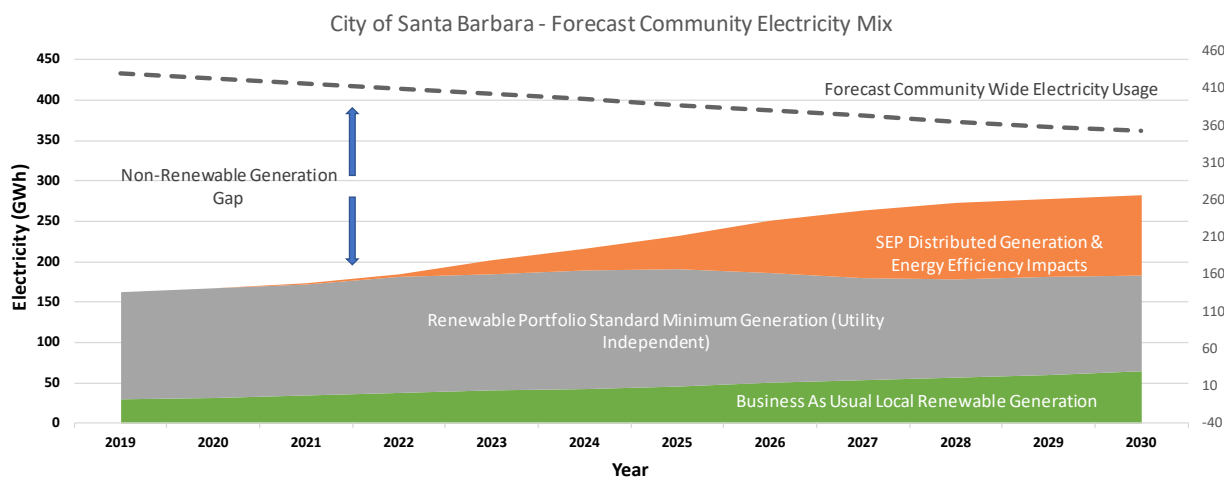


Figure 3: Non-Renewable Generation Gap without CCE¹⁸

ⁱ While the results of the updated feasibility study were not available at the time of writing, the PCIA decision is not expected to improve the ability of a city-only CCA in Santa Barbara to provide high-content renewable electricity at a cheaper rate than SoCal Edison. The PCIA decision is more likely to decrease this ability.

When considering the shortfall in renewable generation without CCE and the additional ways that CCE can support SEP implementation, it is clear that CCE has a key role to play in Santa Barbara's energy future.

Option C: A Different Approach to City-only CCE – Implementation

The primary concern to address if Santa Barbara pursues city-only CCE and cannot provide high-content renewable electricity at a rate lower than SoCal Edison in the near term is affordability for residents and businesses. The implementation approach described below is designed to address this while still providing meaningful progress toward the City's goals.

Implementation Approach Summary

City-only CCE would begin serving municipal accounts immediately upon launch, to align with the City's renewable electricity goal for municipal facilities, before slowly expanding to commercial and residential accounts as it became cost-effective to do so. In this scenario, the City would commit to likely higher electricity costs in the near-term in order to lead by example and achieve renewable energy goals for municipal facilities. Importantly, community choice aggregators are required to offer service to all customer classes¹⁹, and cannot remain in service to only municipal facilities. There is precedent, however, for a methodical roll-out and the ability to alter implementation plans with minimal CPUC oversight (see "Flexible Implementation Plans below").ⁱⁱ In the case of city-only CCE in Santa Barbara, this methodical roll-out would align, and could be adjusted to realign, with projected SCE rate increases and PCIA decreases. This would enable Santa Barbara CCE to delay roll-out to the commercial and residential customer classes until it could offer competitive, or cheaper, rates. In fact, under the scenario assessed by PEA, city-only CCE could offer high content renewable electricity supply at a rate 10% lower than SCE in 2030 (see Figure 2 above). Customers interested in paying a premium for renewable energy could join prior to this point.

Following Implementation Plan Best Practices

As CCE continues to spread throughout California, it has become standard practice to launch municipal accounts first. A survey of existing CCE implementation plans revealed that, in cases where this practice was not followed, it was because the aggregator in question had a small amount of accounts eligible for service in its territory²⁰. "Option A" follows this best practice of phasing in service, starting with municipal accounts, albeit at a slower pace than has been seen in other examples. From a regulatory perspective, the viability of such an extended phased in approach is discussed below. The primary financial impact of this approach would be that CCE in Santa Barbara would have limited ability to launch customer programs until it served a larger portion of the customer base.

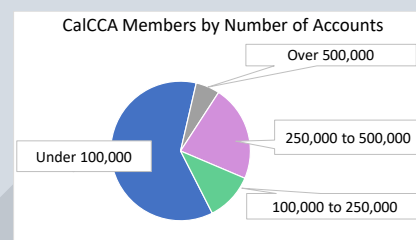
ⁱⁱ See CleanPower SF case study on page 47.

Flexible Implementation Plansⁱⁱⁱ

There is clear regulatory guidance that CCE Implementation Plans submitted to the CPUC are flexible. In the CPUC decision 05-12-041, “Decision Resolving Phase 2 Issues on Implementation of Community Choice Aggregation Program and Related Matters”, issued in 2005, the Commission established that it had no authority to approve, disapprove or change an initial implementation plan, or any revised plan, for CCE implementation.²¹ CCE programs must share their initial and revised implementation plans with the CPUC, including all components specified under Public Utilities Code 366.2(c)(3)²², to certify receipt and notify the CCE program which mechanisms of cost recovery^{iv} it is subject to, but the CPUC does not have the authority to “decertify” a CCE program.²³ The CPUC focused on the CCE program’s obligation to comply with the utility tariff and work collaboratively with the utility to establish an implementation plan that does not violate specific aspects of the utility tariff, but the details of that plan remain firmly at the discretion of the CCE program.²⁴

This flexibility would enable city-only CCE established in Santa Barbara to add municipal accounts at launch and offer service to the community at large over time through a gradual phase in. This idea would enable a “pilot phase” when the City uses municipal facility electricity load to validate the viability of CCE in the near term. From there, the City could expand CCE with confidence and a specific focus on providing 100% renewable electricity and customer programs that catalyze renewable energy development in support of SEP goals.

Is the City of Santa Barbara the Right Size for CCE?



According to public data published by the California Association of Community Choice Aggregators (CalCCA) the majority of CCE programs in the state currently have under 100,000 customer accounts. The program sizes given by CalCCA cover a wide range, from several thousand to over half a million.

Although these numbers are sure to change in the future it does show that a potential City of Santa Barbara CCE would be in good company with many other smaller programs. If desired, there is also a mechanism to establish city-only CCE by joining an existing Joint Powers Agreement. California Choice Energy Authority (CCEA) is an organization founded by the City of Lancaster and Lancaster Choice Energy specifically designed help cities in Southern California Edison territory establish CCE.

ⁱⁱⁱ The conclusions drawn here are under continued expert review as a part of SEP finalization.

^{iv} Cost recovery refers to the fees defined in Public Utilities Code 366(c)(7) that CCA customers must pay to the utility.

Design & Implementation Action Plan	
Continue Exploring CCE	
Authority Required for Implementation:	Regional CCE: Joint Powers Authority City Only CCE: New Ordinance
Responsible Staff:	ECP Supervisor, ECP Analyst I
Kick-off	
October 2019	1. Review results of updated regional CCE feasibility study. If regional CCE is feasible, proceed with established regional partners. 2. If regional CCE is infeasible, continue to work with City Council to create buy-in around pursuing city-only CCE and consider metrics beyond cost of electricity when considering feasibility
Outreach	
December 2019	3. Contact representatives of other small CCE programs to meet with staff and provide advice and assistance
Community Engagement	
December 2019	4. Form a community working group to guide CCE charter
Analysis & Research	
January 2020 – August 2020	5. Determine funding source for setup costs (general fund, bond, etc.). 6. Compile list of outstanding feasibility assessment and RFP needs for insourced versus outsourced support (power broker, portfolio manager, customer utility data manager, customer care call center host, banker, legal advisor, policy and regulatory advisor, rates and reserves analyst)
November 2020	7. Work with internal stakeholders to research members for inclusion on CCE Board, or decision to use Council as CCE Board

June 2022

8. Request for Indicative Pricing from independent power producers

RFP**February 2021**

9. Create and issue RFP for rate and regulatory studies of city-only CCE; implementation consultants and advisors, if necessary after reviewing regional study results

Approval**April – June 2021**

10. Advance any CCE set-up budgetary needs through City budget process and gain budget approval. This may include approval for City accounts to opt-up to the offered 100% renewable option

August - September 2021

11. Approval of CCE rate viability
12. Approval of CCE Board structure
13. Approval for implementation support contracts

December 2021

14. Seek and obtain approval from Council to create Board or Joint Powers Authority

Project Execution**December 2021**

15. Begin hiring CCE staff

May 2022

16. Draft Implementation Plan for submittal to CPUC

August 2022

17. Release RFP for short-term power contracts

October - November 2022

18. Hire additional CCE employees

July - December 2023

- 19. Begin long-term rate setting and power contracting
- 20. Contracting, public noticing, and full deployments in preparation for non-municipal rollout to commercial accounts and then residential accounts

Pilot & Launch

January - June 2023

- 21. Sign first short-term power contract to serve municipal load
- 22. Begin serving Santa Barbara municipal load

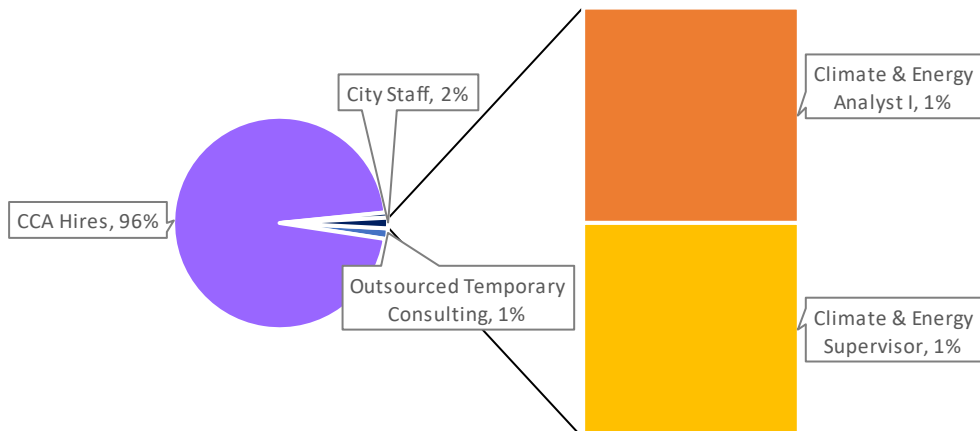
Performance Review

December 2023 forward

- 23. CCE staff and ECP staff work together to monitor progress toward SEP goals and adjust activities accordingly

Staffing Resources Required

Strategy 1.2: Continue Exploring CCA
Division of Total Responsibility for Implementation



	Strategy 1.1: Continue Exploring CCA Implementation Staffing Resource Timeline Total Existing FTE Total Outsourced FTE Total New Hire FTE CCA Hires 3.5 3 2.5 2 1.5 1 0.5 0 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031
Total FTE Requirement	2020: .25 FTE 2021: 1 FTE 2022: 1.7 FTE 2023 forward: 3.2 FTE
FTE Position Breakdown	2020: ECP Analyst I: 500 hours 2021: ECP Analyst I: 500 hours ECP Supervisor: 500 hours Outside Consultant: 1000 hours 2022: ECP Analyst I: 500 hours ECP Supervisor: 200 hours CCE Manager: 2,000 hours/year 2023 forward: ECP Analyst I: 200 hours ECP Supervisor: 200 hours CCE Manager: 2,000 hours/year

<i>CCE Analysts: 4,000 hours/year</i>	
Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	25.62%
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	\$0.0009
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	49,483
Example Case Studies of Success in Local Governments	
<i>Clean Power San Francisco (CleanPowerSF), San Francisco, California²⁵</i> CleanPower SF, originally established in 2004, is the CCE program for San Francisco, run by the San Francisco Public Utilities Commission (SFPUC). CleanPower SF is an important case study because of their iterative implementation process and slow roll-out. CleanPower SF took over ten years from the time of approval to be launch, and submitted three implementation plans to the CPUC, in 2009, 2012 and 2015.²⁶ They began serving customers in 2016 and are planning to add a remaining portion of their residential customers in 2019. The iterative process and implementation plan revisions executed by CleanPower SF were due to a myriad of factors, but the foremost concern was affordability.²⁷ This concern caused multiple program redesigns. CleanPower SF provides an example of an extended roll-out and potential for the type of program redesigns that may be necessary for Santa Barbara in “Option B”. <i>San Jose Clean Energy (SJCE), City of San Jose, California²⁸</i> SJCE, the CCE program for the City of San Jose, was established by the City Council in May 2017 and began serving customers in February 2019. It is expected to serve approximately 350,000 electrical accounts at full operation²⁹. SJCE has two important characteristics that make it a relevant example for Santa Barbara. It is a single-jurisdiction CCE and its staff exist as a department of the City of San Jose, with oversight provided by City Council. Like many other CCEs, SJCE started its roll-out with municipal accounts as a “Phase 1”, a best practice that Santa Barbara is likely to emulate.³⁰ <i>Lancaster Choice Energy (LCE), City of Lancaster, California³¹</i> The City of Lancaster has a population of just over 160,000 (2017) and more than 55,000 eligible electricity accounts within its jurisdiction: 640 municipal, 5,500 non-residential, and 48,900 residential. Similar to approaches discussed in the SEP, LCE began serving municipal accounts first, in May 2015. Since then, it has enjoyed broad community enrollment. LCE recently announced that it is implementing a three-year program that will provide nearly \$1.2 million in energy efficiency services to residential (walk through audits) and small commercial customers (low- to no-cost energy efficiency improvements). The City has included a total of 4 staff to LCE	

management and operations in FY 2018-19 to an Energy Manager, Project Coordinator, and two Project Assistants.

The City's Joint Power Authority – [California Clean Choice Energy](#)³² – is designed to help other cities in SCE territory to participate in a CCE program without having to sacrifice control or any of the benefits associated with a traditional JPA. San Jacinto, Pico Rivera, and Rancho Mirage are members of the CCEA and benefits from it for their respective CCEs.

Approach to Ensuring Equity

Maintaining Affordable Electricity Rates: A CCE program can promote and ensure equity in a variety of ways through the many customer programs it can provide once operational. In the context of the SEP, however, maintaining affordable electricity rates, or even reducing electricity rate below current rates, while providing a power mix with high renewable content is the primary way equity can be ensured and a CCE program can be accessible to all customers. This goal is at the core of the approaches discussed in this section. It is the core question being examined by the regional CCE feasibility studies and it is the reason that the SEP discusses a delayed roll-out if the City pursues CCE on its own. This delayed roll-out increases the ability of a CCE program to provide affordable rates and high-content renewable power.

Strategy 1.3: Participate in a Regional Climate & Energy Collaborative

Strategy Description

While this SEP will serve as the guiding document for the City to achieve its renewable energy goals, there are important opportunities for specific planning and regional collaboration that the City can undertake. These opportunities, discussed below, do not have direct effects on energy efficiency or renewable energy development, thus the metrics applied to the rest of strategies were not applied here. However, they do serve a critical role in increasing the effectiveness of the other strategies and serve a vital role in addressing the reliability and resiliency of the regional electric grid.

The City can join and support existing efforts by the County of Santa Barbara to a regional climate and energy collaborative. This is a regional effort aimed at bringing together the Santa Barbara regional community, public agencies and special districts, to coordinate on climate and energy goals that are shared and prioritized by many entities in the region.

A Regional Energy Planning Group will catalyze collaboration across public agencies including the possibility for the City to share and learn best practices, partner on incentive programs, expand community solar sites and coordinate on resilience planning.

The Santa Barbara region contains a myriad of public entities, special districts and school districts, that make regional coordination difficult. There are several energy issues, however, including energy system resilience, renewable energy and the water-energy nexus, that many entities in the region are focused on and could benefit from coordination. To date, the only collaboration around energy issues at the regional, or sub-regional, level around Santa Barbara was the South County Energy Efficiency Partnership (SCEEP), a collaboration between SoCal Edison, SoCal Gas, the County of Santa Barbara, the City of Santa Barbara, the City of Carpinteria and the City of Goleta³³. SCEEP focused only on energy efficiency issues and is expected to end, to be replaced by the multi-region group the Tri-County Regional Energy Network (3C-REN). 3C-REN is a partnership between the aforementioned utilities, the County of Santa Barbara, Ventura County and San Louis Obispo County, and it will focus primarily on workforce development, codes and standards compliance and energy efficiency programming in residential buildings, particularly in “hard-to-reach” communities³⁴. While 3C-REN will serve many important needs in the tri-county region, it does not

Climate & Energy Collaborative **Example Project: Energy Assurance** **Plan (EAP)**

In light of recent significant natural disasters affecting Santa Barbara and surrounding communities, and the likelihood of future power outages caused by utilities through Public Safety Power Shutoff (PSPS) events, the Santa Barbara regional would be well served by creating and adopt a resiliency-focused EAP. Building on the successful regional approach of the Multi- Jurisdictional Hazard Mitigation Plan, an EAP focus on protecting the community from any future man-made or natural events that threaten the electricity system in the Santa Barbara region. The EAP would identify, energy interdependencies, “key assets” and vulnerabilities of “key assets” from various disaster events, before identifying strategies to address these vulnerabilities that prioritize renewable energy.

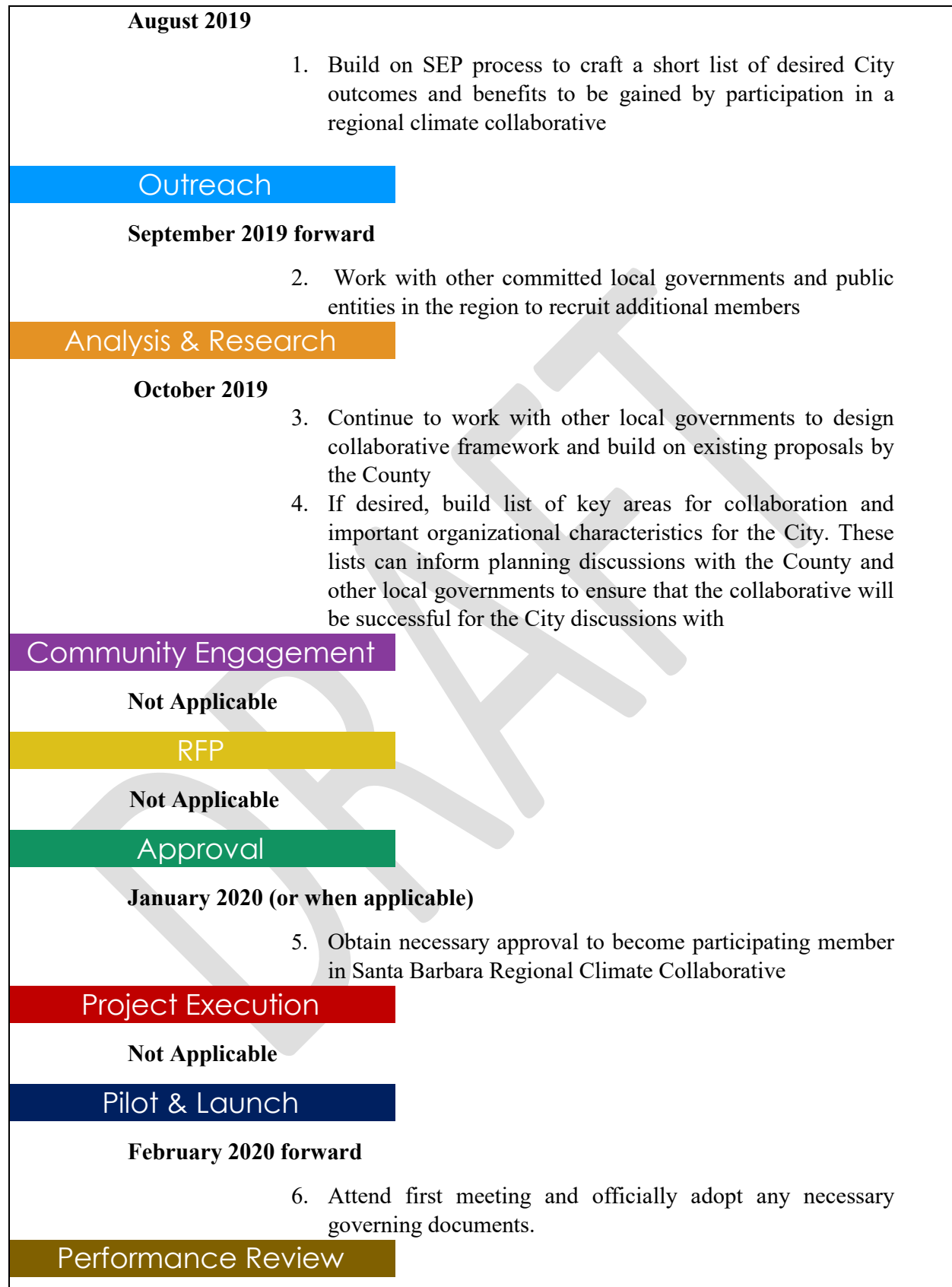
address the need or opportunity for collaboration between municipal governments and special districts within Santa Barbara County.

In late 2018, responding to the need for regional collaboration, the County of Santa Barbara began exploring the possibility of a regional climate collaborative that would serve to coordinate county-wide efforts to reduce greenhouse gases across several sectors. City staff was involved in this process from the beginning and should continue to actively engage with the County throughout the scoping process and launch of any resulting collaborative. Through the proposed Energy & Climate Program, the City may choose to also participate in efforts outside of the energy sector, such as transportation or solid waste, but within the context of the SEP this report focuses on the reasons for the City to be an active participant in the energy aspect of the County climate collaborative.

A primary area for regional collaboration is around the local capacity requirements in SCE's Moorpark electrical sub-area. In February 2018, SCE launched an RFP to procure additional local resources but failed to identify sufficient viable renewable generation resources to meet their requirement and will likely issue another RFP³⁵. The Goleta load pocket³⁶, the part of the Moorpark sub-area that includes the City of Santa Barbara, faces a higher risk of unreliable electricity service and the possibility of prolonged power outages³⁷. The City of Santa Barbara is exposed to additional operations risk related to loss of power at the desalination plant but the reliability challenges, and solutions, in the Goleta load pocket do not subscribe to municipal boundaries. Thus, as the City continues to become more engaged in energy system planning it will be important for the City to lead discussions of possible solutions and use the collaborative as a forum to work with other public entities facing the same location-specific challenges. Official collaboration around this issue would strengthen the unified voice and message to the utility and state regulators about the importance of using renewable energy to serve local capacity requirements around Santa Barbara.

In addition to coordinating action around the pressing issue of electrical reliability, participation in regional collaborative could help the City reach its renewable energy goals in other ways. The unified voice coming from the collaborative could be leveraged to increase the effectiveness of legislative advocacy and attract new funding to the region. The working groups fostered through the collaborative will allow the public entities to share best practices around achieving shared goals and identify opportunities for collaborative action such as joint procurement of distributed energy resources.

Design & Implementation Action Plan	
Participate in a Regional Climate & Energy Collaborative	
Authority Required for Implementation:	Regional Charter
Responsible Staff:	ECP Analyst I, ECP Analyst II
Kick-off	



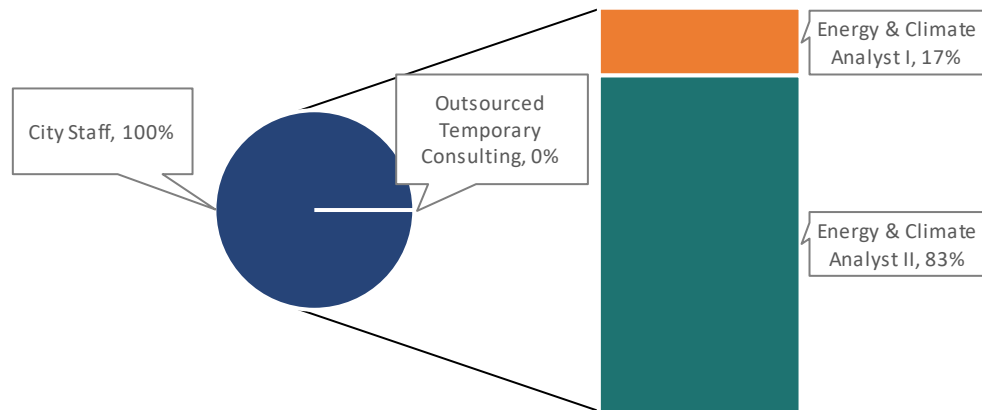
January 2022

7. Assess past participation in the regional collaborative, suggest changes to structure if applicable
8. Shift participation from ECP Analyst I to ECP Analyst II

Staffing Resources Required

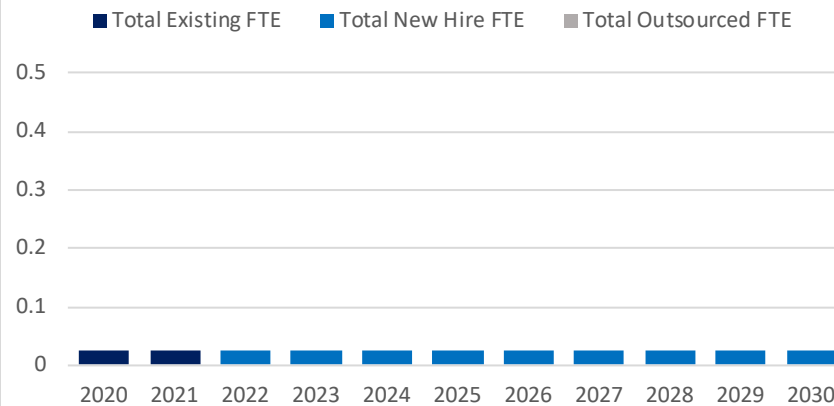
Strategy 1.3: Participate in a Regional Climate & Energy Collaborative

Division of Total Responsibility for Implementation



Strategy 1.3: Participate in a Regional Climate & Energy Collaborative

Implementation Staffing Resource Timeline



Total FTE Requirement	2020: .025 FTE 2021: .025 FTE 2022 forward: .025 FTE
FTE Position Breakdown	2020: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 50 hours</i> 2021: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 25 hours</i> 2022 forward: <i>ECP Analyst II: 25 hours</i>
Example Case Studies of Success in Local Governments	
<i>Monterey Bay Regional Climate Action Compact, Monterey Bay Region, California³⁸</i> The Monterey Bay Regional Climate Action Compact (Compact) is a “network of government agencies, educational institutions, private businesses, non-profit, and non-governmental organizations who are committed to working collaboratively to address the causes and effects of global climate change through local initiatives that focus on economic vitality and reduce environmental impacts for the region”. The design of the Compact allows flexibility for partners, while maintaining focus on the overarching mission. Every partner that joins the Compact must sign a resolution committing them to working collaboratively on emissions reductions and each partner can adopt a boilerplate resolution or adapt it to their organizational needs. This flexibility extends to the funding structure of the Compact. The Compact is funded through the dues of the member organizations, but those dues are not mandatory. In this way, the resources invested in the Compact by its members are directly tied to the efforts and results coming out of the Compact.	
Approach to Ensuring Equity	
<i>Advocated for Inclusion of Equity Language in Guiding Documents:</i> Through involvement in the formation of a Climate Collaborative for the Santa Barbara Region, the City can advocate for equity to play a key role in the guiding documents and mission of the organization. Any regional effort focused on addressing broad climate challenges should prioritize equity because already vulnerable communities (e.g. low-income and minority communities) are expected to be most impacted by the negative effects of climate change.³⁹ Including language reflecting this fact in any guiding documents created to form the Climate Collaborative will ensure that equity is guiding force in the Collaborative’s work moving forward.	

Program Area 2: Community Engagement & Outreach

Strategy 2.1: 100% Renewables Education, Outreach & Behavior-change Programs

Strategy Description

Outreach and community engagement around the SEP are extremely important because of the significant role that the community will have in executing the plan and moving the City toward its goals. The City cannot achieve its energy goals without the buy-in, input, support, knowledge and actions of the community. Throughout the SEP process, the Project Team has engaged key community stakeholders to learn community priorities and inform the strategies. To strengthen and continue this relationship, the SEP contains a holistic marketing and community engagement plan that aims to meet community members where they are and educate them on the plan and how they can benefit from it, while also achieving energy efficiency through behavior change.

Strategic partnerships throughout the community, especially with other government agencies, the Santa Barbara Chamber of Commerce, Santa Barbara Unified School District, City College and UCSB, will also be particularly important for the execution of the SEP strategies. These entities all have important roles in and connections to key aspects of the community. Partnering with other government agencies will create the relationships needed to address regional reliability and resiliency issues. Partnering with the Chamber of Commerce to outreach to the business community will further the energy benchmarking, solar incentive and Smart Energy District strategies discussed in the SEP. Partnering with the School District is a useful way to create momentum around the SEP in the community. UCSB and City College have resources that can be leveraged for research insights and work on energy programs (see SBCC & UCSB Curriculum).

While outreach and community engagement efforts will be an important part of the SEP, the efforts began during SEP creation with an in-depth stakeholder process.

Continuing SEP Stakeholder Process

The SEP Stakeholder Process began with a series of focus groups with City staff and key community stakeholders. The initial insights gathered through these focus groups informed SEP strategy creation. The Project Team continued to engage with key City and community stakeholders throughout the creation of the SEP. After this targeted engagement, the first step toward broader community engagement was the Strategic Energy Plan Symposium in March 2019. At this event the SEP was presented to the larger community and the public comment period was opened. Public comment will be incorporated, along with key City and stakeholder comments, into the final SEP.

Promotional Campaign

After the release of the final SEP, a coordinated promotional campaign can be launched in order to communicate the Plan and its goals to the community at large. This campaign will develop tailored messages relevant to different constituent groups including homeowners, landlords, renters and small businesses. The campaign could have many major avenues of communication to the public. Examples include:

- Public awareness campaign using social media at SEP launch
- Online tracking and dashboard information on energy page of the City's website
- Cross marketing with MTD (advertisements on buses), Santa Barbara Bowl (on site), Airport (advertisements in terminal) and, the Waterfront (progress tracker displaying City's progress toward goals)
- Spotlights on City programs using local TV and radio
- Articles in the City's Energy Newsletter
- Progress tracker display at City Hall
- Water bill insert newsletter

While all of these avenues of communication would be effective in promoting the SEP, budget constraints may limit the number of avenues that can be pursued. Staff from the proposed Energy and Climate Program (Strategy 1.1) can determine which avenues are the most cost-effective.

Clean Energy One-Stop Shop

The need for one point of contact for information on energy efficiency and renewable energy resources was expressed across many of the community stakeholder focus groups. A one-stop shop would be created and, managed by the proposed Energy and Climate Program, aggregate information from multiple City departments enabling residents, businesses owners and developers to learn about existing programs, rooftop solar potential, the business case for DERs, future incentive programs and permitting requirements, all in one place. Creating the first iteration of the one-stop shop, consisting primarily of the final SEP and information on the process, should be a priority in order to coordinate with the SEP promotional campaign. The one-stop-shop can act as the main resource that the community will be pointed toward during the promotional campaign, in order to establish it as the trusted and convenient source of information related to the SEP. As the SEP is implemented the one-stop shop can be expanded with the necessary resources to support implementation. Examples of resources that could be included include;

- Links to resources of current SEP programs
- A user-friendly tool that enables residents to determine the costs and benefits of installing solar
- A vetted list of energy systems installers that are well known in the City in order to create peace of mind to consumers and incentivizes good business practices by installers (to ensure inclusion on the list)
- A blog of positive customer experiences with energy efficiency, solar and battery storage
- Annual "Goal Progress Reports"

Examples of SEP Strategic Partnerships

SEP Working Group: The City can leverage the existing relationship with key stakeholders around the SEP including, local environmental non-profits, APCD, SBMTD, local solar installers, the Association of Realtors and IBEW 431, by creating an SEP working group that meets to discuss SEP design and implementation progress, as necessary. Using the SEP stakeholder symposium as a point of departure the City could continue working with a local non-profit to facilitate and manage the group.

Santa Barbara City College (SBCC) & University of California – Santa Barbara (UCSB) Curriculum & Internship Program: The City can explore partnering with UCSB and SBCC to educate students on renewable energy and what the City is doing to develop it locally, while also engaging students to help

with various outreach activities related to SEP implementation. This curriculum, or “Local Renewable Energy Action Program”, can be leveraged through an internship program placing students within the City government to create mutual benefits between the colleges and the City. The internship or fellowship program provides job training and development opportunities for students that would be attractive to the colleges and enable the City to meet staffing demands created by the SEP at a lower cost. Outreach and collaboration with local unions could provide further options for electrical and mechanical trades.

Santa Barbara Unified School District: The City can also explore partnering with SBUSD to encourage climate and energy related curriculum in middle and high schools and provide resources for students to learn about the City’s leadership efforts. Engaging the school community can also enable successful behavior-change programs, as schools are often a community focal point that connect climate and energy outreach efforts with a broader portion of the community (see below).

Green Business Program of Santa Barbara County: Santa Barbara County’s Green Business Program has an existing relationship with over 100 business in the County and would be a valuable partner in reaching the commercial sector in the City. Since the commercial and industrial sectors account for well over half of the electricity used within the City and have significant solar potential, this is an important community to engage through outreach.⁴⁰ The City could work with the Business Program to establish a specific recognition program unique to business within the City of Santa Barbara, with a set of standards determined by the City.

Behavior Change Programs

Community engagement and behavior change are cutting edge approaches to achieve ever harder energy efficiency and renewable energy actions by local businesses and residents. The programs can be tailored to different parts of the community (businesses, residents, schools) and utilize various approaches (competitions, public recognition). The SEP stakeholder feedback process revealed two insights that could be used to drive future behavior change program design. The first was a keen interest in an award or recognition program for businesses run through the Chamber of Commerce. The second was the need to focus efforts on the renter community. Renters make up a significant portion of the Santa Barbara community, in both the residential and commercial sectors. Since they do not own their buildings, renters have unique challenges to implementing energy measures, and are often prevented from seeing the savings from those measures. Future behavior change programs should acknowledge these challenges and focus on education and resources that address them.

Behavior change programs could be administered within the proposed Energy and Climate Program but may also rely on third party non-profits or community groups that specialize in behavior change programming. The “Case Studies of Success in Local Government” discuss examples of this type of program.

Design & Implementation Action Plan	
100% Renewables Education, Outreach & Behavior-change Programs	
Authority Required for Implementation:	Internal Staff or Council Approval
Responsible Staff:	ECP Analyst I, ECP Supervisor ECP Analyst II
Kick-off	
September 2019	1. Use SEP process to execute initial outreach and promotional campaign in line with SEP adoption and release
January 2022	2. Shift ECP Analyst II into role as primary manager of active outreach, education and behavior-change efforts to
Outreach	
August 2019	3. Continue building relationship with local partners important for promotional campaign, initially contacted through the SEP process (SBMTD, SB Bowl) and other City departments (Airport, Waterfront)
	4. Discuss need/interest for SEP Working Group with community leaders
June 2020	5. Explore 3 rd party managers of behavior change programs
	6. Begin relationship building with City College and UCSB
Analysis & Research	
September 2019 – Promotional Campaign	
	7. Choose prioritized target populations (commercial, industrial, residential, institutional, low-income, etc.) and explore costs of potential advertising strategies
	8. Create outreach plan and materials by target population
April 2020 - One Stop Shop	
	9. Compile list of resources to be included in online resource page

10. Determine necessary features of One-Stop Shop and whether it can be built with existing City resources or if development of desired web platform needs to be outsourced

July 2021 - Behavior Change Programs

11. Survey behavior change research to identify preferred programs
12. Assess staff time & resources needed to run preferred programs and make decision on need for consultant help, in preparation for any necessary budget requests in November/December 2020.
13. Identify neighborhood or sector (e.g. schools, Smart Energy Zone) to pilot programs on a small scale

July - December 2022 - Curriculum & Internship Program

14. Review existing City – University partnerships throughout the country
15. Develop key areas for curriculum to focus on, aligning with priorities of SEP and areas where the City could use intern help
16. Execute outreach to Santa Barbara Unified School District to explore partnership options

RFP

October 2020 – One Stop Shop

17. If determined to be necessary, create and issue RFP for web design to create one stop shop webpage

January 2022 – Behavior Change Programming

18. Create and issue RFP for behavior change program management

Approval

August 2019 - forward

19. Obtain internal approval of any public facing material before release
20. Obtain approval of any necessary consultant contracts

Pilot & Launch

January - May 2020 – Promotional Campaign

21. Launch city-wide Promotional Campaign

January - May 2021 – One Stop Shop

22. Publish online resource page

September 2022 - Behavior Change Programs

23. Pilot behavior change program in chosen area and track results

24. Expand pilot to other areas, if successful

September 2023 - Curriculum and Internship Program

25. Launch finalized programs with educational partners (Universities and/or SB USD)

Performance Review

June 2020 (forward)

26. Beginning with results of initial Promotional Campaign, annually reevaluate levels of community engagement to determine additional outreach needs

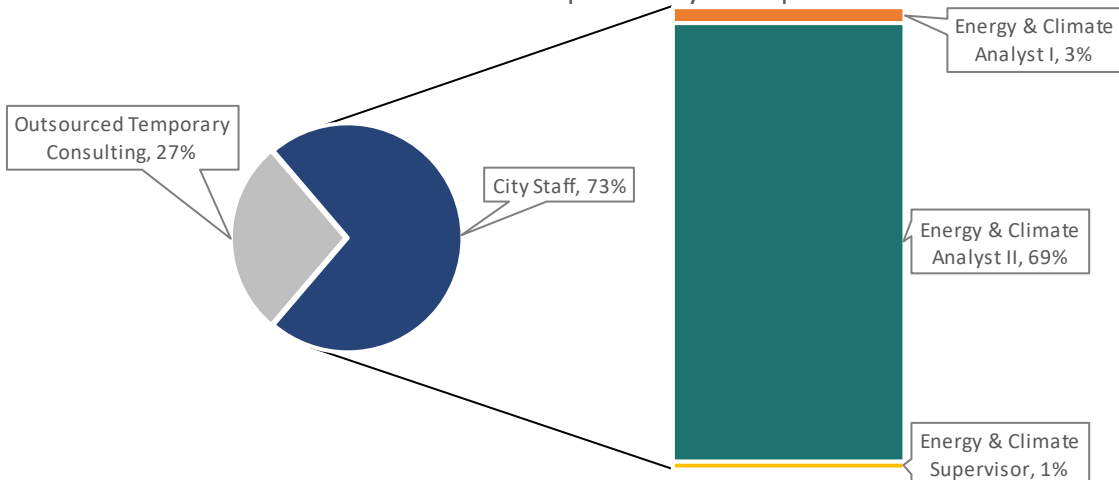
May 2022 (forward)

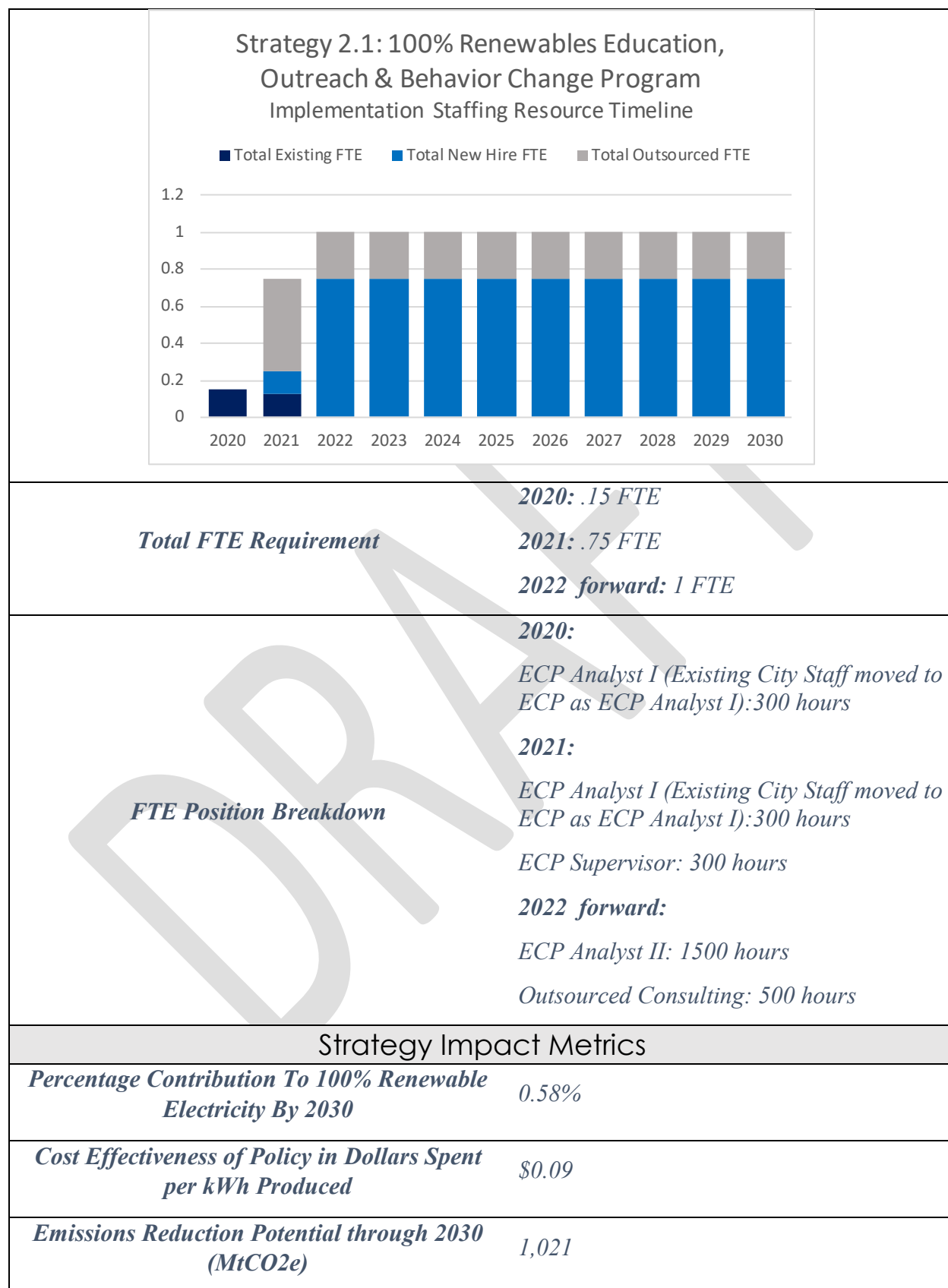
27. Perform annual analytics report of online resource page and review frequently asks questions to determine needed improvements or expansions of online resource

Staffing Resources Required

Strategy 2.1: 100% Renewables Education, Outreach & Behavior Change Program

Division of Total Responsibility for Implementation





***Resilience & Reliability Impacts (Added MWh
of Storage by 2030)*** 2

Example Case Studies of Success in Local Governments

Fremont Green Challenge, Fremont, California⁴¹

The Fremont Green Challenge is a program operate by the City of Fremont in collaboration with the third-party organization Community Climate Solutions. The program is centered around an online platform that provides suggested actions that households can take to reduce their impact on the environment. Participants can fill out their energy profile and receive impact reduction estimates along with suggested actions. Participants can also join teams and community groups to combine their efforts and earn more points. Points are tracked on a leader board in order to gamify the challenge and encourage more impactful actions.

The Fremont Green Challenge is an example of how behavior change programs can be easily combined with educational programs in order to provide community members information on how to act and use social pressure to encourage action.

Fremont funds this challenge through their Sustainability Department.

GoGreenSL, San Leandro, California⁴²

GoGreenSL is a social media-based behavior change program that provides dozens of best practices to reduce energy consumption and carbon emissions and acknowledges individual households and teams through public recognition on the website and placement on a community “Challenge Leaderboard”. Launched in 2018, this social media-based behavior change program has already exceeded its target for participating households in the community of 90,000 residents.

Envision Charlotte, Charlotte, NC⁴³

Envision Charlotte was a five-year collaborative project between the city, University of North Carolina, Duke Energy, and a host of local businesses to engage the community in making smart energy decisions in the daily lives, drive local sustainability and resiliency efforts, and strengthen economic competitiveness. One goal of the initiative was to cut energy use 20-percent over a five-year period. Sixty-one large downtown commercial buildings joined the project and collectively saved 19-percent, totaling \$26 million in energy savings and CO2 reductions equivalent to 11,000 vehicles.

Approach to Ensuring Equity

Prioritize Accessibility of Outreach Efforts: When considering future outreach efforts surrounding the SEP, the City should take actions that decrease barriers preventing hard-to-reach populations from engaging with these efforts. Before each new outreach effort, the City should consider which community members are not being heard from and design an aspect of that new effort to reach those community members.

One useful action is to create outreach materials in languages besides English in order to reach members of the community for whom English is not their first language. Another concrete action is

to schedule community workshops outside of normal business hours to enable community members who are unable to leave their jobs to attend.

Community Needs Assessments: A Community Needs Assessment is a structured community engagement and research technique that can be leveraged to elevate equity in other SEP strategies. Community Needs Assessments are used to determine the exact needs of a community with respect to a certain goal through focus groups, surveys and engagement with community-based organizations. In the context of the SEP, this technique could be used to determine the exact barriers that low-income communities face in adopting clean energy technologies in Santa Barbara in order to design incentive programs that address those barriers.

For example, when designing an incentive program for solar systems, the City could (and should) provide a larger incentive to income-qualified residents. However, if those residents cannot access this larger incentive because they do not have the ability to meet the requirements to prove that they income qualified, the program will not be successful. Community Needs Assessments use primary research to identify less obvious barriers preventing communities from achieving certain goals. Without this sort of assessment there is no guarantee that a program established by the City will succeed, even it is designed to target certain populations.

Program Area 3: New Funding Sources & Financial Incentives

Strategy 3.1: Offer Financial Incentives for Solar + Storage

Strategy Description

A direct option for the City to catalyze development of renewable generation within the City limits, for the simultaneous purposes of climate action and local resiliency, is to provide a financial incentive to reduce the cost of development and decrease the payback period for DERs. There are two main incentive structures that the City could offer: Upfront incentives to cover costs at the time of construction (or shortly thereafter), or ongoing performance-based incentives.

Although a capacity-based, or fixed, incentive is simpler to administer – it requires only a single lump sum per kilowatt to the system owner at the time of installation– a Performance-based Incentive (PBI) is often a more valuable and viable long-term method for the funding agency to ensure that energy systems are maintained over the course of their useable lifetime. A PBI is a \$/kWh-produced incentive that provides payments based on actual system electricity production over set period of time. A PBI ensures that the City is not paying upfront incentive dollars for renewable energy generation systems that were built but failed to produce over their lifespan. If a system owner does not maintain their system, the PBI payment they receive will be reduced. If the energy system fails to operate the funding agency can immediately redirect the incentive dollars toward a local energy system that is performing. This avoids wasted investment in underperforming power systems and upholds energy system owners' attention to maximize production from local energy generation.

Incentive Amount: The goal of any incentive amount, is to push marginal DER projects into economic viability. Accordingly, the incentive amount should be set at a rate that pushes most projects into economic viability, while also balancing the budgetary impacts on the City (cost of paying out the incentive) and achieving targets for renewable energy production. Taking a target simple payback period of 10 years for a simple solar-only system, the incentive amount should cover the difference between the actual savings from that system and the savings needed to achieve a 10-year payback.

As the City launches the incentive program and tracks results, the incentive amount can be increased or decreased depending on how much progress toward the City's goal is being made. Additionally, the City can offer the incentive at different rates for targeted communities or type of projects that the City wants to support. This could mean a higher incentive rate for low-income residents, projects at multi-unit dwellings or non-profit developments.

Incentive Duration: Incentive structures can be offered for the entire system lifetime or for critical system payback period only (e.g. first 3-5 years), depending on the funding amount provided by the City. Evidently, the advantage of offering a PBI over the entire system life is that it adds greater likelihood that any given project will be maintained. However, lifetime incentives can prove costly. The California Solar Initiative, for example, which offered both a PBI and a fixed incentive, in some cases paid over a million dollars in incentives to large commercial solar systems.⁴⁴

Under a PBI incentives are paid in the future rather than in advance, meaning that PBI budget allocations can earn interest for the City while waiting to be paid out to recipients.

Administering the Incentive: One option for the City to address the administrative burden of any incentive structure is to contract with a 3rd party to manage incentive payouts and the system production tracking, as necessary. The outsourced or administrative resources required to track system production under a PBI will require an additional budget allotment. That allotment, however, comes with added benefits. It provides an increase in visibility of local renewable electricity generation information, because system owners must share monitoring data with City in order to receive an incentive. This allows the City to better track progress toward renewable electricity goals.

The City could provide a PBI for projects owned directly or under a third-party financing structure such as a Power Purchase Agreement (PPA). Under a PPA, system performance is tracked by the project owner regardless of any incentives, in order to invoice the project host for the cost of the power produced. The PBI could be included in this transaction and used to buy down the cost of the PPA to the system host. This combined incentive structure was offered by the CSI at a state level and proved a successful way to balance the tradeoffs of different incentive structures while maintaining the primary goal of catalyzing renewable generation.⁴⁵

Incentivizing Advanced Energy Storage: As solar becomes more wide-spread, the importance of storage systems to improve the economics of solar systems and manage solar generation on a decentralized grid is rapidly increasing in importance. To align the impacts of its incentive with larger trends in the energy system, the City should provide a significant adder to the incentive rate for systems that include storage. This would create a higher incentive for solar + storage systems that provide added reliability & resilience benefits to the community. While the City should still provide solar only incentives for residents' that prefer this option, the size of this adder should be large enough that the majority of systems receiving incentives are solar + storage systems.

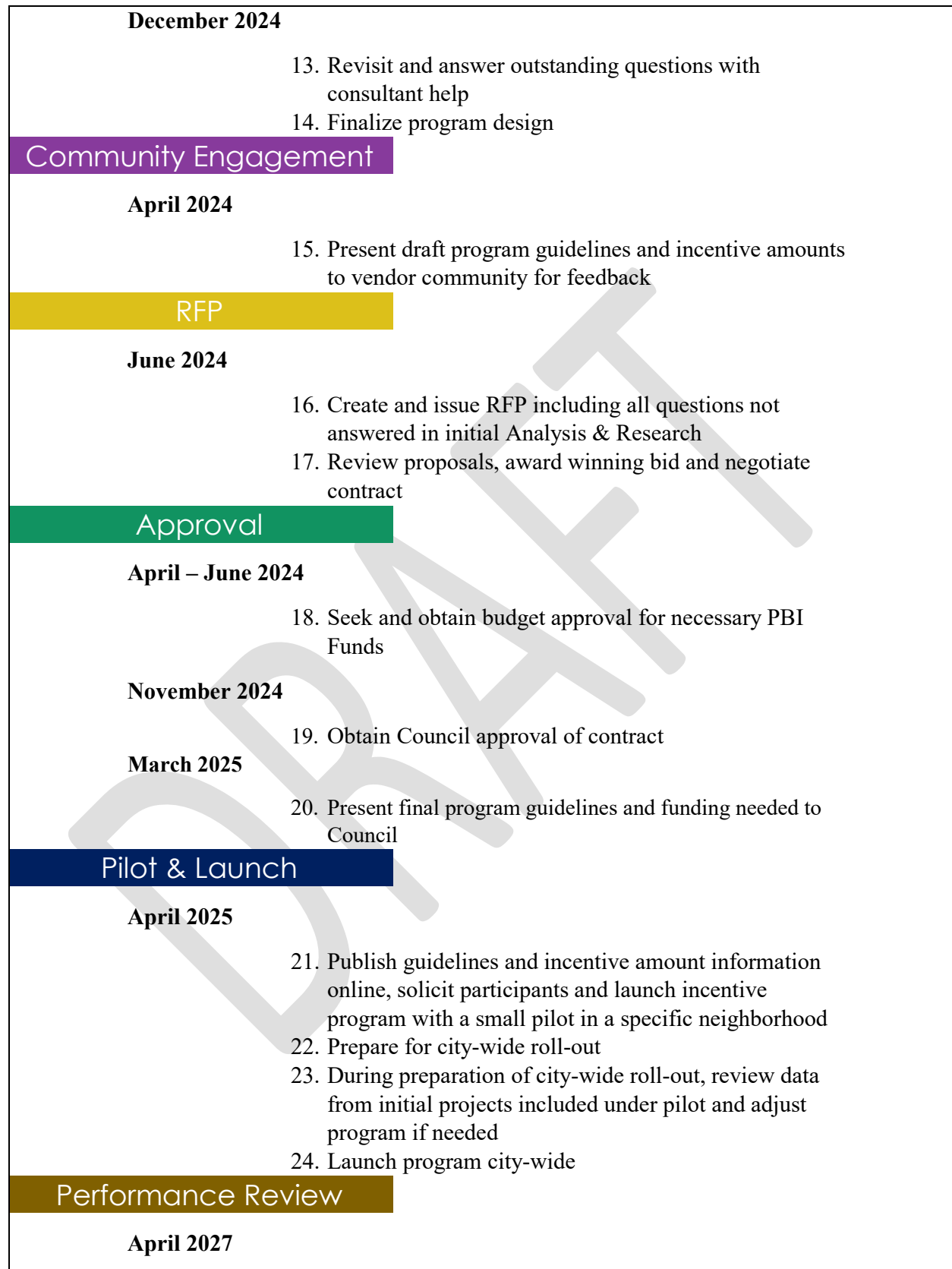
Another idea to further promote resilience is that the City may also offer fixed incentive at the time of installation for a certain pilot set of critical facilities including critical lifelines such as communications, food, and transportation.

Funding: A key part of a PBI, from a funding perspective, is that the costs to the City are predictable and can be limited by instituting a cap on the total capacity of eligible projects, if desired or necessary due to funding constraints. Total required funding depends on the number of projects chosen, length of incentive and incentive amount. The City can control the funding needed by changing these variables, but it is important to ensure that the incentive amount, in particular, is high enough to encourage new development. The SEP provides guidance on calculating incentive amounts, but more research will be needed by City staff to determine the lowest incentive amount that will have a significant impact. This research will be done most effectively through coordination with local solar installers and customer focus groups.

Leveraging CCE: If the City creates a city-only CCE program, any incentive structure can be housed within the CCE program and included in the CCE program budget as a customer program. Once they are established organizations with accumulated capital resources, many CCE s (and municipal utilities) provide DER incentives. A CCE program also creates the ability to offer additional incentive structures not discussed, such as net energy metering (NEM). The revenue stream of a CCE would increase the

total incentive amount that the City could provide. A DER incentive is one of many customer programs that should be explored if CCE is established.

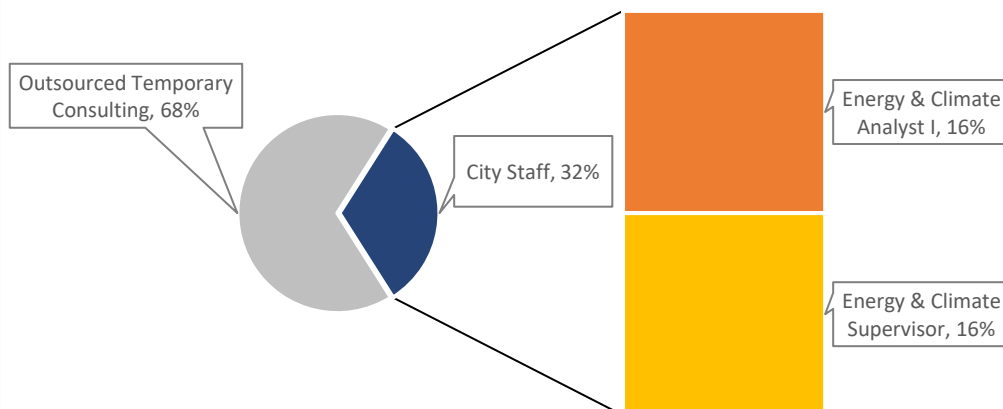
Design & Implementation Action Plan	
Offer Financial Incentives for Solar + Storage	
Authority Required for Implementation:	Council Approval
Responsible Staff:	ECP Supervisor, ECP Analyst I
Kick-off December 2024 1. Assign program development to appropriate staff 2. Identify customer segments and property types to target for the incentive 3. Based on SEP modeling, establish target DER development under incentive program	
Outreach January 2024 4. Contact local solar installers and other DER vendors to discuss necessary incentive characteristics from their point of view	
Analysis & Research February 2024 5. Create program guidelines, including project eligibility, timing and types of incentives to be offered 6. Assess any potential risks and legal protections for the City 7. Explore appropriate incentive amount 8. Create an aggregate system performance model for the program that will determine the incentive payment amount (for fixed incentive model) 9. Establish reporting requirements for PBI model 10. Finalize necessary incentive level (or tiered levels). 11. Calculate estimated capital needs 12. Identify questions beyond the City's technical expertise for inclusion in RFP for program design and implementation assistance	



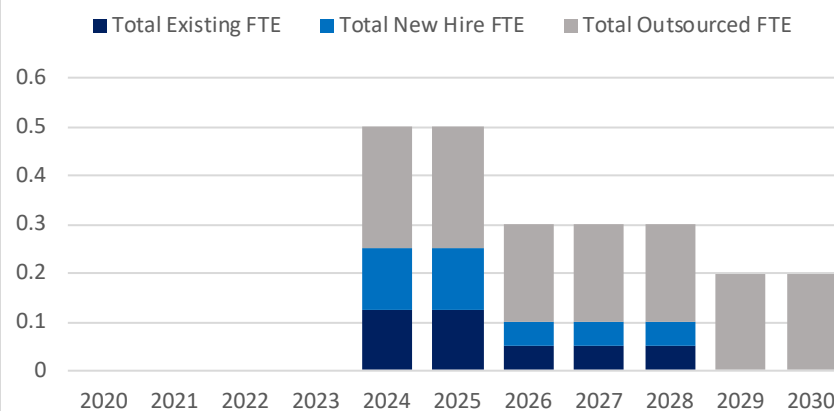
25. Evaluate program results and adjust program as necessary to achieve desired DER development

Staffing Resources Required

Strategy 3.1: Offer Financial Incentives for Solar + Storage Division of Total Responsibility for Implementation



Strategy 3.1: Offer Financial Incentives for Solar + Storage Implementation Staffing Resource Timeline



2024 - 2025: .5 FTE

Total FTE Requirement

2026 - 2028: .3 FTE

2026 - 2028: .2 FTE

FTE Position Breakdown

2024 - 2025:

<i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 300 hours</i> <i>ECP Supervisor: 300 hours</i> <i>Outsourced Consulting: 500 hours</i> 2026 - 2028: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 100 hours</i> <i>ECP Supervisor: 100 hours</i> <i>Outsourced Consulting: 400 hours</i> 2028 forward: <i>Outsourced Consulting: 400 hours</i>	
Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	6.22%
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	\$0.025
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	3,828
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	25
Example Case Studies of Success in Local Governments	
<i>Solar Rebate Program, Alameda Municipal Power, Alameda, California⁴⁶</i> In response to the passage of SB1 in 2008, Alameda Municipal Power (AMP) allocated 4.2 million dollars toward providing solar rebates for its community. The program was quite popular with all allocated residential incentives were reserved by 2013 and all allocated commercial incentives reserved by 2016. Municipal utility research of AMP and others in California revealed an important aspect of this program's design. By executing a PBI, AMP was able to provide incentives for more projects than initially expected. The actual production of the installed systems was often less than was initially projected, meaning that AMP was not paying upfront for clean electricity that was never generated. This demonstrates the primary benefit of a PBI. While AMP is no longer offering solar incentives, they did provide incentives in excess of the amount required by SB1, indicating the value of a local incentive program.⁴⁷ <i>GoSolarSF, San Francisco, California⁴⁸</i>	

GoSolarSF is an incentive program offered by the San Francisco Public Utilities Commission for customers that are enrolled in CleanPower SF, the City's CCE program. It is based on San Francisco's "Solar Energy Incentive Program" which provided a budget of \$2-5 million annually over ten years.

The program provides a lump-sum incentive at project installation and is not a performance-based incentive. It provides a good example of how incentives can be tailored to target specific customer groups. GoSolarSF provides a base incentive of \$400/kW for residential and \$200/kW for commercial customers. The program also includes a variety of adders for low-income households, non-profits and non-profit housing units. A program designed in Santa Barbara could provide similar adders, as well as adders for projects that include energy storage, as outline in this Strategy Description.

Approach to Ensuring Equity

Provide Increased Incentive to Target Communities: Ensuring equity in a DER incentive program can be achieved by offering increased incentive amounts for low-income communities. This is effective for two reasons. First, these communities tend to have less capital available to procure DER systems. Second, low-income households are more highly burdened by energy costs, meaning they spend a higher percentage of gross income on energy costs, than medium and high-income households.⁴⁹ Providing a higher incentive directly addresses the first challenge, enabling more households to procure DERs. Once procured, these DERs will address the second challenge by reducing energy costs. In this way, an increased incentive addresses equity by increasing energy access and affordability.

In addition to increased incentives, the City should design targeted outreach to reach low-income communities. A lack of knowledge of available programs can be a significant barrier for communities that have not participated in energy efforts in the past. Along with a targeted campaign, the City could consider reserving a certain amount of incentive funds for income-qualified residents to ensure that sufficient funds remain available if program uptake is lower.

Strategy 3.2: Pilot On-Bill Financing for DER

Strategy Description

On-bill financing (OBF) is a common tool for funding energy efficiency upgrades that has been used by utilities in the United States since the 1990s.⁵⁰ All four major California utilities, Pacific Gas & Electric (PGE), San Diego Gas & Electric (SDGE), SoCal Gas and SoCal Edison, offer OBF programs to their customers⁵¹. SoCal Edison offers attractive terms; providing no-fee, zero interest loans to customers with at least two years of uninterrupted electric service. However, solar PV and other renewable energy systems are not included.⁵² Other low-cost energy financing programs in California, run by the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA), specifically exclude “solar photovoltaic, solar thermal or other distributed generation or renewable energy systems” as eligible resources in the residential program⁵³, and anticipate this same exclusion in their multi-family and small business programs.⁵⁴ CAEATFA will offer solar and other distributed resources as eligible under their non-residential program (for-profit, non-profit or government entities), but there is no credit enhancement provided in that program to make loans accessible and affordable.⁵⁵ Additionally, this program would not apply to residential and small commercial (defined here as less than 40 kW) building types, which represent 40% of solar potential in Santa Barbara.⁵⁶ In order to address this gap in affordable, accessible financing for distributed energy resources, the City can pilot an on-bill financing and revolving loan program for property owners to complete DER projects (e.g. storage, solar) and using loans repaid through City water bill.

Program Structure – Non-Profit or Foundation Capital

Under this structure, the capital used for the loans would be provided by a 3rd-party funding entity, such as a foundation or non-profit. That entity would be in turn responsible for loan processing and tracking, and receive a service fee from City, separate of the initial capital. The City would facilitate repayment of these loans to the revolving fund via the water bill and ensure a low interest rate that makes the loans viable for funding DER projects in the community. In this case, the City would ensure a low interest rate by establishing a fixed rate in the program contract (e.g. 1.5%), enough to grow the revolving fund but keep loans affordable for residents. For accepted loans, the 3rd-party would transfer funds directly to an approved contractor and report the awarded loan amount, as well as customer information, to the City to be added to the water bill.

Comparing OBF and PACE

Property Assessed Clean Energy (PACE) financing is available to Santa Barbara homeowners and other private building owners. PACE financing provides property owners with funds to implement various property upgrades including energy efficiency and renewable energy projects. Funds are repaid through a new line item on the property owners’ property tax assessment bill. PACE programs are sponsored by public agencies and administered and funded through private capital. Interest rates are similar to fixed rate, fixed term home equity loans, generally ranging from 6% to 9%. Interest paid annually on PACE payments is tax deductible. There is, however, no guarantee that this interest rate will be affordable for the property owner. The purpose of an OBF program, as proposed in the SEP, is provide affordable loans that are accessible to low-income communities and increase the community’s ability to fund renewable energy.

Payments received on the water bill would first be applied to the service fees and other related water rates owed to the City, before being applied to the loan interest or outstanding capital.

City Responsibilities: Under this proposed OBF structure, the City would have only two responsibilities; remitting collected payments from the water bill to the 3rd-party and optional outreach and marketing to assist in loan origination to drive DER adoption, as viable under budget constraints.

3rd-party Responsibilities: The 3rd-party would be responsible for all aspects of the loan management including, primary origination, application, processing, closing and tracking.

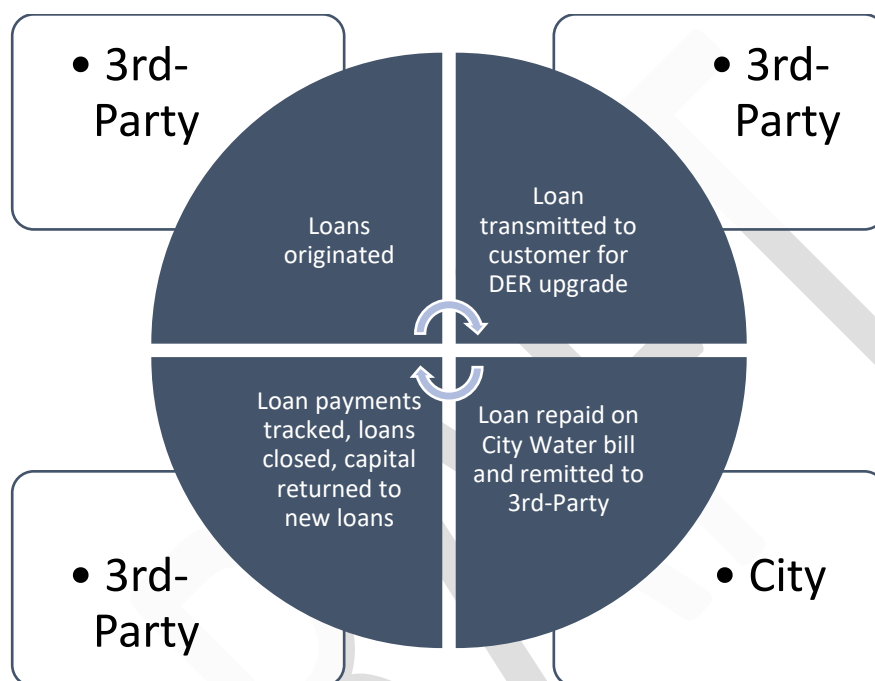


Figure 4: Simplified On-Bill Financing Program Process

Program Structure – Traditional Capital

Under this structure, the general process would follow the process outlined in Figure 4. The primary difference is that the capital used for the loans would be provided by a traditional 3rd-party funding entity such as a bank, credit union or investment fund. The loan origination, processing and tracking would function largely the same as the first structure. In order to ensure a low interest rate in this structure, however, the City would have to provide credit enhancement via a loan-loss reserve, interest rate buy-down or loan guarantee. These mechanisms lower risk for the funding entity keeping interest rates low. While it may be easier to locate and secure traditional capital, each of these mechanisms required to keep interest rates at a level to drive significant DER adoption requires the City to make a capital outlay of its own. For a loan loss reserve, the City would need to reserve a percentage of the loan capital to be available to the 3rd-party entity, should the customer default⁵⁷. An interest buy-down would require the City to provide capital to the 3rd party up-front, compared to in the event of a default, to create added security in exchange for a lower interest rate. The City would not recoup this capital from the 3rd party, even if the loan was repaid.⁵⁸ Finally, a loan guarantee, likely the most powerful

mechanism to lower interest rates requires the City to take the loan amount as a loss on its balance sheet and incorporate it into the overall budget.⁵⁹

Structure Comparison

The goal of OBF is to provide affordable loans and a simple mechanism of loan repayment. The City's water bill allows for a simple mechanism of loan repayment, but the non-profit or foundation capital structure is the most effective way to provide affordable loans. Accordingly, the City should pursue that structure first, before turning to the traditional capital structure if necessary.

OBF via CCE

On-bill financing is also a customer program that can be orchestrated and funded by the city-only CCE program, if it is pursued, as it expands its customer base in the community. Under this model, the CCE program could provide the initial capital and simply collect payments on a customer's electricity bill. This model would provide greater control of interest rates, potentially increasing the impact of the program, but would require an established and financially solvent CCE program.

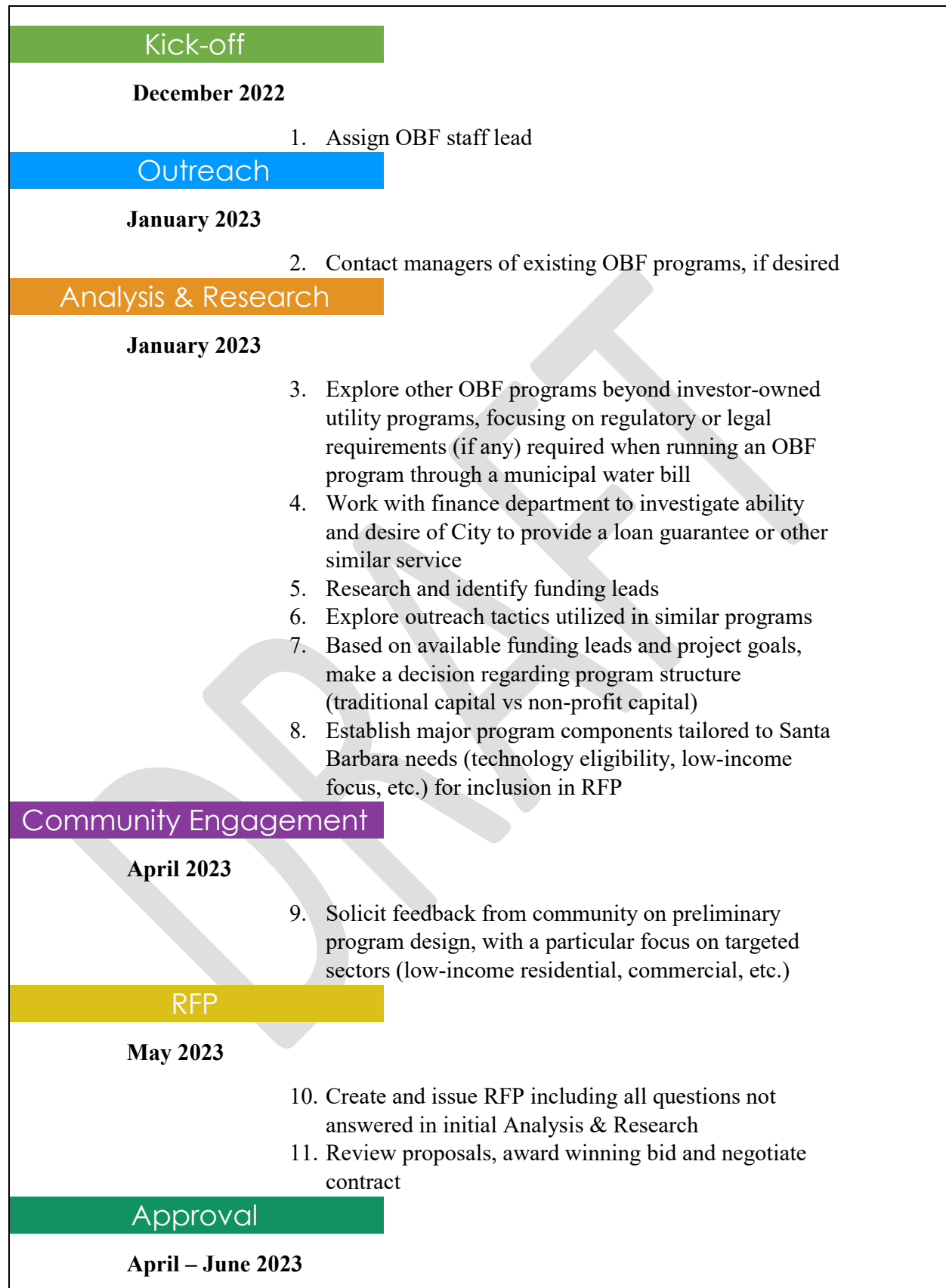
Differentiating from Empower Santa Barbara County

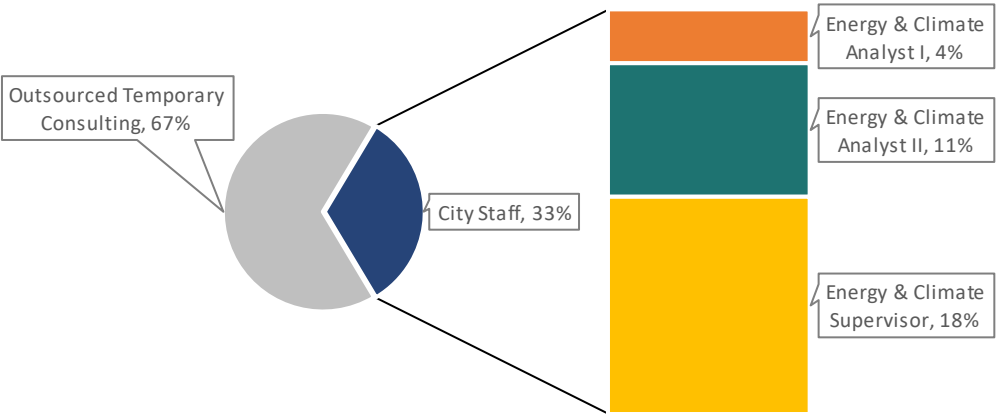
Through 2018, the County of Santa Barbara offered affordable loans for energy efficiency improvements through a program called Empower. The Empower program operated similarly to the "Traditional Capital" program structure described here, using a loan loss reserve to reduce interest rates on loans offered by Coast Hills Credit Union. The primary difference between the on-bill financing programs and Empower is the user-friendly nature of OBF programs. Empower struggled to find participants because utility involvement created extensive red tape that made it difficult for residents to secure and repay loans. By leveraging the City's water bill and creating a program outside of the investor-owned utilities, the City can overcome the constraints faced by Empower.

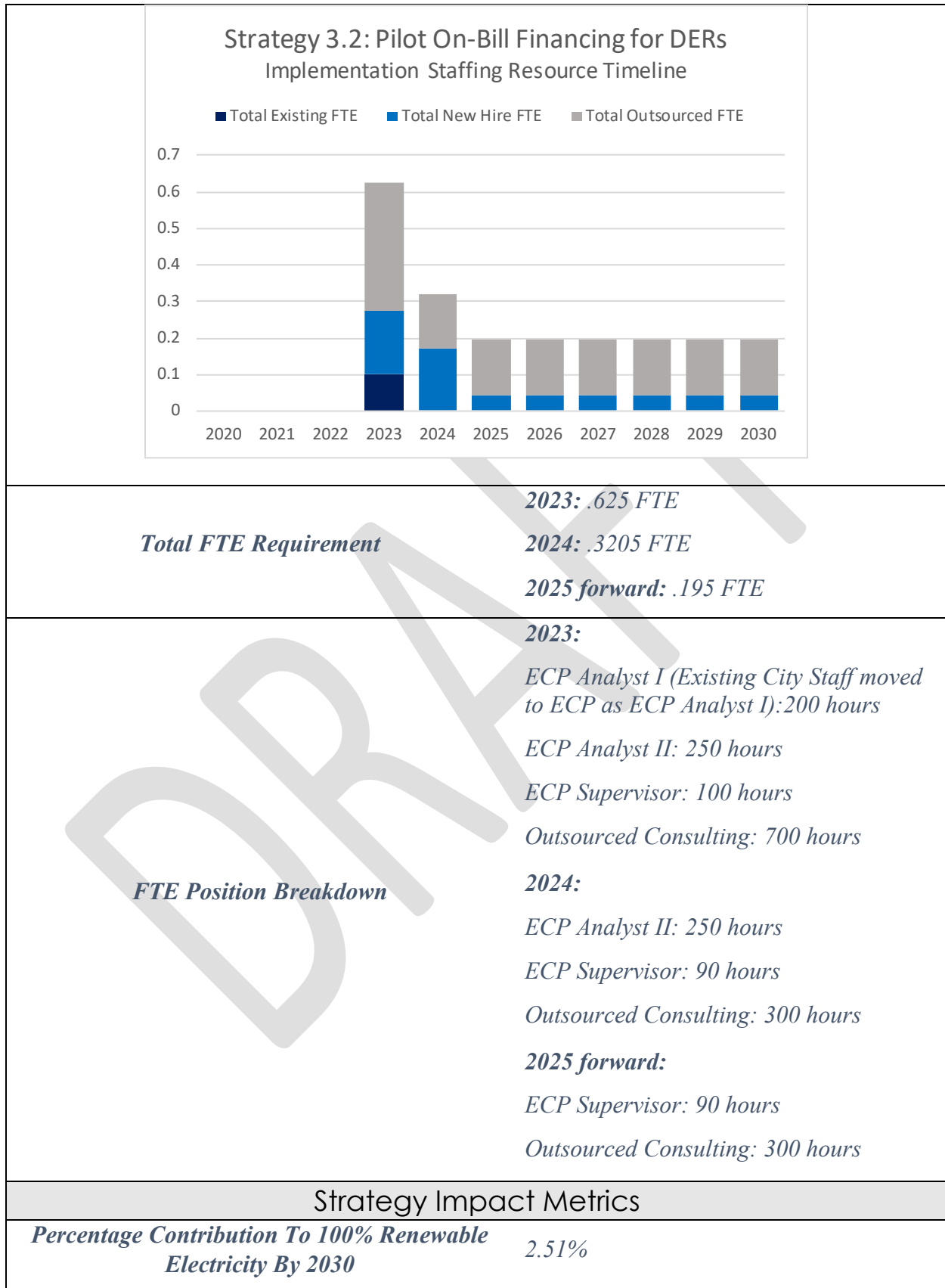
Design & Implementation Action Plan

Pilot On Bill Financing for DERs

Authority Required for Implementation:	Council Approval
Responsible Staff:	ECP Supervisor, ECP Analyst I, ECP Analyst II



August 2024	12. Obtain any budget approval necessary to fund 3rd party contract 13. Obtain Council approval of contract												
Pilot & Launch													
August 2024	14. Work with 3rd party capital provider and program manager to design parameters and operational details of pilot 15. Work with Water Resources to establish process for incorporating water bill 16. Launch pilot program 17. Adjust program based on pilot results 18. Launch full program												
Performance Review													
August 2026	19. Evaluate program results and adjust program as necessary to achieve desired DER development												
Staffing Resources Required													
Strategy 3.2: Pilot On-Bill Financing for DERs Division of Total Responsibility for Implementation  <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Outsourced Temporary Consulting</td> <td>67%</td> </tr> <tr> <td>City Staff</td> <td>33%</td> </tr> <tr> <td> Energy & Climate Analyst I</td> <td>4%</td> </tr> <tr> <td> Energy & Climate Analyst II</td> <td>11%</td> </tr> <tr> <td> Energy & Climate Supervisor</td> <td>18%</td> </tr> </tbody> </table>		Category	Percentage	Outsourced Temporary Consulting	67%	City Staff	33%	Energy & Climate Analyst I	4%	Energy & Climate Analyst II	11%	Energy & Climate Supervisor	18%
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<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	<i>\$0.011</i>
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	<i>1,665</i>
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	<i>8</i>
Example Case Studies of Success in Local Governments	
<i>Lafayette, Colorado, Low Cost Opportunity for Home Improvements (Pilot Program)</i>⁶⁰ During this 6-year pilot project, residential property owners can apply for low-interest (fixed 1.5% APR) energy efficiency improvement loans of up to \$5,000 through Boulder County's Energy Smart Program (mission and rebate program similar to Tri-County REN in Santa Barbara County), and repay the loans through their municipal water utility bills over 1, 3 or 5 years depending on the loan amount. Energy Outreach Colorado contributed \$30,000 to the City's Energy Efficiency and Renewable Energy Revolving Loan Fund to kick-start the program. This program is specifically designed for income-qualified residents in Lafayette and eligibility is based on household size and income.	
Approach to Ensuring Equity	
<i>Simplified Program Design & Targeted Outreach to Diversify Participant Pool:</i> Equity is at the core of the On-Bill Financing strategy, as it is designed to provide affordable capital that increases access to DER technologies. The City can promote equity by using targeted outreach, as discussed in Strategy 2.1, to spread information about the program and focus on simplifying the enrollment process to decrease the administrative burden of participating. A simplified enrollment process is not easy to design. During program design, the City should consider using resources to hold focus groups to determine specific barriers that need to be addressed. Another useful strategy would be to partner with a community-based organization to assist with outreach, application design and even co-sponsor the program to lend credibility to the program in communities that are already familiar with the community-based organization.	

Program Area 4: New City Facility Development & Pilot Projects

State Context on Microgrids Under Senate Bill 1339

Senate Bill 1339 was adopted in September 2018 and mandates that the CPUC work with the CEC, and CAISO to facilitate the commercialization of microgrids for distribution customers of large electrical corporations.

The bill requires standards for microgrid service, specific microgrid tariffs, and interconnection streamlining by December 1, 2020. Strategic Energy Plan pilot project options are intended to align with the deadline for actions by the commissions and CAISO.

Further options for the City to facilitate microgrids would include participating in the State's microgrid working group or developing standards for permit and zoning from the building department. The launch of the Santa Barbara Smart Energy Zone could also align with timing of SB1339 rollout and could provide an initial pilot area for zoning standards and permitting protocols relating to microgrids.

Strategy 4.1: Develop Distributed Energy Resources (DERs) & Microgrids at Municipal Facilities

Strategy Description

Included in Resolution 17-043 was the goal to meet 50% of municipal electricity use with renewable electricity by 2020.⁶¹ As of 2018, the City sourced 41% of its municipal electricity from renewable sources, with the majority coming from SoCal Edison's renewable electricity portfolio.⁶² In order to meet this municipal goal, the City is creating a Zero Net Energy Roadmap for its facilities, in parallel with the SEP. However, DER and microgrid projects at City facilities still occupy an important role in the SEP for the following reasons:

- City facilities' critical role in emergency and disaster response create an important need for energy independence and back-up power that aligns with the City's energy and climate goals while providing resilience and increased reliability of the electricity system.^{63,v}
- Continued development of DERs and microgrids at City facilities maintains the City's role as a renewable energy leader and sets an example for residents and businesses to follow suit
- DERs can continue to provide economic benefits to the City, potentially freeing up money to reinvest in other SEP efforts
- The water-energy nexus creates significant opportunities to find cost savings and system redundancy between the City's water treatment and distribution systems and its energy system

Context & Background

Defining DERs & Microgrids: Broadly, DERs encompass any resource on the distribution system that generates or manages electricity⁶⁴. In the context of renewable energy, this includes solar, battery storage, cogeneration, fuel cells and aggregated

demand response. Energy efficiency measures are also considered a DER. A microgrid is an aggregation of DERs that can island from the electricity grid⁶⁵. Microgrids range from a single building to a larger

^v See Strategy 1.3 for a discussion of renewable energy's role in emergency and disaster planning.

campus such as a hospital or university. To this point, in California, microgrids have been nearly exclusively behind the meter, preventing the type of neighborhood level microgrid that could provide substantial resilience benefits to a community.

Changing Utility Rate Structures: Due to significant changes in the electrical load shape in California, driven primarily by the development of solar⁶⁶, SCE (and other California utilities) are proposing changes to the current time-of-use rates in order to shift peak electricity pricing to the evening⁶⁷. In July 2018, the California Public Utilities Commission (CPUC) issued a proposed decision approving of these changes, indicating that they are likely to be approved for implementation starting in March, 2019⁶⁸. The changing SCE rate structure makes new solar + storage projects more economically viable than solar-only projects, because the storage enables customers to offset electricity costs during the new peak hours when solar is not producing electricity⁶⁹. Thus, storage will likely become a default addition to solar projects due to economic drivers⁷⁰. The City can capitalize on the changing market dynamics and look for opportunities to turn standard DER projects into building level microgrids.

Regulatory Barriers: There are still significant regulatory barriers to developing multi-facility microgrids in California. California Public Utilities Code Section 218(b), known as the “over-the-fence-rule”, prevents any entity besides a publicly regulated utility from distributing electricity to more than two neighboring properties and to any non-adjacent property⁷¹. This does not prevent all multi-facility microgrids (the sidebar “Current Options for Peer Energy Sharing and Microgrids Using “Over-the-fence” and PUC Section 218 Rules” discusses allowable scenarios), but it limits possible sites, and, to date, it has made more economic sense for the City to take advantage of adjacent property meter aggregation rules in order to maximize solar only development^{72–73}.

Current Options for Peer Energy Sharing and Microgrids Using “Over-the-fence” and PUC Section 218 Rules:

Until efforts under Senate Bill 1339 are completed, options for developing microgrids in California are somewhat limited. California Assembly Bill 2863, enacted in 2008, provided rules for independent solar energy producers and master-metered customers. The Public Utilities Code Section 218 was amended to exclude certain energy generation and transfer from regulation as a Utility.

The amended utilities code provides an exemption for Electrical Corporation treatment of corporations and persons employing cogeneration or producing electric power from nonconventional sources like solar. This exemption to regulation is only for specific uses of the generation of electricity for purposes including the sale to a local public agency for its own use (but not for resale or transmission to others).

Also exempted are “over-the-fence” transfers of nonconventional electric power to less than two other corporations or persons, solely for use on property immediately adjacent to the property where the electricity is generated.

“Over-the-fence” transfer is still allowed across an intervening public street constituting the boundary between the property where the electricity is generated and the immediately adjacent property, if the property where the electricity is generated, and the immediately adjacent property is under common ownership or control. This does not apply, however, if common ownership or control was gained solely to enable the sale of the electricity so generated and not for other business purposes.

However, with the passage of SB1339, the investor-owned utilities (IOUs) in California are now required to develop a rate schedule and interconnection requirements for multi-facility microgrids that would create a development pathway for microgrids interacting with the distribution grid (see sidebar “State Context on Microgrids Under Senate Bill 1339). This proceeding has the potential to create a pathway to develop economically viable microgrids, but it is unclear whether it will address the primary financial barrier to microgrid development, California Electrical Rule Number 2. Under Electrical Rule No. 2, IOUs are allowed to charge customers a monthly cost of ownership for any added infrastructure required to support the customers service (new switches, transformers, net generation output meters, etc.), which, when applied to microgrids, can surpass the capital cost of the system itself.⁷⁴ Depending on the specifics of the microgrid tariffs and interconnection rules developed under SB1339, there may be new opportunity for the City to develop impactful microgrid projects that include partner facilities.).

Water-Energy Nexus: Santa Barbara’s critical desalination, water treatment, wastewater treatment and water distribution systems represent an important renewable energy generation opportunity within the City. This is because the water system is an energy intensive system, as well as critical infrastructure for the City, meaning there is both an opportunity and a need to develop renewable generation. While increased reliability and resilience is important throughout the electric grid, they have added important where the City’s electric grid overlaps with the City’s water system. Resiliency investment is needed so that facilities critical to the community’s well-being like the water treatment plants and desalination plant are able to function in the event of grid outage. Additionally, much of the large pumps and equipment used in water treatment processes require high power quality⁷⁵, raising the need for reliability in voltage and frequency as well. Appropriate design and deployment of DERs, especially battery storage, could help smooth the voltage of power entering the water facilities and extend the life of expensive equipment.

Additionally, water systems can be used to generate renewable energy, as the City is already doing at its hydro-electric project at Lauro Reservoir. The City’s Water Resources Division is currently creating a water system master plan which creates the opportunity for collaboration and consideration of renewable energy projects in water system planning. The following renewable energy opportunities exist within the City’s water system:

- Expanding biogas generation at the El Estero Water Treatment Plant^{vi}
- Solar development at water system facilities
- Community Solar at Vic Trace Reservoir (see Strategy 4.2)
- Micro-turbines for energy recovery throughout the water distribution center

“Strategic Energy Plan: Municipal Pilot Projects” contains the full details of project opportunities at City facilities, including an expanded discussion of how to assess the feasibility of renewable energy opportunities in the water system.

The Role of CCE in Municipal Project Development

The creation of a CCE program to serve Santa Barbara has the potential to support many of the SEP strategies, including the development of DERs at municipal facilities. The prospective CCE program could provide targeted incentives, such as a feed-in tariff, to municipalities in its service territory to support DER development at locations like critical facilities that are valuable to the community.

^{vi} Retaining the RECs generated at El Estero, a necessary step enabling the City to claim its generation as a contribution to their goal, was completed in December 2018.

Within the context of the City’s goal of 100% renewable electricity for municipal facilities, the CCE program could allow “power wheeling.” Power wheeling is the concept of generating renewable energy at one facility or location and receiving credit for that generation at another facility or location. It is not currently allowed under SoCal Edison but is an appealing concept because the City has sites with high renewable generation but no electrical load, which limits the development possibilities at the high potential sites.

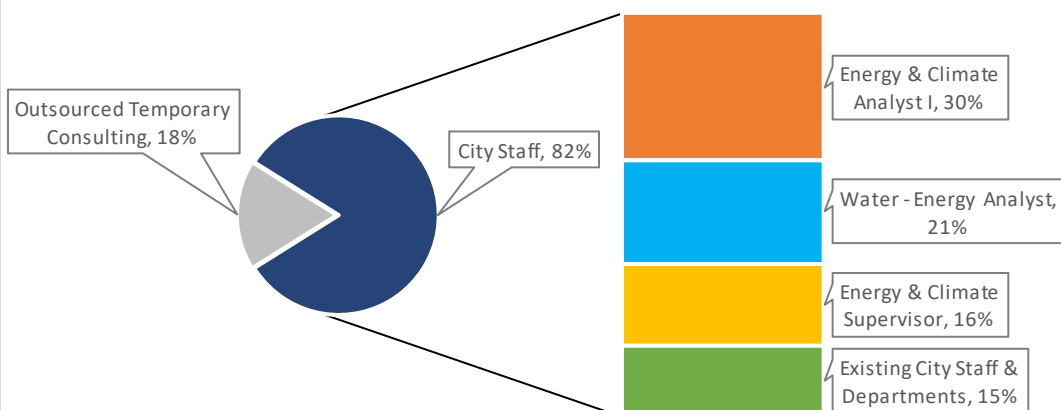
Design & Implementation Action Plan	
Develop DERs & Microgrids at Municipal Facilities	
Authority Required for Implementation:	Council Approval (for PPAs or other contracts)
Responsible Staff:	ECP Supervisor, ECP Analyst I, Water-Energy Analyst, Other City Staff
Kick-off	
December 2019	
1. Based on results of SEP analysis, create a master list of City projects and project concepts to be developed organized by type (solar, microgrid, cogen, etc.)	
Outreach	
February 2020	
2. Reach out to City departments who will be impacted by development to notify them and begin relationship	
Analysis & Research	
February 2020 – December 2021	
3. Review “RFP-ready projects” completed in SEP process for completeness and compile any remaining information needed for RFP	
4. As necessary staffing is added in 2021, perform site analysis on each site included on master list (excluding “RFP-ready projects”)	
5. Based on project feasibility and project priority, create schedule for development, likely starting with microgrid projects at critical facilities	
6. Explore funding strategies for municipal projects	

	7. Compile outstanding questions and list of necessary RFP materials for inclusion in a scope of work for site assessment consultants
Community Engagement	
Not Applicable	
RFP	
March 2020	
	8. Issue RFP for development of “RFP-ready projects”
	9. Create and issue RFP for site assessment technical assistance, as necessary
January 2022	
	10. Create and issue RFP for additional projects assessed beyond shovel-ready projects
Approval	
July 2020	
	11. Obtain approval for PPA or other contract for initial round of projects
April – December 2022	
	12. Return to Council as necessary for additional contract approvals
Project Execution	
August 2020	
	13. Begin and monitor first round of project construction
August 2022 – April 2023	
	14. Begin and monitor second round of project construction
Pilot & Launch	
April 2021	
	15. Achieve commercial operation of “shovel ready projects”
December 2023 - April 2024	
	16. Achieve commercial operation of second round of projects
Performance Review	
April 2021 (forward)	

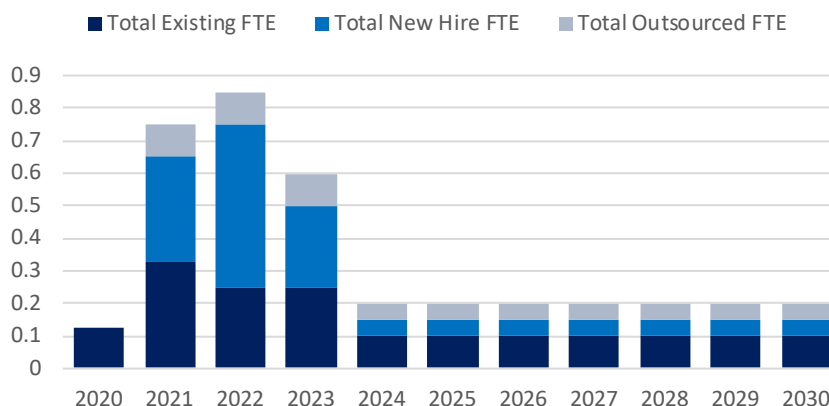
17. Track project performance and execute necessary operation and maintenance tasks

Staffing Resources Required

Strategy 4.1: Develop DERs & Microgrids at Municipal Facilities
Division of Total Responsibility for Implementation



Strategy 4.1: Develop DERs & Microgrids at Municipal Facilities
Implementation Staffing Resource Timeline



2020: .125 FTE

2021: .75 FTE

2022: .85 FTE

2023: .6 FTE

2024 forward: .2 FTE

Total FTE Requirement

FTE Position Breakdown	2020:
	<i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 250 hours</i>
	2021:
	<i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 400 hours</i>
	<i>Manager from Facility in question: 250 hours</i>
	<i>ECP Supervisor: 150 hours</i>
	<i>Water – Energy Analyst: 500 hours</i>
	<i>Outsourced Consulting: 200</i>
	2022:
	<i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 250 hours</i>
	<i>Manager from Facility in question: 250 hours</i>
	<i>ECP Supervisor: 500 hours</i>
	<i>Water – Energy Analyst: 500 hours</i>
	<i>Outsourced Consulting: 200</i>
	2023:
	<i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 250 hours</i>
	<i>Manager from Facility in question: 250 hours</i>
	<i>ECP Supervisor: 250 hours</i>
	<i>Water – Energy Analyst: 250 hours</i>
	<i>Outsourced Consulting: 200</i>
	2024 forward:
	<i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 150 hours</i>
	<i>Manager from Facility in question: 50 hours</i>
	<i>ECP Supervisor: 50 hours</i>
	<i>Water – Energy Analyst: 50 hours</i>
	<i>Outsourced Consulting: 100</i>

Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	0.83%
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	\$0.332
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	1,993
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	15

Strategy 4.2: Pursue Community Solar

Strategy Description

Community solar describes a large-scale solar development program that enables subscribing electricity customers to purchase electricity generated by the development, even if the development is not on their property. It is an important mechanism to enable community members who cannot put solar on their homes or businesses (primarily multifamily units, and rental properties) to experience the benefits of solar development and contribute to the City's goal, as well as to maximize solar development on City properties with large potential but low electricity load.

An example of this type of City property is the Santa Barbara Marina. The Marina is the 3rd largest energy user amongst City facilities but does not have enough space to develop renewable generation sufficient to meet this load. If the City developed a community solar project, it could likely offset all of the electrical usage at the Marina by enrolling those accounts in the community solar program.

Site Assessment & Goal Impacts:

The City owns several sites that have potential for community solar development. These sites and the associated impacts on the City's renewable energy are outlined in Table 2.

Table 2: Community Solar Sites & Goal Impact

Site Location	Capacity (kW)	Expected Generation (kWh)	2030 Goal Impact
Vic Trace Reservoir	1,210	2,116,000	0.85%
Pershing Park	272	439,700	0.18%
Airport Overflow Lot	1,970	3,254,000	1.31%
Airport Hangar	376	601,400	0.24%
Golf Club	321	513,200	0.21%
Total	4,149	6,294,300	2.78%

Two possible pathways to develop community solar energy projects on City-owned land for delivery to subscribers in the community are detailed below.

Pathway 1: Development via City CCE Program

The first pathway for community solar development is via the city-only CCE program, if adopted. In this scenario, the City could provide a land lease to the CCE program and they could develop, own and operate the solar array and associated community solar program. This pathway would allow for increased community involvement, and possibly better pricing, but will have, possibly significant, interconnection challenges that do not exist under the Community Renewables Pathway.

Additionally, there is both a cost and a benefit to locally generated renewable electricity. This cost and benefit would have to be weighed, and if the cost outweighed the benefit, the difference would likely result in an increase for customers wishing to subscribe to the community solar project.^{vii} However, any community solar project developed under SoCal Edison's Community Renewables program would likely also include a cost premium.

Table 2 describes the key characteristics of this development pathway and the advantages and disadvantages.

Table 3: CCE Development Pathway Characteristics

Pathway Characteristic	Advantages	Disadvantages
Subscription Eligibility: CCE program would determine eligibility, no anchor requirement	➤ City can determine characteristics of eligible participants and carve out spots for low-income or other communities ➤ Wider community participation possible ➤ Can be used to meet municipal energy goals	➤ Increased soft costs associated with recruiting many subscribers
Contract Length: CCE determines contract lengths	➤ Provide flexibility for community subscribers ➤ Community solar project can account for a portion of the CCE program's necessary electricity procurement ➤ Predictable energy costs for City	➤ None
Program Pricing: The CCE program can determine price based on project and program administration costs. CCE will still be burdened by PCIA costs, generally	➤ Pricing will likely be lower than Community Renewables pathway because the CCE is not making a profit ➤ Transparency in pricing	➤ No mechanism for recognizing locational value of the resource
Project & Site Details: The CCE program will specify project siting, size, boundaries, and other goals like resiliency, economic development. City will provide land lease to the CCE	➤ City has control over all project details, similar to Community Renewables Pathway	➤ Interconnection costs will be higher than in Community Renewables Pathway

^{vii} The results of a similar cost - benefit analysis can be seen in the Marin Clean Energy "LocalSol" project, which resulted in a about a 30% cost premium. <https://www.mcccleanenergy.org/100-local-solar/>

Pathway 2: Participation in SoCal Edison's Proposed Community Renewables Program

In September 2019 SoCal Edison proposed five new customer programs aimed at enabling customers to access renewable energy while reducing the barriers to entry, helping California meet its greenhouse gas reduction goals and increasing customer choice⁷⁶. These programs were intended to replace the existing Green Tariff Shared Renewables (GTSR) programs but at the time of writing none of these programs has been approved by the CPUC and a proposed decision rejecting these programs as a replacement to GTSR had been issued.⁷⁷ The Proposed Decision, however, did not object to the merits of the proposed programs and the proposal itself indicates that SoCal Edison has shown an intent to propose amended Green Energy Programs. While the future of these programs is uncertain; they should be reevaluated as option for community solar if and when alternatives to GTSR are approved by the CPUC. To prepare for that scenario, the SEP provides an overview of a development pathway under SoCal Edison's proposed program.

One of these offerings, the Community Renewables Program, is aimed at supporting community solar and is well suited for City participation. Under the program, SCE would develop a dedicated renewable energy project to provide electricity to a defined community. Table 3 describes the key characteristics of this development pathway and the advantages and disadvantages.

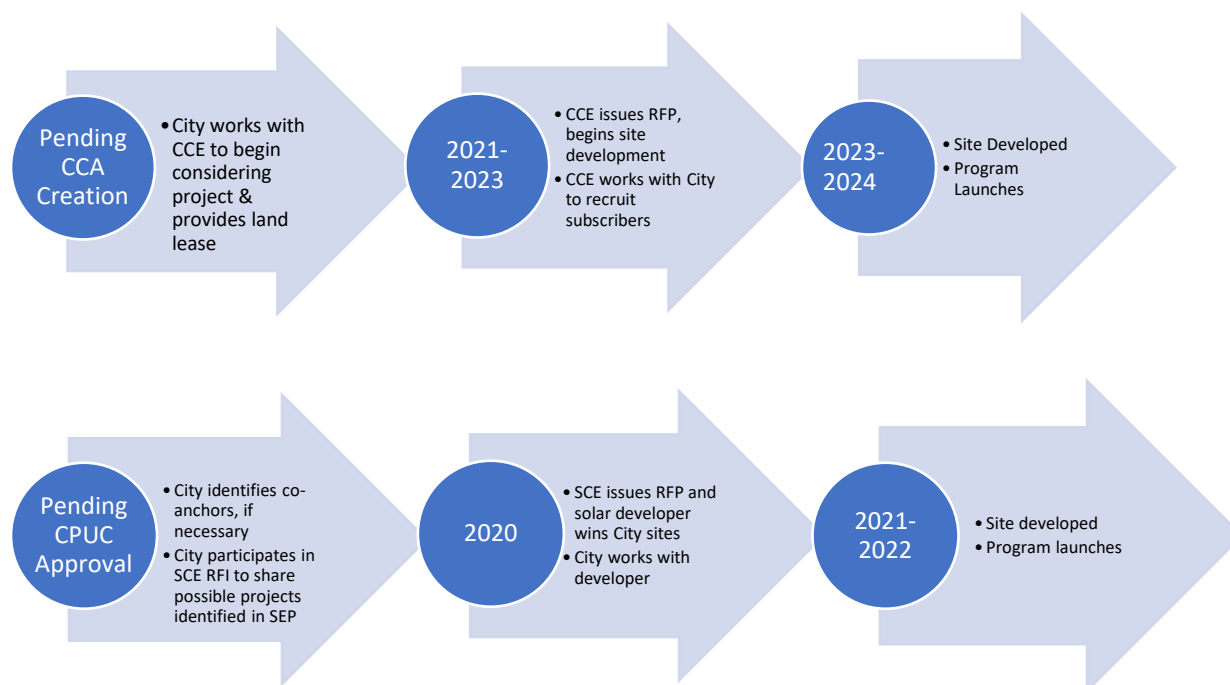
Table 4: Community Renewables Development Pathway Characteristics

Pathway Characteristic⁷⁸	Advantages	Disadvantages
Subscription Eligibility: The program requires an entity, such as a city or large business, or a group of entities, to act as “project anchors”, and purchase a minimum of 80% of system output. The remaining generation is available for subscription by community members within the chosen community.	➤ City can take an active role as anchor client and define community participation boundaries ➤ Can be used to meet municipal energy goals ➤ City can engage business community to financially support project	➤ Anchor requirement significantly limits community participation
Contract Length: Anchor clients must remain subscribed to project for 10, 15 or 20 years. Other subscribers have a 1-year contract	➤ Predictable energy costs for City (and other anchor) entities	➤ Difficult to switch electricity source for subscribed City facilities if CCE becomes active after project is built ➤ 1-year contracts for other subscribers is less flexible than comparable community solar programs
Program Pricing: SCE has not provided transparency on economics of projects, but customers will be treated as departing load and be charged a PCIA	➤ None	➤ Program has the potential to raise costs for customers ➤ Lack of cost transparency makes it difficult to rely on this pathway ➤ Program does not recognize locational value of the resource being developed
Project & Site Details: SCE will issue an RFI allowing anchor clients to specify project siting, size, boundaries, and other goals like resiliency, economic development.	➤ City has control over most project details, similar to CCE Development Pathway	➤ SCE will be considering many projects, and anticipates only two projects will be developed by 2023 encompassing only ~500 customers⁷⁹

		➤ Slows down development process
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Figure 5 outlines the development processes under each discussed pathway.

Figure 5: Community Renewables Development Process (CCE top, SCE bottom)



Development Pathway Comparison

Both development pathways described have the potential to lead to a viable community solar project, but the CCE development pathway has the significant advantages of price transparency, a desire to keep prices low and widespread community participation. Additionally, under this development pathway, the City will be able to align with the actions of the community engagement and education plan to promote its own programs and achieve further municipal renewable energy goals through the CCE program. This removes any competition for community solar capacity between the municipal facilities and the community, moving the City even closer to its renewable energy goals for both municipal facilities and the city as a whole. The Community Renewables Pathway is a viable alternative option, enabling the City to pursue this strategy without CCE, but the disadvantages, particularly the pricing uncertainty, render it an inferior option for the City. Both development pathways carry notable uncertainty stemming from questions around the best CCE model for the City and regulatory risk in the case of SoCal Edison's programs.

Opportunities to Improve Resilience

A community solar development, depending on location, could be a useful site to add a battery storage system. Pairing solar and storage can provide resilience and reliability benefits to local grid that are desperately needed in Santa Barbara and the community solar mechanism can be used to improve the financial viability of the project. A detailed discussion of how the City could be involved with utility scale storage development can be found in the fourth SEP document “Municipal Resource Potential”.

Design & Implementation Action Plan	
Pursue Community Solar	
Authority Required for Implementation:	Council or CCE Board Approval
Responsible Staff:	ECP Analyst I, ECP Analyst II, Water – Energy Analyst
Kick-off	
June 2019 – December 2020	
1. Assign a City staff member and team to lead project development and monitor SoCal Edison timeline	
Outreach	
January 2020 – December 2020	
2. Approach other public entities or large commercial property owners and begin discussion of participating as an anchor client in the Community Renewables Program (as necessary, depending on SoCal Edison timeline.)	
Analysis & Research	
January 2021	
3. Review status of SoCal Edison Community Renewables or equivalent program	
4. Explore case studies and requirements of CCE run community solar programs to assess if CCE staffing can handle program operation	
5. Based on the status of CCE formation and the Community Renewables program, choose the most viable development pathway	
Community Engagement	
May 2021	

	6. Design and execute an engagement process with residents around Vic Trace reservoir to educate them on the City’s goals, the SEP and the importance of solar development at that location 7. Address any aesthetic concerns that arise June 2022 - Community Renewables 8. Offer any assistance to SoCal Edison or project developer to assist in enrollment June 2022 - CCE Development 9. Create outreach materials and outreach plan for enrolling CCE customers in community solar
RFP	
	June 2021 – Community Renewables 10. Respond to SoCal Edison RFI with site details and proceed through process as directed by SoCal Edison November 2021 - January 2022 – CCE Development 11. Issue RFP to developer community
Approval	
	April – June 2021 12. Make additional budget request, if necessary, to fund increased municipal electricity costs expected under Community Renewables Program July 2021 13. Obtain approval for participation in SoCal Edison Community Renewables Program, if applicable June 2022 14. Return to Council as necessary for additional contract approvals
Project Execution	
	June 2022 15. Begin and monitor project construction
Pilot & Launch	
	January – April 2023 16. Achieve commercial operation date for project 17. Launch community program

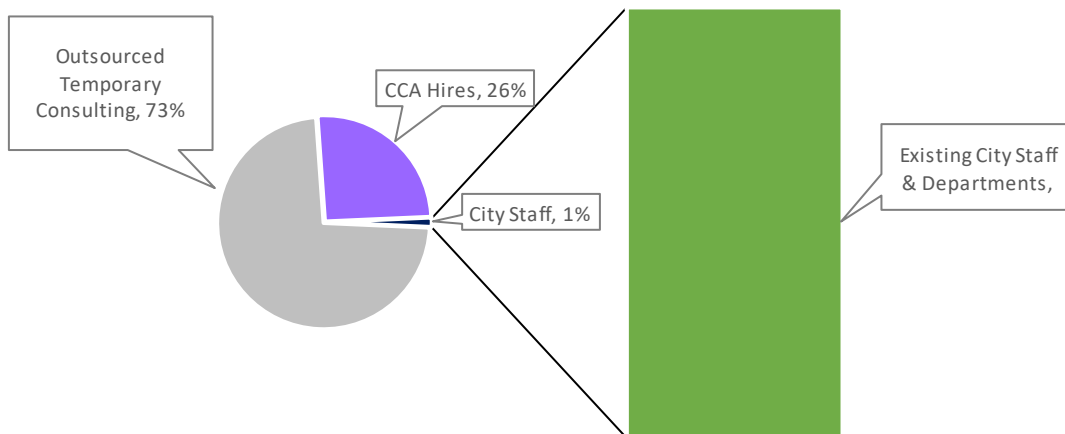
Performance Review

May 2023 (forward)

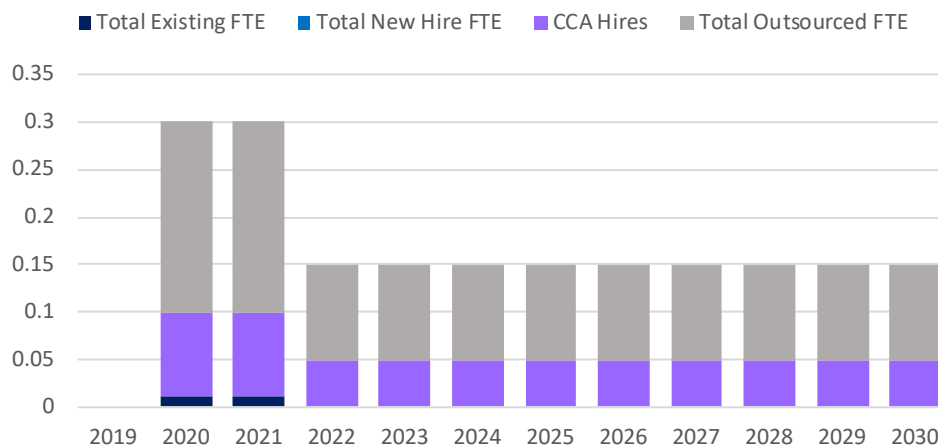
18. Track project performance and program enrollment numbers

Staffing Resources Required

Strategy 4.2: Pursue Community Solar Division of Total Responsibility for Implementation (CCA Path)



Strategy 4.2: Pursue Community Solar Implementation Staffing Resource Timeline (CCA Path)



Total FTE Requirement (CCE Path)

2020 -2021: .30 FTE

2022 – forward: .15 FTE

FTE Position Breakdown (CCE Path)

2020 and 2021:

CCE Analyst: 100 hours/year

CCE Manager: 75 hours/year

Water Resources Employee: 25 hours/year

Outside Consulting: 400 hours/year

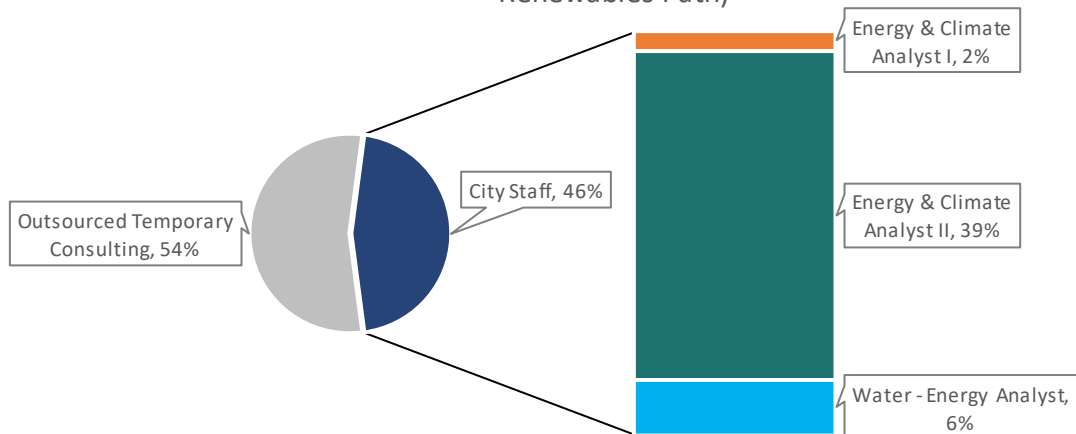
2022 forward:

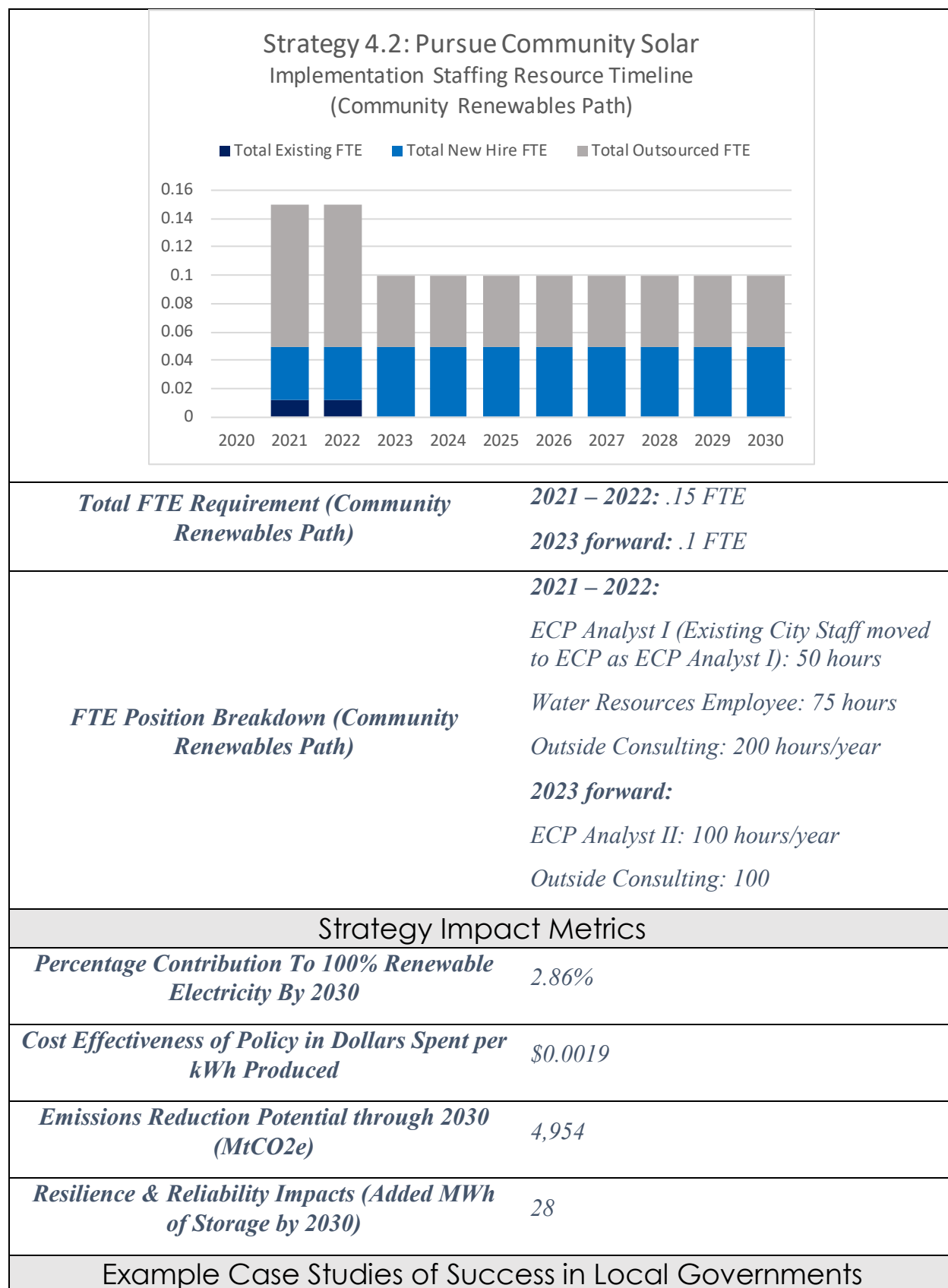
CCE Analyst 75 hours/year

CCE Manager: 25 hours/year

Outside Consulting: 200

Strategy 4.2: Pursue Community Solar
Division of Total Responsibility for Implementation (Community Renewables Path)





*LocalSol, Marin Clean Energy (MCE), Marin, Napa & Contra Costa Counties, California*⁸⁰

Marin Clean Energy's LocalSol project is an example of a community solar project developed via a CCE program. MCE supported the development of a local solar project within its community and allowed customers to subscribe directly to that project and receive electricity from it. MCE charged a premium for this voluntary program, which enabled them to recoup some of the costs incurred through their feed-in tariff program, which is the incentive mechanism MCE used to support the solar array providing the electricity.

The solar array is a 1 MW system located at the Cooley Quarry in Novato, California. It came online in 2017. As a pilot program, the LocalSol project is limited to 300 customers. This is a similar amount of customers that could be expected to enroll in a community solar project developed at Vic Trace.

Approach to Ensuring Equity

Create Carve-outs for Low-income Customers: Depending on the final design of the community solar program and the cost to develop the project, there may be a cost premium for customers who subscribe to the program. Despite this, the City can work with its own CCE or SoCal Edison, depending on the development pathway, to create a 10-15% program carve-out for low-income customers. The City can develop eligibility criteria (e.g. gross annual income under a certain threshold) and enable customers who meet those criteria to participate in the community solar at no additional cost.

A New Twist on a Proven Approach to Business Improvement

Do cities really benefit from energy districts? Although the concept of energy districts may not be as familiar as the concept of business improvement districts, the Smart Energy District would leverage principals common to both district energy system and special services areas or business revitalization zones. The idea would use best practices from existing Santa Barbara Downtown and Old Town business improvement districts which receive marketing and promotional services for retail and professional services offices.

A key feature to each of these arrangements is the ability of the district to operate as an economic unit working in close cooperation with the City government.

In 2015 the *United Nations Environment Programme* shined a spotlight on 36 energy districts worldwide. Their study provided examples that district energy can combine efficiency improvements with renewable energy technologies best if integrated infrastructure and land-use planning are considered. Energy districts can therefore build the awareness, knowledge of technology application, and capacity in structuring projects to overcome barriers to deployment and to attract investments.

Strategy 4.3: Create Smart Energy Zone

Strategy Description

This strategy option would establish a Santa Barbara Smart Energy Zone in order to actively engage the community; address barriers to renewable energy development; pilot unique and innovative projects; attract new businesses; and provide a clear signal to outside capital investors and landing place for those investments.. A Smart Energy Zone focuses problem solving efforts in one part of the City where existing obstacles to development of renewable energy/distributed resources (permitting, neighborhood buy-in, property owner education, data sharing) are already removed and permissions approved. From there, the City can identify specific challenges/opportunities related to SEP implementation and pilot projects that address those challenges/opportunities.

Why Designate a Smart Energy Zone?

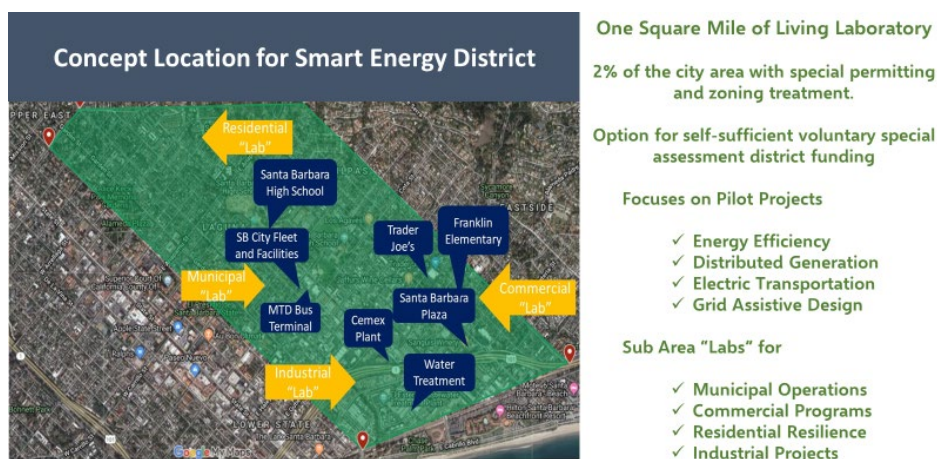
The Smart Energy Zone offers a variety of benefits to the City that are wide ranging and begin to address many of the gaps identified including funding, public understand and motivation, infrastructure and resilience planning (the latter two primarily through Smart Energy District pilot projects). The Smart Energy District provides:

- (1) **A community touch point.** The Smart Energy Zone is centered around the community (see below, “Who is the Smart Energy District”) and is a direct link from the SEP to the community where the community can take an active role in discussing ideas and developing new projects and programs that further the City’s energy goals which could then be rolled out citywide. The ECP and “One-Stop Shop” concept provide a community touch point on all information related to energy efforts at the City but the Smart Energy Zone enables active participation in SEP implementation.
- (2) **A “living lab”.** The Smart Energy Zone provides a context where new SEP policies and programs are tested in real world conditions, innovative technology providers are welcomed, and data sharing is encouraged with labs and universities. Even when solutions are found, scaling up a solution to the entire community is not a trivial problem. The district could help address the challenges of scaling up other strategy options including piloting expedited permitting programs, behavior change programs, or on-bill financing.

- (3) A high visibility landing spot for private investment. The Smart Energy Zone could provide a mental anchor for the identity of Santa Barbara’s new ecosystem of energy businesses. It would be the landing place for innovative projects with clear marketing of pilot programs which have the potential to attract grants, foundation money and corporate capital.
- (4) A location to focus on infrastructure. Projects such as a microgrid including the Santa Barbara Municipal Utility District’s depot at Olive Street or the Charles E. Meyer desalination plant could offer the concept of “community-powered water & transportation”. As noted in other SEP strategies, there are significant regulatory barriers to microgrid development. The Smart Energy District would be a place to examine those challenges and explore:
 - Establishing effective, real world vehicle-grid-integration vehicle-to-grid programs
 - Developing disaster-ready distributed energy (critical load circuits, back-up power inverters)
 - How to take advantage of California Public Utilities Code Section 218(b) the existing “over-the-fence” regulation permitting behind-the-meter sale to two neighboring properties

Where Might Santa Barbara Smart Energy Zone Be Located?

The suggested location for the Santa Barbara Smart Energy Zone is 1.5 square miles that encompasses main City Facilities, the SBMTD depot, the Water Treatment and desalination plants, and a portion of commercial and residential development in the Laguna Street / Olive Street / Cota Street neighborhood; as well as two main school campuses and commercial shopping centers. The proposed location includes a diverse cross-section of the City with areas varying by building type that could be considered a Municipal “Lab”, a Commercial “Lab”, a Residential “Lab” and an Industrial “Lab”.

Figure 6: Smart Energy District – Proposed Location

How to Designate a Smart Energy Zone

There are two variations in how the City could designate a Smart Energy Zone that vary in implementation burden. Accordingly, there are tradeoffs between the depth and potential effectiveness of each approach and ease of implementation that should be considered by the City when determining which approach to follow.

Develop a Specific Plan

The most labor-intensive approach to designating a Smart Energy Zone is to create a Specific Plan that applies to the geographic boundaries of the Smart Energy Zone (see Pittsburgh EcoInnovation District in Case Studies). This provides the opportunity to move beyond energy and directly and comprehensively include other community priorities, such as economic development, equity, and resilience, into the guiding vision for the SEZ. Using this option, the City would undergo a community planning process, led in conjunction with community non-profits and a steering committee of relevant stakeholders, to create a document that directs SEZ implementation and management through 2030 (or beyond). A Specific Plan could be accompanied by zoning, permitting and design review changes that aid in achieving the Plan's goals and a finance plan discussing options to fund implementation (if deemed necessary outside of SEP implementation budgeting).

Pass a Resolution & Create a New Zoning District

A second option for designating a Smart Energy Zone is to use a City Council resolution to formally recognize a given area of the City as a priority for clean energy development. From here, the City can explore a set of zoning, permitting changes and design review changes, without the other aspects of a Specific Plan, applied to the geographic boundaries of the SEZ, in effect creating a "demonstration zone" for clean energy projects. These changes would amend the zoning code to create a new zoning district designed to ease the development process for DERs and support the roll-out of other pilot projects. The City can begin this process by piloting the permitting and design review changes discussed in Strategy 5.1, if desired.

Adopting a Demonstration Framework for Pilot Projects: As a way to complement this approach, the City could adopt an internal policy called a demonstration framework. A demonstration framework enables the City organization to enter into agreements using an expedited process, outside of the standard procurement process, to execute pilot projects that test innovative technology solutions to solve energy related challenges in the City. While this approach carries no inherent geographic focus, the City could designate a priority area of the City to focus these projects in. Establishing an internal policy is less labor-intensive than adopting a Specific Plan or establishing a Demonstration Zone but it limits SEZ projects to City-focused pilots, compared to community-based projects possible under the other options.

Who is the Smart Energy District?

As discussed in Strategy 1.1, community outreach and engagement are core components of successful SEP implementation. The Smart Energy District can be a focal point of that effort that gives a portion of the community the opportunity to engage with the SEP beyond awareness and program utilization. Successful pilot projects in the Smart Energy District will hinge on community involvement and commitment to the SEP goals and Smart Energy District vision.

Accordingly, the Smart Energy District is primarily the community (business owners, residents). Secondly it is the City, its staff and municipal operations. From there, the District can expand to include other stakeholders including third-party providers of marketing and community organizing, technology providers and possibly external private/corporate investors.

The Smart Energy District can serve as the spark to catalyze activity throughout the City, so that successful implementation of this SEP can receive sustained commitment from City leaders, City staff and the community.

Design & Implementation Action Plan	
Create Smart Energy Zone	
Authority Required for Implementation:	Council Resolution and/or Zoning Code Amendment
Responsible Staff:	ECP Supervisor, ECP Analyst I, ECP Analyst II
Kick-off February 2020 Assign appropriate staff to a new Smart Energy District Task Force (Consider making the Planning Director or Community Development Director the Chair of the Task Force) Outreach	

April – December 2020

2. Enlist the expertise of the local business community, ensure they are represented on the Task Force
3. Enlist expertise of local academic institution and offer chance to participate on Task Force

Analysis & Research**July 2020 -August 2021**

4. Use ideas discussed in SEP to establish goals for Santa Barbara's Smart Energy Zone and determine the most viable approach for achieving these goals
5. Decide on programs, policies and technologies that will be incorporated into Smart Energy Zone
6. Explore possible funding sources for Smart Energy Zone implementation, if needed
7. Draft Smart Energy Zone Draft Plan

Community Engagement**September 2020 – February 2021**

8. Establish Community Leadership Committee consisting of residents, business owners and City staff, to drive program prioritization and community enthusiasm around Zone
9. Circulate plan to external stakeholder community, soliciting feedback on design
10. Incorporate stakeholder-recommended changes into the draft plan

RFP

Not Applicable

Project Execution**March 2021 – March 2022**

11. Work with Smart Energy Zone Task Force and Community Leadership Committee to develop and finalize a Draft Plan consisting of the SEZ mission, management strategy and specific mechanism to establish Zone (e.g. special land use designation)

Approval**April – June 2021**

12. Request and obtain any additional ECP budget required to begin implementation of SEZ
13. Present information-only presentations to relevant Council sub-committees and full Council

April 2022

14. Send Draft Plan to stakeholders and Council for approval

Pilot & Launch

July - August 2022

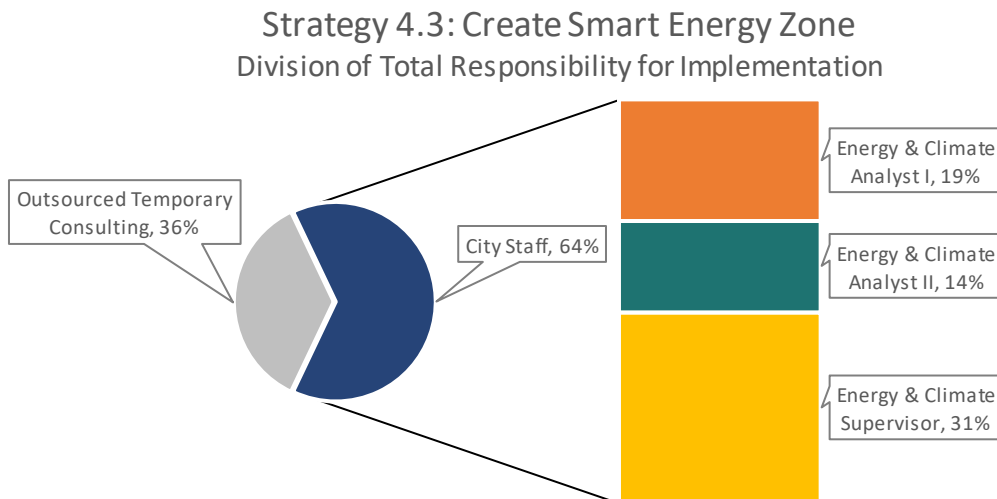
15. Begin implementation of Smart Energy Zone plan

Performance Review

August 2023 - forward

16. Evaluate program results and adjust program as necessary to achieve desired DER development and pilot project results

Staffing Resources Required



	Strategy 4.3: Create Smart Energy Zone Implementation Staffing Resource Timeline ■ Total Existing FTE ■ Total New Hire FTE ■ Total Outsourced FTE	
Total FTE Requirement	2020: .2 FTE 2021: .75 FTE 2022: .7 FTE 2023 forward: .25 FTE	
FTE Position Breakdown	2020: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 400 hours</i> 2021: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 150 hours/year</i> <i>ECP Supervisor: 400 hours/year</i> <i>Outside Consultant: 500 hours/year</i> 2022: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 500 hours/year</i> <i>ECP Supervisor: 400 hours/year</i> <i>Outside Consultant: 500 hours/year</i> 2023 forward: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 50 hours/year</i>	

<i>ECP Analyst II: 125 hours/year</i> <i>ECP Supervisor: 125 hours/year</i> <i>Outside Consultant: 200 hours/year</i>	
Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	<i>1.2 – 9.2%</i>
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	<i>\$0.036</i>
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	<i>1,102</i>
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	<i>4</i>
Example Case Studies of Success in Local Governments	
<i>EcoInnovation District, Pittsburgh, PA⁸¹</i> Following an 18-month community-based planning process beginning in Fall 2015, the City of Pittsburgh created an action plan to create an “EcoInnovation District” in the Uptown/Oakland neighborhood of the city. This District combines two urban development concepts, an EcoDistrict, a framework for sustainable community development, and an Innovation District, a framework to promote jobs and economic development. The EcoInnovation District Plan includes a high-level concept for a “district energy” system to provide cheaper electricity, lower carbon emissions and increased resilience to Uptown/Oakland, but the plan extends well beyond energy to address concepts such as mobility, affordable housing and water infrastructure. Regardless of the final approach that Santa Barbara uses to establish its own SEZ, the City can use the community planning process used in Pittsburgh as a model to establish a SEZ in Santa Barbara. <i>FortZED, Fort Collins, CO⁸²</i> The Fort Collins Zero Energy District (FortZED) was a partnership between the City of Fort Collins, Colorado State University, and several clean energy technology innovation companies to design and implement various emerging smart grid technologies that would generate as much energy as it consumed. Specific actions included the installation of solar PV panels, a microgrid, management of peak energy usage, shifting the community to cleaner modes of transportation, and public education and outreach. FortZED partners learned valuable lessons from the 10-year initiative which they continue to apply in order to meet their respective clean energy and GHG emission reduction targets. <i>North San Jose Transportation Innovation Zone, San Jose, CA⁸³</i> In response to the vision for a smart city and embattled with a 50% population increase by 2040 and overwhelmed by traffic congestion, San Jose identified that it faced twin challenges from a shortage of City staffing resources and the inherent technical risk of innovative solutions. In response to this	

the City named and bounded a Transportation Innovation Zone (TIZ) as a deliberate geographic set-aside for attracting grant funding and piloting “beta tests” of new solutions. This living laboratory was a major concession toward the realization that scaling a solution from a single pilot to a community rollout is rarely a trivial challenge. It also acknowledges that smart cities will need to make clear designations of spaces within the city to cement the value of civic innovation, as public agencies continue cultivate partnerships with the private sector and non-profits.

Approach to Ensuring Equity

Pursue SEZ Specific Plan: While a more labor-intensive process, creating a Specific Plan to guide SEZ formation and management allows for a broad look at multiple factors affecting equity. The plan can address topics such as promoting affordable housing and supporting any existing residents at risk of displacement as development occurs and promoting diversity and inclusion in the City and community’s energy efforts. Highlighting and exploring the cross-ties between clean energy, housing, mobility and community safety can be a hallmark of the SEZ if this option is pursued.

Maintaining Community Involvement: The importance of community involvement in the formation of the SEZ is highlighted throughout the Strategy Description, but it is a key to creating a SEZ that supports projects that provide valuable benefits to the community. Community involvement is also important beyond the formation process. In the event that the SEZ attracts outside funding, community input on which projects it supports will be the foundation of a successful investment.

Program Area 5: New Administrative Policies & Procedures

Strategy 5.1: Further Streamline Permitting, Inspections & Administrative Procedures for Distributed Energy Resources (DERs)

Strategy Description

Local clean energy resources play an important role in reducing peak load on wholesale power delivered through substation and electricity transmission systems. Energy resources which are connected at the distribution system level (DERs) also provide new opportunities for resilience in the event that electrical transmission systems are not able to function. Feedback from community stakeholders and a review of City policies indicates that Santa Barbara has successfully undertaken permit streamlining for solar projects under California Assembly Bill 2188 (see sidebar on AB2188).⁸⁴ However, the recent Assembly Bill 546 (see sidebar on AB546) now requires similar facilitation of permits for advanced energy storage, and there exists a suite of additional actions related to building permit and development processes that the City could take to further reduce DER soft costs and encourage development. Streamlining the costs associated with permitting and transactions for new installations have been estimated to offer an opportunity for 10% reduction of solar energy systems costs⁸⁵. Total soft costs savings are estimated to offer up to 65% of solar system cost reductions through 2030.^{86–87} Studies show that permitting, inspections, and delays cause increased project cancelations and add thousands of dollars to a residential solar system.^{88–89}

Strategy 5.1(a): AB2188 Performance Review:

Before continuing the progress made under AB2188, it is important for Santa Barbara to understand what effects, if any, the law has had on health and safety within the City. Under this strategy option the City would use the Energy and Climate Program and consultants execute an internal review of all solar projects processed under the AB2188 requirements

What did AB2188 do?

Enacted in 2014 as a change to the California Solar Rights Act through amendments to Civil Code 714 and Government code § 65850.5, this bill required all local governments to adopt an ordinance streamlining permitting for solar PV systems 10 kW and under and solar thermal systems 30 kW and under. The primary effect of the bill was to require local governments to create a streamlined checklist of project requirements that conforms with the Office of Planning and Research's Solar Permitting Guidebook, enabling both time and cost savings for residential

What did AB546 do?

Enacted in 2017, this bill added California Government Code §65850.8 and asserted that the timely and cost-effective installation of energy storage systems is a matter of statewide concern. AB546 required local governments to offer electronic resources with guidance for permitting, as well as electronic permit submission. For cities with a population less than 200,000 the deadline for compliance is January 31, 2019.

to assess the results with regards to safety outcomes. The primary goal of the review is to determine whether expedited permitting has caused any negative health and safety outcomes. The result can then be used to decide whether the expedited permitting process used for solar installations under 10 kW can be applied to larger projects without compromising safety.

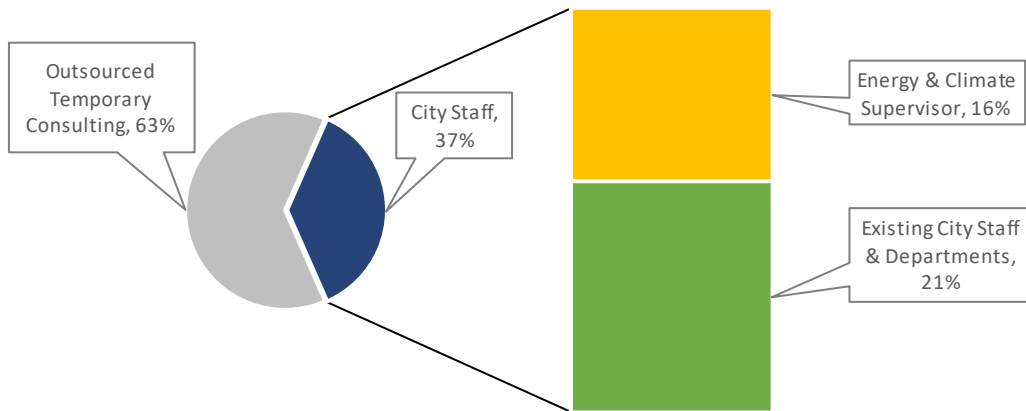
Although the City should not consider expedited permitting as the sole driver of increased installations since the advent of AB2188, this analysis will give the City important data to inform the level of SEP results to expect from expanded expedited permitting.

Design & Implementation Action Plan	
AB2188 Performance Review	
Authority Required for Implementation:	None beyond City Staff
Responsible Staff:	ECP Supervisor, Existing City Staff
Kick-off	
February 2021	
	1. Assign a performance review of the AB 2188 ordinance to appropriate City staff 2. Identify focus questions and goals for performance review, focusing on any increase in negative health and safety outcomes
Analysis & Research	
March 2021	
	3. Work with the Chief Building Official to review all relevant permit data since before and after AB 2188 was implemented in 2015, in order to compare outcomes before and after expedited permitting
Project Execution	
April 2021	
	4. Document the number of denied permits referred to Planning Commission and reasons why, document any negative outcomes and answer any other focus questions identified 5. Make recommendation to City energy staff on whether to move forward with expansion of solar permitting

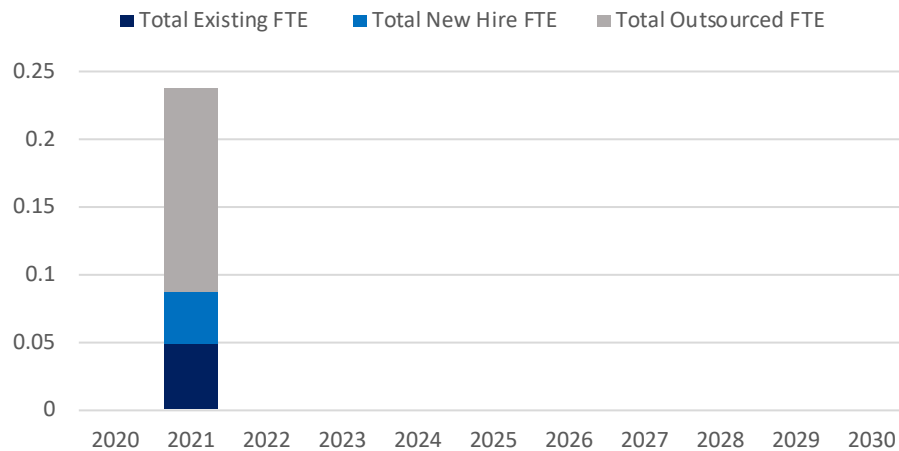
processes (see *Strategy 5.1(b)*, Expansion of Expedited Solar Permits)

Staffing Resources Required

Strategy 5.1(a): AB2188 Performance Review Division of Total Responsibility for Implementation



Strategy 5.1(a): AB2188 Performance Review Implementation Staffing Resource Timeline



Total FTE Requirement

2021: .2375 FTE

FTE Position Breakdown

2021:

ECP Analyst I: 75 hours

Planning Division Employee: 100 hours

<i>Outside Consultant: 300 hours</i>

Strategy 5.1(b): Expansion of Expedited Solar Permitting

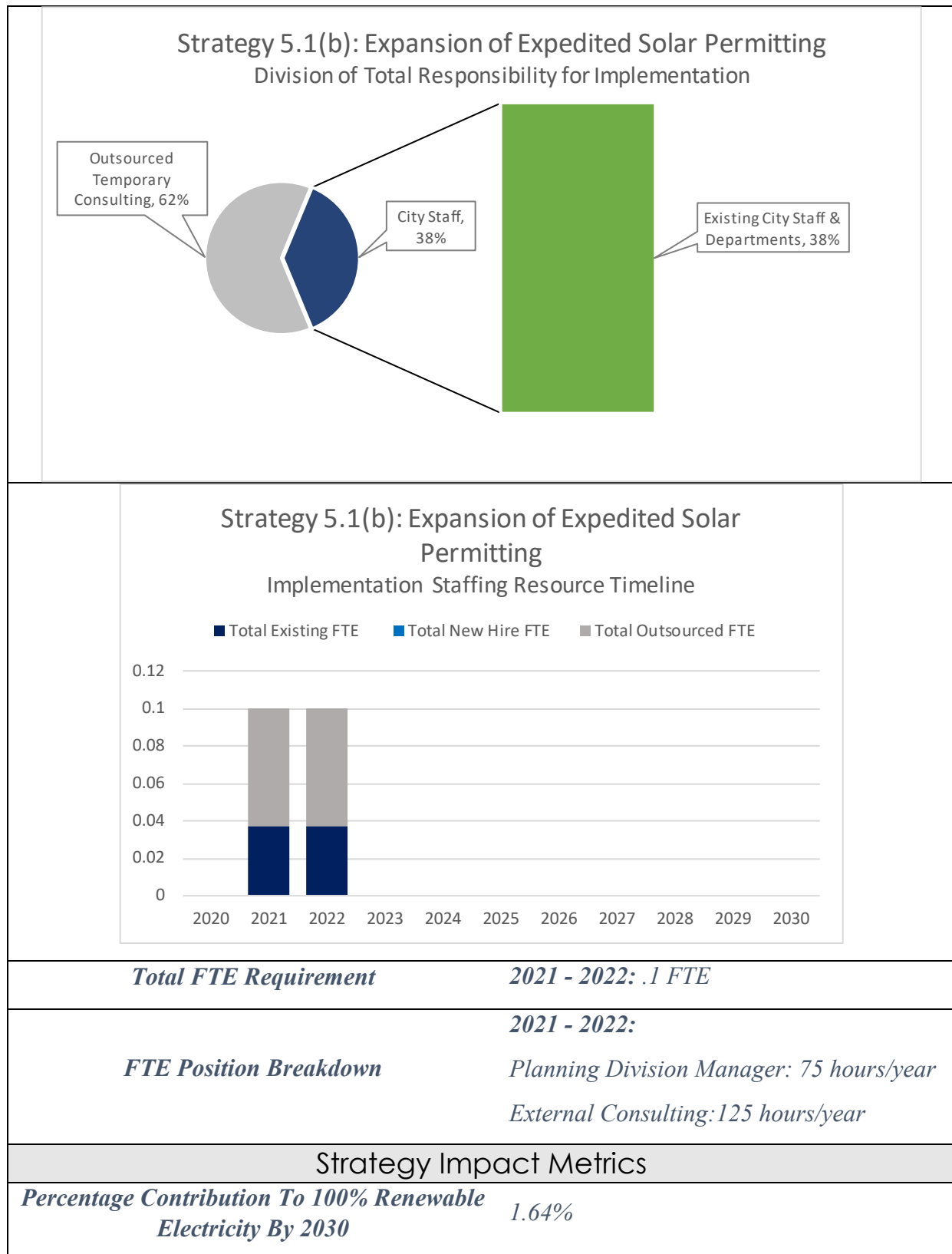
While AB2188 mandated all municipalities in California to create a streamlined permitting process for systems 10 kW and under, the law does not prevent municipalities from expanding the eligible project size.⁹⁰ This strategy option would further the efforts of Strategy 5.1(a) by allowing for certain larger solar projects to be eligible for expedited permitting on a fast track of permitting similarly based on the existing fast track for small residential projects under AB2188. As mentioned above, public health and safety are primary concerns when considering expansion and would be addressed through AB2188 Performance Review under Strategy 5.1 (a) to determine the new upper limit to which expedited permits should be applied.

As a part of the Strategic Energy Plan communitywide energy resource assessment, statistical modeling used a random sampling method to estimate the viable amount of potential new solar installations and the size of those installations within Santa Barbara city limits. The model excluded historic districts and separated the estimated solar energy resource potential into separate building size groups. If a positive correlation between expedited permitting and increasing number of locally-developed energy projects is confirmed by Strategy 5.1(a) then the dataset of potential new DER projects separated by size throughout the city, could be used to estimate what system size eligibility would encompass the largest portion of the possible solar project sites within Santa Barbara (see Strategic Energy Plan: Community Resource Assessment for complete details).

In order to validate and further improve the program before citywide launch, the City can pilot the chosen expedited permit expansion in a certain neighborhood of the City. This type of pilot project would fit squarely within the mission of Smart Energy District (see Strategy 4.3).

Design & Implementation Action Plan	
Expansion of Expedited Solar Permitting	
Authority Required for Implementation:	Update existing City Ordinance
Responsible Staff:	Existing City Staff

Kick-off	
December 2020	1. Review the results of the City's AB 2188 performance review
Outreach	
January 2021	2. Seek external stakeholder input to potential eligibility increase, using SEP statistical analysis to identify impacted property types and inform which property owners that should be contacted
Analysis & Research	
February 2021	3. Work with Chief Building Official to ascertain and model likely fiscal impacts on City based on increased number of new permits and identify any anticipated staffing needs 4. Address any concerns arising from fiscal impact analysis 5. Create draft ordinance amendment
Community Engagement	
March 2021	6. Circulate draft ordinance to all relevant City stakeholders for written feedback
Draft Policy	
July 2021	7. Finalize ordinance amendment based on any feedback
Approval	
January 2022	8. Obtain Council approval of new ordinance
Performance Review	
May 2022	9. Set date for second performance review to assess results of expanded expedited permitting
Staffing Resources Required	



<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	<i>\$0.009</i>
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	<i>6</i>
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	<i>2,298</i>

Strategy 5.1(c): Pilot Automated & Standard-Design Permitting for Clean Energy Measures

Another step the City can take to encourage energy measures within Santa Barbara is piloting an automated online permitting system. Online permitting systems are expanding throughout the Country and reduce the time required by site owners and installers in the permitting process. Importantly, online permitting systems also enable further streamlining of permitting processes, such as the standard-design permitting idea described below.

Once an online system is implemented, the City can take another progressive step by piloting and implementing preapproved standard-designs for energy measures that contribute to the City's clean energy and resiliency goals. For this strategy option the City would retain outside expertise to compile and validate a small set of energy system designs which could only be built according to predefined specifications. These designs would not require plan checking by the building department because they are intended to be prescriptive within the narrowest terms of electrical codes and standards.

A pilot program inside the Smart Energy District could be used to determine if standard design permitting expedites the development energy measures while reducing the plan check burden on City staff.

As an overlap to Program Area 2 (Outreach and Education), it would be important for the City to publicize the standard-design requirements so that customers and installers understand the potential benefits of eliminating risk of permitting delay. Although standard design allows for the capability for issuing an instantaneous permit, the public should be clear that the City would ensure, through inspections (or self-inspections, see sidebar above), that the systems were built subject to the highest safety standard required by these prescriptive designs as mentioned throughout this strategy.

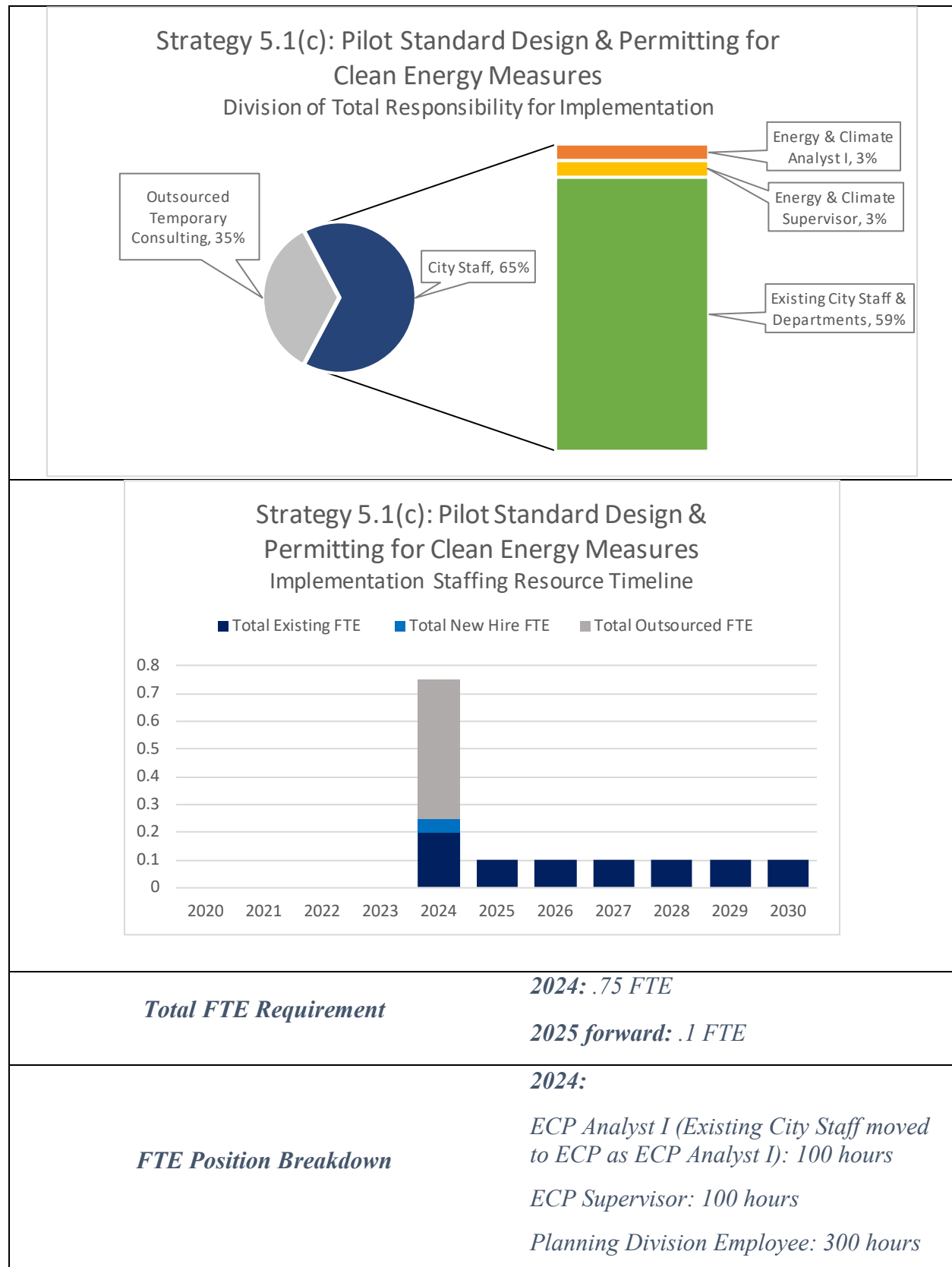
An Alternative Route: Self-inspection by certified special inspectors

Another option to reduce DER permitting soft-costs is to create a vetted list of private installers that are eligible to self-inspect the installation of energy measures. After receiving a certification from the City, installers would be able to register projects as inspected with the City. This competitive option may reduce wait times or add to administrative streamlining and soft cost reduction. For solar projects of a certain size, and other projects like EV chargers, installers are required to fill out a standardized form and the City must contact them in a given amount of time (e.g. 3 days) if there is an issue with the project. To ensure quality control, the City could inspect a random sampling of qualifying solar installations.

Self-inspection shifts the burden of proof from the City on to the customer or project developer, while reducing time burden on City staff.

Design & Implementation Action Plan	
Pilot Standard Automated & Standard Design Permitting for Clean Energy Measures	
Authority Required for Implementation:	None beyond City Staff
Responsible Staff:	ECP Supervisor, ECP Analyst, Existing City Staff
Kick-off January 2024 1. Identify project lead and City departments/stakeholders to be included in the process	
Outreach January 2024 2. Review any existing design integrated or immediate permitting programs for DER nationally and contact local government or NGO staff that led development to gather key insights	
Analysis & Research February 2024 3. Assemble an internal team to further review any existing standards and programs, possibly chaired by the City's Chief Building Official, focusing on minimum health and safety protocols for these types of programs 4. Review existing online permitting software assessing the ability of each to support design integrated permitting and any other desired characteristics 5. Decide on any additional DER technologies to be eligible for design integrated permitting (e.g. battery storage systems) or expand to non-DER technologies like electric vehicle chargers 6. Determine need for neighborhood specific pilot versus City-wide roll-out	
Community Engagement May 2024 7. Solicit and review formal external stakeholder feedback on issue, focusing on solar installers, business owners and	

	homeowners, to identify any particularly important features to include
	8. Based on interest and solar statistical analysis, identify neighborhood for pilot launch, if necessary
RFP	
June 2024	
	9. Create and issue RFP including desired characteristics and important features identified through Research and Engagement.
	10. Review proposals, award winning bid and negotiate contract
Approval	
April – June 2024	
	11. Request and obtain additional budget, if necessary, to fund future software contract
October 2024	
	12. Obtain Council approval of contract
Pilot & Launch	
December 2024	
	13. Finalize program and begin roll-out, either in a specific neighborhood or City wide
Performance Review	
December 2024	
	14. Set program evaluation schedule and be committed to improving program on an annual or biannual basis
Staffing Resources Required	



<i>External Consulting: 1000</i> <i>2025 forward:</i> <i>Planning Division Employee: 200 hours</i>	
Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	3.85%
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	\$0.004
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	27
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	4,252
Example Case Studies of Success in Local Governments	
<i>City of San Jose, California</i>⁹¹ Owners of single family and duplex homes in San Jose can receive a permit for rooftop solar PV installations online and the electrical plan and installation will be reviewed on the day of inspection. Minimum qualifications to utilize the online process are that the panel and frame weight must be less than 5 pounds per square foot, maximum concentrated load at each point of support is less than 40 pounds, maximum height above the roof surface is less than 18 inches, and the PV panels cannot be ballasted. These are examples of system characteristics that the City would stipulate in its online portal to ensure that no solar projects receiving an instantaneous permit were out of compliance with City requirements. <i>Broward County, Florida, Online Permitting System</i>⁹²⁻⁹³ In 2012, Broward County launched an online permitting system for solar systems that included a single application form, flat fee, and electronic review and approval. Applicants create an account, indicate various characteristics of their property (e.g. roof type) and then choose from pre-approved solar designs that meet standards established by the municipality. Solar designs that are not pre-approved and in the system are still permissible, but permits are required to be submitted in person. This is one example of how solar system design can be integrated with permitting to the benefit of developers and residents. Broward County has recently implemented, and required, all building and environmental permits, beyond solar, to be submitted using its online system.	

Strategy 5.1(d): Clarify Citizen Review Board Processes

The City of Santa Barbara has three design review boards: The Architectural Board of Review (ABR), the Historic Landmarks Commission (HLC), and the Single-Family Design Board (SFDB) established in 1925, 1960 and 2007, respectively. These boards serve the important function of preserving the “look and feel” of Santa Barbara and are included within the City’s charter, in the case of ABR and HLC, and the City’s municipal code in the case of SFDB^{94, 95, 96}. The boards have different jurisdictional responsibilities and among the three, almost all exterior alteration (as well as demolition, relocation, construction) projects within the City are subject to additional design review beyond that required to receive a building permit. Construction and external modification to single family homes and one-story duplexes, outside of the El Pueblo Viejo Landmark District, are the only building projects exempted from both ABR or HLC review but are covered by the SFDB. Thus, given that most of the solar potential in Santa Barbara is within design review board jurisdiction and the City’s commitment to renewable energy goals, deployment of DERS would likely increase if the City were to further clarify and standardize the design review process for solar project.^{viii}

In 2006, the City published a set of solar-specific guidelines that provide guidance for siting solar in Santa Barbara within the general guidelines and standards enforced by the design review boards.⁹⁷ However, delays caused by design review can negatively affect solar project economics and stakeholder feedback received during the SEP stakeholder engagement process indicates that this creates a barrier to solar development within the City.⁹⁸ Thus, this indicates that these guidelines may be outdated or unable to support widespread solar development. The City can strike a balance between solar development and the valuable work done by its design review boards by clearly defining the requirements of the California Solar Rights Act, clarifying any Council expectations of design review time to encourage solar development and creating resources that^{ix} encourage interior solar alternatives (energy efficiency upgrades, energy storage) on historic buildings. This could be done through a series of local solar development FAQs and an update of the existing Solar Guidelines. Throughout this process, City staff can work with ABR and HLC representatives to identify any specific concerns they have and address them resolve them accordingly.

The California Solar Rights Act stipulates that solar projects are only subject to “reasonable restrictions”, meaning those restrictions that “do not significantly increase the cost of the system or significantly decrease its efficiency or specified performance, or that allow for an alternative system of comparable cost, efficiency, and energy conservation benefits”.⁹⁹ “Significantly increase the cost” is defined as a cost increase of no more than \$1,000 and “significantly decrease its efficiency” is defined as no more than a 10% decrease.¹⁰⁰ Further, the California Solar Rights Act establishes that it is the goal of State Legislature to ensure that no local agencies implement policies that hinder the development of solar “including, but not limited to, design review for aesthetic purposes”¹⁰¹. Accordingly, the Government Code states that “review of the application to install a solar energy system shall be limited to the building official's review of whether it meets all health and safety requirements of local, state, and federal law”¹⁰². Clarifying how these aspects of California law apply

^{viii} While it makes sense to clarify the design review process for solar projects across all boards, ABR and HLC should be the priority, given their larger jurisdiction. Single family homes account for only 19% of the solar potential in Santa Barbara and preserving ecological sustainability of the built environment is within SFDB’s mission. Community feedback did not highlight barriers posed by SFDB.

to the design review board processes for health and safety in solar projects will help expedite review and protect the City from any liability that arises from non-compliance with a state law.

In addition to the project alterations that cause cost increases, the local community of solar installers and buyers, during the SEP stakeholder engagement process, expressed concern over ABR/HLC review times.¹⁰³ The next step in this strategy option would be clarifying expectations for timely review of solar projects. Establishing a relatively short review time and prioritizing solar projects before the ABR/HLC will create certainty for developers and solar customers that will help lower project costs by reducing soft costs.

Finally, it is important to recognize that there are historic districts, structures, and landmarks in Santa Barbara that have an indispensable role and cultural value to the community. The City, along with ABR/HLC, can develop information, similar to the Solar Energy System Design Guidelines¹⁰⁴, that provides residents and business owners with information on the benefits and funding of energy efficiency upgrades and battery storage systems. These solutions still help drive Santa Barbara toward their renewable energy goals without disrupting the exteriors of historical structures.

Design & Implementation Action Plan	
Clarify Citizen Review Board Processes	
Authority Required for Implementation:	Council Approval
Responsible Staff:	ECP Supervisor, Existing City Staff
Kick-off December 2020 1. Assign City staff or committee to review all ABR and HLC solar-related information	
Outreach January 2021 2. Approach design review board staff members and discuss potential for standardizing and expediting solar-related reviews 3. Seek external stakeholder (solar customers and installers) input on design review board protocols and experiences	
Analysis & Research	

March 2021	- Gather and document obstacles in the design review process for solar projects and opportunities, focusing on minimizing major obstacles to solar installations to maximize potential time and financial savings - Work with City Attorney and Planning Division to confirm Solar Rights Act compliance, based on information gathered on the process through Outreach. Ensure that recommendations address difficult legal questions around support structures
Community Engagement	
May 2021	Circulate draft recommendations to all stakeholders already engaged in the process, as well as City Council, for feedback
Draft Policy	
May 2022	Finalize recommendations based on any feedback
Approval	
September 2022	Obtain Council approval of recommendations and any additional guidance to be provided to design review boards
Performance Review	
September 2022	Document project savings due to the changes as new properties go through the new process
Staffing Resources Required	

Strategy 5.1(d): Standardize Citizen Review Board Processes Division of Total Responsibility for Implementation Outsourced Temporary Consulting, 42% City Staff, 58% Energy & Climate Supervisor, 37% Existing City Staff & Departments, 21%																																																	
Strategy 5.1(d): Standardize Citizen Review Board Processes Implementation Staffing Resource Timeline ■ Total Existing FTE ■ Total New Hire FTE ■ Total Outsourced FTE <table><thead><tr><th>Year</th><th>Total Existing FTE</th><th>Total New Hire FTE</th><th>Total Outsourced FTE</th></tr></thead><tbody><tr><td>2020</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2021</td><td>0.02</td><td>0.03</td><td>0.05</td></tr><tr><td>2022</td><td>0.02</td><td>0.02</td><td>0.05</td></tr><tr><td>2023</td><td>0.00</td><td>0.05</td><td>0.00</td></tr><tr><td>2024</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2025</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2026</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2027</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2028</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2029</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>2030</td><td>0.00</td><td>0.00</td><td>0.00</td></tr></tbody></table>	Year	Total Existing FTE	Total New Hire FTE	Total Outsourced FTE	2020	0.00	0.00	0.00	2021	0.02	0.03	0.05	2022	0.02	0.02	0.05	2023	0.00	0.05	0.00	2024	0.00	0.00	0.00	2025	0.00	0.00	0.00	2026	0.00	0.00	0.00	2027	0.00	0.00	0.00	2028	0.00	0.00	0.00	2029	0.00	0.00	0.00	2030	0.00	0.00	0.00	
Year	Total Existing FTE	Total New Hire FTE	Total Outsourced FTE																																														
2020	0.00	0.00	0.00																																														
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2030	0.00	0.00	0.00																																														
Total FTE Requirement	2021: .1 FTE 2022: .09 FTE 2023: .05 FTE																																																
FTE Position Breakdown	2021: ECP Supervisor: 50 hours Planning Division Employee: 50 hours Outsourced Consultant: 100 hours 2022:																																																

<i>ECP Supervisor: 30 hours</i> <i>Planning Division Employee: 50 hours</i> <i>Outsourced Consultant: 100 hours</i> 2023: <i>ECP Supervisor: 100 hours</i>	
Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	6.75%
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	\$0.003
<i>Resilience & Reliability Impacts (Added MWh of Storage by 2030)</i>	14
<i>Emissions Reduction Potential through 2030 (MtCO₂e)</i>	5,680

Strategy 5.2: Explore Title 24 Building Code Improvements

Strategy Description

California local governments are allowed to adopt and enforce energy standards that are more stringent than the California Building Energy Efficiency Standards (also known as Title 24) for newly constructed buildings and additions, alterations and repairs to existing buildings. Section 10-106 of the Standards includes a straightforward process for local governments to apply to the California Energy Commission (CEC) for approval and certification of local standards exceeding the minimum statewide standards.¹⁰⁵ This application must include supporting analysis for how the local government has determined that the energy savings and cost-effectiveness of their proposed Standards will save no less energy and be no less cost-effective than the current statewide standards.¹⁰⁶

In order to progress toward meeting its renewable energy generation targets and greenhouse gas emission goals, the City can establish a local ordinance which will exceed the California Building Energy Efficiency Standards (specifically Title 24, Part 6). Known as a reach code, these types of ordinances are used throughout California by local governments interested in expanding and tailoring their energy codes to fit the community and the community's energy or sustainability goals. In 2007, Santa Barbara adopted a code of this sort to supersede the 2005 state requirements.¹⁰⁷ Given the stringency of the most recent statewide update, which requires solar panel installation on new construction, and a Zero-Net Energy (ZNE) goal for all new residential construction, a proposed new City ordinance would likely evaluate the SEP benefits of addressing both energy efficiency and DER in the context of achieving ZNE on new commercial construction, and could also be complemented by voluntary battery storage, and electrification guidelines. The ordinance may be similar to other CEC-

approved ordinances from the cities of Lancaster and Davis, CA, both of which focus on using energy efficiency and solar to achieve ZNE status.

Title 24 standards are updated at a statewide level every three years. The 2016 standards are in effect only through 2019 and the 2020 standards are in effect through 2022. Since the CEC process typically takes a minimum four months to complete,¹⁰⁸ the City cannot realistically create and implement a reach code in time to apply to next code cycle. The 2019 Standards go into effect in January 2020, giving the City some lead time to explore a replacement code and prepare for the application process during the next code cycle.

Design & Implementation Action Plan	
Explore Title 24 Building Code Improvements	
Authority Required for Implementation:	Council & California Energy Commission Approval
Responsible Staff:	ECP Supervisor, ECP Analyst I, Existing City Staff
Kick-off March 2021 1. Assemble internal City team to evaluate Title 24 measures, decide on potential measures to pursue 2. Establish goals to prioritize in reach code, such as increased battery storage deployment, net-zero construction or building electrification (discussed above in Strategy Description)	
Outreach April 2021 3. Contact California Energy Commission (CEC) to confirm materials necessary for filing and walk City staff through the expected three to four-month process. This information will allow City staff to determine if consulting assistance is needed for completion of necessary materials 4. Explore existing regional and statewide collaborations to assist City through the process	
Analysis & Research June 2021	

5. Work with Chief Building Official to determine which specific measures should be included in proposed ordinance, in coordination with goals established during Kick-off
6. Use SEP case studies and other resources to examine existing measures that can be adapted to Santa Barbara
7. Begin required cost-effectiveness analyses to determine that the new code will cause buildings to use no more energy than permitted by statewide code and that new code meets the same cost-effectiveness level as the statewide code
8. Solicit external support on these analyses, as needed
9. Create draft ordinance amendment

Community Engagement

November 2021

10. Ensure that CEC has all necessary information and begin required 60-day public comment period

Draft Policy

January 2022

11. Finalize new energy code and submit to CEC
12. Send copy of negative declaration or environmental impact report required by the California Environmental Quality Act (CEQA) to the CEC

Approval

March – October 2022

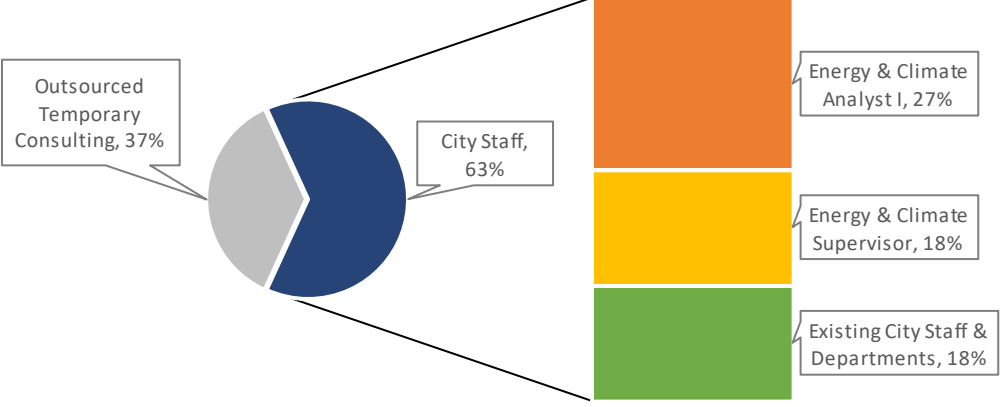
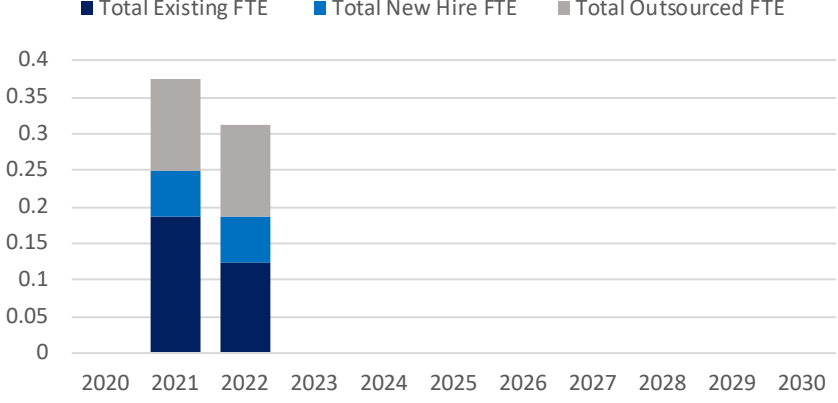
13. Seek and obtain CEC approval
14. Seek and obtain Council approval

Performance Review

December 2024

15. Assess results of new energy code and new statewide requirements in the 2023 code cycle to determine if the process should be repeated

Staffing Resources Required

	Strategy 5.2: Title 24 Building Code Improvements Division of Total Responsibility for Implementation  Outsourced Temporary Consulting, 37% City Staff, 63% Energy & Climate Analyst I, 27% Energy & Climate Supervisor, 18% Existing City Staff & Departments, 18%	
	Strategy 5.2: Explore Title 24 Building Code Improvements Implementation Staffing Resource Timeline  ■ Total Existing FTE ■ Total New Hire FTE ■ Total Outsourced FTE 0.4 0.35 0.3 0.25 0.2 0.15 0.1 0.05 0 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030	Total FTE Requirement <i>2021: .375 FTE</i> <i>2022: .3125 FTE</i> FTE Position Breakdown <i>2021:</i> <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 250 hours</i> <i>ECP Supervisor: 125 hours</i> <i>Building Department Manager: 125 hours</i>

<i>Outside Consulting: 250 hours</i> 2022: <i>ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 125 hours</i> <i>ECP Supervisor: 125 hours</i> <i>Building Department Manager: 125 hours</i> <i>Outside Consulting: 250 hours</i>	
Strategy Impact Metrics	
<i>Percentage Contribution To 100% Renewable Electricity By 2030</i>	2.57%
<i>Cost Effectiveness of Policy in Dollars Spent per kWh Produced</i>	0.002
<i>Emissions Reduction Potential (MtCO₂e)</i>	4,397
Example Case Studies of Success in Local Governments	
<i>Energy Reach Code Cost-Effectiveness Analysis, City of Palo Alto¹⁰⁹</i> Palo Alto is currently seeking approval from the California Energy Commission (CEC) to go beyond the 2019 Title 24 energy code requirements that include requirements for building electrification. In order to further reduce carbon emissions beyond energy efficiency savings, the report examines the cost-effectiveness of electric heat pumps for water heating and space heating. The City had previously received approval from the CEC to implement its 2016 Title 24 Reach Code which increased the overall minimum energy efficiency and allowed for solar PV systems to be used as a credit towards energy efficiency. The City estimated that their Reach Code would be up to 20-percent more efficient than a home built to the minimum 2016 T24 requirements. Homes that did not install solar PV systems had to be at a minimum be “Solar Ready” for future PV systems. <i>City of Davis, California, Energy Efficiency “Reach” PV-Plus Green Building Code¹¹⁰</i> Title 24 includes checklists of voluntary measures from which local jurisdictions can pick and choose measures to make mandatory. The City of Davis adopted an ordinance in August 2017 to require some of these once voluntary options. Specifically, single family homes will need to be at least 30-percent more efficient and low-rise multifamily buildings residential at least 25-percent more efficient than the statewide minimums. These higher thresholds can be met a mix of additional energy efficiency measures as well as the installation of a solar PV system where the installed capacity would offset 80-percent of the total electricity used by a residence. The CEC certified Davis’ reach code application in December 2017. <i>City of Lancaster, California, Zero Net Energy Home Ordinance¹¹¹</i>	

The ZNE Home Ordinance which became effective in 2018, mandates all builders to install a solar PV system equal to two watts per square foot for each home built. Builders are given three alternative paths to comply the code. Builders can install a system equal to the 2 watts per square foot requirement, pay a \$1.40 per square foot fee instead of installing the system (and automatically enables the homebuyer a 20-year special rate opportunity on their Lancaster Choice Energy (CCE bill), or a combination of the two when the builder is constructing homes of various sizes. The CEC approved the ZNE Home Ordinance as a T24 Reach Code in October 2017.

Strategy 5.3: Implement an Energy Disclosure and Performance Policy

Strategy Description

Although Santa Barbara has a temperate climate leading to lower energy use¹¹², there are still opportunities for energy efficiency to advance the City towards its renewable energy goals. The policy option described here focuses on making energy efficiency upgrades a central part of the building sector in Santa Barbara by creating a tool for buyers and sellers of efficient properties and framing upgrades as a positive action with benefits to all parties involved.

California Assembly Bill 802, passed in 2015, requires all buildings over 50,000 ft² to disclose energy use, with the first deadline set at June 2018. This strategy is an expansion of this concept accepted at the state level and shares certain characteristics such as a 3-year roll-out window but moves beyond State requirements to achieve local results. This strategy description outlines a comprehensive building energy efficiency policy consisting of four parts covering energy benchmarking and energy performance standards. The policy specifies which parts apply to residential versus commercial properties, as well as owner-occupied versus rental properties, to provide clarity on which subset of the building sector would be impacted by which part of the policy.

Addressing the Split-Incentive Challenge: Throughout SEP development research and feedback from the community indicated that the challenge of a split-incentive, caused by high proportion of renters in Santa Barbara, created a significant barrier to distributed energy development and energy efficiency improvements.^x Part 4 of this strategy outline a reward structure that focuses on the split-incentive barrier, in order to address the large number of commercial rental properties in Santa Barbara. The goal of the commercial policy option is to provide the benefit of an energy audit and support to the individual businesses that need assistance to reduce energy use within Santa Barbara.

Residential: Owner-occupied Properties

Part 1 Through an ordinance, energy benchmarking is required at time of sale for single-family homes, apartments, and condominiums. Using a service equivalent to RESNET HERS Index¹¹³ or Department of Energy's Home Energy Score¹¹⁴ property sellers (or the realtor managing the sale) are responsible for obtaining and disclosing the property's energy score prior to completion of the sale.

What Is the National Trend in Building Benchmarking Requirements?

According to the 2018 report from the Institute for Market Transformation, more than 20 cities and 2 counties nationally require some form of building benchmarking. Primarily measured using Energy Star Portfolio Manager (ESPM) cities in 17 states from coast to coast are looking to building benchmarking to drive reductions in energy consumption. This trend extends from large cities, including New York and Chicago, to small cities such as Boulder, Fort Collins, and Berkeley. According to one EPA study of Portfolio Manager Data Trends benchmarked buildings consistently reduced energy use by an average of 2.4% per year, and cities of New York and Chicago reported 6% and 4% energy usage reduction in benchmarked buildings.

^x The split incentive barrier describes a challenge to investing in energy efficiency upgrades in rental properties wherein building owners do not have the financial incentive to invest in upgrades because they will not see savings on the utility bill, and tenants do not want to invest in upgrades because they do not own the building.

Residential Energy Audit Rebates: In order to lower the cost of the compliance the City can consider establishing a rebate program to reduce the cost of the required energy audits. To do this, the City can create a list of registered Energy Assessors who approved to report the home energy score to the City and receive a rebate for their services. To minimize costs for the City, this rebate would likely cover a portion (e.g. 40%) of the energy audit with the rest of the cost covered by the seller.

The City can start by providing rebates in a 1-year pilot. If successful, the City can provide rebates for a limited additional period with the goal of creating an established practice of energy auditing at time-of-sale which identifies opportunities to reduce energy use creating benefits for homeowners (reduced utility costs), realtors (improved sales proposition) and the environment.

Leveraging a Local Data Resource: By requiring energy benchmark reports at time of sale, the City will create a flow of useful energy data. Working with the Santa Barbara Association of Realtors (SBAOR) to present this data on Santa Barbara's Multiple Listing Service would be a useful way of informing buyers and making energy a factor in typical real estate transactions.

Efforts of this sort are already underway across the country. The Real Estate Standards Organization (RESO) and Council of Multiple Listing Services (MLS) are working together to standardize all types of data across the real estate industry and offering certification levels to MLSs that achieve standardization.¹¹⁵ With the support of the Department of Energy, the silver certification, the second lowest, includes a requirement for standard energy efficiency data¹¹⁶. The largest MLS in California, the California Regional MLS has already achieved a Platinum Certification¹¹⁷, the highest level, meaning that energy data is included in their listings and setting a precedent for smaller California MLSs to follow.

Residential: Multifamily Rental Properties

Part 2 Properties over the determined minimum square footage (see below) or above a certain number of units (to be determined by the city) are required to obtain and disclose an energy score for the entire building every five years. The frequency of disclosures for multifamily rental properties is less frequent than for commercial buildings in order to be less burdensome.

Property owners who carry a business license in Santa Barbara and own qualifying properties (over determined square footage limit) must adhere to the portion of the policy described below under "Rental Properties: Commercial" and are exempt from the requirements described Parts 1 and 2 above.

Commercial & Large Residential: Rental & Owner-occupied Properties

Part 3 Commercial buildings over a determined square footage (see SEP Document Table 2 for possible square footage baselines and impacts) must disclose energy use and benchmarks every year, using EnergySTAR Portfolio Manager or equivalent, and meet certain energy

performance requirements every three years. Energy performance requirements will go down each year as a guide, but compliance will only be enforced every 3 years.

To ensure compliance, building will be required to undergo a comprehensive energy audit every 3 years. These audits will be performed by approved energy auditors who will identify opportunities to energy use and connect building owners with energy efficiency incentives that will reduce the cost of implementing any measures needed to meet the required energy performance standards.

If a building does not meet a specific performance requirement, they can do so in the following year. The policy will allow for a two-year runway before disclosure requirements enter into force, and another year before performance requirements apply. This will give property owners time to prepare and provide the city with enough data to calculate the average energy usage used to establish the performance requirements discussed in Table 6.

Table 5 includes ten possible square footage minimums that could be chosen as the baseline for mandatory participation in this policy and the corresponding percentage of buildings covered, square footage covered and the estimated contribution to the City's goals, in the form of reduced electrical load, in 2030. If desired, the City can phase-in benchmarking and performance requirements to apply to larger buildings earlier and smaller buildings later. The Estimated Marginal Electricity field provides insight of the additional progress toward the City's goals that could be achieved by decreasing the eligible building size.

Table 5: Energy Disclosure & Performance Policy – Square Footage Baselines

Performance Requirement Eligibility Threshold (ft ²)	Percentage of Commercial Buildings Covered	Percentage of Commercial Building Space Covered	Estimated Marginal Electricity Contribution in 2030
>50000	4%	33%	1.10%
>45000	4%	34%	0.05%
>40000	5%	38%	0.12%
>35000	6%	41%	0.10%
>30000	7%	44%	0.12%
>25000	9%	50%	0.20%
>20000	12%	55%	0.16%
>15000	16%	62%	0.26%
>10000	26%	73%	0.38%
>5000	47%	88%	0.51%

Policy Timeline Details:

Figure 7 lays out the timeline of policy design and program launch to clearly delineate the difference between when property owners are expected to disclose energy use and when the performance requirements will be enforced.



Figure 7: Energy Disclosure & Performance Requirements Timeline

Setting Energy Performance Requirements: The following table is a sample energy performance schedule showing the energy intensity required for compliance in a given year. This number is calculated by taking the average intensity of all buildings in the program and setting a benchmark based upon a certain acceptable margin over the average. As stated above, this policy outline recommends that energy performance requirements go down each year as a guide to property owners, but compliance only be enforced every 3 years.

Table 6: Sample Energy Performance Requirements Schedule

Year	Energy Intensity Benchmark (kWh/ft ²)	% Over Average Usage ^{xi}
2022	8.07	50%
2023	7.76	45%
2024	7.44	40%
2025	7.10	35%
2026	6.75	30%
2027	6.38	25%
2028	6.00	20%
2029	5.60	15%
2030	5.18	10%

Part 4 Establishing the Energy Hero Credit: In order to create a compliance structure that addressed the split incentive challenge, the City could amend the business license tax schedules to include an increased tax amount called an “Energy Hero Credit”. In order to operate a business in Santa Barbara, one must obtain a business license and pay an annual business tax.¹¹⁸ This policy recommends amending the tax schedule to include an added amount, that, if building-owners meet the energy performance requirement, is returned to them through a refund called an “Energy Hero Credit”. The goal is to refund all revenue collected because every commercial building subject to the energy performance regulations

^{xi} Due to restrictions on available data, average usage must be calculated using energy intensities of regulated buildings from two years prior to the year in question. Average usage for 2022 uses data from 2020.

is complying. In practice, the City would likely retain some additional revenue that could be used to cover program administrative costs.

Importantly, both landlords and business tenants in an energy performance compliant building receive a credit on their business license fee and a designation (“Energy Hero”) attached to their business. Because both tenants and property owners earn the Energy Hero credit distinction if a building complies with the performance requirements, this creates a unique value for property owners by allowing them to pass on the Energy Hero credit to tenants, thereby earning that business a tax refund and making their building more appealing for tenants, and incentivizes tenants to actively engage with their landlords around energy efficiency investments in order to qualify for the credit and avoid having to pay an increased tax. In this way, the Energy Hero Credit aligns the interests of both tenants and landlords with respect to invest in energy efficiency.

Exemptions: The reason that this policy recommends that the Energy Hero Credit be part of the business tax is that it applies to commercial landlords and tenants equally (as they both hold business licenses in the City). However, since the energy efficiency upgrades required for compliance with the ordinance will be executed by the landlord, the ordinance should include an appeal process for tenants seeking exemption due to a negligent landlord or other extenuating circumstances.

Additional Considerations & Alternative Compliance Approaches

Implementation Challenges & an Alternative Tax Credit Approach: The tax increase being considered to establish the Energy Hero Credit, like any tax increase in California, would require a vote to be approved. Since the intention is return the vast majority of the revenue collected, the City can work with large property owners to communicate the economic and financial benefits of this policy in order to garner support.

Alternatively, if the City budget can absorb decreased revenue from the existing business licenses, they could create the Energy Hero Credit as a simple tax credit, without an accompanying tax increase to account for any lost revenue. The viability of this approach should be assessed by City staff, as it would enable quicker implementation and avoid the risk and effort needed to pass a tax increase.

A Fee & Fine Structure: A more traditional approach to enforcement of energy benchmarking and performance ordinances is a fee and fine structure. Using this structure, the City would charge a fee on property owners when they filed their benchmarking report. This fee would be used to cover the administrative costs of implementing the program. The City would also establish a fine that would be levied on property owners who fall out of compliance with their reporting and performance requirements. This approach, while simpler than the Energy Hero Credit structure, loses the ability to address the split-incentive challenge. An ordinance using a fee and fine structure becomes a prescriptive measure that, while effective in reducing electricity use, may be opposed by the business community.

Paperwork Reduction and Electronic Compliance: The City can ease the administrative burden by facilitating an option to sign a 3rd party authorization form that would allow a data aggregator to pull utility data directly from commercial accounts and formulate the energy benchmark report online.

Incentivizing Early-action: While energy performance requirements will not be mandatory until the end of Year 3 after the ordinance is passed, the City can begin setting target performance requirements immediately to provide early guidance and offer exemption from the next performance cycle for early voluntary participants.

Rewarding Better Buildings: The City can reward voluntary performance such that buildings meeting certain accepted standards, such as LEED, Passive House or Living Buildings Challenge, pass performance requirements without inspection.

Design & Implementation Action Plan	
Implement an Energy Disclosure & Performance Policy	
Authority Required for Implementation:	New Ordinance
Responsible Staff:	ECP Supervisor, ECP Analyst I, Existing City Staff
Kick-off July 2021 1. Assemble an internal team, including the Chief Building Official, to review policy options	
Outreach November 2021 2. Involve local Realtor associations, HERS raters and other stakeholders in process and team meetings so they are aware of City's efforts and can provide feedback	
Analysis & Research January - June 2022 3. Review other California local government disclosure best practices 4. Formulate draft disclosure policy based on Best Practices review and SEP program outline	
Community Engagement	

July 2022

5. Circulate draft disclosure policy to all relevant stakeholders for written feedback

Draft Policy

September 2022 – November 2022

6. Compile staff report of written feedback on disclosure policy
7. Create disclosure ordinance template based on feedback
8. Presentation to commissions, subcommittees and information-only presentation to City Council
9. Update draft policy to align with Council and public feedback

Approval

December 2022

10. Action item presentation to Council for approval of the ordinance

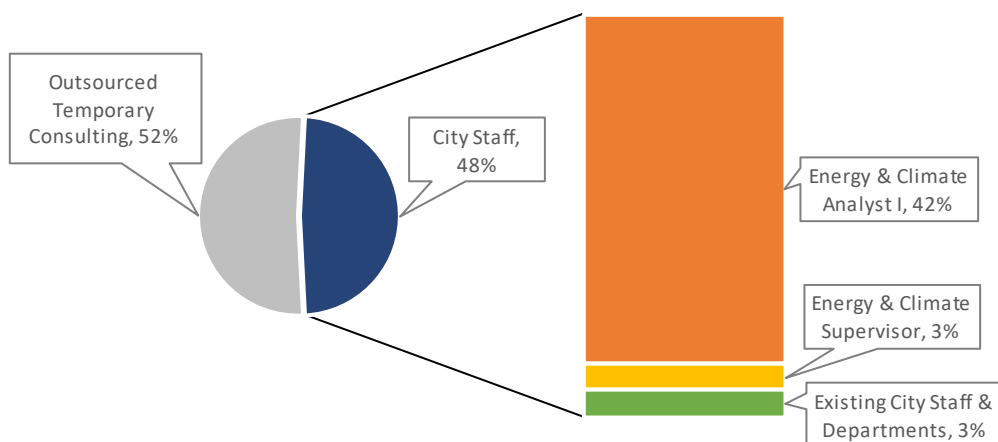
Performance Review

May 2024 - forward

11. Assess policy compliance and feedback from business community to determine if updates are needed

Staffing Resources Required

Strategy 5.3: Implement An Energy Disclosure & Performance Policy
Division of Total Responsibility for Implementation



Strategy 5.3: Institute An Energy Disclosure & Performance Policy Implementation Staffing Resource Timeline Total Existing FTE Total New Hire FTE Total Outsourced FTE 0.4 0.35 0.3 0.25 0.2 0.15 0.1 0.05 0 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030	
Total FTE Requirement	2022 - 2023: .35 FTE 2024 forward: .3 FTE
FTE Position Breakdown	2022 - 2023: ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I):100 hours ECP Supervisor: 100 hours Planning Department Employee: 100 hours Outside Consulting: 400 hours/year 2024 forward: ECP Analyst I (Existing City Staff moved to ECP as ECP Analyst I): 300 hours Outsourced Consulting: 300 hours
Strategy Impact Metrics	
Percentage Contribution To 100% Renewable Electricity By 2030	1.28%
Cost Effectiveness of Policy in Dollars Spent per kWh Produced	0.043\$
Emissions Reduction Potential through 2030 (MtCO2e)	1,454
Example Case Studies of Success in Local Governments	

Building Energy Performance Standards (BEPS), Washington, DC¹¹⁹

BEPS provides Santa Barbara with a model for establishing energy performance requirements for existing buildings that build on benchmarking requirements and provide economic benefits through energy cost savings, increased jobs and increased property values.

Washington, DC passed its Building Energy Performance Standards in December 2018 as part of its landmark Clean Energy DC Omnibus Act. BEPS separates the District's building stock into types and sets a performance standard, based on the median energy performance for buildings of that type, that building must comply with. Under BEPS, all buildings over 50,000 ft² must be compliant by 2026 and the compliance requirement extends to smaller buildings in future years. BEPS also extends the District's existing energy benchmarking requirements and expands them to smaller buildings. *Existing Commercial Buildings Energy Performance Ordinance San Francisco, CA¹²⁰*

San Francisco's Existing Commercial Buildings Ordinance applies to existing commercial buildings with 10,000 square feet or more of space that is heated or cooled. The Ordinance has two separate requirements: energy benchmarking and energy audits. Buildings are required to submit a short energy benchmarking report each year using EnergySTAR Portfolio Manager. Energy audits are required on a rolling basis using deadlines established by the San Francisco Department of the Environment. Buildings over 50,000 ft² are required to perform an audit that meets the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE) Level II standards and buildings between 10,000 and 49,999 ft² are required to perform a basic audit meeting ASHRAE Level I standards.

San Francisco's program also includes resources designed to address the split incentive challenge. These come in the form of a tenant handbook that provides guidance on green leases and other best practices enabling tenants to advocate for improved energy efficiency in their buildings.

Building Performance Ordinance, Boulder, CO¹²¹

Boulder's Building Performance Ordinance requires commercial and industrial property owners to conduct energy assessments every three years, state what improvements will be made, conduct whole-building retro commissioning every 10 years, and requires the sharing of building energy performance information between building owners and tenants.

SmartRegs Program, Boulder, CO¹²²

Boulder's SmartRegs program requires all licensed rental housing to meet basic energy efficiency standards following walk through audits by certified professionals. In addition to assessing fines of up to \$1,000 for non-licensed properties in order to drive participation, licensed property owners that are non-compliant are at risk for losing their ability to rent the property.

Energy Conservation Audit and Disclosure Ordinance (ECAD), Austin, TX¹²³

Austin's Energy Conservation and Audit Disclosure (ECAD) ordinance was approved in 2008 as part of the city's Climate Protection Plan and requires all single-family, multi-family, and commercial properties that are ten years or older to undergo energy audits and present the results three days before the final sale of the home. The goal of the ordinance is to make the City a national leader in reducing and reversing the negative impacts of global warming. Noncompliance with the

code includes fines of \$500 to \$2000. Since 2009, 58 percent of single-family homes and 76 percent of commercial properties have received energy audits and rating designations in Austin.

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